BODY & ACCESSORIES

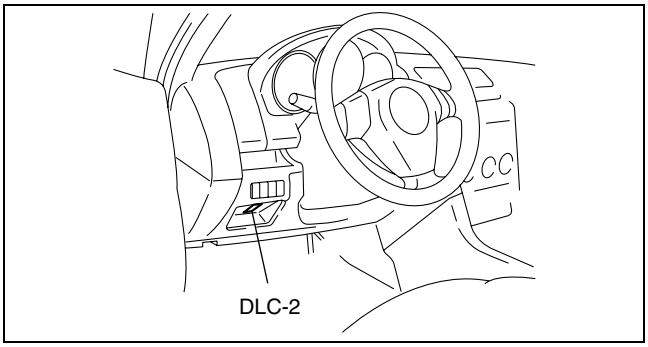
09 SECTION

09–02A ON-BOARD DIAGNOSTIC [ADVANCED KEYLESS ENTRY AND START SYSTEM]

DTC INSPECTION [ADVANCED KEYLESS SYSTEM]

1. Connect the **SST** (WDS or equivalent) to the vehicle DLC-2 16-pin connector.
2. Verify the DTC with the **SST** (WDS or equivalent).
3. If a DTC is indicated, perform on-board diagnostic referring to the DTC table.

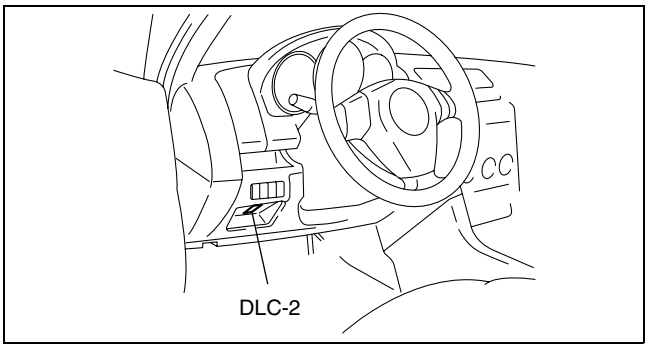
DPE090267000W17



DPE102ZW2001

PID/Data Monitor and Record Procedure

1. Connect the **SST** (WDS or equivalent) to the vehicle DLC-2 16-pin connector.
2. Access and monitor PIDs using the **SST** (WDS or equivalent).



DPE102ZW2001

DTC TABLE [ADVANCED KEYLESS SYSTEM]

DPE090267000W18

DTC No.	Description	Page
B1342	Keyless control module internal malfunction	(See 09–02A–4 DTC B1342 [ADVANCED KEYLESS SYSTEM])
B1134	Unprogrammed card key	(See 09–02A–5 DTC B1134 [ADVANCED KEYLESS SYSTEM])
B2477	Configuration error	(See 09–02A–5 DTC B2477 [ADVANCED KEYLESS SYSTEM])
B1317	Keyless control module power supply voltage increases.	(See 09–02A–6 DTC B1317/B1318 [ADVANCED KEYLESS SYSTEM])
B1317	Keyless control module power supply voltage decreases	(See 09–02A–6 DTC B1317/B1318 [ADVANCED KEYLESS SYSTEM])
B2170	Push switch (Steering lock unit)	(See 09–02A–7 DTC B2170 [ADVANCED KEYLESS SYSTEM])

DTC No.	Description	Page
B1126	Steering lock unit internal malfunction	(See 09–02A–8 DTC B1126 [ADVANCED KEYLESS SYSTEM])
U0236	Steering lock unit communication system	(See 09–02A–8 DTC U0236 [ADVANCED KEYLESS SYSTEM])
B1093	Steering lock unit communication error	(See 09–02A–9 DTC B1093 [ADVANCED KEYLESS SYSTEM])
U0214	Keyless receiver	(See 09–02A–10 DTC U0214 [ADVANCED KEYLESS SYSTEM])
B1133	Keyless antenna (Driver's door)	(See 09–02A–11 DTC B1133 [ADVANCED KEYLESS SYSTEM])
B1132	Keyless antenna (Front passenger door)	(See 09–02A–12 DTC B1132 [ADVANCED KEYLESS SYSTEM])
B1127	Keyless antenna (Interior, RR)	(See 09–02A–13 DTC B1127 [ADVANCED KEYLESS SYSTEM])
B1128	Keyless antenna (Interior, RL)	(See 09–02A–14 DTC B1128 [ADVANCED KEYLESS SYSTEM])
B1131	Keyless antenna (Liftgate)	(See 09–02A–15 DTC B1131 [ADVANCED KEYLESS SYSTEM])
B1129	Keyless antenna (Interior, Front)	(See 09–02A–16 DTC B1129 [ADVANCED KEYLESS SYSTEM])
U0323	Communication error to instrument cluster	(See 09–02–1 MULTIPLEX COMMUNICATION SYSTEM)
U0100	Communication error to PCM	(See 09–02–1 MULTIPLEX COMMUNICATION SYSTEM)
U0073	Control module communication error	(See 09–02–1 MULTIPLEX COMMUNICATION SYSTEM)
U2023	Error signal from CAN related module	(See 09–02–1 MULTIPLEX COMMUNICATION SYSTEM)

PID/DATA MONITOR TABLE [ADVANCED KEYLESS SYSTEM]

DPE090267000W19

PID/data monitor table

PID name (definition)	Data contents	Unit/ Operation	Terminal
DTC_CNT	Number of continuous DTCs	–	–
RPM	Engine speed	RPM	3Z, 3AA
VSS	Vehicle speed	KPH	3Z, 3AA
VPWR	Supply voltage	V	2D
NUMCARD	Number of programmed card keys	–	–
NUMKEY*	Number of programmed key ID numbers	–	–
DRSW_D	Door switch (Driver's door)	OPEN/ CLOSE	3R
DRSW_ALL	Door switch (All doors and liftgate)	OPEN/ CLOSE	3R
BOO	Brake pedal position (Brake switch)	On/Off	3O
REQ_SW_D	Request switch (Driver's door)	On/Off	3H
REQ_SW_P	Request switch (Passenger door)	On/Off	3J
REQ_SW_BK	Request switch (Liftgate)	On/Off	3L
LOCK_SW_D	Door lock-link switch	On/Off	3E
IMMOBI	Immobilizer system equipped or not	On*/Off	–
TR/LG_SW	Liftgate latch switch	OPEN/ CLOSE	3R
IG_KEY_IN	Key reminder switch	Key-In/Key-Out	2O
IG_SW_ST	Ignition switch (Push switch)	Pushed/Not Pushed	2N
BUZZER	Keyless buzzer	On/Off	3Y
PWR_IG1	Power supply (IG1)	On/Off	2B
PWR_ACC	Power supply (ACC)	On/Off	2I

* : Vehicles with immobilizer system

ACTIVE COMMAND MODE TABLE

Command name	Output part name	Unit/ Operation	Terminal
BZR_OUT	Keyless buzzer	On/Off	3Y
BZR_INN	Interior buzzer (Instrument cluster)	On/Off	3Z, 3AA
LNP_RED	Keyless warning light (red)	On/Off	3Z, 3AA
LNP_GREEN	Keyless indicator light (green)	On/Off	3Z, 3AA
DR_LOCK	All doors Lock/Off	Lock/Off	2R
DR_UNLOCK	All doors Unlock/Off	Unlock/Off	2R
SUPERLOCK	All doors Lock/Off	Lock/Off	2R

DTC B1342 [ADVANCED KEYLESS SYSTEM]

DPE090267000W20

DTC B1342	Keyless control module internal maifunction.
POSSIBLE CAUSE	• Malfunction in the keyless control module internal circuit

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1342	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

DTC B1134 [ADVANCED KEYLESS SYSTEM]

DPE090267000W21

DTC B1134	Unprogrammed card key.
POSSIBLE CAUSE	• Unprogrammed card key. • Malfunction in the keyless control module internal circuit

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY NUMBER OF REGISTERED CARD KEYS** • Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See 09–02A–4 PID/DATA MONITOR TABLE [ADVANCED KEYLESS SYSTEM].) • Is card key registered?	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	• Using the WDS or equivalent, register a card key if necessary. (See 09–14–20 CARD KEY ID CODE REGISTRATION) • Go to the next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1134	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

DTC B2477 [ADVANCED KEYLESS SYSTEM]

DPE090267000W22

DTC B2477	Configuration error.
DETECTION CONDITION	• Keyless control module configuration has not been performed correctly.

DTC B2477	Configuration error.
POSSIBLE CAUSE	• Keyless control module configuration error. • Malfunction in the keyless control module internal circuit

Diagnostic procedure

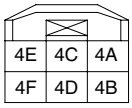
STEP	INSPECTION		ACTION
1	**PERFORM INSTRUMENT KEYLESS CONTROL MODULE CONFIGURATION** • Perform keyless control module configuration. • Is B2477 displayed?	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	• Go to the next step.
2	**VERIFY TROUBLESHOOTING OF DTC B2477 COMPLETED** • Clear the DTC from the memory. • Is any DTC displayed?	Yes	Go to the applicable DTC inspection.
		No	DTC troubleshooting completed.

DTC B1317/B1318 [ADVANCED KEYLESS SYSTEM]

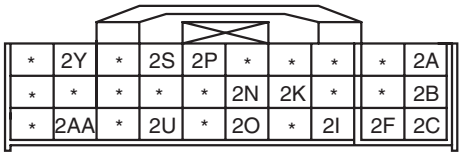
DPE090267000W23

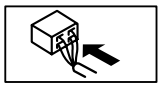
DTC	B1317	Keyless control module power supply voltage increases (16.1 V or more)
	B1318	Keyless control module power supply voltage decreases (less than 9 V)
DETECTION CONDITION		• When the keyless control module power supply voltage is not **within 9—16 V**.
POSSIBLE CAUSE		• Open or short circuit in wiring harness between battery and keyless control module • ROOM 15 A fuse malfunction • Battery malfunction • Keyless control module malfunction

BCM HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

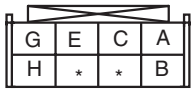
Step	Inspection		Action
1	**INSPECT FUSE** • Remove the ROOM 15 A fuse. • Is the fuse normal?	Yes	Go to the next step.
		No	Replace the fuse.
2	**INSPECT BATTERY** • Measure the battery positive voltage. • Is the voltage **9 V—16 V**?	Yes	Go to the next step.
		No	The battery has a malfunction. Inspect the charge/discharge system.
3	**INSPECT WIRING HARNESS BETWEEN BATTERY AND BCM** • Turn the ignition switch to the ON position. • Measure the BCM terminal 2A voltage. • Is the voltage **9 V—16 V**?	Yes	Install the fuse, then go to the next step.
		No	Repair the wiring harness between the BCM and battery.
4	**INSPECT BCM** • Turn the ignition switch to the ON position. • Measure the voltage at the BCM terminal 4O. • Is the voltage **9 V—16 V**?	Yes	Go to the next step.
		No	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
5	**INSPECT WIRING HARNESS BETWEEN PJB AND SAS CONTROL MODULE** • Turn the ignition switch to the ON position. • Measure the keyless control module terminal 2D voltage. • Is the voltage **9 V—16 V**?	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	Repair the wiring harness between the BCM and keyless control module.

DTC B2170 [ADVANCED KEYLESS SYSTEM]

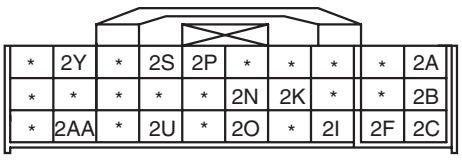
DPE090267000W24

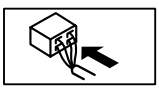
DTC B2170	Push switch.
DETECTION CONDITION	• Detect the push switch OFF signal when ignition switch is ON position.
POSSIBLE CAUSE	• Steering lock unit malfunction • Open or short circuit in wiring harness between keyless control module and steering lock unit • Keyless control module malfunction

STEERING LOCK UNIT
HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE HARNESS
SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and steering lock unit connector. • Is there continuity between keyless control module terminal 3N and steering lock unit terminal A?	Yes	Replace the steering lock unit and perform the resetting procedure for the steering lock unit. (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION)
		No	Repair the wiring harness between the steering lock unit and keyless control module.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B2170	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

DTC B1126 [ADVANCED KEYLESS SYSTEM]

DPE090267000W25

DTC B1126	**Steering lock unit internal malfunction.**
DETECTION CONDITION	• Detect the steering lock unit maifunction signal.
POSSIBLE CAUSE	• Steering lock unit maifunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT STEERING LOCK UNIT** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1126	Yes	Replace the steering lock unit and perform the resetting procedure for the steering lock unit. (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION)
		No	DTC troubleshooting completed.

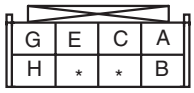
DTC U0236 [ADVANCED KEYLESS SYSTEM]

DPE090267000W26

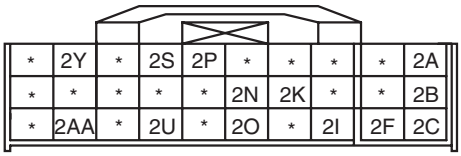
DTC U0236	**Steering lock unit communication system.**
DETECTION CONDITION	• Steering lock unit communication error
POSSIBLE CAUSE	• Steering lock unit maifunction • Open or short circuit in wiring harness between keyless control module and steering lock unit • Keyless control module malfunction

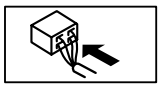
DTC U0236	Steering lock unit communication system.

STEERING LOCK UNIT
HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE HARNESS
SIDE CONNECTOR





Diagnostic procedure

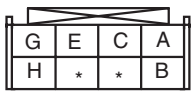
STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and steering lock unit connector. • Is there continuity between keyless control module terminal 2P and steering lock unit terminal G?	Yes	• Replace the steering lock unit and perform the resetting procedure for the steering lock unit. (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) • Go to the next step.
		No	• Repair the wiring harness between the steering lock unit and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: U0236	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

DTC B1093 [ADVANCED KEYLESS SYSTEM]

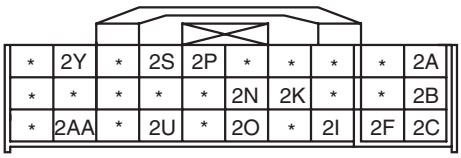
DPE090267000W27

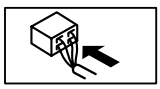
DTC B1093	Unprogrammed steering lock unit.
DETECTION CONDITION	• Unprogrammed steering lock unit.
POSSIBLE CAUSE	• Steering lock unit malfunction • Open or short circuit in wiring harness between keyless control module and steering lock unit • Keyless control module malfunction

STEERING LOCK UNIT
HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE HARNESS
SIDE CONNECTOR





Diagnostic procedure

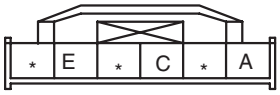
STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and steering lock unit connector. • Is there continuity between keyless control module terminal 2P and steering lock unit terminal G?	Yes	• Perform the resetting procedure for the steering lock unit. (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) • Go to the next step.
		No	• Repair the wiring harness between the steering lock unit and keyless control module. • Go to next step.
2	**INSPECT STEERING LOCK UNIT** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1093	Yes	• Replace the steering lock unit and perform the resetting procedure for the steering lock unit. (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) • Go to the next step.
		No	DTC troubleshooting completed.
3	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1093	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

DTC U0214 [ADVANCED KEYLESS SYSTEM]

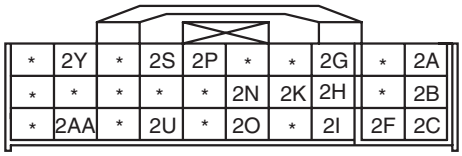
DPE090267000W28

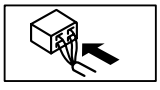
DTC U0214	**Keyless receiver.**
DETECTION CONDITION	• When the keyless receiver power supply voltage is **less than 7.5 V**.
POSSIBLE CAUSE	• Keyless receiver malfunction • Open or short circuit in wiring harness between keyless control module and keyless receiver • Keyless control module malfunction

KEYLESS RECEIVER HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT WIRING HARNESS BETWEEN KEYLESS RECEIVER AND GROUND** • Disconnect keyless receiver connector. • Is there continuity between keyless receiver terminal E and ground?	Yes	Go to next step.
		No	• Repair the wiring harness between the keyless receiver and ground. • Go to next step.
2	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless receiver connector. • Inspect the continuity between the following connector terminals. — keyless control module: 2S—keyless receiver: A — keyless control module: 2U—keyless receiver: C • Is there continuity?	Yes	Go to next step.
		No	• Repair the wiring harness between the keyless receiver and keyless control module. • Go to next step.
3	**INSPECT KEYLESS RECEIVER POWER SUPPLY CIRCUIT** • Turn ignition switch to ON position. • Measure voltage at terminal 2S of keyless control module connector. • Is voltage **more than 7.5 V**?	Yes	Replace keyless receiver. (See 09–14–22 KEYLESS RECEIVER REMOVAL/ INSTALLATION [ADVANCED KEYLESS SYSTEM])
		No	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)

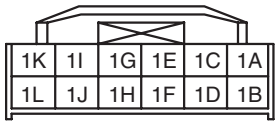
DTC B1133 [ADVANCED KEYLESS SYSTEM]

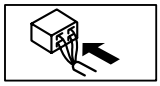
DPE090267000W29

DTC B1133	Keyless antenna (driver's door)
DETECTION CONDITION	Keyless antenna dose not operated.
POSSIBLE CAUSE	• Keyless antenna (driver's door) malfunction • Open or short circuit in wiring harness between keyless control module and keyless antenna • Keyless control module malfunction

KEYLESS ANTENNA HARNESS SIDE CONNECTOR

KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless antenna (driver's door) connector. • Inspect the continuity between the following connector terminals. — keyless control module: 1A—keyless antenna: A — keyless control module: 1B—keyless antenna: B • Is there continuity?	Yes	• Replace keyless antenna (driver's door). (See 09–14–23 KEYLESS ANTENNA REMOVAL/ INSTALLATION) • Go to next step.
		No	• Repair the wiring harness between the keyless antenna (driver's door) and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1133	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

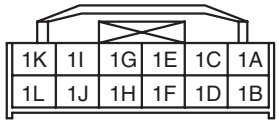
DTC B1132 [ADVANCED KEYLESS SYSTEM]

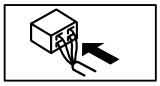
DPE090267000W30

DTC B1132	**Keyless antenna (front passenger's door)**
DETECTION CONDITION	Keyless antenna dose not operated.
POSSIBLE CAUSE	• Keyless antenna (front passenger's door) malfunction • Open or short circuit in wiring harness between keyless control module and keyless antenna • Keyless control module malfunction

KEYLESS ANTENNA HARNESS SIDE CONNECTOR

KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless antenna (front passenger's door) connector. • Inspect the continuity between the following connector terminals. — keyless control module: 1C—keyless antenna: A — keyless control module: 1D—keyless antenna: B • Is there continuity?	Yes	• Replace keyless antenna (front passenger's door). (See 09–14–23 KEYLESS ANTENNA REMOVAL/ INSTALLATION) • Go to next step.
		No	• Repair the wiring harness between the keyless antenna (front passenger's door) and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1132	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

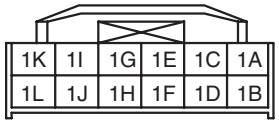
DTC B1127 [ADVANCED KEYLESS SYSTEM]

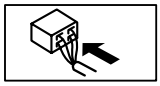
DPE090267000W31

DTC B1127	Keyless antenna (interior, RR)
DETECTION CONDITION	Keyless antenna dose not operated.
POSSIBLE CAUSE	• Keyless antenna (interior, RR) malfunction • Open or short circuit in wiring harness between keyless control module and keyless antenna • Keyless control module malfunction

KEYLESS ANTENNA HARNESS SIDE CONNECTOR

KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless antenna (interior, RR) connector. • Inspect the continuity between the following connector terminals. — keyless control module: 1G—keyless antenna: A — keyless control module: 1H—keyless antenna: B • Is there continuity?	Yes	• Replace keyless antenna (interior, RR). (See 09–14–23 KEYLESS ANTENNA REMOVAL/ INSTALLATION) • Go to next step.
		No	• Repair the wiring harness between the keyless antenna (interior, RR) and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1127	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

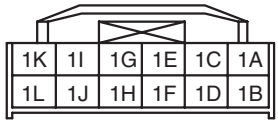
DTC B1128 [ADVANCED KEYLESS SYSTEM]

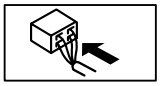
DPE090267000W51

DTC B1128	Keyless antenna (interior, RL)
DETECTION CONDITION	Keyless antenna dose not operated.
POSSIBLE CAUSE	• Keyless antenna (interior, RL) malfunction • Open or short circuit in wiring harness between keyless control module and keyless antenna • Keyless control module malfunction

KEYLESS ANTENNA HARNESS SIDE CONNECTOR

KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless antenna (interior, RL) connector. • Inspect the continuity between the following connector terminals. — keyless control module: 1I—keyless antenna: A — keyless control module: 1J—keyless antenna: B • Is there continuity?	Yes	• Replace keyless antenna (interior, RL). (See 09–14–23 KEYLESS ANTENNA REMOVAL/INSTALLATION) • Go to next step.
		No	• Repair the wiring harness between the keyless antenna (interior, RL) and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1128	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

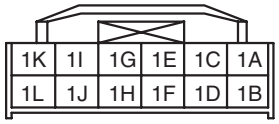
DTC B1131 [ADVANCED KEYLESS SYSTEM]

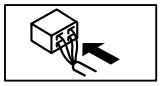
DPE090267000W32

DTC B1131	Keyless antenna (liftgate)
DETECTION CONDITION	Keyless antenna dose not operated.
POSSIBLE CAUSE	• Keyless antenna (liftgate) malfunction • Open or short circuit in wiring harness between keyless control module and keyless antenna • Keyless control module malfunction

KEYLESS ANTENNA HARNESS SIDE CONNECTOR

KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless antenna (liftgate) connector. • Inspect the continuity between the following connector terminals. — keyless control module: 1E—keyless antenna: A — keyless control module: 1F—keyless antenna: B • Is there continuity?	Yes	• Replace keyless antenna (liftgate). (See 09–14–23 KEYLESS ANTENNA REMOVAL/ INSTALLATION) • Go to next step.
		No	• Repair the wiring harness between the keyless antenna (liftgate) and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1131	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

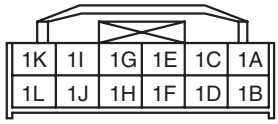
DTC B1129 [ADVANCED KEYLESS SYSTEM]

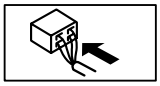
DPE090267000W33

DTC B1129	Keyless antenna (interior, front)
DETECTION CONDITION	Keyless antenna dose not operated.
POSSIBLE CAUSE	• Keyless antenna (interior, front) malfunction • Open or short circuit in wiring harness between keyless control module and keyless antenna • Keyless control module malfunction

KEYLESS ANTENNA HARNESS SIDE CONNECTOR

KEYLESS CONTROL MODULE HARNESS SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module connector and keyless antenna (interior, front) connector. • Inspect the continuity between the following connector terminals. — keyless control module: 1K—keyless antenna: A — keyless control module: 1L—keyless antenna: B • Is there continuity?	Yes	• Replace keyless antenna (interior, front). (See 09–14–23 KEYLESS ANTENNA REMOVAL/ INSTALLATION) • Go to next step.
		No	• Repair the wiring harness between the keyless antenna (interior, front) and keyless control module. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — WDS or equivalent: B1129	Yes	Replace the keyless control module and perform the resetting procedure for the advanced keyless system when replacing the keyless control module. (See 09–14–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–14–20 CARD KEY ID CODE REGISTRATION) (See 09–14–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14–38 SECURITY ACCESS PROCEDURE)
		No	DTC troubleshooting completed.

09–02B ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (ADVANCED KEYLESS ENTRY AND START SYSTEM)]

FOREWORD

DPE090267000W39

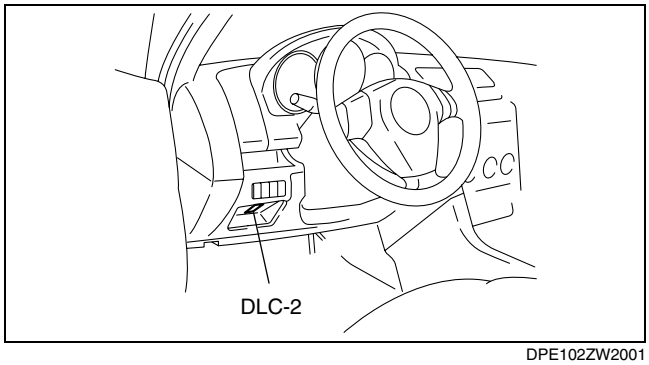
Caution

- **When the engine does not start or stalls and the following DTCs are not indicated, refer to engine symptom troubleshooting. (See 01–03A–7 NO.3 WILL NOT CRANK ~~[L8~~, LF]) ~~(See 01–03B–16 NO.5 WILL NOT CRANK [MZR-CD (RF Turbo)])~~**

Note

- When the immobilizer system is defective, the engine cannot be started.
- If engine condition is normal but security light stays on, inspect for short circuit between security light. Repair or replace the wiring harness if necessary.
- The vehicle may fail to start or a DTC may be stored in the keyless control module and PCM if the following occurs:
  - — If a large, metal object is close to a valid key
  - — If an electrical device is close to a valid key
  - — If two or more valid keys are on the same key ring
- If any malfunction cannot be identified, verify that no metal object or electrical device is on the key ring.
- The security light repeatedly displays a DTC 10 times when the ignition switch is in the ON position.

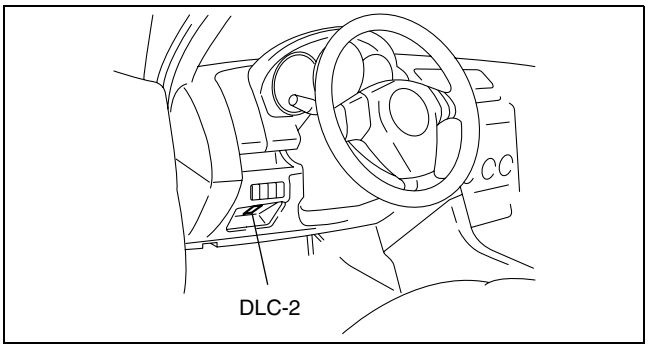
1. Turn the ignition switch to the ON position.
   - If there is any malfunction, the security light flashes rapidly for **approx. 1 minute** and starts displaying a DTC.
   - If there is no malfunction, the security light illuminates for **approx. 3 seconds** and goes off.
2. Verify the security light condition and read the DTC according to security light flashing pattern.
3. Connect the **SST** (WDS or equivalent) to the vehicle DLC-2 16-pin connector.
4. Verify the DTC with the **SST** (WDS or equivalent).
5. If a DTC is indicated, perform on-board diagnostic referring to the DTC table.



DPE102ZW2001

PID/Data Monitor and Record Procedure

1. Connect the **SST** (WDS or equivalent) to the vehicle DLC-2 16-pin connector.
2. Access and monitor PIDs using the **SST** (WDS or equivalent).



DPE102ZW2001

DTC TABLE [IMMOBILIZER SYSTEM (ADVANCED KEYLESS SYSTEM)]

DPE090267000W40

DTC					Description	Page
Security light	Security light flashing pattern	Keyless warning light	WDS or equivalent			
			Keyless control module	PCM		
11		Not illuminated	—	B1681	Communication error between the keyless control module and the PCM.	(See 09–02B–3 SECURITY LIGHT: DTC 11 (WDS OR EQUIVALENT: DTC -/B1681))
		Illuminated	B1681	B1681	Communication error between the keyless control module and the coil antenna.	(See 09–02B–4 SECURITY LIGHT: DTC 11 (WDS OR EQUIVALENT: DTC B1681/B1681))
12		Illuminated	B2103	B2103	Coil Antenna failure.	(See 09–02B–5 SECURITY LIGHT: DTC 12 (WDS OR EQUIVALENT: DTC B2103/B2103))
13		Not illuminated	—	B1600	ID number signal is not received.	(See 09–02B–5 SECURITY LIGHT: DTC 13 (WDS OR EQUIVALENT: DTC -/B1600))
			—	B2431	ID number signal is not received.	(See 09–02B–6 SECURITY LIGHT: DTC 13 (WDS OR EQUIVALENT: DTC -/B2431))
14		Not illuminated	—	B1602	PCM received invalid format of ID number from transponder.	(See 09–02B–7 SECURITY LIGHT: DTC 14 (WDS OR EQUIVALENT: DTC -/B1602))
15		Not illuminated	—	B1601	PCM received incorrect ID number from key (transponder).	(See 09–02B–8 SECURITY LIGHT: DTC 15 (WDS OR EQUIVALENT: DTC -/B1601))
		Illuminated	B1342	B1601	Keyless control module malfunction.	(See 09–02B–8 SECURITY LIGHT: DTC 15 (WDS OR EQUIVALENT: DTC B1342/B1601))
21		Not illuminated	B1213	B1213	Number of valid keys is below minimum. (PCM)	(See 09–02B–9 SECURITY LIGHT: DTC 21 (WDS OR EQUIVALENT: DTC B1213/B1213))

DTC					Description	Page
Security light	Security light flashing pattern	Keyless warning light	WDS or equivalent			
			Keyless control module	PCM		
—	—	Illuminated	B1213	—	Number of valid keys is below minimum. (keyless control module)	(See 09–02B–9 SECURITY LIGHT: DTC 21 (WDS OR EQUIVALENT: DTC B1213/B1213))
—	—	Illuminated	U0073	U0073	CAN system malfunction.	(See 09–02D–1 MULTIPLEX COMMUNICATION SYSTEM)
—	—	Not illuminated	U0323 U0100 U2023	U0323 U0100 U2023	CAN system malfunction.	(See 09–02D–1 MULTIPLEX COMMUNICATION SYSTEM)

Note

- Perform the following if the security light stays on:
  - — If engine stalls, go to symptom troubleshooting NO.11 “ENGINE STALLS/QUITS, ENGINE RUNS ROUGH, MISSES, BUCK/JERK, HESITATION/STUMBLE, SURGES” in. (See 01–03A–28 NO.11 ENGINE STALLS/QUITS, ENGINE RUNS ROUGH, MISSES, BUCK/JERK, HESITATION/STUMBLE, SURGES [~~LC~~, LF].) ~~(See 01–03B–37 NO.13 ENGINE STALLS/QUITS, ENGINE RUNS ROUGH, MISSES, BUCK/JERK, HESITATION/STUMBLE, SURGES [MZR-CD (RF Turbo)].)~~
  - — If engine won’t start, go to symptom troubleshooting NO.6 “CRANKS NORMALLY BUT WILL NOT START” in. (See 01–03A–16 NO.6 CRANKS NORMALLY BUT WILL NOT START [~~LC~~, LF].) ~~(See01–03B–25 NO.8 CRANKS NORMALLY BUT WILL NOT START [MZR-CD (RF Turbo)].)~~

PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM]

DPE090267000W41

PID name (Description)	Unit	Specification	PCM terminal
NUMKEYS (Number of key stored in module)	–	Number of registered keys: 0—8	–

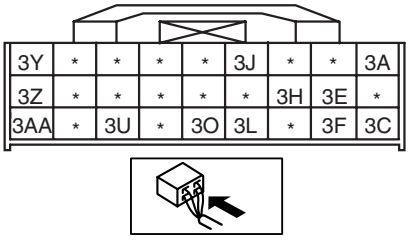
SECURITY LIGHT: DTC 11 (WDS OR EQUIVALENT: DTC -/B1681)

DPE090267000W42

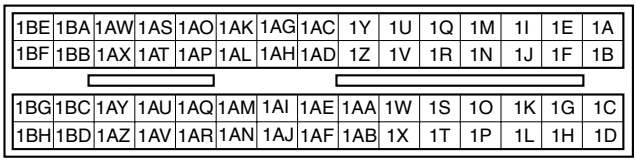
DTC 11 (-/B1681)	Communication error between the keyless control module and the PCM.
POSSIBLE CAUSE	• Defective keyless control module • Defective PCM • Defective wiring harness

DTC 11 (-/B1681)	Communication error between the keyless control module and the PCM.

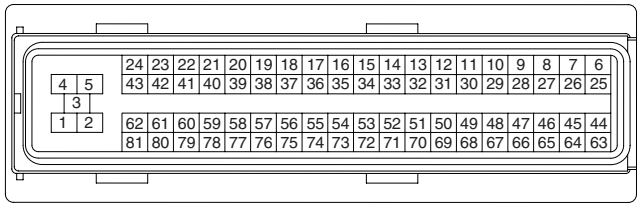
KEYLESS CONTROL MODULE WIRING HARNESS SIDE CONNECTOR



PCM (L8, LF) HARNESS SIDE CONNECTOR



PCM (MZR-CD (RF Turbo)) HARNESS SIDE CONNECTOR



Diagnostic procedure

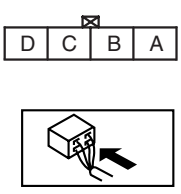
STEP	INSPECTION		ACTION
1	**INSPECT COMMUNICATION CIRCUIT FOR CONTINUITY** • Disconnect keyless control module and PCM connectors. • Is there continuity between the following terminals? **~~L8,~~ LF Engine** — 3A—1AO — 3C—1AS **~~MZR-CD (RF Turbo) Engine~~** ~~— 3A—28~~ ~~— 3C—60~~	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	Repair the wiring harness between the keyless control module and PCM, then go to the next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 11 — WDS or equivalent: -/B1681	Yes	Replace PCM and reprogram immobilizer system.
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 11 (WDS OR EQUIVALENT: DTC B1681/B1681)

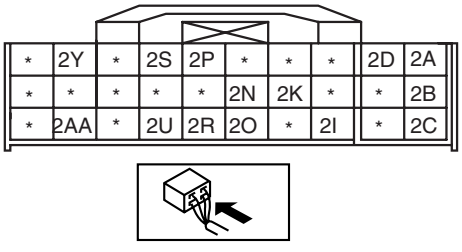
DPE090267000W43

DTC 11 (B1681/B1681)	Communication error between the keyless control module and the coil antenna.
POSSIBLE CAUSE	• Defective coil antenna • Defective keyless control module • Defective wiring harness

COIL ANTENNA
HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE
WIRING HARNESS SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT POWER SUPPLY CIRCUIT OF COIL ANTENNA** • Disconnect coil antenna connector. • Turn ignition switch to ON position. • Measure voltage at terminal D of coil antenna connector. • Is voltage **more than 8 V**?	Yes	Go to next step.
		No	Repair wiring harness.
2	**INSPECT WIRING HARNESS BETWEEN COIL ANTENNA AND GROUND** • Turn ignition switch to LOCK position. • Inspect wiring harness between coil antenna terminal C and ground for following. — Short to power supply — Open circuit • Is wiring harness okay?	Yes	Go to next step.
		No	Repair wiring harness.
3	**INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT** • Connect coil antenna connector. • Turn ignition switch to ON position. • Is there continuity between the following terminals? — 2Y—B — 2AA—A	Yes	Replace coil antenna, then go to the next step. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
		No	Repair wiring harness.
4	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 11 — WDS or equivalent: B1681/B1681	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 12 (WDS OR EQUIVALENT: DTC B2103/B2103)

DPE090267000W44

DTC 12 (B2103/B2103)	**Coil Antenna failure.**
POSSIBLE CAUSE	• Defective coil antenna • Poor connection of coil antenna connector • Defective keyless control module

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT CONNECTOR CONNECTION** • Is connector of coil antenna and keyless control module connected securely?	Yes	Replace coil antenna. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
		No	Connect connector securely.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 12 — WDS or equivalent: B2103/B2103	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 13 (WDS OR EQUIVALENT: DTC -/B1600)

DPE090267000W45

DTC 13 (-/B1600)	**ID number signal is not received.**
POSSIBLE CAUSE	• No transponder in the key • Defective transponder in the key (ID number is not output.) • Defective coil antenna • Defective PCM • Defective keyless control module • Any of the following items are touching or near the key head. — Spare keys — Keys for other vehicles equipped with an immobilizer system — Any metallic object — Any electronic device, or any credit or other cards with magnetic strips

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC USING SST** • Does **SST** (WDS or equivalent) indicate DTC -/B1600?	Yes	Go to Step 3.
		No	Go to the next step.
2	**VERIFY DTC USING SST** • Does **SST** (WDS or equivalent) indicate DTC -/B2431?	Yes	Go to SECURITY LIGHT: DTC 13 (WDS OR EQUIVALENT: -/B2431).
		No	Go to the next step.
3	**VERIFY VALID KEY** • Is there any key, other than the one that caused displayed DTC, which can start the engine?	Yes	Go to Step 5.
		No	Go to the next step.
4	**VERIFY WHETHER MALFUNCTION IS IN COIL ANTENNA OR KEY** • Using **SST** (WDS or equivalent) register an additional key. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) • Using registered key, turn ignition switch to ON position. • Does **SST** (WDS or equivalent) indicate DTC -/B1600 again?	Yes	Replace coil antenna, then go to step 6. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
		No	• Dispose of defective key. • Duplicate key if necessary. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
5	**VERIFY WHETHER MALFUNCTION IS IN COIL ANTENNA OR KEY** • Using any other valid key, turn ignition switch to ON position. • Does **SST** (WDS or equivalent) indicate DTC -/B1600 again?	Yes	Replace coil antenna, then go to next step. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
		No	• Dispose of defective key. • Duplicate key if necessary. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
6	**INSPECT PCM** • Using registered key, turn ignition switch to ON position. • Does **SST** (WDS or equivalent) indicate DTC -/B1600 again?	Yes	Replace PCM and reprogram immobilizer system. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 13 (WDS OR EQUIVALENT: DTC -/B2431)

DPE090267000W46

DTC 13 (-/B2431)	**ID number signal is not received.**
POSSIBLE CAUSE	• The procedure fails to program the transponder into PCM • Any of the following items are touching or near the key head. — Spare keys — Keys for other vehicles equipped with an immobilizer system — Any metallic object — Any electronic device, or any credit or other cards with magnetic strips

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC USING SST** • Does **SST** (WDS or equivalent) indicate DTC -/B2431?	Yes	Go to Step 3.
		No	Go to next step.
2	**VERIFY DTC USING SST** • Does **SST** (WDS or equivalent) indicate DTC -/B1600?	Yes	Go to SECURITY LIGHT: DTC 13 (WDS OR EQUIVALENT: -/B1600).
		No	Go to next step.
3	**INSPECT KEYLESS CONTROL MODULE** • Erase key ID number using **SST** (WDS or equivalent) and register key ID number. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) • Using registered key, turn ignition switch to ON position. • Does **SST** (WDS or equivalent) indicate DTC -/B2431 again?	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	DTC troubleshooting completed.
4	**INSPECT PCM** • Using registered key, turn ignition switch to ON position. • Does **SST** (WDS or equivalent) indicate DTC -/B1600 again?	Yes	Replace PCM and reprogram immobilizer system. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 14 (WDS OR EQUIVALENT: DTC -/B1602)

DPE090267000W47

DTC 14 (-/B1602)	**PCM received invalid format of ID number from transponder.**
POSSIBLE CAUSE	• Defective transponder in the key • Defective coil antenna • Defective PCM • Defective keyless control module • Any of the following items are touching or near the key head. — Spare keys — Keys for other vehicles equipped with an immobilizer system — Any metallic object — Any electronic device, or any credit or other cards with magnetic strips

Diagnostic procedure

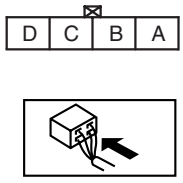
STEP	INSPECTION		ACTION
1	**INSPECT FOR OTHER PROPER KEYS** • Using any other valid key, turn ignition switch to ON position. • If there are no other valid keys, then register an additional key using **SST** (WDS or equivalent) and turn ignition switch to ON position. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) • Does **SST** (WDS or equivalent) indicate DTC -/B1602 again?	Yes	Replace coil antenna, then go to next step. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
		No	• Dispose of defective key. • Duplicate key if necessary. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 14 — WDS or equivalent: -/B1602	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 15 (WDS OR EQUIVALENT: DTC -/B1601)

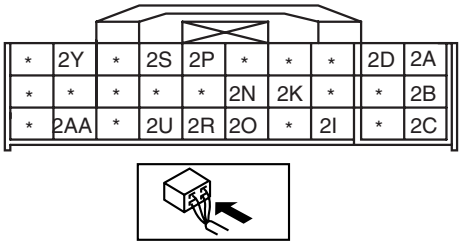
DPE090267000W48

DTC 15 (-/B1601)	**PCM received incorrect ID number from key (transponder).**
POSSIBLE CAUSE	• No keys have been registered after installation of new PCM • Unregistered key detected • Attempt made to register a ninth key **Note** • A maximum of only eight keys can be registered for a single vehicle. • Defective keyless control module • Defective PCM

COIL ANTENNA
HARNESS SIDE CONNECTOR



KEYLESS CONTROL MODULE
WIRING HARNESS SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY REGISTERED KEY IN PCM** • Check following PID/DATA monitor using **SST** (WDS or equivalent). — NUMKEYS • Is NUMKEYS displayed more than 2?	Yes	Go to next step.
		No	Go to Step 3.
2	**VERIFY REGISTERED KEY IN PCM** • Check following PID/DATA monitor using **SST** (WDS or equivalent). — NUMKEYS • Is NUMKEYS displayed more than 8?	Yes	• Erase key ID number using **SST** (WDS or equivalent) and register key ID number. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) • Go to next step.
		No	Go to next step.
3	**INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT** • Connect coil antenna connector. • Turn ignition switch to ON position. • Is there continuity between the following terminals? — 2Y—B — 2AA—A	Yes	Replace coil antenna, then go to the next step. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
		No	Repair wiring harness.
4	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 15 — WDS or equivalent: -/B1601	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 15 (WDS OR EQUIVALENT: DTC B1342/B1601)

DPE090267000W49

DTC 15 (B1342/B1601)	**Keyless control module malfunction.**
POSSIBLE CAUSE	• Defective keyless control module

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 15 — WDS or equivalent: B1342/B1601	Yes	Replace keyless control module, then go to the next step. (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION)
		No	DTC troubleshooting completed.

SECURITY LIGHT: DTC 21 (WDS OR EQUIVALENT: DTC B1213/B1213)

DPE090267000W50

DTC 21 (B1213/B1213)	**Number of valid keys is below minimum.**
POSSIBLE CAUSE	• Less than two valid keys

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY NUMBER OF VALID KEYS** • Check following PID/DATA monitor with **SST** (WDS or equivalent). — NUMKEYS • Is NUMKEYS displayed more than 2? **Note** • To start the engine, two or more keys need to be registered.	Yes	Replace PCM and reprogram immobilizer system. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
		No	• Erase key ID numbers and register necessary key ID numbers. • Go to next step.
2	**INSPECT KEYLESS CONTROL MODULE** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 21 — WDS or equivalent: B1213	Yes	Replace PCM and reprogram immobilizer system. (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM])
		No	DTC troubleshooting completed.

09–02C ON-BOARD DIAGNOSTIC [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

FOREWORD [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

DPE090267000W01

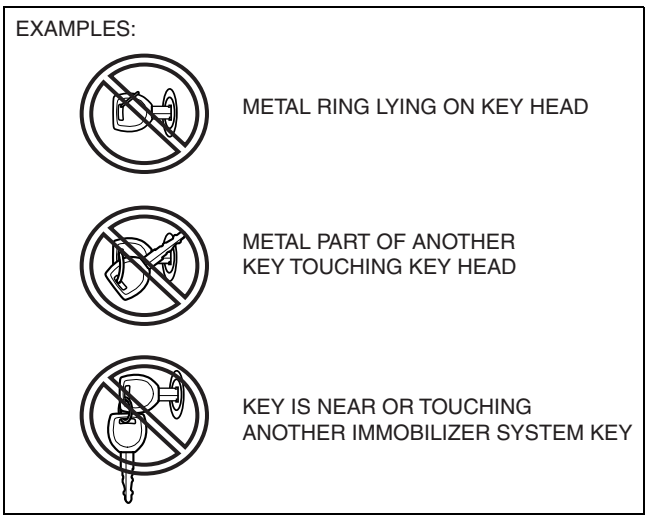
- Malfunction diagnosis occurs automatically when the ignition switch is turned from the LOCK (ACC) to the ON (START) position.
- If the results of the malfunction diagnosis show a malfunction, the security light displays a DTC and the PCM stores the DTC. DTCs stored in the PCM can be verified using the WDS or equivalent.
- DTCs for the immobilizer system that are stored in the PCM are cleared when the ignition switch is turned from the ON to the LOCK (ACC) position.
- There are certain DTCs which can only be verified using the WDS or equivalent, not the security light.
- The PID/data monitor function can be used to verify the number of keys registered for a single vehicle.
- If DTCs are not displayed even though the engine does not start, perform the following symptom troubleshooting:
  — 01–03A–7 NO.3 WILL NOT CRANK [L8, LF]
  ~~01–03B–16 NO.5 WILL NOT CRANK [MZR-CD (RF Turbo)]~~

Caution

- **Always use the WDS or equivalent to verify DTCs even if the DTCs are verified by the security light display. If the security light has a malfunction, it is possible that a DTC may not be properly displayed.**
- **Always use the WDS or equivalent to verify DTCs because there are certain DTCs which cannot be verified using the security light.**
- **If any of the following items are touching or near the key head, signal communication between the key and vehicle is negatively affected, resulting in the engine not starting. Do not start the engine if any of the following items are touching or near the key head.**
  — Any metallic object
  — Spare keys or keys for other vehicles equipped with an immobilizer system

— **Any electronic device, or any credit or other cards with magnetic strips**

Note
- If multiple DTCs are detected as a result of malfunction diagnosis, only the DTC with the lowest number of those detected will be displayed by the security light. The PCM stores multiple DTCs at the same time.
- If two or more immobilizer system DTCs are verified, first repair the part indicated by the security light displayed DTC. After repairing one location, turn the ignition switch from the LOCK to the ON position and perform an immobilizer system malfunction diagnosis.



B3E0914W006

DTC INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

DPE090267000W02

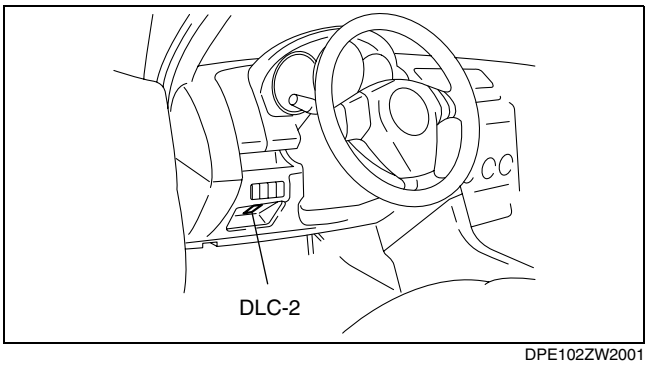
Security Light

1. Turn the ignition switch to the ON position.
2. Verify the security light state.
   - If there is any malfunction:
     — After any malfunction is detected, the security light will function as follows **for approx. 1 min**.
       - DTC 16 and lower: Flashes
       - DTC 21 and higher: Illuminated
   - If there is no malfunction:
     — The security light illuminates **for approx. 3 s** and goes out.
3. When any malfunction has been detected, read DTCs via flashing patterns displayed after the security light flashes or is illuminated **for approx. 1 min**.
   - Perform troubleshooting according to the corresponding DTC inspection.

Note
- A verified DTC is flashed 10 times repeatedly by the security light.
- If multiple DTCs are verified, the security light displays only the smallest DTC.

WDS or Equivalent

1. Connect the WDS or equivalent to the DLC-2.
2. Verify if any DTCs are displayed.
   - If any DTCs are displayed, carry out troubleshooting according to the corresponding DTC inspection.
3. Disconnect the WDS or equivalent.



DPE102ZW2001

DTC TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

DPE090267000W03

DTC				Detection condition	Page
Security light flashing pattern		WDS or equivalent display*			
		Instrument cluster	PCM		
11		B1681	P1260	No detected communication with the coil	09–02C–4 SECURITY LIGHT 11, DTC B1681/ P1260

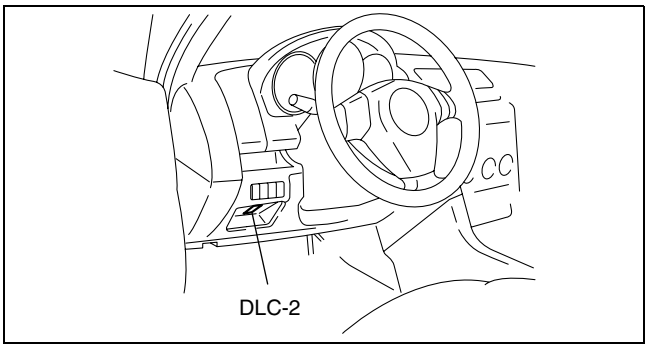
DTC				Detection condition	Page
Security light flashing pattern		WDS or equivalent display*			
		Instrument cluster	PCM		
12		B2103	P1260	• Coil antenna malfunction • The PCM determined a malfunction in the coil antenna even though it is normal.	09–02C–6 SECURITY LIGHT 12, DTC B2103/ P1260
13		B1600	P1260	The key ID number data cannot be read.	09–02C–6 SECURITY LIGHT 13, DTC B1600/ P1260
		B2431	P1260	Key ID number registration error	09–02C–7 SECURITY LIGHT 13, DTC B2431/ P1260
14		B1602	P1260	The instrument cluster cannot read key ID number data normally.	09–02C–8 SECURITY LIGHT 14, DTC B1602/ P1260
15		B1601	P1260	The instrument cluster has detected unregistered key ID number.	09–02C–9 SECURITY LIGHT 15, DTC B1601/ P1260
16		U2510	P1260	Communication error between the instrument cluster and the PCM (no response)	09–02C–10 SECURITY LIGHT 16, DTC U2510/ P1260, U1147/P1260
		U1147	P1260	Communication error between the instrument cluster and the PCM (mismatched conditions)	
21		B1213	P1260	Only one key ID number is registered.	09–02C–11 SECURITY LIGHT 21, DTC B1213/ P1260
22		B2141	P1260	Communication error between the instrument cluster and the PCM (data transfer error)	09–02C–11 SECURITY LIGHT 22, DTC B2141/ P1260
23		B2139	P1260	ID number data in the PCM and the instrument cluster do not match.	09–02C–12 SECURITY LIGHT 23, DTC B2139/ P1260
Not illuminated		B1342	-	Instrument cluster malfunction	09–02C–13 DTC B1342 [IMMOBILIZER SYSTEM]

* : The letters at the beginning of each DTC are only displayed when using the WDS or equivalent, and refer to the following: B= Body system, P= Powertrain system, U= Network communication system.

PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

DPE090267000W04

1. Connect the WDS or equivalent to the DLC-2.
2. Display the PID/data monitor items.
   - Verify a displayed item according to the PID/data monitor table.
3. Disconnect the WDS or equivalent.



DPE102ZW2001

PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)]

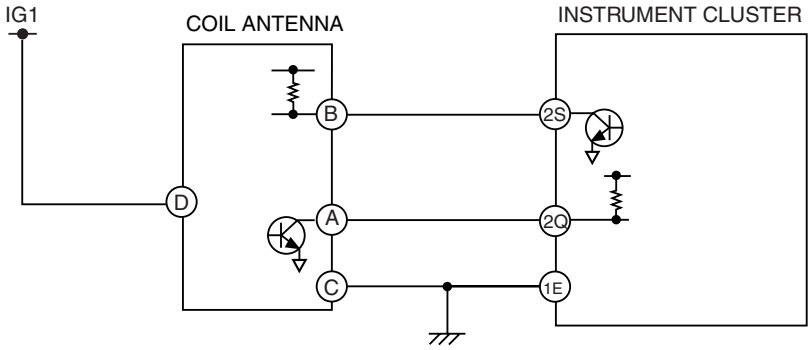
DPE090267000W05

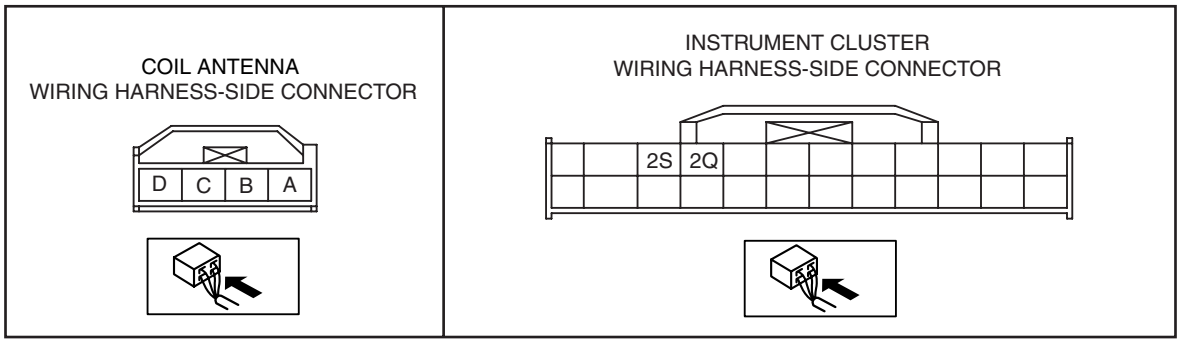
PID name (definition)	Detection condition
NUMKEYS (Number of key ID numbers registered in the instrument cluster)	Number of key ID numbers registered: 0—8

SECURITY LIGHT 11, DTC B1681/P1260

DPE090267000W06

SECURITY LIGHT: 11 **DTC: B1681/P1260**	No detected communication with the coil antenna
DETECTION CONDITION	• No detected communication with the coil antenna
POSSIBLE CAUSE	• Coil antenna malfunction • Instrument cluster malfunction • Malfunction in the related wiring harnesses





Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**INSPECT COIL ANTENNA POWER SUPPLY SYSTEM** • Disconnect the coil antenna connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal D. — Is the voltage **8 V or more**?	Yes	Go to the next step.
		No	Repair the wiring harness.

STEP	INSPECTION		ACTION
2	**INSPECT WIRING HARNESS BETWEEN COIL ANTENNA AND GROUND** • Turn the ignition switch to the LOCK position. • Inspect the wiring harness between coil antenna terminal C and ground for the following: — Short to power supply — Open circuit • Is the wiring harness normal?	Yes	Go to the next step.
		No	Repair the wiring harness.
3	**INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT** • Connect the coil antenna connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal B. — Is the voltage **8 V or more**?	Yes	Go to Step 7.
		No	Go to the next step.
4	**INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT** • Turn the ignition switch to the LOCK position. • Disconnect the instrument cluster connector. • Turn the ignition switch to the ON position. • Measure the voltage at instrument cluster terminal 2S. — Is the voltage **8 V or more**?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	Go to the next step.
5	**INSPECT COMMUNICATION CIRCUIT (INPUT) FOR CONTINUITY** • Turn the ignition switch to the LOCK position. • Is there continuity between coil antenna terminal B and instrument cluster terminal 2S?	Yes	Go to the next step.
		No	Repair the wiring harness.
6	**INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT** • Measure the resistance between coil antenna terminal B and ground. — Is the resistance **10 kilohms or more**?	Yes	Replace the coil antenna. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	Repair the wiring harness.
7	**INSPECT COIL ANTENNA OUTPUT SIGNAL CIRCUIT** • Connect the coil antenna connector and the instrument cluster connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal A. — Is the voltage **8 V or more**?	Yes	Replace the coil antenna. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	Go to the next step.
8	**INSPECT COIL ANTENNA OUTPUT SIGNAL CIRCUIT** • Turn the ignition switch to the LOCK position. • Disconnect the coil antenna connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal A. — Is the voltage **8 V or more**?	Yes	Replace the coil antenna. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	Go to the next step.
9	**INSPECT COMMUNICATION CIRCUIT (OUTPUT) FOR CONTINUITY** • Turn the ignition switch to the LOCK position. • Disconnect the instrument cluster connector. • Is there continuity between coil antenna terminal A and instrument cluster terminal 2Q?	Yes	Repair the wiring harness.
		No	Go to the next step.
10	**INSPECT COIL ANTENNA OUTPUT SIGNAL CIRCUIT** • Measure the resistance between instrument cluster terminal 2Q and ground. — Is the resistance **10 kilohms or more**?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	Repair the wiring harness.

SECURITY LIGHT 12, DTC B2103/P1260

DPE090267000W07

SECURITY LIGHT: 12 **DTC: B2103/P1260**	• Coil antenna malfunction • The PCM determined a malfunction in the coil antenna even though it is normal.
DETECTION CONDITION	• Coil antenna malfunction • The PCM determined a malfunction in the coil antenna even though it is normal.
POSSIBLE CAUSE	• Coil antenna malfunction • Poor connection of the coil antenna connector • PCM malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**INSPECT CONNECTOR CONNECTION** • Are the coil antenna connector and the instrument cluster connector securely connected?	Yes	Replace the coil antenna, then go to the next step. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	Connect the connector securely.
2	**INSPECT PCM** • Turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 12 — WDS or equivalent: B2103/P1260	Yes	Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See 01–40A–5 PCM REMOVAL/INSTALLATION [L8, LF].) ~~(See 01–40B–6 PCM REMOVAL/INSTALLATION [MZR-CD (RF Turbo)].)~~ (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 13, DTC B1600/P1260

DPE090267000W08

SECURITY LIGHT: 13 **DTC: B1600/P1260**	The key ID number data cannot be read.
DETECTION CONDITION	• The key ID number data cannot be read.
POSSIBLE CAUSE	• No transponder in the key • Transponder malfunction (Key ID number is not output) • Coil antenna malfunction • Instrument cluster malfunction • Any of the following items are touching or near the key head. — Spare keys — Keys for other vehicles equipped with an immobilizer system — Any metallic object — Any electronic device, or any credit or other cards with magnetic strips EXAMPLES:  METAL RING LYING ON KEY HEAD  METAL PART OF ANOTHER KEY TOUCHING KEY HEAD  KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC** • Is B1600/P1260 displayed?	Yes	Go to Step 3.
		No	Go to the next step.
2	**VERIFY DTC** • Is B2431/P1260 displayed?	Yes	Perform the DTC inspection for "SECURITY LIGHT: 13, WDS or equivalent: B2431/P1260". (See 09–02C–7 SECURITY LIGHT 13, DTC B2431/P1260.)
		No	Go to the next step.
3	**VERIFY WHETHER KEY IS VALID OR NOT** • Are there any keys with which the engine can be started, other than the key that is a cause of the displayed DTC?	Yes	Go to Step 5.
		No	Go to the next step.
4	**VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA** • Using the WDS or equivalent, register an additional key. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Using the registered key, turn the ignition switch to the ON position. • Verify the DTC using the WDS or equivalent. — Is B1600/P1260 displayed again?	Yes	Replace the coil antenna, then go to Step 6. (See 09–14B–6 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	• Dispose of the malfunctioning key. • Register a new key if necessary. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
5	**VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA** • Using another valid key, turn the ignition switch to the ON position. • Verify the DTC Using the WDS or equivalent. — Is B1600/P1260 displayed again?	Yes	Replace the coil antenna, then go to the next step. (See 09–14B–6 COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	• Dispose of the malfunctioning key. • Register a new key if necessary. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
6	**INSPECT INSTRUMENT CLUSTER** • Using the registered key, turn the ignition switch to the ON position. — Is B1600/P1260 displayed again?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 13, DTC B2431/P1260

DPE090267000W09

SECURITY LIGHT: 13 **DTC: B2431/P1260**	Key ID number registration error
DETECTION CONDITION	• Key ID number registration error

POSSIBLE CAUSE	• Errors during key ID number registration procedure • Any of the following items are touching or near the key head. — Spare keys — Keys for other vehicles equipped with an immobilizer system — Any metallic object — Any electronic device, or any credit or other cards with magnetic strips EXAMPLES:  METAL RING LYING ON KEY HEAD  METAL PART OF ANOTHER KEY TOUCHING KEY HEAD  KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC** • Is B2431/P1260 displayed?	Yes	Go to Step 3.
		No	Go to the next step.
2	**VERIFY DTC** • Is B1600/P1260 displayed?	Yes	Perform the DTC inspection for “SECURITY LIGHT: 13, WDS or equivalent: B1600/P1260”. (See 09–02C–6 SECURITY LIGHT 13, DTC B1600/P1260.)
		No	Go to the next step.
3	**INSPECT INSTRUMENT CLUSTER** • Using the WDS or equivalent, clear the key ID number and re-register it. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) **Note** • Two or more keys must be registered to start the engine. • Using the registered key, turn the ignition switch to the ON position. • Verify the DTC Using the WDS or equivalent. — Is B2431/P1260 displayed again?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 14, DTC B1602/P1260

DPE090267000W10

SECURITY LIGHT: 14 **DTC: B1602/P1260**	The instrument cluster cannot read key ID number data normally.
DETECTION CONDITION	• The instrument cluster cannot read key ID number data normally.

POSSIBLE CAUSE	• Transponder (key) malfunction • Coil antenna malfunction • Instrument cluster malfunction • Any of the following items are touching or near the key head. — Spare keys — Keys for other vehicles equipped with an immobilizer system — Any metallic object — Any electronic device, or any credit or other cards with magnetic strips EXAMPLES:  METAL RING LYING ON KEY HEAD  METAL PART OF ANOTHER KEY TOUCHING KEY HEAD  KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY WHETHER KEY IS VALID OR NOT** • Using another registered key, turn the ignition switch to the ON position. • If there is not another registered key, register an additional key using the WDS or equivalent and turn the ignition key to the ON position using the registered key. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Is the DTC displayed again? — Security light: 14 — WDS or equivalent: B1602/P1260	Yes	Replace the coil antenna, then go to the next step. (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM].)
		No	• Dispose of the malfunctioning key. • Register a new key if necessary. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
2	**INSPECT INSTRUMENT CLUSTER** • Using another registered key, turn the ignition switch to the ON position. • Is the DTC displayed again? — Security light: 14 — WDS or equivalent: B1602/P1260	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 15, DTC B1601/P1260

DPE090267000W11

SECURITY LIGHT: 15 **DTC: B1601/P1260**	The instrument cluster has detected unregistered key ID number.
DETECTION CONDITION	• The instrument cluster has detected unregistered key ID number.
POSSIBLE CAUSE	• No keys have been registered after replacing the instrument cluster. • Unregistered key used • Attempt made to register a ninth key • Instrument cluster malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY NUMBER OF REGISTERED KEYS** • Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See 09–02C–4 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) • Are one or more keys registered?	Yes	Go to the next step.
		No	Go to Step 3.
2	**VERIFY NUMBER OF REGISTERED KEYS** • Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See 09–02C–4 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) • Are eight keys registered?	Yes	Using the WDS or equivalent, clear the key ID numbers as necessary, then go to the next step.
		No	Go to the next step.
3	**INSPECT INSTRUMENT CLUSTER** • Using the WDS or equivalent, register the key ID number. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) **Note** • Two or more keys must be registered to start the engine. • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed again? — Security light: 15 — WDS or equivalent: B1601/P1260	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 16, DTC U2510/P1260, U1147/P1260

DPE090267000W12

SECURITY LIGHT: 16	**DTC: U2510/P1260**	Communication error between the instrument cluster and the PCM (no response)
	DTC: U1147/P1260	Communication error between the instrument cluster and the PCM (mismatched conditions)
DETECTION CONDITION		**Instrument cluster DTC: U2510** • Communication error between the instrument cluster and the PCM (no response) **Instrument cluster DTC: U1147** • Communication error between the instrument cluster and the PCM (mismatched conditions)
POSSIBLE CAUSE		• Malfunction in the wiring harness (CAN line) between the instrument cluster and the PCM • PCM malfunction • Instrument cluster malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC** • Are either U1900 or U0073, or both, displayed, by either the instrument cluster or the PCM, or both?	Yes	Perform troubleshooting according to the corresponding DTC inspection. (See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)
		No	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) Go to the next step.

STEP	INSPECTION		ACTION
2	**VERIFY DTC** • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 16 — WDS or equivalent: U2510 or U1147/P1260	Yes	Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See 01–40A–5 PCM REMOVAL/INSTALLATION [L8, LF].) ~~(See 01–40B–6 PCM REMOVAL/INSTALLATION [MZR-CD (RF Turbo)].)~~ (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 21, DTC B1213/P1260

DPE090267000W13

SECURITY LIGHT: 21 **DTC: B1213/P1260**	Only one key ID number is registered.
DETECTION CONDITION	• Only one key is registered.
POSSIBLE CAUSE	• Only one registered key

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY NUMBER OF REGISTERED KEYS** • Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See 09–02C–4 PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM (KEYLESS ENTRY SYSTEM)].) • Are two or more keys registered?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	• Using the WDS or equivalent, clear the key ID number and register a new key if necessary. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Go to the next step.
2	**VERIFY DTC** • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed again? — Security light: 21 — WDS or equivalent: B1213/P1260	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 22, DTC B2141/P1260

DPE090267000W14

SECURITY LIGHT: 22 **DTC: B1241/P1260**	Communication error between the instrument cluster and the PCM (data transfer error)
DETECTION CONDITION	• Communication error between the instrument cluster and the PCM (data transfer error)
POSSIBLE CAUSE	• Malfunction in the wiring harness (CAN line) between the instrument cluster and the PCM • Instrument cluster malfunction • PCM malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC** • Are either U1900 or U0073, or both displayed, by either the instrument cluster or the PCM, or both?	Yes	Perform troubleshooting according to the corresponding DTC inspection. (See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)
		No	Go to the next step.

STEP	INSPECTION		ACTION
2	**VERIFY DTC** • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 22 — WDS or equivalent: B2141/P1260	Yes	• Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Go to the next step.
		No	DTC troubleshooting completed.
3	**EXAMINE INSTRUMENT CLUSTER AND PCM** • Is the DTC displayed again? — Security light: 22 — WDS or equivalent: B2141/P1260	Yes	• Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Go to the next step.
		No	DTC troubleshooting completed.
4	**EXAMINE PCM** • Is the DTC displayed again? — Security light: 22 — WDS or equivalent: B2141/P1260	Yes	• Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See 01–40A–5 PCM REMOVAL/INSTALLATION ~~[L8,~~ LF].) ~~(See 01–40B–6 PCM REMOVAL/INSTALLATION [MZR-CD (RF Turbo)].)~~ (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

SECURITY LIGHT 23, DTC B2139/P1260

DPE090267000W15

SECURITY LIGHT: 23 **DTC: B2139/P1260**	ID number data in the PCM and the instrument cluster do not match.
DETECTION CONDITION	• ID number data in the instrument cluster and the PCM are different.
POSSIBLE CAUSE	• Necessary procedures were not performed using the WDS or equivalent after replacing the PCM. • Instrument cluster malfunction • PCM malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY DTC** • Are either U1900 or U0073, or both, displayed, by either the instrument cluster or the PCM, or both?	Yes	Perform troubleshooting according to the corresponding DTC inspection. (See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)
		No	Go to the next step.
2	**EXAMINE INSTRUMENT CLUSTER AND PCM** • Perform procedures for when replacing the PCM only. (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed? — Security light: 23 — WDS or equivalent: B2139/P1260	Yes	• Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].) • Go to the next step.
		No	DTC troubleshooting completed.

STEP	INSPECTION		ACTION
3	**VERIFY DTC** • Is the DTC displayed again? — Security light: 23 — WDS or equivalent: B2139/P1260	Yes	• Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See 01–40A–5 PCM REMOVAL/INSTALLATION [L8, LF].) (See 01–40B–6 PCM REMOVAL/INSTALLATION [MZR-CD (RF Turbo)].) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

DTC B1342 [IMMOBILIZER SYSTEM]

DPE090267000W16

DTC: B1342	Instrument cluster malfunction
DETECTION CONDITION	• Instrument cluster malfunction
POSSIBLE CAUSE	• Instrument cluster malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**EXAMINE INSTRUMENT CLUSTER AND PCM** • Is the DTC displayed? — WDS or equivalent: B1342	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.

09–02D ON-BOARD DIAGNOSTIC [MULTIPLEX COMMUNICATION SYSTEM]

MULTIPLEX COMMUNICATION SYSTEM

DPE090255430W05

Outline

- If the controller area network (CAN) system is malfunctioning, read the DTCs of the following modules, using the WDS or equivalent to determine the malfunctioning system.
  - — PCM
  - — EHPAS control module
  - — ~~DSC HU/CM (with DSC)~~
  - — ABS HU/CM (with ABS)
  - — Rear view monitor control module
  - — Keyless control module
  - — Instrument cluster
  - — Climate control unit
  - — Information display
  - — Audio unit (base module)
  - — ~~Water heater unit~~
  - — BCM

Flowchart

- Use the following flowchart to verify the cause of the trouble.

STEP	INSPECTION		ACTION
1	**INSPECT DTC INDICATION** • Using the WDS or equivalent, inspect if DTCs are displayed for the following module: — PCM — EHPAS control module — ~~DSC HU/CM or~~ ABS HU/CM — Keyless control module — Instrument cluster — Climate control unit — Information display — Audio unit — ~~Water heater unit~~ — BCM • Are any DTCs displayed?	Yes	Go to the next step.
		No	Go to Step 5.

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STEP	INSPECTION		ACTION
2	**INSPECT CAN SYSTEM-RELATED DTC** • Are any DTCs other than the following displayed? — U0073 — U0100 — U0121 — U0131 — U0140 — U0155 — U0164 — U0181 — U0184 — U0323 — U0516 — U1900 — U2012 — U2023 — ~~U2202~~ — U2516 — 16:Er12 — 17:Er11 — 18:Er11 — 19:Er11	Yes	Repair the malfunctioning part by following the related DTC inspection. Go to the next step.
		No	Go to the next step.
3	**INSPECT CAN SYSTEM-RELATED DTC** • Are any of the following DTCs displayed? — PCM: U0073, U0121, U0155 — EHPAS control module: U0073, U0100, U2023 — ~~DSC HU/CM or~~ ABS HU/CM: U1900, U2012, U2023,~~U2202~~ — Keyless control module: U0073, U0100, U0140,U0323 — Instrument cluster: U0073, U0100, U0121, U0131, U0140, U0184, U2516 — Climate control unit: U0140, U0155, U0184, U0516 — Information display: U0164, U0181, U0184, U2516 — ~~Water heater unit: U1900, U2516~~ — Audio unit: 16:Er12, 17:Er11, 18:Er11, 19:Er11 — BCM: U0073, U0100, U0155, U0164	Yes	Repair the malfunctioning part by following the DTC inspection. Go to the next step.
		No	Troubleshooting completed.
4	**VERIFY TROUBLESHOOTING COMPLETED** • Clear the DTC from the CAN system-related modules using the WDS or equivalent. • Start the engine. • Are any of the CAN related DTCs displayed?	Yes	Go back to Step 3.
		No	Troubleshooting completed.
5	**INSPECT COMMUNICATION CONDITION** • Is there a response from the following modules? — PCM — EHPAS control module — ~~DSC HU/CM or~~ ABS HU/CM — Keyless control module — Instrument cluster — Climate control unit — ~~Water heater unit~~ — BCM	Yes	Troubleshooting completed.
		No	Go to the next step.
6	**INSPECT MODULES THAT DO NOT RESPOND** • Inspect the power supply and the ground circuit for any units that do not respond. • Are they normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part, then go back to Step 1.

STEP	INSPECTION		ACTION
7	**INSPECT CONNECTOR AND WIRING HARNESS BETWEEN MODULES THAT DO NOT RESPOND AND DLC-2** • Turn the ignition switch to the LOCK position. • Inspect the wiring harness and connector between any module that does not respond and the DLC-2. **PCM (L8, LF)—DLC-2** • 1AM—F • 1AI—E ~~**PCM (MZR-CD (RF Turbo))—DLC-2**~~ ~~• 95—F~~ ~~• 87—E~~ **EHPAS control module—DLC-2** • 2B—F • 2H—E ~~**DSC HU/CM—DLC-2**~~ ~~• P—F~~ ~~• D—E~~ **ABS HU/CM—DLC-2** • H—F • L—E ~~**Rear view monitor control module—DLC-2**~~ ~~• O—F~~ ~~• M—E~~ **Keyless control module—DLC-2** • 3AA—F • 3Z—E **Instrument cluster—DLC-2** • 1I—F • 1K—E • 1M—L • 1O—K **Climate control unit—DLC-2** • X—L • W—K **Information display—DLC-2** • J—L • L—K **Audio unit—DLC-2** • 1O—L • 1Q—K ~~**Water heater unit—DLC-2**~~ ~~• F—L~~ ~~• B—K~~ **BCM—DLC-2** • 3D—L • 3G—K • Is there any malfunction?	Yes	Repair the malfunctioning part, then go back to Step 1.
		No	Go to the next step.
8	**INSPECT WIRING HARNESS** • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between the following terminals. — DLC-2 terminals F and E — DLC-2 terminals L and K • Is the voltage **2.0—3.0 V**?	Yes	Go to the next step.
		No	Go to Step 13.
9	**INSPECT WIRING HARNESS** • Turn the ignition switch to the LOCK position. • Measure the resistance between the following terminals. — DLC-2 terminals F and E — DLC-2 terminals L and K • Is the resistance **59—65 ohms**?	Yes	Replace the modules that do not respond, then go back to Step 1.
		No	Go to the next step.

STEP	INSPECTION		ACTION
10	**INSPECT PCM** • Disconnect the PCM connector. • Measure the resistance between following terminals. — PCM terminals 1AM and 1AI ~~(L8, LF)~~ (part-side) ~~— PCM terminals 95 and 87 (MZR-CD (RF Turbo)) (part-side)~~ • Is the resistance **118—130 ohms**?	Yes	Go to the next step.
		No	Replace the PCM, then go to the next step.
11	**INSPECT INSTRUMENT CLUSTER** • Disconnect the instrument cluster connector. • Measure the resistance between the following terminals. — Instrument cluster terminals 1I and 1K (part-side) — Instrument cluster terminals 1M and 1O (part-side) • Is the resistance **118—130 ohms**?	Yes	Go to next step.
		No	Replace the instrument cluster, then go to the next step.
12	**INSPECT BCM** • Disconnect the BCM connector. • Measure the resistance between the following terminals. — BCM terminal 3D and 3G (part-side) • Is the resistance **118—130 ohms**?	Yes	Go to next step.
		No	Replace the BCM, then go to the next step.
13	**CLASSIFY WIRING HARNESS MALFUNCTION OR MODULE MALFUNCTION** • Turn the ignition switch to the LOCK position. • Disconnect the connector of any unit that does not respond. (If there are two or more units that do not respond, disconnect only one of the units.) • Turn the ignition switch to the ON position. • Measure the voltage between the following terminals. — DLC-2 terminals F and E — DLC-2 terminals L and K • Is voltage **2.0—3.0 V**?	Yes	Go to the next step.
		No	Retry this step with other module connector disconnected. If all units that do not respond are disconnected, go to Step 15.

STEP	INSPECTION		ACTION
14	**INSPECT WIRING HARNESS OF ANY UNIT THAT DOES NOT RESPOND** • Turn the ignition switch to the LOCK position. • Inspect for continuity between the following connector terminals of any disconnected unit. **PCM (~~L6, LF~~)** • 1AM—other terminals • 1AI—other terminals **~~PCM (MZR-CD (RF Turbo))~~** • ~~95—other terminals~~ • ~~87—other terminals~~ **EHPAS control module** • 2B—other terminals • 2H—other terminals **~~DSC HU/CM~~** • ~~P—other terminals~~ • ~~D—other terminals~~ **ABS HU/CM** • H—other terminals • L—other terminals **~~Rear view monitor control module~~** • ~~C—other terminals~~ • ~~M—other terminals~~ **Keyless control module** • 3AA—other terminals • 3Z—other terminals **Instrument cluster** • 1I—other terminals • 1K—other terminals • 1M—other terminals • 1O—other terminals **Climate control unit** • X—other terminals • W—other terminals **Information display** • J—other terminals • L—other terminals **Audio unit** • 1O—other terminals • 1Q—other terminals **~~Water heater unit~~** • ~~F—other terminals~~ • ~~D—other terminals~~ **BCM** • 3D—other terminals • 3G—other terminals Is there continuity?	Yes	Repair or replace the wiring harness, then go back to Step 1.
		No	Replace the disconnected unit, then go back to Step 1.
15	**INSPECT CAN RELATED WIRING HARNESS** • Inspect the related wiring harnesses (CAN_L and/or CAN_H) for the short circuit (to power supply or ground). • Is the wiring harness normal?	Yes	Repair or replace the wiring harness, then go back to Step 1.
		No	Go back to Step 1.

DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM]

DPE090255430W06

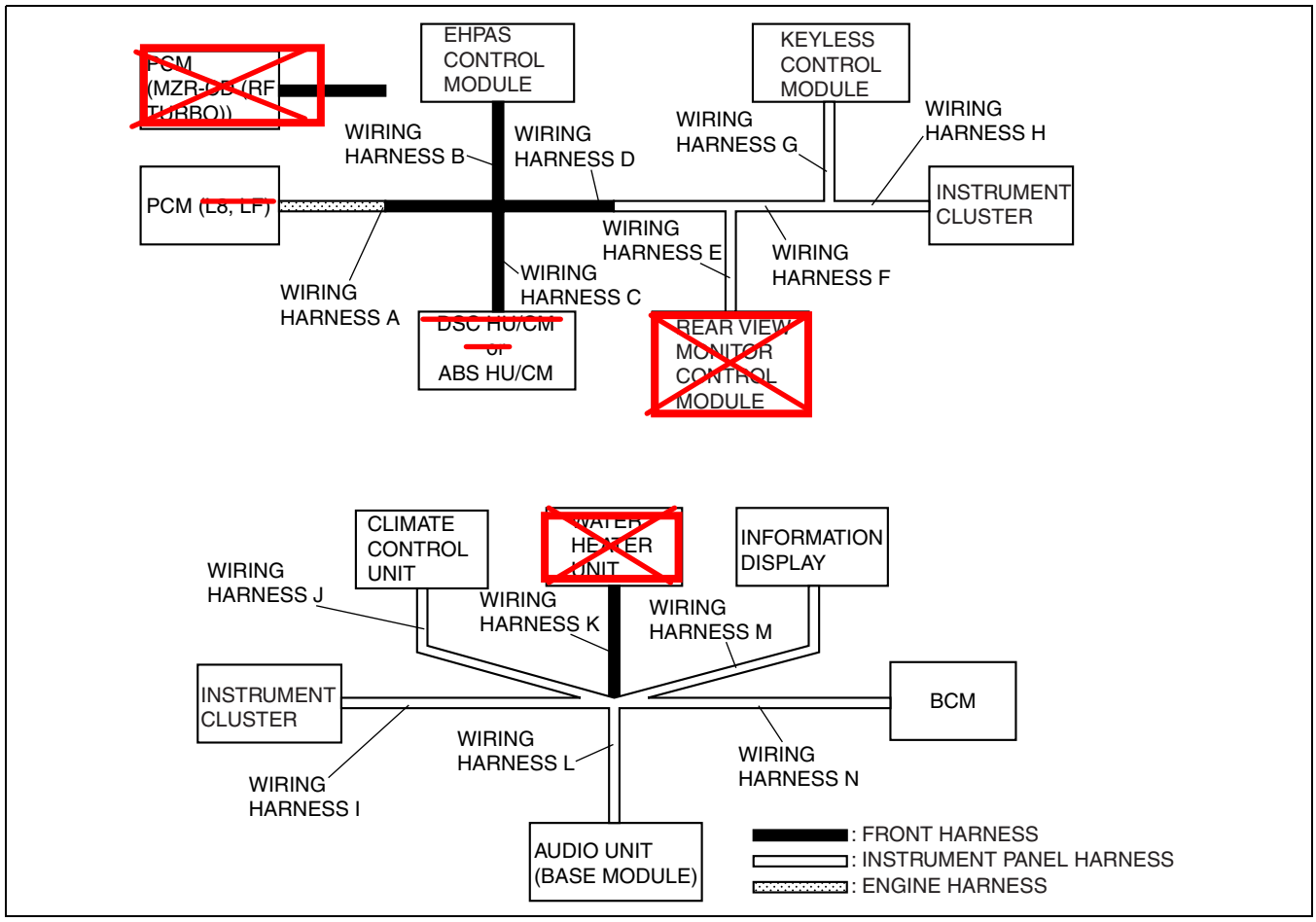
DTC	Malfunction location	DTC output module	Page
U0073	CAN system communication error	• PCM • EHPAS control module • Keyless control module • Instrument cluster	(See 09–02D–11 DTC U0073, U2012.)
		BCM	(See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)

DTC	Malfunction location	DTC output module	Page
U0100	Communication error to PCM	• EHPAS control module • Keyless control module • Instrument cluster • BCM	(See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
U0121	Communication error to DSC HU/CM or ABS HU/CM	• PCM • Instrument cluster	
U0131	Communication error to EHPAS control module	Instrument cluster	
U0140	Communication error to BCM	• Keyless control module • Instrument cluster • Climate control unit	
U0155	Communication error to instrument cluster	• PCM • Climate control unit • BCM	
U0164	Communication error to climate control unit	• BCM • Information display	
U0181	Communication error to instrument cluster	Information display	
U0184	Communication error to audio unit (base module)	• Instrument cluster • Climate control unit • Information display	
U0323	Communication error to instrument cluster	• Keyless control module	
U0516	CAN system communication error	• Climate control unit	(See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)
U1900	Communication error to instrument cluster	• ABS HU/CM (with ABS) • DSC HU/CM (with DSC)	(See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
	Communication error to other module	Water heater unit	
U2012	CAN system communication error	• ABS HU/CM (with ABS) • DSC HU/CM (with DSC)	(See 09–02D–11 DTC U0073, U2012.)
U2023	Abnormal message from PCM	• DSC HU/CM (with DSC) • EHPAS control module • Keyless control module	(See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
U2202	Communication error to PCM	DSC HU/CM (with DSC)	(See 09–02D–13 DTC U2202.) (See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
U2516	CAN system communication error	• Instrument cluster • Information display • Water heater unit	(See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)
16:Er12	CAN system communication error	Audio unit (base module)	(See 09–02D–12 DTC U0073, U0516, U2516, 16:Er12.)
17:Er11	Communication error to instrument cluster		(See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
18:Er11	Communication error to BCM		
19:Er11	Communication error to climate control unit		

PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION

DPE090255430W07

System Wiring Diagram



DPE902AW1001

PCM

1. Inspect the display of DTC U0121 and/or U0155, using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status		Malfunction location
	~~DSC HU/CM or~~ ABS HU/CM	Instrument cluster	
PCM	—	—	• Wiring harness A • PCM
	×	—	• Wiring harness D • Wiring harness E • Wiring harness F • Wiring harness H • Instrument cluster
	—	×	• Wiring harness C • DSC HU/CM or ABS HU/CM

EHPAS Control Module

1. Inspect the display of DTC U0100 and/or U2023, using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

—: Communication error

Module	Communication status	Malfunction location
	PCM	
EHPAS control module	—	• Wiring harness A • Wiring harness B • EHPAS control module • PCM

~~DSC HU/CM or~~ ABS HU/CM

1. Inspect the display of DTC U1900~~, U2023 (with DSC), U2202 (with DSC) and/or~~, using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status		Malfunction location
	PCM	Instrument cluster	
~~DSC HU/CM or~~ ABS HU/CM	—	—	• Wiring harness C • ~~DSC HU/CM or~~ ABS HU/CM
	×	—	• Wiring harness D • Wiring harness F • Wiring harness H • Instrument cluster
	—	×	• Wiring harness A • PCM

Keyless control Module

1. Inspect the display of DTC U0100, U0140, U0323 and/or U2023 using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status		Malfunction location
	PCM	Instrument cluster	
Keyless control module	—	—	• Wiring harness G • Keyless control module
	×	—	• Wiring harness H • Instrument cluster
	—	×	• Wiring harness A • Wiring harness D • Wiring harness F • PCM

Instrument Cluster

1. Inspect the display of DTC U0100, U0121 and/or U0131, using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

—: Communication error

Module	Communication status			Malfunction location
	PCM	DSC HU/CM or ABS HU/CM	EHPAS control module	
Instrument cluster	—	—	—	• Wiring harness D • Wiring harness F • Wiring harness H • Instrument cluster
	—	×	×	• Wiring harness A • PCM
	×	—	×	• Wiring harness C • DSC HU/CM or ABS HU/CM
	×	×	—	• Wiring harness B • EHPAS control module

3. Inspect the display of DTC U0140 and/or U0184, using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
4. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status		Malfunction location
	BCM	Audio unit (base module)	
Instrument cluster	—	—	• Wiring harness I • Instrument cluster
	—	×	• Wiring harness N • BCM
	×	—	• Wiring harness L • Audio unit (base module)

Climate Control Unit

1. Inspect the display of DTC U0140, U0155 and/or U0184, using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Access and monitor the "FFH_MSG" of PID using the WDS or equivalent.
3. Referring to the PID/DATA MONITOR, confirm the display status of the PID.
4. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status				Malfunction location
	BCM	Audio unit (base module)	Water heater unit	Instrument cluster	
Climate control unit	—	—	—	—	• Wiring harness J • Climate control unit
	—	×	×	×	• Wiring harness N • BCM
	×	—	×	×	• Wiring harness L • Audio unit (base module)
	×	×		×	• Wiring harness K • Water heater unit
	×	×	×	—	• Wiring harness I • Instrument cluster

Information display

1. Inspect the display of DTC U0164, U0181 and/or U0184 using the input/output check mode. (See 09–22–14 INFORMATION DISPLAY INPUT/OUTPUT CHECK MODE.)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

—: Communication error

Module	Communication status			Malfunction location
	Climate control unit	Audio unit (base module)	Instrument cluster	
Information display	—	—	—	• Wiring harness M • Information display
	—	×	×	• Wiring harness J • Climate control unit
	×	—	×	• Wiring harness L • Audio unit (base module)
	×	×	—	• Wiring harness I • Instrument cluster

Audio unit (Base module)

1. Inspect the display of DTC 17:Er11, 18:Er11 and/or 19:Er11 using the on-board diagnostic test mode.
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status			Malfunction location
	BCM	Climate control unit	Instrument cluster	
Audio unit (base module)	—	—	—	• Wiring harness L • Audio unit (base module)
	—	×	×	• Wiring harness N • BCM
	×	—	×	• Wiring harness J • Climate control unit
	×	×	—	• Wiring harness I • Instrument cluster

Water Heater unit

1. Inspect the display of DTC U1900 using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunction part of the CAN system.

×: Normal
—: Communication error

Module	Communication status		Malfunction location
	BCM	Instrument cluster	
Water heater unit	—	—	• Wiring harness K • Water heater unit
	—	×	• Wiring harness N • BCM
	×	—	• Wiring harness I • Instrument cluster

BCM

1. Inspect the display of DTC U0100, 0155 and/or U0164 using the WDS or equivalent. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal
—: Communication error

Module	Communication status		Malfunction location
	Climate control unit	Instrument cluster	
BCM	—	—	• Wiring harness N • BCM
	—	×	• Wiring harness J • Water heater unit
	×	—	• Wiring harness I • Instrument cluster

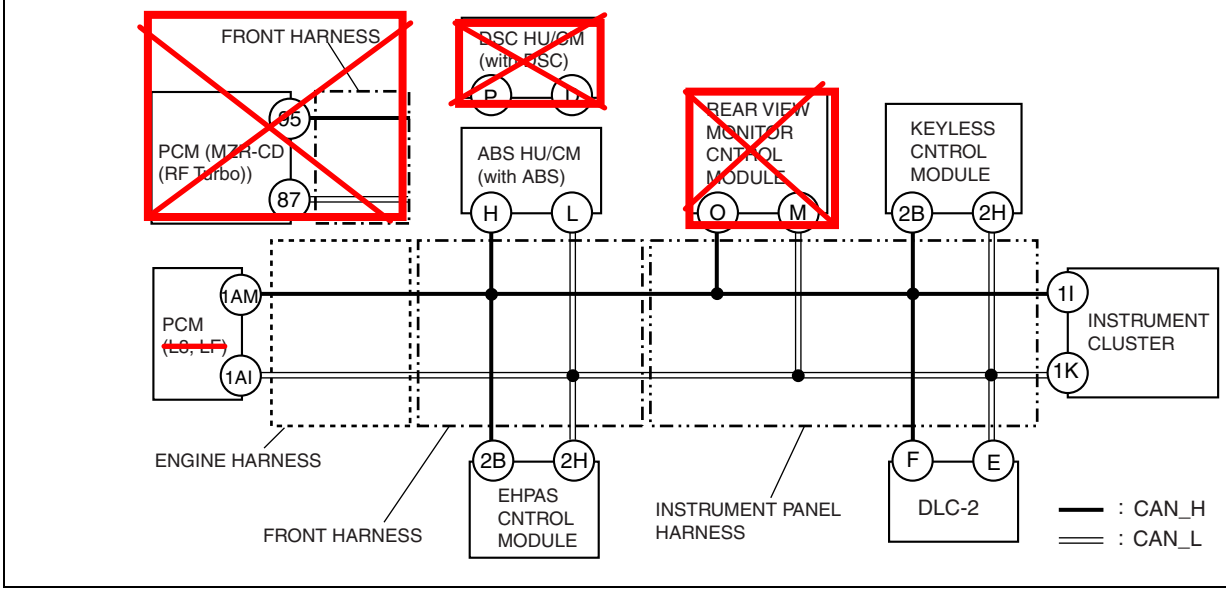
Repair Procedure

1. Inspect the connector of malfunctioning module.
   - If there is any malfunction, repair or replace the connector.
2. Inspect the malfunctioning wiring harnesses as follow:
   - If there is any malfunction, repair or replace the wiring harnesses.
   - If there is no malfunction, replace the malfunctioning module.
     - — Short to GND
     - — Short to power supply
     - — Twisted pair short each other
     - — Open circuit
3. Make sure to reconnect all disconnected connectors.
4. Clear the CAN system related DTCs using the WDS or equivalent.
5. Verify if the CAN system related DTCs are displayed using the WDS or equivalent.
   - If the same following DTCs are present, replace the malfunctioning module.
     - — U0073 (PCM, EHPAS control module, instrument cluster, keyless control module, BCM)
     - — U0516 (Climate control unit)
     - — U2012 (~~DSC HU/CM or~~ ABS HU/CM)
     - — U2516 (Instrument cluster, information display, water heater unit)
     - — 16:Er12 (Audio unit (base module))
   - If other DTC is present, perform the appropriate DTC inspection. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM].)

DTC U0073, U2012

DPE090255430W08

DTC	**U0073**	**PCM EHPAS control module Instrument cluster Keyless control module**	**CAN system communication error**
	U2012	**~~DSC HU/CM~~ ABS HU/CM**	
DETECTION CONDITION	**Warning** • **Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only detection conditions may cause injury due to operating error, or damage the system. When performing an inspection, always follow the inspection procedure.** • CAN system related harness malfunction • Related module communication error		
POSSIBLE CAUSE	• Open or short circuit in wiring harness • Malfunction of connectors between PCM, EHPAS control module, ~~DSC HU/CM~~, ABS HU/CM, keyless control module and instrument cluster • PCM malfunction • EHPAS control module malfunction • ~~DSC HU/CM or~~ ABS HU/CM malfunction • Keyless control module malfunction • Instrument cluster malfunction		



Diagnostic procedure

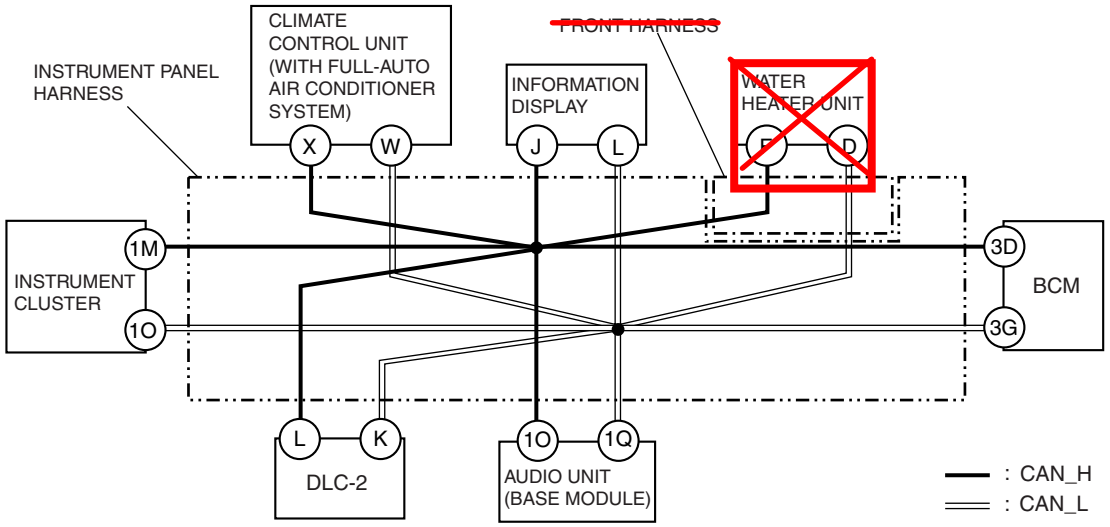
STEP	INSPECTION		ACTION
1	**INSPECT CAN SYSTEM-RELATED DTC** • Are any DTCs other than the following displayed? — U0073 — U2012	Yes	Determine malfunctioning part in CAN system. (See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION)
		No	Go to the next step.
2	**INSPECT CONNECTOR** • Inspect the connector of the module that outputs the DTC. • Is it normal?	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 4.
3	**INSPECT WIRING HARNESSES** • Inspect for the following malfunctioning wiring harnesses: — Short to GND — Short to power supply — Twisted pair short each other — Open circuit • Is there any malfunction?	Yes	Repair or replace the wiring harness, then go to the next step.
		No	Go to the next step.
4	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC using the WDS or equivalent. • Is the same DTC present?	Yes	Replace the module that outputs the DTC, then retry this step.
		No	Troubleshooting completed.

DTC U0073, U0516, U2516, 16:ER12

DPE090255430W09

DTC	**U0073**	**BCM**	**CAN system communication error**
	U0516	**Climate control unit**	
	U2516	**Information display** **Instrument cluster** ~~**Water heater unit**~~	
	16:Er12	**Audio unit (base module)**	
DETECTION CONDITION		**Warning** • **Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only detection conditions may cause injury due to operating error, or damage the system. When performing an inspection, always follow the inspection procedure.** • CAN system related harness malfunction • Related module communication error	
POSSIBLE CAUSE		• Open or short circuit in wiring harness • Malfunction of connectors between BCM, ~~water heater unit~~, information display, audio unit (base module), climate control unit and instrument cluster • BCM malfunction • ~~Water heater unit malfunction~~ • Climate control unit malfunction • Information display malfunction • Audio unit (base module) malfunction • Instrument cluster malfunction	

DTC	U0073	BCM	CAN system communication error
	U0516	Climate control unit	
	U2516	Information display Instrument cluster Water heater unit	
	16:Er12	Audio unit (base module)	



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT CAN SYSTEM-RELATED DTC** • Are any DTCs other than the following displayed? — U0073 — U0516 — U2516 — 16:Er12	Yes	Determine malfunctioning part in CAN system. (See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
		No	Go to the next step.
2	**INSPECT CONNECTOR** • Inspect the connector of the module that outputs the DTC. • Is it normal?	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 4.
3	**INSPECT WIRING HARNESSES** • Inspect for the following malfunctioning wiring harnesses: — Short to GND — Short to power supply — Twisted pair short each other — Open circuit • Is there any malfunction?	Yes	Repair or replace the wiring harness, then go to the next step.
		No	Go to the next step.
4	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC using the WDS or equivalent. • Is the same DTC present?	Yes	Replace the module that outputs the DTC, then retry this step.
		No	Troubleshooting completed.

DTC U2202

DPE090255430W10

DTC	U2202	DSC HU/CM	Communication error to PCM
DETECTION CONDITION		**Warning** • **Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only detection conditions may cause injury due to operating error, or damage the system. When performing an inspection, always follow the inspection procedure.** • CAN system related harness malfunction • Related module communication error	

09

DTC	U2202	DSC HU/CM	Communication error to PCM
POSSIBLE CAUSE	• Open or short circuit in wiring harness • Malfunction of connectors between PCM and DSC HU/CM • DSC HU/CM malfunction • PCM malfunction • Incorrect vehicle data (suspension and brake specs.) input during PCM configuration		

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT DTC** • Is DTC U2202 displayed?	Yes	Perform the PCM configuration. (See 01–40A–24 PCM CONFIGURATION [L8, LF], 01–40B–25 PCM CONFIGURATION [MZR-CD (RF Turbo)].) **Caution** • **When inputting the configuration data by hand, verify that it matches the vehicle specification.** Clear the DTC, then go to the next step.
		No	Troubleshooting completed.
2	**INSPECT DTC** • Is DTC U2202 displayed?	Yes	Go to the next step.
		No	Troubleshooting completed.
3	**INSPECT HARNESS MALFUNCTION** Determine malfunctioning part in can system. (See 09–02D–7 PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.) Is there any malfunction?	Yes	Replace the wiring harness. Clear the DTC.
		No	Replace the DSC HU/CM. (See 04-15–6 DSC HU/CM INSPECTION.) Clear the DTC, then go to the next step.
4	**VERIFY TROUBLESHOOTING COMPLETED** • Is DTC U2202 displayed?	Yes	Replace the PCM. (See 01–40A–5 PCM REMOVAL/INSTALLATION [L8, LF], 01–40B–6 PCM REMOVAL/INSTALLATION [MZR-CD (RF Turbo)].) Clear the DTC.
		No	Troubleshooting completed.

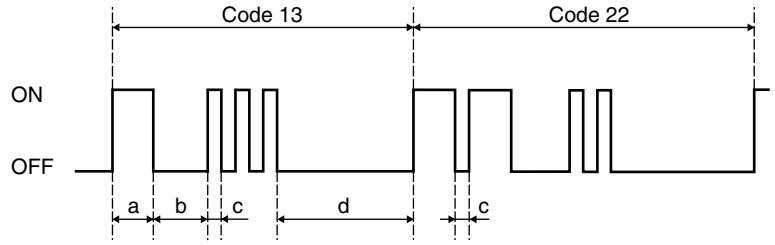
09–02E ON-BOARD DIAGNOSTIC [POWER SLIDING DOOR SYSTEM]

FOREWORD [POWER SLIDING DOOR (PSD) SYSTEM]

DPE090258010W01

- Perform DTC inspection if any repeatable malfunction occurred. For non-repeatable malfunctions, perform the procedure in SYMPTOM TROUBLESHOOTING [POWER SLIDING DOOR SYSTEM].
- A DTC can be confirmed by flashing of the door ajar warning light.
- DTC 13 or 14 is output first, then DTCs are output in numerical order, from lower to higher numbers.
- DTCs are output repeatedly until the DTC output mode is completed.

Example output for DTCs 13 and 22

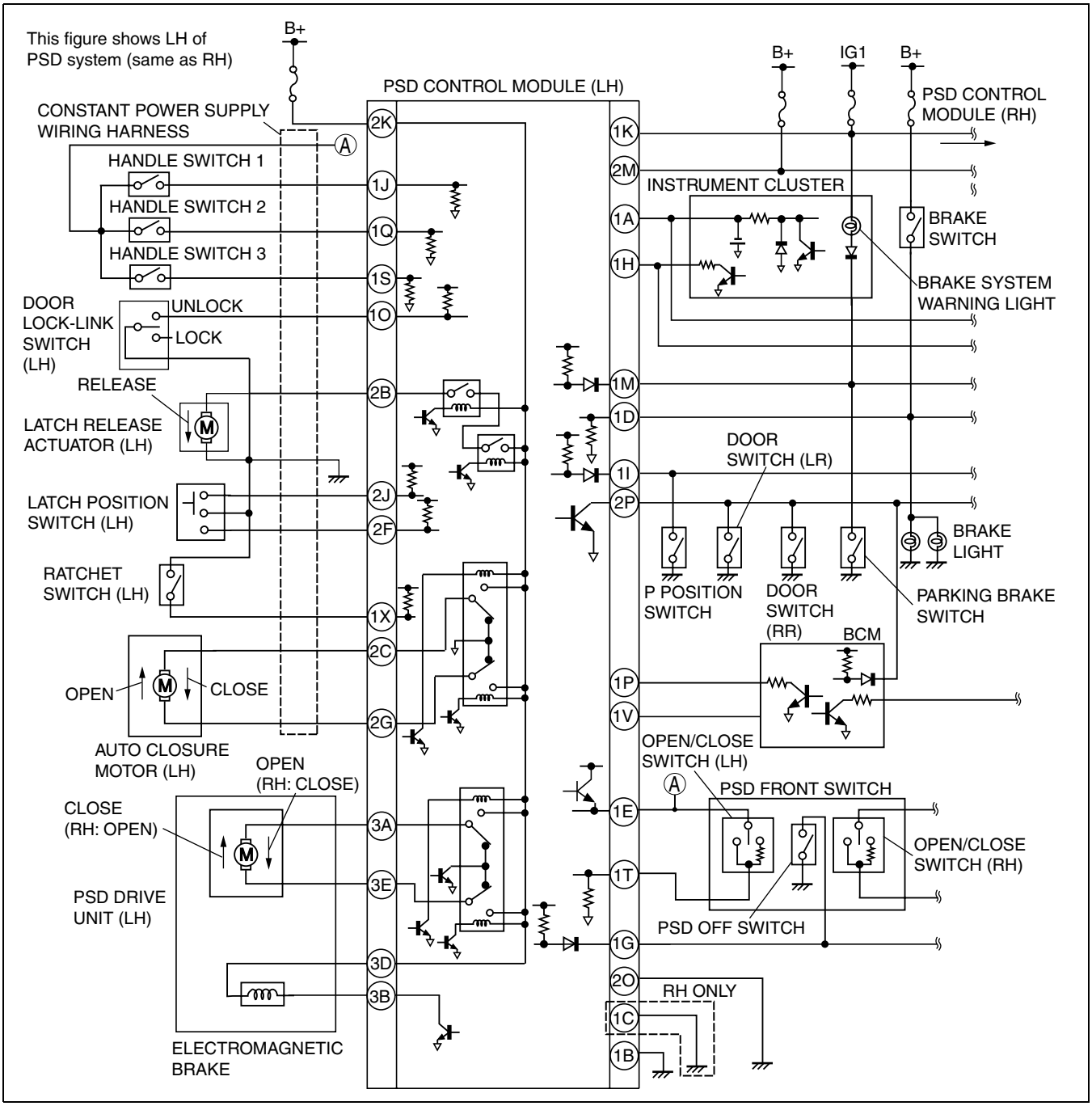


a: 1.2 s (ten figures)
b: 1.6 s
c: 0.4 s (one figures)
d: 4.0 s

DPE902AW1100

POWER SLIDING DOOR (PSD) SYSTEM WIRING DIAGRAM

DPE090258010W02



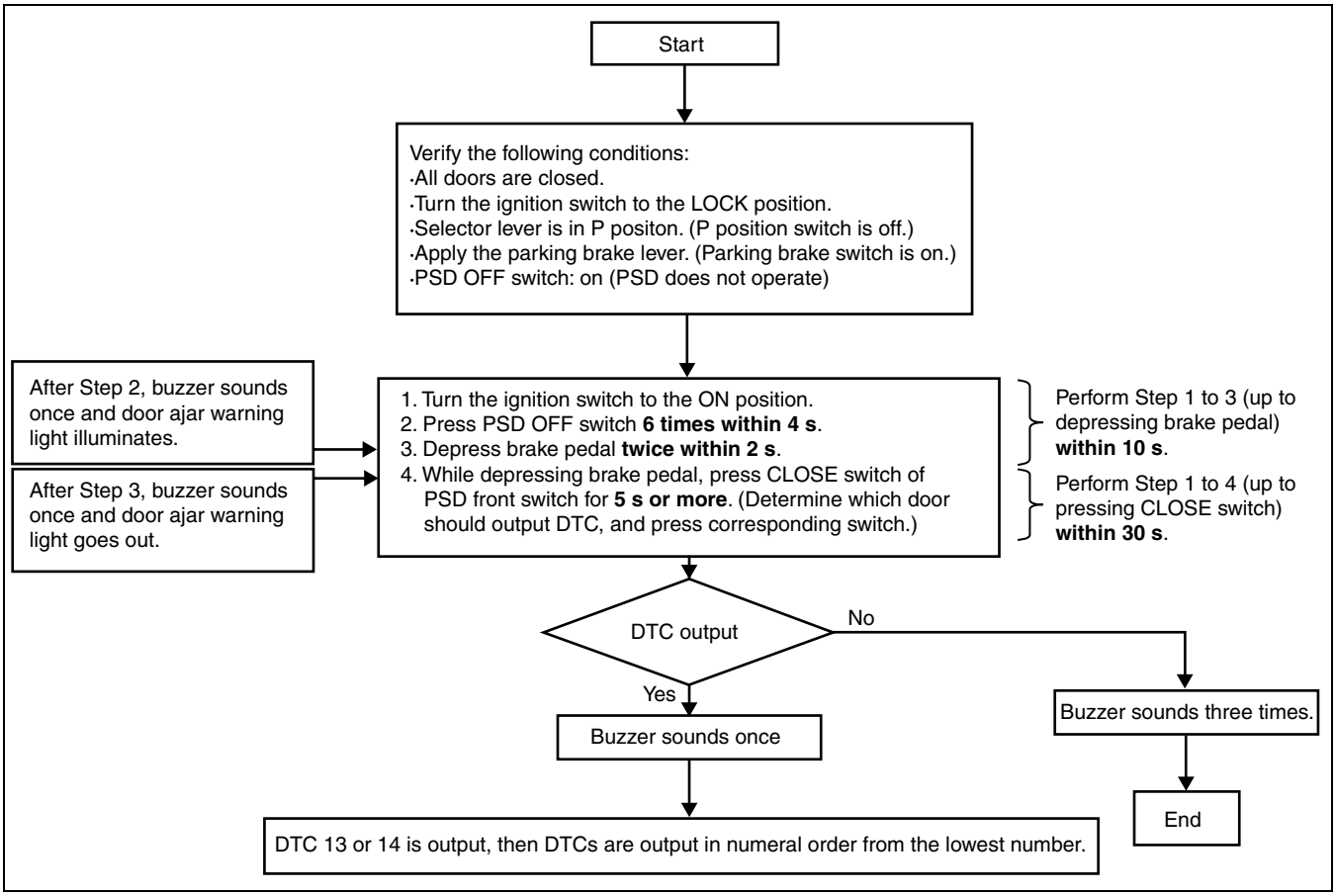
DPE902AW1101

DTC INSPECTION [POWER SLIDING DOOR (PSD) SYSTEM]

DPE090258010W03

Note

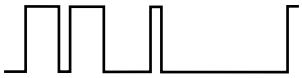
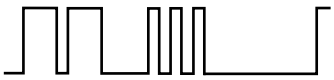
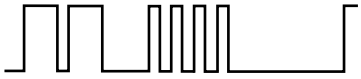
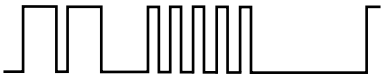
- To stop DTC output procedure or the DTC output, press the PSD OFF switch to the OFF position.
- DTCs are cleared by disconnecting the negative battery cable.

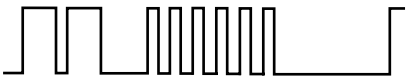
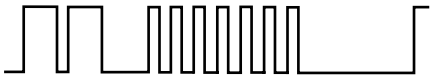
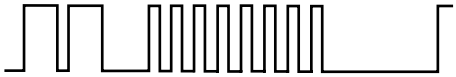
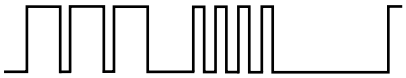
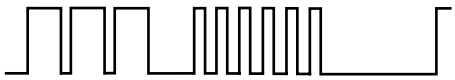
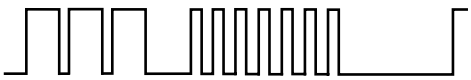
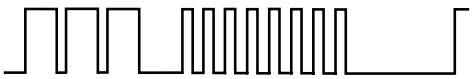
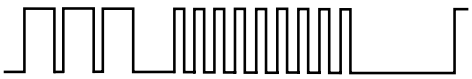
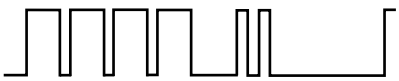


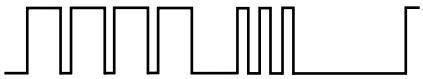
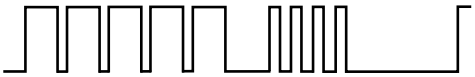
DPE902AW1102

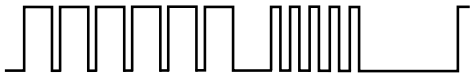
DTC TABLE [POWER SLIDING DOOR (PSD) SYSTEM]

DPE090258010W04

DTC	Door ajar warning light flashing pattern	System malfunction location	Page
13		DTC for PSD RH output	-
14		DTC for PSD LH output	-
21		Auto closure motor malfunction	(See 09–02E–7 DTC 21, 22.)
22			
23		Latch position switch malfunction	(See 09–02E–8 DTC 23, 24, 25, 28.)
24			
25			

DTC	Door ajar warning light flashing pattern	System malfunction location	Page
26		• Handle switch malfunction • Latch release actuator not operated • Latch release actuator miss-operation	(See 09–02E–9 DTC 26.)
27		Latch position switch (ratchet switch) malfunction	(See 09–02E–9 DTC 26.)
28		Latch position switch malfunction	(See 09–02E–8 DTC 23, 24, 25, 28.)
31		PSD motor FET malfunction	(See 09–02E–11 DTC 31, 32.)
32			
33		Magnet brake malfunction	(See 09–02E–11 DTC 33, 59.)
34		PSD motor malfunction	(See 09–02E–12 DTC 34, 35, 36, 58.)
35			
36			
37		Latch release actuator relay malfunction	(See 09–02E–13 DTC 37, 38.)
38			
39		PSD control module internal malfunction	(See 09–02E–13 DTC 39.)
41		Keyless control module input signal error	(See 09–02E–13 DTC 41.)
42		Vehicle speed warning signal error	(See 09–02E–14 DTC 42, 44, 45, 49.)

DTC	Door ajar warning light flashing pattern	System malfunction location	Page
43		Vehicle speed signal error	(See 09–02E–15 DTC 43.)
44			(See 09–02E–14 DTC 42, 44, 45, 49.)
45		Vehicle speed warning signal error	
46		PSD front switch malfunction	(See 09–02E–17 DTC 46, 47, 48.)
47			
48			
49		Vehicle speed warning signal malfunction	(See 09–02E–14 DTC 42, 44, 45, 49.)
51		PSD motor abnormal resistance value	(See 09–02E–17 DTC 51.)
52		Speed sensor malfunction	(See 09–02E–18 DTC 52, 53, 54, 55, 56, 57.)
53			
54			
55			
56			
57			
58		PSD motor malfunction	(See 09–02E–12 DTC 34, 35, 36, 58.)
59		Magnet brake malfunction	(See 09–02E–11 DTC 33, 59.)

DTC	Door ajar warning light flashing pattern	System malfunction location	Page
61		Jamming during open operation	(See 09–02E–18 DTC 61, 62, 63, 64, 65, 67, 68.)
62			
63			
64			
65			
67			
68			
72		Jamming during close operation	(See 09–02E–19 DTC 72, 73, 74, 75, 76, 77, 78.)
73			
74			
75			
76			
77			
78			
79		Jamming during vehicle movement	(See 09–02E–19 DTC 72, 73, 74, 75, 76, 77, 78.)
81		Abnormal operation time	(See 09–02E–19 DTC 72, 73, 74, 75, 76, 77, 78.)

DTC	Door ajar warning light flashing pattern	System malfunction location	Page
82		Abnormal battery voltage	(See 09–02E–21 DTC 82.)
83		Clutch not disengaged	(See 09–02E–21 DTC 83, 84.)
84			

DTC 21, 22

DPE090258010W05

Detection Condition

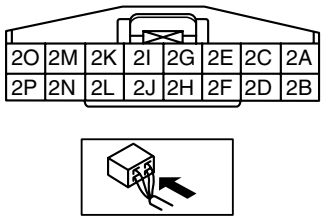
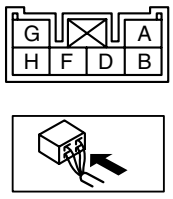
- Auto closure motor malfunction

Possible Cause

- DTC 21:
  - — Open circuit on auto closure motor
  - — Short to ground in auto closure motor normal rotation system
  - — Short to ground in auto closure motor reverse rotation system
  - — Open circuit between battery and PSD control module terminal 2K
  - — Short to ground between battery and PSD control module terminal 2K
- DTC 22:
  - — Short circuit on both ends of auto closure motor

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT AUTO CLOSURE MOTOR** • Inspect the auto closure motor. (See 09–11–13 AUTO CLOSURE MOTOR INSPECTION.) • Is the auto closure motor normal?	Yes	Go to the next step.
		No	Replace the sliding door latch. (See 09–14A–10 SLIDING DOOR LATCH REMOVAL/INSTALLATION.)
2	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND AUTO CLOSURE MOTOR** • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable. • Disconnect the auto closure motor connector. • Disconnect the PSD control module connector. • Inspect the wiring harnesses between PSD control module terminal 2C and auto closure motor terminal B, PSD control module terminal 2G and auto closure motor terminal A for the following: — Short to ground — Open circuit • Are the wiring harnesses normal?	Yes	Go to the next step.
		No	Repair or replace the related wiring harness.
3	**INSPECT WIRING HARNESS BETWEEN BATTERY AND PSD CONTROL MODULE** • Inspect the wiring harness between PSD control module terminal 2K and the battery for the following: — Short to ground — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Repair or replace the related wiring harness.

Step	Inspection	Action
	PSD CONTROL MODULE HARNESS SIDE CONNECTOR  AUTO CLOSURE MOTOR HARNESS SIDE CONNECTOR 	

DTC 23, 24, 25, 28

DPE090258010W06

Detection Condition

- Latch position switch malfunction

Possible Cause

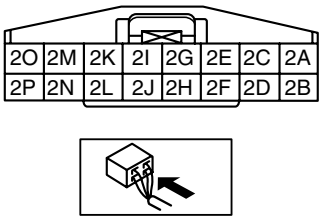
- Open circuit in full latch switch signal system (full latch switch off)
- Short to ground in full latch switch signal system (full latch switch on)
- Open circuit in half latch switch signal system (half latch switch off)
- Short to ground in half latch switch signal (half latch switch on)
- Open circuit in latch position switch ground (full and half latch switches off)
- Latch position switch malfunction

Diagnostic Procedure

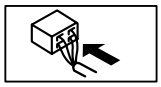
Step	Inspection		Action
1	**INSPECT LATCH POSITION SWITCH** • Inspect the latch position switch. (See 09–11–13 LATCH POSITION SWITCH INSPECTION.) • Is the latch position switch normal?	Yes	Go to the next step.
		No	Replace the sliding door latch. (See 09–14A–10 SLIDING DOOR LATCH REMOVAL/ INSTALLATION.)
2	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND LATCH POSITION SWITCH** • Turn the ignition switch to the LOCK position. • Disconnect the negative battery cable. • Disconnect the latch position switch connector. • Disconnect the PSD control module connector. • Inspect the wiring harnesses between PSD control module terminal 2J and latch position switch terminal H, PSD control module terminal 2F and latch position switch terminal F for the following: — Short to ground — Open circuit • Are the wiring harnesses normal?	Yes	Go to the next step.
		No	Repair or replace the related wiring harness.
3	**INSPECT WIRING HARNESS BETWEEN LATCH POSITION SWITCH AND GROUND** • Inspect the wiring harness between latch position switch terminal D and ground for the following: — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

Step	Inspection	Action

PSD CONTROL MODULE
HARNESS SIDE CONNECTOR



LATCH POSITION SWITCH
HARNESS SIDE CONNECTOR



DTC 26

DPE090258010W07

Detection Conditions

- Outer handle switch malfunction
- Latch release actuator not operated
- Latch release actuator miss-operated

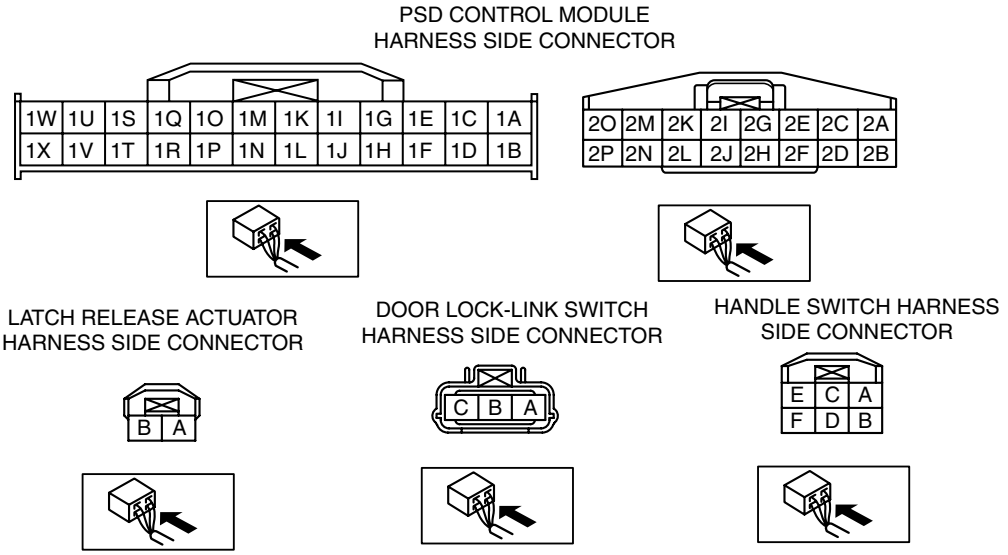
Possible Cause

- Short to ground in outer handle switch
- Open circuit in outer handle switch
- Outer handle switch malfunction
- Open circuit in latch release actuator
- Short to ground in latch release actuator power supply system
- Latch release actuator malfunction
- Short to ground in lock-link switch

Diagnostic Procedure

Step	Inspection		Action
1	**VERIFY OTHER DTCs DISPLAYED** • Is DTC 68 or 78 displayed?	Yes	Go to the next step.
		No	Go to Step 6.
2	**INSPECT LATCH RELEASE ACTUATOR** • Inspect the latch release actuator. (See 09–11–11 LATCH RELEASE ACTUATOR INSPECTION.) • Is the latch release actuator normal?	Yes	Go to the next step.
		No	Replace the latch release actuator. (See 09–11–11 LATCH RELEASE ACTUATOR REMOVAL/ INSTALLATION.)
3	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND LATCH RELEASE ACTUATOR** • Disconnect the latch release actuator connector. • Disconnect the PSD control module connector. • Inspect the wiring harness between PSD control module terminal 2B and latch release actuator terminal A for a short to ground. • Is the wiring harness normal?	Yes	Go to the next step.
		No	Repair or replace the related wiring harness.
4	**INSPECT DOOR LOCK-LINK SWITCH** • Inspect the door lock-link switch. (See 09–14A–14 DOOR LOCK-LINK SWITCH INSPECTION.) • Is the door lock-link switch normal?	Yes	Go to the next step.
		No	Replace the door lock-link switch. (See 09–14A–10 REMOTE CONTROLLER REMOVAL/ INSTALLATION.)
5	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND DOOR LOCK-LINK SWITCH** • Disconnect the door lock-link switch connector. • Inspect the wiring harnesses between PSD control module terminal 1O and door lock-link switch terminal 2C (RH) and 2A (LH) for a short to ground. • Are the wiring harnesses normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

Step	Inspection		Action
6	**INSPECT HANDLE SWITCH** • Inspect the handle switch. (See 09–14A–13 HANDLE SWITCH INSPECTION.) • Is the handle switch normal?	Yes	Go to the next step.
		No	Replace the handle switch. (See 09–14A–10 REMOTE CONTROLLER REMOVAL/ INSTALLATION.)
7	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND HANDLE SWITCH** • Disconnect the handle switch connector. • Disconnect the PSD control module connector. • Inspect the wiring harness between PSD control module terminal 1J and handle switch terminal 3B for the following: — Short to ground — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.



DTC 27

DPE090258010W08

Detection Condition
- Latch position switch (ratchet switch) malfunction

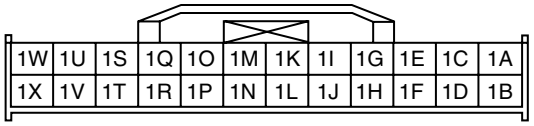
Possible Cause
- Ratchet switch malfunction
- Short to ground in ratchet switch

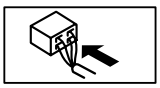
Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT LATCH POSITION SWITCH** • Inspect the latch position switch. (See 09–11–13 LATCH POSITION SWITCH INSPECTION.) • Is the latch position switch normal?	Yes	Go to the next step.
		No	Replace the sliding door latch. (See 09–14A–10 SLIDING DOOR LATCH REMOVAL/ INSTALLATION.)
2	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND LATCH POSITION SWITCH** • Disconnect the latch position switch connector. • Inspect the wiring harness between PSD control module terminal 1X and latch position switch terminal G for a short to ground. • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

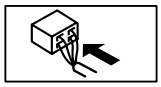
Step	Inspection	Action

PSD CONTROL MODULE
HARNESS SIDE CONNECTOR





LATCH POSITION SWITCH
HARNESS SIDE CONNECTOR



DTC 31, 32

DPE090258010W09

Detection Condition
- PSD motor FET malfunction

Possible Cause
- PSD motor FET malfunction

Diagnostic Procedure

Step	Action
1	**REPLACE PSD CONTROL MODULE** • Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)

DTC 33, 59

DPE090258010W10

Detection Condition
- Magnet brake malfunction

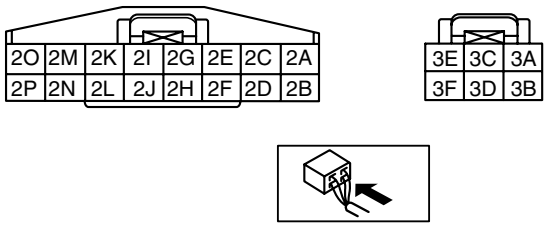
Possible Cause
- Magnet brake transistor malfunction
- Open circuit in magnet brake
- Short to ground in magnet brake power supply system
- Short to power supply in magnet brake ground
- Short to ground in magnet brake ground
- Short circuit on both ends of magnet brake

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT PSD CONTROL MODULE TERMINALS 3B AND 3D** • Refer to the PSD control module inspection and inspect PSD control module terminals 3B and 3D. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Are the terminal voltages normal?	Yes	Go to Step 3.
		No	Go to the next step.
2	**INSPECT WIRING HARNESS BETWEEN BATTERY AND PSD CONTROL MODULE** • Inspect the wiring harness between PSD control module terminal 2K and the battery for the following: — Short to ground — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Repair or replace the related wiring harness.

Step	Inspection		Action
3	**INSPECT PSD CONTROL MODULE TERMINAL 3B AND 3D WIRING HARNESS** • Inspect PSD control module terminal 3A and 3D wiring harness for the following: — Short to power supply — Short to ground • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)

PSD CONTROL MODULE
HARNESS SIDE CONNECTOR



DTC 34, 35, 36, 58

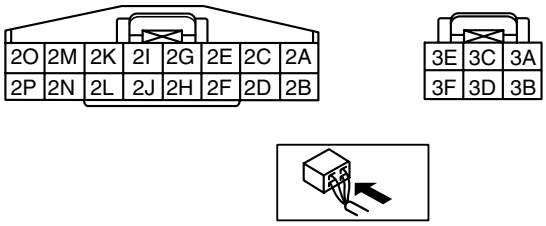
DPE090258010W11

Detection Condition
- PSD motor malfunction

Possible Cause
- PSD motor relay malfunction
- Open circuit in PSD motor power supply system
- Short to power supply in PSD motor ground
- Short circuit on both ends of PSD motor

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT PSD CONTROL MODULE TERMINAL 3A** • Refer to the PSD control module inspection and inspect PSD control module terminal 3A. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Is the terminal voltage normal?	Yes	Go to the next step.
		No	Go to Step 3.
2	**INSPECT PSD CONTROL MODULE TERMINAL 3E** • Refer to the PSD control module inspection and inspect PSD control module terminal 3E. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Is the terminal voltage normal?	Yes	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)
		No	Go to the next step.
3	**INSPECT WIRING HARNESS BETWEEN BATTERY AND PSD CONTROL MODULE** • Inspect the wiring harness between PSD control module terminal 2K and the battery for the following: — Short to ground — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

Step	Inspection	Action
	PSD CONTROL MODULE HARNESS SIDE CONNECTOR 	

DTC 37, 38

DPE090258010W12

Detection condition
- Latch release actuator relay malfunction

Possible Cause
- Latch release actuator relay malfunction

Diagnostic Procedure

Step	Action
1	**REPLACE PSD CONTROL MODULE** • Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)

DTC 39

DPE090258010W13

Detection Condition
- PSD control module internal malfunction

Possible Cause
- PSD control module internal malfunction

Diagnostic Procedure

Step	Action
1	**REPLACE PSD CONTROL MODULE** • Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)

DTC 41

DPE090258010W14

Detection Condition
- Keyless control module input signal error

Possible Cause
- Short to ground in keyless control module input signal system

Diagnostic Procedure

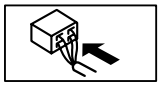
Step	Inspection		Action
1	**INSPECT PSD CONTROL MODULE TERMINAL 1P** • Refer to the PSD control module inspection and inspect PSD control module terminal 1P. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Is the terminal voltage normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Go to the next step.

09

Step	Inspection		Action
2	**INSPECT WIRING HARNESS BETWEEN BCM AND PSD CONTROL MODULE** • Disconnect the BCM connector. • Disconnect the PSD control module connector. • Inspect the wiring harnesses between BCM terminals 5B (LH) and 5D (RH) and PSD control module terminal 1P for a short to ground. • Are the wiring harnesses normal?	Yes	Go to the next step.
		No	Repair or replace the related wiring harness.
3	**INSPECT KEYLESS CONTROL MODULE** • Inspect the keyless control module. (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.) • Is the keyless control module normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair the malfunctioning part according to the keyless entry system inspection.

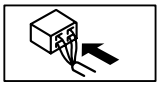
PSD CONTROL MODULE HARNESS SIDE CONNECTOR

1W	1U	1S	1Q	1O	1M	1K	1I	1G	1E	1C	1A
1X	1V	1T	1R	1P	1N	1L	1J	1H	1F	1D	1B



BCM HARNESS SIDE CONNECTOR

5W	5U	5S	5Q	5O	5M	5K	5I	5G	5E	5C	5A
5X	5V	5T	5R	5P	5N	5L	5J	5H	5F	5D	5B



DTC 42, 44, 45, 49

DPE090258010W15

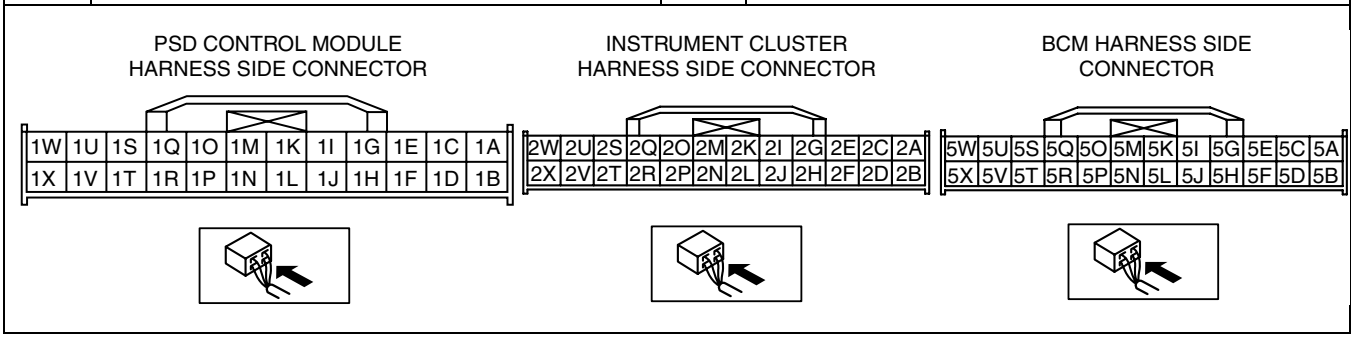
Detection Condition
- Vehicle speed warning signal error
- Vehicle speed signal error

Possible Cause
- DTC 42:
  — Ignition switch position and vehicle speed warning signal are incompatible
- DTC 44:
  — Ignition switch position and vehicle speed signal are incompatible
- DTC 45:
  — Short to ground in vehicle speed warning signal
- DTC 49:
  — Vehicle speed signal and vehicle speed warning signal are incompatible

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT VEHICLE SPEED SIGNAL** • Refer to the instrument cluster inspection and verify that the speedometer operates normally. (See 09–22–3 INSTRUMENT CLUSTER INSPECTION.) • Is the speedometer normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part according to the instrument cluster inspection. (See 09–22–3 INSTRUMENT CLUSTER INSPECTION.)
2	**INSPECT WIRING HARNESS BETWEEN INSTRUMENT CLUSTER AND PSD CONTROL MODULE** • Inspect the wiring harnesses between instrument cluster terminal 2O and PSD control module 1A, instrument cluster terminal 1H and PSD control module 1H for the following: — Short to ground — Short to power supply — Open circuit • Are the wiring harnesses normal?	Yes	Go to the next step.
		No	Repair or replace the related wiring harness.

Step	Inspection		Action
3	**INSPECT BCM TERMINAL 5T** • Refer to the body control module (BCM) inspection and inspect BCM terminal 5T. (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.) • Is the terminal voltage normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part according to the body control module (BCM) inspection. (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.)
4	**INSPECT WIRING HARNESS BETWEEN BCM AND PSD CONTROL MODULE** • Disconnect the BCM connector. • Disconnect the PSD control module connector. • Inspect the wiring harness between BCM terminal 5T and PSD control module terminal 1K for a short to ground. • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Repair or replace the related wiring harness.



DTC 43

DPE090258010W16

Detection Condition
- Vehicle speed signal error

Possible Cause
- Open or short to ground in vehicle speed signal input
- Short to ground in NOT P position switch
- Open circuit in parking brake switch
- Open circuit in brake switch

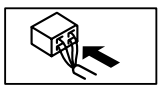
Diagnostic Procedure
- Perform the operation permission condition inspection in on-board diagnostic test and determine the malfunctioning part. (See 09–03E–2 ON-BOARD DIAGNOSIS.)
- Verify the procedure for not sounding the buzzer and perform the following steps:
  — After depressing the brake pedal: go to Step 1.
  — After shifting the selector lever to a position other than P: go to Step 3.
  — After releasing the parking brake: go to Step 5.
  — After driving the vehicle at 3 km/h or more: go to Step 7.

Step	Inspection		Action
1	**INSPECT BRAKE SWITCH** • Refer to the brake switch inspection and inspect the brake switch. (See 04–11–9 BRAKE SWITCH INSPECTION.) • Is the brake switch normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part according to the brake switch inspection. (See 04–11–9 BRAKE SWITCH INSPECTION.)
2	**INSPECT WIRING HARNESS BETWEEN BRAKE SWITCH AND PSD CONTROL MODULE** • Inspect the wiring harness between brake switch terminal D and PSD control module terminal 1D for the following: — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Repair or replace the related wiring harness.

Step	Inspection		Action
3	**INSPECT NOT P POSITION SWITCH** • Refer to the selector lever component inspection and inspect the NOT P position switch. (See 05–18–4 SELECTOR LEVER COMPONENT INSPECTION.) • Is the NOT P position switch normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part according to the selector lever component inspection. (See 05–18–4 SELECTOR LEVER COMPONENT INSPECTION.)
4	**INSPECT WIRING HARNESS BETWEEN SELECTOR LEVER COMPONENT AND PSD CONTROL MODULE** • Inspect the wiring harness between selector lever component terminal G and PSD control module 1I for the following: — Short to ground • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.
5	**INSPECT PARKING BRAKE SWITCH** • Refer to the parking brake switch inspection and inspect the parking brake switch. (See 04–12–4 PARKING BRAKE SWITCH INSPECTION.) • Is the parking brake switch normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part according to the parking brake switch inspection. (See 04–12–4 PARKING BRAKE SWITCH INSPECTION.)
6	**INSPECT WIRING HARNESS BETWEEN PARKING BRAKE SWITCH AND PSD CONTROL MODULE** • Inspect the wiring harness between parking brake switch terminal A and PSD control module terminal 1M for the following: — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.
7	**INSPECT VEHICLE SPEED SIGNAL** • Refer to the instrument cluster inspection and verify that the speedometer operates normally. (See 09–22–3 INSTRUMENT CLUSTER INSPECTION.) • Is the speedometer normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part according to the instrument cluster inspection. (See 09–22–3 INSTRUMENT CLUSTER INSPECTION.)
8	**INSPECT WIRING HARNESS BETWEEN INSTRUMENT CLUSTER AND PSD CONTROL MODULE** • Inspect the wiring harness between instrument cluster terminal 2O and PSD control module terminal 1A for the following: — Short to ground — Open circuit • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

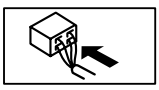
PSD CONTROL MODULE HARNESS SIDE CONNECTOR

1W	1U	1S	1Q	1O	1M	1K	1I	1G	1E	1C	1A
1X	1V	1T	1R	1P	1N	1L	1J	1H	1F	1D	1B



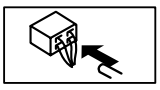
INSTRUMENT CLUSTER HARNESS SIDE CONNECTOR

2W	2U	2S	2Q	2O	2M	2K	2I	2G	2E	2C	2A
2X	2V	2T	2R	2P	2N	2L	2J	2H	2F	2D	2B



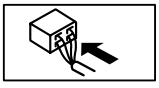
SELECTOR LEVER COMPONENT HARNESS SIDE CONNECTOR

K	I	G	E	C	A
L	J	H	F	D	B



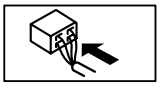
BRAKE SWITCH HARNESS SIDE CONNECTOR

D	C	B	A



PARKING BRAKE SWITCH HARNESS SIDE CONNECTOR

A



DTC 46, 47, 48

DPE090258010W17

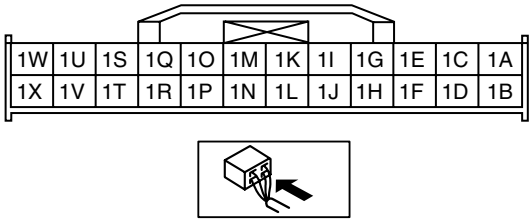
Detection Condition
- PSD front switch malfunction

Possible Cause
- Short to ground in PSD front switch (open/close switch)
- Short to ground or power supply in PSD front switch input signal

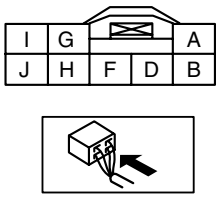
Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT PSD FRONT SWITCH** • Inspect the PSD front switch. (See 09–11–12 PSD FRONT SWITCH INSPECTION.) • Is the PSD front switch normal?	Yes	Go to the next step.
		No	Replace the PSD front switch. (See 09–11–11 PSD FRONT SWITCH REMOVAL/ INSTALLATION.)
2	**INSPECT WIRING HARNESS BETWEEN PSD FRONT SWITCH AND PSD CONTROL MODULE** • Disconnect the PSD front switch connector. • Disconnect the PSD control module connector. • Inspect the wiring harnesses between PSD front switch terminals A (LH) and H (RH) and PSD control module terminal 1E, PSD front switch terminals I (LH) and D (RH) and PSD control module terminal 1T for the following: — Short to ground — Short to power supply • Are the wiring harnesses normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

PSD CONTROL MODULE HARNESS SIDE CONNECTOR



PSD FRONT SWITCH HARNESS SIDE CONNECTOR



DTC 51

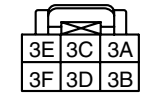
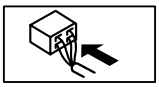
DPE090258010W18

Detection Condition
- Abnormal PSD motor resistance

Possible Cause
- PSD control module internal malfunction
- Abnormal PSD motor resistance

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT PSD CONTROL MODULE TERMINALS 3A AND 3E** • Refer to the PSD control module inspection and inspect PSD control module terminals 3A and 3E. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Are the terminal voltages normal?	Yes	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)
		No	Go to the next step.
2	**VERIFY DTC** • Is DTC 51 displayed?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	DTC inspection completed.

Step	Inspection	Action
	PSD CONTROL MODULE HARNESS SIDE CONNECTOR  	

DTC 52, 53, 54, 55, 56, 57

DPE090258010W19

Detection Condition
- Speed sensor malfunction

Possible Cause
- DTC 52, 53, 54, 55:
  — Door speed sensor malfunction
- DTC 56, 57
  — Motor speed sensor malfunction

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT PSD CONTROL MODULE** • Inspect the PSD control module. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Is the PSD control module normal?	Yes	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)
		No	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)

DTC 61, 62, 63, 64, 65, 67, 68

DPE090258010W20

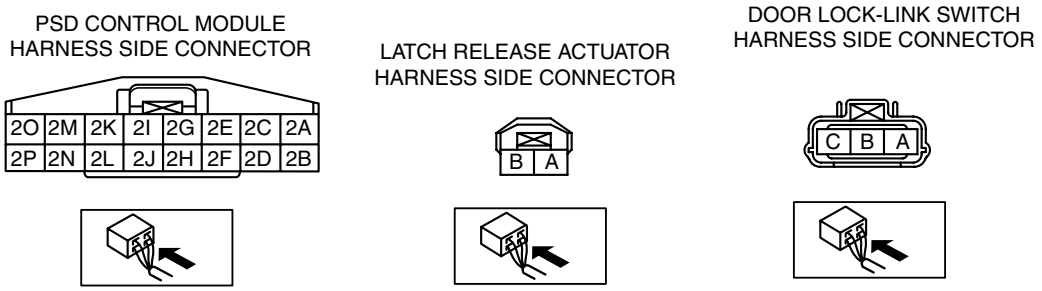
Detection Condition
- Jamming during open operation

Possible Cause
- Abnormal load while sliding door is opening
- Open circuit in latch release actuator
- Latch release actuator malfunction
- Short to ground in latch release actuator power supply system
- Short to ground in lock-link switch

Diagnostic Procedure

Step	Inspection		Action
1	**VERIFY OTHER DTCs DISPLAYED** • Is DTC 26 displayed?	Yes	Go to Step 3.
		No	Go to the next step.
2	**INSPECT SLIDING DOOR SLIDING RESISTANCE** • Inspect the sliding door for abnormal sliding resistance while the door is opening/closing. • Is the sliding resistance abnormal?	Yes	Inspect the sliding door for foreign material penetration and adjust the sliding door to correct the sliding resistance. Perform the DTC inspection again and verify that the DTC is not displayed.
		No	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)
3	**INSPECT LATCH RELEASE ACTUATOR** • Inspect the latch release actuator. (See 09–11–11 LATCH RELEASE ACTUATOR INSPECTION.) • Is the latch release actuator normal?	Yes	Go to the next step.
		No	Replace the latch release actuator. (See 09–11–11 LATCH RELEASE ACTUATOR REMOVAL/INSTALLATION.)

Step	Inspection		Action
4	**INSPECT LOCK-LINK SWITCH** • Inspect the lock-link switch. (See 09–14A–14 DOOR LOCK-LINK SWITCH INSPECTION.) • Is the door lock-link switch normal?	Yes	Go to the next step.
		No	Replace the door lock-link switch. (See 09–14A–10 REMOTE CONTROLLER REMOVAL/ INSTALLATION.)
5	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND LATCH RELEASE ACTUATOR** • Disconnect the latch release actuator connector. • Disconnect the PSD control module connector. • Inspect the wiring harness between PSD control module terminal 2B and latch release actuator terminal A for a short to ground. • Is the wiring harness normal?	Yes	Go to the next step.
		No	Repair or replace the related wiring harness.
6	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND DOOR LOCK-LINK SWITCH** • Disconnect the door lock-link switch connector. • Inspect the wiring harnesses between PSD control module terminal 1O and door lock-link switch terminals 2C (RH) and 2A (LH) for a short to ground. • Are the wiring harnesses normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.



DTC 72, 73, 74, 75, 76, 77, 78

DPE090258010W21

Detection Condition

- Jamming during close operation

Possible Cause

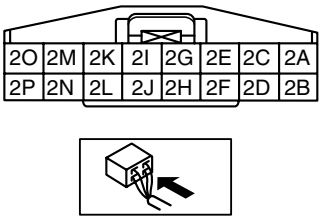
- Abnormal load while sliding door is closing
- Open circuit in latch release actuator
- Latch release actuator malfunction
- Short to ground in latch release actuator power supply system

Diagnostic Procedure

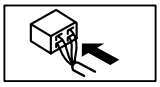
Step	Inspection		Action
1	**VERIFY OTHER DTC DISPLAYED** • Is DTC 26 displayed?	Yes	Go to Step 3.
		No	Go to the next step.
2	**INSPECT SLIDING DOOR SLIDING RESISTANCE** • Inspect the sliding door for abnormal sliding resistance while the sliding door is opening/ closing. • Is the sliding resistance abnormal?	Yes	Inspect the sliding door for foreign material penetration and adjust the sliding door to correct the sliding resistance. Perform the DTC inspection again and verify that the DTC is not displayed.
		No	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)
3	**INSPECT LATCH RELEASE ACTUATOR** • Inspect the latch release actuator. (See 09–11–11 LATCH RELEASE ACTUATOR INSPECTION.) • Is the latch release actuator normal?	Yes	Go to the next step.
		No	Replace the latch release actuator. (See 09–11–11 LATCH RELEASE ACTUATOR REMOVAL/INSTALLATION.)

Step	Inspection		Action
4	**INSPECT WIRING HARNESS BETWEEN PSD CONTROL MODULE AND LATCH RELEASE ACTUATOR** • Disconnect the latch release actuator connector. • Disconnect the PSD control module connector. • Inspect the wiring harness between PSD control module terminal 2B and latch release actuator terminal A for a short to ground. • Is the wiring harness normal?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	Repair or replace the related wiring harness.

PSD CONTROL MODULE HARNESS SIDE CONNECTOR



LATCH RELEASE ACTUATOR HARNESS SIDE CONNECTOR



DTC 79

DPE090258010W22

Detection Condition
- Jamming during vehicle movement

Possible Cause
- Abnormal load to sliding door

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT SLIDING DOOR SLIDING RESISTANCE** • Inspect the sliding door for abnormal sliding resistance while the sliding door is opening/ closing. • Is the sliding resistance abnormal?	Yes	Inspect the sliding door for foreign material penetration and adjust the sliding door to correct the sliding resistance. Perform the DTC inspection again and verify that the DTC is not displayed.
		No	Replace the PSD drive unit and go to the next step. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)
2	**VERIFY DTC** • Is DTC 79 displayed?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/ INSTALLATION.)
		No	DTC inspection completed.

DTC 81

DPE090258010W23

Detection Condition
- Operation period error

Possible Cause
- Abnormal load during open/close operation

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT SLIDING DOOR SLIDING RESISTANCE** • Inspect the sliding door for abnormal sliding resistance while the sliding door is opening/ closing. • Is the sliding resistance abnormal?	Yes	Inspect the sliding door for foreign material penetration and adjust the sliding door to correct the sliding resistance. Perform the DTC inspection again and verify that the DTC is not displayed.
		No	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/ INSTALLATION.)

DTC 82

DPE090258010W24

Detection Condition

- Abnormal battery positive voltage

Possible Cause

- Battery positive voltage increases to abnormal value during PSD operation

Diagnostic Procedure

Step	Inspection		Action
1	**VERIFY DTC FOR PCM** • Connect the WDS or equivalent to the DLC-2. • Are any DTCs for PCM displayed?	Yes	Perform troubleshooting according to the corresponding DTC inspection. (See 01–02A–9 DTC TABLE [L8, LF].) (See 01–02B–7 DTC TABLE [MZR-CD (RF Turbo)].) Go to the next step.
		No	Go to the next step.
2	**VERIFY CORRECTION COMPLETED** • Using the WDS or equivalent, clear DTCs from the PCM memory. • Start the engine. • Perform the DTC inspection again. • Is DTC 82 displayed?	Yes	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
		No	DTC inspection completed.

DTC 83, 84

DPE090258010W25

Detection Condition

- Clutch is not disengaged

Possible Cause

- Clutch malfunction

Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT PSD CONTROL MODULE** • Inspect the PSD control module. (See 09–11–8 PSD CONTROL MODULE INSPECTION.) • Is the PSD control module normal?	Yes	Replace the PSD drive unit. (See 09–11–6 PSD DRIVE UNIT REMOVAL/INSTALLATION.)
		No	Replace the PSD control module. (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)

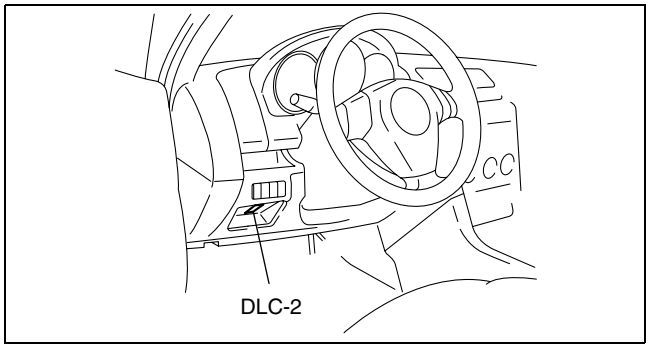
09–02F ON-BOARD DIAGNOSTIC [INSTRUMENTATION/DRIVER INFO.]

DTC INSPECTION [INSTRUMENT CLUSTER]

DPE090255430W01

WDS

1. Connect the WDS or equivalent to the DLC-2.
2. Verify if any DTCs are displayed.
   - If any DTCs are displayed, perform the troubleshooting according to the corresponding DTC inspection.
3. Disconnect the WDS or equivalent.



DPE102ZW2001

DTC TABLE [INSTRUMENT CLUSTER]

DPE090255430W02

DTC	Description	Page
B1342	Instrument cluster malfunction	(See 09–02F–1 DTC B1342 [INSTRUMENT CLUSTER].)
B2477	Configuration error	(See 09–02F–1 DTC B2477 [INSTRUMENT CLUSTER].)

DTC B1342 [INSTRUMENT CLUSTER]

DPE090255430W03

DTC B1342	• **Instrument cluster malfunction**
DETECTION CONDITION	• Malfunction in the instrument cluster internal circuit
POSSIBLE CAUSE	• Instrument cluster malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT INSTRUMENT CLUSTER** • Clear the DTC from the memory. • Turn the ignition switch to the LOCK position. • Turn the ignition switch to the ON position. • Is B1342 displayed?	Yes	Replace the instrument cluster.
		No	DTC troubleshooting completed.

DTC B2477 [INSTRUMENT CLUSTER]

DPE090255430W04

DTC B2477	• **Configuration error**
DETECTION CONDITION	• Configuration error • Malfunction in the instrument cluster internal circuit
POSSIBLE CAUSE	• Instrument cluster malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**PERFORM INSTRUMENT CLUSTER CONFIGURATION** • Perform instrument cluster configuration. • Is B2477 displayed?	Yes	Replace the instrument cluster.
		No	Go to the next step.
2	**VERIFY TROUBLESHOOTING OF DTC B2477 COMPLETED** • Clear the DTC from the memory. • Is B2477 displayed?	Yes	Go to the applicable DTC inspection.
		No	DTC troubleshooting completed.

09–02G ON-BOARD DIAGNOSTIC [AUDIO]

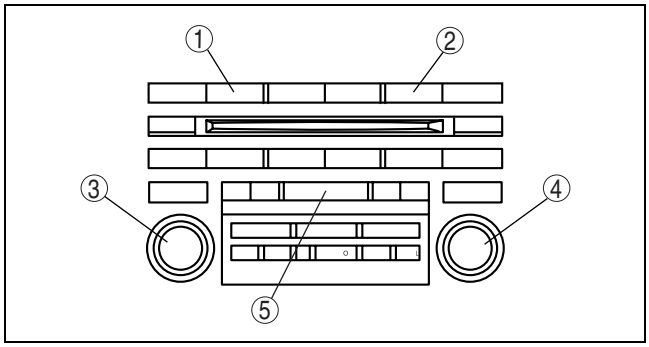
STARTING PROCEDURE FOR ON-BOARD DIAGNOSTIC TEST MODE

DPE090266900W01

Note
- All DTCs displayed in the on-board diagnostic test mode should be entered in the Audio Repair Order Form.

1. Turn the ignition switch to the ACC or ON position.
2. Turn the POWER switch off.
3. While pressing the POWER button, simultaneously press the FM1/2 button and the MEDIA button for **2 s or more**.

1	FM1/2 button
2	MEDIA button
3	POWER button (with RDS)
4	POWER button (without RDS)
5	SEEK button



DPE902EW1O01

Note
- If several DTCs are in the memory, they can be displayed using the SEEK button.

4. To stop the on-board diagnostic test mode, turn the ignition switch off.

SUPPLIER IDENTIFICATION PROCEDURE

DPE090266900W02

Note
- The supplier can vary with the module. When asking the supplier (service center) for repair or replacement, identify the supplier and fill in the Audio Repair Order Form with the following procedures.

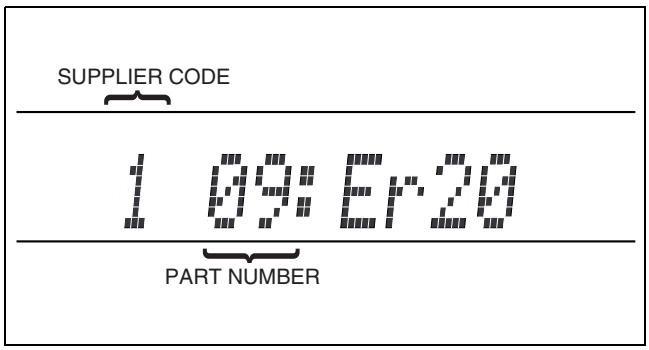
Identification Using the Label or Inscribed Lettering

1. Remove the audio unit.
2. Verify the supplier by referring to the label attached to each unit.

Identification Using the On-board Diagnostic Test Mode.

1. Start the on-board diagnostic test mode.
2. Identify the device and supplier codes by referring to the LCD display.

Note
- If no DTC is stored, no codes will be displayed.



CHU0902WM02

Supplier code	Supplier name
1	SANYO Automedia
2	Panasonic
3	CLARION
4	Pioneer

Part number	Part name
00	Cassette deck

09

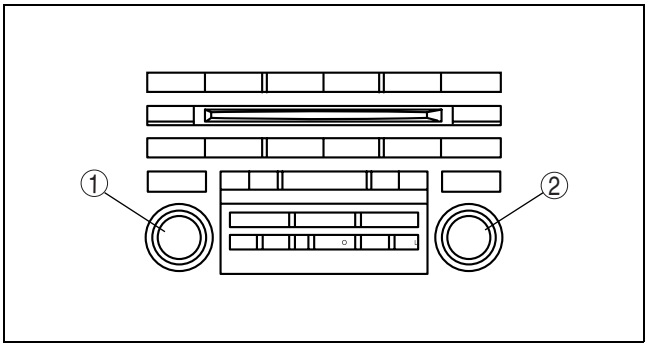
Part number	Part name
03	CD player
06	CD changer (upper module)
07	MD player
09	Base unit
10	MP3 applicable CD player system
16	CAN system
17	CAN system
18	CAN system
19	CAN system
20	HDD audio (base module)
21	Center panel
22	MP3 applicable CD changer

MEMORY CLEARING PROCEDURE

DPE090266900W03

1. Start the on-board diagnostic test mode.
2. While pressing the POWER button, simultaneously press the AUDIO CONT button for **2 s or more**.

1	POWER button (with RDS)
	AUDIO CONT button (without RDS)
2	AUDIO CONT button (with RDS)
	POWER button (without RDS)



DPE902EW1O02

Caution

- **Before clearing the memory, be sure to enter all of the DTCs displayed in the on-board diagnostic test mode in the Audio Repair Order Form.**

3. To stop the on-board diagnostic test mode, turn the ignition switch off.

DTC TABLE [AUDIO SYSTEM]

DPE090266900W04

Screen display DTC (When starting on-board diagnostic test function)	Detection condition	Possible cause/inspection
00: Er01	Cassette deck cannot implement insert and eject commands.	Cassette deck malfunction
00: Er03	Reel built into cassette deck does not operate.	Verify condition of the cassette deck.
00: Er04	Cassette tape is worn out.	• Tape wear • Verify condition of the cassette deck.
00: Er10	Cassette deck does not operate.	• Malfunction of connectors between base unit and cassette deck • Cassette deck malfunction
03: Er01	CD player cannot implement insert and eject commands.	CD player malfunction
03: Er02	Cannot change tracks.	CD player malfunction
03: Er07	CD reading error.	• Defective CD (scratches or dirt) • CD player malfunction
03: Er10	CD player does not operate.	• Malfunction of connectors between base unit and CD player • CD player malfunction
06: Er01	CD changer (upper module) cannot implement insert, eject, and disc change commands.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • CD changer (upper module) malfunction

Screen display DTC (When starting on-board diagnostic test function)	Detection condition	Possible cause/inspection
06: Er02	Cannot change tracks.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • CD changer (upper module) malfunction
06: Er07	CD reading error.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • CD changer (upper module) malfunction
06: Er10	CD changer (upper module) does not operate.	• Malfunction of connectors between base unit and CD changer (upper module) • CD changer (upper module) malfunction
07: Er01	MD player cannot implement insert and eject commands.	MD player malfunction
07: Er02	Cannot change tracks.	MD player malfunction
07: Er07	MD reading error.	Defective MD
07: Er08	Blank unrecorded MD is inserted.	Defective MD
07: Er10	MD player does not operate.	• Malfunction of connectors between base unit and MD player • MD player malfunction
09: Er20	Audio system does not operate.	Voltage at base unit is low.
09: Er21	Broken sound/No sound	Inspect the audio system operation according to vehicle condition.
09: Er22	No radio reception	Inspect the radio operation according to vehicle condition.
10: Er01	MP3 applicable CD player cannot implement insert and eject commands.	MP3 applicable CD player malfunction
10: Er02	Cannot change tracks.	MP3 applicable CD player malfunction
10: Er07	MP3 CD reading error.	Incorrect format CD
10: Er10	MP3 applicable CD player does not operate.	• Malfunction of connectors between base unit and MP3 applicable CD player • MP3 applicable CD player malfunction
16: Er12	—	CAN system
17: Er11	—	CAN system
18: Er11	—	CAN system
19: Er11	—	CAN system
19: Er17	Incorrect combination (base unit and center panel)	Install the correct base unit or the center panel.
19: Er18		
19: Er19	Communication error between base unit and center panel	Malfunction of connectors between base unit and center panel
20: Er01	CD player cannot implement insert and eject commands.	• Over heat/cool protection function is operating • HDD malfunction
20: Er02	Cannot change tracks.	• Over heat/cool protection function is operating • HDD malfunction
20: Er07	CD reading error.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • HDD malfunction
20: Er10	CD player/HDD does not operate.	• Over heat/cool protection function is operating • HDD malfunction

Screen display DTC (When starting on-board diagnostic test function)	Detection condition	Possible cause/inspection
20: Er14	HDD reading error.	• Verify the HDD unit using condition • HDD malfunction
	HDD reading error.	HDD malfunction (need of format)
	HDD writing error.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • HDD malfunction
	HDD writing error (system file)	• Over heat/cool protection function is operating • Defective CD (curved, broken or foreign material stuck/attached, etc.) • HDD malfunction
	HDD writing error (system file)	• Over heat/cool protection function is operating • Defective CD (curved, broken or foreign material stuck/attached, etc.) • HDD malfunction
20: Er15	Writing stop by low battery voltage	Inspect the battery voltage.
20: Er16	HDD over heat/cool	Over heat/cool protection function is operating
21: Er19	Audio system communication error	Center panel malfunction
22: Er01	MP3 applicable CD changer cannot implement insert, eject, and disc change commands.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • MP3 applicable CD changer malfunction
22: Er02	Cannot change tracks.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • MP3 applicable CD changer malfunction
22: Er07	CD reading error.	• Defective CD (curved, broken or foreign material stuck/attached, etc.) • MP3 applicable CD changer malfunction
22: Er10	MP3 applicable CD changer does not operate.	• Malfunction of connectors between base unit and MP3 applicable CD changer • MP3 applicable CD changer malfunction
no Err	No DTCs stored	No DTCs stored

DTC 16:ER12

DPE090266900W05

DTC 16:Er12	CAN system communication error
DETECTION CONDITION	• CAN system communication error
POSSIBLE CAUSE	• Malfunction of wiring harness between base unit and other CAN system related module • Audio unit malfunction

Diagnostic procedure

ACTION
(See09–02D–1 MULTIPLEX COMMUNICATION SYSTEM.)

DTC 17:ER11

DPE090266900W06

DTC 17:Er11	CAN system communication error
DETECTION CONDITION	• ALC function does not operate.
POSSIBLE CAUSE	• Malfunction of wiring harness between base unit and other CAN system related module • CAN system related module malfunction

Diagnostic procedure

ACTION
(See09–02D–1 MULTIPLEX COMMUNICATION SYSTEM.)

DTC 18:ER11

DPE090266900W07

DTC 18:Er11	CAN system communication error
DETECTION CONDITION	• CAN system communication error
POSSIBLE CAUSE	• Malfunction of wiring harness between base unit and other CAN system related module • CAN system related module malfunction

Diagnostic procedure

ACTION
(See09–02D–1 MULTIPLEX COMMUNICATION SYSTEM.)

DTC 19:ER11

DPE090266900W08

DTC 18:Er11	CAN system communication error
DETECTION CONDITION	• CAN system communication error
POSSIBLE CAUSE	• Malfunction of wiring harness between base unit and other CAN system related module • CAN system related module malfunction

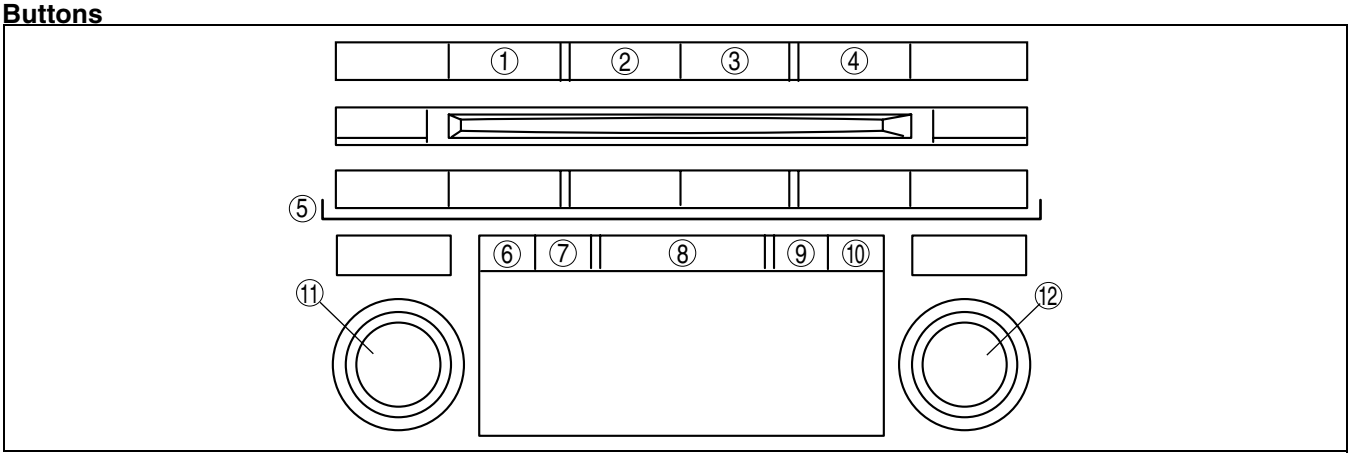
Diagnostic procedure

ACTION
(See09–02D–1 MULTIPLEX COMMUNICATION SYSTEM.)

DIAGNOSTIC ASSIST FUNCTION

DPE090266900W12

Structural View
Buttons



DPE902EW1O03

1	FM1/2 button
2	AM button
3	CD button
4	MEDIA button
5	Preset button 1—6
6	TA button (with RDS)
	AUTO-M button (without RDS)
7	PTY button (with RDS)
	DISP button (without RDS)

8	SEEK UP/SEEK DOWN button
9	AF button (with RDS)
	RDM button (without RDS)
10	DISP/AUTO-M button (with RDS)
	SCAN button (without RDS)
11	POWER/VOLUME button (with RDS)
	AUDIO CONT/TUNE/TEXT button (without RDS)
12	AUDIO CONT/TUNE/TEXT button (with RDS)
	POWER/VOLUME button (without RDS)

Button Inspection

1. With the audio power on, press the POWER button and simultaneously press the MEDIA button for **approx. 1 s**.
2. Inspect according to the following table:

INSPECTION	DISPLAY	ACTION	
• Start the button inspection mode. • Press all buttons.	—	The buzzer sounds.	The button is normal.
		The buzzer does not sound.	Replace the base unit.

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

Speaker Inspection

1. With the audio power on, press the POWER button and simultaneously press the AUTO-M button for **approx. 1 s**.
2. Inspect according to the following table:

INSPECTION	DISPLAY	ACTION	
• Start the speaker inspection mode. • Does each speaker output sound in the following order? 1. Front door speaker and tweeter (LH) 2. Front door speaker and tweeter (RH) 3. Rear speaker (RH) 4. Rear speaker LH	—	Yes	Speakers, and wiring harness between the base unit and speakers are normal.
		No	• Inspect the following parts. — Malfunctioning speaker — Wiring harness between base unit and malfunctioning speaker

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

Radio Reception Condition Inspection

1. With the audio power on, press the POWER button and simultaneously press the PRESET 2 button for **approx. 1 s**.
2. Inspect according to the following table:

Caution

- **Even if the system is normal, radio reception may be difficult depending on where the system is inspected (indoors/outdoors, or conditions at the location). Before inspecting the system, verify that radio reception is adequate.**
- **When inspecting, select a frequency band (radio station) with the best reception.**

INSPECTION	DISPLAY	ACTION
Start the radio reception condition inspection mode.	NORMAL CONDITION LEV–5 ↕ LEV–9	Antenna, antenna feeder and base unit are normal.
	LEV–3 ↕ LEV–4	Change the frequency (radio station) and inspect again.
	MALFUNCTION PRESENT LEV–0 ↕ LEV–2	Inspect the antenna and antenna feeder. • If either the antenna or the antenna feeder is not normal, replace the malfunctioning part. • If the antenna and antenna feeder are normal, replace the base unit.

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

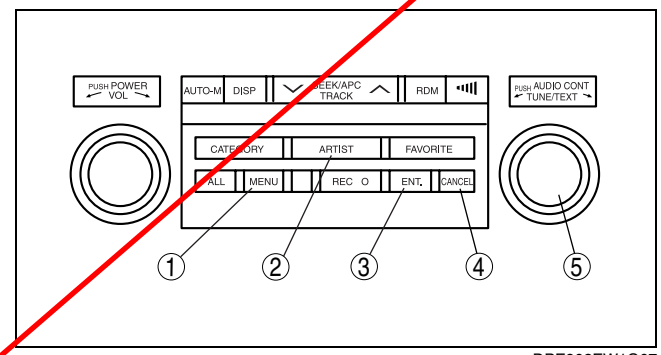
SECRET MENU PROCEDURE

DPE090266900W13

Caution

- **While secret menu is operating, do not subject the HDD to vibration or turn the audio system off. It may cause audio system malfunction.**

1. Play the HDD.
2. Press the MENU button and simultaneously press the ENT. button and ARTIST button for **approx. 1 s**.



DPE902EW1O07

1	MENU button
2	ARTIST button
3	ENT. button
4	CANCEL button
5	AUDIO CONT button/TEXT dial

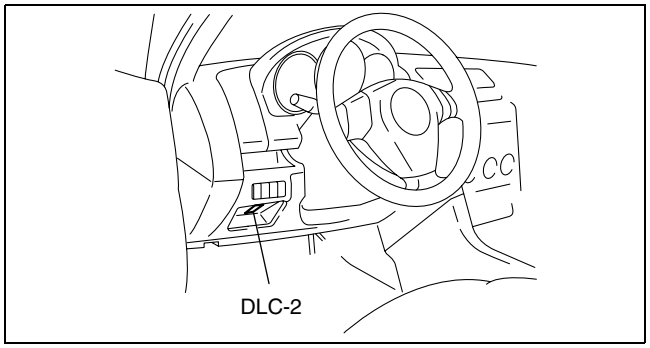
3. Select the item by turning the TEXT dial and press the AUDIO CONT button to execute the item.
   - TEST PLAY
   - Format
   - FW Info
   - DB Rebuilt
   - FW Update
   - Scan Disk
4. Press the MENU button to stop the secret menu.
   - Press the CANCEL button for **less than 1.5 s**: Return to last screen.
   - Press the CANCEL button for **more than 1.5 s**: Return to top menu.
   - Press the MENU button for **less than 1.5 s**: Stop the secret menu.

09–02H ON-BOARD DIAGNOSTIC [CONTROL SYSTEM]

DTC INSPECTION [BCM]

1. Connect the WDS or equivalent to the DLC-2.
2. Verify if any DTCs are displayed.
   - If any DTCs are displayed, perform the troubleshooting according to the corresponding DTC inspection.
3. Disconnect the WDS or equivalent.

DPE090200200W01



DPE102ZW2001

09

DTC TABLE [BCM]

DPE090200200W02

DTC table

DTC No.	Description	Detection condition	Page
B1014	Rain sensor error	Rain sensor internal malfunction	(See 09–02H–3 DTC B1014.)
B1311	Unlock switch circuit open	Open circuit in wiring harness between BCM and driver-side door lock-link switch (unlock signal)	(See 09–02H–3 DTC B1311.)
B1317	Battery voltage high	Input voltage from the battery is excessively high	(See 09–02H–4 DTC B1317.)
B1318	Battery voltage low	Input voltage from the battery is excessively low	(See 09–02H–5 DTC B1318.)
B1320	Driver door ajar circuit open	Open circuit in wiring harness between BCM and front door latch switch (driver-side)	(See 09–02H–6 DTC B1320.)
B1328	Passenger door ajar circuit open	Open circuit in wiring harness between BCM and front door latch switch (passenger-side)	(See 09–02H–8 DTC B1328.)
B1342	ECU is faulted	BCM microcomputer malfunction	(See 09–02H–10 DTC B1342.)
B1345	Heated backlite input circuit short to ground	Short to GND in wiring harness between BCM and climate control unit (rear window defroster switch)	(See 09–02H–11 DTC B1345.)
B1447	Wiper park sense circuit open	Open circuit in wiring harness between BCM and windshield wiper motor (autostop switch)	(See 09–02H–12 DTC B1447.)
B1472	Headlight on switch input circuit short to ground	Short to GND in wiring harness between BCM and light switch (low beam)	(See 09–02H–14 DTC B1472.)
B1506	Turn signal switch circuit short to ground	Short to GND in wiring harness between BCM and turn switch	(See 09–02H–15 DTC B1506.)
B1570	Headlight high beam switch input circuit short to battery	Short to GND in wiring harness between BCM and light switch (high beam)	(See 09–02H–16 DTC B1570.)
B1572	Sliding door ajar circuit open	Open circuit in wiring harness between BCM and sliding door switch	(See 09–02H–17 DTC B1572.)
B1614	Rear wiper interval switch input circuit short to ground	Short to GND in wiring harness between BCM and rear wiper and washer switch (INT)	(See 09–02H–19 DTC B1614.)
B1696	Auto light switch input circuit short to ground	Short to GND in wiring harness between BCM and light switch (AUTO)	(See 09–02H–20 DTC B1696.)
B1798	Position lights switch (TNS) input circuit short to ground	Short to GND in wiring harness between BCM and light switch (TNS)	(See 09–02H–21 DTC B1798.)
B1873	Turn signal/hazard power feed circuit short to ground	Short to GND in wiring harness between BCM and hazard warning switch	(See 09–02H–22 DTC B1873.)
B2114	Front washer switch input circuit short to battery	Short to power supply in wiring harness between BCM and windshield wiper and washer switch (front washer)	(See 09–02H–23 DTC B2114.)
B2175	A/C request switch circuit short to ground	Short to GND in wiring harness between BCM and climate control unit (A/C ON request)	(See 09–02H–25 DTC B2175.)
B2177	Intruder sensor circuit failure	Intruder sensor malfunction or circuit malfunction	(See 09–02H–26 DTC B2177.)
B2180	Front wiper switch (slow) circuit short to ground	Short to GND in wiring harness between BCM and windshield wiper and washer switch (low)	(See 09–02H–28 DTC B2180.)
B2181	Front wiper switch (high) circuit short to ground	Short to GND in wiring harness between BCM and windshield wiper and washer switch (high)	(See 09–02H–30 DTC B2181.)
B2259	Intermittent wiper circuit short to ground	Short to GND in wiring harness between BCM and windshield wiper and washer switch (INT)	(See 09–02H–31 DTC B2259.)
B2264	Rear fog light switch short to ground	Short to GND in wiring harness between BCM and rear fog light switch	(See 09–02H–33 DTC B2264.)
B2479	Park brake switch circuit open	Open circuit in wiring harness between BCM and parking brake switch	(See 09–02H–34 DTC B2479.)
B2574	Driver door lock switch short to ground	Short to GND in wiring harness between BCM and driver-side door lock-link switch.	(See 09–02H–34 DTC B2479.)
B2665	Battery back sounder circuit failure	Short to GND or power supply in wiring harness between BCM and theft-deterrent siren	(See 09–02H–36 DTC B2665.)
B2721	Liftgate ajar output short to ground	Short to GND in wiring harness between BCM and liftgate latch switch	(See 09–02H–38 DTC B2721.)

DTC No.	Description	Detection condition	Page
U2030	Rain sensor communication fault	Communication error to rain sensor	(See 09–02H–39 DTC U2030.)

DTC B1014

DPE090200200W03

DTC B1014	Rain sensor error
DETECTION CONDITION	Rain sensor internal malfunction
POSSIBLE CAUSE	• Rain sensor malfunction • BCM malfunction

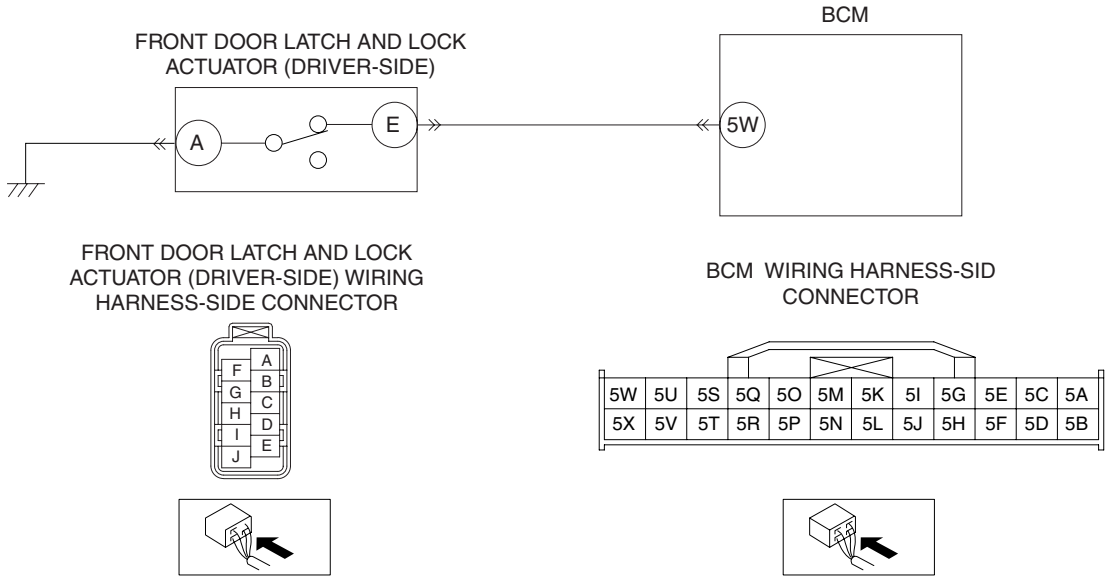
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT DTC** • Clear the DTC from the BCM memory using the WDS or equivalent. • Turn the ignition switch off. • Turn the ignition switch to ON position. • Is the same DTC present?	Yes	Replace the rain sensor, then go to the next step. (See 09–19–18 RAIN SENSOR REMOVAL/ INSTALLATION.)
		No	Go to the next step.
2	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Turn the ignition switch off. • Turn the ignition switch to ON position. • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1311

DPE090200200W04

DTC B1311	Unlock switch circuit open
DETECTION CONDITION	Open circuit in wiring harness between BCM and driver-side door lock-link switch (unlock signal)
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5W and front door latch and lock actuator (driver-side) terminal E • Open circuit in wiring harness between front door latch and lock actuator (driver-side) terminal A and body GND • Front door latch and lock actuator malfunction • BCM malfunction



09

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR** • Turn the ignition switch off. • Disconnect the front door latch and lock actuator (driver-side) connector. • Inspect the front door latch and lock actuator (driver-side) connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5W (wiring harness-side) and front door latch and lock actuator (driver-side) terminal E (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) GND CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between front door latch and lock actuator (driver-side) terminal A (wiring harness-side) and body GND. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
5	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE)** • Inspect the front door latch and lock actuator (driver-side). (See 09–14A–10 FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION.) • Is there any malfunction?	Yes	Replace the front door latch and lock actuator (driver-side), then go to the next step. (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
6	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1317

DPE090200200W05

DTC B1317	Battery voltage high
DETECTION CONDITION	Input voltage from the battery is excessively high
POSSIBLE CAUSE	• Battery malfunction • Generator malfunction • BCM malfunction

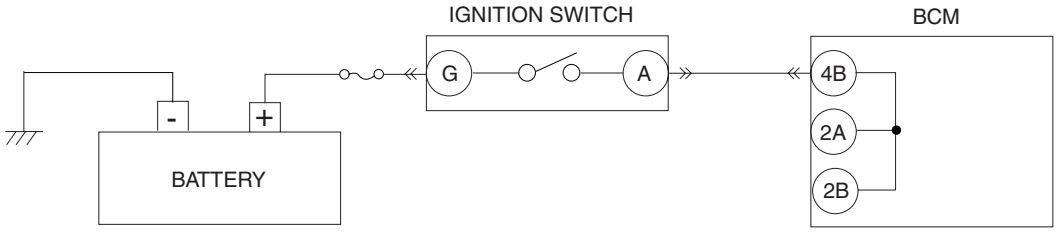
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT DTC FROM PCM** • Connect the WDS or equivalent to the DLC-2. • Are any DTCs from the PCM displayed?	Yes	Perform DTC inspection. (See 01–02A–9 DTC TABLE [L8, LF].) (See 01–02B–7 DTC TABLE [MZR-CD (RF Turbo)].) Go to the next step.
		No	Go to the next step.
2	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Turn the ignition switch to LOCK position then ON position. • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

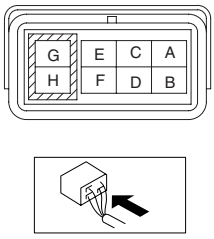
DTC B1318

DPE090200200W06

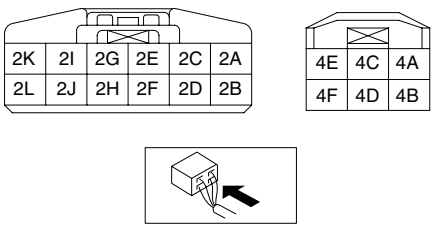
DTC B1318	Battery voltage low
DETECTION CONDITION	Input voltage from the battery is excessively low
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 4B and battery • Open circuit in wiring harness between BCM terminal 2A and battery • Open circuit in wiring harness between BCM terminal 2B and battery • Short to GND in wiring harness between BCM terminal 4B and battery • Short to GND in wiring harness between BCM terminal 2A and battery • Short to GND in wiring harness between BCM terminal 2B and battery • Battery malfunction • Generator malfunction • BCM malfunction



IGNITION SWITCH WIRING HARNESS-SIDE CONNECTOR



BCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

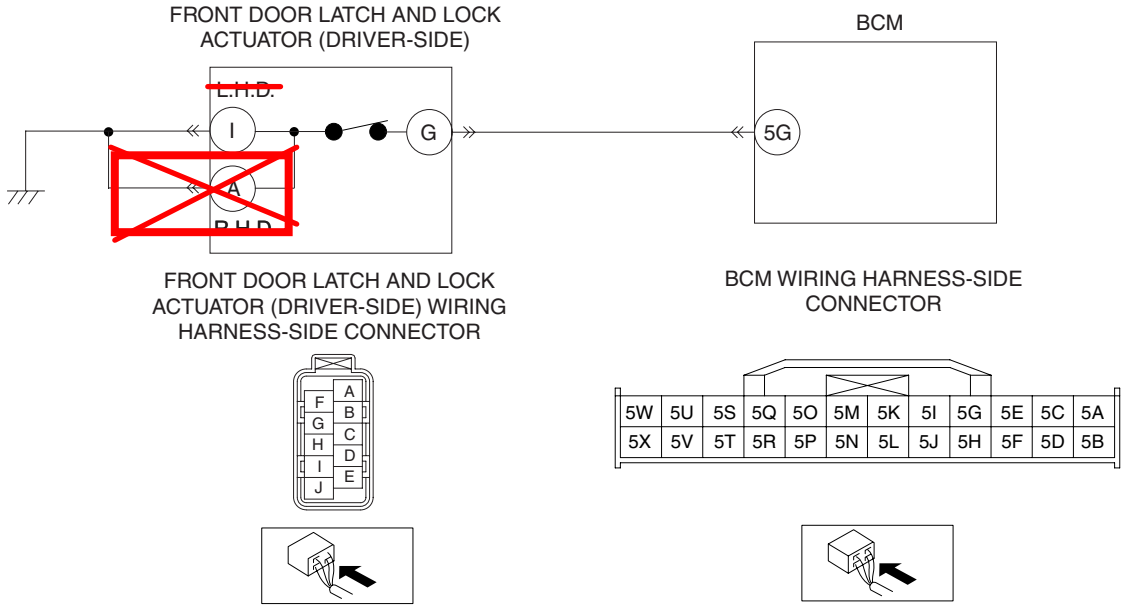
STEP	INSPECTION		ACTION
1	**INSPECT DTC FROM PCM** • Connect the WDS or equivalent to the DLC-2. • Are any DTCs from the PCM displayed?	Yes	Perform DTC inspection. (See 01–02A–9 DTC TABLE [L8, LF].) (See 01–02B–7 DTC TABLE [MZR-CD (RF Turbo)].) Go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT BCM POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT** • Disconnect the negative battery cable. • Disconnect the positive battery cable. • Inspect for continuity between following terminals: — BCM terminal 4B (wiring harness-side) — battery positive terminal (wiring harness-side) — BCM terminal 2A (wiring harness-side) — battery positive terminal (wiring harness-side) — BCM terminal 2B (wiring harness-side) — battery positive terminal (wiring harness-side) • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	**INSPECT BCM POWER SUPPLY CIRCUIT FOR SHORT TO GND** • Inspect for continuity between following terminals: — BCM terminal 4B (wiring harness-side) — body GND — BCM terminal 2A (wiring harness-side) — body GND — BCM terminal 2B (wiring harness-side) — body GND • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to the next step.
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Turn the ignition switch to LOCK position then ON position. • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1320

DPE090200200W07

DTC B1320	Drive door ajar circuit open
DETECTION CONDITION	Open circuit in wiring harness between BCM and front door latch switch (driver-side)
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5G and front door latch and lock actuator (driver-side) terminal G • Open circuit in wiring harness between front door latch and lock actuator (driver-side) terminal I (L.H.D.) or A (R.H.D.) and body GND • Front door latch and lock actuator malfunction • BCM malfunction

DTC B1320	Drive door ajar circuit open



Diagnostic procedure

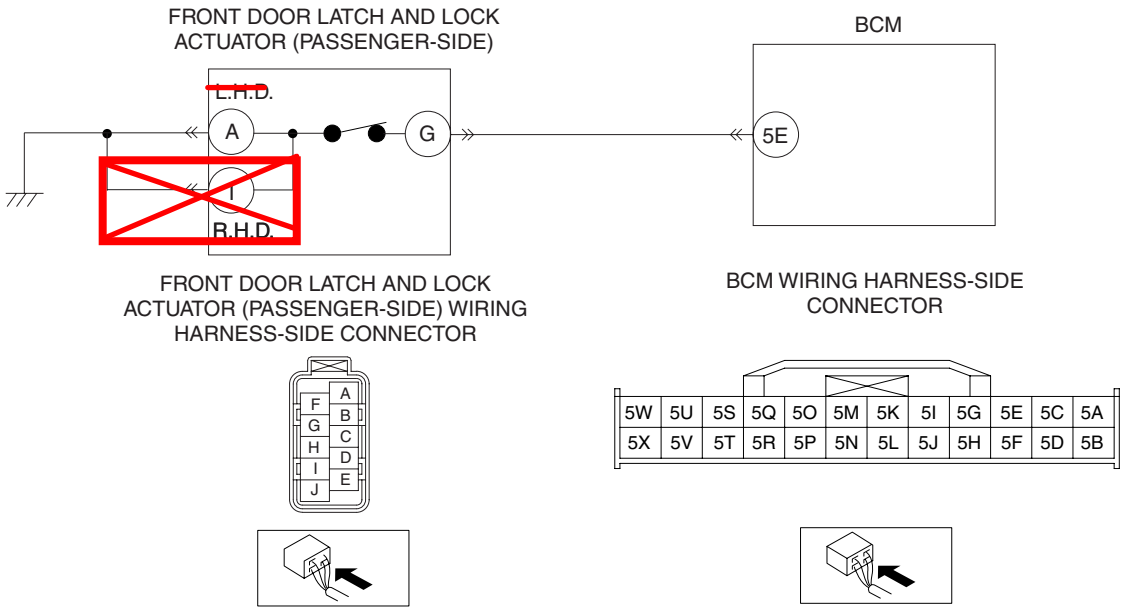
STEP	INSPECTION		ACTION
1	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR** • Turn the ignition switch off. • Disconnect the front door latch and lock actuator (driver-side) connector. • Inspect the front door latch and lock actuator (driver-side) connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
3	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5G (wiring harness-side) and front door latch and lock actuator (driver-side) terminal G (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
4	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) GND CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between front door latch and lock actuator (driver-side) terminal I ~~(L.H.D.) or A (R.H.D.~~) (wiring harness-side) and body GND. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
5	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE)** • Inspect the front door latch and lock actuator (driver-side). (See 09–14A–10 FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION.) • Is there any malfunction?	Yes	Replace the front door latch and lock actuator (driver-side), then go to the next step. (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
6	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1328

DPE090200200W08

DTC B1328	Passenger door ajar circuit open
DETECTION CONDITION	Open circuit in wiring harness between BCM and front door latch switch (passenger-side)
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5E and front door latch and lock actuator (passenger-side) terminal G • Open circuit in wiring harness between front door latch and lock actuator (passenger-side) terminal A ~~(L.H.D.) or I (R.H.D.~~) and body GND. • Front door latch and lock actuator malfunction • BCM malfunction

DTC B1328	Passenger door ajar circuit open



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR** • Turn the ignition switch off. • Disconnect the front door latch and lock actuator (passenger-side) connector. • Inspect the front door latch and lock actuator (passenger-side) connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
3	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5E (wiring harness-side) and front door latch and lock actuator (passenger-side) terminal G (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
4	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) GND CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between front door latch and lock actuator (passenger-side) terminal A ~~(L.H.D.) or I (R.H.D.~~) and body GND. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
5	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE)** • Inspect the front door latch and lock actuator (passenger-side). (See 09–14A–10 FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION.) • Is there any malfunction?	Yes	Replace the front door latch and lock actuator (passenger-side), then go to the next step. (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
6	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1342

DPE090200200W09

DTC B1342	ECU is faulted
DETECTION CONDITION	BCM microcomputer malfunction
POSSIBLE CAUSE	• BCM microcomputer malfunction

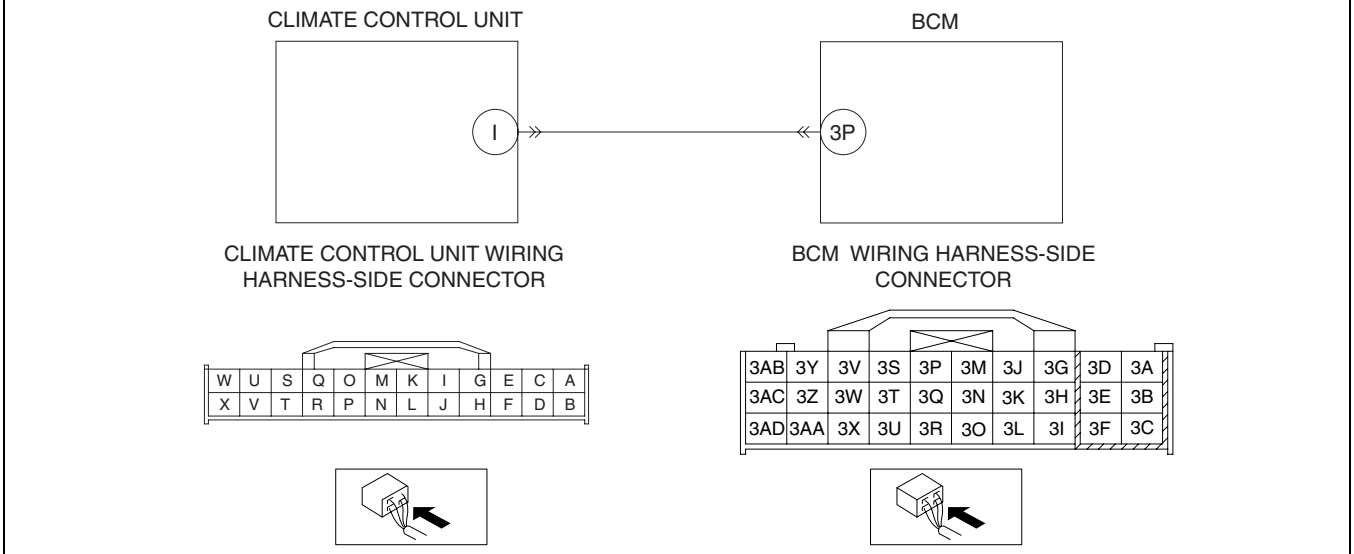
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT DTC** • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1345

DPE090200200W10

DTC B1345	**Heated backlite input circuit short to ground**
DETECTION CONDITION	Short to GND in wiring harness between BCM and climate control unit (rear window defroster switch)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3P and climate control unit terminal I • Climate control unit malfunction • BCM malfunction



Diagnostic procedure

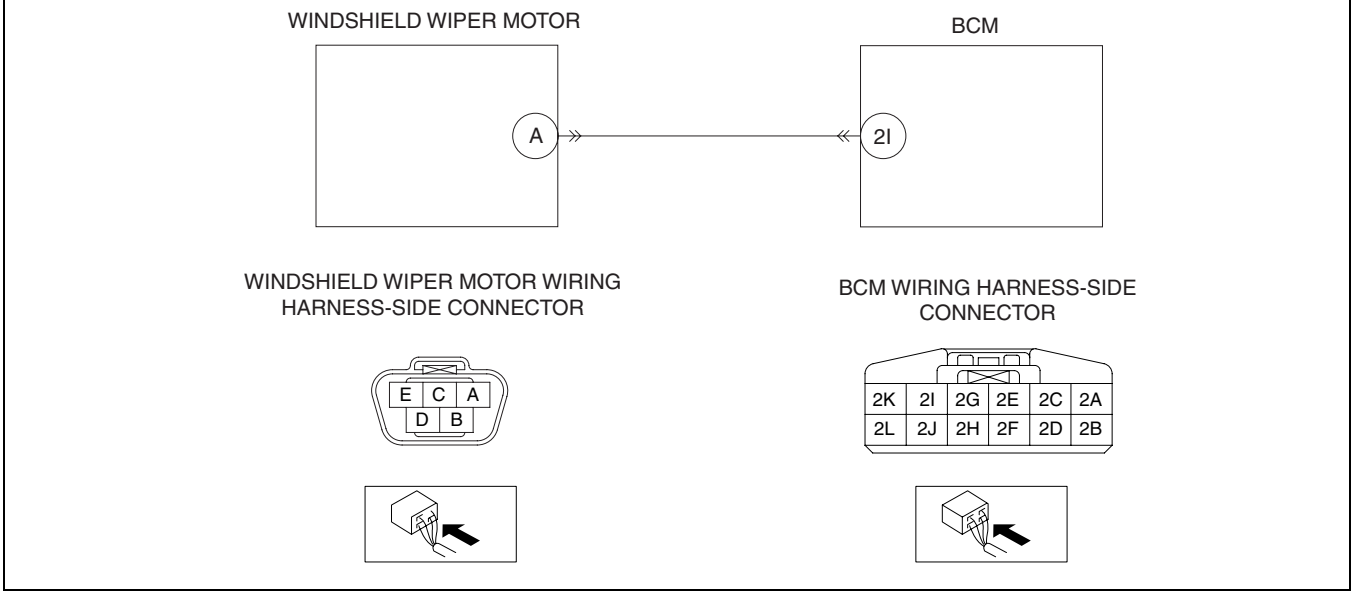
STEP	INSPECTION		ACTION
1	**INSPECT CLIMATE CONTROL UNIT CONNECTOR** • Disconnect the climate control unit connector. • Inspect the climate control unit connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT REAR WINDOW DEFROSTER SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3P (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT CLIMATE CONTROL UNIT** • Inspect the climate control unit. (See 07–40–44 CLIMATE CONTROL UNIT INSPECTION [MANUAL AIR CONDITIONER].) • Is there any malfunction?	Yes	Replace the climate control unit, then go to the next step. (See 07–40–36 CLIMATE CONTROL UNIT REMOVAL [MANUAL AIR CONDITIONER], 07–40–37 CLIMATE CONTROL UNIT INSTALLATION [MANUAL AIR CONDITIONER].)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1447

DPE090200200W11

DTC B1447	Wiper park sense circuit open
DETECTION CONDITION	Open circuit in wiring harness between BCM and windshield wiper motor (autostop switch)
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 2I and windshield wiper motor terminal A • Windshield wiper motor malfunction • BCM malfunction

DTC B1447	Wiper park sense circuit open



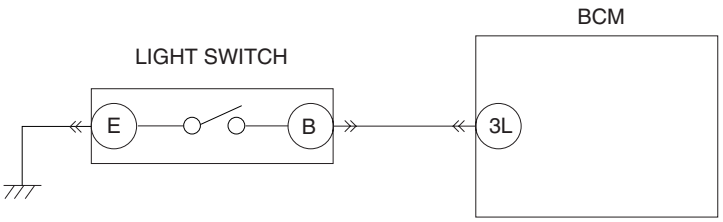
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT WINDSHIELD WIPER MOTOR CONNECTOR** • Turn the ignition switch off. • Disconnect the windshield wiper motor connector. • Inspect the windshield wiper motor connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT WINDSHIELD WIPER MOTOR SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 2I (wiring harness-side) and windshield wiper motor terminal A (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	**INSPECT WINDSHIELD WIPER MOTOR** • Inspect the windshield wiper motor. (See 09–19–6 WINDSHIELD WIPER MOTOR INSPECTION [~~L.H.D.~~]; ~~09–19–6 WINDSHIELD WIPER MOTOR~~ INSPECTION [R.H.D.].) • Is there any malfunction?	Yes	Replace the windshield wiper motor, then go to the next step. (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

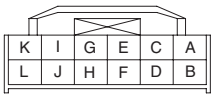
DTC B1472

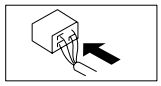
DPE090200200W12

DTC B1472	Headlight on switch input circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and light switch (low beam)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3L and light switch terminal B • Light switch malfunction • BCM malfunction

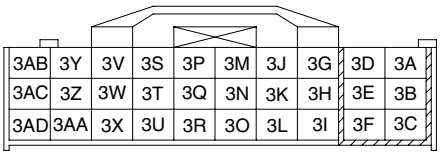


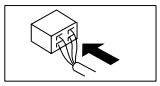
LIGHT SWITCH WIRING HARNESS-SIDE CONNECTOR





BCM WIRING HARNESS-SIDE CONNECTOR





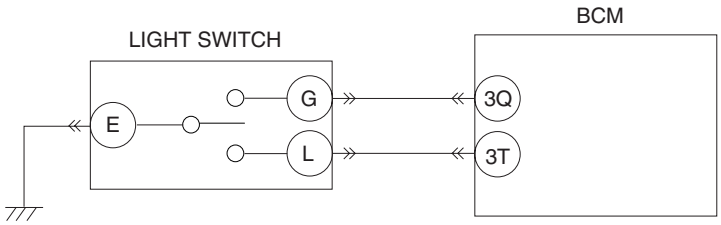
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT LIGHT SWITCH CONNECTOR** • Disconnect the light switch connector. • Inspect the light switch connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIGHT SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3L (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. (See 09–18–23 LIGHT SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the light switch, then go to the next step. (See 09–18–22 LIGHT SWITCH REMOVAL/ INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

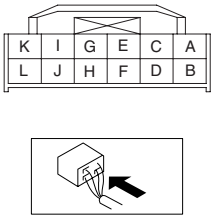
DTC B1506

DPE090200200W13

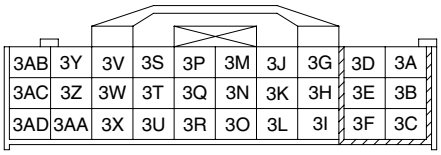
DTC B1506	Turn signal switch circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and turn switch
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3T and light switch terminal L • Short to GND in wiring harness between BCM terminal 3Q and light switch terminal G • Light switch malfunction • BCM malfunction

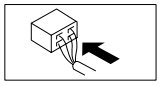


LIGHT SWITCH WIRING HARNESS-SIDE CONNECTOR



BCM WIRING HARNESS-SIDE CONNECTOR





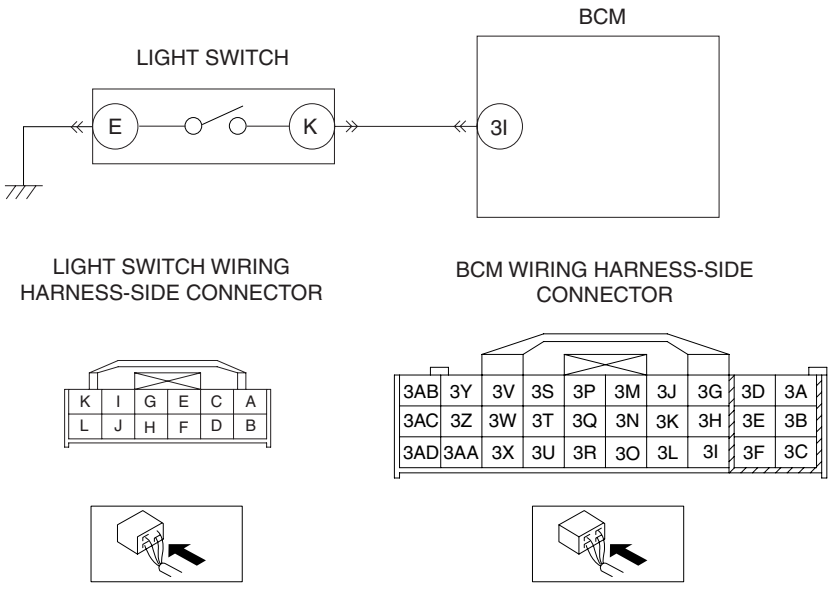
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT LIGHT SWITCH CONNECTOR** • Disconnect the light switch connector. • Inspect the light switch connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIGHT SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between following terminals: — BCM terminal 3T (wiring harness-side) — body GND — BCM terminal 3Q (wiring harness-side) — body GND • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. • Is there any malfunction?	Yes	Replace the light switch, then go to the next step. (See 09–18–23 LIGHT SWITCH INSPECTION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1570

DPE090200200W14

DTC B1570	Headlight high beam switch input circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and light switch (high beam)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3I and light switch terminal K • Light switch malfunction • BCM malfunction



Diagnostic procedure

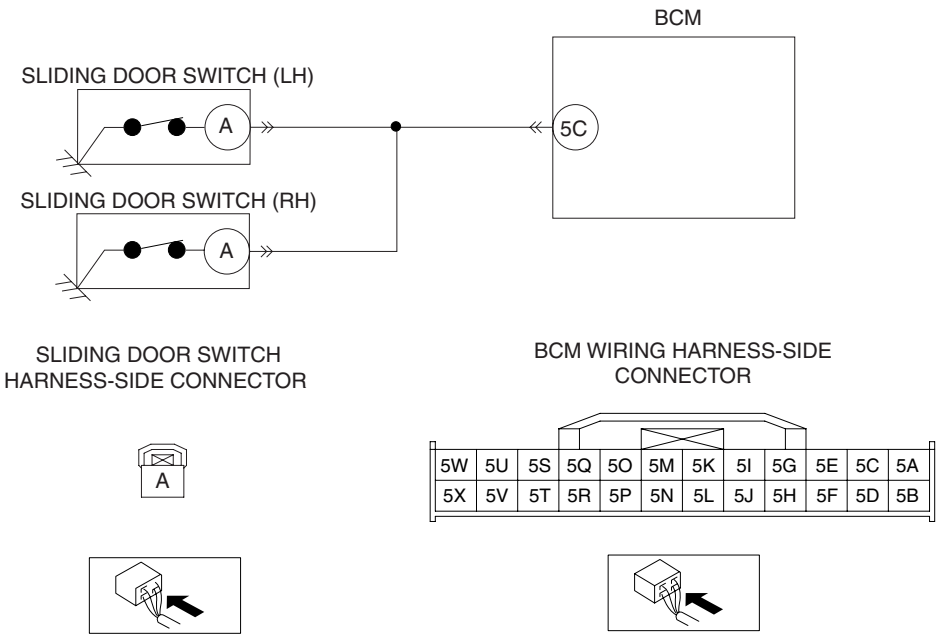
STEP	INSPECTION		ACTION
1	**INSPECT LIGHT SWITCH CONNECTOR** • Turn the ignition switch off. • Disconnect the light switch connector. • Inspect the light switch connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIGHT SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3I and body GND. • Is there any continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. (See 09–18–23 LIGHT SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the light switch, then go to the next step. (See 09–18–22 LIGHT SWITCH REMOVAL/ INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1572

DPE090200200W15

DTC B1572	Sliding door ajar circuit open
DETECTION CONDITION	Open circuit in wiring harness between BCM and sliding door switch
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5C and following terminals: — Sliding door switch (LH) terminal A — Sliding door switch (RH) terminal A • Sliding door switch actuator malfunction • BCM malfunction

DTC B1572	Sliding door ajar circuit open



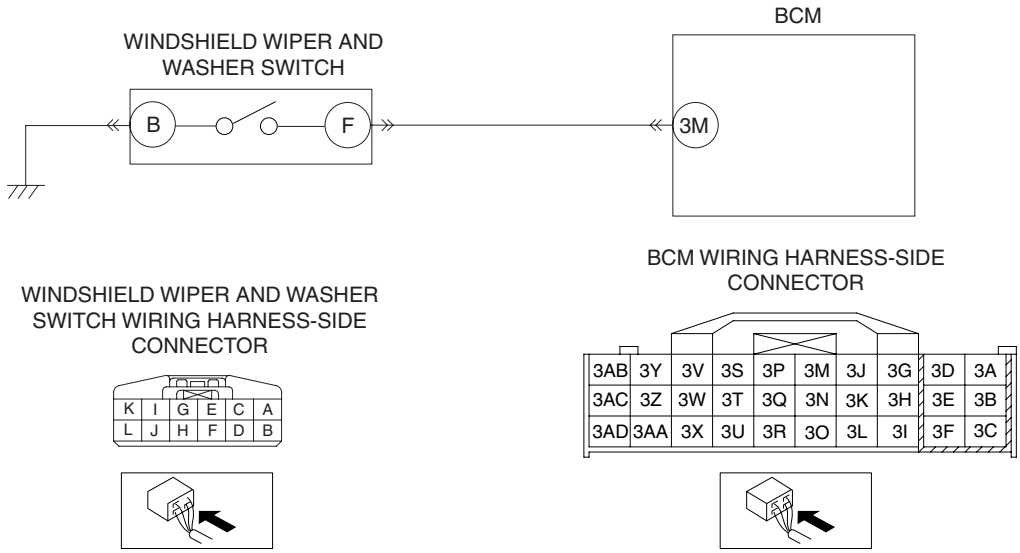
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT SLIDING DOOR SWITCH CONNECTOR** • Turn the ignition switch off. • Disconnect the sliding door switch connector. • Inspect the sliding door switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT SLIDING DOOR SWITCH SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5C (wiring harness-side) and sliding door switch terminal A (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	**INSPECT SLIDING DOOR SWITCH** • Inspect the sliding door switch. (See 09–18–29 DOOR SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the sliding door switch, then go to the next step. (See 09–18–28 DOOR SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1614

DPE090200200W16

DTC B1614	Rear wiper interval switch input circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and rear wiper and washer switch (INT)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3M and windshield wiper and washer switch terminal F • Windshield wiper and washer switch malfunction • BCM malfunction



09

Diagnostic procedure

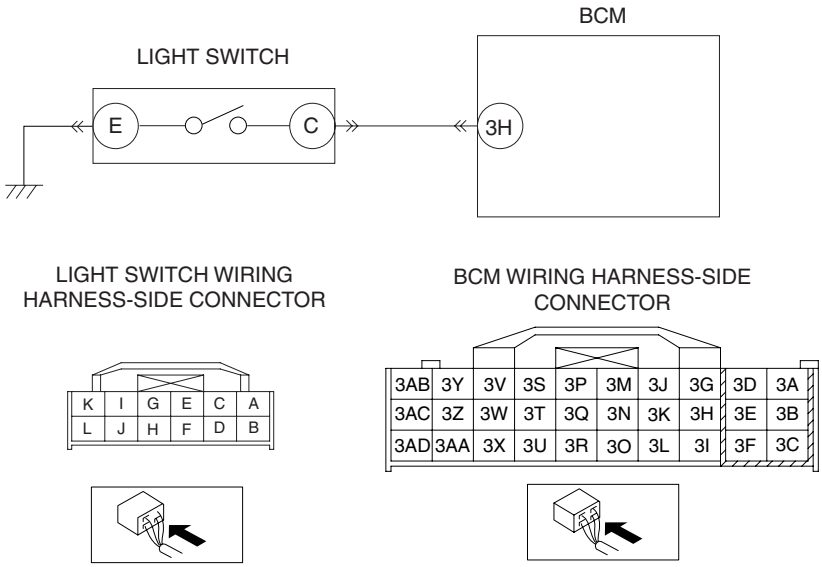
STEP	INSPECTION		ACTION
1	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH CONNECTOR** • Disconnect the windshield wiper and washer switch connector. • Inspect the windshield wiper and washer switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3M (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH** • Inspect the windshield wiper and washer switch. (See 09–19–10 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the windshield wiper and washer switch, then go to the next step. (See 09–19–9 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1696

DPE090200200W17

DTC B1696	Auto light switch input circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and light switch (AUTO)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3H and light switch terminal C • Light switch malfunction • BCM malfunction

DTC B1696	Auto light switch input circuit short to ground



Diagnostic procedure

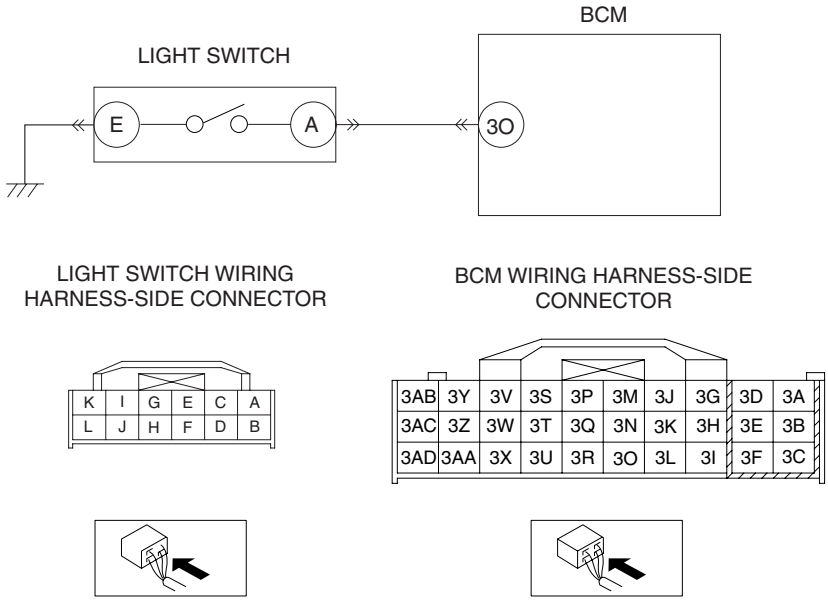
STEP	INSPECTION		ACTION
1	**INSPECT LIGHT SWITCH CONNECTOR** • Disconnect the light switch connector. • Inspect the light switch connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIGHT SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3H (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. (See 09–18–23 LIGHT SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the light switch, then go to the next step. (See 09–18–22 LIGHT SWITCH REMOVAL/ INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1798

DPE090200200W18

DTC B1798	Position lights switch (TNS) input circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and light switch (TNS)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3O and light switch terminal A • Light switch malfunction • BCM malfunction

DTC B1798	Position lights switch (TNS) input circuit short to ground



Diagnostic procedure

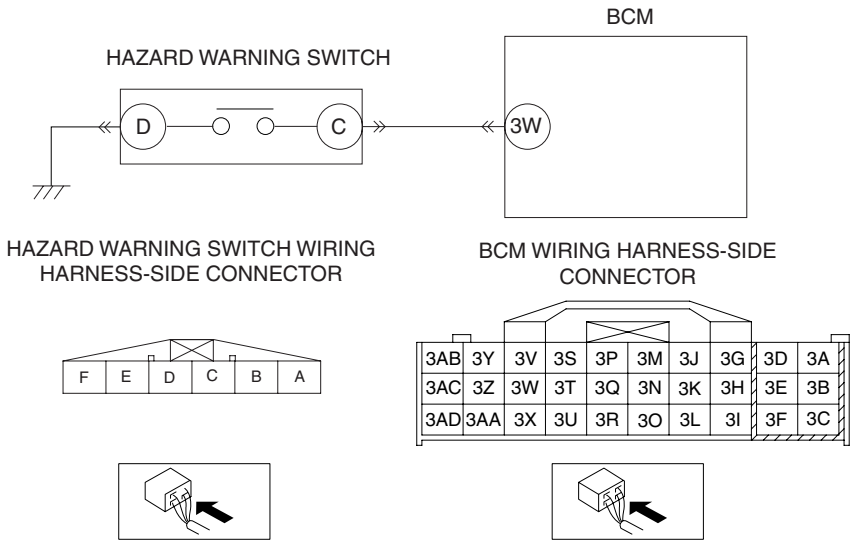
STEP	INSPECTION		ACTION
1	**INSPECT LIGHT SWITCH CONNECTOR** • Disconnect the light switch connector. • Inspect the light switch connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIGHT SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3O (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. (See 09–18–23 LIGHT SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the light switch, then go to the next step. (See 09–18–22 LIGHT SWITCH REMOVAL/ INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B1873

DPE090200200W19

DTC B1873	Hazard switch input circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and hazard warning switch
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3W and hazard warning switch terminal C • Hazard warning switch malfunction • BCM malfunction

DTC B1873	Hazard switch input circuit short to ground



Diagnostic procedure

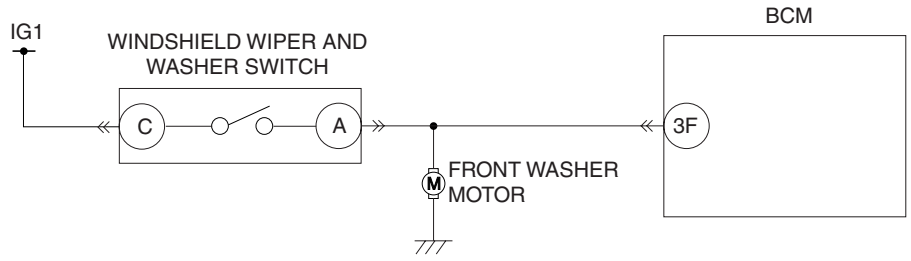
STEP	INSPECTION		ACTION
1	**INSPECT HAZARD WARNING SWITCH CONNECTOR** • Disconnect the hazard warning switch connector. • Inspect the hazard warning switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT HAZARD WARNING SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3W (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT HAZARD WARNING SWITCH** • Inspect the hazard warning switch. (See 09–18–21 HAZARD WARNING SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the hazard warning switch, then go to the next step. (See 09–18–20 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2114

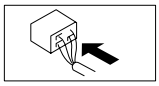
DPE090200200W20

DTC B2114	Front washer switch input circuit short to battery
DETECTION CONDITION	Short to power supply in wiring harness between BCM and windshield wiper and washer switch (front washer)

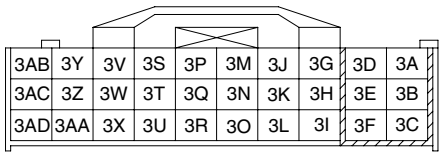
DTC B2114	Front washer switch input circuit short to battery
POSSIBLE CAUSE	• Short to power supply in wiring harness between BCM terminal 3F and windshield wiper and washer switch terminal A • Windshield wiper and washer switch malfunction • BCM malfunction

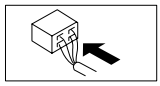


WINDSHIELD WIPER AND WASHER SWITCH WIRING HARNESS-SIDE CONNECTOR



BCM WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

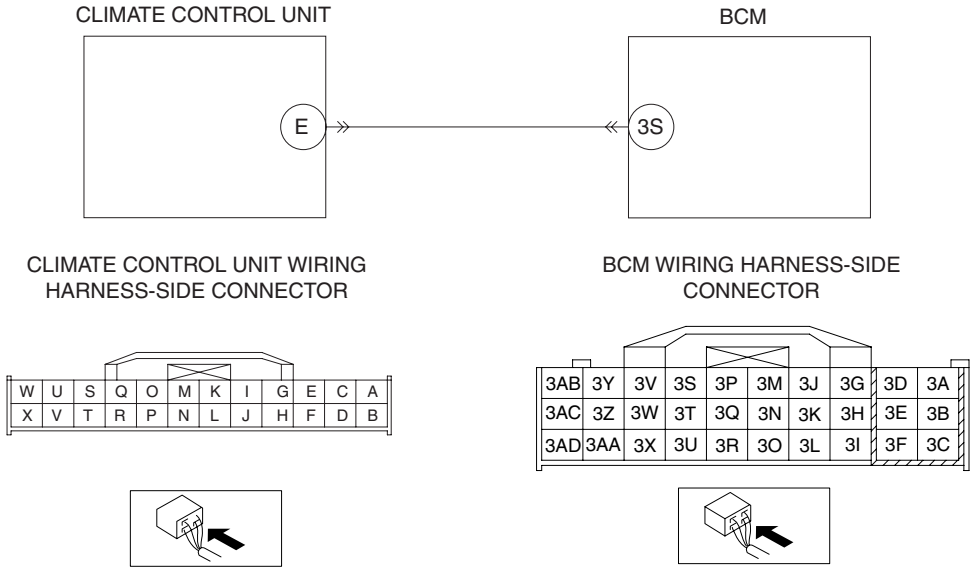
STEP	INSPECTION		ACTION
1	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH CONNECTOR** • Turn the ignition switch off. • Disconnect the windshield wiper and washer switch connector. • Inspect the windshield wiper and washer switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between BCM terminal 3F (wiring harness-side) and body GND. • Is the voltage **B+**?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 5.
		No	Go to the next step.
4	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH** • Inspect the windshield wiper and washer switch. (See 09–19–10 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the windshield wiper and washer switch, then go to the next step. (See 09–19–9 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2175

DPE090200200W21

DTC B2175	A/C request switch circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and climate control unit (A/C ON request)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3S and climate control unit terminal E • Climate control unit malfunction • BCM malfunction

DTC B2175	A/C request switch circuit short to ground



Diagnostic procedure

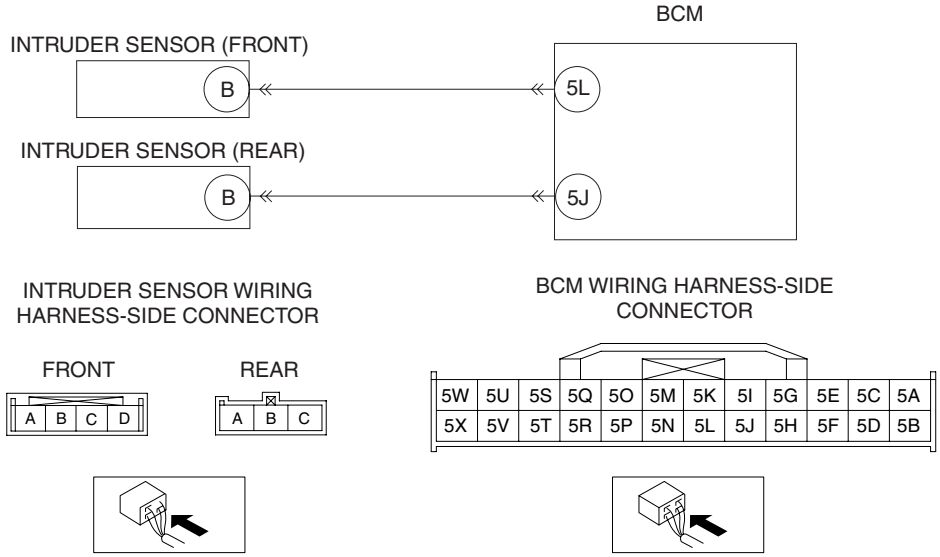
STEP	INSPECTION		ACTION
1	**INSPECT CLIMATE CONTROL UNIT CONNECTOR** • Disconnect the climate control unit connector. • Inspect the climate control unit connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT CLIMATE CONTROL UNIT SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3S (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT CLIMATE CONTROL UNIT** • Inspect the climate control unit. (See 07–40–44 CLIMATE CONTROL UNIT INSPECTION [MANUAL AIR CONDITIONER].) • Is there any malfunction?	Yes	Replace the climate control unit, then go to the next step. (See 07–40–36 CLIMATE CONTROL UNIT REMOVAL [MANUAL AIR CONDITIONER], 07–40–37 CLIMATE CONTROL UNIT INSTALLATION [MANUAL AIR CONDITIONER].)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2177

DPE090200200W22

DTC B2177	Intruder sensor circuit failure
DETECTION CONDITION	Intruder sensor malfunction or circuit malfunction

DTC B2177	Intruder sensor circuit failure
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5L and intruder sensor (front) terminal B • Open circuit in wiring harness between BCM terminal 5J and intruder sensor (front) terminal B • Short to power supply in wiring harness between BCM terminal 5L and intruder sensor (front) terminal B • Short to power supply in wiring harness between BCM terminal 5J and intruder sensor (rear) terminal B • Short to GND in wiring harness between BCM terminal 5L and intruder sensor (rear) terminal B • Short to GND in wiring harness between BCM terminal 5J and intruder sensor (rear) terminal B • Intruder sensor malfunction • BCM malfunction



Diagnostic procedure

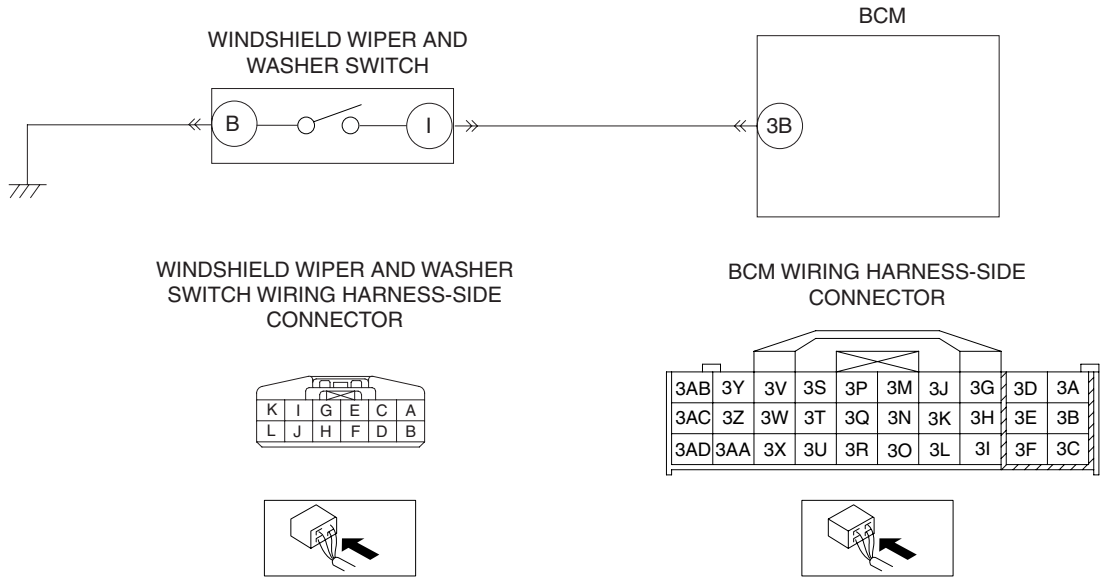
STEP	INSPECTION		ACTION
1	**INSPECT INTRUDER SENSOR CONNECTOR** • Turn the ignition switch off. • Disconnect the intruder sensor connector. • Inspect the intruder sensor connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
3	**INSPECT INTRUDER SENSOR SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5L or 5J (wiring harness-side) and intruder sensor terminal B (wiring harness-side) • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
4	**INSPECT INTRUDER SENSOR SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 5L or 5J (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 6.
		No	Go to the next step.
5	**INSPECT INTRUDER SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between BCM terminal 5L or 5J (wiring harness-side) and body GND. • Is the voltage **B+**?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to the next step.
		No	Replace the intruder sensor, then go to the next step. (See 09–14A–27 INTRUDER SENSOR REMOVAL/ INSTALLATION.)
6	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Turn the ignition switch to off then ON. • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	Troubleshooting completed.

DTC B2180

DPE090200200W23

DTC B2180	Front wiper switch (slow) circuit short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and windshield wiper and washer switch (low)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3B and windshield wiper and washer switch terminal I • Windshield wiper and washer switch malfunction • BCM malfunction

DTC B2180	Front wiper switch (slow) circuit short to ground



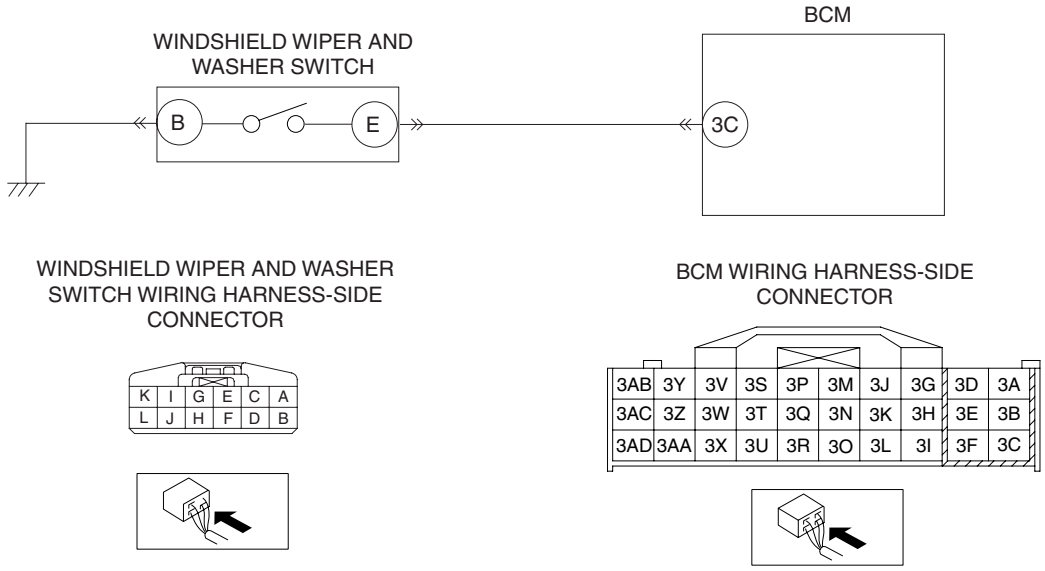
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH CONNECTOR** • Disconnect the windshield wiper and washer switch connector. • Inspect the windshield wiper and washer switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3B (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH** • Inspect the windshield wiper and washer switch. (See 09–19–10 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the windshield wiper and washer switch, then go to the next step. (See 09–19–9 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2181

DPE090200200W24

DTC B2181	**Front wiper switch (high) circuit short to ground**
DETECTION CONDITION	Short to GND in wiring harness between BCM and windshield wiper and washer switch (high)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3C and windshield wiper and washer switch terminal E • Windshield wiper and washer switch malfunction • BCM malfunction



Diagnostic procedure

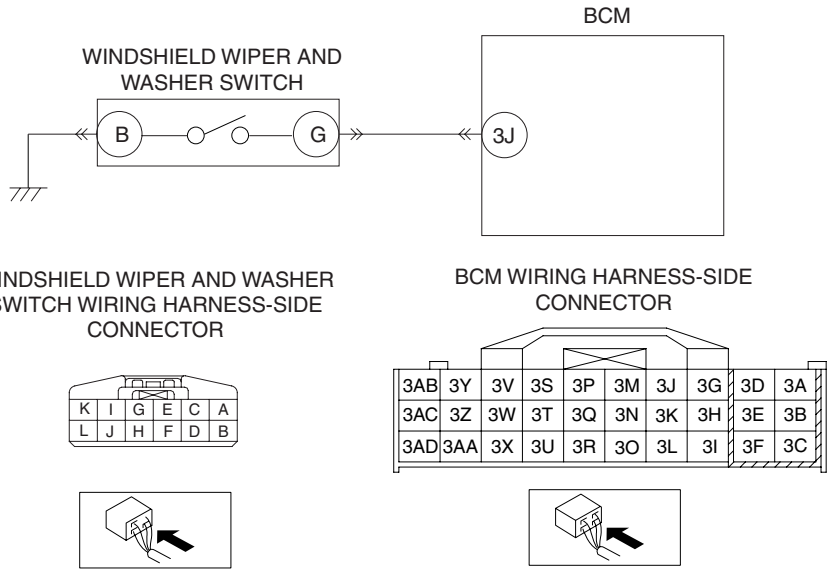
STEP	INSPECTION		ACTION
1	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH CONNECTOR** • Disconnect the windshield wiper and washer switch connector. • Inspect the windshield wiper and washer switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3C (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH** • Inspect the windshield wiper and washer switch. (See 09–19–10 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the windshield wiper and washer switch, then go to the next step. (See 09–19–9 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2259

DPE090200200W25

DTC B2259	Intermittent wiper circuit short to ground
DETECTION CONDITION	• Short to GND in wiring harness between BCM and windshield wiper and washer switch (INT or AUTO)
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3J and windshield wiper and washer switch terminal G • Windshield wiper and washer switch malfunction • BCM malfunction

DTC B2259	Intermittent wiper circuit short to ground



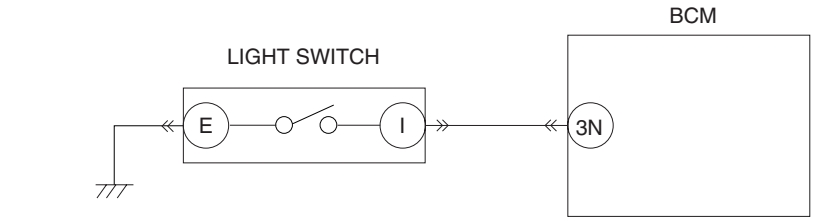
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH CONNECTOR** • Turn the ignition switch off. • Disconnect the windshield wiper and washer switch connector. • Inspect the windshield wiper and washer switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3J (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT WINDSHIELD WIPER AND WASHER SWITCH** • Inspect the windshield wiper and washer switch. (See 09–19–10 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the windshield wiper and washer switch, then go to the next step. (See 09–19–9 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

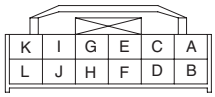
DTC B2264

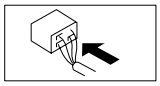
DPE090200200W26

DTC B2264	Rear fog light switch short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and rear fog light switch
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 3N and light switch terminal I • Light switch malfunction • BCM malfunction

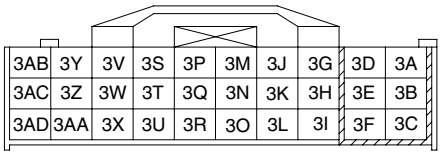


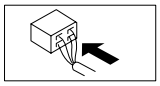
LIGHT SWITCH WIRING HARNESS-SIDE CONNECTOR





BCM WIRING HARNESS-SIDE CONNECTOR





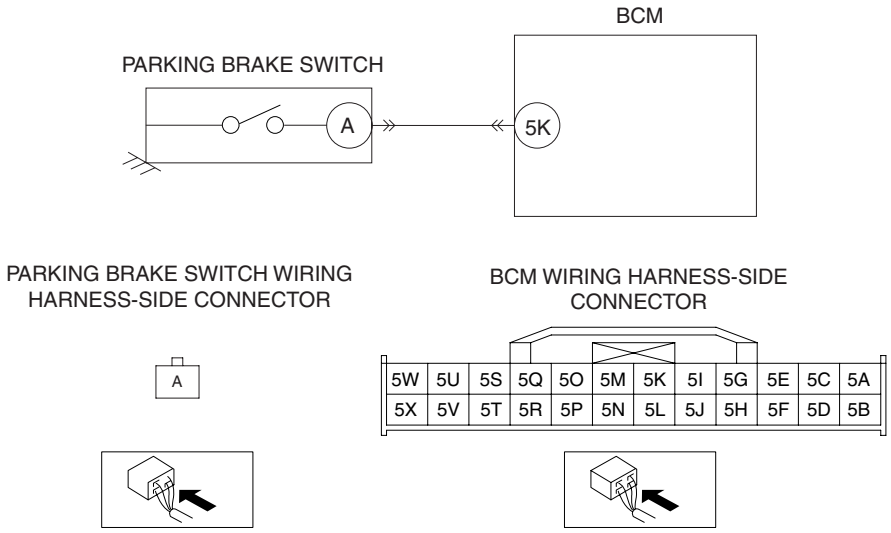
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT LIGHT SWITCH CONNECTOR** • Disconnect the light switch connector. • Inspect the light switch connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIGHT SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 3N (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. (See 09–18–23 LIGHT SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the light switch, then go to the next step. (See 09–18–22 LIGHT SWITCH REMOVAL/ INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2479

DPE090200200W27

DTC B2479	Park brake switch circuit open
DETECTION CONDITION	Open circuit in wiring harness between BCM and parking brake switch
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5K and parking brake switch terminal A • Parking brake switch malfunction • BCM malfunction



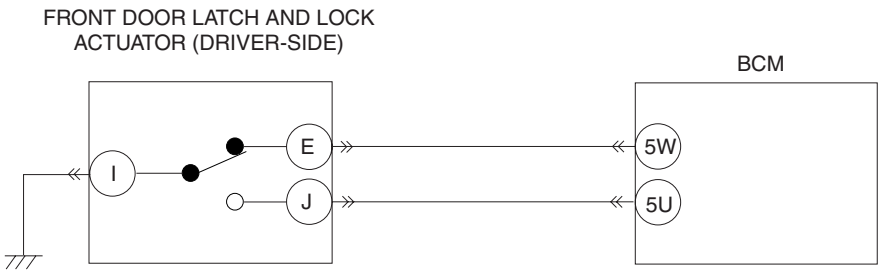
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT PARKING BRAKE SWITCH CONNECTOR** • Turn the ignition switch off. • Disconnect the parking brake switch connector. • Inspect the parking brake switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT PARKING BRAKE SWITCH SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5K (wiring harness-side) and parking brake switch terminal A (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	**INSPECT PARKING BRAKE SWITCH** • Inspect the parking brake switch. (See 04–12–4 PARKING BRAKE SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the parking brake switch, then go to the next step.
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

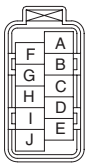
DTC B2574

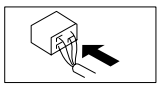
DPE090200200W28

DTC B2574	Driver door lock switch short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and driver-side door lock-link switch
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 5U and front door latch and lock actuator (driver-side) terminal J • Front door latch and lock actuator (driver-side) malfunction • BCM malfunction

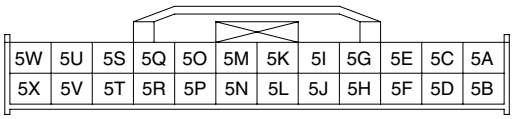


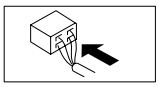
FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) WIRING HARNESS-SIDE CONNECTOR





BCM WIRING HARNESS-SIDE CONNECTOR





09

Diagnostic procedure

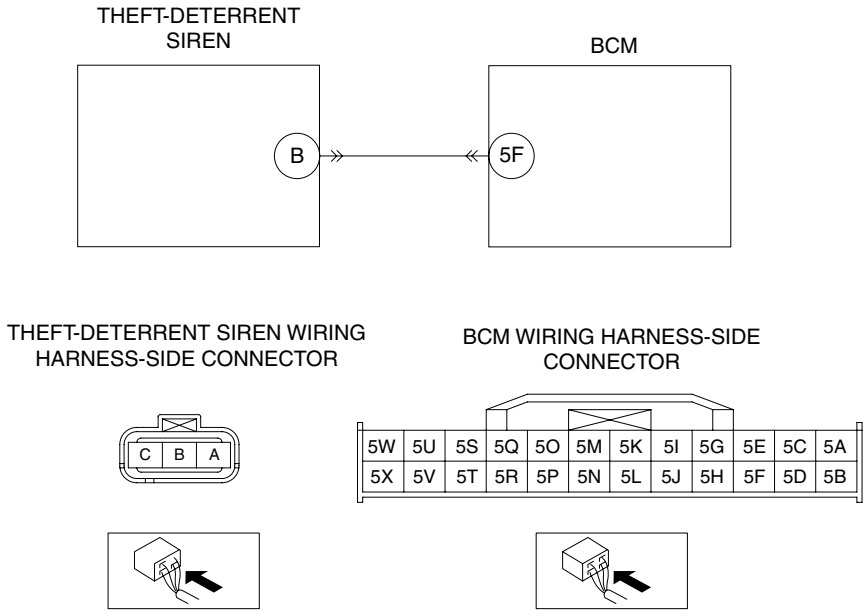
STEP	INSPECTION		ACTION
1	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR** • Disconnect the front door latch and lock actuator (driver-side) connector. • Inspect the front door latch and lock actuator (driver-side) connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 5U (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE)** • Inspect the front door latch and lock actuator (driver-side). (See 09–14A–10 FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION.) • Is there any malfunction?	Yes	Replace the front door latch and lock actuator (driver-side), then go to the next step. (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2665

DPE090200200W29

DTC B2665	Battery back sounder circuit failure
DETECTION CONDITION	Short to GND or power supply in wiring harness between BCM and theft-deterrent siren
POSSIBLE CAUSE	• Short to power supply in wiring harness between BCM terminal 5F and theft-deterrent siren terminal B • Short to GND in wiring harness between BCM terminal 5F and theft-deterrent siren terminal B • Theft-deterrent siren malfunction • BCM malfunction

DTC B2665	Battery back sounder circuit failure



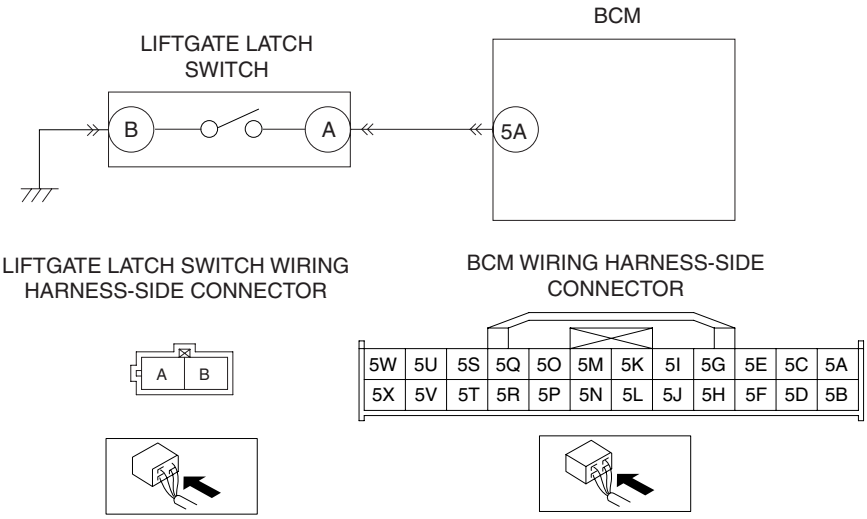
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT THEFT-DETERRENT SIREN CONNECTOR** • Turn the ignition switch off. • Disconnect the theft-deterrent siren connector. • Inspect the theft-deterrent siren connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT THEFT-DETERRENT SIREN SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 5F (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to the next step 5.
		No	Go to the next step.
4	**INSPECT THEFT-DETERRENT SIREN SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between BCM terminal 5F (wiring harness-side) and body GND. • Is the voltage **B+**?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to the next step.
		No	Replace the theft-deterrent siren, then go to the next step. (See 09–14A–28 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION.)
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Turn the ignition switch off then ON. • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

DTC B2721

DPE090200200W30

DTC B2721	Liftgate ajar output short to ground
DETECTION CONDITION	Short to GND in wiring harness between BCM and liftgate latch switch
POSSIBLE CAUSE	• Short to GND in wiring harness between BCM terminal 5A and liftgate latch switch terminal A • Liftgate latch switch malfunction • BCM malfunction



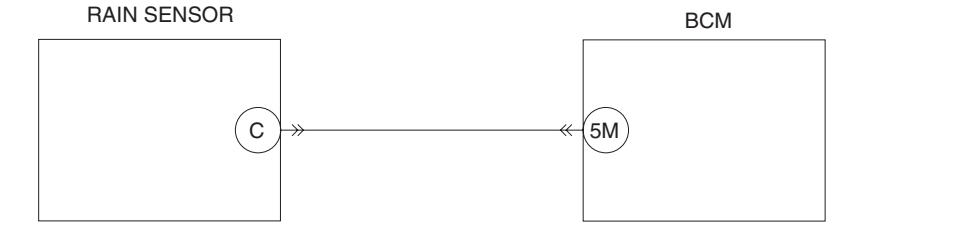
Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT LIFTGATE LATCH SWITCH CONNECTOR** • Disconnect the liftgate latch switch connector. • Inspect the liftgate latch switch connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 5.
		No	Go to the next step.
3	**INSPECT LIFTGATE LATCH SWITCH SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 5A (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 5.
		No	Go to the next step.
4	**INSPECT LIFTGATE LATCH SWITCH** • Inspect the liftgate latch switch. (See 09–14A–15 LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION.) • Is there any malfunction?	Yes	Replace the liftgate latch switch, then go to the next step. (See 09–14A–15 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
5	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.

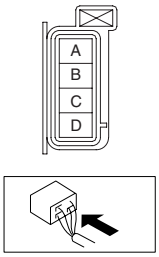
DTC U2030

DPE090200200W31

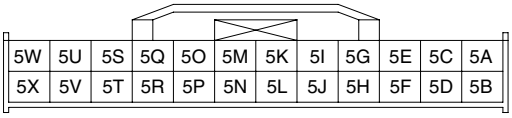
DTC U2030	Rain sensor communication fault
DETECTION CONDITION	Communication error to rain sensor
POSSIBLE CAUSE	• Open circuit in wiring harness between BCM terminal 5M and rain sensor terminal C • Short to power supply in wiring harness between BCM terminal 5M and rain sensor terminal C • Short to GND in wiring harness between BCM terminal 5M and rain sensor terminal C • Rain sensor malfunction • BCM malfunction



RAIN SENSOR WIRING HARNESS-SIDE CONNECTOR



BCM WIRING HARNESS-SIDE CONNECTOR

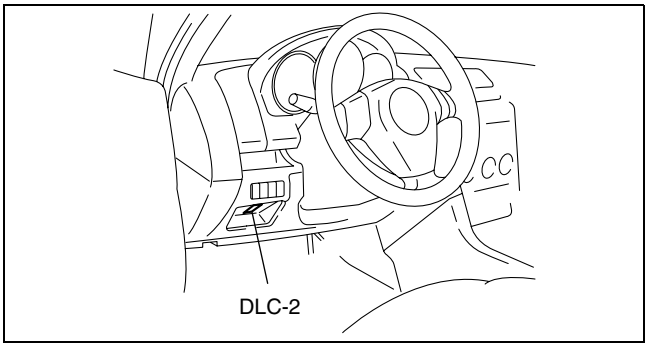


Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT RAIN SENSOR CONNECTOR** • Turn the ignition switch off. • Disconnect the rain sensor connector. • Inspect the rain sensor connector terminals for poor connection (such as damaged/ pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
2	**INSPECT BCM CONNECTOR** • Disconnect the BCM connector. • Inspect the BCM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 6.
		No	Go to the next step.
3	**INSPECT RAIN SENSOR CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between BCM terminal 5M (wiring harness-side) and rain sensor terminal C (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
4	**INSPECT RAIN SENSOR SIGNAL CIRCUIT FOR SHORT TO GND** • Inspect for continuity between BCM terminal 5M (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 6.
		No	Go to the next step.
5	**INSPECT RAIN SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between BCM terminal 5M (wiring harness-side) and body GND. • Is the voltage **B+**?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to the next step.
		No	Replace the Rain sensor, then go to the next step. (See 09–19–18 RAIN SENSOR REMOVAL/ INSTALLATION.)
6	**VERIFY TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the BCM memory using the WDS or equivalent. • Perform the self-test. (See 09–02H–40 BCM SELF-TEST.) • Is the same DTC present?	Yes	Replace the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
		No	Troubleshooting completed.

BCM SELF-TEST

DPE090200200W32



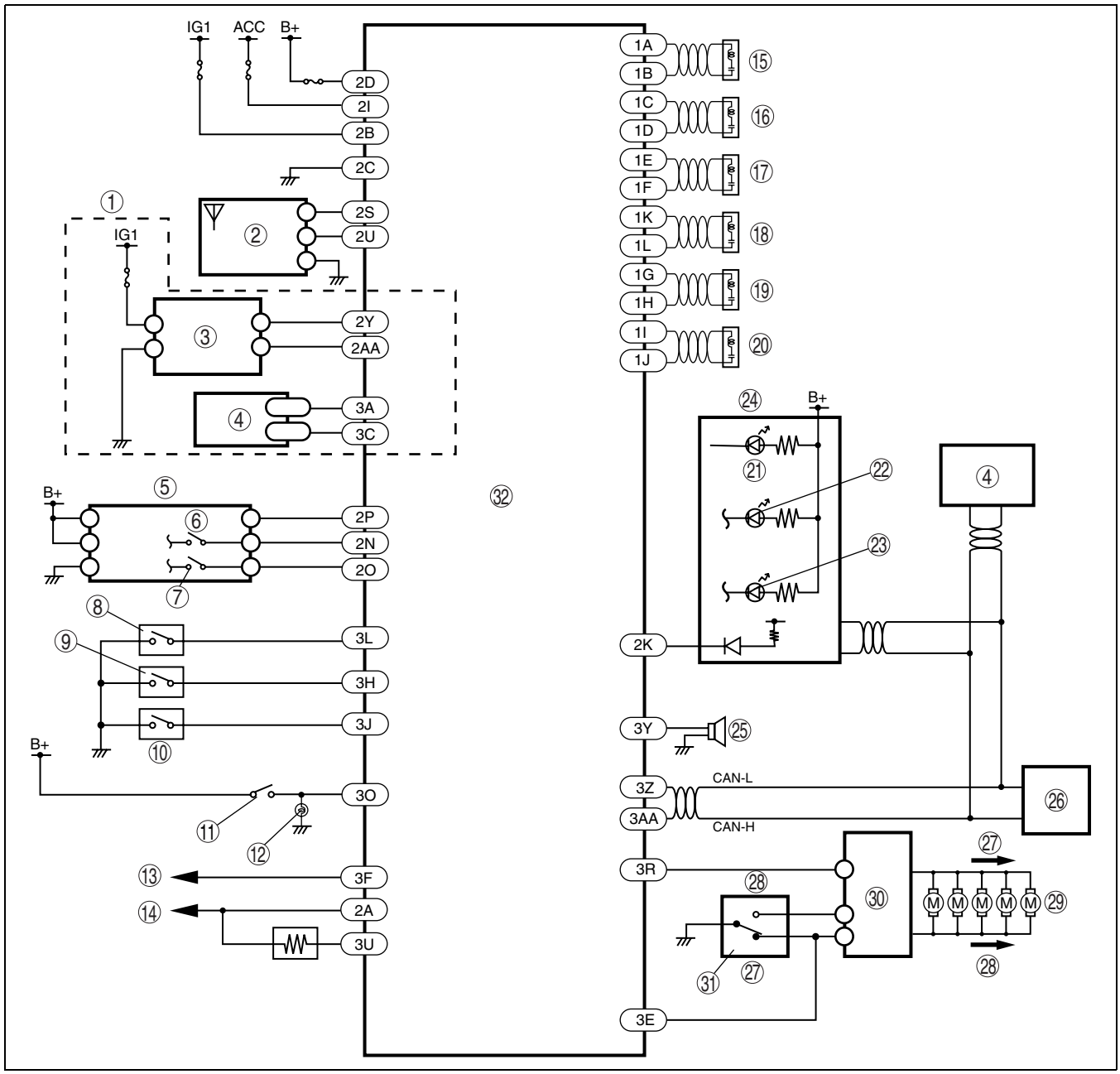
DPE102ZW2001

1. Connect the WDS or equivalent to the DLC-2.
2. Set up the WDS or equivalent (including the vehicle recognition).
3. Verify the following vehicle conditions:
   - Ignition switch is at ON position.
   - All the switches are turned off (except the ignition switch).
   - All the doors, bonnet, and liftgate are closed.
   - All the doors, and liftgate are unlocked.
   - Parking brake lever is pulled.
4. Perform procedures according to directions on the WDS or equivalent screen.
5. Verify if any DTCs are displayed.
   - If any DTCs are displayed, perform the troubleshooting according to the corresponding DTC inspection.
6. Disconnect the WDS or equivalent.

09–03A SYMPTOM TROUBLESHOOTING [ADVANCED KEYLESS ENTRY AND START SYSTEM]

KEYLESS ENTRY SYSTEM WIRING DIAGRAM [ADVANCED KEYLESS SYSTEM]

DPE090369000W08



DPE914AT2002

1	With immobilizer system
2	Keyless receiver

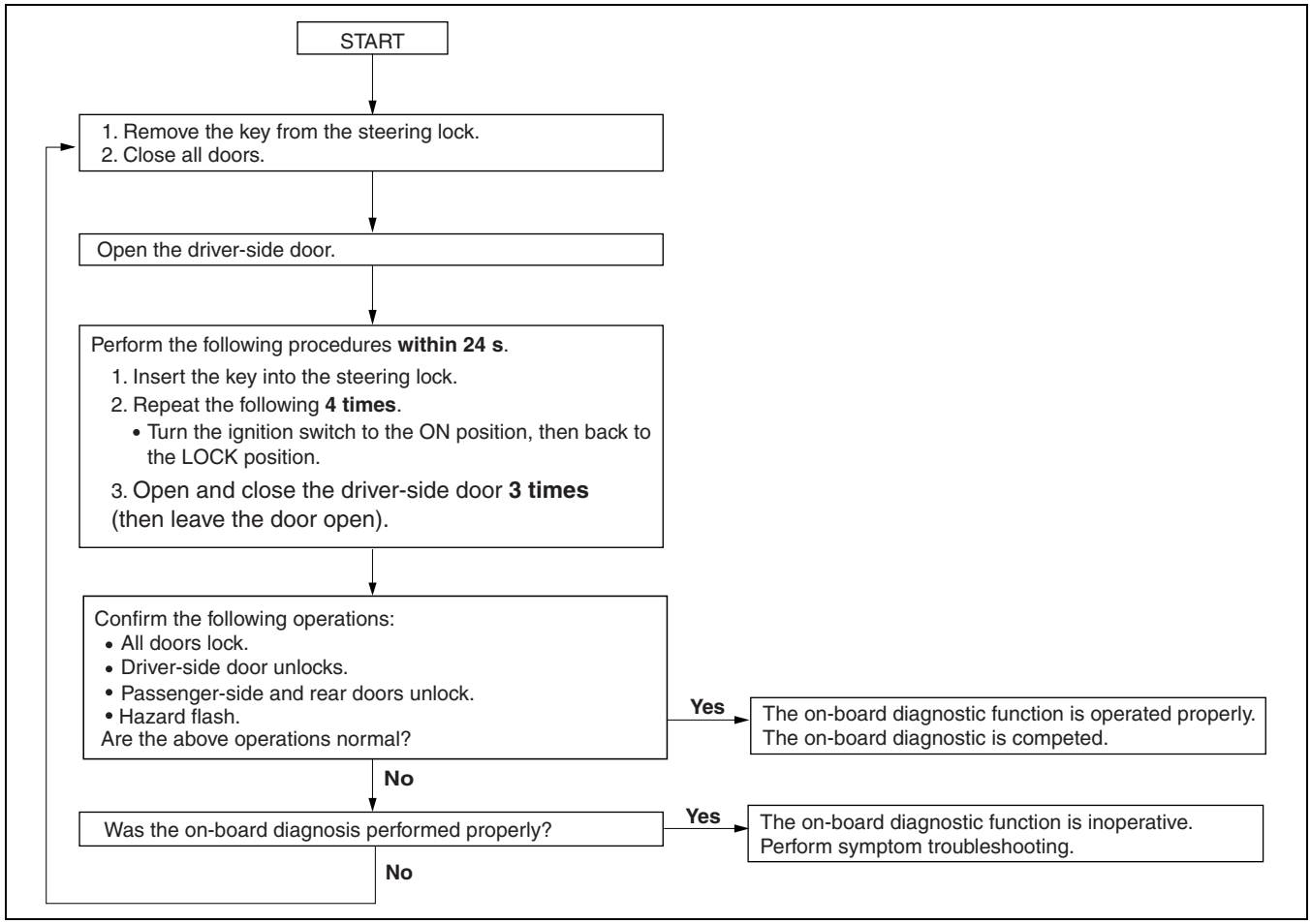
3	Coil
4	PCM

5	Steering lock unit
6	Push switch
7	Key reminder switch
8	Request switch (liftgate)
9	Request switch (driver side)
10	Request switch (passenger side)
11	Brake light switch
12	Brake light
13	Selector lever
14	Key inter lock solenoid
15	Keyless antenna (driver side)
16	Keyless antenna (passenger side)
17	Keyless antenna (liftgate)
18	Keyless antenna (interior, front)
19	Keyless antenna (interior, RR)
20	Keyless antenna (interior, RL)
21	Security light
22	Keyless indicator light (green)
23	Keyless warning light (red)
24	Instrument cluster
25	Keyless buzzer
26	DLC-2
27	LOCK
28	UNLOCK
29	Door lock actuator
30	BCM
31	Door lock-link switch
32	Keyless control module

KEYLESS ENTRY SYSTEM ON-BOARD DIAGNOSIS [ADVANCED KEYLESS SYSTEM]

DPE090369000W10

Note
- "All doors“ includes the liftgate.



B3E0903WT11

FOREWARD [ADVANCED KEYLESS SYSTEM]

DPE090369000W15

- The advanced keyless system is controlled by the keyless control module.
- “All locks” includes the liftgate.

SYMPTOM TROUBLESHOOTING CHART [ADVANCED KEYLESS SYSTEM]

DPE090369000W11

No.	Troubleshooting item	Page
1	Door cannot be locked/unlocked by transmitter	See 09–03A–3 NO.1 DOOR CANNOT BE LOCKED/UNLOCKED BY TRANSMITTER (CARD KEY)
2	Blink keyless indicator light	See 09–03A–6 NO.2 BLINK KEYLESS INDICATOR LIGHT
3	Advanced keyless entry function inoperative	See 09–03A–7 NO.3 ADVANCED KEYLESS ENTRY FUNCTION INOPERATIVE
4	Advanced keyless start function inop erative	See 09–03A–9 NO.4 ADVANCED KEYLESS START FUNCTION INOPERATIVE

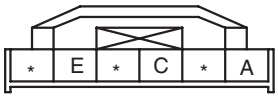
NO.1 DOOR CANNOT BE LOCKED/UNLOCKED BY TRANSMITTER (CARD KEY)

DPE090369000W12

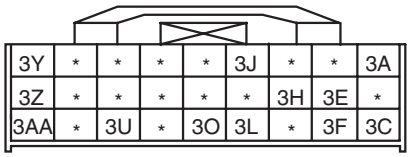
1	Door cannot be locked/unlocked by transmitter
POSSIBLE CAUSE	• Malfunction in transmitter (card key) battery or transmitter (card key) • Malfunction in keyless control module • Malfunction in keyless receiver • Malfunction in BCM • Wrong usage • The after-market electrical parts are interfering with the keyless entry system

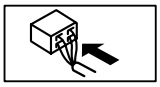
1	Door cannot be locked/unlocked by transmitter

KEYLESS RECEIVER
WIRING HARNESS-SIDE CONNECTOR



KEYLESS CONTROL MODULE
WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Attempt to lock/unlock the door with the transmitter (card key). • Does door lock system work?	Yes	Go to the next step.
		No	Go to Step 7.
2	• Did the customer activate the keyless entry system within operative area (**2.5 m {8.2 ft}** from vehicle)?	Yes	Go to the next step.
		No	The system is normal. Explain to the customer that the system does not work without the system operative area.
3	• Did the customer use the keyless entry system in particular area, such as being near TV towers, power plants, power lines, or factories?	Yes	The system is normal. Area of operation is subject. Explain effect of outside interference on the transmitter (card key) to the customer.
		No	Go to the next step.
4	• Did the customer activate the keyless entry system with the key inserted into the steering lock?	Yes	The system is normal. Explain to the customer that the system does not work with the key inserted into the steering lock.
		No	Go to the next step.
5	• Are any of the following after-market electrical parts on the vehicle? — Cellular phone — Radio-wave equipment — Remote engine starter — TV — Other	Yes	Go to the next step.
		No	Go to Step 7.
6	• Disconnect the after-market electrical parts connectors and attempt to lock/unlock the doors with the transmitter (card key). • Does the keyless entry system work?	Yes	The system is normal. The after-market electrical parts are interfering with the keyless entry system.
		No	Go to the next step.
7	• Attempt to lock/unlock the doors with the transmitter (card key). • Does the door lock system work?	Yes	Go to the next step.
		No	Go to Step 9.
8	• Replace with a transmitter (card key) battery known to be good. • Does the keyless entry system operate properly?	Yes	Replace the transmitter (card key) battery, and then go to Step 24.
		No	Go to the next step.
9	• Visually inspect the transmitter (card key) battery. • Are the below items correct? — Transmitter (card key) battery installation (correct polarity) — Battery type (**CR2025**)	Yes	Go to the next step.
		No	Install the transmitter (card key) battery properly or replace with the specified transmitter (card key) battery (**CR2025**), then go to Step 24.
10	• Visually inspect the transmitter (card key). — Is there rust on the transmitter (card key) battery terminals (positive or negative)? — Is there poor connection between the terminals and battery?	Yes	Replace the transmitter (card key) or repair the transmitter (card key) battery terminal, then go to Step 24.
		No	Go to the next step.
11	• Inspect transmitter (card key) battery. • Is the battery voltage normal?	Yes	Go to Step 13.
		No	Go to the next step.
12	• Replace with a transmitter (card key) battery known to be good. • Does the keyless entry system operate properly?	Yes	Replace the transmitter (card key) battery, and then go to Step 24.
		No	Replace the transmitter (card key), and then go to Step 24.
13	• Inspect for the keyless receiver installation. • Is the bracket securely installed on the keyless receiver?	Yes	Go to the next step.
		No	Install the bracket securely, and then go to the next step.
14	• Inspect the ground wire on the keyless receiver bracket. • Is the ground wire tighten on the bracket?	Yes	Go to the next step.
		No	Tighten the ground wire, then go to the next step.
15	• Turn the ignition switch to the LOCK position. • Measure the voltage at keyless receiver terminal A? • Is the voltage **B+**?	Yes	Go to the next step.
		No	• Inspect ROOM 15 A fuse.. • Inspect and repair the wiring harness between the fuse block and the keyless receiver as necessary.

STEP	INSPECTION		ACTION
16	• Measure the voltage at keyless receiver terminal E? • Is the voltage **0 V**?	Yes	Go to the next step.
		No	• Inspect and repair the wiring harness between the ground wire and the keyless receiver as necessary. • Re-tighten the ground wire as necessary.
17	• Disconnect the keyless receiver connector (6-pin) and keyless control module connector (75-pin). • Is there continuity between the following terminals? — Keyless receiver connector terminal A— keyless control module connector terminal 2S	Yes	Go to the next step.
		No	• Inspect and repair the wiring harness between the keyless control module and the keyless receiver, then go to the next step.
18	• Remove the key from steering lock. • Measure the voltage at the keyless control module terminal 2U while operating the transmitter (card key)? • Is the voltage as below — **5 V→1.0** ς **o**ρ λεσσ	Yes	Go to the next step.
		No	Replace the keyless receiver, and then go to the next step.
19	• Measure the voltage at the keyless contorl module terminals 2B, 2D and 2I. — Terminal 2B: **IG1 voltage** — Terminal 2D: **B+** — Terminal 2B: **ACC voltage** • Is the voltage as above?	Yes	Go to the next step.
		No	• Inspect for fuse. • Inspect and repair the wiring harness between the keyless control module and the fuse block as necessary.
20	• Measure the voltage at keyless control module terminal 2C? • Is the voltage **0 V**?	Yes	Go to the next step.
		No	• Inspect and repair the wiring harness between the ground wire and the keyless control module as necessary. • Re-tighten the ground wire as necessary.
21	• Measure the voltage at the keyless contorl module terminals 2O. — Insert the key into the steering lock: **B+** — Remove the key from steering lock: **1.0 V or less** • Is the voltage as above?	Yes	Go to the next step.
		No	• Inspect for key reminder switch. • Inspect and repair the wiring harness between the steering lock unit (key reminder switch) and the keyless control module.
22	• Measure the voltage at the keyless contorl module terminals 2R while operating the transmitter. — All doors locked: **1.0 V or less→B+→**1.0 V or less — Any door unlocked: **1.0 V or less→**B+**→**1.0 V or less • Is the voltage as above?	Yes	Replace the keyless control module.
		No	• Inspect and repair the wiring harness between the keyless control module (2R) and BCM (7I). — If the harness is normal, go to the next step. — If the harness is malfunctioning, repair the wiring harness.
23	• Measure the voltage at the BCM terminals 6A, 6B and 6F while operating the transmitter. — Lock all doors with the transmitter (card key): **1.0 V or less→B+→**1.0 V or less • (normal lock: 6A terminal) • (double lock: 6F terminal) — Unlock any door with the transmitter (card key): **1.0 V or less→**B+**→**1.0 V or less (6B terminal) • Is the voltage as above?	Yes	• Inspect and repair the wiring harness between the BCM and the door lock actuator. • Inspect for door lock actuator.
		No	Replace the BCM.
24	• Does the keyless entry system operate properly?	Yes	Troubleshooting completed. Explain repairs to the customers
		No	Re-inspect the malfunction symptoms, then repeat form Step 1 if malfunction recurs.

NO.2 BLINK KEYLESS INDICATOR LIGHT

DPE090369000W13

2	Blink keyless indicator light
POSSIBLE CAUSE	• Low transmitter (card key) battery voltage.

Diagnostic procedure

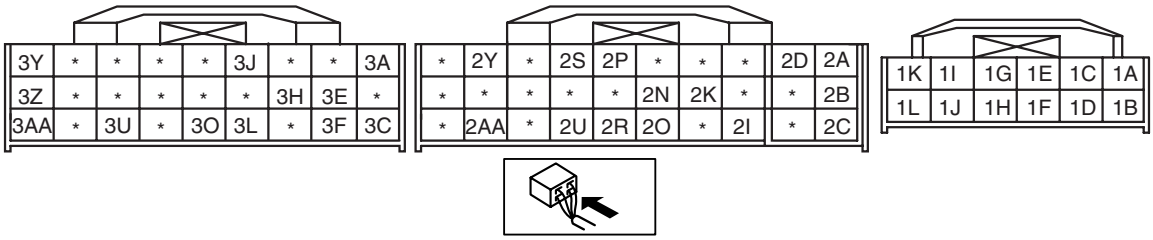
STEP	ACTION
1	• Replace wit new transmitter (card key) battery.

NO.3 ADVANCED KEYLESS ENTRY FUNCTION INOPERATIVE

DPE090369000W14

3	Advanced keyless entry function inoperative
POSSIBLE CAUSE	• Malfunction in the transmitter (card key). • Malfunction in the keyless control module. • Malfunction in the keyless receiver. • Malfunction in the keyless antenna. • Malfunction in the BCM. • Wrong usage.

KEYLESS CONTROL MODULE WIRING HARNESS SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Retrieve the advanced keyless system DTC using the WDS or equivalent. • Are there DTC displayed?	Yes	Perform the applicable DTC diagnostic procedures.
		No	Go to the next step.
2	• Did the customer attempt to operate each front doors and liftgate using the request switch?	Yes	Go to the next step.
		No	Inspect the advanced keyless system operations using the request switch. If the advanced keyless system is inoperative, then go to the next step.
3	• Prepare the follwings: — Make sure that there is no transmitter (card key) inside the passenger compartment. — Close all doors including liftgate. — Remove the key from the steering lock. — Make sure that start knob is to the LOCK position. (Do not Press the knob) — Make sure that the transmitter (card key) is within the advanced keyless system operative area (**within 80 cm {2.6 ft}** from front door) • Does the advanced keyless system operate properly?	Yes	The system is normal. Explain the advanced keyless system operation.
		No	Go to the next step.
4	• Replace with a transmitter (card key) battery known to be good. • Operate the transmitter (card key). • Does the keyless entry system operate properly?	Yes	Replace the transmitter (card key). Then go to the next step.
		No	Go to the next step.
5	• Measure the voltage at the keyless control module terminals 3H, 3J and 3L while operating the request switch. — Operate driver's side front door request switch (4H): **5.0 V**→1.0 V or less — Operate passenger's side front door request switch (4J): **5.0 V**→1.0 V or less — Operate liftgate request switch (4L): **5.0 V**→1.0 V or less • Is the voltage as above?	Yes	Go to the next step.
		No	Inspect and repair the applicable wiring harness as necessary, then go to the next step.
6	• Measure the voltage at the following keyless control module terminal while operating the request switch. — Terminal 1A and 1B for driver's side keyless antenna — Terminal 1C and 1D for passengerr's side keyless antenna — Terminal 1E and 1F for liftgate keyless antenna — Terminal 1G and 1H for interior, RR keyless antenna — Terminal 1I and 1J for interior, RL keyless antenna — Terminal 1K and 1L for interior, front keyless antenna • Is the voltage **within 4.0—6.0 V**?	Yes	Go to the next step.
		No	Inspect and repair the applicable wiring harness between the keyless antenna and the keyless control module, then go to the next step.

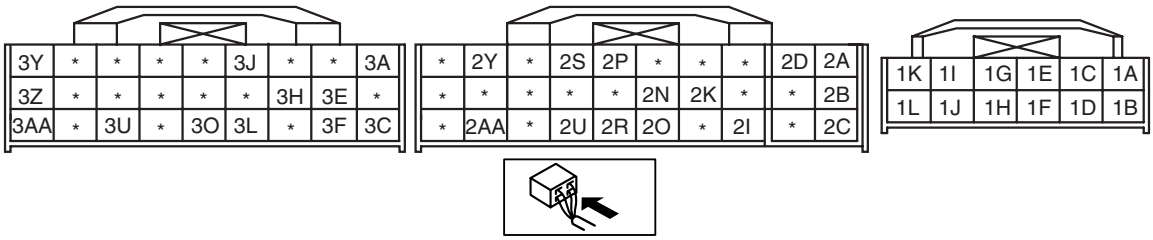
STEP	INSPECTION		ACTION
7	• Simulate the following keyless antenna using the WDS or equivalent:. — ANT_RF# (driver's side keyless antenna: terminals 1A and 1B) — ANT_LF# (passenger's side keyless antenna: terminals 1C and 1D) — ANT_BK# (liftgate keyless antenna: terminals 1E and 1F) — ANT_INN1# (interior, RR keyless antenna: terminals 1G and 1H) — ANT_INN2# (interior, RL keyless antenna: terminals 1I and 1J) — ANT_INN3# (interior, front keyless antenna: terminals 1K and 1L) • Does each antenna operate properly (ON/OFF)?	Yes	Go to the next step.
		No	Replace the faulted antenna, then go to the next step.
8	• Measure the voltage at the keyless control module terminals 2U (keyless receiver) while operating the any request switch. — **5.0 V**→1.0 V or less • Is the voltage as above?	Yes	Go to the next step.
		No	• Inspect the wiring harness between the keyless receiver and the keyless control module. — If the harness is normal, replace the keyless receiver. — If the harness is malfunctioning, repair the wiring harness. • Go to the next step.
9	• Measure the voltage at the keyless control module terminals 2R (BCM) while operating the request switch. — Unlock: **1.0 V or less**→**B+**→1.0 V or less • Is the voltage as above?	Yes	Inspect and repair the wiring harness between the BCM and the keyless control module, then go to the next step.
		No	Inspect the keyless control module. If the keyless control module is malfunctioning, replace the module.
10	• Does the keyless entry system operate properly?	Yes	Troubleshooting completed. Explain repairs to the customers
		No	Re-inspect the malfunction symptoms, then repeat form Step 1 if malfunction recurs.

NO.4 ADVANCED KEYLESS START FUNCTION INOPERATIVE

DPE090369000W16

4	**Advanced keyless start function inoperative**
POSSIBLE CAUSE	• Malfunction in the transmitter (card key). • Malfunction in the keyless control module. • Malfunction in the keyless receiver. • Malfunction in the keyless antenna. • Malfunction in the PCM.

KEYLESS CONTROL MODULE WIRING HARNESS SIDE CONNECTOR



Diagnostic procedure

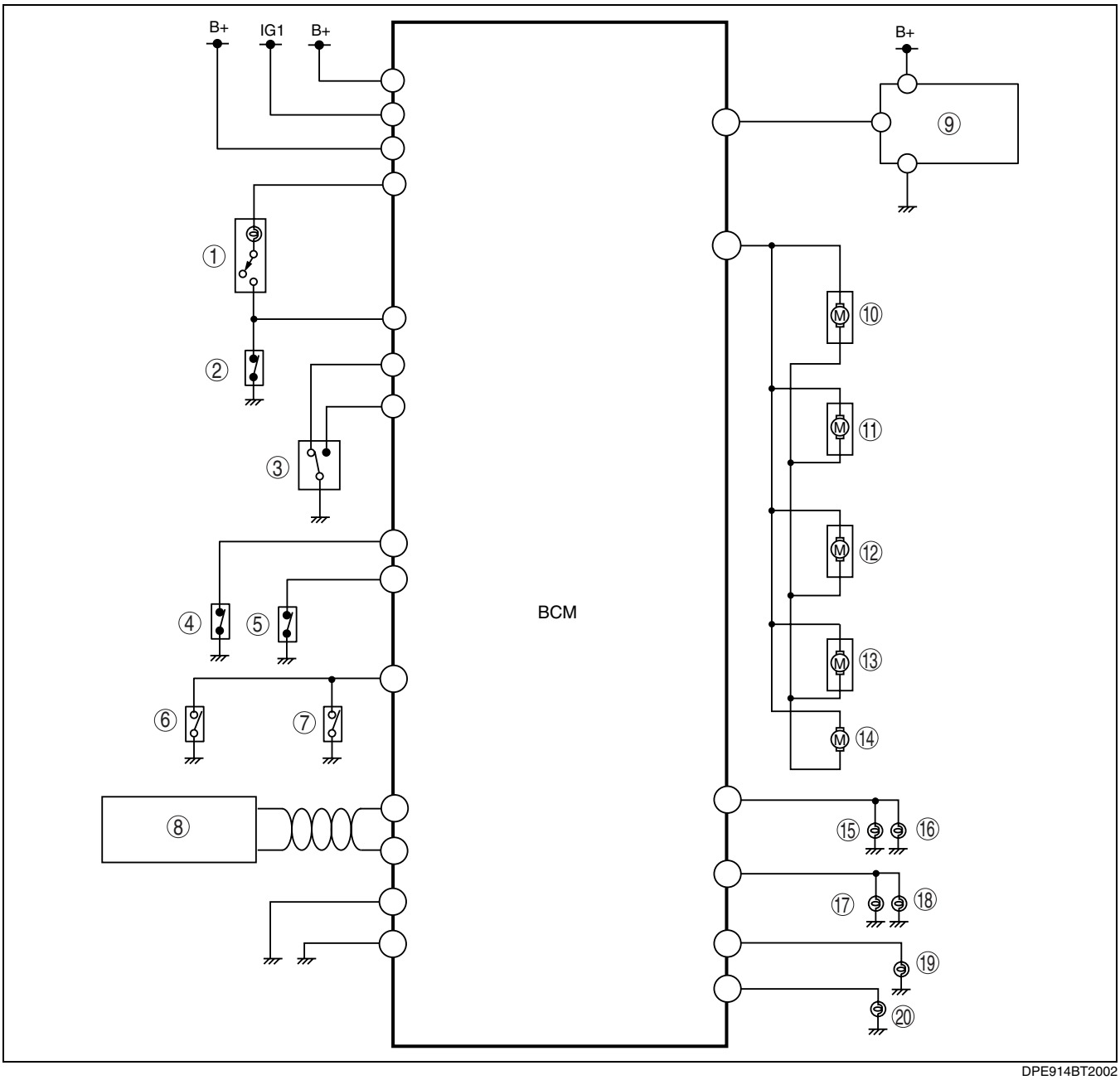
STEP	INSPECTION		ACTION
1	• Retrieve the advanced keyless system DTC using the WDS or equivalent. • Are there DTC displayed?	Yes	Perform the applicable DTC diagnostic procedures.
		No	Go to the next step.
2	• Attempt to start the engine using the key. • Does engine start?	Yes	Go to the next step.
		No	Go to symptom torubleshooting flow No.3 in 01-03 section.
3	• Bring the transmitter (card key) inside the passenger compartment. • Measure the voltage at the keyless control module terminal 2N (push switch) while pushing the start knob. • Is the voltage **0 V**?	Yes	Go to the next step.
		No	• Inspect the wiring harness between the steering lock unit and keyless control. — If the harness is normal, replace the steering lock unit. — If the harness is malfunctioning, repair the wiring harness. • Go to the next step.
4	• Replace with a transmitter (card key) battery known to be good. • Bring the transmitter (card key) inside the passenger compartment. • Does the keyless entry system operate properly?	Yes	Replace the transmitter (card key). Then go to the next step.
		No	Go to the next step.
5	• Measure the voltage at the following keyless control module terminal while pressing the start knob. — Terminal 1A and 1B for driver's side keyless antenna — Terminal 1C and 1D for passengerr's side keyless antenna — Terminal 1E and 1F for liftgate keyless antenna — Terminal 1G and 1H for interior, RR keyless antenna — Terminal 1I and 1J for interior, RL keyless antenna — Terminal 1K and 1L for interior, front keyless antenna • Is the voltage **within 4.0—6.0 V**?	Yes	Go to Step 7.
		No	Inspect and repair the applicable wiring harness between the keyless antenna and the keyless control module, then go to the next step.
6	• Simulate the following keyless antenna using the WDS or equivalent:. — ANT_RF# (driver's side keyless antenna: terminals 1A and 1B) — ANT_LF# (passenger's side keyless antenna: terminals 1C and 1D) — ANT_BK# (liftgate keyless antenna: terminals 1E and 1F) — ANT_INN1# (interior, RR keyless antenna: terminals 1G and 1H) — ANT_INN2# (interior, RL keyless antenna: terminals 1I and 1J) — ANT_INN3# (interior, front keyless antenna: terminals 1K and 1L) • Does each antenna operate properly (ON/OFF)?	Yes	Go to the next step.
		No	Replace the faulted antenna, then go to the next step.
7	• Measure the voltage at the keyless control module terminals 2U (keyless receiver) while pressing the start knob. — **5.0 V**→1.0 V or less • Is the voltage as above?	Yes	Go to the next step.
		No	• Inspect the wiring harness between the keyless receiver and the keyless control module. — If the harness is normal, replace the keyless receiver. — If the harness is malfunctioning, repair the wiring harness. • Go to the next step.
8	• Does the keyless indicator light turn ON when pressing the start knob?	Yes	Go to Step 10.
		No	Go to the next step.

STEP	INSPECTION		ACTION
9	• Measure the voltage at the keyless control module terminals 2P while pressing the start knob. — **5.0 V**→1.0 V or less • Is the voltage as above?	Yes	Go to the next step.
		No	• Inspect the wiring harness between the steering lock unit and the keyless control module. — If the harness is normal, replace the keyless control module. — If the harness is malfunctioning, repair the wiring harness. • Go to the next step.
10	• Does the keyless entry system operate properly?	Yes	Troubleshooting completed. Explain repairs to the customers
		No	Re-inspect the malfunction symptoms, then repeat form Step 1 if malfunction recurs.

09–03B SYMPTOM TROUBLESHOOTING [KEYLESS ENTRY SYSTEM]

KEYLESS ENTRY SYSTEM WIRING DIAGRAM [KEYLESS ENTRY SYSTEM]

DPE090369000W01



DPE914BT2002

1	Cargo compartment light
2	Liftgate latch switch

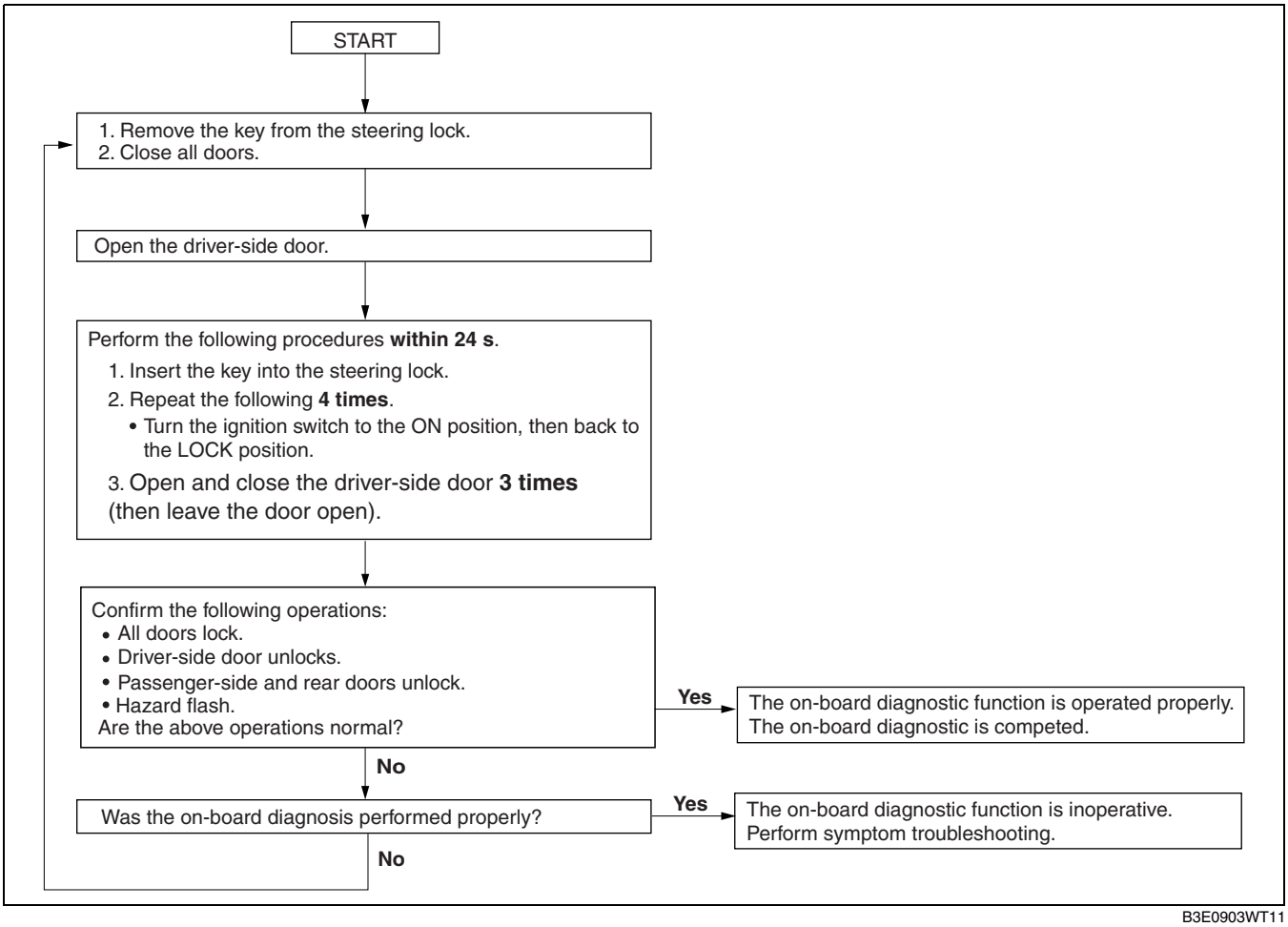
3	Door lock-link switch
4	Front door latch switch (LH)

5	Front door latch switch (RH)
6	Door switch (LH)
7	Door switch (RH)
8	CAN related parts
9	Keyless receiver
10	Front door lock actuator (driver side)
11	Front door lock actuator (passenger side)
12	Sliding door lock actuator (LH)
13	Sliding door lock actuator (RH)
14	Liftgate lock actuator
15	Front turn light (LH)
16	Front side turn light (LH)
17	Front turn light (RH)
18	Front side turn light (RH)
19	Rear turn light (LH)
20	Rear turn light (RH)

KEYLESS ENTRY SYSTEM ON-BOARD DIAGNOSIS [KEYLESS ENTRY SYSTEM]

DPE090369000W03

Note
- "All doors“ includes the liftgate.



B3E0903WT11

FOREWARD [KEYLESS ENTRY SYSTEM]

DPE090369000W17

- The keyless entry system is controlled by the BCM.
- “All locks” includes the liftgate.

SYMPTOM TROUBLESHOOTING CHART [KEYLESS ENTRY SYSTEM]

DPE090369000W04

No.	Troubleshooting item	Description	Page
1	One or more on-board diagnostic functions inoperative	• Malfunction in door lock linkage system	See 09–03B–3 NO.1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM]
2	All on-board diagnostic functions inoperative	• Malfunction in BCM power supply circuit, door latch switch circuit, BCM ground circuit, or keyless receiver.	See 09–03B–4 NO.2 ALL ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE
3	Transmitter ID code cannot be reprogrammed	• Malfunction in transmitter battery, transmitter, keyless receive bracket, keyless receive bracket ground screw, or BCM circuit. keyless receive circuit.	See 09–03B–7 NO.3 TRANSMITTER ID CODE CANNOT BE REPROGRAMMED [KEYLESS ENTRY SYSTEM]

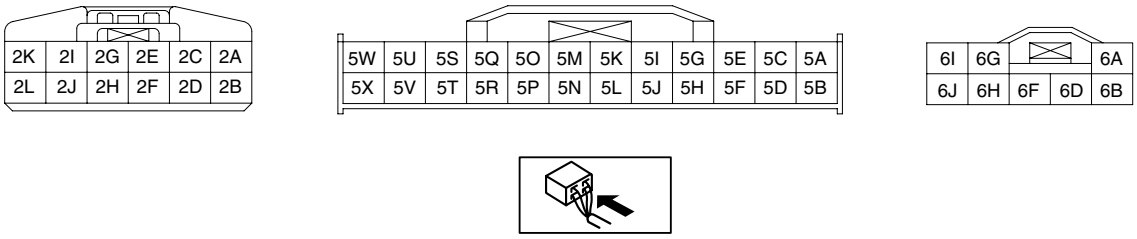
NO.1 ONE OR MORE ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE [KEYLESS ENTRY SYSTEM]

DPE090369000W05

- When performing an asterisked (*) troubleshooting inspection, slightly shake the wiring harness and connectors while performing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, verify that the connectors, terminals and wiring harnesses are connected correctly and undamaged.

1	One or more on-board diagnostic functions inoperative
DESCRIPTION	• Malfunction in door lock linkage system
POSSIBLE CAUSE	• Malfunction in door lock linkage • Malfunction in BCM door lock/unlock signal circuit — BCM malfunction

BODY CONTROL MODULE (BCM)
WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**CHECK HORN, AND HAZARD WARNING LIGHT OPERATION DURING ON-BOARD DIAGNOSIS** • Did all of the following items work during on-board diagnostic function operation? — Hazard warning lights flashed — Horns sounded intermittently	Yes	Go to Step 5.
		No	Go to next step.
2	**INSPECT HAZARD WARNING LIGHT OPERATION DURING ON-BOARD DIAGNOSIS** • Did hazard warning lights flash during on-board diagnostic function operation?	Yes	Go to Step 5.
		No	Go to next step.
3	**INSPECT HAZARD WARNING LIGHT CIRCUIT** • Do hazard warning lights flash when hazard warning switch is on?	Yes	Go to next step.
		No	Inspect hazard warning light circuit.
*4	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (BETWEEN BCM AND TURN LIGHTS) OR BCM** • Measure the voltage at BCM terminals 5V and 5X (24-pin connector), and 2D and 2F (12-pin connector) during on-board diagnostic function operation. — When hazard warning light flashed: **Alternates between B+ and below 1.0 V** • Are the voltage as above?	Yes	Recheck malfunction symptoms, then repeat from Step 1 if malfunction reoccurs.
		No	• Inspect wiring harness between BCM and turn lights. — If wiring harness is normal, replace the BCM, then go to Step 8. — If wiring harness malfunction, repair wiring harness, then go to Step 8.
5	**VERIFY THAT ALL DOORS LOCK AND UNLOCK DURING ON-BOARD DIAGNOSIS** • Do all doors unlock and lock during on-board diagnostic function operation?	Yes	Reinspect the malfunction symptoms, then repeat from Step 1 if the malfunction recurs.
		No	Go to the next step.
6	**INSPECT DOOR LOCK LINKAGE** • Operate the door lock knob and verify the door locks and unlocks manually. • Does every door lock system work?	Yes	Go to the next step.
		No	Inspect the door lock linkage.
*7	**INSPECT IF MALFUNCTION IS IN DOOR LOCK ACTUATOR, BCM GROUND CIRCUIT OR ELSEWHERE** • Measure the voltage at BCM terminals 6A, 6B and 6F. — All doors locked: **1.0 V or less → B+ → 1.0 V or less** (Normal lock: 6A terminal) (Double lock: 6F terminal) — Driver-side door unlocked: **1.0 V or less → B+ → 1.0 V or less** (Normal unlock: 6B terminal) • Is the voltage as above?	Yes	Reinspect the malfunction symptoms, then repeat from Step 1 if the malfunction recurs.
		No	• Inspect the BCM connector. • Inspect the wiring harness between the BCM and door lock actuator. — If the above parts are normal, go to the next step. — If any of above parts are malfunctioning, repair the malfunctioning part.
8	**REINSPECT MALFUNCTION SYMPTOM AFTER REPAIR** • Does the keyless entry system operate properly?	Yes	• Troubleshooting completed. • Explain repairs to the customer.
		No	Reinspect the malfunction symptoms, then repeat from Step 1 if malfunction recurs.

NO.2 ALL ON-BOARD DIAGNOSTIC FUNCTIONS INOPERATIVE

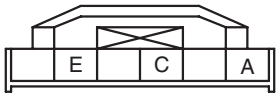
DPE090369000W06

- When performing an asterisked (*) troubleshooting inspection, slightly shake the wiring harness and connectors while performing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, verify that the connectors, terminals and wiring harnesses are connected correctly and undamaged.

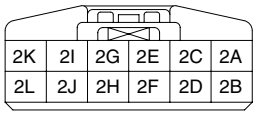
2	All on-board diagnostic functions inoperative
DESCRIPTION	• Malfunction in BCM power supply circuit, door latch switch circuit, BCM ground circuit, or keyless receiver.

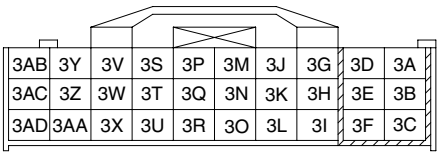
POSSIBLE CAUSE	• Malfunction in IG1 or power supply signal circuit of BCM — BCM power supply fuse malfunction — Malfunction in wiring harness between BCM power supply fuses and BCM • Malfunction in door open/closed signal circuit of BCM — Door latch switch system malfunction — BCM malfunction — Malfunction in wiring harness between BCM and door latch switch • Malfunction in BCM GND signal circuit — Malfunction in wiring harness between BCM and ground • Malfunction in keyless receiver — Keyless receiver malfunction — Malfunction in wiring harness between keyless receiver and BCM

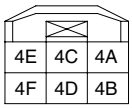
KEYLESS CONTROL MODULE
WIRING HARNESS-SIDE CONNECTOR

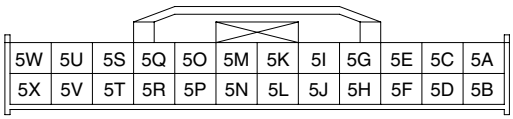


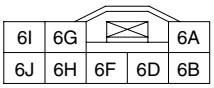
BODY CONTROL MODULE (BCM)
WIRING HARNESS-SIDE CONNECTOR

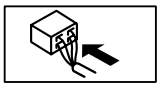












09

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT BCM POWER SUPPLY FUSES** • Are the BCM power supply fuses normal?	Yes	Go to the next step.
		No	Install an appropriate amperage fuse.
2	**INSPECT DOOR LATCH SWITCH INSTALLATION** • Are the door latch switches installed securely?	Yes	Go to the next step.
		No	Install the door latch switches securely, then go back to Step 5 of KEYLESS ENTRY SYSTEM PRELIMINARY INSPECTION.
*3	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN FUSE BLOCK AND BCM) OR ELSEWHERE** • Turn the ignition switch to the ON position. • Measure the voltage at the following BCM terminals: — IG1 signal (terminal 3X, 4B) — Power supply signal (terminal 2A, 2B, 2J) • Is the voltage **B+**?	Yes	Go to the next step.
		No	Repair the wiring harness between the fuse block and BCM, then go to Step 13.
*4	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (SHORT TO POWER SUPPLY BETWEEN FUSE BLOCK AND BCM, OR BETWEEN BCM AND GROUND) OR ELSEWHERE** • Turn the ignition switch to the LOCK position. • Disconnect the BCM connector. • Measure the voltage at the following BCM terminal (wiring harness-side): — IG1 signal (terminal 3X, 4B) • Is the voltage **B+**?	Yes	Repair the malfunctioning wiring harness, then go to Step 13.
		No	Go to the next step.
*5	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN BCM AND GROUND) OR ELSEWHERE** • Is there continuity between BCM terminal 4E and ground?	Yes	Go to the next step.
		No	Repair the wiring harness between the BCM and ground, then go to Step 13.
6	**INSPECT FOR CHECK CODE 04 IN INSTRUMENT CLUSTER** • Inspect the door latch switch using the instrument cluster input/output check mode. (See 09–22–4 INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE.) • Is DTC 04 displayed?	Yes	Go to the next step.
		No	Repair the door latch switch system using the DTC 04 inspection procedure, then go to Step 13.
7	**INSPECT BCM OR WIRING HARNESS (BETWEEN BCM AND DOOR LATCH SWITCHES FOR CONTINUITY)** • Open all doors. • Is there continuity between BCM terminals 5C, 5E, 5G and ground?	Yes	Replace the BCM and reprogram the transmitter ID code, then go to the next step.
		No	Repair the wiring harness between the BCM and door latch switches, then go to the next step.
8	**INSPECT POWER SUPPLY FUSE** • Is the keyless receiver power supply fuse normal?	Yes	Go to the next step.
		No	Install an appropriate amperage fuse.
9	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN FUSE BLOCK AND KEYLESS RECEIVER) OR ELSEWHERE** • Turn the ignition switch to the ON position. • Measure the voltage at the following keyless receiver terminal: — IG1 signal (terminal A) • Is the voltage **B+**?	Yes	Go to the next step.
		No	Repair the wiring harness between the fuse block and keyless receiver, then go to Step 13.
10	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN KEYLESS RECEIVER AND GROUND) OR ELSEWHERE** • Is there continuity between keyless receiver terminal E and ground?	Yes	Go to the next step.
		No	Repair the wiring harness between the keyless receiver and ground, then go to Step 13.

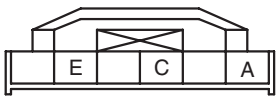
STEP	INSPECTION		ACTION
11	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN KEYLESS RECEIVER AND BCM) OR ELSEWHERE** • Turn the ignition switch to the ON position. • Disconnect the keyless receiver connector and BCM connector. • Is there continuity between the following terminals? — 3AB (BCM connector)—C (keyless receiver connector)	Yes	Go to the next step.
		No	Repair the wiring harness between the keyless receiver and BCM, then go to Step 13.
12	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN KEYLESS RECEIVER AND BCM) OR BCM** • Measure the voltage at keyless receiver terminal C. — When transmitter operated: • Any transmitter button is operated : **0.5 V** • Any transmitter button is not operated : **3.5 V** • Is the voltage normal?	Yes	Replace the BCM, then go to the next step.
		No	Replace the keyless receiver, then go to the next step.
13	**REINSPECT MALFUNCTION SYMPTOM AFTER REPAIR** • Does the keyless entry system operate properly?	Yes	Troubleshooting completed. Explain repairs to the customer.
		No	Reinspect the malfunction symptoms, then repeat from Step 1 if the malfunction recurs.

NO.3 TRANSMITTER ID CODE CANNOT BE REPROGRAMMED [KEYLESS ENTRY SYSTEM]

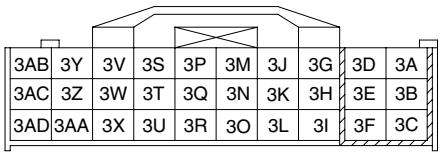
DPE090369000W07

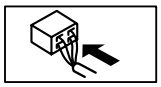
3	**Transmitter ID code cannot be reprogrammed**
DESCRIPTION	• Malfunction in transmitter battery, transmitter, BCM circuit, or keyless receiver circuit.
POSSIBLE CAUSE	• Malfunction in transmitter battery, transmitter, BCM, or keyless receiver.

KEYLESS CONTROL MODULE
WIRING HARNESS-SIDE CONNECTOR



BODY CONTROL MODULE (BCM)
WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT TRANSMITTER BATTERY INSTALLATION AND TYPE** • Visually inspect the transmitter battery. • Are the below items correct? — Transmitter battery installation (correct polarity) — Battery type: CR1620	Yes	Go to the next step.
		No	Properly install the battery or replace the battery with the specified battery (CR1620), and then go to Step 11.
2	**INSPECT TRANSMITTER BATTERY TERMINALS FOR RUST AND POOR CONNECTION** • Visually inspect the transmitter. — Is there rust on the transmitter battery terminals (positive or negative)? — Is there poor connection between the terminals and battery?	Yes	Replace the transmitter battery or repair the transmitter battery terminal, then go to Step 11.
		No	Go to the next step.
3	**INSPECT TRANSMITTER BATTERY** • Inspect the transmitter battery. • Is the battery voltage normal?	Yes	Go to the next step.
		No	Replace the transmitter battery, then go to Step 11.
4	**INSPECT IF MALFUNCTION IS IN TRANSMITTER BATTERY OR ELSEWHERE** • Replace with a transmitter battery known to be good. • Does the keyless entry system operate properly?	Yes	Replace the transmitter battery, then go to Step 11.
		No	Go to the next step.
5	**INSPECT IF MALFUNCTION IS IN TRANSMITTER OR BCM** • Reprogram the transmitter ID code using another known good transmitter. • Does the keyless entry system operate properly?	Yes	Replace the transmitter and reprogram the transmitter ID code, then go to Step 11.
		No	Go to the next step.
6	**INSPECT POWER SUPPLY FUSE** • Is the keyless receiver power supply fuse normal?	Yes	Go to the next step.
		No	Install an appropriate amperage fuse, then go to Step 11.
7	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN FUSE BLOCK AND KEYLESS RECEIVER) OR ELSEWHERE** • Measure the voltage at the following keyless receiver terminal: — Power supply signal (terminal A) • Is the voltage **B+**?	Yes	Go to the next step.
		No	Repair the wiring harness between the fuse block and keyless receiver, then go to Step 11.
8	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN KEYLESS RECEIVER AND GROUND) OR ELSEWHERE** • Is there continuity between keyless receiver terminal E and ground?	Yes	Go to the next step.
		No	Repair the wiring harness between the keyless receiver and ground, then go to Step 11.
9	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN KEYLESS RECEIVER AND BCM) OR ELSEWHERE** • Disconnect the keyless receiver connector and BCM connector. • Is there continuity between the following terminals? — 3AB (BCM connector)—C (keyless receiver connector)	Yes	Go to the next step.
		No	Repair the wiring harness between the keyless receiver and BCM, then go to Step 11.

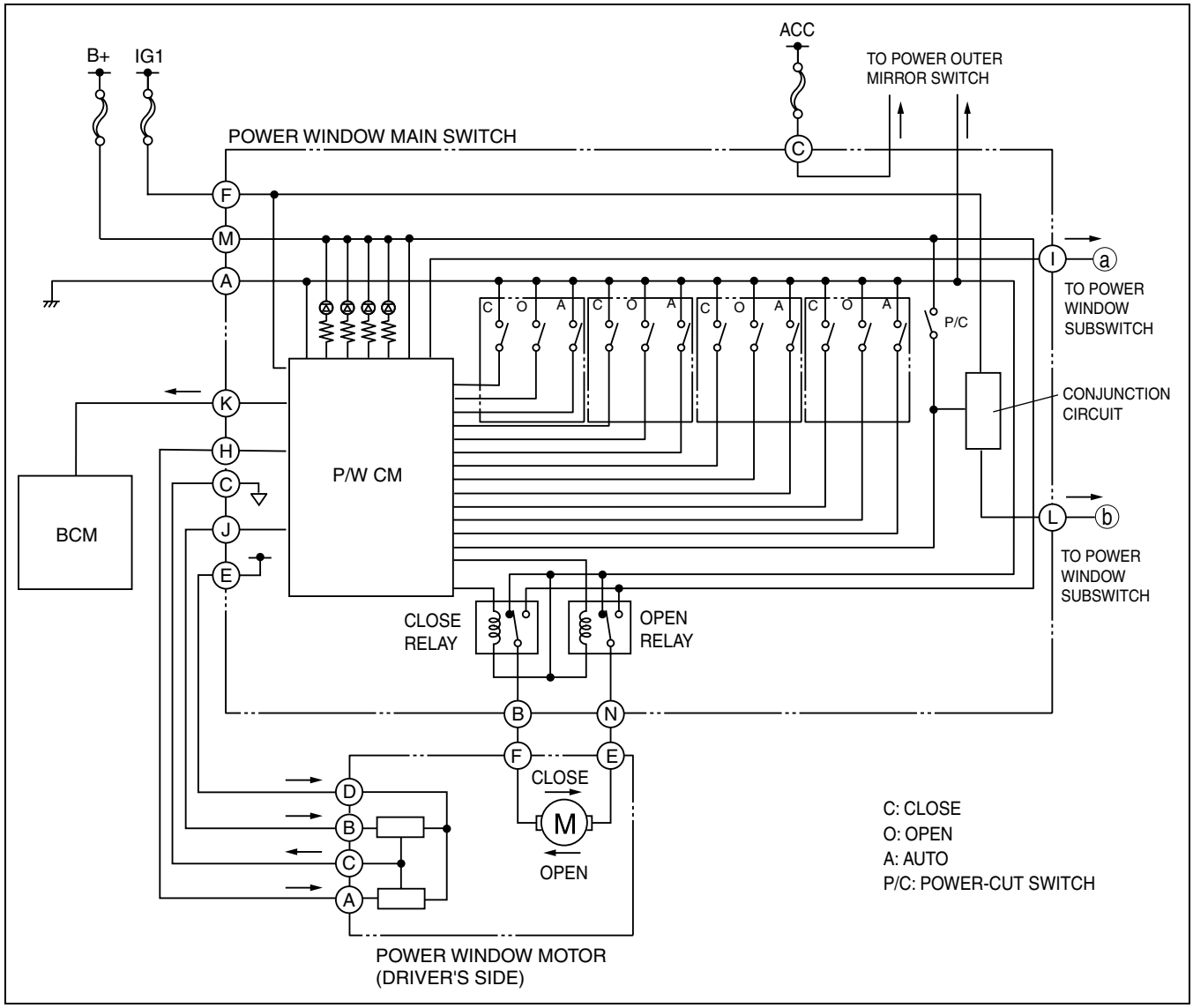
STEP	INSPECTION		ACTION
10	**INSPECT IF MALFUNCTION IS IN WIRING HARNESS (NO CONTINUITY BETWEEN KEYLESS RECEIVER AND BCM) OR BCM** • Measure the voltage at BCM terminal C. — When transmitter operated: • Any transmitter button is operated: **0.5 V** • Any transmitter button is operated: **3.5 V** • Is the voltage normal?	Yes	Replace the BCM, then go to the next step.
		No	Replace the keyless receiver, then go to the next step.
11	**REINSPECT MALFUNCTION SYMPTOM AFTER REPAIR** • Does the keyless entry system operate properly?	Yes	Troubleshooting completed. Explain repairs to the customer.
		No	Reinspect the malfunction symptoms, then repeat from Step 1 if the malfunction recurs.

09–03C SYMPTOM TROUBLESHOOTING [POWER WINDOW SYSTEMS]

POWER WINDOW SYSTEM WIRING DIAGRAM

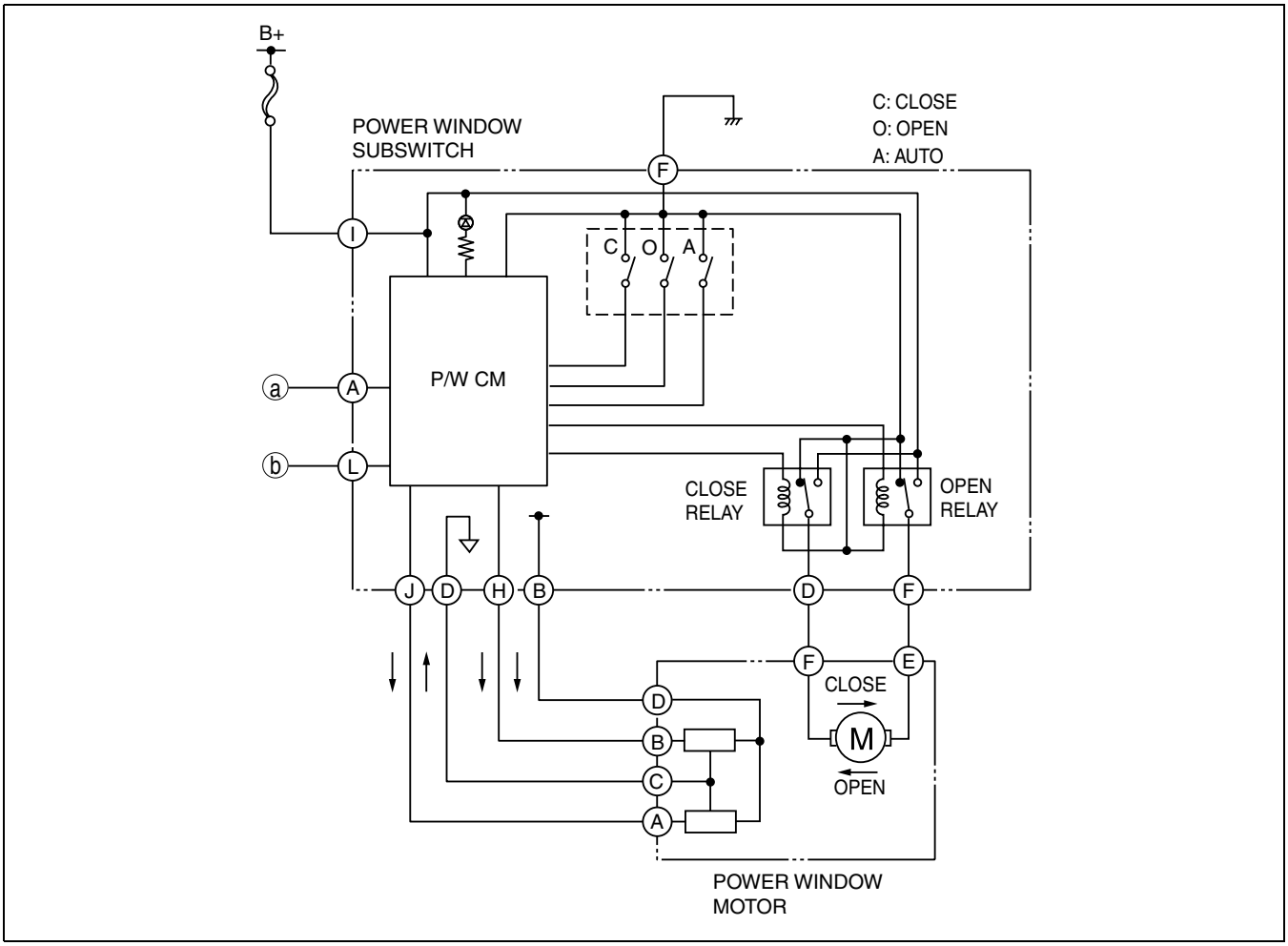
DPE090358000W01

Power Window Main Switch



DPE903BW1S03

Power Window Subswitch



DPE903BW1S04

INTERMITTENT CONCERN TROUBLESHOOTING

DPE090358000W02

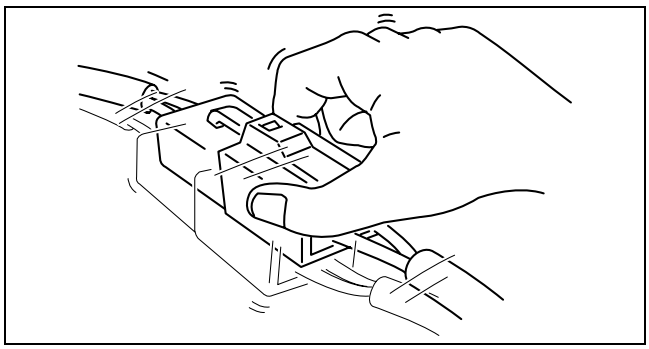
Vibration Method

- If a malfunction occurs or becomes worse while driving on a rough road or when the engine is vibrating, perform following the steps:

Note

- There are several reasons why vehicle or engine vibration could cause an electrical malfunction. Some of the things to inspect for:
  - — Connectors not fully seated.
  - — Wiring harnesses not having full play.
  - — Wires laying across brackets or moving parts.
  - — Wires routed too close to hot parts.
- An improperly routed, improperly clamped, or loose wiring harness can cause wiring to become pinched between parts.
- The connector joints, points of vibration, and places where wiring harnesses pass through the firewall, body panels are the major areas to be inspected.

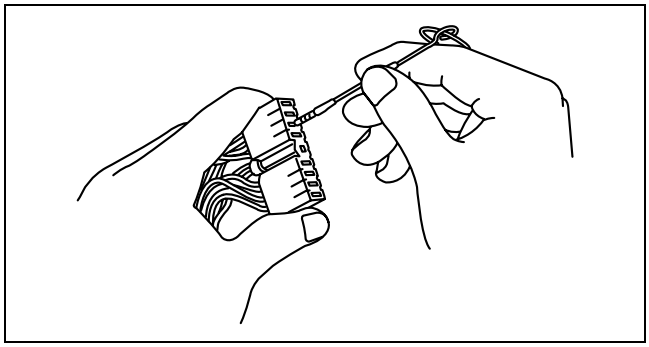
- Inspect for DTCs or malfunctions by slightly shaking wiring harnesses and connectors that are suspected of causing the malfunction.



DPE903BW1S07

Connector Terminal Check Method

1. Inspect the connection condition of each female terminal.
2. Insert the male terminal into the female terminal to inspect for looseness.



DPE903BW1S06

FOREWORD

DPE090358000W03

- Always perform basic power window system inspection before troubleshooting.
- Troubleshooting procedures provide information unique to malfunctions of the automatic window return function.

BASIC POWER WINDOW SYSTEM INSPECTION

DPE090358000W04

Manual Mode Function Inspection

STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the ON position. • Turn the power-cut switch to UNLOCK. • Does each door glass move up and down in manual mode using the power window subswitch?	Yes	Go to the next step.
		No	• Inspect the following items: — Power window main switch (power-cut switch system malfunction) — Power window subswitch power supply fuses — Power window subswitch ground wiring harness — Power window switch power supply wiring harnesses — Wiring harness between power window subswitch and power window motor — Power window subswitch — Power window motor • Repair or replace the malfunctioning part, then go to the next step.
2	• Does the driver-side door glass move up and down in manual mode using the power window main switch?	Yes	Go to the next step.
		No	• Inspect the following items: — Power window main switch power supply fuses — Power window main switch ground wiring harness — Power window main switch power supply wiring harnesses — Wiring harness between power window main switch and power window motor — Power window main switch • Repair or replace the malfunctioning part, then go to the next step.

STEP	INSPECTION		ACTION
3	• Does each other door glass other than the driver-side door glass move up and down in manual mode using the power window main switch?	Yes	Go to the next step.
		No	• Perform the power window system initial setting procedure for any door glass that does not move up and down, and reinspect. (See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) • If it does not move up and down upon reinspection, inspect the following: — Wiring harness between power window main switch and subswitch • Repair or replace the malfunctioning part, then go to the next step.
4	• Turn the power-cut switch to LOCK. • Push/pull the power window main switch (switches for all windows in manual mode). • Does only driver-side front door glass move up and down?	Yes	• Manual mode function is normal. • Go to the automatic mode function inspection.
		No	Replace the power window main switch, then go to the automatic mode function inspection (power-cut switch system malfunction).

Automatic Mode Function Inspection

Note
- Perform the following inspection for the power window main switch and the power window subswitches for each window.

STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the ON position. • Operate the power window switch in automatic mode. • Does the door glass move up and down in automatic mode?	Yes	Go to the next step.
		No	• Door glass does not move up and down in automatic mode: — Go to Step 1 of NO. 1 DOOR GLASS DOES NOT MOVE UP AND DOWN IN AUTOMATIC MODE. • Door glass moves up and down in automatic mode, but door glass reverses: — Go to Step 1 of NO. 3 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE.
2	• Gently pull the power window switch while the door glass is moving down in automatic mode. • Does the glass stop?	Yes	Go to the next step.
		No	Replace the power window switch, then go to the automatic door glass return function inspection.
3	• Gently press the power window switch while the door glass is moving up in automatic mode. • Does the glass stop?	Yes	• Automatic mode function is normal. • Go to the automatic door glass return function inspection.
		No	Replace the power window switch, then go to the automatic door glass return function inspection.

Automatic Door Glass Return Function Inspection

Note
- Perform the following inspection for the power window main switch and the power window subswitches for each window.
- With the switch held at auto-up, the door glass does not automatically reverse even when a foreign object is encountered.

STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the ON position. • Lower the door glass completely. • Use the power window switch to close the door glass in automatic mode. • Does the door glass automatically reverse even though the glass does not encounter a foreign object while it is moving up in automatic mode?	Yes	Go to Step 1 of NO. 3 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE.
		No	Go to the next step.

STEP	INSPECTION		ACTION
2	• Lower the door glass completely. • Take a hammer and hold it against the inside of the top of the window frame so that the door glass will hit its handle when it is closed. • Raise the door glass using automatic mode. • When the door glass hits the hammer handle, does it immediately reverse and move down to **approx. 200 mm {7.87 in}** from the completely closed position?	Yes	• Automatic door glass return function inspection is normal. • Go to the IG OFF timer function inspection.
		No	Go to Step 1 of NO. 2 DOOR GLASS DOES NOT REVERSE, EVEN WHEN ENCOUNTERING A FOREIGN OBJECT IN ITS PATH.

IG OFF Timer Function Inspection

STEP	INSPECTION		ACTION
1	• Close all doors. • Turn the ignition switch to the ON position. • In automatic mode, push down the power window main switch for the driver-side front door glass. The door glass should move down **within approx. 40 s** after ignition switch off. • In manual mode (finger continuously depressing the power window main switch), the door glass should move down **within approx. 40 s** after ignition switch off. • Does the driver-side front door glass move down?	Yes	Go to the next step.
		No	• Perform the driver-side power window system initial setting procedure, and reinspect.(See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) • If it does not move up and down upon reinspection, inspect the following: — Wiring harness for the door open/close signal system — Latch switch • Repair or replace the malfunctioning part, and reinspect. — If operation is not normal, replace the power window main switch, and then go to the next step.
2	• Turn the ignition switch to the ON position. • In automatic mode, pull up the power window main switch for the driver-side front door glass. The door glass does not move up **within approx. 40 s** after ignition switch off. • Verify that driver-side front door glass does not operate. • Does the driver-side front door glass move up?	Yes	• Perform the driver-side power window system initial setting procedure, and reinspect.(See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) — If operation is not normal, replace the power window main switch, then go to the next step.
		No	Go to the next step.
3	• Turn the ignition switch to the ON position. • Lower the driver-side front door glass completely. • Take a hammer and hold it against the inside of the top of the door glass frame so that the door glass will hit its handle when it is closing. • Raise the door glass using manual mode. • When the door glass hits the hammer handle, does it immediately reverse and move down to **approx. 200 mm {7.87 in}** from the completely closed position?	Yes	Go to the next step.
		No	• Perform the driver-side power window system initial setting procedure, and reinspect.(See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) — If operation is not normal, replace the power window main switch, then go to the next step.
4	• Open any door. • Turn the ignition switch to the ON position. • Push/pull the power window main switch for the door glass **within approx. 40 s** after ignition switch off. • Verify that the door glass does not move up or down. • Does the door glass move up or down?	Yes	• Inspect the door switch and related wiring harness. • If above parts are normal, replace the power window main switch, then go to the next step. • If the above parts have any malfunction, repair or replace the malfunction part, then go to the next step.
		No	Go to the next step.
5	• Close all doors. • Turn the ignition switch to the ON position. • Push/pull the power window main switch for door glass after **approx. 60 s** after ignition switch off. • Verify that the door glass does not move up or down. • Does the door glass move up or down?	Yes	• Perform the driver-side power window system initial setting procedure, and reinspect.(See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) — If operation is not normal, replace the power window main switch, then go to the two-step down function inspection.
		No	• The IG OFF timer function is normal. • Go to the two-step down function inspection.

Two-step Down Function Inspection

- The distance the door glass opens can be changed using the two-step down function (**approx. 20—100 mm {0.79—3.93 in}**).
- The two-step down function can be made inoperative. (The function is operative at the initial setting.)

- The two-step down function does not function during IG OFF timer.

Note
- Perform the following inspection for the power window main switch and the power window subswitches for each window.

STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the ON position. • Raise door glass completely. • When the door glass is lowered using manual mode, does it move down to **approx. 30 mm {1.2 in}** from the completely closed position and stop for 1 s? (This inspection cannot be performed during IG OFF timer function operation.)	Yes	• Two-step down function is normal. • Reinspect malfunction symptoms.
		No	• Perform the power window initial setting procedure and verify auto-up/down operation.(See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) — If the automatic function does not operate, go to Automatic Door Glass Return Function Inspection. — If the automatic function operates but the two-step down function does not, replace the power window switch.

SYMPTOM TROUBLESHOOTING CHART

DPE090358000W05

No.	TROUBLESHOOTING ITEM	PAGE
1	Door glass does not move up and down in automatic mode	(See 09–03C–6 NO. 1 DOOR GLASS DOES NOT MOVE UP AND DOWN IN AUTOMATIC MODE.)
2	Door glass does not reverse, even when encountering a foreign object in its path.	(See 09–03C–10 NO. 2 DOOR GLASS DOES NOT REVERSE, EVEN WHEN ENCOUNTERING A FOREIGN OBJECT IN ITS PATH.)
3	Door glass reverses even though the glass does not encounter a foreign object while it is moving up in automatic mode.	(See 09–03C–10 NO. 3 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE.)
4	Abnormal noise while the door glass is opening or closing.	(See 09–03C–13 NO. 4 ABNORMAL NOISE WHILE THE DOOR GLASS IS OPENING OR CLOSING.)

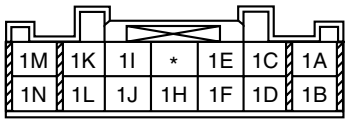
NO. 1 DOOR GLASS DOES NOT MOVE UP AND DOWN IN AUTOMATIC MODE

DPE090358000W06

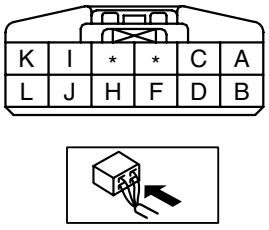
Note
- Perform the following inspection for the power window system component parts of windows where the door glass cannot be operated automatically.

1	Door glass does not move up and down in automatic mode
POSSIBLE CAUSE	• Open circuit or short to power supply in sensor 1 signal, ground signal from wiring harness (between power window switch and power window motor), inner power window switch, or inner motor: Steps 3–6 • Open circuit or short to power supply/ground in sensor 2 signal from wiring harness (between power window switch and power window motor), inner power window switch, or inner motor: Steps 7–11 **Note** • The automatic function and the IG OFF timer function do not operate while the power window switch is in fail-safe mode. The fail-safe operates when sensor 1, and/or sensor 2, and/or the sensor power supply malfunctions. • Sensor 1 and/or 2 malfunction — When the door glass is moving up and down, the power window switch cannot sense a pulse signal from sensor 1 during the time it senses 5 pulses (2.5 cycles) from sensor 2. — When the door glass is moving up and down, the switch cannot sense a pulse signal from sensor 2 during the time it senses 5 pulses (2.5 cycles) from sensor 1. — There are three abnormal pulses in a pulse signal while the door glass is moving up or down. — There are 20 cycle pulses from a closed position while the door glass is moving up. — There is no pulse signal for 1 s after the door glass is moved down.

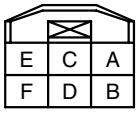
POWER WINDOW MAIN SWITCH
WIRING HARNESS-SIDE CONNECTOR



POWER WINDOW SUBSWITCH
WIRING HARNESS-SIDE CONNECTOR



POWER WINDOW MOTOR
WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT WHETHER POWER WINDOW SWITCH ENTERS FAIL-SAFE MODE OR NOT** • Did the door glass move up or down in automatic mode?	Yes	Reinspect malfunction symptoms.
		No	Go to the next step. (Power window switch may enter fail-safe mode.)
2	**VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE** • Turn the ignition switch to the ON position. • Inspect the voltage at the following power window switch terminals (sensor 1 signal): — Driver's side: H — Except driver's side: J • Does the voltage alternate between **0 V** and **approx. 12 V** when the door glass is moving up and down?	Yes	Go to Step 7.
		No	Go to the next step.
3	**VERIFY SENSOR 1 OUTPUT SIGNAL** • Turn the ignition switch to the ON position. • Inspect the voltage at power window motor terminals A (sensor 1 signal): • Is the voltage alternate between **0 V** and **approx. 12 V** when the door glass is moving up and down in manual mode?	Yes	Go to the next step.
		No	Replace the power window motor, then go to Step 12.
4	**INSPECT WIRING HARNESS BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR FOR CONTINUITY** • Turn the ignition switch to the LOCK position. • Disconnect the power window switch connector. • Is there continuity between the following power window switch terminals and power window motor terminals? — Driver's side: • H–A (sensor 1 signal) • E–D (sensor power supply) • D–C (ground signal) — Except driver's side: • J–A (sensor 1 signal) • B–D (sensor power supply) • D–C (ground signal)	Yes	Go to the next step.
		No	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
5	**VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR POWER WINDOW SWITCH** • Turn the ignition switch to the ON position. • Inspect the voltage at the following power window switch terminals: — Driver's side • H (sensor 1 signal) • D (ground signal) — Except driver's side • J (sensor 1 signal) • D (ground signal) • Is the voltage **approx. 12 V**?	Yes	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
		No	Replace the power window switch (open circuit or short to power supply in power window switch).

STEP	INSPECTION		ACTION
6	**VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE** • Is there continuity between the following power window switch terminals (wiring harness-side) and ground? — Driver's side • H (sensor 1 signal) • E (sensor power supply) — Except driver's side • J (sensor 1 signal) • B (sensor power supply)	Yes	Replace the wiring harness between the power window switch and power window motor, then go to Step 12.
		No	Go to the next step.
7	**VERIFY WHETHER MALFUNCTION IS IN POWER WINDOW SWITCH OR ELSEWHERE** • Turn the ignition switch to the ON position. • Inspect the voltage at the following power window switch terminals (sensor 2 signal): — Driver's side : J — Except driver's side : H • Does the voltage alternate between **0 V** and **approx. 12 V** when the door glass is moving up and down?	Yes	Replace the power window switch (malfunction in power window switch automatic mode control), then go to Step 11.
		No	Go to the next step.
8	**VERIFY SENSOR 2 OUTPUT SIGNAL** • Turn the ignition switch to the ON position. • Inspect the voltage at power window motor terminal B (sensor 2 signal). • Does the voltage alternate between **0 V** and **approx. 12 V** when door glass is moving up and down?	Yes	Go to the next step.
		No	Replace the power window motor, then go to Step 12.
9	**VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE** • Turn the ignition switch to the LOCK position. • Disconnect the power window switch connector and power window motor connector. • Is there continuity between the following power window switch terminals and power window motor terminals? — Driver's side : J and B (sensor 2 signal) — Except driver's side : H and B (sensor 2 signal)	Yes	Go to the next step.
		No	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
10	**VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE** • Is there continuity between the following power window switch terminals (sensor 2 signal) and ground? — Driver's side : J — Except driver's side : H	Yes	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
		No	Go to the next step.
11	**VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR POWER WINDOW SWITCH** • Turn the ignition switch to the ON position. • Measure the voltage at the following power window switch terminals (sensor 2 signal): — Driver's side : J — Except driver's side : H • Is the voltage **approx. 12 V**?	Yes	Repair the wiring harness between the power window switch and front driver-side power window motor, then go to the next step.
		No	Replace the power window switch (open circuit or short to power supply/ground in power window switch), then go to the next step.

STEP	INSPECTION		ACTION
12	**REINSPECT MALFUNCTION SYMPTOM AFTER REPAIR** • Is malfunction no longer present?	Yes	• Troubleshooting completed. • Explain repairs to the customer.
		No	Reinspect malfunction symptoms, then repeat from Step 1 if malfunction recurs.

NO. 2 DOOR GLASS DOES NOT REVERSE, EVEN WHEN ENCOUNTERING A FOREIGN OBJECT IN ITS PATH

DPE090358000W07

Note
- Perform the following inspection for the power window system component parts of the windows where the door glass does not reverse, even when encountering a foreign object in its path.

2	**Door glass does not reverse, even when encountering a foreign object in its path.**
POSSIBLE CAUSE	• Automatic window return range did not reset after battery disconnection: Step 2

Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY CUSTOMER COMPLAINT** • Did the customer complain that the door glass did not reverse when near complete closed position?	Yes	• The system is normal. • Explain to the customer that automatic window return power window system does not operate when near complete closed position.
		No	Go to the next step.
2	**RESET REVERSE AREA STORED IN DOOR GLASS MOTOR** • Perform the power window system initial setting procedure. • Did malfunction disappear?	Yes	• Troubleshooting completed. • Explain to the customer that misadjustment of automatic window return range was the problem.
		No	Replace the power window switch. • Verify auto-up/down operation and if the automatic function does not operate, go to Step 1 of NO. 1 DOOR GLASS DOES NOT MOVE UP AND DOWN IN AUTOMATIC MODE. • If the automatic function operates, replace the power window switch.

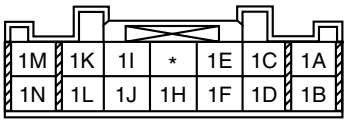
NO. 3 DOOR GLASS REVERSES EVEN THOUGH THE GLASS DOES NOT ENCOUNTER A FOREIGN OBJECT WHILE IT IS MOVING UP IN AUTOMATIC MODE

DPE090358000W08

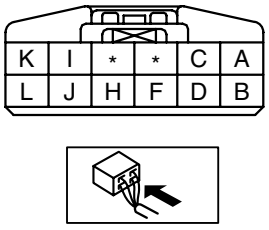
Note
- Perform the following inspection for the power window system component parts of windows where the door glass reverses even though the glass does not encounter a foreign object while it is moving up in automatic mode.

3	**Door glass reverses even though the glass does not encounter a foreign object while it is moving up in automatic mode.**
POSSIBLE CAUSE	• Extreme change in the sliding resistance of the glass while the door glass is closing. — Improper installation of the acrylic door visor. — Power window motor malfunction — Object caught between the glass run channel and the door glass. — Insufficient tightening of the door glass to the carrier plate. — Glass run channel malfunction. — Glass guide related malfunction. **Note** • The auto-reverse pinch protection function is a mechanism that automatically reverses (opens) the door glass while it is closing when the power window main switch detects the signal from the power window motor indicating that an object is obstructing the door glass movement. • The auto-reverse pinch protection function may operate if the sliding resistance of the door glass increases causing the closing speed to decrease. • If the door glass closing speed has changed, concentrate the inspection on the following locations: (Slip occurrence) — If the door glass is slipping forward, inspect the front side of the glass guide or glass run channel. — If the door glass is slipping rearward, inspect the rear side of the glass guide or glass run channel.

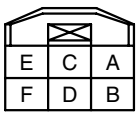
POWER WINDOW MAIN SWITCH
WIRING HARNESS-SIDE CONNECTOR



POWER WINDOW SUBSWITCH
WIRING HARNESS-SIDE CONNECTOR

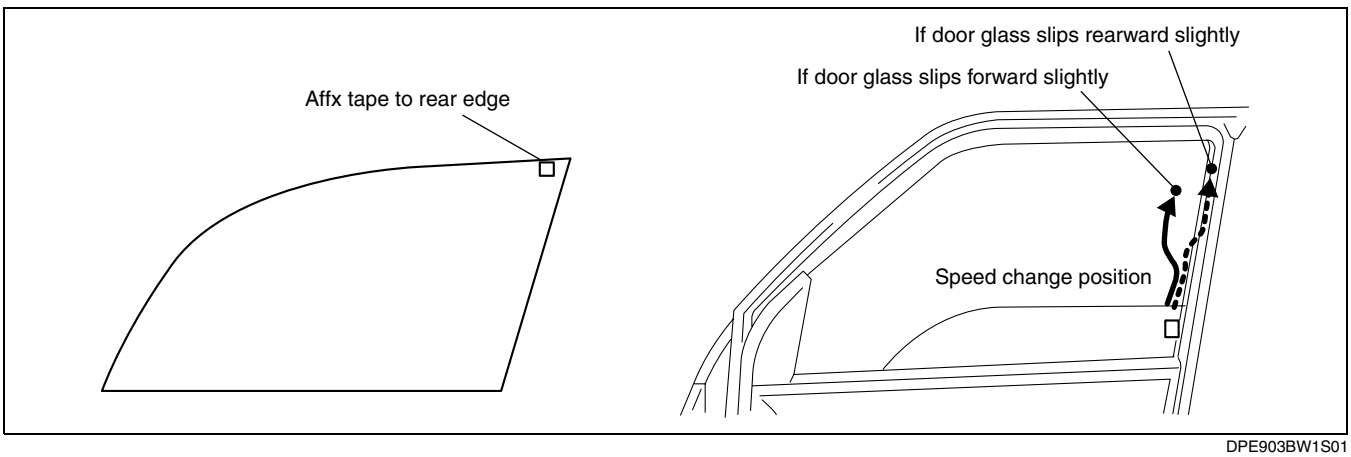


POWER WINDOW MOTOR
WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT MALFUNCTION SYMPTOM** • Does the malfunction symptom occur only under the following special conditions?: — Driving over railroad tracks — Driving on bumpy roads. — Opening/closing the door.	Yes	The system is normal (Explain to the customer that this does not indicate a malfunction because the system is designed to reverse the door glass while it is closing if it receives vibration when the vehicle is crossing railroad tracks, driving on a bumpy road, or when the door is opened/closed.)
		No	Go to the next step.
2	**INSPECT ACRYLIC DOOR VISOR INSTALLATION CONDITION** • Is the acrylic door visor normal?	Yes	Go to the next step.
		No	Install the side visor properly, then go to the next step.
3	**INSPECT DOOR GLASS CLOSING SPEED** • Affix tape to the rear edge of the door glass as shown in the figure for placing marks (to facilitate seeing the door glass movement) • Start the engine and idle it (to ensure a stabilized operational voltage). • Does the door glass hesitate only once while its closing?	Yes	Mark the point where the door glass closing speed changed, then go to Step 5.
		No	Go to the next step.
4	**REINSPECT DOOR GLASS CLOSING SPEED** • Does the door glass hesitate periodically (5-6 times) while it is closing?	Yes	Replace the power window motor, then go to Step 8 (See 09–12–9 POWER WINDOW MOTOR REMOVAL/ INSTALLATION.)
		No	Go to Step 8.
5	**INSPECT GLASS RUN CHANNEL AND DOOR GLASS SLIDING SURFACE** • Is there an object caught between the glass run channel and the door glass, or is there roughness on the sliding surface (rubber surface)?	Yes	**Object is caught between glass run channel and door glass:** • Remove the object. **Roughness on the sliding surface (rubber surface):** • Replace the glass run channel. After performing one of the above actions, reinspect. If the malfunction is not corrected, go to Step 3.
		No	Go to the next step.
6	**INSPECT TIGHTENING OF DOOR GLASS TO CARRIER PLATE** • Is it normal?	Yes	Go to the next step.
		No	After tightening correctly, reinspect. If the malfunction is not corrected, go to Step 3.
7	**INSPECT CONDITION OF GLASS RUN CHANNEL AND DOOR GLASS** • Is it normal?	Yes	Go to the next step.
		No	Assemble the glass run channel and door glass securely, and reinspect. If the malfunction is not corrected, go to Step 3.
8	**INSPECT DOOR GLASS CLOSING SPEED** • Does the door glass hesitate at any location?	Yes	Repeat the inspection from Step 3.
		No	Troubleshooting completed.



DPE903BW1S01

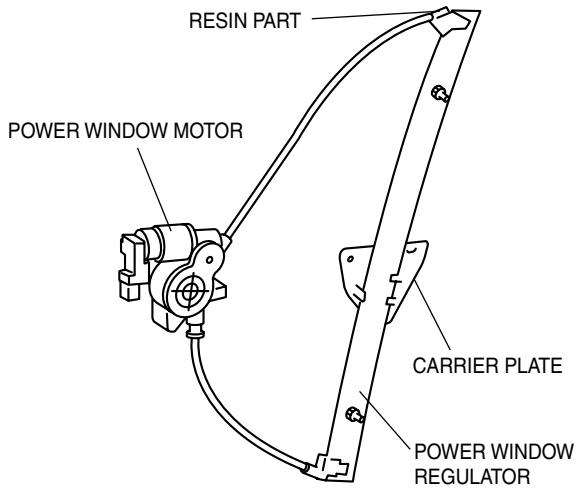
NO. 4 ABNORMAL NOISE WHILE THE DOOR GLASS IS OPENING OR CLOSING

DPE090358000W26

4	Abnormal noise while the door glass is opening or closing
POSSIBLE CAUSE	• Installation screw is loose between the door glass and carrier plate. • Deformity in the power window regulator plastic part due to use. — Scratching, wear marks to the power window regulator resin part due to twisting of the cable. — Gear deformity in the power window motor. **Note** • Identify the location of the noise using a stethoscope or similar device.

Diagnostic procedure

Noise type	Time of occurence	Possible cause	Location of noise	Action
Clanking noise	Door glass begins to move	Insufficiently tightened installation screw between the door glass and carrier plate.	Between door glass lower edge and carrier plate.	Securely tighten the installation screw.
Groaning noise (Sound increases due to use)	While door glass is operating	Vibration caused by wear on the resin part from cable twisting due to use of the power window regulator. **Note** • Noise does not occur if a roller is equipped to power window regulator resin part.	Power window regulator	Replace the power window regulator (See 09–12–7 FRONT POWER WINDOW REGULATOR REMOVAL/ INSTALLATION.) (See 09–12–7 REAR WINDOW REGULATOR REMOVAL/ INSTALLATION.)
Whining noise		Gear inside power window motor is deformed due to use.	Gear in power window motor	Replace the power window motor (See 09–12–9 POWER WINDOW MOTOR REMOVAL/ INSTALLATION.)
Clicking noise (Periodic noise)				



DPE903BW1S02

09–03D SYMPTOM TROUBLESHOOTING [EXTERIOR OPEN/ CLOSE FUNCTION]

SYMPTOM TROUBLESHOOTING CHART

DPE090358000W12

No.	TROUBLESHOOTING ITEM
1	09–03D–3 NO. 1 DOOR GLASS DOES NOT OPERATE EVEN THOUGH VARIOUS OPERATIONS ARE PERFORMED
2	09–03D–3 NO. 2 DOOR GLASS DOES NOT OPERATE USING THE KEYLESS TRANSMITTER
3	09–03D–4 NO. 3 DOOR GLASS DOES NOT OPERATE USING THE REQUEST SWITCH
4	09–03D–5 NO. 4 SOME DOOR GLASS DO NOT OPERATE
5	09–03D–6 NO. 5 DOOR GLASS STOPS BEFORE FULLY OPENING/CLOSING
6	09–03D–6 NO. 6 DOOR GLASS REVERSES BEFORE IT FULLY OPENS
7	09–03D–7 NO. 7 ALL DOOR GLASSES OPERATE ACCIDENTALLY
8	09–03D–8 NO. 8 PART OF DOOR GLASS OPERATES ACCIDENTALLY

QUICK DIAGNOSTIC CHART

DPE090358000W21

X: Applied

Troubleshooting item \ Possible factor	1	2	3	4	5	6	7	8
	Door glass does not operate even though various operations are performed	Door glass does not operate using the keyless transmitter	Door glass does not operate using the request switch	Some door glass do not operate	Door glass stops before fully opening/closing	Door glass reverses before it fully opens	All door glasses operate accidentally	Part of door glass operates accidentally
Power window main switch malfunction	X				X		X	
Power window subswitch malfunction				X	X		X	X
Power window motor malfunction	X			X	X	X		
Battery malfunction (low voltage)	X			X	X	X		
Power window system initial setting error	X			X	X			
Open circuit in wiring harness between power window main switch and BCM	X							
BCM malfunction	X	X	X		X		X	
Keyless receiver malfunction		X			X			
Keyless control module malfunction		X	X					
Open circuit in wiring harness between keyless receiver and BCM		X	X					
Any door or liftgate is open.		X	X					
Key is inserted in steering lock.		X	X					
Open circuit in wiring harness between request switch and keyless control module.			X				X	
Start knob is in a position other than LOCK position.			X					
Open circuit in wiring harness between power window main switch and power window subswitch				X			X	
Improper installation of door glass					X	X		
Keyless entry system signal reception error (outside operation area, radio signal interference)					X			
Transmitter malfunction							X	
Request switch malfunction							X	

DPE903CW1S01

Note

- The exterior open/close function does not operate when the following conditions are met.
  - — Any door or liftgate is open.
  - — The key is inserted in the steering lock.
  - — The start knob is not in the LOCK position.
- The auto-open/close function (the exterior open/close function) does not operate if the power window system initial setting procedure has been reset.
- Depending on the temperature and battery conditions, the window may reverse on rare occasions.

NO. 1 DOOR GLASS DOES NOT OPERATE EVEN THOUGH VARIOUS OPERATIONS ARE PERFORMED

DPE090358000W14

1	Door glass does not operate even though various operations are performed
POSSIBLE CAUSE	• Power window main switch malfunction • Power window motor malfunction • Battery malfunction (low voltage) • Power window system initial setting error • Open circuit in wiring harness between power window main switch and BCM • BCM malfunction

Diagnostic Procedure

Step	Inspection		Action
1	• Inspect the operation of the door glass by operating the power window main switch. • Is the manual operation normal?	Yes	Go to the next step.
		No	Inspect the following parts, and repair or replace. • Power window main switch (See 09–12–11 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–12 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Battery (Low voltage)
2	• Inspect the operation of the door glass by operating the power window main switch. • Does the door glass operate in auto?	Yes	Go to the next step.
		No	Perform the power window system initial setting procedure. (See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.)
3	• Does the door lock/unlock normally?	Yes	Inspect the wiring harness between the power window main switch and the BCM. If there is any malfunction, repair or replace the applicable part.
		No	Replace the BCM. (See .09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)

NO. 2 DOOR GLASS DOES NOT OPERATE USING THE KEYLESS TRANSMITTER

DPE090358000W15

2	DOOR GLASS DOES NOT OPERATE USING THE KEYLESS TRANSMITTER
POSSIBLE CAUSE	• Keyless receiver malfunction • Keyless control module malfunction • BCM malfunction • Open circuit in wiring harness between keyless receiver and BCM • Any door or liftgate is open • Key is inserted in steering lock

Diagnostic Procedure

Step	Inspection		Action
1	• Inspect the door lock/unlock operation using the transmitter. • Does it operate normally?	Yes	Inspect the following parts, and repair or replace. • Keyless receiver (See 09–14A–23 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS SYSTEM].) • BCM (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.) • Keyless control module (Vehicles with advanced keyless system) (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.)
		No	Go to the next step.
2	• Inspect the open/close condition of the doors and the liftgate. • Is the reason why they do not lock/unlock because a door or the liftgate is open?	Yes	System is normal (Does not operate when a door or the liftgate is open).
		No	Go to the next step.
3	• Verify whether the key is in the steering lock. • Is the reason why they do not lock/unlock because the key is inserted in the steering lock?	Yes	System is normal (Does not operate when the key is inserted in the steering wheel lock)
		No	Go to the next step.
4	• When the lock/unlock operation does not operate for reasons other than the above Steps 2 and 3.	Yes	Inspect the following parts, and repair or replace. **With keyless entry system** • Keyless receiver (See 09–14A–23 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS SYSTEM].) • Wiring harness between keyless receiver and BCM **With advanced keyless system** • Keyless receiver (See 09–14A–23 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS SYSTEM].) • Keyless control module (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.) • Wiring harness between keyless receiver and keyless control module • Wiring harness between keyless control module and BCM.
		No	Reinspect for malfunction recurrence.If the malfunction is not corrected, repeat the procedure from Step 1.

NO. 3 DOOR GLASS DOES NOT OPERATE USING THE REQUEST SWITCH

DPE090358000W16

3	**Door glass does not operate using the request switch**
POSSIBLE CAUSE	• Keyless control module malfunction • BCM malfunction • Open circuit in wiring harness between request switch and keyless control module. • Any door or liftgate is open. • Key is inserted in steering lock. • Start knob is in a position other than LOCK position.

Diagnostic Procedure

Step	Inspection		Action
1	• Verify the door lock/unlock operation by operating the request switch. • Does it operate normally?	Yes	Inspect the following parts, and repair or replace. • Keyless control module (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.) • BCM (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.)
		No	Go to the next step.
2	• Verify the open/close condition of the doors and the liftgate. • Is the reason why they do not lock/unlock because a door or the liftgate is open?	Yes	The system is normal (When any door or the liftgate is open, the system does not operate).
		No	Go to the next step.
3	• Verify the start knob position, or if the key is in the steering lock. • Is the reason why the door lock/unlock does not operate because the start knob is in a position other than LOCK, or the key is inserted?	Yes	The system is normal (When the start knob is in a position other than LOCK, or the key is inserted in the steering lock, the system does not operate).
		No	Go to the next step.
4	• The door lock/unlock does not operate for reasons other than Steps 2 and 3 above.	Yes	Inxspect the following parts, and repair or replace. • Keyless control module (See (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.) • Wiring harness between the request switch and the keyless control module.
		No	Reinspect for malfunction recurrence.If the malfunction is not corrected, repeat the procedure from Step 1.

NO. 4 SOME DOOR GLASS DO NOT OPERATE

DPE090358000W17

4	Some door glass do not operate
POSSIBLE CAUSE	• Power window subswitch malfunction • Power window motor malfunction • Battery malfunction (low voltage) • Open circuit in wiring harness between power window main switch and power window subswitch • Power window system initial setting error

Diagnostic Procedure

Step	Inspection		Action
1	• Inspect the door glass operation by operating the power window subswitch. • Does it operate normally?	Yes	Go to the next step.
		No	Inspect the following parts, and repair or replace. • Power window subswitch (See 09–12–15 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–17 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Battery (Low voltage)
2	• Inspect the door glass operation by operating the power window subswitch. • Does it operate in auto?	Yes	Inspect the wiring harness between the power window main switch and the power window subswitch. If there is any malfunction, repair or replace the applicable part.
		No	Perform the power window system initial setting procedure. (See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.)

NO. 5 DOOR GLASS STOPS BEFORE FULLY OPENING/CLOSING

DPE090358000W22

5	DOOR GLASS STOPS BEFORE FULLY OPENING/CLOSING
POSSIBLE CAUSE	• Power window main switch malfunction • Power window subswitch malfunction • Power window motor malfunction • Battery malfunction (Low voltage) • Door glass improper installation • Power window system initial setting error • Keyless receiver malfunction • Keyless control module malfunction • BCM malfunction • Keyless entry system signal reception error (outside operation area, radio signal interference)

Diagnostic Procedure

Step	Inspection		Action
1	• Operate the door glass in auto/manual by operating the power window main switch/power window subswitch. • Does the door glass stop before fully opening/ closing using either operation?	Yes	Inspect the following parts, and repair or replace. • Power window main switch (See 09–12–11 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–12 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Power window subswitch (See 09–12–15 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–17 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Battery (Low voltage) • Door glass (Installation condition)
		No	Go to the next step.
2	• Inspect the operation of the door glass by repeating Step 1 above. • Does the door glass stop before fully opening/ closing while in auto operation?	Yes	Perform the power window system initial setting procedure. (See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.)
		No	Go to the next step.
3	• Open the door glass by operating the transmitter. • Does the door glass stop before fully opening?	Yes	Inspect the following parts, and repair or replace. • Keyless control module (Vehicles with advanced keyless system) (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.) • BCM (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.)
		No	Go to the next step.
4	• Close the door glass by operating the transmitter. • Does the door glass stop before fully closing?	Yes	Inspect the following parts, and repair or replace. • Keyless control module (Vehicle with advanced keyless system) (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION.) • BCM (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.) • Keyless entry system signal reception error (outside operation area, radio signal interference)
		No	Reinspect for malfunction recurrence.If the malfunction is not corrected, repeat the procedure from Step 1.

NO. 6 DOOR GLASS REVERSES BEFORE IT FULLY OPENS

DPE090358000W23

6	Door glass reverses before it fully opens

POSSIBLE CAUSE	• Malfunction in power window motor • Malfunction in battery • Improper installation of door glass

Diagnostic procedure

Step	INSPECTION		ACTION
1	• By operating a power window main switch / power window subswitch, operate the door glass. • Does the door glass mis-reverse?	Yes	Inspect the power window motor and repair or replace it. (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/ CLOSE FUNCTION FOR DRIVER'S SIDE].)
		No	Inspect the folllowing parts and repair or replace them. • Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Battery (brownout) • Door glass (improper installation) **Note** • Depending on the temperature, battery, and voltage condition, the door glass may mis-reverse.

NO. 7 ALL DOOR GLASSES OPERATE ACCIDENTALLY

DPE090358000W24

7	All door glasses operate accidentally
POSSIBLE CAUSE	• Transmitter malfunction • Request switch malfunction • Open or short circuit in wiring harness between request switch (each door) and keyless control module. • Power window main switch malfunction • Power window subswitch malfunction • Open or short circuit in wiring harness between power window main switch and power window subswitch • BCM malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect if malfunction is in operating by transmitter	Yes	Inspect the transmitter.
		No	**With keyless entry system** • Go to Step 3. **With advanced keyless system** • Go to the next step.
2	• Inspect if malfunction is in operating by request switch	Yes	Inspect the following parts and repair or replace. • Request switch (See 09–14A–26 REQUEST SWITCH INSPECTION.) • Wireing harness between request switch and keyless controll mdule
		No	Go to the next step.
3	• Inspect if malfunction is in operating power window main switch	Yes	Inspect power window main switch (See 09–12–11 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–12 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].)
		No	Go to the next step.
4	• Inspect if malfunction is in without operating Step1to 3	Yes	Inspect the following parts and repair or replace • Power window subswitch (See 09–12–15 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–17 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • BCM (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.) • Wiring harness between power window subswitch and power window main switch
		No	Reinspect for malfunction recurrence.If the malfunction is not corrected, repeat the procedure from Step 1.

NO. 8 PART OF DOOR GLASS OPERATES ACCIDENTALLY

DPE090358000W25

8	**Part of door glass operates accidentally**
POSSIBLE CAUSE	• Power window subswitch malfunction

Diagnostic procedure

ACTION
Inspect the power window subswitch of the door glass and repair or replace (See 09–12–15 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–17 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].)

09–03F SYMPTOM TROUBLESHOOTING [AUDIO]

09

FOREWORD [ENTIRE AUDIO SYSTEM]

DPE090366900W01

Note

- Record all radio programs set by customer prior to the repairs. Set all radio programs and adjust the time after repairs.

Troubleshooting Index

No.	Symptom	Possible DTC
1	AF noise or POP noise on all sources (Radio, CD, MD, Cassette tape, ~~HDD~~)	09:Er20, 09:Er21
2	No power on the entire audio system	09:Er20
3	No sound at all	00:Er10, 03:Er07, 03:Er10, 06:Er07, 06:Er10, 07:Er07, 07:Er08, 07:Er10, 09:Er20, 09:Er21, 10:Er10, 20:Er07, 20:Er10, 22:Er07, 22:Er10
4	No sound from some speaker	—
5	Broken sound or poor sound quality	09:Er21
6	Sound becomes loudly or weakly while driving the vehicle	—
7	ALC function is inoperative	16:Er12, 17:Er11
8	Audio system illumination does not illuminate at all.	09:Er20, 21:Er19
9	LCD does not display at all.	09:Er20, 21:Er19

Quick Diagnostic Chart (Entire Audio System)

X: Applicable

Possible factor / Troubleshooting item	1	2	3	4	5	6	7	8	9
	AF noise or POP noise on all sources (Radio, CD, MD, Cassette tape, ~~HDD~~)	No power on the entire audio system	No sound at all	No sound from some speaker	Broken sound or poor sound quality	Sound becomes loudly or weakly while driving the vehicle	ALC function is inoperative	Audio system illumination does not illuminate at all.	LCD does not display at all.
Low vehicle battery voltage	X								
Jammed radio signals from after market equipment	X								
Speaker malfunction (e. g., any foreign material, broken)	X		X	X	X				
Improper speaker installation	X				X				
Poor connection of audio unit connector, terminal damage	X	X		X				X	
Antenna malfunction (e.g., poor ground)	X								
~~BOSE amplifier unit malfunction~~	~~X~~		~~X~~	~~X~~	~~X~~				
~~Open or short circuit in wiring harness between BOSE amplifier unit and ground~~	~~X~~								
~~Woofer unit malfunction~~	~~X~~								
~~Poor connection of woofer unit connector, terminal damage~~	~~X~~								
Audio unit malfunction		X		X		X	X	X	X
Burnt fuse (B+)		X							
Burnt fuse (ACC)		X							
Open or short circuit in power supply (B+) wiring harness		X							
Open or short circuit in power supply (ACC) wiring harness		X							
~~Short circuit in wiring harness between BOSE amplifier unit and speaker~~			~~X~~	~~X~~					
Short circuit inside speaker			X	X					
~~Open circuit in wiring harness between BOSE amplifier unit and speaker~~			~~X~~	~~X~~					
~~Open or short circuit in wiring harness between BOSE amplifier unit and audio unit~~			~~X~~	~~X~~					
~~Poor connection of BOSE amplifier unit connector~~				~~X~~					
Vibration of door trim and/or package trim					X				
CAN signal wiring harness malfunction							X		
Open or short circuit in vehicle speed signal wiring harness (e.g., instrument cluster)							X		
Burnt fuse (TNS signal)								X	
Open or short circuit in TNS signal wiring harness								X	
Center panel malfunction								X	
Information display malfunction									X

DPE903EW1O02

CONFIRMATION STEP 1: AUDIO PANEL SWITCH CONFIRMATION

DPE090366900W02

- Make sure the customer complain and identify either the center panel malfunction or audio unit malfunction.

09

How to activate audio panel switch confirmation mode

1. Turn the audio system to ON.
2. Press both POWER SW and CLOCK buttons for a second at the same time.
3. The audio panel switch confirmation mode is now activated.

STEP	INSPECTION		ACTION
1	• Press each button on the center panel. • Does buzzer sound when pressing each button?	Yes	Make sure the customer complain and then go to the appropriate symptom troubleshooting procedure.
		No	Go to the next step.
2	• Disassemble and reassemble the center panel and audio unit. • Activate the audio panel switch confirmation mode. • Does buzzer sound when pressing each button?	Yes	Go to the next step.
		No	Replace the center panel.
3	• Does the audio system operate properly?.	Yes	The system is normal.
		No	Make sure the customer complain and then go to the appropriate symptom troubleshooting procedure.

CONFIRMATION STEP 2: AUDIO CONTROL SWITCH CONFIRMATION

DPE090366900W03

- Make sure the customer complain and identify either the audio control switch malfunction or audio unit malfunction.

STEP	INSPECTION		ACTION
1	• Is the symptom related to either the audio control switch or audio panel operation?	Yes	Make sure the customer complain and then go to the appropriate symptom troubleshooting procedure.
		No	**The symptom is related to the audio panel operation:** • Follow the “Confirmation Step 1”. **The symptom is related to the audio control switch operation:** • Go to the next step.
2	• Disconnect the audio unit connector (24-pin). • Inspect both the audio unit and wiring harness-side connectors for poor connection. (such as damaged/pulled-out pins, corrosion). — Terminal N (ST SW1) — Terminal P (ST SW2) • Are all the pins normal?	Yes	Go to the next step.
		No	**If the audio unit side connector is wrong:** • Replace the audio unit. **If the wiring harness-side connector is wrong:** • Repair or replace the pins and/or the connector.
3	• Inspect the continuity between the audio unit wiring harness-side connector terminal N and P while operating the audio control switch. • Does the resistance change?	Yes	Make sure the customer complain and then go to the appropriate symptom troubleshooting procedure.
		No	Go to the next step.
4	• Turn the ignition switch to the LOCK position. • Remove the audio control switch. • Inspect the continuity between the audio unit wiring harness-side connector (24-pin) terminal and the audio control switch wiring harness-side connector (8-pin) terminal. — Terminal N (24-pin) — Terminal G (8-pin) — Terminal P (24-pin) — Terminal E (8-pin) • Is there the continuity?	Yes	Replace the audio control switch.
		No	Repair or replace the suspect wiring harness.

NO.1 AF NOISE OR POP NOISE ON ALL SOURCES (RADIO, CD, MD, CASSETTE TAPE, HDD)

DPE090366900W04

1	**AF noise or POP noise on all sources (Radio, CD, MD, Cassette tape, HDD)/Possible DTC: 09:Er20, 09:Er21**

Troubleshooting hints

- Low vehicle battery voltage.
- Jammed radio signals from after market equipment.
- Speaker malfunction (e.g., any foreign material, broken)
- Improper speaker installation
- Poor connection of audio unit connector, terminal damage
- Antenna malfunction (e.g., poor ground)
- ~~BOSE amplifier unit malfunction~~
- ~~Open or short circuit in wiring harness between BOSE amplifier and ground~~
- ~~Woofer unit malfunction~~
- ~~Poor connection of woofer unit connector, terminal damage~~

Note

- AF noise is “Petit Petit” noise that generally occurs with switch ON/OFF operations of electrical equipment other than the audio unit, or “Gee” continual noise that occurs when electrical equipment is operated.This is caused by noise entrance to the power supply wiring, signal wiring, speaker cable or head of cassette deck etc. Therefore noise can be heard regardless of radio wave condition or audio volume position. The noise will start after one click from the minimum position of volume button but normally does not change even when volume is turned to higher position.
- POP noise is “Putsun”, “Poco” or “Putsun” noise that occurs with switch ON/OFF operation of the audio unit, or with switching Radio to CD. Even normal audio unit sometimes emit small noise depending on conditions.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect the vehicle battery voltage. • Is the vehicle battery voltage normal? **Specification:** **Ignition switch ON: 11.5 V or more** **Idle: 12.5 V or more**	Yes	Go to the next step.
		No	Charge the battery, then go to the next step.
2	• Turn the audio system to ON. • Is there any noise?	Yes	Go to the next step.
		No	The system is normal. Explain to the customer that the vehicle battery voltage was low.
3	• Is any of the following after-market equipment installed? (Inspect especially near the antenna.) — Radar — Remote engine starter — Anti-theft device — Other	Yes	Go to the next step.
		No	Go to the Step 5.
4	• Remove the after-market equipment. • Turn the audio system to ON. • Is there any noise?	Yes	Go to the next step.
		No	The system is normal. The after-market electrical devices might make a noise.
5	• Is there the noise from all speakers?	Yes	Go to the Step 7.
		No	Go to the next step.
6	• Inspect the suspect speaker. • Is the speaker normal?	Yes	Go to the next step.
		No	**If there is any foreign material on the speaker:** • Remove the foreign material from the speaker. **If the speaker is malfunctioning:** • Replace the speaker. **If the speaker is not installed properly:** • Install the speaker properly.
7	• Attempt to duplicate the symptom on the other vehicle. • Is the noise better than the customer's vehicle?	Yes	Go to the next step.
		No	The system is normal. Explain the noise generation mechanism to the customer. **Note** • The noise may be heard depends on the operating speed of audio power and/or mode switch.
8	• Is there any noise from the woofer speaker?	Yes	Go to the next step.
		No	Go to the Step 11.
9	• Remove the woofer unit. • Inspect the connection of the woofer unit connector (6-pin) terminal A (B+), B (GND), G (WOOF IN+) and H (WOOF IN-). • Is the connector connected securely?	Yes	Replace the woofer unit.
		No	Repair or replace the terminal or connector. Go to the next step.
10	• Is there any noise?	Yes	Replace the woofer unit. Go to the next step
		No	The system is normal.
11	• Turn the ignition switch to the LOCK position. • Remove the audio unit. • Inspect the connection of the audio unit connector (24-pin) (for sound signal line). • Is the connector connected securely?	Yes	Go to the Step 13.
		No	Repair or replace the terminal or connector. Go to the next step.
12	• Is there any noise?	Yes	Go to the next step.
		No	The system is normal.
13	• Turn the ignition switch to the LOCK position. • Disconnect the BOSE amplifier unit connector. • Inspect the continuity between the BOSE amplifier unit wiring harness connector (26-pin) terminal V and ground. • Is there continuity?	Yes	Go to the Step 15.
		No	Repair or replace the terminal or connector. Go to the next step.
14	• Is there any noise?	Yes	Go to the next step.
		No	The system is normal.
15	• Inspect the ground condition of the antenna. • Is the ground condition normal?	Yes	Replace the BOSE amplifier unit. Go to the next step.
		No	Repair or replace the ground. Go to the next step.

STEP	INSPECTION		ACTION
16	• Is there any noise?	Yes	~~Replace the BOSE amplifier unit.~~ Replace the audio unit.
		No	The system is normal.

NO.2 NO POWER ON THE ENTIRE AUDIO SYSTEM

DPE090366900W05

2	No power on the entire audio system/Possible DTC: 09:Er20

Troubleshooting hints

- Poor connection of audio unit connector, terminal damage
- Audio unit malfunction
- Burnt fuse (B+)
- Burnt fuse (ACC)
- Open or short circuit in power supply (B+) wiring harness
- Open or short circuit in power supply (ACC) wiring harness

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the LOCK position. • Inspect the following fuses: — RADIO — ROOM • Are the fuse normal?	Yes	Go to the next step.
		No	Replace with the appropriate standard fuse. • If the fuse is melted, inspect the wiring harness for short to ground. Repair or replace the wiring harness, then replace the fuse.
2	• Remove the audio unit. • Inspect the connection of the audio unit connector (24-pin). • Disconnect the audio unit connector and inspect both the audio unit and wiring harness-side connectors for poor connection. (such as damaged/pulled-out pins, corrosion). — Terminal B (B+) — Terminal R (ACC) — Terminal W GND) • Are all the pins normal?	Yes	Go to the next step.
		No	**If poor connection of audio unit connector:** • Secretly connect the audio unit connector. **If the audio unit side connector is wrong:** • Replace the audio unit. **If the wiring harness-side connector is wrong:** • Repair or replace the pins and/or the connector.
3	• Connect the audio unit connector. • Inspect the voltage for the power supply line (B+, ACC). **Specification:** **Ignition switch ON: 11.5 V or more** **Idle: 12.5 V or more** • Is the voltage normal?	Yes	Go to the next step.
		No	Repair ore replace the suspect wiring harness.
4	• Turn the ignition switch to the LOCK position. • Remove the audio unit connector (24-pin). • Inspect the continuity between the audio unit wiring harness-side connector terminal W and the ground. • Is there the continuity?	Yes	Replace the audio unit.
		No	Repair or replace the wiring harness.

NO.3 NO SOUND FROM ALL SPEAKERS

DPE090366900W06

3	No sound from all speakers/Possible DTC: 00:Er10, 03:Er07, 03:Er10, 06:Er07, 06:Er10, 07:Er07, 07:Er08, 07:Er10, 09:Er20, 09:Er21, 10:Er10, 20:Er07, 20:Er10, 22:Er07, 22:Er10

Troubleshooting hints

- Speaker malfunction (e.g., any foreign material. broken)
- ~~BOSE amplifier unit malfunction~~
- ~~Short circuit in wiring harness between BOSE amplifier unit and speaker~~
- Short circuit inside speaker
- ~~Open circuit in wiring harness between BOSE amplifier unit and speaker~~
- ~~Open or short circuit in wiring harness between BOSE amplifier unit and audio unit~~

09

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Press AUDIO CONT button more than 1 second. • Play the CD or Radio. • Adjust the volume between “10” to “15”. • Is there the sound?	Yes	The system is normal.
		No	Go to the next step.
2	• Turn the ignition switch to the LOCK position. • Remove the BOSE amplifier unit. • Disconnect the BOSE amplifier connector (26-pin). • Inspect the continuity between the BOSE amplifier unit wiring harness-side connector terminal and ground: **For front speaker** — Terminal B (L+) — GND — Terminal D (L-) — GND — Terminal W (R+) — GND — Terminal Y (R-) — GND **For rear speaker** — Terminal C (L+) — GND — Terminal A (L-) — GND — Terminal X (R+) — GND — Terminal Z (R-) — GND — Is there a continuity?	Yes	Repair or replace the suspect wiring harness or speaker unit. **Note** • If there is a short circuit between the speaker harness or speaker lead wire and ground, the protector circuit inside the BOSE amplifier unit operates to cut the sound.
		No	Go to the next step.
3	• Turn the ignition switch to the LOCK position. • Disconnect the BOSE amplifier unit connector (26-pin). • Inspect the voltage at the audio unit wiring harness-side connector (26-pin) terminal U (B+). • Is the voltage **B+**?	Yes	Go to the Step 5.
		No	Repair or replace wiring harness between the BOSE amplifier unit and fuse. Go to the next step.
4	• Is there any sound?	Yes	The system is normal.
		No	Go to the next step.
5	• Turn the ignition switch to the LOCK position. • Disconnect the BOSE amplifier unit connector (26-pin) and audio unit connector (24-pin). • Inspect the continuity between the BOSE amplifier unit wiring harness-side connector terminal Q (AMP CONT) and the audio unit wiring harness side connector terminal J. • Is there the continuity?	Yes	Replace the BOSE amplifier unit.
		No	Repair or replace wiring harness between the BOSE amplifier unit and the audio unit. Go to the next step.
6	• Is there any sound?	Yes	The system is normal.
		No	Go to the next step.
7	• Remove the speaker. • Disconnect the speaker connector (2-pin). • Inspect the continuity between the speaker wiring harness-side connector (2-pin) terminal and ground: **For each speaker** — Terminal A — GND — Terminal B — GND • Is there the continuity?	Yes	Replace the speaker.
		No	Replace the BOSE amplifier unit.

NO.4 NO SOUND FROM CERTAIN SPEAKER

DPE090366900W07

4	No sound from certain speaker/Possible DTC: —

Troubleshooting hints

- Speaker malfunction (e.g., any foreign material. broken)
- Poor connection of audio unit connector, terminal damage
- BOSE amplifier unit malfunction
- Audio unit malfunction
- Short circuit inside speaker
- Open or short circuit in wiring harness between BOSE amplifier unit and speaker
- Open or short circuit in wiring harness between BOSE amplifier unit and audio unit
- Poor connection of BOSE amplifier unit connector

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the audio unit to ON. • Press AUDIO CONT button more than one second (BAL/FAD cancel mode). • Press both POWER and AUTO-M buttons more than 1 second at the same time. **Note** • The sounded speaker now changes in the order of left -front speaker, right-front speaker, right-rear speaker and left-rear speaker. • Is there any speaker with no sound?	Yes	**If no sound from some speaker:** • Go to the next step. **If no sound at all:** • Go to the troubleshooting of “No.3 No sound from all speakers”
		No	The troubleshooting is completed.
2	• Does the same speaker have no sound if changing the sound source? (radio, CD, cassette tape).	Yes	Go to the next step.
		No	Replace the audio unit. **Note** • If the different speaker has no sound now, the audio unit is malfunctioning.
3	• Turn the ignition switch to the LOCK position. • Inspect the connection of the audio unit connector (24-pin) (for sound signal line). • Is the connector connected securely?	Yes	Go to the next step.
		No	Connect the audio unit connector (24-pin) securely.
4	• Turn the ignition switch to the LOCK position. • Remove the audio unit. • Disconnect the audio unit connector (24-pin). • Inspect the continuity between the audio unit wiring harness-side connector terminal and ground: **For front speaker** — Terminal A (LH+) — GND — Terminal C (LH-) — GND — Terminal D (RH+) — GND — Terminal F (RH-) — GND **For rear speaker** — Terminal S (LH+) — GND — Terminal U (LH-) — GND — Terminal V (RH+) — GND — Terminal X (RH-) — GND • Is there continuity?	Yes	Go to the next step.
		No	Go to the Step 6.
5	• Turn the ignition switch to the LOCK position. • Disconnect the BOSE amplifier unit connector (26-pin) and the audio unit connector (24-pin). • Inspect the continuity between the BOSE amplifier unit wiring harness-side connector (26-pin) terminal and the audio unit wiring harness-side connector (24-pin) terminal. **For front speaker** — Terminal H (26-pin, L+IN) — Terminal A (24-pin, LH+) — Terminal G (26-pin, L-IN) — Terminal C (24-pin, LH-) — Terminal L (26-pin, R+IN) — Terminal D (24-pin, RH+) — Terminal K (26-pin, R-IN) — Terminal F (24-pin, RH-) **For rear speaker** — Terminal J (26-pin, L+IN) — Terminal S (24-pin, LH+) — Terminal I (26-pin, L-IN) — Terminal U (24-pin, LH-) — Terminal N (26-pin, R+IN) — Terminal V (24-pin, RH+) — Terminal M (26-pin, R-IN) — Terminal X (24-pin, RH-) • Is there the continuity?	Yes	Go to the next step.
		No	Repair or replace the suspect wiring harness between the BOSE amplifier unit and audio unit. Go to the next step.

STEP	INSPECTION		ACTION
6	• Turn the ignition switch to the LOCK position. • Inspect the connection of the BOSE amplifier unit connector (26-pin). • Is the connector connected securely?	Yes	Go to the next step.
		No	Connect the BOSE amplifier unit connector (26-pin) securely.
7	• Turn the ignition switch to the LOCK position. • Disconnect the BOSE amplifier unit connector (26-pin). • Inspect the continuity between the BOSE amplifier unit wiring harness-side connector (26-pin) terminal and ground. **For front speaker** — Terminal B (26-pin, L+) — Ground — Terminal D (26-pin, L-) — Ground — Terminal W (26-pin, R+) — Ground — Terminal Y (26-pin, R-) — Ground **For rear speaker** — Terminal C (26-pin, L+) — Ground — Terminal A (26-pin, L-) — Ground — Terminal X (26-pin, R+) — Ground — Terminal Z (26-pin, R-) — Ground • Is there the continuity?	Yes	Repair or replace the short circuit between the BOSE amplifier unit and speaker wiring harness or inside the speaker unit. **Note** • If there is a short circuit between the speaker harness or speaker lead wire and ground, the protector circuit inside the BOSE amplifier unit operates to cut the sound.
		No	Go to the next step.
8	• Remove the suspect speaker. • Disconnect the speaker connector (2-pin) and inspect the resistance of speaker. • Is the resistance normal? **Specification** **Speaker resistance + wiring harness resistance**	Yes	Replace the BOSE amplifier unit.
		No	Go to the next step.
9	• Inspect the suspect speaker. • Is the speaker normal? **Note** • If the speaker lead wire contacts to either ground or vehicle frame, replace the speaker.	Yes	Replace the BOSE amplifier unit.
		No	Go to the next step.

NO.5 BROKEN SOUND OR POOR SOUND QUALITY

DPE090366900W08

5	Broken sound or poor sound quality/Possible DTC: 09:Er21

Troubleshooting hints

- Speaker malfunction (e.g., any foreign material. broken)
- Improper speaker installation
- BOSE amplifier unit malfunction
- Vibration of door trim and/or package trim

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Are there a broken sound or poor sound quality from all speakers?	Yes	Go to the next step.
		No	Go to the Step 5.
2	• Inspect the sound while adjusting the sound volume. • Is there a broken sound or poor sound quality between “15” and “20”?	Yes	Go to the next step.
		No	The system is normal.
3	• Inspect the BASS/TREB. • Is there a poor sound quality at “-3 — +3” of “BASS/TREB”? **Note** • When press the AUDIO CONT button for a few seconds, BASS/TREB is set at “0”.	Yes	Go to the next step.
		No	If there is a broken sound at “+6—-6” of BASS/TREB with the maximum volume, the system is normal.
4	• Attempt to duplicate the symptom on the other vehicle. • Is the sound better than the customer’s vehicle?	Yes	~~Replace the BOSE amplifier unit.~~ Go to the next step
		No	The system is normal.
5	• Identify the speaker with a broken sound by adjusting BAL/FADE. • Is the suspect speaker installed upward?	Yes	Go to the Step 7.
		No	Go to the next step.
6	• Inspect the speaker installation condition. • Is the speaker installed properly?	Yes	Go to the next step.
		No	Install the speaker properly.
7	• Remove the speaker. • Is there any foreign material or damage on the speaker?	Yes	Repair or replace the suspect speaker.
		No	Go to the next step.
8	• Inspect the sound again. • Is there broken sound?	Yes	Go to the next step.
		No	Inspect the vibration from the door trim and/or package trim. Repair or replace the suspect trim as necessary.
9	• Replace with the speaker known to be good. (e.g., swap right and left speaker.) • Does the broken sound appear at the same location?	Yes	Replace the ~~BOSE amplifier unit.~~ audio unit
		No	Replace the speaker.

NO.6 SOUND BECOMES LOUDLY OR WEAKLY WHILE DRIVING THE VEHICLE

DPE090366900W09

6	Sound becomes loudly or weakly while driving the vehicle/Possible DTC: —

Troubleshooting hints

- Audio unit malfunction

Note

- Inspect the ALC function while driving the vehicle with playing the CD, etc.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Does the ALC function turn to ON?	Yes	Go to the next step.
		No	Replace the audio unit.
2	• Turn the ALC function to OFF. • Does the sound change while driving the vehicle?	Yes	Replace the audio unit.
		No	The system is normal. Explains the ALC function to the customer.

NO.7 ALC FUNCTION IS INOPERATIVE

DPE090366900W10

7	ALC function is inoperative/Possible DTC: 16:Er12, 17:Er11

Troubleshooting hints

- Audio unit malfunction
- CAN signal wiring harness malfunction
- Open or short circuit in vehicle speed signal wiring harness (e. g., instrument cluster)

Note

- Inspect the ALC function while driving the vehicle with playing the CD, etc.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the ALC function to ON. • Inspect the ALC function operation when driving the vehicle. • Does the ALC system operate properly?.	Yes	The system is normal. Explains the ALC function to the customer.
		No	Go to the next step.
2	• Retrieve the DTCs from all vehicle modules using the WDS or equivalent. • Is there the following DTC displayed? — Vehicle speed signal wiring harness — CAN signal wiring harness	Yes	Go to the appropriate DTC inspection.
		No	Replace the audio unit.

NO.8 AUDIO SYSTEM ILLUMINATION DOES NOT ILLUMINATE AT ALL

DPE090366900W11

8	Audio system illumination does not illuminate at all/Possible DTC: 09:Er20, 21:Er19

Troubleshooting hints

- Poor connection of audio unit connector, terminal damage
- Audio unit malfunction
- Burnt fuse (TNS signal)
- Open or short circuit in TNS signal wiring harness
- Center panel malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Are all illumination on the audio unit turned OFF?	Yes	Go to the next step.
		No	Replace the center panel.
2	• Turn the ignition switch to the LOCK position. • Inspect the fuse (ILLUMI). • Is the fuse normal?	Yes	Go to the Step 4.
		No	Go to the next step.
3	• Turn the ignition switch to the LOCK position. • Disconnect the audio unit connector (24-pin) and inspect the continuity between the audio unit wiring harness-side connector terminal E (TNS) and the ground. • Is there continuity?	Yes	Repair or replace the short circuit in the suspect wiring harness. After repair the harness, replace with the appropriate standard fuse.
		No	Go to the next step.
4	• Inspect the connection of the audio unit connector (24-pin). • Inspect both the audio unit and wiring harness-side connector terminal E for poor connection (such as damaged/pulled-out pins, corrosion). • Are all the pins normal?	Yes	Go to the next step.
		No	**If poor connection of audio unit connector:** • Securely connect the audio unit connector. **If the audio unit side connector is wrong:** • Replace the audio unit. **If the wiring harness-side connector is wrong:** • Repair or replace the pins and/or the connector.
5	• connect the audio unit connector (24-pin). • Turn the ignition switch to the ACC position. • inspect the voltage at the audio unit connector terminal E (TNS). • Is the voltage **B+** when the light switch is turned to the TNS position?	Yes	Replace the audio unit.
		No	Repair or replace the suspect wiring harness (TNS signal).

NO.9 LCD DOES NOT DISPLAY AT ALL

DPE090366900W12

9	LCD does not display at all/Possible DTC: 09:Er20, 21:Er19

Troubleshooting hints

- Audio unit malfunction
- Information display malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the audio unit to ON. • Press both POWER ON/OFF and SEEK UP buttons for **0.2 seconds** at the same time. • Does the LCD display properly?	Yes	Go to the next step.
		No	Replace the information display.
2	• Press either CLC or SET/INFO button on the information display. • Does the beep sound?	Yes	Replace the audio unit.
		No	Replace both audio unit and information display. (CAN communication malfunction)

FOREWORD [RADIO]

DPE090366900W13

Note

- In case location, time, and broadcasting station etc. can be specified through interview to customer, possibility that signal environment causes problem is high.
- Perform confirmation of symptom and evaluation under conditions that customer reported (location, time, broadcasting station etc.). If not possible, perform it under equivalent conditions.
- Before inspection or repair, record the broadcasting stations that customer preset and reset them accordingly after the inspection or repair. Adjust the clock too.

Troubleshooting Index

No.	Symptom	Possible DTC
1	No radio reception (AM/FM)/No or low volume	09:Er20, 09:Er22
2	Noise from radio (AM only)	09:Er22
3	Noise from radio (FM only)	09:Er22
4	Cannot tune (SEEK does not stop)	09:Er20, 09:Er22
5	Cannot preset (preset function does not operate)	21:Er19
6	Reception frequency of radio slips	09:Er22

Quick Diagnostic Chart (Radio)

X: Applicable

Possible factor \ Troubleshooting item	1 No radio reception (AM/FM)/No or low volume	2 Noise from radio (AM only)	3 Noise from radio (FM only)	4 Cannot tune (SEEK does not stop)	5 Cannot preset (preset function does not operate)	6 Reception frequency of radio slips
Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc)	X	X	X			
Audio unit	X	X	X	X	X	X
Antenna plug poor connection	X	X	X	X		
Antenna feeder	X	X	X	X		
Electronic jamming from outside, or inferior condition of broadcasting station radio wave	X	X	X	X		X
Antenna rod not installed	X	X	X	X		
Noise from electrical system on vehicle (e.g. fuel pump)		X	X			
Battery		X	X			
Charging system		X	X			
Antenna installation loosened		X	X			
Center panel				X	X	

DPE903EW1O03

CONFIRMATION STEP 1: RECEPTION CONDITION SYMPTOM (EXAMPLE)

DPE090366900W14

Symptom	Antenna signal condition	Source
Only a buzzing sound from the speakers	• There is no broadcasting wave. • Signals from antenna to audio unit are not transmitted.	• Electric noise caused by the operation of internal circuit from audio unit itself • Atmosphere noise
A buzzing or crunching sound and normal sound produced at the same time from the speakers	• Though signals are transmitted from antenna to audio unit, electric noise from other sources is larger.	• Electrical noise caused by operation of electrical component on vehicle • Electrical noise from high tension wire, transformer substation (factory), electrical feeder line (street car), or motorcycle.
A thumping sound and normal sound produced at the same time from the speakers (FM only)	• Noise occurs due to radio wave environment at specific places (e.g. in valleys between buildings). Noise varies when own vehicle or surrounding vehicles moves. (FM only)	• Interference between direct and reflected waves of FM signals causes noise (Multipass noise).

CONFIRMATION STEP 2: ANTENNA SYSTEM SYMPTOM (EXAMPLE)

DPE090366900W15

Possible cause	AM reception condition	FM reception condition
• Antenna feeder axis, open circuit • Antenna feeder plug not attached	NG: No reception	YES: Reception possible. (Sensitivity decreases, but reception is possible under strong electric field.)
• Antenna feeder axis (+) to ground (-), open circuit	NG: No reception	NG: No reception

Possible cause	AM reception condition	FM reception condition
• Antenna feeder and antenna, poor ground	YES: Reception possible (Noise may occur)	YES: Reception possible (Sensitivity decreases, but reception is possible under strong electric field.)
• Antenna feeder, jack and plug poor connection	NG: No reception (Depending on connection conditions)	YES: Reception possible (Depending on connection conditions)

CONFIRMATION STEP 3: ANTENNA SYSTEM SIMPLE INSPECTION

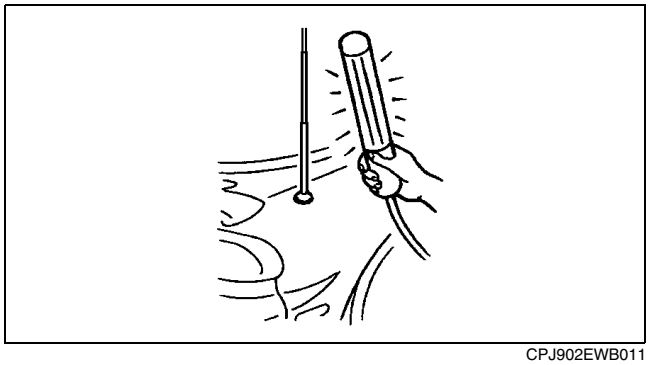
DPE090366900W16

Note

- Because the antenna system is equipped with a capacitor, the continuity cannot be checked. Therefore proceed the following simple inspection.
  1. Turn the AM radio on.
  2. Tune to the frequency that there is no broadcast and you will hear a buzzing sound.
  3. Turn a work light on and shake it around the antenna rod (around 10—20 mm)
  4. If a whirring sound from the speaker synchronized to the work light movement is confirmed, the antenna system is normal.

Note

- Use a fluorescent light type for the inspection. Accurate diagnostic cannot be done with an incandescent light.



CPJ902EWB011

NO.1 NO RADIO RECEPTION (AM/FM)/NO OR LOW VOLUME

DPE090366900W17

1	No radio reception (AM/FM)/no or low volume/Possible DTC: 09:Er20, 09:Er22
POSSIBLE CAUSE	• Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) • Audio unit malfunction • Antenna plug poor connection • Antenna feeder malfunction • Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Antenna rod is not installed

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the audio unit ON. • Is the LCD indicated correctly?	Yes	Go to the Step 3.
		No	Go to the next step.
2	• Measure voltage at B+ and ACC terminals. • Is voltage okay? **Specification** **With ignition switch ON: 11.5 V or more** **At idling: 12.5 V or more**	Yes	Go to the next step.
		No	Follow diagnostic procedure for symptom No. 2 (Entire audio system).
3	• Set volume to 10 to 15. • Is buzzing sound or voice confirmed?	Yes	Go to the next step.
		No	Follow diagnostic procedure for symptom No. 3 (Entire audio system) or No. 4 (Entire audio system).
4	• Tune to local broadcasting station and check reception condition. • Is reception okay?	Yes	Go to the next step.
		No	Go to the Step 6.
5	• Push PRESET buttons and check preset conditions. • Has preset been stored?	Yes	The system is normal.
		No	Preset broadcasting stations.
6	• Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) installed? **Note** TV antenna located closely to audio antenna can be cause of noise. Relocate TV antenna.	Yes	Go to the next step.
		No	Go to the Step 8.
7	• Remove aftermarket electronic equipment. • Turn audio unit ON and check reception condition. • Is reception improved?	Yes	The system is normal. (Explain to customers that aftermarket electronic equipment is cause of noise)
		No	Go to the next step.
8	• Refer to confirmation step 3, and inspect antenna system. • Is a whirring sound present?	Yes	Replace audio unit.
		No	Go to the next step.
9	• Inspect antenna plug connection condition. • Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
10	• Turn ignition switch to LOCK position. • Measure continuity between antenna feeder axis and ground. • Is there any continuity?	Yes	Replace antenna feeder.
		No	Go to the next step.
11	• Compare reception with other audio unit on same model (model/unit) under same problem conditions. • Is reception equivalent between customer's unit and compared unit? **Note** • Due to following differences, you may feel difference in reception efficiency. **(Vehicle side factor)** — Antenna installation location, height, feeder wiring routing, optional electrical equipment **(Audio unit factor)** — Volume concern type: It decreases change of volume when signals become weak. (Noise is easy to be conspicuous) — Noise decrease type: It decreases volume when signals become weak, so that noise is not conspicuous.	Yes	The system is normal. (It is caused by electronic jamming from outside, or inferior broadcasting station signal condition.)
		No	Replace audio unit.

NO.2 NOISE FROM RADIO (AM ONLY)

DPE090366900W18

2	Noise from radio (am only)/Possible DTC: 09:Er22
POSSIBLE CAUSE	• Antenna rod not installed • Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) • Noise from electrical system on vehicle (e.g. fuel pump) • Battery malfunction • Charging system malfunction • Audio unit malfunction • Antenna plug poor connection • Antenna feeder malfunction • Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Antenna installation loosened

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Tune to local broadcasting station and check reception condition. • Is reception okay?	Yes	Tune to correct frequency of broadcasting station. If not preset, preset it.
		No	Go to the next step.
2	• Inspect antenna rod condition. • Is antenna rod installed?	Yes	Go to the next step.
		No	Advise customer to install antenna rod when radio is used.
3	• Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) installed? **Note** • TV antenna located closely to audio antenna can be cause of noise. Relocate TV antenna.	Yes	Go to the next step.
		No	Go to the Step 5.
4	• Remove aftermarket electronic equipment. • Turn audio unit ON and check reception condition. • Is reception improved?	Yes	The system is normal. (Explain to customers that aftermarket electronic equipment is cause of noise)
		No	Go to the next step.
5	• Measure battery voltage. • Is battery voltage okay? **Standard** **With ignition switch ON: 11.5 V or more** **At idling: 12.5 V or more** **Note** • Inspect that battery cables are connected to terminals securely.	Yes	Go to the next step.
		No	Charge battery. Inspect charging system, and repair or replace if necessary.
6	• Is noise occurring only when vehicle electrical system (e.g. fuel pump) operates? **Note** • Identify subject electrical component by disconnecting fuse, turning switch ON & OFF, or disconnecting & connecting connector. • It will be easy when simulation function on WDS is used.	Yes	Go to the next step.
		No	Go to the Step 8.
7	• Inspect power supply, ground condition, and noise prevention capacitor for electrical component. • Is noise present after inspection? **Note** • Inspect following: — Power supply to electrical component for voltage drop (compare with battery voltage) — Resistance between ground of electrical component and body. (Should be close to 0 ohm) — Installation condition of noise prevention capacitor for fuel pump etc.	Yes	Go to the next step.
		No	Troubleshooting completed. **Note** • The audio unit supplies 12 V battery power to the antenna amplifier for the AM radio reception in the radio mode. The audio unit cannot receive the AM signals without the 12 V battery power to the antenna amplifier. If the AM signals become strong, the audio unit may receive the signal with noises.
8	• Inspect antenna plug connection condition. • Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
9	• Turn ignition switch to LOCK position. • Measure continuity between antenna feeder axis and ground. • Is there any continuity?	Yes	Replace antenna feeder.
		No	Go to the next step.

STEP	INSPECTION		ACTION
10	Compare reception with other audio unit on same model (model/unit) under same problem conditions. • Is reception equivalent between customer's unit and compared unit? **Note** • Due to following differences, you may feel difference in reception efficiency. **(Vehicle side factor)** — Antenna installation location, height, feeder wiring routing, optional electrical equipment **(Audio unit factor)** — Volume concern type: It decreases change of volume when signals become weak. (Noise is easy to be conspicuous) — Noise decrease type: It decreases volume when signals become weak, so that noise is not conspicuous.	Yes	The system is normal (It is caused by electronic jamming from outside, or inferior broadcasting station signal condition).
		No	Go to the next step.
11	• Retighten ground fixation for antenna installation part and antenna amplifier. Retighten antenna rod. • Is noise present, after retightening?	Yes	Replace audio unit.
		No	Troubleshooting completed.

NO.3 NOISE FROM RADIO (FM ONLY)

DPE090366900W19

3	Noise from radio (fm only)/Possible DTC: 09:Er22
POSSIBLE CAUSE	• Antenna rod not installed • Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) • Noise from electrical system on vehicle (e.g. fuel pump) • Battery malfunction • Charging system malfunction • Audio unit malfunction • Antenna plug poor connection • Antenna feeder malfunction • Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Antenna installation loosened

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Tune to local broadcasting station and check reception condition. • Is reception okay?	Yes	Tune to correct frequency of broadcasting station. If not preset, preset it.
		No	Go to the next step.
2	• Inspect antenna rod condition. • Is antenna rod installed?	Yes	Go to the next step.
		No	Advise customer to install antenna rod when radio is used.
3	• Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) installed?	Yes	Go to the next step.
		No	Go to the Step 5.
4	• Remove aftermarket electronic equipment. • Turn audio unit ON and check reception condition. • Is reception improved?	Yes	The system is normal. (Explain to customers that aftermarket electronic equipment is cause of noise)
		No	Go to the next step.
5	• Measure battery voltage. • Is battery voltage okay? **Standard** **With ignition switch ON: 11.5 V or more** **At idling: 12.5 V or more** **Note** • Inspect that battery cables are connected to terminals securely.	Yes	Go to the next step.
		No	Charge battery. Inspect charging system, and repair or replace if necessary.
6	• Is noise occurring only when vehicle electrical system (e.g. fuel pump) operates? **Note** • Identify subject electrical component by disconnecting fuse, turning switch ON & OFF, or disconnecting & connecting connector. • It will be easy when simulation function on WDS is used.	Yes	Go to the next step.
		No	Go to the Step 8.
7	• Inspect power supply, ground condition, and noise prevention capacitor for electrical component. • Is noise present after inspection? **Note** • Inspect following: — Power supply to electrical component for voltage drop (compare with battery voltage) — Resistance between ground of electrical component and body. (Should be close to 0 ohm) — Installation condition of noise prevention capacitor for fuel pump etc.	Yes	Go to the next step.
		No	Troubleshooting completed.
8	• Inspect antenna plug connection condition. • Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
9	• Turn ignition switch to LOCK position. • Measure continuity between antenna feeder axis and ground. • Is there any continuity?	Yes	Replace antenna feeder.
		No	Go to the next step.
10	• Compare reception with other audio unit on same model (model/unit) under same problem conditions. • Is reception equivalent between customer's unit and compared unit?	Yes	The system is normal (It is caused by electronic jamming from outside, or inferior broadcasting station signal condition).
		No	Go to the next step.

STEP	INSPECTION		ACTION
11	• Retighten ground fixation for antenna installation part and antenna amplifier. Retighten antenna rod. • Is noise present, after retightening? **Note** • When antenna is not grounded perfectly, FM particular noise is likely to be conspicuous.	Yes	Replace audio unit.
		No	Troubleshooting completed.

NO.4 CANNOT TUNE (SEEK DOES NOT STOP)

DPE090366900W20

4	Cannot tune (seek does not stop)/Possible DTC: 09:Er20, 09:Er22
POSSIBLE CAUSE	• Center panel malfunction • Antenna plug poor connection • Antenna feeder malfunction • Audio unit malfunction • Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Antenna rod not installed.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect if feel of SEEK button is normal when button is pushed and released. • Is it okay?	Yes	Go to the next step.
		No	Perform confirmation step 1: audio panel switch confirmation. Replace center panel if necessary.
2	• Inspect indication of LCD. • Is frequency indication increased or decreased when SEEK button is pushed?	Yes	Go to the next step.
		No	Perform confirmation step 1: audio panel switch confirmation. Replace center panel if necessary.
3	• Manually tune to local broadcasting station and check reception condition. • Is reception okay?	Yes	Go to the Step 6.
		No	Go to the next step.
4	• Inspect antenna plug connection condition. • Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
5	• Turn ignition switch to LOCK position. • Measure continuity between antenna feeder axis and ground. • Is there any continuity?	Yes	Replace antenna feeder.
		No	Go to the next step.
6	• Check if number of broadcasting stations changes depending on time and place. • Does it change?	Yes	The system is normal. (Explain to customer that SEEK sometimes does not stop depending on signal reception condition. **Note** • Signals tend to reach longer distances in the night. It is conspicuous in AM signals, several audio functions may stop due to foreign broadcasting station or noise. Though the audio system restrains sensitivity of SEEK and SCAN functions in the night, the audio system may select other than desired broadcasting station when signals are considerably strong.This function is linked to the parking light. When the parking light or headlight is turned on, SEEK and SCAN may not function for weak signals.
		No	Replace audio unit.

NO.5 CANNOT PRESET (PRESET FUNCTION DOES NOT OPERATE)

DPE090366900W21

5	Cannot preset (preset function does not operate)/Possible DTC: 21:Er19
POSSIBLE CAUSE	• Audio unit malfunction • Center panel malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Tune to desired station and push channel preset button 1 for about 2 seconds to store it. • Repeat above for other stations using channel preset buttons 2 to 5. • Push channel preset button 1 to 6 one by one. • Are stored stations present?	Yes	Go to the next step.
		No	Go to the Step 3.
2	• Turn ignition switch to LOCK and then to ACC. • Check if preset stations are stored by pushing preset buttons. • Are stations stored?	Yes	The system is normal. (Explain preset procedure to customer using Owner's Manual)
		No	Replace audio unit.
3	• Remove center panel from audio unit, and reinstall center panel to audio unit. • Turn audio power switch ON. • Push POWER SW button and MEDIA button at same time for approximately 1 second to enter system to switch check mode. • Push all buttons and check if buzzer sounds. • Is all buttons okay?	Yes	Replace audio unit.
		No	Replace center panel.

NO.6 RECEPTION FREQUENCY OF RADIO SLIPS

DPE090366900W22

6	Reception frequency of radio slip/Possible DTC: 09:Er22
POSSIBLE CAUSE	• Audio unit malfunction • Electronic jamming from outside, or inferior condition of broadcasting station radio wave

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Push SEEK button and check if desired broadcasting station is tuned. • Is it okay?	Yes	Go to the Step 3.
		No	Go to the next step.
2	• Check if other broadcasting station is received at certain place when indication of reception frequency stays. • Is other station received? **Note** • When you receive weak signal from one broadcasting station and come close to broadcasting antenna which emits strong signal, broadcasting with strong signal is sometimes received.	Yes	Go to the next step.
		No	Replace audio unit.
3	• Compare reception with other audio unit on same model (model/unit) under same problem conditions. • Is reception equivalent between customer's unit and compared unit?	Yes	Troubleshooting completed (Audio unit is normal).
		No	Replace audio unit.

FOREWORD [CASSETTE TAPE PLAYER]

DPE090366900W23

Troubleshooting Index

No.	Symptom	Possible DTC
1	No sound of the cassette tape	00:Er01, 00:Er03, 00:Er10
2	Cassette tape player does not eject the cassette tape	00:Er01, 00:Er04, 00:Er10
3	Cassette tape player does not load the cassette tape	00:Er01, 00:Er10
4	Cassette tape player ejects the cassette tape immediately	00:Er04, 00:Er10
5	Wavering sound and/or poor sound quality of the cassette tape	—
6	There is a noise when playing the cassette tape player	—
7	Poor sound quality (Poor treble sound)	—
8	Abnormal sound of the cassette tape (Play backwards)	—

Quick Diagnostic Chart (Cassette Tape Player)

X: Applicable

Troubleshooting item / Possible factor	1 No sound of the cassette tape	2 Cassette tape player does not eject the cassette tape	3 Cassette tape player does not load the cassette tape	4 Cassette tape player eject the cassette tape immediately	5 Wavering sound and/or poor sound quality of the cassette tape	6 There is a noise when playing the cassette tape player	7 Poor sound quality (Poor treble sound)	8 Abnormal sound of the cassette tape (Play backwards)
Tape head gathers oxide residue from cassette tape	X						X	
Cassette tape is malfunctioning	X	X	X	X	X	X	X	X
Cassette tape player is malfunctioning	X	X	X	X	X	X	X	X
Cassette patch is broken		X	X					
Poor installation of cassette patch		X	X					
Poor connection of cassette tape player connector			X			X		
Dolby noise reduction is used improperly						X	X	
The after-market electrical parts interfere with the audio system						X		

DPE903EW1O04

NO.1 NO SOUND OF THE CASSETTE TAPE

DPE090366900W24

1	**No sound of the cassette tape/Possible DTC: 00:Er01, 00:Er03, 00:Er10**

Troubleshooting hints

- Tape head gathers oxide residue from cassette tape
- Cassette tape is malfunctioning
- Cassette tape player is malfunctioning

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Replace with the cassette tape known to be good. • Does the cassette tape player sound?	Yes	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning.
		No	Go to the next step.
2	• Clean the tape head using the good quality head-cleaning tape. • Does the cassette tape player sound?	Yes	Explain the repairs (head cleaning) to the customer.
		No	Replace the cassette tape player.

09

NO.2 CASSETTE TAPE PLAYER DOES NOT EJECT THE CASSETTE TAPE

DPE090366900W25

2	Cassette tape player does not eject the cassette tape/Possible DTC: 00:Er01, 00:Er04, 00:Er10

Troubleshooting hints

- Cassette tape is malfunctioning.
- Cassette tape player is malfunctioning.
- Cassette patch is broken.
- Poor installation of cassette patch.

Note

- The cassette tape player may not eject the cassette tape due to the tape slack, peel-off or seal on it.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Click the eject button on the player. • Is “TAPE OUT” message displayed?	Yes	Go to the next step.
		No	Replace the cassette patch.
2	• Visually inspect the dust cover on the cassette patch. • Is there any damage on the cover?	Yes	Replace the cassette patch.
		No	Go to the next step.
3	• Inspect the cassette patch installation. • Is the cassette patch installed securely? **Note** • Inspect the connector for poor connection (such as damaged/bent/pulled-out pins, corrosion).	Yes	Replace the cassette tape player. **Note** • When replacing the cassette tape player, inspect the followings: — No peeling-off the label — Cassette patch is normal
		No	Install the cassette patch securely. If the cassette patch is broken, replace the cassette patch.

NO.3 CASSETTE TAPE PLAYER DOES NOT LOAD THE CASSETTE TAPE

DPE090366900W26

3	Cassette tape player does not load the cassette tape/Possible DTC: 00:Er01, 00:Er10

Troubleshooting hints

- Cassette tape is malfunctioning
- Cassette tape player is malfunctioning
- Cassette patch is broken
- Poor installation of cassette patch
- Poor connection of cassette tape player connector

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Visually inspect the cassette tape. • Is the cassette tape normal?	Yes	Go to the Step 3.
		No	Go to the next step.
2	• Inspect the cassette tape player connector. • Does the cassette tape player load the cassette tape after re-connecting the connector?	Yes	The cassette tape player is normal. Explain the repairs to the customer.
		No	Replace the cassette tape player.
3	• Replace with the cassette tape known to be good. • Does the cassette tape player load the cassette tape?	Yes	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning.
		No	Go to the next step.
4	• Visually inspect the duct cover on the cassette patch (damaged, crack, etc.). • Is the dust cover normal?	Yes	Replace the cassette tape player.
		No	Replace the cassette patch.

NO.4 CASSETTE TAPE PLAYER EJECT THE CASSETTE TAPE IMMEDIATELY

DPE090366900W27

4	Cassette tape player ejects the cassette tape immediately/Possible DTC: 00:Er04, 00:Er10

Troubleshooting hints

- Cassette tape is malfunctioning
- Cassette tape player is malfunctioning

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Replace with the cassette tape known to be good. • Does the cassette tape player eject the cassette tape immediately?	Yes	Replace the cassette tape player.
		No	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning (e.g.,slack, broken, etc.).

NO.5 WAVERING SOUND AND/OR POOR SOUND QUALITY OF THE CASSETTE TAPE

DPE090366900W28

5	Wavering sound and/or poor sound quality of the cassette tape/Possible DTC: —

Troubleshooting hints
- Cassette tape is malfunctioning.
- Cassette tape player is malfunctioning.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Replace with the cassette tape known to be good. • Is the sound normal?	Yes	Go to the next step.
		No	Replace the cassette tape player.
2	• Fast-forward and rewind the original tape. • Is the sound normal?	Yes	The cassette tape player is normal. **Note** • If fast-forward/rewind the tape for a short period repeatedly, the tape playing speed may be temporarily changed.
		No	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning.

NO.6 THERE IS A NOISE WHEN PLAYING THE CASSETTE TAPE PLAYER

DPE090366900W29

6	There is a noise when playing the cassette tape player/Possible DTC: —

Troubleshooting hints
- Cassette tape is malfunctioning
- Cassette tape player is malfunctioning
- Poor connection of cassette tape player connector
- Dolby noise reduction is used improperly
- The after-market electrical parts interfere with the audio system

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Set the Dolby noise reduction properly. • Is there any noise?	Yes	Go to the next step.
		No	Set the Dolby noise reduction correctly.
2	• Replace with the cassette tape known to be good. • Is there any noise?	Yes	Go to the next step.
		No	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning.
3	• Inspect and re-connect the cassette tape player connector. • Is there any noise?	Yes	Go to the next step.
		No	The cassette tape player is normal. Explain the repairs to the customer.
4	• Are any of the following after-market electrical parts on the vehicle? — Cellular phone — Radio-wave equipment — Remote engine starter — TV	Yes	Go to the next step.
		No	Replace the cassette tape player.
5	• Remove the after-market electrical parts. • Is there any noise?	Yes	Replace the cassette tape player.
		No	The cassette tape player is normal. Explain to the customer that the after-market electrical parts interfere with the audio system.

NO.7 POOR SOUND QUALITY (POOR TREBLE SOUND)

DPE090366900W30

7	Poor sound quality (Poor treble sound)/Possible DTC: —

Troubleshooting hints

- Tape head gathers oxide residue from cassette tape
- Cassette tape is malfunctioning
- Cassette tape player is malfunctioning
- Dolby noise reduction is used improperly

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect the Dolby noise reduction mode. • Is the Dolby noise reduction mode set correctly?	Yes	Go to the Step 3.
		No	Go to the next step.
2	• Set the Dolby reduction mode correctly. • Is the sound improved?	Yes	Set the Dolby noise reduction correctly/
		No	Go to the next step.
3	• Replace with the cassette tape known to be good. • Is the sound improved?	Yes	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning. **Note** • The tape used for a long time may have a poor sound quality.
		No	Go to the next step.
4	• Clean the tape head using the good quality head-cleaning tape. • Is the sound improved?	Yes	Explain the repairs (head cleaning) to the customer.
		No	Replace the cassette tape player.

NO.8 ABNORMAL SOUND OF THE CASSETTE TAPE (PLAY BACKWARDS)

DPE090366900W31

8	Abnormal sound of the cassette tape (Play backwards)/Possible DTC: —

Troubleshooting hints

- Cassette tape is malfunctioning
- Cassette tape player is malfunctioning

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Replace with the cassette tape known to be good. • Is the sound normal?	Yes	The cassette tape player is normal. Explain to the customer that the cassette tape is malfunctioning.
		No	Replace the cassette tape player.

FOREWORD [CD PLAYER/CHANGER]

DPE090366900W32

Troubleshooting Index

No.	Items	Symptom	Possible DTC
1	CD player/changer	CD player/changer does not load the CD or ejects the CD immediately	03:Er01, 03:Er10, 06:Er01, 06:Er10, 10:Er01, 10:Er10, 20:Er01, 20:Er10, 22:Er01, 22:Er10
2		CD player/changer does not eject the CD	03:Er01, 06:Er01, 10:Er01, 20:Er01, 22:Er01
3		CD player/changer does not play the CD/No sound	03:Er07, 03:Er10, 06:Er07, 10:Er07, 20:Er07, 22:Er07
4		Sound jumps	03:Er02, 06:Er02, 10:Er02, 20:Er02, 22:Er02
5		CD player/changer scratches on the CD	03:Er02, 06:Er02, 10:Er02, 20:Er02, 22:Er02
6	CD changer	Disc changer is inoperative	06:Er01, 06:Er10, 22:Er01, 22:Er10

No.	Items	Symptom	Possible DTC
7	MP3 applicable CD player	CD player does not play the MP3-formatted file	10:Er07, 22:Er07
8		MP3-formatted file folder selection is inoperative/Track search is inoperative	10:Er02, 22:Er02
9		CD player does not indicate the MP3 title text	10:Er02, 22:Er02
10		CD player does not play the audio data (CDDA)	10:Er02, 22:Er02
11	MD player	MD player does not load the MD or ejects the MD immediately	07:Er01
12		MD player does not eject the MD	07:Er01
13		MD player does not play the MD/No sound	07:Er07, 07:Er08, 07:Er10
14	CD player/changer /MD player	Track change is inoperative	03:Er02, 06:Er02, 07:Er02, 10:Er02, 20:Er02, 22:Er02

X: Applicable

Troubleshooting Item / Possible factor	CD player/changer					CD player	MP3 applicable CD player				MD player			CD player/changer /MD player
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	CD player/changer dose not load the CD or ejects the CD immediately	CD player/changer dose not eject the CD	CD player/changer dose not play the CD/No sound	Sound jumps	CD player/changer scratches on the CD	Disc change is inoperative	CD player dose not play the MP3-formatted file	MP3-formatted file folder selection is inoperative/ Track search is inoperative	CD player dose not indicate the MP3 title text	CD player dose not play the audio data (CODA)	MD player dose not load the MD or ejects the MD immediately	MD player dose not eject the MD	MD player dose not play the MD/No sound	Track change is inoperative
CD is inserted upside down	X		X											
Audio unit is malfunctioning	X	X	X	X	X	X								X
Defective CD (egg., cracked, badly bent, rough edges, scratch, dirty CD, condensation)	X	X	X	X										X
Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)	X	X	X											X
Poor connection of audio unit connector or terminal (e.g., damaged, bent, pull-out pin, corrosion)	X	X												
Improper center panel installation		X				X								
Improper CD cover installation		X												
Improper audio unit installation (e.g., rattle, loose)				X										
Inadequate tire pressure				X										
Deformed disc is used (e.g., out of specification (thickness), bent disc)	X	X			X									
Multiple CDs are inserted into the CD player at the same time		X			X									
Center panel is malfunctioning						X								X
CD-R/RW written format is out of specification							X			X				
MP3 and other format data are in the CD-R/RW							X							
File extension for MP3-formatted file is incorrect (Correct: ".mp3", Incorrect: e.g., RIFF)							X							
Defective CD-R/RW (e.g., dirty, scratch)							X	X	X	X				
CD-R/RW (MP3 files are all written to RIFF format)							X							
Conflict of ID tag version for CD-R/RW								X	X					
Improper folder and/or music title in CD-R/RW								X						
The number of characters of folder/music file name in CD-R/RW exceeds the maximum number of characters								X	X					
Improper encode in CD-R/RW								X	X					
MP3 applicable CD player is malfunctioning							X	X	X	X				X
No title input in CD-R/RW									X					
Input title text by 2-bytes characters									X					
Data other than the audio data is in CD-R/RW										X				
MD malfunction											X	X		
MD panel malfunction											X	X		
MD panel improperly installation											X	X		
Poor connection of MD player connector or terminal (e.g., damaged, bent, pull-out pin, corrosion)											X	X	X	X
MD player malfunction											X	X	X	X
Non-conventional MD (Hi-MD)											X		X	X

DPE903EW1O09

NO.1 CD PLAYER/CHANGER DOES NOT LOAD THE CD OR EJECTS THE CD IMMEDIATELY

DPE090366900W33

1	**CD player/changer does not load the CD or ejects the CD immediately** **Possible DTC: 03:Er01, 03:Er10, 06:Er01, 06:Er10, 10:Er01, 10:Er10, 20:Er01, 20:Er10, 22:Er01, 22:Er10**

Troubleshooting hints

- CD is inserted upside down
- Audio units is malfunctioning
- Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)
- Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)
- Poor connection of audio unit connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)
- Deformed disc is used (e.g., out of specification (thickness), bent disc)

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Is CD inserted properly, label-side up?	Yes	Go to the next step.
		No	Explain to the customer that CD should be inserted into the slot, label-side up.
2	• Replace with a CD known to be good. • Does the CD player/changer load the CD?	Yes	Go to the next step.
		No	Replace the audio unit.
3	Visually inspect the CD. — Is there any dirt, scratch or deformation on the CD? — Is the CD a non-conventional disc?	Yes	Explain to the customer that the defective CD or non-conventional disc cannot be use.
		No	Go to the next step.
4	• Turn the ignition switch to the LOCK position. • Inspect the connection of the audio unit connector (24-pin). • Inspect both audio unit connector and wiring harness-side connector for poor connection. (such as damaged/bent/pulled-out pins, corrosion) • All the pins and connector normal?	Yes	Replace the audio unit.
		No	**If the audio unit connector/pin is wrong:** • Replace the audio unit. **If the wiring harness-side connector/pin is wrong:** • Repair or replace the pins and/or the connector.

NO.2 CD PLAYER/CHANGER DOES NOT EJECT THE CD

DPE090366900W34

2	**CD player/changer does not eject the CD** **Possible DTC:03:Er01, 06:Er01, 10:Er01, 20:Er01, 22:Er01**

Troubleshooting hints

- Audio units is malfunctioning
- Defective CD. (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)
- Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)
- Poor connection of audio unit connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)
- Improper center panel installation
- Improper CD cover installation
- Deformed disc is used (e.g., out of specification (thickness), bent disc).
- Multiple CDs are inserted into the CD player at the same time

Note

- The CD may be malfunctioning if the Cd player/changer does not eject the certain CD only. Inspect the CD player/changer operation using the CD known to be good.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect the operation of the audio system other than CD player/changer (e.g. Radio). • Does other audio system operate?	Yes	Go to Step 3.
		No	Go to the next step.
2	• Turn the ignition switch to the LOCK position. • Inspect the connection of the audio unit connector (24-pin). • Inspect both audio unit connector and wiring harness-side connector for poor connection. (such as damaged/bent/pulled-out pins, corrosion) • All the pins and connector normal?	Yes	Go to the next step.
		No	**If the audio unit connector/pin is wrong:** • Replace the audio unit. **If the wiring harness-side connector/pin is wrong:** • Repair or replace the pins and/or the connector.
3	• Eject the CD. • Is the CD ejected from the CD player/ changer?	Yes	Go to the next step.
		No	Inspect the center panel and CD cover installation. Securely install the center panel and/or CD cover as necessary.
4	• Insert the CD into the CD player/changer. • Does the CD insert into the CD player/ changer smoothly?	Yes	Replace the audio unit.
		No	Install the center panel and/or CD cover properly, then go to the next step.
5	• Is the CD ejected from the CD player/ changer?	Yes	Troubleshooting completed. Explain repairs to the customers.
		No	Replace the audio unit.

NO.3 CD PLAYER/CHANGER DOES NOT PLAY THE CD/NO SOUND

DPE090366900W35

3	**CD player/changer does not play the CD/No sound** **Possible DTC:03:Er07, 03:Er10, 06:Er07, 10:E07, 20:Er07, 22:Er07**

Troubleshooting hints

- CD is inserted upside down
- Audio units is malfunctioning
- Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)
- Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the radio ON and inspect that there is a sound. • Is there a sound? **Note** • Check for the volume dial position.	Yes	Go to the next step.
		No	Go to the symptom troubleshooting No.3 (Audio system)
2	• Was CD inserted properly, label-side up?	Yes	Go to the next step.
		No	Explain to the customer that CD should be inserted into the slot, label-side up.
3	• Replace the CD known to be good. • Does the CD player/changer load the CD?	Yes	Go to the next step.
		No	Replace the audio unit.
4	• Visually inspect the CD. — Is there any dirt, scratch or deformation on the CD? — Is the CD a non-conventional disc? — Is there a CD in MP3 recording?	Yes	Explain to the customer that the defective CD or non-conventional disc cannot be use.
		No	Replace the audio unit.

NO.4 SOUND JUMPS

DPE090366900W36

4	**Sound jumps** **Possible DTC:03:Er02, 06:Er02, 10:Er02, 20:Er02, 22:Er02**

Troubleshooting hints

- Audio unit is malfunctioning
- Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)
- Improper audio unit installation (e.g., rattle, loose)
- Inadequate tire pressure

Note

- The CD may be malfunctioning if the sound jumps on the certain CD only. Inspect the CD player/changer operation using the CD known to be good.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Does the sound jump when the vehicle is stopped?	Yes	Go to the Step 6.
		No	Go to the next step.
2	• Drive the vehicle. • Does the sound jump when driving over uneven surfaces?	Yes	Go to the next step.
		No	Go to the Step 6.
3	• Is the audio unit installed securely?	Yes	Go to the next step.
		No	Install the audio unit securely.
4	• Inspect the tire pressure. • Is the tire pressure normal?	Yes	Replace the audio unit.
		No	Go to the next step.
5	• Adjust the tire pressure within specification. • Does the sound jump when driving the vehicle?	Yes	Replace the audio unit.
		No	Audio system is normal. Explain repairs to the customers.
6	• Replace the CD known to be good. • Does the sound jump when driving the vehicle?	Yes	Replace the audio unit.
		No	Audio system is normal. Explain to the customer that the CD is malfunctioning.

NO.5 CD PLAYER/CHANGER SCRATCHES ON THE CD

DPE090366900W37

5	**CD player/changer scratches on the CD** **Possible DTC:03:Er02, 06:Er02, 10:Er02, 20:Er02, 22:Er02**

Troubleshooting hints

- Audio units is malfunctioning
- Deformed disc is used (e.g., out of specification (thickness), bent disc)
- Multiple CDs are inserted into the CD player at the same time

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Were the multiple CDs inserted into the CD player at the same time?	Yes	Explain to the customer to insert a CD one by one.
		No	Go to the next step.
2	• Visually inspect the CD. • Is the CD a deformed disc (e.g., out of specification (thickness), bent disc)?	Yes	Audio system is normal. Explain to the customer that the CD is malfunctioning.
		No	Replace the audio unit.

NO.6 DISC CHANGE IS INOPERATIVE

DPE090366900W38

6	**Disc change is inoperative** **Possible DTC:06:Er01, 06:Er10, 22:Er01, 22:Er10**

Troubleshooting hints

- Audio unit is malfunctioning
- Improper center panel installation
- Center panel is malfunctioning

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect the CD changer operation. • Does the CD changer operate properly?	Yes	Go to the next step.
		No	Go to the symptom troubleshooting “No.3 CD player/ changer does not play the CD/No sound”.
2	• Inspect the followings: — Is the display shown properly when operating the disc change button? — Does the radio band selection operate properly?	Yes	Replace the audio unit.
		No	Go to the next step.
3	• Inspect the center panel installation. • Does the CD changer change the disc properly after re-installing the center panel?	Yes	Install the center panel securely and properly.
		No	Go to the “No.1 Audio panel switch inspection” in this section. Replace the center panel as necessary.

NO.7 CD PLAYER DOES NOT PLAY THE MP3 FORMATTED FILE

DPE090366900W39

7	**CD player does not play the MP3-formatted file** **Possible DTC10:Er07, 22:Er07**

Troubleshooting hints

- CD-R/RW written format is out of specification
- MP3 and other format data are in the CD-R/RW
- File extension for MP3-formatted file is incorrect (Correct. “.mp3”, incorrect: e.g., RIFF)
- Defective CD-R/RW (e.g. dirty CD, scratch)
- MP3 applicable CD player is malfunctioning

Note

- The free-software for the MP3-formatted file in the field may cause the deterioration of sound quality, noise, or defective play, so that the CD player won’t play the customer made MP-3-formatted file.
- The CD player may not play the CD-R/RW properly due to the disc condition.
- If there are MP-3-formatted file and other file in the same disc, the CD player may not play the disc.
- If there are MP-3-formatted file and audio data in the same disc, the CD player loads and plays the first session of the data only.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Inspect the written format of the recorded data on the CD-R/RW. • Is the written format correct?	Yes	Go to the next step.
		No	Write the CD-R/RW with the correct specification.
2	• Inspect the recorded data in the CD-R/RW. • Is there MP3 and other format data in the CD-R/RW.	Yes	Replace with the CD-R/RW known to be good (MP3-formatted file data only), then inspect the CD player operation. **If the CD player plays the MP3-formatted file:** • Audio system is normal. Explain to the customer that the CD player does not operate properly if the MP3 and other format data are in the CD-R/RW. **If the CD player does not play the MP3-formatted file:** • Replace the audio unit.
		No	Go to the next step.
3	• Inspect the CD-R/RW written format. • Is the written format within the specification (“.mp3” is the correct file extension)?	Yes	Replace with the CD-R/RW using the “.mp3” file extension, then inspect the CD player operation. **If the CD player plays the MP3-formatted file:** • Audio system is normal. Explain to the customer that the CD player does not operate properly if the correct file extension is not used. **If the CD player does not play the MP3-formatted file:** • Replace the audio unit.
		No	Go to the next step.
4	• Visually inspect the CD-R/RW. • Is there any dirt or scratch on the CD-R/RW?	Yes	Clean the disc or replace with the CD-R/RW known to be good.
		No	Replace the audio unit.

NO.8 MP3-FORMATTED FILE FOLDER SELECTION IS INOPERATIVE/TRACK SEARCH IS INOPERATIVE

DPE090366900W40

8	**MP3-formatted file folder selection is inoperative/Track search is inoperative** **Possible DTC:10:Er02, 22:Er02**

Troubleshooting hints

- Defective CD-R/RW (e.g. dirty CD, scratch)
- Conflict of ID tag version for CD-R/RW
- Improper folder and/or music title in CD-R/RW
- The number of characters of folder/audio file name in CD-R/RW exceeds the maximum number of characters
- Improper encode in CD-R/RW
- MP3 applicable CD player is malfunctioning

Note

- ID3 is a tagging format for MP3-formatted file. ID3 allows metadata (e.g., title, artist, track number, etc.) to be added to the MP3-formatted file.
- There are two versions in the ID tag.
  - — ID3v1: This is the most widespread standard tag formats and most software is compatible with this version. There is a limitation on the maximum number of characters for the text data.
  - — ID3v2: There are a variety of version in V2, but there is no interchangeability among the versions.

Limitation on the maximum number of characters for the text data (ID3v1)

Item	Maximum number of characters	Description
Title	30	Music title
Artist	30	Artist name
Album	30	Album title
Year	4	Album produced year/CD wholesale year
Genre	—	Music category selection
Comment	30	Free comment
Track	3	Track number

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Visually inspect the CD-R/RW. • Is there any dirt or scratch on the CD/R/RW?	Yes	Clean the disc or replace with the CD-R/RW known to be good.
		No	Go to the next step.
2	• Inspect the ID tag version. • Is ID tag correct?	Yes	Go to the next step.
		No	Write the CD-R/RW with the correct ID tag version.
3	• Inspect folder and audio file name. • Are all file name input correctly?	Yes	Go to the next step.
		No	Use the CD-R/RW that a folder and audio file name is input correctly.
4	• Inspect the encode for the folder and audio file name in the CD-R/RW. • Is the encode correct? **Note** • Unreadable characters may be displayed if incorrect encode is used.	Yes	Go to the next step.
		No	Use the correct encode.
5	• Inspect the number of characters for the folder and audio file name. • Is the number of characters within the maximum number of characters?	Yes	Replace the audio unit.
		No	Input the folder and audio file name within the maximum number of characters.

NO.9 CD PLAYER DOES NOT INDICATE THE MP3 TITLE TEXT

DPE090366900W41

9	**CD player does not indicate the MP3 title text** **Possible DTC:10:Er02, 22:Er02**

Troubleshooting hints

- Defective CD-R/RW (e.g. dirty CD, scratch)
- Conflict of ID tag version for CD-R/RW
- The number of characters of folder/audio file name in CD-R/RW exceeds the maximum number of characters
- Improper encode in CD-R/RW
- MP3 applicable CD player is malfunctioning
- No title input in CD-R/RW
- Input title text by 2-bytes characters

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Visually inspect the CD-R/RW. • Is there any dirt or scratch on the CD/R/RW?	Yes	Clean the disc or replace with the CD-R/RW known to be good.
		No	Go to the next step.
2	• Inspect the display the LCD. • Is the CD (other than MP3 compatible) displayed on the LCD?	Yes	Go to the next step.
		No	Go to the symptom troubleshooting No.9 (Entire audio system).
3	• Inspect the ID tag version. • Is the ID tag correct?	Yes	Go to the next step.
		No	Write the CD-R/RW with the correct ID tag version.
4	• Is the title text input into the CD-R/RW?	Yes	Go to the next step.
		No	Input the title text. **Note** • Do not input the title text by two-bytes character.
5	• Inspect the encode for the folder and audio file name in the CD-R/RW. • Is the encode correct?	Yes	Go to the next step.
		No	Use the correct encode.
6	• Inspect the number of characters for the folder and audio file name. • Is the number of characters within the maximum number of characters?	Yes	Replace the audio unit.
		No	Input the folder and audio file name within the maximum number of characters.

NO.10 CD PLAYER DOES NOT PLAY THE AUDIO DATA (CDDA)

DPE090366900W42

10	**CD player does not play the audio data (CDDA)** **Possible DTC:10:Er02, 22:Er02**

Troubleshooting hints

- CD-R/RW written format is out of specification
- Defective CD-R/RW (e.g., dirty CD, scratch)
- MP3 applicable CD player is malfunctioning
- Data other than the audio data is in CD-R/RW

Note

- The CD player may not play the CD-R/RW properly due to the disc condition.
- If there are MP-3-formatted file and audio data in the same disc, the CD player loads and plays the first session of the data only.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Replace with the audio-CD known to be good. • Does the CD player play the audio-CD properly?	Yes	Go to the next step.
		No	Replace the audio unit.
2	• Inspect the written format of the recorded data on the CD-R/RW. • Is the written format correct?	Yes	Go to the next step.
		No	Write the CD-R/RW with the correct specification.
3	• Inspect the recorded data in the CD-R/RW. • Is any data other than the audio data recorded in the CD-R/RW?	Yes	Replace with the CD-R/RW known to be good (record audio data only), then inspect the CD player operation. **If the CD-R/RW plays:** • Audio system is normal. Explain to the customer that the CD player does not operate properly if the audio data and other data are recorded in the CD-R/RW. **If the CD-R/RW does not play:** • Replace the audio unit.
		No	Go to the next step.
4	• Visually inspect the CD-R/RW. • Is there any dirt or scratch on the CD-R/RW?	Yes	Clean the disc or replace with the CD-R/RW known to be good.
		No	Replace the audio unit.

NO.11 MD PLAYER DOES NOT LOAD THE MD OR EJECTS THE MD IMMEDIATELY

DPE090366900W43

11	NO.11 MD PLAYER DOES NOT LOAD THE MD OR EJECTS THE MD IMMEDIATELY Possible DTC: 07:Er01

Troubleshooting hints

- MD malfunction
- MD panel malfunction
- MD panel improperly installation
- MD player malfunction
- Poor connection of MD player connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)
- Non-conventional MD (Hi-MD)

Note

- The Hi-MD has longer recording time and higher sound quality than the conventional MD. The conventional MD can be formatted to Hi-MD, but it can be played on the Hi-MD player only.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Visually inspect the MD. • Is there any dirt, scratch or deformation on the MD?	Yes	Explain to the customer that the defective MD cannot be used.
		No	Go to the next step.
2	• Is there Hi-MD?	Yes	Explain to the customer that the Hi-MD cannot be used.
		No	Go to the next step.
3	• Visually inspect the MD panel. • Is there any damage on the MD panel?	Yes	Replace the MD panel.
		No	Go to the next step.
4	• Visually inspect the MD panel installation condition. • Is the MD panel installation properly?	Yes	Re-install the MD panel properly.
		No	Go to the next step.
5	• Turn the ignition switch to the LOCK position. • Inspect the MD player connector. • Inspect both MD player connector and wiring harness-side connector for poor connection (such as damaged/bent/pulled-out pins, corrosion) • Are all the pins and connector normal?	Yes	Troubleshooting is completed.
		No	**If the MD player connector/pin is wrong:** • Replace the MD player. **If the wiring harness-side connector/pin is wrong:** • Repair or replace the pins and/or connector.

NO.12 MD PLAYER DOES NOT EJECT THE MD

DPE090366900W44

12	MD player does not eject the MD Possible DTC:07:Er01

Troubleshooting hints

- MD malfunction
- MD panel malfunction
- MD panel improperly installation
- Poor connection of MD player connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)
- MD player malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Is there MD IN on the display?	Yes	Go to Step 3.
		No	Go to the next step.
2	• Turn the ignition switch to the LOCK position. • Inspect the connection of the MD player connector. • Inspect both MD player connector and wiring harness-side connector for poor connection (such as damaged/bent/pulled-out pins, corrosion) • All the pins and connector normal?	Yes	Replace the MD player.
		No	**If the MD player connector/pin is wrong:** • Replace the MD player. **If the wiring harness-side connector/pin is wrong:** • Repair or replace the pins and/or the connector.
3	• Depress eject button on the MD panel. • Is the eject button normal?	Yes	Go to the next step.
		No	Replace the MD panel.
4	• Visually inspect the MD panel. • Is the MD panel normal?	Yes	Go to the next step.
		No	Replace the MD panel.
5	• Is the MD panel installed properly?	Yes	Go to the next step.
		No	Install the MD panel properly.
6	• Visually inspect the MD. • Is the MD normal?	Yes	Replace MD player.
		No	Explain to the customer that the defect MD cannot be used.

NO.13 MD PLAYER DOES NOT PLAY THE MD/NO SOUND

DPE090366900W45

13	**MD player does not play the MD/No sound** **Possible DTC:07:Er07, 07:Er08, 07:Er10**

Troubleshooting hints

- Poor connection of MD player connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)
- MD player malfunction
- Non-conventional MD (Hi-MD)

Note

- The Hi-MD has a longer recording time and higher sound quality than the conventional MD. The conventional MD can be formatted to Hi-MD, but it can be played on the Hi-MD player only.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the radio ON and inspect that there is a sound. • Is there a sound? **Note** • Check for the volume dial position.	Yes	Go to the next step.
		No	GO to the symptom troubleshooting No.3 (Audio system).
2	• Replace the MD known to be good. • Does MD player play the MD properly? **Note** • Do not use the MD recorded in MDLP format.	Yes	Explain to the customer that Hi-MD cannot be used.
		No	Go to the next step.
3	• Turn the ignition switch to the LOCK position. • Inspect the connection of the MD player connector. • Inspect both MD player connector and wiring harness-side connector for poor connection (such as damaged/bent/pulled-out pins, corrosion) • All the pins and connector normal?	Yes	Replace the MD player.
		No	**If the MD player connector/pin is wrong:** • Replace the MD player. **If the wiring harness-side connector/pin is wrong:** • Repair or replace the pins and/or the connector.

NO.14 TRACK CHANGE IS INOPERATIVE

DPE090366900W46

14	**Track change is inoperative** **Possible DTC:03:Er02, 06:Er02, 07:Er02, 10:Er02, 20:Er02, 22:Er02**

Troubleshooting hints

- Audio unit is malfunctioning
- Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)
- Non-conventional discs (e.g., 8 cm (3 in) CD, 8 cm (3 in) disc adapter, heart-shaped disc, octagonal disc)
- Center panel is malfunctioning
- MP3 applicable CD player is malfunctioning
- Poor connection of MD player connector or terminal (e.g., damaged, bent, pulled-out pin, corrosion)
- MD player malfunction
- Non-conventional MD (Hi-MD)

Note

- The Hi-MD has a longer recording time and higher sound quality than the conventional MD. The conventional MD can be formatted to Hi-MD, but it can be played on the Hi-MD player only.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Replace the CD/MD known to be good. • Does the CD player/MD player change the track?	Yes	Explain to the customer that the defective CD, non-conventional disc, or Hi-MD cannot be used.
		No	For MD: Go to the next step. For CD: Go to Step 3.
2	• Turn the ignition switch to the LOCK position. • Inspect the connection of the MD player connector. • Inspect both MD player connector and wiring harness-side connector for poor connection (such as damaged/bent/pulled-out pins, corrosion). • All the pins and connector normal?	Yes	Go to the next step.
		No	**If the MD player connector/pin is wrong:** • Replace the MD player. **If the wiring harness-side connector/pin is wrong:** • Repair or replace the pins and/or the connector.
3	• Inspect the center panel installation. • Does the CD player/MD player change the track number on the display when pressing the track up or down button?	Yes	For MD: Replace the MD player. For CD: Replace the audio unit.
		No	Go to the “No.1 Audio panel switch inspection” in this section.Replace the center panel as necessary.

FOREWORD [HARD DISC DRIVE]

DPE090366900W47

TROUBLESHOOTING INDEX

Hard disc Drive		
NO.	**Symptom**	**Possibe DTC**
1	No sound / Audio system does not play HDD	20:Er02, 20:Er10, 20:Er14, 20:Er16, 20:Er30
2	Audio system does not record any data on HDD / Audio system does not record the data on HDD properly	20:Er07, 20:Er10, 20:Er14, 20:Er15, 20:Er16, 20:Er30
3	Accidentally erase the data recorded on HDD	20:Er02, 20:Er14, 20:Er15, 20:Er16
4	Remote controller is inoperative	20:Er16

Quick Diagnostic Chart (Harddisc Drive)

X: Applicable

Troubleshooting itme / Possible factor	1 No sound / Audio system does not play HDD	2 Audio system does not record any data on HDD / Audio system does not record the data on HDD properly	3 Accidentally erase the data recorded on HDD	4 Remote controller is inoperarive
Not record data on HDD	X			
Audio unit is malfunction	X	X	X	
Non-conventional discs (e.g., 8cm (3 in) CD, 8cm (3 in) disc adapter, heart-shaped disc,octagonal disc)		X		
Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)		X		
HDD panel is malfunction		X		
Record the data while driving on the rough road		X		
HDD memory is full		X		
Improper operation on Audio unit			X	
Low remote controller battery				X
Remote controller is malfunction				X

DPE903EW1G01

NO.1 NO SOUND / AUDIO SYSTEM DOES NOT PLAY HDD / POSSIBLE DTC: 20:ER02, 20:ER10, 20:ER14, 20:ER16, 20:ER30

DPE090366900W48

1	**No sound / Audio system does not play HDD / Possible DTC:20:Er02, 20:Er10, 20:Er14, 20:Er16, 20:Er30**

TROUBLESHOOTING HINTS

- Not record data on HDD
- Audio unit is malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Press MEDIA button. • Does the audio unit display “NO DATA”?	Yes	System is normal (The audio unit won’t play even if select the HDD mode since there is no recorded data on HDD).
		No	Go to the next step.
2	• Inspect the audio unit display. • Does audio unit display the following? — Display “CHECKING” for a few minutes. — Audio unit is turned to OFF automatically. — Display clock. **Note** • **Audio unit displays “CHECKING” for a while during playing the HDD. It is normal operation.**	Yes	Replace the audio unit.
		No	Go to the next step.
3	• Does audio unit display either “LOW TEMP” or “HIGH TEMP”?	Yes	System is normal. (Temperature inside the HDD is out of specifications. Leave the system until the temperature is within the specification. Then, the system will start to operate.)
		No	Go to the next step.
4	• Does the audio unit display “DB ERROR”?	Yes	Go to the next step.
		No	Go to STEP 6.
5	• Turn the ignition switch to OFF and ON. • Does the audio system operate properly? **Note** • **The audio system does not sound during displaying “CHECKING” on the audio unit.**	Yes	System is normal.
		No	Replace the audio unit.
6	• Dose the audio unit display “FORMAT ERROR”?	Yes	Return to STEP 5.
		No	Replace the audio unit.

NO.2 AUDIO SYSTEM DOES NOT RECORD ANY DATA ON HDD / AUDIO SYSTEM DOES NOT RECORD THE DATA ON HDD PROPERLY / POSSIBLE DTC:20:ER07, 20:ER10, 20:ER14, 20:ER15, 20:ER16, 20:ER30

DPE090366900W49

2	**Audio system does not record any data on HDD / Audio system does not record the data on HDD properly / Possible DTC: 20:Er07, 20:Er10, 20:Er14, 20:Er15, 20:Er16, 20:Er30**

TROUBLESHOOTING HINTS

- Audio unit is malfunction
- Non-conventional discs (e.g., 8cm (3 in) CD, 8cm (3 in) disc adapter, heart-shaped disc, octagonal disc)
- Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation)
- HDD panel is malfunction
- Record the data while driving on the rough road
- HDD memory is full

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Play CD player. • Is there a sound?	Yes	Go to STEP 3.
		No	Go to the next step.
2	• Is the CD normal?	Yes	Replace the audio unit.
		No	System is normal (CD is malfunction). **Note** • **SCMS CD cannot be recorded on HDD.** • **The audio unit displays "NOT PERMIT" when use copied CD.** • **The audio nuit won't play the MP3 applicable CD.**
3	• Inspect REC button operation. • Does the REC button operate properly? **Note** • **Presssing REC button for a few second, REC button operates as REC PAUSE. Pressing REC button for a second, REC button operates as REC.**	Yes	Go to the next step.
		No	Replace HDD panel.
4	• Is there any noise or jumping sound?	Yes	Go to the next step.
		No	Go to STEP 6.
5	• Visually inspect the CD. • Is there any dirt, scratch or deformation on the CD?	Yes	System is normal (CD is malfunction.)
		No	System is normal (Explain to the customer that the data may be recorded on the HDD while driving on the rough road.)
6	• Operate REC button. • Is there "resume-recordind" available?	Yes	Go to the next step.
		No	Turn "resume-recording" to ON in MENU button.
7	• Operate REC button. • Is there "ACC OFF recording" available?	Yes	Go to the next step.
		No	Turn ACC OFF recording to ON in MENU button.
8	• Operate HDD. • Does the audio unit display "LOW BATT"?	Yes	System is normal. (Charge the vehicle battery.)
		No	Go to the next step.
9	• Dose the sudio unit display either "LOW TEMP" or "HIGH TEMP"?	Yes	System is normal (Temperature inside the HDD is out of specifications. Leave the system until the temperarture is within the specification. Then, the system will start to operate.)
		No	Go to the next step.
10	• Does the audio unit display "DISC FULL"?	Yes	System is normal (Explain to the customer that the HDD memory is full. In order to record any data, need to erase some data from the HDD.)
		No	Go to the next step.
11	• Does the audio unit display "REC ERROR"?	Yes	Replace the audio unit.
		No	Go to the next step.
12	• Clear error code, and then operate HDD. • Does the system record the data properly?	Yes	System is normal.
		No	Replace the audio unit.

NO.3 ACCIDENTALLY ERASE THE DATA RECORDED ON HDD / POSSIBLE DTC:20:ER02, 20:ER14, 20:ER15, 20:ER16

DPE090366900W50

3	**Accidentally erase the data recorded on HDD / Possible DTC: 20:Er02, 20:Er14, 20:Er15, 20:Er16**

TROUBLESHOOTING HINTS

- Audio unit is malfunction
- Improper operation on Audio unit

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Press ALL button. • Is any data available?	Yes	System is normal. (The data is transferred to CATEGORY/ Customer cancels FAVORITE mode.)
		No	Go to the next step.
2	• Press truck button. • Does the audio unit display “NO FILE” when selecting the erased data truck number and then go to the next truck?	Yes	System is normal. (Ask the customer to record the data again).
		No	Replace the audio unit.

NO.4 REMOTE CONTROLLER IS INOPERATIVE / POSSIBLE DTC:20:ER16

DPE090366900W51

4	Remote controller is in operative / Possible DTC:20:ER16
TROUBLESHOOTING HINTS • Low remote controller battery • Remote controller is malfunction	

Diagnostic procedure

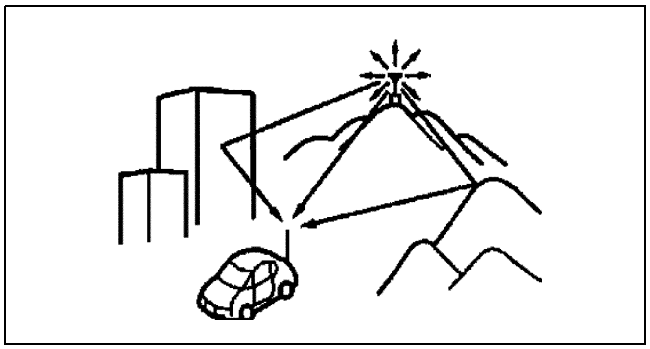
STEP	INSPECTION		ACTION
1	• Replace the battery known to be good. • Does remote controller operate properly?	Yes	Replace the battery.
		No	Replace the remote controller.

RADIO [REFERENCE]

DPE090366900W52

1. Multipath Noise

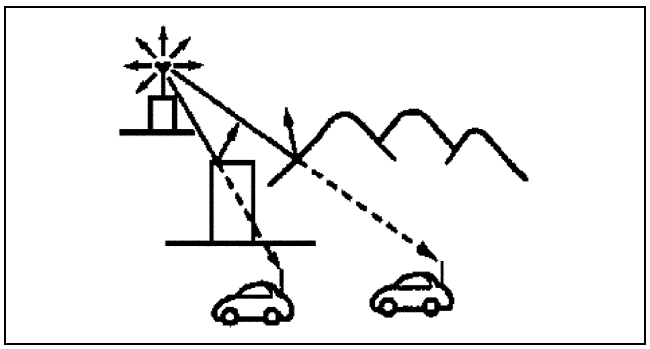
- Signals from an FM transmitter are a high frequency and similar to beams of light because they do not bend around corners, but they do reflect. Since FM signals can be reflected by obstructions, it is possible to receive both the direct signal and the reflected signal at the same time. This causes a slight delay in reception and may be heard as a broken sound or a distortion.



E6U902HWB007

2. Flutter/Skip Noise

- Signals become weak in valleys between mountains, tall building, and other obstacles. When the vehicle passes through such an area, the reception conditions may change suddenly, resulting in annoying noise.



E6U902HWB008

3. Stereo and Monaural Receptions

- As signals become weak, noise may appear more in stereo reception. Comparing to stereo reception, noise in monaural receptions is relatively less striking.

Measures in Audio System
Separation control

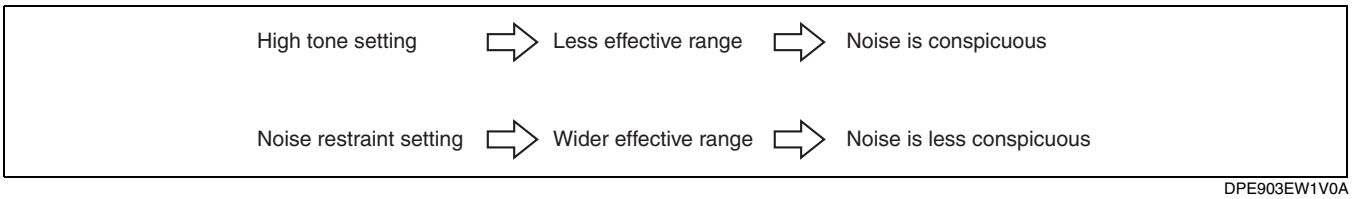
- Utilizing the characteristic of monaural reception that noise is relatively less striking than stereo reception, the audio system automatically changes the reception from stereo to monaural and lessens annoying noise when signals become weak or a multipath phenomenon occurs.

High tone control

- When signals become weak or a multipath phenomenon occurs, the audio system restrains volume level in high frequency band and lessens annoying noise.

Effect Setting of Separation Control and High Tone Control

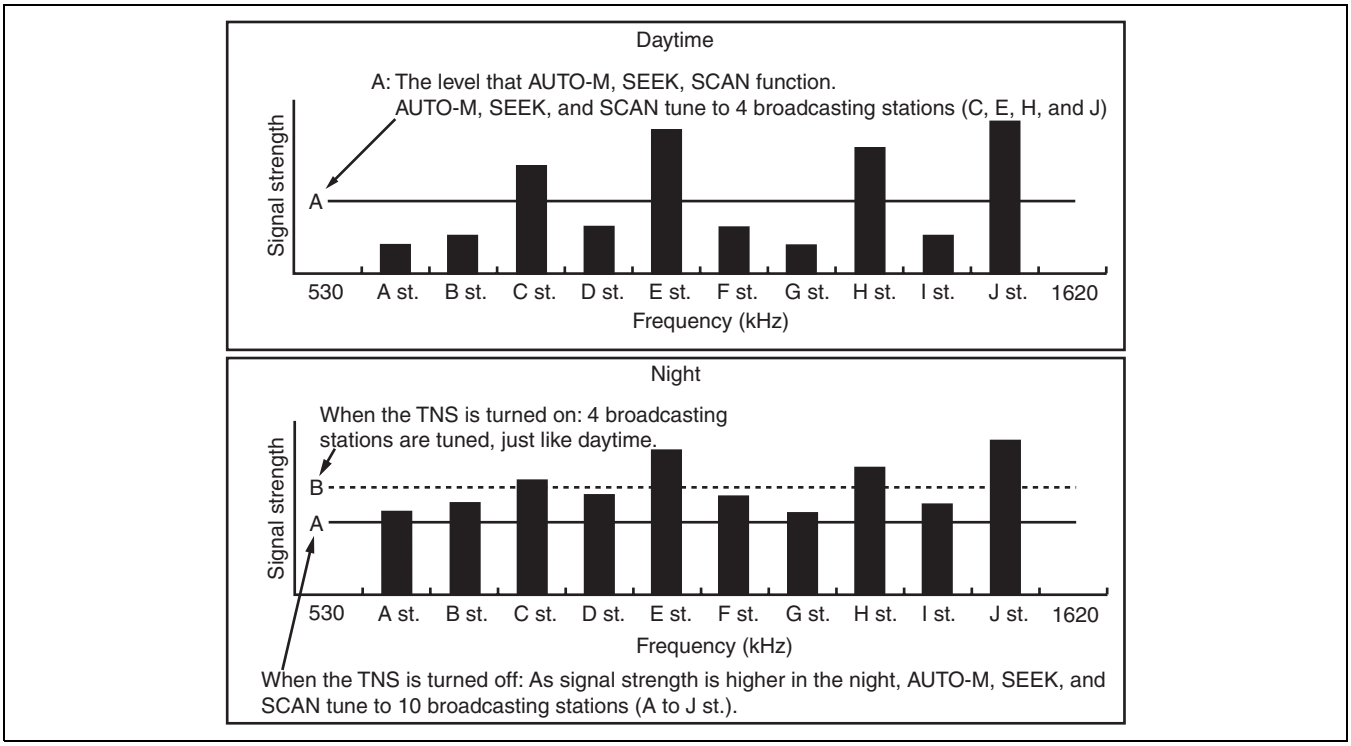
- The separation and high tone controls influence sound quality, Therefore they are specifically tuned for individual model. (Comparison of characteristic must be done on the same models)



DPE903EW1V0A

Remarks

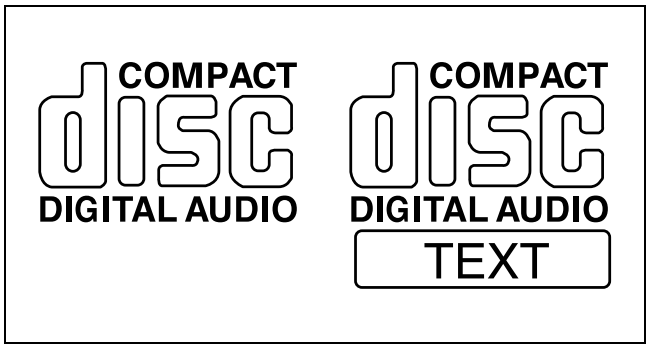
- Signals tend to reach longer distances in the night. It is conspicuous in AM signals, several audio functions may stop due to foreign broadcasting station or noise. though the audio system restrains sensitivity of SEEK and SCAN functions in the night, the audio system may select other than desired broadcasting station when signals are considerably strong. This function is liked to the parking light. When the parking light or headlight is turned on, SEEK and SCAN may not function for weak signals.



DPE903EW1V0B

AUDIO CD [REFERENCE]

DPE090366900W53

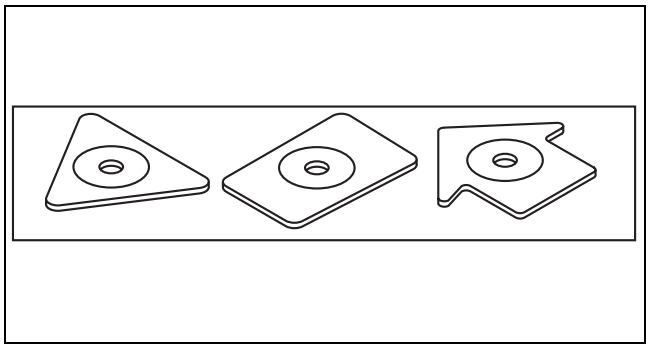


E6U903HWB010

- The CD player/changer has been designed to play CDs bearing the identification logo, COMPACT DISC DIGITAL AUDIO, as shown. No other discs can be played on the CD player/changer other than MP3 applicable one.
- The CD player/changer may not play the following CD:
  - — Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD condensation)
  - — 8 cm (3 in) CDs accessories (e.g., 8 cm (3 in) disc adapter, sticker, label)
  - — Nonstandard CD (e.g., Diameter/thickness is out of specification)
    Specification: 119.7—120.3 mm (4.668—4.692 in) of diameter, 12+0.3 or -0.1 mm (0.047+0.012 or 0.004 in) of thickness
- Do not use non-conventional discs. The CD player/changer could be damaged.

Examples:

- Although the same physical size as the compact disc, SACD uses a different kind of digital audio signal, Direct Stream Digital.
- The CD player/changer may not play the CD-R/RW properly due to the disc condition (excluding the MP3).



E6U903HWB011

MP3-Formatted File
Outline of CD-R and CD-RW

- Definition
  - — CD-R: The CD-R is a non-rewritable version. Once a section of a CD-R is written, it cannot be erased or rewritten.
  - — CD-RW: The CD-RW is a re-writable version of CD-ROM and can be written the data an unlimited number of times.
  - — Since a reflected laser beam amount of the CD-R/RW is less than the reflected laser beam amount of the conventional CD media, the CD player/changer may not play the CD-R/RW or have the sound jumped.
  - — Since the recording quality of the CD-R/RW vary widely, some CD-R/RW may not be played.

Recording method

- There are two methods for recording.
- Classification by recorder
  - — Record the audio data in the audio-CD by audio recorder
    - The price of the audio recorder and original audio-CD includes the copyright fee.
  - — Recorded the audio data in the conventional data-CD by the personal computer
    - The data-CD is cheaper than the audio-CD. But, there is a CD with the low quality.
- Classification by audio data uncompression/compression
  - — Uncompressed audio data
    - The CD-R/RW player can play the uncompressed audio data.
  - — Compressed audio data
    - It is possible to record the large quantity of music in a disc. The sound quality varies depends on the audio data compression format. The compressed audio data can be played on the applicable player only.
  - — Type of compression format:
    - MP3: MPEG Audio Layer 3 — Mazda genie MP3 applicable CD player is available.
    - WMA: Windows Media Audio
    - ATRAG: Adaptive TRansform Acoustic Coding

MP3

- The following condition should be met in order to record the MP3-formatted data on the MP3 applicable CD player:

Media	Applicable to the CD-R/RW
Logical format	ISO 9660 level 1&2 / Joliet / Romeo

Media	Applicable to the CD-R/RW
Number of directly	8 directly
Number of files	Maximum 255 as a total number of file and folder Maximum 155 for folder
ID3 TAG	Applicable to Ver1.1, 2.3 and 2.4
File extension	MP3
Packet writing	Not applicable
Bit rate	8kbps—320kbps/VBR
Sampling rate	11.025kHz—48kHz

09–03I SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

SYMPTOM TROUBLESHOOTING [INSTRUMENT CLUSTER]

DPE090355430W01

No.	TROUBLESHOOTING ITEM	PAGE
1	Fuel gauge needle position incorrect	(See 09–03I–2 NO. 1 FUEL GAUGE NEEDLE POSITION INCORRECT.)
2	All meters and gauges do not operate	(See 09–03I–3 NO. 2 ALL METERS AND GAUGES DO NOT OPERATE.)
3	ABS warning light illuminates	(See 09–03I–4 NO. 3 ABS WARNING LIGHT ILLUMINATES.)
4	MIL illuminates	(See 09–03I–5 NO. 4 MIL ILLUMINATES.)
5	Brake system warning light illuminates	(See 09–03I–6 NO. 5 BRAKE SYSTEM WARNING LIGHT ILLUMINATES.)
6	Instrument cluster illumination does not illuminate	(See 09–03I–7 NO. 6 INSTRUMENT CLUSTER ILLUMINATION DOES NOT ILLUMINATE.)

QUICK DIAGNOSTIC CHART [INSTRUMENT CLUSTER]

DPE090355430W02

X: Applicable

No.	Troubleshooting item / Possible factor	Open circuit or short to GND in power supply wiring harness, fuse malfunction	Power supply/GND wiring harness, fuse: Open circuit or short to GND in TNS wiring harness, fuse malfunction	Power supply/GND wiring harness, fuse: Open circuit in GND wiring harness	CAN system: Short to GND in CAN_H wiring harness	CAN system: Open circuit in CAN_H wiring harness	CAN system: Short to GND in CAN_L wiring harness	CAN system: Open circuit in CAN_L wiring harness	CAN system: CAN_H and CAN_L wiring harness short each other	ABS HU/CM ~~or DSC HU/CM~~: ABS HU/CM ~~or DSC HU/CM~~ malfunction	ABS HU/CM ~~or DSC HU/CM~~: Connector or pin malfunction	Instrument cluster: Instrument cluster malfunction	Instrument cluster: Connector or pin malfunction	PCM: PCM malfunction	PCM: Connector or pin malfunction	Fuel gauge sender unit	BCM: BCM malfunction	BCM: Connector or pin malfunction	Brake fluid level sensor	Parking brake switch
1	Fuel gauge needle position incorrect											X	X			X				
2	All meters and gauges do not operate	X		X								X	X							
3	ABS warning light illuminates				X	X	X	X	X	X	X	X	X							
4	MIL illuminates				X	X	X	X	X			X	X	X	X					
5	Brake system warning light illuminates				X	X	X	X	X	X	X	X	X				X	X	X	X
6	Instrument cluster illumination does not illuminate		X	X								X	X							

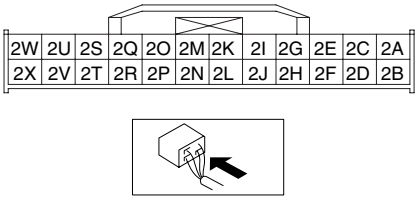
DPE903DW1001

NO. 1 FUEL GAUGE NEEDLE POSITION INCORRECT

DPE090355430W03

1	Fuel gauge needle position incorrect
POSSIBLE CAUSE	• Fuel gauge sender unit malfunction • Instrument cluster malfunction • Connector or pin malfunction • Fuel gauge sender unit is improperly installed

Diagnostic procedure

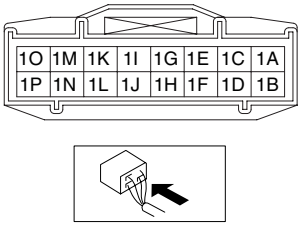
STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the ON position. • Inspect the fuel gauge needle does not move after ignition switch is turned off, or display does not indicate F even though fuel tank is full. • Is fuel gauge okay?	Yes	Troubleshooting completed.
		No	Go to the next step.
2	• Start the instrument cluster input/output check mode. • Select the check code 22. • Display value is **7—206**?	Yes	Go to the next step.
		No	Go to Step 4.
3	• Perform the check code 23 inspection. • Is there any malfunction?	Yes	Replace the instrument cluster.
		No	Go to the next step.
4	• Perform the check code 22 inspection. • Is there any malfunction?	Yes	Go to the next step.
		No	Go to Step 6.
5	• Turn the ignition switch off. • Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay?  	Yes	Replace the instrument cluster.
		No	Repair or replace the terminal.
6	• Turn the ignition switch off. • Inspect the fuel gauge sender unit connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay?	Yes	Go to the next step.
		No	Repair or replace the terminal.
7	• Turn the ignition switch off. • Is fuel gauge sender unit installed properly?	Yes	Inspect the fuel gauge sender unit.
		No	Reinstall the fuel gauge sender unit.

NO. 2 ALL METERS AND GAUGES DO NOT OPERATE

DPE090355430W04

2	All meters and gauges do not operate
POSSIBLE CAUSE	• Instrument cluster malfunction • Connector or pin malfunction • Fuse malfunction • GND wiring harness malfunction

Diagnostic procedure

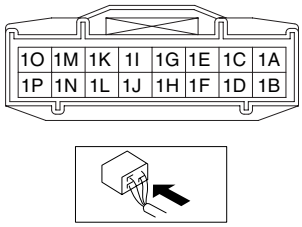
STEP	INSPECTION		ACTION
1	• Turn the ignition switch to the ON position. • Inspect the following: — Does the odometer/tripmeter illuminate? — Does the fuel gauge operate? — Dose the engine warning light illumination turn off within **approx. 3 s**?	Yes	Troubleshooting completed.
		No	Go to the next step.
2	• Inspevt the METER fuse. • Is the fuse okay?	Yes	Go to the next step.
		No	Replace the fuse.
3	• Turn the ignition switch off. • Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay? 	Yes	Replace the instrument cluster.
		No	Repair or replace the terminal.

NO. 3 ABS WARNING LIGHT ILLUMINATES

DPE090355430W05

3	**ABS warning light illuminates**
POSSIBLE CAUSE	• ABS HU/CM ~~or DSC HU/CM~~ malfunction • Instrument cluster malfunction • Connector or pin malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Start the engine. • Does the ABS warning light turn off?	Yes	Troubleshooting completed.
		No	Go to the next step.
2	• Are there a number of warning lights illuminated?	Yes	Go to Step 4.
		No	Go to the next step.
3	• Start the instrument cluster input/output check mode. • Does the ABS warning light turn off with a check code other than 26?	Yes	Inspect the ABS HU/CM ~~or DSC HU/CM~~.
		No	Replace the instrument cluster.
4	• Disconnect the negative battery cable. • Measure the resistance between the DLC-2 terminals F and E. • Is the resistance **54—66 ohms**?	Yes	Go to the next step.
		No	Go to Step 6.
5	• Disconnect the negative battery cable. • Inspect the DLC-2 terminals F and E for short to power supply or GND. • Is there any malfunction?	Yes	Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.
		No	Replace the instrument cluster.
6	• Turn the ignition switch off. • Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay?  	Yes	Replace the instrument cluster.
		No	Repair or replace the terminal.

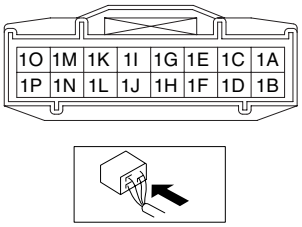
NO. 4 MIL ILLUMINATES

DPE090355430W06

4	MIL illuminates
POSSIBLE CAUSE	• PCM malfunction • Instrument cluster malfunction • Connector or pin malfunction

09

Diagnostic procedure

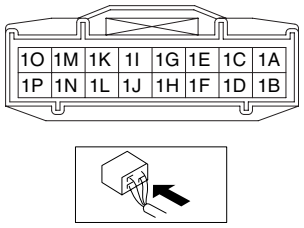
STEP	INSPECTION		ACTION
1	• Start the engine. • Does the MIL turn off?	Yes	Troubleshooting completed.
		No	Go to the next step.
2	• Are there a number of warning lights illuminated?	Yes	Go to Step 4.
		No	Go to the next step.
3	• Start the instrument cluster input/output check mode. • Does the MIL turn off with a check code other than 26?	Yes	Inspect the PCM.
		No	Replace the instrument cluster.
4	• Disconnect the negative battery cable. • Measure the resistance between the DLC-2 terminals F and E. • Is the resistance **54—66 ohms**?	Yes	Go to the next step.
		No	Go to Step 6.
5	• Disconnect the negative battery cable. • Inspect the DLC-2 terminals F and E for short to power supply or GND. • Is there any malfunction?	Yes	Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.
		No	Replace the instrument cluster.
6	• Turn the ignition switch off. • Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay?  	Yes	Replace the instrument cluster.
		No	Repair or replace the terminal.

NO. 5 BRAKE SYSTEM WARNING LIGHT ILLUMINATES

DPE090355430W07

5	Brake system warning light illuminates
POSSIBLE CAUSE	• ABS HU/CM or DSC HU/CM malfunction • BCM malfunction • Brake fluid level sensor malfunction • Parking brake switch malfunction • Instrument cluster malfunction • Connector or pin malfunction

Diagnostic procedure

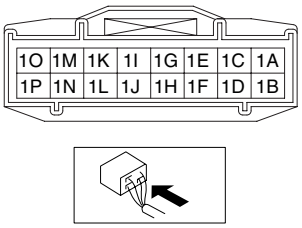
STEP	INSPECTION		ACTION
1	• Start the engine. • release the parking brake. • Does the brake system warning light turn off?	Yes	Troubleshooting completed.
		No	Go to the next step.
2	• Are there a number of warning lights illuminated?	Yes	Go to Step 5.
		No	Go to the next step.
3	• Does the brake fluid need replenishment?	Yes	Add brake fluid.
		No	Go to the next step.
4	• Start the instrument cluster input/output check mode. • Does the brake system warning light turn off with a check code other than 26?	Yes	Inspect the ABS HU/CM, ~~DSC HU/CM,~~ BCM, brake fluid level sensor, parking brake switch or connectors.
		No	Replace the instrument cluster.
5	• Disconnect the negative battery cable. • Measure the resistance between the DLC-2 terminals F and E. • Is the resistance **54—66 ohms**?	Yes	Go to the next step.
		No	Go to Step 7.
6	• Disconnect the negative battery cable. • Inspect the DLC-2 terminals F and E for short to power supply or GND. • Is there any malfunction?	Yes	Inspect the wiring harness and CAN system-related module. Repair or replace the malfunctioning part.
		No	Replace the instrument cluster.
7	• Turn the ignition switch off. • Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay? 	Yes	Replace the instrument cluster.
		No	Repair or replace the terminal.

NO. 6 INSTRUMENT CLUSTER ILLUMINATION DOES NOT ILLUMINATE

DPE090355430W08

6	Instrument cluster illumination does not illuminate
POSSIBLE CAUSE	• Instrument cluster malfunction • Connector or pin malfunction • Fuse malfunction • GND wiring harness malfunction

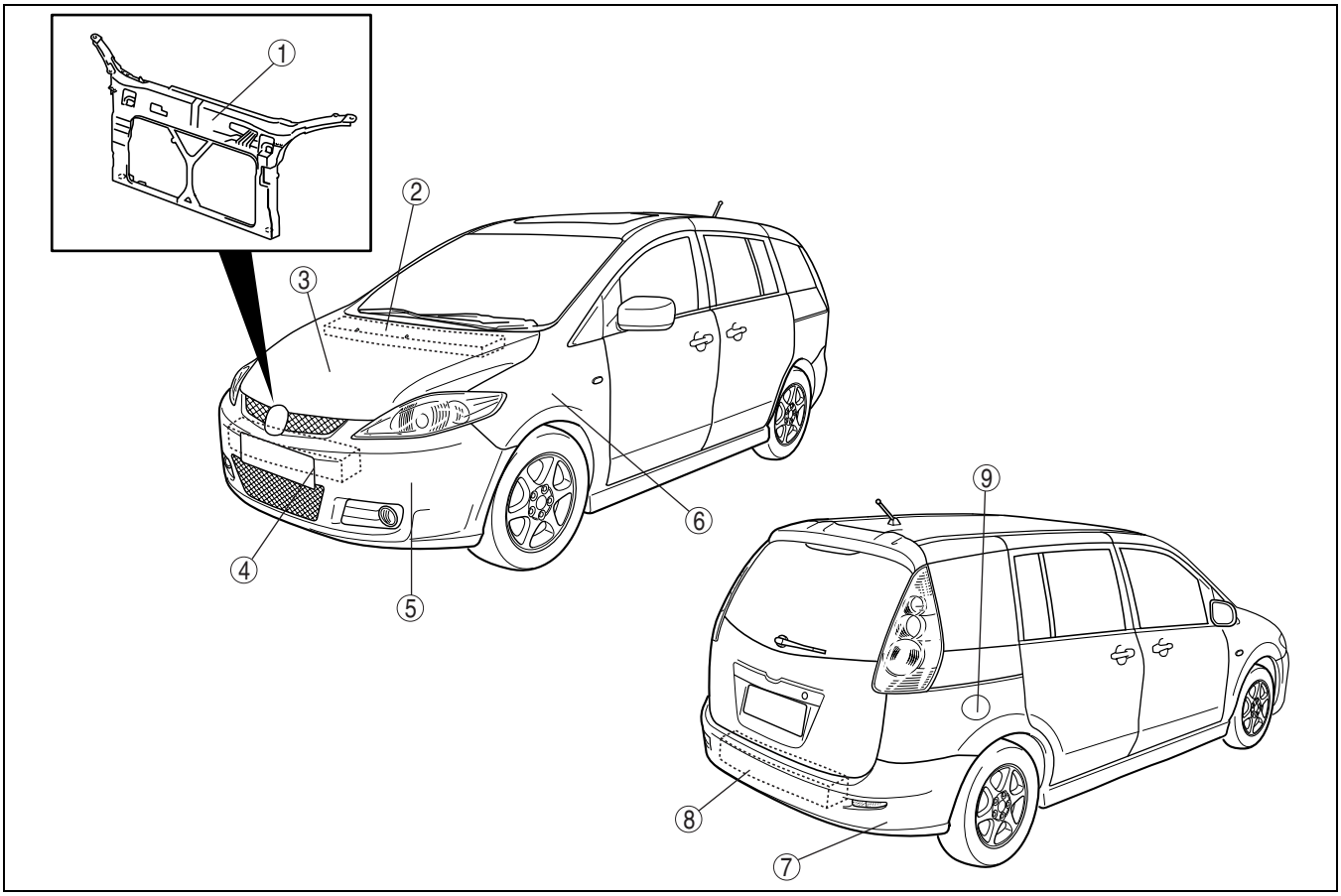
Diagnostic procedure

STEP	INSPECTION		ACTION
1	• Turn the light switch to the TNS position. • Does the instrument cluster illumination turn on?	Yes	Troubleshooting completed.
		No	Go to the next step.
2	• Does the non-illumination include the entire instrument cluster?	Yes	Go to the next step.
		No	Replace the instrument cluster.
3	• Inspevt the ROOM and ILLUMI fuse. • Are the fuses okay?	Yes	Go to the next step.
		No	Replace the fuse.
4	• Turn the ignition switch off. • Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is the terminals are okay? 	Yes	Replace the instrument cluster.
		No	Repair or replace the terminal.

09–10 BODY PANELS

BODY PANEL LOCATION INDEX

DPE091056100W01



DPE910ZW1000

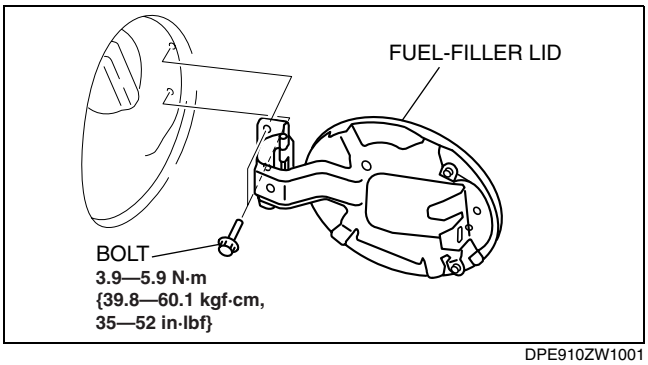
1	Shroud panel (See 09–10–12 SHROUD PANEL REMOVAL/ INSTALLATION.)
2	Cowl panel (See 09–10–11 COWL PANEL REMOVAL/ INSTALLATION.)
3	Bonnet (See 09–10–2 BONNET REMOVAL/ INSTALLATION.) (See 09–10–3 BONNET ADJUSTMENT.)
4	Front bumper reinforcement (See 09–10–9 FRONT BUMPER REINFORCEMENT REMOVAL/INSTALLATION.)
5	Front bumper (See 09–10–5 FRONT BUMPER REMOVAL/ INSTALLATION.) (See 09–10–6 FRONT BUMPER DISASSEMBLY/ ASSEMBLY.)
6	Front fender panel (See 09–10–11 FRONT FENDER PANEL REMOVAL/INSTALLATION.)
7	Rear bumper (See 09–10–8 REAR BUMPER REMOVAL/ INSTALLATION.) (See 09–10–8 REAR BUMPER DISASSEMBLY/ ASSEMBLY.)

8	Rear bumper reinforcement (See 09–10–10 REAR BUMPER REINFORCEMENT REMOVAL/INSTALLATION.)
9	Fuel-filler lid (See 09–10–2 FUEL-FILLER LID REMOVAL/INSTALLATION.) (See 09–10–2 FUEL-FILLER LID ADJUSTMENT.)

FUEL-FILLER LID REMOVAL/INSTALLATION

DPE091042400W01

1. Remove the bolt.
2. Remove the fuel-filler lid.
3. Install in the reverse order of removal.
4. Adjust the fuel-filler lid. (See 09–10–2 FUEL-FILLER LID ADJUSTMENT.)



DPE910ZW1001

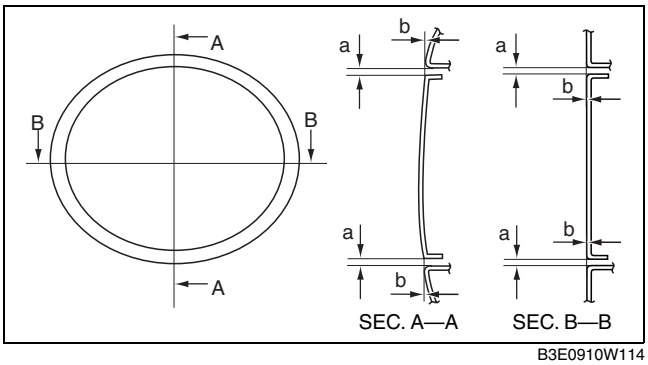
FUEL-FILLER LID ADJUSTMENT

DPE091042400W02

1. Measure the gap and height difference between the fuel-filler lid and the body.
2. Loosen the fuel-filler lid installation bolts and adjust the fuel-filler lid.

   Standard clearance
   a: 1.7—3.7 mm
   b: -0.5—1.5 mm

3. Tighten the bolts.



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BONNET REMOVAL/INSTALLATION

DPE091056601W01

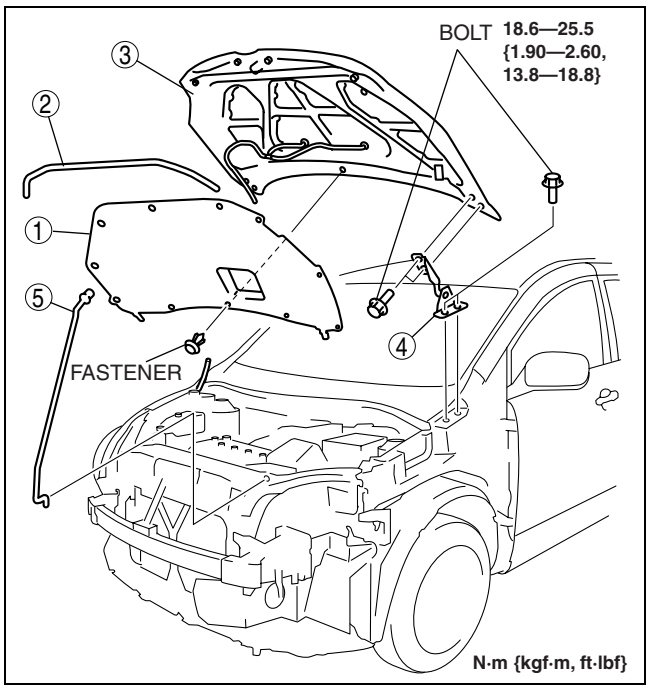
Warning
- **Removing the bonnet without supporting it could cause the bonnet to fall and cause serious injury. Always perform the procedure with at least another person to prevent the bonnet from falling.**

1. To remove the bonnet hinges, remove the following parts:
   (1) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (2) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (3) Front side turn lights (See 09–18–12 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
   (4) Front bumper (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
   (5) Front combination lights (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (6) Side step molding (vehicles with side step molding) (See 09–16–5 SIDE STEP MOLDING REMOVAL/INSTALLATION.)
   (7) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
   (8) Front fender panel (See 09–10–11 FRONT FENDER PANEL REMOVAL/INSTALLATION.)
2. Disconnect the windshield washer hose.

3. Remove in the order indicated in the table.

1	Bonnet insulator
2	Shroud seal weatherstrip
3	Bonnet
4	Bonnet hinge
5	Bonnet stay

4. Install in the reverse order of removal.
5. Adjust the bonnet. (See 09–10–3 BONNET ADJUSTMENT.)



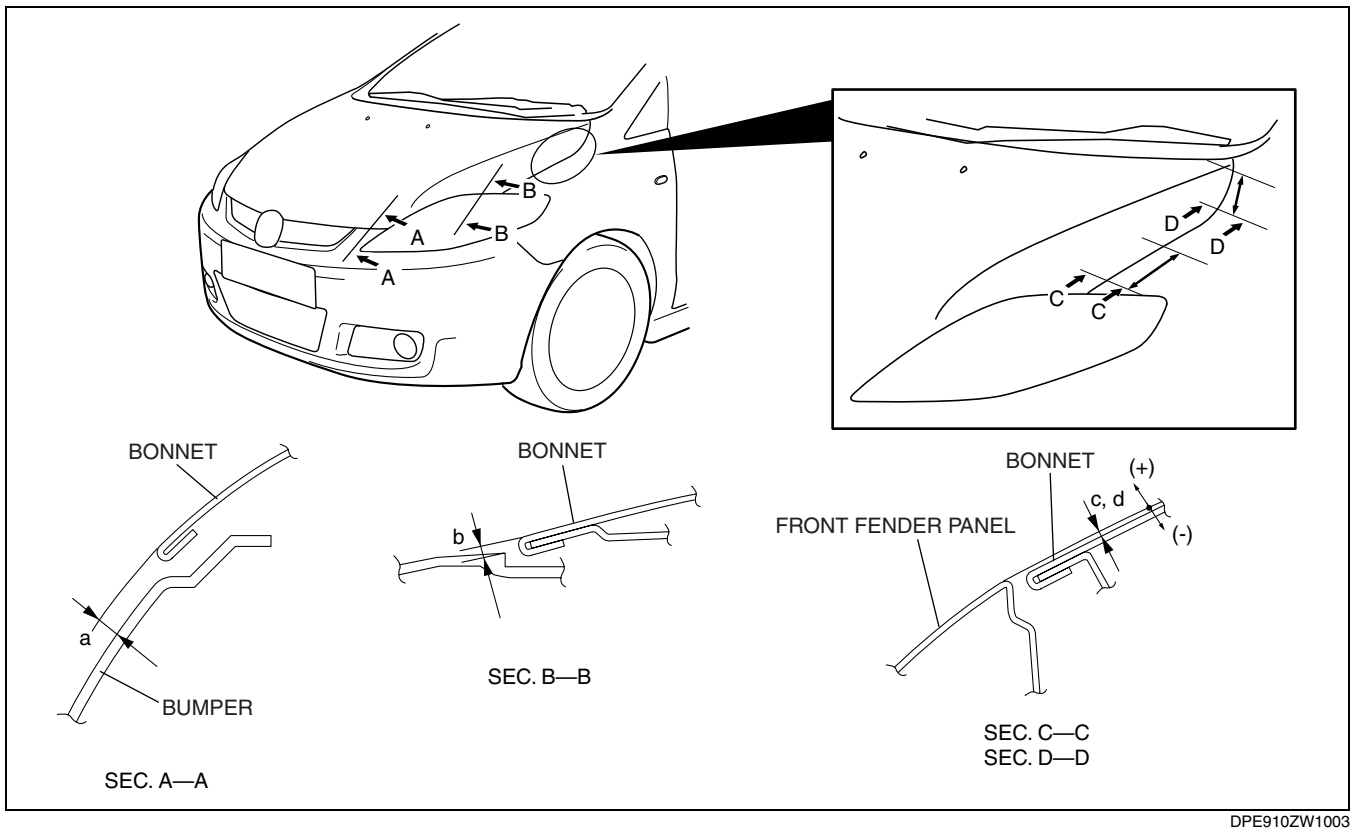
DPE910ZW1002

BONNET ADJUSTMENT

DPE091056601W02

Gap Adjustment

1. Measure the gap between the bonnet and body.

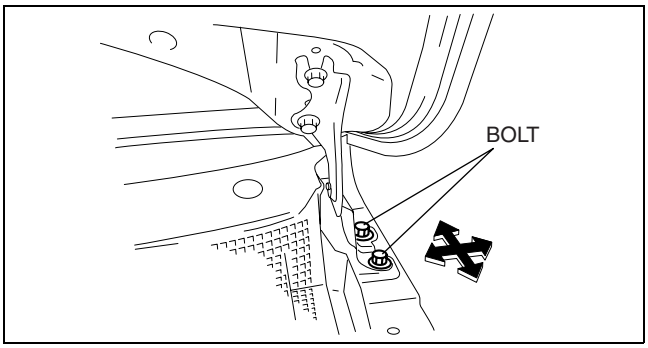


DPE910ZW1003

Standard clearance
a: -1.0—3.0 mm
b: -0.5—2.5 mm
c: -1.5—0.5 mm
d: -1.0—1.0 mm

2. Disconnect the negative battery cable.

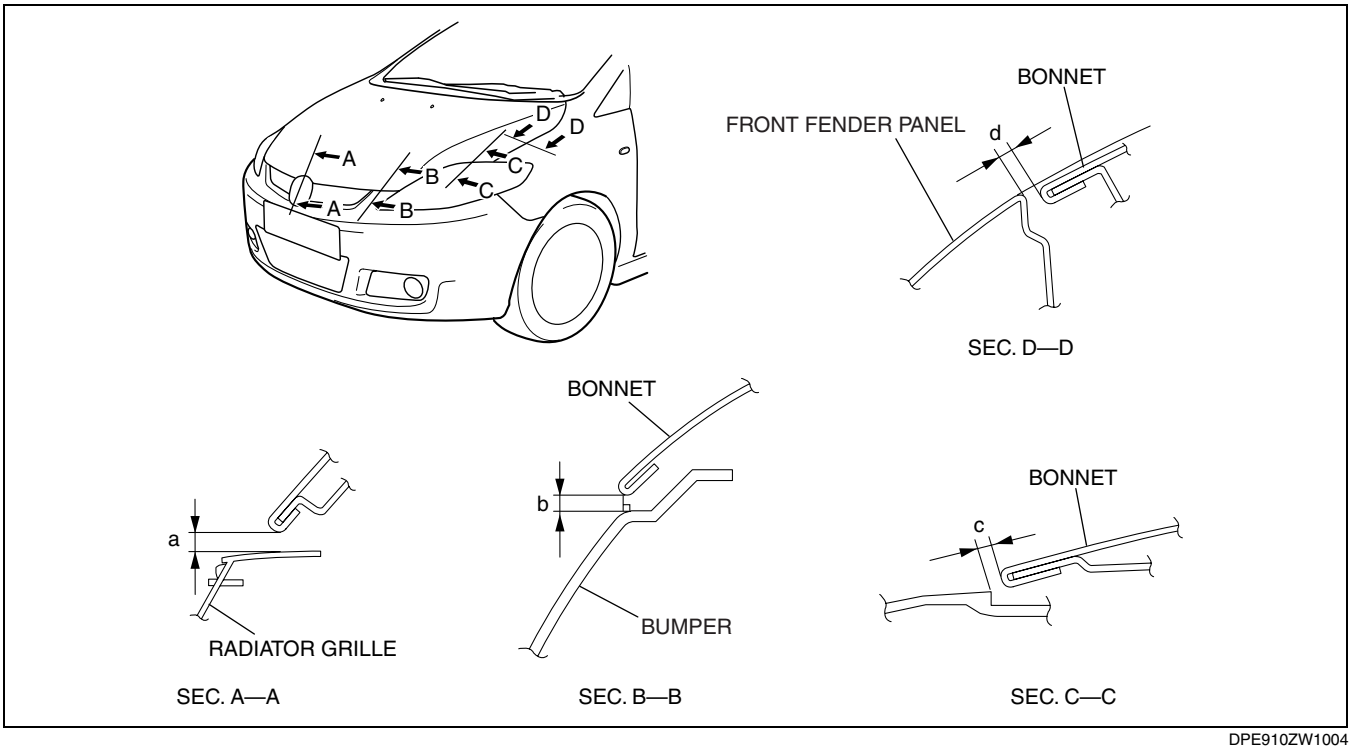
3. Remove the following parts:
   (1) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (2) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (3) Front side turn lights (See 09–18–12 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
   (4) Front bumper (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
   (5) Front combination lights (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (6) Side step molding (vehicles with side step molding) (See 09–16–5 SIDE STEP MOLDING REMOVAL/INSTALLATION.)
   (7) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
   (8) Front fender panel (See 09–10–11 FRONT FENDER PANEL REMOVAL/INSTALLATION.)
4. Loosen the bonnet hinge installation bolts and adjust the bonnet.
5. Tighten the bolts.



B3E0910W103

Height Difference Adjustment

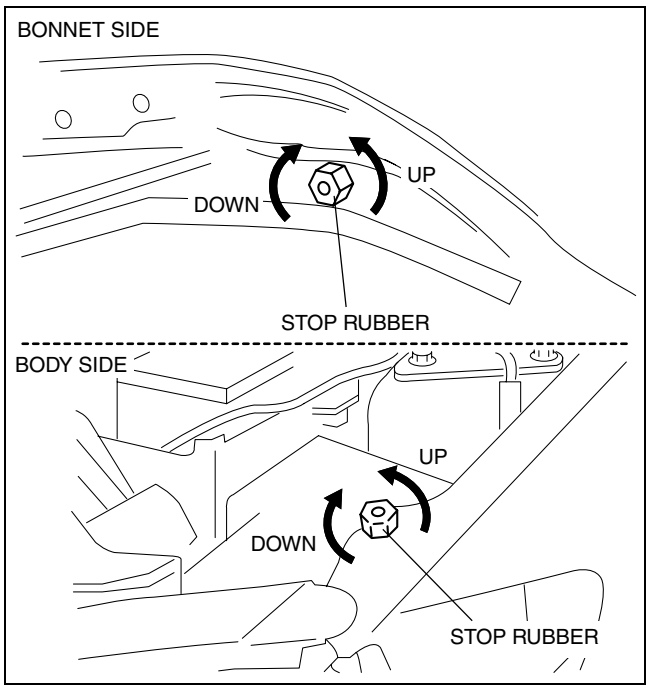
1. Measure the height difference between the bonnet and body.



DPE910ZW1004

Standard clearance
a: 2.5—6.5 mm
b: 3.0—6.0 mm
c: 2.5—6.5 mm
d: 2.5—4.5 mm

2. Turn the stop rubber to adjust.

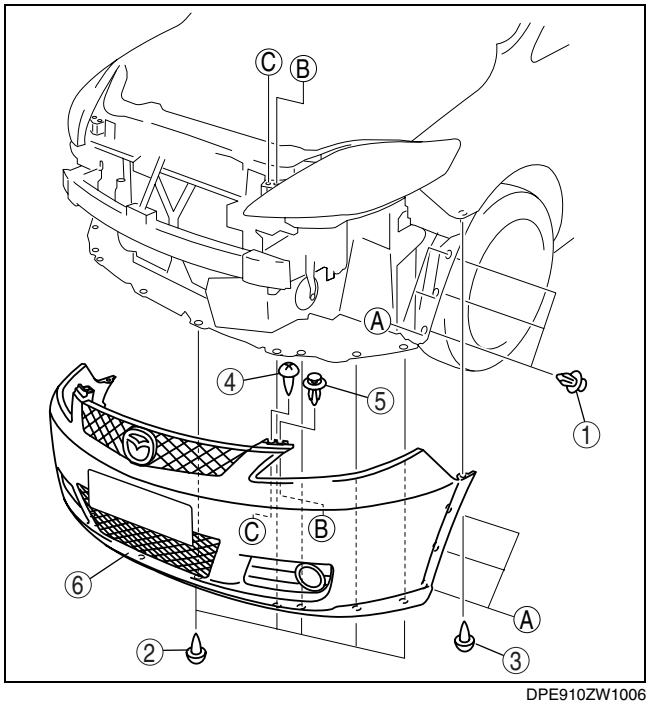


DPE910ZW1005

FRONT BUMPER REMOVAL/INSTALLATION

DPE091050000W01

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



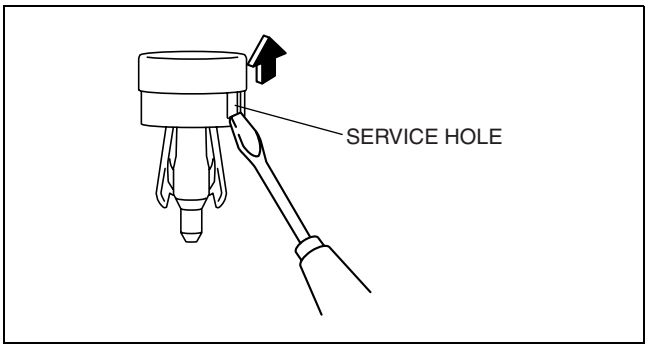
DPE910ZW1006

1	Fastener A
2	Screw A
3	Screw B
4	Screw C
5	Fastener B (See 09–10–6 Fastener B Removal Note.)
6	Front bumper (See 09–10–6 Front Bumper Removal Note.) (See 09–10–6 Front Bumper Installation Note.)

3. Disconnect the front fog light connector.
4. Install in the reverse order of removal.
5. Adjust the front fog light aiming for vehicles with front fog lights. (See 09–18–11 FRONT FOG LIGHT AIMING.)

Fastener B Removal Note

1. Remove fastener B by inserting a small flathead screwdriver into the service hole as shown in the figure.



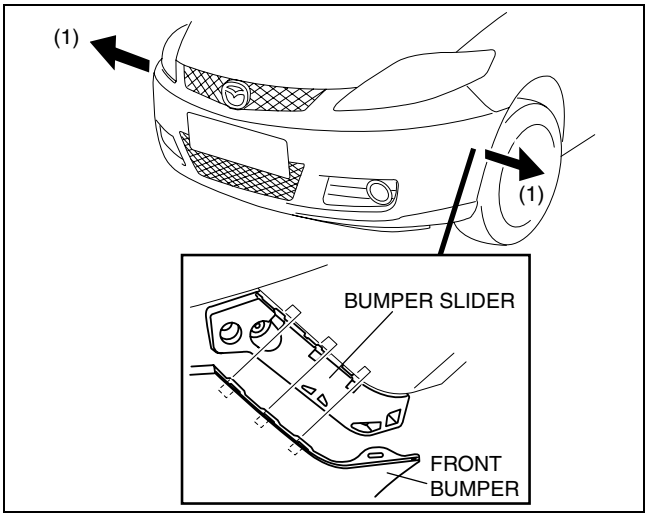
DPE910ZW1007

Front Bumper Removal Note

1. Pull the front bumper ends (wheel arch) outward (1) to detach from the bumper slider.

   Caution
   - **When disengaging the front bumper from the bumper slider, the front bumper could fall and be damaged. Secure the front bumper so that it does not fall.**

2. Remove the front bumper from the body.



DPE910ZW1008

Front Bumper Installation Note

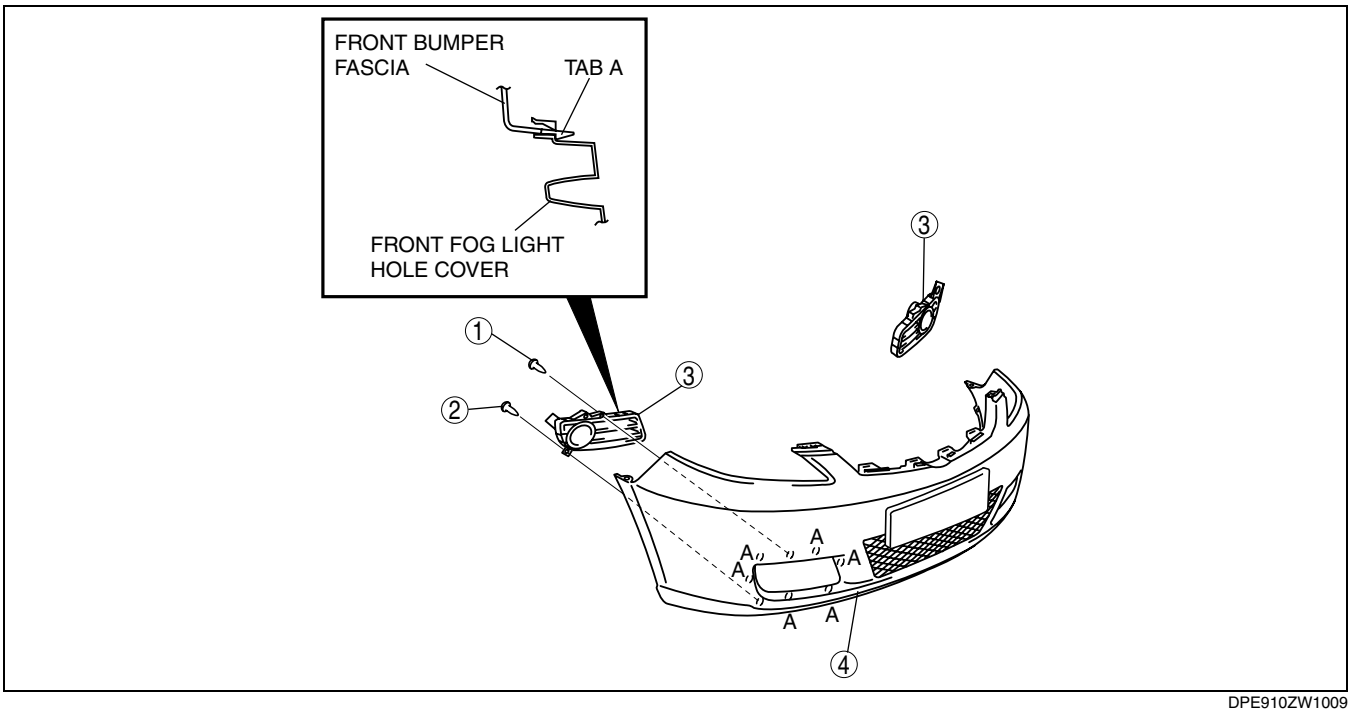
1. Spread the front bumper ends apart.
2. Assemble the front bumper to the body.
3. Press the front bumper connecting area into the body to engage with the bumper slider.

FRONT BUMPER DISASSEMBLY/ASSEMBLY

DPE091050000W02

1. Remove the front fog light. (Vehicles with front fog lights) (See 09–18–10 FRONT FOG LIGHT REMOVAL/INSTALLATION.)
2. Remove the radiator grille. (See 09–16–3 RADIATOR GRILLE REMOVAL/INSTALLATION.)
3. Disassemble in the order indicated in the table.

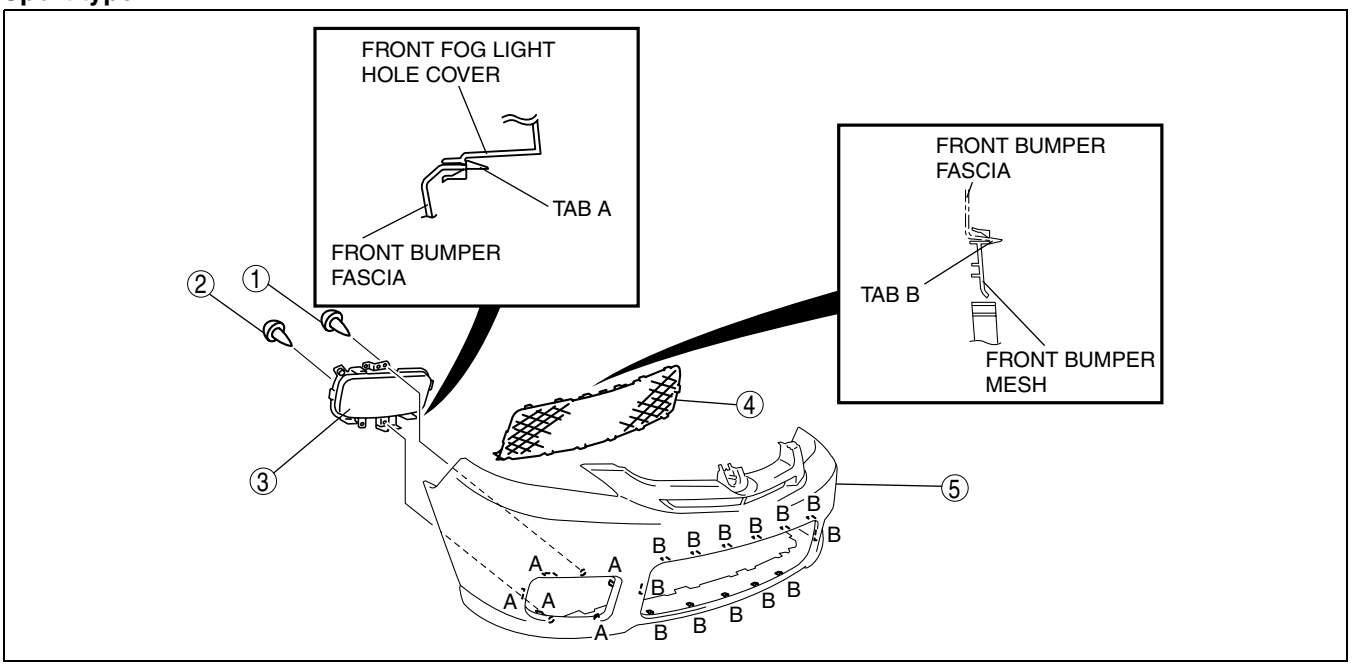
Standard type



DPE910ZW1009

1	Screw (Vehicles with front fog lights or headlight cleaners)
2	Screw (Vehicles with front fog lights)
3	Front fog light hole cover
4	Front bumper fascia

Sport type



DPE910ZW1010

1	Screw (Vehicles with front fog lights or headlight cleaners)
2	Screw (Vehicles with front fog lights)
3	Front fog light cover
4	Front bumper mesh
5	Front bumper fascia

4. Assemble in the reverse order of disassembly.

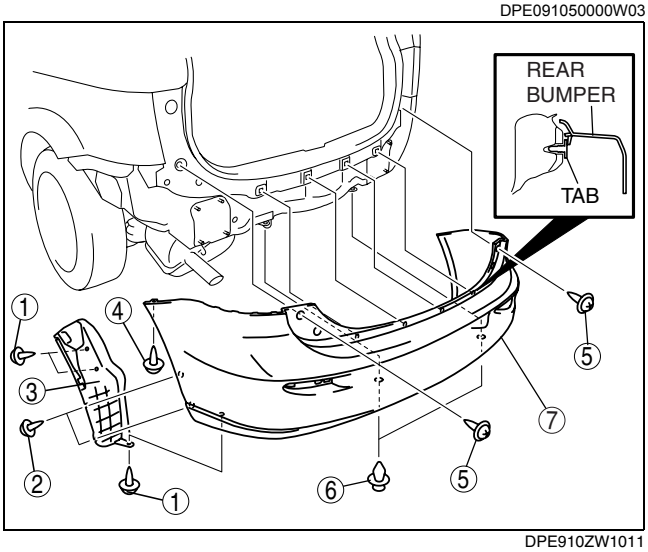
REAR BUMPER REMOVAL/INSTALLATION

1. Remove in the order indicated in the table.

1	Screw A
2	Screw B (Vehicles with rear flap)
3	Splash shield
4	Screw C
5	Screw D
6	Fastener
7	Rear bumper (See 09–10–8 Rear Bumper Removal Note.) (See 09–10–8 Rear bumper Installation Note.)

2. Install in the reverse order of removal.

DPE091050000W03



DPE910ZW1011

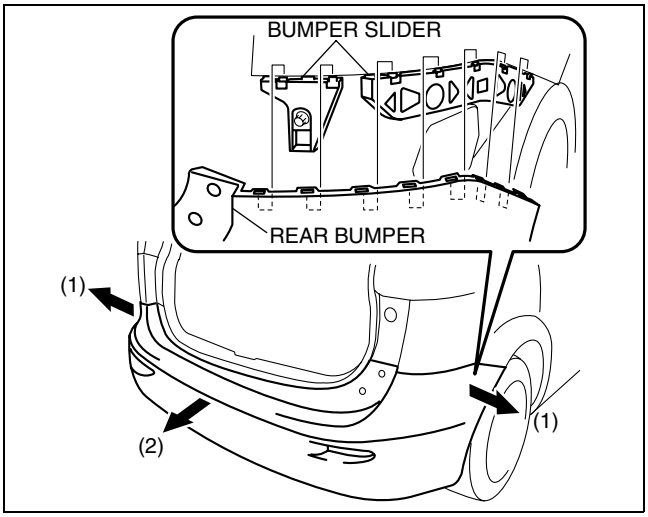
Rear Bumper Removal Note

1. Pull the rear bumper ends (wheel arch) outward (1) to detach from the bumper slider.

Caution

- **When detaching the rear bumper from the bumper slider, the rear bumper could fall and be damaged. Secure the rear bumper so that it does not fall.**

2. Remove the rear bumper (2).



DPE910ZW1012

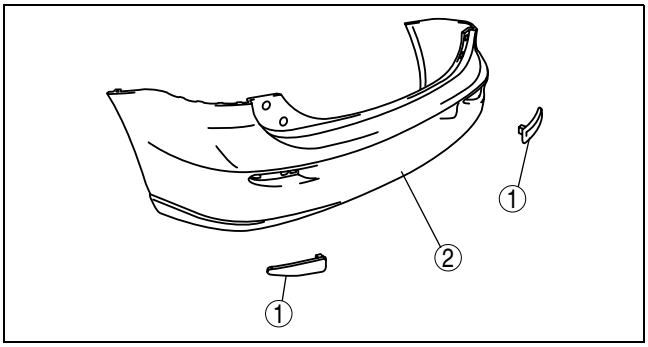
Rear bumper Installation Note

1. Spread the rear bumper ends apart.
2. Assemble the rear bumper to the body.
3. Press the rear bumper connecting area into the body to engage with the bumper slider.

REAR BUMPER DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.

DPE091050000W04



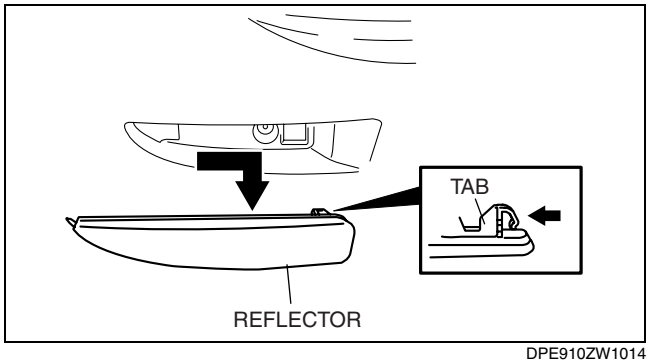
DPE910ZW1013

1	Rear reflector (See 09–10–9 Reflector Removal Note.)
2	Rear bumper fascia

2. Assemble in the reverse order of disassembly.

Reflector Removal Note

1. Pull off the reflector from the rear bumper in the direction shown by the arrow.



DPE910ZW1014

FRONT BUMPER REINFORCEMENT REMOVAL/INSTALLATION

DPE091050000W05

Caution

- **Because the shroud panel is installed to the front bumper reinforcement, support the shroud panel using a jack before removing the front bumper reinforcement so as not to apply excessive force to the shroud panel.**

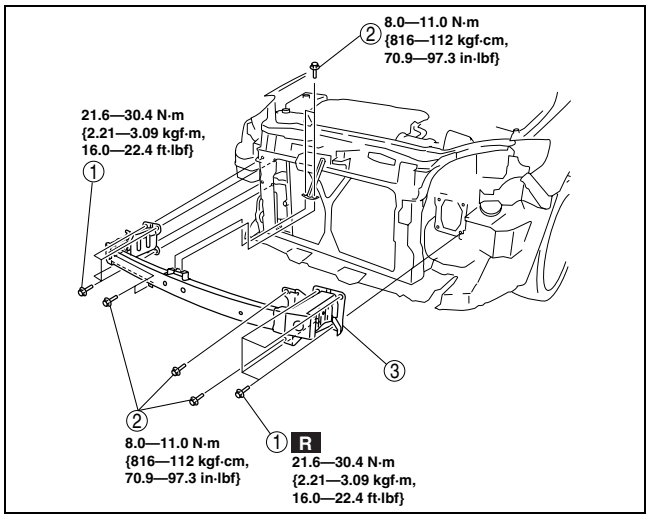
1. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
2. Remove the front combination lights. (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
3. Remove the horn. (See 09–22–13 HORN REMOVAL/INSTALLATION.)
4. Set the following parts out of the way.
   (1) Power steering oil pump ~~[L8, LF]~~
   (2) Washer tank
5. Remove the air guider (LH).
6. Remove in the order indicated in the table.

Caution

- **After removing bolt A (lower left, one location only), always replace it with a specialized service bolt (Part No. BPYK 500Z2) to ensure grounding of the horn.**

1	Bolt A
2	Bolt B
3	Front bumper reinforcement (See 09–10–9 Front Bumper Reinforcement Removal Note.)

7. Install in the reverse order of removal.
8. After installation, verify that the horn operates correctly.

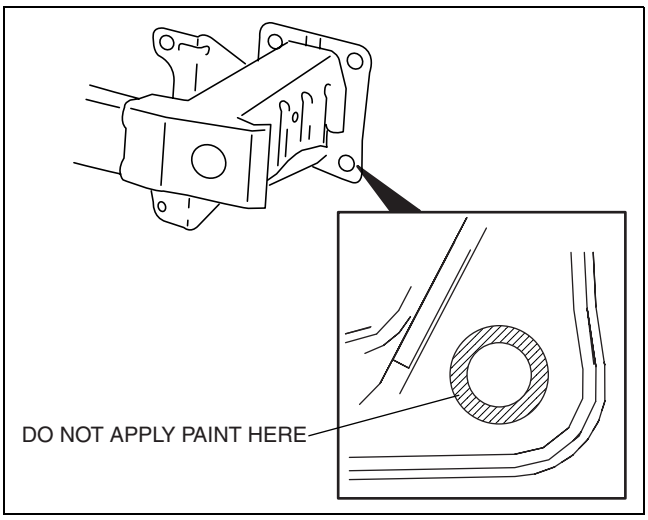


DPE910ZW1015

Front Bumper Reinforcement Removal Note
Reusing the front bumper reinforcement

Caution

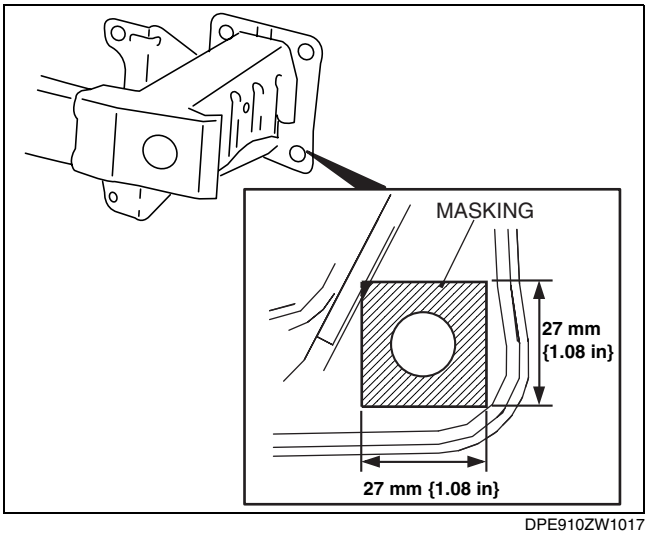
- **To ensure the body ground, do not coat the bolt A flange contact surface of the front bumper reinforcement.**



DPE910ZW1016

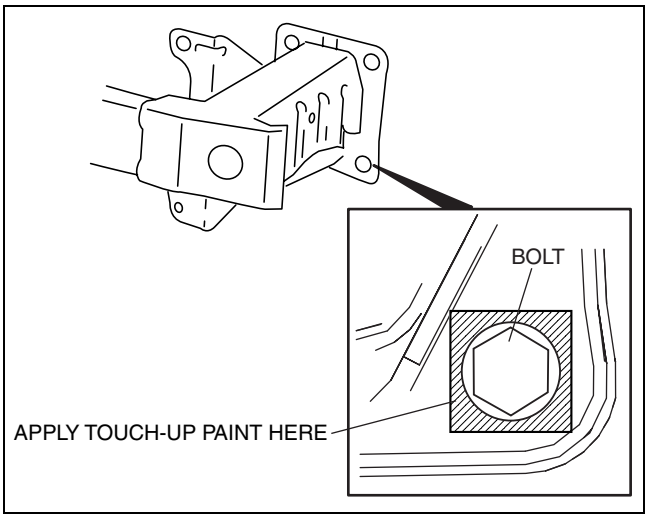
Using a new front bumper reinforcement

1. Remove the masking affixed to the front bumper reinforcement.
   - If the masking has already been peeled off, sand off rust or coating film in the masking area.



DPE910ZW1017

2. After installing bolt A, touch-up the exposed base material area of the front bumper reinforcement with touch-up paint.



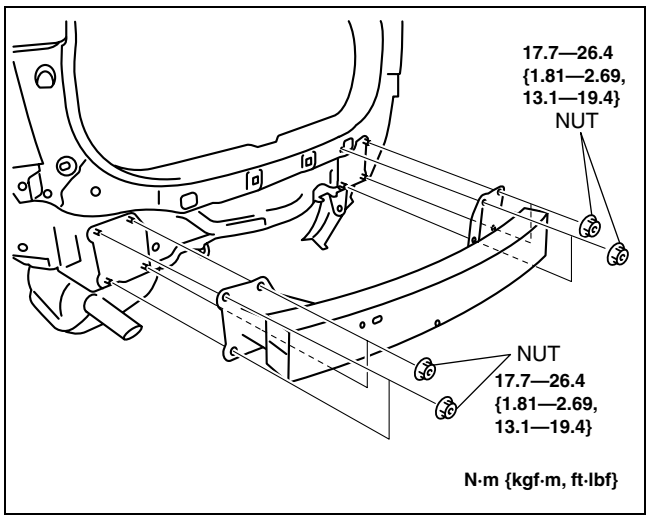
DPE910ZW1018

REAR BUMPER REINFORCEMENT REMOVAL/INSTALLATION

DPE091050000W06

1. Remove the rear bumper. (See09–10–8 REAR BUMPER REMOVAL/INSTALLATION)

2. Remove the nuts, then remove the rear bumper reinforcement.
3. Install in the reverse order of removal.



DPE910ZW1022

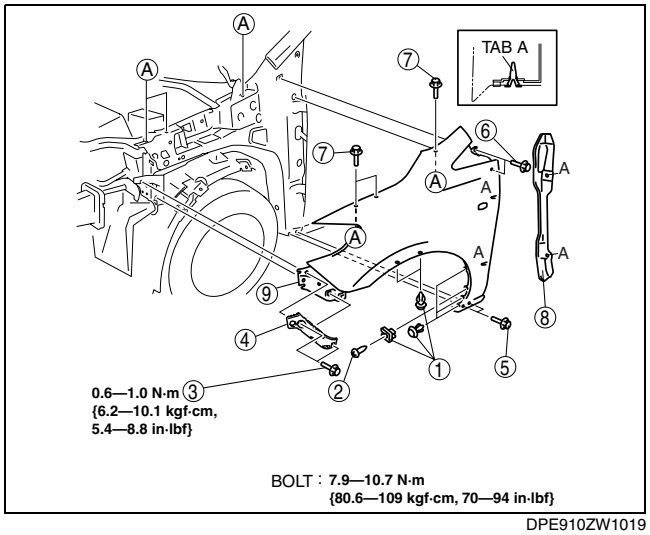
FRONT FENDER PANEL REMOVAL/INSTALLATION

DPE091052010W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (2) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (3) Front side turn lights (See 09–18–12 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
   (4) Front bumper (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
   (5) Front combination lights (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (6) Side step molding (vehicles with side step molding) (See 09–16–5 SIDE STEP MOLDING REMOVAL/INSTALLATION.)
   (7) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
3. Remove in the order indicated in the table.

1	Fastener
2	Screw
3	Bolt A
4	Bumper slider
5	Bolt B
6	Bolt C
7	Bolt D
8	Seal plate
9	Front fender panel

4. Install in the reverse order of removal.



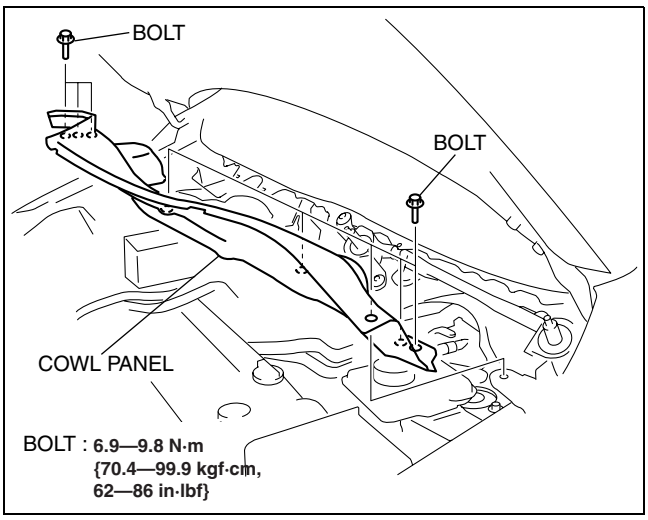
DPE910ZW1019

COWL PANEL REMOVAL/INSTALLATION

DPE091056100W02

1. Remove the windshield wiper arm and blade. (See 09–19–4 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION)
2. Remove the cowl grille. (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
3. Remove the center cowl grille. (See 09–16–3 CENTER COWL GRILLE REMOVAL/INSTALLATION.)

4. Remove the bolts, then remove the cowl panel.
5. Install in the reverse order of removal.



DPE910ZW1020

SHROUD PANEL REMOVAL/INSTALLATION

DPE091056100W03

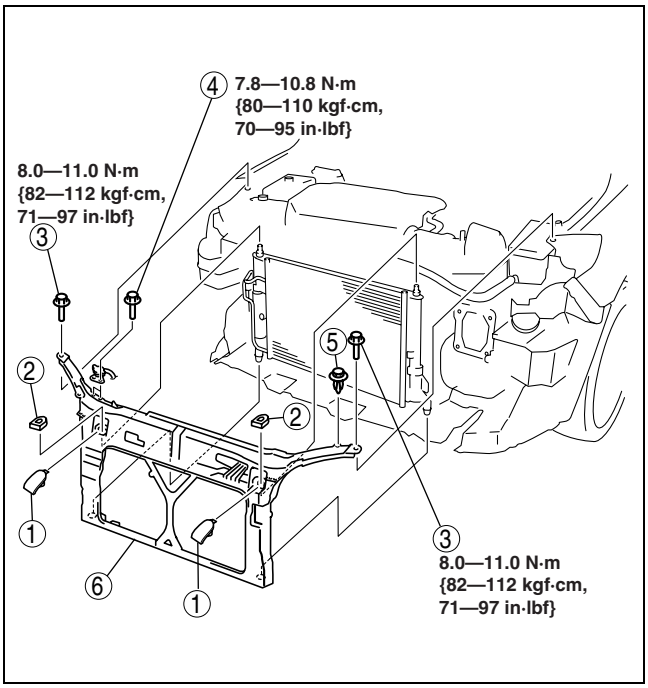
Caution

- **Because the shroud panel is installed to the front bumper reinforcement, support the shroud panel using a jack before removing the front bumper reinforcement so as not to apply excessive force to the shroud panel.**

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front bumper (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
   (2) Front combination lights (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (3) Front bumper reinforcement (See 09–10–9 FRONT BUMPER REINFORCEMENT REMOVAL/INSTALLATION.)
   (4) Bonnet latch (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

1	Radiator mount cap
2	Radiator mount rubber
3	Bolt A
4	Bolt B
5	Fastener
6	Shroud panel

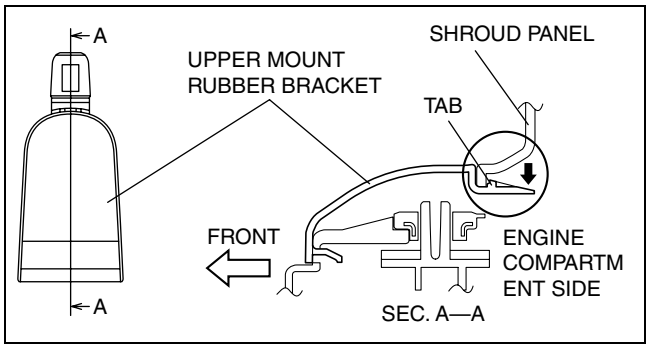
4. Install in the reverse order of removal.



DPE910ZW1021

Upper Mount Rubber Bracket

1. Remove the upper mount rubber bracket while pressing down the upper mount rubber bracket tab in the direction of the arrow.

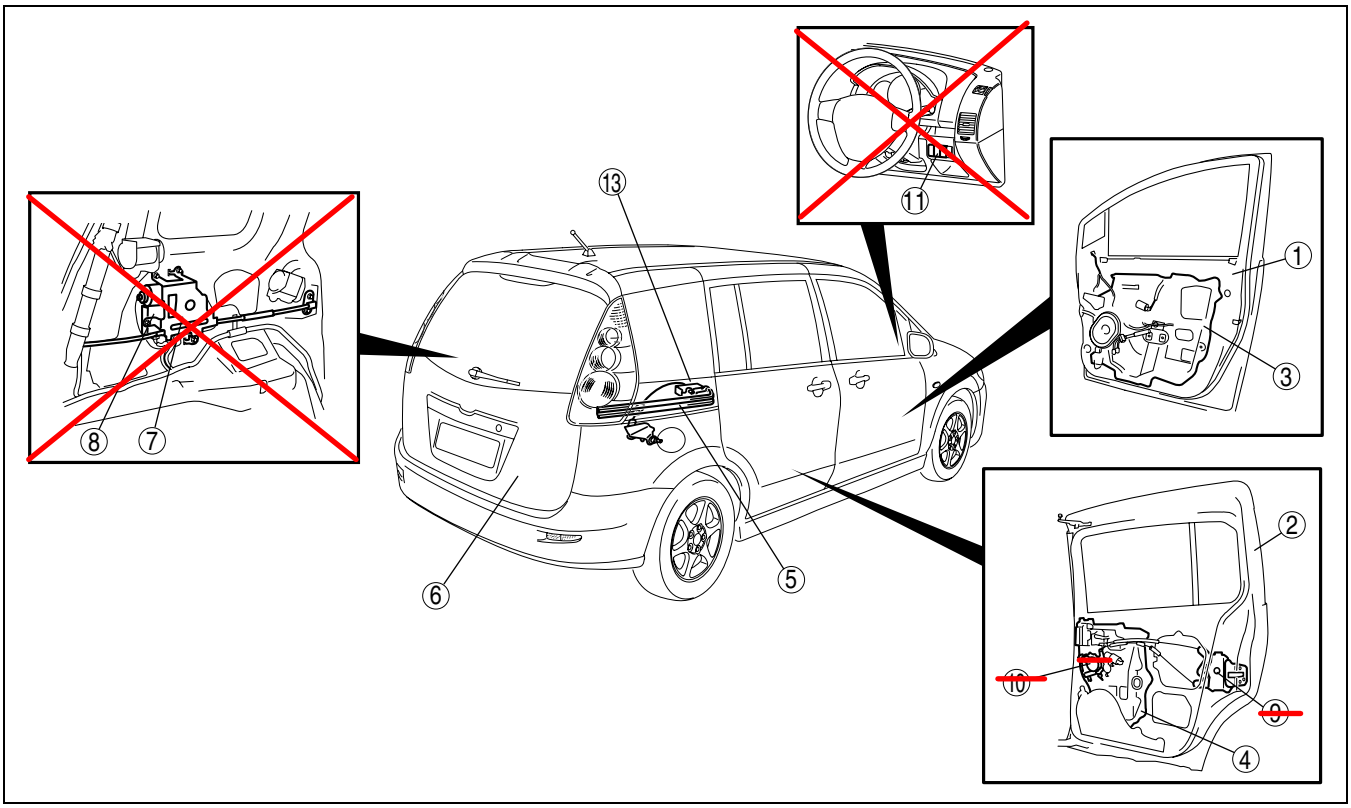


DPE910ZW1023

09–11 DOORS AND LIFTGATE

DOOR AND LIFTGATE LOCATION INDEX

DPE091158010W01



DPE911ZW1001

1	Front door (See 09–11–2 FRONT DOOR REMOVAL/INSTALLATION.) (See 09–11–3 FRONT DOOR ADJUSTMENT.)
2	Sliding door (See 09–11–4 SLIDING DOOR REMOVAL/INSTALLATION.) (See 09–11–6 SLIDING DOOR ADJUSTMENT.)
3	Front door module (See 09–11–16 FRONT DOOR MODULE REMOVAL/INSTALLATION.)

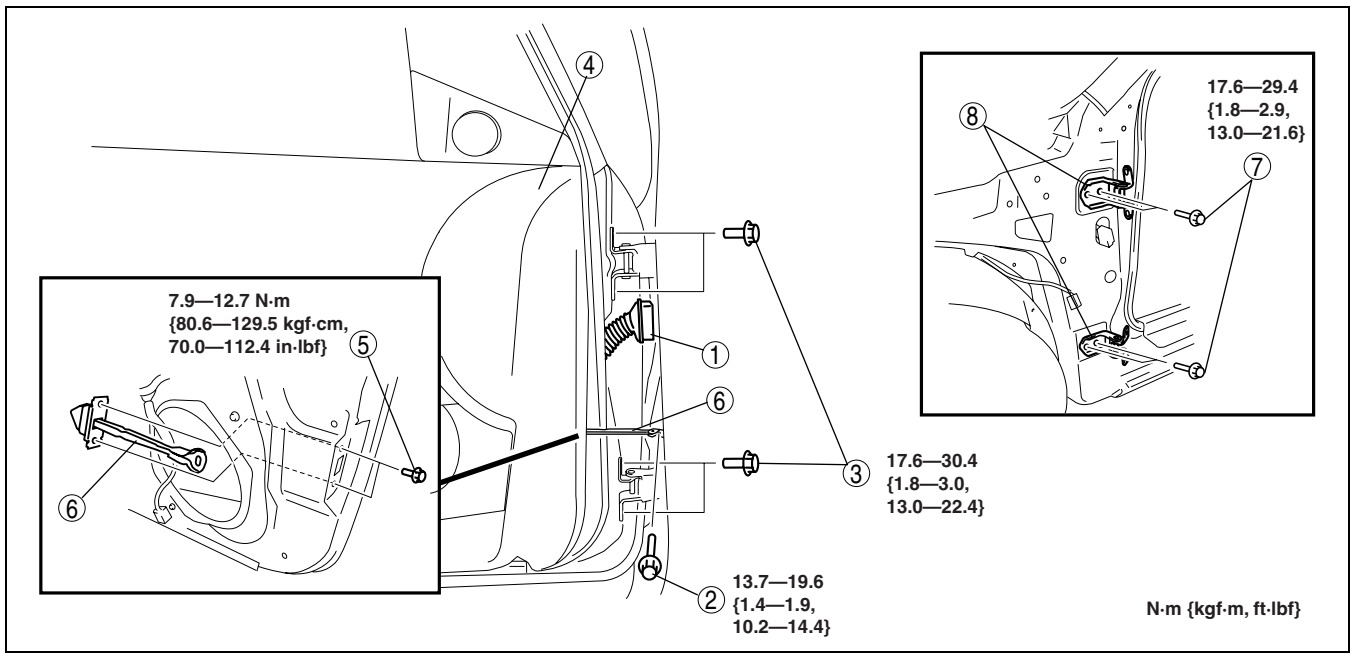
4	Sliding door module (See 09–11–16 SLIDING DOOR MODULE REMOVAL/INSTALLATION.)
5	Center guide rail (See 09–11–6 CENTER GUIDE RAIL REMOVAL/INSTALLATION.)
6	Liftgate (See 09–11–17 LIFTGATE REMOVAL/INSTALLATION.)

7	PSD drive unit (See 09–11–7 PSD DRIVE UNIT REMOVAL/INSTALLATION.)
8	PSD control module (See 09–11–8 PSD CONTROL MODULE REMOVAL/INSTALLATION.)
9	Auto closure motor (See 09–11–13 AUTO CLOSURE MOTOR INSPECTION.)
10	Latch release actuator (See 09–11–11 LATCH RELEASE ACTUATOR REMOVAL/INSTALLATION.) (See 09–11–12 LATCH RELEASE ACTUATOR INSPECTION.)
11	PSD front switch (See 09–11–12 PSD FRONT SWITCH REMOVAL/INSTALLATION.) (See 09–11–13 PSD FRONT SWITCH INSPECTION.)
12	Sliding door stopper (See 09–11–15 SLIDING DOOR STOPPER REMOVAL/INSTALLATION.)

FRONT DOOR REMOVAL/INSTALLATION

DPE091158010W02

1. Disconnect the negative battery cable.
2. To remove the checker, remove the following parts:
   (1) Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
   (2) Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
   (3) Front door speaker (See 09–20–9 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
3. To remove the front door hinges, remove the following parts:
   (1) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (2) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (3) Front side turn lights (See 09–18–12 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
   (4) Front bumper (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
   (5) Front combination lights (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (6) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
   (7) Side step molding (vehicles with side step molding) (See 09–16–5 SIDE STEP MOLDING REMOVAL/INSTALLATION.)
   (8) Front fender panel (See 09–10–11 FRONT FENDER PANEL REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the figure.
5. Install in the reverse order of removal.
6. Adjust the front door. (See 09–11–3 FRONT DOOR ADJUSTMENT.)



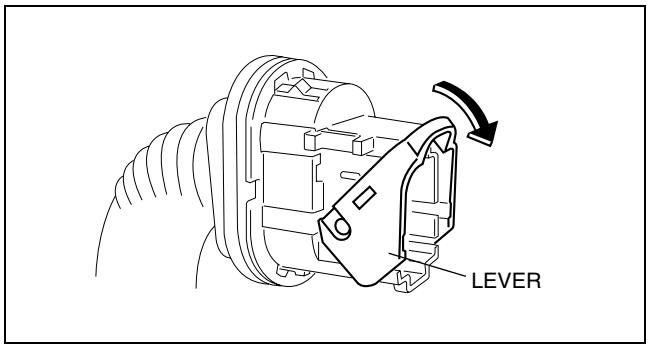
DPE911ZW1002

1	Connector (See 09–11–3 Connector Removal Note.)
2	Bolt A
3	Bolt B
4	Front door

5	Bolt C
6	Checker
7	Bolt D
8	Front door hinge

Connector Removal Note

1. Pull down the lever in the direction indicated by the arrow and disconnect the connector.



DPE911ZW1003

FRONT DOOR ADJUSTMENT

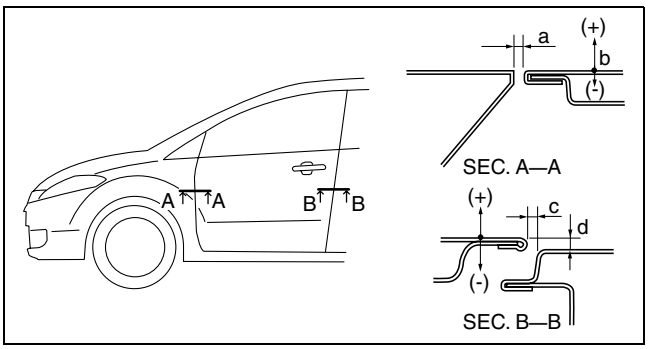
DPE091158010W03

1. Loosen the door hinge installation bolts.
2. Adjust the gap and height difference to the standard range by moving the front door back and forth, left and right.

Standard range

a:3.0—5.0 mm {0.12—0.19 in}
b:-1.0—1.0 mm {-0.03—0.03 in}
c:3.5—6.5 mm {0.14—0.25 in}
d:-1.5—1.5 mm {-0.05—0.05 in}

3. Tighten the bolts.
4. If the front door does not open/close smoothly, loosen the door lock striker installation screw and adjust.



DPE911ZW1004

SLIDING DOOR REMOVAL/INSTALLATION

DPE091158010W04

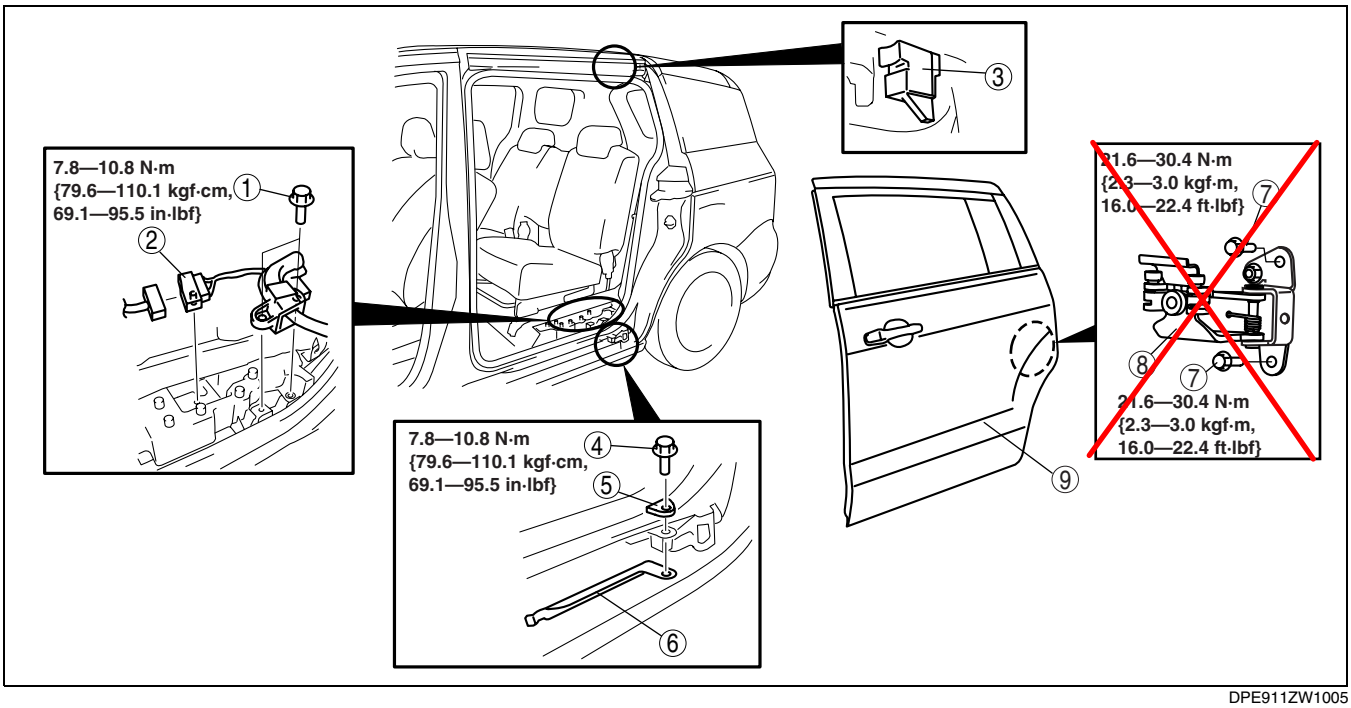
Warning

- **If the sliding door removal/installation is performed by one person, the sliding door could fall down and serious injury may occur. Always perform the procedure with at least another person to prevent the sliding door from falling down.**

Note

- If the negative battery cable is disconnected with the sliding door half opened, the clutch cannot be disengaged resulting in difficulty in opening/closing operation of the sliding door. Disconnect the negative battery cable with the sliding door in the fully open/close position.

1. Disconnect the negative battery cable.
2. Remove the rear scuff plate. (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
3. Remove the rear combination light. ~~(vehicles without PSD)~~ (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the figure.
5. Install in the reverse order of removal.
6. Adjust the sliding door. (See 09–11–6 SLIDING DOOR ADJUSTMENT.)



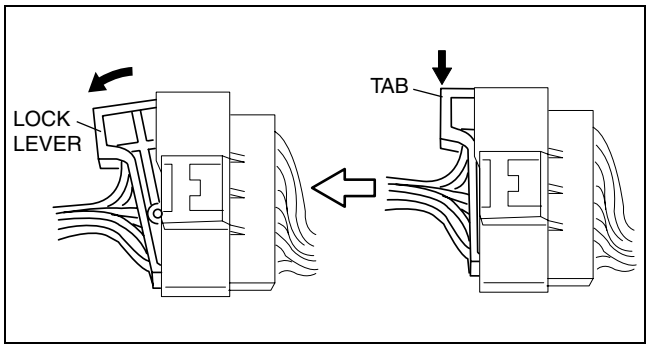
DPE911ZW1005

1	Bolt A
2	Connector (See 09–11–5 Connector Removal Note.)
3	Stopper rubber (See 09–11–5 Stopper Rubber Removal Note.)
4	Bolt B

5	Cover
6	Lower rail guide
~~7~~	~~Bolt C (vehicles with PSD)~~
~~8~~	~~Center roller (vehicles with PSD)~~
9	Sliding door (See 09–11–5 Sliding Door Removal Note.)

Connector Removal Note

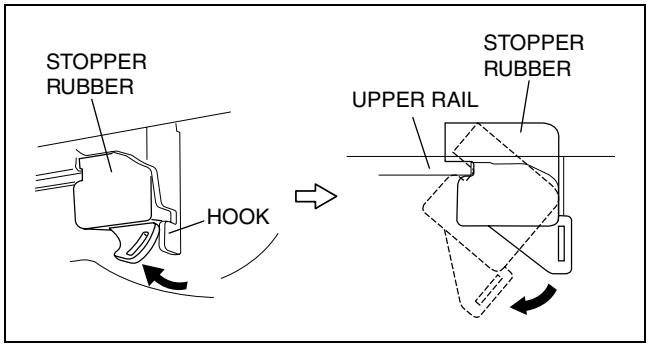
1. Disconnect the connector by pressing the connector tab and pulling out the lock lever in the direction of the arrow.



DPE911ZW1006

Stopper Rubber Removal Note

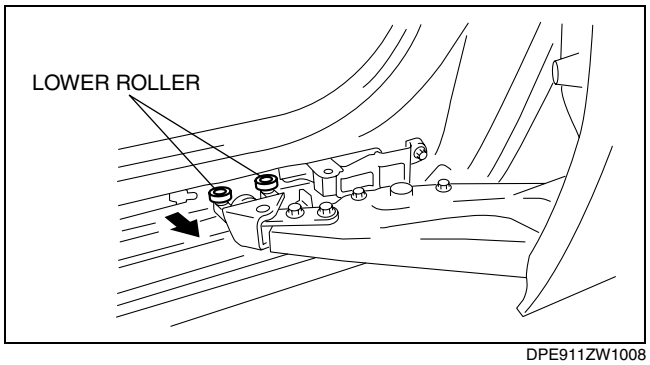
1. Pull the stopper rubber outward and unhook it from the upper rail.
2. Rotate the stopper rubber in the direction of the arrow and remove it from the upper rail.



DPE911ZW1007

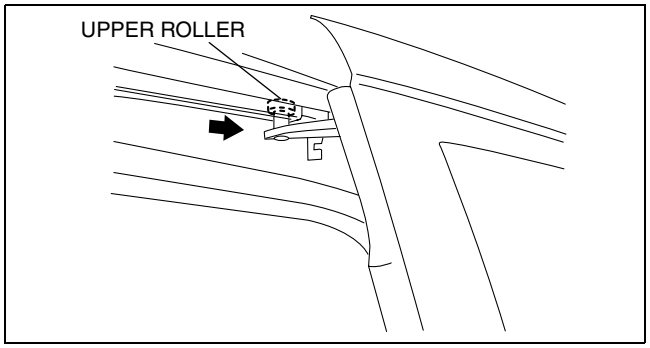
Sliding Door Removal Note

1. Slide the sliding door rearward and pull the lower rollers out in the direction of the arrow from the point where the lower rail guide was removed.



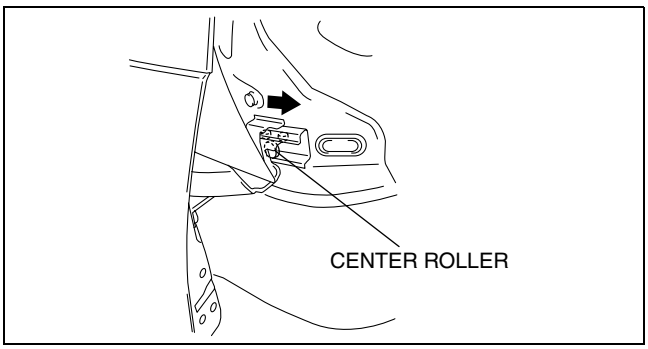
DPE911ZW1008

2. Slide the sliding door rearward and remove the upper roller from the point where the stopper rubber was removed.



DPE911ZW1009

3. ~~For vehicles without PSD,~~ slide the sliding door rearward, and then remove the center roller from the center guide rail.



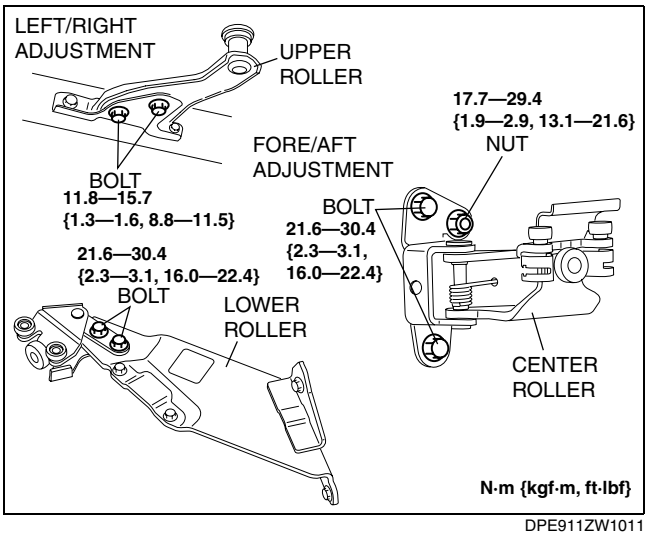
DPE911ZW1010

SLIDING DOOR ADJUSTMENT

DPE091158010W05

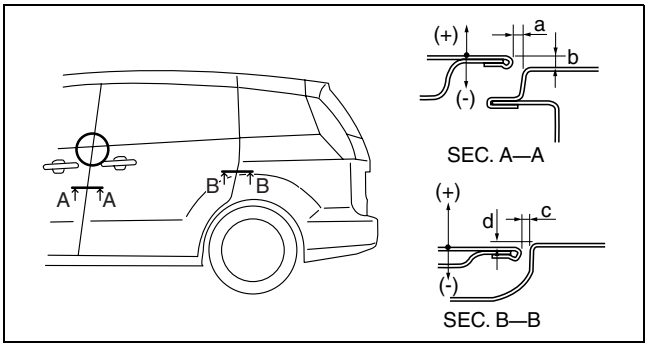
1. Loosen the installation bolts and nut for each roller.
2. Adjust the gap and height difference to the standard range by moving the front door back and forth, left and right.

   Standard range
   a:3.5—6.5 mm {0.14—0.25 in}
   b:-1.5—1.5 mm {-0.05—0.05 in}
   c:3.0—6.0 mm {0.12—0.23 in}
   d:-1.5—1.5 mm {-0.05—0.05 in}



DPE911ZW1011

3. Tighten the bolts.



DPE911ZW1012

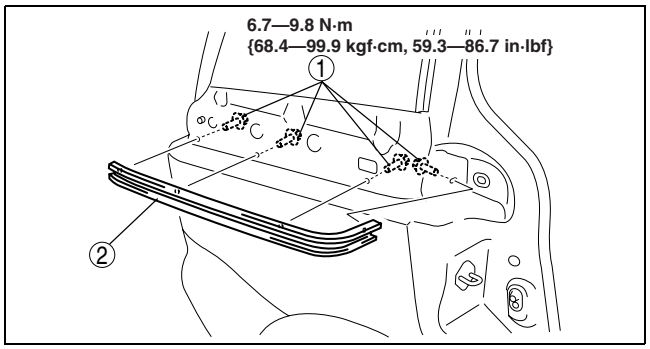
CENTER GUIDE RAIL REMOVAL/INSTALLATION

DPE091158010W06

Warning
- **If the sliding door removal is performed by one person, the sliding door could fall down and serious injury may occur. Always perform the procedure with at least another person to prevent the sliding door from falling down.**

1. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Third-row seat belt lower anchor installation bolt ~~(7-passenger model)~~ (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (8) Rear combination lights (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (9) Center guide rail cover (See 09–16–6 CENTER GUIDE RAIL COVER REMOVAL/INSTALLATION.)
2. Disconnect the center roller from the sliding door. (See 09–11–4 SLIDING DOOR REMOVAL/INSTALLATION.)

3. ~~Disconnect the PSD drive unit cable (front side) from the center roller, then~~ remove the center roller from the center guide rail. (See 09–11–4 SLIDING DOOR REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the figure.



DPE911ZW1013

1	Bolt
2	Center guide rail

5. Install in the reverse order of removal.

PSD DRIVE UNIT REMOVAL/INSTALLATION

DPE0911158010W07

Warning

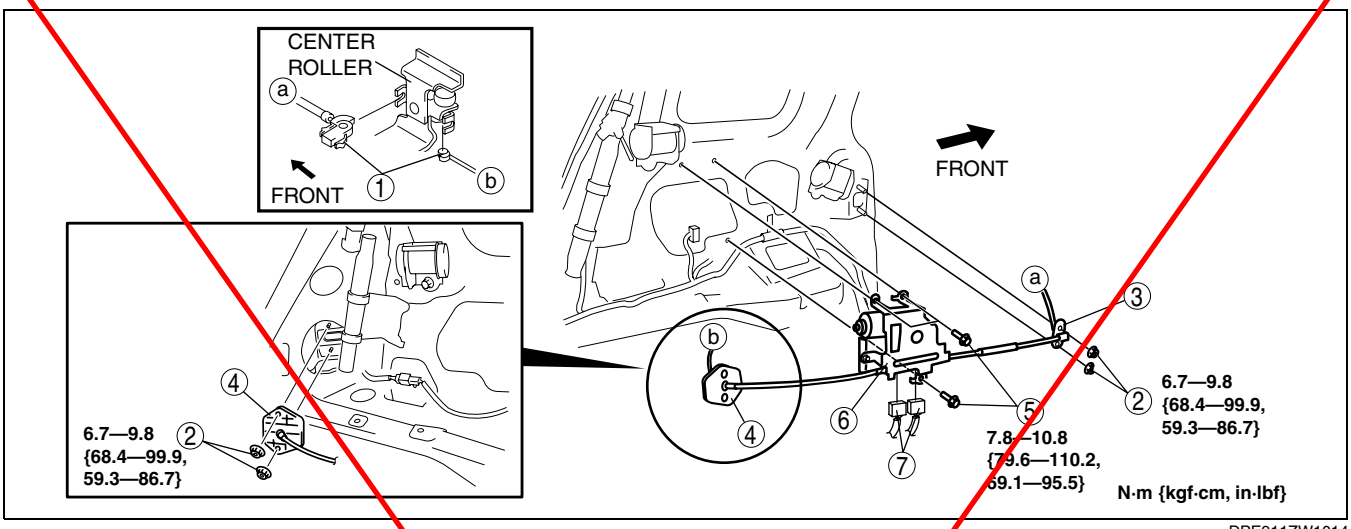
- **If the sliding door removal is performed by one person, the sliding door could fall down and serious injury may occur. Always perform the procedure with at least another person to prevent the sliding door from falling down.**

Note

- If the negative battery cable is disconnected with the sliding door half opened, the clutch cannot be disengaged resulting in difficulty in opening/closing operation of the sliding door. Disconnect the negative battery cable with the sliding door in the fully open/close position.

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (7-passenger model) (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Third-row seat belt lower anchor installation bolt (7-passenger model) (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (8) Rear combination lights (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (9) Rear speaker (See 09–20–10 REAR SPEAKER REMOVAL/INSTALLATION.)
3. Disconnect the center roller from the sliding door. (See 09–11–4 SLIDING DOOR REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the figure.

5. Install in the reverse order of removal.



DPE911ZW1014

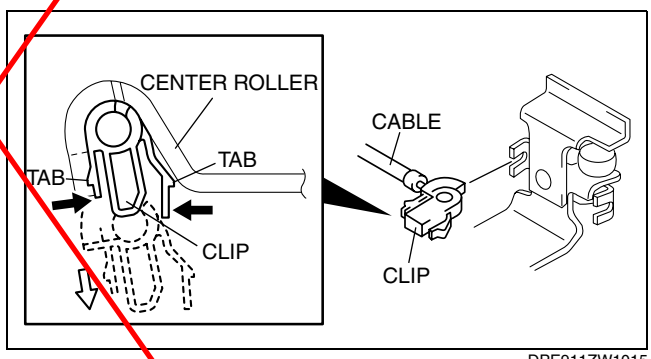
1	Cable (See 09–11–8 Cable Removal Note.)
2	Nut
3	Front pulley

4	Rear pulley
5	Bolt
6	PSD drive unit
7	Connector

Cable Removal Note

Front

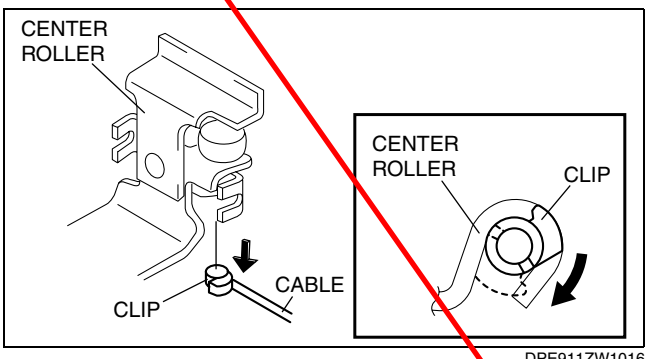
1. Pull the clip outward while pressing the tabs indicated in the figure, and remove the cable from the center roller.



DPE911ZW1015

Rear

1. Remove the center roller from the center guide rail.
2. Rotate the clip in the direction shown in the figure.
3. Pull the clip downward, and remove the cable from the center roller.



DPE911ZW1016

PSD CONTROL MODULE REMOVAL/INSTALLATION

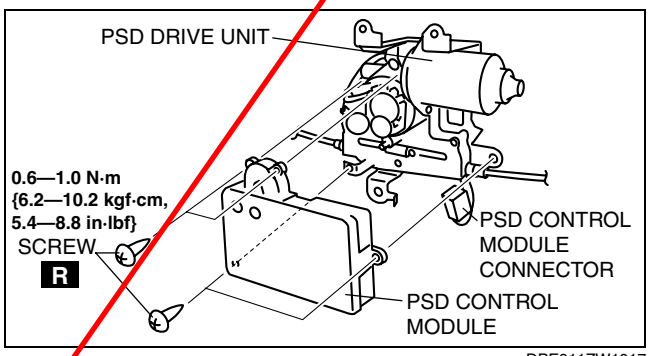
DPE091158010W08

Caution

- **Do not remove the PSD control module except when replacing the PSD control module because thread-locking compound has been applied to the screws.**

1. Disconnect the negative battery cable.

2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (7-passenger model) (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Third-row seat belt lower anchor installation bolt (7-passenger model) (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (8) Rear speaker (See 09–20–10 REAR SPEAKER REMOVAL/INSTALLATION.)
   (9) PSD drive unit front cable (See 09–11–8 Front.)
   (10) PSD drive unit front pulley (See 09–11–7 PSD DRIVE UNIT REMOVAL/INSTALLATION.)
   (11) PSD drive unit securing bolt (See 09–11–7 PSD DRIVE UNIT REMOVAL/INSTALLATION.)
3. Disconnect the PSD control module connector.
4. Turn the PSD drive unit so that the PSD control module faces outward.
5. Remove the screws.
6. Remove the PSD control module.
7. Install in the reverse order of removal.
8. Inspect the operation permission condition. (See 09–03E–2 ON-BOARD DIAGNOSIS.)



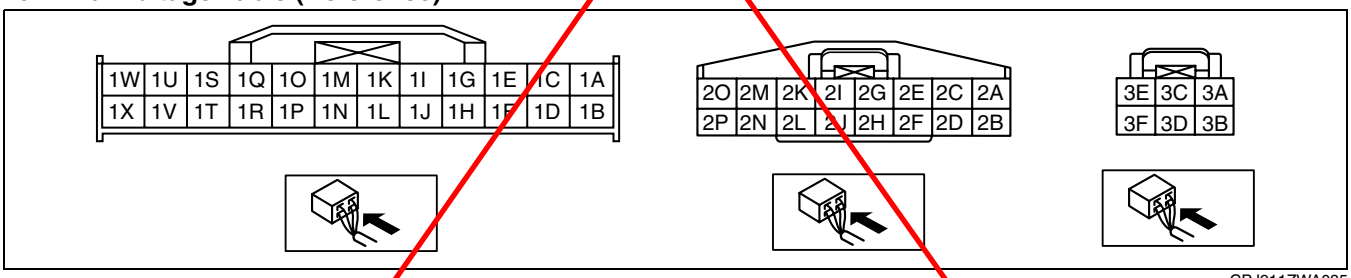
DPE911ZW1017

PSD CONTROL MODULE INSPECTION

DPE091158010W09

1. Measure the PSD control module terminal voltage.
2. Before inspecting terminal 1B, 1C, and 2O for continuity, disconnect the PSD control module connector.
3. If there is large difference between the measured value and the value in the terminal voltage table, inspect the parts under “Inspection item(s)” and related wiring harnesses.
   - If the system does not work properly even though the inspection items or related wiring harnesses do not have any malfunction, replace the PSD control module.

Terminal Voltage Table (Reference)



CPJ911ZWA035

Terminal	Signal name	Connected to	Measurement condition	Voltage (V)/ Continuity	Inspection item(s)
1A	Vehicle speed input	Instrument cluster	Pulse signal	-	• Instrument cluster • Related wiring harness
1B	GND	Body ground	Under any condition: Inspect for continuity to ground	Continuity detected	• Wiring harness between PSD control module and ground
1C	GND*1	Body ground	Under any condition: Inspect for continuity to ground	Continuity detected	• Wiring harness between PSD control module and ground
1D	Brake switch	Brake switch	When the brake pedal is depressed	B+	• Brake switch • Related wiring harness
			When the brake pedal is released	1.0 or less	

Terminal	Signal name	Connected to	Measurement condition	Voltage (V)/ Continuity	Inspection item(s)
1E	OPEN/CLOSE switch output	PSD front switch	PSD front switch: OPEN or CLOSE switch is at OFF position	5	• PSD front switch • Related wiring harness
			PSD front switch: OPEN or CLOSE switch is at ON position	1.0 or less	
1F	-	-	-	-	-
1G	PSD OFF switch	PSD front switch	PSD front switch: PSD OFF switch is at ON position	B+	• PSD front switch • Related wiring harness
			PSD front switch: PSD OFF switch is at ON position	1.0 or less	
1H	Vehicle speed abnormal	Instrument cluster	When vehicle speed is normal	1.0 or less	• Instrument cluster • Related wiring harness
			When vehicle speed is abnormal	5	
1I	NOT P position	Selector lever component	Selector lever shifted to P position	B+	• Selector lever component • Related wiring harness
			Other	1.0 or less	
1J	Handle switch 1	Handle switch	Outer handle is operated	5	Handle switch
			Other	1.0 or less	
1K	IG1	METER 10 A fuse	Ignition switch is at ON position	B+	METER 10 A fuse
			Ignition switch is at LOCK or ACC position	1.0 or less	
1L	-	-	-	-	-
1M	Parking brake switch	Parking brake switch	Parking brake switch is at ON position	1.0 or less	• Parking brake switch • Related wiring harness
			Parking brake switch is at OFF position	B+	
1N	-	-	-	-	-
1O	Door lock-link switch	Door lock-link switch	Sliding door is locked	5	• Door lock-link switch • Related wiring harness
			Sliding door is unlocked	1.0 or less	
1P	Transmitter	BCM	Transmitter PSD button is pressed	5 → 1.0 or less → 5	• Door lock-link switch • Related wiring harness
			Other	B+	
1Q	Handle switch 2	Handle switch	Inner handle is operated to open direction (tilt it rearward)	5	Handle switch
			Other	1.0 or less	
1R	-	-	-	-	-
1S	Handle switch 3	Handle switch	Inner handle is operated to close direction (tilt it forward)	5	Handle switch
			Other	1.0 or less	
1T	OPEN/CLOSE switch input	PSD front switch	PSD front switch: OPEN or CLOSE switch is at ON position	5	• PSD front switch • Related wiring harness
			PSD front switch: OPEN or CLOSE switch is at OFF position	1.0 or less	
1U	-	-	-	-	-
1V	Door lock-link switch (unlock output)	BCM	Sliding door is unlocked	1.0 or less	• BCM • Door lock-link switch • Related wiring harness
			Sliding door is locked	5	
1W	-	-	-	-	-
1X	Ratchet switch	Ratchet switch	Open the sliding door, then activate auto closure system at ajar position	B+ → 1.0 or less → B+	• Ratchet switch • Related wiring harness
2A	-	-	-	-	-
2B	Latch release actuator	Latch release actuator	Open the sliding door from full-close position	1.0 or less → B+ → 1.0 or less	• Latch release actuator • Related wiring harness
2C	Auto closure motor normal rotation	Auto closure motor	Open the sliding door, then activate auto closure system at ajar position	0 → B+ → 0 → B+ → 0	• Latch position switch • Auto closure motor

Terminal	Signal name	Connected to	Measurement condition	Voltage (V)/ Continuity	Inspection item(s)
2D	-	-	-	-	-
2E	-	-	-	-	-
2F	Half latch detection switch	Latch position switch	Open the sliding door, then activate auto closure system at ajar position	5 → 1.0 or less	• Latch position switch • Auto closure motor
2G	Auto closure motor reverse rotation	Auto closure motor	Open the sliding door, then activate auto closure system at ajar position	B+ → 0 → B+ → 1.0 or less	• Latch position switch • Auto closure motor
2H	-	-	-	-	-
2I	-	-	-	-	-
2J	Full latch detection switch	Latch position switch	Open the sliding door, then activate auto closure system at ajar position	5 → 1.0 or less	• Latch position switch • Auto closure motor
2K	Power supply	P SLIDE RH 20 A/P.SLIDE LH 20 A fuse	Under any condition	B+	• P.SLIDE RH 20 A/ P.SLIDE LH 20 A fuse
2L	-	-	-	-	-
2M	Power supply	ROOM 15 A fuse	Under any condition	B+	• ROOM 15 A fuse
2N	-	-	-	-	-
2O	GND	Body ground	Under any condition: Inspect for continuity to ground	Continuity detected	• Wiring harness between PSD control module and ground
2P	Door switch	Door switch	Sliding doors (RH and LH) are fully closed	B+	• Wiring harness between PSD control module and ground
			Either sliding door (RH or LH) is opened	0	
3A (3E)*2	PSD motor normal rotation	PSD drive unit	Open the sliding door from full-close position	0 → B+ → 0	• PSD drive unit • Related wiring harness
3B	Magnet brake	Magnet brake	Brake is ON	1.0 or less	PSD drive unit
			Brake is OFF	B+	
3C	-	-	-	-	-
3D	Magnet brake power supply	Magnet brake	Brake is ON	1.0 or less	PSD drive unit
3E (3A)*2	PSD motor reverse rotation	PSD drive unit	Close the sliding door from full-open position	0 → B+ → 0	• PSD drive unit • Related wiring harness

*1 : PSD control module (RH) only

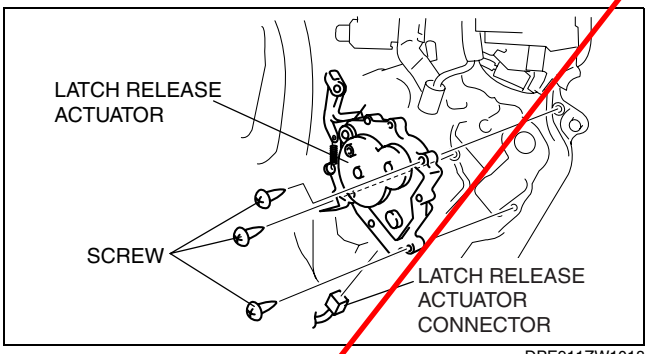
*2 : ( ) is for PSD control module (RH)

LATCH RELEASE ACTUATOR REMOVAL/INSTALLATION

DPE-091158010W10

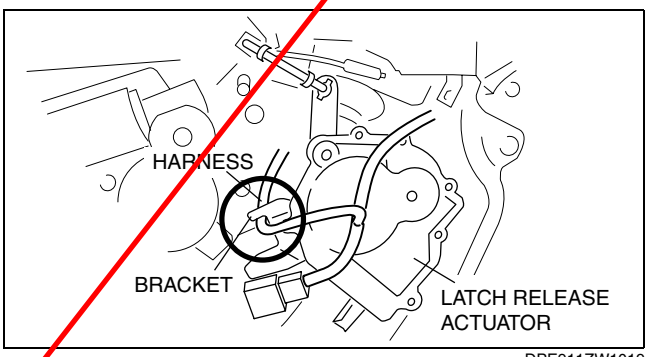
1. Disconnect the negative battery cable.
2. Remove the side door garnish. (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
3. Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
4. Remove the sliding door trim. (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)

5. Disconnect the latch release actuator connector.
6. Remove the screws and rod, then remove the latch release actuator from the sliding door module.
7. Install in the reverse order of removal.



DPE911ZW1018

8. Hook the harness to the latch release actuator bracket indicated in the figure.



DPE911ZW1019

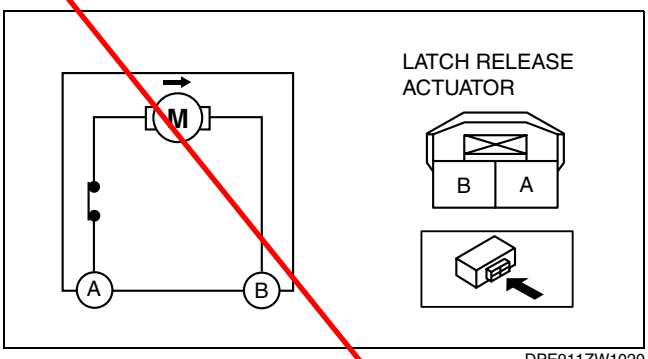
LATCH RELEASE ACTUATOR INSPECTION

DPE091158010W11

1. Apply battery positive voltage and connect ground to the sliding door lock actuator terminals, and then inspect the sliding door lock actuator operation.

Note
- If the voltage is applied in reverse, the motor operates but the link does not operate.
- If there is any malfunction, replace the latch release actuator.

Operation	Terminal	
	A	B
Release	B+	Ground



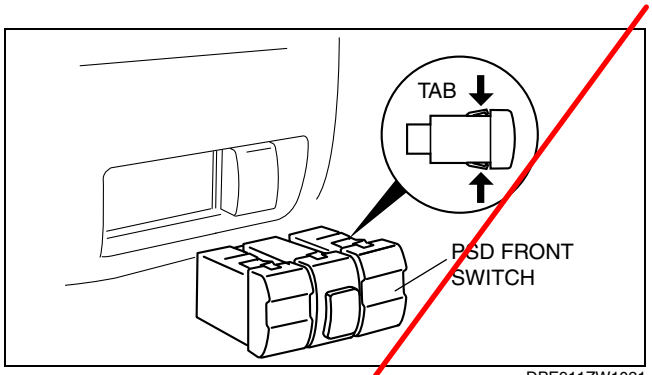
DPE911ZW1020

PSD FRONT SWITCH REMOVAL/INSTALLATION

DPE091158010W12

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front scuff plate inner (driver's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (driver's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (4) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (5) Bonnet release lever (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
   (6) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)

3. From the back side of the lower panel, pull the PSD front switch outward while pressing the tabs.
4. Install in the reverse order of removal.

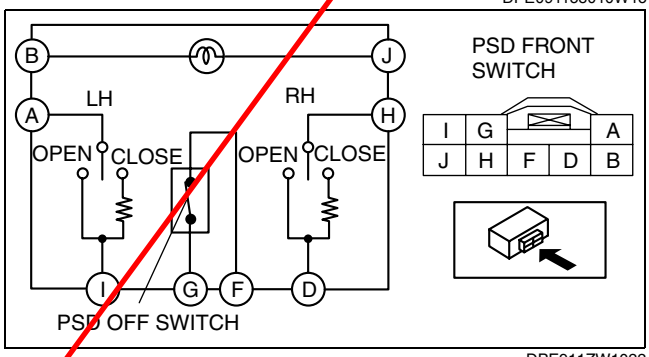


DPE911ZW1021

PSD FRONT SWITCH INSPECTION

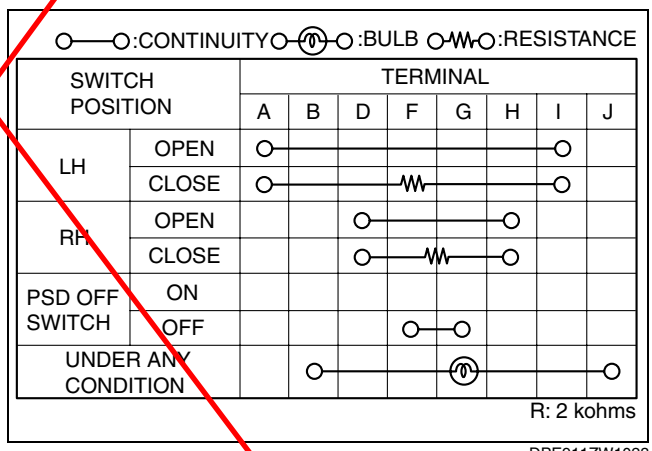
1. Verify that the continuity is as indicated in the table.

DPE091158010W13



DPE911ZW1022

- If not as indicated in the table, replace the PSD front switch.

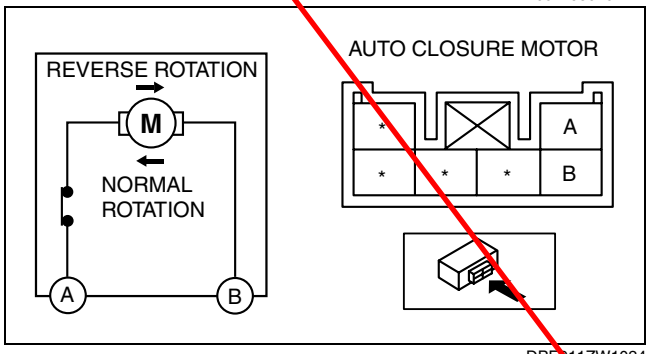


DPE911ZW1023

AUTO CLOSURE MOTOR INSPECTION

1. Apply battery positive voltage and connect the ground to the sliding door lock terminals A and B, and then inspect the sliding door lock operation.

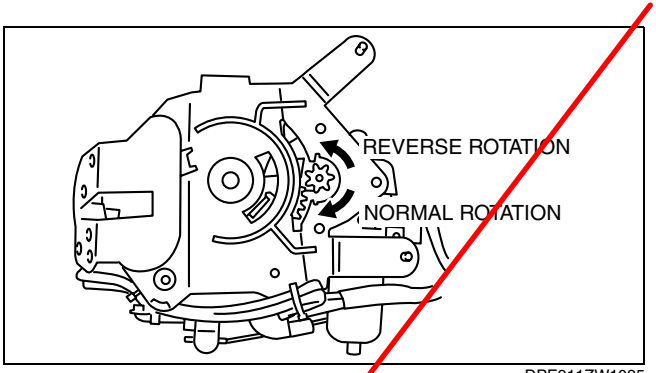
DPE091158010W14



DPE911ZW1024

- If not as indicated in the table, replace the sliding door lock.

Terminal		Operation
A	B	
Ground	B+	Normal rotation
B+	Ground	Reverse rotation



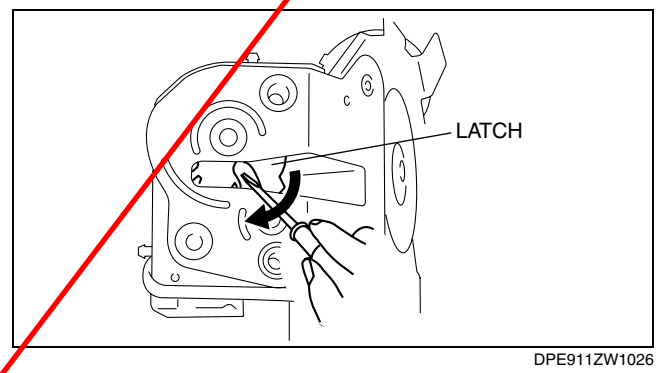
DPE911ZW1025

LATCH POSITION SWITCH INSPECTION

DPE091158010W15

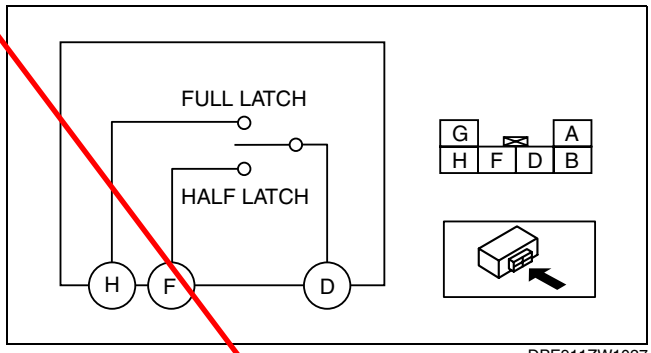
Vehicles Without PSD

1. Disconnect the negative battery cable.
2. Press the latch in using a flathead screwdriver to inspect the latch condition.

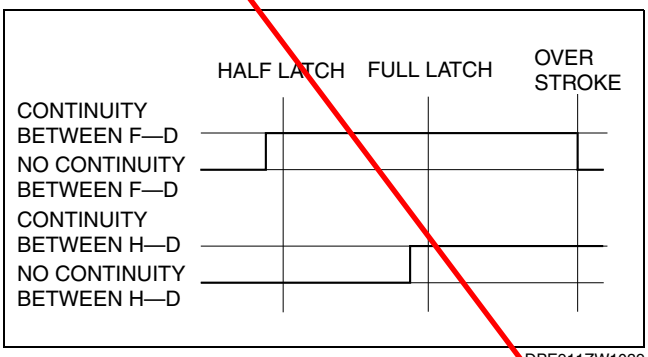


DPE911ZW1026

3. Verify that the continuity is as indicated in the table.
   - If not as indicated in the table, replace the sliding door latch.



DPE911ZW1027

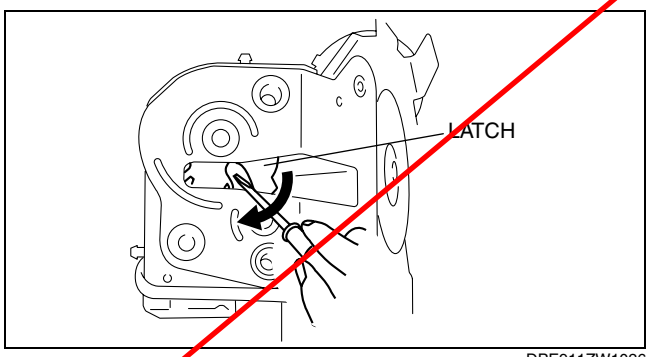


DPE911ZW1039

Vehicles With PSD

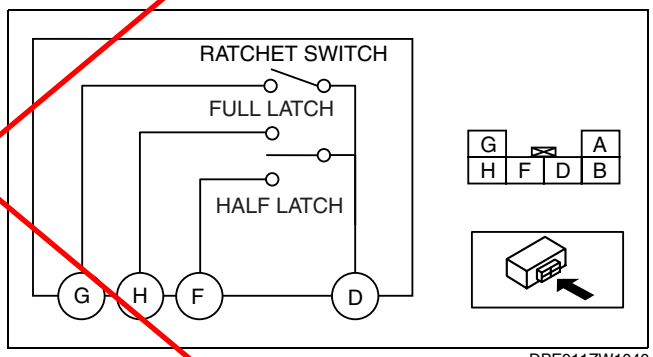
1. Disconnect the negative battery cable.

2. Press the latch in using a flathead screwdriver to inspect the latch condition.

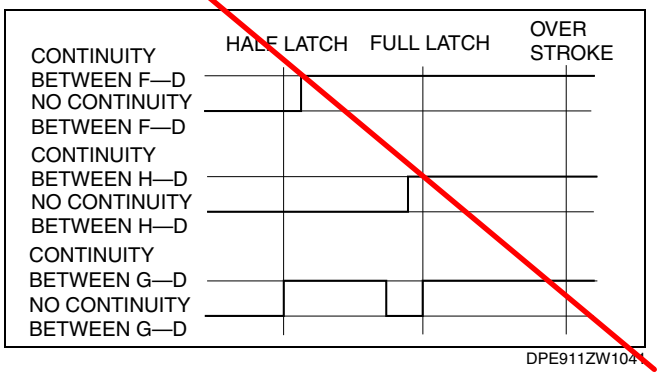


DPE911ZW1026

3. Verify that the continuity is as indicated in the table.
   - If not as indicated in the table, replace the sliding door latch.



DPE911ZW1040



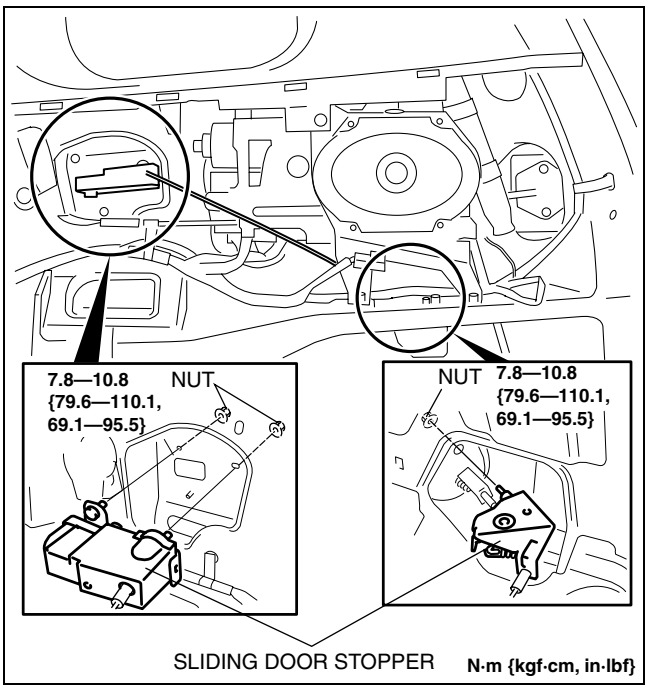
DPE911ZW1041

SLIDING DOOR STOPPER REMOVAL/INSTALLATION

DPE091158010W18

1. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (~~7-passenger model~~) (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (RH) (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Third-row seat belt lower anchor installation bolt (~~7-passenger model~~) (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (RH) (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (8) Rear combination light (RH) (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
   (9) Center guide rail cover (RH) (See 09–16–6 CENTER GUIDE RAIL COVER REMOVAL/INSTALLATION.)
2. Remove the nuts.

3. Remove the sliding door stoppers.
4. Install in the reverse order of removal.

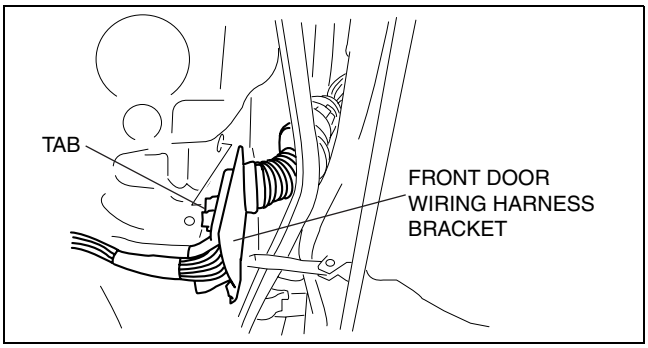


DPE911ZW1032

FRONT DOOR MODULE REMOVAL/INSTALLATION

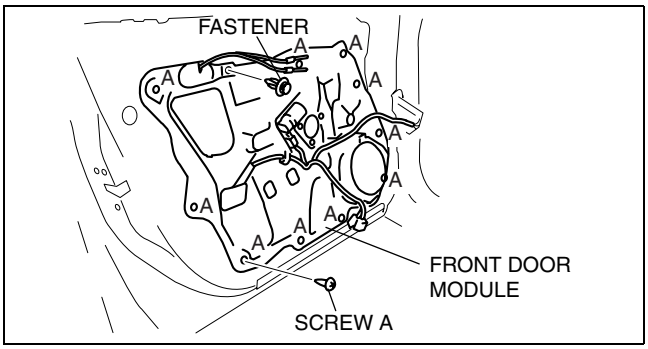
DPE091159970W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
   (2) Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
   (3) Front door speaker (See 09–20–9 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
   (4) Front door glass (See 09–12–4 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
   (5) Inner handle (See 09–14A–5 FRONT INNER HANDLE REMOVAL/INSTALLATION.)
3. Disconnect the power outer mirror connector.
4. Disconnect the front door wiring harness connector. (See 09–11–2 FRONT DOOR REMOVAL/INSTALLATION.)
5. Remove the tab, then remove the front door wiring harness bracket.



DPE911ZW1033

6. Remove screws A and the fastener.
7. Remove the front door module.
8. Install in the reverse order of removal.



DPE911ZW1034

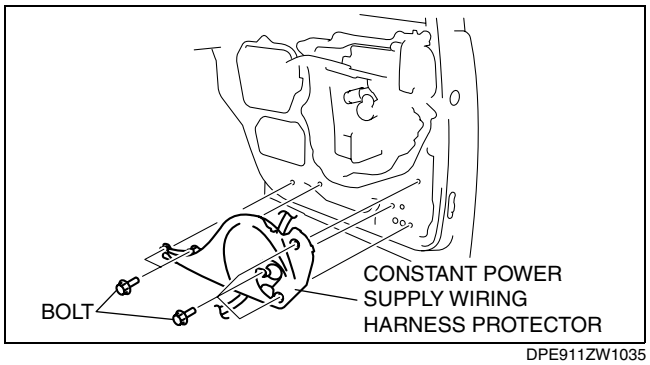
SLIDING DOOR MODULE REMOVAL/INSTALLATION

DPE091159970W02

1. Disconnect the negative battery cable.
2. Remove the following parts:

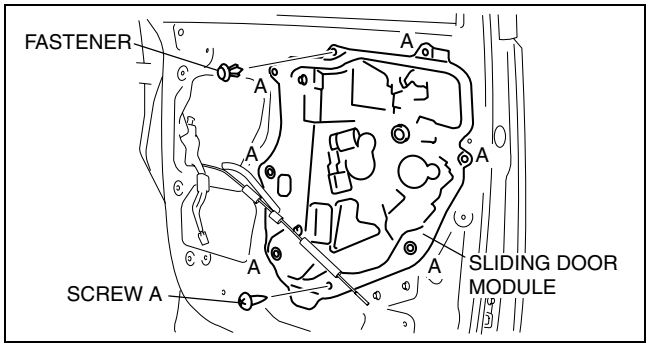
(1) Side door garnish (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
(2) Rear side trim (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
(3) Sliding door trim (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
(4) Sliding door glass (See 09–12–5 SLIDING DOOR GLASS REMOVAL/INSTALLATION.)
(5) Remote controller (See 09–14A–10 REMOTE CONTROLLER REMOVAL/INSTALLATION.)
(6) Latch release actuator (vehicles with PSD) (See 09–11–11 LATCH RELEASE ACTUATOR REMOVAL/INSTALLATION.)

3. Disconnect the power window motor connector.
4. Remove the bolts, then remove the constant power supply wiring harness protector.



DPE911ZW1035

5. Remove screws A and the fastener.
6. Remove the sliding door module.
7. Install in the reverse order of removal.



DPE911ZW1036

LIFTGATE REMOVAL/INSTALLATION

DPE091162010W01

Warning

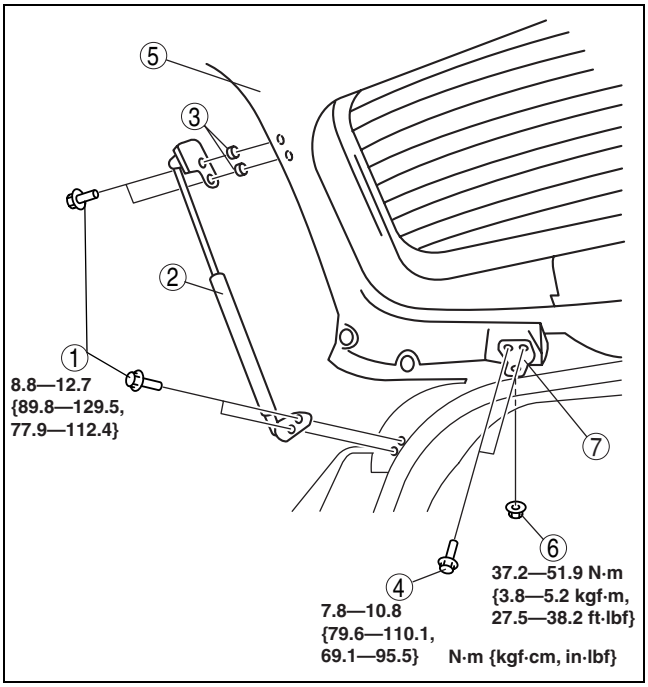
- **When removing the stay damper, serious injury may occur if the stay damper is removed without supporting the liftgate. Always perform the procedure with at least another person.**

1. Disconnect the negative battery cable.
2. Remove the rear header trim. (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
3. Disconnect the rear washer hose.
4. Disconnect the liftgate wiring harness connector.

5. Remove in the order indicated in the figure.

1	Bolt A
2	Stay damper (See 09–11–18 Stay Damper Installation Note.)
3	Collar
4	Bolt B
5	Liftgate
6	Nut
7	Liftgate hinge

6. Install in the reverse order of removal.
7. Adjust the liftgate. (See 09–11–18 LIFTGATE ADJUSTMENT.)



DPE911ZW1037

Stay Damper Installation Note

Caution

- **If a stay damper is installed without installing a collar, the stay damper could come off causing the liftgate to fall. When installing the stay damper, always install a collar.**

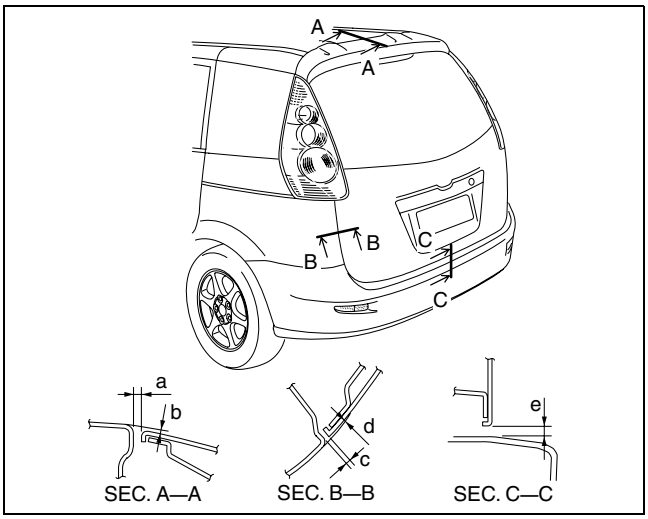
LIFTGATE ADJUSTMENT

DPE091162010W02

1. Measure the gap and height difference between the liftgate and the body.
2. Loosen the liftgate hinge installation bolts and adjust the gap by moving the liftgate.

   Standard clearance
   a: 4.5—7.5 mm {0.18—0.29 in}
   b: -2.5—0.5 mm {-0.09—0.01 in}
   c: 2.6—6.6 mm {0.11—0.25 in}
   d: -4.1— -0.3 mm {-0.16— -0.01 in}
   e: 3.6—8.4 mm {0.15—0.33 in}

3. Tighten the nuts.

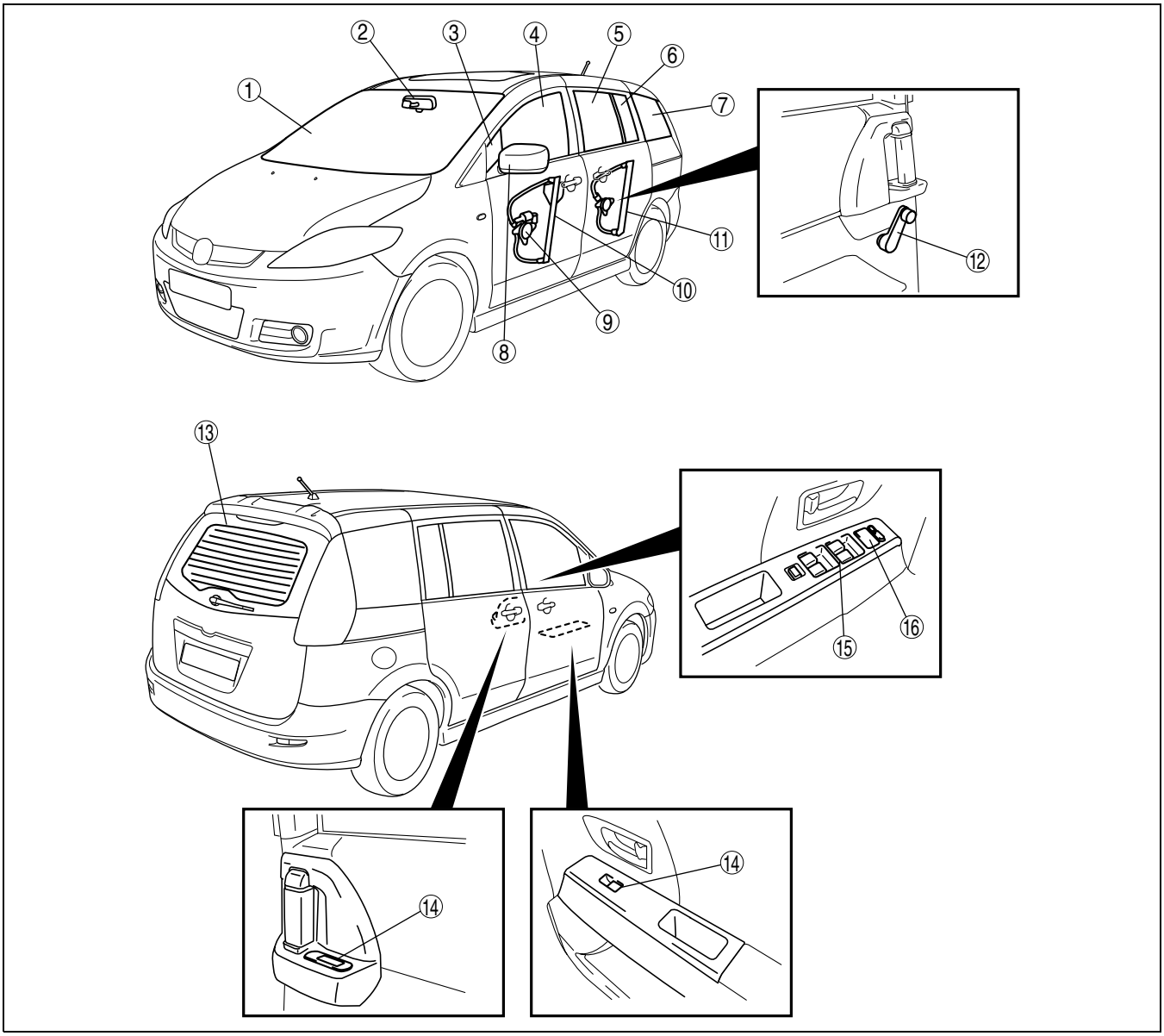


DPE911ZW1038

09–12 GLASS/WINDOWS/MIRRORS

GLASS/WINDOWS/MIRRORS LOCATION INDEX

DPE091200001W01



DPE912ZW1106

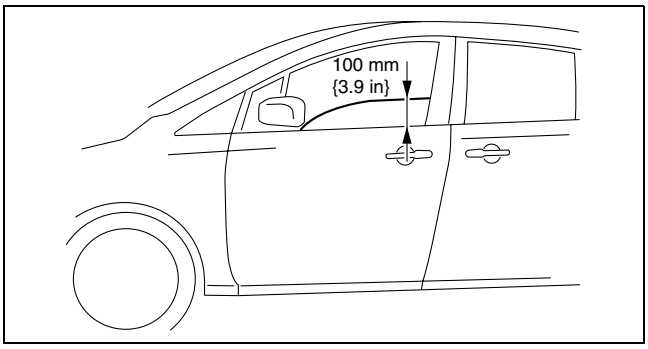
1	Windshield (See 09–12–19 WINDSHIELD REMOVAL.) (See 09–12–21 WINDSHIELD INSTALLATION.)
2	Rearview mirror (See 09–12–36 REARVIEW MIRROR REMOVAL/ INSTALLATION [VEHICLES WITH THE AUTO WIPER SYSTEM].) (See 09–12–37 REARVIEW MIRROR REMOVAL [VEHICLES WITHOUT THE AUTO WIPER SYSTEM].) (See 09–12–37 REARVIEW MIRROR INSTALLATION [VEHICLES WITHOUT THE AUTO WIPER SYSTEM].) (See 09–12–37 BASE REMOVAL.) (See 09–12–37 BASE INSTALLATION.)
3	Front door quarter glass (See 09–12–4 FRONT DOOR QUARTER GLASS REMOVAL/INSTALLATION.)
4	Front door glass (See 09–12–4 FRONT DOOR GLASS REMOVAL/ INSTALLATION.)
5	Sliding door glass (See 09–12–5 SLIDING DOOR GLASS REMOVAL/ INSTALLATION.)
6	Sliding door quarter glass (See 09–12–6 SLIDING DOOR QUARTER GLASS REMOVAL/INSTALLATION.)
7	Quarter window glass (See 09–12–27 QUARTER WINDOW GLASS REMOVAL.) (See 09–12–29 QUARTER WINDOW GLASS INSTALLATION.)

8	Power outer mirror (See 09–12–32 POWER OUTER MIRROR REMOVAL/INSTALLATION.) (See 09–12–33 OUTER MIRROR GLASS REMOVAL.) (See 09–12–33 OUTER MIRROR GLASS INSTALLATION.) (See 09–12–34 OUTER MIRROR GARNISH REMOVAL.) (See 09–12–34 OUTER MIRROR GARNISH INSTALLATION.) (See 09–12–34 POWER OUTER MIRROR INSPECTION.)
9	Power window motor (See 09–12–9 POWER WINDOW MOTOR REMOVAL/INSTALLATION.) (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].)
10	Front power window regulator (See 09–12–7 FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION.)
11	Rear window regulator (See 09–12–7 REAR WINDOW REGULATOR REMOVAL/INSTALLATION.)
12	Regulator handle (See 09–12–8 REGULATOR HANDLE REMOVAL.) (See 09–12–8 REGULATOR HANDLE INSTALLATION.)
13	Rear window glass (See 09–12–24 REAR WINDOW GLASS REMOVAL.) (See 09–12–24 REAR WINDOW GLASS INSTALLATION.) (See 09–12–32 FILAMENT INSPECTION.) (See 09–12–32 FILAMENT REPAIR.)
14	Power window subswitch (See 09–12–14 POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION.) (See 09–12–15 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–17 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].)
15	Power window main switch (See 09–12–10 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.) (See 09–12–11 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) (See 09–12–12 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) (See 09–12–17 POWER WINDOW SYSTEM INITIAL SETTING.) (See 09–12–17 TWO-STEP DOWN FUNCTION OPERATIVE/NON-OPERATIVE SWITCHING PROCEDURE.) (See 09–12–18 DOOR GLASS POSITION CHANGE PROCEDURE.)
16	Power outer mirror switch (See 09–12–35 POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION.) (See 09–12–35 POWER OUTER MIRROR SWITCH INSPECTION.)

FRONT DOOR GLASS REMOVAL/INSTALLATION

DPE091259500W01

1. Adjust the door glass position as shown in the figure.
2. Disconnect the negative battery cable.
3. Remove the inner garnish. (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the front door trim. (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the front door speaker. (See 09–20–9 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)

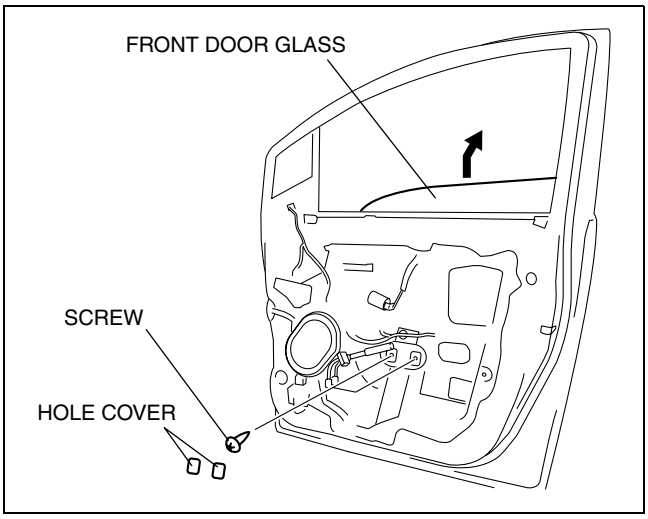


DPE912ZW1001

Note

- When installing the front door glass, the front door speaker must be removed to align the glass edge with the glass run channel by hand through the speaker installation hole.

6. Remove the hole cover.
7. Remove the screws.
8. Lift the front door glass up and remove it in the direction of the arrow.
9. Install in the reverse order of removal.

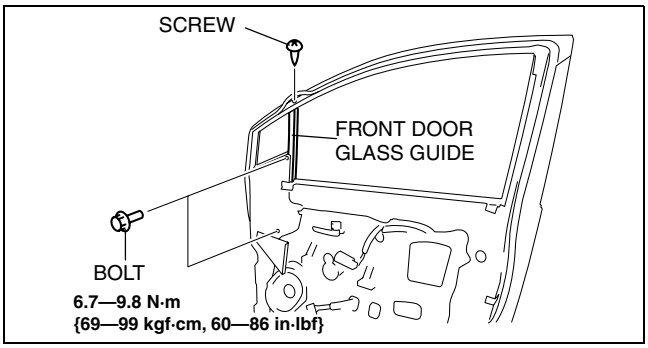


DPE912ZW1002

FRONT DOOR QUARTER GLASS REMOVAL/INSTALLATION

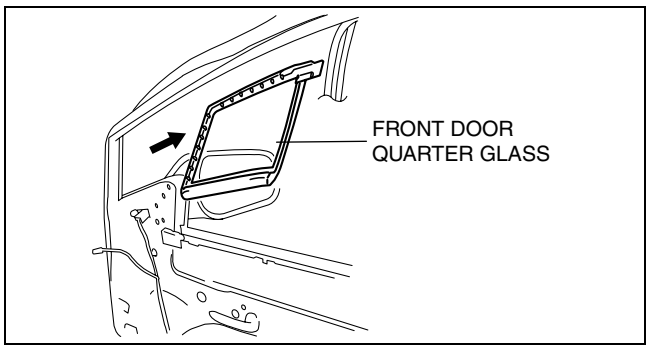
DPE091259500W02

1. Fully open the front door glass.
2. Disconnect the negative battery cable.
3. Remove the inner garnish. (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
4. Remove the front door trim. (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
5. Remove the bolts and screw.
6. Remove the front door glass guide and glass run channel as a single unit.



DPE912ZW1011

7. Remove the front door quarter glass.
8. Install in the reverse order of removal.

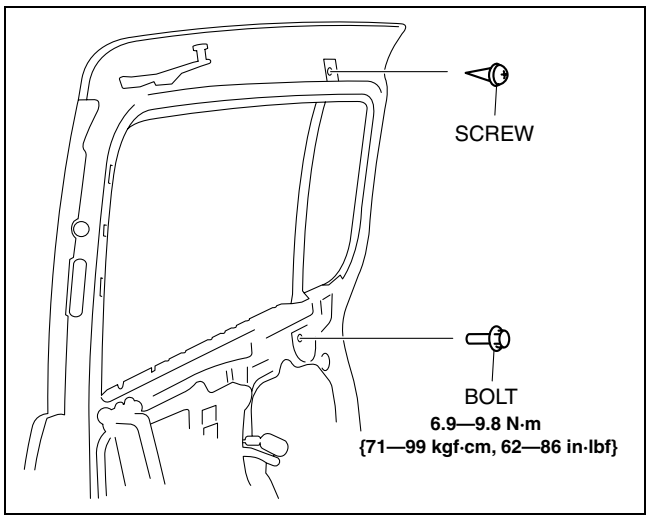


DPE912ZW1012

SLIDING DOOR GLASS REMOVAL/INSTALLATION

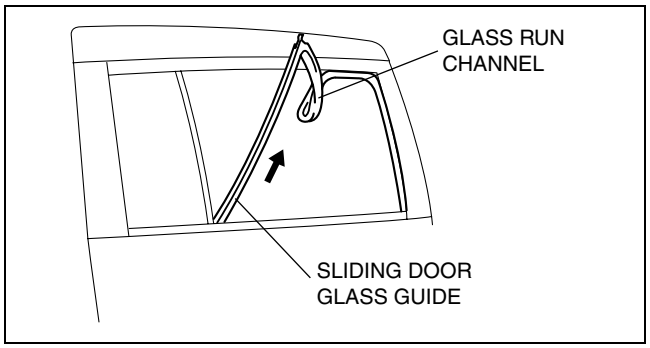
DPE091259500W03

1. Fully open the sliding door glass.
2. Disconnect the negative battery cable.
3. Remove the side door garnish. (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
4. Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
5. Remove the sliding door trim. (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
6. Remove the bolt and screw.



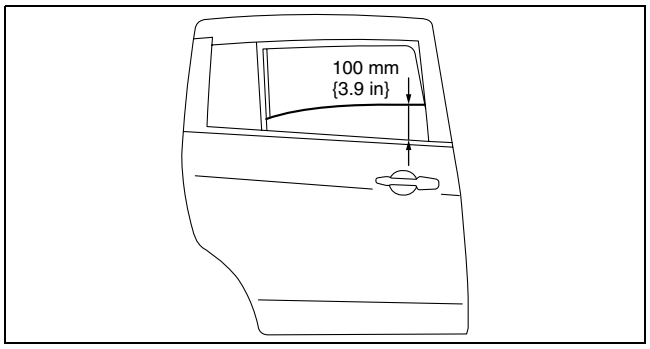
DPE912ZW1007

7. Remove the rear door glass guide and glass run channel as a single unit.
8. Connect the negative battery cable.
9. Connect the power window sub switch connector.



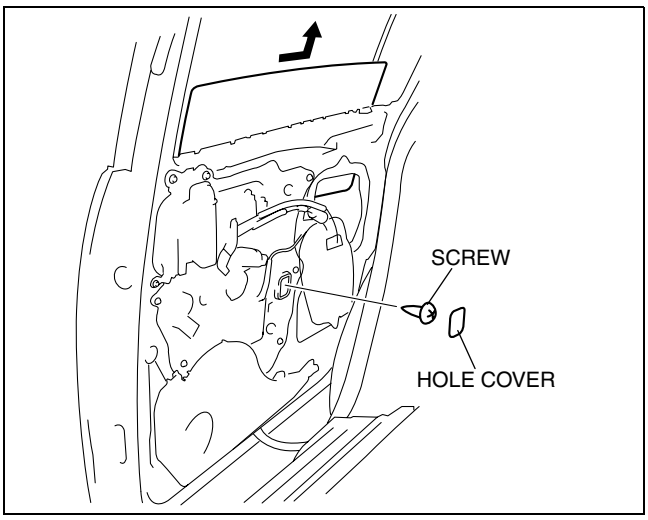
DPE912ZW1008

10. Adjust the door glass position as shown in the figure.
11. Remove the hole cover.



DPE912ZW1006

12. Remove the screw.
13. Lift the sliding door glass up and remove it by sliding it to the vehicle rear.
14. Install in the reverse order of removal.

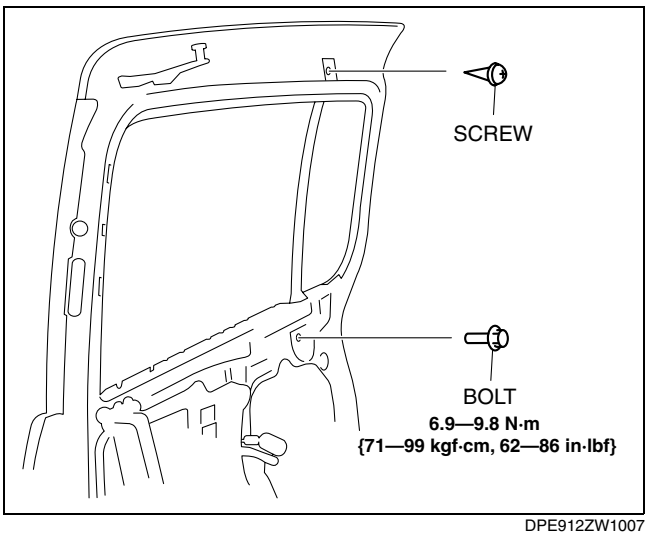


DPE912ZW1013

SLIDING DOOR QUARTER GLASS REMOVAL/INSTALLATION

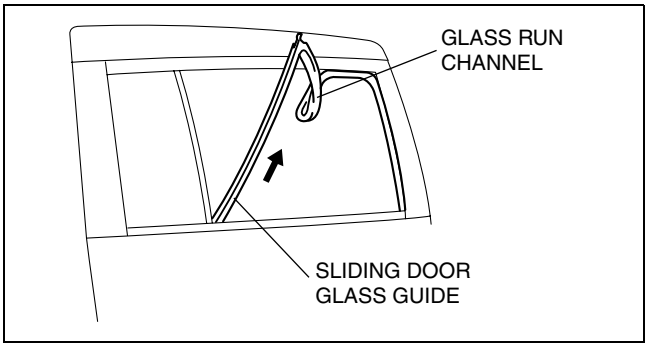
DPE091259500W04

1. Fully open the sliding door glass.
2. Disconnect the negative battery cable.
3. Remove the sliding door garnish. (See 09–16–6 SLIDING DOOR GARNISH REMOVAL/INSTALLATION.)
4. Remove the side door garnish. (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
5. Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
6. Remove the sliding door trim. (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
7. Remove the bolt and screw.



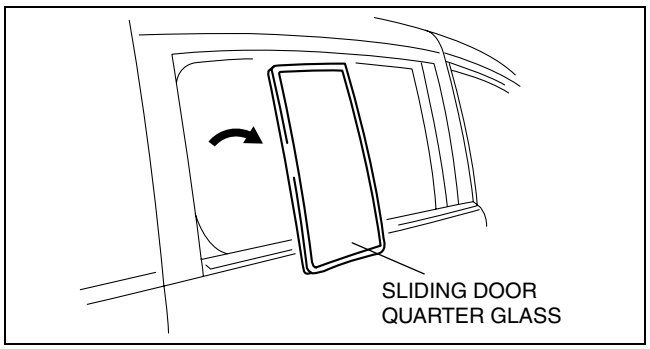
DPE912ZW1007

8. Remove the rear door glass guide and glass run channel as a single unit.



DPE912ZW1008

9. Remove the sliding door glass.
10. Install in the reverse order of removal.

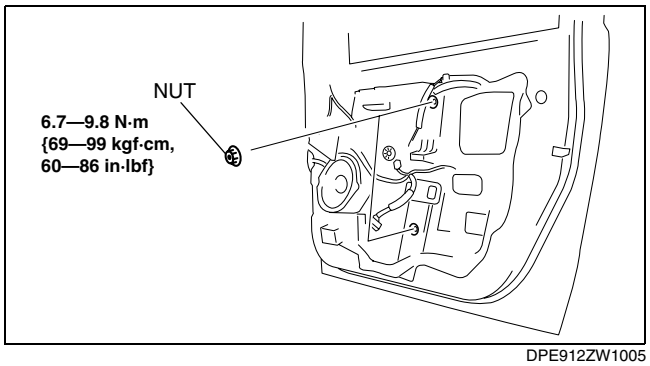


DPE912ZW1014

FRONT POWER WINDOW REGULATOR REMOVAL/INSTALLATION

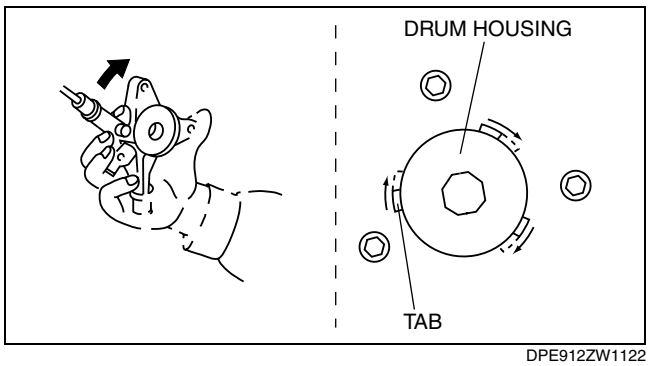
DPE091258560W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
   (2) Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
   (3) Front door glass (See 09–12–4 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
   (4) Power window motor (See 09–12–9 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)
3. Remove the nut.



DPE912ZW1005

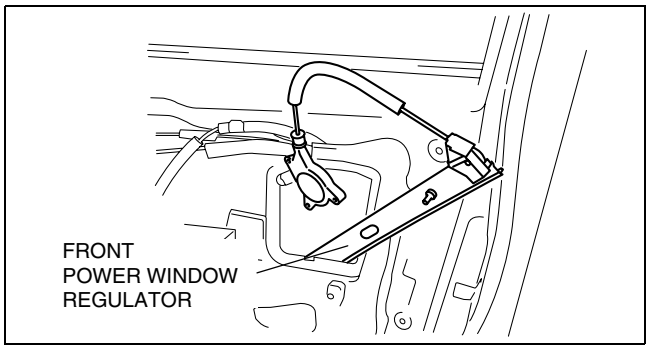
4. Insert a hand through the service hole, rotate the drum housing in the direction shown in the figure to detach the tabs from the front door unit.



DPE912ZW1122

5. Remove the front power window regulator through the service hole.
6. Install in the reverse order of removal.

Caution
- **Make sure the cable does not unspool from the drum housing when installing.**



DPE912ZW1004

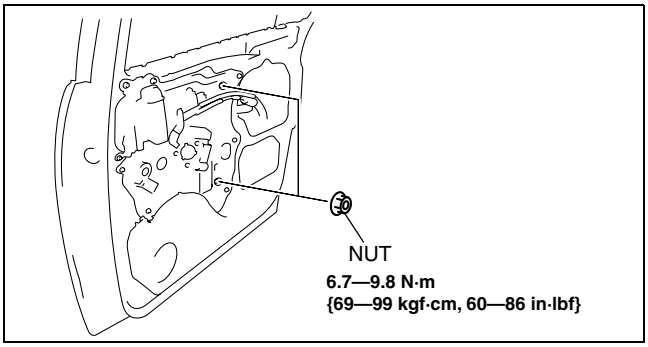
REAR WINDOW REGULATOR REMOVAL/INSTALLATION

DPE091258560W02

1. Disconnect the negative battery cable. (Vehicles with the power window system)
2. Remove the following parts:
   (1) Remove the side door garnish. (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
   (2) Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Sliding door trim (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)

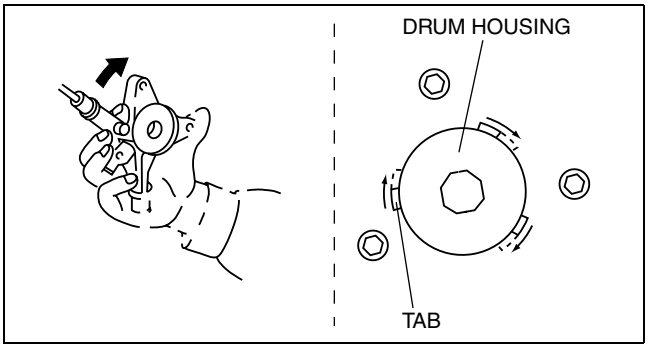
(4) Sliding door glass (See 09–12–5 SLIDING DOOR GLASS REMOVAL/INSTALLATION.)
(5) Rear power window motor (Vehicles with the power window system) (See 09–12–9 POWER WINDOW MOTOR REMOVAL/INSTALLATION.)

3. Remove the nuts.



DPE912ZW1010

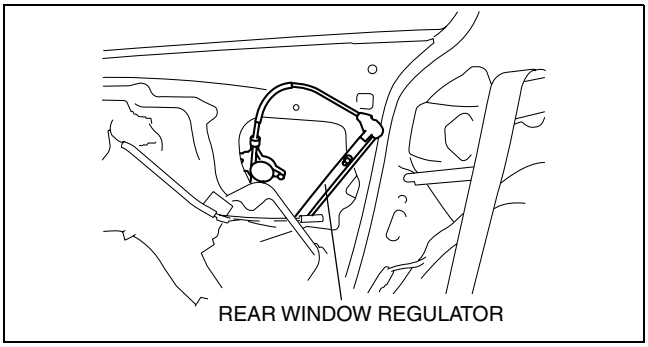
4. Insert a hand through the service hole, rotate the drum housing in the direction shown in the figure and disengage the tabs from the sliding door module.



DPE912ZW1122

5. Take the rear window regulator out through the service hole.
6. Install in the reverse order of removal.

Caution
- **Make sure the cable does not unspool from the drum housing when installing.**

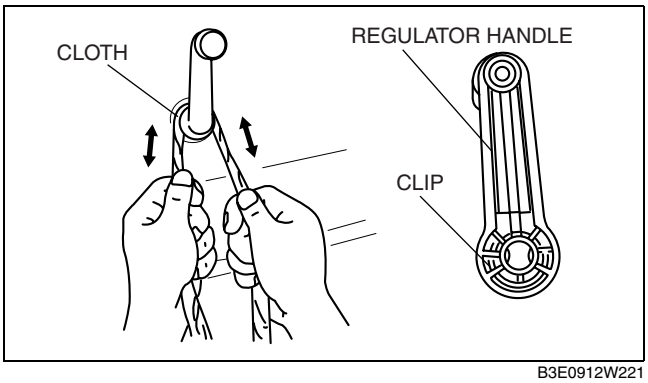


DPE912ZW1009

REGULATOR HANDLE REMOVAL

DPE091258560W03

1. Using a cloth, remove the regulator handle installation clip and remove the regulator handle.



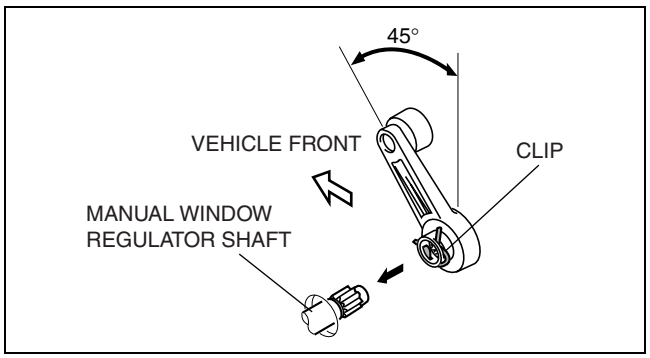
B3E0912W221

REGULATOR HANDLE INSTALLATION

DPE091258560W04

1. Fully raise the door glass.

2. Install the clip to the regulator handle.
3. Install the regulator handle while tilting it as shown in the figure and press it onto the shaft.



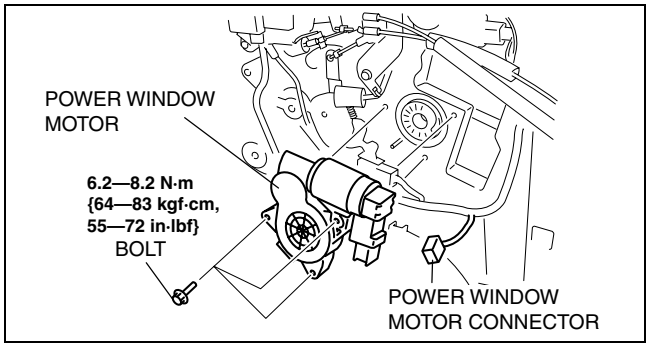
B3E0912W330

POWER WINDOW MOTOR REMOVAL/INSTALLATION

DPE091259560W01

1. Half open the door glass.
2. Disconnect the negative battery cable.
3. Remove the following parts:
   Front door
   - Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
   - Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)

   Sliding door
   - Side door garnish (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
   - Rear side trim (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
   - Sliding door trim (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
4. Remove the bolts.
5. Remove the power window motor from the power window regulator drum.
6. Disconnect the power window motor connector.
7. Install in the reverse order of removal.



DPE912ZW1018

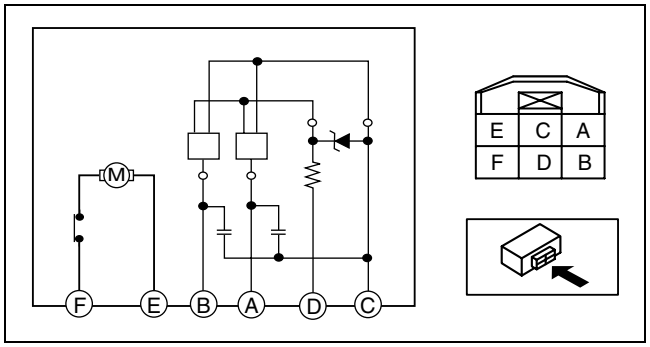
Note
- When installing the power window motor to the power window regulator drum, the drum housing tabs may detach from the door module. If this happens, insert a hand through the service hole to engage the drum housing tabs, and install the power window motor to the drum while supporting the drum housing.

POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS]

DPE091259560W03

1. Apply battery positive voltage and connect ground to power window motor terminals E and F, and then inspect the power window motor operation.
   - If the power window motor does not operate as indicated in the table, replace it.

Operation	Terminal	
	F	E
Open	B+	GND
Closed	GND	B+



CPJ912ZWC123

2. Connect battery positive voltage to power window motor terminal D and connect terminal C to ground.
3. Operate the power window motor and measure the voltage at terminals A and B.
   - If there is any malfunction, replace the power window motor.

Voltage
Pulse: Max. 12V, Min. 0 V

09

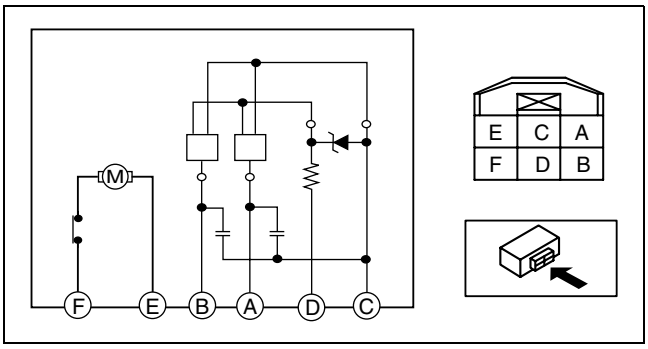
POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE]

DPE091259560W02

Driver's Side

1. Apply battery positive voltage and connect the ground to power window motor terminals E and F, and then inspect the power window motor operation.
   - If the power window motor does not operate as indicated in the table, replace it.

   Caution
   - **If the power window motor temperature is high, the motor may not rotate due to the motor internal bimetal function. Leave it untouched for about 3 min to cool it down, then reinspect.**



CPJ912ZWC123

Operation	Terminal	
	F	E
Open	B+	Ground
Close	Ground	B+

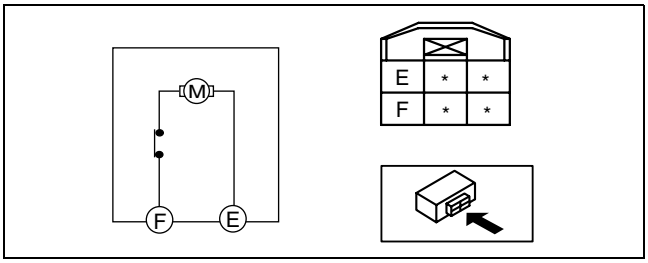
2. Connect the battery positive voltage to power window motor terminal D and connect terminal C to ground.
3. Operate the power window motor and measure the voltage at terminals A and B.
   - If there is any malfunction, replace the power window motor.

   Voltage
   Pulse: max. 12 V/min. 0 V

Except Driver's Side

1. Apply battery positive voltage and connect the ground to the power window motor terminals, and then inspect the power window motor operation.
   - If the power window motor does not operate as indicated in the table, replace it.

   Caution
   - **If the power window motor temperature is high, the motor may not rotate due to the motor internal bimetal function. Leave it untouched for about 3 min to cool it down, then reinspect.**



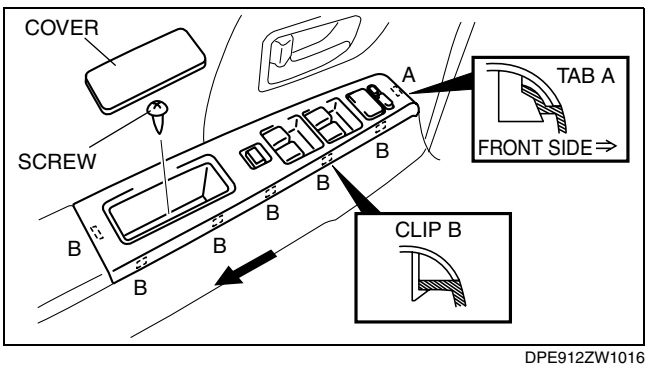
B3J0912W007

Operation	Terminal	
	F	E
Open	B+	Ground
Close	Ground	B+

POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION

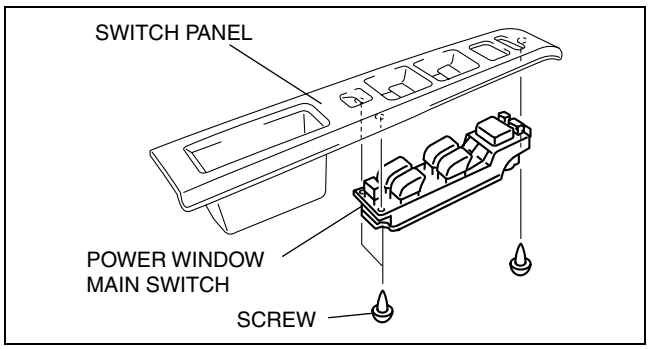
DPE091266330W01

1. Disconnect the negative battery cable.
2. Remove the cover, then remove the screw.
3. Detach clips B using a tape-wrapped flathead screwdriver.
4. Detach tab A by pulling it in the direction of the arrow, and remove the switch panel from the front door trim.
5. Disconnect the power window main switch connector and the power outer mirror switch connector.



DPE912ZW1016

6. Remove the screws, then remove the power window main switch.
7. Install in the reverse order of removal.



DPE912ZW1015

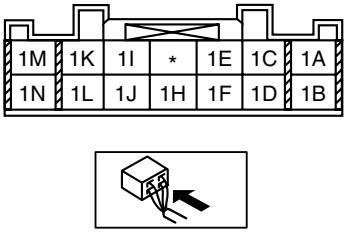
POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS]

DPE091266330W05

1. Measure the voltage at each terminal (other than terminals 1A and 1D).
   - If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under "Inspection item(s)" and related wiring harnesses.
2. Disconnect the negative battery cable.
3. Inspect the power window main switch connector for continuity at terminals 1A and 1D.
4. If the system does not work properly even though the inspection items or related wiring harnesses do not have any malfunction, replace the power window main switch.

Terminal Voltage Table (Reference)

POWER WINDOW MAIN SWITCH
HARNESS-SIDE CONNECTOR



DPE912ZW1206

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
1A	GND	Body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	• GND
1B	Close output	Power window motor	While door glass is opening	1.0 or less	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			While door glass is closing	B+	
1D	Sensor ground	Power window motor	Under any condition: Inspect for continuity to ground.	Continuity detected	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
1E	Power supply	Power window motor	Ignition switch at ON	B+	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
1F	Power supply	METER 10 A fuse	Ignition switch at ON	B+	• METER 10 A fuse • Related wiring harnesses

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
1H	Pulse 1	Power window motor	Door glass moving	Alternates between 1.0 or less and B+.	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			Door glass stopped	1.0 or less or B+	
1I	Communication	Power window subswitch	–	–	–
1J	Pulse 2	Power window motor	Door glass moving	Alternates between 1.0 or less and B+.	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			Door glass stopped	1.0 or less or B+	
1K	Door status	BCM	All doors are closed	B+	• BCM (See 09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.) • Related wiring harnesses
			Any door is opened	1.0 or less	
1L	Power-cut signal	Power window subswitch	Ignition switch at ON and power-cut switch at UNLOCK	B+	• Power window subswitch (See 09–12–15 POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
1M	Power supply	P.WIND 40 A fuse	Under any condition	B+	• P.WIND 40 A fuse • Related wiring harnesses
1N	Open output	Power window motor	While door glass is opening	B+	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			While door glass is closing	1.0 or less	

POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE]

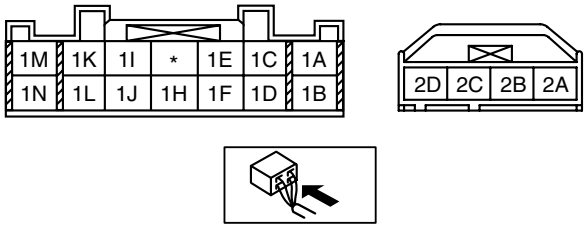
DPE091266330W02

Driver's Side

1. Measure the voltage at each terminal (except terminals 1N and 2A).
   - If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under Inspection item(s) and related wiring harnesses.
2. Disconnect the negative battery cable.
3. Inspect the power window main switch connector for continuity at terminals 1N and 2A.
4. If the system does not work properly even though the inspection items or related wiring harnesses do not have any malfunction, replace the power window main switch.

Terminal Voltage Table (Reference)

POWER WINDOW MAIN SWITCH
HARNESS-SIDE CONNECTOR



DPE912ZW1119

Terminal	Signal name	Connected to	Measurement condition	Voltage (V)/ Continuity	Inspection item(s)
1A	Power supply	P/W 30 A fuse	Ignition switch at ON	B+	• P/W 30 A fuse • Related wiring harness
			Ignition switch is off.	1.0 or less	

Terminal	Signal name	Connected to	Measurement condition	Voltage (V)/ Continuity	Inspection item(s)
1C ~~(1K)~~	Open signal	Power window motor	Door glass opening	B+	• Power window motor (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Related wiring harness
			Door glass closing	1.0 or less	
1E ~~(1I)~~	Close signal	Power window motor	Door glass opening	1.0 or less	• Power window motor (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Related wiring harness
			Door glass closing	B+	
1M	Power supply	P.WIND 20 A fuse	Under any condition	B+	• P.WIND 20 A fuse • Related wiring harness
1N	GND	Body ground	Under any condition: Inspect for continuity to ground	Continuity detected	• Ground
2A	Sensor ground	Power window motor	Under any condition: Inspect for continuity to ground	Continuity detected	• Power window motor (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Related wiring harness
2B	Power supply	Power window motor	Ignition switch at ON	B+	• Power window motor (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Related wiring harness
2C	Pulse 1	Power window motor	Door glass operating	Approx. 6	• Power window motor (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Related wiring harness
			Door glass stopped	1.0 or less or B+	
2D	Pulse 2	Power window motor	Door glass operating	Approx. 6	• Power window motor (See 09–12–10 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE].) • Related wiring harness
			Door glass stopped	1.0 or less or B+	

~~( ) : R.H.D.~~

Except Driver's Side

1. Unlock the power-cut switch.
2. Verify that the continuity is as indicated in the table using a tester.
   - If not as indicated in the table, replace the power window main switch.

Passenger's side

○—○ : Continuity

Switch position	Terminal			
	1A	1N	1I (1E)	1K (1C)
CLOSED	○		○	
		○		○
OFF		○	○	○
OPEN	○			○
		○	○	

( ) : R.H.D.

Rear right

○—○ : Continuity

Switch position	Terminal			
	1A	1N	1L	1J
CLOSED	○		○	
		○		○
OFF		○	○	○
OPEN	○			○
		○	○	

Rear left

○—○ : Continuity

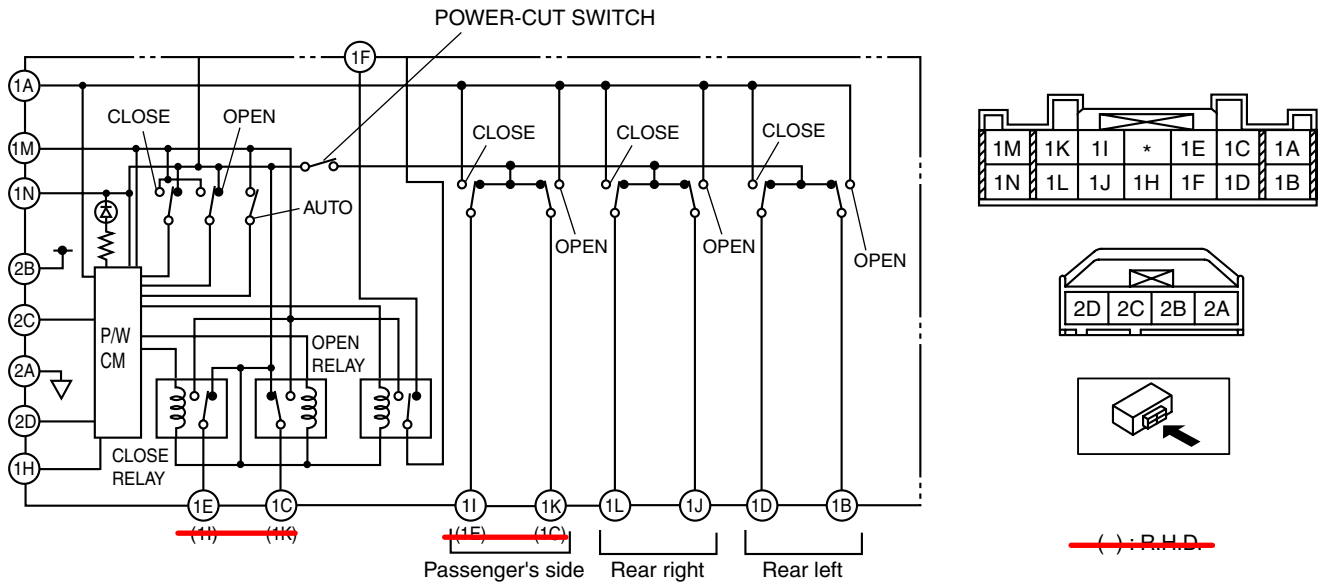
Switch position	Terminal			
	1A	1N	1D	1B
CLOSED	○		○	
		○		○
OFF		○	○	○
OPEN	○			○
		○	○	

Power-cut switch

○—○ : Continuity

Switch position	Terminal								
	1N	1E (1I)	1C (1K)	1I (1E)	1K (1C)	1L	1J	1D	1B
UNLOCK	○	○	○	○	○	○	○	○	○
LOCK	○	○	○	○	○	○	○	○	○

( ) : R.H.D.



DPE912ZW1100

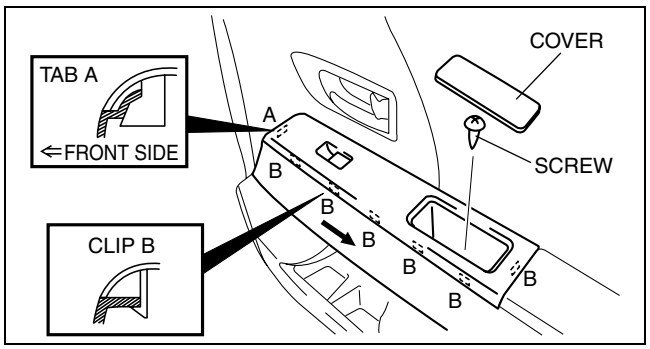
POWER WINDOW SUBSWITCH REMOVAL/INSTALLATION

DPE091266330W03

Passenger's Side

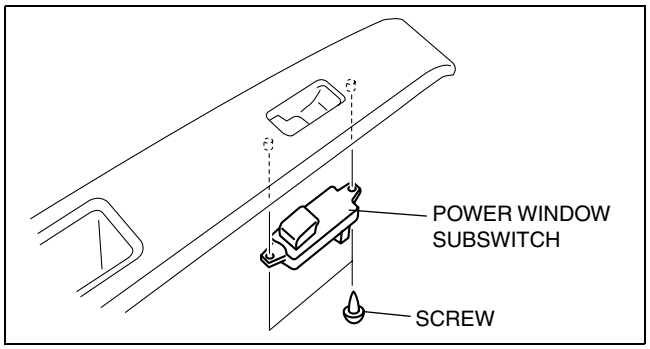
1. Disconnect the negative battery cable.

2. Remove the cover, then remove the screw.
3. Detach clips B using a tape-wrapped flathead screwdriver.
4. Detach tab A by pulling it in the direction of the arrow, and remove the switch panel from the door trim.
5. Disconnect the power window subswitch connector.



DPE912ZW1022

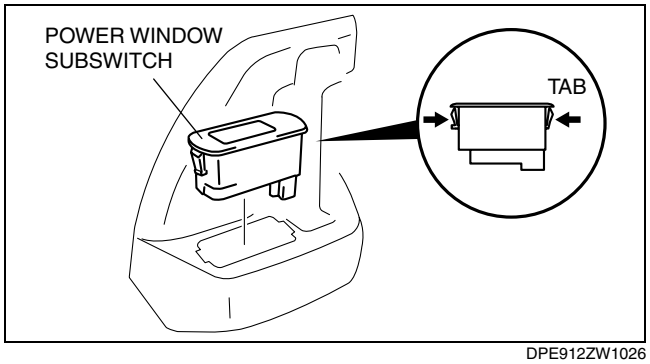
6. Remove the screws, then remove the power window subswitch.
7. Install in the reverse order of removal.



DPE912ZW1021

Rear

1. Disconnect the negative battery cable.
2. Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
3. Press the tabs and remove the power window subswitch.
4. Install in the reverse order of removal.



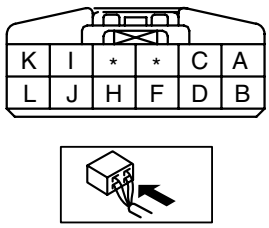
DPE912ZW1026

POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS]
DPE091266330W06

1. Measure the voltage at each terminal (other than terminals F and D).
   - If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under "inspection item(s)" and related wiring harnesses.
2. Disconnect the negative battery cable.
3. Inspect the power window subswitch connector for continuity at terminals F and D.
4. If the system does not work properly even though the inspection items or related wiring harnesses do not have any malfunction, replace the power window subswitch.

Terminal Voltage Table (Reference)

POWER WINDOW SUBSWITCH
HARNESS-SIDE CONNECTOR



DPE912ZW1207

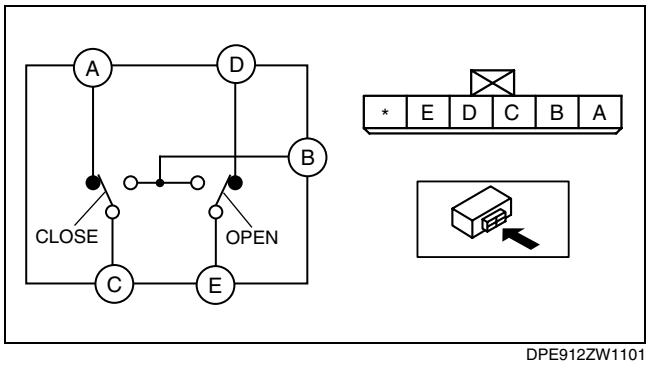
Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
A	Communication	Power window main switch	–	–	–
B	Power supply	Power window motor	Ignition switch at ON	B+	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
C	Close output	Power window motor	While door glass is opening	1.0 or less	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			While door glass is closing	B+	
D	Sensor ground	Power window motor	Under any condition: Inspect for continuity to ground.	Continuity detected	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
F	GND	Body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	• GND
H	Pulse 2	Power window motor	Door glass moving	Alternates between 1.0 or less and B+.	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			Door glass stopped	1.0 or less or B+	
I	Power supply	P.WIND 40 A fuse	Under any condition	B+	• P.WIND 40 A fuse • Related wiring harnesses
J	Pulse 1	Power window motor	Door glass moving	Alternates between 1.0 or less and B+.	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			Door glass stopped	1.0 or less or B+	
K	Open output	Power window motor	While door glass is opening	B+	• Power window motor (See 09–12–9 POWER WINDOW MOTOR INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses
			While door glass is closing	1.0 or less	

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
L	Power-cut signal	Power window main switch	Ignition switch at ON and power-cut switch at UNLOCK	B+	• Power window main switch (See 09–12–11 POWER WINDOW MAIN SWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR ALL WINDOWS].) • Related wiring harnesses

POWER WINDOW SUBSWITCH INSPECTION [WITH AUTO-OPEN/CLOSE FUNCTION FOR DRIVER'S SIDE]

DPE091266330W04

1. Verify continuity as indicated in the table.
   - If not as indicated in the table, replace the power window subswitch.



DPE912ZW1101

○—○ : Continuity

Switch position	Terminal				
	B	C	A	D	E
Close	○	○		○	○
OFF		○	○	○	○
Open	○				○
		○	○		

DPE912ZW1102

POWER WINDOW SYSTEM INITIAL SETTING

DPE091258000W04

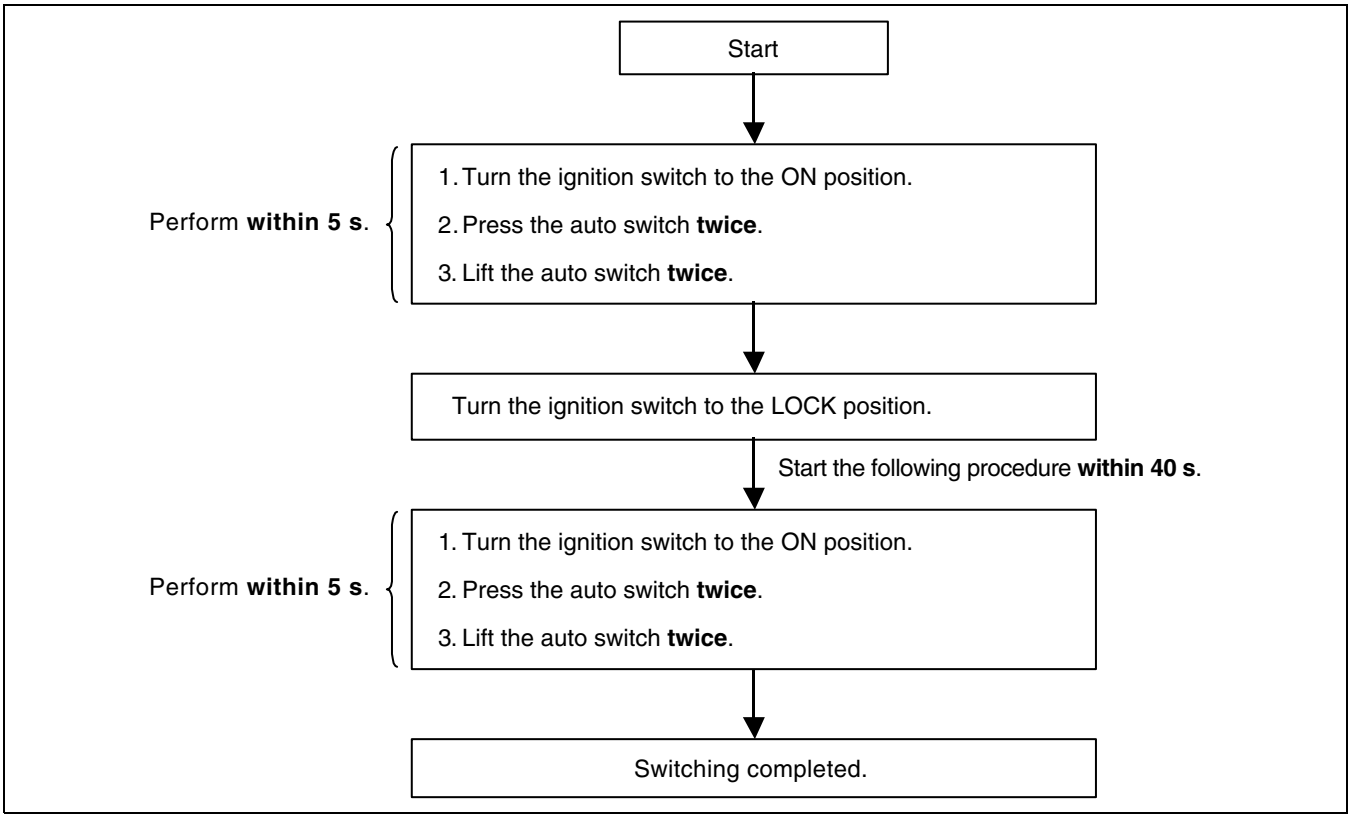
Note
- Initial setting must be performed for the switch of each seat.
- If the following operations have been performed, initial setting is reset, and auto up/down and two-step down operation are disabled. Therefore, performing initial setting is necessary.
  — Negative battery cable disconnected or power window system power supply fuse removed (Perform initial setting for the switches of all seats.)
  — Power window switch connector disconnected (Perform initial setting for the switch connected with the connector.)

1. Turn the ignition switch to the ON position.
2. Press the switch of each seat and fully open the door glass.
3. Pull the switch of each seat to the manual-up position to fully close the door glass, and keep holding the switch up at the position for **approx. 2 s**.

TWO-STEP DOWN FUNCTION OPERATIVE/NON-OPERATIVE SWITCHING PROCEDURE

DPE091258000W05

Note
- The following procedure switches the two-step down function from operative to non-operative and vice versa.



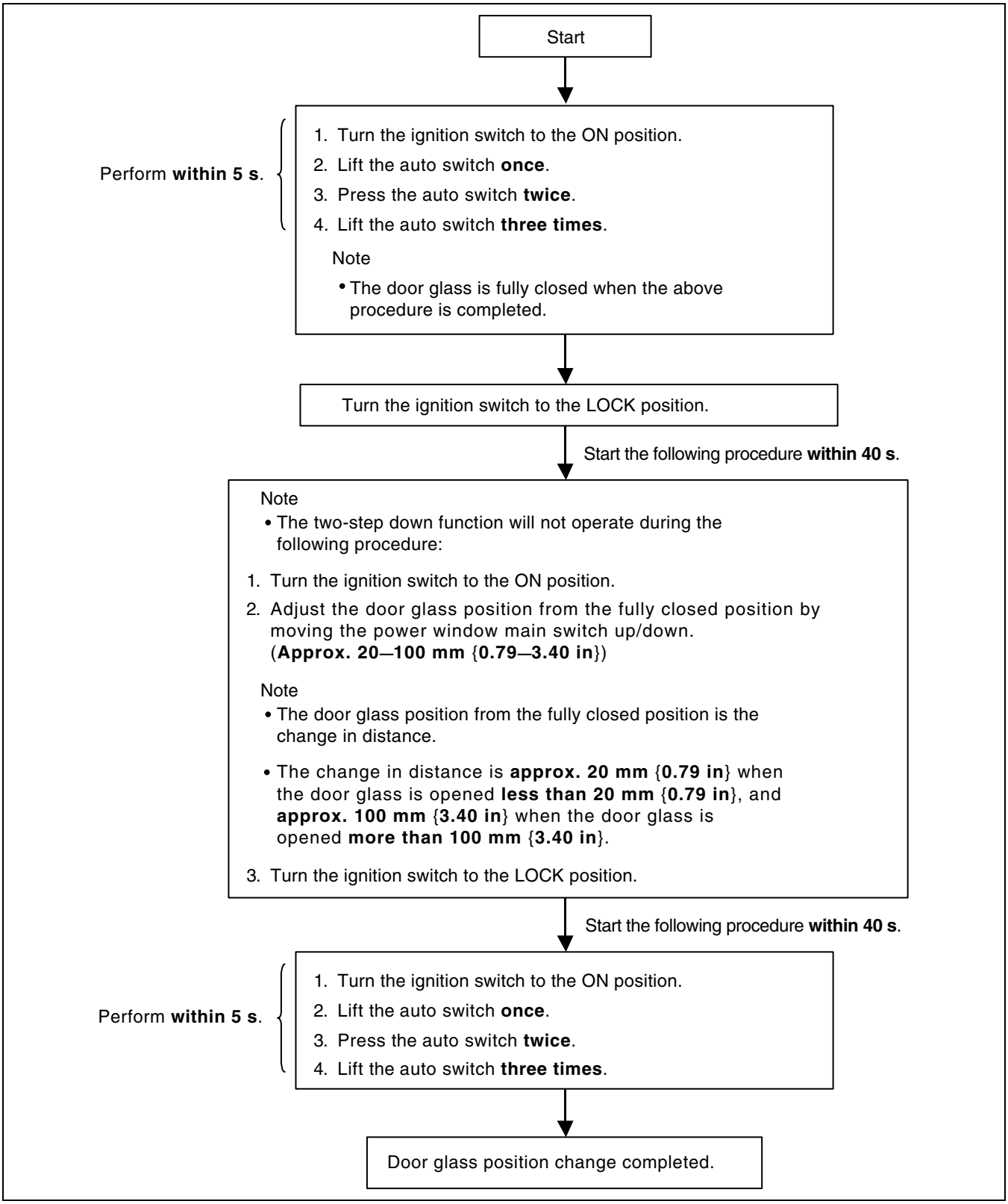
B3E0912W319

DOOR GLASS POSITION CHANGE PROCEDURE

DPE091258000W06

Note

- After performing the following procedure, verify that the two-step down function operates normally and the door glass position has changed. If the two-step down function does not operate or the door glass position has not changed, the procedure was not performed properly. Repeat the procedure from the beginning.



B3E0912W320

09

WINDSHIELD REMOVAL

DPE091263900W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (2) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (3) Center cowl grille (See 09–16–3 CENTER COWL GRILLE REMOVAL/INSTALLATION.)
   (4) Cowl panel (See 09–10–11 COWL PANEL REMOVAL/INSTALLATION.)

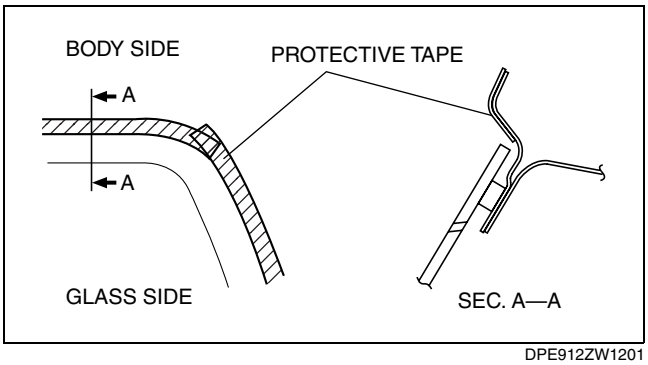
(5) Rearview mirror (See 09–12–36 REARVIEW MIRROR REMOVAL/INSTALLATION [VEHICLES WITH THE AUTO WIPER SYSTEM].) (See 09–12–37 REARVIEW MIRROR REMOVAL [VEHICLES WITHOUT THE AUTO WIPER SYSTEM].)
(6) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
(7) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
(8) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
(9) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)

3. Set the headliner out of the way.
4. Apply protective tape along the edge of the body.

Note
- Overlap and adhere the protective tape to the corners to prevent damage.

5. Remove the windshield molding by pulling it outward.

Note
- If the windshield molding is difficult to remove, warm the windshield molding using a hot air blower.
- The windshield molding is a replacement part.

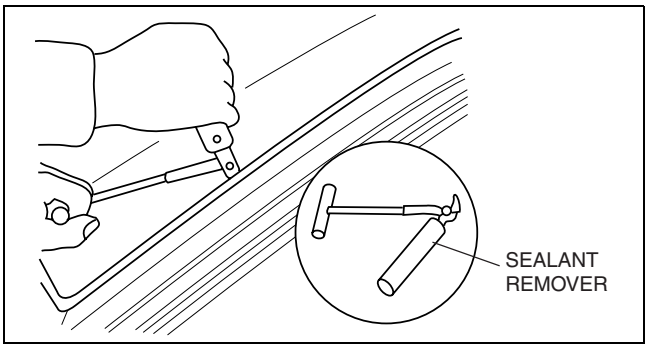


DPE912ZW1201

Not Reusing Windshield

Note
- For the areas of the sealant that are difficult to cut, use the **SST** (piano wire) and follow the procedure under “Reusing Windshield”.

1. Cut out the sealant all around the glass using a sealant remover.
2. Remove the windshield.



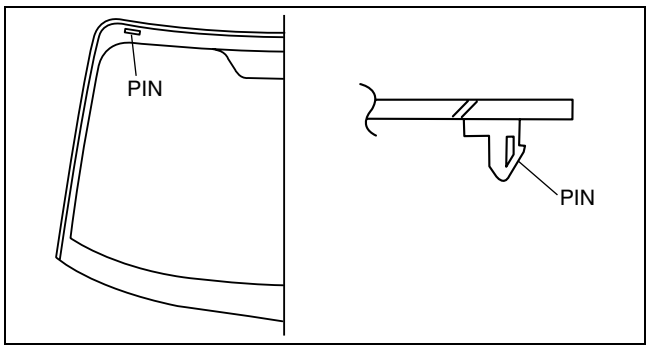
ADA7738W002

Reusing Windshield

Warning
- **Using the SST (piano wire) with bare hands can cause injury. Always wear gloves when using the SST (piano wire).**

Note
- Before removing the windshield from the body, mark the position of the windshield by affixing tape to the windshield and body panel.

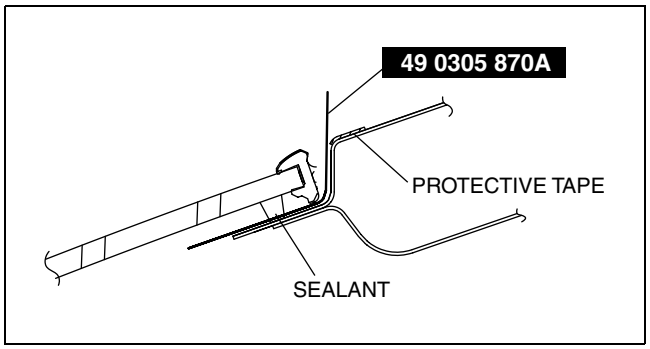
1. Avoiding the pin on the inside of the vehicle, insert the **SST** (piano wire) which has been cut to sufficient length.



DPE912ZW1112

2. Wind each end of the **SST** (piano wire) around a bar.

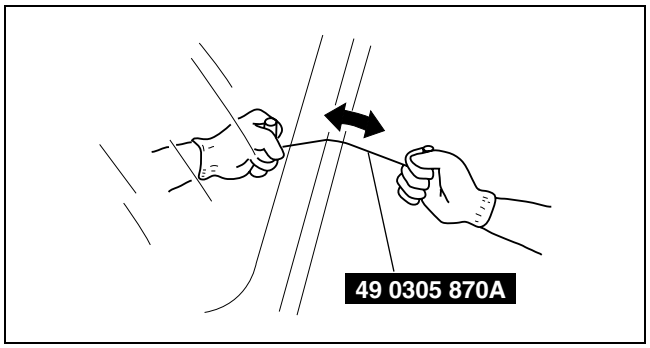
Note
- Use a long sawing action to spread the work over the whole length of the **SST** (piano wire) to prevent it from breaking due to localized heating.



CHU0912WT17

3. Secure one end of the **SST** (piano wire), and while pulling the other end, cut the sealant around the windshield.
4. Pinch the pin from the inside of the vehicle and detach it.
5. Remove the windshield.
6. If the pin is damaged, remove the pin.

Note
- Before removing the pin from the windshield glass, place an alignment mark on the windshield.



A6E7738W021

WINDSHIELD INSTALLATION

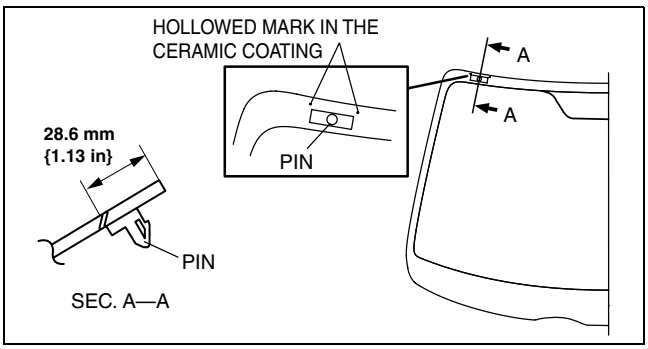
DPE091263900W02

Warning
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

Caution
- **If a door is opened or closed when all the window glass is closed, the resulting change in air pressure could cause the sealant to crack preventing the proper installation of the glass. Keep the door glass opened until the windshield installation is completed.**

1. Remove the sealant along the perimeter of the glass using a cutting a razor. (When reusing the glass)
2. Clean and degrease an **approx. 50 mm** wide strip along the perimeter of the windshield.
3. Inspect the glass for cracks. If it is cracked, chamfer it using sandpaper.

4. Align the marks made before removal and install the pin to the windshield referring to the figure. (when reusing the glass, and the pin was removed)

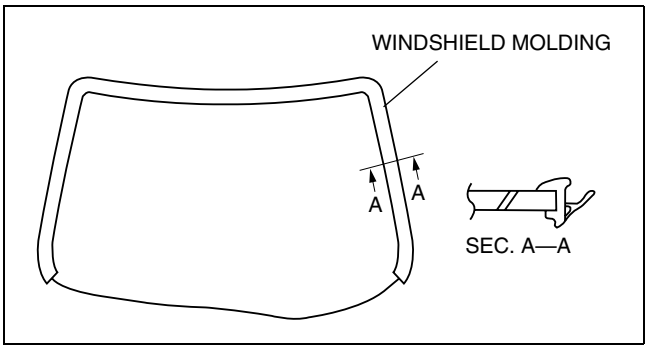


DPE912ZW1113

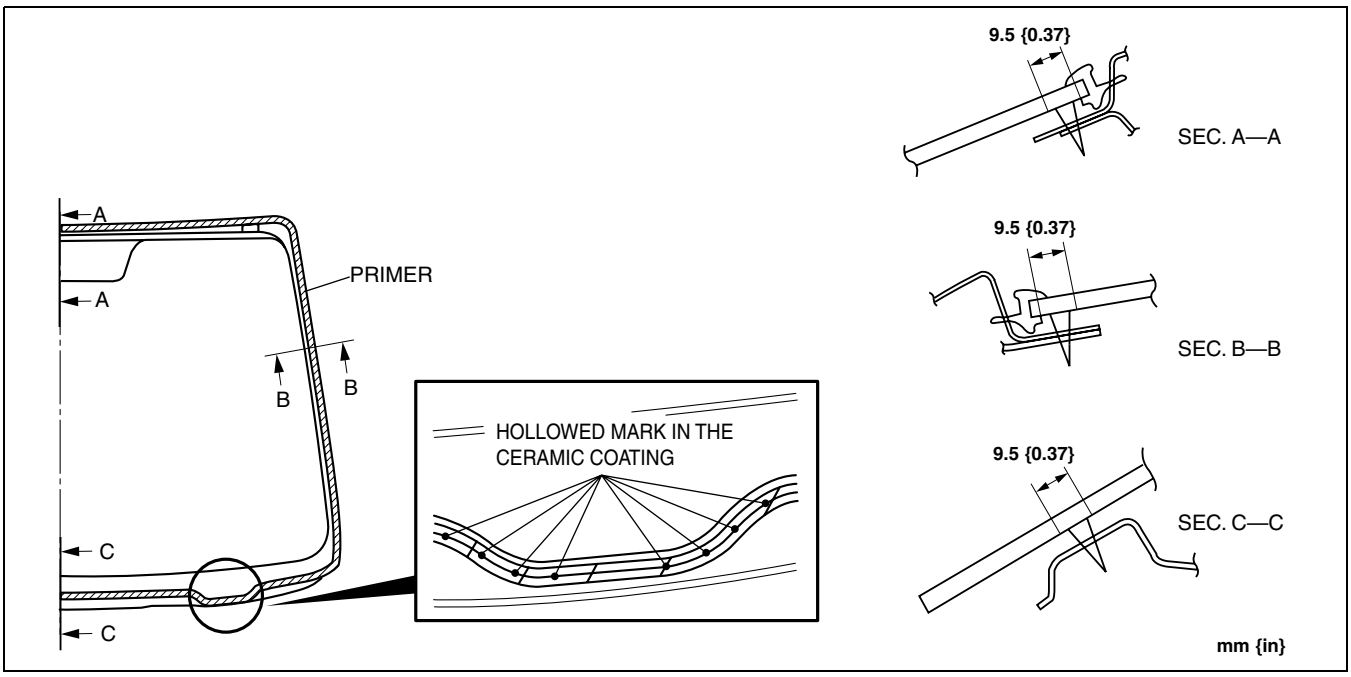
5. Install the windshield molding.
6. Use glass primer on the glass, then allow it to dry for **approx. 30 min**.

Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

Note
- Make sure to apply primer to the hollowed marks in the ceramic coating.



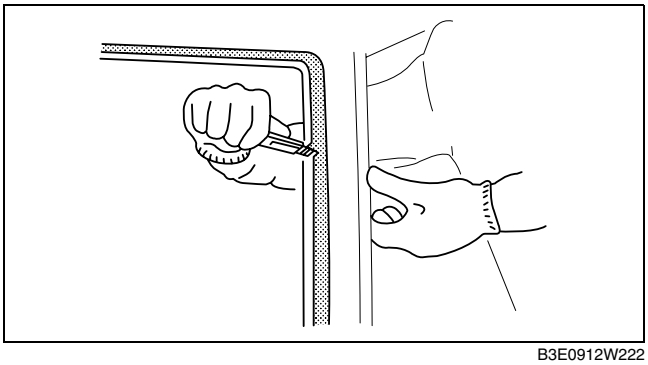
CHU0912WT12



DPE912ZW1114

7. Cut away the old sealant using a razor or scraper so that **1—2 mm** thickness of sealant remains along the perimeter of the frame.
8. If the sealant has come off completely in any one place, apply some primer after degreasing, and allow it **approx. 30 min** to dry. Then apply **2 mm** thickness of new sealant.

Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

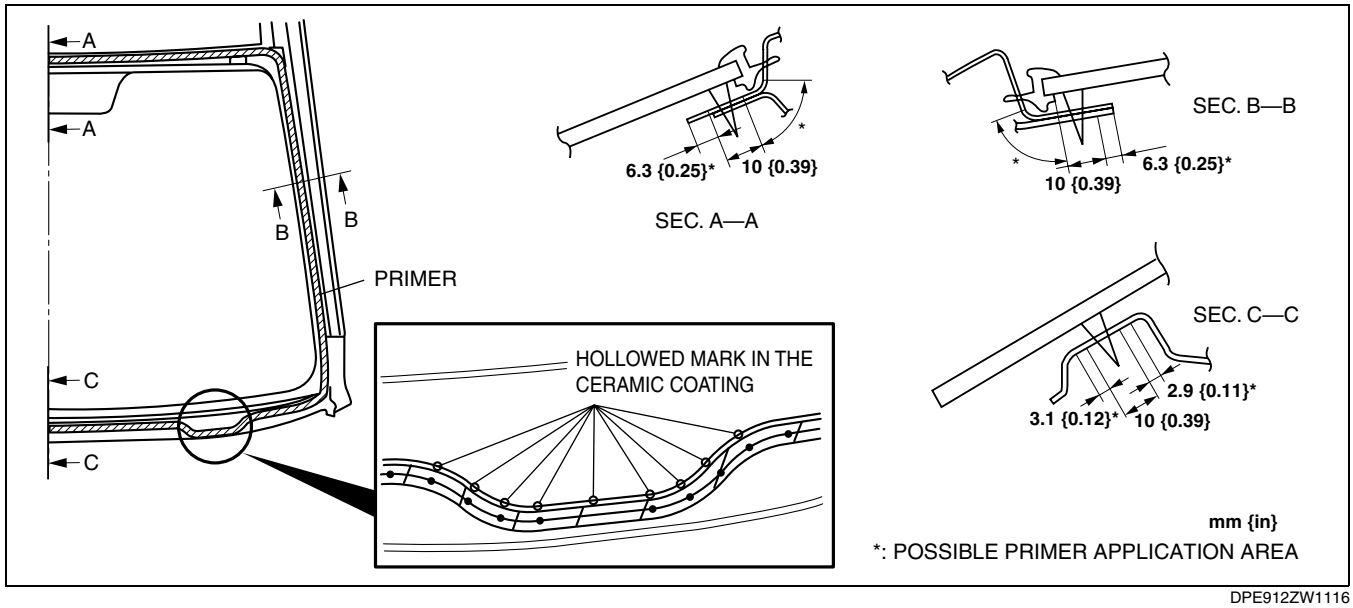


B3E0912W222

9. Clean and degrease along the perimeter of the bonding area on the body.
10. Apply body primer on the body as shown in the figure, then allow it to dry for **approx. 30 min**.

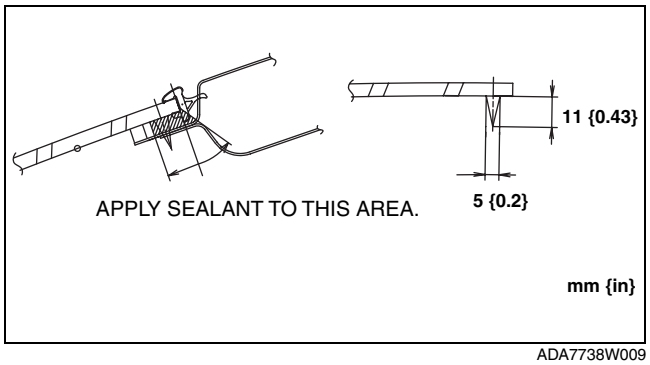
Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

Note
- Apply primer to the hollowed marks in the ceramic coating.



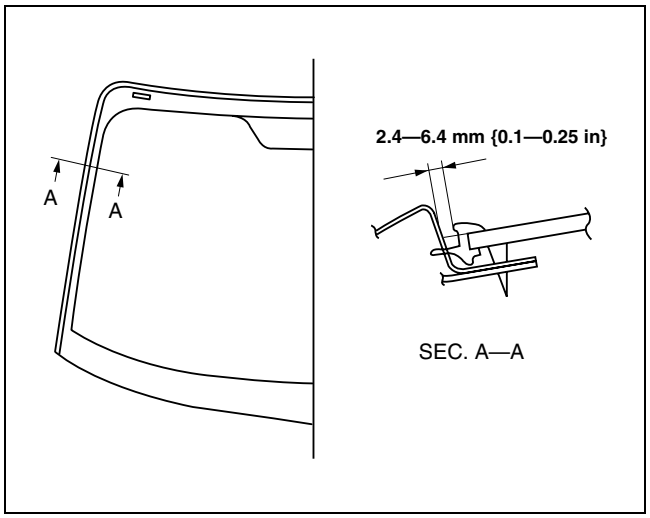
DPE912ZW1116

11. Apply sealant to the area of the glass surface as shown in the figure.
12. Insert the windshield locator pins to the body and install the windshield.



ADA7738W009

13. Verify that the clearance of the A-pillar is within the range shown in the figure, and press along the perimeter of the glass.
14. Install the headliner.
15. Install the following parts:
    (1) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
    (2) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
    (3) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
    (4) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
    (5) Rearview mirror (See 09–12–37 REARVIEW MIRROR INSTALLATION [VEHICLES WITHOUT THE AUTO WIPER SYSTEM].)
    (6) Cowl panel (See 09–10–11 COWL PANEL REMOVAL/INSTALLATION.)
    (7) Center cowl grille (See 09–16–3 CENTER COWL GRILLE REMOVAL/INSTALLATION.)
    (8) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)



DPE912ZW1903

(9) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)

16. Allow the sealant to harden completely.

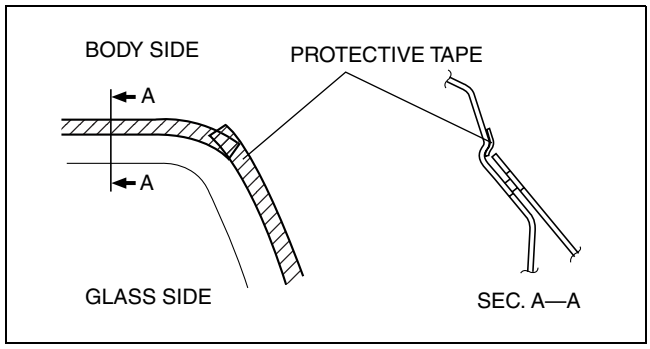
Sealant hardening time: 24 h

REAR WINDOW GLASS REMOVAL

DPE091263900W03

1. Disconnect the negative battery cable.
2. Remove the rear wiper arm and blade. (See 09–19–12 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
3. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
4. Remove the rear wiper motor. (See 09–19–13 REAR WIPER MOTOR REMOVAL/INSTALLATION.)
5. Remove the high-mount brake light. (See 09–18–13 HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION.)
6. Disconnect the filament connector.
7. Apply protective tape along the edge of the body.

Note
- Overlap and adhere the protective tape to the corners to prevent damage.

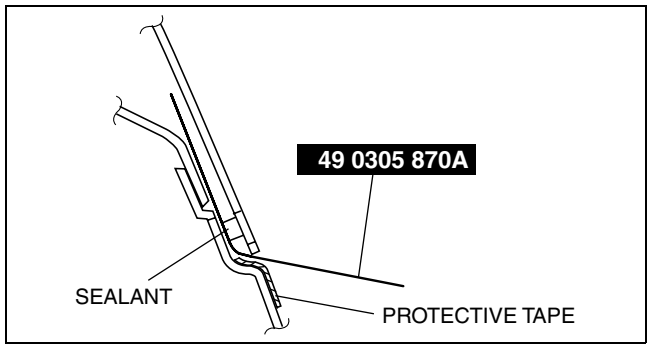


DPE912ZW1208

8. Insert the **SST** (piano wire), which has been cut to sufficient length from inside the vehicle.

Warning
- **Using the SST (piano wire) with bare hands can cause injury. Always wear gloves when using the SST (piano wire).**

Note
- Before removing the rear window glass from the body, mark the position of the glass by affixing tape to the glass and body panel.



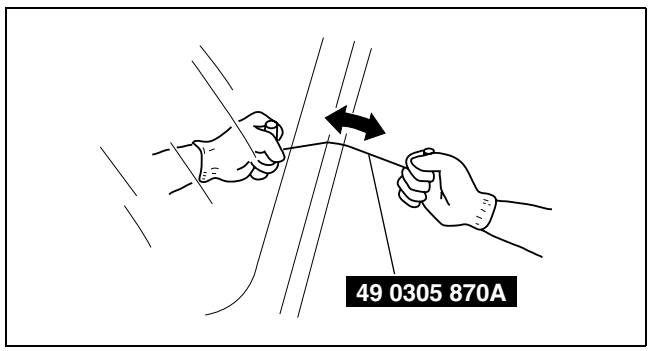
DPE912ZW1209

9. Wind each end of the **SST** (piano wire) around a bar.

Note
- Use a long sawing action to spread the work over the whole length of the **SST** (piano wire) to prevent it from breaking due to localized heating.

10. Secure one end of the **SST** (piano wire), and while pulling the other end, cut the sealant around the rear window glass.
11. Remove the rear window glass.
12. Remove the fasteners from the rear window glass.

Note
- Place alignment marks on the rear window glass before removing the fasteners from the rear window glass.



A6E7738W021

REAR WINDOW GLASS INSTALLATION

DPE091263900W04

Warning

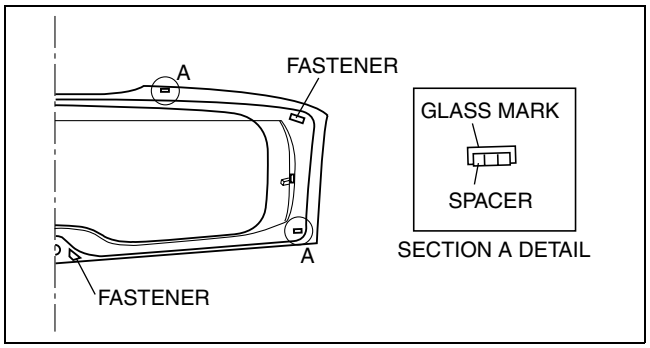
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

Caution
- **If a door is opened or closed when all the window glass is closed, the resulting change in air pressure could cause the sealant to crack preventing the proper installation of the glass. Keep the door glass open until the rear window glass installation is completed.**

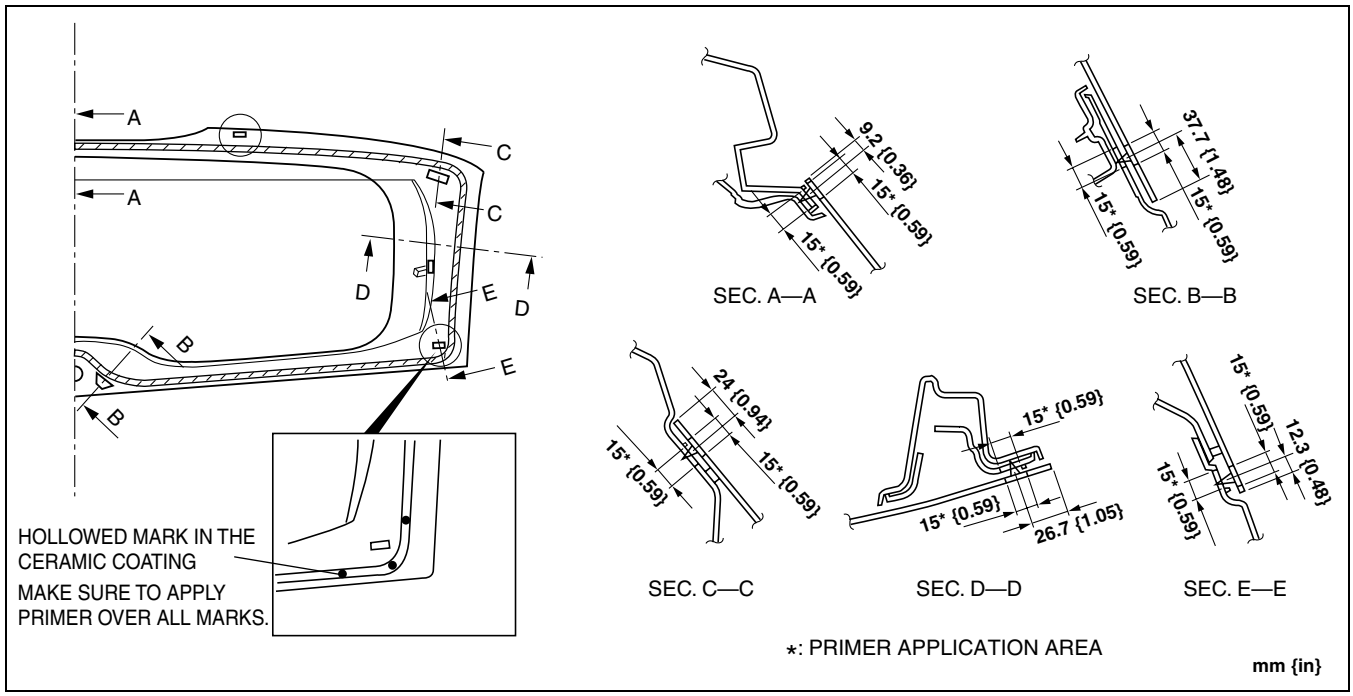
1. Remove the sealant along the perimeter of the glass using a razor or scraper. (when reusing the glass)
2. Clean and degrease an **approx. 50 mm** wide strip along the perimeter of the glass.
3. Inspect the glass for cracks. If it is cracked, chamfer it using sandpaper.
4. Install the spacers and fasteners to the glass as shown in the figure. When reusing the glass, align with the alignment mark marked before removing.
5. Apply glass primer on the glass as shown in the figure then allow it to dry for **approx. 30 min**.

Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

Note
- Apply primer to the hollowed marks in the ceramic coating.



DPE912ZW1117



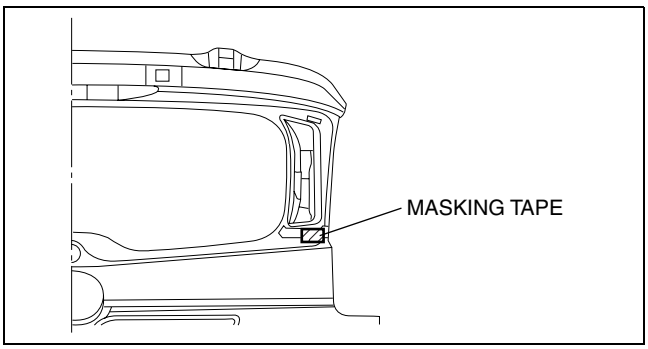
DPE912ZW1118

6. Cut away the old sealant using a razor or scraper so that **1—2 mm** thickness of sealant remains along the perimeter of the frame.
7. Clean and degrease the bonding area along the perimeter of the body.
8. When reusing the liftgate, apply primer to the area where the sealant has come off completely and allow it to dry for **approx. 30 min**.

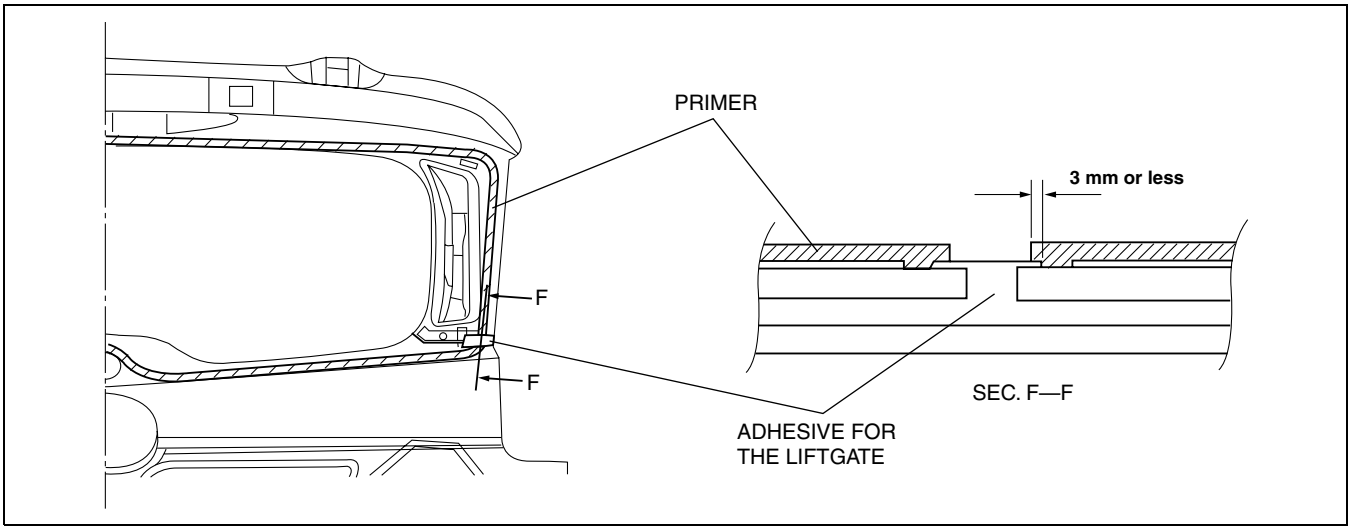
Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

9. When using a new liftgate, peel off the masking tape after the body color has been painted.
10. When using a new liftgate, apply primer as shown in the figure and allow it to dry for **approx. 30 min**.

Caution
- **To prevent poor adhesion to the glass, apply primer and avoid the application area of the adhesive for the liftgate.**
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

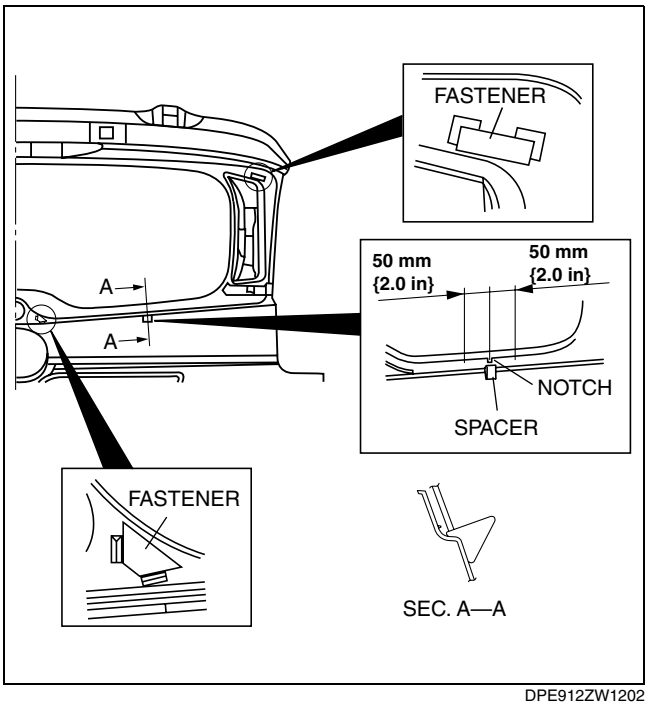


DPE912ZW1902



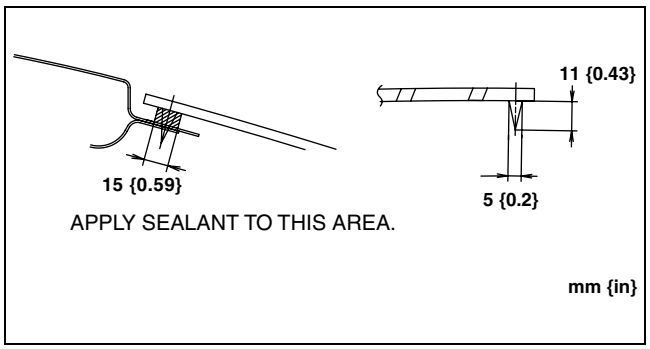
DPE912ZW1901

11. Install fasteners and spacers to the body as shown in the figure.

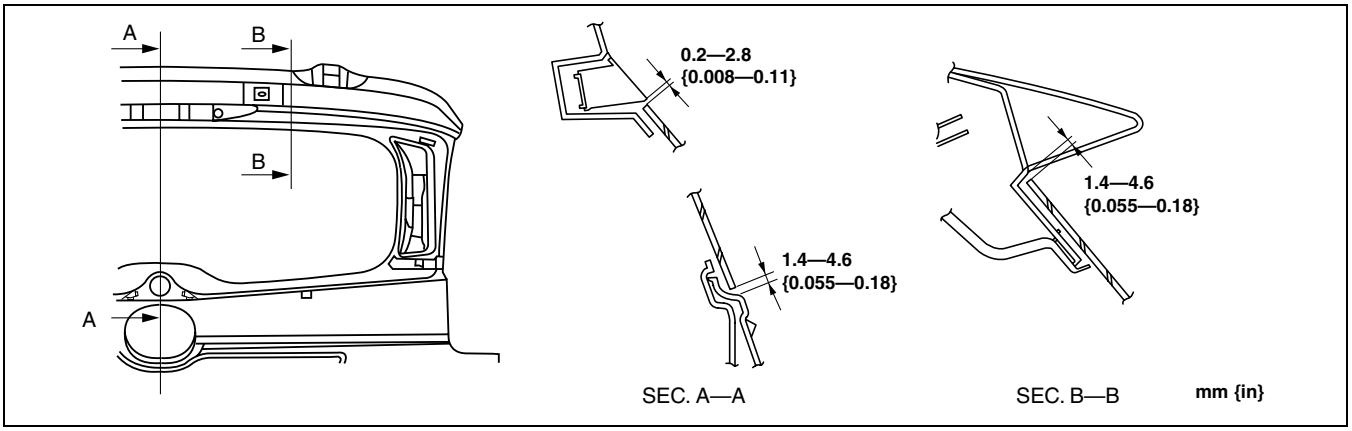


DPE912ZW1202

12. Apply sealant to the area of the glass surface as shown in the figure.
13. Install the rear window glass.
14. Verify that the gap at the upper and lower parts of the glass is within the standard value shown in the figure, then press along the perimeter of the glass.



DPE912ZW1213

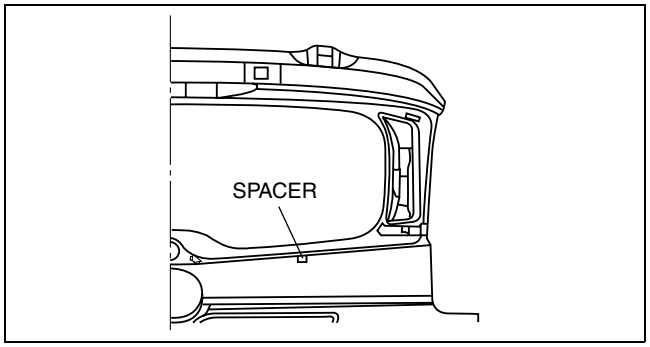


DPE912ZW1123

15. Connect the filament connector.
16. Install the high-mount brake light. (See 09–18–13 HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION.)
17. Install the rear wiper motor. (See 09–19–13 REAR WIPER MOTOR REMOVAL/INSTALLATION.)
18. Install the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
19. Install the rear wiper arm and blade. (See 09–19–12 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
20. Allow the sealant to harden completely.

    Sealant hardening time: 24 h

21. Remove the spacer shown in the figure.



DPE912ZW1124

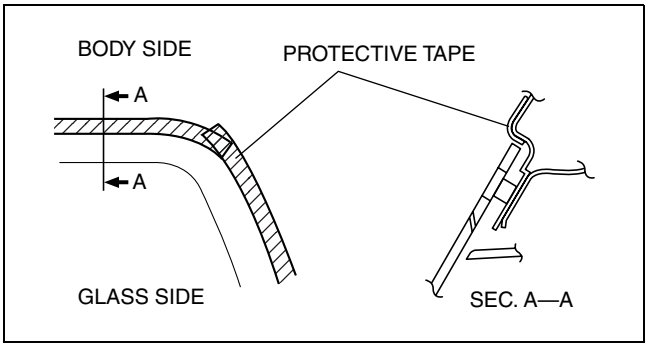
QUARTER WINDOW GLASS REMOVAL

DPE091263900W07

1. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Sub-trunk
   (3) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (4) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (5) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (6) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (7) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (8) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (9) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (10)Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/

INSTALLATION.)
(11)C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
(12)Rear combination lights (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
(13)Center guide rail cover (See 09–16–6 CENTER GUIDE RAIL COVER REMOVAL/INSTALLATION.)

2. Apply protective tape along the edge of the body and the quarter window glass.



DPE912ZW1211

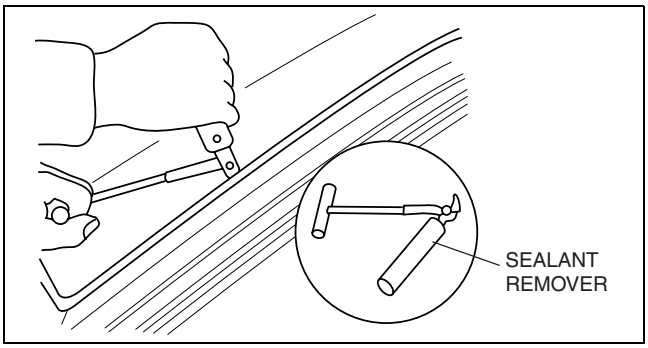
Not Reusing Windshield

Note
- For the areas of the sealant that are difficult to cut, use the **SST** (piano wire) and follow the procedure under “Reusing Windshield”.

1. Cut out the sealant all around the glass from inside the vehicle using a sealant remover.

Warning
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

2. Remove the quarter window glass.

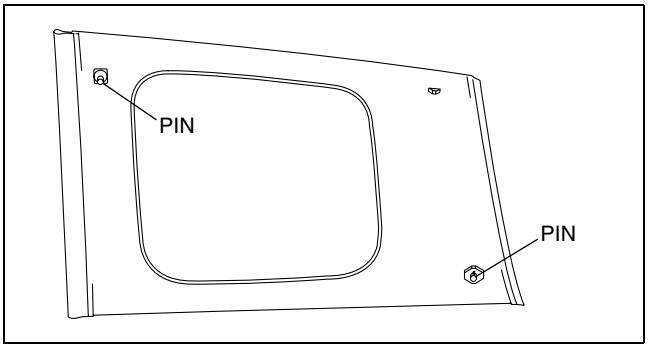


ADA7738W002

Reusing Windshield

Warning
- **Using the SST (piano wire) with bare hands can cause injury. Always wear gloves when using the SST (piano wire).**

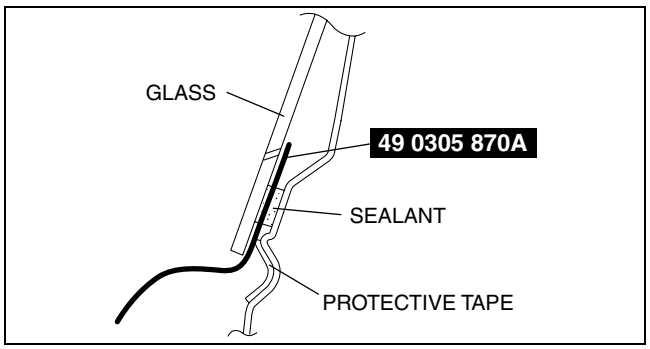
1. Avoiding the pin on the inside of the vehicle, insert the **SST** (piano wire) which has been cut to sufficient length.



DPE912ZW1109

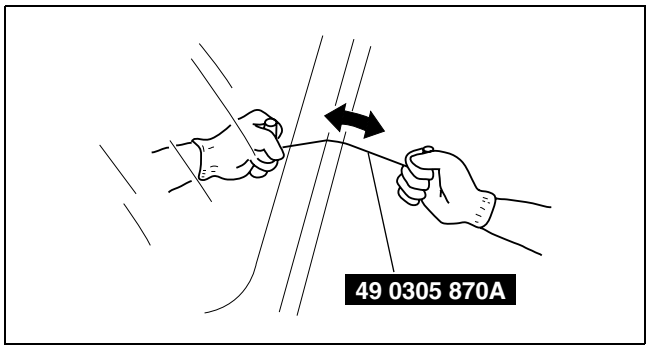
2. Wind each end of the **SST** (piano wire) around a bar.

Note
- Use a long sawing action to spread the work over the whole length of the **SST** (piano wire) to prevent it from breaking due to localized heating.



DPE912ZW1210

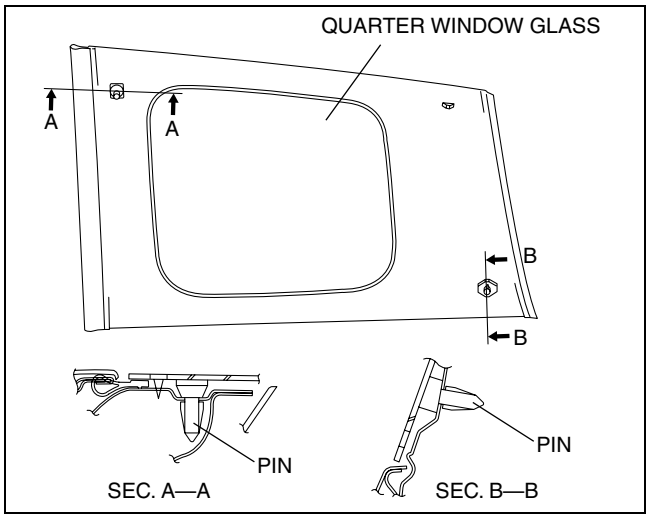
3. Secure one end of the **SST** (piano wire), and while pulling the other end, cut the sealant around the quarter window glass.



A6E7738W021

4. Pull the quarter window glass outward and detach the pins from the body.
5. If a pin or spacer is damaged, remove it.

Note
- Before removing the pins or spacers from the quarter window glass, place alignment marks on the quarter window glass.



DPE912ZW1110

QUARTER WINDOW GLASS INSTALLATION

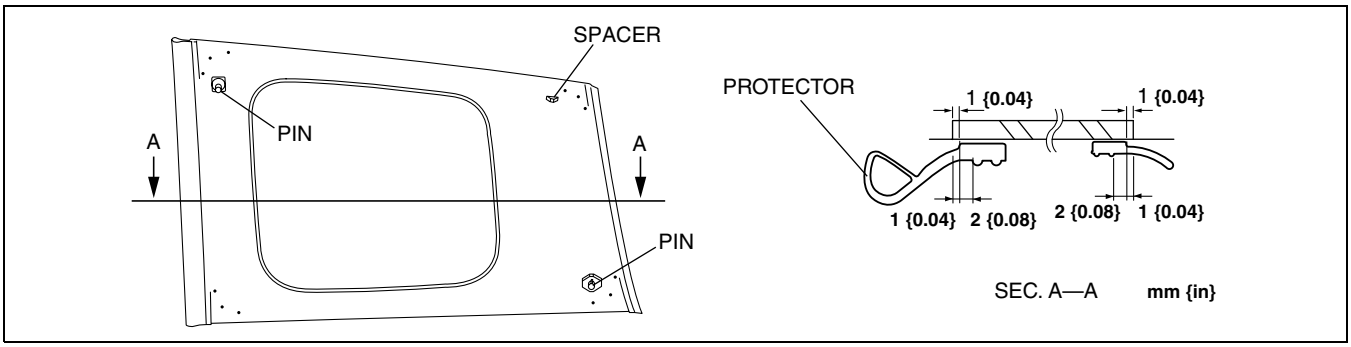
DPE091263900W08

Warning
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

Caution
- **If a door is opened or closed when all the window glass is closed, the resulting change in air pressure could cause the sealant to crack preventing the proper installation of the glass. Keep the door glass open until the quarter window glass installation is completed.**

1. Remove sealant along the perimeter of the glass using a razor or scraper. (when reusing the glass)
2. Clean and degrease the ceramic part along the perimeter of the glass.
3. Inspect the glass for cracks. If it is cracked, chamfer it using sandpaper.
4. If the glass is reused, attach the pins, spacers and protector to the glass as shown in the figure.

Align with the alignment marks marked before removing the glass.

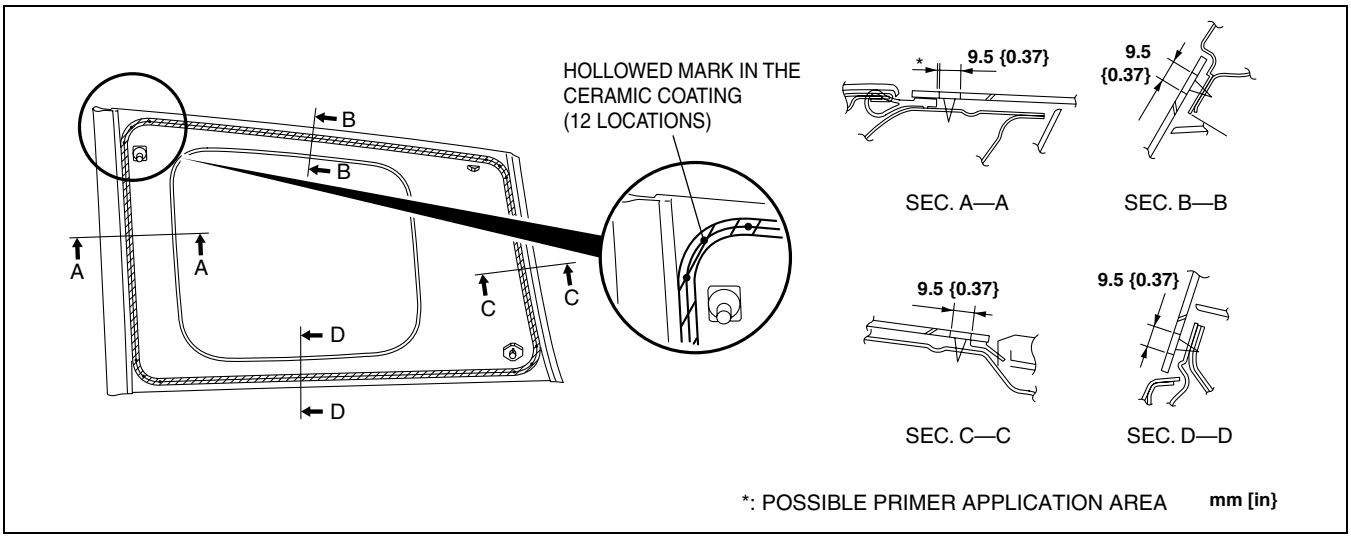


DPE912ZW1111

5. Apply glass primer along the hollowed marks in the ceramic coating on the new glass, along the sealant tracks on the reused glass, then allow it to dry for **approx. 30 min**.

Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**

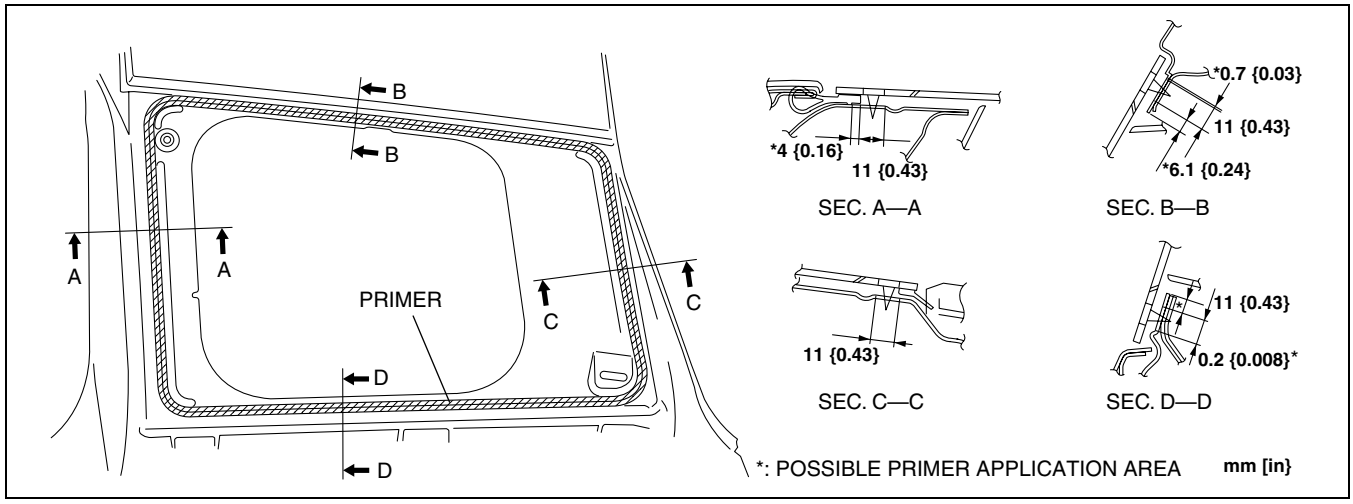
Note
- Apply primer to the hollowed marks in the ceramic coating.



DPE912ZW1108

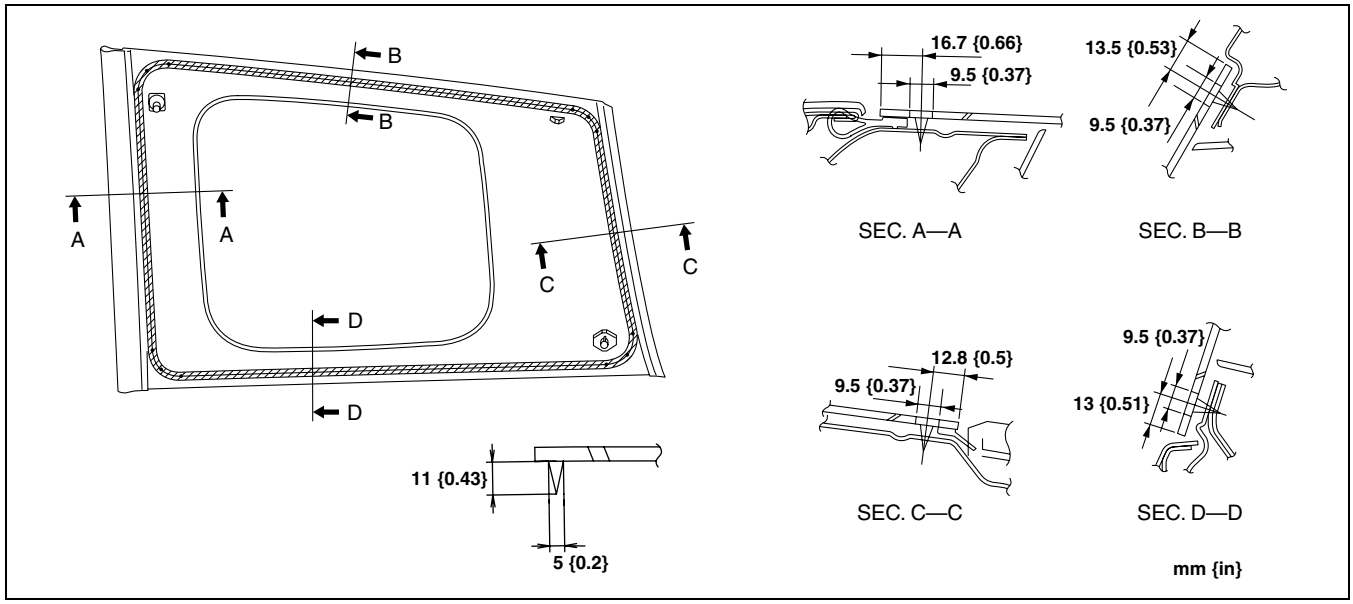
6. Cut away the old sealant using a razor or scraper so that **1—2 mm** thickness of sealant remains along the perimeter of the frame.
7. If the sealant has come off completely in any one place, apply some primer after degreasing, and allow it **approx. 30 min** to dry. Then apply **2 mm** thickness of new sealant.
8. Clean and degrease the bonding surface along the perimeter of the body.
9. Apply body primer on the body as shown in the figure, then allow it to dry for **approx. 30 min**.

Caution
- **To prevent weakening of the primer adhesion, keep the bonding surface free of dirt, moisture, and grease. Do not touch the surface with your hand.**



DPE912ZW1025

10. After the primer has dried, apply **11 mm** in thickness, **5 mm** in width of sealant using a sealant gun. Where it is not applied properly, correctly apply it using a spatula.



DPE912ZW1107

11. Insert the positioning pins to the body and install the quarter window glass.
12. Install the following parts:
    (1) Center guide rail cover (See 09–16–6 CENTER GUIDE RAIL COVER REMOVAL/INSTALLATION.)
    (2) Rear combination lights (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
    (3) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
    (4) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
    (5) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
    (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
    (7) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
    (8) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
    (9) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
    (10) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
    (11) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
    (12) Sub-trunk
    (13) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
13. Allow the sealant to harden completely.

Sealant hardening time: 24 h

FILAMENT INSPECTION

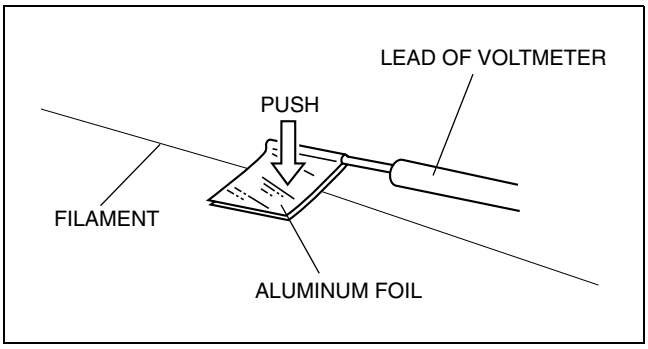
DPE091263000W03

1. Turn the ignition switch to the ON position.
2. Turn the rear window defroster switch on.

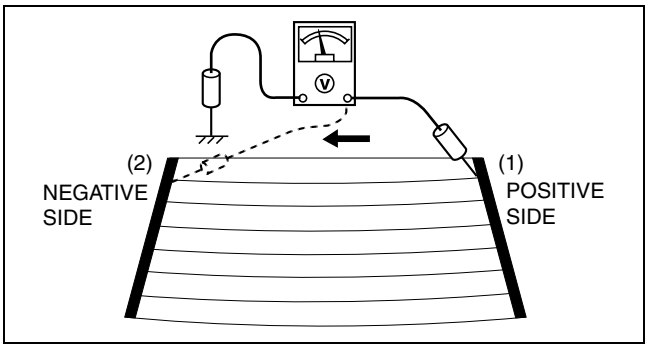
Caution
- **Directly touching the rear window defroster filament with the lead of the tester could damage it. Wrap aluminum foil around the end of the lead and inspect the filament by touching it with the foil.**

3. Connect the positive lead of the tester to the positive side of each filament and the negative lead to ground.
4. Gradually slide the positive lead from the positive side to the negative side and verify that the voltage decreases accordingly.
   - If the voltage changes rapidly, the filament has a malfunction. Repair the filament.

Measured part	Voltage (Reference)
(1) to (2)	Approx. 11 V to 0 V



A6E7736W001



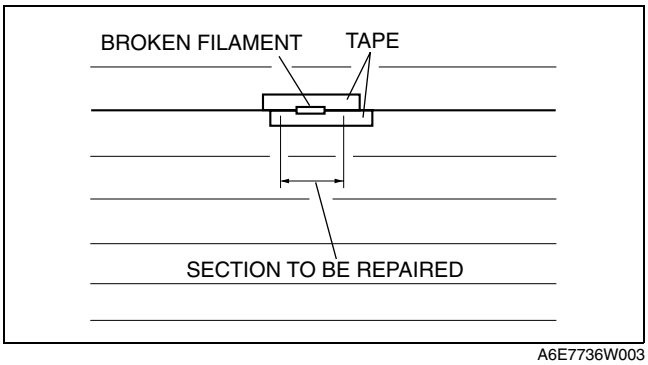
A6E7736W002

FILAMENT REPAIR

DPE091263000W04

1. Clean the filament using isopropyl alcohol.
2. Attach tape to both sides of the filament.
3. Using a small brush or marking pen, apply silver paint.
4. After **2—3 min**, carefully remove the tape without damaging the applied area.

Caution
- **Do not operate the rear window defroster until the paint is completely dry. It may cause other malfunctions if it is used before the paint is dry.**



A6E7736W003

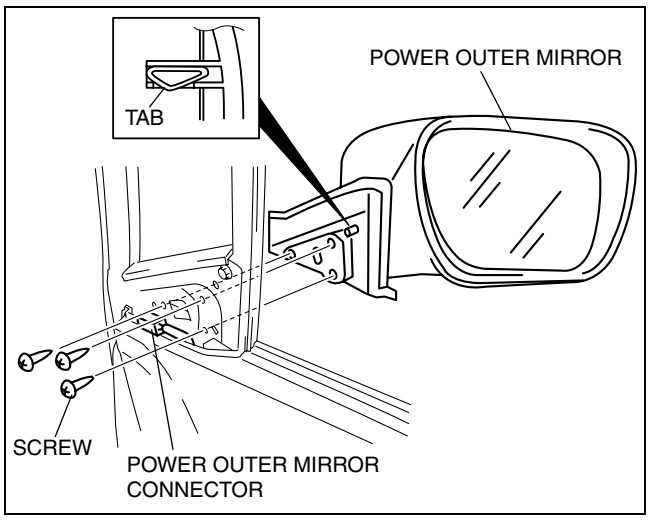
5. Dry the repaired part according to the following procedure.
   - When the room temperature is **25 °C {77 °F}**, leave it as it is for **24 h**.
   - When a hot air blower is used, dry with the **150 °C {302 °F}** air for **30 min**.

POWER OUTER MIRROR REMOVAL/INSTALLATION

DPE091269100W01

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)

3. Disconnect the power outer mirror connector.
4. Remove the screws.
5. Push the power outer mirror against the vehicle and detach the tab while lifting the mirror up to remove.
6. Install in the reverse order of removal.

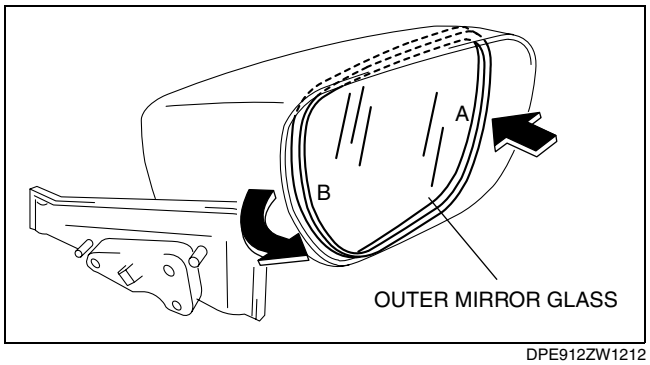


DPE912ZW1017

OUTER MIRROR GLASS REMOVAL

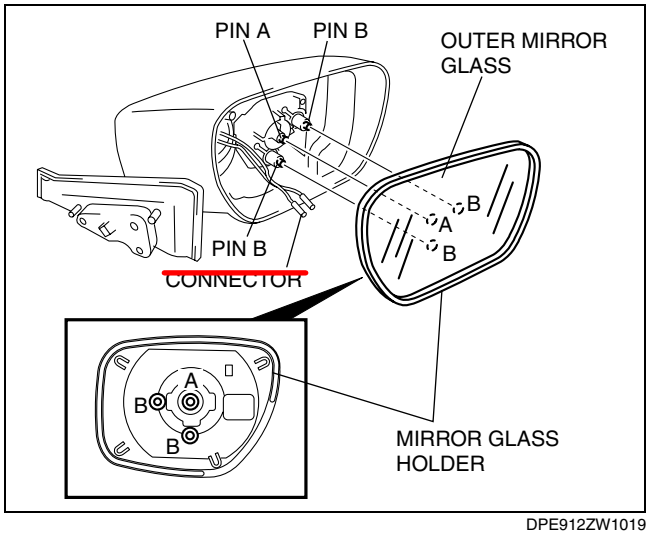
DPE091269100W02

1. Press area A of the mirror glass so that area B moves outward.



DPE912ZW1212

2. Detach pin A while lifting up the inside of the mirror glass holder.
3. Pull the mirror glass holder and remove pins B.
4. ~~Disconnect the connector. (vehicles with heated outer mirrors)~~
5. Remove the mirror glass holder and the outer mirror glass as a single unit.



DPE912ZW1019

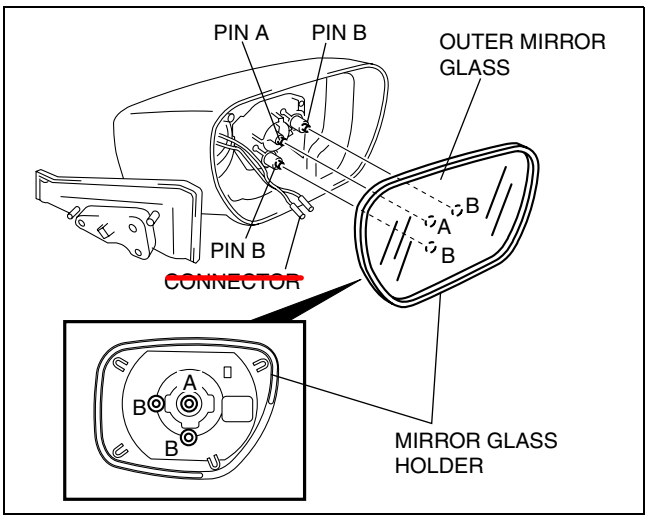
OUTER MIRROR GLASS INSTALLATION

DPE091269100W03

1. ~~Connect the connector. (vehicles with heated outer mirrors)~~

09

2. Press part A on the outer mirror glass and install pin A
3. Press part B on the outer mirror glass and install pins B.

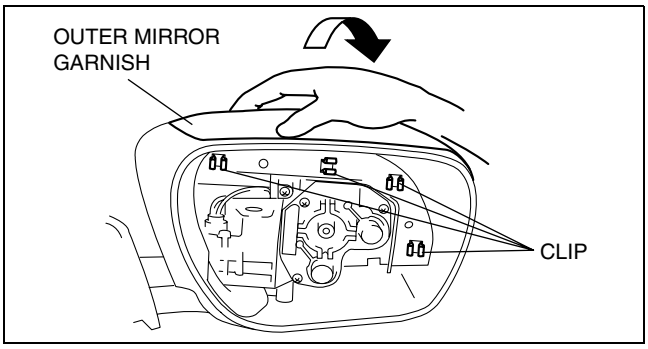


DPE912ZW1019

OUTER MIRROR GARNISH REMOVAL

DPE091269100W04

1. Remove the outer mirror glass from the outer mirror. (See 09–12–33 OUTER MIRROR GLASS REMOVAL.)
2. Pinch the clip ends using pincers and detach the clips by pushing them forward.
3. Grasp the upper side of the outer mirror garnish and remove it by pulling it in the direction of the arrow.

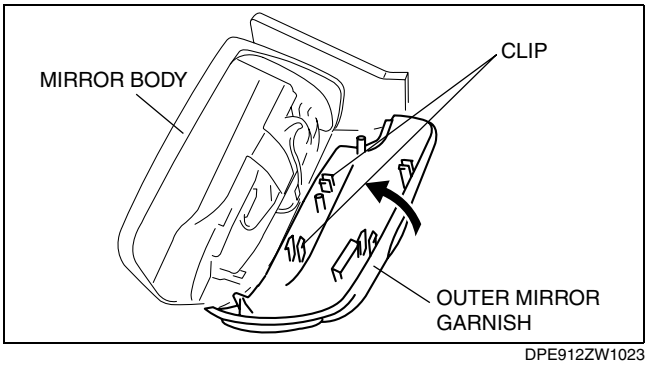


DPE912ZW1024

OUTER MIRROR GARNISH INSTALLATION

DPE091269100W05

1. Position the outer mirror garnish against the mirror body in the direction of the arrow shown in the figure, and insert the outer mirror garnish clips (6 locations) into the mirror body.
2. Install the outer mirror garnish so that there are no gaps around the component.



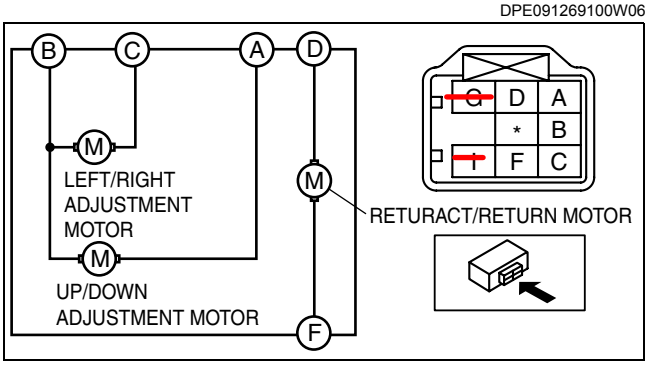
DPE912ZW1023

POWER OUTER MIRROR INSPECTION

DPE091269100W06

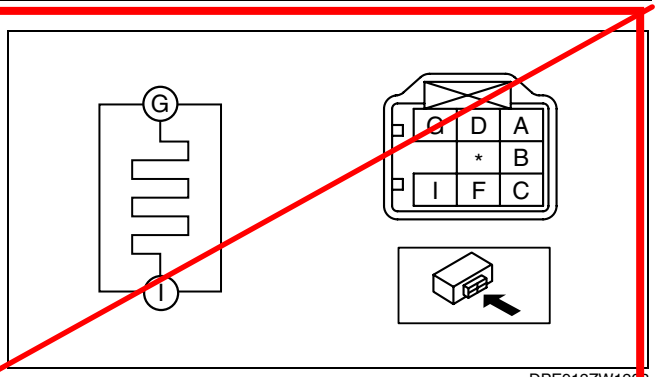
1. Apply battery positive voltage to the power outer mirror terminals and inspect the operation of the power outer mirror.
   - If not as specified, replace the power outer mirror.

Mirror operation	terminal	
	B+	GND
Up	A	B
Down	B	A
Left	C	B
Right	B	C
Return	F	D
Retract	D	F



DPE912ZW1103

2. Inspect for continuity between the power outer mirror heater terminals.
   - If not as specified, replace the power outer mirror.



DPE912ZW1203

○—○ : Continuity

Mirror operation	Terminal	
	G	I
Heater	○	○

DPE912ZW1204

POWER OUTER MIRROR SWITCH REMOVAL/INSTALLATION

DPE091266600W01

Note
- The power outer mirror switch is integrated with the power window main switch.

1. Disconnect the negative battery cable.
2. Remove the power outer mirror switch from the front door trim. (See 09–12–10 POWER WINDOW MAIN SWITCH REMOVAL/INSTALLATION.)
3. Install in the reverse order of removal.

POWER OUTER MIRROR SWITCH INSPECTION

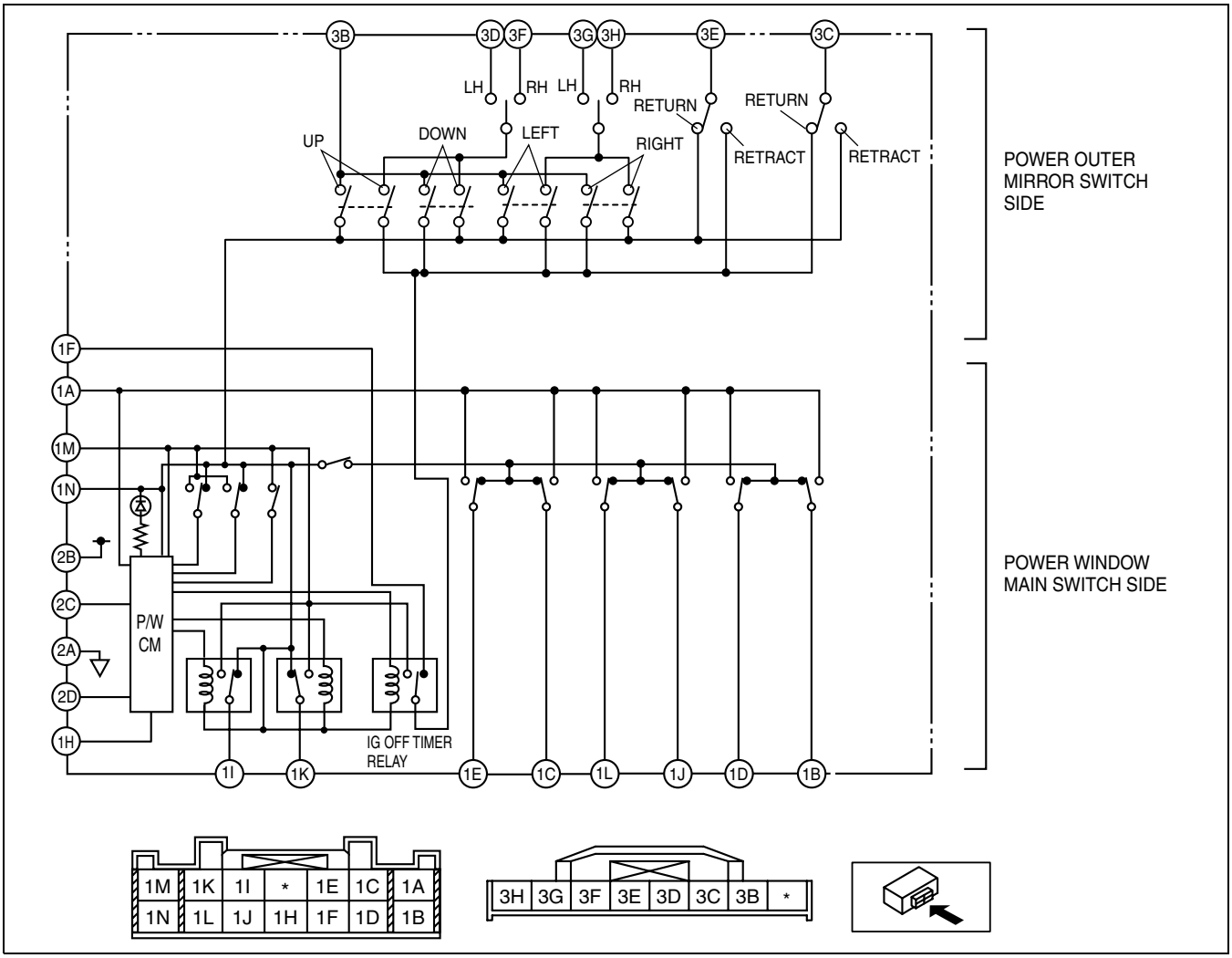
DPE091266600W02

1. Inspect for continuity between the power outer mirror switch terminals using an ohmmeter.
   - If not as indicated in the table, replace the power outer mirror switch.

○—○ : Continuity

Mirror operation		1F	1N	3B	3G	3F	3H	3D	3C	3E
LH	Up	○	○	○				○		
	Down	○	○	○					○	
	Left	○	○	○	○					
	Right	○	○	○	○					
RH	Up	○	○	○		○				
	Down	○	○	○		○				
	Left	○	○	○			○			
	Right	○	○	○			○			
Retractable mirror switch	Retract	○	○						○	○
	Return	○	○						○	○

DPE912ZW1105

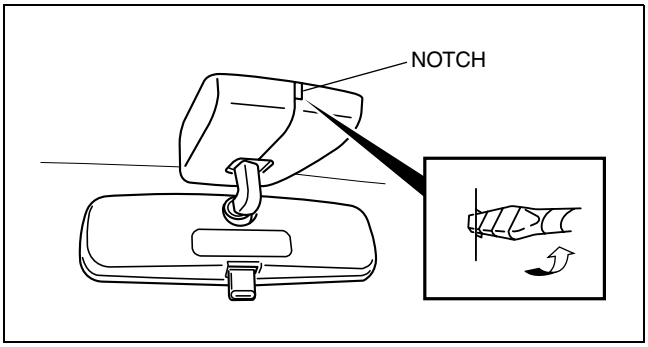


DPE912ZW1121

REARVIEW MIRROR REMOVAL/INSTALLATION [VEHICLES WITH THE AUTO WIPER SYSTEM]

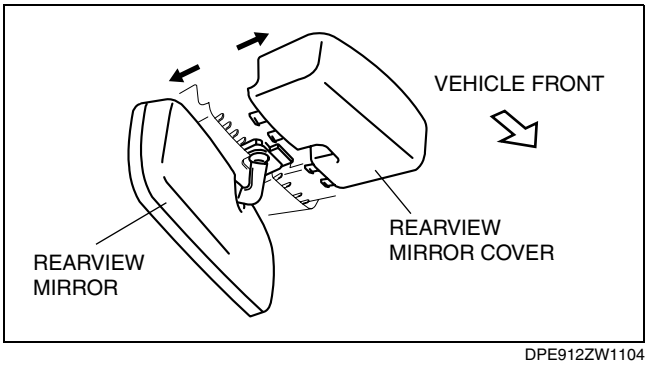
DPE091269220W01

1. Insert a tape-wrapped flathead screwdriver into the notch and pry with the screwdriver in the direction shown by the arrow to remove the covers.



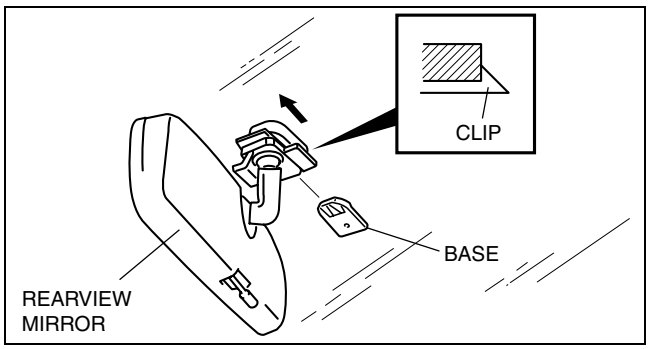
B3E0912W333

2. Remove the covers.
3. Remove the rain sensor. (See 09–19–18 RAIN SENSOR REMOVAL/INSTALLATION.)



DPE912ZW1104

4. Remove the clip, and then remove the rearview mirror upward.
5. Install in the reverse order of removal.

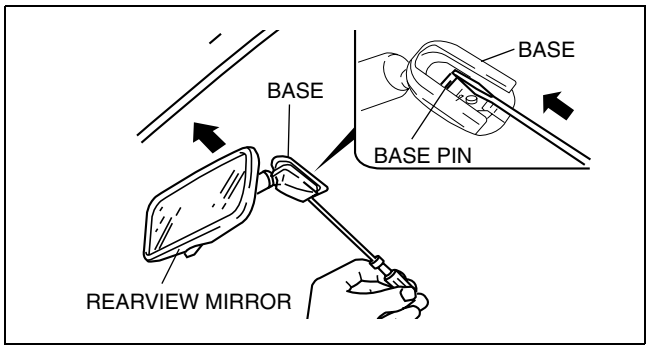


DPE912ZW1214

REARVIEW MIRROR REMOVAL [VEHICLES WITHOUT THE AUTO WIPER SYSTEM]

DPE091269220W06

1. Insert a flathead screwdriver between the mirror and the base.
2. Push the base pin down to remove the rearview mirror.

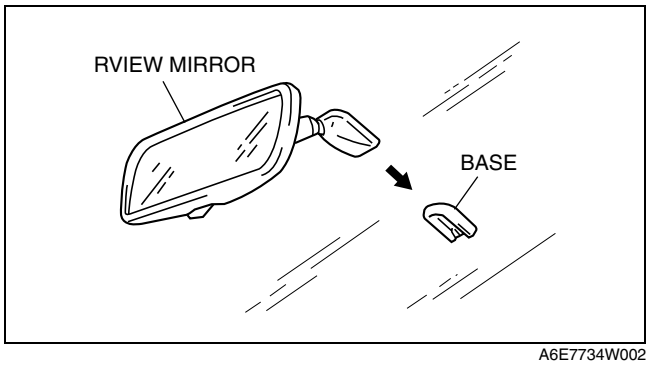


A6E7734W001

REARVIEW MIRROR INSTALLATION [VEHICLES WITHOUT THE AUTO WIPER SYSTEM]

DPE091269220W07

1. Install the rearview mirror onto the base.



A6E7734W002

BASE REMOVAL

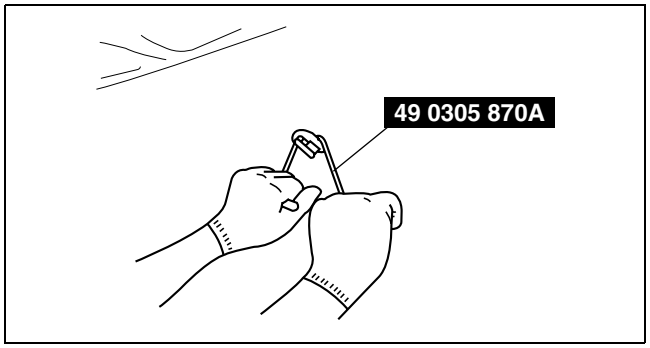
DPE091269220W08

1. Remove the rearview mirror. (See (See 09–12–36 REARVIEW MIRROR REMOVAL/INSTALLATION [VEHICLES WITH THE AUTO WIPER SYSTEM].) 09–12–37 REARVIEW MIRROR REMOVAL [VEHICLES WITHOUT THE AUTO WIPER SYSTEM].)
2. Wind each end of a wire around a bar.

   Warning
   - **Using the SST (piano wire) with bare hands can cause injury. Always wear gloves when using the SST (piano wire).**

   Note
   - Use a long sawing action to spread the work over the whole length of the **SST** (piano wire) to prevent it from breaking.

3. Fix one end of the **SST** (piano wire), and while pulling the other end, cut the sealant to remove the base.



A6E7734W006

BASE INSTALLATION

DPE091269220W09

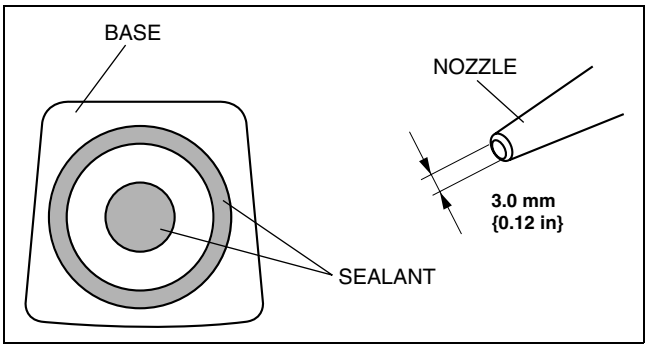
1. Cut away all of the original sealant using a razor.

Warning
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

2. Clean and degrease the ceramic coating on the glass and the base.

Caution
- **Keep the area free of dirt and grease, and do not touch the surface. Otherwise, the primer may not properly bond to the surface of the glass.**

3. Apply primer to the bonding area of the glass and the base.
4. Use only glass primer on the glass, and body primer on the base. Allow the primer to dry for **approx. 30 min**.
5. Apply **3.0 mm {0.12 in}** layer of sealant to the base.

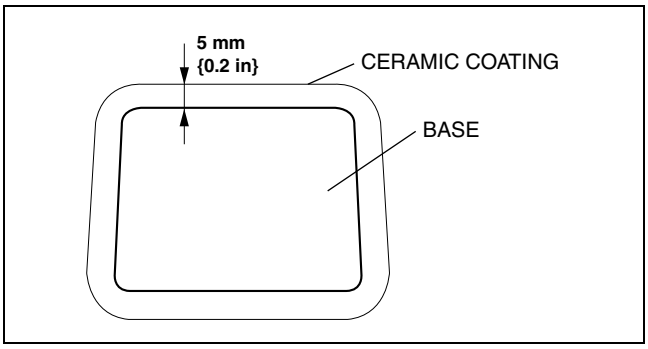


ADA7734W001

6. Center the base in the ceramic coating and press it onto the glass.
7. Use isopropyl alcohol to remove any excess repair sealant.

Hardening time of sealant

Temperature	Surface hardening time	Time required until car can be put into service
5 °C {41 °F}	Approx. 1.5 h	Approx. 12 h
20 °C {68 °F}	Approx. 1 h	Approx. 4 h
35 °C {95 °F}	Approx. 10 min	Approx. 2 h



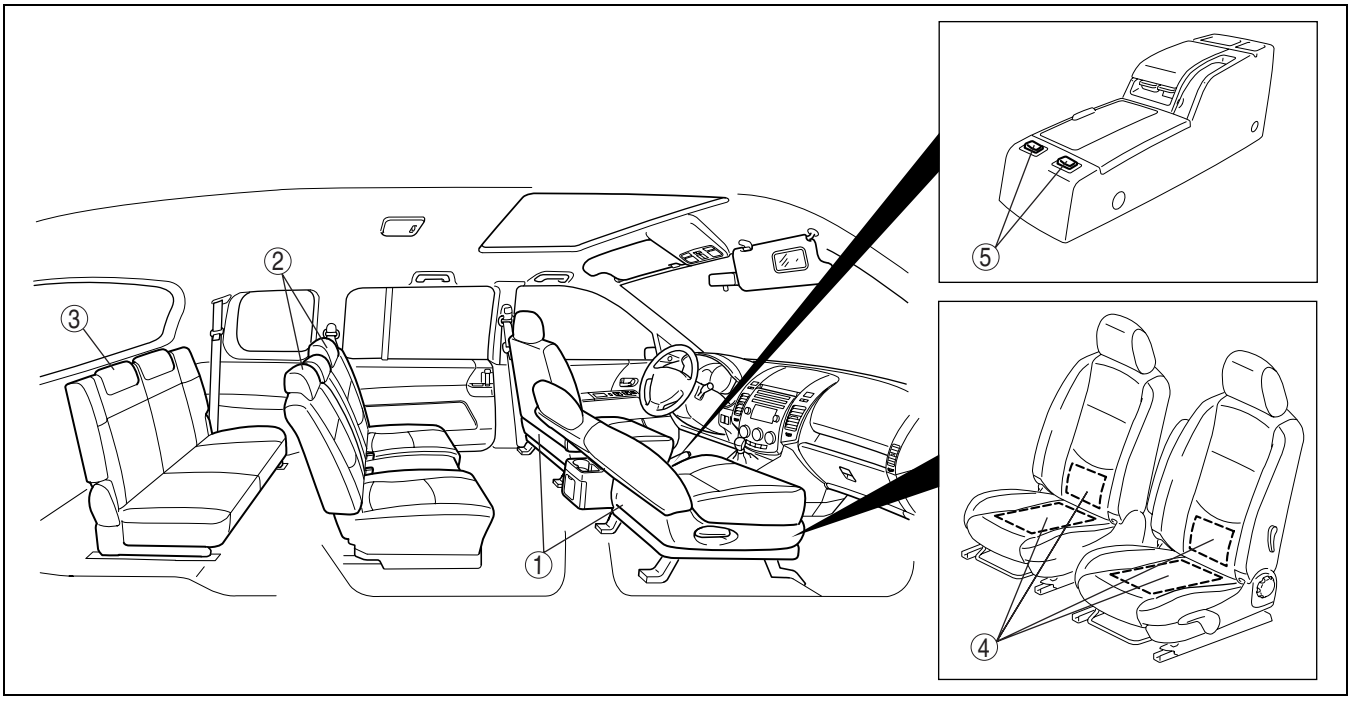
A6E7734W005

8. Install the rearview mirror.

09–13 SEATS

SEAT LOCATION INDEX

DPE091357000W01



DPE913ZW1001

1	Front seat (See 09–13–1 FRONT SEAT REMOVAL/ INSTALLATION.) (See 09–13–2 FRONT SEAT DISASSEMBLY/ ASSEMBLY.) (See 09–13–11 SEAT WARMER UNIT INSPECTION.)
2	Second-row seat (See 09–13–5 SECOND-ROW SEAT REMOVAL/ INSTALLATION.) (See 09–13–5 SECOND-ROW SEAT DISASSEMBLY/ASSEMBLY.)

3	Third-row seat (~~7-passenger model~~) (See 09–13–8 THIRD-ROW SEAT REMOVAL/ INSTALLATION.) (See 09–13–8 THIRD-ROW SEAT DISASSEMBLY/ ASSEMBLY.)
4	Seat warmer unit (See 09–13–11 SEAT WARMER UNIT INSPECTION.)
5	Seat warmer switch (See 09–13–9 SEAT WARMER SWITCH REMOVAL/INSTALLATION.) (See 09–13–10 SEAT WARMER SWITCH INSPECTION.)

09

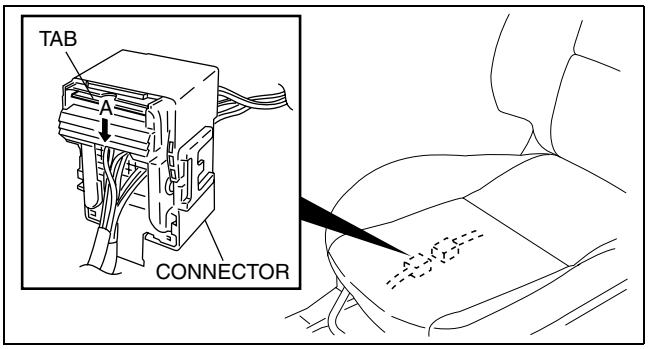
FRONT SEAT REMOVAL/INSTALLATION

DPE091357100W01

Warning

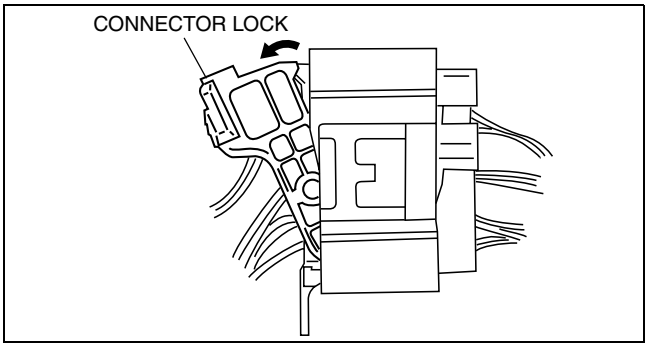
- **Handling the front seat (with built-in side air bag) improperly can accidentally deploy the air bag, which may seriously injure you. Read the service warnings before handling the front seat (with built-in side air bag). (See 08–10–2 SERVICE WARNINGS.)**

1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait **1 min or more**.
3. Press the connector tab at point A in the direction of the arrow.



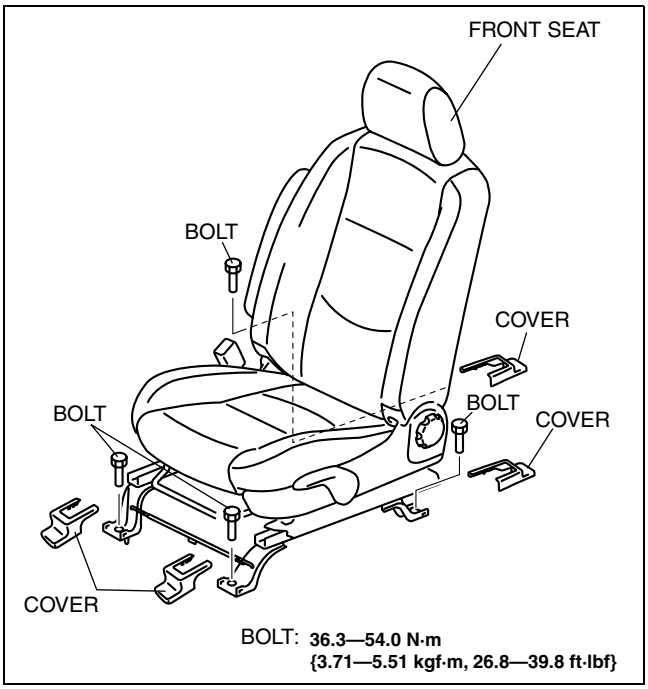
DPE913ZW1002

4. Pull out the connector lock in the direction of the arrow and disconnect the connector.



DPE913ZW1003

5. Remove the cover.
6. Remove the bolt, then remove the front seat.
7. Install in the reverse order of removal.



DPE913ZW1004

FRONT SEAT DISASSEMBLY/ASSEMBLY

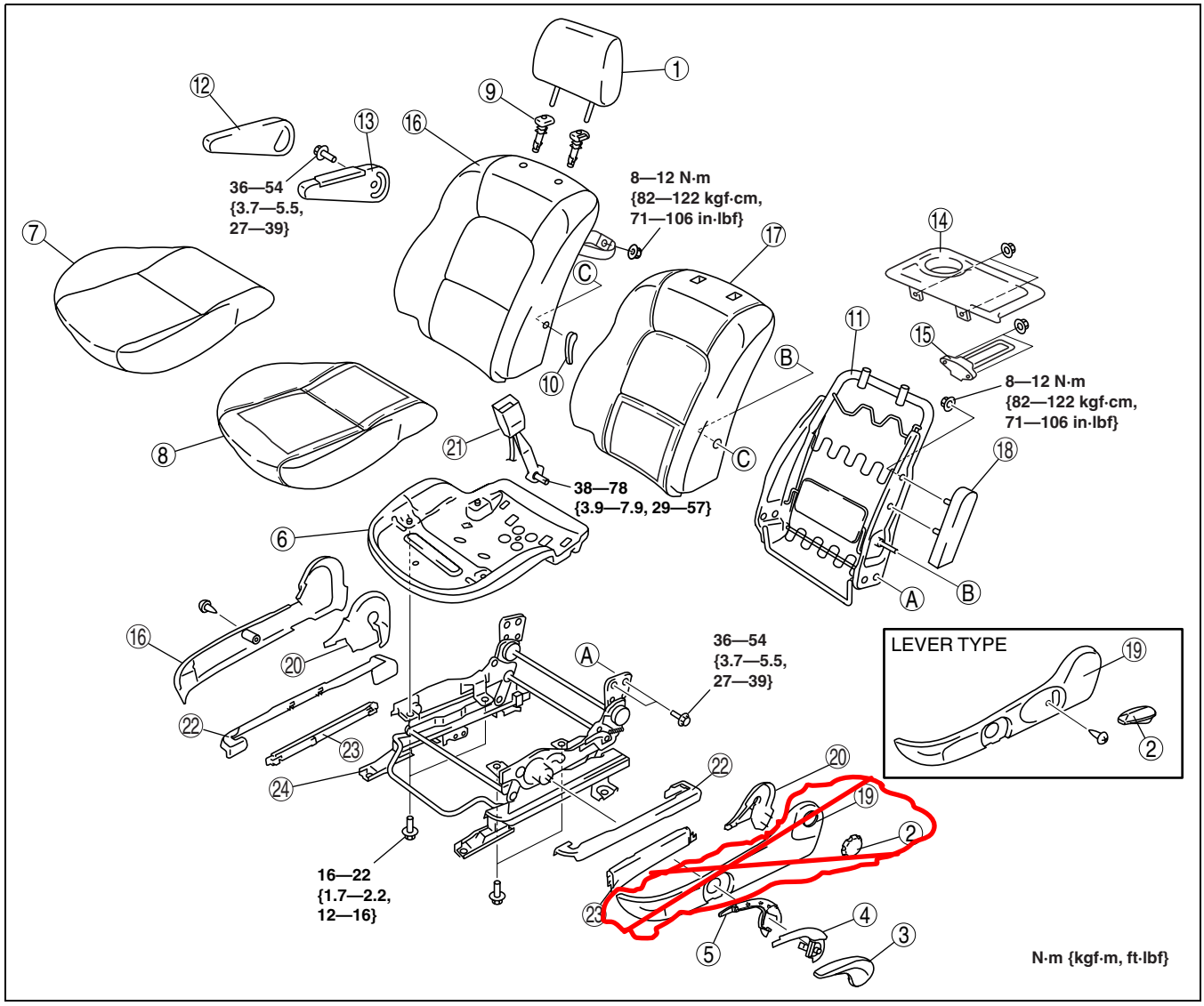
DPE091357100W02

Warning

- **Handling the front seat (with built-in side air bag and pre-tensioner seat belt) improperly can accidentally deploy the air bag and pre-tensioner seat belt, which may seriously injure you. Read the service warnings before handling the front seat (with built-in side air bag and pre-tensioner seat belt). (See 08–10–2 SERVICE WARNINGS.)**

1. Disassemble in the order indicated in the table.
2. Assemble in the reverse order of disassembly.

Driver's Side

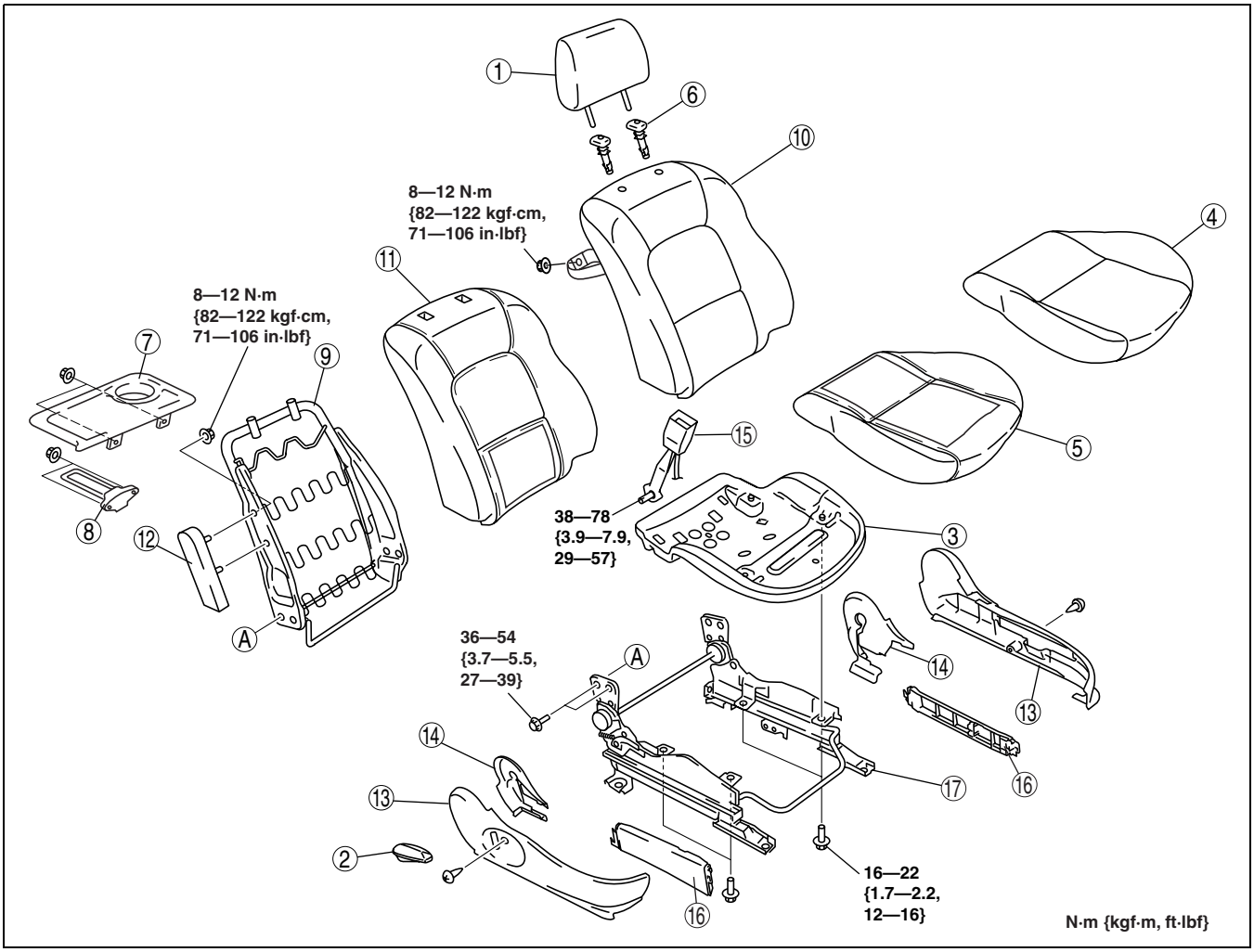


DPE913ZW1010

1	Headrest
2	Recliner lever (lever type)/Recliner dial (dial type)
3	Lift lever outer cover
4	Lift lever
5	Lift lever inner cover
6	Seat cushion frame
7	Seat cushion trim
8	Seat cushion pad
9	Pole guide
10	Lumbar support lever
11	Seat back frame
12	Armrest trim
13	Armrest frame

14	Picnic table
15	Picnic table hinge
16	Seat back trim
17	Seat back pad
18	Side air bag module (See 08–10–7 SIDE AIR BAG MODULE REMOVAL/ INSTALLATION.)
19	Side cover No.1
20	Reverse cover
21	Front buckle
22	Rail cover
23	Side cover No.2
24	Slide adjuster

Passenger's Side



DPE913ZW1008

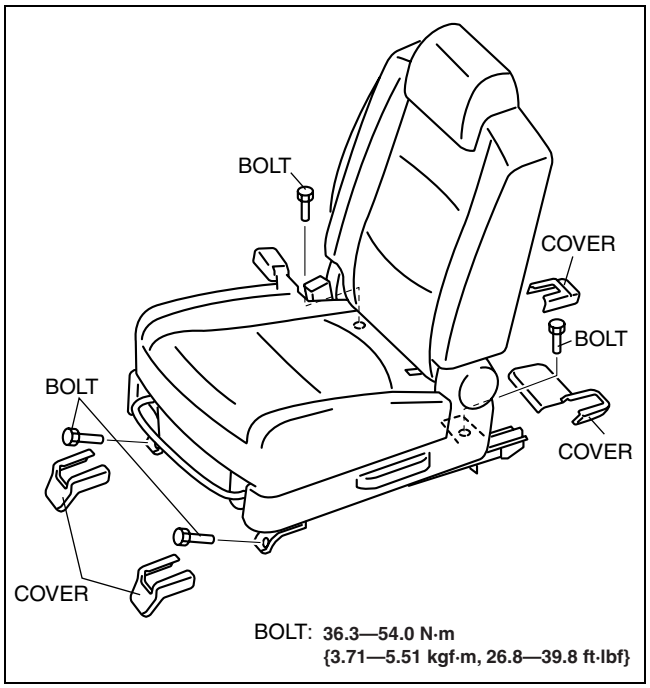
1	Headrest
2	Recliner lever
3	Seat cushion frame
4	Seat cushion trim
5	Seat cushion pad
6	Pole guide
7	Picnic table
8	Picnic table hinge
9	Seat back frame
10	Armrest trim
11	Armrest frame

12	Seat back trim
13	Seat back pad
14	Side air bag module (See 08–10–7 SIDE AIR BAG MODULE REMOVAL/ INSTALLATION.)
15	Cup holder
16	Side cover No.1
17	Reverse cover
18	Front buckle
19	Side cover No.2
20	Slide adjuster

SECOND-ROW SEAT REMOVAL/INSTALLATION

DPE091357200W01

1. Remove the covers.
2. Remove the bolts, then remove the second-row seat.
3. Install in the reverse order of removal.



DPE913ZW1005

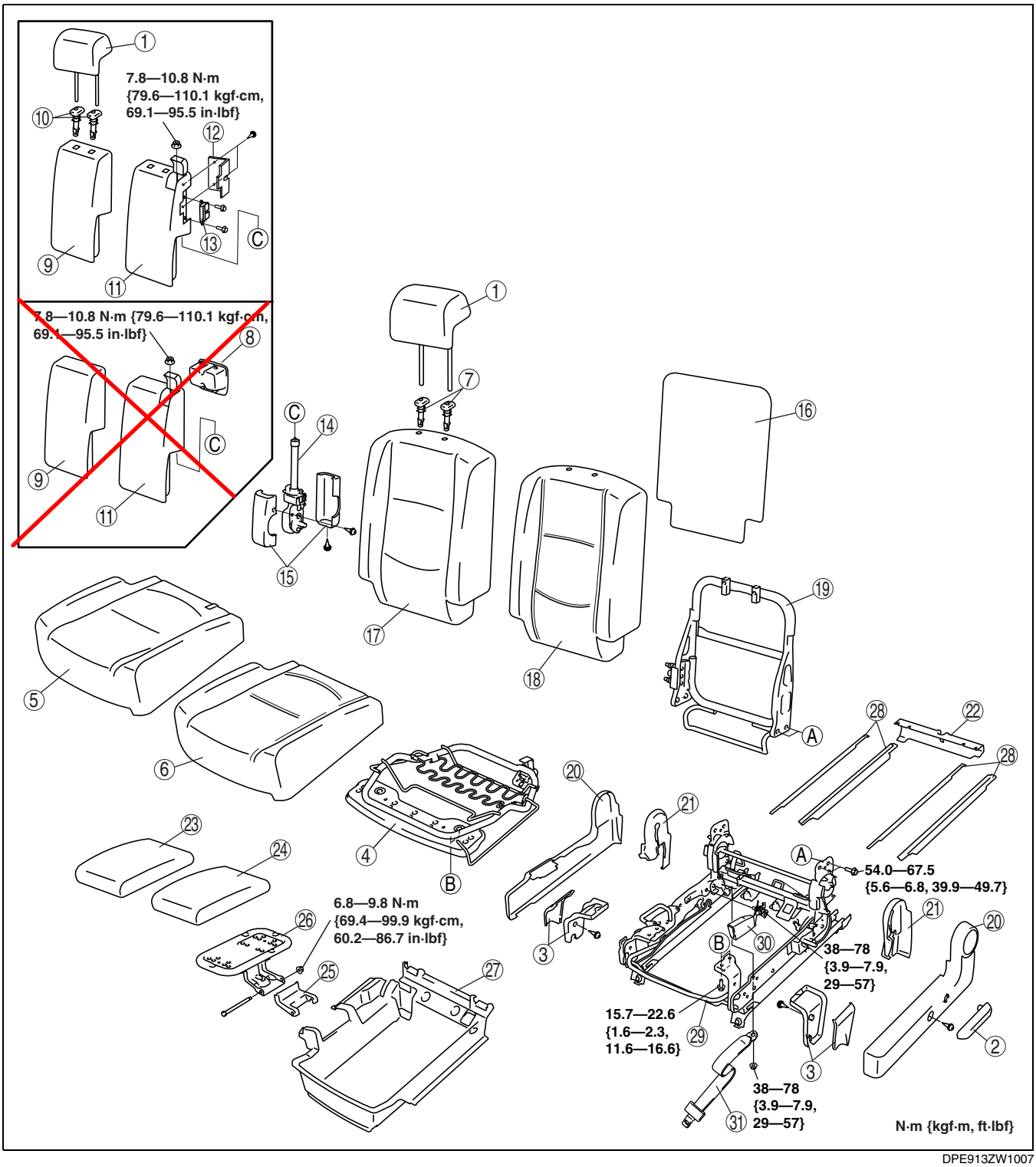
SECOND-ROW SEAT DISASSEMBLY/ASSEMBLY

DPE091357200W02

Left Side

1. Disassemble in the order indicated in the table.

2. Assemble in the reverse order of disassembly.



DPE913ZW1007

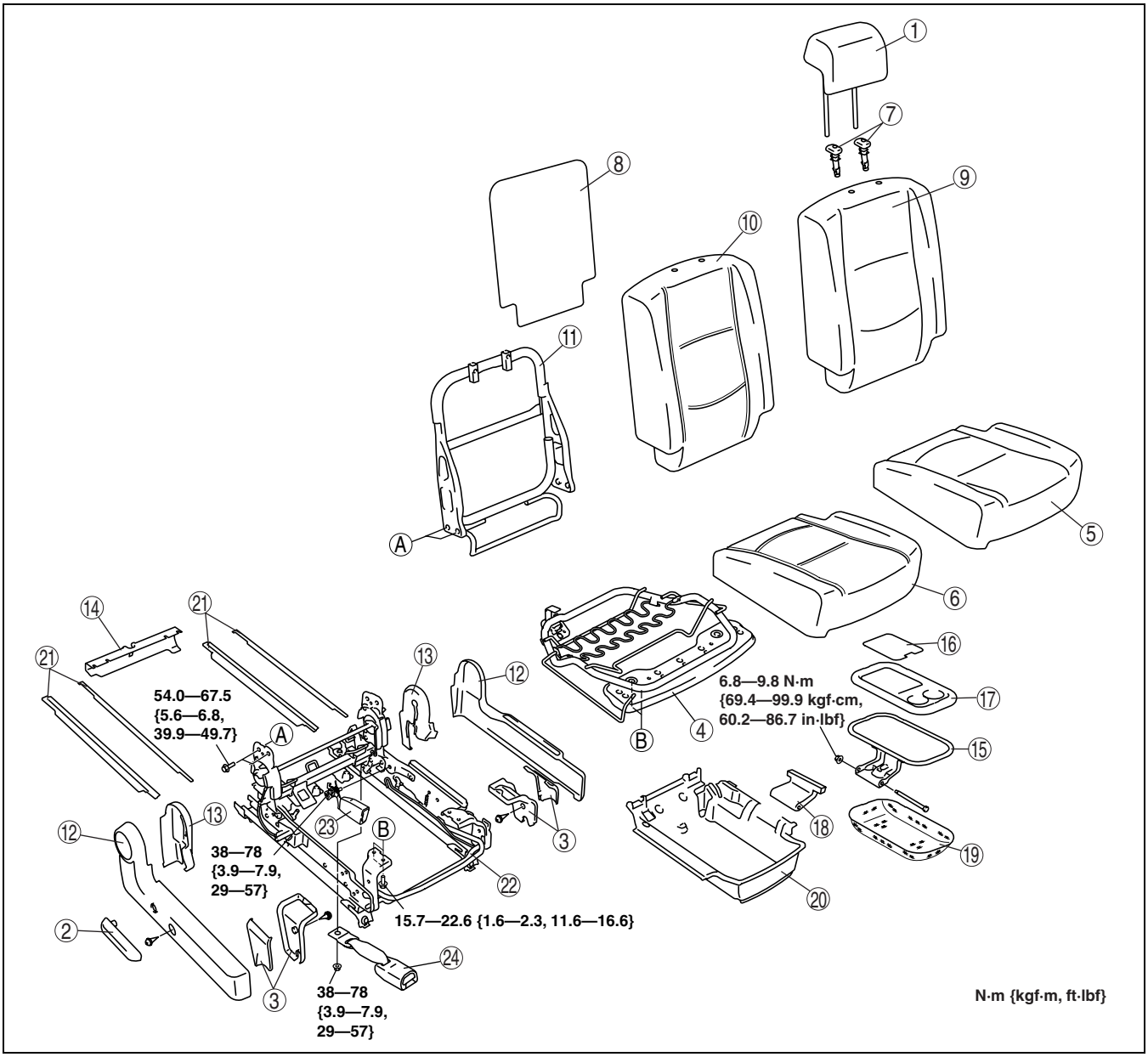
1	Headrest
2	Recliner lever
3	Hinge cover
4	Seat cushion frame
5	Seat cushion trim
6	Seat cushion pad
7	Pole guide
8	Cup holder
9	Armrest trim
10	Pole guide

11	Armrest pad
12	Seat back latch cover
13	Seat back latch
14	Armrest shaft
15	Armrest shaft cover
16	Seat back board
17	Seat back trim
18	Seat back pad
19	Seat back frame
20	Side cover

21	Reverse cover
22	Slide adjuster cover
23	Seat cushion trim (center seat)
24	Seat cushion pad (center seat)
25	Seat cushion frame cover (center seat)
26	Seat cushion frame (center seat)
27	Seat under tray
28	Rail cover
29	Slide adjuster
30	Second-row buckle
31	Second-row center seat belt

Right Side

1. Disassemble in the order indicated in the table.
2. Assemble in the reverse order of disassembly.



DPE913ZW1011

1	Headrest
2	Recliner lever
3	Hinge cover
4	Seat cushion frame

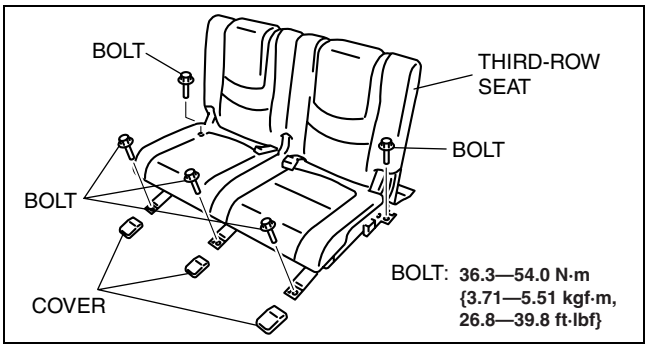
5	Seat cushion trim
6	Seat cushion pad
7	Pole guide
8	Seat back board

9	Seat back trim
10	Seat back pad
11	Seat back frame
12	Side cover
13	Reverse cover
14	Slide adjuster cover
15	KARAKURI storage box cover
16	KARAKURI storage box tray
17	KARAKURI storage box hinge cover
18	KARAKURI storage box net
19	KARAKURI storage box frame
20	Seat under tray
21	Rail cover
22	Slide adjuster
23	Second-row buckle
24	Second-row center buckle

THIRD-ROW SEAT REMOVAL/INSTALLATION

DPE091357200W03

1. Remove the rear package tray lid. (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
2. Remove the floor covering installation fasteners. (See 09–17–23 FLOOR COVERING REMOVAL/INSTALLATION.)
3. Remove the covers.
4. Remove the bolts, then remove the third-row seat.
5. Install in the reverse order of removal.



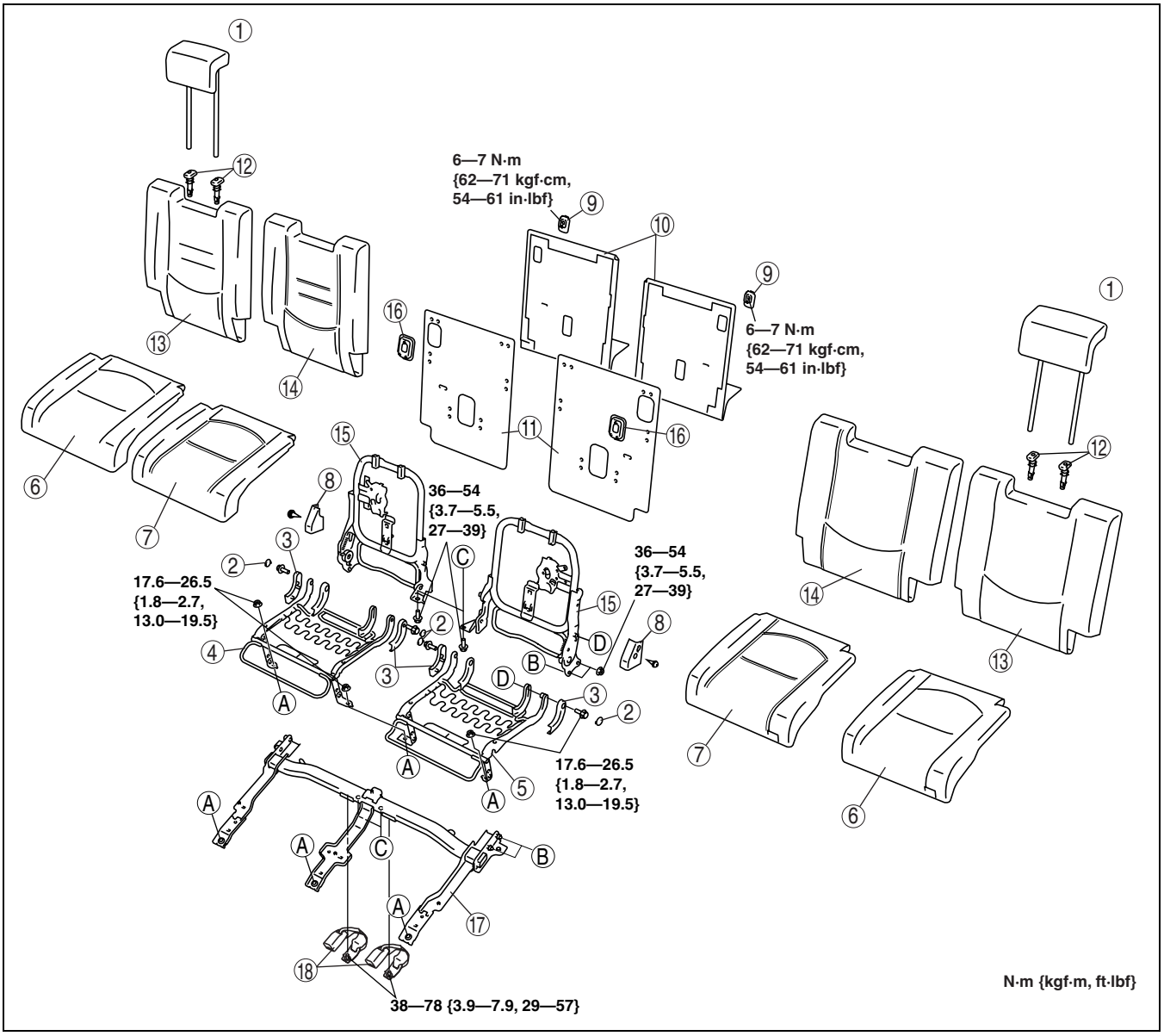
DPE913ZW1006

THIRD-ROW SEAT DISASSEMBLY/ASSEMBLY

DPE091357200W04

1. Disassemble in the order indicated in the table.

2. Assemble in the reverse order of disassembly.



DPE913ZW1009

1	Headrest
2	Cap
3	Hinge cover
4	Seat cushion frame (RH)
5	Seat cushion frame (LH)
6	Seat cushion trim
7	Seat cushion pad
8	Side cover
9	Cargo net hook

10	Seat back rear cover
11	Seat back board
12	Pole guide
13	Seat back trim
14	Seat back pad
15	Seat back frame
16	Cargo net hook cover
17	Seat under bracket
18	Third-row buckle

09

SEAT WARMER SWITCH REMOVAL/INSTALLATION

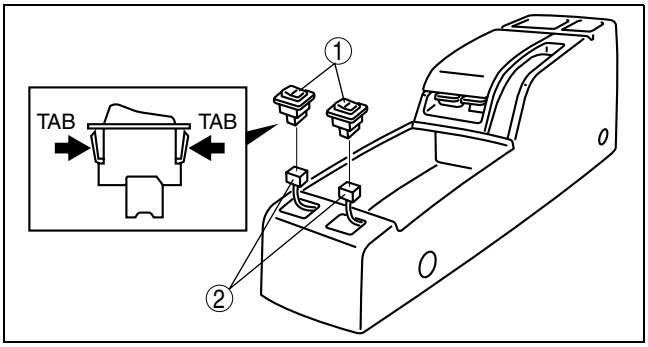
DPE091388110W01

1. Disconnect the negative battery cable.
2. Remove the front cup holder. (See 09–17–15 CENTER CONSOLE DISASSEMBLY/ASSEMBLY.)

3. Remove in the order indicated in the table.

1	Seat warmer switch (See 09–13–10 Seat Warmer Switch Removal Note.)
2	Connector

4. Install in the reverse order of removal.



DPE913ZW1012

Seat Warmer Switch Removal Note

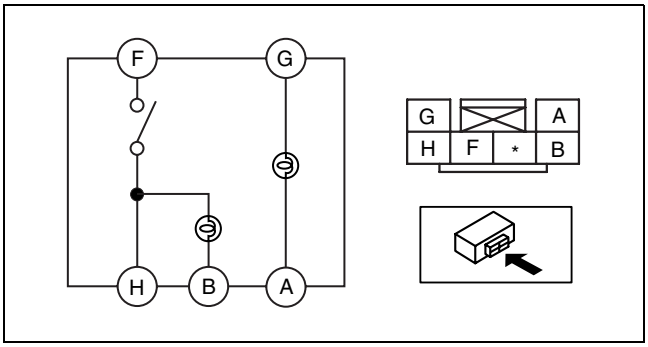
1. Squeeze the tabs of seat warmer switch and pull it outward to remove it.

SEAT WARMER SWITCH INSPECTION

DPE091388110W02

Driver's side

1. Verify that the continuity between the seat warmer switch terminals is as indicated in the table



A6E7752W025

- If not as indicated in the table, replace the seat warmer switch.

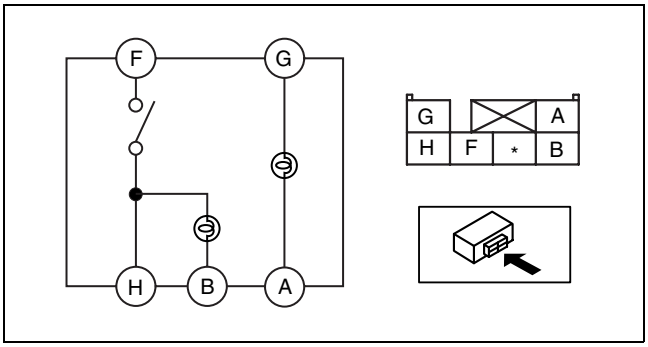
○——○: Continuity ○—⓪—○: Bulb

Switch position	Terminal				
	B	H	F	A	G
ON	○—⓪—○		○	○—⓪—○	
OFF	○—⓪—○			○—⓪—○	

A6E7752W024

Passenger's side

1. Verify that the continuity between the seat warmer switch terminals is as indicated in the table



A6E7752W026

- If not as indicated in the table, replace the seat warmer switch.

○——○: Continuity ○—⓪—○: Bulb

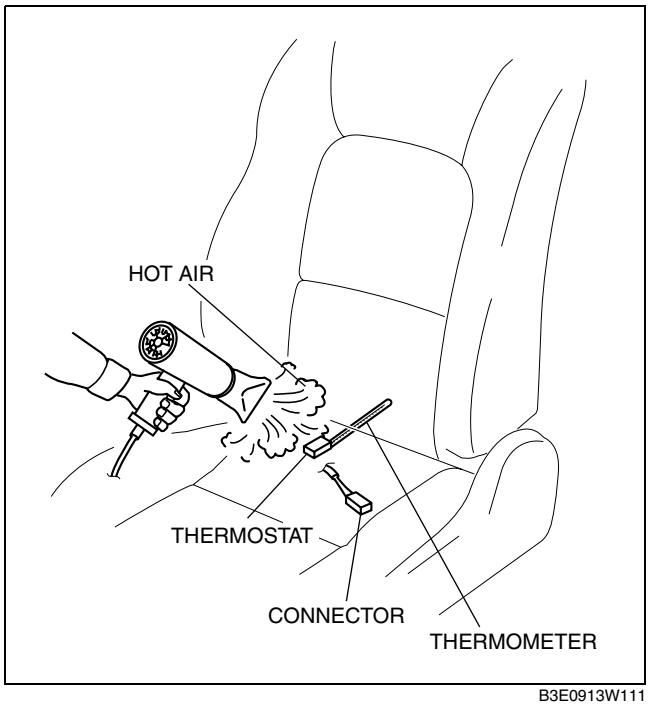
Switch position	Terminal				
	B	H	F	A	G
ON	○—⓪—○		○	○—⓪—○	
OFF	○—⓪—○			○—⓪—○	

A6E7752W024

SEAT WARMER UNIT INSPECTION

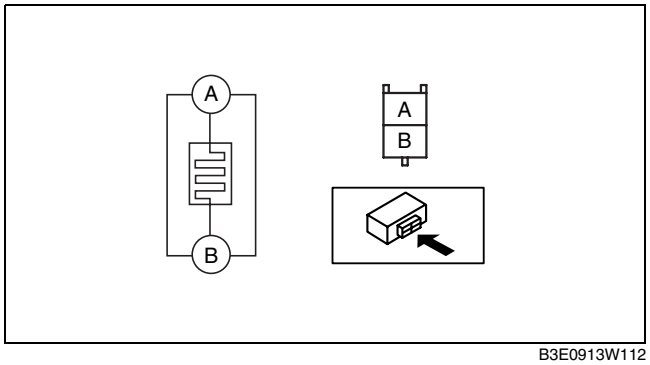
DPE091388110W03

1. Remove the front seat. (See 09–13–1 FRONT SEAT REMOVAL/INSTALLATION.)
2. Remove the seat cushion trim. (See 09–13–2 FRONT SEAT DISASSEMBLY/ASSEMBLY.)
3. While inspecting for continuity between the terminals A and B of the connector, use a dryer to warm the thermostat of the seat warmer unit on seat cushion.



B3E0913W111

4. Verify that the continuity between the seat warmer terminals is as indicated in the table.



B3E0913W112

- If not as indicated in the table, replace the seat warmer switch.

○—○ : Continuity

Thermostat temperature	Terminal	
	A	B
More than approx. 37 °C {99 °F}		
Less than approx. 27 °C {81 °F}	○	○

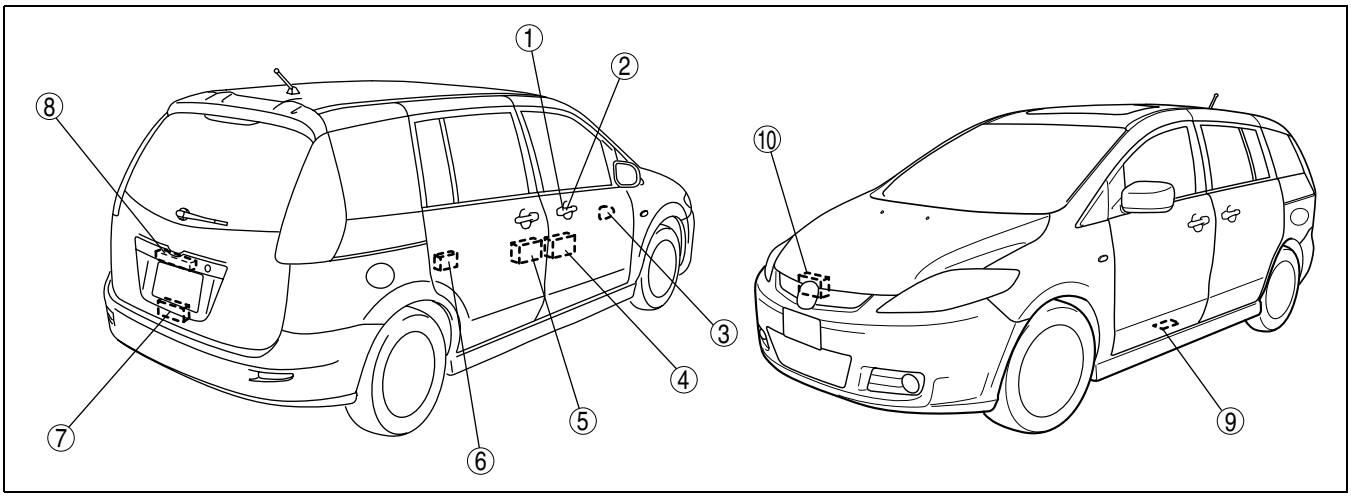
B3E0913W115

09–14A SECURITY AND LOCKS [ADVANCED KEYLESS AND START SYSTEM]

SECURITY AND LOCKS LOCATION INDEX [ADVANCED KEYLESS SYSTEM]

DPE091400001W01

Lock And Opener

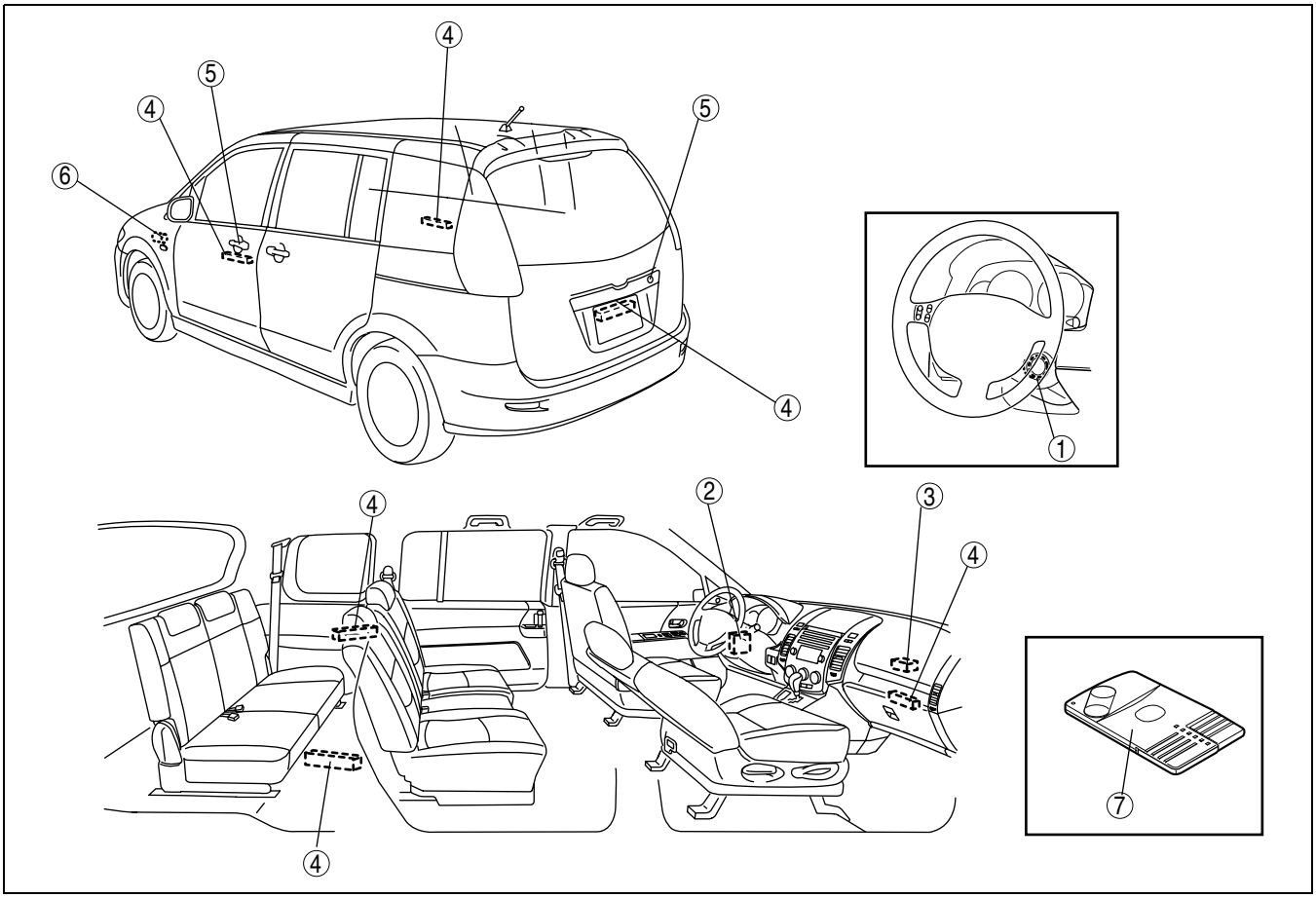


CPJ914AWC021

1	Front door key cylinder (See 09–14A–8 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION) (See 09–14A–9 FRONT DOOR KEY CYLINDER SWITCH INSPECTION
2	Front outer handle (See 09–14A–4 FRONT OUTER HANDLE REMOVAL/INSTALLATION)
3	Front inner handle (See 09–14A–5 FRONT INNER HANDLE REMOVAL/INSTALLATION)
4	Front door latch and lock actuator (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION) (See 09–14A–12 FRONT DOOR LOCK ACTUATOR INSPECTION) (See 09–14A–13 FRONT DOOR LATCH SWITCH INSPECTION)

5	Remote controller (See 09–14A–10 REMOTE CONTROLLER REMOVAL/INSTALLATION) (See 09–14A–11 REMOTE CONTROLLER INSPECTION)
6	Sliding door latch (See 09–14A–10 SLIDING DOOR LATCH REMOVAL/INSTALLATION)
7	Liftgate latch and lock actuator (See 09–14A–15 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION) (See 09–14A–15 LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION
8	Liftgate outer handle (See 09–14A–14 LIFTGATE OUTER HANDLE REMOVAL/INSTALLATION)
9	Fuel-filler lid opener (See 09–14A–7 FUEL-FILLER LID OPENER REMOVAL/INSTALLATION)
10	Bonnet latch and release lever (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION)

Keyless Entry System And Immobilizer System

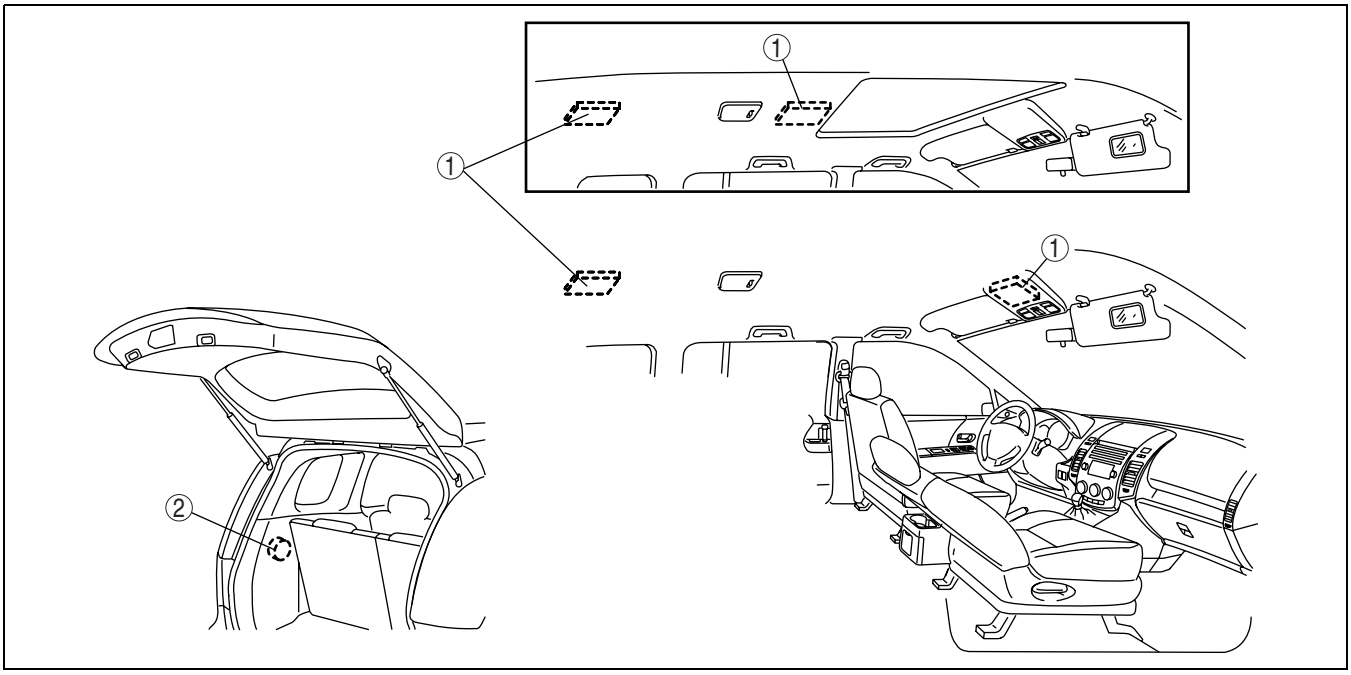


DPE914AWC001

1	Coil antenna (See 09–14A–28 COIL ANTENNA REMOVAL/ INSTALLATION [ADVANCED KEYLESS SYSTEM])
2	Keyless control module (See 09–14A–16 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION) (See 09–14A–17 KEYLESS CONTROL MODULE INSPECTION) (See 09–14A–20 CARD KEY ID CODE REGISTRATION) (See 09–14A–21 STEERING LOCK UNIT ID CODE REGISTRATION) (See 09–14A–22 KEYLESS CONTROL MODULE CONFIGURATION) (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]) (See 09–14A–38 SECURITY ACCESS PROCEDURE)

3	Keyless receiver (See 09–14A–22 KEYLESS RECEIVER REMOVAL/ INSTALLATION [ADVANCED KEYLESS SYSTEM]) (See 09–14A–23 KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS SYSTEM])
4	Keyless antenna (See 09–14A–23 KEYLESS ANTENNA REMOVAL/ INSTALLATION)
5	Request switch (See 09–14A–25 REQUEST SWITCH REMOVAL/ INSTALLATION) (See 09–14A–26 REQUEST SWITCH INSPECTION)
6	Keyless buzzer (See 09–14A–25 KEYLESS BUZZER REMOVAL/ INSTALLATION)
7	Card key (See 09–14A–26 CARD KEY BATTERY REPLACEMENT) (See 09–14A–20 CARD KEY ID CODE REGISTRATION)

Theft-deterrent System



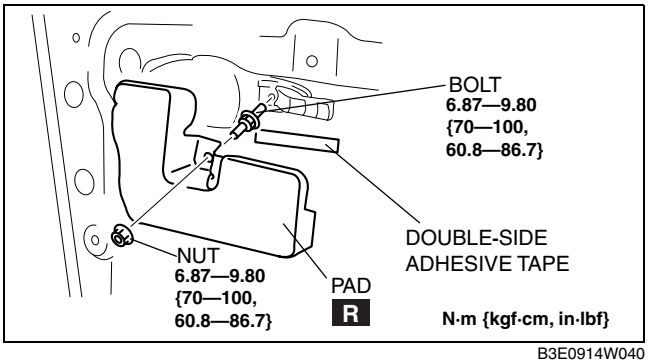
DPE914AWC002

1	Intruder sensor (See 09–14A–27 INTRUDER SENSOR REMOVAL/ INSTALLATION)
2	Theft-deterrent siren (See 09–14A–28 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION)

FRONT OUTER HANDLE REMOVAL/INSTALLATION

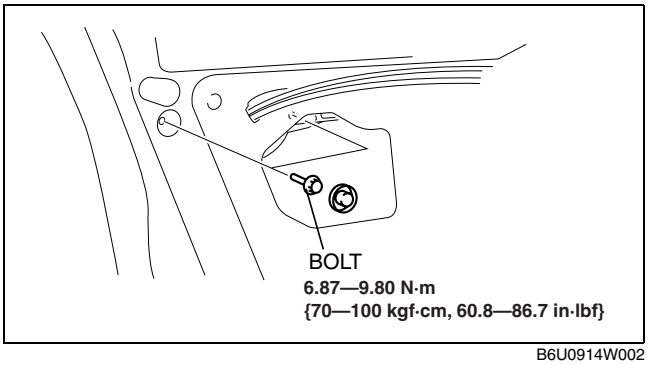
DPE091458410W01

1. Remove the front door glass.
2. Detach the outer handle and front door latch rod.
3. Detach the rod from the outer handle.
4. Remove the nut, then remove the pad.



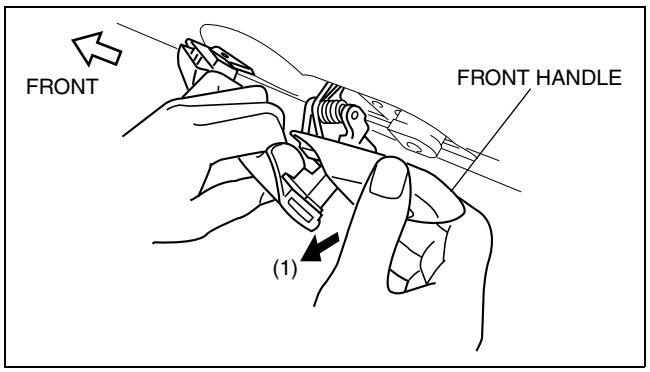
B3E0914W040

5. Remove the bolt.



B6U0914W002

6. With the rear side of the outer handle fixed and the outer handle lever pulled out (1), remove the rear side of the outer handle from the front door.
7. Pull out the front side of the outer handle from the front door.
8. Remove the request switch harness from the door. (with advanced keyless system)
9. Install in the reverse order of removal.

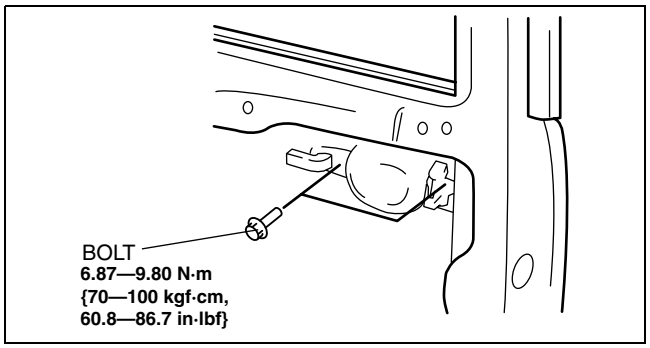


B6U0911W001

SLIDING DOOR OUTER HANDLE REMOVAL/INSTALLATION

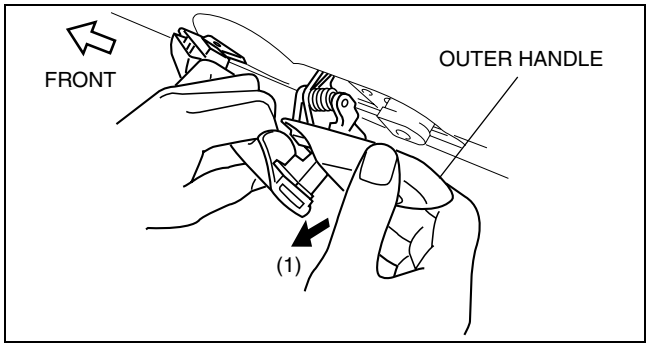
DPE091458410W03

1. Remove the sliding door trim. (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
2. Remove the sliding door glass. (See 09–12–5 SLIDING DOOR GLASS REMOVAL/INSTALLATION.)
3. Remove the remote controller. (See 09–14A–10 REMOTE CONTROLLER REMOVAL/INSTALLATION.)
4. Remove the sliding door module. (See 09–11–16 SLIDING DOOR MODULE REMOVAL/INSTALLATION.)
5. Remove the bolts.



DPE914AWC003

6. Secure the rear part of the sliding door outer handle and, with the sliding door outer handle lever pulled outward (1), remove the rear part of the sliding door outer handle from the sliding door.

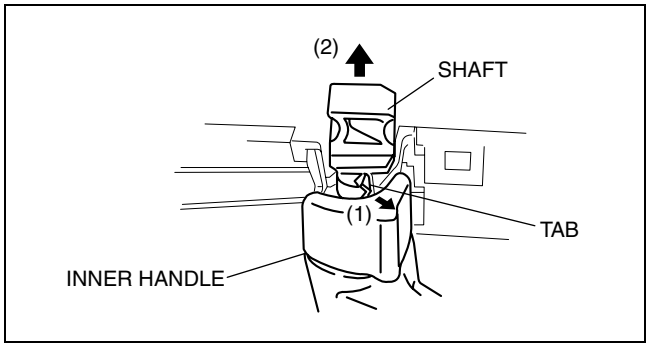


A6E7714W005

FRONT INNER HANDLE REMOVAL/INSTALLATION

DPE091459320W01

1. Disconnect the negative battery cable.
2. Remove the front door trim. (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
3. Using a flathead screwdriver, press and hold the tab in the direction indicated by arrow (1), and remove the shaft by pulling it in the direction indicated by arrow (2).
4. Pull off the inner handle, and remove the door lock knob cable and inner handle cable.
5. Install in the reverse order of removal.



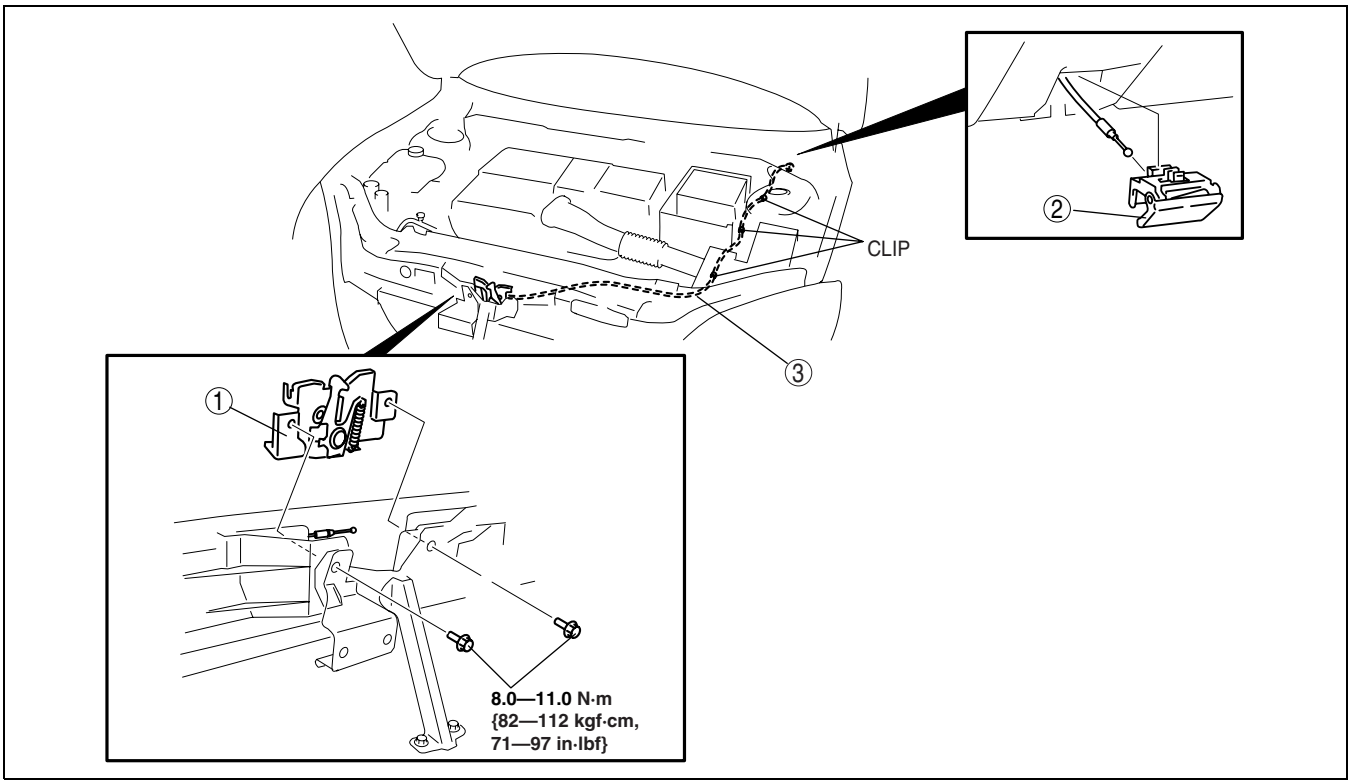
B3E0914W004

BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION

DPE091467001W01

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.

3. Adjust the bonnet. (See 09–10–3 BONNET ADJUSTMENT.)



DPE914AWC004

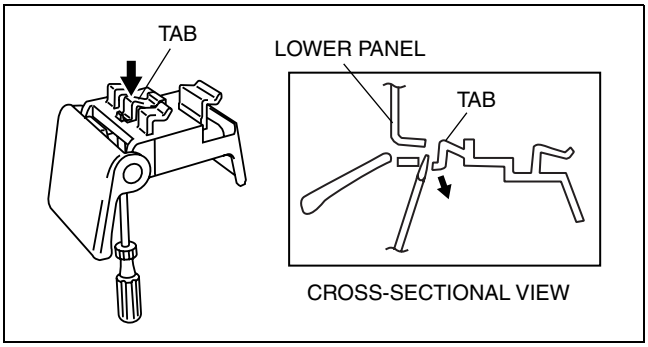
1	Bonnet latch
2	Bonnet release lever (See 09–14A–6 Bonnet Release Lever Removal Note.)
3	Bonnet release cable

Bonnet Release Lever Removal Note

1. Pull the lever.
2. While pushing the tab in the direction of the arrow using a tape-wrapped, small flathead screwdriver, detach it from the lower panel.

   Caution
   - **Remove the bonnet release lever while taking care not to damage the bonnet release cable with the flathead screwdriver.**

3. Under the condition in Step 2, pull the bonnet release lever outward, then remove it from the lower panel.



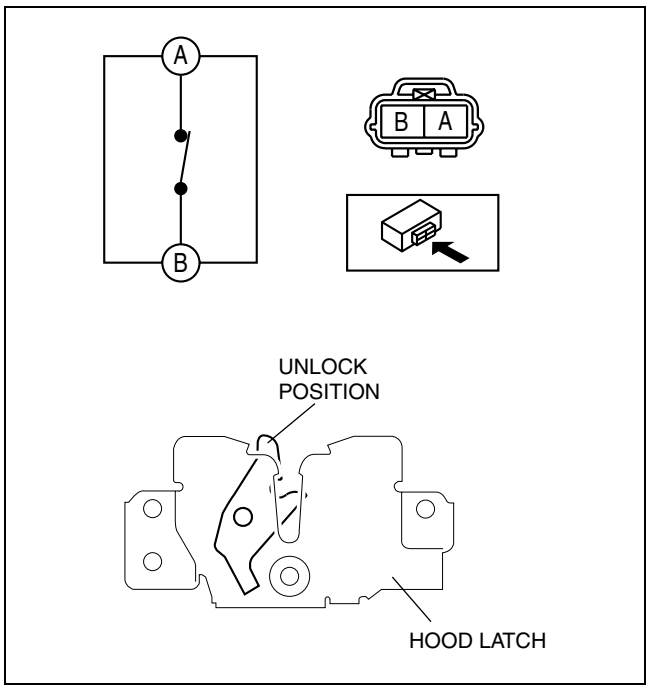
B3E09141003

BONNET LATCH SWITCH INSPECTION

DPE091467001W03

1. Open the bonnet.
2. Disconnect the negative battery cable.
3. Disconnect the bonnet latch switch connector.

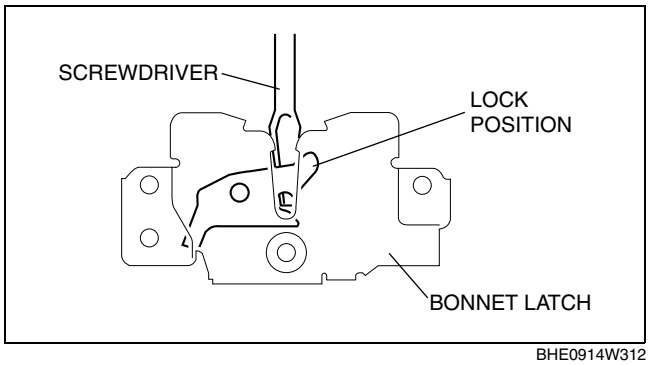
4. Inspect for continuity between the bonnet latch switch terminals A and B.
   - If there is continuity, replace the bonnet latch.



CHU0914W202

5. Lock the bonnet latch using a flathead screwdriver or equivalent as shown.
6. Inspect for continuity between the bonnet latch switch terminals A and B
   - If there is no continuity, replace the bonnet latch switch.

Caution
- **After the inspection, unlock the bonnet latch. If closing the bonnet with the bonnet latch locked, the bonnet latch and/or bonnet striker may be broken.**



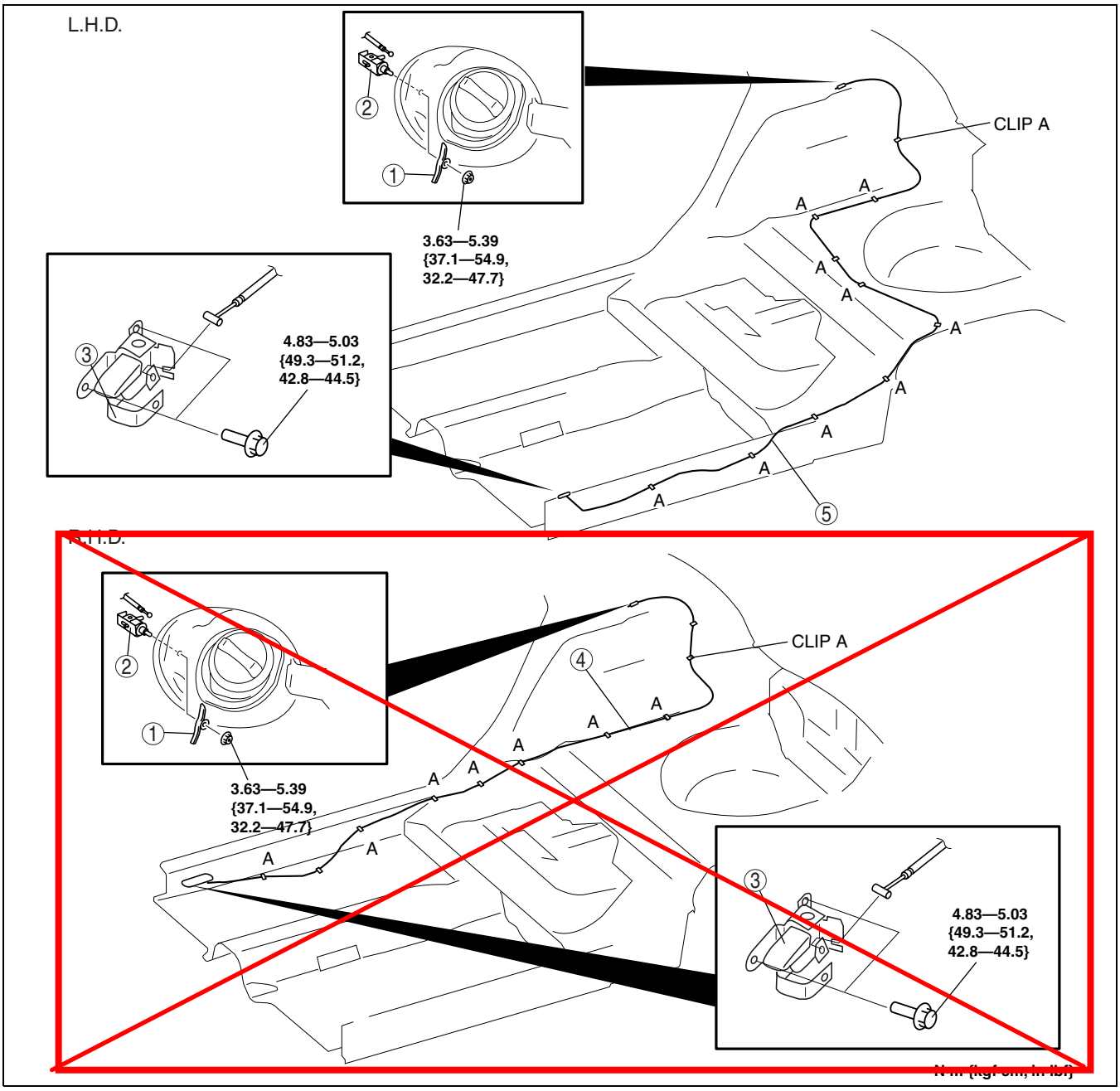
BHE0914W312

FUEL-FILLER LID OPENER REMOVAL/INSTALLATION

DPE091466640W01

1. To remove the fuel-filler lid opener, remove the left side trunk side trim.
2. To remove the fuel-filler lid opener cable, perform the following and partially peel back the floor covering.
   (1) Remove the driver-side front seat.
   (2) Remove the driver-side front scuff plate.
   (3) Remove the driver-side rear scuff plate.
   (4) Remove the driver-side B-pillar lower trim.
   (5) Remove the driver-side tire house trim.

3. Remove in the order indicated in the table.



DPE914AWC005

1	Lift spring
2	Fuel-filler lid opener

3	Fuel-filler lid opener lever
4	Fuel-filler lid opener cable

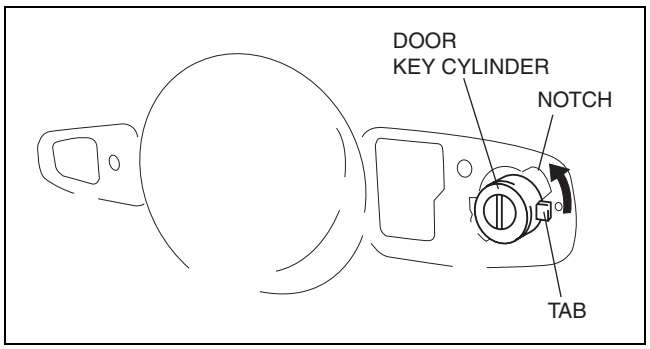
4. Install in the reverse order of removal.
5. Adjust the fuel-filler lid. (See 09–10–2 FUEL-FILLER LID ADJUSTMENT.)

FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION

DPE091458490W04

1. Disconnect the rod.
2. Remove the front outer handle.

3. Turn the key cylinder in the direction indicated by the arrow and move the tab to the notch.
4. Pull the key cylinder outward to remove it.
5. Install in the reverse order of removal.

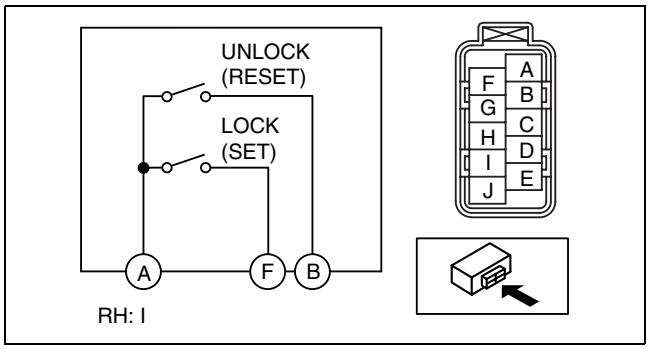


B6U0914WS20

FRONT DOOR KEY CYLINDER SWITCH INSPECTION

DPE091458490W05

Inspect for continuity between the front door key cylinder switch terminals.



B3E0914W015

- If not as specified, replace the front door latch and lock actuator.

○—○ : Continuity

Key cylinder position	Terminal		
	B	LH: A RH: I	F
Lock (Set)		○	○
Unlock (Reset)	○	○	
Neutral			

B3E0914W016

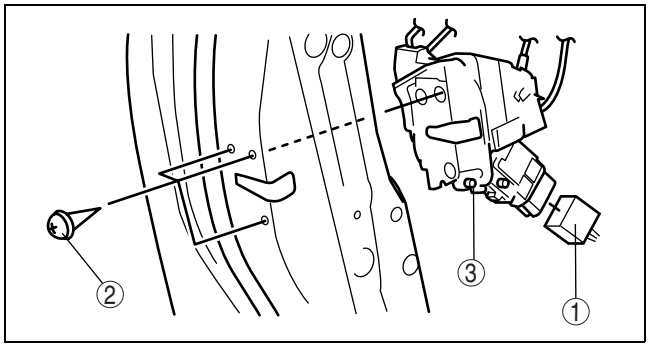
FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION

DPE091458490W02

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
   (2) Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
   (3) Front door glass (See 09–12–4 FRONT DOOR GLASS REMOVAL/INSTALLATION.)
   (4) Front door speaker (See 09–20–9 FRONT DOOR SPEAKER REMOVAL/INSTALLATION.)
   (5) Front inner handle (See 09–14A–5 FRONT INNER HANDLE REMOVAL/INSTALLATION.)
   (6) Front door module (See 09–11–16 FRONT DOOR MODULE REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

1	Connector (See 09–14A–9 Connector Removal Note)
2	Screw
3	Front door latch and lock actuator

4. Install in the reverse order of removal.

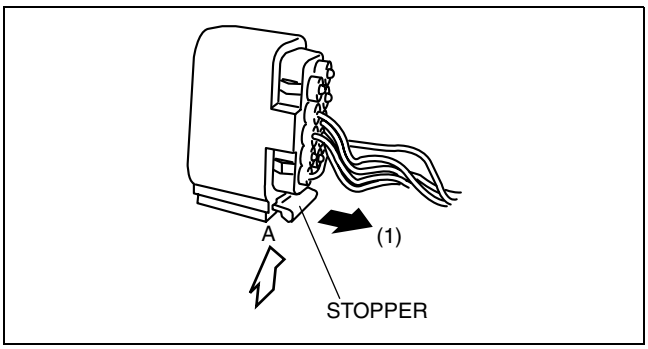


DPE914AWC006

Connector Removal Note

1. Pull the stopper of the front door lock actuator connector in the direction of the arrow (1).

2. Disconnect the front door lock actuator connector while pushing at point A.



B3E0914W043

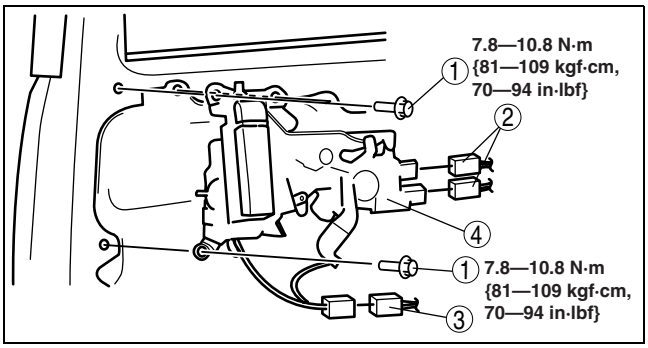
REMOTE CONTROLLER REMOVAL/INSTALLATION

DPE091458490W06

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.

1	Bolt
2	Connector A
3	Connector B (with PSD)
4	Remote controller

3. Install in the reverse order of removal.



DPE914AWC030

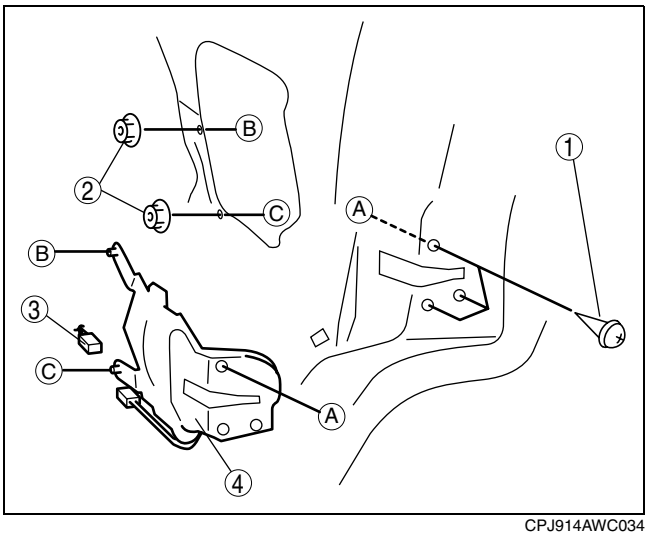
SLIDING DOOR LATCH REMOVAL/INSTALLATION

DPE091458490W07

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Sliding door trim (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
   (2) Cover (See 09–11–16 SLIDING DOOR MODULE REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

1	Screw
2	Nut
3	Connector
4	Sliding door latch

4. Install in the reverse order of removal.

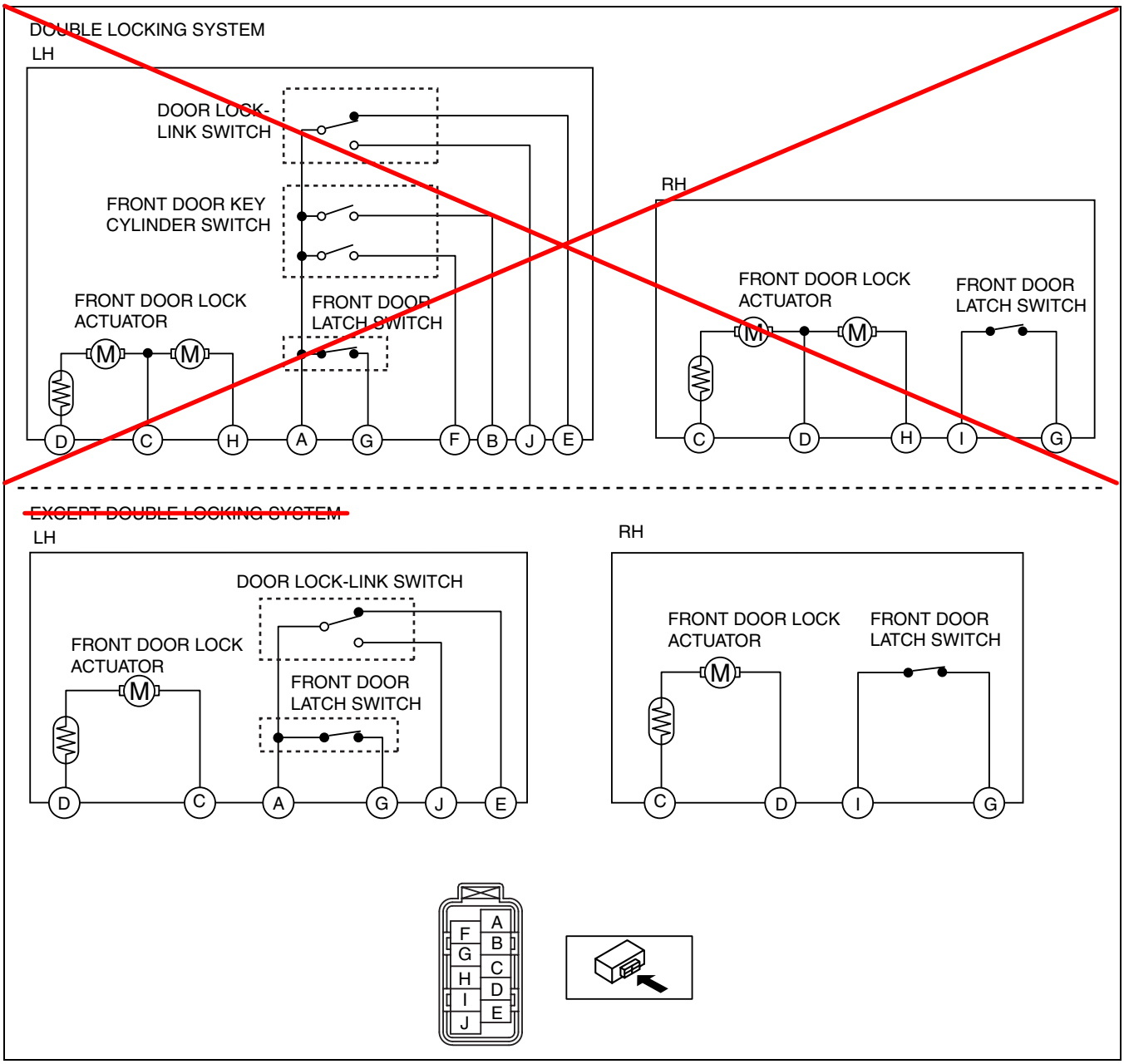


CPJ914AWC034

FRONT DOOR LATCH AND LOCK ACTUATOR INSPECTION

DPE091458490W03

1. The following actuators and switches are integrated with the front door latch and lock actuator. Inspect the front door latch and lock actuator according to each inspection procedure for the following items.
   - Front door lock actuator (See 09–14A–12 FRONT DOOR LOCK ACTUATOR INSPECTION.)
   - Front door latch switch (See 09–14A–13 FRONT DOOR LATCH SWITCH INSPECTION.)
   - Front door key cylinder switch (driver's side) (See 09–14A–9 FRONT DOOR KEY CYLINDER SWITCH INSPECTION.)
   - Door lock-link switch (driver's side) (See 09–14A–14 DOOR LOCK-LINK SWITCH INSPECTION.)

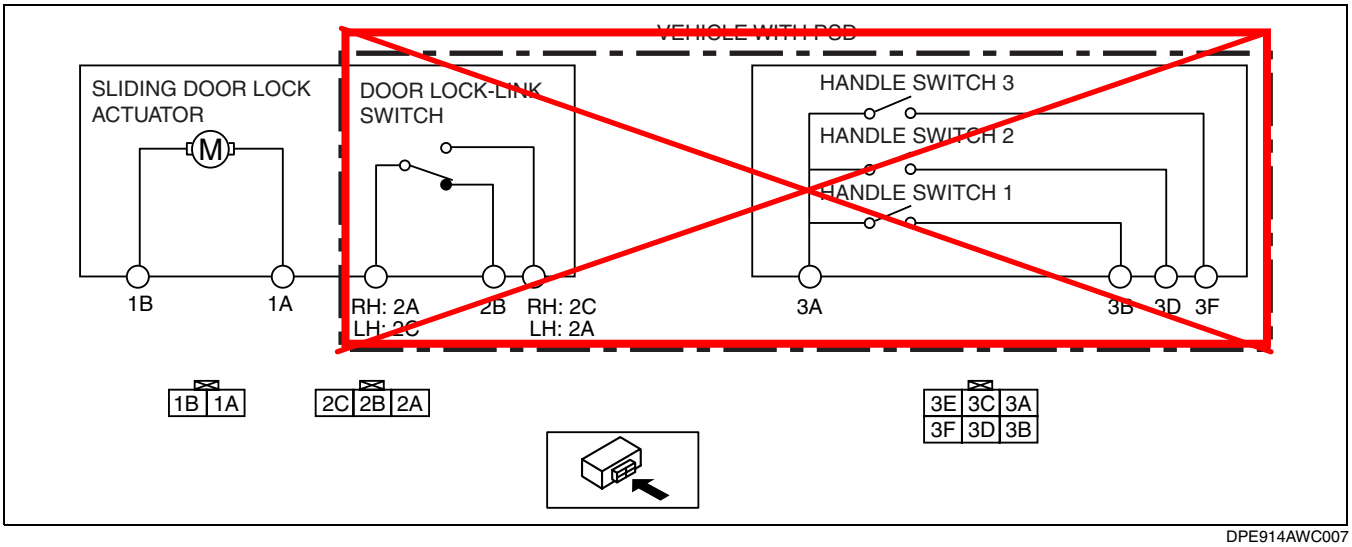


B3E0914W044

REMOTE CONTROLLER INSPECTION

DPE091458490W08

1. The following actuators and switches are integrated with the remote controller. Inspect the remote controller according to each inspection procedure for the following items.
   - Sliding door lock actuator (See 09–14A–12 FRONT DOOR LOCK ACTUATOR INSPECTION.)
   - Door lock-link switch (driver's side) (See 09–14A–14 DOOR LOCK-LINK SWITCH INSPECTION.)
   - ~~Handle switch (See 09–14A–13 HANDLE SWITCH INSPECTION.)~~



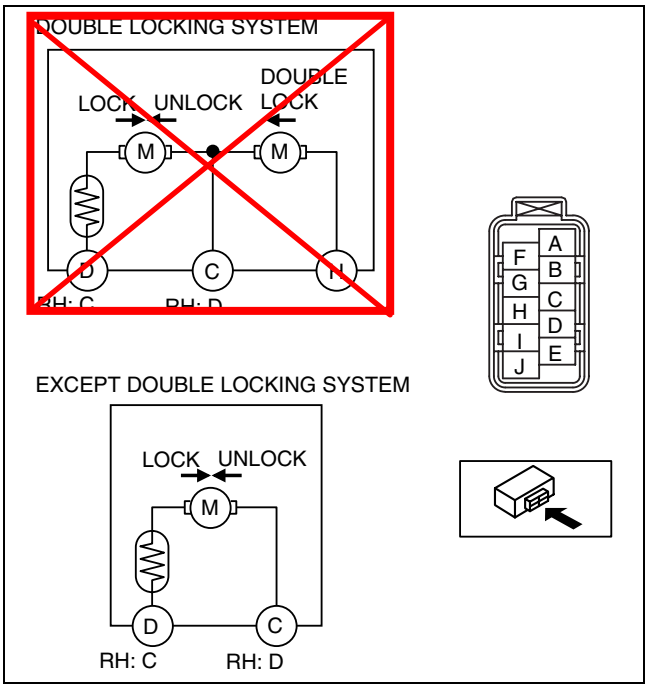
DPE914AWC007

FRONT DOOR LOCK ACTUATOR INSPECTION

1. Apply battery positive voltage and connect ground to the corresponding front door lock actuator terminals, and inspect the front door lock actuator operation.
   - If not as specified, replace the front door latch and lock actuator.

Lock actuator operation	Connection	
	B+	GND
Double lock	H	LH: C RH: D
Lock	LH: D RH: C	LH: C RH: D
Unlock	LH: C RH: D	LH: D RH: C

DPE091458490W09



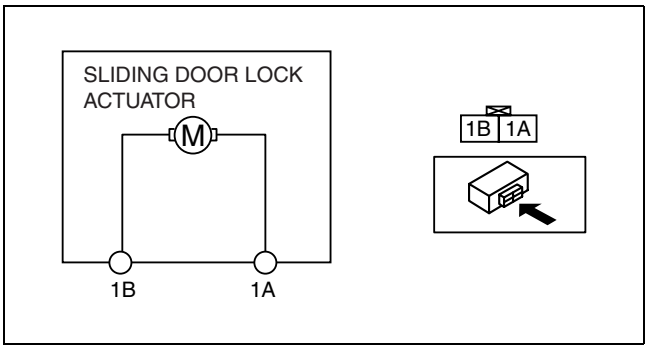
B3E0914W051

SLIDING DOOR LOCK ACTUATOR INSPECTION

1. Apply battery positive voltage and connect ground to the corresponding sliding door lock actuator terminals, and inspect the sliding door lock actuator operation.
   - If not as specified, replace the remote controller.

Lock actuator operation	Connection	
	LH: D RH: C	**LH: C RH: D**
Lock	B+	GND
Unlock	GND	B+

DPE091458490W10

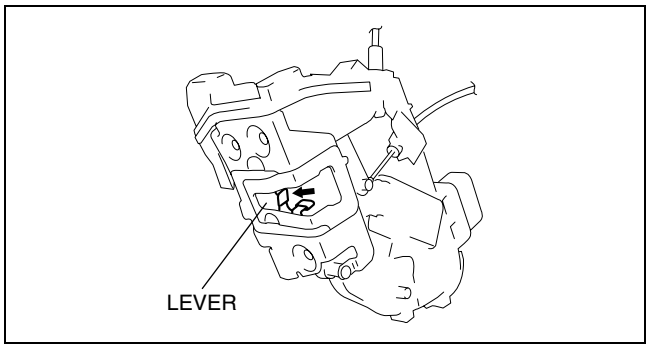


DPE914AWC008

FRONT DOOR LATCH SWITCH INSPECTION

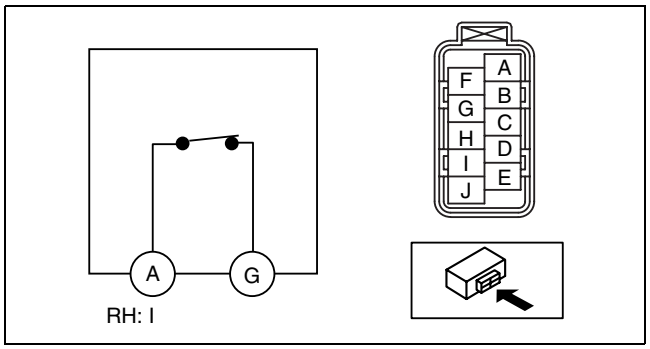
1. When inspecting the latch, press the latch lever using a flathead screwdriver or a similar tool.

DPE091458490W11



B3E0914W029

2. Inspect for continuity between the front door latch switch terminals.
   - If not as specified, replace the front door latch and lock actuator.



B3E0914W052

: Continuity

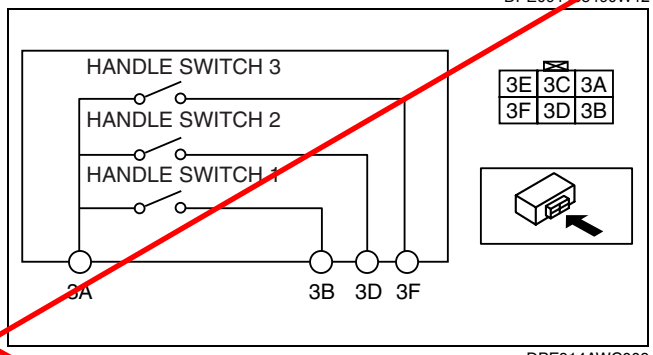
Latch condition	Terminal	
	LH: A RH: I	G
Latch (door is closed)	○	○
Unlatch (door is open)		

B3E0914W012

HANDLE SWITCH INSPECTION

1. Inspect for continuity between the handle switch terminals.
   - If not as specified, replace the front door latch and lock actuator.

DPE091458490W12



DPE914AWC009

: Continuity

Handle condition	Terminal			
	3A	3B	3D	3F
Tilt I/H forward	○			○
Tilt I/H rearward	○		○	
O/H pulled	○	○		

I/H: INNER HANDLE, O/H: OUTER HANDLE

DPE914AWC010

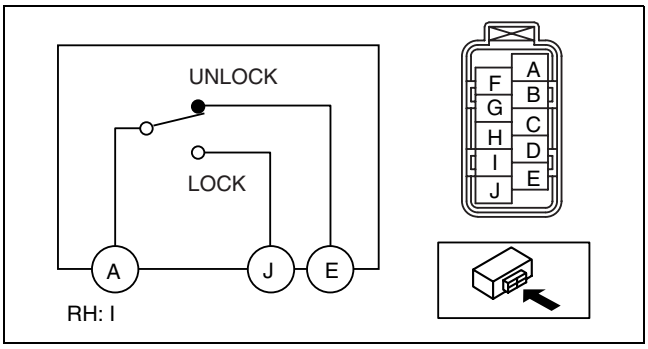
09

DOOR LOCK-LINK SWITCH INSPECTION

DPE091458490W13

Driver-side Front Door

1. Inspect for continuity between the door lock-link switch terminals.
   - If not as specified, replace the front door latch and lock actuator.



B3E0914W013

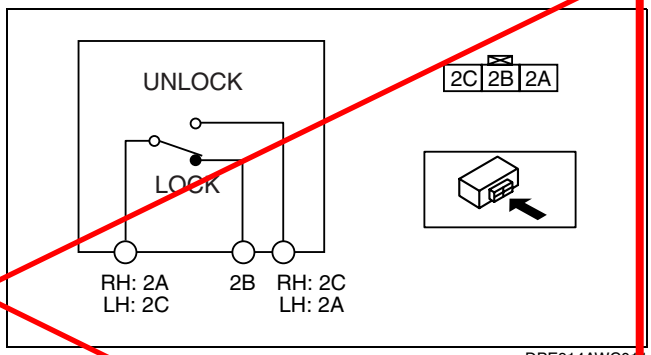
: Continuity

Lock knob position	Terminal		
	E	LH: A RH: I	J
Lock		○	○
Unlock	○	○	

B3E0914W014

Sliding Door (With PSD)

1. Inspect for continuity between the door lock-link switch terminals.
   - If not as specified, replace the remote controller.



DPE914AWC011

: Continuity

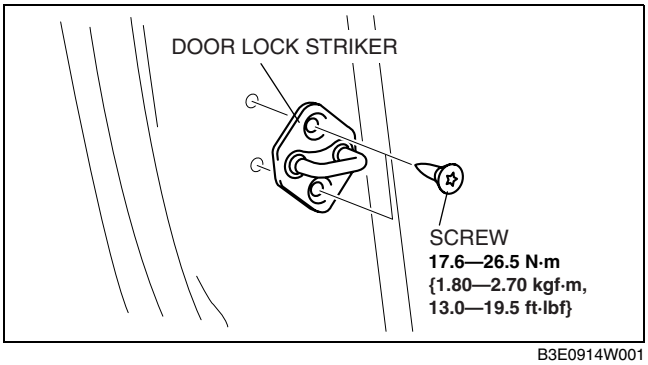
Lock knob position	Terminal		
	RH: 2A LH: 2C	2B	RH: 2C LH: 2A
Lock	○	○	
Unlock	○		○

DPE914AWC012

DOOR LOCK STRIKER REMOVAL/INSTALLATION

DPE091458490W01

1. Remove the screws, then remove the door lock striker.
2. Install in the reverse order of removal.



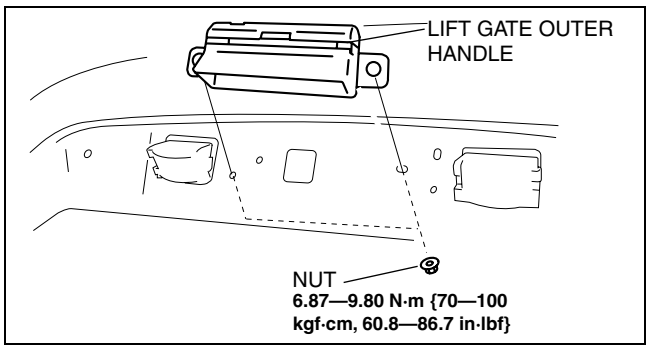
B3E0914W001

LIFTGATE OUTER HANDLE REMOVAL/INSTALLATION

DPE091462490W01

1. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)

2. Remove the nuts.
3. Install in the reverse order of removal.

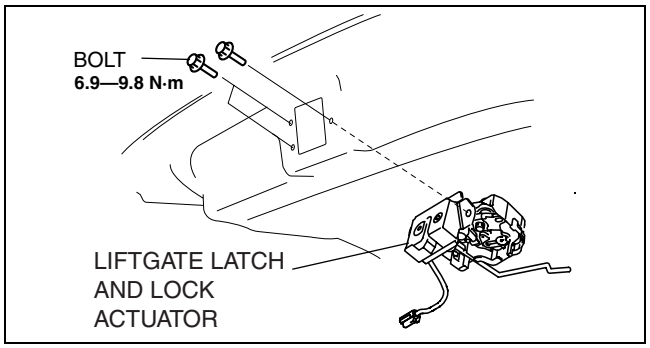


DPE914AWC013

LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION

DPE091462490W02

1. Disconnect the negative battery cable.
2. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
3. Remove the bolts, then remove the liftgate latch and lock actuator
4. Install in the reverse order of removal.



DPE914AWC014

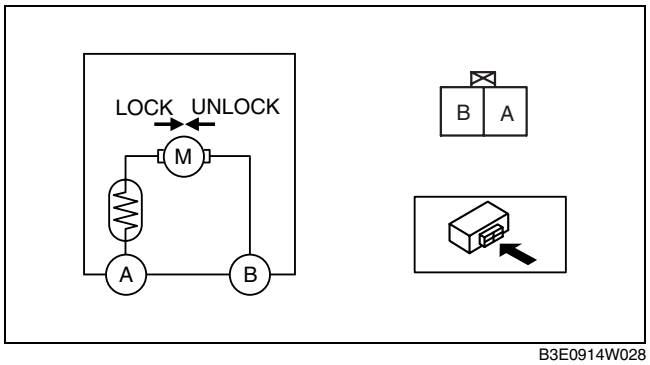
LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION

DPE091462490W03

Liftgate Lock Actuator

1. Apply battery positive voltage and connect ground to the corresponding liftgate lock actuator terminals, and inspect the liftgate lock actuator operation.
   - If not as specified, replace the liftgate latch and lock actuator.

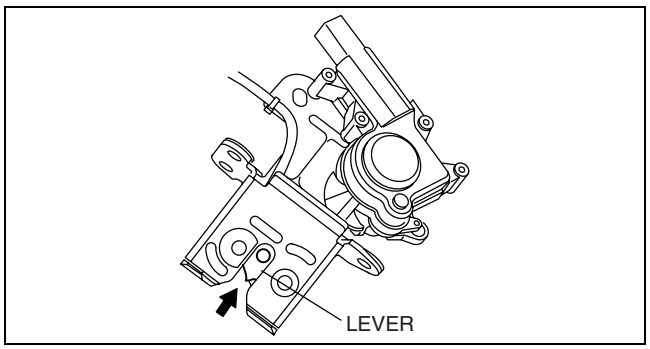
Lock actuator operation	Connection	
	B+	GND
Lock	A	B
Unlock	B	A



B3E0914W028

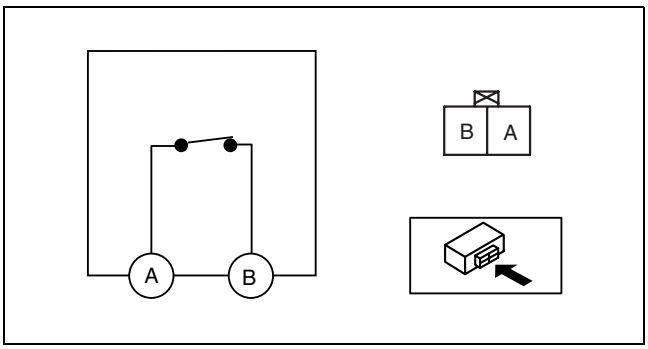
Liftgate Latch switch

1. When inspecting the latch, press the latch lever using a flathead screwdriver or a similar tool.



B3E0914W038

2. Inspect for continuity between the liftgate latch switch terminals.
   - If not as specified, replace the liftgate latch and lock actuator.



B3E0914W022

○—○ : Continuity

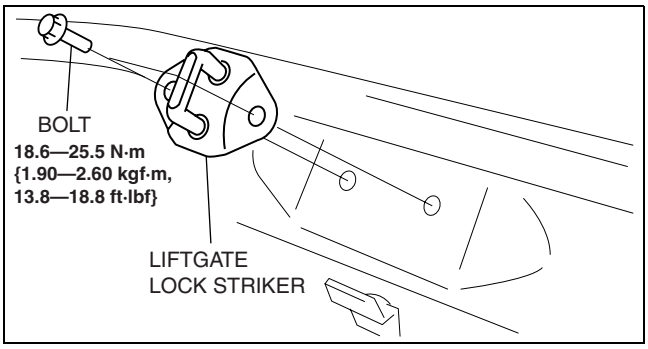
Latch condition	Terminal	
	A	B
Latch (liftgate is closed)		
Unlatch (liftgate is open)	○	○

B3E0914W021

LIFTGATE LOCK STRIKER REMOVAL/INSTALLATION

DPE091462490W04

1. Remove the trunk end trim. (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
2. Remove the bolts, then remove the liftgate lock striker.
3. Install in the reverse order of removal.
4. Adjust the liftgate. (See 09–11–18 LIFTGATE ADJUSTMENT.)



B3E0914W037

KEYLESS CONTROL MODULE REMOVAL/INSTALLATION

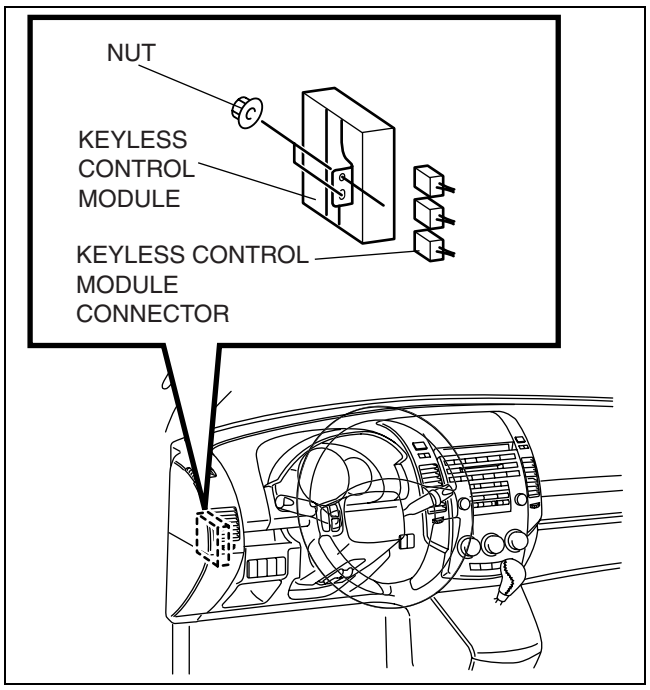
DPE091467820W01

Note

- If the keyless control module is replaced, always perform the following procedure.
  Without immobilizer system
  — Configuration (See 09–14A–22 KEYLESS CONTROL MODULE CONFIGURATION.)
  — Card key programming (See 09–14A–20 CARD KEY ID CODE REGISTRATION.)
  — Steering lock unit programming (See 09–14A–21 STEERING LOCK UNIT ID CODE REGISTRATION.)
  With immobilizer system
  — Configuration (See 09–14A–22 KEYLESS CONTROL MODULE CONFIGURATION.)
  — Card key programming (See 09–14A–20 CARD KEY ID CODE REGISTRATION.)
  — Steering lock unit programming (See 09–14A–21 STEERING LOCK UNIT ID CODE REGISTRATION.)
  — Immobilizer system resetting (See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM].)

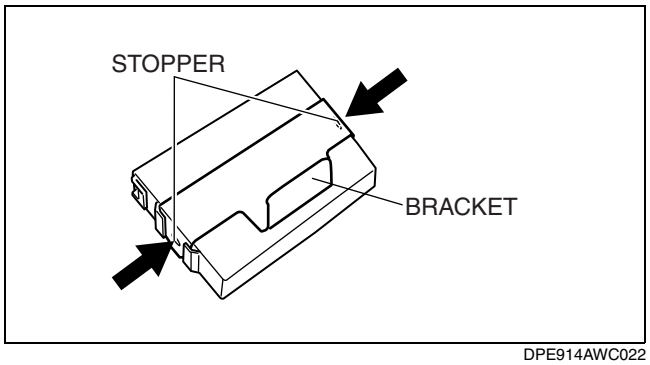
1. Disconnect the negative battery cable.
2. Remove the side panel. (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
3. Remove the nuts.

4. Remove the keyless control module.
5. Disconnect the keyless control module connector.



DPE914AWC021

6. Push the stopper with a small screwdriver and remove the bracket in the direction shown by the arrow.
7. Install in the reverse order of removal.



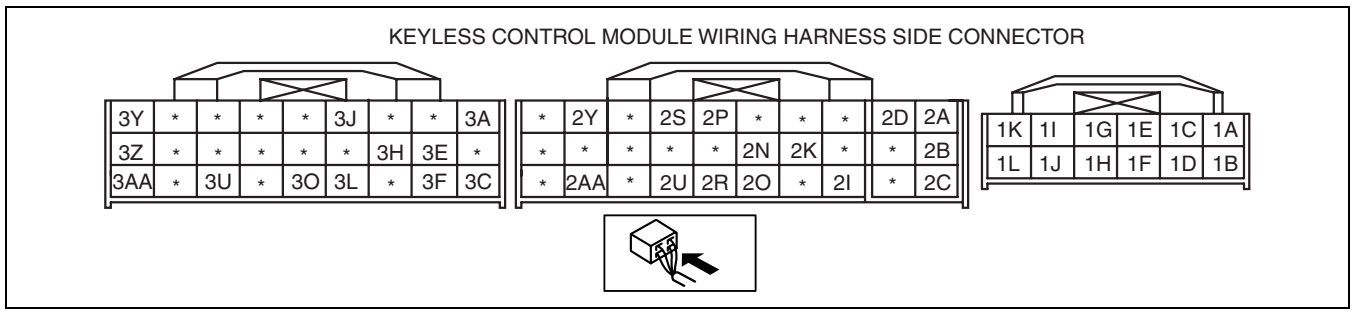
DPE914AWC022

KEYLESS CONTROL MODULE INSPECTION

DPE091467820W02

1. Measure the voltage or inspect for continuity according to the Terminal Voltage Table (Reference).
   - If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under "Inspection item(s)" and related wiring harnesses.
2. If the system does not work properly even though the inspection items or related wiring harnesses do not have any malfunction, perform symptom troubleshooting [ADVANCED KEYLESS ENTRY AND START SYSTEM].

Terminal Voltage Table (Reference)



DPE914AWC023

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
1A	keyless antenna (driver-side)(+)	keyless antenna (driver-side)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (driver-side)

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
1B	keyless antenna (driver-side)(-)	keyless antenna (driver-side)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (driver-side)
1C	keyless antenna (passenger-side)(+)	keyless antenna (passenger-side)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (passenger-side)
1D	keyless antenna (passenger-side)(-)	keyless antenna (passenger-side)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (passenger-side)
1E	keyless antenna (liftgate)(+)	keyless antenna (liftgate)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (liftgate)
1F	keyless antenna (liftgate)(-)	keyless antenna (liftgate)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (liftgate)
1G	keyless antenna (interior, RR)(+)	keyless antenna (interior, RR)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (interior, RR)
1H	keyless antenna (interior, RR)(-)	keyless antenna (interior, RR)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (interior, RR)
1I	keyless antenna (interior, RL)(+)	keyless antenna (interior, RL)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (interior, RL)
1J	keyless antenna (interior, RL)(-)	keyless antenna (interior, RL)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (interior, RL)
1K	keyless antenna (interior, front)(+)	keyless antenna (interior, front)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (interior, front)
1L	keyless antenna (interior, front)(-)	keyless antenna (interior, front)	Under any condition: Inspect for continuity to keyless antenna.	Continuity detected	keyless antenna (interior, front)
2A	Key inter lock solenoid	Key inter lock solenoid	Selector lever is at P position	1.0 or less	Key inter lock solenoid
			Selector lever is not at P position	B+	
2B	IG1	ENGINE 10 A fuse	Ignition switch is at ON position	B+	ENGINE 10 A fuse
			Ignition switch is at LOCK or ACC position	1.0 or less	
2C	GND	body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	GND
2D	Power supply	ROOM 15 A fuse	Under any condition	B+	• ROOM 15 A fuse • Battery
2I	ACC	METER 10 A fuse	Ignition switch is at ACC position	B+	METER 10 A fuse
			Ignition switch is at LOCK or ON position	1.0 or less	
2K	Buzzer (interior)	Instrument cluster	Buzzer operated	1.0 or less	Instrument cluster
			Other	5.0	
2N	Start knob (push switch)	Steering lock unit	Start knob is Pushed	B+	Steering lock unit
			Other	1.0 or less	
2O	Key reminder switch	Steering lock unit	Key reminder switch is ON	B+	Steering lock unit
			Other	1.0 or less	
2P	Communication (steering lock unit)	Steering lock unit	Under any condition: Inspect for continuity to steering lock unit.	Continuity detected	Steering lock unit

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
2R	Communication (BCM)	BCM	Under any condition: Inspect for continuity to BCM.	Continuity detected	BCM
2S	Power supply (keyless receiver)	Keyless receiver	Under any condition	B+	Keyless receiver
2U	Communication (keyless receiver)	Keyless receiver	Under any condition: Inspect for continuity to keyless receiver.	Continuity detected	Keyless receiver
2Y*	Tx-SKE	Coil	Ignition switch is at ON position	B+	Coil
			Ignition switch is at LOCK or ACC position	1.0 or less	
2AA*	Rx-SKE	Coil	Ignition switch is at ON position	5.0	Coil
			Ignition switch is at LOCK or ACC position	1.0 or less	
3A*	Tx	PCM	Ignition switch is at ON position	B+	PCM
			Ignition switch is at LOCK or ACC position	1.0 or less	
3C*	Rx	PCM	Ignition switch is at ON position	B+	PCM
			Ignition switch is at LOCK or ACC position	1.0 or less	
3E	Lock signal input	Door lock-link switch	Driver-side door is locked: Inspect for continuity to ground.	Continuity detected	Door lock-link switch
			Driver-side door is unlocked: Inspect for continuity to ground.	No continuity	
3F	Not P range switch	Not P range switch	Selector lever is at P position	1.0 or less	Key inter lock solenoid
			Selector lever is not at P position	B+	
3H	Request switch input (driver-side)	Request switch (driver-side)	Driver-side request switch is ON: Inspect for continuity to ground.	Continuity detected	Request switch (driver-side)
			Driver-side request switch is OFF: Inspect for continuity to ground.	No continuity	
3J	Request switch input (passenger-side)	Request switch (passenger-side)	Passenger-side request switch is ON: Inspect for continuity to ground.	Continuity detected	Request switch (passenger-side)
			Passenger-side request switch is OFF: Inspect for continuity to ground.	No continuity	
3L	Request switch input (trunk lid)	Request switch (trunk lid)	Trunk lid request switch is ON: Inspect for continuity to ground.	Continuity detected	Request switch (trunk lid)
			Trunk lid request switch is OFF: Inspect for continuity to ground.	No continuity	
3O	Brake signal	Brake switch	Stop light switch is ON	B+	Brake switch
			Stop light switch is OFF	1.0 or less	
3U	Key inter lock resistor	Key inter lock resistor	Selector lever is at P position	1.0 or less	Key inter lock resistor
			Selector lever is not at P position	B+	
3Y	Keyless buzzer output	Keyless buzzer	Keyless buzzer operated	B+	Keyless buzzer
			Other	1.0 or less	

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
3Z	HS-CAN+	PCM	Under any condition: • Inspect for continuity to PCM. • Inspect for continuity to instrument cluster.	Continuity detected	-
3AA	HS-CAN-	PCM	Under any condition: • Inspect for continuity to PCM. • Inspect for continuity to instrument cluster.	Continuity detected	-

* : With immobilizer system

CARD KEY ID CODE REGISTRATION

DPE091469000W09

Caution
- **Do not place the following devices in the vehicle while programming, otherwise programming cannot be performed.**
  - **— WDS or equivalent**
  - **— Personal computer**
  - **— Device that can send/receive radio waves**
- **Verify that the other transmitter is not being operated around the servicing area during card key programming.**

Note
- Use the WDS or equivalent and start programming if the condition corresponds to the following:
  - — One or No Programmed Card Keys
  - — Keyless control module is replaced
- If six card keys are already programmed, the programming mode does not activate. If programming is needed, use the WDS or equivalent to erase the unnecessary card key programming.

With two programmed card keys
1. Bring the programmed card keys (2) and a unprogrammed card key into the vehicle.
2. Close all doors.
3. Insert the supplementary key into the ignition key cylinder.

Note
- Complete the procedures up to Step 7 within **30 s** after the supplementary key is inserted.

4. Turn the ignition switch to the ON position.
5. Press the UNLOCK button on card key 1.
6. Press the UNLOCK button on card key 2.
7. From the ignition switch in the ON position, switch the ignition switch in the order indicated below.
   — ACC→ON→ACC→ON→ACC→ON
8. Open the driver-side front door, press the door switch **twice**, and then close the door.

Note
- After Step 3 is completed and the card key programming mode is activated, the door lock actuator operates to lock, and then operates to unlock.
- If the door lock actuator does not operate, repeat the procedure from Step 2.

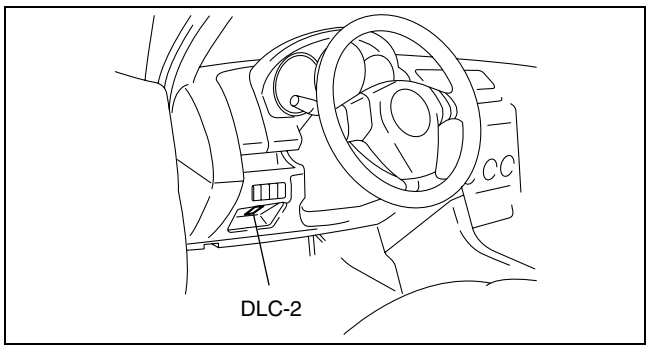
9. Press the UNLOCK button on the unprogrammed card key **twice**.

Note
- After Step 8 is completed and the card key is programmed, the door lock actuator operates to lock, and then operates to unlock.

10. If programming more card keys, remove the supplementary key once, and then repeat the procedure from Step 2.

Using WDS or Equivalent
1. Fully lower the driver-side door glass.

2. Connect the WDS or equivalent to the DLC-2.
3. Pull out the WDS or equivalent cable from the door glass opening and set the WDS or equivalent outside the vehicle.



DPE102ZW2001

Caution
- **Protect the cable and body contact area with a clean rag, otherwise they could be damaged.**

4. Select “BODY/SECURITY/PATS (immobilizer)“ from the WDS or equivalent screen menu.
5. Security access begins and the WDS or equivalent displays the “OUT-CODE“.

Note
- When “OUT-CODE“ is first displayed, turning the ignition switch from the LOCK to the ON position **5 times** will change the “OUT-CODE”.

6. Input the “IN-CODE“ that corresponds to the “OUT-CODE “ displayed on the WDS or equivalent screen.
7. Select “CARD KEY PROGRAMMING“ from the WDS or equivalent screen menu.

Note
- After Step 7 is completed and the card key programming is activated, the door lock actuator operates to lock, and then operates to unlock.

8. Press the unprogrammed card key UNLOCK button **twice**.

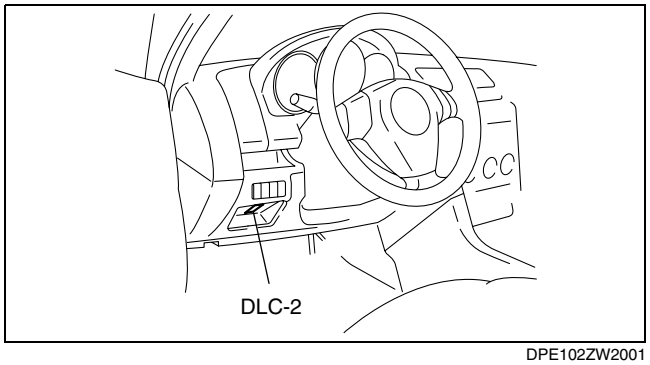
Note
- After Step 8 is completed and the card key is programmed, the door lock actuator operates to lock, and then operates to unlock.

9. If programming more card keys, remove the supplementary key once, and then repeat the procedure from Step 7 by following the instructions on the WDS or equivalent screen.

CLEARING CARD KEY

DPE091469000W10

1. Fully lower the driver-side door glass.
2. Connect the WDS or equivalent to the DLC-2.
3. Pull out the WDS or equivalent cable from the door glass opening and set the WDS or equivalent outside the vehicle.



DPE102ZW2001

Caution
- **Protect the cable and body contact area with a clean rag, otherwise they could be damaged.**

4. Select “BODY/SECURITY/PATS (immobilizer)“ from the WDS or equivalent screen menu.
5. Security access begins and the WDS or equivalent displays the “OUT-CODE“.

Note
- When “OUT-CODE“ is first displayed, turning the ignition switch from the LOCK to the ON position **5 times** will change the “OUT-CODE”.

6. Input the “IN-CODE“ that corresponds to the “OUT-CODE“ displayed in the WDS or equivalent screen.
7. Select “CARD KEY CLEARING“ from the WDS or equivalent screen menu.

STEERING LOCK UNIT ID CODE REGISTRATION

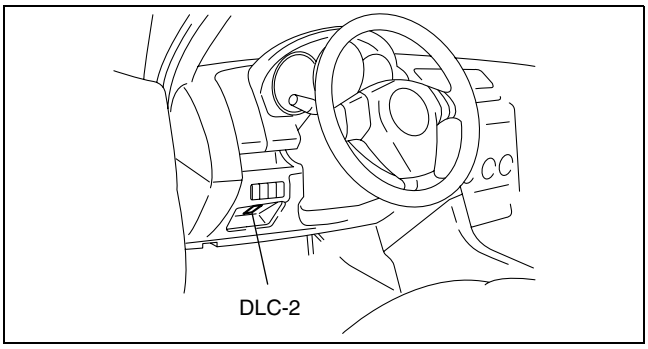
DPE091469000W11

Caution
- **Do not place the following devices in the vehicle while programming, otherwise programming cannot be performed.**
  - **— WDS or equivalent**

— **Personal computer**
— **Device that can send/receive radio waves**

Note
- The steering lock unit and steering lock component are a single unit. Therefore, replace the steering lock component when replacing steering lock unit. (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
- For this procedure, a programmed card key is necessary. If there is no programmed card key, perform the steering lock unit programming after the card key programming.

1. Bring the programmed card key into the vehicle.
2. Fully lower the driver-side door glass.
3. Connect the WDS or equivalent to the DLC-2.
4. Pull out the WDS or equivalent cable from the door glass opening and set the WDS or equivalent outside the vehicle.
5. Select “BODY/SECURITY/PATS (immobilizer)“ from the WDS or equivalent screen menu.
6. Perform the security access according to the directions on the WDS or equivalent screen. (See 09–14A–38 SECURITY ACCESS PROCEDURE.)
7. The security access begins and the WDS or equivalent displays “OUT-CODE“.



DPE102ZW2001

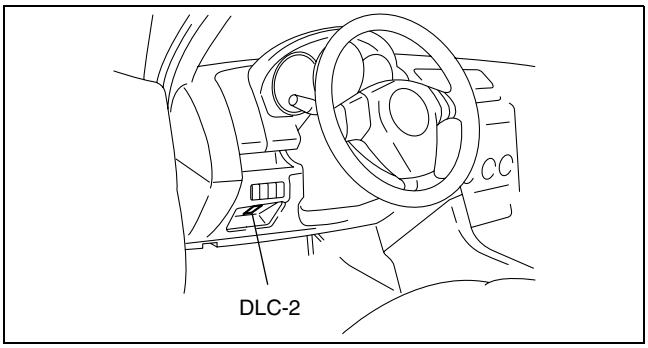
Note
- When “OUT-CODE” is first displayed, turning the ignition switch from the LOCK to the ON position **5 times** will change the “OUT-CODE”.

8. Input the “IN-CODE“ that corresponds to the “OUT-CODE“ displayed on the WDS or equivalent screen.
9. Select “STEERING LOCK UNIT PROGRAMMING“ and perform procedures according to the directions on the WDS or equivalent screen.

KEYLESS CONTROL MODULE CONFIGURATION

DPE091469000W12

1. Connect the WDS or equivalent to the DLC-2.
2. Select “Module Programming”.
3. Select “Configuration/PMI”.
4. Select “RKE” and perform procedures according to directions on the screen.

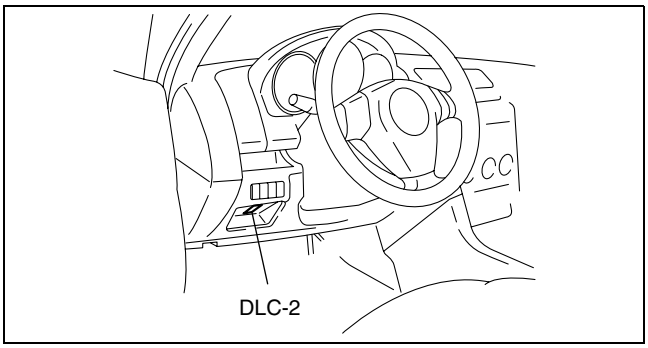


DPE102ZW2001

CUSTOMIZED FUNCTION SETTING PROCEDURE

DPE091469000W13

1. Connect the WDS or equivalent to the DLC-2.
2. Select “Module Programming”.
3. Select “Programming change available parameter/RKE”.
4. Select the item name, and than select either “Disable/Enable”.
   Items
   - Automatic Lock
   - Answer Back Buzzer
   - Low Battery Warning



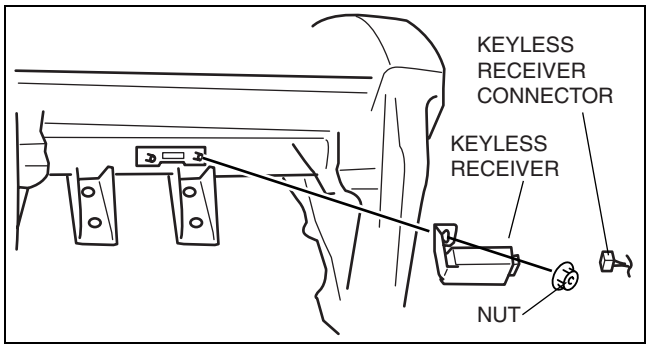
DPE102ZW2001

KEYLESS RECEIVER REMOVAL/INSTALLATION [ADVANCED KEYLESS SYSTEM]

DPE091469000W01

1. Disconnect the negative battery cable.
2. Remove the glove compartment. (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)

3. Disconnect the keyless receiver module connector.
4. Remove the nut, then remove the keyless receiver.

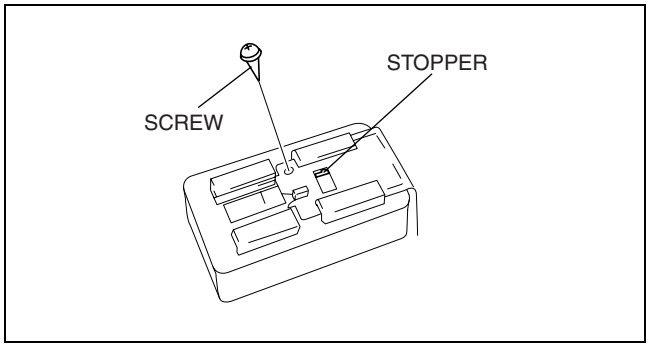


DPE914AWC024

5. Remove the screw.

Note
- The screw which fixes the keyless receiver and bracket is for a body ground connection.

6. Push the stopper in with a small screwdriver and remove the bracket.
7. Install in the reverse order of removal.



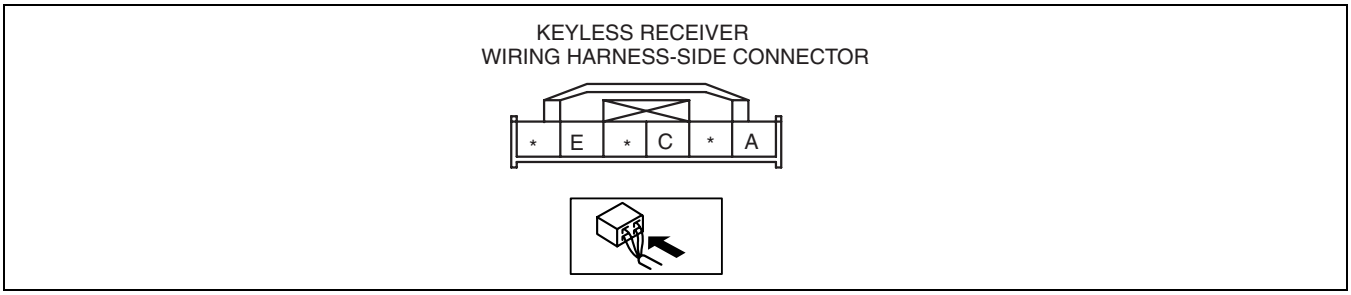
DPE914AWC025

KEYLESS RECEIVER INSPECTION [ADVANCED KEYLESS SYSTEM]

DPE091469000W02

1. Measure the voltage or inspect for continuity according to the Terminal Voltage Table (Reference).
   - If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under "Inspection item(s)" and related wiring harnesses.

Terminal Voltage Table (Reference)



E6U914ZW1007

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
A	Power supply	Keyless control module	Under any condition	B+	• Keyless control module • Related wiring harnesses
C	Data	Keyless control module	Under any condition: Inspect the wiring harness between the keyless receiver and keyless control module terminal 3U for continuity.	Continuity detected	• Keyless control module • Related wiring harnesses
E	GND	Body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	GND

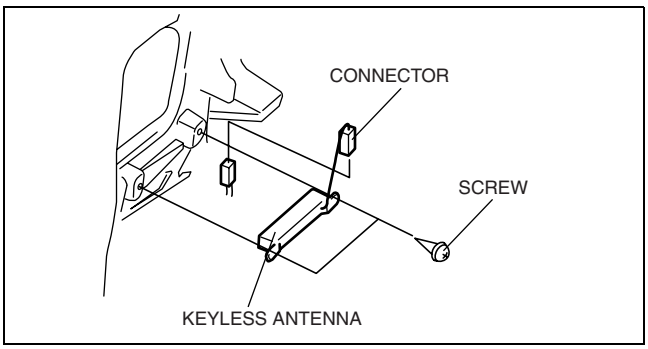
KEYLESS ANTENNA REMOVAL/INSTALLATION

DPE091469000W03

Driver-side/passenger-side

1. Disconnect the negative battery cable.
2. Remove the front door trim. (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
3. Remove the screws.

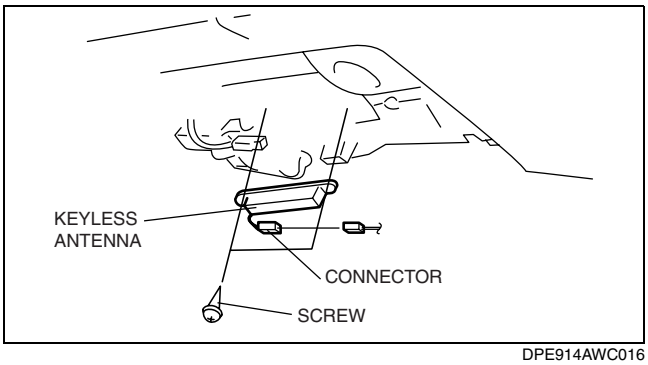
4. Disconnect the connector, then remove the keyless antenna.
5. Install in the reverse order of removal.



DPE914AWC015

Liftgate

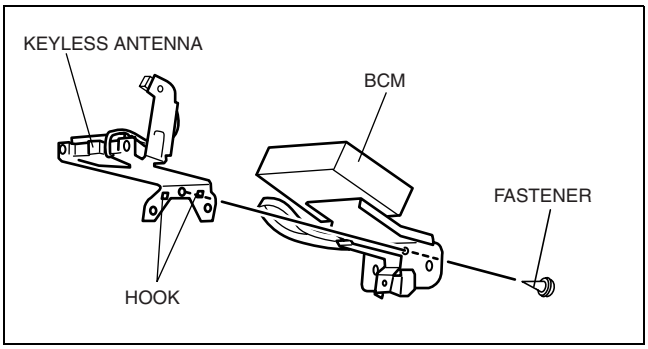
1. Disconnect the negative battery cable.
2. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
3. Remove the screws.
4. Disconnect the connector, then remove the keyless antenna.
5. Install in the reverse order of removal.



DPE914AWC016

Interior, Front

1. Disconnect the negative battery cable.
2. Remove the BCM. (See 09–40–1 BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION.)
3. Remove the fastener.
4. Remove the keyless antenna.
5. Install in the reverse order of removal.

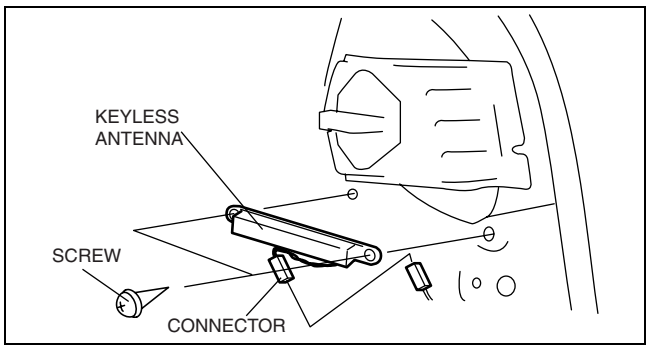


DPE914AWC017

Interior, RR/RL

1. Disconnect the negative battery cable.
2. Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)

3. Disconnect the connector, then remove the keyless antenna.
4. Install in the reverse order of removal.

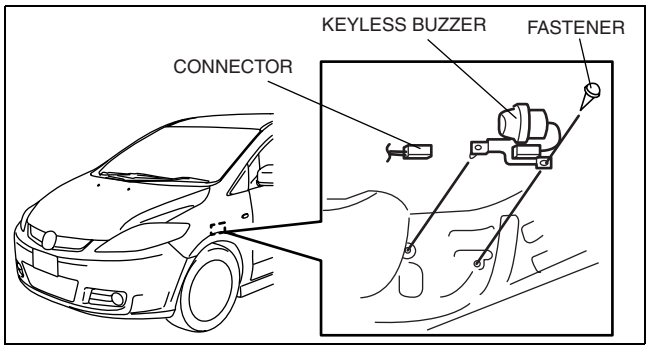


DPE914AWC018

KEYLESS BUZZER REMOVAL/INSTALLATION

DPE091469000W05

1. Disconnect the negative battery cable.
2. Remove the passenger-side mud guard.
3. Remove the fastener, then remove the keyless buzzer.
4. Disconnect the connector.
5. Install in the reverse order of removal.



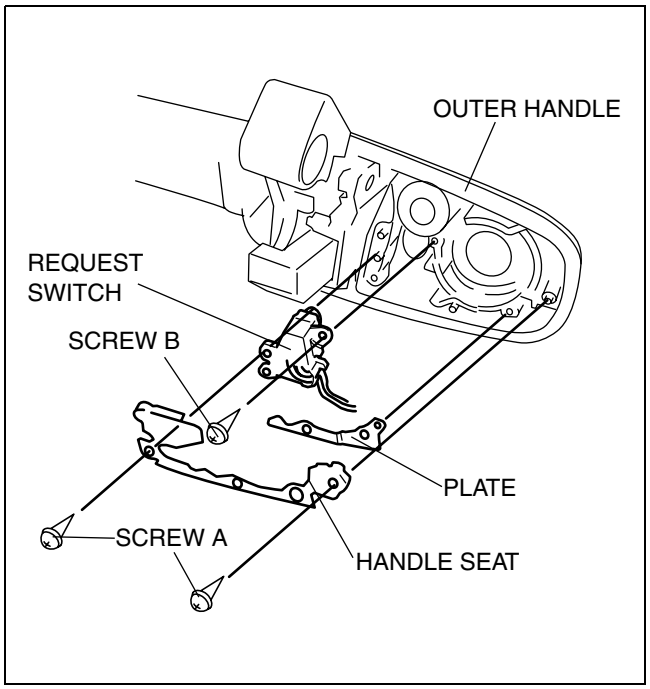
DPE914AWC019

REQUEST SWITCH REMOVAL/INSTALLATION

DPE091469000W06

Driver-side/passenger-side

1. Disconnect the negative battery cable.
2. Remove the front door trim. (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
3. Remove the front outer handle. (See 09–14A–4 FRONT OUTER HANDLE REMOVAL/INSTALLATION.)
4. Remove the screws A, then remove the handle seat and plate.
5. Remove screw B, then remove the request switch.
6. Install in the reverse order of removal.

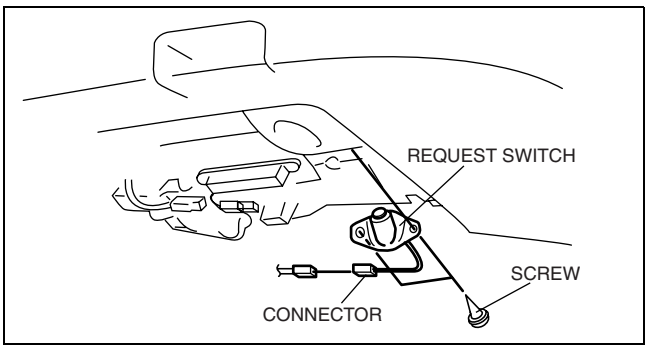


E6U914ZW1009

Liftgate

1. Disconnect the negative battery cable.
2. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)

3. Remove the screws, then remove the request switch.
4. Install in the reverse order of removal.

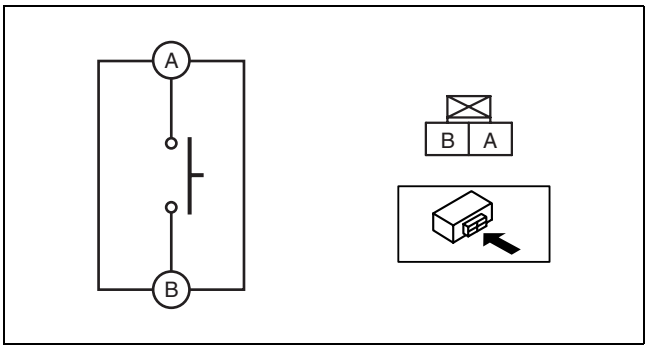


DPE914AWC020

REQUEST SWITCH INSPECTION

1. Inspect for continuity between request switch terminals A and B.
   - If not as specified, replace the request switch.

DPE091469000W07



CJJ914ZW5014

○—○ : Continuity

Switch position	Terminal	
	A	B
Push (ON)	○	○
Not push (OFF)		

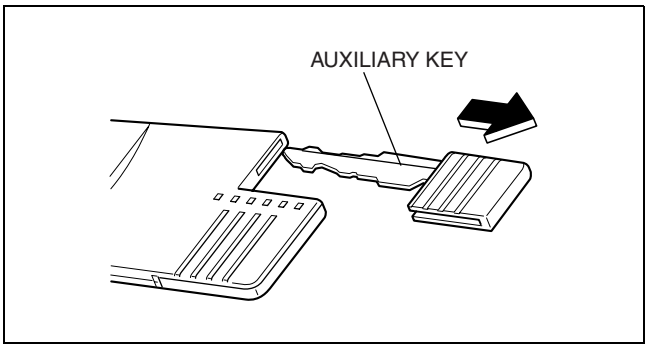
E6U914ZW1018

CARD KEY BATTERY REPLACEMENT

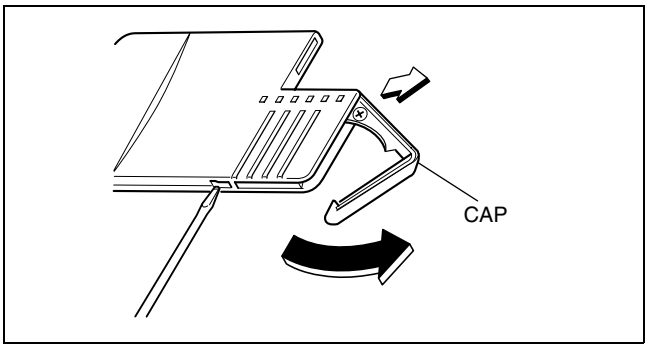
1. Pull out the auxiliary key.
2. Replace the cap using a flathead screwdriver, then rotate and remove the cap.

Caution
- **Do not turn the cap excessively. The cap may be damaged.**

DPE091467543W01

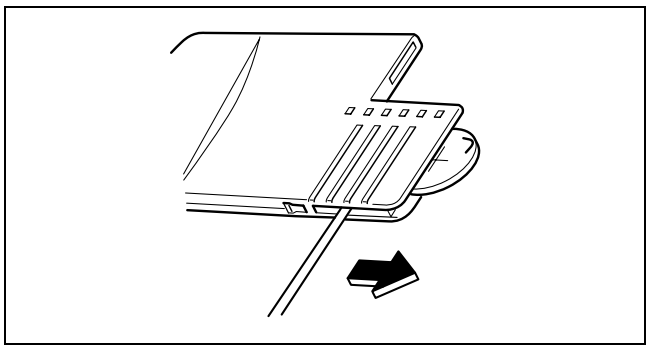


E6U914ZW1019



E6U914ZW1020

3. Insert a flathead screwdriver into the crack and press the battery out.

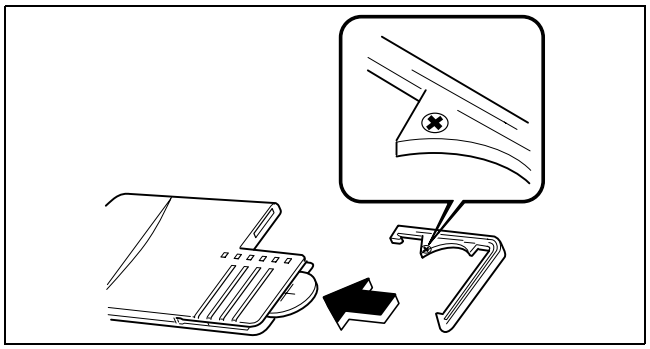


E6U914ZW1021

4. Insert the new battery (CR2025) with the positive pole (+) facing the (+) mark on the cap.

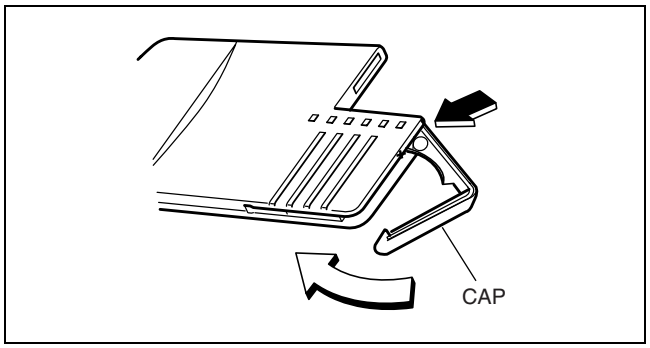
Battery specification
Lithium CR2025 × 1

Note
- The batteries will last about **2 years** when used **10 times** a day.



E6U914ZW1022

5. Rotate and close the cap.
6. Reinsert the auxiliary key.



E6U914ZW1023

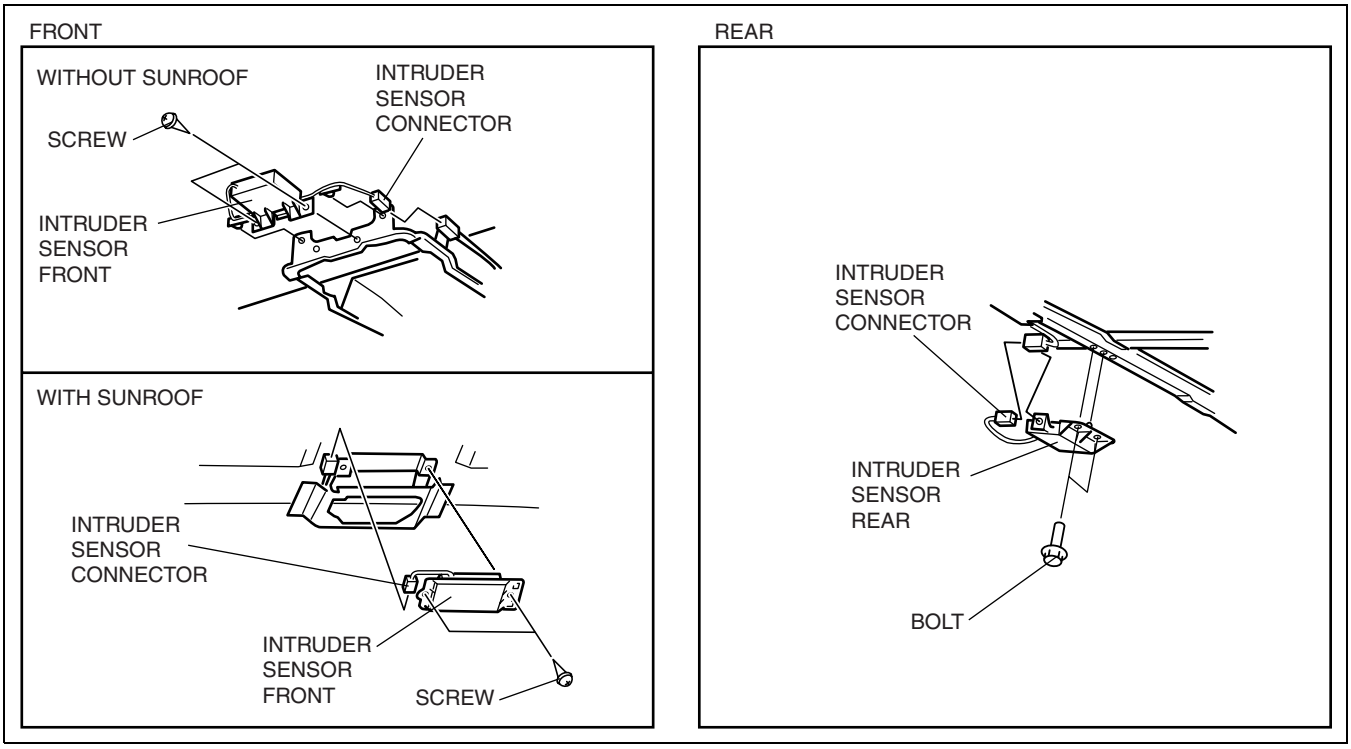
INTRUDER SENSOR REMOVAL/INSTALLATION

DPE091400172W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (8) Sub-trunk
   (9) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (10) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (11) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (12) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (13) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (16) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (17) SES unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (19) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (20) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)

(21)Headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)

3. Disconnect the intruder sensor connector.
4. Remove the screws.



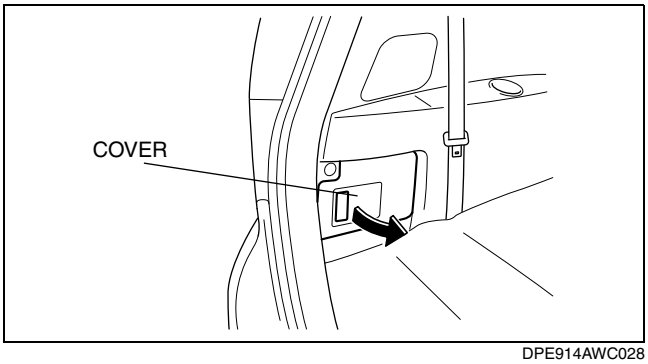
DPE914AWC026

5. Remove the intruder sensor.
6. Install in the reverse order of removal.

THEFT-DETERRENT SIREN REMOVAL/INSTALLATION

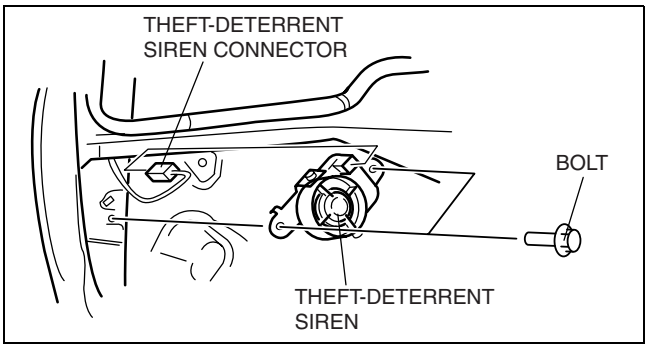
DPE091400173W02

1. Disconnect the negative battery cable.
2. Remove the cover, then remove the jack.
3. Disconnect the theft-deterrent siren connector.



DPE914AWC028

4. Remove the bolt, then remove the theft-deterrent siren.
5. Install in the reverse order of removal.



DPE914AWC027

COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED KEYLESS SYSTEM]

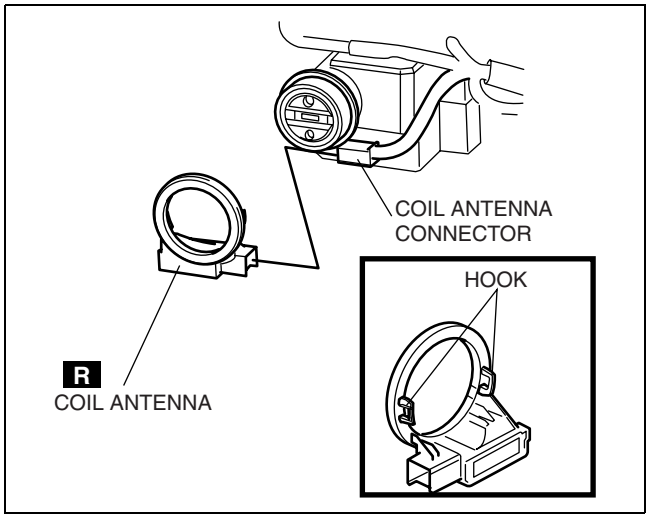
DPE091467004W01

Note

- Do not remove the coil antenna unless you are replacing it.

- When only the coil antenna is replaced, the immobilizer system reprogram procedure is not necessary.

1. Disconnect the negative battery cable.
2. Remove the column cover.
3. Remove the coil antenna.
4. Install in the reverse order of removal.



DPE914AWC029

IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM]

DPE091467000W01

Foreword

- When performing the following procedures, the immobilizer resetting procedure using the WDS or equivalent must also always be performed: “Keyless control module replacement”, “PCM replacement”, “Steering lock unit replacement”, “Keyless control module and PCM joint replacement”, “Keyless control module, PCM, and steering lock unit joint replacement”, and “Key ID number clearing”. The engine will not start unless all work is performed using the WDS or equivalent.
- A card key that can start the engine is necessary for the key programming. If there is no card key that can start the engine, perform the key programming after the card key programming. (See 09–14A–20 CARD KEY ID CODE REGISTRATION.)
- There are two ways to add supplemental key: Using the WDS or equivalent or using two keys that can start the engine to program.
- When replacing any of the immobilizer system component parts, adding/clearing keys, or performing other functions, refer to the following table and perform the applicable procedure (No.1 to 5).
- Verify that the room fuse is equipped.

Ref. No.	Condition	Items necessary for procedure (prepare before starting procedure)	Cautionary notes
1	Since two or more keys that can start the engine are necessary, make a spare key. Or program an additional key.	• Programming key	• The WDS or equivalent is necessary for the additional key programming if “Customer spare key programming disable” is performed before the procedure using the WDS or equivalent. In this case, perform No. 2.
2	If there is only one key that can start the engine, make a spare key. If there is no key, program an additional key.	• Programmed card key • Programming key • WDS or equivalent	-
3	Clearing the programmed key ID number.	• Programming keys (two or more) • WDS or equivalent	• The key ID number programmed to the vehicle will be completely cleared. • The engine cannot be started unless the key is reprogrammed after the procedure. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle. • The engine cannot be started unless two or more keys are reprogrammed after the procedure. • The two or more keys prepared before the procedure do not have to be new ones and there is no problem with using the key that was used to start the engine before the procedure.

Ref. No.	Condition	Items necessary for procedure (prepare before starting procedure)	Cautionary notes
3	Replacing all the keys. (Steering lock unit is not replaced)	• Programmed card key • Programming keys (two or more) • WDS or equivalent	• The keys (two or more) prepared before the procedure do not have to be new ones, and there is no problem with using the key that was used to start the engine before the procedure. • The engine cannot be started unless the key is reprogrammed after the procedure.
3	Replacing the PCM only.	• New PCM • Programmed card key • Programming keys (two or more) • WDS or equivalent	-
4	Changing the additional key programming procedure. (Method for programming other keys using two keys that can start the engine is disabled.)	• WDS or equivalent	• The additional key programming using No. 1 cannot be performed after the procedure. It is possible to restore the setting. For restoring the setting, the WDS or equivalent is necessary.
4	Changing the additional key programming procedure. Allows programming using two keys that can start the engine.	• WDS or equivalent	• New vehicles have this setting.
5	Replacing the steering lock unit only.	• New steering lock unit • Programmed card key • New keys (two or more) • WDS or equivalent	• Have two or more keys ready for programming before beginning the procedure, since the previous keys will be invalid. • The steering lock unit programming is necessary for the keyless control module before the key programming. • Two or more keys need to be programmed after the procedure to start the engine.
5	Replacing the PCM and steering lock unit at the same time.	• New PCM • New steering lock unit • Programmed card key • New keys (two or more) • WDS or equivalent	• Have two or more keys ready for programming before beginning the procedure, since the previous keys will be invalid. • Perform the steering lock unit programming. • Two or more keys need to be programmed after the procedure to start the engine.
5	Replacing the keyless control module only.	• New keyless control module • Programming card key • Programming keys (two or more) • WDS or equivalent	• Unless keys are reprogrammed after the procedure, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the card keys and keys for the vehicle. • Perform the card key programming. • Perform the steering lock unit programming. • Unless card keys and keys (two or more) are programmed after the procedure, the engine cannot be started. • The card key and keys (two or more) prepared before the procedure do not have to be new ones and there is no problem with using the keys that were used to start the engine before the procedure.

Ref. No.	Condition	Items necessary for procedure (prepare before starting procedure)	Cautionary notes
5	Replacing the keyless control module and steering lock unit at the same time.	• New keyless control module • New steering lock unit • Programming card key • New keys (two or more) • WDS or equivalent	• Unless keys are re-programmed after the procedure, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the card keys and keys for the vehicle. • Perform the card key programming. • Perform the steering lock unit programming. • The engine cannot be started unless a card key and keys (two or more) are programmed. • The card key and keys (two or more) prepared before the procedure do not have to be new ones and there is no problem with using the keys that were used to start the engine before the procedure.
5	Replacing the PCM and keyless control module at the same time.	• New PCM • New keyless control module • Programming card key • Programming keys (two or more) • WDS or equivalent	• Unless keys are reprogrammed after the procedure, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the card keys and keys for the vehicle. • Perform the card key programming. • Perform the steering lock unit programming. • The engine cannot be started unless a card key and two or more keys are programmed after the procedure. • The card key and keys (two or more) prepared before the procedure do not have to be new ones and there is no problem with using the keys that were used to start the engine before the procedure.
5	Replacing the PCM, keyless control module, and steering lock unit at the same time.	• New PCM • New keyless control module • New steering lock unit • Programming card key • Programming keys (two or more) • WDS or equivalent	• Unless keys are reprogrammed after the procedure, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the card keys and keys for the vehicle. • Perform the card key programming. • Perform the steering lock unit programming. • The engine cannot be started unless a card key and two or more keys are programmed after the procedure. • The card key and keys (two or more) prepared before the procedure do not have to be new ones and there is no problem with using the keys that were used to start the engine before the procedure.
-	Replacing the coil antenna.	• New coil antenna	• Immobilizer system resetting is not necessary.

Caution

- **The following conditions may cause poor signal communication between the key and vehicle, resulting in the engine not starting or a key registration error. Do not perform any work under the following conditions:**
  - **— Placing the following items close to the key grip or contacting it.**
    - **Spare keys**
    - **Keys for other vehicles equipped with an immobilizer system**
    - **Any metallic object**
    - **Any electronic device, or any credit or other card with magnetic strips**
- **Do not place the following devices in the vehicle while programming, otherwise programming cannot be performed:**
  - **— WDS or equivalent**
  - **— Personal computer**
  - **— Devices that can send/receive the radio waves**

Note

- The “valid key” used in this manual indicates the key that can start the engine.
- If the key adding, programming, clearing, and immobilizer system construction parts replacement are

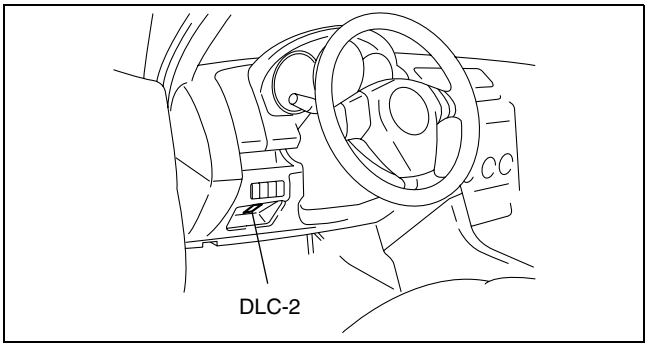
performed, verify that the all keys can start the engine within **5 s** after the procedure.
- When verifying that the engine starts, wait at least **5 s or more** before starting the engine using the next key.
- If the engine cannot be started using a programmed key, repeat the procedure from the beginning.
- Do not start the engine unless indicated in the procedure. If the engine is started during the programming procedure, programming is stopped at that point. Repeat the procedure starting from the beginning if the engine is started before completion.
- Do not place the card key in the vehicle or bring it **within approx. 1 m** of the vehicle unless indicated in the procedure.
- Two or more key ID numbers must be programmed for the engine to start.
- A maximum of eight key ID numbers can be programmed for one vehicle. The WDS or equivalent can be used to verify the number of key ID numbers programmed to a single vehicle.
- Do not select a WDS or equivalent screen menu other than one indicated in the procedure.

WDS or Equivalent Connecting Procedure

Caution
- **Do not place the WDS or equivalent in the vehicle while programming, otherwise programming cannot be performed.**

1. Fully lower the door glass.
2. Connect the WDS or equivalent to the DLC-2.
3. Pull out the WDS or equivalent cable from the door glass opening and set the WDS or equivalent outside the vehicle.

Caution
- **Protect the cable and body contact area with a clean rag, otherwise they could be damaged.**



DPE102ZW2001

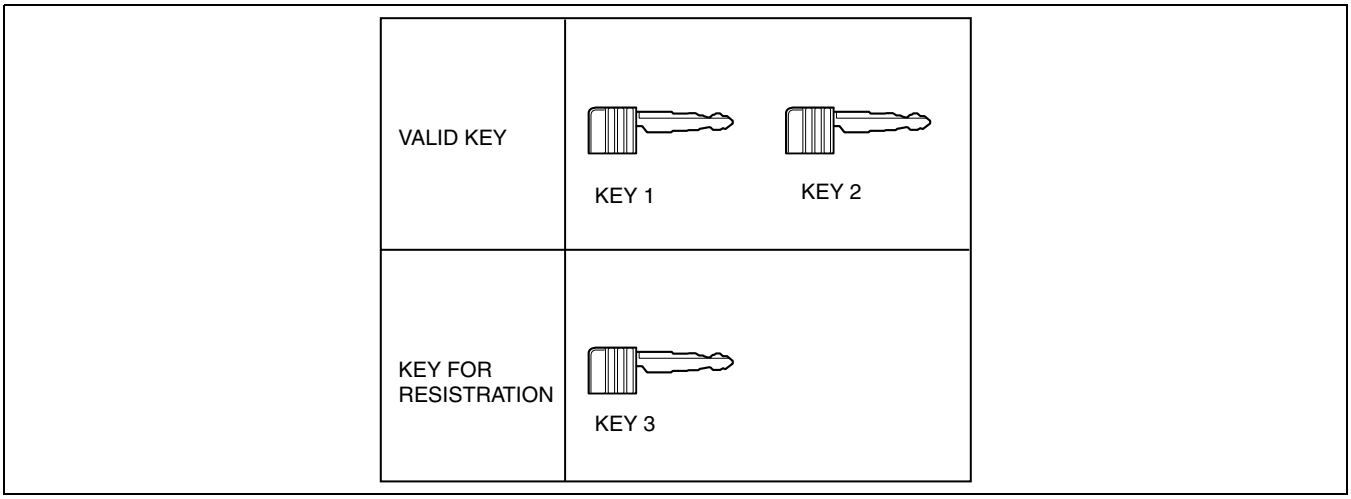
No.1 Additional Key Programming Procedure (Using Two Valid Keys)

Caution
- **Do not place the following devices in the vehicle while programming, otherwise programming cannot be performed:**
  - **— Card key**
  - **— WDS or equivalent**
  - **— Personal computer**
  - **— Devices that can send/receive the radio waves**

Condition
- Have two or more valid keys.

Note
- A maximum of eight keys can be programmed for one vehicle. If key programming is not successful and DTC 15 appears even though the procedure was performed properly, use the PID/data monitor function of the WDS or equivalent and verify the number of keys that have been programmed.
- If eight keys have already been programmed, and it is necessary to program other keys, the previously programmed key ID numbers must first be cleared. To clear the key, refer to “09–14A–34 No.3 PCM, and Key Replacement Procedure (Clearing Previously Programmed Key ID Numbers, Key Re-program)”.

Procedure



E6U914ZW1024

1. Prepare key 3 for programming.
2. Start the engine using key 1.
3. Verify that the security light illuminates for **approx. 3 s**, and then goes out.
4. Turn the ignition switch to the LOCK position.
5. Using key 1, turn the ignition switch to the ON position.
6. Verify that the security light illuminates for **approx. 3 s**, and then goes out.
7. Using key 1, turn the ignition switch to the LOCK position **within approx. 4 s** after the security light goes out.
8. Remove key 1.
9. Repeat Steps 2—5 using key 2 instead of key 1.
10. Repeat Steps 5—8 using key 3 instead of key 1.
11. If additional keys need to be programmed, repeat Steps 1—10, and replace key 3 in Step 10 with the key to be programmed (key 4).

No. 2 Key Additional Programming Procedure (Using the WDS or Equivalent)
Condition

- There is only one valid key. Or, there is no valid key but there is a card key that can start the engine.

Note

- A maximum of eight keys can be programmed for one vehicle. If key registration is not successful and DTC 15 appears even though the procedure was performed properly, use the PID/data monitor function of the WDS or equivalent and verify the number of keys that have been programmed.
- If eight keys have already been programmed, and it is necessary to program other keys, the previously programmed key ID numbers must first be cleared. To clear the key ID number, refer to “09–14A–34 No.3 PCM, and Key Replacement Procedure (Clearing Previously Programmed Key ID Numbers, Key Re-program)”.

Procedure

1. Prepare key 1 for programming.
2. Start the engine using a valid key or card key.

Caution

- **Do not place the card key in the vehicle when starting the engine with the valid key, otherwise programming cannot be performed. If the engine is started with the card key, remove the card key from the vehicle after the engine is started.**

3. Verify that the security light illuminates for **approx. 3 s**, and then goes out.
4. Turn the ignition switch to the LOCK position.
5. Connect the WDS or equivalent to the DLC-2. (See 09–14A–32 WDS or Equivalent Connecting Procedure.)
6. Using key 1, turn the ignition switch to the ON position.

Note

- Although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

7. Select “BODY/SECURITY/PATS (immobilizer) function” from the WDS or equivalent screen menu.
8. Select “Ignition key additional programming” from the WDS or equivalent screen menu.

Note
- After selecting the above menu, “operation is successful” is displayed. At this point, the key that turned the ignition switch to the ON position is completely programmed.

- In this procedure, the necessary number of the keys are completely programmed. To finish the additional key programming, go to Step 13.
- If additional keys need to be programmed, go to the next step.

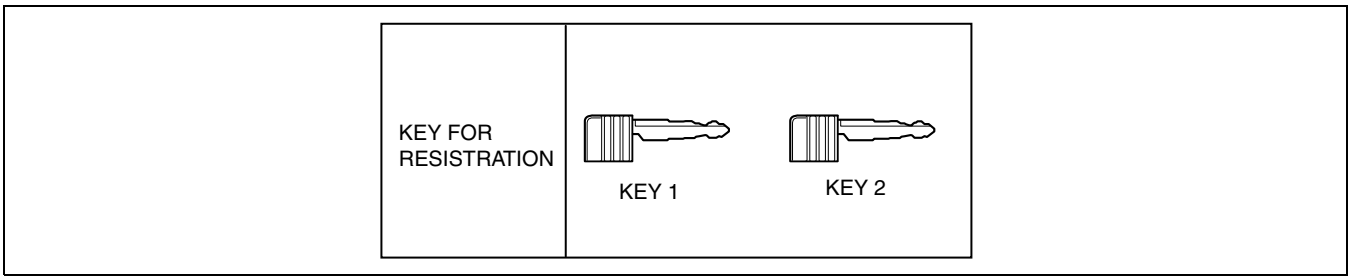
9. Perform the security access according to the directions on the WDS or equivalent screen. (See 09–14A–38 SECURITY ACCESS PROCEDURE.)
10. After verifying that the PATS function menu is displayed again on the WDS or equivalent screen, turn the ignition switch to the LOCK position and remove key 1.
11. Using the key to be programmed, turn the ignition switch to the ON position.
12. Return to the Step 6.
13. After verifying that the PATS function menu is displayed again on the WDS or equivalent screen, select the “Finish (this menu)” to finish the WDS or equivalent procedure.
14. After Step 10, wait **5 s or more**, and then turn the ignition switch to the LOCK position.

No.3 PCM, and Key Replacement Procedure (Clearing Previously Programmed Key ID Numbers, Key Re-program)

Condition
- Have two or more keys to be programmed after the key ID number clearing.

Caution
- **Before starting Step 1, complete the procedure for PCM replacement.**

Procedure



E6U914ZW1025

1. Prepare two or more keys to be programmed after the key ID number clearing.
2. Connect the WDS or equivalent to the DLC-2. (See 09–14A–32 WDS or Equivalent Connecting Procedure.)
3. Using key 1, turn the ignition switch to the ON position.

Note
- Although the security light flashes and DTC 15 or 21 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

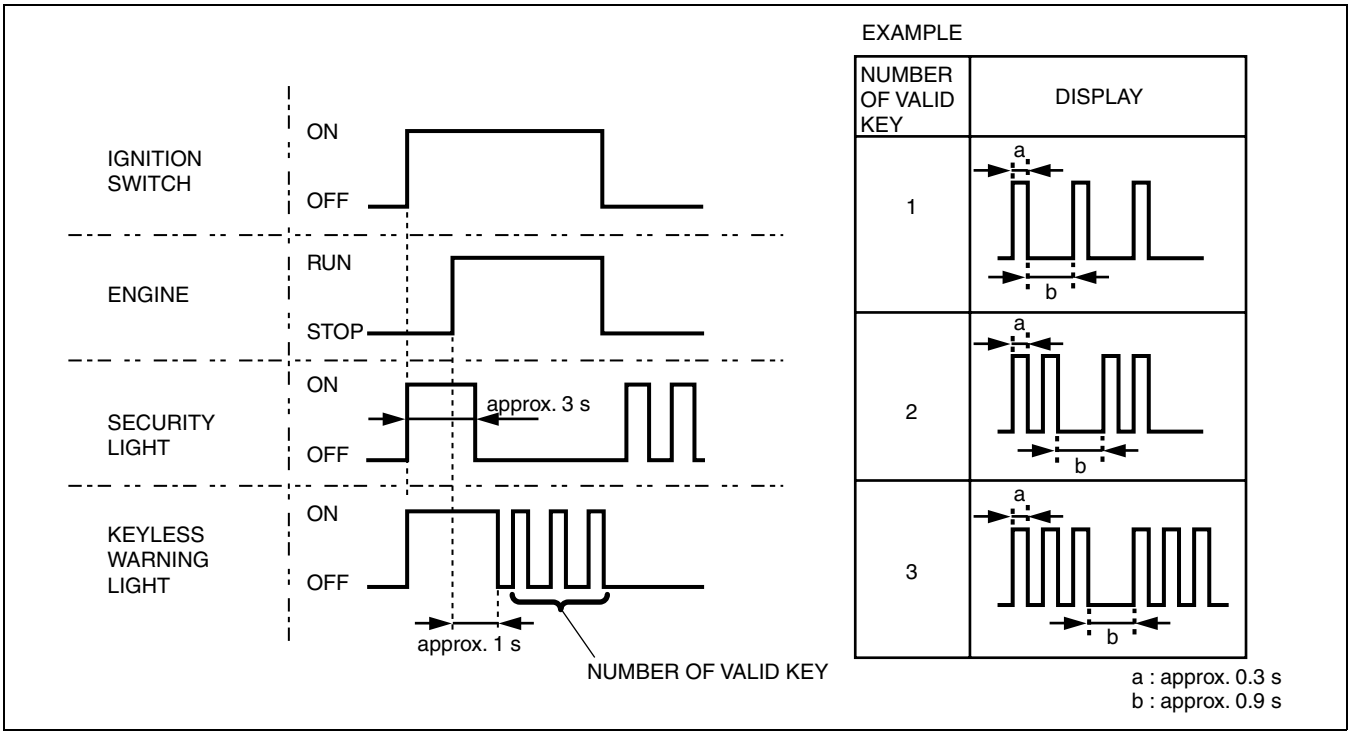
4. Verify that the keyless warning light illuminates for **approx. 3 s**, and then goes out.
5. Select “BODY/SECURITY/PATS (immobilizer) function” from the menu.
6. Select “Ignition key ID number Clearing” from the WDS or equivalent screen menu and perform the procedure according to the WDS or equivalent screen.
7. Perform the security access according to the direction of the WDS or equivalent screen. (See 09–14A–38 SECURITY ACCESS PROCEDURE.)
8. After verifying that the PATS function menu is displayed again on the WDS or equivalent screen, select “Finish (this menu)” to finish the WDS or equivalent procedure.
9. After Step 9, wait **5 s or more**, and then turn the ignition switch to the LOCK position.
10. Using key 1, turn the ignition switch to the ON position.
11. After verifying that the security light and keyless warning light illuminates **for 3 s or more** turn the ignition switch to the LOCK position and remove key 1.

Note
- Although the security light flashes and DTC 21 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

12. Using key 2, turn the ignition switch to the ON position.
13. Verify that the security light and keyless warning light illuminates **for approx. 3 s**, and then goes out.
14. After verifying that the security light goes out, turn the ignition switch to the LOCK position using key 2, and

then remove key 2.

15. If an additional key needs to be programmed, repeat Steps 13—15 with the additional key being key 3. If the ignition switch is held in the ON position **for 1 min or more**, the additional key programming procedure according to Steps 13—15 will not be possible. If this occurs, refer to "09–14A–32 No.1 Additional Key Programming Procedure (Using Two Valid Keys)" to register any additional keys.
16. Start the engine with the key 1.
17. Verify that the security light and keyless warning light operate as follows:
    - From the point when the ignition switch is turned to the ON position, the security light illuminates **for approx. 3 s** and goes out.
    - The keyless warning light illuminates with the ignition switch turned to the ON position, and after **approx. 1 s** after the engine is started, it goes out and displays the number of programmed keys.



E6U914ZW1026

18. After verifying that the keyless warning light goes out, turn the ignition switch to the LOCK position using key 1.
19. Repeat Steps 17—19 using key 2 instead of key 1.

Note
- Perform Steps 17—19 as well when there are three or more programmed keys.

20. Start the engine with the card key and remove any key from the key cylinder.

Caution
- **Remove any key from the key cylinder.**

21. Verify that the security light and keyless warning light operate as follows:
    - From the point when the ignition switch is turned to the ON position, the security light illuminates **for approx. 3 s**, and goes out.
    - The keyless warning light illuminates when the ignition switch is turned to the ON position, and after **approx. 1 s** after the engine is started, it goes out.
22. Turn the ignition switch to the LOCK position after verifying that the keyless warning light goes out.

No. 4 Key Additional Programming Procedure Changing

Note
- This procedure is performed for enabling/diabling the "No.1 Additional Key Programming Procedure (Using Two Valid Keys)" setting.
- This procedure is possible when the vehicle is new, and when replacing the keyless unit with a new one.
- If "No.1 Additional Key Programming Procedure (Using Two Valid Keys)" is set to disable, the additional key programming can be only performed using the WDS or equivalent preventing the forging of a spare key by using two keys that can start the engine. This function is for use by rental car agencies or other companies with vehicle fleets.

Procedure

1. Using the key, turn the ignition switch to the ON position. (The key can be either the valid key or an unprogrammed key)

   Note
   - Although the security light flashes and DTC 15 is displayed when an unprogrammed key is used, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

2. Connect the WDS or equivalent to the DLC-2.
3. Select “BODY/SECURITY/PATS (immobilizer) function” from the WDS or equivalent screen menu.
4. Select “Customer spare key programming enable” or “Customer spare key programming disable” from the WDS or equivalent screen menu. The key additional programming procedure is as follows according to the selected menu:

Setting	Additional key programming procedure	
	Method using two valid keys	Method using the WDS or equivalent
Customer spare key programming enable	–	–
Customer spare key programming disable	×	–

? : Available

× : Unavailable

5. Perform the security access according to the directions on the WDS or equivalent screen. (See 09–14A–38 SECURITY ACCESS PROCEDURE.)
6. After verifying that the PATS function menu is displayed again on the WDS or equivalent screen, select “Finish (this menu)” to finish the WDS or equivalent procedure.
7. After Step 6, wait **5 s or more** and then turn the ignition switch to the LOCK position.

No.5 Resetting Procedure for the Immobilizer System when Replacing the PCM, Keyless Control Module, or Steering Lock Unit

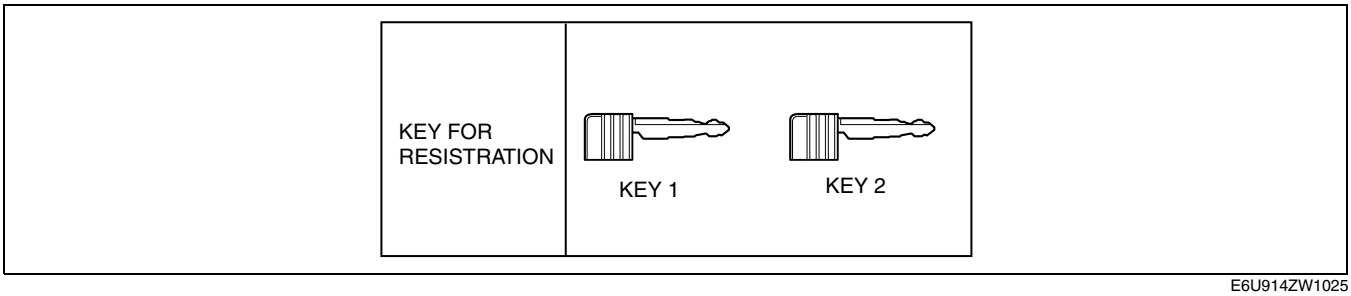
Condition

- When the keyless control module is replaced
  - — Have one or more card keys to be programmed after the replacement.
  - — Have two or more keys to be programmed after the replacement.
- When the keyless control module is not to be replaced
  - — Have one or more card keys to be programmed.
  - — Have two or more keys to be programmed after the replacement.

Caution

- **Perform the procedures in the following order: “Key ID number clearing”, “Card key programming”, “Steering lock unit programming”, and “Key programming”. If there is a failure in the programming, the engine may not be started.**
- **When replacing only the PCM, start from Step 2. Key 1 in the procedure can be any valid key.**
- **Perform the “card key programming procedure” in Step 9 only when the keyless control module is replaced.**
- **Perform the “steering lock unit programming procedure” in Step 10 only when either the keyless control module or steering lock unit is replaced.**

Procedure



E6U914ZW1025

1. Prepare two or more keys to be programmed after the key ID number is cleared.
2. Connect the WDS or equivalent to the DLC-2. (See 09–14A–32 WDS or Equivalent Connecting Procedure.)
3. Using key 1, turn the ignition switch to the ON position.

Note
- Although the security light flashes and DTC 15 or 21 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

4. Verify that the keyless warning light illuminates for **approx. 3 s** and then goes out.
5. Select "BODY/SECURITY/PATS (immobilizer) function" from the WDS or equivalent screen menu.
6. Select "Ignition key ID number clearing" from the WDS or equivalent screen menu and perform the procedure according to the WDS or equivalent screen.
7. Perform the security access according to the directions on the WDS or equivalent screen. (See 09–14A–38 SECURITY ACCESS PROCEDURE.)

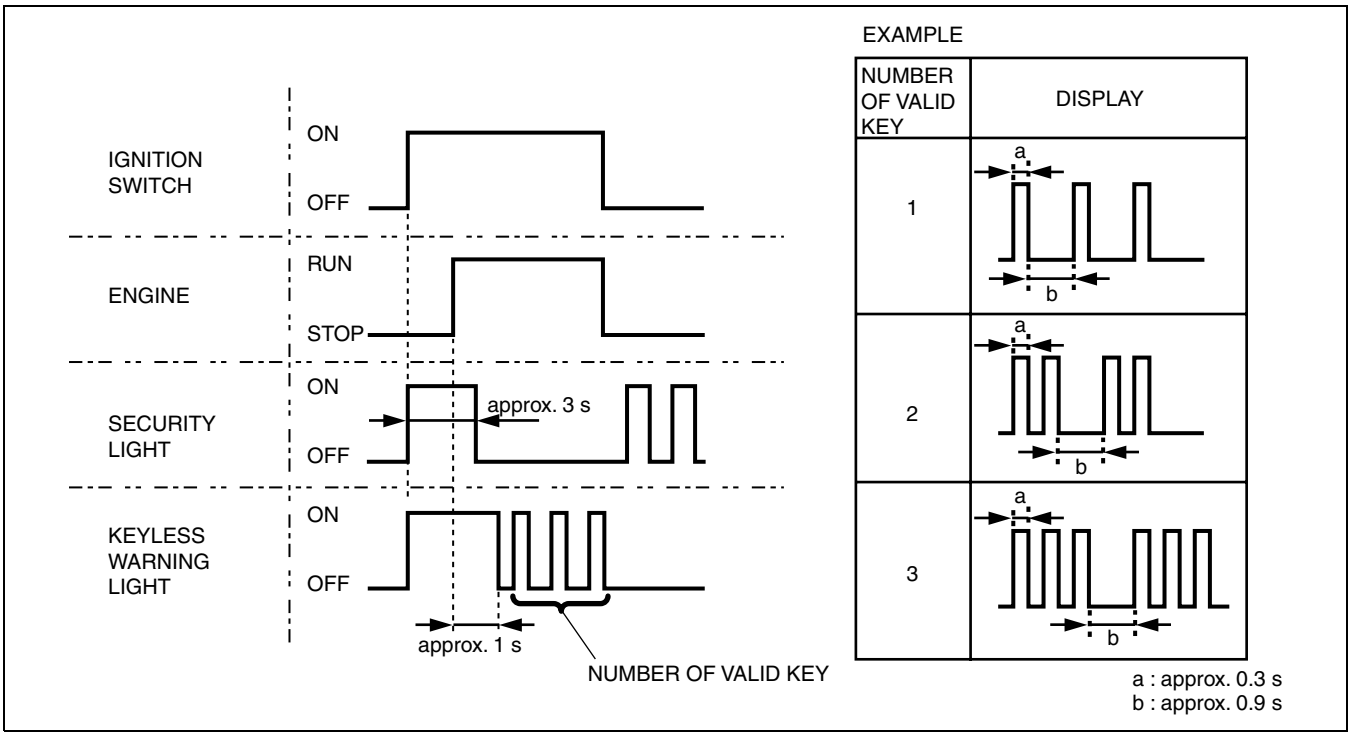
Caution
- **The WDS or equivalent displays "At least two or more keys must be programmed", however, do not perform the key programming and proceed to Step 8 or 9. If the procedure is not followed, the engine may not be started.**
  The key programming procedure is performed at Step 12—15.

8. Perform the card key programming. (when the keyless control module is replaced) (See 09–14A–20 CARD KEY ID CODE REGISTRATION.)
9. Perform the steering lock unit programming. (when either the keyless control module or steering lock unit is replaced) (See 09–14A–21 STEERING LOCK UNIT ID CODE REGISTRATION.)
10. After verifying that the PATS function menu is displayed again on the WDS or equivalent screen, select "Finish (this menu)" to finish the WDS or equivalent procedure.
11. After Step 11, wait **5 s or more** and then turn the ignition switch to the LOCK position.
12. Using key 1, turn the ignition switch to the ON position.
13. After verifying that the security light and keyless warning light illuminate **for 3 s or more**, turn the ignition switch to the LOCK position and remove key 1.

Note
- Although the security light flashes and DTC 21 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

14. Using key 2, turn the ignition switch to the ON position.
15. Verify that the security light and keyless warning light illuminate **for approx. 3 s**, and then goes out.
16. After verifying that the security light goes out, turn the ignition switch to the LOCK position using key 2, and then remove key 2.
17. If additional keys need to be programmed, repeat Steps 15—17 with the additional key to be programmed being key 3. If the ignition switch is held in the ON position **for 1 min or more**, additional key programming according to Steps 15—17 will not be possible. If this occurs, refer to "09–14A–32 No.1 Additional Key Programming Procedure (Using Two Valid Keys)" to program any additional keys.
18. Start the engine with key 1.
19. Verify that the security light and keyless warning light operate as follows:
    - From the point when the ignition switch is turned to the ON position, the security light illuminates **for approx. 3 s**, and goes out.
    - The keyless warning light illuminates when the ignition switch is turned to the ON position, and the light

goes out after **approx. 1 s**, and then displays the number of the programmed keys.



E6U914ZW1026

20. After verifying that the keyless warning light goes out, turn the ignition switch to the LOCK position using key 1, and then remove the key.
21. Repeat Steps 19—21 using key 2 instead of key 1.

Note
- Perform Steps 19—21 as well when three or more keys are to be programmed.

22. Start the engine using the card key.

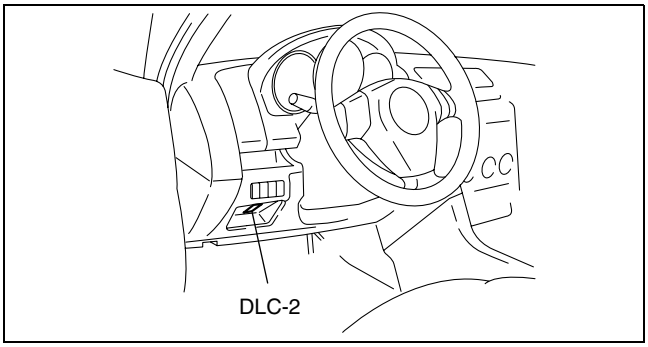
Caution
- **Remove any key from the key cylinder.**

23. Verify that the security light and keyless warning light operate as follows:
    - From the point that ignition switch is turned to the ON position, the security light illuminates **for approx. 3 s**, and goes out.
    - The keyless warning light illuminate when the ignition switch is turned to the ON position for **approx. 1 min**, and goes out.
24. After verifying that the keyless warning light goes out, turn the ignition switch to the LOCK position.

SECURITY ACCESS PROCEDURE

1. Connect the WDS or equivalent to the DLC-2.
2. Select “BODY/SECURITY/PATS (immobilizer) function” from the WDS or equivalent screen menu.
3. Select the items to be performed from the following:
    - Additional card key programming
    - Card key ID number clearing
    - Steering lock unit programming
    - Ignition key additional programming (with immobilizer system)
    - Ignition key ID number clearing (with immobilizer system)
    - Customer spare key programming enable (with immobilizer system)
    - Customer spare key programming disable (with immobilizer system)
4. The security access begins and the WDS or equivalent displays the “OUT-CODE”.

DPE091467000W02



DPE102ZW2001

Note
- When “OUT-CODE” is first displayed, turning the ignition switch from the LOCK to the ON position **5 times** will change the “OUT-CODE”.

5. Input “IN-CODE” corresponding to “OUT-CODE” displayed on the WDS or equivalent screen.
6. If the security access is successful, selected item can be performed.

09–14B SECURITY AND LOCKS [KEYLESS ENTRY SYSTEM]

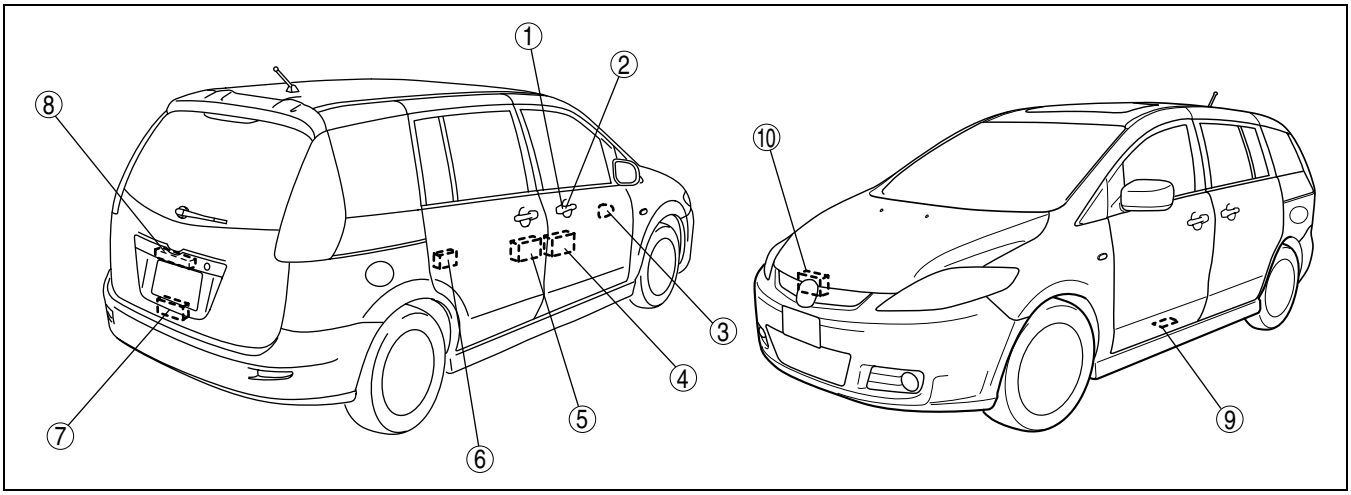
SECURITY AND LOCKS LOCATION INDEX [KEYLESS ENTRY SYSTEM]

DPE091400001W02

Lock And Opener

Note

- This component same as “Advanced keyless entry and start system. Refer to 09–14A–2 SECURITY AND LOCKS LOCATION INDEX [ADVANCED KEYLESS SYSTEM].

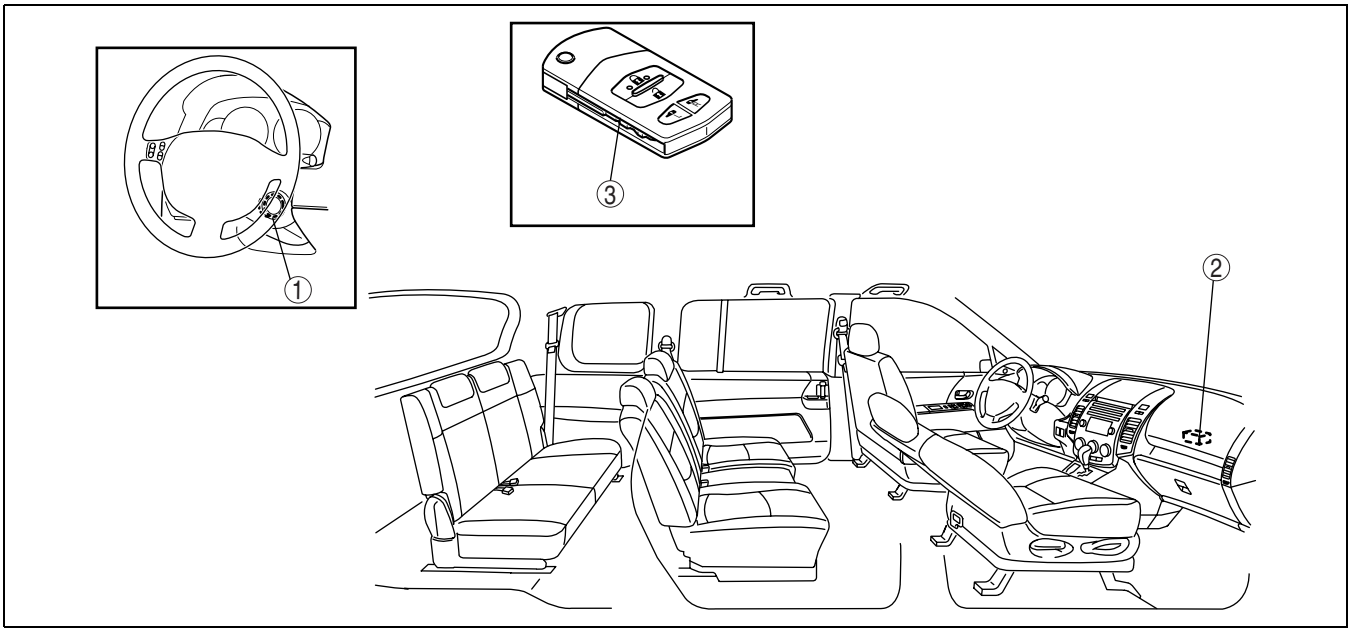


CPJ914AWC021

1	Front door key cylinder (See 09–14A–8 FRONT DOOR KEY CYLINDER REMOVAL/INSTALLATION) (See 09–14A–9 FRONT DOOR KEY CYLINDER SWITCH INSPECTION
2	Front outer handle (See 09–14A–4 FRONT OUTER HANDLE REMOVAL/INSTALLATION)
3	Front inner handle (See 09–14A–5 FRONT INNER HANDLE REMOVAL/INSTALLATION)
4	Front door latch and lock actuator (See 09–14A–9 FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION) (See 09–14A–12 FRONT DOOR LOCK ACTUATOR INSPECTION) (See 09–14A–13 FRONT DOOR LATCH SWITCH INSPECTION)

5	Remote controller (See 09–14A–10 REMOTE CONTROLLER REMOVAL/INSTALLATION) (See 09–14A–11 REMOTE CONTROLLER INSPECTION)
6	Sliding door latch (See 09–14A–10 SLIDING DOOR LATCH REMOVAL/INSTALLATION)
7	Liftgate latch and lock actuator (See 09–14A–15 LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION) (See 09–14A–15 LIFTGATE LATCH AND LOCK ACTUATOR INSPECTION
8	Liftgate outer handle (See 09–14A–14 LIFTGATE OUTER HANDLE REMOVAL/INSTALLATION)
9	Fuel-filler lid opener (See 09–14A–7 FUEL-FILLER LID OPENER REMOVAL/INSTALLATION)
10	Bonnet latch and release lever (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION)

Keyless Entry System And Immobilizer System



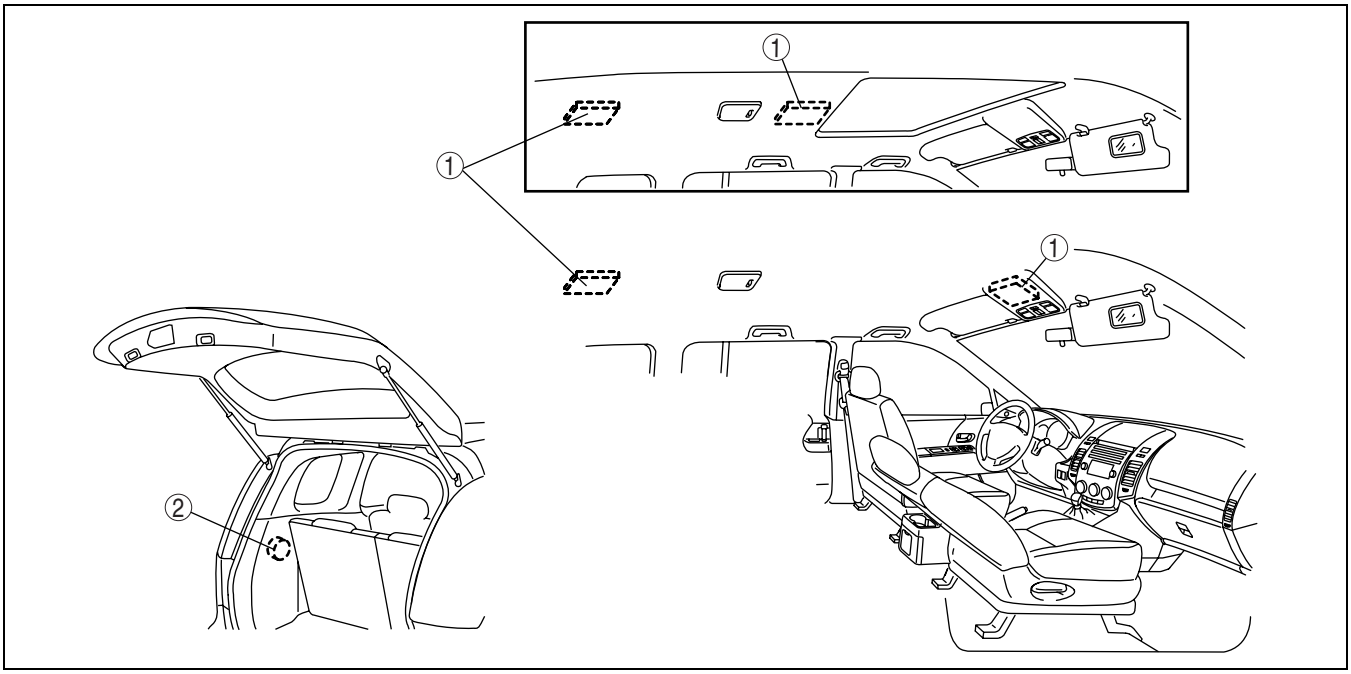
DPE914BWC001

1	Coil antenna (See 09–14B–6 COIL ANTENNA REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM])
2	Keyless receiver (See 09–14B–3 KEYLESS RECEIVER REMOVAL/ INSTALLATION [KEYLESS ENTRY SYSTEM]) (See 09–14B–3 KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM])

3	Transmitter (See 09–14B–5 TRANSMITTER BATTERY REPLACEMENT [WITH KEYLESS ENTRY SYSTEM]) (See 09–14B–4 TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM])

Theft-deterrent System

Note
- This component same as “Advanced keyless entry and start system. Refer to 09–14A–2 SECURITY AND LOCKS LOCATION INDEX [ADVANCED KEYLESS SYSTEM].



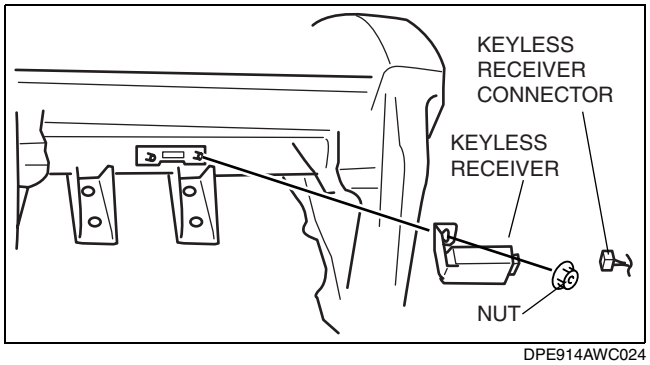
DPE914AWC002

1	Intruder sensor (See 09–14A–27 INTRUDER SENSOR REMOVAL/INSTALLATION)
2	Theft-deterrent siren (See 09–14A–28 THEFT-DETERRENT SIREN REMOVAL/INSTALLATION)

KEYLESS RECEIVER REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM]

DPE091469000W15

1. Disconnect the negative battery cable.
2. Remove the glove compartment. (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
3. Disconnect the keyless receiver module connector.
4. Remove the nut, then remove the keyless receiver.

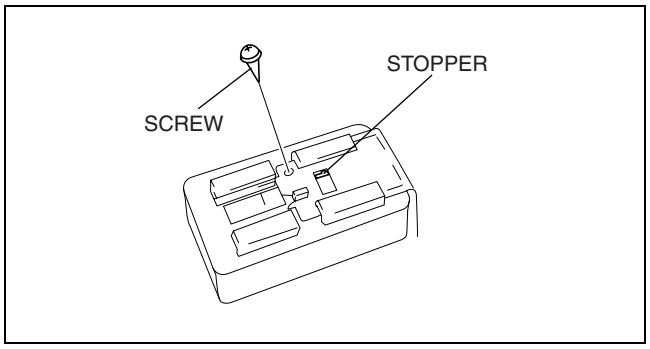


DPE914AWC024

5. Remove the screw.

Note
- The screw which fixes the keyless receiver and bracket is for a body ground connection.

6. Push the stopper in with a small screwdriver and remove the bracket.
7. Install in the reverse order of removal.



DPE914AWC025

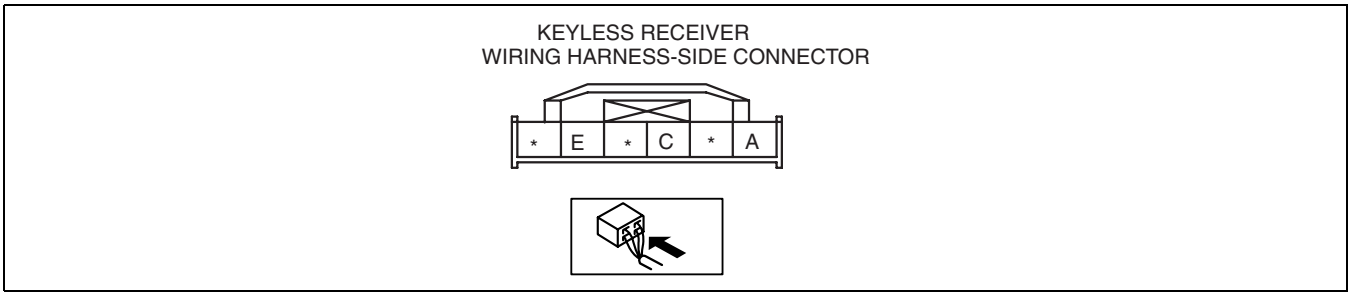
KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM]

DPE091469000W16

1. Measure the voltage or inspect for continuity according to the Terminal Voltage Table (Reference).

- If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under “Inspection item(s)” and related wiring harnesses.

Terminal Voltage Table (Reference)



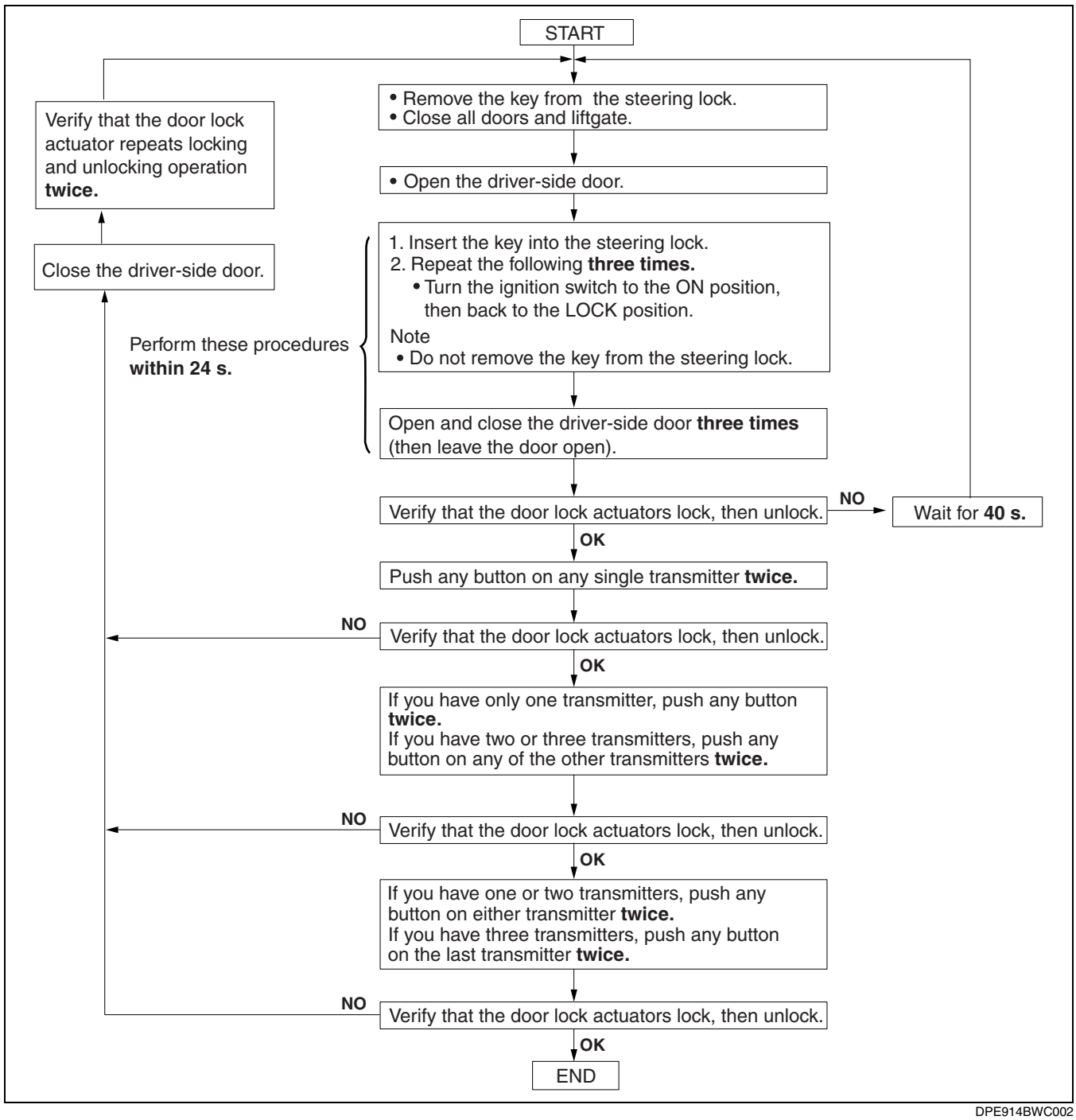
E6U914ZW1007

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
A	Power supply	BCM	Under any condition	B+	• BCM • Related wiring harnesses
C	Data	BCM	Under any condition: Inspect the wiring harness between the keyless receiver and BCM terminal 7I for continuity.	Continuity detected	• BCM • Related wiring harnesses
E	GND	Body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	GND

TRANSMITTER ID CODE REGISTRATION [KEYLESS ENTRY SYSTEM]

DPE091469000W14

- When programming the ID code into a transmitter, verify that other transmitters are not being operated in the vicinity.
- Program the ID code as indicated in the procedure below.



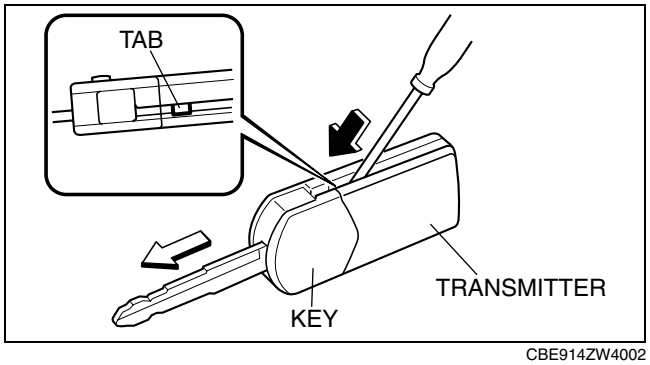
DPE914BWC002

TRANSMITTER BATTERY REPLACEMENT [WITH KEYLESS ENTRY SYSTEM]

DPE091467543W04

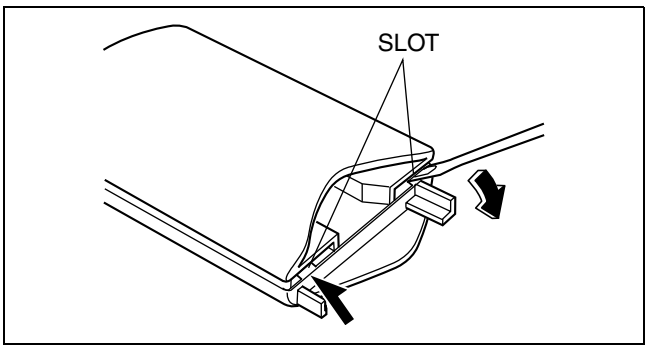
Retractable Key Type

1. Insert a small screwdriver into the slot and push the tab to remove the key from the transmitter.



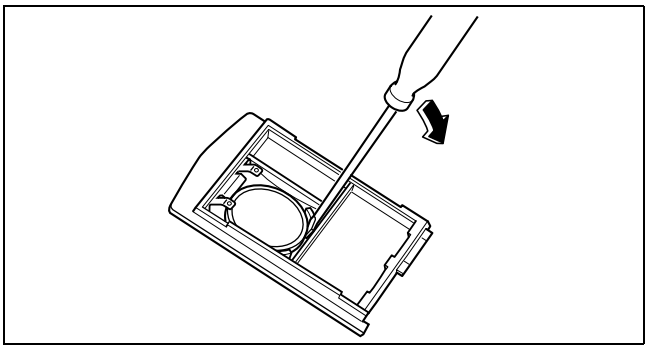
CBE914ZW4002

2. Insert a small screwdriver into the slot and gently pry open the transmitter.



CBE914ZW4003

3. Remove the battery.

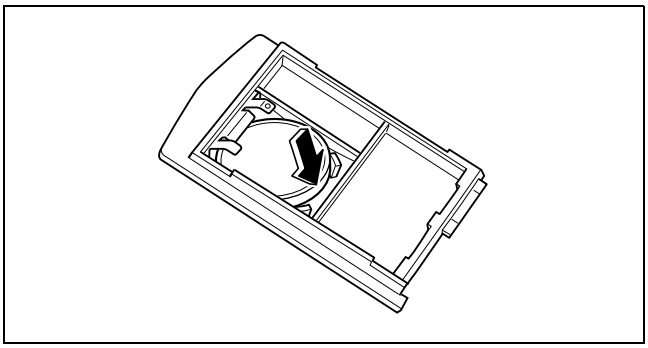


CBE914ZW4004

4. Put in the new battery (CR1620) with the positive pole (+) facing down.
5. Align the front and back covers and snap the transmitter shut.

Battery specification
Lithium CR1620 × 1

Note
- The batteries will last about **2 years** when used **10 times** a day.



CBE914ZW4005

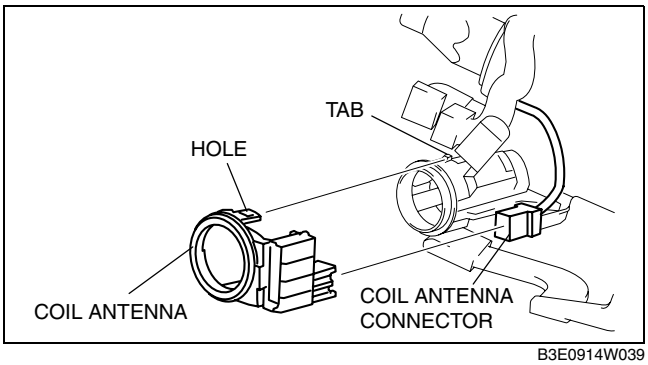
6. Install the key to the transmitter.

COIL ANTENNA REMOVAL/INSTALLATION [KEYLESS ENTRY SYSTEM]

DPE091467000W04

Note
- Do not remove the coil antenna unless you are replacing it.

1. Disconnect the negative battery cable.
2. Remove the column cover. (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
3. Disconnect the coil antenna connector.
4. Detach the steering lock tabs from the holes on the coil antenna.
5. Install in the reverse order of removal.



B3E0914W039

IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM]

DPE091467000W05

Foreword
- When performing the following procedures, the immobilizer resetting procedure using the WDS or equivalent must also always be performed: “instrument cluster replacement”, “PCM replacement”, “instrument cluster and

PCM joint replacement", "Key ID number clearing". The engine will not start unless all work is performed using the WDS or equivalent.

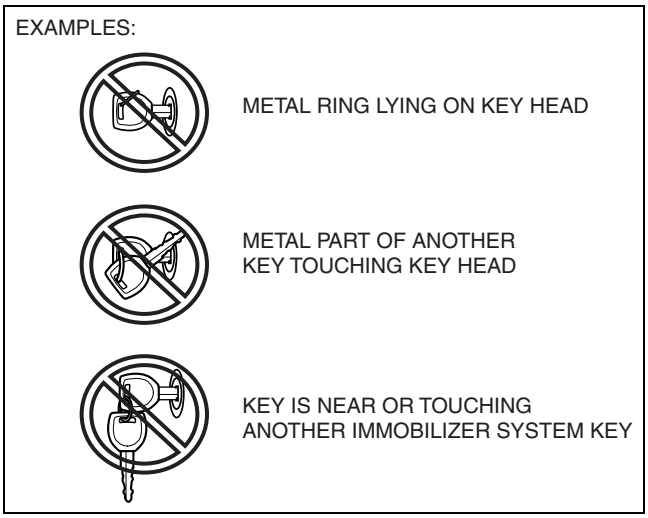
- There are two methods for registering an additional key: Using the WDS or equivalent and using two keys that are able to start the engine.
- When replacing any of the immobilizer system component parts, adding/erasing keys or performing other functions, refer to the following table and perform the applicable procedure (No.1 to 5).

Reference number	Situation	Required items	Cautionary notes
1	Making a spare key when the customer has two or more keys that can start the engine. Or registering an additional key.	• Registration key	• If the additional key registration method has been changed to "Customer spare key programming disabled" (inhibiting the method that uses two keys that are able to start the engine), the WDS or equivalent is required when registering the additional key. In that case, perform procedure No.2.
2	Making a spare key when the customer has one key that can start the engine or no keys. Or registering an additional key.	• Registration key • WDS or equivalent	-
3	Clearing previously registered key ID numbers.	• Registration keys (two or more) • WDS or equivalent	• All the key ID numbers registered in the vehicle will be cleared. • Unless keys are re-registered after clearing the key ID numbers, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle. • Unless two or more keys are registered after replacement, the engine cannot be started. • The keys (two or more keys) readied before beginning the procedure do not have to be new keys. Any key that is capable of starting the engine before beginning the procedure can be used.
3	Replace all the keys. (Key cylinder replacement)	• Registration keys (two or more) • WDS or equivalent	• When replacing the key cylinder, have two or more keys ready for registration before beginning the procedure, since the previous keys will be invalid.
4	Changing the method for registering additional keys. (Method for registering other keys using two keys that can start the engine is disabled.)	• WDS or equivalent	• After performing this procedure it is not possible to register additional keys according to procedure No.1. The system can be returned to the original setting. The WDS or equivalent must always be used to change the system setting.
4	Changing the method for registering additional keys. (Method for registering other keys using two keys that can start the engine is enabled.)	• WDS or equivalent	• This is the default setting on new vehicles.
5	Replacing the instrument cluster.	• Replacement instrument cluster • Registration keys (two or more) • WDS or equivalent	• Unless keys are registered after replacing the steering lock, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle. • Unless two or more keys are registered after replacement, the engine cannot be started. • The keys (two or more keys) readied before beginning the procedure do not have to be new keys. Any key that is capable of starting the engine before beginning the procedure can be used.
5	Replacing the PCM.	• Replacement PCM • WDS or equivalent	-

Reference number	Situation	Required items	Cautionary notes
5	Replacing the PCM and instrument cluster.	• Replacement PCM • Replacement instrument cluster • Registration keys (two or more) • WDS or equivalent	• Unless keys are registered after replacing the steering lock, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle. • Unless two or more keys are registered after replacement, the engine cannot be started. • The keys (two or more keys) readied before beginning the procedure do not have to be new keys. Any key that is capable of starting the engine before beginning the procedure can be used.
-	Replacing the coil antenna.	• New coil antenna	• It is not necessary to reset the immobilizer system.

Caution

- **If any of the following items are touching or near the key head, signal communication between the key and vehicle is negatively affected, resulting in the engine not starting or the key registration failure. Do not perform the procedure if any of the following items are touching or near the key head.**
  - **— Any metallic object**
  - **— Spare keys or keys for other vehicles equipped with an immobilizer system**
  - **— Any electronic device, or any credit or other cards with magnetic strips**



B3E0914W006

Note

- Within the following procedures, the term a “valid key” means a “key that can start the engine”.
- After adding/registering keys, clearing ID numbers or replacing any component part of the immobilizer system, verify that all keys can start the engine **within 5 s**.
- When verifying that the keys can start the engine, wait at least **5 s or more** between inserting them.
- If the engine cannot be started using a registered key, repeat the procedure from the beginning.
- Do not start the engine until the key registration procedure for all the necessary keys is completed. If the engine is started during the registration procedure, registration is stopped at that point. Repeat the procedure starting from the beginning if the engine is started before completion.
- Two or more key ID numbers must be registered for the engine to start.
- A maximum of eight key ID numbers can be registered for one vehicle. The WDS or equivalent can be used to verify the number of key ID numbers registered to a single vehicle.
- Do not select screen menus of the WDS or equivalent that are not indicated within the procedures.

No.1 Additional Key Registration Procedure (Using Two Valid Keys)

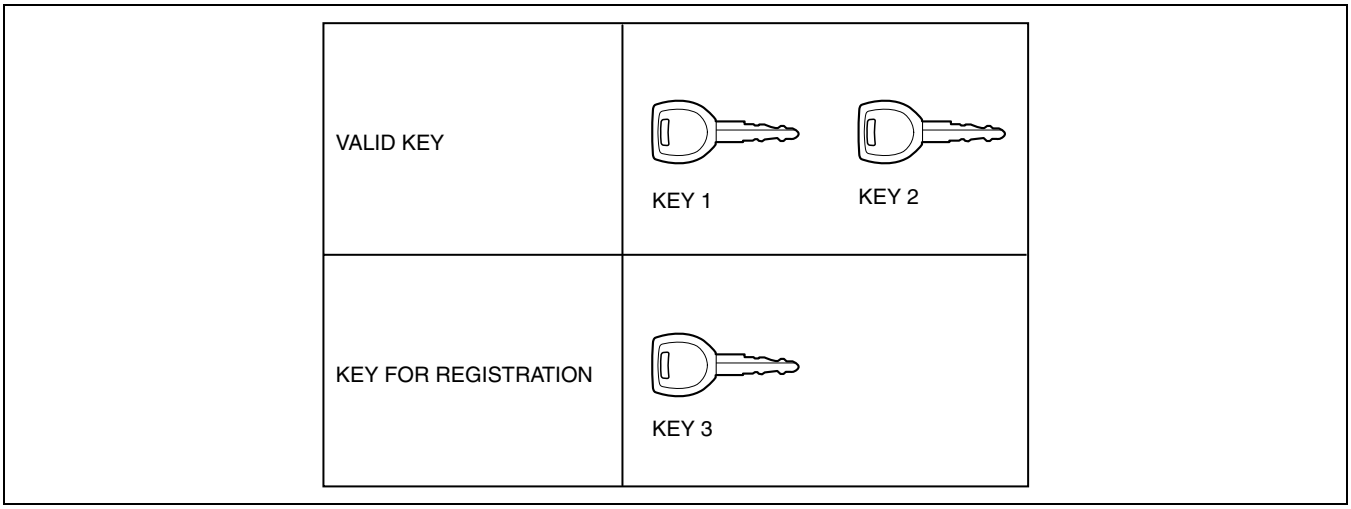
Conditions

- Customer has two or more valid keys.

Note

- A maximum of eight keys can be registered for any one vehicle. If key registration is not successful and DTC 15 appears even though the procedure was performed properly, use the PID/data monitor function of the WDS or equivalent and verify the number of keys that have been registered.
- If eight keys have already been registered, and it is necessary to register other keys, the previously registered key ID numbers must first be cleared. To clear the key ID numbers, refer to “09–14B–10 No.3 Key Replacement Procedure (Clearing Previously Registered Key ID Numbers, Key Re-registration)”.

Procedure



CHU0914W046

1. Have one key (key 3) ready for registration.
2. Using key 1, turn the ignition switch to the ON position.
3. Verify that the security light illuminates for **approx. 3 s** and then goes out.
4. Using key 1, turn the ignition switch to the LOCK position **within approx. 4 s** after the security light goes out.
5. Remove key 1
6. Repeat Steps 2—5 using key 2.
7. Repeat Steps 2—5 using key 3.
8. If additional keys need to be registered, repeat Steps 1—7 in the same manner as key 3.

No.2 Additional Key Registration Procedure (Using the WDS or equivalent)

Conditions

- Customer has only one valid key. Or customer has no valid keys. (Can also be performed even if there are two or more valid keys)

Note

- A maximum of eight keys can be registered for any one vehicle. If key registration is not successful and DTC 15 appears even though the procedure was performed properly, use the PID/data monitor function of the WDS or equivalent and verify the number of keys that have been registered.
- If eight keys have already been registered, and it is necessary to register other keys, the previously registered key ID numbers must first be cleared. To clear the key ID numbers, refer to “09–14B–10 No.3 Key Replacement Procedure (Clearing Previously Registered Key ID Numbers, Key Re-registration)”.

Procedure

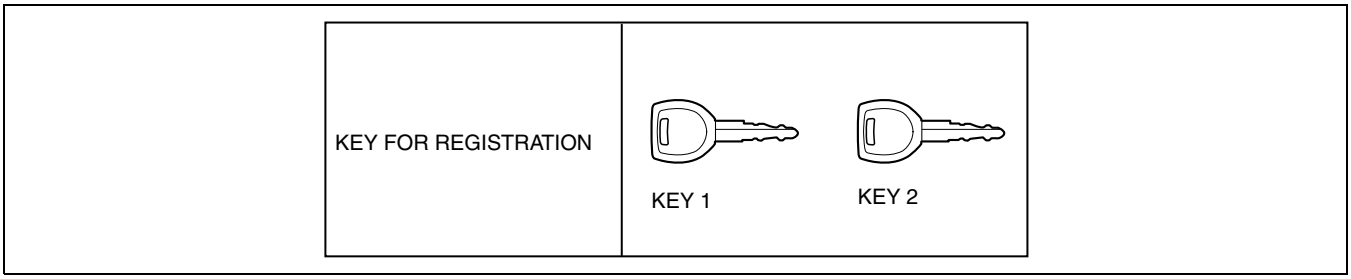
1. Have one key (key 1) ready for registration.
2. Using key 1, turn the ignition switch to the ON position.

Note

- Although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

3. Connect the WDS or equivalent to the DLC-2.
4. Select “Body/Security/PATS function” from the WDS or equivalent screen menu.
5. Perform security access as indicated on the WDS or equivalent screen. (See 09–14B–11 No.6 Security Access Procedure.)
6. Select “Program Additional Ignition Key” from the WDS or equivalent screen menu.

No.3 Key Replacement Procedure (Clearing Previously Registered Key ID Numbers, Key Re-registration) Procedure



CHU0914W047

1. Have two or more keys (key 1, key 2) ready for registration after the clearing the key ID numbers.
2. Using key 1, turn the ignition switch to the ON position.

Note
- Although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

3. Connect the WDS or equivalent to the DLC-2.
4. Select “Body/Security/PATS function” from the WDS or equivalent screen menu.
5. Perform security access as indicated on the WDS or equivalent screen. (See 09–14B–11 No.6 Security Access Procedure.)
6. Select “Ignition key ID number Erase” from the WDS or equivalent screen menu and perform the tasks according to the WDS or equivalent screen.

No.4 Changing the Method for Registering Additional Keys

Note
- This procedure is for changing the enable/disable setting of the “No.1 Additional Key Registration Procedure (Using Two Valid Keys)”.
- The default setting for new vehicles and new instrument cluster replacement is “Enabled”.
- By disabling the “No.1 Additional Key Registration Procedure (Using Two Valid Keys)”, only the WDS or equivalent can be used to register additional keys, thereby preventing two valid keys from being used to create an unauthorized spare key. This function is for use by rental car or other companies with vehicle fleets.

Procedure
1. Using any key, turn the ignition switch to the ON position. (Either a valid or an unregistered key can be used.)

Note
- When using an unregistered key, although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

2. Connect the WDS or equivalent to the DLC-2.
3. Select “Body/Security/PATS function” from the WDS or equivalent screen menu.
4. Perform security access as indicated on the WDS or equivalent screen. (See 09–14B–11 No.6 Security Access Procedure.)
5. Select either “Customer Spare Key Programming Enable” or “Customer Spare Key Programming Disable” from the WDS or equivalent screen menu. Depending on the selected menu, the additional key registration method is as shown below:

Setting	Additional key registration method	
	Procedure using two valid keys	Procedure using the WDS or equivalent
Customer spare key programming enable	x	x
Customer spare key programming disable	-	x

x : Procedure is possible

- : Procedure is not possible

6. After verifying that the PATS function menu is displayed again on the WDS or equivalent screen, select “Exit” to complete the WDS or equivalent function.
7. After Step 6, wait **10 s or more** and then turn the ignition switch to the LOCK position.

No.5 Resetting Procedure for the Immobilizer System when Replacing the PCM or Instrument Cluster

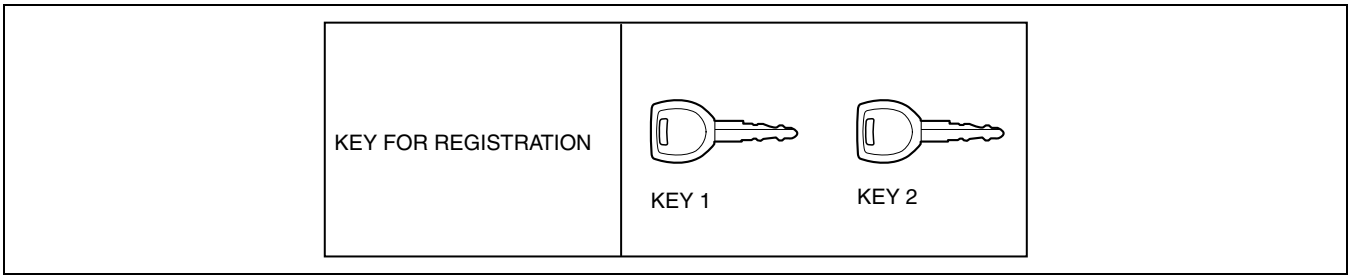
Conditions

- When replacing only the PCM: No conditions.
- When replacing only the instrument cluster: Customer has two or more valid keys after replacement tasks.
- When replacing the PCM and the instrument cluster: Customer has two or more valid keys after replacement.

Caution

- **When replacing the PCM and the instrument cluster at the same time, follow the same instructions described in the procedure for "when replacing the instrument cluster".**
- **When replacing only the PCM, start from Step 2. Also, when key 1 is indicated within the procedure, any valid key can be used.**
- **Before starting Step 1, complete the procedure for PCM and instrument cluster replacement.**

Procedure



CHU0914W047

1. Have two or more keys (key 1, key 2) ready for registration.
2. Using key 1, turn the ignition switch to the ON position.

Note

- When replacing only the PCM: The security light illuminates **for 3 s** and then goes out.
- When replacing the instrument cluster: Although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

3. Connect the WDS or equivalent to the DLC-2.
4. Select "Body/Security/PATS function" from the WDS or equivalent screen menu.
5. Perform security access as indicated on the WDS or equivalent screen. (See 09–14B–11 No.6 Security Access Procedure.)
6. Select "Parameter Reset" from the WDS or equivalent screen menu.
7. Perform security access again as indicated on the WDS or equivalent screen. (See 09–14B–11 No.6 Security Access Procedure.)
8. Select the replaced part as indicated on the WDS or equivalent screen.
   - When replacing only the PCM: Select "PCM".
   - When replacing only the instrument cluster: Select "HEC".

Note

- At this time, do not select any other parts from the WDS or equivalent screen menu.

9. Perform the tasks according to the WDS or equivalent screen.

No.6 Security Access Procedure

Note

- Security access must be performed when performing the following functions: "Program Additional Ignition Key", "Ignition Key ID Number Erase", "Customer Spare Key Programming Enable/Disable" and "Parameter Reset".

Procedure

1. Connect the WDS or equivalent to the DLC-2.
2. Select "Body/Security/PATS function" from the WDS or equivalent screen menu.
3. Security access is started and the WDS or equivalent displays "Outcode".

Caution

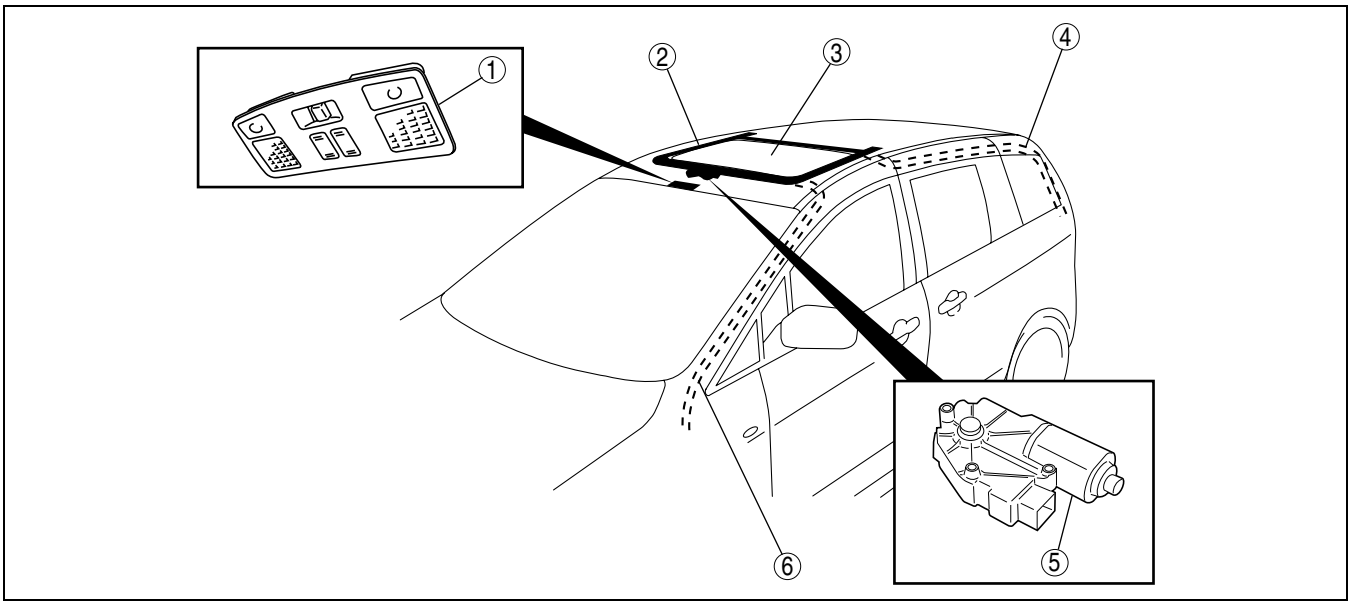
- **After reading out the outcode, do not turn ignition switch from LOCK to ON position 5 times, otherwise the outcode value will be changed.**

4. Input the corresponding “Incode” for the “Outcode” displayed on the WDS or equivalent screen.
5. After successfully performing security access, “Program Additional Ignition Key”, “Ignition key ID number Erase” or “Customer Spare Key Programming Enable/Disable” is displayed on the WDS or equivalent screen. When performing “Parameter Reset”, security access is requested two times and after successfully performing it the second time, “Replacement Module” is displayed.

09–15 SUNROOF

SUNROOF LOCATION INDEX

DPE091569850W01



CPJ915ZWC007

1	Sunroof switch (See 09–15–11 SUNROOF SWITCH REMOVAL/ INSTALLATION.) (See 09–15–11 SUNROOF SWITCH INSPECTION.)
2	Sunroof unit (See 09–15–3 SUNROOF UNIT REMOVAL/ INSTALLATION.) (See 09–15–3 SUNROOF UNIT DISASSEMBLY/ ASSEMBLY.) (See 09–15–1 DEFLECTOR REMOVAL/ INSTALLATION.)
3	Glass panel (See 09–15–2 GLASS PANEL REMOVAL/ INSTALLATION.) (See 09–15–2 GLASS PANEL ADJUSTMENT.)
4	Rear drain hose (See 09–15–8 REAR DRAIN HOSE REMOVAL.) (See 09–15–9 REAR DRAIN HOSE INSTALLATION.)
5	Sunroof motor (See 09–15–10 SUNROOF MOTOR REMOVAL/ INSTALLATION.) (See 09–15–10 SUNROOF MOTOR INSPECTION.)
6	Front drain hose (See 09–15–5 FRONT DRAIN HOSE REMOVAL.) (See 09–15–7 FRONT DRAIN HOSE INSTALLATION.)

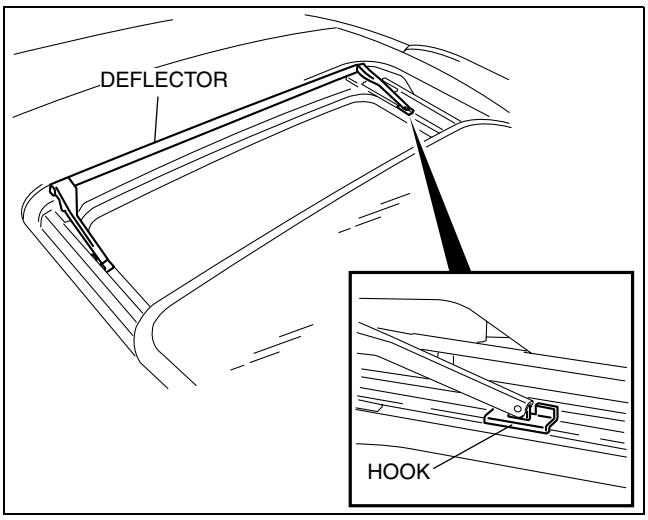
09

DEFLECTOR REMOVAL/INSTALLATION

DPE091569850W02

1. Fully open the glass panel.

2. Unhook and remove the deflector.
3. Install in the reverse order of removal.

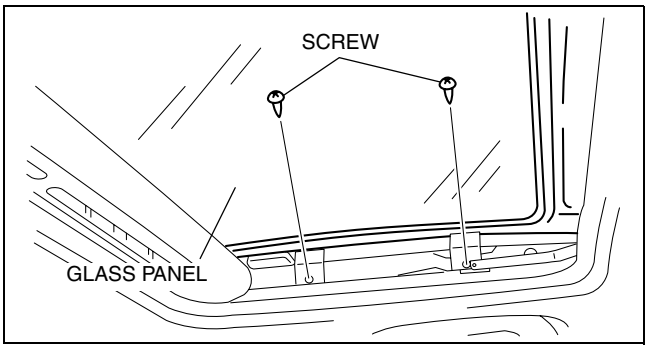


DPE915ZW1008

GLASS PANEL REMOVAL/INSTALLATION

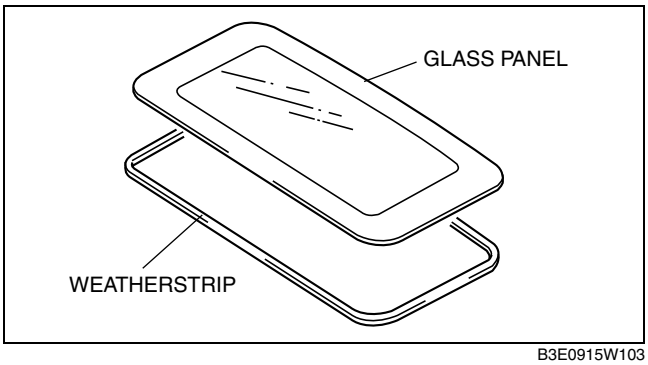
DPE091569850W03

1. Fully close the glass panel.
2. Fully open the sunshade.
3. Remove the screws, and then remove the glass panel.



DPE915ZW1003

4. Peel the weatherstrip off the glass panel.
5. Install in the reverse order of removal.
6. Adjust the glass panel. (See 09–15–2 GLASS PANEL ADJUSTMENT.)



B3E0915W103

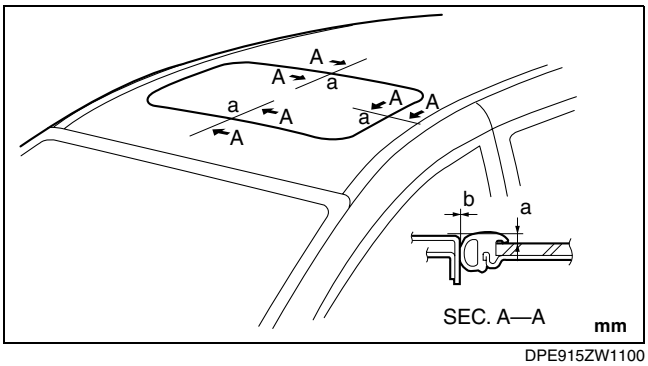
GLASS PANEL ADJUSTMENT

DPE091569850W04

1. Fully close the glass panel.
2. Measure the gap and height difference between the glass panel and the body.
3. Loosen the glass panel installation screws and move the glass panel to adjust.

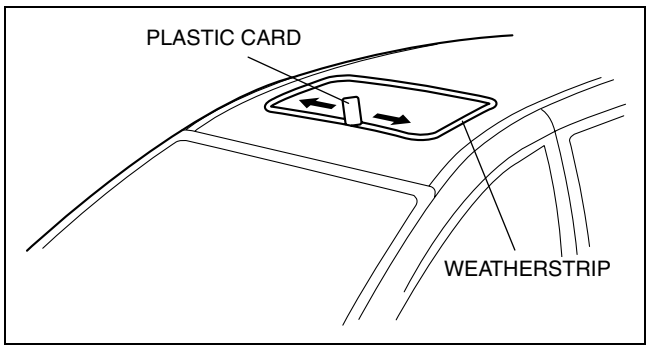
   Standard clearance
   a: -2.7—0 mm {-0.11—0 in}
   b: 0 mm {0 in}

4. Tighten the screws.



DPE915ZW1100

5. Insert any available thin plastic card between the weatherstrip and the body, and verify that they are sealed. (There is resistance when the plastic card is moved.)
   - If they are not sealed, perform Steps 3—4 and adjust again.

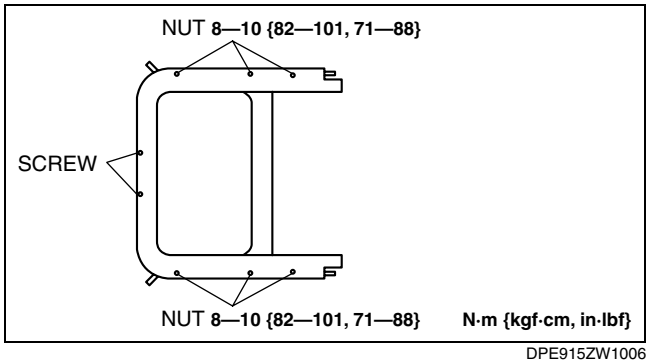


DPE915ZW1001

SUNROOF UNIT REMOVAL/INSTALLATION

DPE091569850W07

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (8) Sub-trunk
   (9) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (10) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (11) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (12) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (13) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (16) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (17) Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (19) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (20) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (21) Seaming welt
   (22) Headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
   (23) Shock absorbing pad (See 09–17–22 SHOCK ABSORBING PAD REMOVAL/INSTALLATION.)
   (24) Glass panel (See 09–15–2 GLASS PANEL REMOVAL/INSTALLATION.)
3. Disconnect the front and rear drain hoses from the sunroof frame.
4. Disconnect the sunroof motor connector.
5. Disconnect the intruder sensor connector. (Vehicles with the theft-deterrent system)
6. Remove the bolts and nuts, then remove the sunroof unit.
7. Install in the reverse order of removal.
8. Adjust the glass panel. (See 09–15–2 GLASS PANEL ADJUSTMENT.)



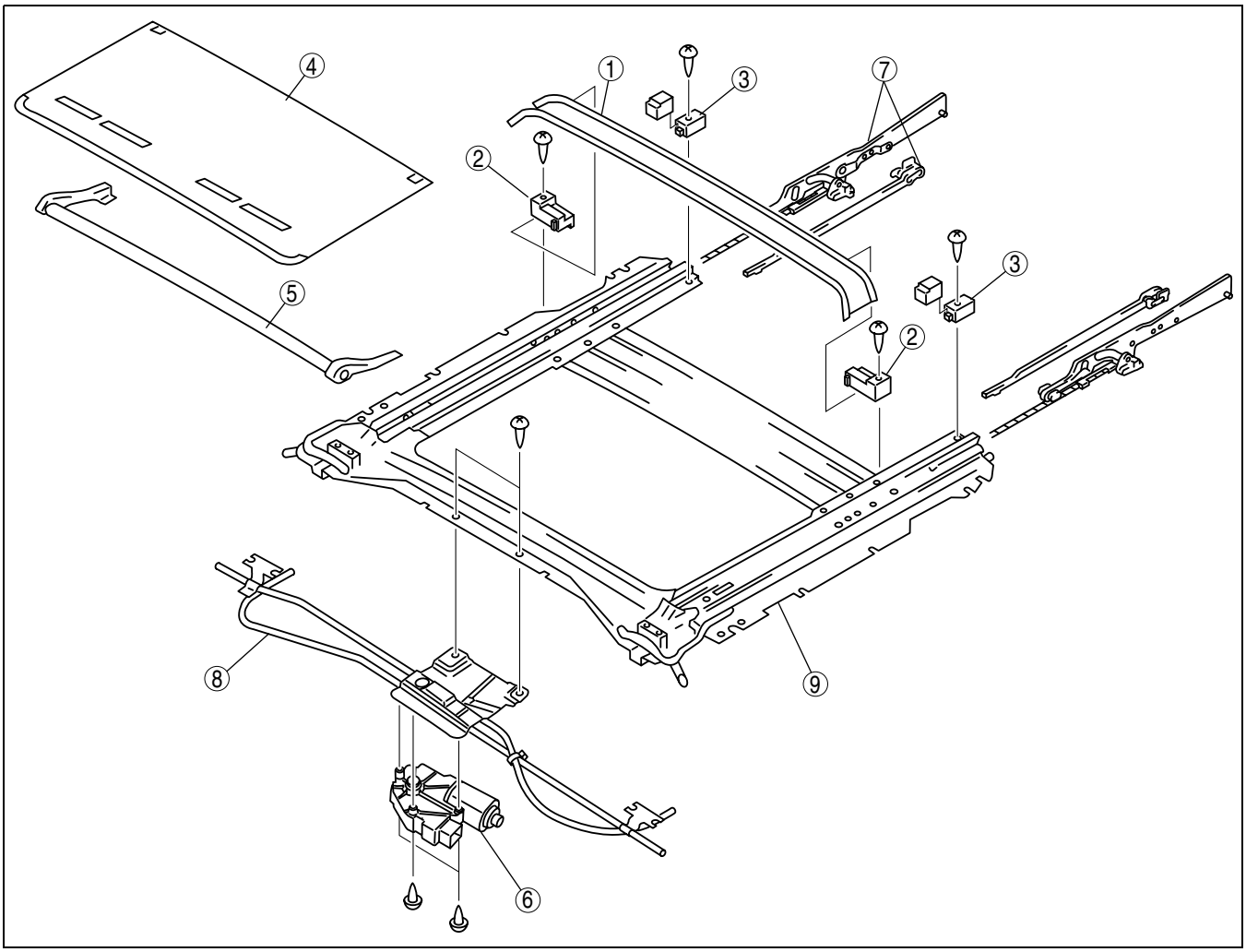
DPE915ZW1006

SUNROOF UNIT DISASSEMBLY/ASSEMBLY

DPE091569850W08

1. Disassemble in the order indicated in the table.

2. Assemble in the reverse order of disassembly.



CPJ915ZWB002

1	Drip rail
2	Drip guide
3	Rear stopper
4	Sunshade
5	Deflector
6	Sunroof motor (See 09–15–4 Sunroof Motor Assembly Note.)
7	Guide and decoration link (See 09–15–5 Guide Disassembly Note.) (See 09–15–5 Guide Disassembly Note.) (See 09–15–5 Decoration Link Assembly Note.)
8	Drive unit
9	Frame

Sunroof Motor Assembly Note

Note
- If the guide is removed, the sunroof motor initial position setting has to be performed. After installing the sunroof unit, perform the initial position setting using the following procedure.

1. Press the close switch to fully close the glass panel.
2. Release the close switch with the glass panel in the fully closed position, and press the close switch again until the motor performs the position learning operation. The position learning operation can be confirmed by visual check of the glass panel or motor operation sound (clickety-clack).

Note
- The position learning operation is regarded as the operation the motor operates to move the glass panel

forward and backward several millimeters then stops.
- The motor may operate after **approx. 13 s** from where the switch has been pressed and held.
- If the switch is released during the position learning operation, resume from the beginning of Step 2.

3. Press and hold the close switch again within **5 s** after the position learning operation was performed.

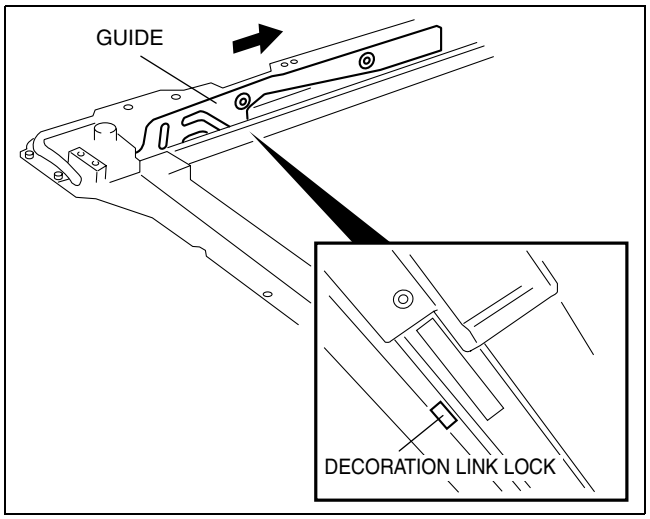
Note
- If the switch is not pressed within 5 s after the position learning operation, resume from the beginning of Step 2.

4. The glass panel fully opens and returns to the fully closed position and stops, then release the close switch.

Note
- If the switch is released while the glass panel is operating, resume from the beginning of Step 1.

Guide Disassembly Note

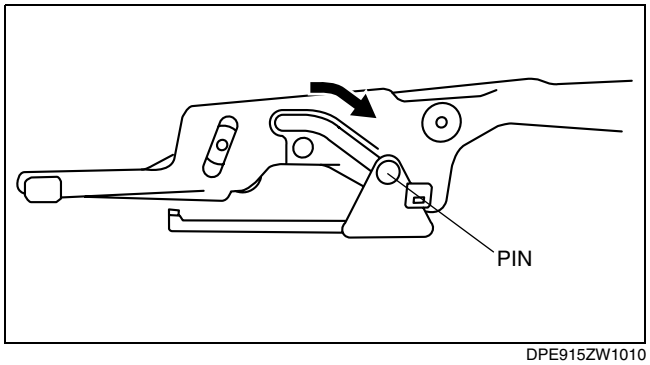
1. Insert a hand to the back side of the sunroof frame, raise the decoration link lock and remove it.
2. Slide the guide to the rear of the sunroof frame, and remove the guide and decoration link as a single unit.



DPE915ZW1011

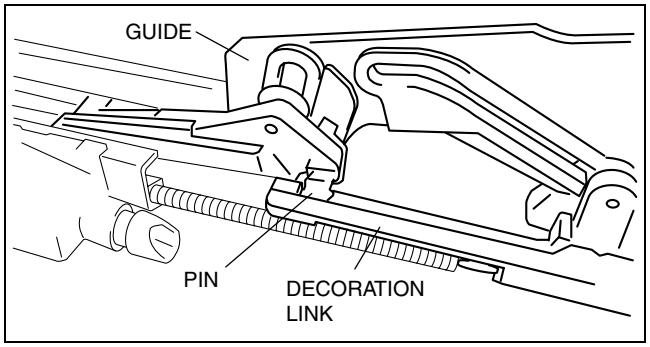
Decoration Link Assembly Note

1. Move the pin to the position shown in the figure.



DPE915ZW1010

2. Set the guide pin to the decoration link.



DPE915ZW1009

FRONT DRAIN HOSE REMOVAL

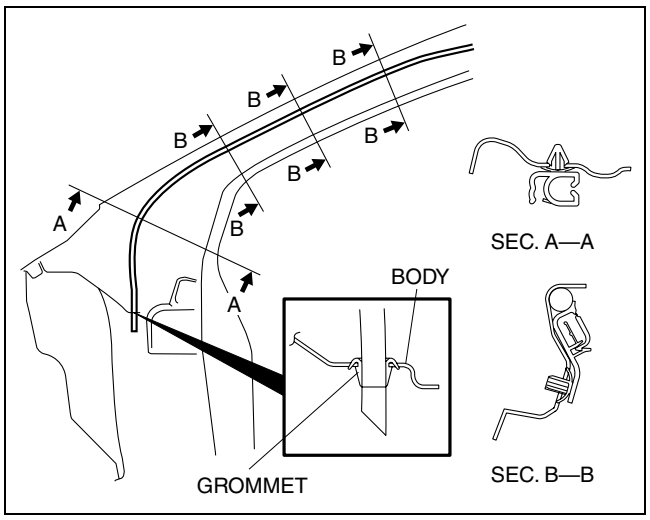
DPE091569920W05

1. Remove the following parts:

(1) Front door (See 09–11–2 FRONT DOOR REMOVAL/INSTALLATION.)
(2) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
(3) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
(4) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
(5) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
(6) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
(7) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
(8) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
(9) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
(10) Sub-trunk
(11) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
(12) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
(13) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
(14) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
(15) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
(16) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
(17) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
(18) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
(19) Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
(20) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
(21) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
(22) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
(23) headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
(24) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
(25) Side panel (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
(26) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
(27) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
(28) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
(29) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)
(30) Center panel module (vehicles with audio unit) (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
(31) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)
(32) Selector lever component (See 05–18–5 SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION.)
(33) Driver-side air bag module (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
(34) Meter hood (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
(35) Lower column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
(36) Instrument cluster (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
(37) Steering shaft (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
(38) Climate control unit (See 07–40–35 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07–40–36 CLIMATE CONTROL UNIT REMOVAL [MANUAL AIR CONDITIONER].) (See 07–40–37 CLIMATE CONTROL UNIT INSTALLATION [MANUAL AIR CONDITIONER].)
(39) Rear heat duct (1) (See 07–11–24 REAR HEAT DUCT REMOVAL/INSTALLATION.)
(40) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
(41) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
(42) Dashboard (See 09–17–4 DASHBOARD REMOVAL/INSTALLATION.)

2. Disconnect the front drain hose from the sunroof frame.

3. Remove the front drain hose from the clips.
4. Pull the front drain hose into the vehicle interior and remove the front drain hose.



DPE915ZW1004

FRONT DRAIN HOSE INSTALLATION

DPE091569920W06

Caution
- **If the front drain hose is pinched or bent at any point, the water in the hose may not drain and could leak inside the vehicle. During and after installation of the trims and headliner, always make sure there is no interference with the front drain hose. Correct any abnormality if found.**

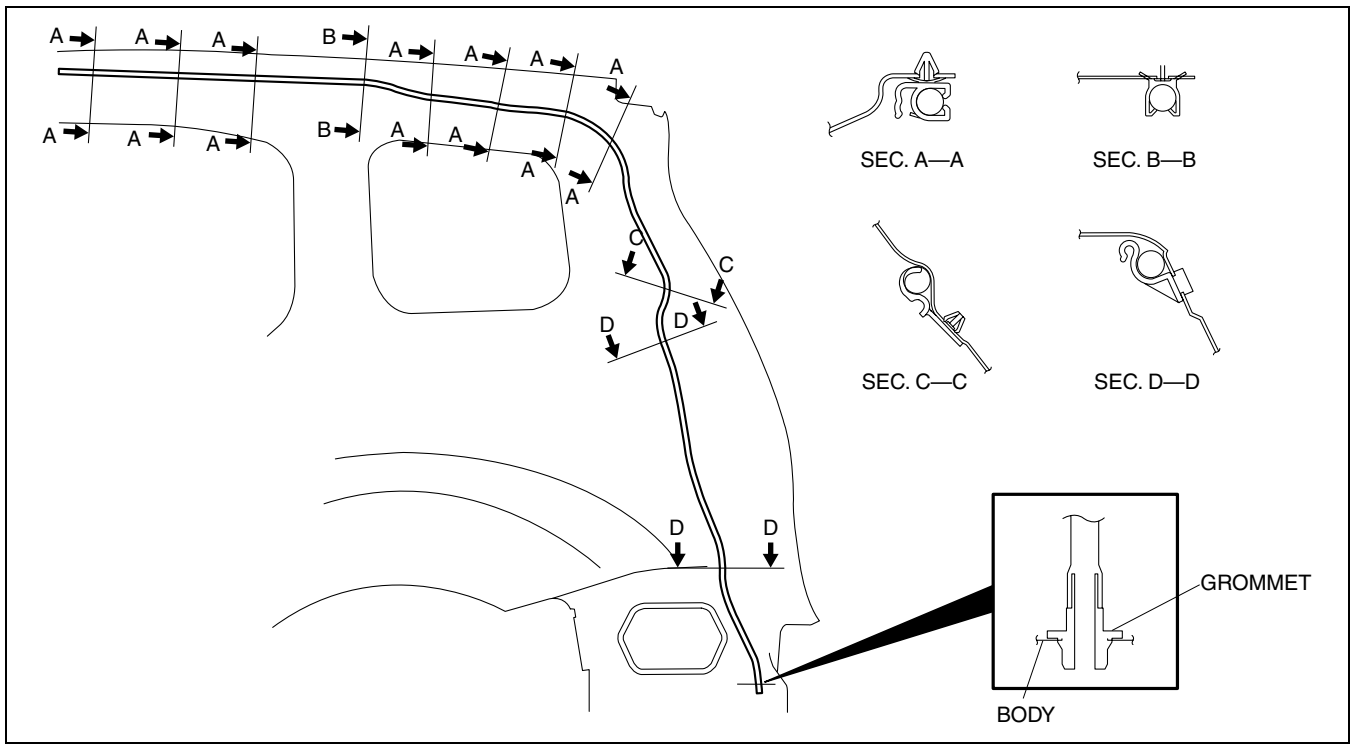
1. Apply soapy water to the part of the sunroof frame where the front drain hose is inserted.
2. Insert the front drain hose end into the sunroof frame.
3. Install the front drain hose to the clips parallel to the pillar and free of looseness.
4. Insert the front drain hose grommet into the hole of the inner hinge pillar.
5. Install the following parts:
   (1) Dashboard (See 09–17–4 DASHBOARD REMOVAL/INSTALLATION.)
   (2) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (3) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (4) Rear heat duct (1) (See 07–11–24 REAR HEAT DUCT REMOVAL/INSTALLATION.)
   (5) Climate control unit (See 07–40–35 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07–40–36 CLIMATE CONTROL UNIT REMOVAL [MANUAL AIR CONDITIONER].) (See 07–40–37 CLIMATE CONTROL UNIT INSTALLATION [MANUAL AIR CONDITIONER].)
   (6) Steering shaft (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
   (7) Instrument cluster (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
   (8) Lower column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
   (9) Meter hood (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
   (10) Selector lever component (See 05–18–5 SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION.)
   (11) Driver-side air bag module (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (12) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)
   (13) Center panel module (vehicles with audio unit) (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
   (14) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)
   (15) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (16) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
   (17) Side panel (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (18) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (19) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (20) headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
   (21) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (22) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (23) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (24) Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (25) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (26) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (27) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

(28)Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
(29)Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
(30)Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
(31)Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
(32)Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
(33)Sub-trunk
(34)Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
(35)B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
(36)Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
(37)B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
(38)Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
(39)Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
(40)A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
(41)Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
(42)Front door (See 09–11–2 FRONT DOOR REMOVAL/INSTALLATION.)

REAR DRAIN HOSE REMOVAL

DPE091569920W07

1. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (8) Sub-trunk
   (9) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (10)Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (11)Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (12)Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (13)Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (14)Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (15)Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (16)C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (17)Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (18)Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (19)Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (20)Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (21)headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
2. Disconnect the rear drain hose from the sunroof frame.
3. Remove the rear drain hose from the clips.
4. Pull the rear drain hose into the vehicle interior and remove the rear drain hose.



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REAR DRAIN HOSE INSTALLATION

DPE091569920W08

Caution

- **If the rear drain hose is pinched or bent at any point, the water in the hose may not drain and could leak inside the vehicle. During and after installation of the trims and headliner, always make sure there is no interference with the rear drain hose. Correct any abnormality if found.**

1. Apply soapy water to the part of the sunroof frame where the rear drain hose is inserted.
2. Insert the rear drain hose end into the sunroof frame.
3. Install the rear drain hose to the clips parallel to the pillar and free of looseness.
4. Insert the rear drain hose grommet into the hole of the inner rear pillar.
5. Install the following parts:
   (1) headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
   (2) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (3) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (4) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (5) Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (6) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (7) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (8) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (9) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (10) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (11) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (12) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (13) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (14) Sub-trunk
   (15) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (16) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (17) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (18) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (19) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (20) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (21) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)

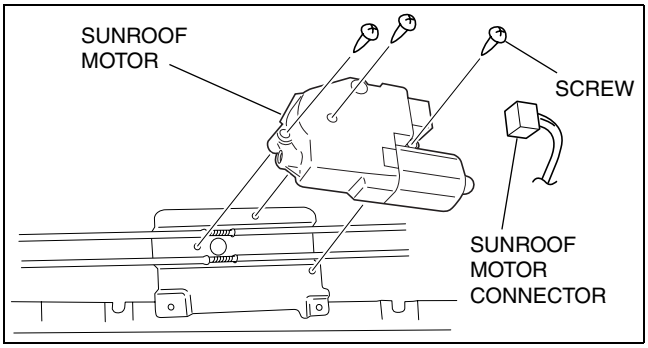
SUNROOF MOTOR REMOVAL/INSTALLATION

DPE091569873W03

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (8) Sub-trunk
   (9) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (10) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (11) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (12) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (13) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (16) C-pillar trim(See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (17) Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (19) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (20) 15)Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (21) Headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
3. Disconnect the sunroof motor connector.
4. Remove the screws, then remove the sunroof motor.
5. Install in the reverse order of removal.

Note

- If the glass panel or the sunroof motor is moved with the sunroof motor removed, initial position setting of the sunroof motor will be required. Perform initial position setting referring to the Sunroof Motor Assembly Note. (See 09–15–4 Sunroof Motor Assembly Note.)



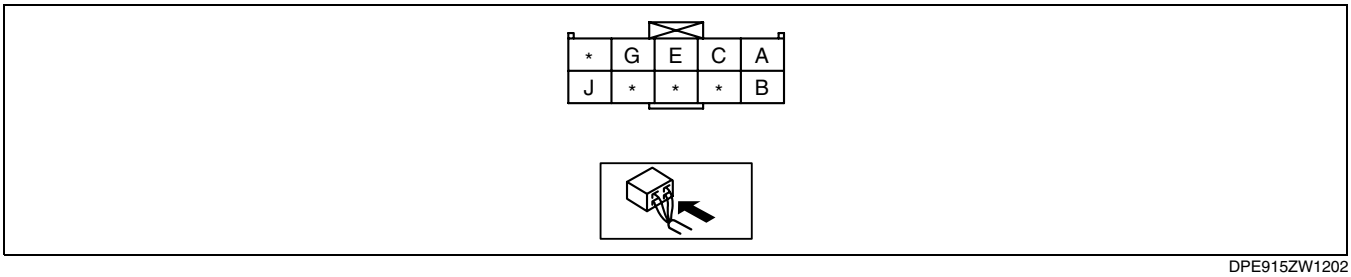
CHU0915W113

SUNROOF MOTOR INSPECTION

DPE091569873W04

1. Measure the voltage at each terminal (other than terminal G).
   - If not as specified, inspect the parts listed under “Inspection item“ and the related wiring harnesses.
2. Disconnect the negative battery cable.
3. Verify that continuity at terminal G is as indicated in the Terminal Voltage Table (Reference).
4. If the parts and wiring harnesses are normal but the system still does not work properly, replace the sunroof motor.

Terminal Voltage Table (Reference)



DPE915ZW1202

Terminal	Signal	Connected to	Test condition	Voltage (V)/ Continuity	Inspection item
A	Slide open	Sunroof switch	Sunroof is fully opening.	B+	Sunroof switch (See 09–15–11 SUNROOF SWITCH INSPECTION.)
			Other	0	
B	Slide close/tilt down	Sunroof switch	Sunroof is closing/tilting down.	B+	Sunroof switch (See 09–15–11 SUNROOF SWITCH INSPECTION.)
			Other	0	
C	Tilt up	Sunroof switch	Sunroof is tilting up.	B+	Sunroof switch (See 09–15–11 SUNROOF SWITCH INSPECTION.)
			Other	0	
E	IG2	A/C 10 A fuse	Turn the ignition switch to the ON position.	B+	A/C 10 A fuse
G	GND	GND	Under any condition: Check for continuity to ground.	Continuity	GND
J	Power supply	SUN ROOF 20 A fuse	Under any condition	B+	SUN ROOF 20 A fuse

SUNROOF SWITCH REMOVAL/INSTALLATION

DPE091566560W01

Note
- The sunroof switch and the map light are a single unit.

1. Disconnect the negative battery cable.
2. Remove the map light from the headliner. (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
3. Install in the reverse order of removal.

SUNROOF SWITCH INSPECTION

1. Verify that the continuity between the sunroof switch terminals is as indicated in the table.
   - If not as indicated in the table, replace the sunroof switch.

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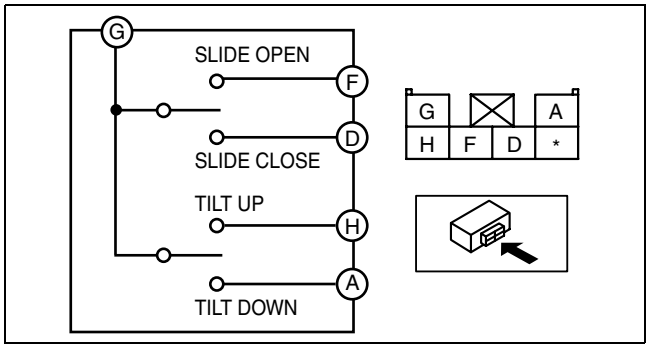


DPE915ZW1102

: Continuity

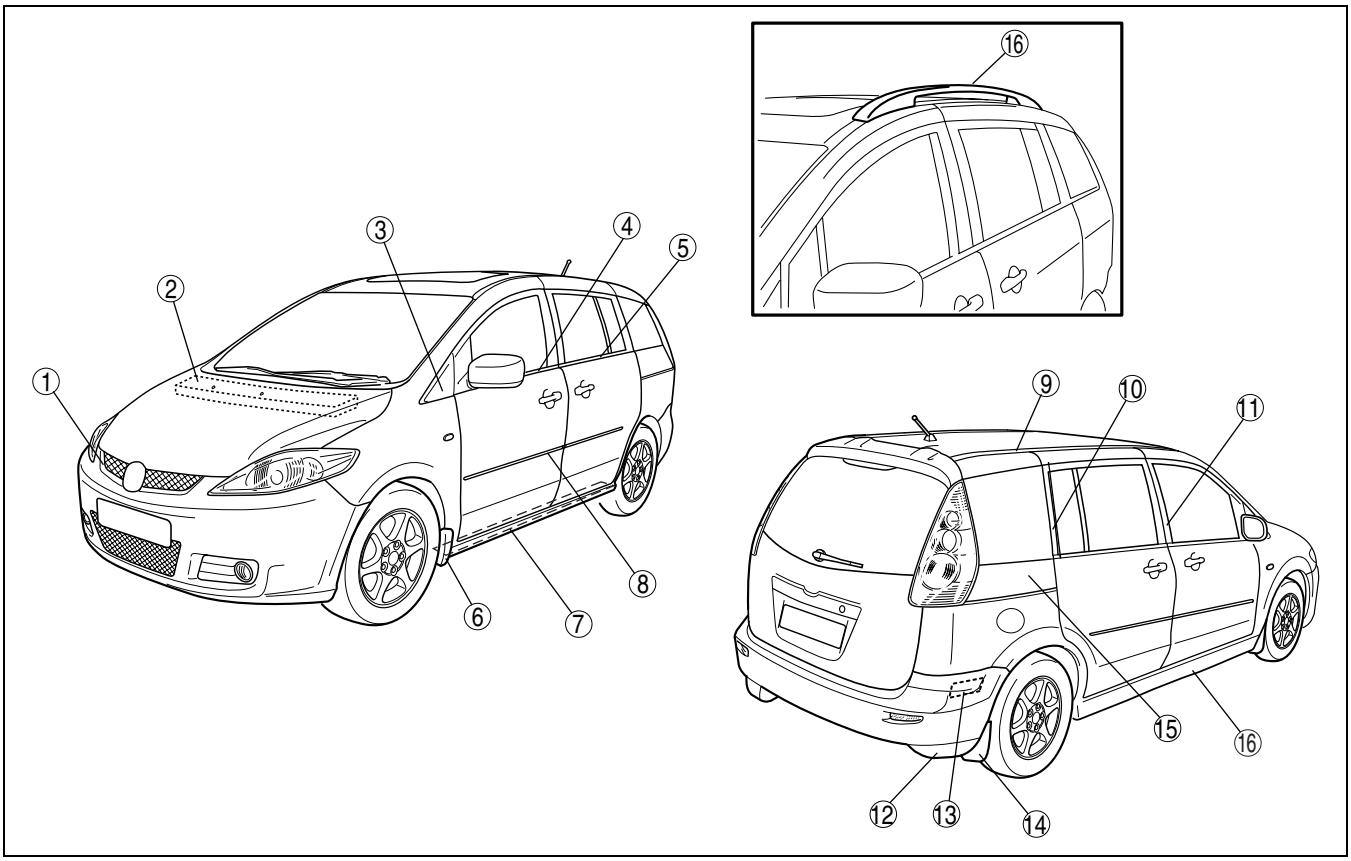
Switch position	Terminal				
	A	D	F	H	G
Slide open		○			○
Slide close			○		○
Tilt up				○	○
Tilt down	○				○
OFF					

B3E0915W112

09–16 EXTERIOR TRIM

EXTERIOR TRIM LOCATION INDEX

DPE091600000W01



DPE916ZW1000

1	Radiator grille (See 09–16–3 RADIATOR GRILLE REMOVAL/INSTALLATION.)
2	Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)

3	Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.) (See 09–16–4 SAIL GARNISH INSTALLATION.)
4	Front beltline molding (See 09–16–9 FRONT BELTLINE MOLDING REMOVAL/INSTALLATION.)

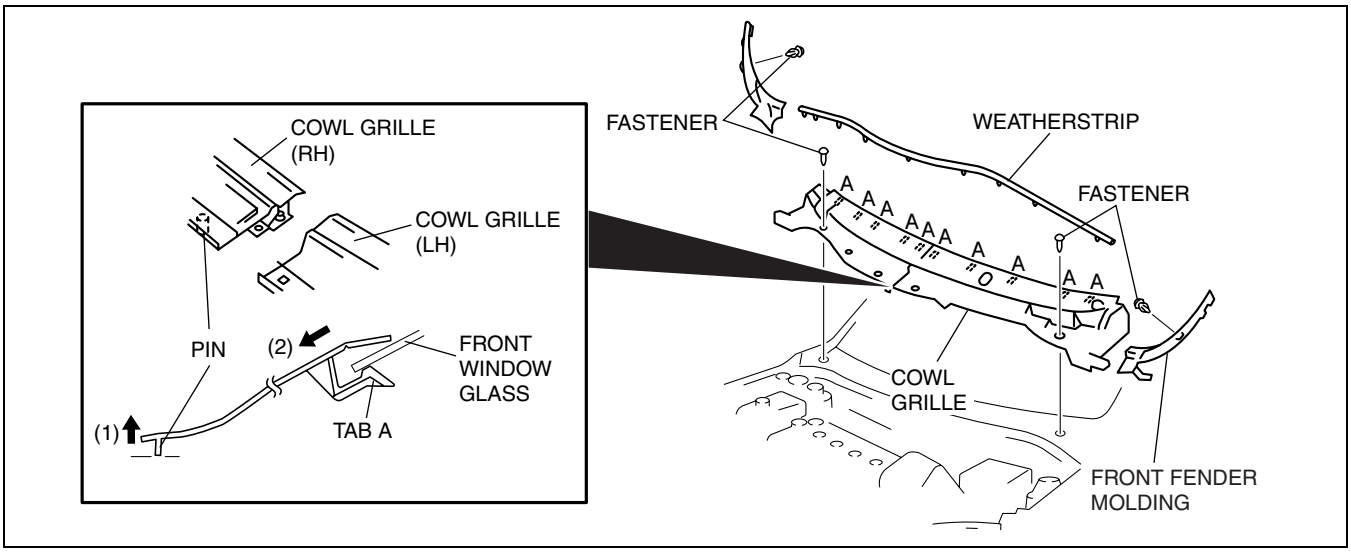
5	Rear beltline molding (See 09–16–9 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)
6	Front flap (See 09–16–5 FRONT FLAP REMOVAL/INSTALLATION.)
7	Stone guard (See 09–16–6 STONE GUARD REMOVAL/INSTALLATION.)
8	Side protector (See 09–16–7 SIDE PROTECTOR REMOVAL.) (See 09–16–8 SIDE PROTECTOR INSTALLATION.)
9	Roof molding (See 09–16–9 ROOF MOLDING REMOVAL/INSTALLATION.)
10	Sliding door garnish (See 09–16–6 SLIDING DOOR GARNISH REMOVAL/INSTALLATION.)
11	Door sash film (See 09–16–10 DOOR SASH FILM REMOVAL.) (See 09–16–11 DOOR SASH FILM INSTALLATION.)
12	Rear airdam skirt (See 09–16–7 REAR AIRDAM SKIRT REMOVAL/INSTALLATION.)
13	Extractor chamber (See 09–16–7 EXTRACTOR CHAMBER REMOVAL/INSTALLATION.)
14	Rear flap (See 09–16–5 REAR FLAP REMOVAL/INSTALLATION.)
15	Center guide rail cover (See 09–16–6 CENTER GUIDE RAIL COVER REMOVAL/INSTALLATION.)
16	Side step molding (See 09–16–5 SIDE STEP MOLDING REMOVAL/INSTALLATION.)
17	Roof rail (See 09–16–9 ROOF RAIL REMOVAL/INSTALLATION.)

COWL GRILLE REMOVAL/INSTALLATION

DPE091650710W01

1. Remove the windshield wiper arm and blade. (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)

2. Remove the front fender molding.



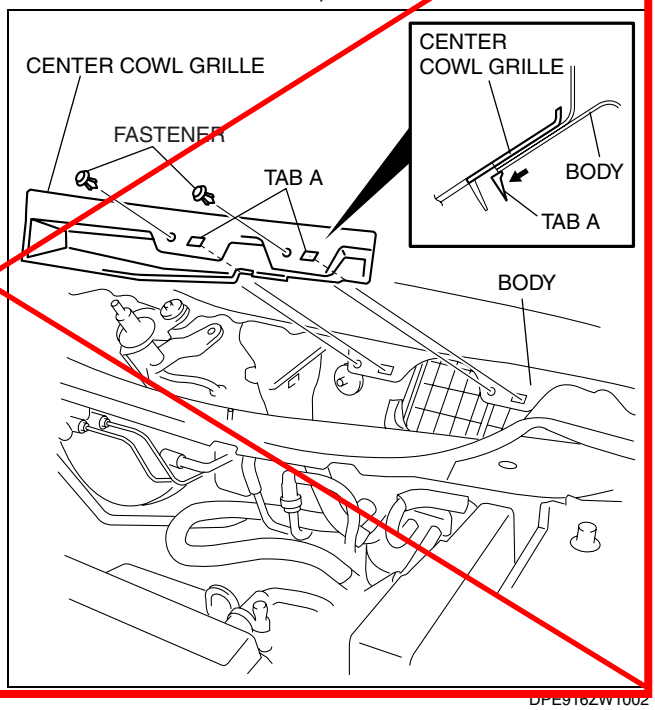
DPE916ZW1001

3. Remove the weatherstrip.
4. Remove the fastener.
5. Pull the cowl grille in the direction of arrow (1) so that it is free from the pins, pull tabs A in the direction of arrow (2), and then remove the front window glass.
6. Remove the cowl grille.
7. Install in the reverse order of removal.

CENTER COWL GRILLE REMOVAL/INSTALLATION

DPE091600710W02

1. Remove the windshield wiper arm and blade. (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
2. Remove the cowl grille. (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
3. Remove the fastener.
4. Press tabs A in the direction of the arrow and pull the center cowl grille to remove.
5. Install in the reverse order of removal.



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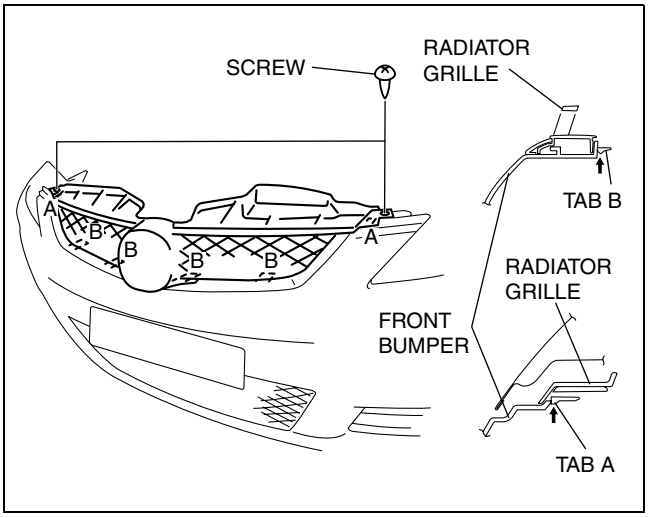
RADIATOR GRILLE REMOVAL/INSTALLATION

DPE091600000W02

Standard Type

1. Remove the screw.
2. Remove tab A.

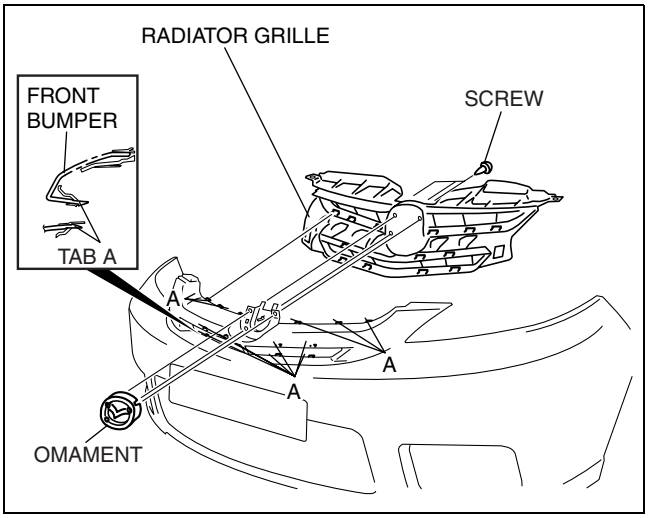
3. Press tab B in the direction of the arrow and pull the radiator grille to remove it from the front bumper.
4. Install in the reverse order of removal.



DPE916ZW1003

Sport Type

1. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
2. Remove the screw.
3. Remove the ornament.
4. Remove tab A and then remove the radiator grille.
5. Install in the reverse order of removal.

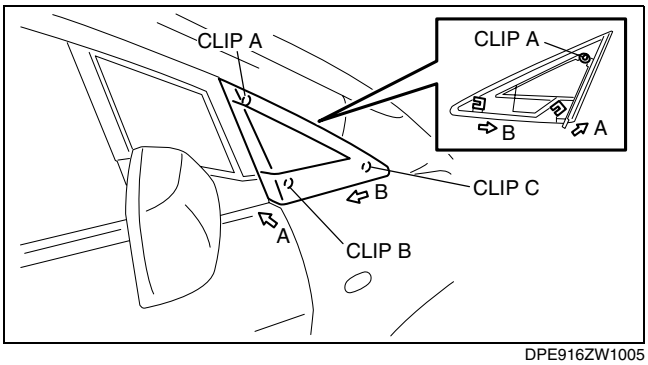


DPE916ZW1004

SAIL GARNISH REMOVAL

DPE091650710W03

1. Remove clip A from the vehicle.
2. Move the sail garnish in direction A and remove it from clip B.
3. Move the sail garnish in direction B and remove from clip C.
4. Remove clips B and C from the vehicle body.



DPE916ZW1005

SAIL GARNISH INSTALLATION

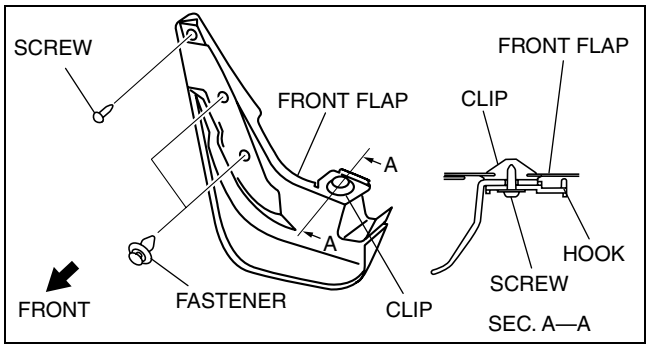
DPE091650710W04

1. Install clip B and C to the sail garnish.
2. Install the sail garnish to the vehicle body.

FRONT FLAP REMOVAL/INSTALLATION

1. Remove the screw and fasteners.
2. Detach the clip, then remove the front flap.
3. Install in the reverse order of removal.

DPE091651840W01

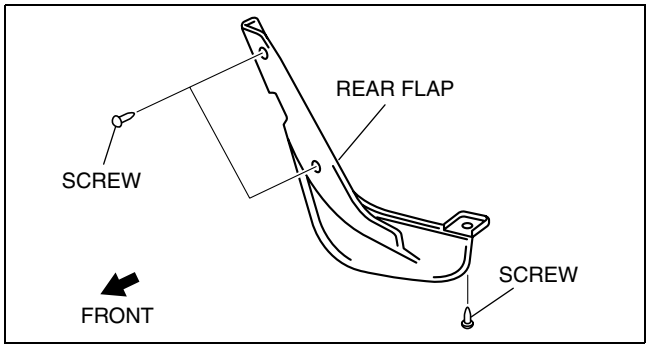


DPE916ZW1018

REAR FLAP REMOVAL/INSTALLATION

1. Remove the screws.
2. Remove the rear flap.
3. Install in the reverse order of removal.

DPE091651840W02

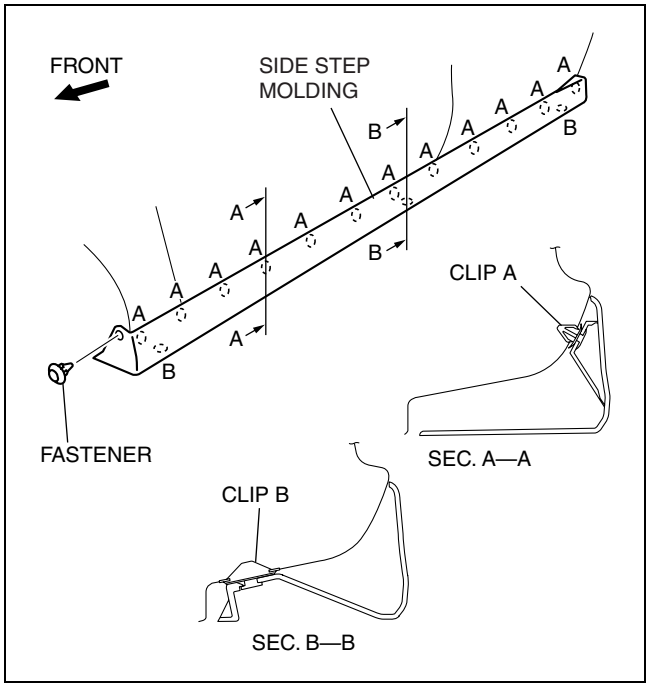


DPE916ZW1019

SIDE STEP MOLDING REMOVAL/INSTALLATION

1. Remove the fastener.
2. Pull the side step molding and remove clips A from the vehicle body.

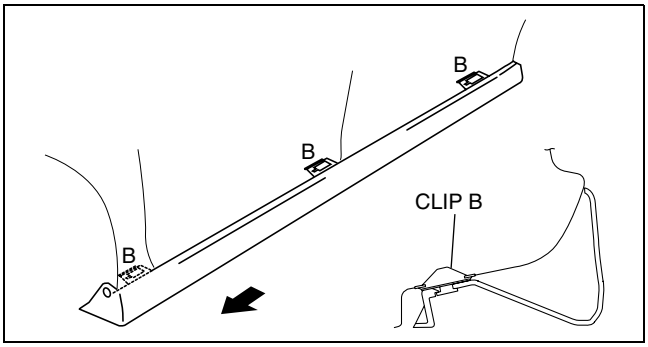
DPE091651100W01



DPE916ZW1006

09

3. Slide the side step molding to the vehicle front and remove clips B from the side step molding.
4. Remove the side step molding.
5. Remove clips B from the body, then install it to the side step molding.
6. Install in the reverse order of removal.

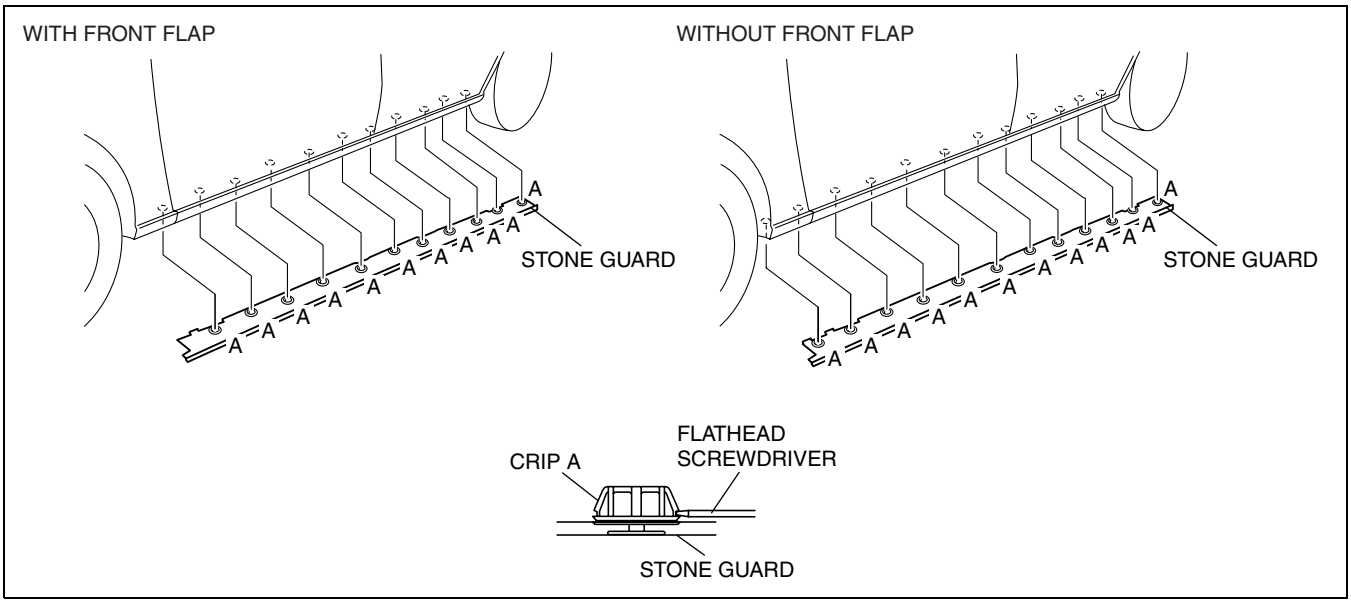


DPE916ZW1007

STONE GUARD REMOVAL/INSTALLATION

DPE091650710W08

1. Remove the front flap. (vehicles with front flap) (See09–16–5 FRONT FLAP REMOVAL/INSTALLATION.)
2. Remove clips A using a flathead screwdriver.



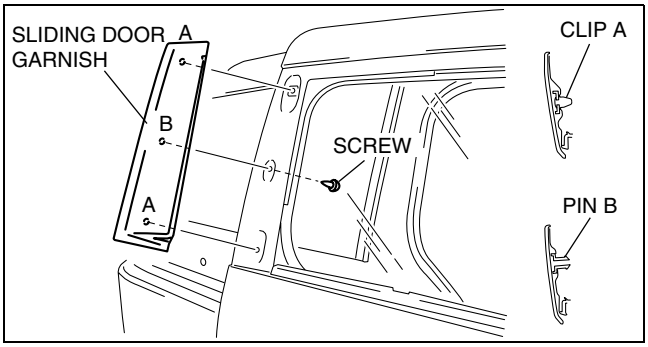
DPE916ZW1022

3. Remove the stone guard.
4. Install in the reverse order of removal.

SLIDING DOOR GARNISH REMOVAL/INSTALLATION

DPE091650030W01

1. Remove the screw.
2. Remove clip A using a fastener remover.
3. Remove the sliding door garnish.
4. Install in the reverse order of removal.



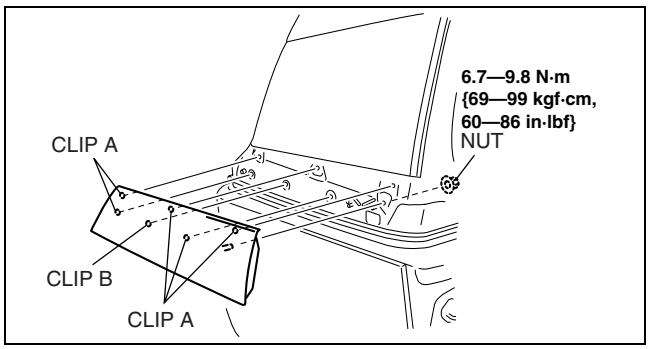
DPE916ZW1008

CENTER GUIDE RAIL COVER REMOVAL/INSTALLATION

DPE091650710W05

1. Remove the following parts:
   (1) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (2) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Third-row seat belt lower anchor installation bolt ~~(7-passenger model)~~ (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (6) Rear combination light (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)

2. Remove the nuts.
3. Pull the center guide rail cover away from the vehicle and remove clips A and B.
4. Remove the center guide rail cover.
5. Install in the reverse order of removal.

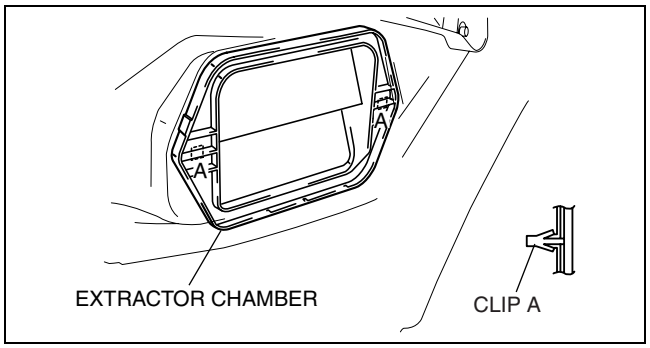


DPE916ZW1009

EXTRACTOR CHAMBER REMOVAL/INSTALLATION

DPE091650710W06

1. Remove the rear bumper. (See 09–10–8 REAR BUMPER REMOVAL/INSTALLATION.)
2. Remove clip A using a fastener remover and then remove the extractor chamber from the vehicle.
3. Install in the reverse order of removal.

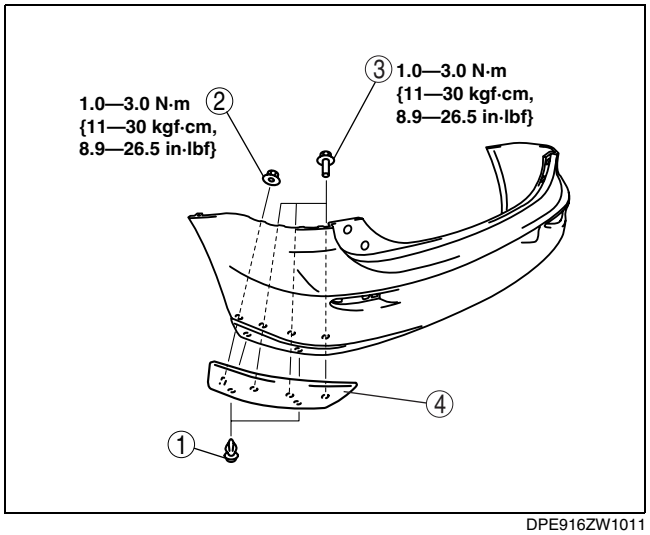


DPE916ZW1010

REAR AIRDAM SKIRT REMOVAL/INSTALLATION

DPE091650710W07

1. Remove in the order indicated in the figure.



DPE916ZW1011

1	Fastener A
2	Nut
3	Bolt
4	Rear airdam skirt

2. Install in the reverse order of removal.

SIDE PROTECTOR REMOVAL

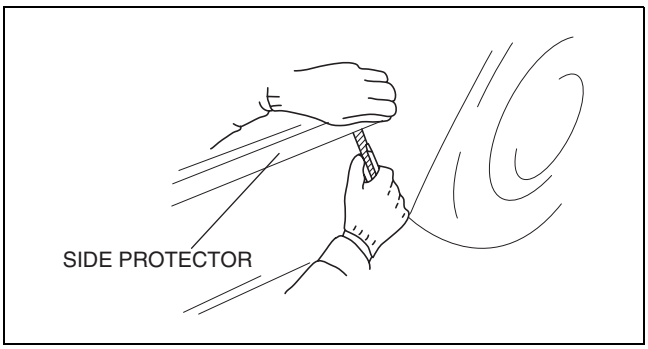
DPE091650710W09

1. Pry the side protector end **20—30 mm {0.8—1.1 in}** using a flathead screwdriver or a razor.

Warning
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

Note
- The side protector is installed with double-sided adhesive tape. If the side protector is difficult to remove, warm the double-sided adhesive tape using a hot air blower.

2. Pull the side protector outward, then remove it from the body.



DPE916ZW1020

SIDE PROTECTOR INSTALLATION

DPE091650710W10

1. Remove the adhesive remaining on the side protector and the body using a razor.

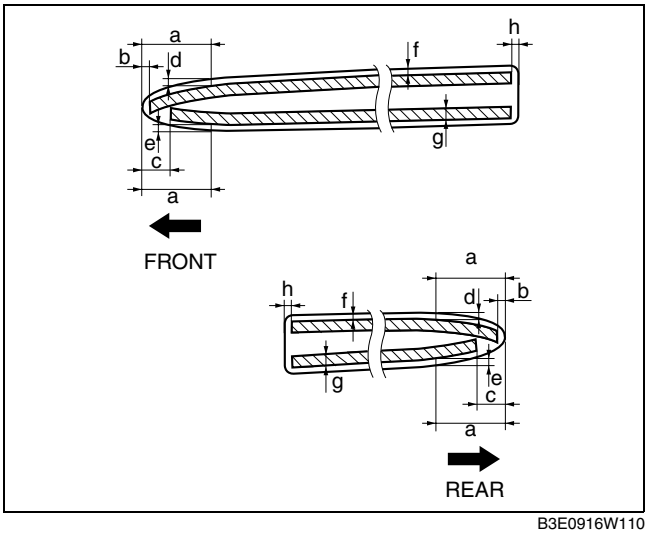
   Warning
   - **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

2. Remove any grease or dirt from the adhesion surface of the side protector and the body.
3. Attach double-sided adhesive tape to the side protector as shown in the figure.

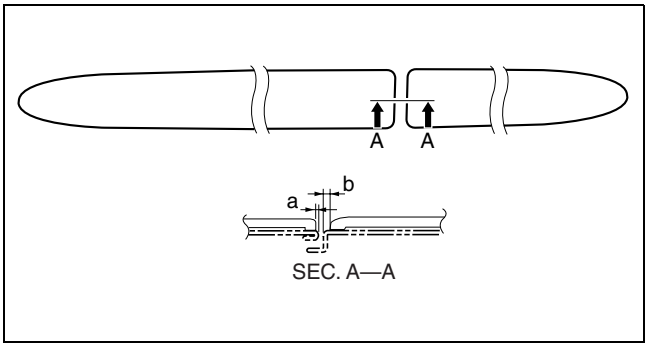
   Clearance
   a: 30 mm {1.2 in}
   b: 2.0 mm {0.08 in}
   c: 12 mm {0.47 in}
   d: 1.0—3.0 mm {0.04—0.11 in}
   e: 1.0—3.0 mm {0.04—0.11 in}
   f: 1.0—3.0 mm {0.04—0.11 in}
   g: 5.0 mm {0.2 in}
   h: 1.0—3.0 mm {0.04—0.11 in}

4. Peel off the backing paper from the double-sided adhesive tape and attach the side protector onto the body as shown in the figure.

   Clearance
   a: 1.0—4.0 mm {0.04—0.15 in}
   b: 1.0—4.0 mm {0.04—0.15 in}



B3E0916W110

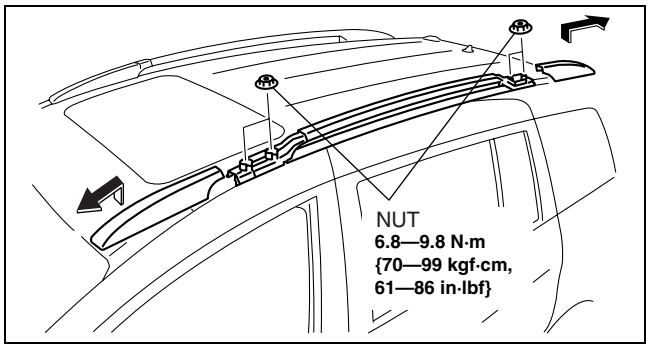


DPE916ZW1021

ROOF RAIL REMOVAL/INSTALLATION

1. Slide the covers in the direction of the arrows and remove them.
2. Remove the nuts.
3. Remove the roof rail.
4. Install in the reverse order of removal.

DPE091650710W11

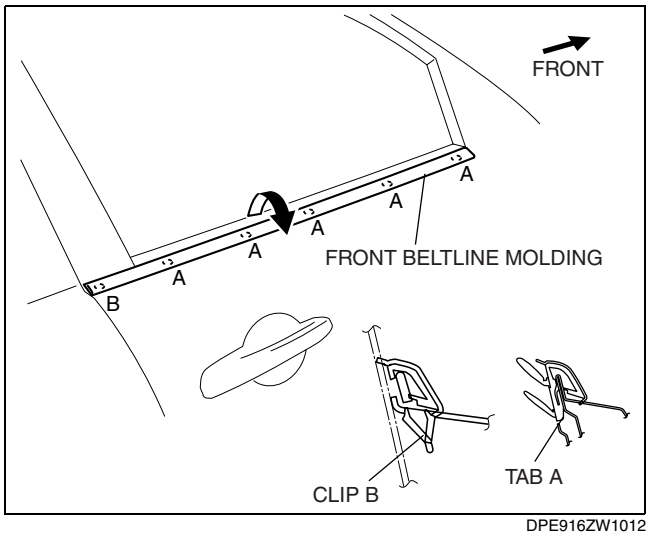


DPE916ZW1023

FRONT BELTLINE MOLDING REMOVAL/INSTALLATION

DPE091650641W01

1. Remove the inner garnish. (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
2. Remove the power outer mirror. (See 09–12–32 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
3. Fully open the front door glass.
4. Remove clip B using a protective tape-wrapped flathead screwdriver.
5. Lift (partially peeling back) the front beltline molding in the direction of the arrow and then remove tabs A.
6. Remove the front beltline molding by sliding it to the vehicle rear.
7. Install in the reverse order of removal.

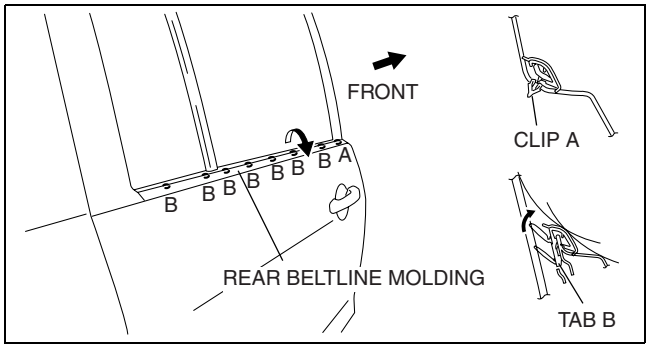


DPE916ZW1012

REAR BELTLINE MOLDING REMOVAL/INSTALLATION

DPE091650641W02

1. Fully lower the rear door glass.
2. Remove clip A using a protective tape-wrapped flathead screwdriver.
3. Lift (partially peeling back) the rear beltline molding in the direction of the arrow and then remove tabs B.
4. Remove the rear beltline molding by sliding it to the vehicle front.
5. Install in the reverse order of removal.



DPE916ZW1013

ROOF MOLDING REMOVAL/INSTALLATION

DPE091650641W03

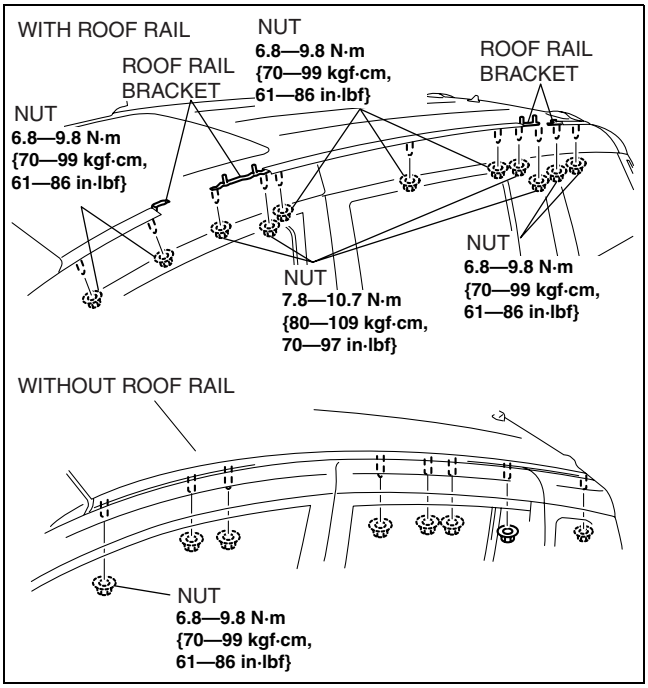
1. Disconnect the negative battery cable.
2. Partially peel back the seaming welt.
3. Remove the following parts:
   (1) Roof rail. (vehicles with roof rail) (See09–16–9 ROOF RAIL REMOVAL/INSTALLATION.)
   (2) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (3) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (5) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (6) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (7) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)

(8) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
(9) Sub-trunk
(10) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
(11) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
(12) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
(13) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
(14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
(15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
(16) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
(17) Rear entertainment system (RES) unit cover (vehicles with RES) (See09–20–25 RES UNIT REMOVAL/INSTALLATION.)
(18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
(19) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
(20) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
(21) Headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
(22) Shock-absorbing pad (See 09–17–22 SHOCK ABSORBING PAD REMOVAL/INSTALLATION.)
(23) Roof rail (vehicles with roof rail) (See09–16–9 ROOF RAIL REMOVAL/INSTALLATION)

4. Remove the nuts.

Note
- Remove the curtain air bag installation bolt (if equipped), position the curtain air bag out of the away, and then remove the roof molding installation nut.

5. Remove the roof molding.
6. Install in the reverse order of removal.



DPE916ZW1014

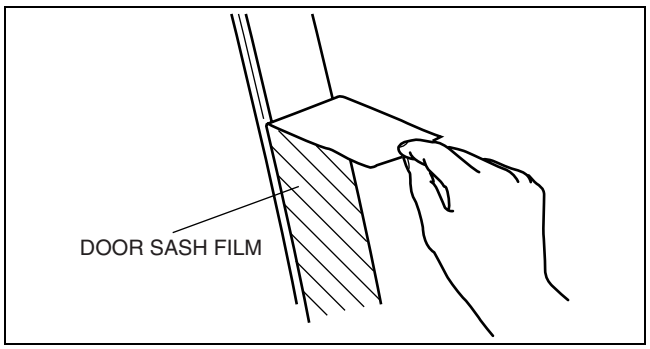
DOOR SASH FILM REMOVAL

DPE091650030W02

1. Partially peel back the glass run channel.
2. Partially peel back the door weatherstrip.
3. Remove the following parts:
   (1) Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)
   (2) Power outer mirror (See 09–12–32 POWER OUTER MIRROR REMOVAL/INSTALLATION.)
   (3) Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
   (4) Front door quarter glass (See 09–12–4 FRONT DOOR QUARTER GLASS REMOVAL/INSTALLATION.)
   (5) Slide door garnish (See 09–16–6 SLIDING DOOR GARNISH REMOVAL/INSTALLATION.)
   (6) Side door garnish (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
   (7) Rear side trim (See09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
   (8) Sliding door trim (See09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
   (9) Sliding door quarter glass (See 09–12–6 SLIDING DOOR QUARTER GLASS REMOVAL/INSTALLATION.)
   (10) Front beltline molding (See 09–16–9 FRONT BELTLINE MOLDING REMOVAL/INSTALLATION.)
   (11) Rear beltline molding (See 09–16–9 REAR BELTLINE MOLDING REMOVAL/INSTALLATION.)

4. Peel off the rear sash film by pulling it outward from one end.

Note
- Slowly remove the door sash film since it may tear easily.

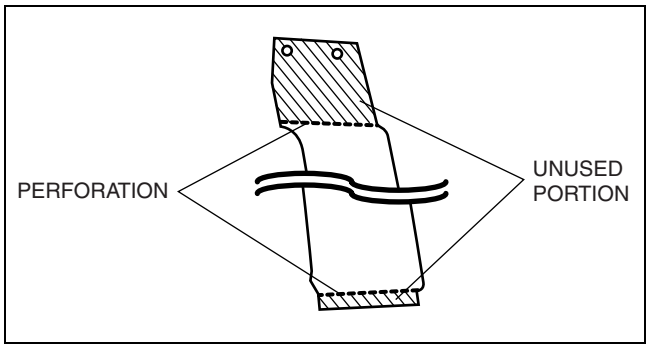


DPE916ZW1015

DOOR SASH FILM INSTALLATION

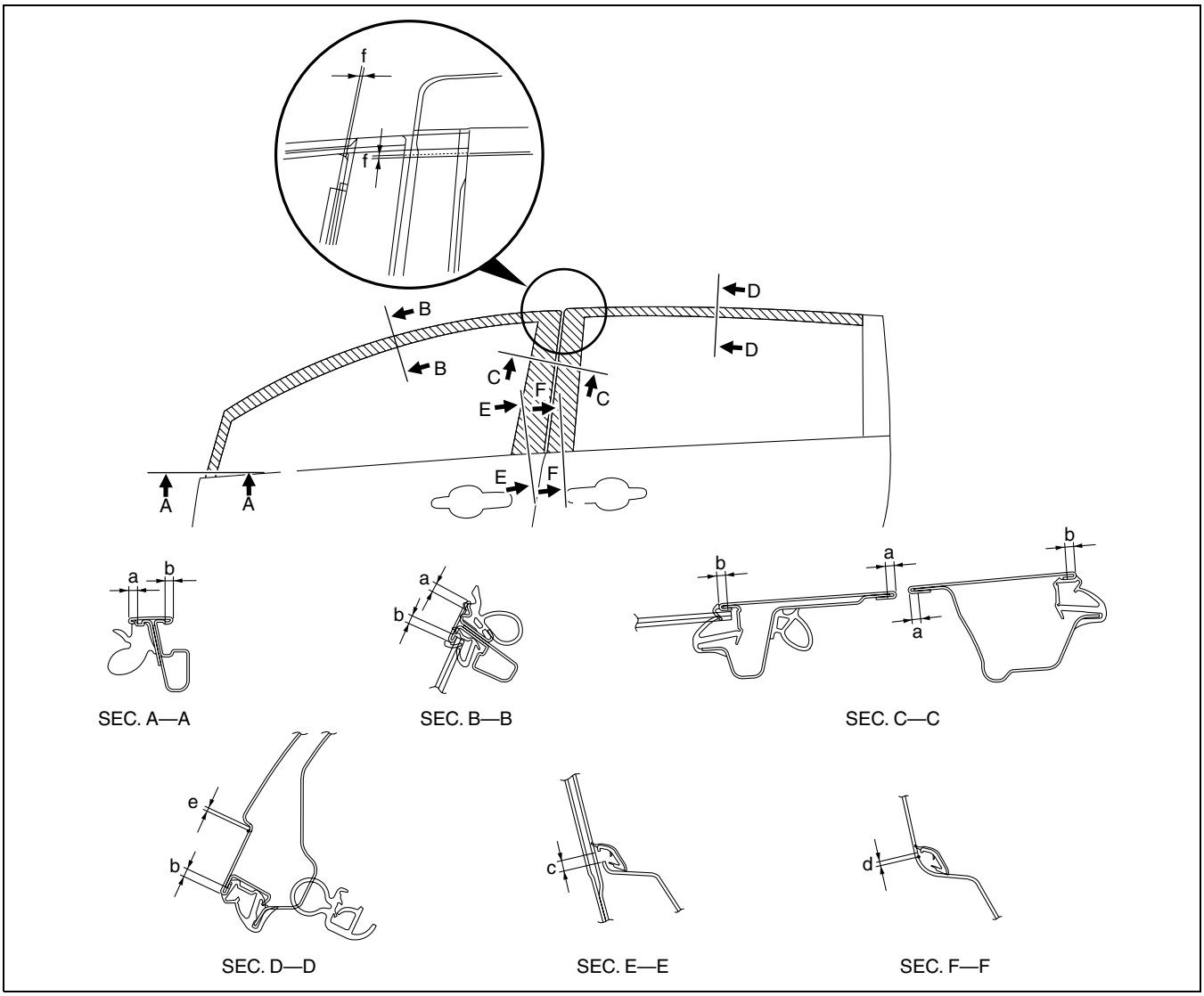
DPE091650030W03

1. Remove any grease or dirt from the affixing surface of the door.
2. Cut away the unused portion along the dotted lines.



DPE916ZW1016

3. Peel off the backing paper and attach the door sash film onto the door as shown in the figure.



DPE916ZW1017

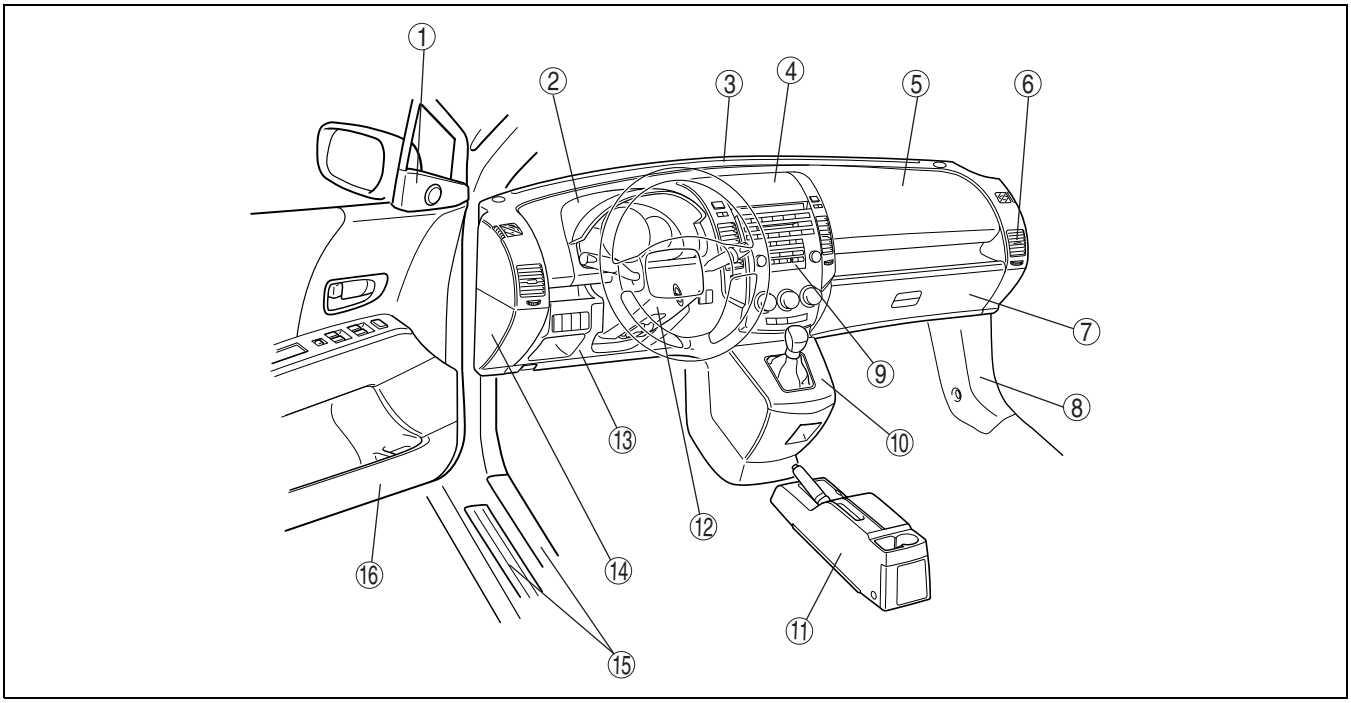
Standard clearance
a: 3.0—5.0 mm {0.12—0.19 in}
b: 3.0 mm {0.12 in}
c: 5.0 mm {0.19 in}
d: 2.0 mm {0.08 in}
e: 0—1.0 mm {0—0.04 in}
f: 2.5 mm {0.10 in}

4. Peel off the transparent protective film on the door sash film.

09–17 INTERIOR TRIM

INTERIOR TRIM LOCATION INDEX

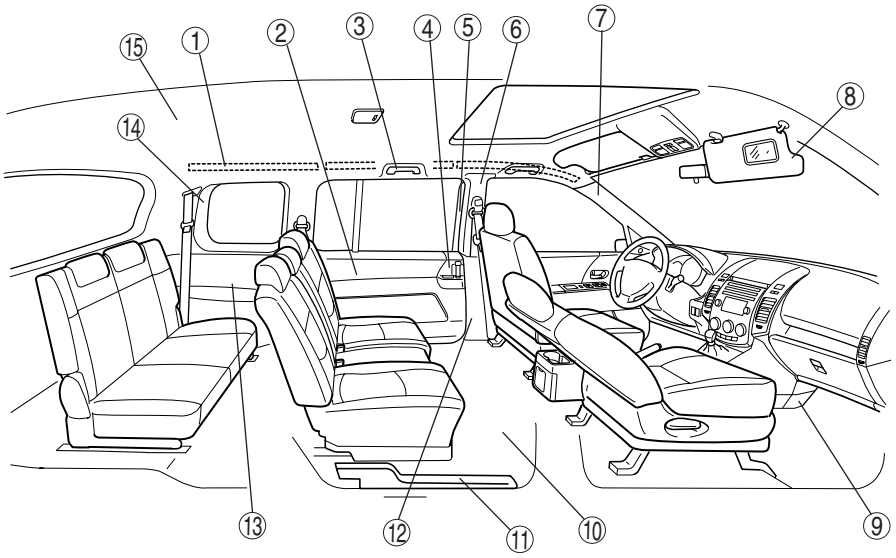
DPE091755000W01



DPE917ZW1000

1	Inner garnish (See 09–17–12 INNER GARNISH REMOVAL/ INSTALLATION.)
2	Meter hood (See 09–17–7 METER HOOD REMOVAL/ INSTALLATION.)
3	Dashboard (See 09–17–4 DASHBOARD REMOVAL/ INSTALLATION.)
4	Dashboard center panel (See 09–17–12 DASHBOARD CENTER PANEL REMOVAL/INSTALLATION.)
5	Dashboard garnish (See 09–17–13 DASHBOARD GARNISH REMOVAL/INSTALLATION.)
6	Ventilator grille (See 09–17–9 VENTILATOR GRILLE REMOVAL/ INSTALLATION.)
7	Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
8	Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/ INSTALLATION.)

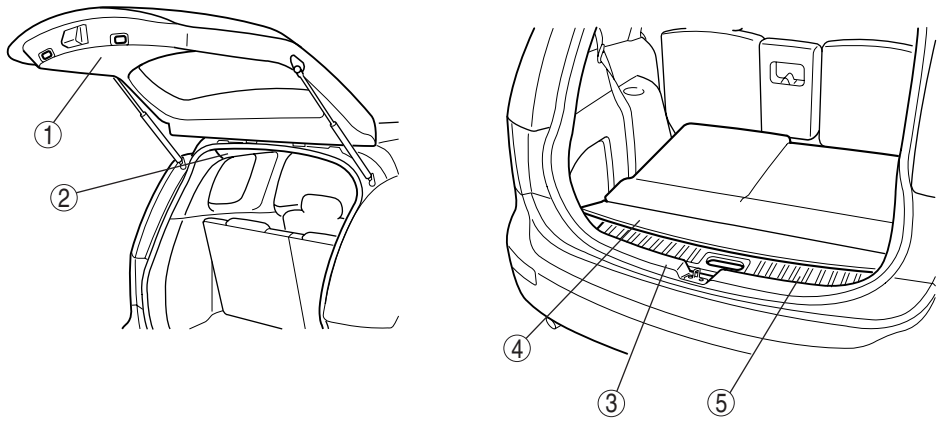
9	Center panel (See 09–17–15 CENTER PANEL REMOVAL/ INSTALLATION.)
10	Front console (See 09–17–13 FRONT CONSOLE REMOVAL/ INSTALLATION.)
11	Center console (See 09–17–14 CENTER CONSOLE REMOVAL/ INSTALLATION.) (See 09–17–15 CENTER CONSOLE DISASSEMBLY/ASSEMBLY.)
12	Column cover (See 09–17–7 COLUMN COVER REMOVAL/ INSTALLATION.)
13	Lower panel (See 09–17–8 LOWER PANEL REMOVAL/ INSTALLATION.)
14	Side panel (See 09–17–11 SIDE PANEL REMOVAL/ INSTALLATION.)
15	Front scuff plate (See 09–17–19 FRONT SCUFF PLATE REMOVAL/ INSTALLATION.)
16	Front door trim (See 09–17–17 FRONT DOOR TRIM REMOVAL/ INSTALLATION.)



DPE917ZW1001

1	Shock absorbing pad (without curtain air bag module) (See 09–17–22 SHOCK ABSORBING PAD REMOVAL/INSTALLATION.)
2	Sliding door trim (See 09–17–18 SLIDING DOOR TRIM REMOVAL/INSTALLATION.)
3	Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
4	Rear side trim (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
5	Side door garnish (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
6	B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
7	A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)

8	Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
9	Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
10	Floor covering (See 09–17–23 FLOOR COVERING REMOVAL/INSTALLATION.)
11	Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
12	B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
13	Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
14	C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
15	Headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)



DPE917ZW1002

1	Liftgate trim (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
2	Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)

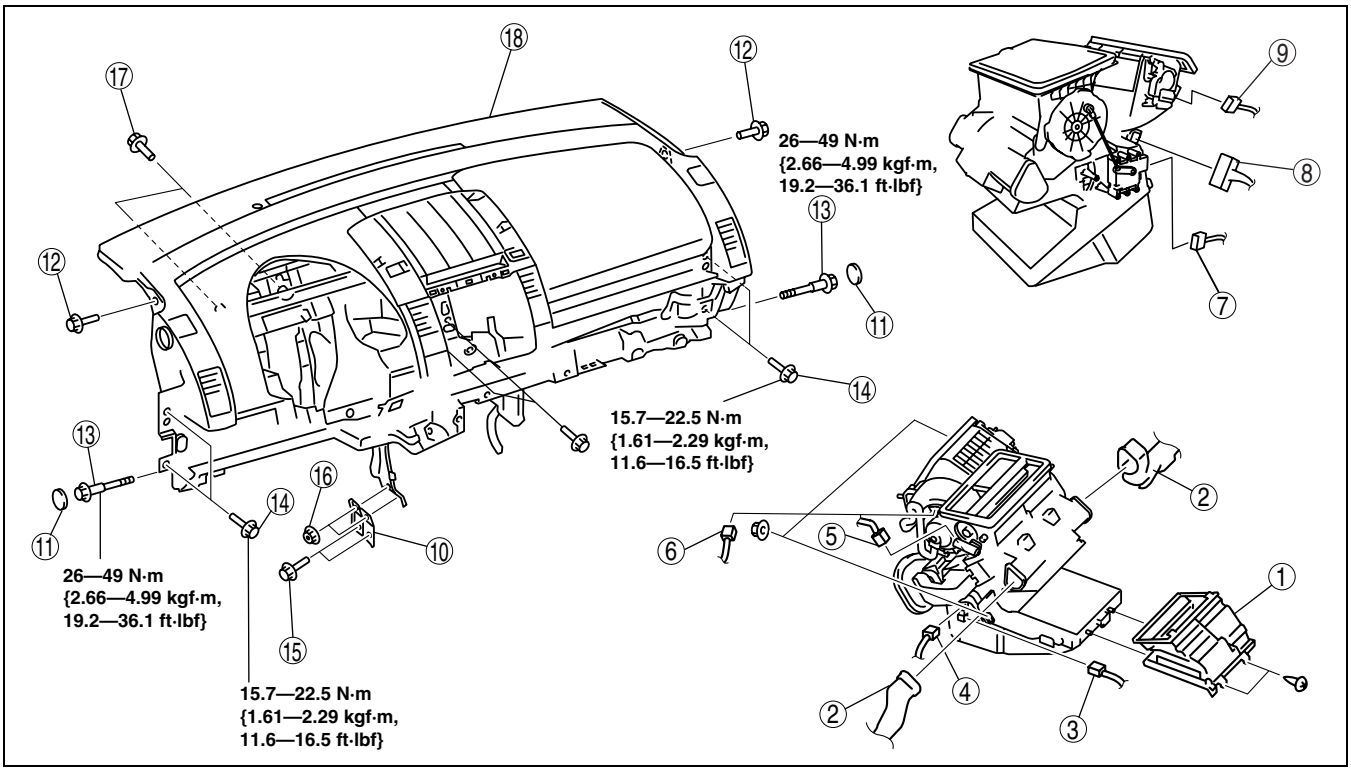
3	Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
4	Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
5	Sub-trunk

DASHBOARD REMOVAL/INSTALLATION

DPE091755000W02

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front door (See 09–11–2 FRONT DOOR REMOVAL/INSTALLATION.)
   (2) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
   (3) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (5) Side panel (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (6) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (7) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (8) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
   (9) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)
   (10) Center panel module ~~(vehicles with audio unit)~~ (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
   ~~(11) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)~~
   (12) Selector lever component (See 05–18–5 SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION.)
   (13) Driver-side air bag module (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (14) Meter hood (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
   (15) Lower column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
   (16) Instrument cluster (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
   (17) Steering shaft (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
   (18) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (19) Climate control unit (See 07–40–35 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07–40–36 CLIMATE CONTROL UNIT REMOVAL [MANUAL AIR CONDITIONER].) (See 07–40–37 CLIMATE CONTROL UNIT INSTALLATION [MANUAL AIR CONDITIONER].)
   (20) Rear heater duct (1) (See 07–11–24 REAR HEAT DUCT REMOVAL/INSTALLATION.)
   (21) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (22) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
3. Disconnect the dashboard harness connectors.
4. Remove in the order indicated in the figure.

5. Install in the reverse order of removal.



DPE917ZW1003

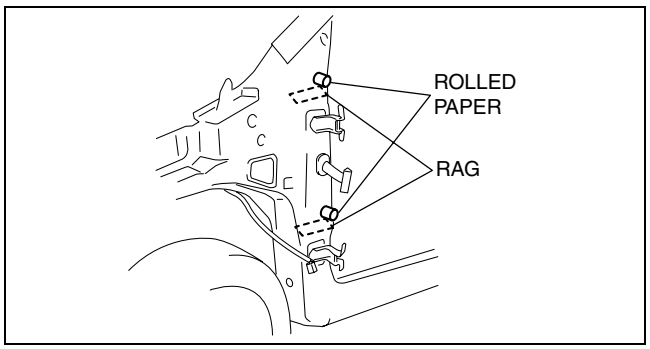
1	Heater case
2	Duct
3	Power MOS FET connector (with full-auto air conditioner)
4	Evaporator temperature sensor connector
5	Air mix actuator connector (with full-auto air conditioner system)
6	Blower motor connector
7	Airflow mode actuator connector (with full-auto air conditioner system)
8	Resistor connector (with manual air conditioner system)
9	Air intake actuator connector

10	Dashboard bracket
11	Cap
12	Bolt A (See 09–17–5 Bolt Removal Note.)
13	Bolt B (See 09–17–5 Bolt Removal Note.)
14	Bolt C
15	Bolt D
16	Nut A
17	Bolt E
18	Dashboard (See 09–17–5 Dashboard Removal Note.)

Bolt Removal Note

Caution

- **Bolts or tools dropped into the A-pillar cannot be retrieved. To prevent this, after inserting clean rags into the A-pillar, roll up regular paper into a tube and insert it into each hole, and then secure each tube so that it does not move while performing the work.**



DPE917ZW1004

Dashboard Removal Note

Warning

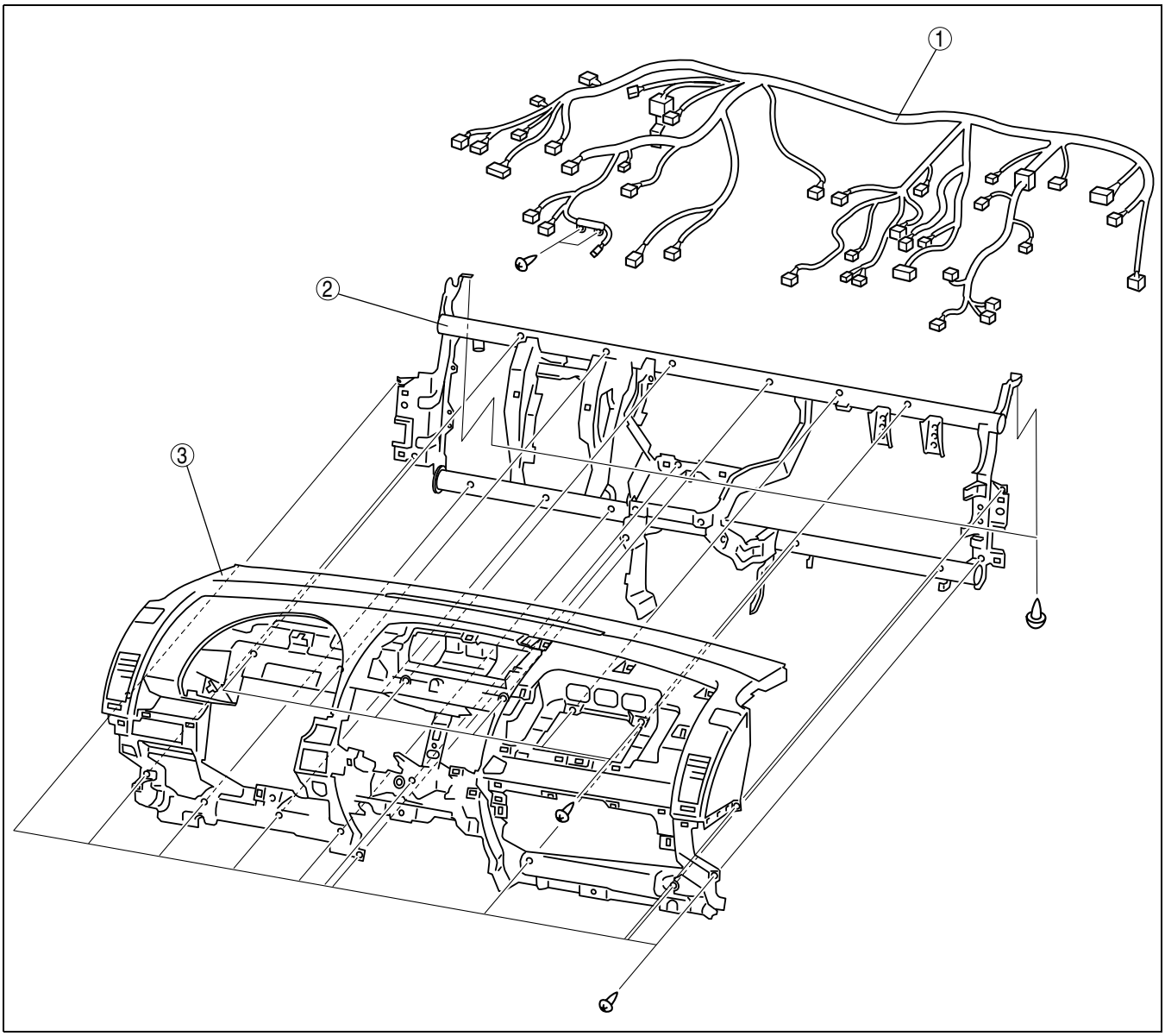
- **Removing the dashboard without supporting it can be dangerous. The dashboard may fall and injure you. Always perform the following procedure with at least another person.**

1. Take the dashboard out through the opened front driver-side door.

DASHBOARD DISASSEMBLY/ASSEMBLY

DPE091755000W03

1. Remove the following parts:
   (1) ~~LCD unit (vehicles with car-navigation system) (See 09–20–8 LCD UNIT REMOVAL/INSTALLATION.)~~
   (2) Dashboard center panel ~~(vehicles without car-navigation system)~~ (See 09–17–12 DASHBOARD CENTER PANEL REMOVAL/INSTALLATION.)
   (3) ~~Car navigation unit (vehicles with car-navigation system) (See 09–20–8 CAR NAVIGATION UNIT REMOVAL/INSTALLATION.)~~
   (4) Passenger-side air bag module (See 08–10–6 PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (5) Dashboard garnish (See 09–17–13 DASHBOARD GARNISH REMOVAL/INSTALLATION.)
2. Disassemble in the order indicated in the table.
3. Assemble in the reverse order of disassembly.

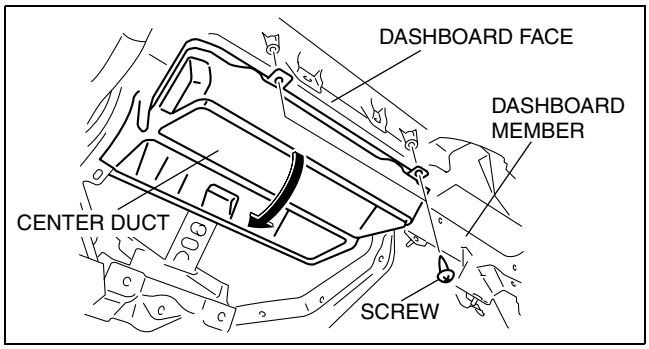


DPE917ZW1005

1	Dashboard wiring harness
2	Dashboard member (See 09–17–7 Dashboard Member Removal Note.) (See 09–17–7 Dashboard Member Installation Note.)
3	Dashboard face

Dashboard Member Removal Note

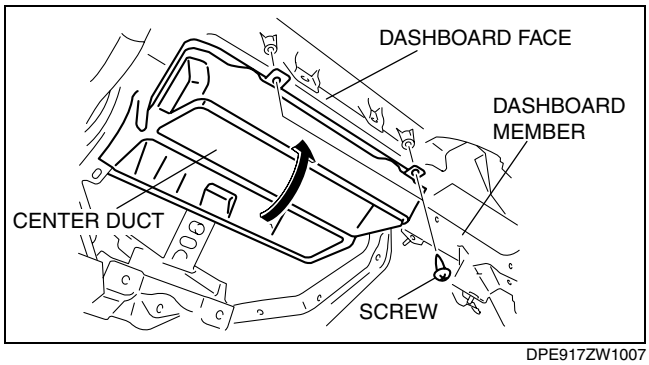
1. Remove the screw.
2. Partially open the center duct in the direction shown by the arrow, and remove the dashboard member.



DPE917ZW1006

Dashboard Member Installation Note

1. Install the dashboard member to the dashboard face while holding the dashboard member with the center duct.
2. Install the screws.



DPE917ZW1007

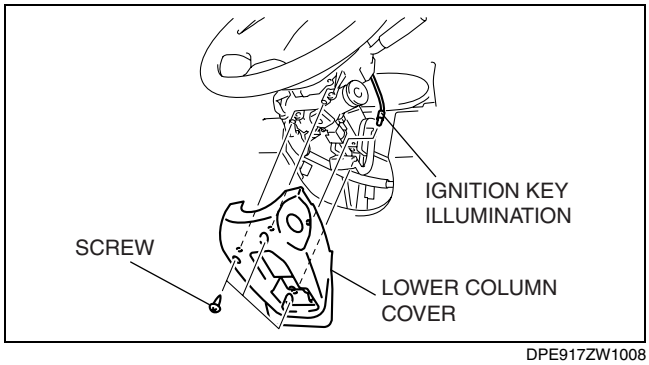
COLUMN COVER REMOVAL/INSTALLATION

DPE091755000W04

1. Remove the screws.
2. Pull the upper column cover upward and detach the upper column cover from the lower column cover.
3. Remove the lower column cover.
4. Remove the ignition key illumination.
5. Install in the reverse order of removal.

Note

- The upper column cover is integrated with the meter hood.

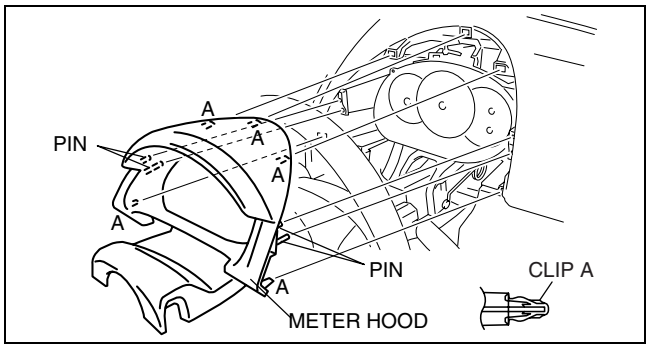


DPE917ZW1008

METER HOOD REMOVAL/INSTALLATION

DPE091755000W05

1. Pull the upper column cover upward and detach the upper column cover from the lower column cover.
2. Pull the meter hood and remove clips A and the pins.
3. Remove the meter hood.
4. Install in the reverse order of removal.



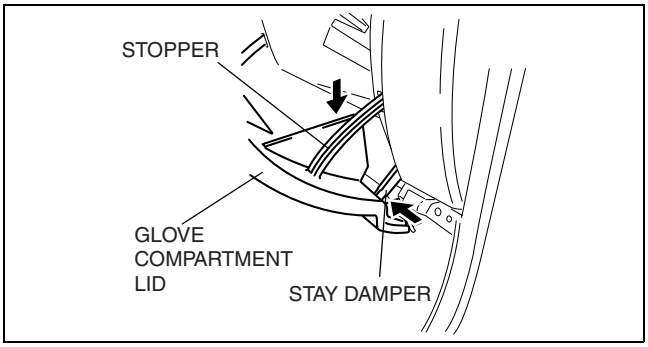
DPE917ZW1009

GLOVE COMPARTMENT REMOVAL/INSTALLATION

DPE091755000W06

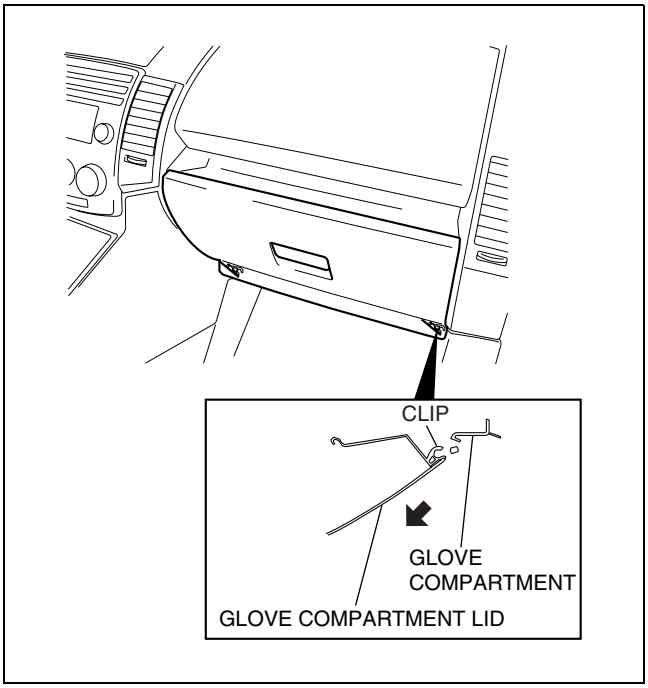
1. Remove the following parts:
   (1) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (2) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)

(3) Front scuff plate inner (passenger's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
(4) Front side trim (passenger's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
2. Partially peel back the seaming welt.
3. Remove the side panel. (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
4. Press the stay damper in the direction shown by the arrow and detach it from the glove compartment lid.
5. While pressing the stopper in the direction shown by the arrow, detach the stopper from the glove compartment lid.



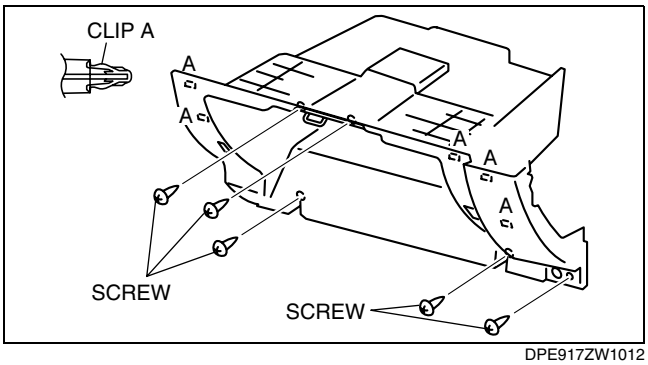
DPE917ZW1010

6. Pull the glove compartment lid outward while lowering it to the position shown in the figure, and then detach the clip and remove the glove compartment lid.



DPE917ZW1011

7. Remove the screws.
8. Pull the glove compartment outward and detach clips A.
9. Glove compartment light bulb. (vehicles with glove compartment light bulb) (See09–18–27 GLOVE COMPARTMENT LIGHT BULB REMOVAL/INSTALLATION.)
10. Remove the glove compartment.
11. Install in the reverse order of removal.



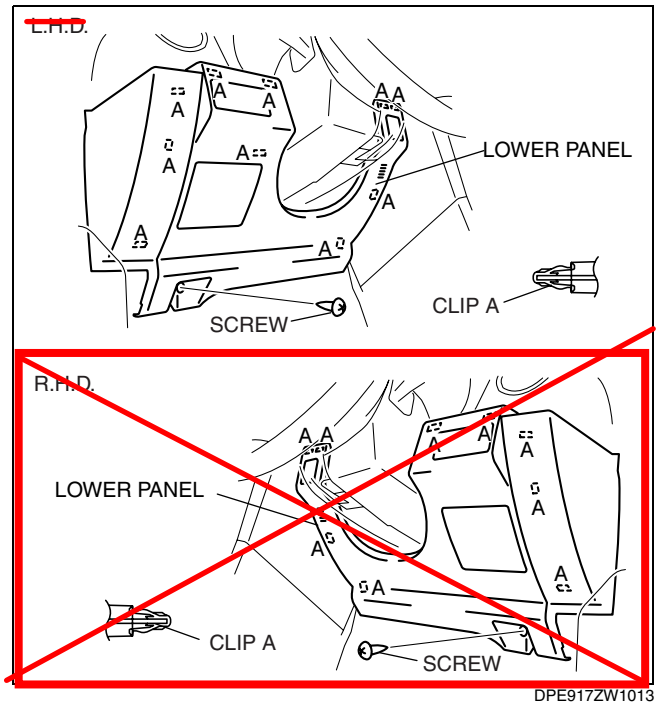
DPE917ZW1012

LOWER PANEL REMOVAL/INSTALLATION

DPE091755000W07

1. Disconnect the negative battery cable.
2. Partially peel back the seaming welt.
3. Remove the following parts:
(1) Front scuff plate inner (driver's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
(2) Front side trim (driver's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
(3) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
(4) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
(5) Bonnet release lever (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/

INSTALLATION.)
4. Remove the screw.
5. Pull the lower panel outward and detach clips A.
6. Disconnect the headlight leveling switch connector, DSC OFF switch connector, ~~and PSD front switch connector~~.
7. Remove the lower panel.
8. Install in the reverse order of removal.



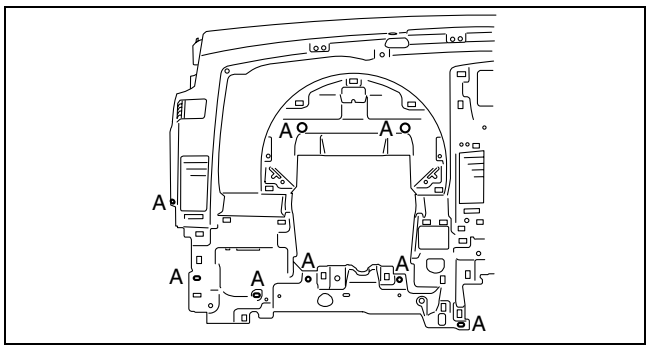
DPE917ZW1013

VENTILATOR GRILLE REMOVAL/INSTALLATION

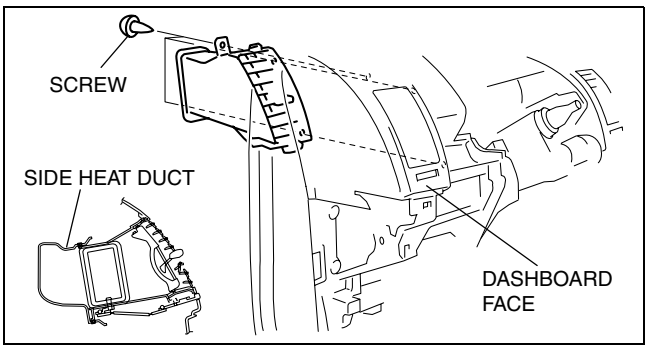
DPE091755000W08

Warning
- **Handling the air bag module improperly can accidentally operate (deploy) the air bag module, which may seriously injure you. Read the service warnings and cautions before handling the air bag module. (See 08–10–2 SERVICE WARNINGS.) (See 08–10–4 SERVICE CAUTIONS.)**

Driver's Side
1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front scuff plate inner (driver's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (driver's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (4) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (5) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)
   (6) Meter hood (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
   (7) Lower column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
   (8) Driver-side air bag module (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (9) Steering wheel (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
   (10)Instrument cluster (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
   (11)Duct
   (12)Steering shaft (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
3. Remove the screws at A in the figure.


DPE917ZW1014

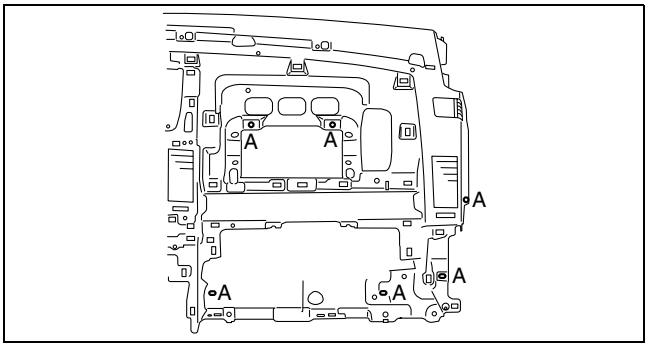
4. Remove the screw.
5. Pull the dashboard face outward to secure a space.
6. Pull the ventilator grille out.
7. Install in the reverse order of removal.



DPE917ZW1015

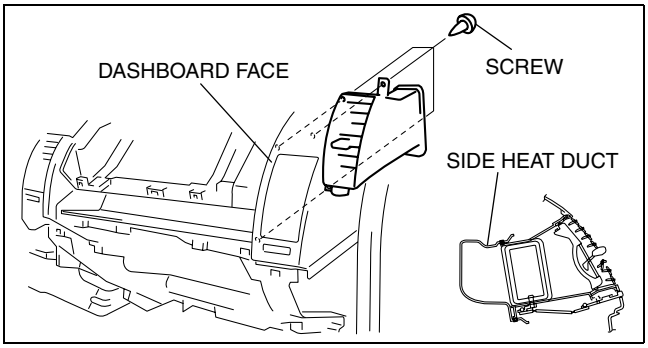
Passenger's Side

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front scuff plate inner (passenger's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (passenger's side). (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side panel (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (4) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (5) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (6) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
   (7) Center panel module ~~(vehicles with audio unit)~~ (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
   ~~(8) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)~~
   ~~(9) LCD unit (vehicles with car-navigation system) (See 09–20–8 LCD UNIT REMOVAL/INSTALLATION.)~~
   (10) Dashboard center panel ~~(vehicles without car-navigation system)~~ (See 09–17–12 DASHBOARD CENTER PANEL REMOVAL/INSTALLATION.)
   (11) Duct
   ~~(12) Car-navigation unit (vehicles with car-navigation system) (See 09–20–8 CAR-NAVIGATION UNIT REMOVAL/INSTALLATION.)~~
   (13) Passenger-side air bag module (See 08–10–6 PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (14) Dashboard garnish (See 09–17–13 DASHBOARD GARNISH REMOVAL/INSTALLATION.)
3. Remove the screws at A in the figure.



DPE917ZW1016

4. Remove the screw.
5. Pull the dashboard face outward to secure a space.
6. Pull the ventilator grille out.
7. Install in the reverse order of removal.



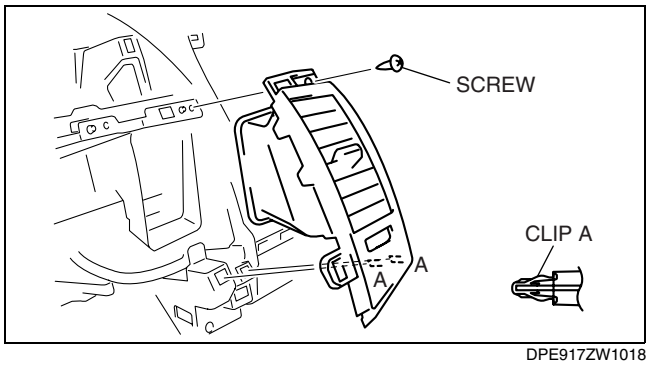
DPE917ZW1017

Center

1. Remove the following parts:

(1) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
(2) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
(3) Center panel module ~~(vehicles with audio unit)~~ (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
~~(4) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)~~
~~(5) LCD unit (vehicles with car-navigation system) (See 09–20–8 LCD UNIT REMOVAL/INSTALLATION.)~~
(6) Dashboard center panel ~~(vehicles without car-navigation system)~~ (See 09–17–12 DASHBOARD CENTER PANEL REMOVAL/INSTALLATION.)

2. Remove the screw.
3. Pull the center ventilator grille outward and detach clips A.
4. Remove the center ventilator grille.
5. Install in the reverse order of removal.

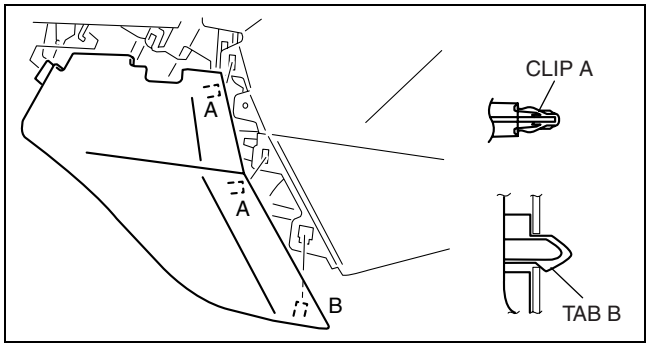


DPE917ZW1018

SIDE WALL REMOVAL/INSTALLATION

1. Detach clips A and tab B in the order of top to bottom.
2. Remove the side wall by pulling it outward.
3. Install in the reverse order of removal.

DPE091755000W09



DPE917ZW1019

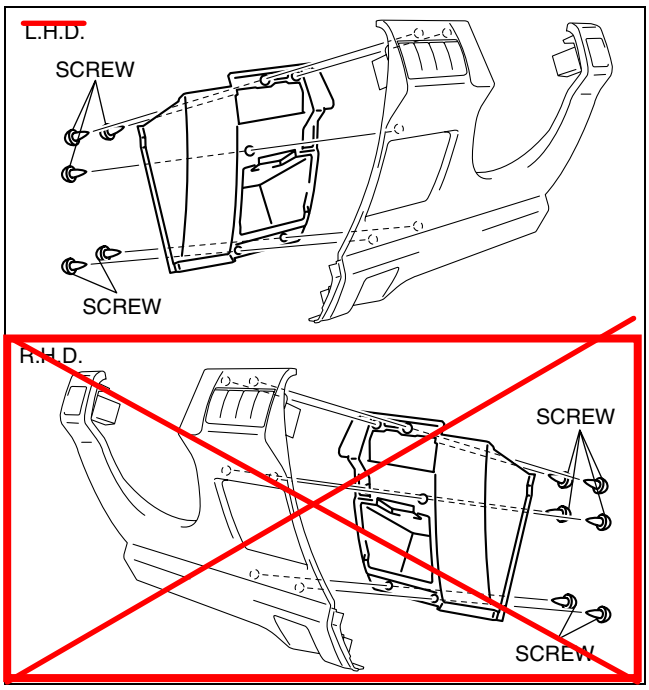
SIDE PANEL REMOVAL/INSTALLATION

DPE091755000W10

Driver's Side

1. Remove the following parts:
   (1) Front scuff plate inner (driver's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (driver's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (4) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (5) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)

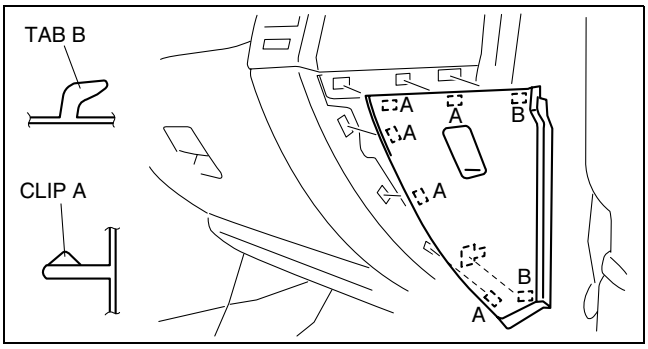
2. Remove the screws.
3. Remove the side panel from the lower panel.
4. Install in the reverse order of removal.



DPE917ZW1020

Passenger's Side

1. Pull the side panel outward and detach clips A.
2. Pull the side panel outward and detach tabs B from the dashboard.
3. Install in the reverse order of removal.

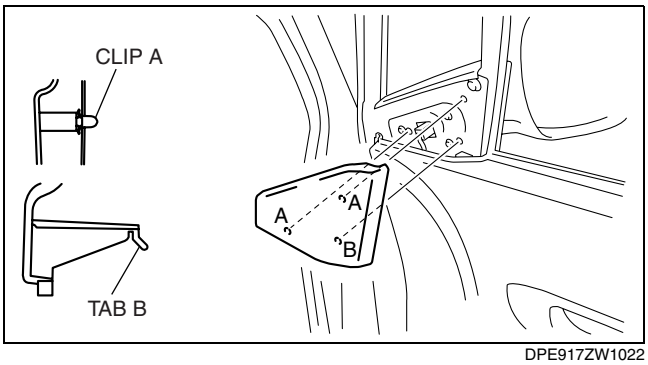


DPE917ZW1021

INNER GARNISH REMOVAL/INSTALLATION

DPE091768530W01

1. Disconnect the negative battery cable. (Vehicles with front tweeter)
2. Pull the inner garnish outward and detach clips A.
3. Disconnect the front tweeter connector. (Vehicles with front tweeter)
4. Detach tab B and remove the inner garnish.
5. Install in the reverse order of removal.



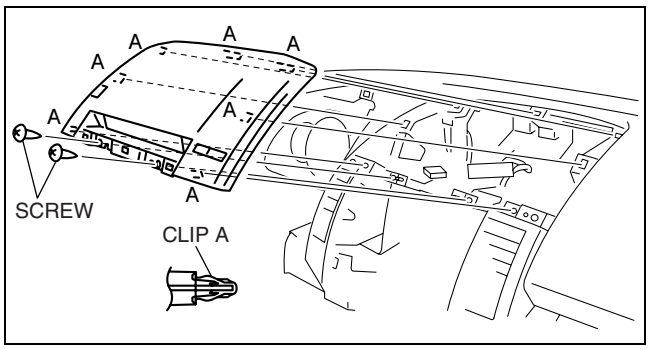
DPE917ZW1022

DASHBOARD CENTER PANEL REMOVAL/INSTALLATION

DPE091768530W02

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (2) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (3) Center panel module ~~(vehicles with audio unit)~~ (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
   ~~(4) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)~~

3. Remove the screws.
4. Pull the dashboard center panel outward and detach clips A.
5. Disconnect the hazard warning switch connector and information display connector.
6. Remove the dashboard center panel.
7. Install in the reverse order of removal.



DPE917ZW1023

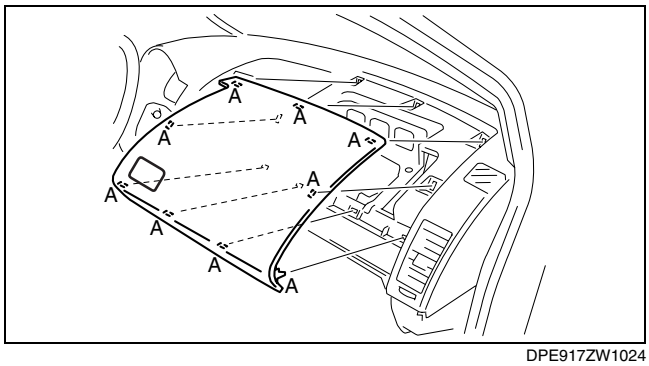
DASHBOARD GARNISH REMOVAL/INSTALLATION

DPE091768530W03

Warning

- **Handling the air bag module improperly can accidentally operate (deploy) the air bag module, which may seriously injure you. Read the service warnings and cautions before handling the air bag module. (See 08–10–2 SERVICE WARNINGS.) (See 08–10–4 SERVICE CAUTIONS.)**

1. Disconnect the negative battery cable and wait **1 min or more**.
2. Remove the following parts:
   (1) Front scuff plate inner (passenger's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (passenger's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side panel (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (4) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (5) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (6) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
   (7) Center panel module ~~(vehicles with audio unit)~~ (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
   ~~(8) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)~~
   ~~(9) LCD unit (vehicles with car-navigation system) (See 09–20–8 LCD UNIT REMOVAL/INSTALLATION.)~~
   (10) Dashboard center panel ~~(vehicles without car-navigation system)~~ (See 09–17–12 DASHBOARD CENTER PANEL REMOVAL/INSTALLATION.)
   ~~(11) Car-navigation unit (vehicles with car-navigation system) (See 09–20–8 CAR NAVIGATION UNIT REMOVAL/INSTALLATION.)~~
   (12) Passenger-side air bag module (See 08–10–6 PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
3. Pull the dashboard garnish outward and detach clips A.
4. Remove the PAD indicator. (vehicles with PAD switch) (See08–10–16 PASSENGER AIR BAG DEACTIVATION (PAD) SWITCH REMOVAL/INSTALLATION.)
5. Remove the dashboard garnish.
6. Install in the reverse order of removal.



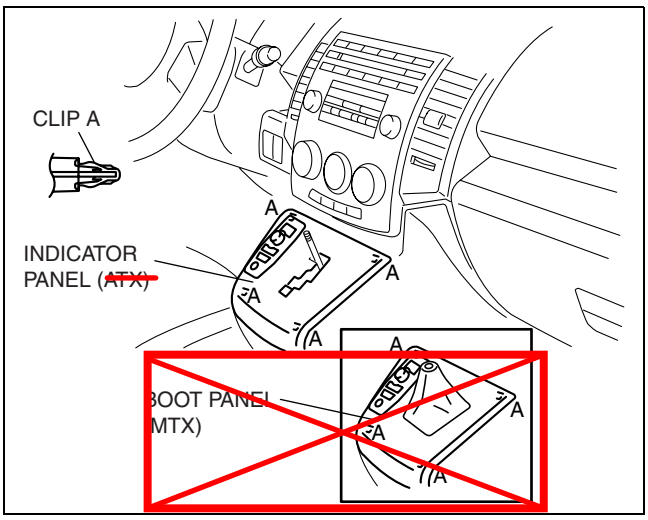
DPE917ZW1024

FRONT CONSOLE REMOVAL/INSTALLATION

DPE091764270W01

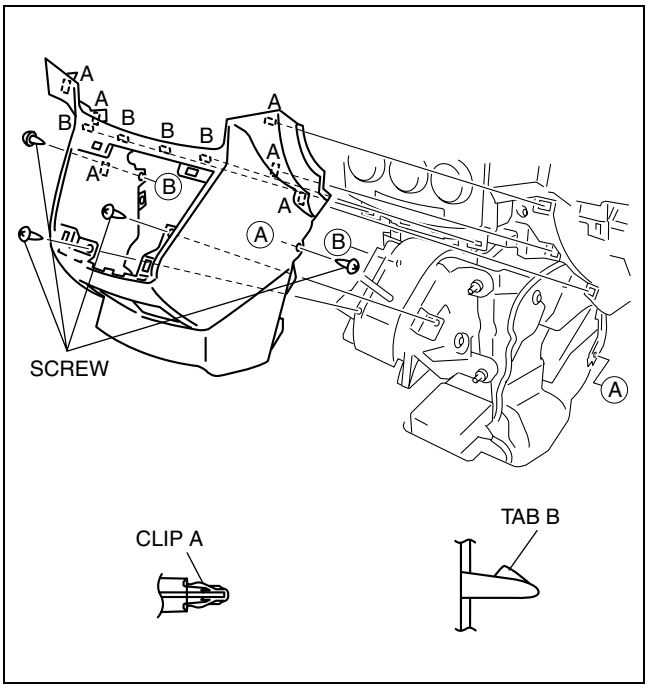
1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the selector lever knob ~~(ATX), shift lever knob (MTX)~~.

4. Pull the indicator panel ~~(ATX), boot panel (MTX)~~ upward and detach clips A.
5. ~~Disconnect the car-navigation control switch connector. (Vehicles with car-navigation system)~~
6. Remove the indicator panel.



DPE917ZW1025

7. Remove the screws.
8. Pull the front console outward and detach clips A and tabs B.
9. Disconnect the cigarette lighter connector.
10. Remove the front console.
11. Install in the reverse order of removal.

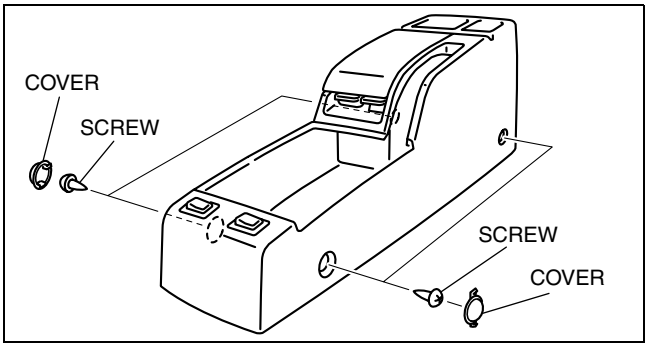


DPE917ZW1026

CENTER CONSOLE REMOVAL/INSTALLATION

DPE091764270W03

1. Disconnect the negative battery cable.
2. Remove the front cup holder. (See 09–17–15 CENTER CONSOLE DISASSEMBLY/ASSEMBLY.)
3. Remove the screws.
4. Disconnect the seat warmer switch connector. (Vehicles with seat warmer)
5. Remove the center console.
6. Install in the reverse order of removal.



DPE917ZW1055

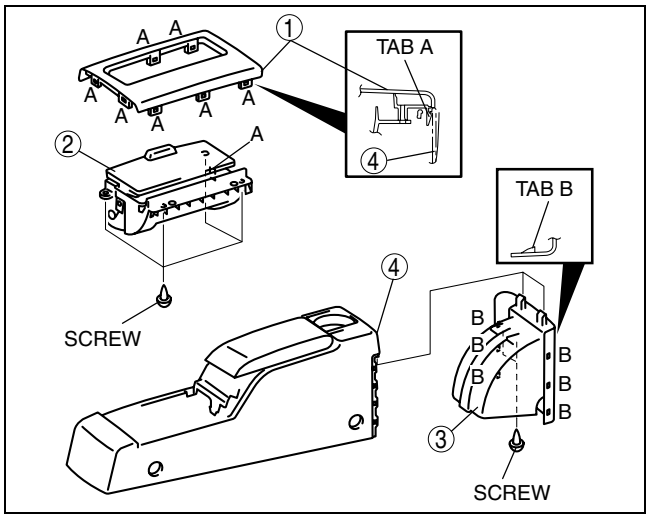
CENTER CONSOLE DISASSEMBLY/ASSEMBLY

DPE091764270W04

1. Disassemble in the order indicated in the table.

1	Upper panel
2	Front cup holder
3	Rear cup holder
4	Center console

2. Assemble in the reverse order of disassembly.

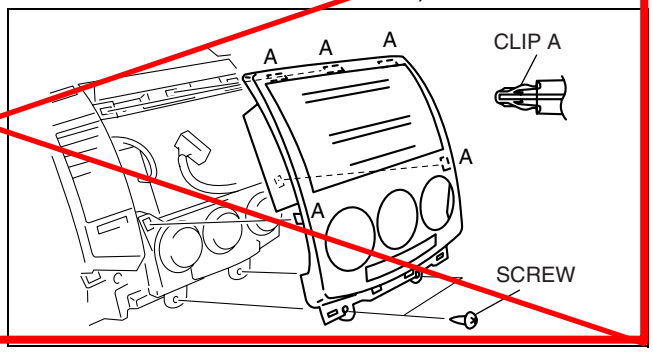


DPE917ZW1056

CENTER PANEL REMOVAL/INSTALLATION

DPE091755000W1

1. Remove the side wall. (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
2. Remove the front console. (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
3. Remove the screws.
4. Pull the center panel outward and detach clips A.
5. Remove the center panel.
6. Install in the reverse order of removal.

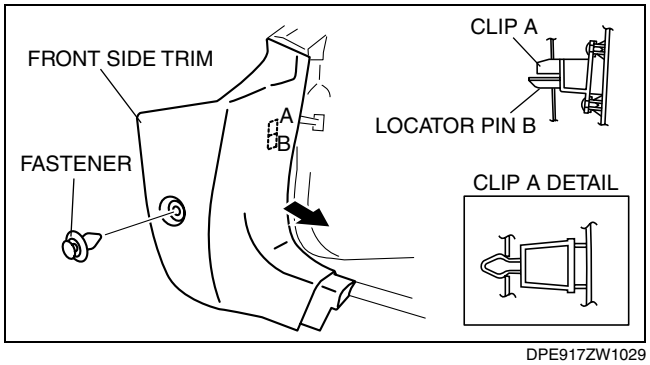


DPE917ZW1028

FRONT SIDE TRIM REMOVAL/INSTALLATION

DPE091768370W01

1. Remove the front scuff plate inner. (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
2. Remove the fastener.
3. Pull the front side trim in the direction shown by the arrow, then detach clip A and locator pin B.
4. Install in the reverse order of removal.



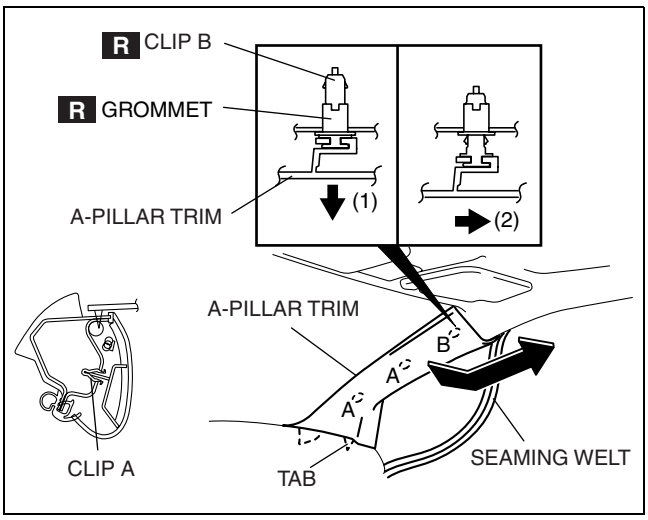
DPE917ZW1029

A-PILLAR TRIM REMOVAL/INSTALLATION

DPE091768150W01

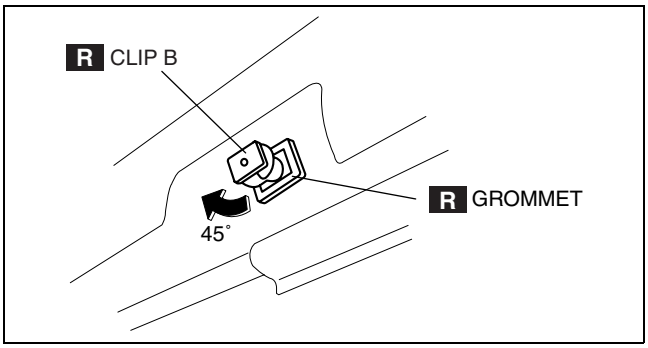
1. Partially peel back the seaming welt.
2. Remove clips A using a fastener remover.
3. Pull the A-pillar trim outward and remove clip B from the grommet (1).

4. Slide the A-pillar trim upward and remove clip B from the A-pillar trim (2).



DPE917ZW1030

5. Pull clip B out and rotate it **45**°.
6. Pull clip B and remove it from the grommet.
7. Install in the reverse order of removal.

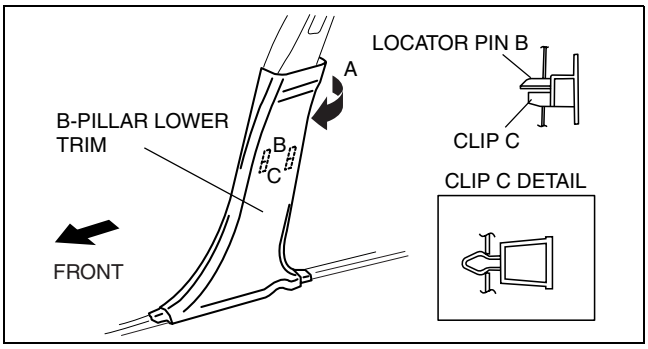


DPE917ZW1031

B-PILLAR LOWER TRIM REMOVAL/INSTALLATION

DPE091768150W02

1. Remove the front scuff plate inner. (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
2. Remove the rear scuff plate. (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
3. Partially peel back the seaming welt.
4. Remove one side of the B-pillar lower trim by pulling A part of the B-pillar lower trim.
5. Pull the B-pillar lower trim outward and detach clip C and locator pin B.
6. Remove the B-pillar lower trim.
7. Install in the reverse order of removal.



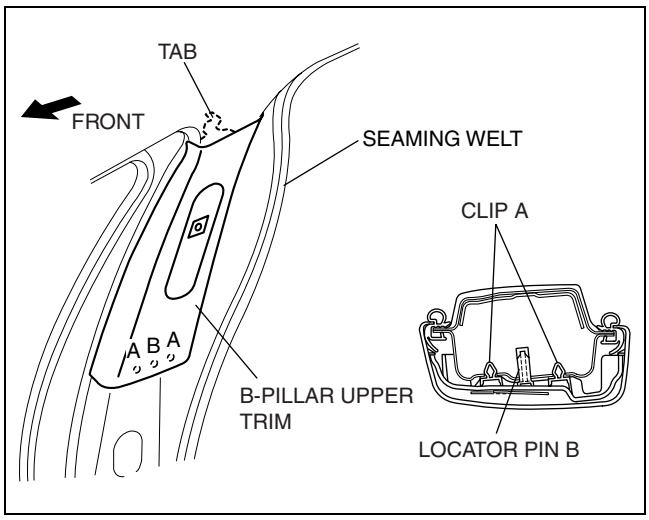
DPE917ZW1032

B-PILLAR UPPER TRIM REMOVAL/INSTALLATION

DPE091768150W03

1. Remove the following parts:
   (1) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
2. Partially peel back the seaming welt.

3. Pull the B-pillar upper trim outward and detach clips A and locator pin B.
4. Detach the tab from the body and remove the B-pillar upper trim.
5. Install in the reverse order of removal.

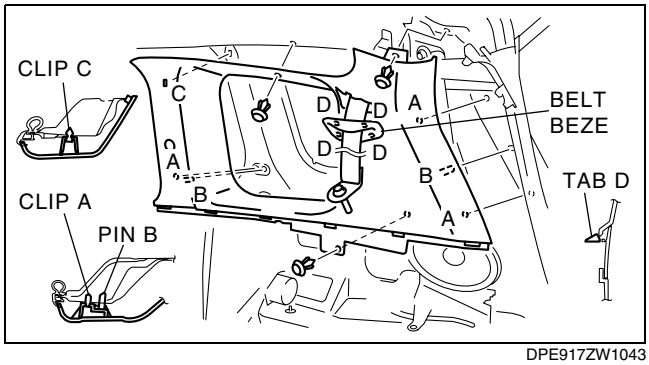


DPE917ZW1033

C-PILLAR TRIM REMOVAL/INSTALLATION

DPE091768150W04

1. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Sub-trunk
   (3) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (4) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (5) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (6) Third-row seat belt lower anchor installation bolt (7-passenger model) (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (7) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (8) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (9) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (10) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
2. Partially peel back the seaming welt.
3. Remove the fastener.
4. Remove clips A, and pins B using a fastener remover.
5. Remove the belt bezel, and remove the third-row seat belt from the C-pillar trim. ~~(7-passenger model)~~
6. Slide the C-pillar trim to the vehicle front and remove clips C from the C-pillar trim.
7. Remove the C-pillar trim.
8. Remove clips C from the body, then install it to the C-pillar trim.
9. Install in the reverse order of removal.

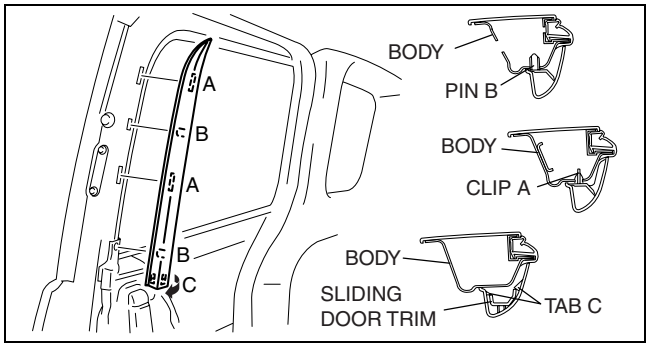


DPE917ZW1043

SIDE DOOR GARNISH REMOVAL/INSTALLATION

DPE091768530W04

1. Pull the side door garnish outward and detach clips A and pins B.
2. Remove one side of the side door garnish by pulling C part of the side door garnish.
3. Pull the side door garnish outward and remove it.
4. Install in the reverse order of removal.



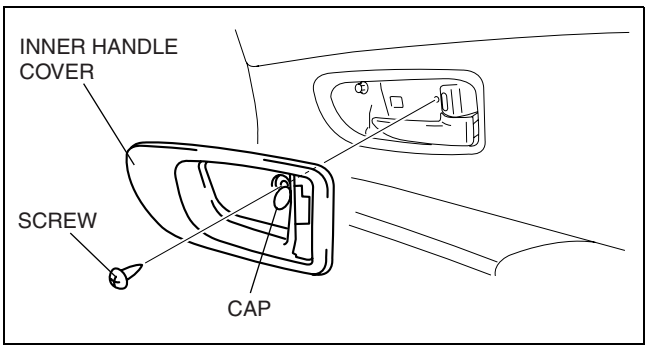
DPE917ZW1034

FRONT DOOR TRIM REMOVAL/INSTALLATION

DPE091768400W01

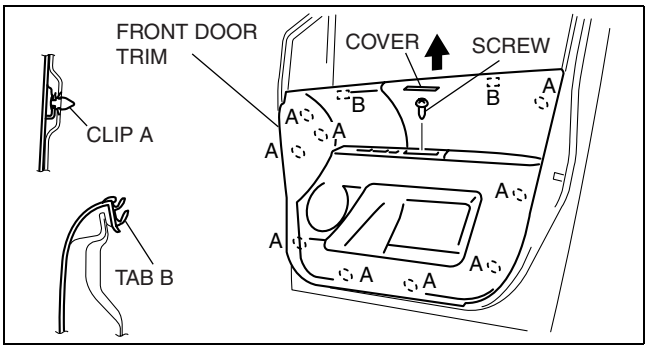
1. Disconnect the negative battery cable.
2. Open the cap using a small flathead screwdriver and remove the screw.

3. Remove the inner handle cover.
4. Remove the inner garnish. (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)



DPE917ZW1035

5. Pull up the cover and remove the screw.
6. Detach clips A from the front door using a fastener remover.
7. Pull the front door trim upward and detach tabs B from the front door.
8. Disconnect the power window main switch connector and the power outer mirror switch connector. (Driver's side)
9. Disconnect the power window subswitch connector. (Passenger's side)
10. Remove the front door trim.
11. Install in the reverse order of removal.

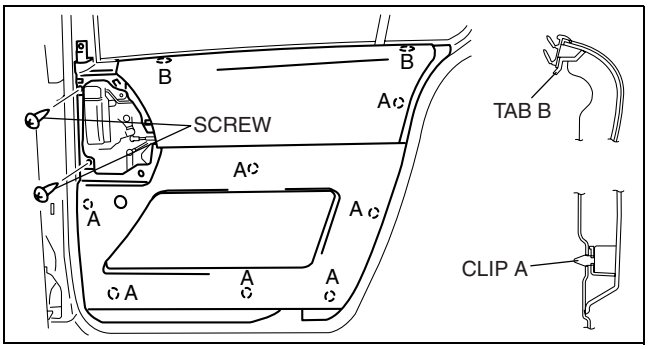


DPE917ZW1036

SLIDING DOOR TRIM REMOVAL/INSTALLATION

DPE091768580W01

1. Disconnect the negative battery cable.
2. Remove the rear side trim. (See 09–17–18 REAR SIDE TRIM REMOVAL/INSTALLATION.)
3. Disconnect the power window subswitch connector. (vehicles with power window system)
4. Remove the side door garnish. (See 09–17–17 SIDE DOOR GARNISH REMOVAL/INSTALLATION.)
5. Remove the screws.
6. Remove clips A from the sliding door using a fastener remover.
7. Pull the sliding door trim upward and detach tabs B from the sliding door.
8. Remove the sliding door trim.
9. Install in the reverse order of removal.

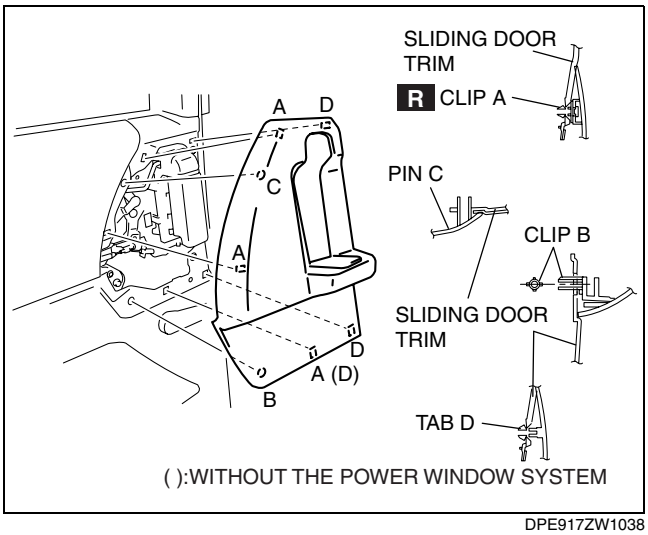


DPE917ZW1037

REAR SIDE TRIM REMOVAL/INSTALLATION

DPE091768580W02

1. Pull the rear side trim outward and detach clips A and B, pin C, and tabs D.
2. Disconnect the power window subswitch connector. (Vehicle with power window system)
3. Remove the rear side trim.
4. Install in the reverse order of removal.



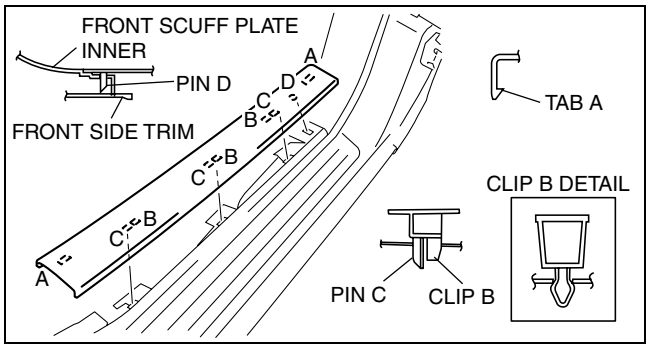
DPE917ZW1038

FRONT SCUFF PLATE REMOVAL/INSTALLATION

DPE091767870W01

Front Scuff Plate Inner

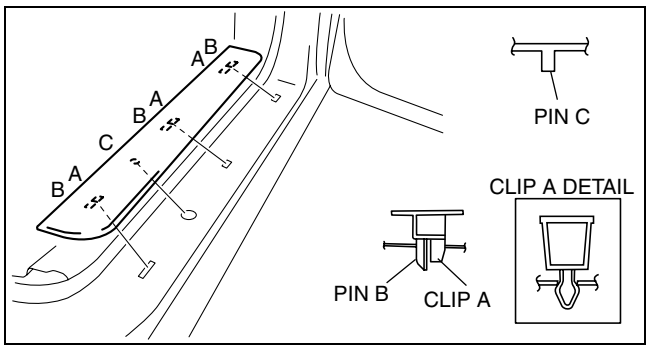
1. Pull the front scuff plate inner upward while detaching tabs A, detach clips B, pins C and D from the body, and then remove the front scuff plate inner.
2. Install in the reverse order of removal.



DPE917ZW1039

Front Scuff Plate Outer

1. Pull the front scuff plate outer upward, detach clips A, pins B and C from the body, and then remove the front scuff plate outer.
2. Install in the reverse order of removal.

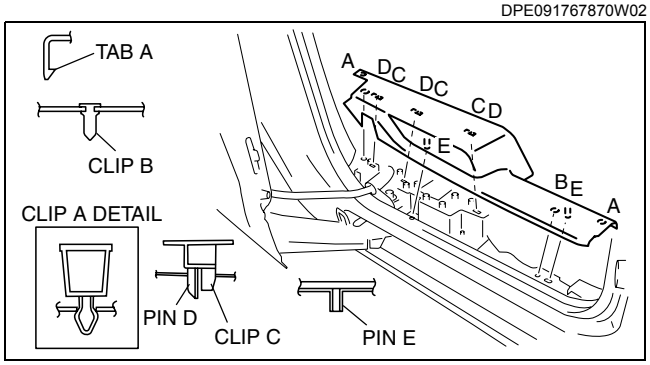


DPE917ZW1040

REAR SCUFF PLATE REMOVAL/INSTALLATION

DPE091767870W02

1. Pull the rear scuff plate upward while detaching tabs A, detach clips B and C, and pin D and E from the body, and then remove the rear scuff plate.
2. Install in the reverse order of removal.



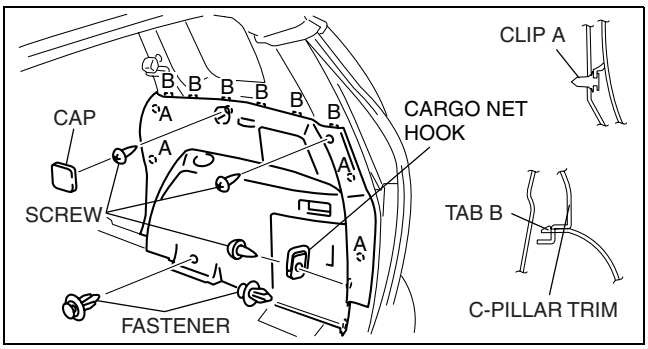
DPE917ZW1041

TRUNK SIDE TRIM REMOVAL/INSTALLATION

DPE091768810W01

1. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Sub-trunk
   (3) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (4) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (5) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (6) Third-row seat belt lower anchor installation bolt ~~(7-passenger model)~~ (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (7) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)

2. Remove the screws or the fasteners, and remove the cargo net hook.
3. Pull the trunk side trim outward and detach clips A and tabs B.
4. Disconnect the accessory socket connector.
5. Disconnect the auxiliary terminal connector. (vehicles with RES)
6. Remove the trunk side trim.
7. Install in the reverse order of removal.

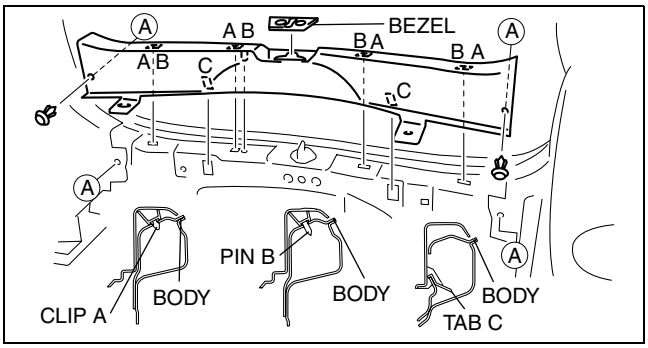


DPE917ZW1042

TRUNK END TRIM REMOVAL/INSTALLATION

DPE091768810W03

1. Remove the sub-trunk.
2. Remove the fastener.
3. Pull the trunk end trim upward, then detach clips A, pins B, and tabs C.
4. Remove the trunk end trim.
5. Install in the reverse order of removal.

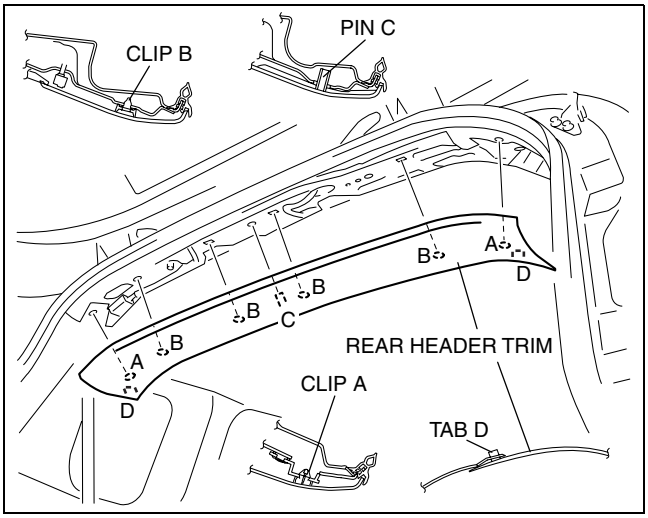


DPE917ZW1044

REAR HEADER TRIM REMOVAL/INSTALLATION

DPE091768810W04

1. Pull the rear header trim and detach clips A and B, pin C, and tabs D.
2. Remove the rear header trim.
3. Install in the reverse order of removal.



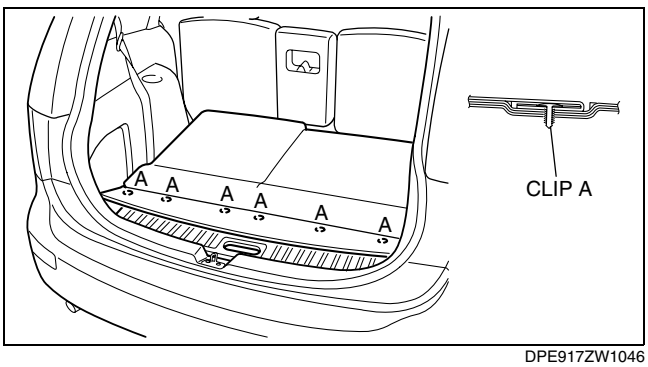
DPE917ZW1045

REAR PACKAGE TRAY LID REMOVAL/INSTALLATION

DPE091768810W05

7-Passenger Model

1. Detach clips A.
2. Remove the rear package tray lid.
3. Install in the reverse order of removal.



DPE917ZW1046

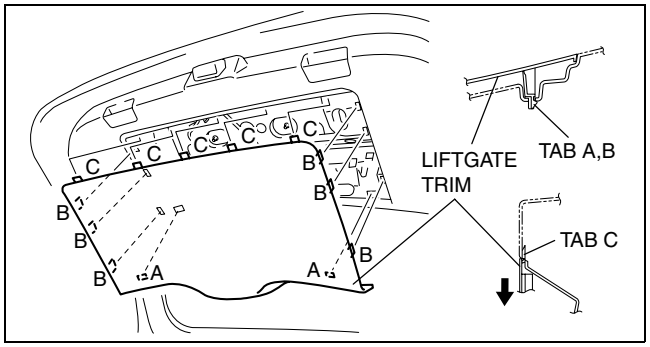
5-Passenger Model

1. Partially peel back the magic tape.
2. Remove the rear package tray lid.
3. Install in the reverse order of removal.

LIFTGATE TRIM REMOVAL/INSTALLATION

1. Detach tabs A.
2. Detach tabs B.
3. Pull the liftgate trim in the direction shown by the arrow and detach tabs C.
4. Remove the liftgate trim.
5. Install in the reverse order of removal.

DPE091768940W01

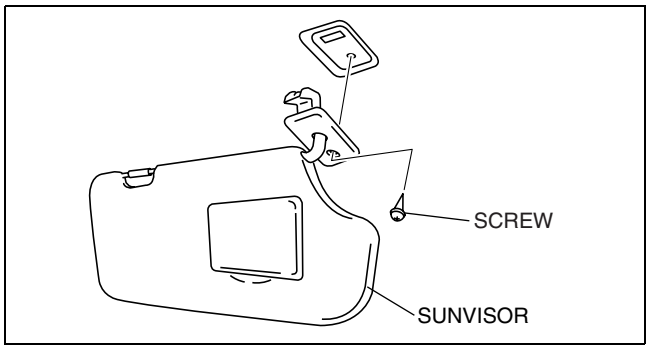


DPE917ZW1047

SUNVISOR REMOVAL/INSTALLATION

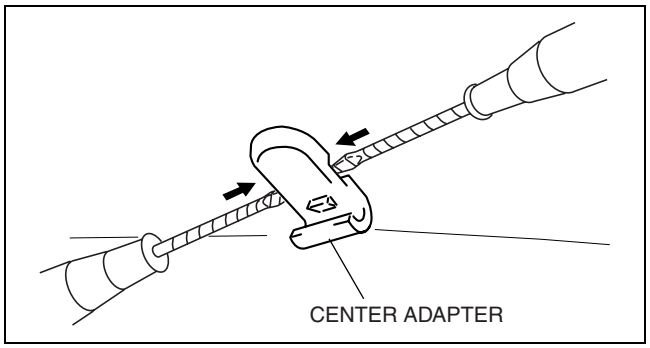
1. Remove the screw.
2. Unhook and remove the sunvisor.

DPE091768140W01



DPE917ZW1048

3. Press the center adaptor tabs as shown in the figure using two tape-wrapped flathead screwdrivers, and remove the center adaptor.
4. Install in the reverse order of removal.

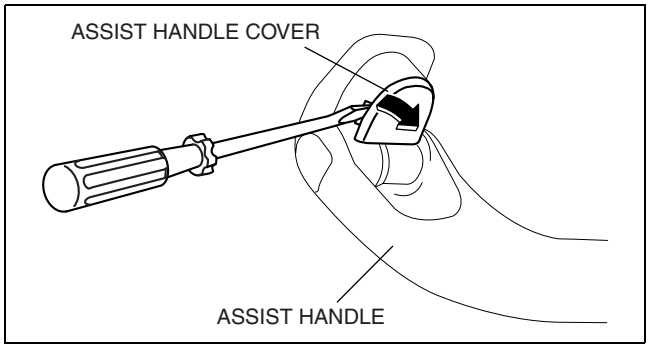


DPE917ZW1049

ASSIST HANDLE REMOVAL/INSTALLATION

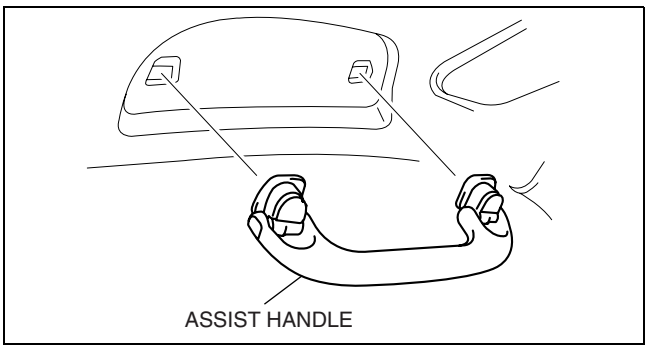
1. Insert a flathead screwdriver into the assist handle notch and remove the assist handle covers.

DPE091768140W02



DPE917ZW1050

2. Pull the assist handle outward and remove it.
3. Install in the reverse order of removal.

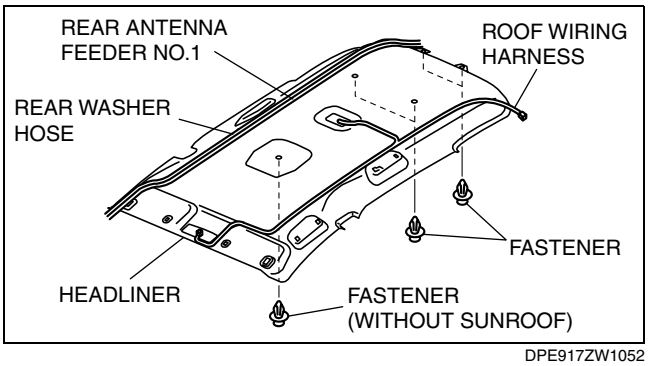


DPE917ZW1051

HEADLINER REMOVAL/INSTALLATION

DPE091768140W03

1. Disconnect the negative battery cable.
2. Partially peel back the seaming welt.
3. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (8) Sub-trunk
   (9) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (10) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (11) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (12) Third-row seat belt lower anchor installation bolt ~~(7-passenger model)~~ (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (13) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (16) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   ~~(17) RES unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)~~
   (18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (19) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (20) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
4. Disconnect the roof wiring harness connector and detach the roof wiring harness connector clip from the body.
5. Disconnect the rear washer hose.
6. Disconnect the antenna feeder.
7. Remove the seaming welt. (vehicles with sunroof)
8. Remove the fasteners.
9. Take the headliner out from the opened liftgate.
10. Install in the reverse order of removal.



DPE917ZW1052

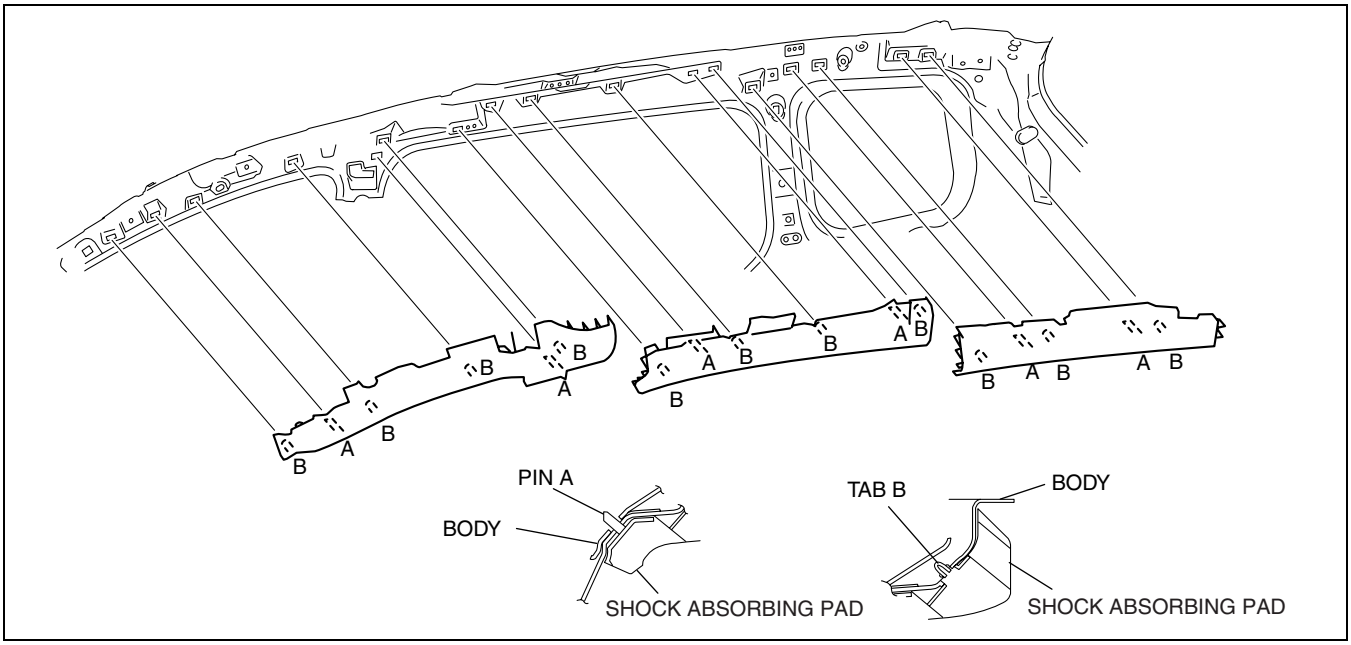
SHOCK ABSORBING PAD REMOVAL/INSTALLATION

DPE091700113W01

1. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/

INSTALLATION.)
(6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
(7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
(8) Sub-trunk
(9) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
(10) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
(11) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
(12) Third-row seat belt lower anchor installation bolt ~~(7-passenger model)~~ (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
(13) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
(14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
(15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
(16) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
~~(17) RES unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)~~
(18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
(19) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
(20) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
(21) Headliner (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)

2. Pull the shock-absorbing pad outward and detach pins A and tabs B.
3. Remove the shock-absorbing pad.



DPE917ZW1053

4. Install in the reverse order of removal.

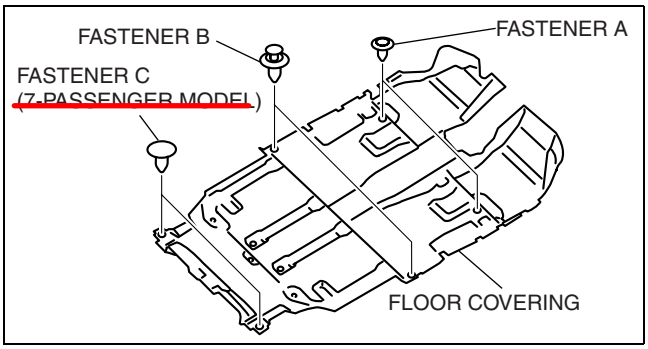
FLOOR COVERING REMOVAL/INSTALLATION

DPE091768660W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
(1) Front seat (See 09–13–1 FRONT SEAT REMOVAL/INSTALLATION.)
(2) Second-row seat (See 09–13–5 SECOND-ROW SEAT REMOVAL/INSTALLATION.)
(3) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
(4) Sub-trunk
(5) Third-row seat ~~(7-passenger model)~~ (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
(6) Center console (See 09–17–14 CENTER CONSOLE REMOVAL/INSTALLATION.)
(7) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
(8) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
(9) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
(10) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
(11) Dust cover (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
(12) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
(13) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
(14) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
(15) Third-row seat belt lower anchor installation bolt ~~(7-passenger model)~~ (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)

(16)Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
(17)Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

3. Remove fastener A, B, and C.
4. Take the floor covering out from the opened liftgate.
5. Install in the reverse order of removal.



DPE917ZW1054

09–18 LIGHTING SYSTEMS

LIGHTING SYSTEMS LOCATION INDEX

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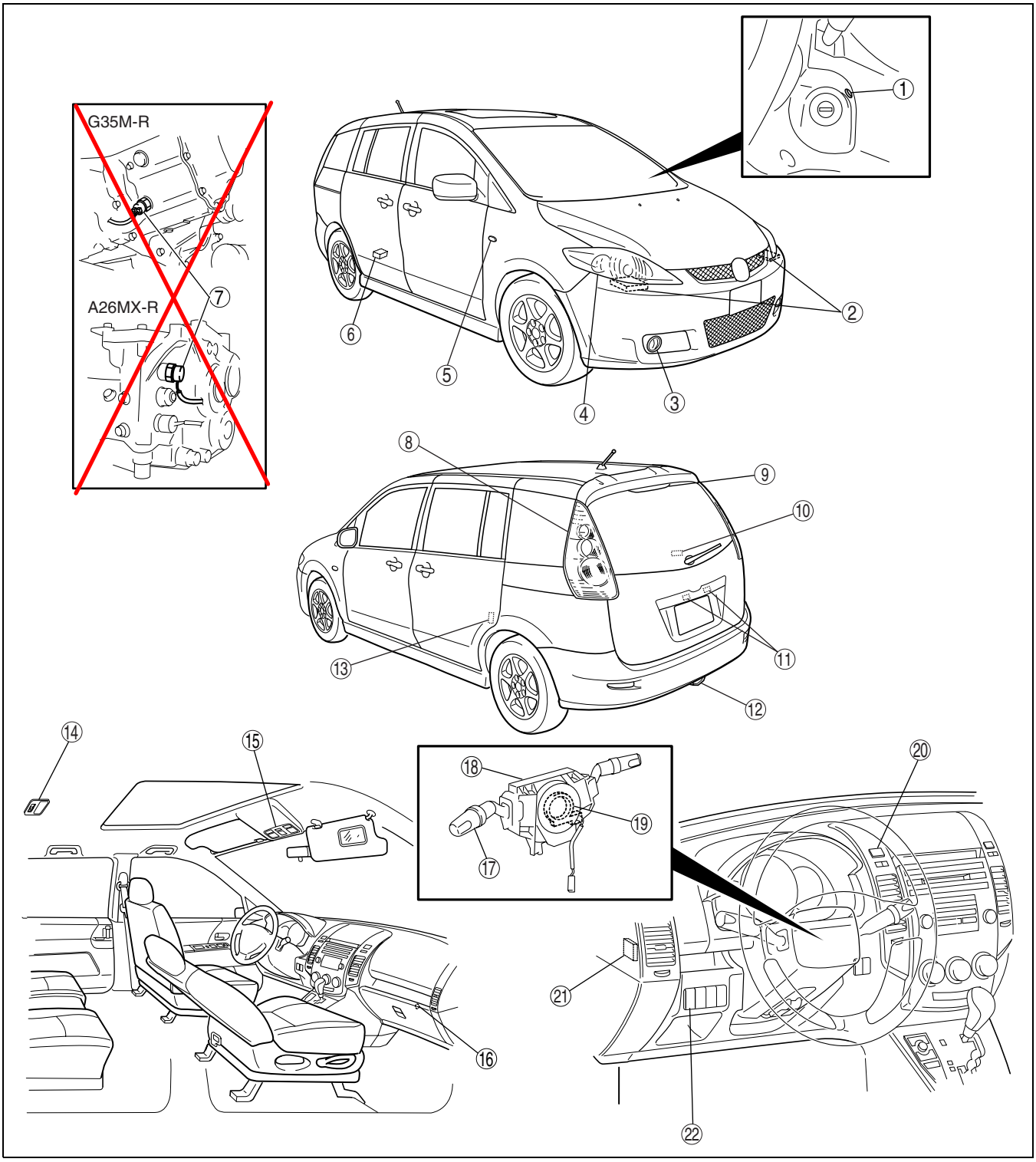


DPE918ZW1001

1	Ignition key illumination (See 09–18–29 IGNITION KEY ILLUMINATION BULB REMOVAL/INSTALLATION.)
2	Discharge headlight control module (See 09–18–7 DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION.) (See 09–18–8 DISCHARGE HEADLIGHT SYSTEM INSPECTION.)

3	Front fog light (See 09–18–10 FRONT FOG LIGHT REMOVAL/INSTALLATION.) (See 09–18–11 FRONT FOG LIGHT AIMING.) (See 09–18–11 FRONT FOG LIGHT BULB REMOVAL/INSTALLATION.)

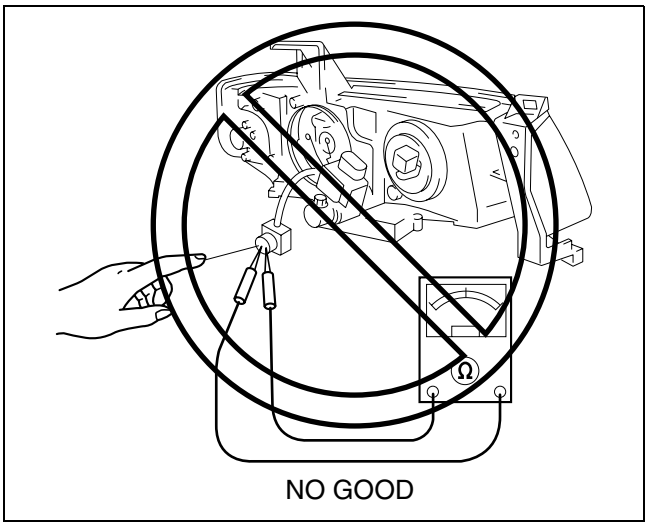
4	Front combination light (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.) (See09–18–5 FRONT COMBINATION LIGHT BRACKET REPLACEMENT.) (See 09–18–6 HEADLIGHT AIMING.) (See 09–18–6 HEADLIGHT BULB REMOVAL/INSTALLATION.) (See 09–18–10 PARKING LIGHT BULB REMOVAL/INSTALLATION.) (See 09–18–10 FRONT TURN LIGHT BULB REMOVAL/INSTALLATION.) (See 09–18–4 DISCHARGE HEADLIGHT SERVICE WARNINGS.)
5	Front side turn light (See 09–18–12 FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION.)
6	Auto leveling sensor (See 09–18–14 AUTO LEVELING SENSOR REMOVAL/INSTALLATION.) (See 09–18–14 AUTO LEVELING SENSOR INSPECTION.)
7	Back-up light switch (MTX) (See 09–18–17 BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION [G35M-R].) (See 09–18–17 BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION [A26MX-R].) (See 09–18–17 BACK-UP LIGHT SWITCH INSPECTION [G35M-R].) (See 09–18–18 BACK-UP LIGHT SWITCH INSPECTION [A26MX-R].)
8	Rear combination light (See 09–18–12 REAR COMBINATION LIGHT REMOVAL/INSTALLATION.)
9	High-mount brake light (See 09–18–13 HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION.)
10	Cargo compartment light (See09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION) (See09–18–28 CARGO COMPARTMENT LIGHT INSPECTION)
11	License plate light (See 09–18–13 LICENSE PLATE LIGHT REMOVAL/INSTALLATION.)
12	Rear fog light (See 09–18–11 REAR FOG LIGHT REMOVAL/INSTALLATION.)
13	Door switch (See09–18–28 DOOR SWITCH REMOVAL/INSTALLATION) (See09–18–29 DOOR SWITCH INSPECTION)
14	Interior light (See 09–18–26 INTERIOR LIGHT REMOVAL/INSTALLATION.) (See 09–18–27 INTERIOR LIGHT INSPECTION.)
15	Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.) (See 09–18–25 MAP LIGHT INSPECTION.)
16	Glove compartment light (See 09–18–27 GLOVE COMPARTMENT LIGHT BULB REMOVAL/INSTALLATION.)
17	Light switch (See 09–18–22 LIGHT SWITCH REMOVAL/INSTALLATION.) (See 09–18–23 LIGHT SWITCH INSPECTION.) (See 09–18–20 FRONT AND REAR FOG LIGHT SWITCH INSPECTION.)
18	Combination switch (See 09–18–18 COMBINATION SWITCH REMOVAL/INSTALLATION.) (See 09–18–19 COMBINATION SWITCH DISASSEMBLY/ASSEMBLY.)
19	Steering angle sensor (See09–18–19 STEERING ANGLE SENSOR INSPECTION)
20	Hazard warning switch (See 09–18–20 HAZARD WARNING SWITCH REMOVAL/INSTALLATION.) (See 09–18–21 HAZARD WARNING SWITCH INSPECTION.)
21	Auto leveling control module (See 09–18–14 AUTO LEVELING CONTROL MODULE REMOVAL/INSTALLATION.) (See09–18–15 AUTO LEVELING SYSTEM INITIALIZATION.)
22	Headlight leveling switch (See 09–18–21 HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION.) (See 09–18–22 HEADLIGHT LEVELING SWITCH INSPECTION.)

DISCHARGE HEADLIGHT SERVICE WARNINGS

DPE091800000W02

DISCHARGE HEADLIGHT BULB SERVICE WARNINGS

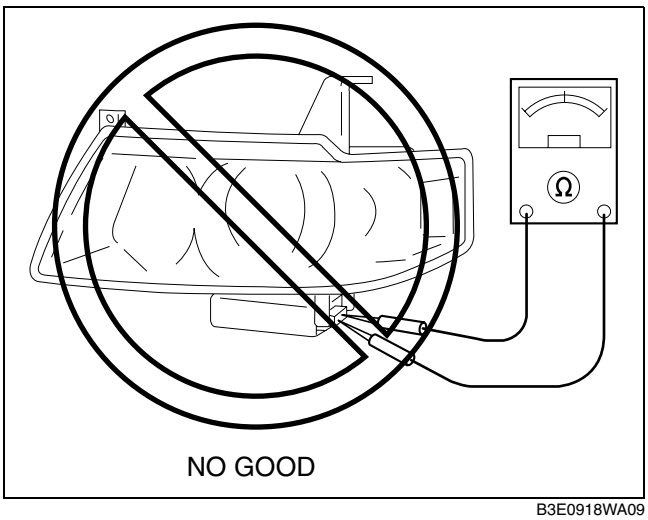
- **To prevent electrical shock when replacing the discharge headlight bulb, dry hands thoroughly, and perform the work in an area out of rain.**
- **When the light switch is on, approx. 25,000 V of high voltage passes through the discharge headlight bulb socket. Because of the danger of electrical shock, do not insert fingers or a tester.**
- **When the headlights are on, high voltage flows around the socket and bulb. When turning on the discharge headlights while working, always leave the headlights in the vehicle-installed condition to prevent electrical shock.**



B3E0918WA08

DISCHARGE HEADLIGHT CONTROL MODULE SERVICE WARNINGS

- **Because of the danger of electrical shock, when inspecting with a tester, do not inspect the discharge headlight control module as a single unit or disassemble it.**



B3E0918WA09

DISCHARGE HEADLIGHT CONTROL MODULE REUSE

- **If the discharge headlight control module is dented or damaged in any way, replace the module with a new one to prevent electrical shock and improper operation.**
- **Although the control module may temporarily operate normally even though it has received an impact, it is possible that the interior may have been damaged. When reusing the control module, inspect the following items regarding discharge headlight illumination to verify that there are no malfunctions.**
  - **— Verify that the discharge headlights illuminate normally by testing them several times under cold illumination (headlights off for approx. 10 min or more and then turned on) and hot illumination (headlights on for approx. 15 min or more, turned off for approx. 1 min, and then turned on again) conditions.**
  - **— Inspect the headlight illumination in the period from directly after cold illumination until they are uniformly illuminated (approx. 5 min) and verify that there is no flickering or inconsistent brightness.**
  - **— Turn on the headlights for approx. 30 min with normal condition bulbs and verify that there is no brightness difference between the right and left, and that illumination is consistent.**

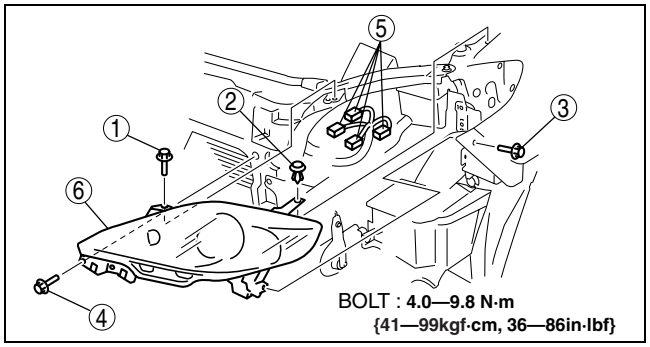
FRONT COMBINATION LIGHT REMOVAL/INSTALLATION

DPE091851060W01

Warning

- **Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See 09–18–4 DISCHARGE HEADLIGHT SERVICE WARNINGS.)**

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



DPE918ZW1002

1	Bolt A
2	Fastener
3	Bolt B
4	Bolt C
5	Connector
6	Front combination light

4. Install in the reverse order of removal.
5. Adjust the headlight aiming. (See09–18–6 HEADLIGHT AIMING)

FRONT COMBINATION LIGHT BRACKET REPLACEMENT

DPE091851060W02

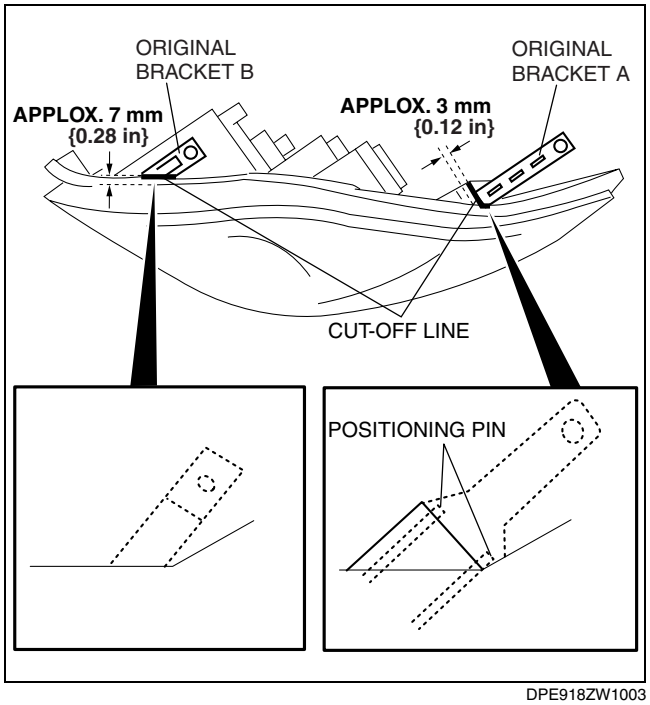
Note
- Verify that the front combination light is not damaged before using the repair bracket for installation when the original brackets are damaged. If the front combination light component is damaged, replace the light as a single unit.

1. Cut off the front combination light brackets at the locations shown in the figure.

Caution
- **Be careful not to cut off the positioning pin.**

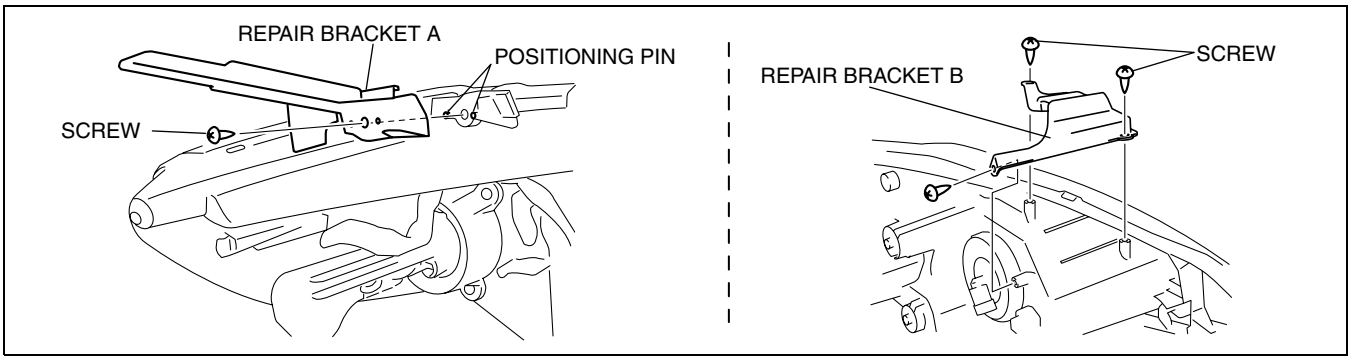
Note
- After roughly cutting off the brackets, position the repair bracket using the positioning pins, and gradually smoothen any rough areas to create a shape that facilitates installation.

2. Smoothen the cut surfaces using sandpaper so that the repair bracket can be properly installed.



DPE918ZW1003

3. Securely attach the repair bracket to the front combination light using the screws.

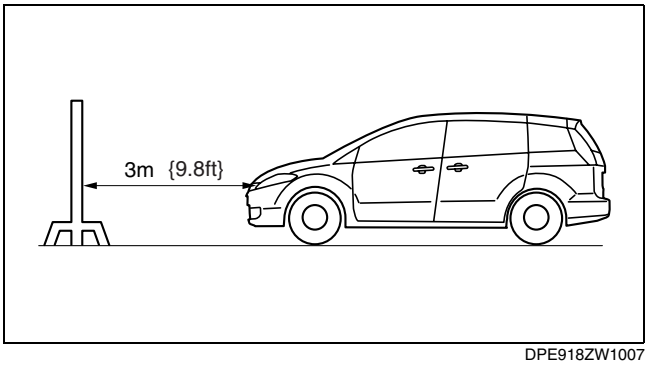


DPE918ZW1004

HEADLIGHT AIMING

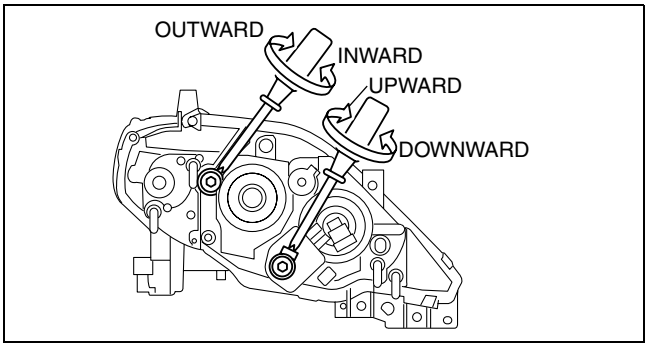
DPE091851030W01

1. Adjust the tire pressure to the specification.
2. Position the unloaded vehicle on a flat, level surface.
3. Seat one person in the driver's seat.
4. Position the vehicle straight ahead and perpendicular to the white screen.
5. Set the headlights **3 m {9.8 ft}** from the white screen.
6. Place an object in front of the headlight not being adjusted to block its light beam.
7. Start the engine so that the battery remains charged.
8. Turn on the low-beam headlight.
9. Set the headlight leveling switch to the 0 position. (Vehicles with discharge headlights)

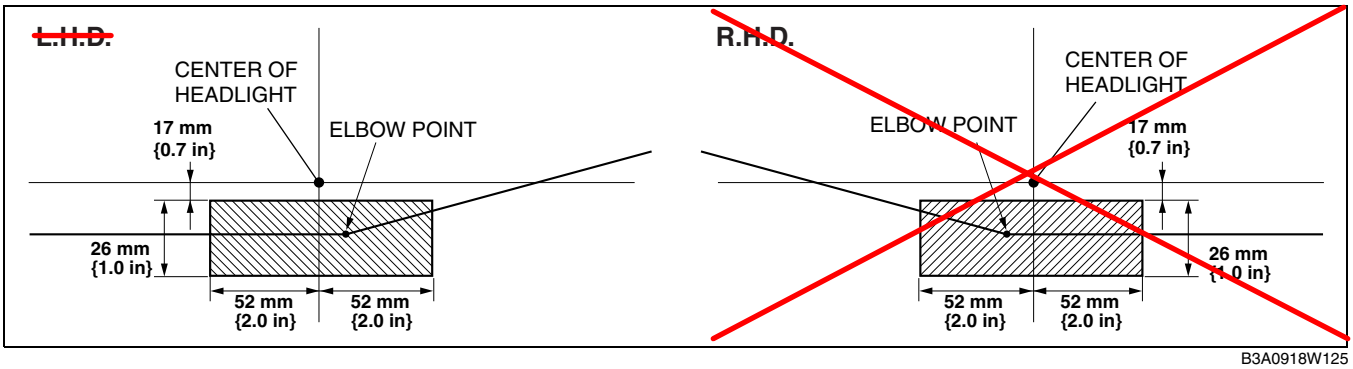


DPE918ZW1007

10. Adjust the headlight by loosening the adjusting screws as shown in the figure.
11. Turn the adjusting screws to adjust the headlight so that the elbow point is in the shaded area shown in the figure.



DPE918ZW1008



B3A0918W125

HEADLIGHT BULB REMOVAL/INSTALLATION

DPE091851030W02

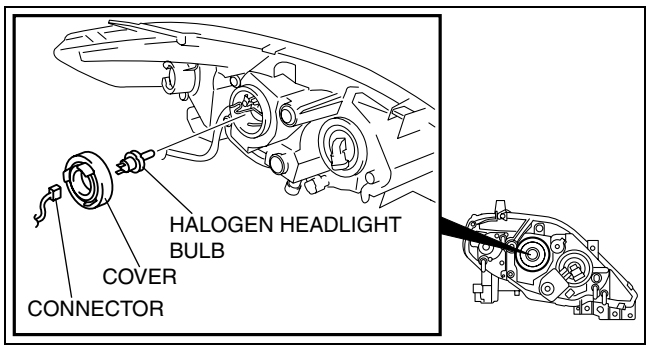
Low-beam
Halogen type

1. Disconnect the negative battery cable.

2. Disconnect the connector.

Caution
- **A halogen bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When replacing the bulb, hold the metal flange, not the glass.**

3. Remove the cover.
4. Remove the socket, then remove the headlight bulb.
5. Install in the reverse order of removal.



DPE918ZW1012

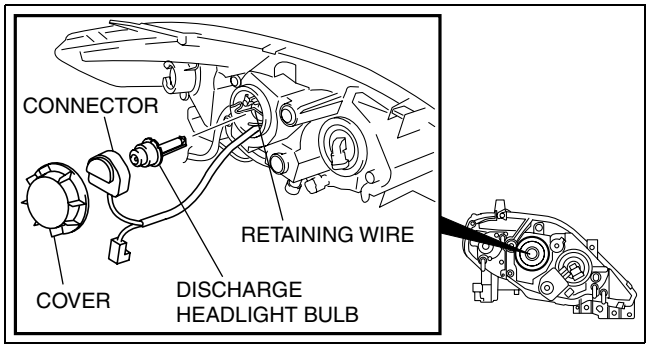
Discharge type

Warning
- **Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See 09–18–4 DISCHARGE HEADLIGHT SERVICE WARNINGS.)**

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove the front combination light. (See09–18–4 FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
4. Remove the cover.

Caution
- **The bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When replacing the bulb, hold the metal flange, not the glass.**

5. Remove the connector, then remove the discharge headlight bulb.
6. Install in the reverse order of removal.

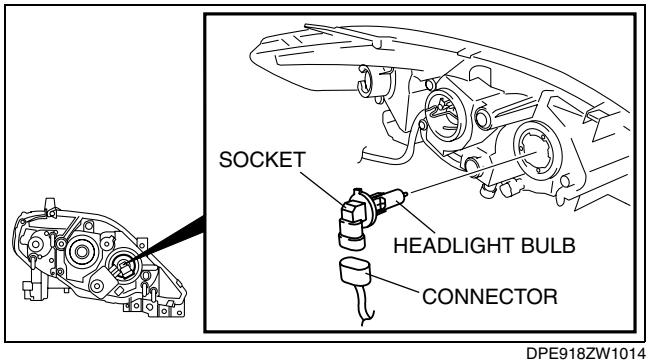


DPE918ZW1013

High-beam
1. Disconnect the negative battery cable.
2. Disconnect the connector.

Caution
- **A halogen bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When replacing the bulb, hold the metal flange, not the glass.**

3. Remove the socket, then remove the headlight bulb.
4. Install in the reverse order of removal.



DPE918ZW1014

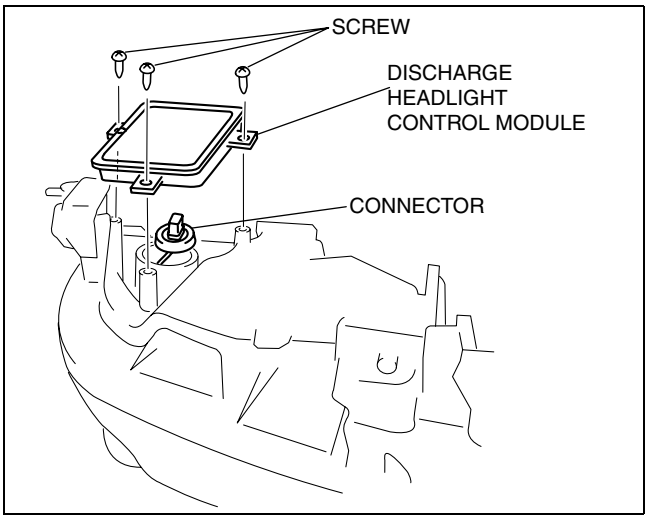
DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION

DPE091851030W03

Warning
- **Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See 09–18–4 DISCHARGE HEADLIGHT SERVICE WARNINGS.)**

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove the front combination light. (See 09–18–4 FRONT COMBINATION LIGHT REMOVAL/

INSTALLATION.)
4. Remove screws.
5. Disconnect the connector.
6. Remove the discharge headlight control module.
7. Install in the reverse order of removal.



DPE918ZW1015

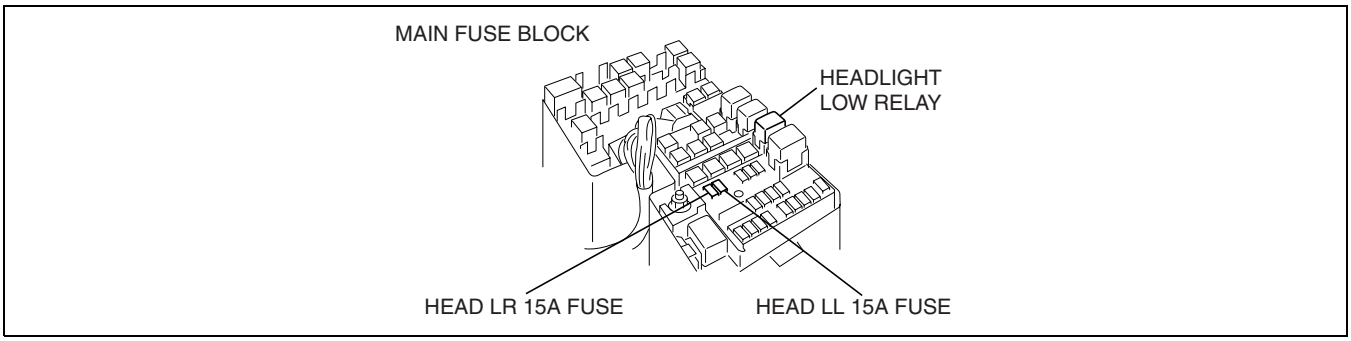
DISCHARGE HEADLIGHT SYSTEM INSPECTION

DPE091851030W04

Discharge Headlight Inoperative

Warning

- **Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See 09–18–4 DISCHARGE HEADLIGHT SERVICE WARNINGS.)**



DPE918ZW1016

Inspection procedure

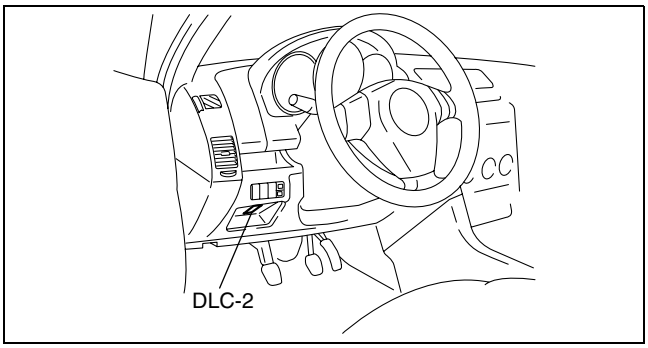
STEP	INSPECTION		ACTION
1	**INSPECT POWER SUPPLY CIRCUIT OF DISCHARGE HEADLIGHT CONTROL MODULE** • Disconnect the discharge headlight control module connector. • Turn the headlight switch to the HEADLIGHT (LO) position. • Measure the voltage at discharge headlight control module terminal A (wiring harness-side). • Is the voltage **approx. 12 V**?	Yes	Go to Step 6.
		No	Go to the next step.
2	**INSPECT FUSE** • Turn the headlight switch to the OFF position. • Remove the HEAD LR 15 A fuse (RH) or HEAD LL 15 A fuse (LH). • Inspect the fuses. • Are the fuses normal?	Yes	Go to the next step.
		No	Replace the fuse.
3	**INSPECT HEADLIGHT LOW RELAY** • Inspect the headlight low relay. (See 09–21–3 RELAY INSPECTION.) • Is the headlight low relay normal?	Yes	Go to the next step.
		No	Replace the headlight lowrelay. (See 09–21–3 RELAY INSPECTION.)
4	**INSPECT LIGHT SWITCH** • Inspect the light switch. (See 09–18–23 LIGHT SWITCH INSPECTION.) • Is the light switch normal?	Yes	Go to the next step.
		No	Replace the light switch. (See 09–18–22 LIGHT SWITCH REMOVAL/INSTALLATION.)
5	**INSPECT WIRING HARNESS BETWEEN BATTERY AND DISCHARGE HEADLIGHT CONTROL MODULE** • Disconnect the negative battery cable. • Inspect for continuity between the following terminals: — Battery (positive terminal) and headlight low relay terminal D. — HEAD LR 15 A fuse (RH) and discharge headlight control module terminal A — HEAD LL 15 A fuse (LH) discharge headlight control module terminal A • Are the wiring harnesses normal?	Yes	Go to the next step.
		No	Replace the related wiring harness.
6	**INSPECT WIRING HARNESS BETWEEN DISCHARGE HEADLIGHT CONTROL MODULE AND GROUND** • Inspect the wiring harness between discharge headlight control module terminal B and ground for the following: — Short to power supply — Open circuit • Is the wiring harness normal?	Yes	Go to the next step.
		No	Replace the related wiring harness.
7	**VERIFY WHETHER MALFUNCTION IS IN DISCHARGE HEADLIGHT BULB OR DISCHARGE HEADLIGHT CONTROL MODULE** • Install the discharge headlight low bulb (previously verified as illuminating normally). (See 09–18–6 HEADLIGHT BULB REMOVAL/INSTALLATION.) • Connect the discharge headlight control module connector. • Turn the headlight switch to the HEADLIGHT (LO) position. • Does the headlight (low-beam) illuminate?	Yes	System inspection completed.
		No	Replace the discharge headlight control module. (See 09–18–7 DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION.)

AUTO LIGHT ILLUMINATION LEVEL SETTING

1. Connect the WDS or equivalent to the DLC-2 (16-pin).
2. Select “Module Programming” from the menu.
3. Select “Programmable Parameters”.
4. Select “Exterior Lighting”.
5. Select “Standard” or “Low” on the WDS or equivalent to set the illumination level.

Note
- When the WDS is set to Low, the auto-light sensor sensitivity decreases, and the TNS and headlight illumination timing is slower.

DPE091866500W01

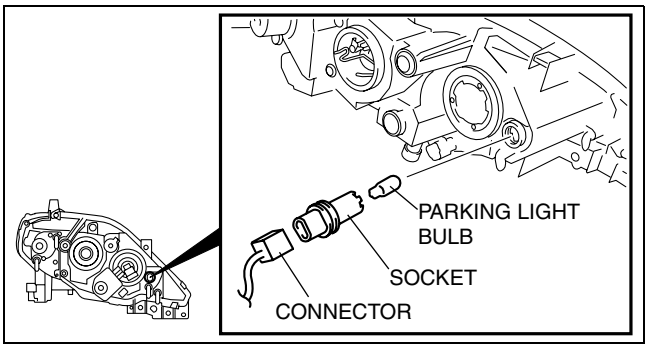


DPE918ZW1076

PARKING LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Disconnect the connector.
3. Remove the socket, then remove the parking light bulb.
4. Install in the reverse order of removal.

DPE091851040W01

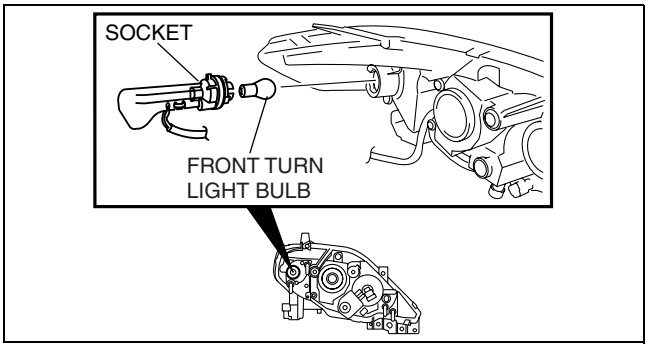


DPE918ZW1018

FRONT TURN LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the fasteners and slightly bend back the mudguard.
3. Remove the socket, then remove the front turn light bulb.
4. Install in the reverse order of removal.

DPE091851050W01

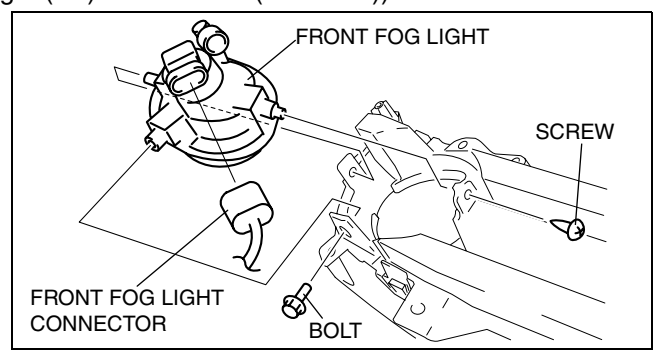


DPE918ZW1019

FRONT FOG LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. ~~Remove the front bumper.(Front fog light (LH) for MZR-CD (RF Turbo))(See09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)~~
3. Slightly bend back the mudguard.~~(Except for front fog light (LH) for MZR-CD (RF Turbo))~~
4. Disconnect the front fog light connector.~~(Except for front fog light (LH) for MZR-CD (RF Turbo))~~
5. Remove the screws and bolt, then remove the front fog light.
6. Install in the reverse order of removal.
7. Adjust the front fog light aiming. (See 09–18–11 FRONT FOG LIGHT AIMING.)

DPE091851680W01

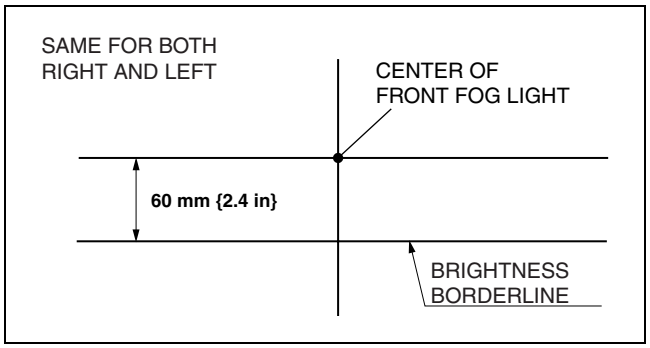


DPE918ZW1020

FRONT FOG LIGHT AIMING

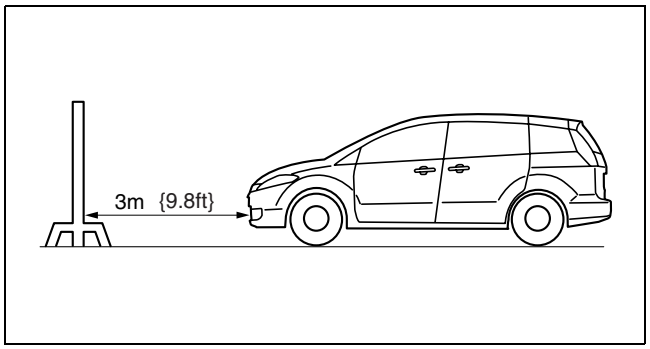
DPE091851680W02

1. Make a headlight adjustment screen as shown in the figure using double-weight, white paper.
2. Adjust the tire pressure to the specification.
3. Position the unloaded vehicle on a flat, level surface.
4. Seat one person in the driver's seat.



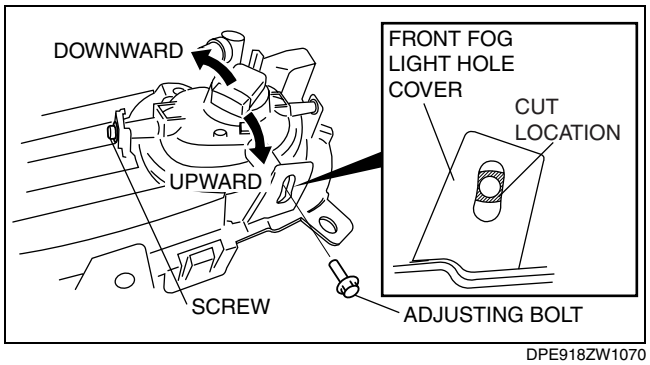
DPE918ZW1021

5. Line up the headlights with the white screen at a distance of **3 m {9.8 ft}** apart.
6. Place an object in front of the fog light not being adjusted to block its light beam.
7. Start the engine so that the battery remains charged.
8. Turn the front fog lights on.



DPE918ZW1022

9. Remove the adjusting bolt and cut the front fog light hole cover at the position shown in the figure.
10. Loosen the screw, move the front fog light in the direction of the arrows, and adjust the center of the front fog light to the position shown in the figure.
11. Install the adjusting bolt and tighten the screw.



DPE918ZW1070

FRONT FOG LIGHT BULB REMOVAL/INSTALLATION

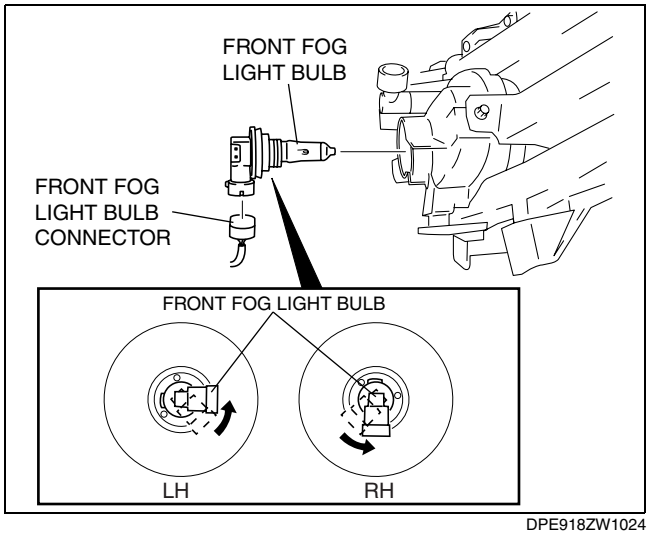
DPE091851680W03

1. Disconnect the negative battery cable.
2. Slightly bend back the mudguard.
3. ~~Turn over the service hole cover.(Front fog light (LH) for MZR-CD (RF-Turbo))~~
4. Disconnect the front fog light connector.
5. 9.Remove the front fog light bulb by turning it in the direction shown by the arrow.

Caution

- **A halogen bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When handling the bulb, hold the flange, not the glass.**

6. Install in the reverse order of removal.



DPE918ZW1024

REAR FOG LIGHT REMOVAL/INSTALLATION

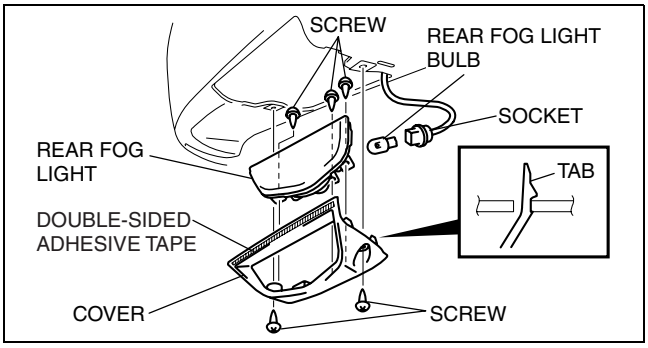
DPE091851680W04

1. Disconnect the negative battery cable.

2. While cutting the double-sided adhesive tape using a flathead screwdriver or razor, separate the cover from the body.

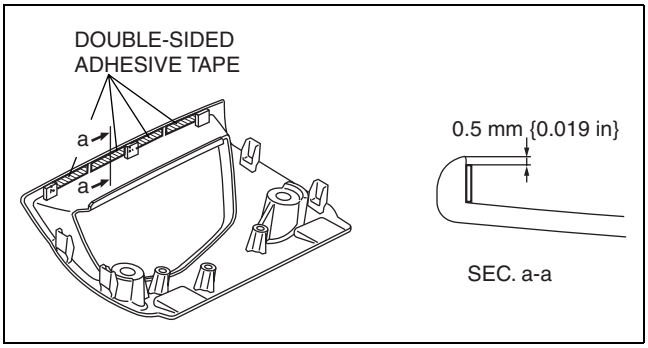
Warning
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

3. Remove the screw.
4. A hand is put in from the crevice between the rear bumper bottoms,and a tab is removed.
5. Remove the socket,then remove the rear fog light.
6. Install in the reverse order of removal.



DPE918ZW1069

(1) Attach the double-sided adhesive tape to the cover as shown in the figure.



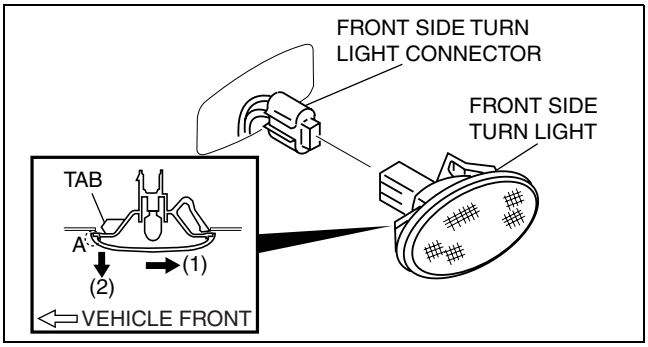
DPE918ZW1M02

FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION

DPE091851121W01

1. Disconnect the negative battery cable.
2. Move the front side turn light in the direction of the arrow (1) and detach the tab.
3. Pull area A of the front side turn light in the direction of the arrow (2) and remove the front side turn light.
4. Disconnect the front side turn light connector.
5. Install in the reverse order of removal.

Caution
- **Always assemble the front side turn light with the tab towards the vehicle front.**



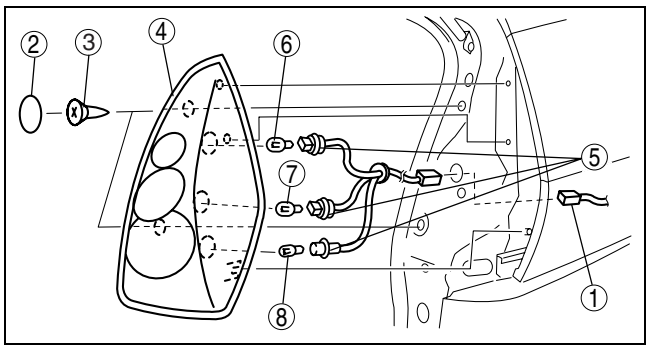
DPE918ZW1025

REAR COMBINATION LIGHT REMOVAL/INSTALLATION

DPE091851150W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Third-row seat (7-passenger model) (See09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (2) Rear scuff plate (See09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Trunk end trim (See09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (4) Second-row seat belt lower anchor installation bolt (See08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (5) Third-row seat belt lower anchor installation bolt (7-passenger model) (See08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

3. Remove in the order indicated in the table.



CPJ918ZWB025

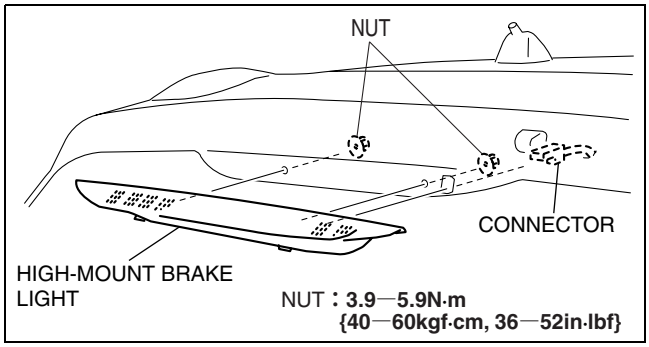
1	Connector
2	Cover
3	Screw
4	Rear combination light
5	Socket
6	Back-up light bulb
7	Rear turn light bulb
8	Brake light/taillight bulb

4. Install in the reverse order of removal.

HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION

DPE091851580W01

1. Disconnect the negative battery cable.
2. Remove the cover in the interior of the liftgate.
3. Remove the nut.
4. Disconnect the connector.
5. Remove the high-mount brake light.
6. Install in the reverse order of removal.



DPE918ZW1027

LICENSE PLATE LIGHT REMOVAL/INSTALLATION

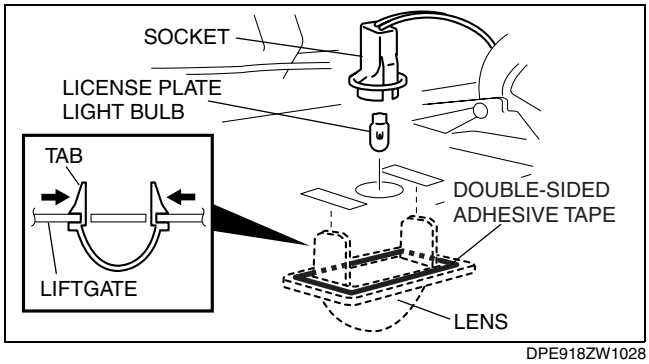
DPE091851270W01

1. Disconnect the negative battery cable.
2. Remove the liftgate trim.(See09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
3. While cutting the double-sided adhesive tape using a flathead screwdriver or razor, separate the cover from the body.

Warning

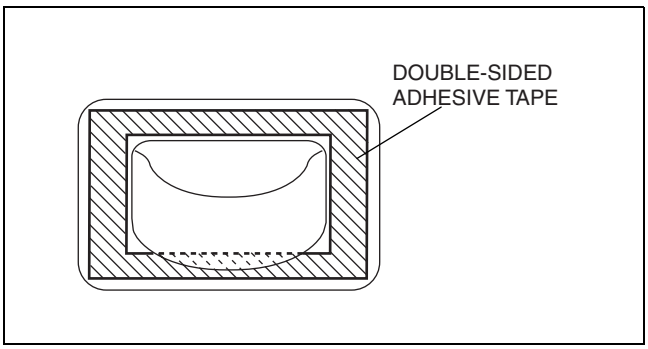
- **Using a razor with bare hands can cause injury. Always wear gloves when using a razor.**

4. Press the lens tabs in the direction indicated by the arrows and remove the lens.
5. Remove the socket.
6. Remove the license plate light bulb.
7. Install in the reverse order of removal.



DPE918ZW1028

(1) Attach the double-sided adhesive tape to the cover as shown in the figure.

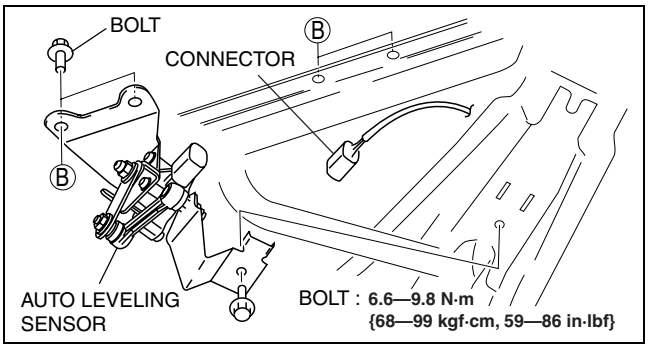


DPE918ZW1M01

AUTO LEVELING SENSOR REMOVAL/INSTALLATION

DPE091851031W04

1. Disconnect the negative battery cable.
2. Jack up the vehicle.
3. Disconnect the connector.
4. Remove the bolts, then remove the auto leveling sensor.
5. Install in the reverse order of removal.



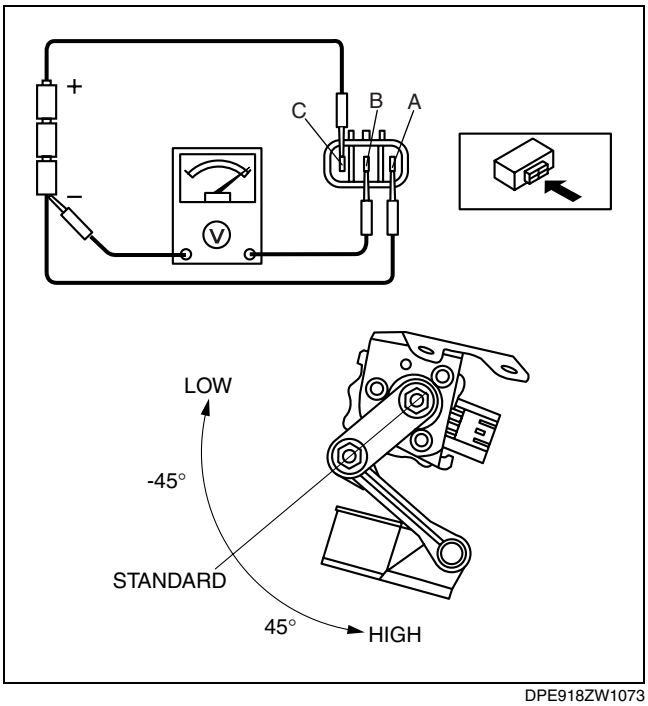
B3E0918W123

AUTO LEVELING SENSOR INSPECTION

DPE091851031W05

1. Connect the three dry cell batteries in series.
2. Connect the positive pole of the battery to auto leveling sensor terminal C, and the negative pole to terminal A.
3. Connect the tester as shown in the figure.
4. Measure the voltage while the link is moved up and down slowly.
   - If not as indicated in the table, replace the auto leveling sensor.

Link angle (vehicle height)	Voltage (V)
+45°(High)	4.1
0°	2.3
-45°(Low)	0.5



DPE918ZW1073

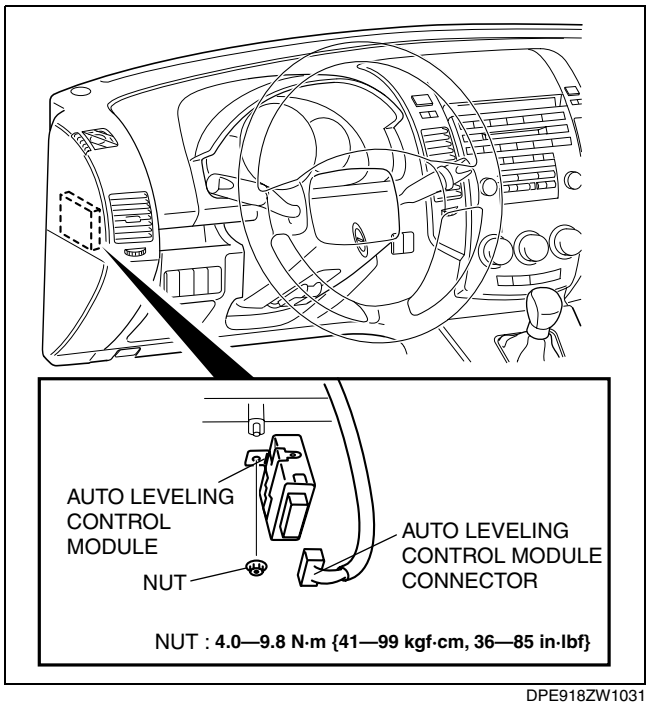
AUTO LEVELING CONTROL MODULE REMOVAL/INSTALLATION

DPE091851031W06

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front scuff plate inner (driver's side) (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (driver's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (4) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (5) Bonnet release lever (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)

(6) Lower panel (See09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)

3. Disconnect the auto leveling control module connector.
4. Remove the nut, then remove the auto leveling control module.
5. Install in the reverse order of removal.



DPE918ZW1031

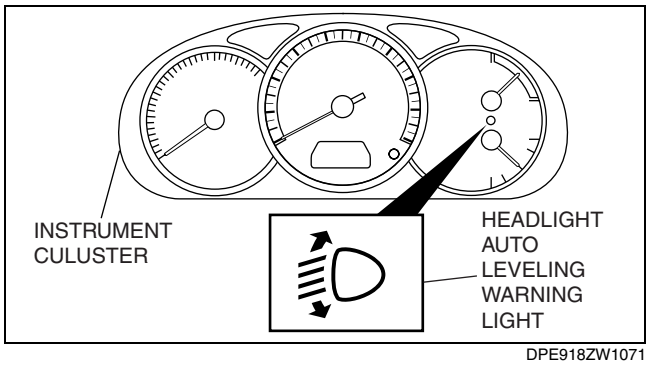
AUTO LEVELING SYSTEM INITIALIZATION

DPE091851031W07

Without using WDS or equivalent

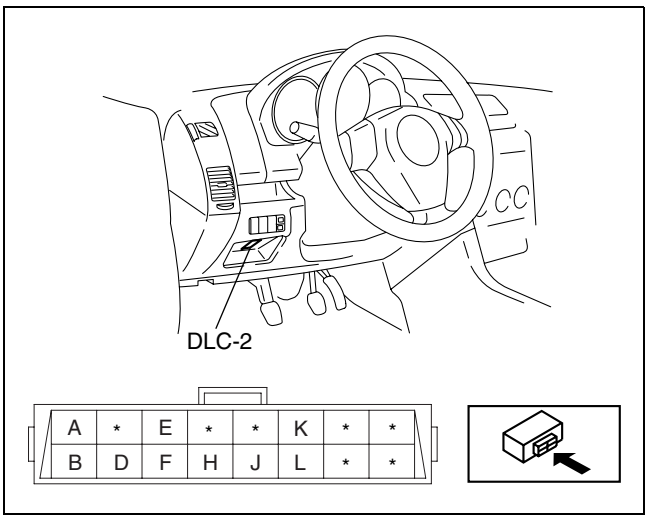
Caution
- **Perform with the vehicle in the unloaded condition (No occupants. Spare tire, jack and tools are in designated positions.).**
- **Perform the procedures from Step 1 to Step 3 within 30 s.**

1. Turn the ignition switch to the ON position.
2. Verify that the headlight auto leveling warning light flashes every 0.5 s.
   - If the headlight auto-leveling warning light starts flashing at 0.5 s intervals 10 s from when the ignition switch was turned to the ON position, one of the following malfunctions may have occurred: If the auto-leveling control module is malfunctioning, replace it because cannot be inspected. Repair or replace the malfunctioning part, then repeat the procedure from Step 1.
     — Auto leveling sensor malfunction (See09–18–14 AUTO LEVELING SENSOR INSPECTION.)
     — Instrument cluster malfunction (See09–22–3 INSTRUMENT CLUSTER INSPECTION.)
     — BCM malfunction (See09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.)
     — Auto leveling control module malfunction
     — Malfunction in the related wiring harnesses



DPE918ZW1071

3. Short the DLC-2 terminal B to ground for 0.5 s or more using a jumper wire.
4. Verify that the headlight auto leveling warning light flashes every 1 s.
   If the headlight auto-leveling warning light does not flash at 1 s intervals, perform the following procedure:
   - If the headlight auto-leveling warning light goes out, one of the following malfunctions may have occurred:Repair or replace the malfunctioning part, then repeat the procedure from Step 1.
     — Incorrect installation of auto leveling sensor. (See09–18–14 AUTO LEVELING SENSOR REMOVAL/INSTALLATION.)
     — Malfunction in the related wiring harnesses
   - If the headlight auto-leveling warning light is flashing at 0.5 s intervals, it is possible that the procedure from Step 1 to Step 3 was not completed within 30 s.Resume from Step 1.



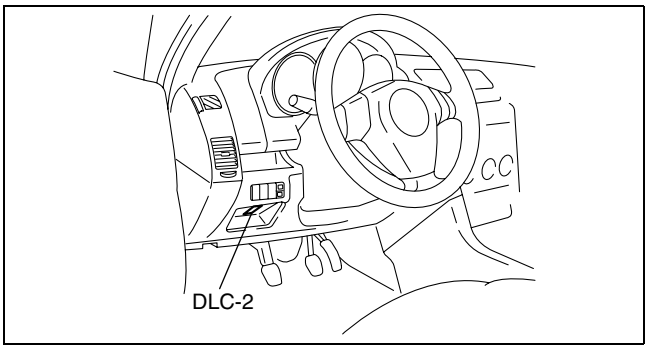
DPE918ZW1072

5. Pull out the jumper wire from DLC-2.
6. Verify that the headlight auto leveling warning light is not illuminated.

Using WDS or Equivalent

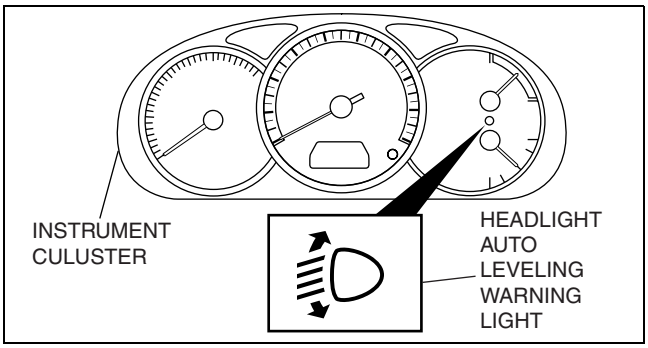
Caution
- **Perform with the vehicle in the unloaded condition (No occupants. Spare tire, jack and tools are in designated positions.).**
- **Perform the procedure in Step 5 within 30 s.**

1. Connect the WDS or equivalent to the DLC-2 (16-pin).
2. Select “Electrical” .
3. Select “Exterior Lighting” .
4. Select “Headlamp”.
5. Select "Auto Leveling Sensor Re-zero Procedure" and perform the procedure as indicated on the screen.



DPE918ZW1076

6. Verify that the headlight auto leveling warning light is not illuminated.
   If the headlight auto-leveling warning light is flashing or illuminated, the system has not been initialized correctly. Perform the following procedure:
   - If the headlight auto leveling warning light flashes every 0.5 s,Step 4 may not have been completed within 30 s. Resume from Step 1.
   - If the headlight auto leveling warning light flashes at 0.5 s intervals even though the procedure in Step 4 was completed within 30 s, one of the following malfunctions may have occurred: Repair or replace the malfunctioning part, then go back to Step 1.
     — Incorrect installation of auto leveling sensor. (See09–18–14 AUTO LEVELING SENSOR REMOVAL/INSTALLATION.)
     — Malfunction in the related wiring harnesses
   - If the headlight auto leveling warning light is illuminated, one of the following malfunctions may have occurred: If the auto-leveling control module is malfunctioning, replace it because cannot be inspected. Repair or replace the malfunctioning part, then repeat the procedure from Step 1.



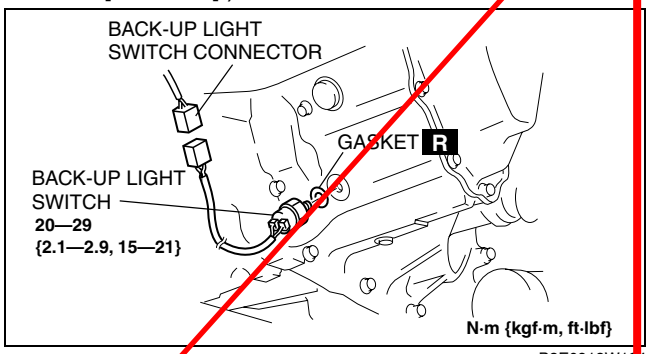
DPE918ZW1071

— Auto leveling sensor malfunction (See09–18–14 AUTO LEVELING SENSOR INSPECTION.)
— Instrument cluster malfunction (See09–22–3 INSTRUMENT CLUSTER INSPECTION.)
— BCM malfunction (See09–40–1 BODY CONTROL MODULE (BCM) INSPECTION.)
— Auto leveling control module malfunction
— Malfunction in the related wiring harnesses

BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION [G35M-R]

DPE091817640W03

1. Disconnect the negative battery cable.
2. Remove the under cover.
3. Drain the oil.(See05–15A–2 TRANSAXLE OIL REPLACEMENT [G35M-R].)
4. Disconnect the back-up light switch connector and remove the back-up light switch.
5. Install in the reverse order of removal.
6. Refill the oil.(See05–15A–2 TRANSAXLE OIL REPLACEMENT [G35M-R].)

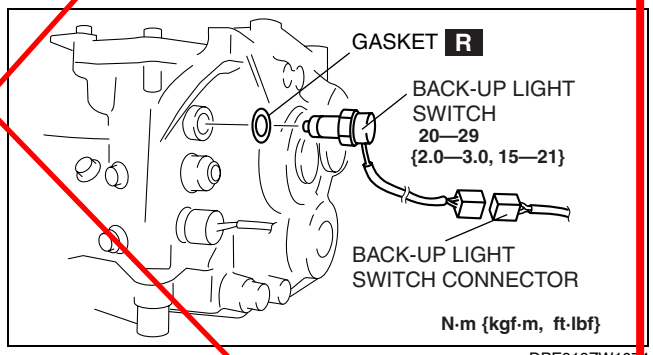


B3E0918W124

BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION [A26MX-R]

DPE091817640W05

1. Disconnect the negative battery cable.
2. Remove the under cover.
3. Disconnect the back-up light switch connector and remove the back-up light switch.
4. Install in the reverse order of removal.



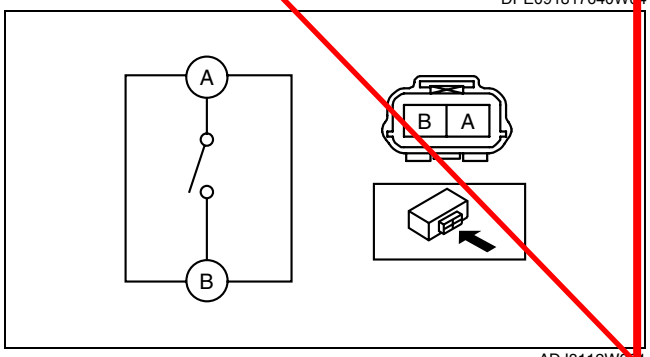
DPE918ZW1074

BACK-UP LIGHT SWITCH INSPECTION [G35M-R]

DPE091817640W04

1. Verify that the continuity between the back-up light switch terminals is as indicated in the table.

• If not as indicated in the table, replace the back-up light switch.



ADJ8112W051

BACK-UP LIGHT SWITCH INSPECTION [A26MX-R]

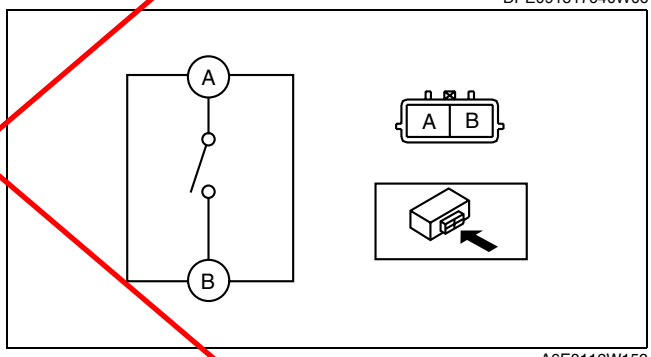
1. Verify that the continuity between the back-up light switch terminals is as indicated in the table.
- If not as indicated in the table, replace the back-up light switch.

: Continuity

Shift lever position	Terminal	
	A	B
Reverse	○	○
Other		

DPE918ZW1075

DPE091817640W06



A6E8112W153

: Continuity

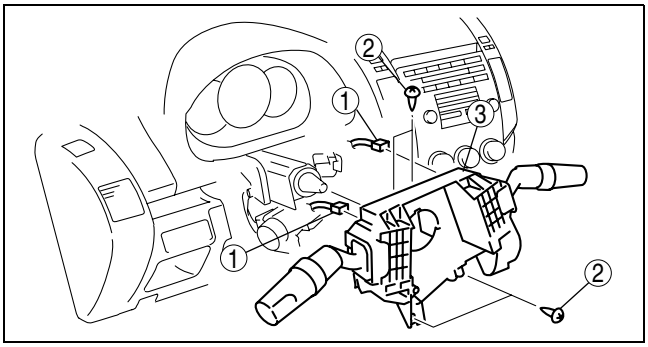
Shift lever position	Terminal	
	A	B
Reverse	○	○
Other		

A6E8112W128

COMBINATION SWITCH REMOVAL/INSTALLATION

DPE091866120W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Driver-side air bag module (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (2) Steering wheel (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
   (3) Meter hood (See09–17–7 METER HOOD REMOVAL/INSTALLATION.)
   (4) Column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
   (5) Clock spring (See 08–10–13 CLOCK SPRING REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



DPE918ZW1034

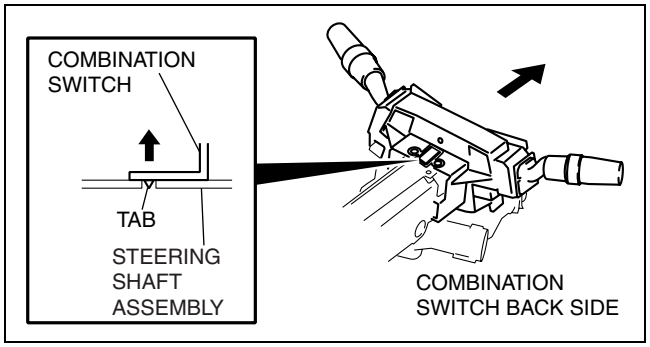
1	Connector
2	Screw

3	Combination switch (See 09–18–19 Combination Switch Removal Note.)

4. Disconnect the steering angle sensor connector. (Vehicles with steering angle sensor)
5. Install in the reverse order of removal.

Combination Switch Removal Note

1. Pull the combination switch locks in the direction indicated in the figure and disengage the tab.
2. Pull the combination switch outward, then remove it.



DPE918ZW1035

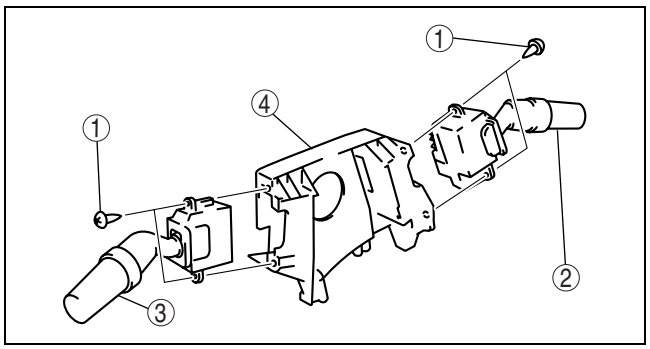
COMBINATION SWITCH DISASSEMBLY/ASSEMBLY

DPE091866120W02

Caution

- **For vehicles with DSC: If the disc on the combination switch is deformed or has foreign material adhering to it, performance of the steering angle sensor may be reduced, causing abnormal operation. When handling the combination switch, be careful not to deform the disc and make sure there is no foreign material on it.**

1. Disassemble in the order indicated in the table.



DPE918ZW1036

1	Screw
2	Wiper and washer switch
3	Light switch
4	Body

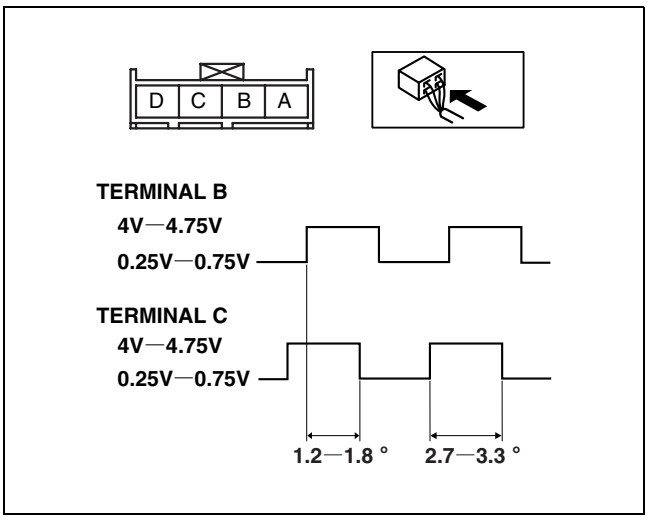
2. Assemble in the reverse order of disassembly.

STEERING ANGLE SENSOR INSPECTION

DPE091866120W03

1. Remove the meter hood (See09–17–7 METER HOOD REMOVAL/INSTALLATION.)
2. Remove the column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the steering angle sensor connector.
4. Connect battery positive voltage to terminal A and ground to terminal D of the steering angle sensor.

5. Turn the steering wheel to the right and left, and verify that the voltage and pulses at the terminals are as shown in the figure.
   - If not as specified, replace the steering angle sensor.

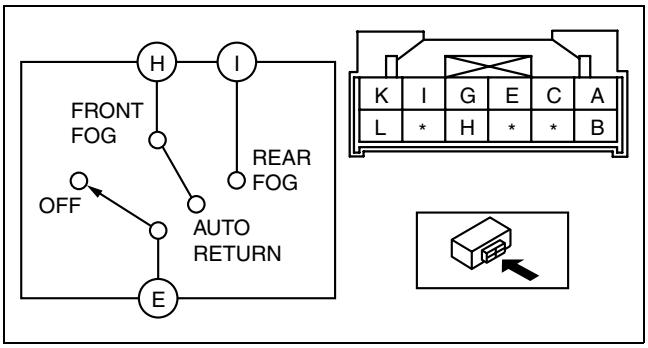


DPE918ZW1037

FRONT AND REAR FOG LIGHT SWITCH INSPECTION

DPE091866402W01

1. Verify that the continuity between the front and rear fog light switch terminals is as indicated in the table.



B3E0918W130

   - If not as indicated in the table, replace the light switch.

○—○ : Continuity

Light	Switch position: Front fog light switch	Switch position: Rear fog light switch	Terminal: E	Terminal: H	Terminal: I
OFF	OFF	—			
	ON	—	○	○	
	ON	ON	○	○	○
TNS	ON	OFF	○	○	
	ON	ON	○	○	○
Head light	ON	OFF	○	○	
	ON	ON	○	○	○
Auto	ON	OFF	○	○	
	ON	ON	○	○	○

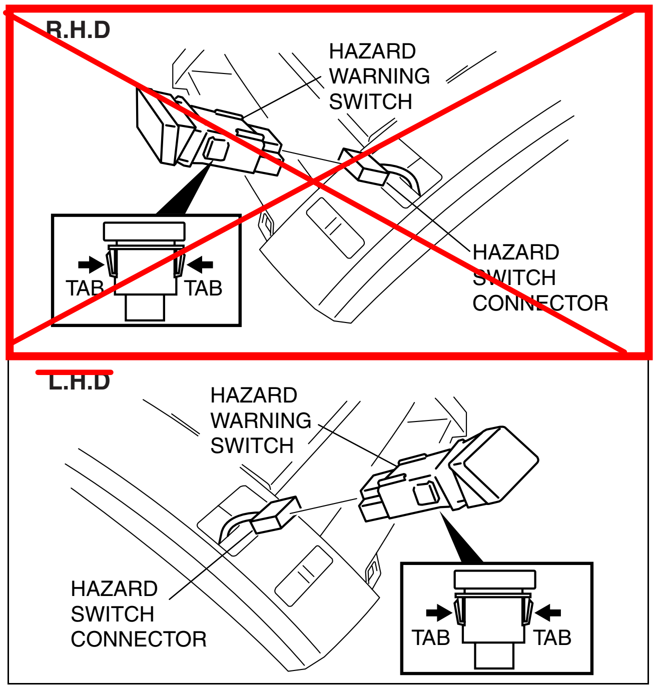
B3E0918W131

HAZARD WARNING SWITCH REMOVAL/INSTALLATION

DPE091866401W01

1. Disconnect the negative battery cable.
2. Remove the side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
4. Remove the center panel module (vehicles with audio unit) (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
5. Remove the center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/

INSTALLATION.)
6. Remove the LCD unit (vehicles with audio unit) (See09–20–8 LCD UNIT REMOVAL/INSTALLATION.)
7. Disconnect the hazard warning switch connector.
8. Squeeze the tabs of hazard warning switch and pull it outward to remove it.
9. Install in the reverse order of removal.

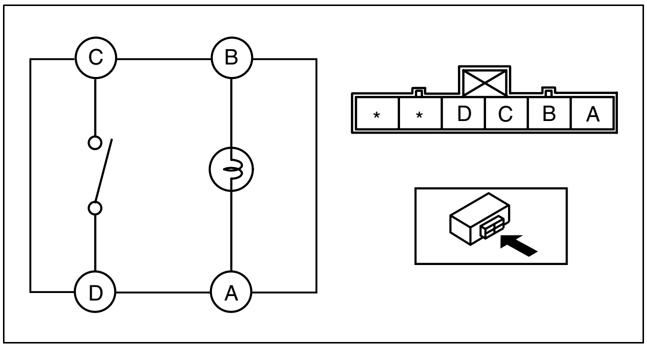


DPE918ZW1040

HAZARD WARNING SWITCH INSPECTION

DPE091866401W02

1. Verify that the continuity between the hazard switch terminals is as indicated in the table.
   - If not as indicated in the table, replace the hazard warning switch.



DPE918ZW1041

○—○ : Continuity ○—⊙—○ : Bulb

Switch position	Terminal			
	A	B	C	D
Off	○—⊙	—○		
On	○—⊙	—○	○—	—○

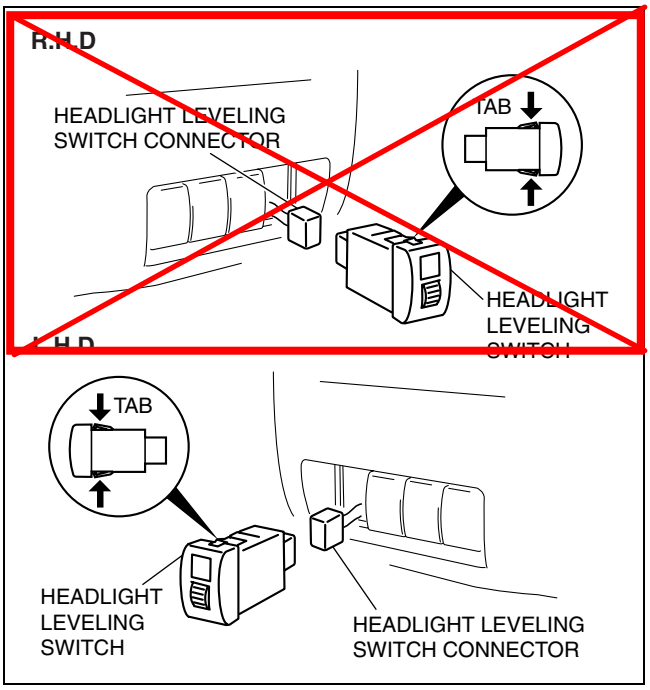
DPE918ZW1042

HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION

DPE091866610W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Front scuff plate inner (See09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (2) Front side trim (Driver's side) (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (3) Side wall (See09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (4) Front console (See09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (5) Bonnet release lever (See 09–14A–5 BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
   (6) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)

3. Press the tabs from the inner side of the lower panel, pull the headlight leveling switch outward, and then remove it.
4. Install in the reverse order of removal.

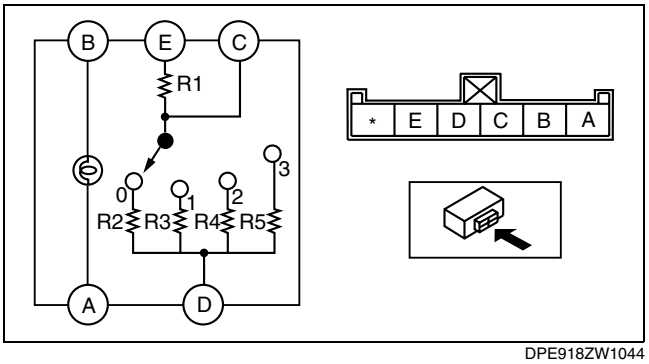


DPE918ZW1043

HEADLIGHT LEVELING SWITCH INSPECTION

1. Verify that continuity between the headlight leveling switch terminals is as indicated in the table.
   - If not as indicated in the table, replace the headlight leveling switch.

DPE091866610W02



DPE918ZW1044

: Resistance : Bulb

Switch position	Terminal				
	E	C	D	B	A
0		R_1	R_2		
1		R_1	R_3		
2		R_1	R_4		
3		R_1	R_5		

R_1 : 966—986 ohms R_2 : 1900—2100 ohms
R_3 : 966—986 ohms R_4 : 532—588 ohms
R_5 : 190—210 ohms

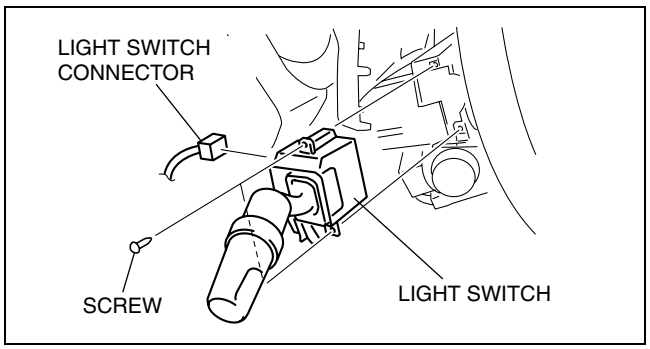
DPE918ZW1045

LIGHT SWITCH REMOVAL/INSTALLATION

DPE091866121W01

1. Disconnect the negative battery cable.
2. Remove the meter hood.(See09–17–7 METER HOOD REMOVAL/INSTALLATION.)
3. Remove the column cover.(See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)

4. Disconnect the light switch connector.
5. Remove the screws, then remove the light switch.
6. Install in the reverse order of removal.



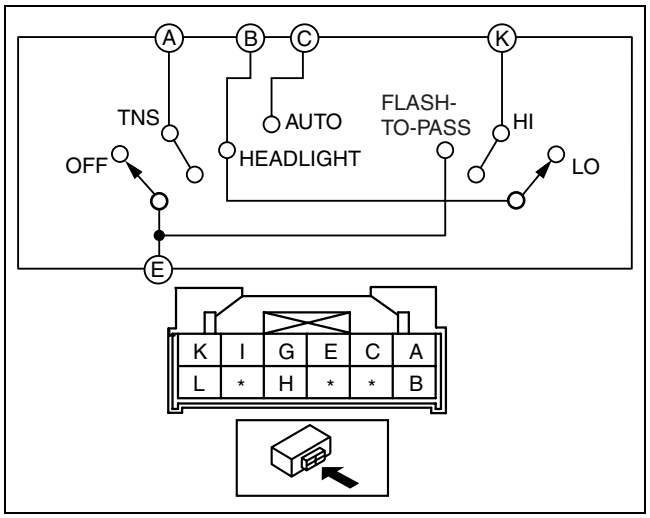
DPE918ZW1046

LIGHT SWITCH INSPECTION

DPE091866121W02

1. Verify that the continuity between the light switch terminals is as indicated in the table.

Headlight Switch



DPE918ZW1047

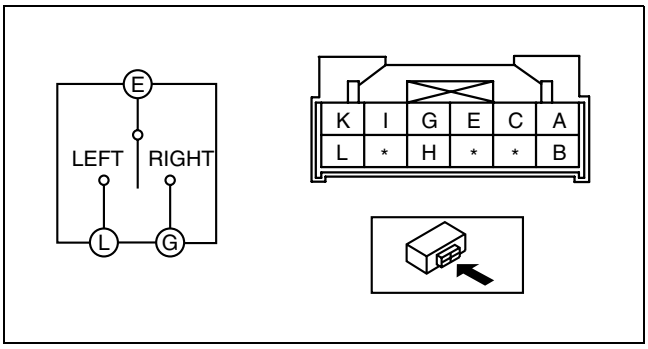
- If not as indicated in the table, replace the light switch.

○—○ : Continuity

Switch position			Termina				
Light	Dimme	Flash-to-	A	B	C	E	K
OFF	—	OFF					
		ON		○		○	○
TNS	—	OFF	○			○	
		ON	○	○		○	○
Head light	LO	OFF	○	○		○	
		ON	○	○		○	○
	HI	—	○	○		○	○
Auto	LO	OFF			○	○	
		ON		○	○	○	○
	HI	—		○	○	○	○

DPE918ZW1048

Turn Switch



DPE918ZW1049

○—○ : Continuity

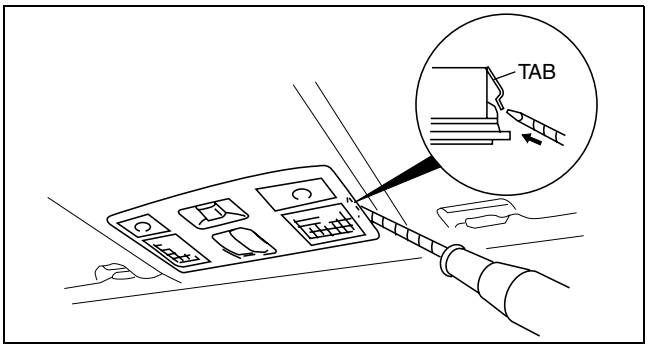
Switch position	Terminal		
	E	L	G
LEFT	○	○	
OFF			
RIGHT	○		○

DPE918ZW1067

MAP LIGHT REMOVAL/INSTALLATION

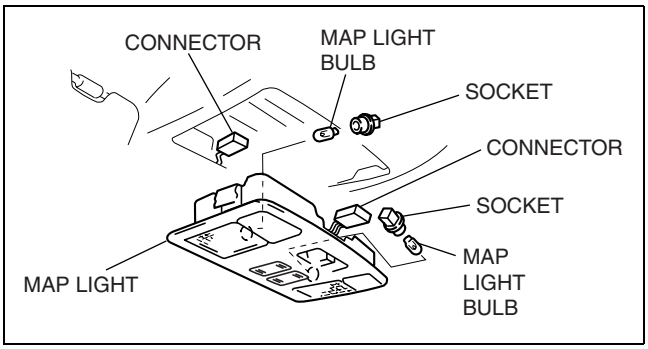
DPE091851311W01

1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the gap between the headliner and the map light.
3. Press the tab and remove the map light.



DPE918ZW1068

4. Disconnect the connector.
5. Remove the socket, then remove the map light bulb.
6. Install in the reverse order of removal.

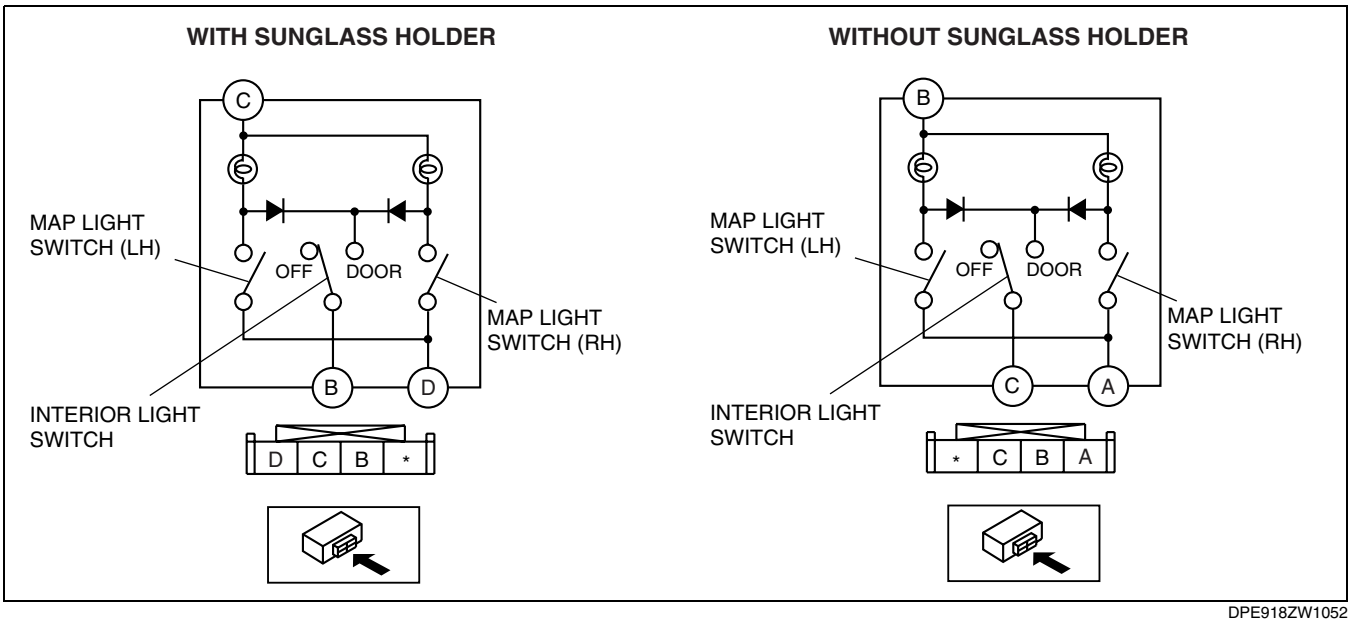


DPE918ZW1077

MAP LIGHT INSPECTION

DPE091851311W02

1. Verify that the continuity between the map light terminals is as indicated in the table.



DPE918ZW1052

- If not as indicated in the table, replace the map light.

WITH SUNGLASS HOLDER

: Bulb

Switch position		Terminal		
MAP LIGHT SWITCH	INTERIOR LIGHT SWITCH	B	C	D
ON	-		○—◎—○	
-	DOOR	○—◎—○		
OFF	OFF			

WITHOUT SUNGLASS HOLDER

: Bulb

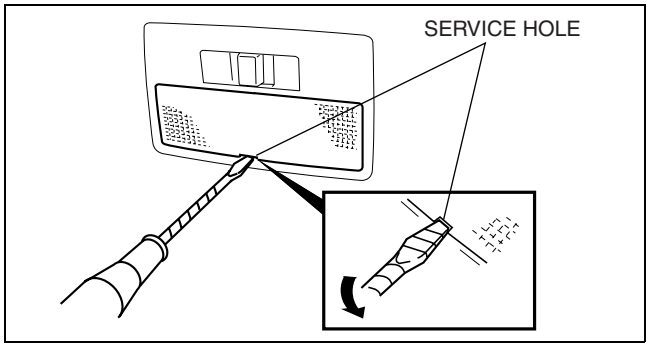
Switch position		Terminal		
MAP LIGHT SWITCH	INTERIOR LIGHT SWITCH	C	B	A
ON	-		○—◎—○	
-	DOOR	○—◎—○		
OFF	OFF			

DPE918ZW1053

INTERIOR LIGHT BULB REMOVAL/INSTALLATION

DPE091851311W03

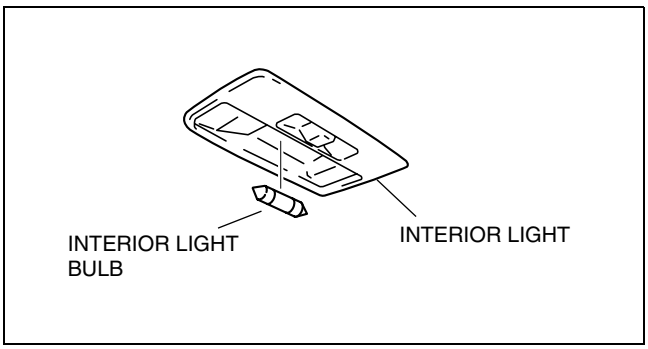
1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the service hole and pry with the screwdriver in the direction shown by the arrow to remove the lens.



B3E0918W152

09

3. Remove the interior light bulb.
4. Install in the reverse order of removal.



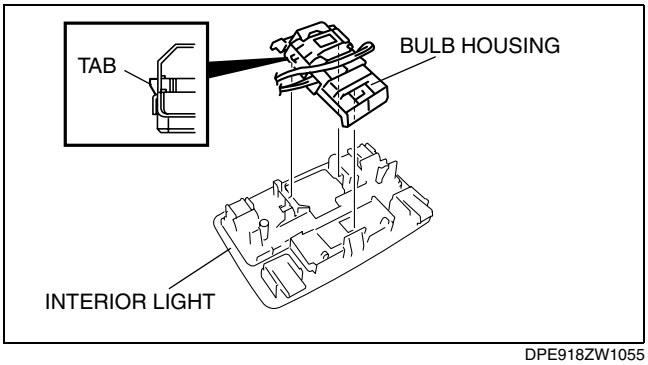
DPE918ZW1054

INTERIOR LIGHT REMOVAL/INSTALLATION

DPE091851311W04

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (2) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
   (5) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
   (6) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
   (7) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (8) Sub-trunk
   (9) Third-row seat (7-passenger model) (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (10) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
   (11) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (12) Third-row seat belt lower anchor installation bolt (7-passenger model) (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (13) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (14) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
   (15) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (16) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
   (17) RES unit cover (vehicles with RSES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
   (18) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
   (19) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
   (20) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
   (21) Headliner (See09–17–22 HEADLINER REMOVAL/INSTALLATION.)
3. 15.Detach the tab and remove the bulb housing.

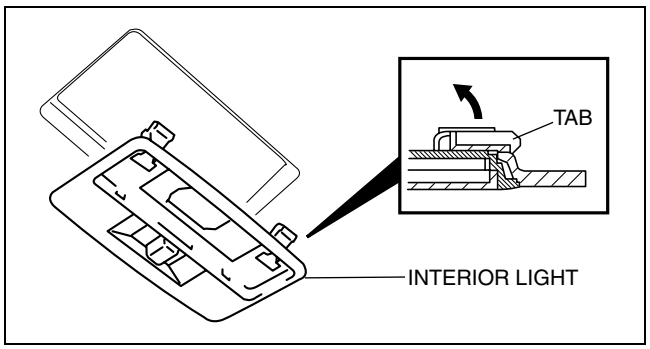
Note
- The valve housing and the wiring harness have been integrated and attached to the headliner. When replacing the valve housing, remove the wiring harness which passes under the urethane by cutting the urethane.



DPE918ZW1055

4. Pull in the direction of the arrows and detach the tabs.
5. Remove the interior light.
6. Install in the reverse order of removal.

Note
- After installing the wiring harness, reinforce the urethane that was cut when removing the valve housing with vinyl tape.

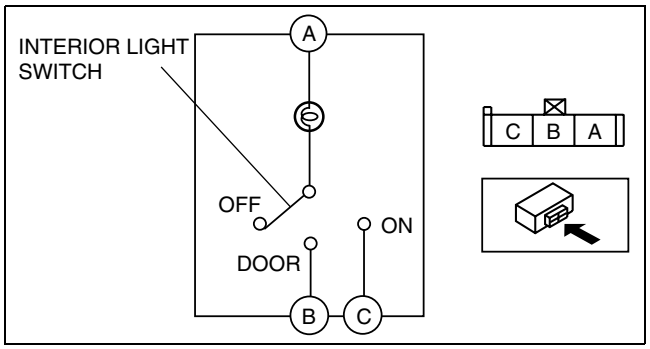


DPE918ZW1056

INTERIOR LIGHT INSPECTION

DPE091851311W05

1. Verify that the continuity between the interior light terminals is as indicated in the table.
   - If not as indicated in the table, replace the interior light.



DPE918ZW1057

: Bulb

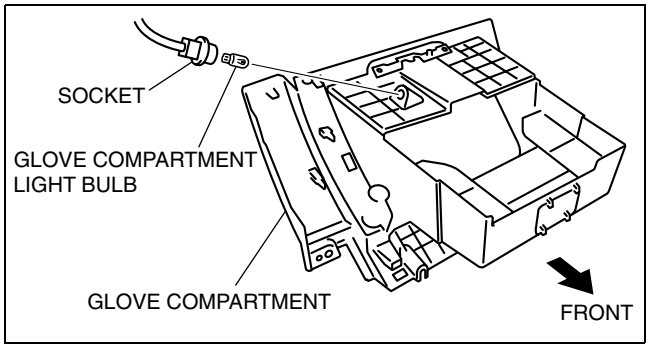
Switch position	Terminal		
	C	A	B
ON	○—⏀—○		
DOOR		○—⏀—○	
OFF			

DPE918ZW1058

GLOVE COMPARTMENT LIGHT BULB REMOVAL/INSTALLATION

DPE091851445W02

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Side wall (See09–17–11 SIDE WALL REMOVAL/INSTALLATION)
   (2) Front console (See09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION)
   (3) Front scuff plate inner (Passenger's side)(See09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION)
   (4) Front side trim (Passenger's side)(See09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION)
   (5) Side panel (Passenger's side)(See09–17–11 SIDE PANEL REMOVAL/INSTALLATION)
   (6) Glove compartment (See09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION)
3. Remove the socket, then remove the glove compartment light bulb.
4. Install in the reverse order of removal.

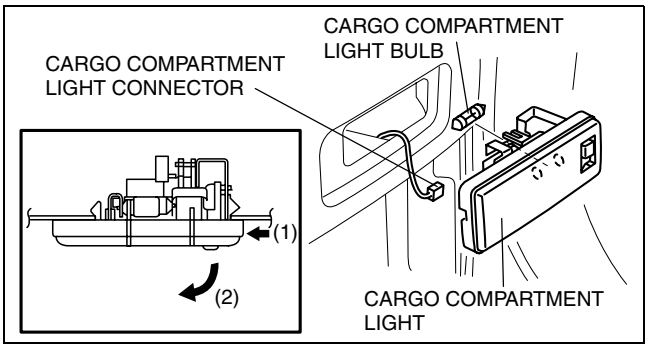


DPE918ZW1059

CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION

DPE091851441W01

1. Disconnect the negative battery cable.
2. Remove the cargo compartment light.
3. Disconnect the cargo compartment light connector.
4. Remove the cargo compartment light bulb.
5. Install in the reverse order of removal.

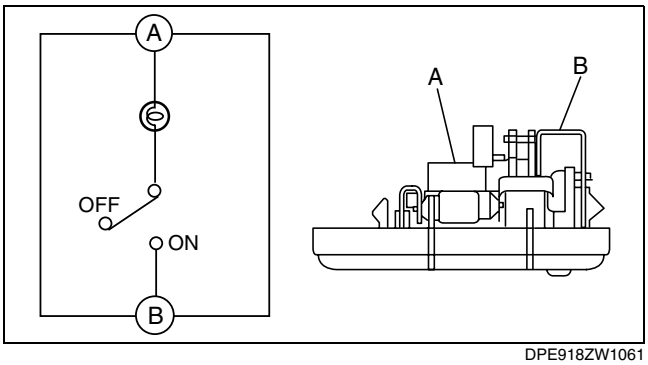


DPE918ZW1060

CARGO COMPARTMENT LIGHT INSPECTION

DPE091851441W02

1. Verify that the continuity between the cargo compartment light terminals is as indicated in the table.
   - If not as indicated in the table, replace the cargo compartment light.



DPE918ZW1061

: Bulb

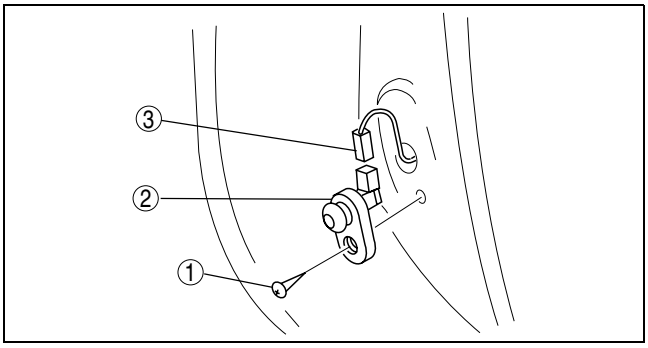
Switch position	Terminal	
	A	B
ON	○	○
OFF		

DPE918ZW1062

DOOR SWITCH REMOVAL/INSTALLATION

DPE091866540W01

1. Disconnect the negative battery cable.
2. Disassemble in the order indicated in the table.



DPE918ZW1063

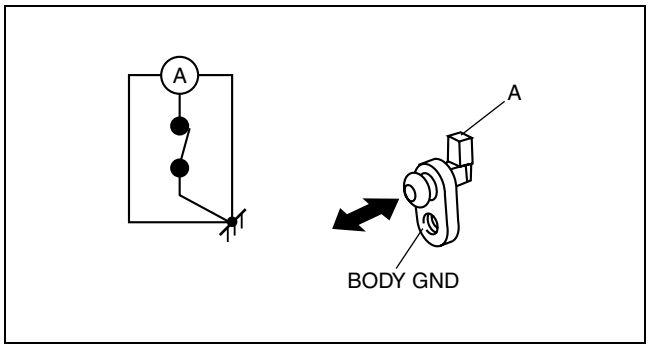
1	Screw
2	Door switch
3	connector

3. Install in the reverse order of removal.

DOOR SWITCH INSPECTION

1. Verify that the continuity between door switch terminal and the body ground is as indicated in the table.
   - If not as indicated in the table, replace the door switch.

DPE091866540W02



DPE918ZW1064

○—○ : Continuity

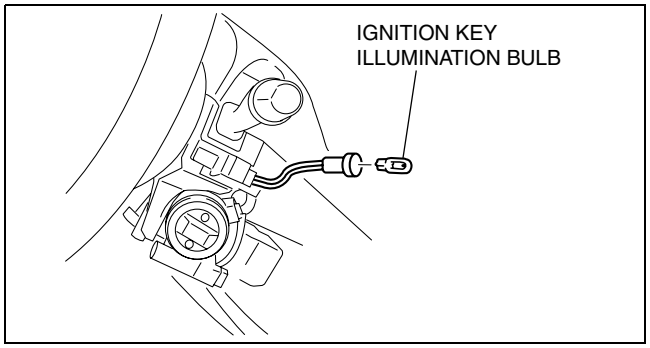
Switch position	Terminal	
	A	Body GND
Pressed		
Released	○	○

DPE918ZW1065

IGNITION KEY ILLUMINATION BULB REMOVAL/INSTALLATION

DPE091860231W01

1. Disconnect the negative battery cable.
2. Remove the lower column cover. (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
3. Remove the ignition key illumination bulb.
4. Install in the reverse order of removal.

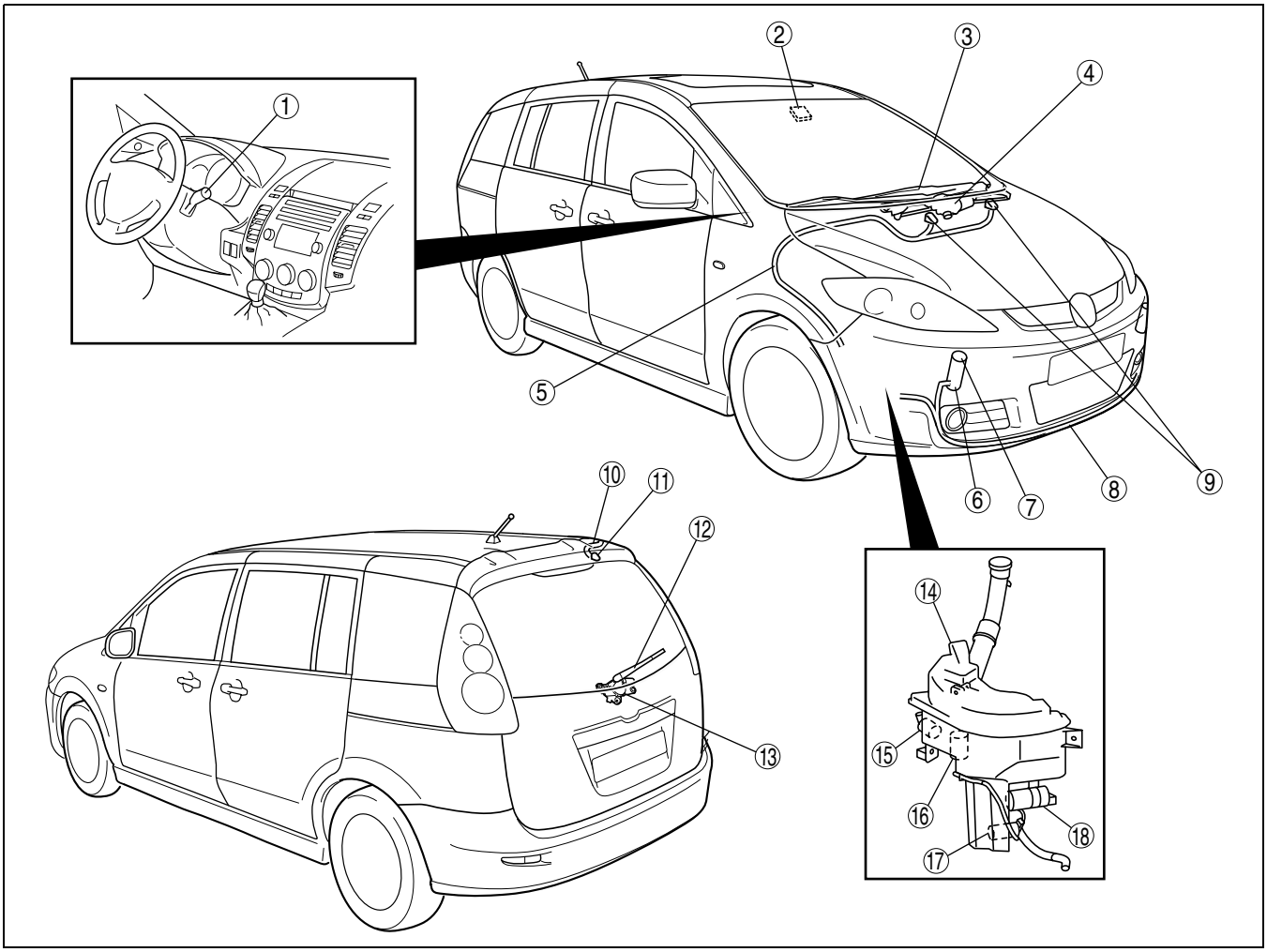


DPE918ZW1066

09–19 WIPER/WASHER SYSTEM

WIPER/WASHER SYSTEM LOCATION INDEX

DPE091900000W01



DPE919ZW1100

1	Wiper and washer switch (See 09–19–9 WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.) (See 09–19–10 WINDSHIELD WIPER AND WASHER SWITCH INSPECTION.) (See 09–19–11 REAR WIPER AND WASHER SWITCH INSPECTION.)
2	Rain sensor (See 09–19–18 RAIN SENSOR REMOVAL/INSTALLATION.) (See 09–19–18 RAIN SENSOR INITIAL SETTING.)
3	Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.) (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT.)
4	Windshield wiper motor (See 09–19–4 WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION.) (See 09–19–5 WINDSHIELD WIPER MOTOR DISASSEMBLY/ASSEMBLY.) (See 09–19–6 WINDSHIELD WIPER MOTOR INSPECTION [L.H.D.].) (See 09–19–6 WINDSHIELD WIPER MOTOR INSPECTION [R.H.D.].)
5	Windshield washer hose (See 09–19–8 WINDSHIELD WASHER HOSE REMOVAL/INSTALLATION.)
6	Headlight cleaner actuator (See 09–19–17 HEADLIGHT CLEANER ACTUATOR REMOVAL/INSTALLATION.)
7	Headlight cleaner nozzle (See 09–19–17 HEADLIGHT CLEANER NOZZLE REMOVAL.) (See 09–19–17 HEADLIGHT CLEANER NOZZLE INSTALLATION.)
8	Headlight cleaner hose (See 09–19–17 HEADLIGHT CLEANER HOSE REMOVAL/INSTALLATION.)
9	Windshield washer nozzle (See 09–19–8 WINDSHIELD WASHER NOZZLE REMOVAL/INSTALLATION.)
10	Rear washer hose (See 09–19–15 REAR WASHER HOSE REMOVAL/INSTALLATION.)
11	Rear washer nozzle (See 09–19–14 REAR WASHER NOZZLE REMOVAL/INSTALLATION.) (See 09–19–15 REAR WASHER NOZZLE ADJUSTMENT.)
12	Rear wiper arm and blade (See 09–19–12 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.) (See 09–19–12 REAR WIPER ARM AND BLADE ADJUSTMENT.)

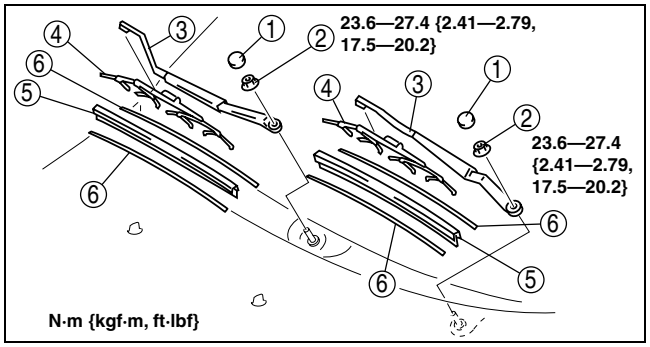
13	Rear wiper motor (See 09–19–13 REAR WIPER MOTOR REMOVAL/INSTALLATION.) (See 09–19–13 REAR WIPER MOTOR INSPECTION.)
14	Washer tank (See 09–19–6 WASHER TANK REMOVAL/INSTALLATION.)
15	Rear washer motor (See 09–19–13 REAR WASHER MOTOR REMOVAL/INSTALLATION.) (See 09–19–14 REAR WASHER MOTOR INSPECTION.)
16	Washer fluid-level sensor (See 09–19–8 WASHER FLUID-LEVEL SENSOR REMOVAL/INSTALLATION.) (See 09–19–9 WASHER FLUID-LEVEL SENSOR INSPECTION.)
17	Windshield washer motor (See 09–19–7 WINDSHIELD WASHER MOTOR REMOVAL/INSTALLATION.) (See 09–19–8 WINDSHIELD WASHER MOTOR INSPECTION.)
18	Headlight cleaner motor (See 09–19–16 HEADLIGHT CLEANER MOTOR REMOVAL/INSTALLATION.) (See 09–19–17 HEADLIGHT CLEANER MOTOR INSPECTION.)

WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION

DPE091967320W01

1. Remove in the order indicated in the table.

1	Cap
2	Nut
3	Windshield wiper arm (See 09–19–3 Windshield Wiper Arm Installation Note.)
4	Windshield wiper blade
5	Rubber brush
6	Backing plate

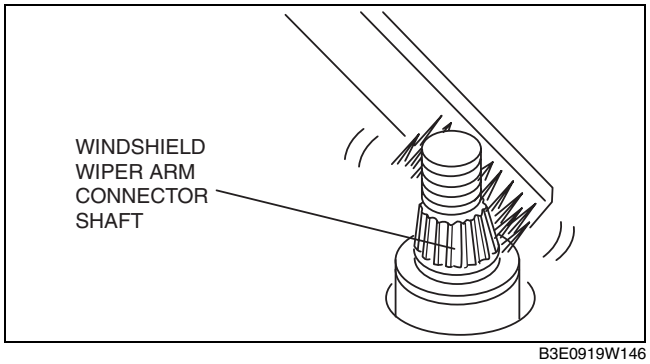


DPE919ZW1101

2. Install in the reverse order of removal.
3. Adjust the windshield wiper arm and blade. (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT.)

Windshield Wiper Arm Installation Note

1. Clean the windshield wiper arm connector shafts using a wire brush before installing the windshield wiper arms.



B3E0919W146

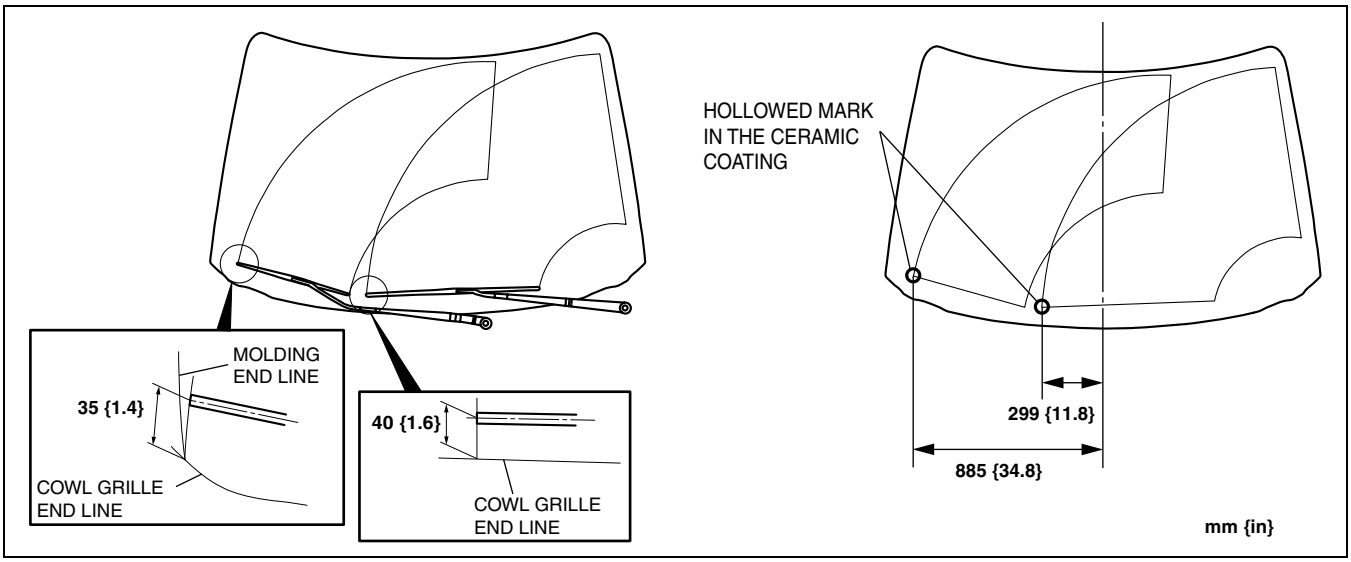
WINDSHIELD WIPER ARM AND BLADE ADJUSTMENT

DPE091967320W02

1. Operate the windshield wipers, and then turn off the windshield wiper motor to set the wipers in the park position.

2. Slide the serrated connecting part and adjust the windshield wiper arm and blade so that its end is aligned with the hollowed mark in the ceramic coating.

Note
- If the hollowed mark in the ceramic coating cannot be located, measure the distance from the cowl grille end line, and adjust the windshield wiper arm and blade.

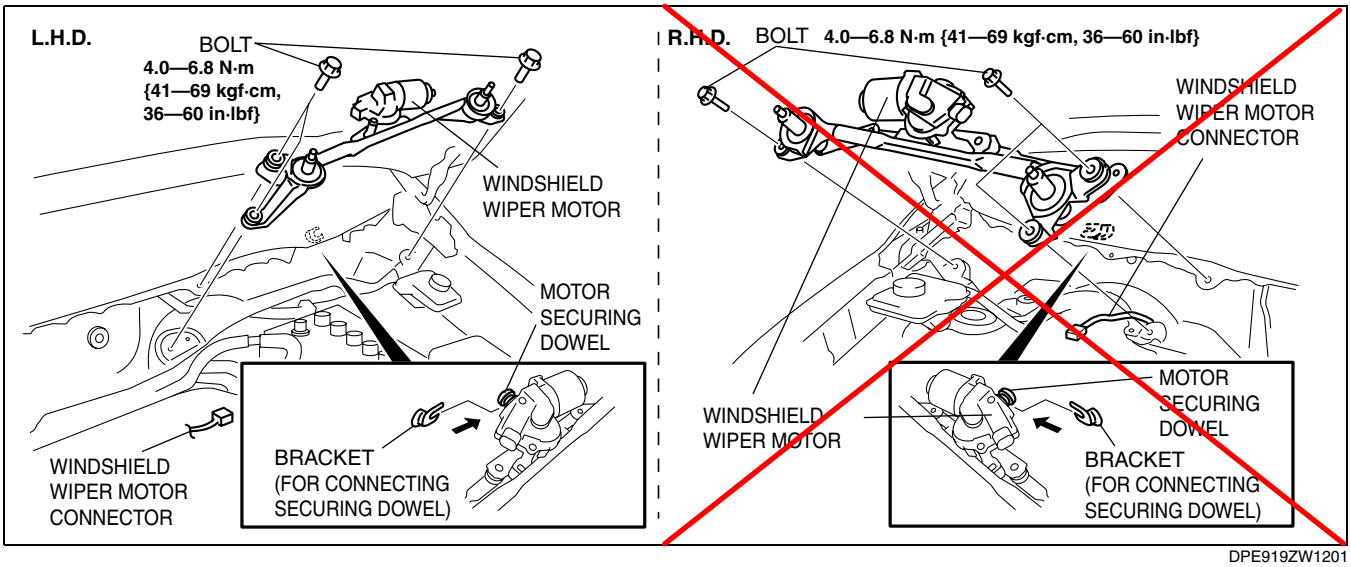


DPE919ZW1102

WINDSHIELD WIPER MOTOR REMOVAL/INSTALLATION

DPE091967340W01

1. Disconnect the negative battery cable.
2. Remove the windshield wiper arm and blade. (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
3. Remove the cowl grille. (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
4. Remove the center cowl grille. (See 09–16–3 CENTER COWL GRILLE REMOVAL/INSTALLATION.)
5. Remove the cowl panel. (See 09–10–11 COWL PANEL REMOVAL/INSTALLATION.)
6. Remove the bolts.



DPE919ZW1201

7. Move the windshield wiper motor in the direction of the arrow, remove the securing dowel from the bracket, then remove the windshield wiper motor.
8. Disconnect the windshield wiper motor connector.
9. Install in the reverse order of removal.

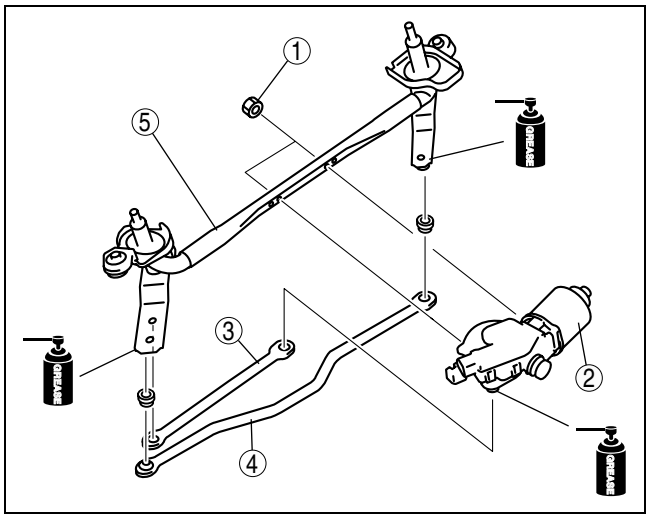
WINDSHIELD WIPER MOTOR DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.

1	Nut
2	Windshield wiper motor (See 09–19–5 Windshield Wiper Motor Assembly Note.)
3	Wiper link No. 1 (See 09–19–5 Ball Joint Assembly Note.)
4	Wiper link No. 2 (See 09–19–5 Ball Joint Assembly Note.)
5	Main link (See 09–19–5 Ball Joint Assembly Note.)

2. Assemble in the reverse order of disassembly.

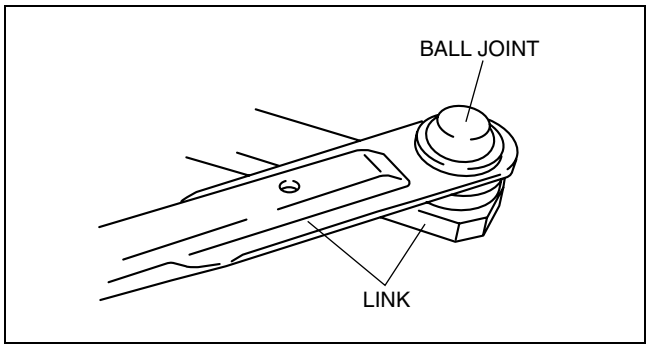
DPE091967340W02



DPE919ZW1107

Ball Joint Assembly Note

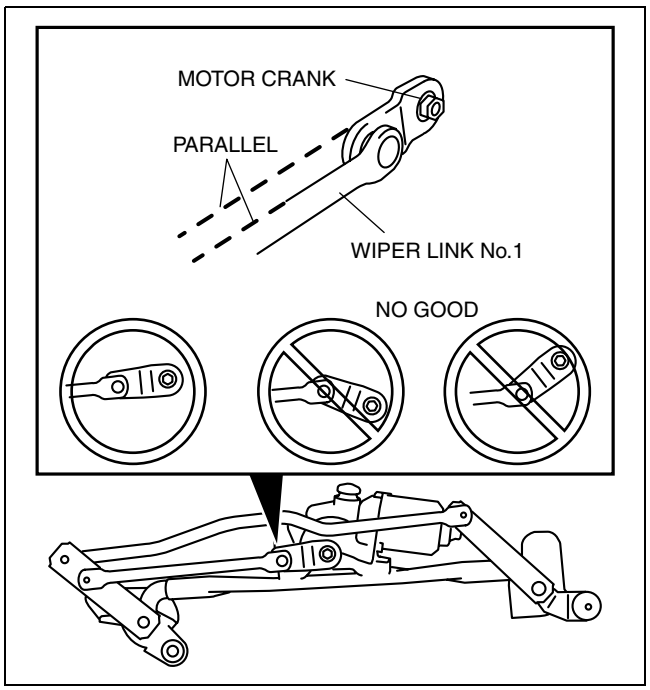
1. Use a clean rag to protect the link, and squeeze using pliers.



B3E0919WA03

Windshield Wiper Motor Assembly Note

1. Connect the windshield wiper motor to the vehicle wiring harness connector, operate the windshield wipers, and then stop them at the auto-stop position.
2. Adjust the motor crank, wiper link No.1, and wiper link No.2 so that they are parallel as shown in the figure.
3. Assemble the windshield wiper motor.



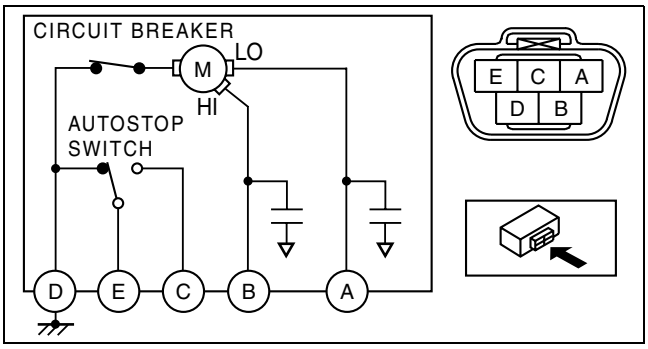
DPE919ZW1108

WINDSHIELD WIPER MOTOR INSPECTION [~~L.H.D.~~]

DPE091967340W04

1. Disconnect the windshield wiper motor connector.
2. Connect battery positive voltage to windshield wiper motor terminal A or B, and ground to terminal D, then verify that the windshield wipers operate as shown in the table.
   - If the windshield wipers do not operate as indicated in the table, replace the windshield wiper motor.

Terminal connected to battery positive voltage	Operation condition
A	LO
B	HI



DPE919ZW1202

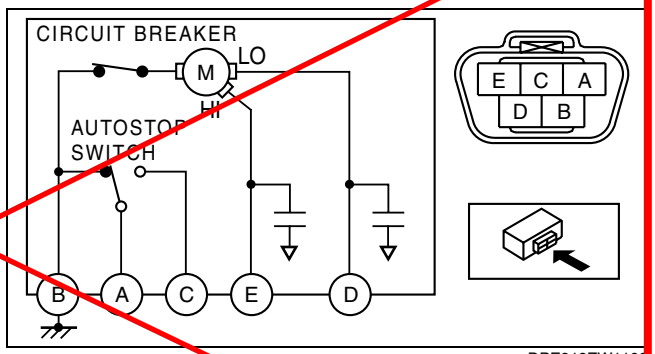
3. Disconnect battery positive voltage from the motor terminal A while the wipers are operating.
4. Verify that the wipers do not stop in the park position.
5. Short between the motor terminals A and C, and connect battery positive voltage to the motor terminal E.
6. Verify that the wipers operate at low speed again, then stop in the park position.
   - If there is any malfunction, replace the windshield wiper motor.

WINDSHIELD WIPER MOTOR INSPECTION [R.H.D.]

DPE091967340W03

1. Disconnect the windshield wiper motor connector.
2. Connect battery positive voltage to windshield wiper motor terminal D or E, and ground to terminal B, then verify that the windshield wipers operate as shown in the table.
   - If the windshield wipers do not operate as indicated in the table, replace the windshield wiper motor.

Terminal connected to battery positive voltage	Operation condition
D	LO
E	HI



DPE919ZW1103

3. Disconnect battery positive voltage from the motor terminal D while the wipers are operating.
4. Verify that the wipers do not stop in the park position.
5. Short between the motor terminals D and C, and connect battery positive voltage to the motor terminal A.
6. Verify that the wipers operate at low speed again, then stop in the park position.
   - If there is any malfunction, replace the windshield wiper motor.

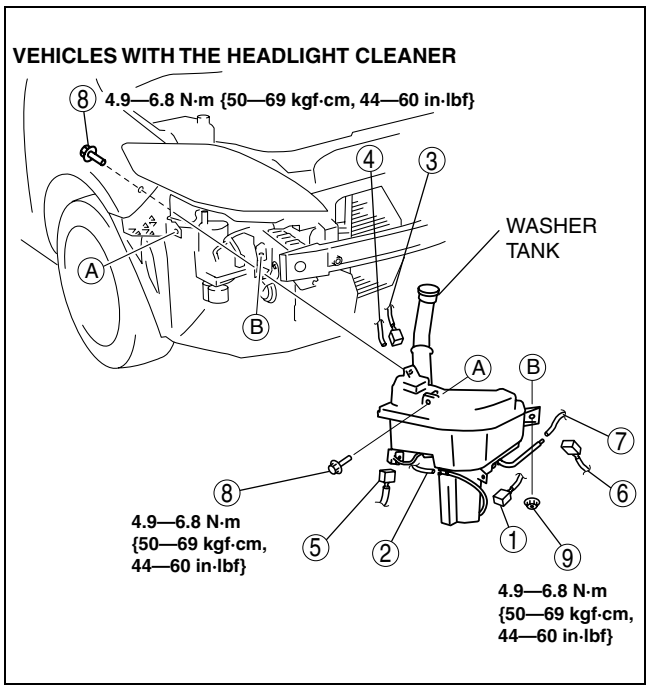
WASHER TANK REMOVAL/INSTALLATION

DPE091967480W01

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)

3. Remove in the order indicated in the table.

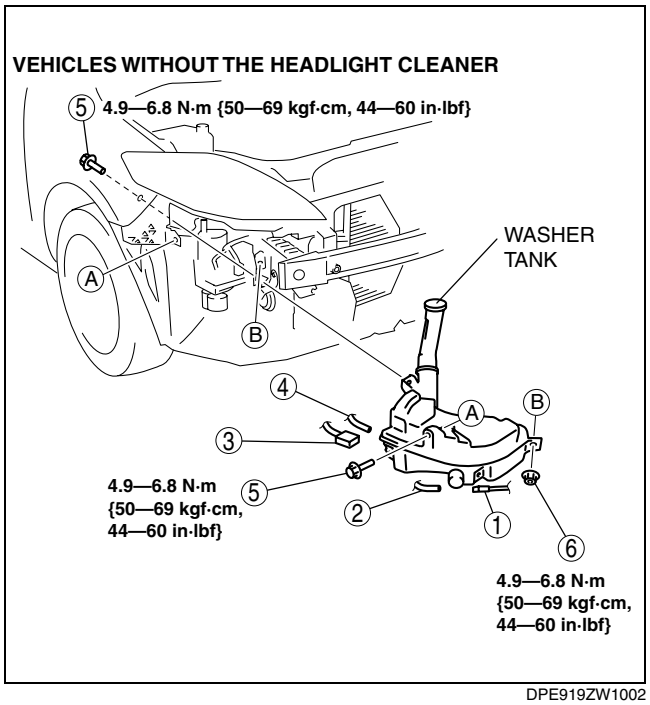
1	Windshield washer motor connector
2	Windshield washer hose
3	Rear washer motor connector
4	Rear washer hose
5	Washer fluid-level sensor connector
6	Headlight cleaner motor connector
7	Headlight cleaner hose
8	Bolt
9	Nut



DPE919ZW1203

1	Windshield washer motor connector
2	Windshield washer hose
3	Rear washer motor connector
4	Rear washer hose
5	Bolt
6	Nut

4. Install in the reverse order of removal.

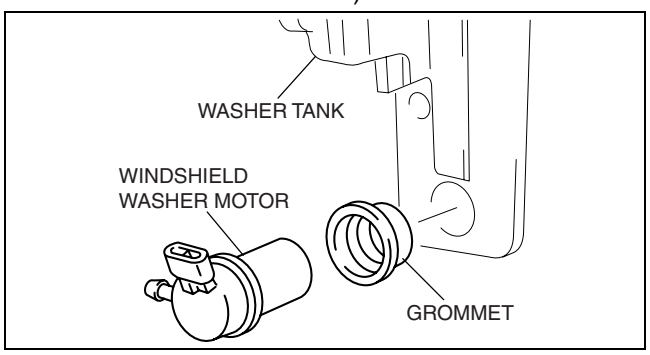


DPE919ZW1002

WINDSHIELD WASHER MOTOR REMOVAL/INSTALLATION

DPE091976670W03

1. Disconnect the negative battery cable.
2. Remove the washer tank. (See 09–19–6 WASHER TANK REMOVAL/INSTALLATION.)
3. Remove the windshield washer motor, then remove the grommet.
4. Install in the reverse order of removal.

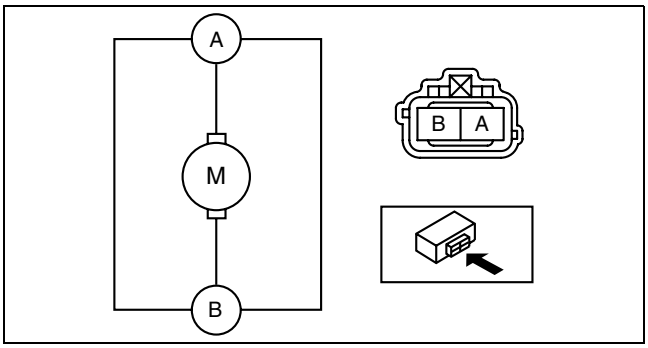


B3E0919W122

WINDSHIELD WASHER MOTOR INSPECTION

DPE091976670W02

1. Connect battery positive voltage to windshield washer motor terminal A and terminal B to ground.
2. Verify that the windshield washer motor operates normally.
   - If there is any malfunction, replace the windshield washer motor.

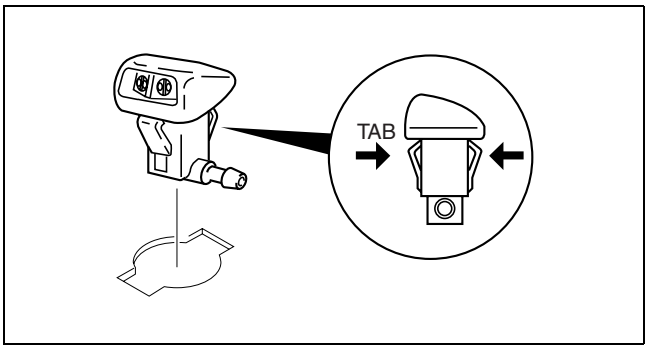


CPJ919ZWB109

WINDSHIELD WASHER NOZZLE REMOVAL/INSTALLATION

DPE091967510W03

1. Remove the bonnet insulator.
2. Remove the windshield washer hose from the windshield washer nozzle.
3. Squeeze the tabs of the windshield washer nozzle.
4. Pull the windshield washer nozzle out to remove it.
5. Install in the reverse order of removal.

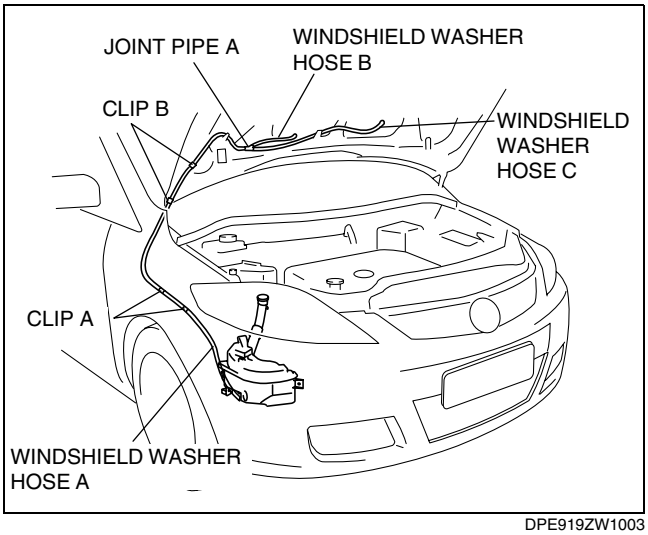


B3E0919W147

WINDSHIELD WASHER HOSE REMOVAL/INSTALLATION

DPE091967510W02

1. Remove the bonnet insulator. (See 09–10–2 BONNET REMOVAL/INSTALLATION)
2. Slightly bend back the mudguard (RH).
3. Disconnect windshield washer hose A from the windshield washer motor.
4. Remove front washer hose A from clips A.
5. Detach clips B.
6. Disconnect windshield washer hose B from the washer nozzle.
7. Disconnect windshield washer hose C from the washer nozzle.
8. Disconnect joint pipe A and remove windshield washer hose A, B and C.
9. Install in the reverse order of removal.



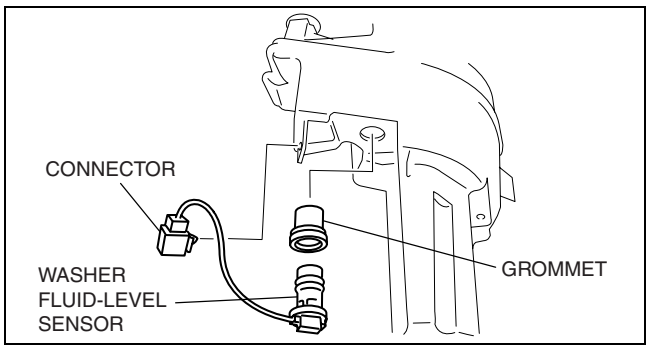
DPE919ZW1003

WASHER FLUID-LEVEL SENSOR REMOVAL/INSTALLATION

DPE091967488W01

1. Disconnect the negative battery cable.
2. Remove the washer tank. (See 09–19–6 WASHER TANK REMOVAL/INSTALLATION)

3. Disconnect the connector.
4. Remove the washer fluid-level sensor.
5. Remove the grommet.
6. Install in the reverse order of removal.

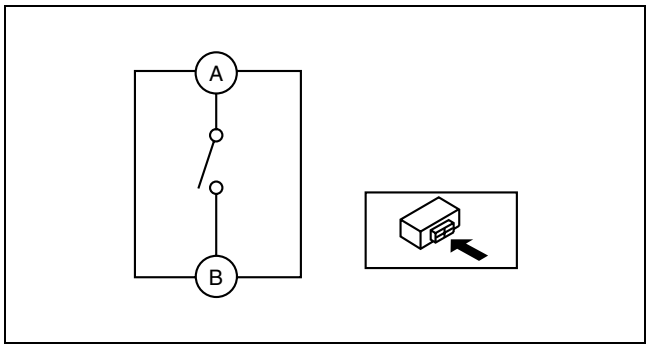


B3E0919W123

WASHER FLUID-LEVEL SENSOR INSPECTION

DPE091967488W02

1. Disconnect the negative battery cable.
2. Inspect for continuity between the washer fluid-level sensor terminals using an ohmmeter.
   - If not as specified, replace the washer fluid-level sensor.



B3E0919W126

○—○ : Continuity

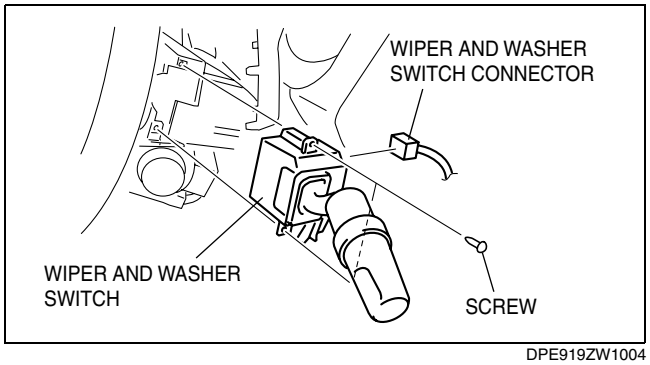
Fluid level	Terminal	
	A	B
Above low		
Below low	○	○

B3E0919W144

WIPER AND WASHER SWITCH REMOVAL/INSTALLATION

DPE091966122W01

1. Disconnect the negative battery cable.
2. Remove the meter hood. (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
3. Remove the column cover. (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
4. Disconnect the wiper and washer switch connector.
5. Remove the screws, then remove the wiper and washer switch.
6. Install in the reverse order of removal.

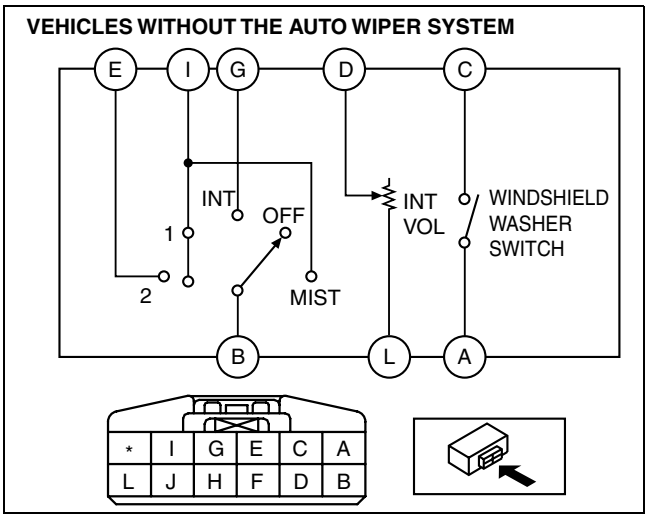


DPE919ZW1004

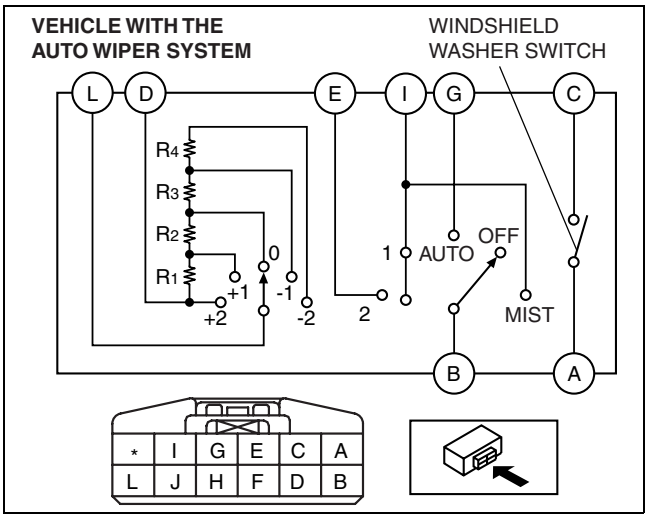
WINDSHIELD WIPER AND WASHER SWITCH INSPECTION

DPE091966122W02

1. Verify that the continuity between the windshield wiper and washer switch is as indicated in the table.



DPE919ZW1010



B3E0919W110

- If not as indicated in the table, replace the wiper and washer switch.

○—○ : Continuity

Switch position		Mist	Terminal					
			A	B	C	E	G	I
Windshield wiper switch	OFF	OFF						
		ON		○				○
	AUTO (INT)			○			○	
	1			○				○
	2			○		○		○
Windshield washer switch	ON		○		○			

B3E0919W128

VEHICLES WITHOUT THE AUTO WIPER SYSTEM

○—○ : Continuity ○—W—○ : Resistance

Switch position	Terminal	
	D	L
FAST	○	○
SLOW	○	○ (R)

R : 700—1300 ohms

DPE919ZW1104

VEHICLES WITH THE AUTO WIPER SYSTEM

○—○ : Continuity ○—W—○ : Resistance

Switch position		Terminal	
		D	L
+	2	○	○
	1	○ (R)	○
0		○ (R R)	○
-	1	○ (R R R)	○
	2	○ (R R R R)	○

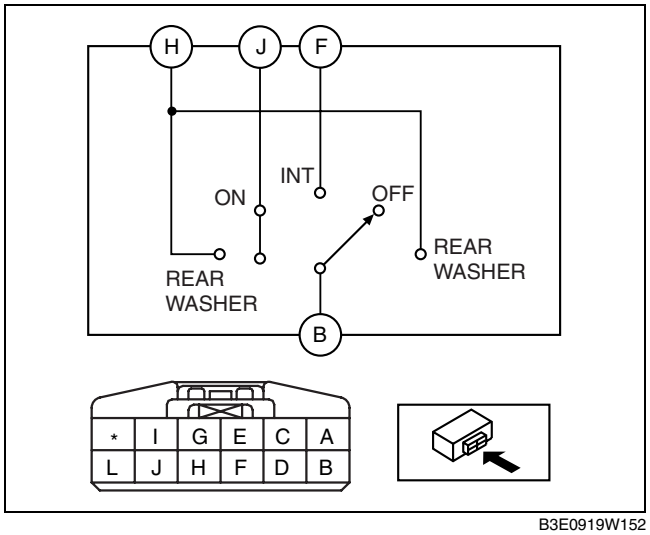
R : 228—252 ohms

DPE919ZW1106

REAR WIPER AND WASHER SWITCH INSPECTION

1. Verify that the continuity between the rear wiper and washer switch terminals is as indicated in the table.

DPE091966122W03



B3E0919W152

09

- If not as indicated in the table, replace the wiper and washer switch.

○—○ : Continuity

Switch position		Terminal			
		B	F	H	J
Rear wiper switch	OFF				
	ON	○			○
	INT	○	○		
Rear wiper and washer switch	ON	○		○	○
Rear washer switch	ON	○		○	

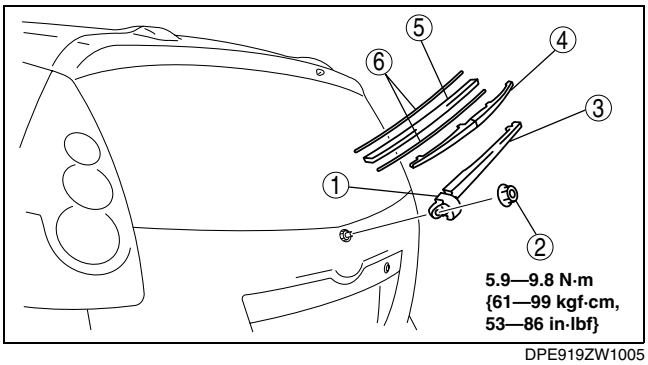
DPE919ZW1205

REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION

DPE091967420W01

1. Remove in the order indicated in the table.

1	Cap
2	Nut
3	Rear wiper arm (See 09–19–12 Rear Wiper Arm Installation Note.)
4	Rear wiper blade
5	Rubber brush
6	Backing plate

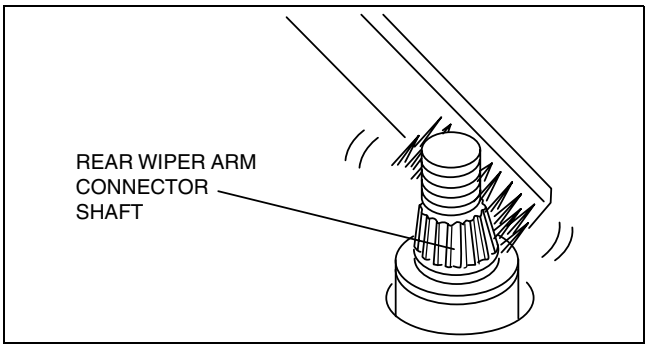


DPE919ZW1005

2. Install in the reverse order of removal.
3. Adjust the rear wiper arm and blade. (See 09–19–12 REAR WIPER ARM AND BLADE ADJUSTMENT.)

Rear Wiper Arm Installation Note

1. Clean the rear wiper arm connector shaft using a wire brush before installing the rear wiper arm.



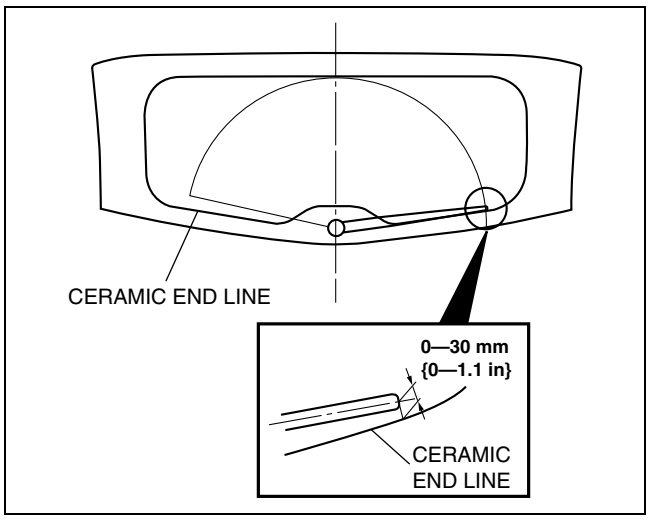
B3E0919W149

REAR WIPER ARM AND BLADE ADJUSTMENT

DPE091967420W02

1. Turn off the rear wiper switch while operating the rear wiper motor, and then stop the rear wiper at the auto-stop position.

2. Set the rear wiper arm onto the ceramic end line.

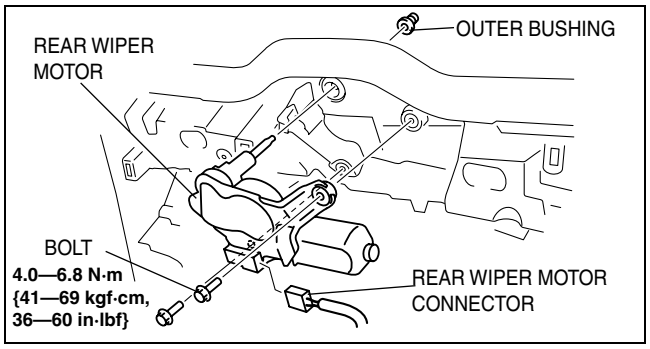


DPE919ZW1011

REAR WIPER MOTOR REMOVAL/INSTALLATION

DPE091967450W01

1. Disconnect the negative battery cable.
2. Remove the rear wiper arm and blade. (See 09–19–12 REAR WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
3. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
4. Disconnect the rear wiper motor connector.
5. Remove the bolts, then remove the rear wiper motor.
6. Remove the outer bushing.
7. Install in the reverse order of removal.

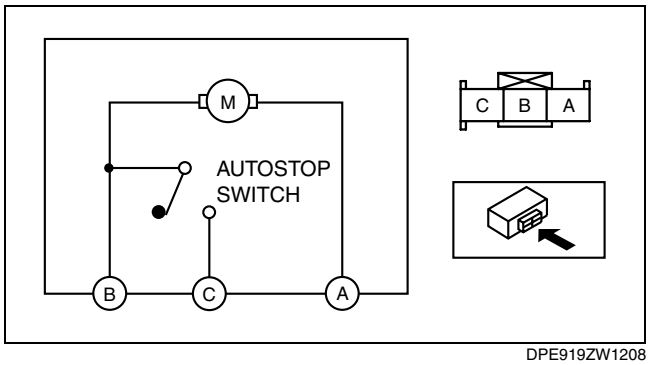


DPE919ZW1008

REAR WIPER MOTOR INSPECTION

DPE091967450W03

1. Connect battery positive voltage to the rear wiper motor terminal B, and ground the rear wiper motor terminal A.
2. Verify that the rear wiper motor operates.
   - If there is any malfunction, replace the rear wiper motor.



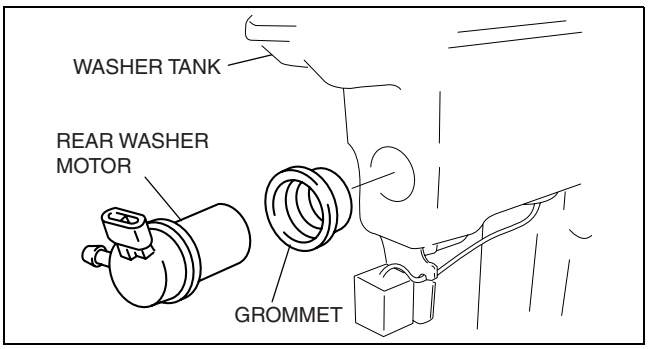
DPE919ZW1208

REAR WASHER MOTOR REMOVAL/INSTALLATION

DPE091976672W03

1. Disconnect the negative battery cable.
2. Remove the washer tank. (See 09–19–6 WASHER TANK REMOVAL/INSTALLATION)

3. Remove the rear washer motor, then remove the grommet.
4. Install in the reverse order of removal.

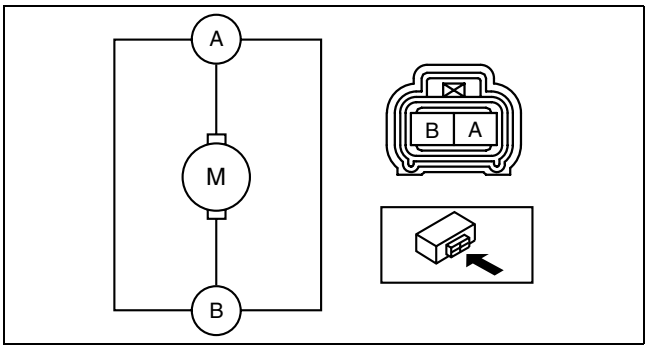


B3E0919W134

REAR WASHER MOTOR INSPECTION

DPE091976672W02

1. Connect battery positive voltage to rear washer motor terminal A and terminal B to ground.
2. Verify that the rear washer motor operates normally.
   - If there is any malfunction, replace the rear washer motor.

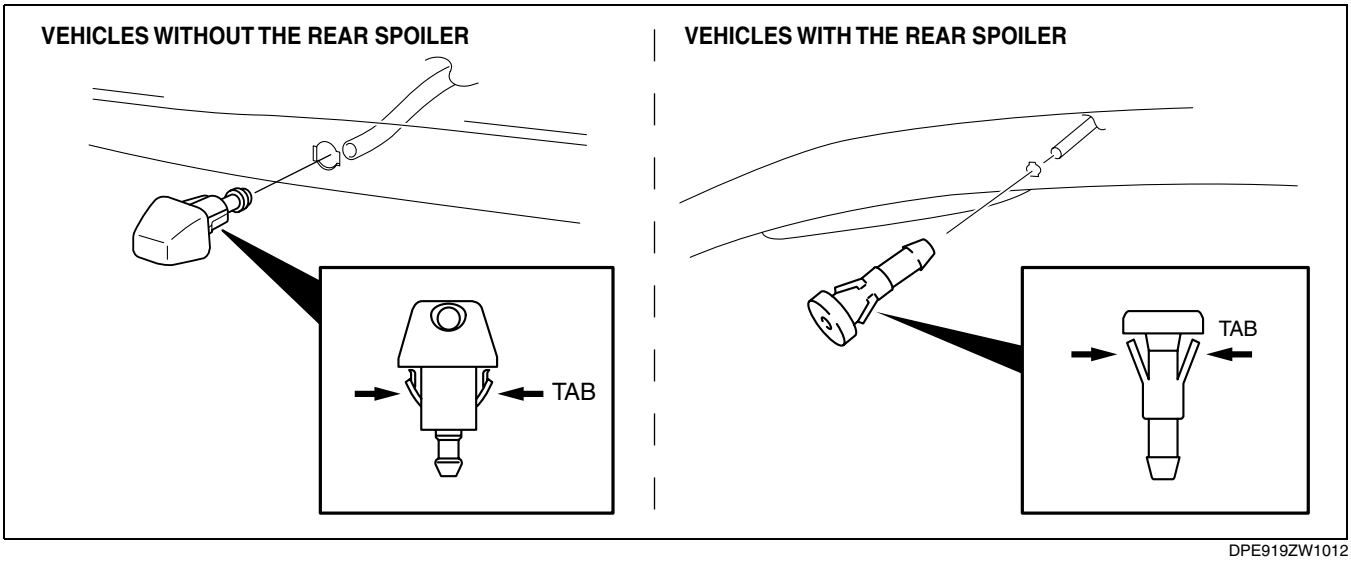


CPJ919ZWB105

REAR WASHER NOZZLE REMOVAL/INSTALLATION

DPE091967511W01

1. Remove the high-mount brake light cover.
2. Press the tabs and remove the rear washer nozzle.
3. Install in the reverse order of removal.
4. Adjust the rear washer nozzle. (See 09–19–15 REAR WASHER NOZZLE ADJUSTMENT.)

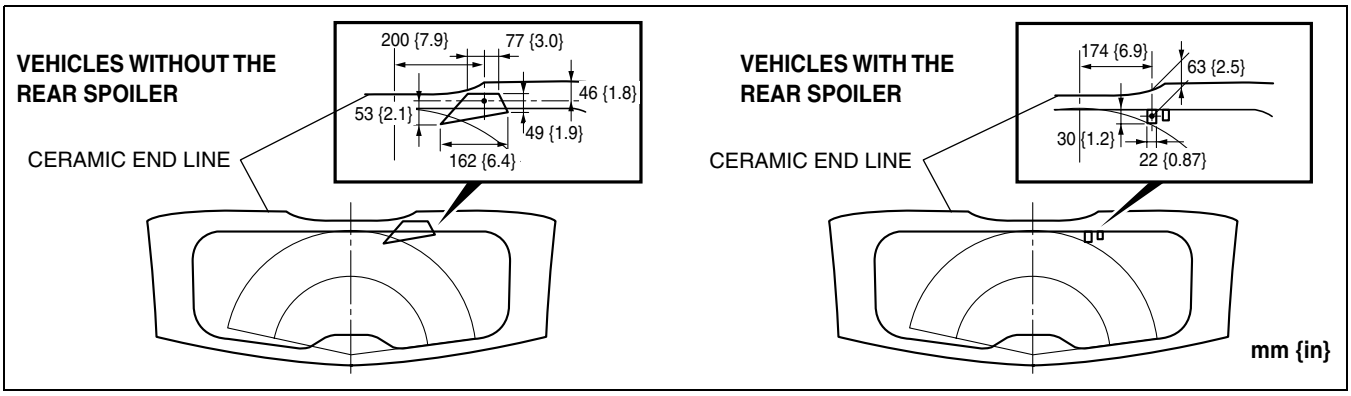


DPE919ZW1012

REAR WASHER NOZZLE ADJUSTMENT

DPE091967511W02

1. Insert a needle or an equivalent tool into the spray hole of the rear washer nozzle and adjust the nozzle direction as shown.

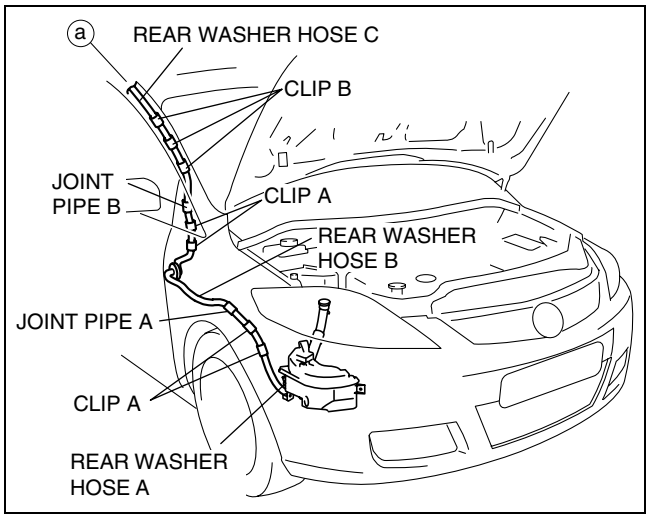


DPE919ZW1013

REAR WASHER HOSE REMOVAL/INSTALLATION

DPE091967471W02

1. Disconnect the negative battery cable.
2. Remove the mudguard (RH).
3. Disconnect rear washer hose A from the washer tank.
4. Remove rear washer hose A from clips A.
5. Disconnect joint pipe A and remove rear washer hose A.
6. Remove the following parts:
   (1) Front door (See 09–11–2 FRONT DOOR REMOVAL/INSTALLATION.)
   (2) Sail garnish (See 09–16–4 SAIL GARNISH REMOVAL.)
   (3) Front scuff plate inner (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (5) Side panel (passenger's side) (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (6) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (7) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (8) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)



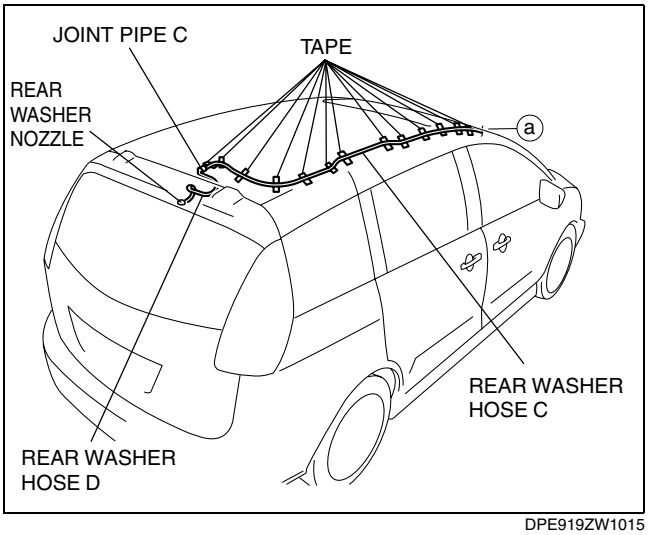
DPE919ZW1014

   (9) Lower panel (See 09–17–8 LOWER PANEL REMOVAL/INSTALLATION.)
   (10) Center panel module (vehicles with audio unit) (See 09–20–6 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
   (11) Center panel (vehicles without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION.)
   (12) Selector lever component (See 05–18–5 SELECTOR LEVER COMPONENT REMOVAL/INSTALLATION.)
   (13) Driver-side air bag module (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
   (14) Meter hood (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
   (15) Lower column cover (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
   (16) Instrument cluster (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
   (17) Steering shaft (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
   (18) A-pillar trim (See 09–17–15 A-PILLAR TRIM REMOVAL/INSTALLATION.)
   (19) Climate control unit (See 07–40–35 CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See 07–40–36 CLIMATE CONTROL UNIT REMOVAL [MANUAL AIR CONDITIONER].) (See 07–40–37 CLIMATE CONTROL UNIT INSTALLATION [MANUAL AIR CONDITIONER].)
   (20) Rear heat duct (1) (See 07–11–24 REAR HEAT DUCT REMOVAL/INSTALLATION.)
   (21) Windshield wiper arm and blade (See 09–19–3 WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.)
   (22) Cowl grille (See 09–16–2 COWL GRILLE REMOVAL/INSTALLATION.)
   (23) Dashboard (See 09–17–4 DASHBOARD REMOVAL/INSTALLATION.)
7. Remove rear washer hose B from clips A.

8. Disconnect joint pipe B and remove rear washer hose B.
9. Detach clips B.
10. Remove the following parts:
    (1) Front seat belt upper anchor installation bolt (See 08–11–1 FRONT SEAT BELT REMOVAL/INSTALLATION.)
    (2) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
    (3) B-pillar lower trim (See 09–17–16 B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.)
    (4) B-pillar upper trim (See 09–17–16 B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.)
    (5) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
    (6) Sub-trunk
    (7) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
    (8) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
    (9) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
    (10) Third-row seat belt lower anchor installation bolt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
    (11) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
    (12) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
    (13) Second-row seat belt upper anchor installation bolt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
    (14) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)
    (15) Rear entertainment system (RES) unit cover (vehicles with RES) (See 09–20–25 RES UNIT REMOVAL/INSTALLATION.)
    (16) Map light (See 09–18–24 MAP LIGHT REMOVAL/INSTALLATION.)
    (17) Sunvisor (See 09–17–21 SUNVISOR REMOVAL/INSTALLATION.)
    (18) Assist handle (See 09–17–21 ASSIST HANDLE REMOVAL/INSTALLATION.)
11. Disconnect joint pipe C.
12. Remove the headliner. (See 09–17–22 HEADLINER REMOVAL/INSTALLATION.)
13. Cut the urethane of the headliner and remove the tape and rear washer hose C.

Note
- After installing the rear washer hose, reinforce the urethane that was cut when removing.

14. Remove rear washer hose D from the rear washer nozzle.
15. Install in the reverse order of removal.

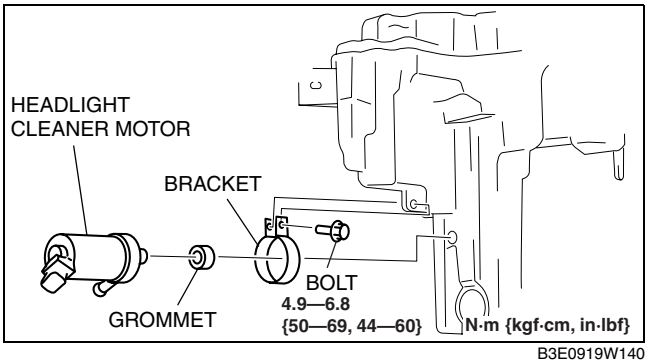


DPE919ZW1015

HEADLIGHT CLEANER MOTOR REMOVAL/INSTALLATION

DPE091951801W01

1. Disconnect the negative battery cable.
2. Remove the washer tank. (See 09–19–6 WASHER TANK REMOVAL/INSTALLATION.)
3. Remove the bolt, then remove the bracket.
4. Remove the headlight cleaner motor, then remove the grommet.
5. Install in the reverse order of removal.

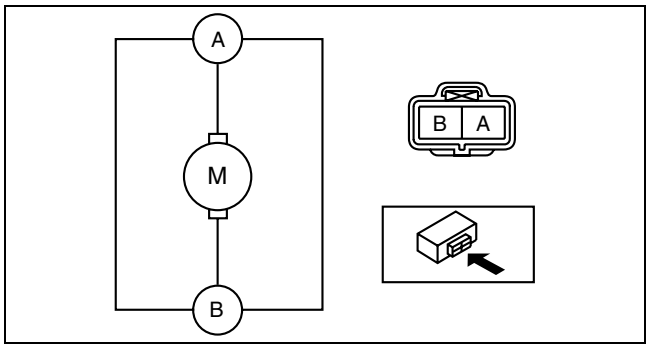


B3E0919W140

HEADLIGHT CLEANER MOTOR INSPECTION

DPE091951801W02

1. Connect battery positive voltage to headlight cleaner motor terminal A and terminal B to ground.
2. Verify that the headlight cleaner motor operates normally.
   - If there is any malfunction, replace the headlight cleaner motor.

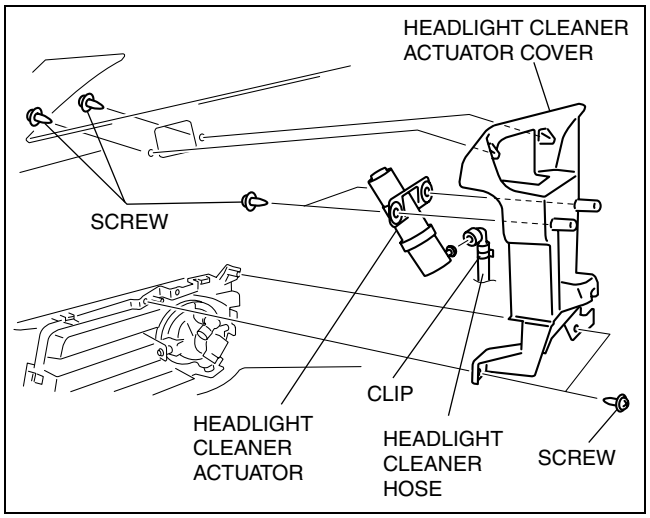


CHU0919W119

HEADLIGHT CLEANER ACTUATOR REMOVAL/INSTALLATION

DPE091951801W03

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Remove the headlight cleaner nozzle cover.
4. Squeeze the clip tabs and slide the clip in the direction of the arrow.
5. Disconnect headlight cleaner hose from the headlight cleaner actuator.
6. Remove the screw, then remove the headlight cleaner actuator cover.
7. Remove the headlight cleaner actuator from the headlight cleaner actuator cover.
8. Install in the reverse order of removal.

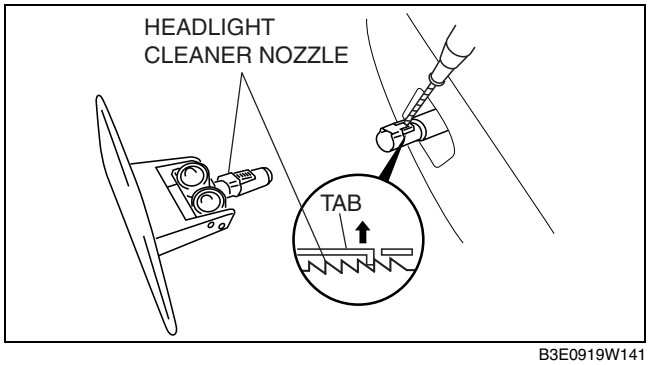


DPE919ZW1207

HEADLIGHT CLEANER NOZZLE REMOVAL

DPE091951801W04

1. Pull out the headlight cleaner nozzle.
2. While detaching the tab with a tape-wrapped flathead screwdriver, remove the headlight cleaner nozzle.



B3E0919W141

HEADLIGHT CLEANER NOZZLE INSTALLATION

DPE091951801W05

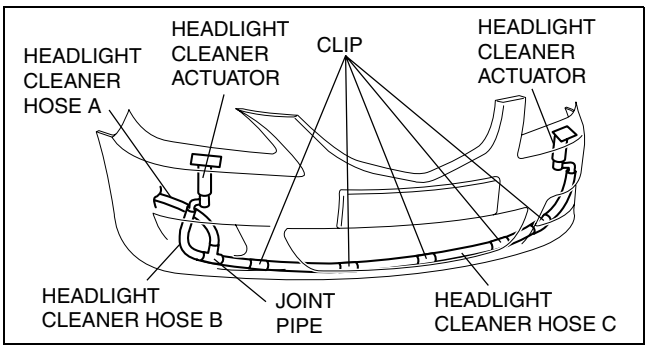
1. Attachment is pushed in until there is click sound in headlight cleaner nozzle.

HEADLIGHT CLEANER HOSE REMOVAL/INSTALLATION

DPE091951801W06

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See 09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)

3. Disconnect the headlight cleaner hose A from the joint pipe.
4. Disconnect the headlight cleaner hose B from the headlight cleaner actuator.
5. Disconnect the headlight cleaner hose C from the headlight cleaner actuator.
6. Remove the headlight cleaner hose C from the clips.
7. Disconnect the joint pipe, then remove the headlight cleaner hose B and C.
8. Install in the reverse order of removal.



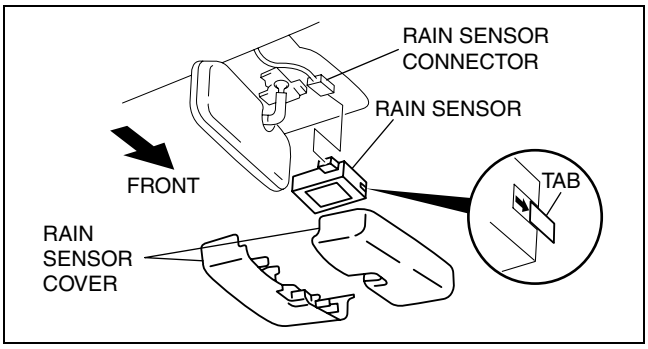
DPE919ZW1206

RAIN SENSOR REMOVAL/INSTALLATION

DPE091966500W01

Caution
- **If the ignition switch is turned to the ON position after replacing a rain sensor with a new one, the rain sensor determines that there is no raindrops or dirt on the windshield and performs the initial setting. When replacing a rain sensor with a new one, thoroughly wipe off raindrops and dirt from the windshield.**

1. Disconnect the negative battery cable.
2. Remove the rain sensor cover.
3. Disconnect the rain sensor connector.
4. Slide the tab in the direction of the arrow and remove the rain sensor.
5. Install in the reverse order of removal.



B3E0919W145

RAIN SENSOR INITIAL SETTING

DPE091966500W02

Caution
- **If the initial setting is performed with water or dirt on the windshield, the rain sensor will not operate correctly. Before performing the rain sensor initial setting, remove water and dirt from the windshield.**

Note
- Perform initial setting in the following cases:
  - — The windshield is replaced but the rain sensor is reused.
  - — If the ignition switch is turned to the ON position with water or dirt on the windshield when replacing the rain sensor.

1. Remove water and dirt from the windshield surface.
2. Turn the ignition switch off.
3. Turn the windshield wiper switch to the AUTO position.
4. Within 10 s after turning the ignition switch to the ON position, turn the windshield wiper switch from the AUTO to the OFF position for five times and return it to the AUTO position.

Caution
- **If the operation is too fast, the windshield wiper switch position cannot be detected and the initial setting may not be performed. Operate the windshield wiper switch for one cycle (AUTO→OFF→AUTO) per 1 s.**

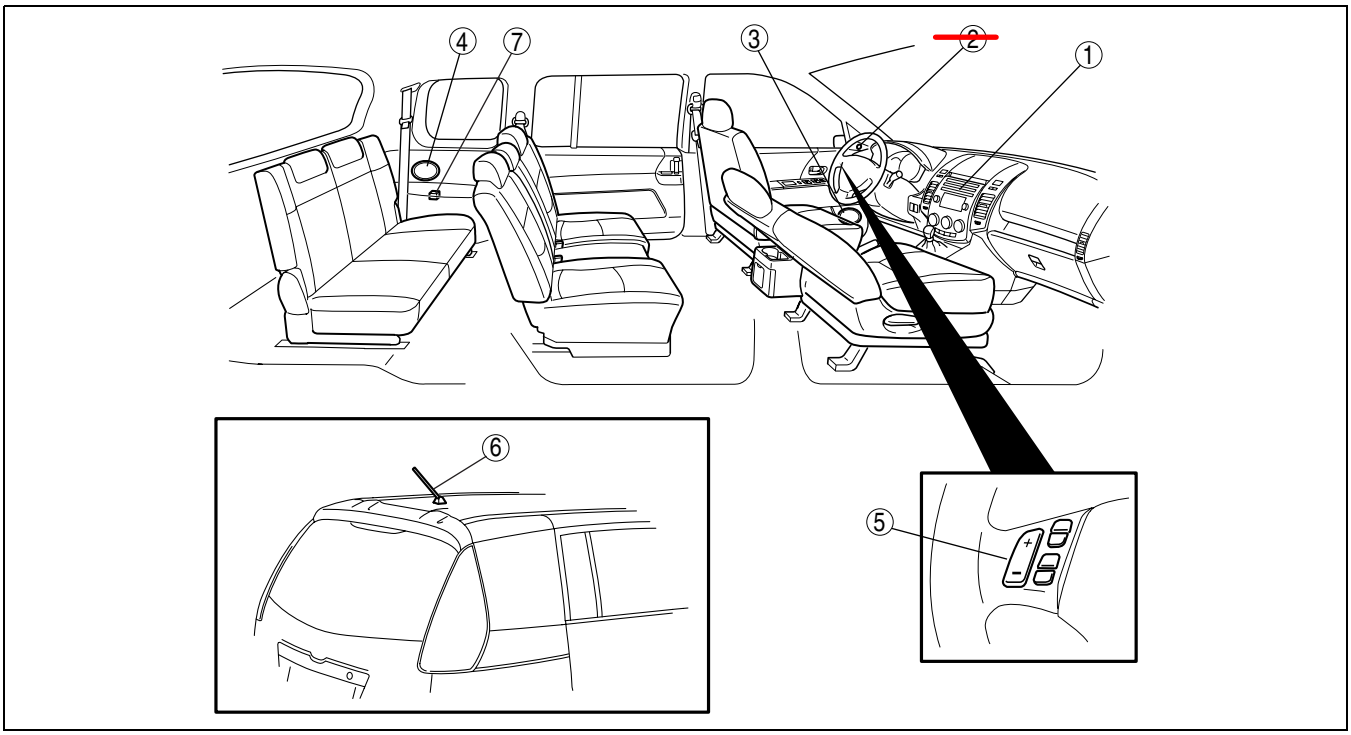
Note
- When the initial setting is performed correctly, the windshield wiper operates once at low speed.

09–20 ENTERTAINMENT

ENTERTAINMENT LOCATION INDEX

DPE092000001W01

Audio System

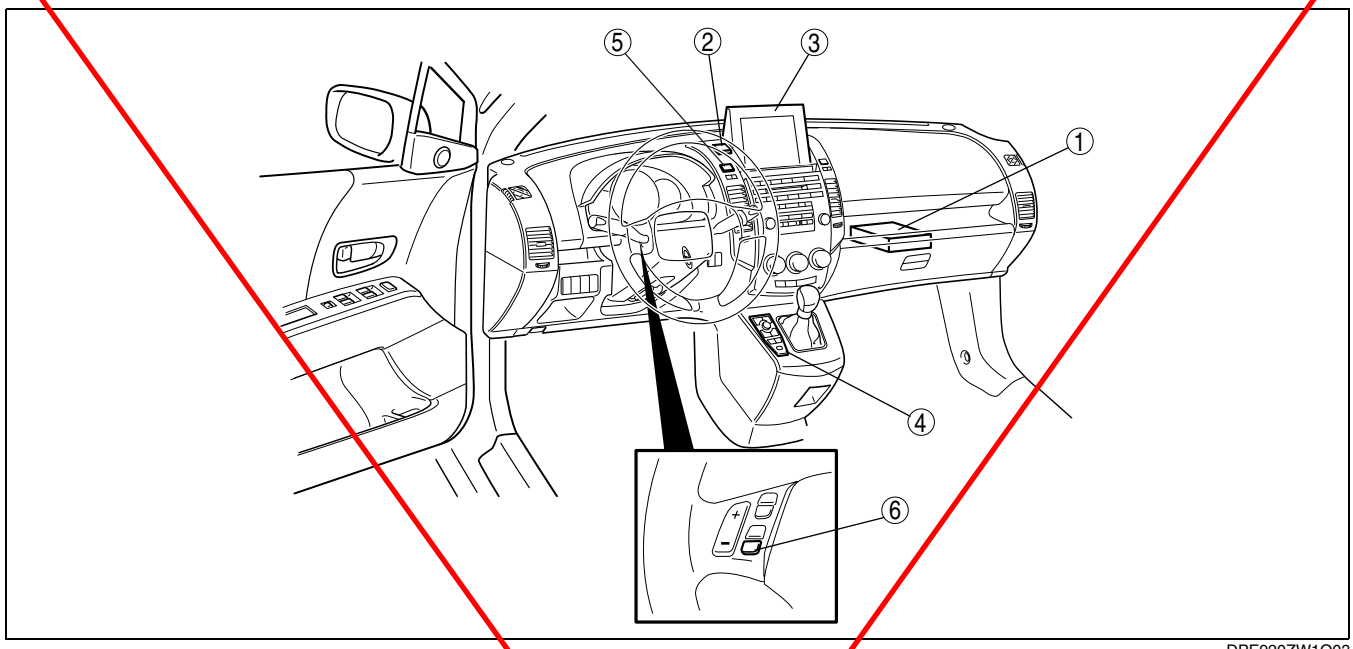


DPE920ZW1O01

1	Center panel module (See 09–20–7 CENTER PANEL MODULE REMOVAL/INSTALLATION) (See 09–20–8 CENTER PANEL MODULE DISASSEMBLY/ASSEMBLY) (See 09–20–8 AUDIO UNIT DISASSEMBLY/ASSEMBLY)
2	Front tweeter (See 09–20–11 FRONT TWEETER REMOVAL/INSTALLATION) (See 09–20–12 FRONT TWEETER INSPECTION)
3	Front door speaker (See 09–20–10 FRONT DOOR SPEAKER REMOVAL/INSTALLATION) (See 09–20–11 FRONT DOOR SPEAKER INSPECTION)
4	Rear speaker (See 09–20–11 REAR SPEAKER REMOVAL/INSTALLATION) (See 09–20–11 REAR SPEAKER INSPECTION)

5	Audio control switch (See 09–20–16 AUDIO CONTROL SWITCH REMOVAL/INSTALLATION) (See 09–20–17 AUDIO CONTROL SWITCH INSPECTION)
6	Center roof antenna (See 09–20–12 CENTER ROOF ANTENNA REMOVAL/INSTALLATION) (See 09–20–13 CENTER ROOF ANTENNA INSPECTION) (See 09–20–14 ANTENNA FEEDER LOCATION) (See 09–20–14 FRONT ANTENNA FEEDER INSPECTION) (See 09–20–15 REAR ANTENNA FEEDER INSPECTION)
7	Condenser (See 09–20–12 CONDENSER REMOVAL/INSTALLATION)

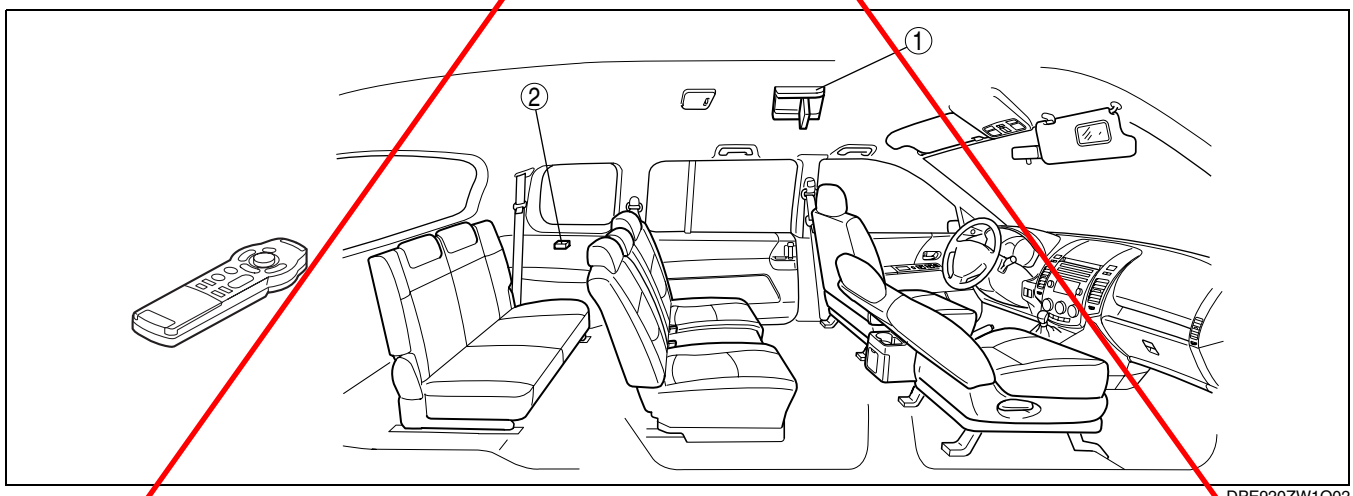
Car-navigation System



DPE920ZW1O03

1	Car-navigation unit (See 09–20–8 CAR-NAVIGATION UNIT REMOVAL/INSTALLATION)
2	GPS antenna (See 09–20–13 GPS ANTENNA REMOVAL/INSTALLATION)
3	LCD unit (See 09–20–9 LCD UNIT REMOVAL/INSTALLATION)
4	Car-navigation control switch (See 09–20–17 CAR-NAVIGATION CONTROL SWITCH REMOVAL/INSTALLATION) (See 09–20–18 CAR-NAVIGATION CONTROL SWITCH INSPECTION)
5	Microphone (See 09–20–18 MICROPHONE REMOVAL/INSTALLATION)
6	VOICE button (See 09–20–16 AUDIO CONTROL SWITCH REMOVAL/INSTALLATION) (See 09–20–17 AUDIO CONTROL SWITCH INSPECTION)

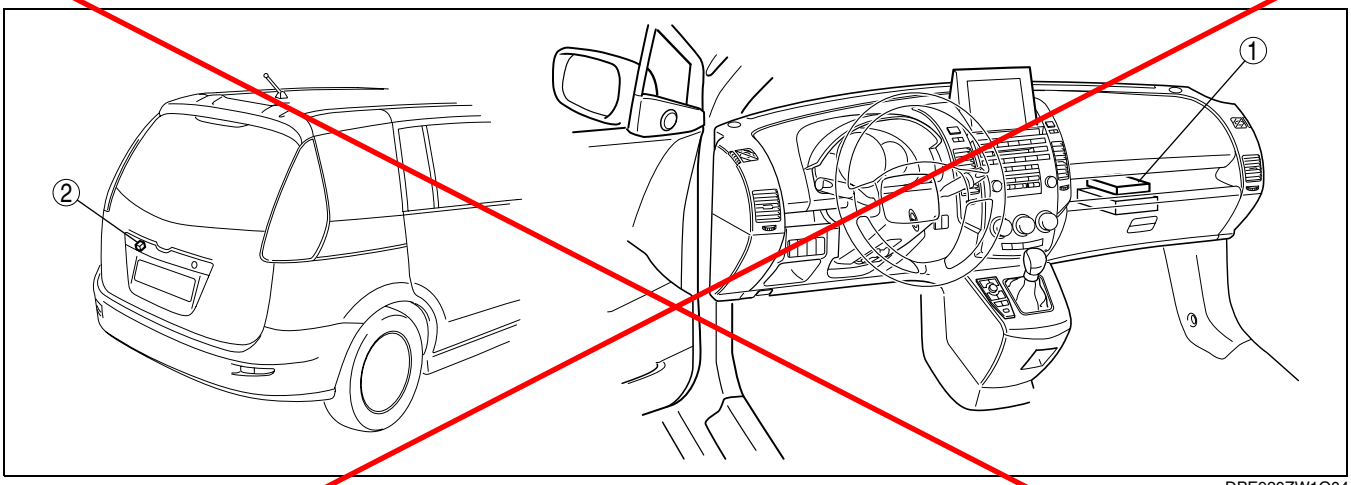
RES (Rear Entertainment System)



DPE920ZW1O02

1	RES unit (See 09–20–26 RES UNIT REMOVAL/INSTALLATION)
2	Auxiliary terminal unit (See 09–20–27 AUXILIARY TERMINAL UNIT REMOVAL/INSTALLATION)

Rear View Monitor System



DPE920ZW1O04

1	Rear view monitor control module (See 09–20–19 REAR VIEW MONITOR CONTROL MODULE REMOVAL/INSTALLATION)
2	Back camera (See 09–20–19 BACK CAMERA REMOVAL/INSTALLATION)

ANTI-THEFT SYSTEM

DPE092066900W01

Alarm Conditions

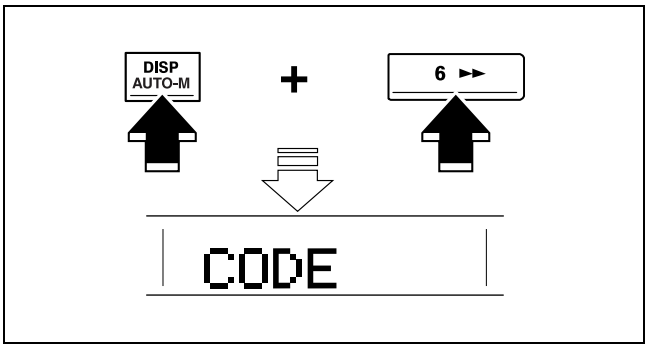
- If the anti-theft system protection has been activated, any one of the following conditions will trigger the system:
  - — Disconnected battery cable
  - — Discharged battery
  - — Disconnected audio unit connectors
- If the system is triggered, the audio unit will then be inoperative when it is reconnected to a power source, and “code” will flash on the display until the preselected code number is input. If the anti-theft system is triggered, follow the procedures in “Canceling Anti-theft Operation” to reset the unit.

Operation	Reference
Input code number to activate anti-theft system	Setting the Code Number
Delete previous code number and set new number	Canceling the Code Number
Resume audio unit operation after anti-theft system is triggered	Canceling Anti-theft Operation

Setting the Code Number

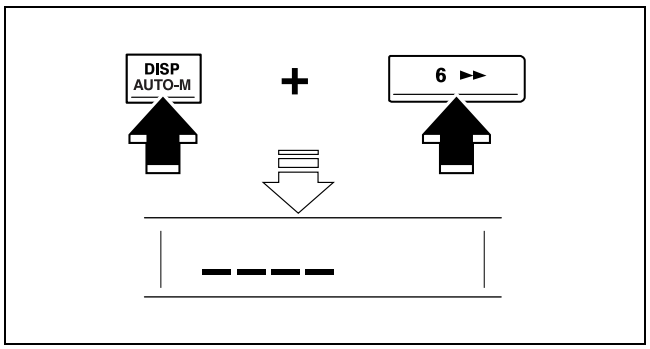
Complete each step (Steps 1–3) **within 10 s** or the setting procedure will be canceled.

1. Turn the ignition switch to ACC position and then turn off the audio unit.
2. First press the AUTO-M button, then simultaneously press channel button 6 for **approximately 2 s** until “CODE” appears on the display.



DPE920ZW1O05

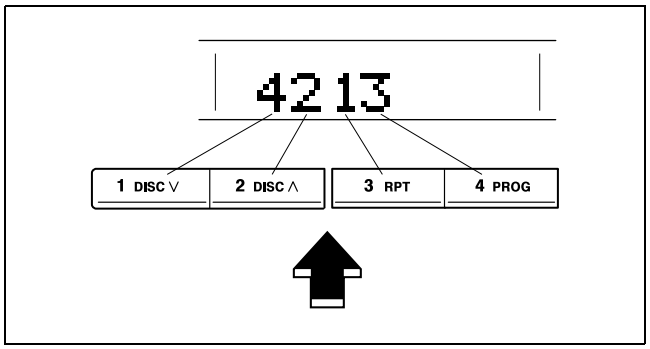
3. Press the AUTO-M button again, then simultaneously press channel button 6 until bars appear on the display.
4. Select a personal code number and record it before inputting it. If the number is input and then forgotten, it cannot be canceled, and if the unit is disconnected again, the audio unit will be inoperative.



DPE920ZW1O06

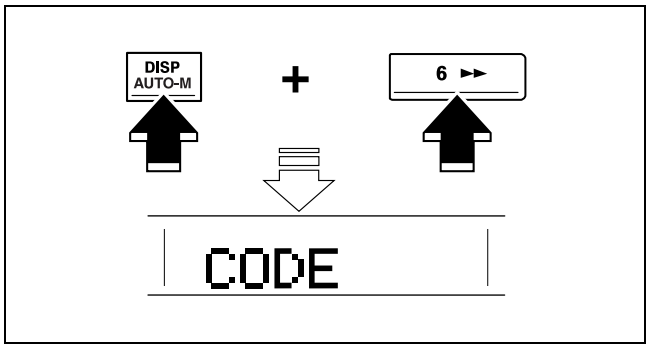
5. Use channel buttons 1–4 to input the selected code number. Press button 1 for the first digit, 2 for the second, 3 for the third, and 4 for the last digit. Input the number **within 10 s**. If the display is deleted, repeat the procedure from Step 1.

Note
- Perform Step 6 **within 10 s** after Step 5.



DPE920ZW1O07

6. With the code number displayed, press the AUTO-M button, then simultaneously press channel button 6 for **approximately 2 s**. “CODE” will be displayed for **approximately 5 s**. After it disappears, the code number is set.
7. If “Err” (error) appears on the display, repeat the procedure from Step 5. If input error is repeated three times, turn the ignition switch to LOCK position and repeat the procedure from Step 1.

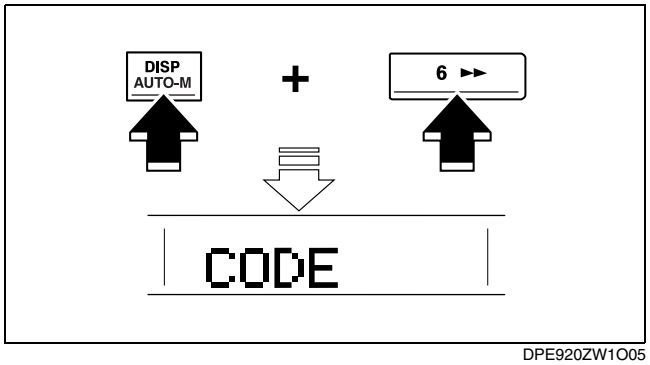


DPE920ZW1O05

Canceling the Code Number

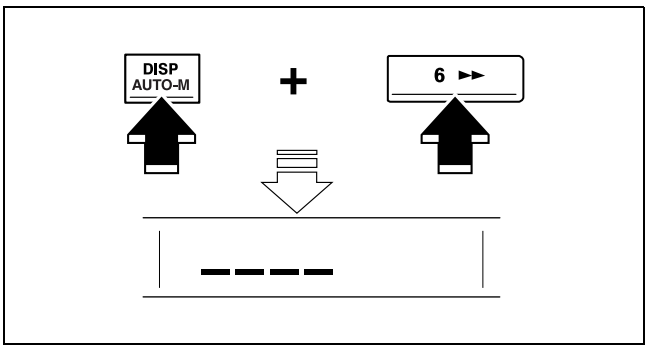
Complete each step (Steps 1–3) **within 10 s** or the canceling procedure will be canceled.

1. Turn the ignition switch to ACC position and then turn off the audio unit.
2. First press the AUTO-M button, then simultaneously press channel button 6 for **approximately 2 s** until “CODE” appears on the display.



DPE920ZW1O05

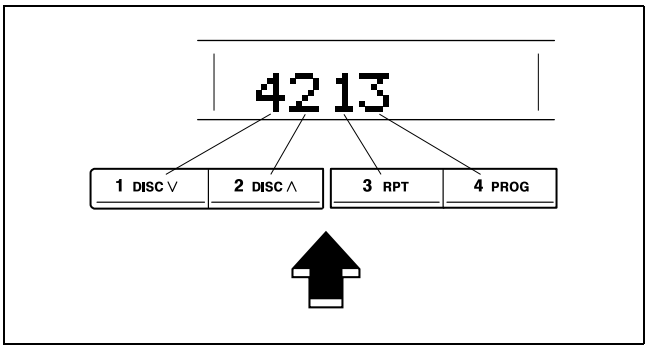
3. Press the AUTO-M button again, then simultaneously press channel button 6 until bars appear on the display.



DPE920ZW1O06

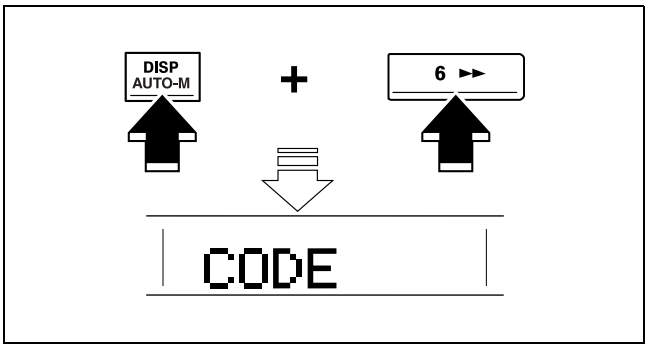
4. Use channel buttons 1–4 to input the current code number. Press button 1 for the first digit, 2 for the second, 3 for the third, and 4 for the last digit. Input the number **within 10 s**. If the display is deleted, repeat the procedure from Step 1.

Note
- Perform Step 5 **within 10 s** after Step 4.



DPE920ZW1O07

5. With the code number displayed, press the AUTO-M button, then simultaneously press channel button 6 for **approximately 2 s**. “CODE” will be displayed for **approximately 5 s**. After it disappears, the code number is canceled.
6. If “Err” (error) appears on the display, repeat the procedure from Step 4.



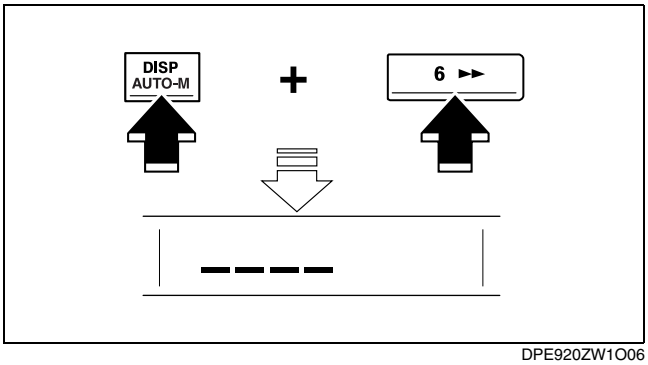
DPE920ZW1O05

Canceling Anti-theft Operation

Properly input the selected code number to deactivate the anti-theft system and resume normal audio operation.

1. Turn the ignition switch to ACC position. (“CODE” will flash on the display.)
2. First press the AUTO-M button, then simultaneously press channel button 6 for **approximately 2 s** until bars appears on the display.

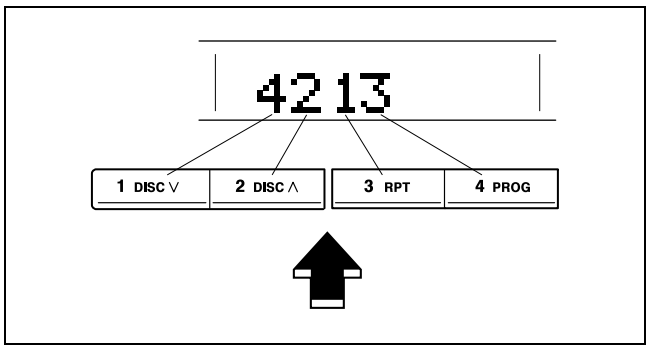
Note
- Perform Step 3 **within 10 s** after Step 2.



DPE920ZW1O06

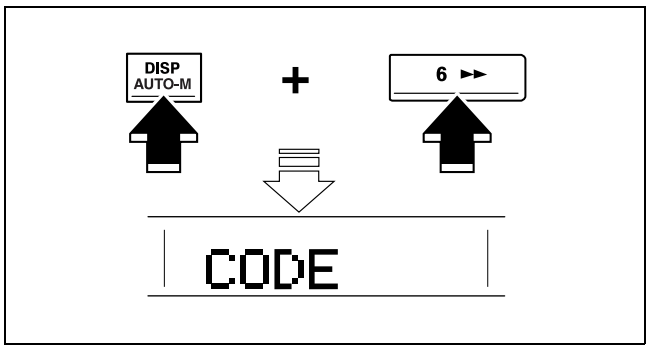
3. Use channel buttons 1–4 to input the selected code number. Press button 1 for the first digit, 2 for the second, 3 for the third, and 4 for the last digit. Input the number **within 10 s**. If the display is deleted, repeat the procedure from Step 1.

Caution
- **Three consecutive errors, including turning the ignition switch to LOCK position and disconnecting the audio unit, will activate the anti-theft system and render the audio unit completely inoperative.**



DPE920ZW1O07

4. With the code number displayed, press the AUTO-M button, then simultaneously press channel button 6 for **approximately 2 s**. “CODE” will flash for **approximately 5 s**.
5. If “Err” (error) appears on the display, repeat the procedure from Step 1.

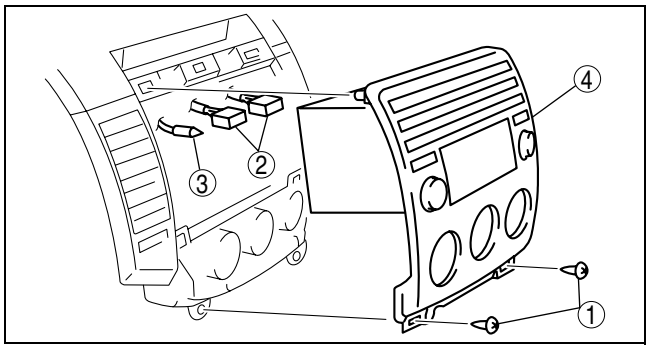


DPE920ZW1O05

CENTER PANEL MODULE REMOVAL/INSTALLATION

DPE092066900W02

1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console. (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.



DPE920ZW1O08

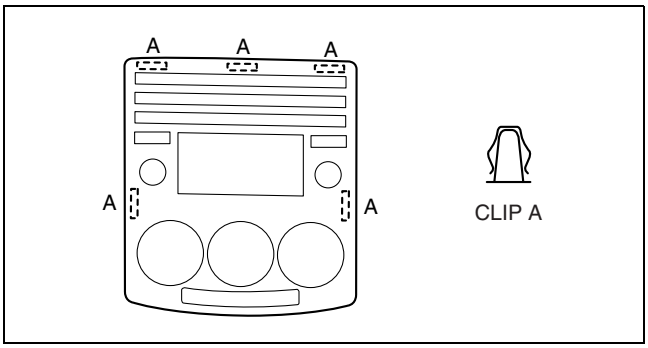
1	Screw
2	Connector
3	Antenna feeder
4	Center panel module (See 09–20–8 Center Panel Module Removal Note.)

5. Install in the reverse order of removal.

Caution
- **When installing the center panel module, make sure that the wiring harness and antenna feeder are not caught between the unit and dashboard.If the wiring harness or the antenna feeder is caught between the unit and dashboard, it may cause malfunctions.**

Center Panel Module Removal Note

1. Pull the center panel module outward, detach clip A from the dashboard, and then remove the center panel module.



DPE920ZW1O09

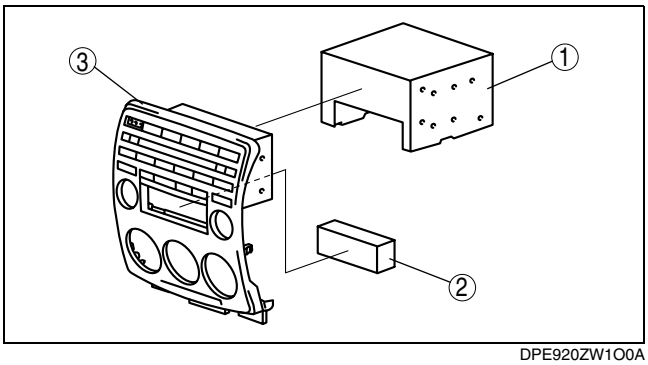
CENTER PANEL MODULE DISASSEMBLY/ASSEMBLY

DPE092066900W03

Caution

- **Before disassembling the center panel module, spread a cloth on the floor to put the disassembled parts on. This protects the surface of the panel from scratches or dirt.**

1. Disassemble in the order indicated in the table.
2. Assemble in the reverse order of disassembly.



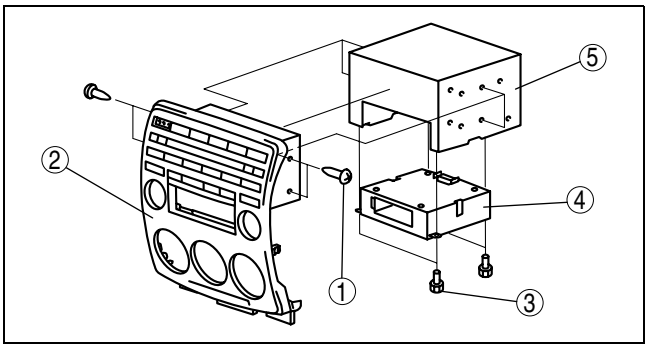
DPE920ZW1O0A

1	Audio unit
2	Cover (lower module)
3	Center panel

AUDIO UNIT DISASSEMBLY/ASSEMBLY

DPE092066900W04

1. Disassemble in the order indicated in the table.



DPE920ZW1O0B

1	Screw
2	Center panel
3	Screw
4	Lower module (without HDD audio)
5	Base unit

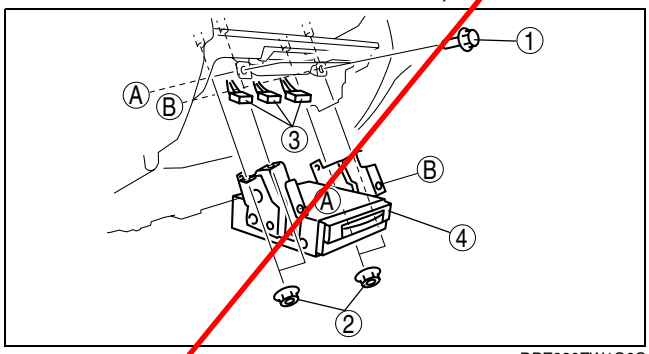
2. Assemble in the reverse order of disassembly.

~~CAR-NAVIGATION UNIT REMOVAL/INSTALLATION~~

DPE092066902W01

~~1. Disconnect the negative battery cable.~~

2. Remove the following parts:
   (1) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (2) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (3) Front scuff plate (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (5) Side panel (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (6) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



DPE920ZW1O0C

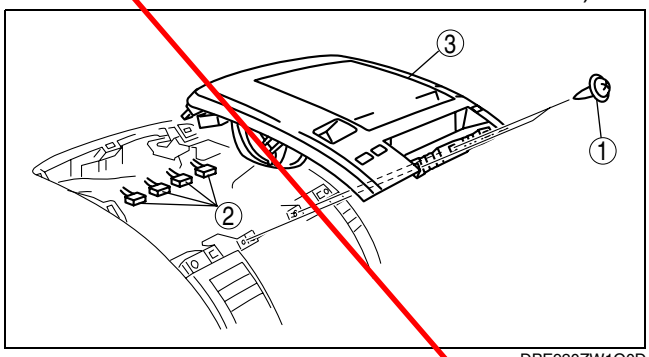
1	Bolt
2	Nut
3	Connector
4	Car-navigation unit

4. Install in the reverse order of removal.

LCD UNIT REMOVAL/INSTALLATION

DPE092066901W01

1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console. (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
4. Remove the center panel module. (See 09–20–7 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
5. Remove in the order indicated in the table.



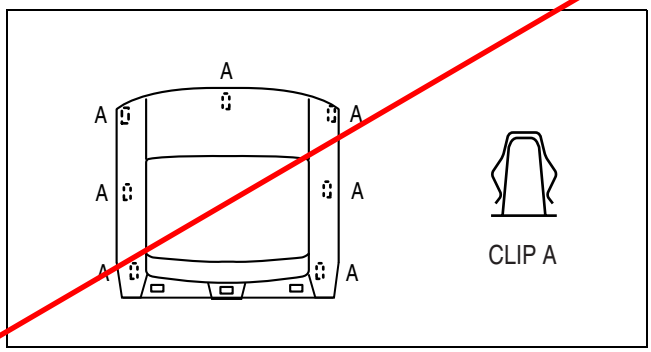
DPE920ZW1O0D

1	Screw
2	Connector
3	LCD unit (See 09–20–10 LCD Unit Removal Note.)

6. Install in the reverse order of removal.

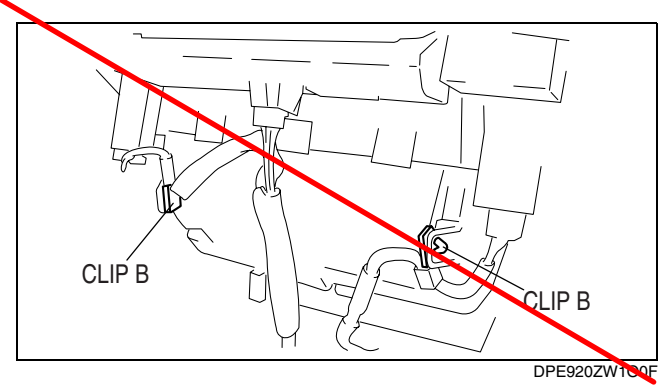
LCD Unit Removal Note

1. Pull the lower LCD unit outward, detach clip A.



DPE920ZW1O0E

2. Detach B, and then remove the LCD unit.



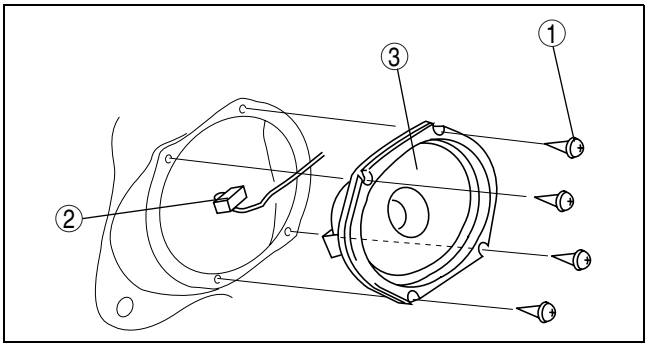
DPE920ZW1O0F

FRONT DOOR SPEAKER REMOVAL/INSTALLATION

DPE092066961W01

1. Disconnect the negative battery cable.
2. Remove the front door trim. (See 09–17–17 FRONT DOOR TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

1	Screw
2	Connector
3	Front door speaker (See 09–20–10 Front Door Speaker Installation Note.)



B3E0920W013

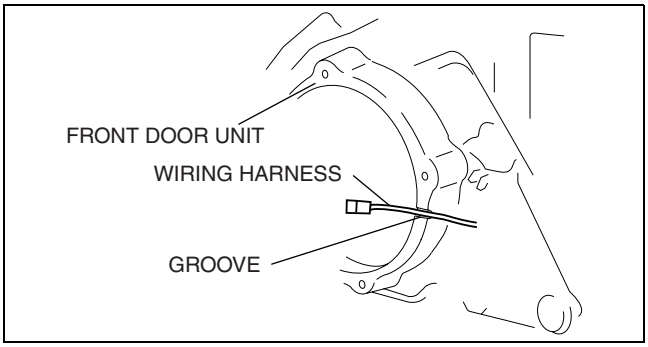
4. Install in the reverse order of removal.

Front Door Speaker Installation Note

1. Remove the speaker with the wiring harness passing through the groove of the front door module.

Caution

- **If the speaker is installed with the wiring harness out of the groove, an open circuit in the wiring harness could occur.**



CHU0920W012

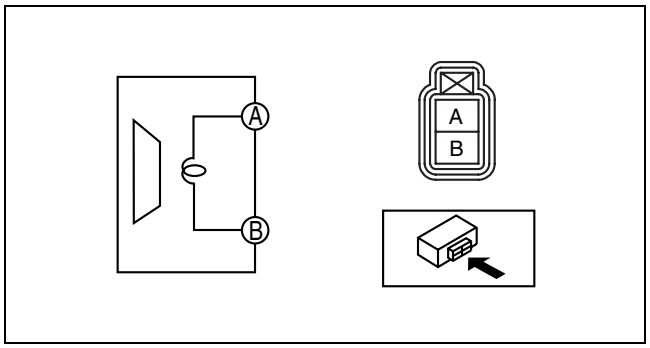
FRONT DOOR SPEAKER INSPECTION

DPE092066961W02

1. Verify the resistance between front door speaker terminals.
   - If the resistance is not within the specification, replace the front door speaker.

   Resistance
   4 ohms

2. Connect a **1.5 V** battery to the front door speaker and verify that noise is sound from the front door speaker.
   - If no sound is output, replace the front door speaker.

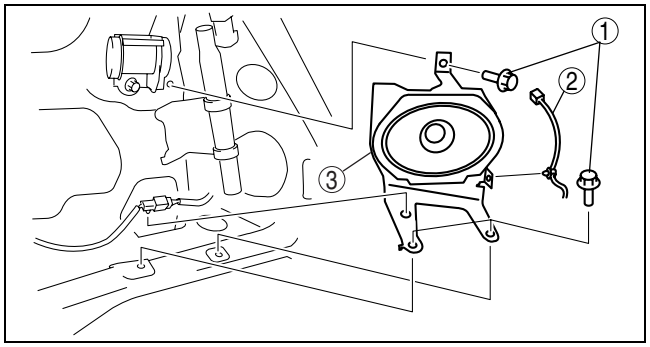


BHJ0920W040

REAR SPEAKER REMOVAL/INSTALLATION

DPE092066961W03

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Lower anchor of the third-row seat belt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



DPE920ZW1O0

1	Screw
2	Connector
3	Rear speaker

4. Install in the reverse order of removal.

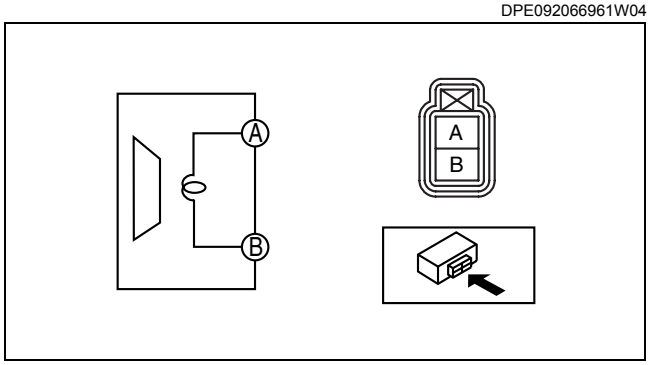
REAR SPEAKER INSPECTION

DPE092066961W04

1. Verify the resistance between rear speaker terminals.
   - If the resistance is not within the specification, replace the rear speaker.

   Resistance
   4 ohms

2. Connect a **1.5 V** battery to the rear door speaker and verify that noise is sound from the rear speaker.
   - If no sound is output, replace the rear speaker.



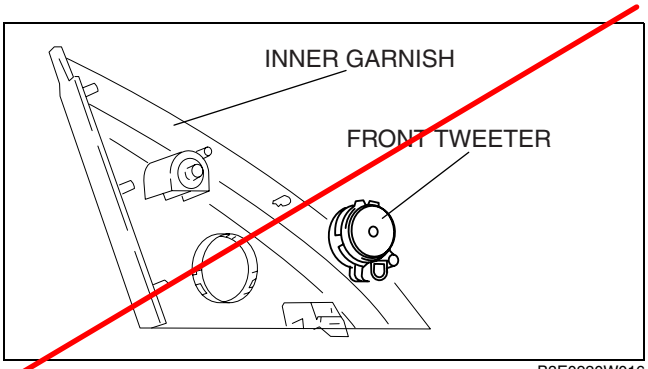
BHJ0920W040

FRONT TWEETER REMOVAL/INSTALLATION

DPE092066961W05

1. Disconnect the negative battery cable.
2. Remove the inner garnish from the front door. (See 09–17–12 INNER GARNISH REMOVAL/INSTALLATION.)

3. Remove the front tweeter.
4. Install in the reverse order of removal.



B3E0920W016

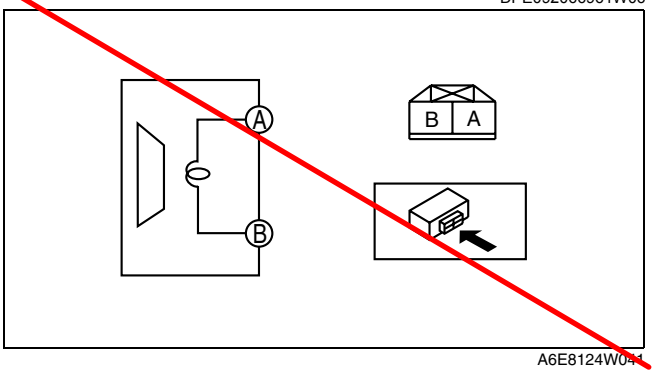
FRONT TWEETER INSPECTION

DPE092066961W06

1. Verify the resistance between front tweeter terminals.
   - If the resistance is not within the specification, replace the front tweeter.

   Resistance
   3.2 ohms

2. Connect a **1.5 V** battery to the front tweeter and verify that noise is sound from the front tweeter.
   - If no sound is output, replace the front tweeter.

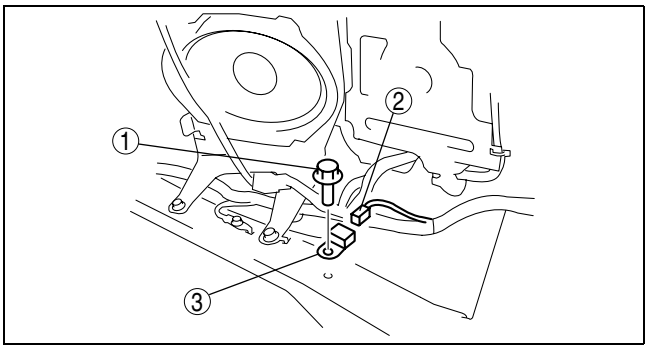


A6E8124W011

CONDENSER REMOVAL/INSTALLATION

DPE092066991W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Lower anchor of the third-row seat belt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



DPE920ZW1O0H

1	Bolt
2	Connector
3	Condenser

4. Install in the reverse order of removal.

CENTER ROOF ANTENNA REMOVAL/INSTALLATION

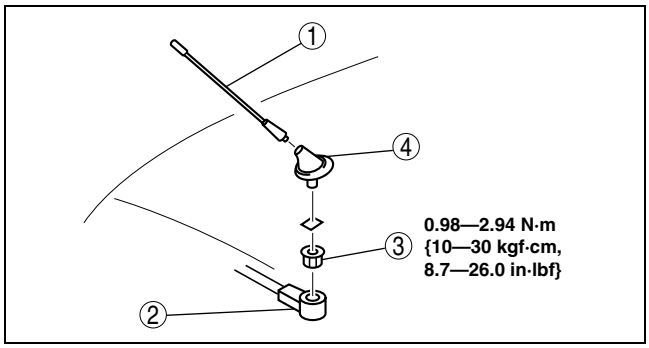
DPE092066939W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)

(5) Lower anchor of the third-row seat belt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
(6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
(7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
(8) Rear header trim (See 09–17–20 REAR HEADER TRIM REMOVAL/INSTALLATION.)
(9) Upper anchor of the second-row seat belt (See 08–11–3 SECOND-ROW SEAT BELT REMOVAL/INSTALLATION.)
(10) C-pillar trim (See 09–17–17 C-PILLAR TRIM REMOVAL/INSTALLATION.)

3. Partially peel back the headliner.
4. Remove in the order indicated in the table.

1	Antenna rod
2	Antenna feeder
3	Nut
4	Center roof antenna



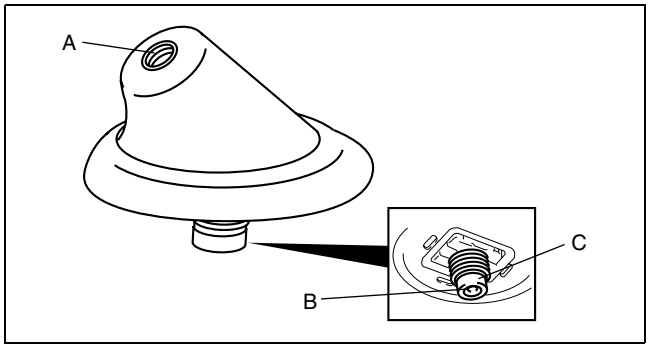
A6E8124W023

5. Install in the reverse order of removal.
6. After installation, verify that the rubber of the center roof antenna is installed to the roof panel with no space between them.

CENTER ROOF ANTENNA INSPECTION

DPE092066939W02

1. Verify that there is no continuity between the center roof antenna terminals A and C using an ohmmeter.
2. Inspect for continuity between the center roof antenna terminals using an ohmmeter.
   - If not as indicated in the table, replace the center roof antenna.



A6E8124W048

○—○: Continuity

Test condition	Terminal	
	A	B
Under any condition	○	○

A6E8124W031

GPS ANTENNA REMOVAL/INSTALLATION

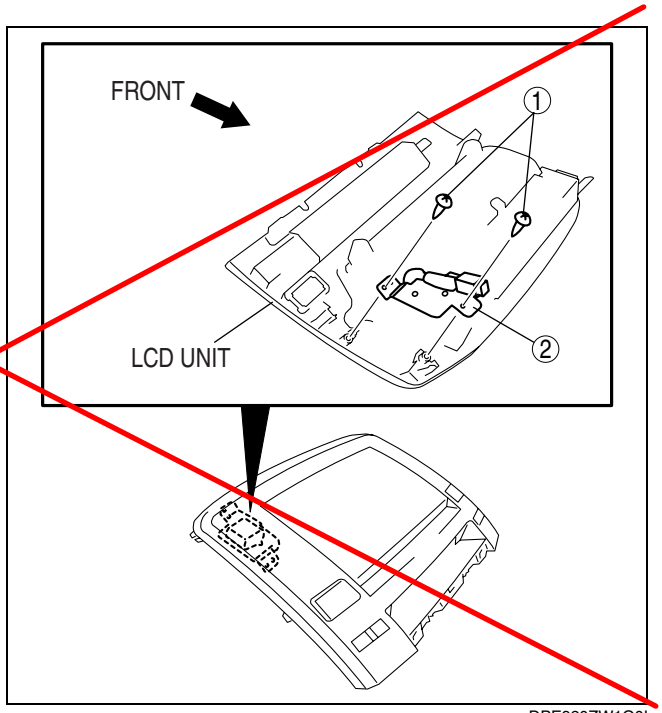
DPE092066936W01

1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console. (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
4. Remove the center panel module. (See 09–20–7 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
5. Remove the LCD unit. (See 09–20–9 LCD UNIT REMOVAL/INSTALLATION.)

6. Remove in the order indicated in the table.

1	Screw
2	GPS antenna

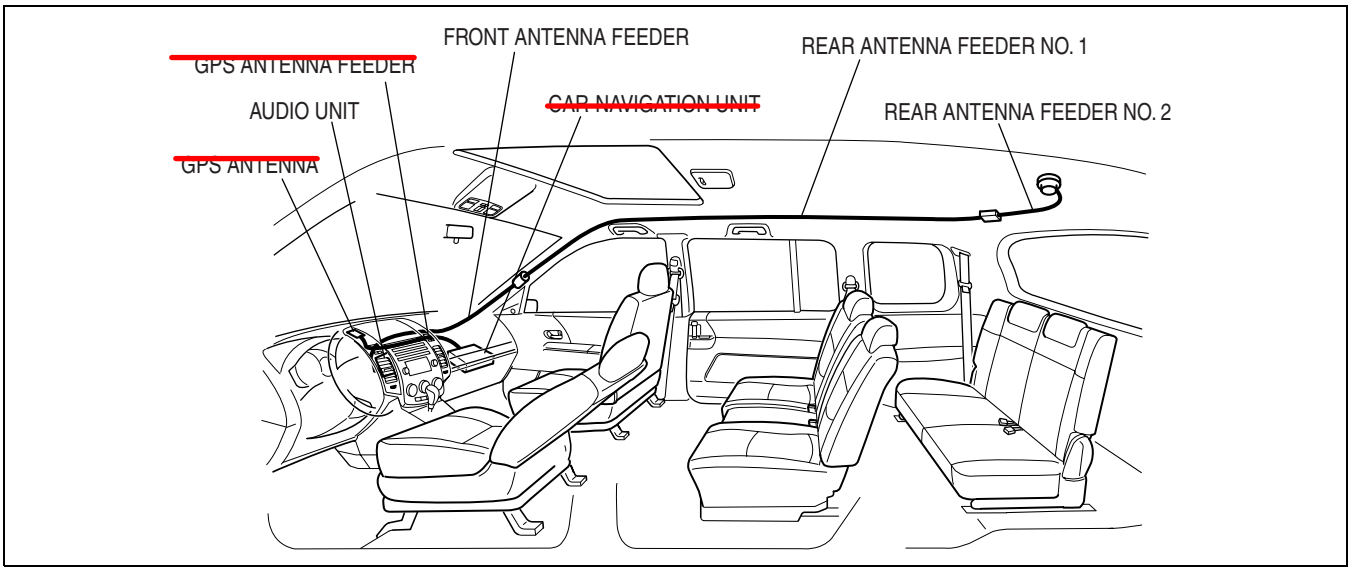
7. Install in the reverse order of removal.



DPE920ZW1O0I

ANTENNA FEEDER LOCATION

DPE092066940W01



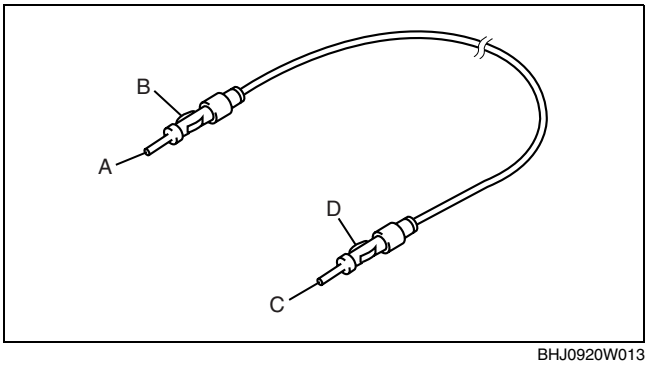
DPE920ZW1O12

FRONT ANTENNA FEEDER INSPECTION

DPE092066940W02

Except General (R.H.D.) Specs.

1. Verify that there is no continuity between the front antenna feeder terminal A and B.
2. Verify that the continuity is as indicated in the table.
   - If not as indicated in the table, replace the front antenna feeder.



BHJ0920W013

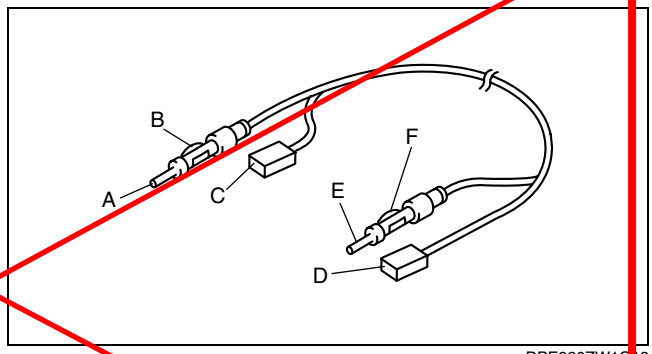
: Continuity

Step	Terminal			
	A	B	C	D
1	○		○	
2		○		○

CHU0920W019

General (R.H.D.) Specs.

1. Verify that there is no continuity between the front antenna feeder terminal A and B.
2. Verify that the continuity is as indicated in the table.
   - If not as indicated in the table, replace the front antenna feeder.



DPE920ZW1O13

: Continuity

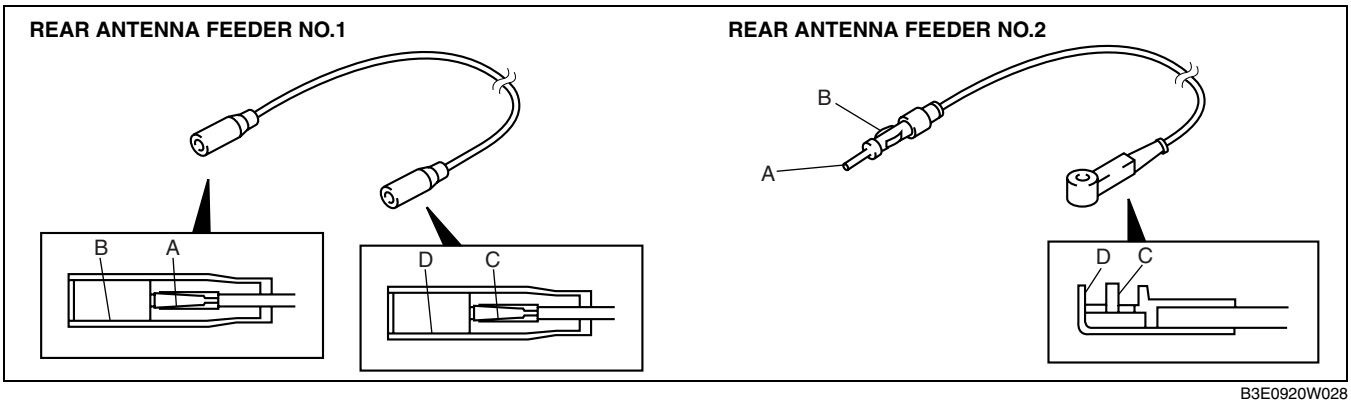
Step	Terminal					
	A	B	C	D	E	F
1	○				○	
2		○				○
3			○	○		

DPE920ZW1O14

REAR ANTENNA FEEDER INSPECTION

DPE092066940W03

1. Verify that there is no continuity between the rear antenna feeder terminal A and B.
2. Verify that the continuity is as indicated in the table.



B3E0920W028

- If not as indicated in the table, replace the rear antenna feeder No.1 or No.2.

: Continuity

Step	Terminal			
	A	B	C	D
1	○		○	
2		○		○

CHU0920W019

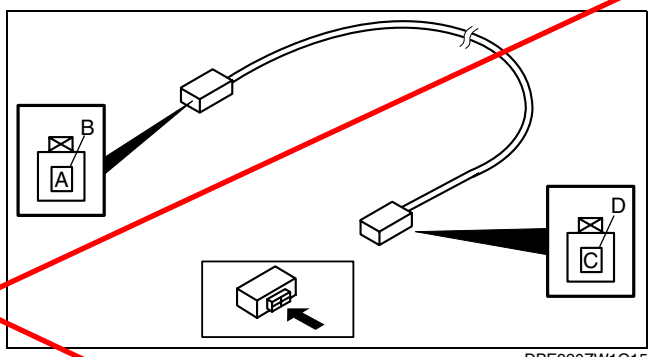
GPS ANTENNA FEEDER INSPECTION

DPE092066940W05

1. Verify that there is no continuity between the GPS antenna feeder terminal A and B.

09

2. Verify that the continuity is as indicated in the table.
   - If not as indicated in the table, replace the GPS antenna feeder.



DPE920ZW1O15

: Continuity

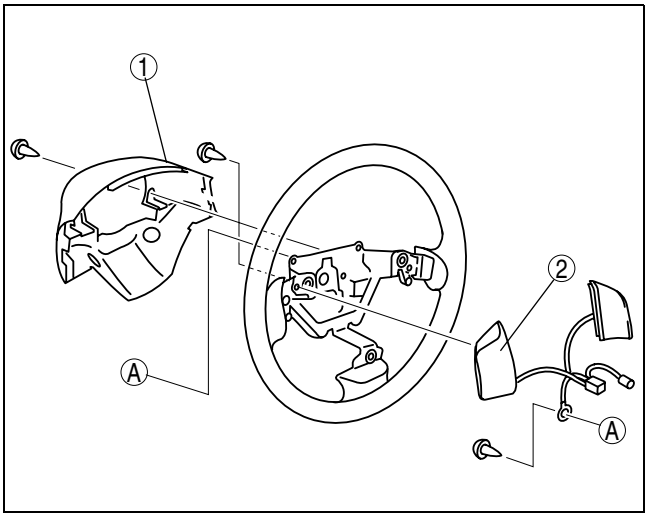
Step	Terminal			
	A	B	C	D
1	○		○	
2		○		○

CHU092OW019

AUDIO CONTROL SWITCH REMOVAL/INSTALLATION

DPE092000148W01

1. Disconnect the negative battery cable.
2. Remove the driver-side air bag module. (See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
3. Remove the steering wheel. (See 06-14–7 STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.



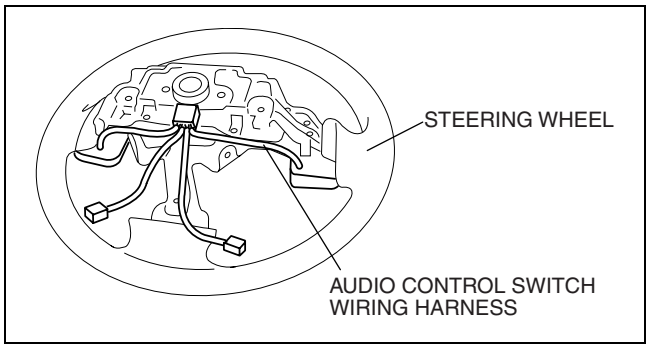
DPE920ZW1O0

1	Cover
2	Audio control switch (See 09–20–17 Audio Control Switch Installation Note.)

5. Install in the reverse order of removal.

Audio Control Switch Installation Note

1. Install the audio control switch so that the audio control switch wiring harness passes behind the steering wheel as shown in the figure.

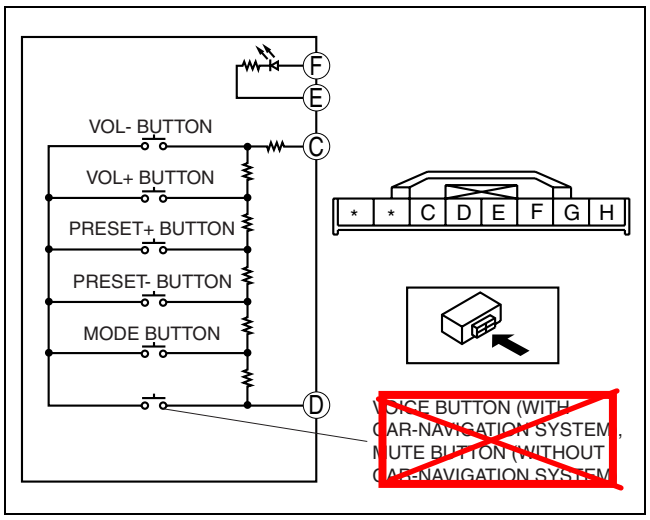


CHU0920W023

AUDIO CONTROL SWITCH INSPECTION

DPE092000148W02

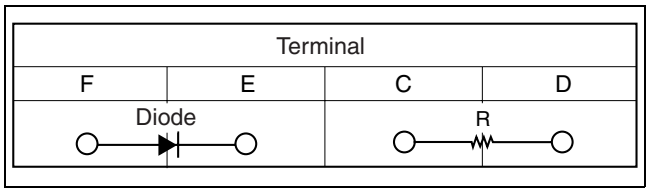
1. Disconnect the negative battery cable.
2. Remove the driver-side air bag module.(See 08–10–5 DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.)
3. Disconnect the audio control switch connector.
4. Verify the resistance and continuity between the audio control switch terminals.
   - If the resistance and continuity are not as indicated in the tables, replace the audio control light switch.



DPE920ZW1O0N

R: : Resistance.See the table.

Switch position	Resistance (ohm)
VOL- button ON	51—56
VOL+ button ON	140—154
PRESET+ button ON	286—316
PRESET- button ON	533—590
MODE button ON	984—1,089
MUTE button ON	1,934—2,139
OFF	4,794—5,300



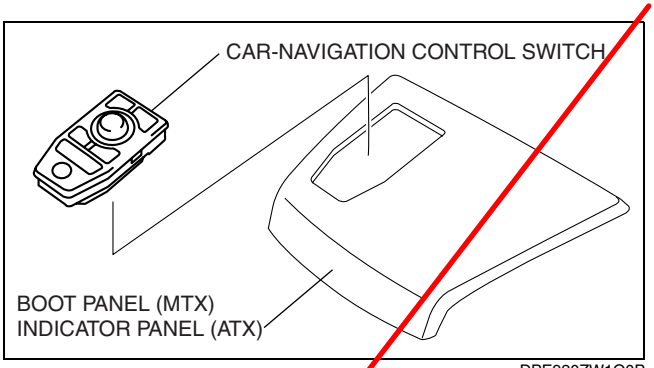
B3E0920W025

CAR-NAVIGATION CONTROL SWITCH REMOVAL/INSTALLATION

DPE092066921W01

1. Disconnect the negative battery cable.
2. Remove the shift lever knob. (MTX)
3. Remove the selecter lever knob. (ATX)
4. Remove the boot panel. (MTX) (See09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
5. Remove the indicator panel. (ATX) (See09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)

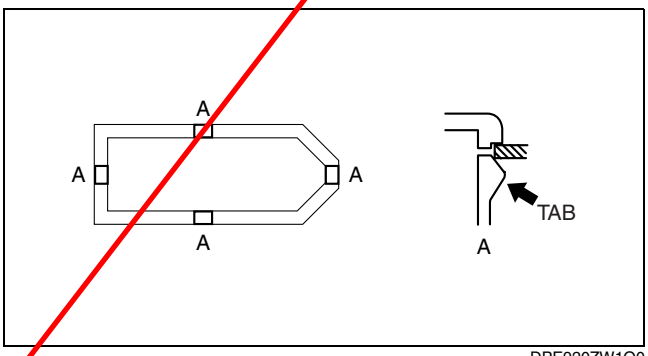
6. Remove the car-navigation control switch.
7. Install in the reverse order of removal.



DPE920ZW1O0P

Car-Navigation Control Switch Removal Note

1. Pry the car-navigation control switch from the console using a flathead screwdriver wrapped with protective tape.

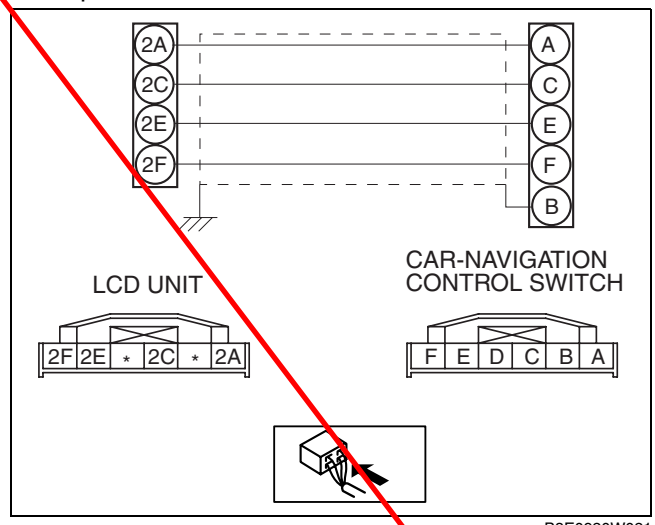


DPE920ZW1O0

CAR-NAVIGATION CONTROL SWITCH INSPECTION

DPE092066921W02

1. Operate the car-navigation control switch and verify that the car-navigation system operates normally.
   - If the system does not operate normally, go to the next step.
2. Inspect the wiring harness between the LCD unit and the car-navigation control switch for an open circuit, power short, or a short to ground.
   - If there is any malfunction in the wiring harnesses, repair or replace the applicable wiring harness.
   - If the wiring harnesses are normal, replace the car-navigation control switch.



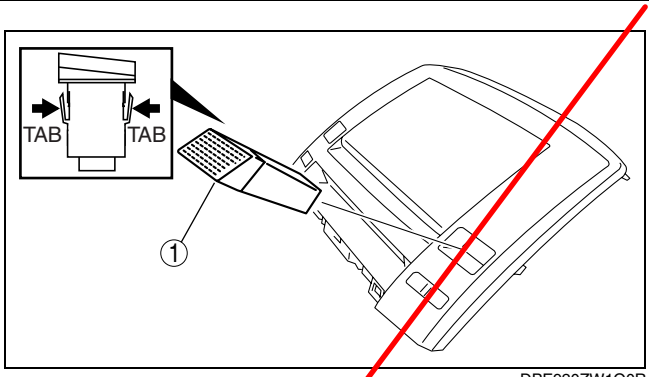
B3E0920W021

MICROPHONE REMOVAL/INSTALLATION

DPE092066921W03

1. Disconnect the negative battery cable.
2. Remove the side wall. (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
3. Remove the front console. (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
4. Remove the center panel module. (See 09–20–7 CENTER PANEL MODULE REMOVAL/INSTALLATION.)
5. Remove the LCD unit. (See 09–20–9 LCD UNIT REMOVAL/INSTALLATION.)

6. Remove the microphone.
7. Install in the reverse order of removal.



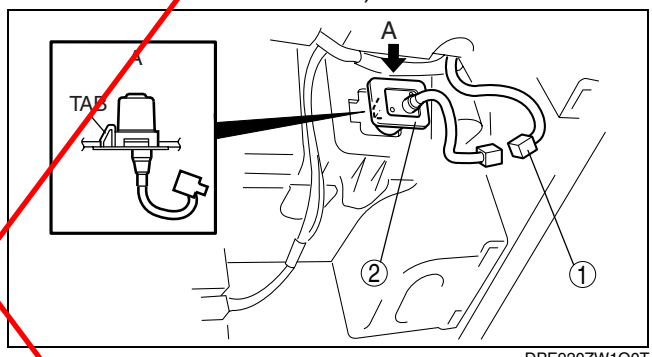
DPE920ZW1O0R

BACK CAMERA REMOVAL/INSTALLATION

DPE092000159W01

Note
- Perform the back monitor control unit initialization when replacing back camera. (See09–20–20 REAR VIEW MONITOR CONTROL MODULE INITIALIZATION.)

1. Disconnect the negative battery cable.
2. Remove the liftgate trim. (See 09–17–21 LIFTGATE TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.



DPE920ZW1O0T

1	Connector
2	Back camera

4. Install in the reverse order of removal.

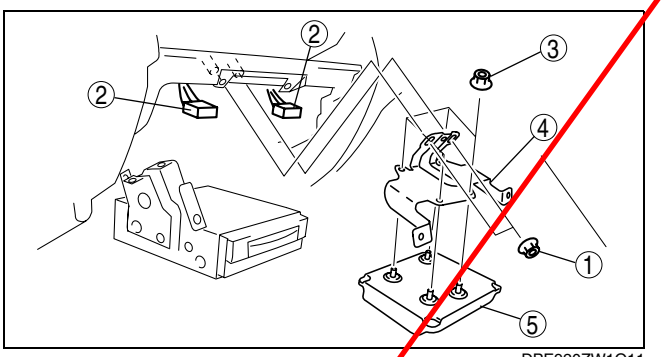
REAR VIEW MONITOR CONTROL MODULE REMOVAL/INSTALLATION

DPE092000160W01

Note
- Perform the rear view monitor control module initialization when replacing following parts. (See09–20–20 REAR VIEW MONITOR CONTROL MODULE INITIALIZATION.)
  - — Rear view monitor control module
  - — Back camera
  - — Liftgate

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION.)
   (2) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
   (3) Front scuff plate (See 09–17–19 FRONT SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Front side trim (See 09–17–15 FRONT SIDE TRIM REMOVAL/INSTALLATION.)
   (5) Side panel (See 09–17–11 SIDE PANEL REMOVAL/INSTALLATION.)
   (6) Glove compartment (See 09–17–7 GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
   (7) Car-navigation unit (See 09–20–8 CAR-NAVIGATION UNIT REMOVAL/INSTALLATION.)

3. Remove in the order indicated in the table.



DPE920ZW1O11

1	Nut A
2	Connector
3	Nut B
4	Bracket
5	Rear view monitor control module

4. Install in the reverse order of removal.

REAR VIEW MONITOR CONTROL MODULE INITIALIZATION

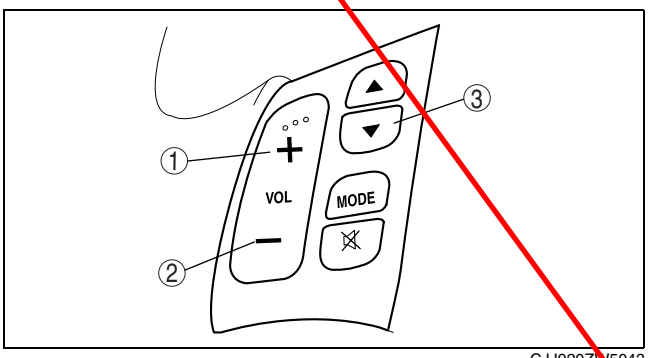
DPE092000160W02

Operation Method

Note

- Perform initialization setting of the rear view monitor control module in the following cases:
  1. If the rear view monitor control module, back monitor camera, or the liftgate is replaced.
     (In the case of 1. above, perform “Factory Adjustment” or all of the other adjustment items.)
  2. If the image has deviated for some reason and it does not recover by turning the steering wheel completely left and right, or driving the vehicle for a period of time.
     (In the case of 2. above, perform “Factory Adjustment” or all of the other adjustment items.)
  3. If the system does not recover by turning the steering wheel completely to the left and right while “System Initializing” is displayed, or the system does not recover even after the vehicle is driven for a period of time.
     (In the case of 3. above, only perform “Steering Angle Setting”)
  4. If “Not initialized” is displayed:
     (In the case of 4. above, if the system does not recover even after performing the “Factory Adjustment”, replace the rear view monitor control module.)
- The operation when the ignition switch is turned to the ON position differs depending on whether the initialization setting has been completed or whether it has not been implemented.
  - For vehicles with a factory initialization setting (condition when shipped from factory), display the Adjustment No. 0 screen “Input check”, and input the password to enter the initialization setting screen, then proceed to the adjustment.
  - Vehicles for which the initialization setting has been implemented (rear view monitor control module replaced after shipment from factory), display the forced adjustment No. 0-1 screen “Japanese/English” after turning the ignition switch to the ON position.

1	VOL+	Move the cursor to the right (turn counterclockwise)
2	VOL-	Move the cursor to the left (turn clockwise)
3	SEEK-	Select



CJJ920ZW5043

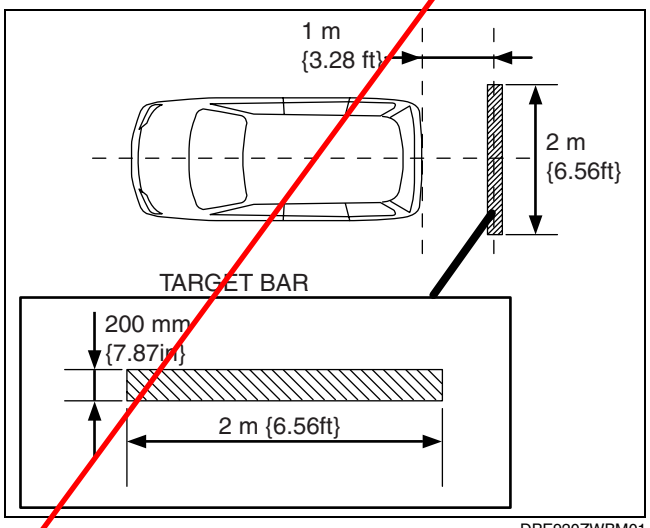
Preparation

Note

- If the setting is done on an inclined road surface, the setting may not be done correctly. Perform the initialization setting on a level surface.

1. Stop the vehicle with the steering wheel and tires pointed straight ahead.
2. Attach the target bar to the position (floor surface) shown in the figure.

Note
- Make the target bar using colored tape that is easily visible on the screen.

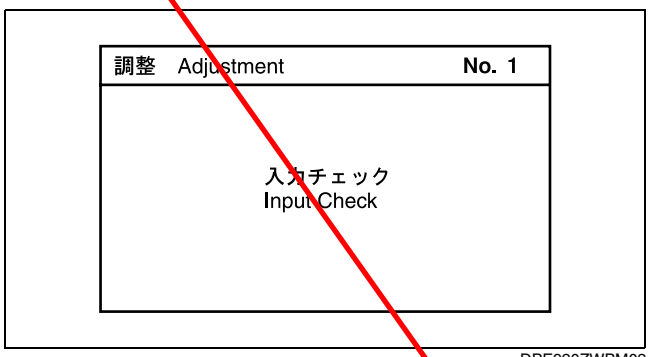


DPE920ZWBM01

Starting Procedure for Initial Setting Mode
1. Turn the audio off and turn the ignition switch to the LOCK position.
2. Turn the ignition switch to the ON position while pressing “SEEK-” and hold for **approx. 2 s**.
3. When “Input Check” is displayed on the screen release “SEEK-” and press the following switches in the indicated order.
   (1) VOL+→VOL-→VOL+→VOL-→VOL+→VOL-

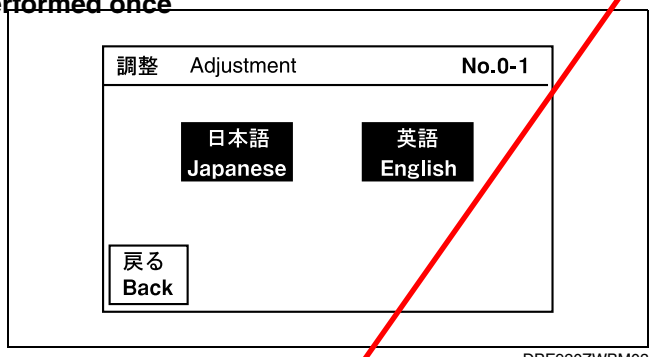
Note
- In vehicles where the initialization setting has not been performed, the initialization setting mode is not displayed.
- If the input is not completed **within 1 min** after “Input Check” is displayed, the screen returns to normal.
- After ”Input Check” has been displayed, it doesn’t matter if the engine is started.

Vehicles with completed initialization setting
4. Select “English” on the screen and press “SEEK-”.



DPE920ZWBM02

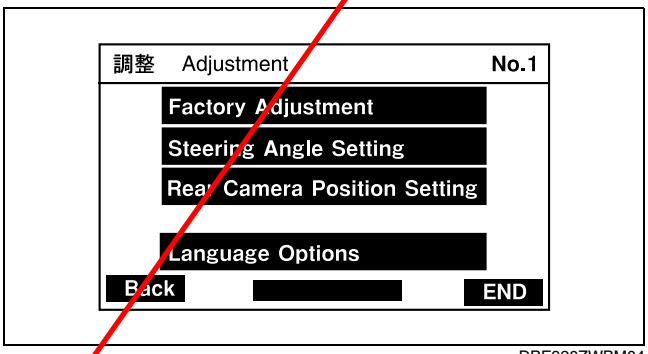
Vehicles for which initialization setting has not been performed once



DPE920ZWBM03

5. Select the items for performing the adjustment and press “SEEK-”.

Note
- The “Steering Angle Setting” and “Rear Camera Setting” are included in the “Factory Adjustment”. If the rear view monitor control module is replaced, performing the“Factory Adjustment” is recommended.
- Adjustment items that have been completed are displayed in green on the screen.

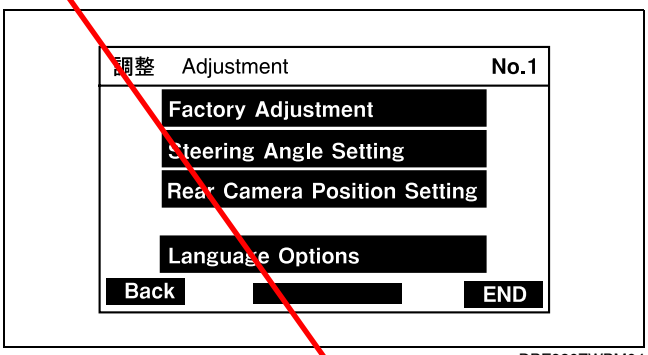


DPE920ZWBM04

Steering Angle Setting

Note
- If the ignition switch is turned to the ON position without performing the adjustment, the initialization setting mode is forcibly launched.
- Adjustment items that have not been completed are displayed in orange and change to green after they are completed.

1. Launch the initialization setting mode.
2. Select “Steering Angle Setting” on the screen and press “SEEK-”



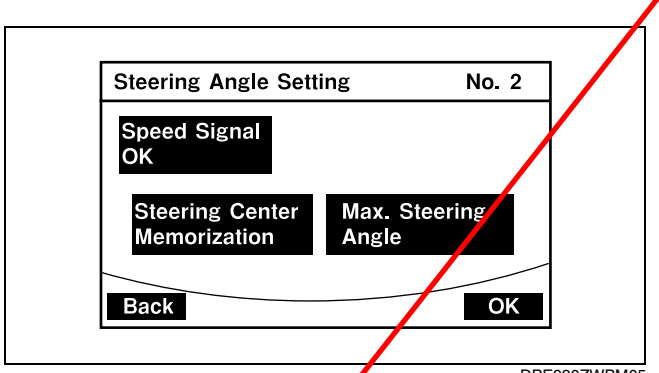
DPE920ZWBM04

Steering Angle Setting (Steering Center Memorization)

Note
- Because the steering wheel position is stored automatically in memory as neutral at the moment this screen is displayed (Steering Angle Setting No. 2), if the steering wheel is in a straight-ahead condition, this adjustment is necessary. This adjustment is performed only if the steering wheel has deviated from the neutral position.

1. Verify that the steering wheel and tires are in a straight-ahead condition, select “Steering Center Memorization” on the screen, and press “SEEK-”.

Note
- If “Speed Signal OK” (faint pink color) is displayed, first select “Speed Signal OK”, and after pressing “SEEK-”, activate “Steering Center Memorization” and “Max.. Steering Angle” after verifying that the display has turned orange, otherwise the adjustment results will not be stored in memory.



DPE920ZWBM05

Steering Angle Setting (Max. Steering Angle)

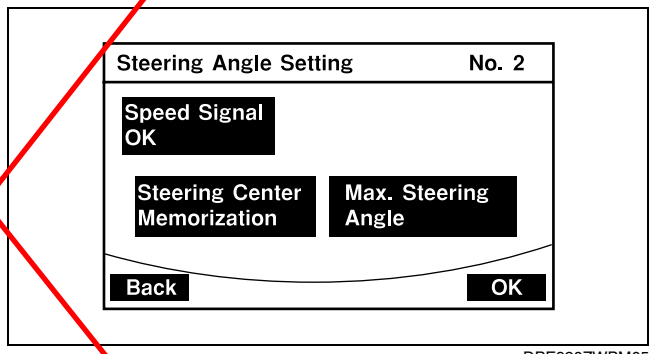
1. Turn the steering wheel left/right until it locks, select “Max. Steering Angle” on the screen and press “SEEK-”.

Note
- The steering wheel can be turned first to the left or right.
- If the steering wheel is turned in the opposite direction before it locks, the correct steering angle will not be stored in memory.

2. Select “OK” on the screen and Å•.

Note
- If “Back” is selected without selecting “OK”, the adjustment results will not be stored in the memory.

3. To return to the previous screen, select “Back” on the screen and press “SEEK-”
4. After all the adjustments are completed (Steering Angle Setting, Rear Camera Setting), perform the maximum steering angle inspection.

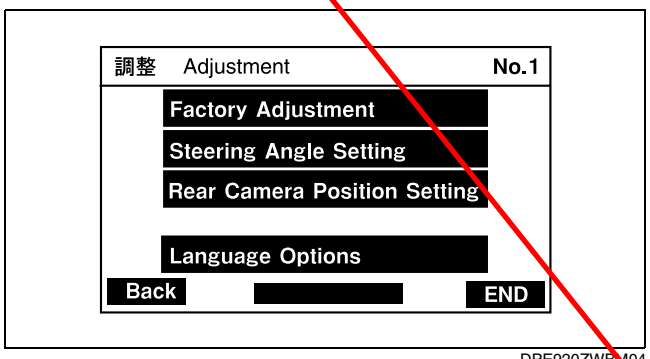


DPE920ZWBM05

Rear Camera Setting

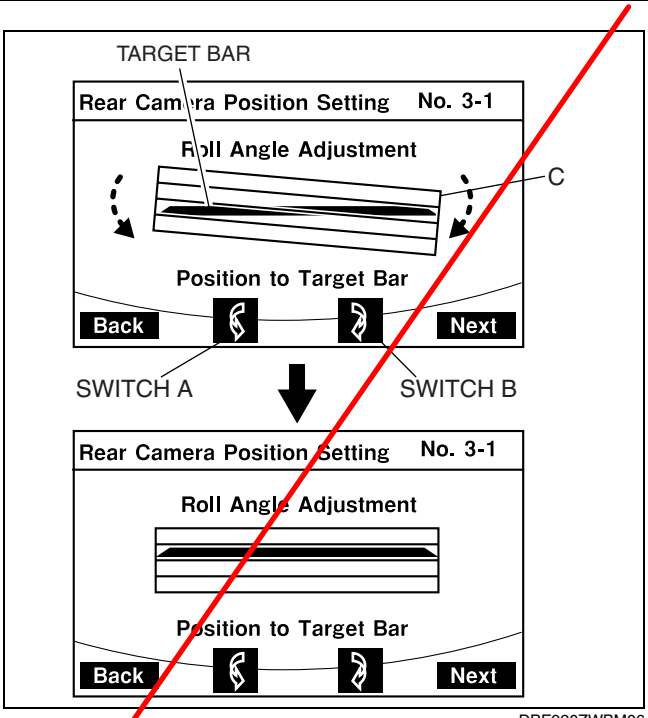
Note
- If the ignition switch is turned to the ON position without performing the adjustment, the initialization setting mode is forcibly launched.
- Adjustment items that have been completed are displayed in green on the screen.

1. Launch the initialization setting mode.
2. Select “Rear Camera Setting” on the screen and press “SEEK-”.



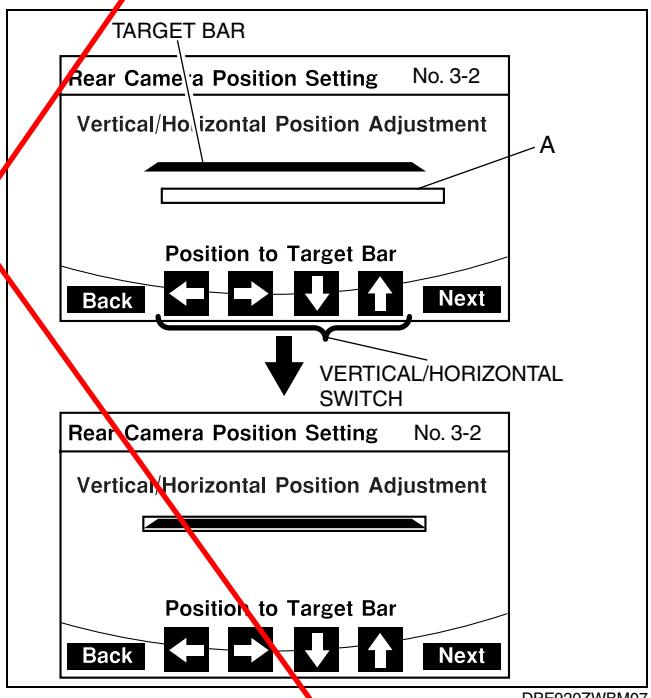
DPE920ZWBM04

3. Operate switch A or B and rotate C, and adjust so that the target bar and C are parallel.
4. Select “Next” on the screen and press “SEEK-”.

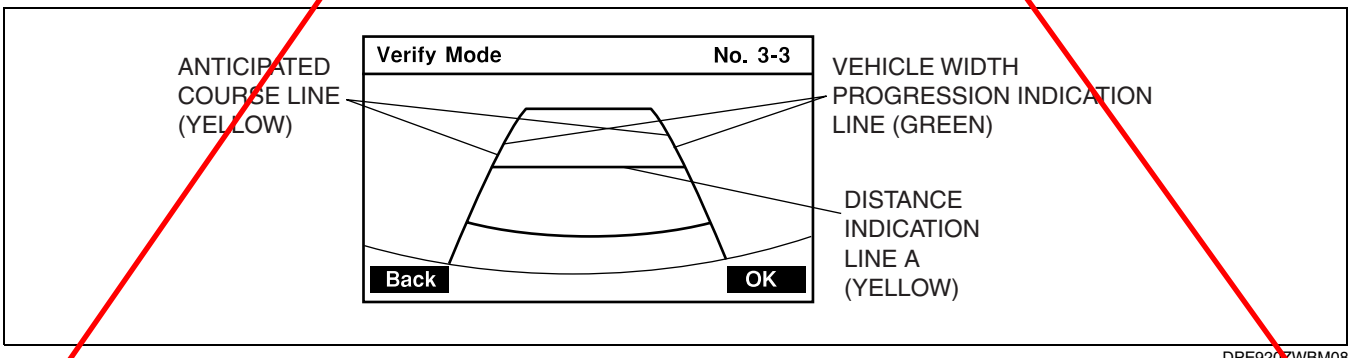


DPE920ZWBM06

5. Operate the vertical/horizontal switch, and adjust so that the target bar is centered in the A frame.
6. Verify that the distance indication line and the target bar are nearly aligned to each other. Also, with the steering wheel in the straight-ahead condition, verify that the anticipated course line (yellow) and the vehicle width progression indication line (green) are aligned to each other.



DPE920ZWBM07



DPE920ZWBM08

- If there is any malfunction, perform a readjustment.

7. Select “OK” on the screen and press “SEEK-”.

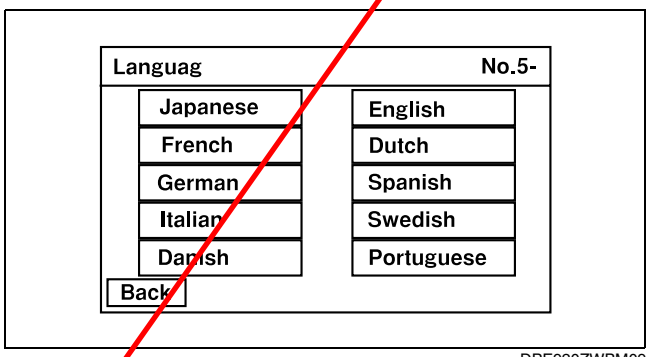
Note
- If “Back” is selected without selecting “OK”, the adjustment results will not be stored in memory.

8. To return to the previous screen, select “Back” on the screen and press “SEEK-”.

Language Selection

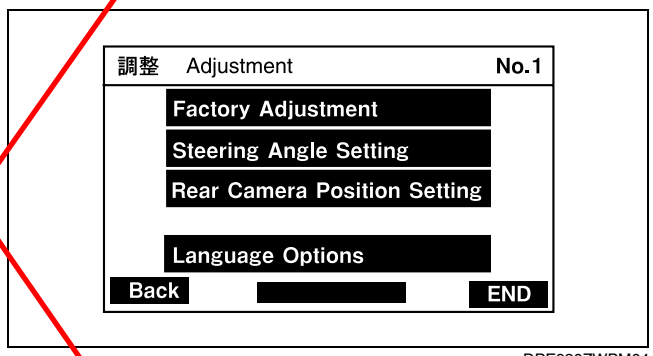
Note
- Perform the language settings for the rear view monitor, the “Check surroundings for safety” display while the back monitor is activated, and the error messages.

1. Launch the initialization setting mode.
2. Select “Language Option” on the screen and press “SEEK-”.
3. Select the language on the screen and press “SEEK-”.



DPE920ZWBM09

4. Select “END” on the screen and press “SEEK-”.



DPE920ZWBM04

Factory Adjustment

Note
- “Steering Angle Setting” and “Rear Camera Setting” are included with the “Factory Adjustment”. If the rear view monitor control module is replaced, it is best to perform the “Factory Adjustment”.

1. The adjustments are done in the order of the items below, and for details refer to each adjustment item.
- Starting procedure for the initialization setting mode.
- Steering Angle Setting
- Steering Center Memorization
- Max. Steering Angle
- Rear Camera Setting

Maximum Steering Angle Inspection

1. Start the engine and shift to R.
2. Turn the steering wheel left and right until it locks, and verify that the anticipated course line movement is synchronized.
   - If the anticipated course line no longer moves prior to locking the steering wheel, the maximum steering angle will not be stored correctly, therefore perform “Max. Steering Angle” again.

STEERING ANGLE/VIDEO SIGNAL INSPECTION

DPE0[illegible]2000160W03

Note
- The rear view monitor control module receives steering angle signals from the EHPAS control module via CAN.

Based on these signals, calculations are made internally and the anticipated vehicle course line is combined with the camera image and displayed.

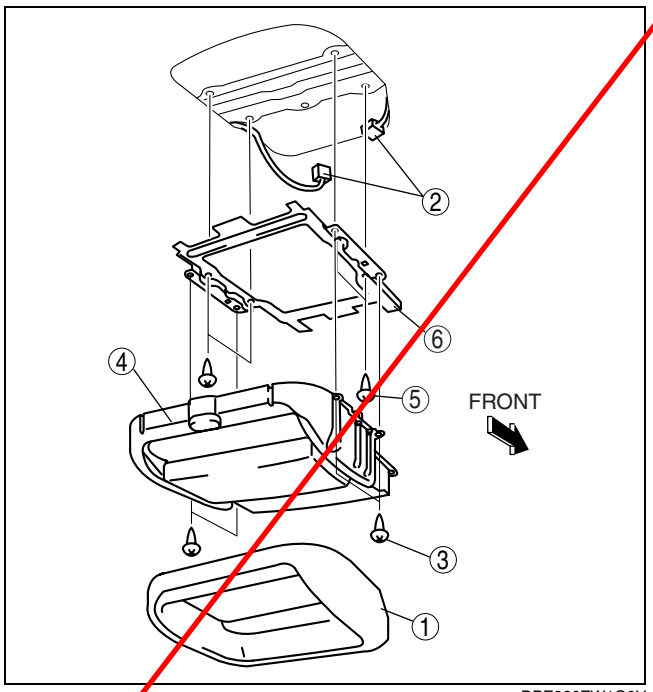
			Malfunction description	
			Steering angle signal disruption	**Rear camera not connected or malfunctioning**
Conditions/ operation	initialization setting completed	Normal operation	1. When shifting to R with the ignition switch in the ON position, the back monitor camera displays, but the predicted vehicle track does not. 2. The EHPAS warning light, which transmits the steering angle signal, illuminates.	1. When shifting to R with the ignition switch in the ON position, the screen turns black.
		Initialization setting	1. The input check screen cannot be displayed. 2. If the cause is in the EHPAS control module which transmits the steering angle signal, the EHPAS warning light in the instrument cluster illuminates when the engine is running.	The input check screen is displayed, but after inputting the password, it switches to the navigation screen.
	Initialization setting has not been implemented		1. The screen turns black with the ignition switch in the ON position. 2. When shifting to R with the ignition switch in the ON position, the screen remains black. 3. If the cause is in the EHPAS control module which transmits the steering angle signal, the EHPAS warning light in the instrument panel illuminates when the engine is started.	1. The screen turns black with the ignition switch in the ON position. 2. If the selector lever is shifted to R with the ignition switch in the ON position, the screen remains black.
Countermeasures			Verify the following items and perform repair or replacement if necessary. 1. Inspect the rear view monitor control module connector and the CAN signal terminal of the vehicle wiring harness. 2. Inspect the condition of the EHPAS control module.	Inspect the following and repair or replace if necessary. 1. Inspect the rear view monitor control module connector and the camera terminal of the vehicle wiring harness. 2. Inspect the back monitor camera.

RES UNIT REMOVAL/INSTALLATION

DPE092066904W01

1. Disconnect the negative battery cable.

2. Remove in the order indicated in the table.



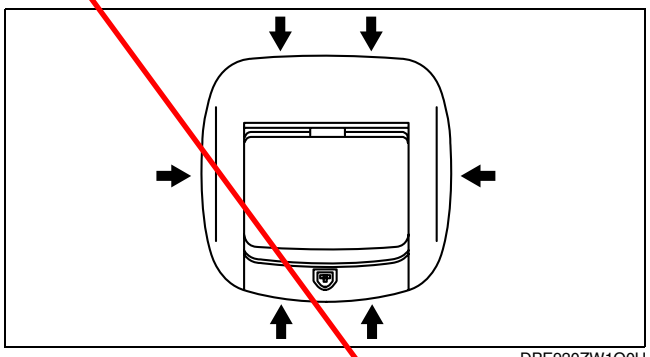
DPE920ZW1O0V

1	Cover (See 09–20–10 LCD Unit Removal Note.)
2	Connector
3	Screw
4	RES unit
5	Screw
6	Bracket

3. Install in the reverse order of removal.

Cover Removal Note

1. To remove the cover, insert the tape-wrapped flathead screwdriver.



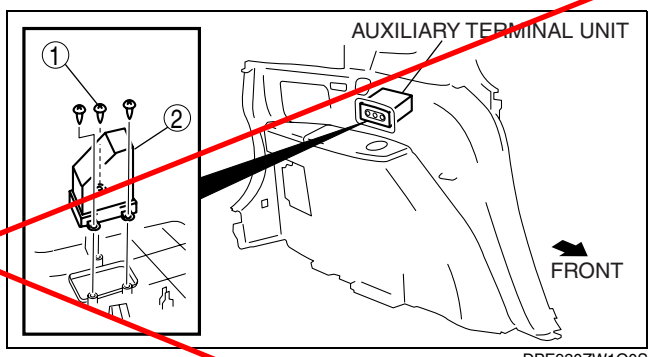
DPE920ZW1O0U

AUXILIARY TERMINAL UNIT REMOVAL/INSTALLATION

DPE092066904W02

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Lower anchor of the third-row seat belt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)

3. Remove in the order indicated in the table.



DPE920ZW1O0S

1	Screw
2	Auxiliary terminal unit

4. Install in the reverse order of removal.

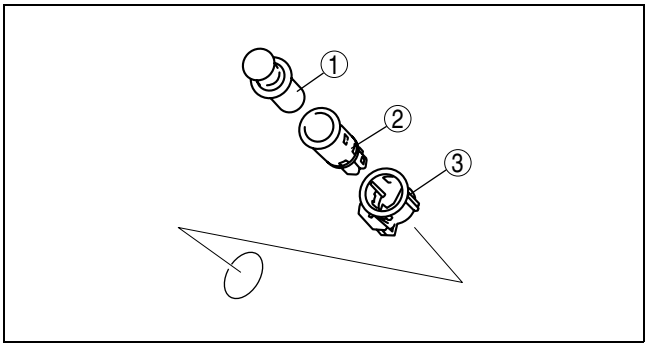
CIGARETTE LIGHTER REMOVAL/INSTALLATION

DPE092067000W01

1. Disconnect the negative battery cable.
2. Remove the shift lever knob. (MTX)
3. Remove the selecter lever knob. (ATX)
4. Remove the front console. (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION.)
5. Remove in the order indicated in the table.

1	Cigarette lighter plug
2	Socket (See 09–20–28 Socket Removal Note.)
3	Ring (See 09–20–29 Ring Removal Note.)

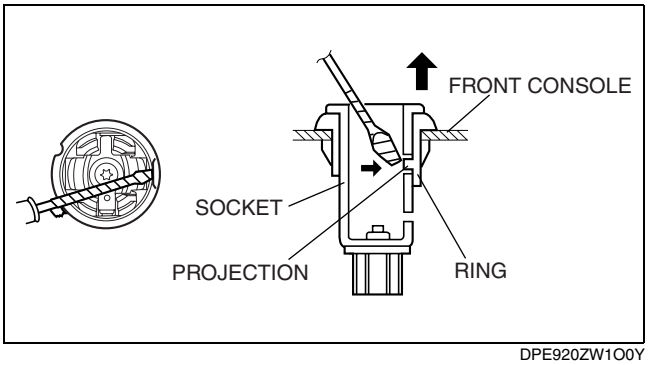
6. Install in the reverse order of removal.



DPE920ZW1O0X

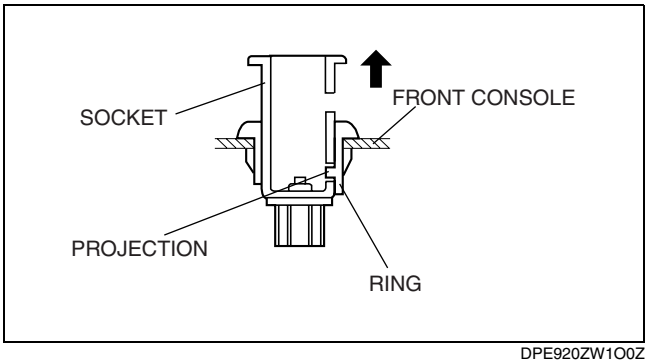
Socket Removal Note

1. Insert a tape-wrapped flathead screwdriver into the socket hole and push on the ring projection to lift the socket outward.



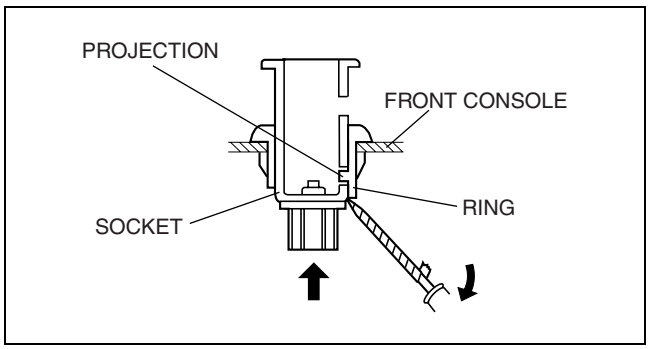
DPE920ZW1O0Y

2. Lift out the socket until the ring projection locks into the lower socket hole as shown in the figure.



DPE920ZW1O0Z

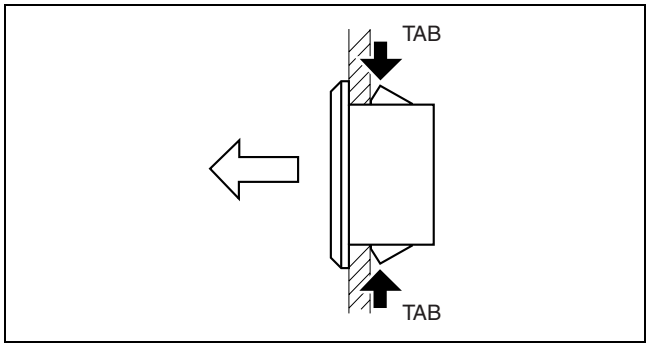
3. From the rear of the front console, insert a tape-wrapped flathead screwdriver between the socket and the ring as shown in the figure.
4. While lifting the ring projection with the flathead screwdriver, push out and remove the socket.



DPE920ZW1O10

Ring Removal Note

1. Pull the ring outward while pressing the tabs.



CHU0920W030

CIGARETTE LIGHTER INSPECTION

DPE092067000W02

1. Turn the ignition switch to the ACC position.
2. Press the cigarette lighter into the socket and verify that it returns to its original position in **10—20 s**.
   - If the cigarette lighter does not operate normally, replace the cigarette lighter and the socket.

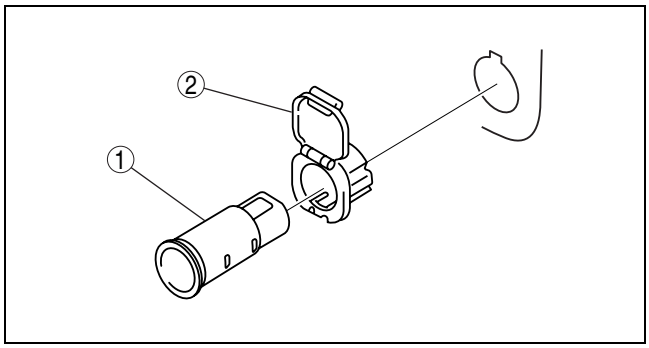
ACCESSORY SOCKET REMOVAL/INSTALLATION

DPE092066290W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Rear package tray lid (See 09–17–20 REAR PACKAGE TRAY LID REMOVAL/INSTALLATION.)
   (2) Third-row seat (See 09–13–8 THIRD-ROW SEAT REMOVAL/INSTALLATION.)
   (3) Rear scuff plate (See 09–17–19 REAR SCUFF PLATE REMOVAL/INSTALLATION.)
   (4) Trunk end trim (See 09–17–20 TRUNK END TRIM REMOVAL/INSTALLATION.)
   (5) Lower anchor of the third-row seat belt (See 08–11–5 THIRD-ROW SEAT BELT REMOVAL/INSTALLATION.)
   (6) Cargo compartment light (See 09–18–28 CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION.)
   (7) Trunk side trim (See 09–17–19 TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
3. Remove in the order indicated in the table.

1	Accessory socket (See 09–20–30 Accessory Socket Removal Note.)
2	Cap (See 09–20–30 Cap Removal Note.)

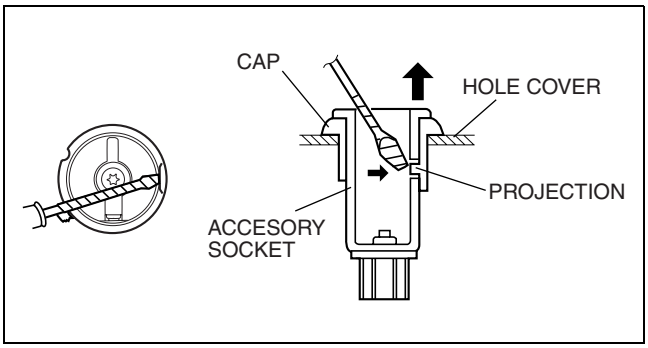
4. Install in the reverse order of removal.



DPE920ZW1O0

Accessory Socket Removal Note

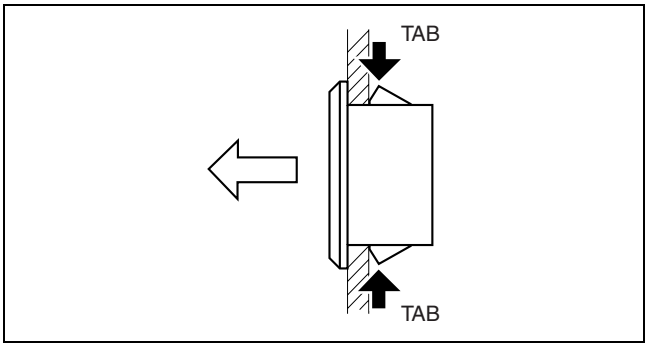
1. While pressing a tape-wrapped flathead screwdriver against the cap projection, pull the accessory socket outward.



CHU0920W031

Cap Removal Note

1. While pressing the tabs, pull the cap outwards.

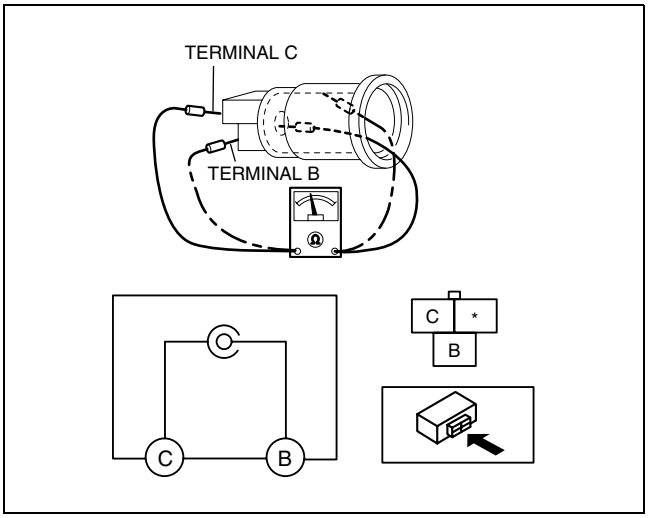


CHU0920W030

ACCESSORY SOCKET INSPECTION

DPE092066290W02

1. Connect a tester as shown in the figure and verify that there is continuity.
   - If the continuity cannot be verified, replace the accessory socket.

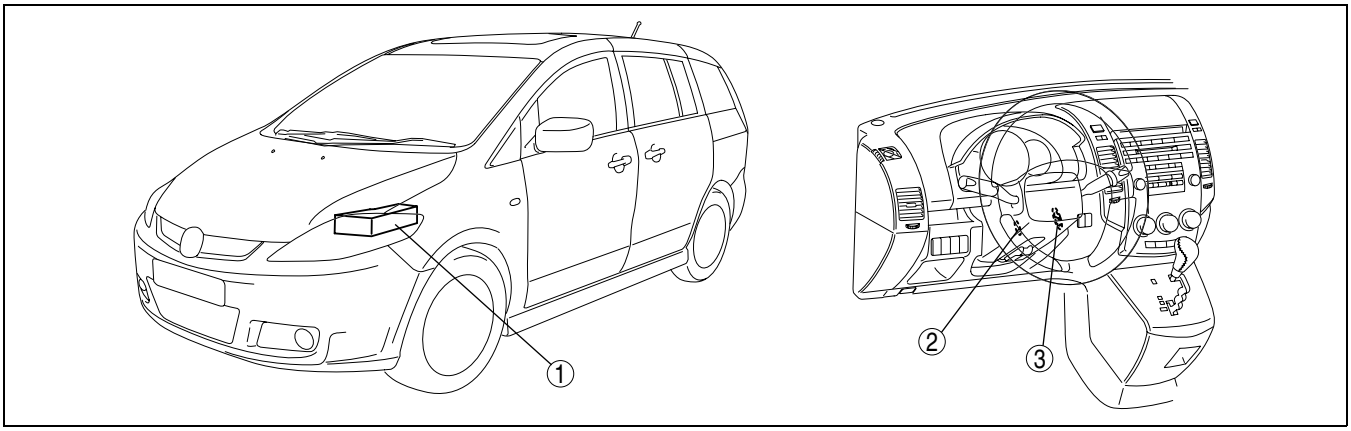


B6U0920W005

09–21 POWER SYSTEMS

POWER SYSTEM LOCATION INDEX

DPE092100200W01



DPE921ZW1001

1	Main fuse block (See 09–21–3 RELAY LOCATION.) (See 09–21–3 RELAY INSPECTION.)
2	Ignition switch (See 09–21–1 IGNITION SWITCH REMOVAL/ INSTALLATION) (See 09–21–2 IGNITION SWITCH INSPECTION.)
3	Steering lock unit (See 09–21–2 STEERING LOCK UNIT INSPECTION)

FUSE SERVICE CAUTIONS

DPE092166000W01

Caution

- **Determine and correct the cause of the burnt fuse before replacing it with the specified type. If the fuse is replaced before doing this, it may burn again.**

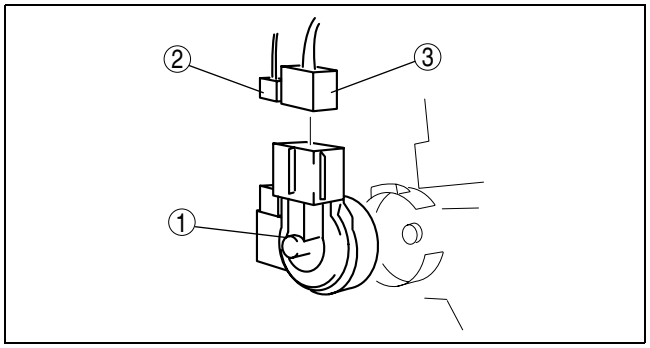
IGNITION SWITCH REMOVAL/INSTALLATION

DPE092166151W01

1. Disconnect the negative battery cable.
2. Remove the meter hood. (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
3. Remove the column cover. (See 09–17–7 COLUMN COVER REMOVAL/INSTALLATION.)
4. Remove in the order indicated in the table.

1	Ignition switch
2	Key interlock solenoid connector
3	Ignition switch connector (See 09–21–2 Ignition Switch Connector Removal Note.) (See 09–21–2 Ignition Switch Connector Installation Note.)

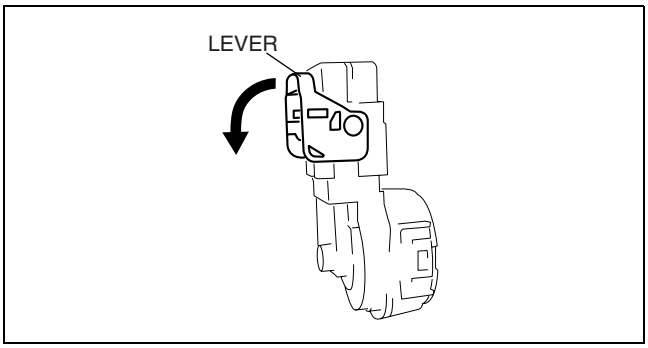
5. Install in the reverse order of removal.



DPE921ZW1002

Ignition Switch Connector Removal Note

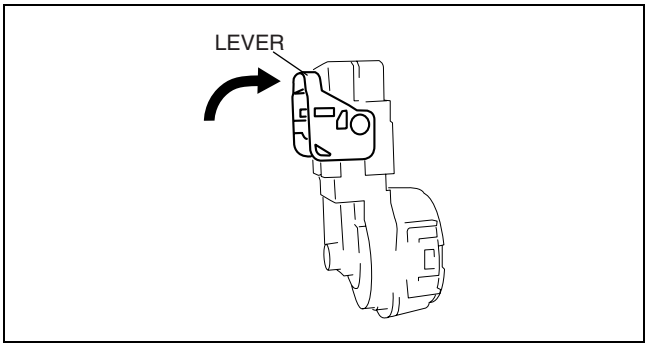
1. Rotate the lever in the direction of the arrow and remove the connector.



B3E0921W006

Ignition Switch Connector Installation Note

1. After connecting the connector, rotate the lever in the direction of the arrow to install the connector.

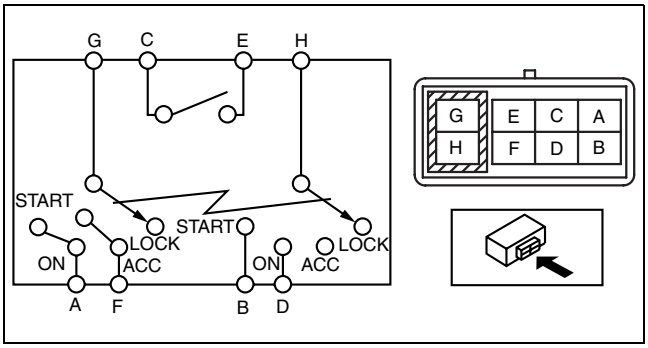


B3E0921W007

IGNITION SWITCH INSPECTION

1. Verify that the continuity between the ignition switch terminals is as indicated in the table.
   - If not as indicated in the table, replace the ignition switch.

DPE092166151W02



B3E0921W008

○—○: Continuity

Ignition key position		Terminal							
		A	B	C	D	E	F	G	H
LOCK									
ACC							○	○	
ON		○					○	○	
					○				○
START		○						○	
			○						○
With advanced keyless system	Start knob pressed			○		○			
	Start knob released								
Without advanced keyless system	Key inserted			○		○			
	Key removed								

DPE921ZW1003

STEERING LOCK UNIT INSPECTION

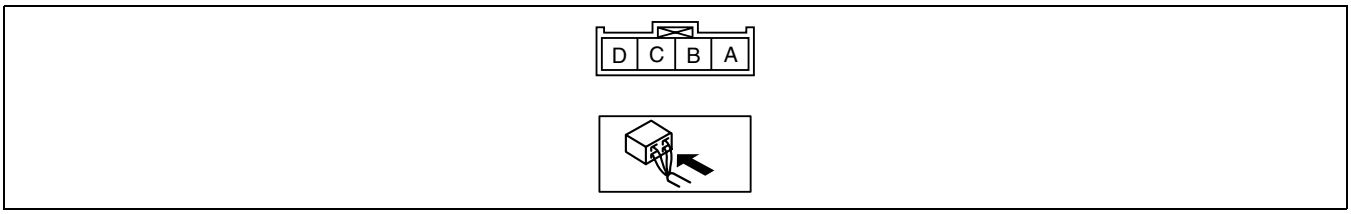
DPE092166152W01

1. Measure the voltage or inspect for continuity according to the Terminal Voltage Table (Reference).

- If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under "Inspection item(s)" and related wiring harnesses.

2. If the system does not work properly even though the inspection items or related wiring harnesses do not have any malfunction, replace the steering look unit.

Terminal Voltage Table (Reference)

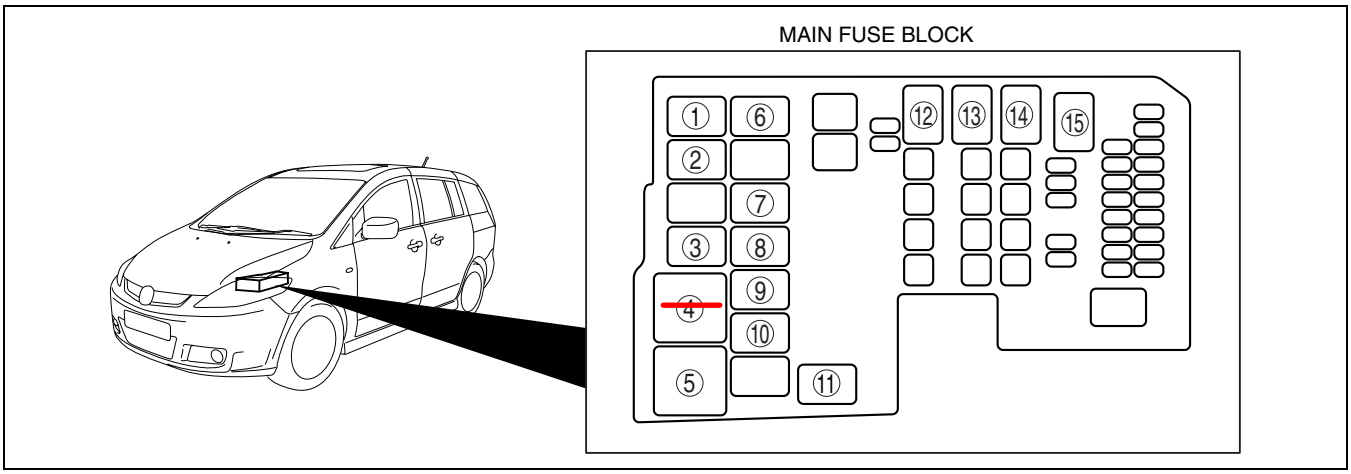


CPJ921ZWB004

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
A	GND	Body ground	Under any condition: Inspect for continuity to GND.	Continuity detected	Related wiring harnesses
B	Serial communication	Keyless control module	Under any condition: Inspect for continuity to keyless control module.	Continuity detected	Related wiring harnesses
C	Power supply	Fuse	Under any condition	B+	• Fuse • Related wiring harnesses
D	Key reminder switch signal	Keyless control module	Key inserted	B+	• Keyless control module • Related wiring harnesses
			Key removed	1.0 or less	

RELAY LOCATION

DPE092167730W01



DPE921ZW1004

1	Horn relay
2	Headlight cleaner relay
3	Front fog light relay
4	~~Glow relay (MZR-CD (RF Turbo) only)~~
5	Cooling fan relay
6	Starter relay
7	Rear fog light relay
8	A/C relay

9	Fuel pump relay (~~except MZR-CD (RF Turbo)~~)
10	Rear window defroster relay
11	Blower relay
12	TNS relay
13	Headlight high relay
14	Headlight low relay
15	Main relay

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RELAY INSPECTION

DPE092167730W03

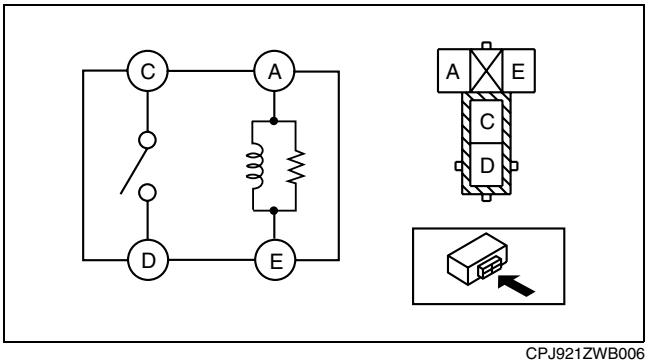
Relay type

Terminal type	Part name

4 terminals	Type A	• Horn relay • Headlight cleaner relay • Front fog light relay • Starter relay • Rear fog light relay • A/C relay • Fuel pump relay • Rear window defroster relay • Blower relay • TNS relay • Headlight high relay • Headlight low relay • Main relay
	Type B	• Glow relay • Cooling fan relay

Type A

1. Verify the continuity between the relay terminals.
   - If not as indicated in the table, replace the relay.



CPJ921ZWB006

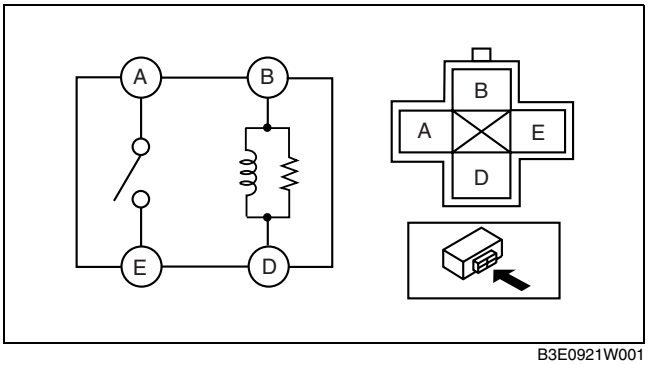
○—○ : Continuity

Step	Terminal			
	A	E	C	D
1	○	○		
2	B+	GND	○	○

CHU0921W005

Type B

1. Verify the continuity between the relay terminals.
   - If not as indicated in the table, replace the relay.



B3E0921W001

○—○ : Continuity

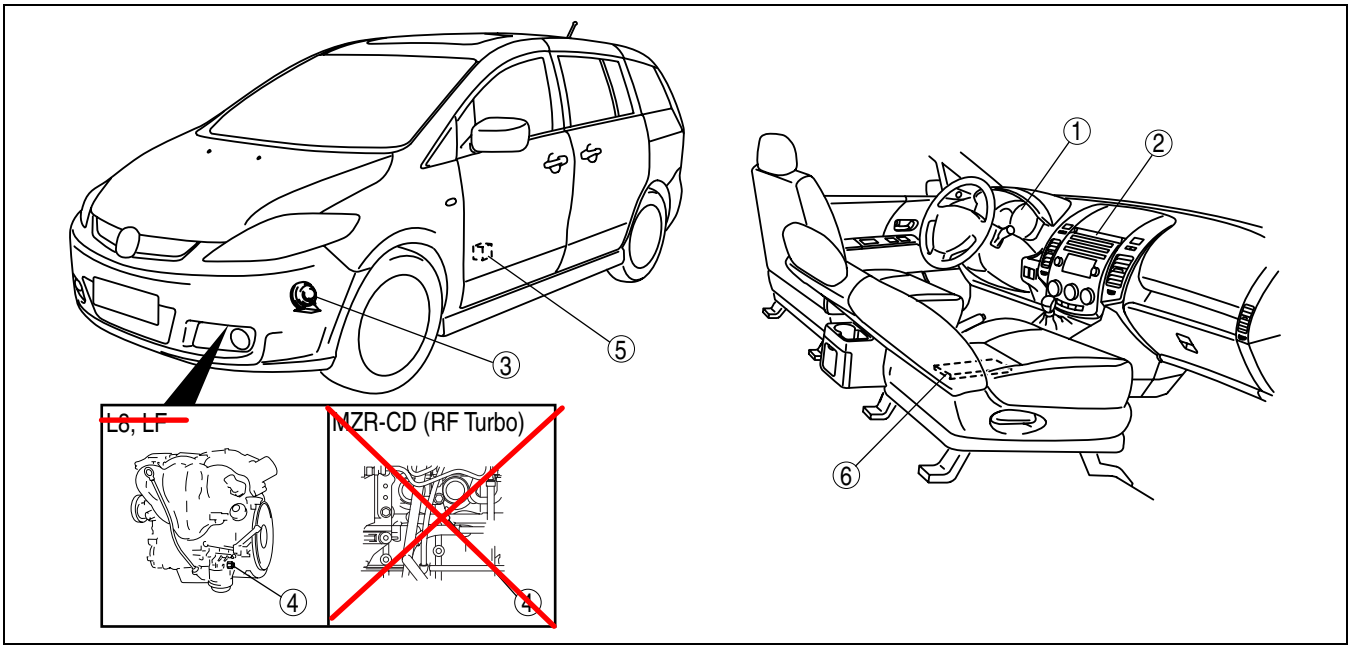
Step	Terminal			
	B	D	A	E
1	○	○		
2	B+	GND	○	○

B3E0921W002

09–22 INSTRUMENTATION/DRIVER INFO.

INSTRUMENTATION/DRIVER INFO. LOCATION INDEX

DPE092200000W01



DPE922ZW1001

1	Instrument cluster (See 09–22–1 INSTRUMENT CLUSTER REMOVAL/INSTALLATION) (See 09–22–2 INSTRUMENT CLUSTER DISASSEMBLY/ASSEMBLY) (See 09–22–3 INSTRUMENT CLUSTER INSPECTION) (See 09–22–4 INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE)
2	Information display (See 09–22–13 INFORMATION DISPLAY REMOVAL/INSTALLATION) (See 09–22–14 INFORMATION DISPLAY INPUT/OUTPUT CHECK MODE)

3	Horn (See 09–22–13 HORN REMOVAL/INSTALLATION)
4	Oil pressure switch (See 09–22–13 OIL PRESSURE SWITCH INSPECTION)
5	Fuel gauge sender unit (See 09–22–13 FUEL GAUGE SENDER UNIT INSPECTION)
6	Occupancy sensor inspection (See 09–22–18 OCCUPANCY SENSOR INSPECTION)

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INSTRUMENT CLUSTER REMOVAL/INSTALLATION

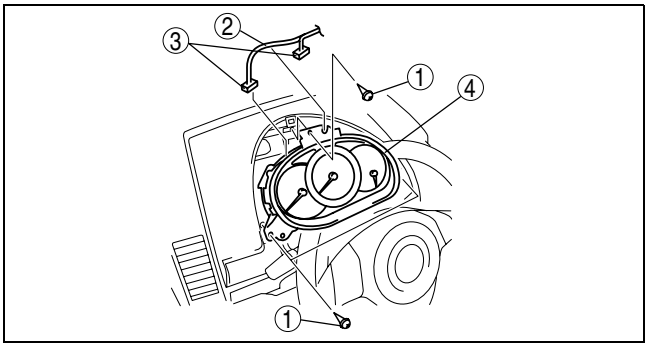
DPE092255430W01

Caution

- **When replacing the instrument cluster, the configuration procedure must be performed before removing the instrument cluster. Replacing the instrument cluster without performing the**

configuration procedure will result in system malfunction.

1. Perform the instrument cluster configuration when replacing it. (See 09–22–2 INSTRUMENT CLUSTER CONFIGURATION.)
2. Disconnect the negative battery cable.
3. Remove the meter hood. (See 09–17–7 METER HOOD REMOVAL/INSTALLATION.)
4. Remove the screw.



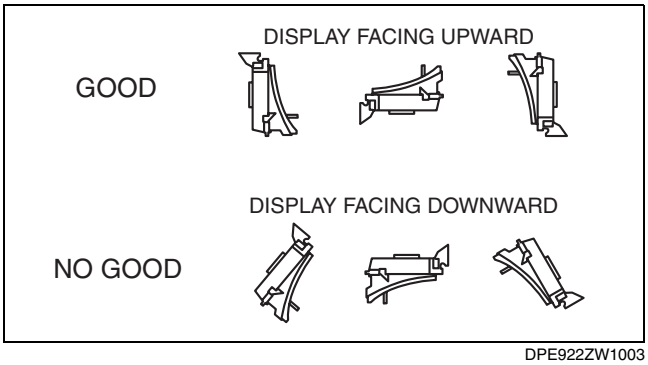
DPE922ZW1002

1	Screw
2	Instrument cluster wiring harness
3	Connector
4	Instrument cluster

5. Remove the instrument cluster.
6. Disconnect the connector.
7. Install in the reverse order of removal.
8. When replacing the instrument cluster of vehicles with the immobilizer system, perform the following procedure:
   - See 09–14A–29 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [WITH ADVANCED KEYLESS SYSTEM], 09–14B–6 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING [KEYLESS ENTRY SYSTEM].

Caution

- **The removed instrument cluster should be placed with the display side up to prevent grease from leaking from the meters.**

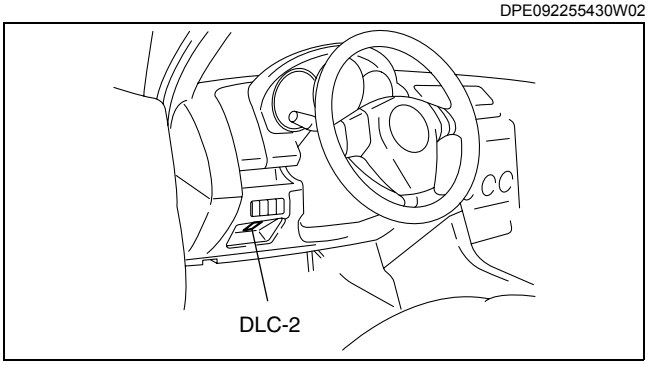


DPE922ZW1003

INSTRUMENT CLUSTER CONFIGURATION

DPE092255430W02

1. Connect the WDS or equivalent to the DLC-2 (16-pin).
2. Set up the WDS or equivalent (including the vehicle recognition).
3. Select “Module Programming”.
4. Select “Programmable Module Installation”.
5. Select “IC” and perform procedures according to directions on the WDS or equivalent screen.
6. Retrieve DTCs using the WDS or equivalent and verify that there is no DTC present.
   - If any DTC is present, perform applicable DTC inspection. (See 09–02F–1 DTC TABLE [INSTRUMENT CLUSTER].)



DPE102ZW2001

INSTRUMENT CLUSTER DISASSEMBLY/ASSEMBLY

DPE092255430W03

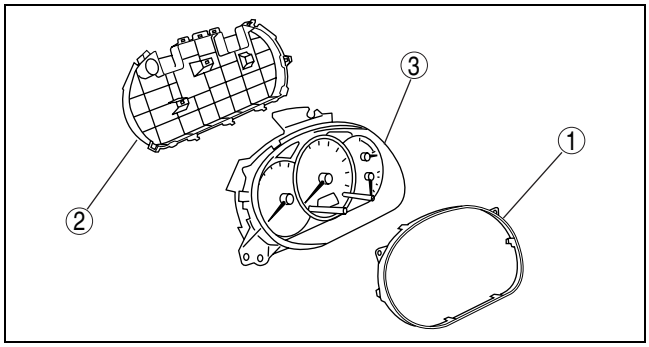
Caution

- **Do not drop the instrument cluster or damage the printed board. This will lead to a system malfunction.**

1. Disassemble in the order indicated in the table.

1	Lens
2	Cover
3	Instrument cluster unit

2. Assemble in the reverse order of disassembly.



CPJ922ZWB019

INSTRUMENT CLUSTER INSPECTION

DPE092255430W04

Speedometer

Using the input/output check mode

1. Inspect the speedometer by setting it to check code 12 of the input/output check mode. (See 09–22–4 INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE.)

Using a speedometer tester

1. Adjust the tire pressure to the specification.
2. Using a speedometer tester, verify that the tester reading is as indicated in the table below.

Speedometer tester indication (km/h)	Allowable range (km/h)	
	~~European (L.H.D. U.K.) specs.~~	General (L.H.D. R.H.D.) specs.
20	21—24	18—22
40	41—44	38—41
60	61—65	58—62
80	81—86	78—82
100	101—106	97—102
120	122—127	117—122
140	142—148	136—142

Speedometer tester indication (mph)	Allowable range (mph)	
	~~European (L.H.D. U.K.) specs.~~	General (L.H.D. R.H.D.) specs.
10	10—12	8.6—11
20	21—23	19—21
30	31—33	29—31
40	41—43	39—41
50	51—54	49—51
60	61—64	59—61
70	71—75	68—72
80	82—85	78—82

3. Verify that the speedometer reading is within the range indicated in the table.
   - If the speedometer does not move or the indication is not within the allowable range, inspect the PCM and related wiring harnesses.
     — If the PCM and related wiring harnesses are normal, replace the instrument cluster.

Tachometer

Using the input/output check mode

1. Inspect the tachometer by setting it to check code 13 of the input/output check mode. (See 09–22–4 INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE.)

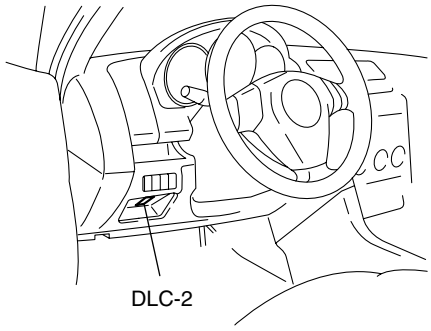
Using WDS or external diagnostic equipment

Caution

- **If the engine speed exceeds the allowable range, the engine could be damaged. Therefore, when inspecting the tachometer, do not allow the engine speed to exceed the allowable range indication**

on the tachometer.

1. Connect the WDS or equivalent to the diagnostic connector 2 (16-pin).



DPE102ZW2001

2. Compare the data monitor item (RPM) with the tachometer indication.
   - If the tachometer does not operate properly, inspect the PCM and related wiring harnesses.
     — If the PCM and related harnesses do not have any malfunction, replace the instrument cluster.

Fuel gauge

1. Inspect the fuel gauge by setting it to check code 23 of the input/output check mode. (See 09–22–4 INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE.)

Water temperature gauge

1. Inspect the water temperature gauge by setting it to check code 25 of the input/output check mode. (See 09–22–4 INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE.)

INSTRUMENT CLUSTER INPUT/OUTPUT CHECK MODE

DPE092255430W05

Note

- In this mode, it is possible to verify the items in the following chart.

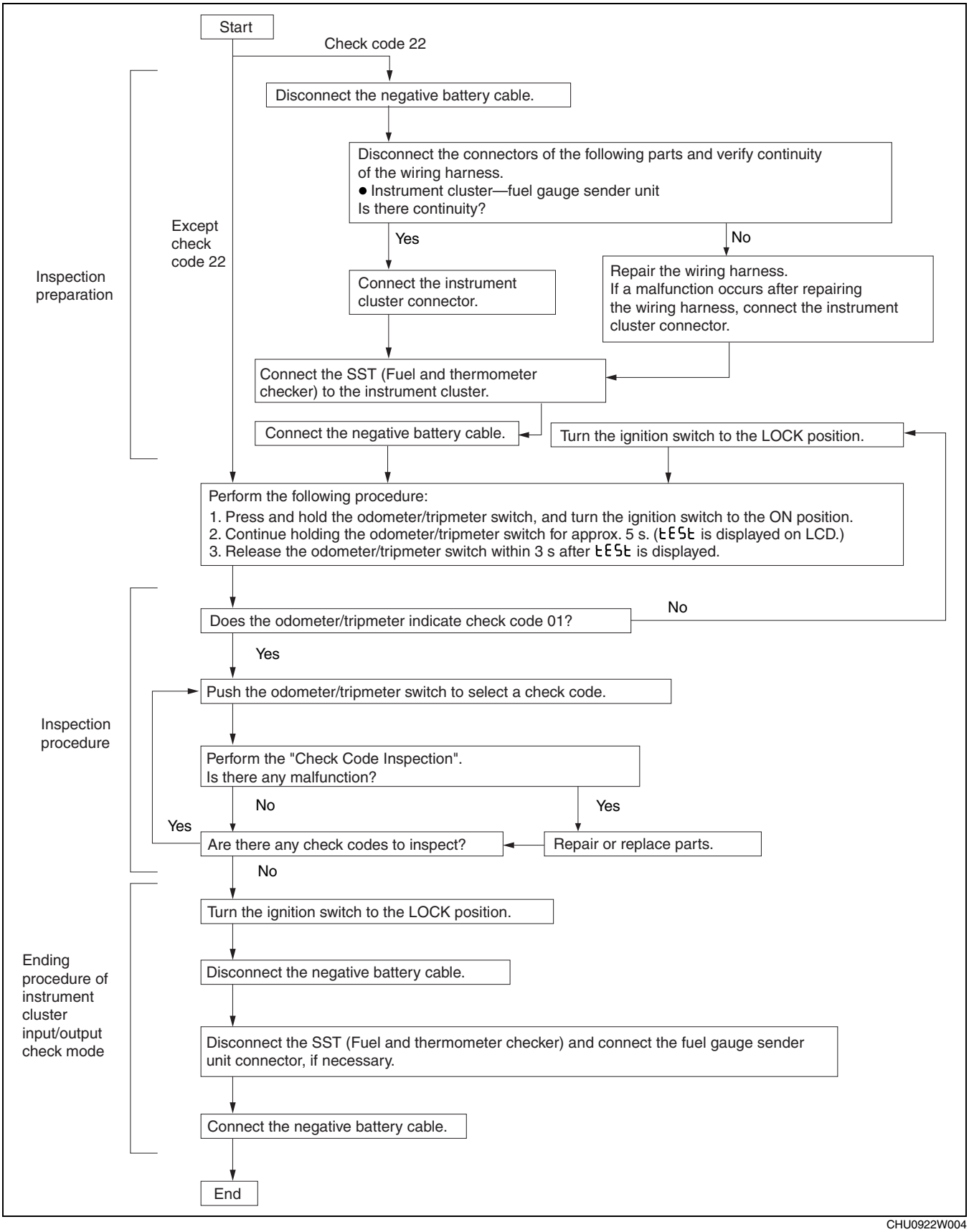
Check Code Table

Check code	Check item	Related items
01	Driver-side buckle switch	Seat belt warning alarm (driver side)
08	TNS relay	• Lights-on reminder warning alarm • Each illumination light
12	Speedometer	Speedometer
13	Tachometer	Tachometer
14	Buzzer	Buzzer
16	Fuel-level warning light	Fuel-level warning light
22	Fuel gauge sender unit	Fuel gauge
23	Fuel gauge	Fuel gauge
25	Water temperature gauge	Water temperature gauge
26	• Odometer/tripmeter (LCD) • Warning and indicator light	• Odometer/tripmeter (LCD) • Warning and indicator light
31	Key reminder switch	Key reminder warning alarm
32	Indicator buzzer	Indicator buzzer
57	Panel light control	Illumination light bulb
58	• Passenger-side buckle switch • Occupancy sensor	Seat belt warning alarm (passenger side)
59	• CAN system • Fuel gauge sender unit	• CAN system • Fuel system

Note

- Check codes which are not listed may be indicated, but they cannot be inspected.
- The check codes are displayed in numerical order. (While performing the inspection, if you want to inspect a check code with a number smaller than the code number you are currently inspecting, terminate the

check mode then repeat the inspection from the beginning.)
- If a speed signal is input to the instrument cluster (the wheels are rotated) while a code other than check code 50 or 51 is displayed, the input/output check mode will be cancelled.
- The check codes can be fast-forwarded by pushing and holding the odometer/tripmeter switch for **1 s or more**.



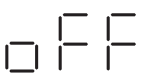
CHU0922W004

Checking Order

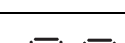
Note
- When inspecting more than two check codes, begin with the code with the highest ranking.

Priority order of inspection	Ignition switch position	Check code
1	ON	22
2		01, 08, 12, 13, 14, 16, 23, 25, 26, 57, 58, 59
3	LOCK	31, 32

Check Code Inspection
Check code 01

Check code 01	Buckle switch ON/OFF signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
1	Unfasten driver-side seat belt. (Buckle switch ON)		Go to the next step.
			Verify that the voltage of instrument cluster terminal 2H is **1.0 V or less**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Buckle switch (driver-side) — Wiring harness (Buckle switch (driver-side)—instrument cluster)
2	Fasten driver-side seat belt. (Buckle switch OFF)		Verify that the voltage of instrument cluster terminal 2H is **B+**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Buckle switch (driver-side) — Wiring harness (Buckle switch (driver-side)—instrument cluster)
			Input signal to the instrument cluster is normal.

Check code 08

Check code 08	TNS relay ON/OFF signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
1	Turn the headlight switch to the TNS position. (TNS relay ON)		Go to the next step.
			Verify that the voltage of instrument cluster terminal 1L is **B+**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — TNS relay — Wiring harness (Battery—TNS relay—instrument cluster)

Check code 08	TNS relay ON/OFF signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
2	Turn the headlight switch off. (TNS relay OFF)		Verify that the voltage of the instrument cluster terminal 1L is **1.0 V or less**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — TNS relay — Wiring harness (TNS relay—instrument cluster)
			Input signal to the instrument cluster is normal.

Check code 12

Check code 12	Speedometer display signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 12, wait for **approx. 2 s**.		The speedometer needle moves full scale then returns to **approx. 60 km/h**.	The speedometer is normal.
		Except above	Replace the instrument cluster.
		—	

Check code 13

Check code 13	Tachometer operation signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 13, wait for **approx. 2 s**.		The tachometer needle moves full scale then returns to **approx. 3,000 rpm**.	The tachometer is normal.
		Except above	Replace the instrument cluster.
		—	

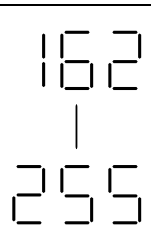
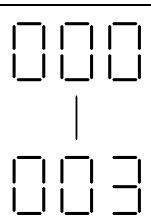
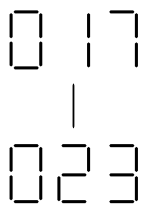
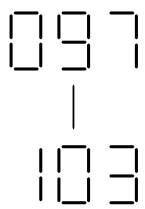
Check code 14

Check code 14	Buzzer operation signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 14, wait **approx. 2 s**.		The buzzer sounds.	The buzzer is normal.
		The buzzer does not sound.	Replace the instrument cluster.

Check code 16

Check code 16	Fuel-level warning light flashing signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 16, wait **approx. 2 s**.	 (FLASHING)	Fuel-level warning light flashes **three times**.	The fuel-level warning light is normal.
		Except above	Replace the instrument cluster.

Check code 22

Check code 22	Fuel level signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
1	Select check code 22 with the fuel gauge sender unit connector disconnected.		Go to the next step.
		Except above	Go to the Step 6.
2	Connect terminals 2U and 2W of the instrument cluster.		Go to the next step.
		Except above	Go to the Step 6.
3	Using the **SST** (Fuel and thermometer checker) or resistor, input **20 ohms** between instrument cluster terminals 2U and 2W.		Go to the next step.
		Except above	Go to the Step 6.
4	Using the **SST** (Fuel and thermometer checker) or resistor, input **60 ohms** between instrument cluster terminals 2U and 2W.		Go to the next step.
		Except above	Go to the Step 6.
5	Using the **SST** (Fuel and thermometer checker) or resistor, input **100 ohms** between instrument cluster terminals 2U and 2W.		Inspect the fuel gauge sender unit.
		Except above	Go to the next step.
6	Inspect the wiring harness and connector between instrument cluster and fuel gauge sender unit. • If there is any malfunction, repair or replace the wiring harness or connector. • If there is no malfunction, replace the instrument cluster.		

Check code 23

Check code 23	Fuel gauge operation signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 23, wait **approx. 2 s**.		The fuel gauge indicates status in the following order **approx. every 2 s**. • F → 1/2 → E → F (fixed)	The fuel gauge is normal.
		Except above	Replace the instrument cluster.
		Replace the instrument cluster.	

Check code 25

Check code 25	Water temperature gauge operation signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 25, wait approx. **2 s**.		The water temperature gauge indicates status in the following order **approx. every 2 s**. • H → Center → C → H (fixed)	The water temperature gauge is normal.
		Except above	Replace the instrument cluster.
		Replace the instrument cluster.	

Check code 26

Check code 26	Odometer/tripmeter display signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
Select check code 26.		• Display is normal. • Warning and indicator light illuminated. — Generator warning light — AT warning light ~~— DSC indicator light~~ ~~— DSC OFF light~~ — ABS warning light — Brake system warning light — Selector indicator light — MIL — EHPAS warning light — Security light — Door ajar warning light — Turn indicator light — High-beam indicator light ~~— Glow indicator light~~ ~~— DPF indicator light~~ — Keyless indicator light — Keyless warning light — Cruise set indicator light — Cruise main indicator light	• The odometer/tripmeter is normal. • Warning and indicator is normal.
		Except above	Replace the instrument cluster.

09

Check code 31

Check code 31	Key reminder switch ON/OFF signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
1	Remove the key from the steering lock, then reinsert the key into the steering lock after selecting check code 31. (The key reminder switch is on.)	01	Go to the next step.
		01 FF	Verify that the voltage of instrument cluster terminal 2C is **B+**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Key reminder switch — Wiring harness (Battery—key reminder switch—instrument cluster)
2	Remove the key from the steering lock. (The key reminder switch is off.)	01	Verify that the voltage of instrument cluster terminal 2C is **1.0 V or less**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Key reminder switch — Wiring harness (Key reminder switch—instrument cluster)
		01 FF	Input signal to the instrument cluster is normal.

Check code 32

Check code 32	Indicator buzzer		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
After selecting check code 32, wait **approx. 2 s**.	01	Indicator buzzer sounds **three times**.	The buzzer is normal.
		The buzzer does not sound.	Replace the instrument cluster.

Check code 57

Check code 57	Panel light control signal		
INSPECTION CONDITION	**DISPLAY**	**ACTION**	
Turn the headlight switch to the TNS position. After selecting check code 57, wait **approx. 2 s**.	01 (FLASHING)	Illumination light (hazard warning switch, center panel module, etc.) flashes **three times**.	The panel light control signal is normal.
		Except above	Verify that the voltage of instrument cluster terminal 1F is **B+**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Illumination light (hazard warning switch, center panel module, etc.) — Wiring harness (Instrument cluster—illumination lights—TNS relay)

Check code 58

Check code 58	Dimmer switch ON/OFF signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
1	Seat one person in the passenger's seat, and unfasten passenger-side seat belt. (Occupancy sensor and buckle switch ON)		Go to the next step.
			Verify that the voltage of instrument cluster terminal 2F is **1.0 V or less**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Buckle switch — Occupancy sensor — Wiring harness (Instrument cluster—occupancy sensor—buckle switch)
2	Seat one person in the passenger's seat, and fasten passenger-side seat belt. (Occupancy sensor ON and buckle switch OFF) Seat no person in the passenger's seat, and unfasten passenger-side seat belt. (Occupancy sensor OFF and buckle switch ON) Seat no person in the passenger's seat, and fasten passenger-side seat belt. (Occupancy sensor and buckle switch OFF)		Verify that the voltage of instrument cluster terminal 2F is **B+**. • If the voltage is as specified, replace the instrument cluster. • If the voltage is not as specified, inspect the following parts: — Buckle switch — Occupancy sensor — Wiring harness (Instrument cluster—occupancy sensor—buckle switch)
			Input signal to the instrument cluster is normal.

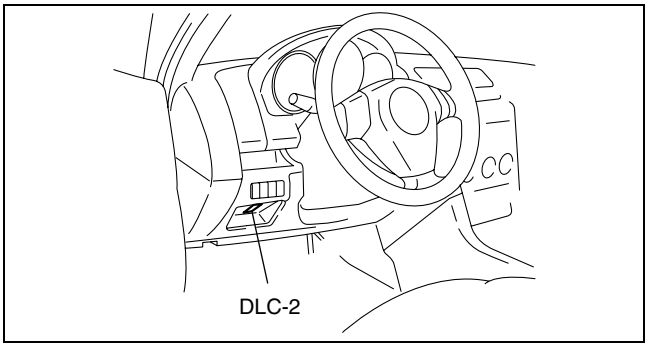
Check code 59
Diagnostic procedure

STEP	INSPECTION	INDICATION	ACTION
1	The three digits number is indicated after selecting check code 59. Confirm the first digit from the right.	First digit from the right 	The CAN system is okay. Go to next step.
		First digit from the right 	The DTC of CAN system is detected. Perform the DTC inspection. (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM]) • If the CAN system is okay, replace the instrument cluster. Go to next step.
2	Confirm the second digit from the right.	Second digit from the right 	The wiring harnesses between the fuel gauge sender unit and instrument cluster are okay. Go to next step.
		Second digit from the right 	Inspect following parts. • Fuel gauge sender unit • Wiring harness (Fuel gauge sender unit—instrument cluster) — If fuel gauge sender unit and wiring harness are okay, replace the instrument cluster. Go to next step.
3	Confirm the third digit from the right.	Third digit from the right 	The fuel pulse signal from the PCM is okay.
		Third digit from the right 	Inspect the PCM. (See 01–02A–9 DTC TABLE [L8, LF], 01–02B–7 DTC TABLE [MZR-CD (RF Turbo)], 01–40A–7 PCM INSPECTION [L8, LF], 01–40B–10 PCM INSPECTION [MZR-CD (RF Turbo)]) • If the PCM is okay, replace the instrument cluster.

DATA MONITORING AND RECORDING PROCEDURE

1. Connect the WDS or equivalent to the diagnostic connector 2 (16-pin).
2. Verify the data monitor items.

DPE092255430W06



DPE102ZW2001

Indication Item Table

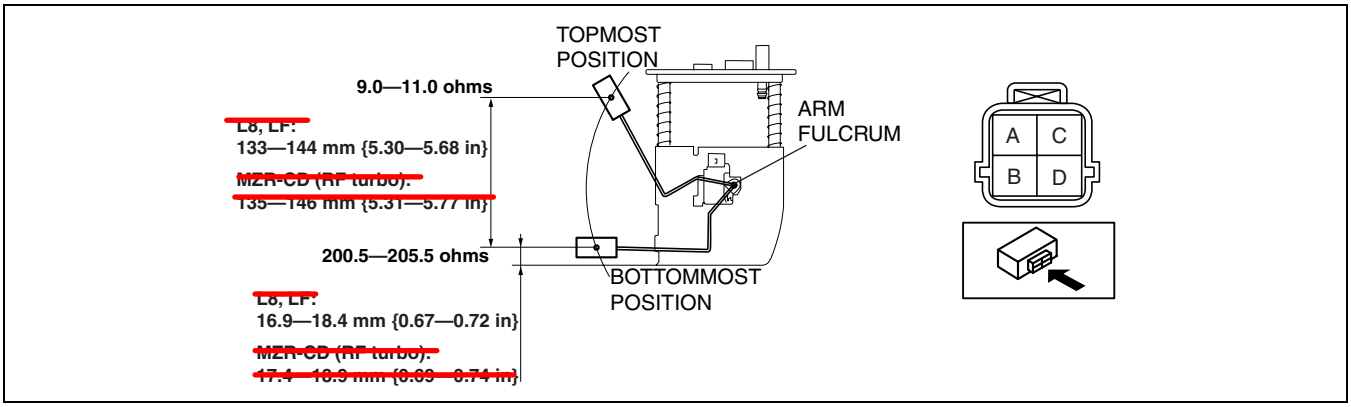
Monitor item	Input-output signal/part name	Unit/State		Terminal
CCNT_HE	Number of continuous DTCs	—		—
ECT_GAUGE	Water temperature gauge	°F	°C	1I, 1K

Monitor item	Input-output signal/part name	Unit/State		Terminal
NUMKEYS	Number of key ID numbers registered with the vehicle	—		—
ODO COUNT	Odometer	m		1I, 1K
SPDOMETER	Speedometer	MPH	KPH	
TACH	Tachometer	RPM		

FUEL GAUGE SENDER UNIT INSPECTION

DPE092260960W01

1. Move the float to the topmost and bottommost positions, and verify that the resistance between terminals A and B of the unit and the position of the float are as indicated in the figure.



DPE922ZW1004

- If they are not as indicated, replace the fuel gauge sender unit.

OIL PRESSURE SWITCH INSPECTION

DPE092218500W01

1. Verify that the oil pressure warning light illuminates when the ignition switch is at the ON position.
2. Verify that the oil pressure warning light goes out when the engine is started.
   - If the oil pressure warning light does not illuminate or remains illuminated, inspect the related wiring harness.
     — If the related wiring harness is normal, inspect the oil pressure. (See 01–11A–1 OIL PRESSURE INSPECTION [L8, LF], 01–11B–1 OIL PRESSURE INSPECTION [MZR-CD (RF Turbo)].)
       - If the oil pressure is normal, replace the oil pressure switch.

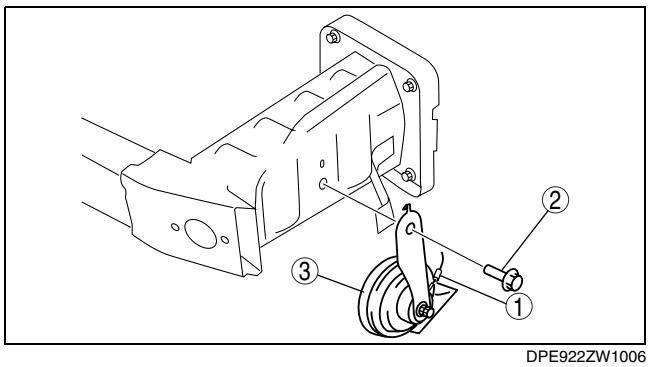
HORN REMOVAL/INSTALLATION

DPE092266790W01

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See09–10–5 FRONT BUMPER REMOVAL/INSTALLATION.)
3. Slightly bend back the mudguard.
4. Remove in the order indicated in the table.

1	Connector
2	Bolt
3	Horn

5. Install in the reverse order of removal.



DPE922ZW1006

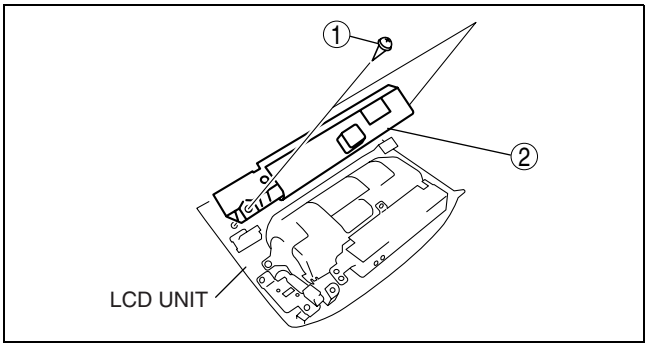
INFORMATION DISPLAY REMOVAL/INSTALLATION

DPE092255000W01

1. Disconnect the negative battery cable.
2. Remove the following parts:
   (1) Side wall (See 09–17–11 SIDE WALL REMOVAL/INSTALLATION)
   (2) Front console (See 09–17–13 FRONT CONSOLE REMOVAL/INSTALLATION)
   (3) Center panel module ~~(with audio unit)~~ (See 09–20–7 CENTER PANEL MODULE REMOVAL/INSTALLATION)
   ~~(4) Center panel (without audio unit) (See 09–17–15 CENTER PANEL REMOVAL/INSTALLATION)~~

(5) LCD unit (with car-navigation system) (See 09–20–9 LCD UNIT REMOVAL/INSTALLATION)
(6) Dashboard center panel (without car-navigation system) (See 09–17–12 DASHBOARD CENTER PANEL REMOVAL/INSTALLATION)

3. Remove in the order indicated in the table.



DPE922ZW1014

1	Screw
2	Information display

4. Install in the reverse order of removal.

INFORMATION DISPLAY INPUT/OUTPUT CHECK MODE

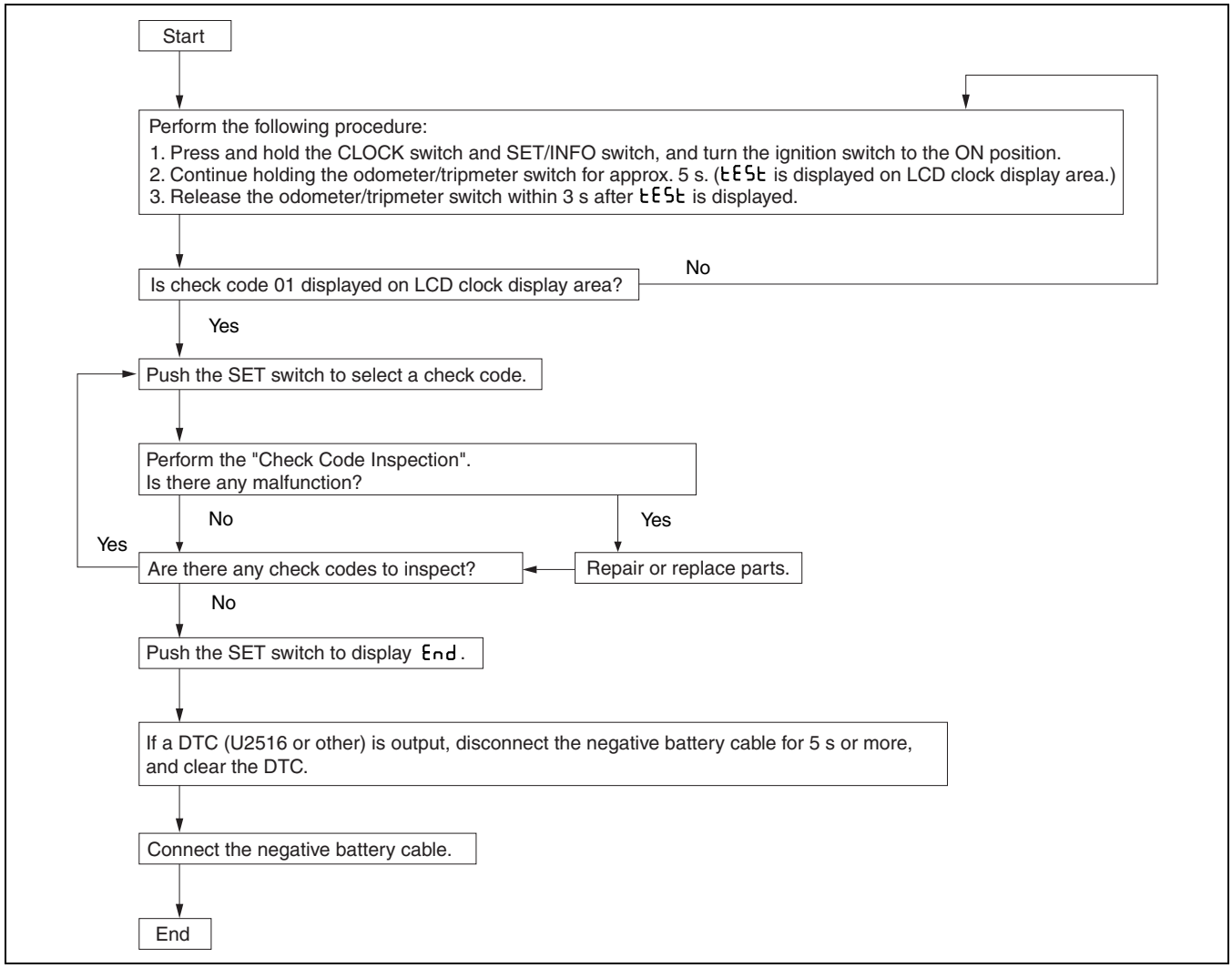
DPE092255000W02

Note
- In this mode, it is possible to verify the items in the following chart.

Check Code Table

Check code	Check item	Related items
01	Information display	CAN system • DTC U2516: CAN system communication error
02	• Audio unit • Climate control unit • Instrument cluster	CAN system • DTCU0184: Communication error to audio unit • DTCU0164: Communication error to climate control unit • DTCU0181: Communication error to instrument cluster
03	LCD	LCD
04	TNS relay	• TNS relay • BCM • TNS signal wiring harness
05	Ambient temperature sensor	• Ambient temperature sensor • Ambient temperature signal wiring harness

Note
- The check codes are displayed in numerical order. (While performing the inspection, if you want to inspect a check code with a number smaller than the code number you are currently inspecting, terminate the check mode then repeat the inspection from the beginning.)



DPE922ZW1007

Check Code Inspection
Check code 01

Check code 01	**CAN system**	
INSPECTION CONDITION	**DISPLAY**	**ACTION**
Select the check code 01.	OK	CAN system of information display is normal.
	U2516	CAN system communication error. (DTC U2516) (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM])

Check code 02

Check code 02	• Communication status to audio unit • Communication status to climate control unit • Communication status to instrument cluster

INSPECTION CONDITION	DISPLAY		ACTION
Select the check code 02. (The diagnostic results will be displayed once each in the order of audio unit, heater control unit, and instrument cluster.)	Audio unit	OK ACU	Communication to audio unit is normal.
		U0184	Communication error to audio unit. (DTC U0184) (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM])
		None ACU	Vehicle without audio unit.
	Climate control unit	OK EATC	Communication to climate control unit is normal.
		U0164	Communication error to climate control unit. (DTC U0164) (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM])
		None EATC	Vehicle without climate control unit.
	Instrument cluster	OK HEC	Communication to instrument cluster is normal.
		U0181	Communication error to instrument cluster. (DTC U0181) (See 09–02D–5 DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM])

Check code 03

Check code 03	LCD

INSPECTION CONDITION	DISPLAY	ACTION	
Select the check code 03.		All segments and dots illuminated.	LCD is normal.
		Except above	Replace the information display.

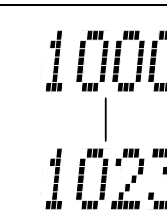
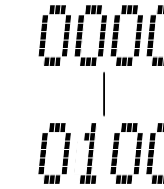
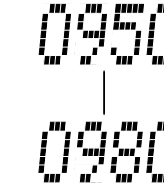
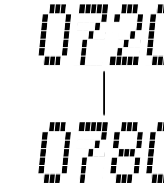
Check code 04

Check code 04	TNS relay ON/OFF signal

STEP	INSPECTION CONDITION	DISPLAY	ACTION
1	Turn the headlight switch to the TNS position. (TNS relay ON)	ON	Go to the next step.
		OFF	Verify that the voltage of information display terminal C is **B+**. • If the voltage is as specified, replace the information display. • If the voltage is not as specified, inspect the following parts: — TNS relay — Wiring harness (Battery—TNS relay—information display)

Check code 04	TNS relay ON/OFF signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
2	Turn the headlight switch off. (TNS relay OFF)		Verify that the voltage of the information display terminal C is **1.0 V or less**. • If the voltage is as specified, replace the information display. • If the voltage is not as specified, inspect the following parts: — TNS relay — Wiring harness (TNS relay—information display)
			Input signal to the information display is normal.

Check code 05

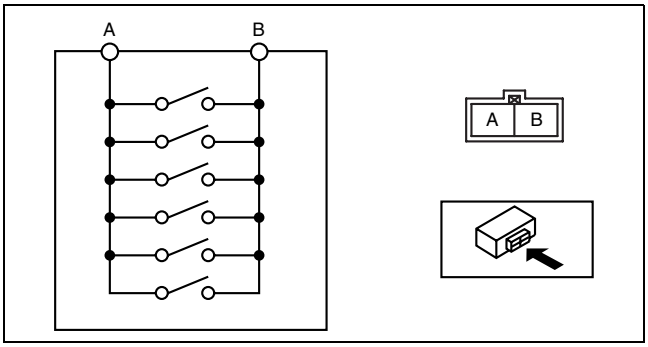
Check code 05	Ambient temperature signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
1	Select check code 05 with the ambient temperature sensor connector disconnected.		Vehicle with full-auto air conditioner system. (ambient temperature sensor is not connected to information display)
			Go to the next step.
		Except above	Go to Step 6.
2	Connect terminals F and G of the information display.		Go to the next step.
		Except above	Go to Step 6.
3	Using the **SST** (Fuel and thermometer checker) or resistor, input **42 kilohms** between information display terminals F and G.		Go to the next step.
		Except above	Go to Step 6.
4	Using the **SST** (Fuel and thermometer checker) or resistor, input **6.6 kilohms** between information display terminals F and G.		Go to the next step.
		Except above	Go to Step 6.

Check code 05	Ambient temperature signal		
STEP	**INSPECTION CONDITION**	**DISPLAY**	**ACTION**
5	Using the **SST** (Fuel and thermometer checker) or resistor, input **385 ohms** between information display terminals F and G.	0130 | 0150	Inspect the ambient temperature sensor.
		Except above	Go to the next step.
6	Inspect the wiring harness and connector between information display and ambient temperature sensor. • If there is any malfunction, repair or replace the wiring harness or connector. • If there is no malfunction, replace the information display.		

OCCUPANCY SENSOR INSPECTION

1. Disconnect the occupancy sensor connector.
2. Verify that the continuity between the occupancy sensor terminals is as indicated in the table.
   - If not as indicated in the table, replace the occupancy sensor.

DPE092200000W02



DPE922ZW1015

○—○: Continuity

Condition	Terminal	
	A	**B**
Seat one person in the passenger's seat	○	○
Seat no person in the passenger's seat		

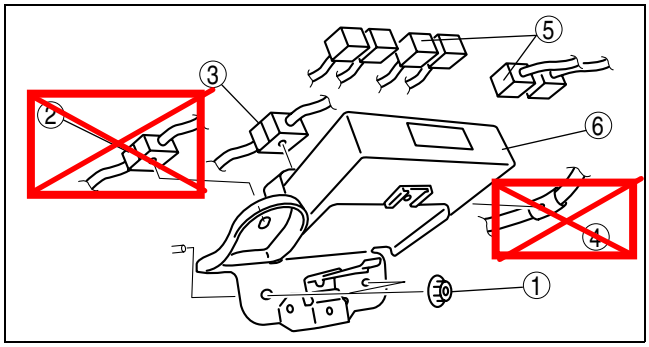
DPE922ZW1016

09–40 CONTROL SYSTEM

BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION

DPE094000200W01

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



DPE940ZW1001

1	Nut
~~2~~	~~Wiring harness (R.H.D. only)~~
3	Wiring harness ~~(L.H.D. only)~~
~~4~~	~~Wiring harness (R.H.D. (MZR-CD (PF Turbo)) only)~~
5	Connector
6	BCM

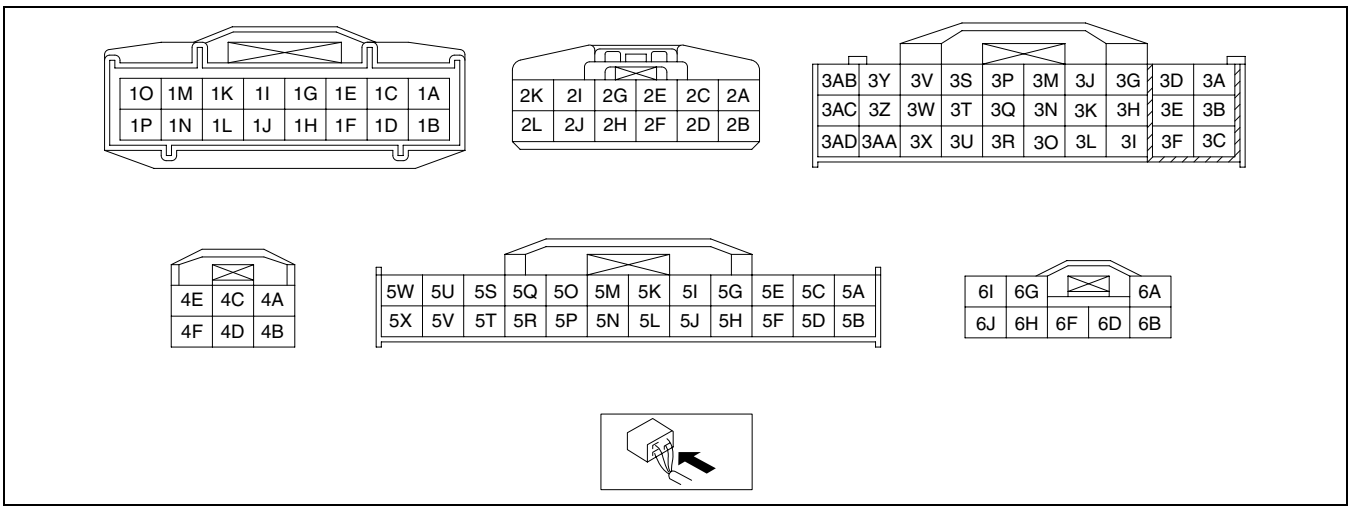
3. Install in the reverse order of removal.

BODY CONTROL MODULE (BCM) INSPECTION

DPE094000200W02

1. Remove the glove compartment.
2. Remove the BCM with the connector connected.
3. Measure the voltage at each terminal and inspect for the continuity between the terminals and ground is as indicated in the Terminal Voltage Tables (Reference).
   - If the voltage or continuity is not as specified in the Terminal Voltage Table (Reference), inspect the parts under “Inspection item (s)”.
     — If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the BCM.

Terminal Voltage Table (Reference)



CPJ940ZWB003

Terminal	Signal	Connected to	Measurement condition		Voltage (V)/ Continuity	Inspection item (s)
1A	Bonnet latch switch signal	Bonnet latch switch	Bonnet open (Bonnet latch switch off)		B+	• Bonnet latch switch • Related wiring harnesses
			Bonnet closed (Bonnet latch switch on)		1.0 or less	
1B	Tail light power supply	TNS relay	Light switch at TNS position		B+	• TNS relay • Related wiring harnesses
			Light switch at OFF position		1.0 or less	
1C	Headlight cleaner relay control	Headlight cleaner relay	Headlight cleaner operating		1.0 or less	• Headlight cleaner relay • Related wiring harnesses
			Other		B+	
1D	—	—	—		—	—
1E	Rear window defroster relay control	Rear window defroster relay	Ignition switch at ON	Rear window defroster switch on	1.0 or less	• Rear window defroster relay • Related wiring harnesses
				Rear window defroster switch off	5	
1F	—	—	—		—	—
1G	Brake fluid level signal	Brake fluid level sensor	Ignition switch at ON	Brake fluid level below MIN.	B+	• Brake fluid level sensor • Related wiring harnesses
				Brake fluid level above MIN.	1.0 or less	
1H	Front fog light relay control	Front fog light relay	Front fog light switch on and light switch at TNS position		1.0 or less	• Front fog light relay • Related wiring harnesses
			Front fog light switch off		B+	
1I	—	—	—		—	—
1J	TNS relay control	TNS relay	Light switch at TNS position		1.0 or less	• TNS relay • Related wiring harnesses
			Light switch at OFF position		B+	
1K	—	—	—		—	—
1L	Headlight LO relay control	Headlight LO relay	Light switch at headlight position		1.0 or less	• Headlight LO relay • Related wiring harnesses
			Light switch off		B+	
1M	Rear fog light relay control	Rear fog light relay	Rear fog light switch on		1.0 or less	• Rear fog light relay • Related wiring harnesses
			Rear fog light switch off		B+	
1N	Headlight HI relay control	Headlight HI relay	Ignition switch off	Light switch at high position or flash-to-pass	1.0 or less	• Headlight HI relay • Related wiring harnesses
				Other	B+	
1O	—	—	—		—	—
1P	—	—	—		—	—
2A	Power supply	Main fuse block	Under any condition		B+	• Related wiring harnesses
2B	Turn light power supply	Main fuse block	Under any condition		B+	• Related wiring harnesses
2C	—	—	—		—	—
2D	Front turn light (LH) control	• Front turn light (LH) • Front side turn light (LH)	Turn switch (LH) on	Front turn light (LH) flashes	Alternates between 1.0 or less and B+	• Front turn light (LH) • Front side turn light (LH) • Related wiring harnesses
			Hazard warning switch on			
			Other		1.0 or less	
2E	—	—	—		—	—
2F	Front turn light (RH) control	• Front turn light (RH) • Front side turn light (RH)	Turn switch (RH) on	Front turn light (RH) flashes	Alternates between 1.0 or less and B+	• Front turn light (RH) • Front side turn light (RH) • Related wiring harnesses
			Hazard warning switch on			
			Other		1.0 or less	

Terminal	Signal	Connected to	Measurement condition		Voltage (V)/ Continuity	Inspection item (s)
2G	Interior illumination power supply	TNS relay	Light switch at TNS position		B+	• TNS relay • Related wiring harnesses
			Light switch at OFF position		1.0 or less	
2H	Rear washer motor control	Rear washer motor	Ignition switch at ON	Rear washer switch on	1.0 or less	• Rear washer motor • Related wiring harnesses
				Rear washer switch off	B+	
2I	Autostop switch signal	Autostop switch	Ignition switch at ON	Windshield wiper moving	B+	• Autostop switch (windshield wiper motor) • Related wiring harnesses
				Windshield wiper stopped	1.0 or less	
2J	Power door lock power supply	Main fuse block	Under any condition		B+	• Related wiring harnesses
2K	Windshield wiper motor control	Windshield wiper motor (high speed)	Wiper switch at high position		B+	• Windshield wiper motor • Related wiring harnesses
			Other		1.0 or less	
2L	Windshield wiper motor control	Windshield wiper motor (low speed)	Wiper switch at low position		B+	• Windshield wiper motor • Related wiring harnesses
			Other		1.0 or less	
3A	BCM GND	Body ground	Under any condition: Inspect for continuity to ground.		Continuity detected	• Related wiring harnesses
3B	Windshield wiper switch signal (low)	Windshield wiper and washer switch	Ignition switch at ON	Windshield wiper switch at low position	1.0 or less	• Windshield wiper and washer switch • Related wiring harnesses
				Other	B+	
3C	Windshield wiper switch signal (high)	Windshield wiper and washer switch	Ignition switch at ON	Windshield wiper switch at high position	1.0 or less	• Windshield wiper and washer switch • Related wiring harnesses
				Other	B+	
3D	CAN_H	—	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.		—	• Related wiring harnesses
3E	Sensitivity adjustment volume (with auto wiper system)	Windshield wiper and washer switch	Ignition switch at ON	Sensitivity adjustment volume turned from + position to – position	0 → 0.8 → 1.5 → 2.5 → 2.7	• Windshield wiper and washer switch • Related wiring harnesses
	INT volume (without auto wiper system)			INT volume turned from lowest position to highest position	0 → 0.2 → 0.7 → 1.0 → 1.4 → 1.6 → 1.8 → 2.0 → 2.1→ 2.3	
3F	Washer switch signal	Windshield wiper and washer switch	Ignition switch at ON	Washer switch on	B+	• Windshield wiper and washer switch • Related wiring harnesses
				Washer switch off	1.0 or less	
3G	CAN_L	—	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.		—	• Related wiring harnesses
3H	Light switch signal (AUTO)	Light switch	Ignition switch at ON	Light switch at AUTO position	1.0 or less	• Light switch • Related wiring harnesses
				Other	B+	
3I	Headlight switch signal (high beam)	Light switch	Light switch at high position or flash-to-pass		1.0 or less	• Light switch • Related wiring harnesses
			Other		B+	

Terminal	Signal	Connected to	Measurement condition		Voltage (V)/ Continuity	Inspection item (s)
3J	Windshield wiper switch signal (AUTO) (with auto wiper system)	Windshield wiper switch	Ignition switch at ON	Windshield wiper switch at AUTO position	1.0 or less	• Windshield wiper switch • Related wiring harnesses
				Other	B+	
	Windshield wiper switch signal (INT) (without auto wiper system)			Windshield wiper switch at INT position	1.0 or less	
				Other	B+	
3K	Rear wiper switch signal (on)	Rear wiper and washer switch	Ignition switch at ON	Rear wiper switch at ON position	1.0 or less	• Rear wiper and washer switch • Related wiring harnesses
				Other	B+	
3L	Headlight switch signal	Light switch	Light switch at headlight position		1.0 or less	• Light switch • Related wiring harnesses
			Light switch at OFF position		B+	
3M	Rear wiper switch signal (INT)	Rear wiper and washer switch	Ignition switch at ON	Rear wiper switch at INT position	1.0 or less	• Rear wiper and washer switch • Related wiring harnesses
				Other	B+	
3N	Rear fog light switch signal	Rear fog light switch	Rear fog light switch on		1.0 or less	• Rear fog light switch • Related wiring harnesses
			Rear fog light switch off		B+	
3O	TNS signal	Light switch	Light switch at TNS position		1.0 or less	• Light switch • Related wiring harnesses
			Light switch at OFF position		B+	
3P	Rear window defroster signal (with manual A/C)	Climate control unit	Rear window defroster switch is pressed		1.0 or less	• Climate control unit • Related wiring harnesses
			Rear window defroster switch is released		B+	
3Q	Turn switch input (RH)	Turn switch	Ignition switch at ON	Turn switch at right position	1.0 or less	• Turn switch • Related wiring harnesses
				Other	B+	
3R	Front fog light switch signal	Front fog light switch	Front fog light switch on		1.0 or less	• Fog light switch • Related wiring harnesses
			Front fog light switch off		B+	
3S	A/C operation signal (with manual A/C)	Climate control unit	A/C operating		1.0 or less	• Climate control unit • Related wiring harnesses
			A/C not operating		5	
3T	Turn switch input (LH)	Turn switch	Ignition switch at ON	Turn switch at left position	1.0 or less	• Turn switch • Related wiring harnesses
				Other	B+	
3U	Power supply	Fuse block	Ignition switch at ON		B+	• Ignition switch • Related wiring harnesses
			Ignition switch off		1.0 or less	
3V	Rear window defroster indicator control (with manual A/C)	Climate control unit	Rear window defroster on		1.0 or less	• Climate control unit • Related wiring harnesses
			Rear window defroster off		B+	
3W	Hazard warning switch signal	Hazard warning switch	Hazard warning switch on		1.0 or less	• Hazard warning switch • Related wiring harnesses
			Hazard warning switch off		B+	
3X	Power supply	Fuse block	Ignition switch at ON		B+	• Ignition switch • Related wiring harnesses
			Ignition switch off		1.0 or less	
3Y	—	—	—		—	—
3Z	Ignition key illumination control	Ignition key illumination	Ignition switch off and driver-side door opened.		1.0 or less	• Ignition key illumination bulb • Related wiring harnesses
			15 s or more after all doors closed.		B+	

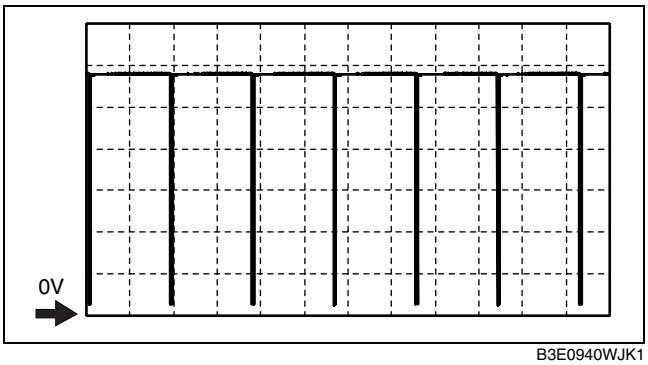
Terminal	Signal	Connected to	Measurement condition		Voltage (V)/ Continuity	Inspection item (s)
3AA	Rear washer switch signal	Rear wiper and washer switch	Ignition switch at ON	Rear washer switch on	1.0 or less	• Rear wiper and washer switch • Related wiring harnesses
				Rear washer switch off	B+	
3AB	Serial communication	• Keyless control module (with advanced keyless system) • Keyless receiver (with keyless entry system)	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.		—	• Keyless control module (with advanced keyless system) • Keyless receiver (with keyless entry system) • Related wiring harnesses
3AC	—	—	—		—	—
3AD	Key reminder switch signal	• Steering lock unit (with advanced keyless system) • Ignition switch (with keyless entry system)	Key inserted		B+	• Steering lock unit (with advanced keyless system) • Ignition switch(with keyless entry system) • Related wiring harnesses
			Key removed		1.0 or less	
4A	Windshield wiper motor power supply	• Windshield wiper and washer switch • Windshield wiper motor • Fuse block	Ignition switch at ON		B+	• Ignition switch • Related wiring harnesses
			Ignition switch off		1.0 or less	
4B	Power supply	Fuse block	Ignition switch at ON		B+	• Ignition switch • Related wiring harnesses
			Ignition switch off		1.0 or less	
4C	Illumination control	Illumination bulb	Light switch at TNS position		B+	• Illumination bulb • Related wiring harnesses
			Light switch at OFF position		1.0 or less	
4D	Key reminder switch, ignition key illumination power supply	• Key reminder switch • Ignition key illumination	Under any condition		B+	• Related wiring harnesses
4E	GND	Body ground	Under any condition: Inspect for continuity to ground.		Continuity detected	• Related wiring harnesses
4F	Auto leveling control	Auto leveling control module	Light switch at headlight position		1.0 or less	• Auto leveling control module • Related wiring harnesses
			Light switch at OFF position		B+	
5A	Liftgate latch switch signal	Liftgate latch switch	Liftgate is open. (Liftgate latch switch on)		1.0 or less	• Liftgate latch switch • Related wiring harnesses
			Liftgate is closed. (Liftgate latch switch off)		B+	
5B	~~Transmitter signal (LH) (PSD button)~~	~~PSD control module~~	~~Transmitter PSD L button pressed~~		~~5 → 1.0 or less → 5~~	~~• PSD control module • Related wiring harnesses~~
			~~Other~~		~~5~~	
5C	Sliding door switch signal	~~• PSD control module (with PSD)~~ • Sliding door switches ~~(without PSD)~~	Any sliding door open (Sliding door switch on)		1.0 or less	• Sliding door switches • Related wiring harnesses
			All sliding doors closed (Sliding door switch off)		B+	
5D	~~Transmitter signal (RH) (PSD button)~~	~~PSD control module~~	~~Transmitter PSD R button pressed~~		~~5 → 1.0 or less → 5~~	~~• PSD control module • Related wiring harnesses~~
			~~Other~~		~~5~~	

09

Terminal	Signal	Connected to	Measurement condition		Voltage (V)/ Continuity	Inspection item (s)
5E	Front door latch switch (passenger-side) signal	Front door latch switch (passenger-side)	Front door (passenger-side) open (Front door latch switch (passenger-side) off)		B+	• Front door latch switch (passenger-side) • Related wiring harnesses
			Front door (passenger-side) closed (Front door latch switch (passenger-side) on)		1.0 or less	
5F	Theft-deterrent siren signal	Theft-deterrent siren	Theft-deterrent system arming	(See 09–40–7 Inspection Using an Oscilloscope (Reference).)		• Theft-deterrent siren • Related wiring harnesses
5F	—	—	—		—	—
5G	Front door latch switch (driver-side) signal	Front door latch switch (driver-side)	Front door (driver-side) open (Front door latch switch (driver-side) off)		B+	• Front door latch switch (driver-side) • Related wiring harnesses
			Front door (driver-side) closed (Front door latch switch (driver-side) on)		1.0 or less	
5H	Intruder sensor power supply	Intruder sensor	Theft-deterrent system pre-arming or arming		B+	• Related wiring harnesses
			Other		1.0 or less	
5I	—	—	—		—	—
5J	Intruder sensor signal	Intruder sensor (rear)	Theft-deterrent system pre-arming, arming, or alarm		B+	• Intruder sensor (rear) • Related wiring harnesses
			Intruder sensor detects intrusion		B+ → 1.0 or less → B+	
			Theft-deterrent system: Other		1.0 or less	
5K	Parking brake switch signal	Parking brake switch	Ignition switch at ON	Parking brake switch on	1.0 or less	• Parking brake switch • Related wiring harnesses
				Parking brake switch off	B+	
5L	Intruder sensor signal	Intruder sensor (front)	Theft-deterrent system pre-arming, arming, or alarm		B+	• Intruder sensor (front) • Related wiring harnesses
			Intruder sensor detects intrusion		B+ → 1.0 or less → B+	
			Theft-deterrent system: Other		1.0 or less	
5M	Wiper or headlight operation request	Rain sensor	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.		—	• Rain sensor • Related wiring harnesses
5N	—	—	—		—	—
5O	Unlock input (Sliding door lock-link switch) (with PSD)	Sliding door lock-link switch	All sliding doors locked		5	• Sliding door lock-link switch • Related wiring harnesses
			Any sliding door unlocked		1.0 or less	
5P	—	—	—		—	—
5Q	Unlock input (Driver-side door key cylinder switch)	Driver-side door key cylinder switch	At the moment key cylinder is unlocked		1.0 or less	• Driver-side door key cylinder switch • Related wiring harnesses
			Other		B+	
5R	Tail light control	Tail light	Light switch at TNS position		B+	• Tail light • Related wiring harnesses
			Light switch at OFF position		1.0 or less	
5S	Lock input (Driver-side door key cylinder switch)	Driver-side door key cylinder switch	At the moment key cylinder is locked		1.0 or less	• Driver-side door key cylinder switch • Related wiring harnesses
			Other		B+	
5T	—	—	—		—	—
5U	Lock input (Driver-side door lock-link switch)	Driver-side door lock-link switch	Driver-side door locked		1.0 or less	• Driver-side door lock-link switch • Related wiring harnesses
			Driver-side door unlocked		5	

Terminal	Signal	Connected to	Measurement condition		Voltage (V)/ Continuity	Inspection item (s)
5V	Rear turn light (RH) control	Rear turn light (RH)	Turn switch (RH) on	Rear turn light (RH) flashes	Alternates between 1.0 or less and B+	• Rear turn light (RH) • Related wiring harnesses
			Hazard warning switch on			
			Other		1.0 or less	
5W	Unlock input (Driver-side door lock-link switch)	Driver-side door lock-link switch	Driver-side door locked		5	• Driver-side door lock-link switch • Related wiring harnesses
			Driver-side door unlocked		1.0 or less	
5X	Rear turn light (LH) control	Rear turn light (LH)	Turn switch (LH) on	Rear turn light (LH) flashes	Alternates between 1.0 or less and B+	• Rear turn light (LH) • Related wiring harnesses
			Hazard warning switch on			
			Other		1.0 or less	
6A	Door lock control	Door lock actuator	Door lock actuator locking		1.0 or less → B+ → 1.0 or less	• Door lock actuator • Related wiring harnesses
			Other		1.0 or less	
6B	Door unlock control	Door lock actuator	Door lock actuator unlocking		1.0 or less → B+ → 1.0 or less	• Door lock actuator • Related wiring harnesses
			Other		1.0 or less	
6D	—	—	—		—	—
6F	Double lock control	Door lock actuator	Lock actuator double-locking (Transmitter LOCK button pressed twice **within 5 s**)		1.0 or less → B+ → 1.0 or less	• Door lock actuator • Related wiring harnesses
			Other		1.0 or less	
6G	Rear wiper control	Rear wiper motor	Rear wiper moving		1.0 or less	• Rear wiper motor • Related wiring harnesses
			Rear wiper stopped		B+	
6H	—	—	—		—	—
6I	Interior light control	• Map light • Interior light	**Within 5 min** after any door is opened.		1.0 or less	• Map light • Interior light • Related wiring harnesses
			5 min or more after any door is opened.		B+	
			All doors closed		B+	
6J	Interior light power supply	• Map light • Interior light • Cargo compartment light	Under any condition		B+	• Related wiring harnesses

Inspection Using an Oscilloscope (Reference)
Intruder sensor signal



B3E0940WJK1

- Terminal connected: 5F (+)—Negative battery terminal
- Oscilloscope setting: 2 V/DIV (Y): 100 ms/DIV (X), DC range
- Measurement condition: Theft-deterrent system arming.

09–50 TECHNICAL DATA

BODY ELECTRICAL SYSTEM

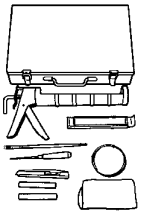
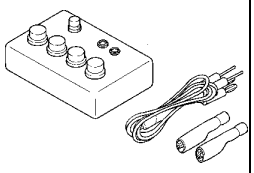
DPE095000000W01

Item		Specifications (W) × number
Exterior light bulb capacity	Headlight bulb (high-beam)	60 × 2
	Discharge headlight bulb (low-beam)	35 × 2
	Halogen headlight bulb (low-beam)	55 × 2
	Front turn light bulb	21 × 2
	Parking light bulb	5 × 2
	Front fog light bulb	55 × 2
	Front side turn light bulb	5 × 2
	Brake light/taillight bulb	21/5 × 2
	Rear turn light bulb	21 × 2
	Back-up light bulb	18 × 2
	Rear fog light bulb	21 × 1
	License plate light bulb	5 × 2
	High-mount brake light bulb (LED)	2.4
Interior light bulb capacity	Map light bulb	5 × 2
	Interior light bulb	10 × 1
	Cargo compartment light bulb	8 × 1
	Glove compartment light bulb	1.7 × 1
	Ignition key illumination bulb	1.4 × 1

09–60 SERVICE TOOLS

BODY & ACCESSORIES SST

DPE096000000W01

49 0305 870A Window Tool Set 	49 N088 0A0 Fuel & Thermometer Checker 	WDS