

SECTION

RF

ROOF

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

WorkFlow

INFOID:000000003812841

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicle in.

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

Use "Symptom diagnosis" from the symptom inspection result in step 2 and then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 4.

4.IDENTIFY THE MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Are the malfunctions corrected?

YES >> INSPECTION END
NO >> GO TO 3.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000003812842

Initialization of system should be conducted after the following conditions.

- When the sunroof motor or sunshade motor is changed.
- When the sunroof or sunshade does not operate normally. (Incomplete initialization conditions)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000003812843

INITIALIZATION PROCEDURE

If the sunroof or sunshade does not close or open automatically, use the following procedure to return sunroof or sunshade operation to normal.

1. Close the sunroof and sunshade, then release the sunroof switch once.
2. Press and hold the sunroof switch CLOSE (1st or 2nd) again (for approx. 10 seconds), then sunroof moves forward and stops mechanically.
3. Release the sunroof switch, and press and hold the sunroof switch CLOSE (1st or 2nd) again. Then sunroof and sunshade automatically move to the fully closed⇒fully open⇒fully closed.
4. Release sunroof switch, after the sunroof is fully closed position.
5. Check sunroof and sunshade operation.

CHECK ANTI-PINCH FUNCTION

1. Fully open the sunroof.
2. Place a piece of wood near the fully closed position.
3. Close the sunroof completely with auto-slide closed.
4. Check that sunroof lowers for approximately 150 mm (5.91in) or for 2 seconds without pinching a piece of wood and stops.
5. Fully open the sunshade.
6. Place a piece of wood near fully closed position.
7. Close the sunroof completely with auto-slide closed.
8. Check that sunroof lowers for approximately 150 mm (5.91in) or for 2 seconds without pinching a piece of wood and stop.

CAUTION:

- **Never check with hands or another part of the body because they may be pinched. never get pinched.**
- **Depending on environment and driving conditions, if a similar impact or load is applied to the sunroof it may lower.**
- **Check that auto-slide operates before inspection when system initialization is performed.**
- **Perform initial setting when auto-slide operation or anti-pinch function does not operate normally.**

SUNROOF SYSTEM

< FUNCTION DIAGNOSIS >

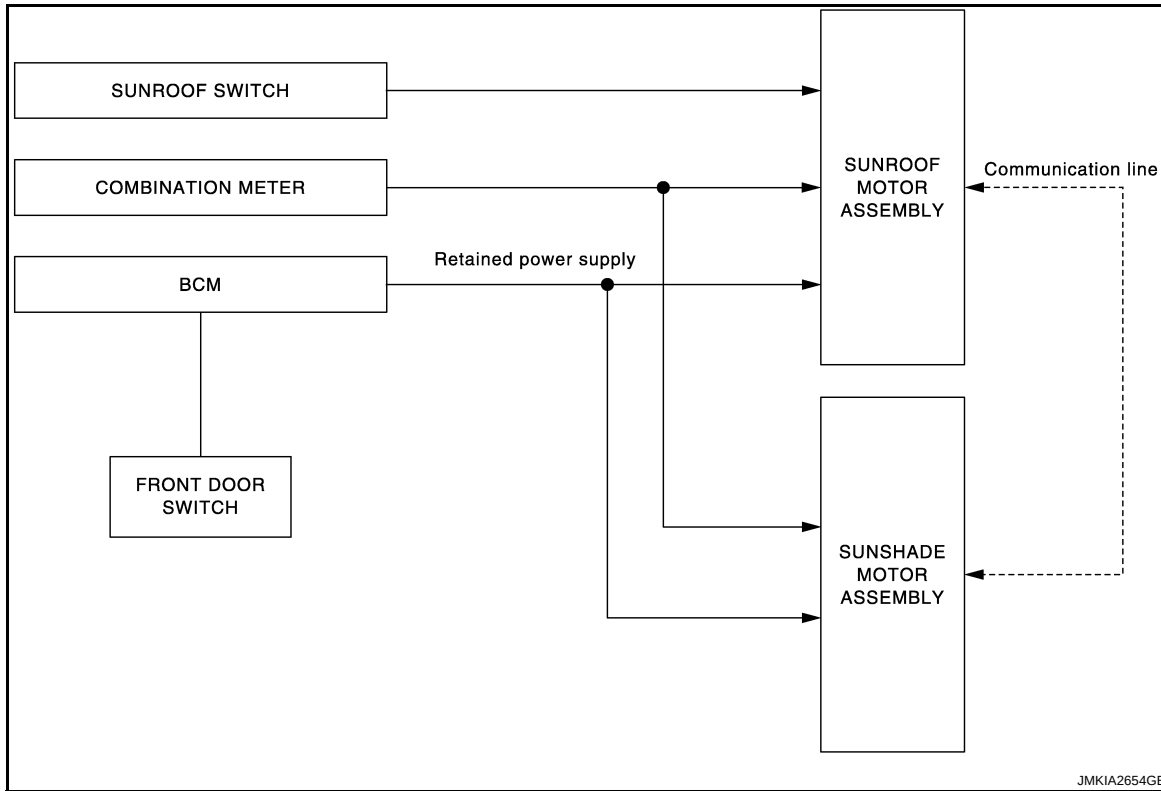
FUNCTION DIAGNOSIS

SUNROOF SYSTEM

System Diagram

INFOID:000000003812844

SUNROOF



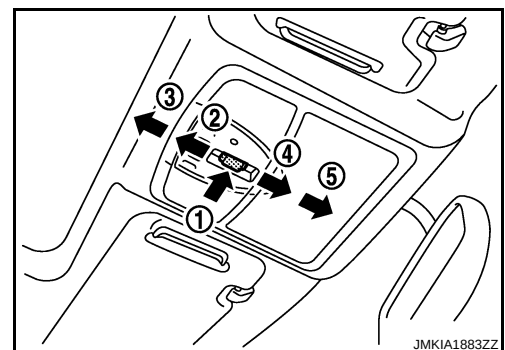
System Description

INFOID:000000003812845

DESCRIPTION

- Sunroof motor assembly and sunshade motor assembly operate with the power supplied from BCM while ignition switch is ON or retained power is operating.
- Sunroof motor assembly receives an operation signal from sunroof switch, and sends the signal to sunshade motor by communication line.
- Sunroof motor assembly and sunshade motor assembly receive a vehicle speed signal from combination meter, and control the sunroof motor and sunshade motor torque during high speed operation.
- The sunroof switch can be operated in the directions of push, open (1st, 2nd) and close (1st, 2nd). It can operate the sunroof and sunshade by one switch.

- | | |
|----------------|--|
| (1) PUSH | = Tilt up and down. |
| (2) OPEN: 1st | = The sunshade opens during the 1st slide. The sunroof opens during the 2nd slide. |
| (3) OPEN: 2nd | = The sunshade opens, and then the sunroof opens. |
| (4) CLOSE: 1st | = The sunroof closes during the 1st slide. The sunshade closes during the 2nd slide. |
| (5) CLOSE: 2nd | = The sunroof closes, and then the sunshade closes. |

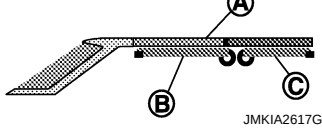
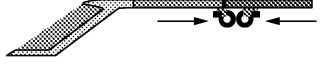
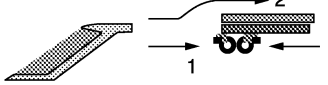
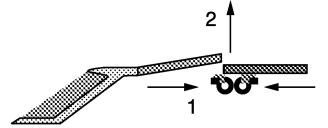
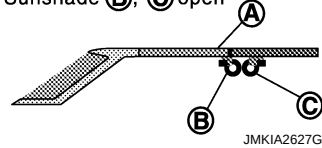
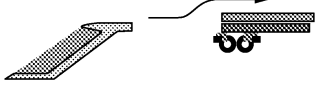
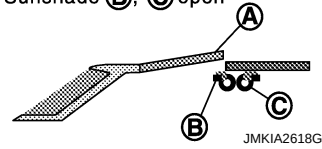
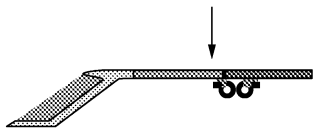
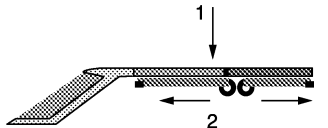


OPERATION DESCRIPTION

The sunroof and sunshade operate as per the following by operating the sunroof switch operation.

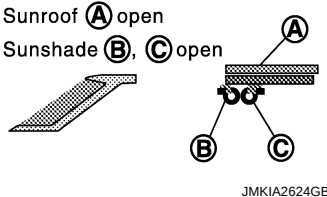
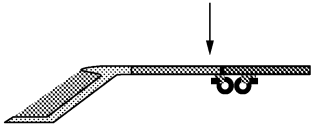
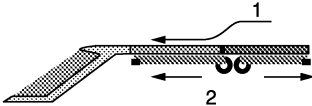
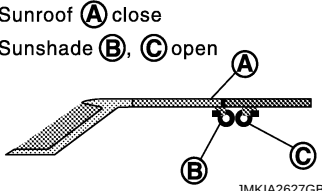
SUNROOF SYSTEM

< FUNCTION DIAGNOSIS >

Before Operation	Switch condition	Roof and sunshade operation	After Operation
Sunroof (A) close Sunshade (B), (C) close  JMKIA2617GB	OPEN: 1st	Opens the sunshade	 JMKIA2619ZZ
	OPEN: 2nd	The sunshade opens, and then the sunroof opens.	 JMKIA2620ZZ
	PUSH	The sunshade opens, and then the sunroof tilts up.	 JMKIA2621ZZ
Sunroof (A) close Sunshade (B), (C) open  JMKIA2627GB	OPEN: 1st	Opens the sunroof	 JMKIA2628ZZ
Sunroof (A) tilt up Sunshade (B), (C) open  JMKIA2618GB	PUSH	Tilts down	 JMKIA2622ZZ
	CLOSE: 1st		
	CLOSE: 2nd	The sunroof tilts down, and then sunshade closes.	 JMKIA2623ZZ

SUNROOF SYSTEM

< FUNCTION DIAGNOSIS >

Before Operation	Switch condition	Roof and sunshade operation	After Operation
	PUSH	Tilts up	
	CLOSE: 1st	Closes the sunroof	
	CLOSE: 2nd	The sunroof closes, and then the sunshade closes.	
	CLOSE: 1st	Closes the sunshade	

AUTO OPERATION

The sunroof or sunshade operates automatically to the fully-open or fully-closes position by operating the sunroof switch to the OPEN (2nd) or CLOSE (2nd) position.

RETAINED POWER OPERATION

Retained power operation is an additional power supply function that enables sunroof system to operate for 45 seconds after ignition switch is turned OFF.

RETAINED POWER FUNCTION CANCEL CONDITIONS

- Front door CLOSE (door switch OFF)→OPEN (door switch ON)
- Ignition switch is ON again.
- Timer passed. (45 seconds)

ANTI-PINCH FUNCTION

CAUTION:

There are some small distances immediately before the closed position which cannot be detected.

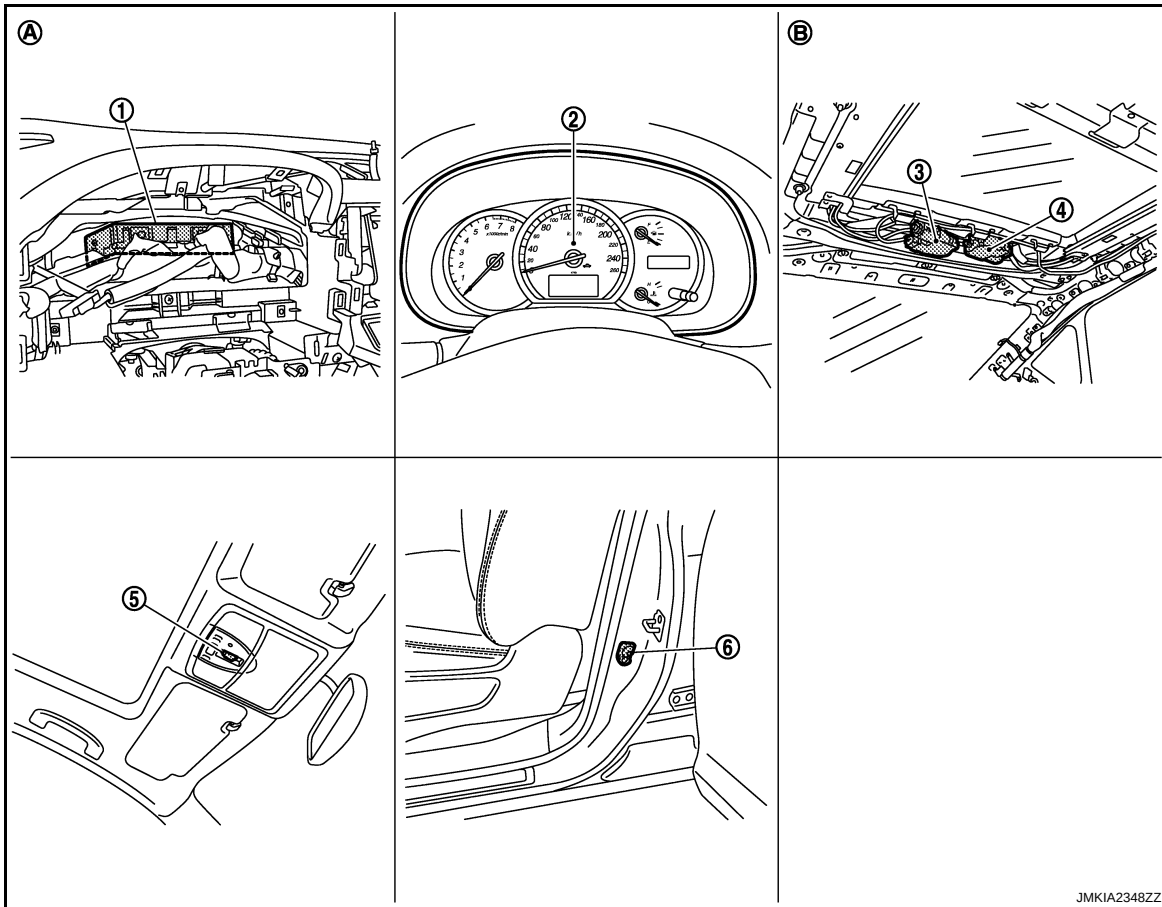
- The CPU of sunroof motor assembly monitors the sunroof condition using the signals from sunroof motor. When sunroof motor assembly detects an interruption during auto operation (close or tilt down operation), sunroof motor will tilt up or open [150 mm (5.91 in) or more] sunroof.
- The CPU of sunshade motor assembly monitors the sunshade condition using the signals from sunshade motor. When sunshade motor assembly detects an interruption during auto close operation, sunshade motor will open [150 mm (5.91 in) or more] sunshade.

SUNROOF SYSTEM

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000003812846



- | | | |
|---------------------------------|--------------------------|--|
| 1. BCM M118, M119, M123 | 2. Combination meter M34 | 3. Sunroof motor assembly R101 |
| 4. Sunshade motor assembly R102 | 5. Sunroof switch R6 | 6. Front door switch (driver side) B34 |
| A. Behind the combination meter | B. Behind headlining | |

Component Description

INFOID:000000003812847

Component	Function
BCM	- Supplies power to sunroof motor assembly and sunshade motor assembly. - Controls retained power function.
Combination meter	Transmits vehicle speed signal to sunroof motor assembly and sunshade motor assembly.
Sunroof motor assembly	The sunroof motor and CPU integrated type enable tilt up/down and slide open/close sunroof operation by sunroof switch operation. And sends sunroof switch operation signal to sunshade motor assembly via communication line.
Sunshade motor assembly	The sunshade motor and CPU integrated type enable open/close sunshade operation by sunroof switch operation.
Sunroof switch	Transmits switch operation signal to sunroof motor assembly.
Front door switch (driver side/passenger side)	Detects door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000003812848

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	- Read and save the vehicle specification. - Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT*1	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER		×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*2			
- Intelligent Key system - Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door opener system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

NOTE:

- *1: At model with Intelligent Key system this item is displayed, but is not used.
- *2: This item is displayed, but is not used.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

FREEZE FRAME DATA (FFD) AND IGN COUNTER

Freeze Frame Data

The BCM records the following condition at the moment a particular DTC is detected.

- Vehicle Speed
- Odo/Trip Meter
- Vehicle Condition (BCM detected condition)

CONSULT screen terms	Description
SLEEP>LOCK	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
SLEEP>OFF	While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
LOCK>ACC	While turning power supply position from "LOCK" to "ACC"
ACC>ON	While turning power supply position from "ACC" to "IGN"
RUN>ACC	While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
CRANK>RUN	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
RUN>URGENT	While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
ACC>OFF	While turning power supply position from "ACC" to "OFF"
OFF>LOCK	While turning power supply position from "OFF" to "LOCK"
OFF>ACC	While turning power supply position from "OFF" to "ACC"
ON>CRANK	While turning power supply position from "IGN" to "CRANKING"
OFF>SLEEP	While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
LOCK>SLEEP	While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
LOCK	Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)
OFF	Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
ACC	Power supply position is "ACC" (Ignition switch ACC)
ON	Power supply position is "IGN" (Ignition switch ON with engine stopped)
ENGINE RUN	Power supply position is "RUN" (Ignition switch ON with engine running)
CRANKING	Power supply position is "CRANKING" (At engine cranking)

IGN Counter

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:0000000003812849

Data monitor

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:000000003812850

1.CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Signal name	Fuse and fusible link No.
Battery power supply	I (40A)
	10 (10A)

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check voltage between BCM harness connector and ground.

(+)		(-)	Voltage (Approx.)
BCM			
Connector	Terminal	Ground	Battery voltage
M118	1		
M119	11		

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair or replace harness.

SUNROOF MOTOR ASSEMBLY

SUNROOF MOTOR ASSEMBLY : Diagnosis Procedure

INFOID:000000003812851

1.CHECK POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect sunroof motor assembly connector.
3. Turn ignition switch ON.
4. Check voltage between sunroof motor assembly harness connector and ground.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

(+)		(-)	Voltage (V) (Approx.)
Sunroof motor assembly			
Connector	Terminal		
R101	3	Ground	Battery voltage
	6		

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between sunroof motor assembly harness connector and ground.

Sunroof motor assembly		Ground	Continuity
Connector	Terminal		
R101	1		Existed
	2		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK SUNROOF MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and sunroof motor assembly harness connector.

BCM		Sunroof motor assembly		Continuity
Connector	Terminal	Connector	Terminal	
M118	2	R101	6	Existed
	3		3	

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2		Not existed
	3		

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

SUNSHADE MOTOR ASSEMBLY

SUNSHADE MOTOR ASSEMBLY : Diagnosis Procedure

INFOID:000000003812852

1.CHECK POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect sunshade motor assembly connector.
3. Turn ignition switch ON.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

4. Check voltage between sunshade motor assembly harness connector and ground.

(+) Sunshade motor assembly		(-)	Voltage (V) (Approx.)
Connector	Terminal		
R102	6		
		Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between sunshade motor assembly harness connector and ground.

Sunshade motor assembly		Ground	Continuity
Connector	Terminal		
R102	1		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK SUNSHADE MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and sunshade motor assembly harness connector.

BCM		Sunshade motor assembly		Continuity
Connector	Terminal	Connector	Terminal	
M118	2	R102	6	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

COMMUNICATION SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:000000003812853

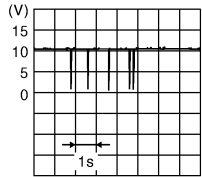
Detects door open/close condition.

Diagnosis Procedure

INFOID:000000003812854

1.CHECK COMMUNICATION SIGNAL

1. Turn ignition switch OFF.
2. Disconnect sunshade motor assembly connector.
3. Turn ignition switch ON.
4. Check signal between sunshade motor assembly harness connector and ground with oscilloscope.

(+)Sunshade motor assembly		(-)	Voltage (V) (Approx.)
Connector	Terminal		
R102	7	Ground	

JMKIA1869ZZ

Is the inspection result normal?

YES >> INSPECTION END.

NO >> GO TO 2.

2.CHECK COMMUNICATION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sunroof motor assembly connector.
3. Check continuity between sunshade motor assembly harness connector and sunroof motor assembly harness connector.

Sunshade motor assembly		Sunroof motor assembly		Continuity
Connector	Terminal	Connector	Terminal	
R102	7	R101	7	Existed

4. Check continuity between sunshade motor assembly harness connector and ground.

Sunshade motor assembly		Ground	Continuity
Connector	Terminal		
R102	7		Not existed

Is the inspection result normal?

YES >> Replace sunshade motor assembly. Refer to [RF-85, "Removal and Installation"](#).

NO >> Repair or replace harness.

SUNROOF SWITCH

< COMPONENT DIAGNOSIS >

SUNROOF SWITCH

Description

INFOID:0000000003812855

Transmits switch operation signal to sunroof motor assembly.

Component Function Check

INFOID:0000000003866180

1.CHECK SUNROOF FUNTION

Check tilt up/down & slide open/close operations with sunroof switch.

Is the inspection result normal?

YES >> Sunroof function is OK.

NO >> Refer to [RF-15, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000003812856

1. CHECK SUNROOF SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect sunroof switch harness connector.
3. Turn ignition switch ON.
4. Check voltage between sunroof switch harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Sunroof switch			
Connector	Terminal		
R6	2	Ground	Battery voltage
	3		
	4		
	5		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK SUNROOF SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sunroof motor assembly connector.
3. Check continuity between sunroof switch harness connector and sunroof motor assembly harness connector.

Sunroof switch		Sunroof motor assembly		Continuity
Connector	Terminal	Connector	Terminal	
R6	2	R101	9	Existed
	3		5	
	4		10	
	5		4	

4. Check continuity between sunroof motor assembly harness connector and ground.

SUNROOF SWITCH

< COMPONENT DIAGNOSIS >

Sunroof switch		Ground	Continuity
Connector	Terminal		
R6	2		Not existed
	3		
	4		
	5		

Is the inspection result normal?

YES >> Replace sunroof motor assembly. Refer to [RF-83, "Removal and Installation"](#)

NO >> Repair or replace harness.

3.CHECK SUNROOF SWITCH GROUND CIRCUIT

Check continuity between sunroof switch harness connector and ground.

Sunroof switch		Ground	Continuity
Connector	Terminal		
R6	1		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness.

4.CHECK SUNROOF SWITCH

Check sunroof switch.

Refer to [RF-16, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace sunroof switch. Refer to [RF-101, "Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:0000000003812857

SUNROOF SWITCH

1.CHECK SUNROOF SWITCH

1. Turn ignition switch OFF.
2. Disconnect sunroof switch connector.
3. Check continuity sunroof switch terminals.

Terminals	Condition	Continuity
-----------	-----------	------------

SUNROOF SWITCH

< COMPONENT DIAGNOSIS >

2	1	Sunroof switch is operated OPEN (2nd) or CLOSE (2nd)	Existed
		Other than above	Not existed
3		Sunroof switch is operated OPEN (1st) or OPEN (2nd)	Existed
		Other than above	Not existed
4		Sunroof switch is operated CLOSE (1st) or CLOSE (2nd)	Existed
		Other than above	Not existed
5		Sunroof switch is operated PUSH	Existed
		Other than above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace sunroof switch (built in map lamp assembly). Refer to [RF-101. "Removal and Installation"](#).

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DOOR SWITCH

< COMPONENT DIAGNOSIS >

DOOR SWITCH

Description

INFOID:000000003812858

Detects door open/close condition.

Component Function Check

INFOID:000000003812859

1.CHECK FUNCTION

Check door switches ("DOOR SW-DR", "DOOR SW-AS") in Data Monitor mode with CONSULT-III.

Monitor item	Condition		Status
DOOR SW-DR	Front door (driver side)	OPEN	ON
		CLOSE	OFF
DOOR SW-AS	Front door (passenger side)	OPEN	ON
		CLOSE	OFF

Is the inspection result normal?

YES >> Door switch is OK.

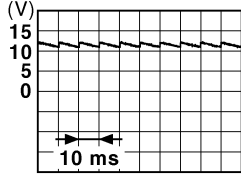
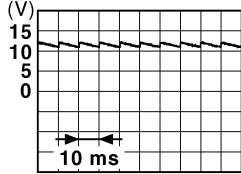
NO >> Refer to [RF-18, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000003812860

1.CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect malfunctioning door switch connector.
3. Check signal between malfunctioning door switch harness connector and ground with oscilloscope.

(+)			(-)	Voltage (V) (Approx.)
Door switch				
Connector	Terminal			
Driver side	B34	2	Ground	 JPMIA0011GB
Passenger side	B220	2		 JPMIA0011GB

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector and door switch harness connector.

DOOR SWITCH

< COMPONENT DIAGNOSIS >

BCM		Door switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	150	B34 (Driver side)	2	Existed
	124	B220 (Passenger side)		

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	150		Not existed
	124		

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

3.CHECK DOOR SWITCH

Refer to [RF-19, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace malfunctioning door switch. Refer to [DLK-234, "Removal and Installation"](#).

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000003812861

1.CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check door switch terminals.

Terminal		Ground part of door switch	Condition	Continuity
Door switch				
Each door	2		Door switch pressed	Not existed
			Door switch released	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace malfunction door switch. Refer to [DLK-234, "Removal and Installation"](#).

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003888227

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
RR FOG SW	Rear fog lamp switch OFF	Off
	Rear fog lamp switch ON	On
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On

BCM (BODY CONTROL MODULE)

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Monitor Item	Condition	Value/Status	
DOOR SW-RL	Rear LH door closed	Off	A
	Rear LH door opened	On	
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off	B
CDL LOCK SW	Other than power door lock switch LOCK	Off	C
	Power door lock switch LOCK	On	
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off	D
	Power door lock switch UNLOCK	On	
KEY CYL LK-SW	NOTE: The item is indicated, but not monitored.	Off	E
KEY CYL UN-SW	NOTE: The item is indicated, but not monitored.	Off	F
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off	G
HAZARD SW	Hazard switch is OFF	Off	H
	Hazard switch is ON	On	
REAR DEF SW NOTE: At model with BOSE audio system this item is indicated, but is not monitored.	Rear window defogger switch is OFF	Off	I
	Rear window defogger switch is ON	On	
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off	J
TR/BD OPEN SW	Trunk lid opener switch OFF	Off	RF
	While the trunk lid opener switch is turned ON	On	
TRNK/HAT MNTR	Trunk lid closed	Off	L
	Trunk lid opened	On	
RKE-LOCK	LOCK button of the key is not pressed	Off	M
	LOCK button of the key is pressed	On	
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off	N
	UNLOCK button of the key is pressed	On	
RKE-TR/BD	TRUNK OPEN button of the key is not pressed	Off	O
	TRUNK OPEN button of the key is pressed	On	
RKE-PANIC	NOTE: The item is indicated, but not monitored.	Off	P
RKE-P/W OPEN	NOTE: The item is indicated, but not monitored.	Off	
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off	
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On	
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V	
	Dark outside of the vehicle	Close to 0 V	
REQ SW -DR	Driver door request switch is not pressed	Off	
	Driver door request switch is pressed	On	
REQ SW -AS	Passenger door request switch is not pressed	Off	
	Passenger door request switch is pressed	On	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Trunk lid opener request switch is not pressed	Off
	Trunk lid opener request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	On
	The brake pedal is depressed	Off
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
UNLK SEN -DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is locked	Off
	Steering is unlocked	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
S/L UNLK-IPDM	Steering is unlocked	Off	A
	Steering is locked	On	
S/L RELAY-REQ	Ignition switch in OFF or ACC position	Off	B
	Ignition switch in ON position	On	
VEH SPEED 1	While driving	Equivalent to speedometer reading	C
VEH SPEED 2	While driving	Equivalent to speedometer reading	
DOOR STAT-DR	Driver door is locked	LOCK	D
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Driver door is unlocked	UNLOCK	
DOOR STAT-AS	Passenger door is locked	LOCK	E
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Passenger door is unlocked	UNLOCK	
ID OK FLAG	Ignition switch in ACC or ON position	Reset	F
	Ignition switch in OFF position	Set	
PRMT ENG STRT	The engine start is prohibited	Reset	G
	The engine start is permitted	Set	
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset	H
KEY SW -SLOT	The key is not inserted into key slot	Off	
	The key is inserted into key slot	On	I
RKE OPE COUN1	During the operation of the key	Operation frequency of the key	
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—	J
CONFIRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with any key ID registered to BCM.	Done	L
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done	M
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done	N
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done	O
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done	P
TP 4	The ID of fourth key is not registered to BCM	Yet	
	The ID of fourth key is registered to BCM	Done	
TP 3	The ID of third key is not registered to BCM	Yet	
	The ID of third key is registered to BCM	Done	

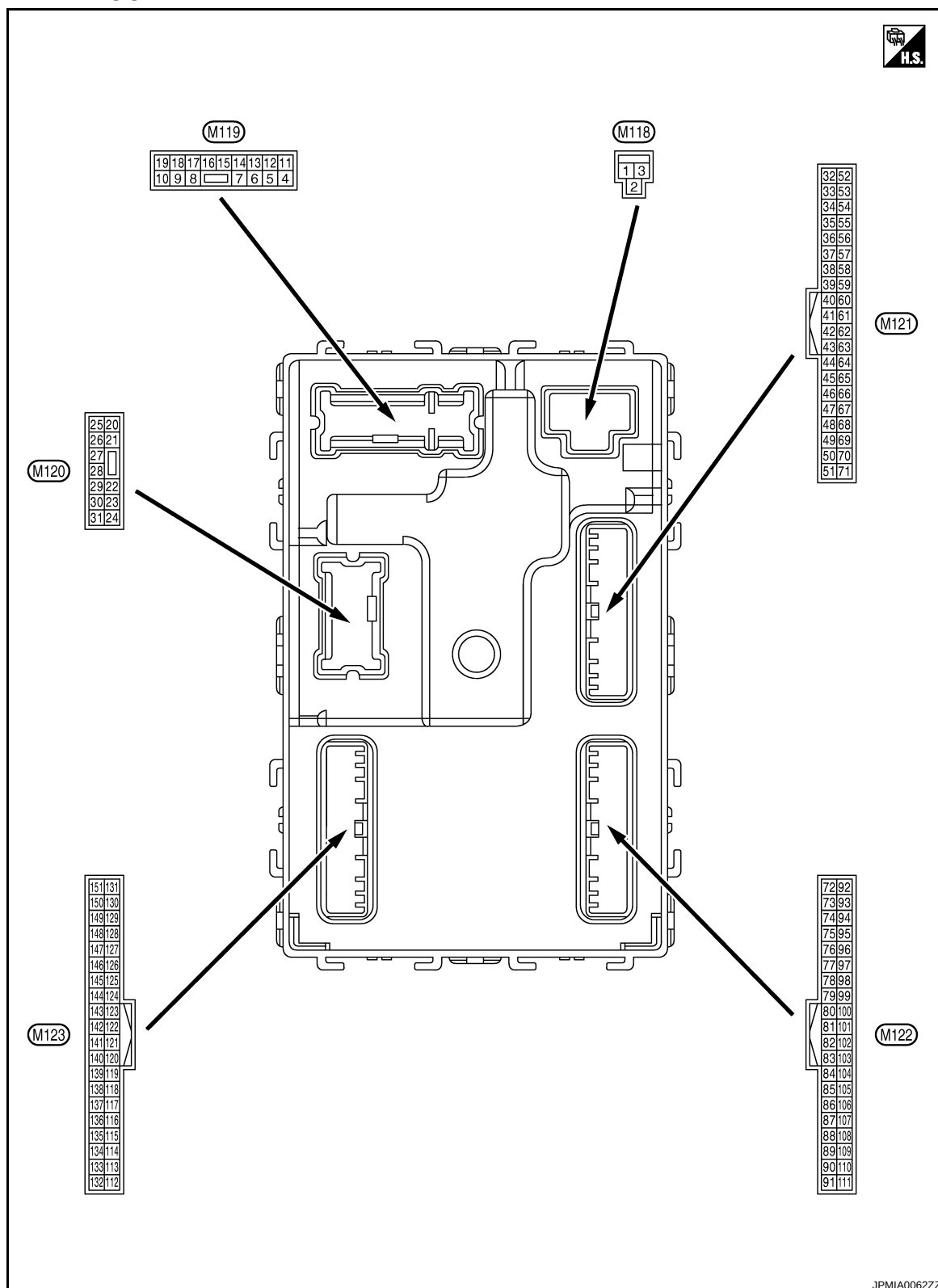
RF

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	Done

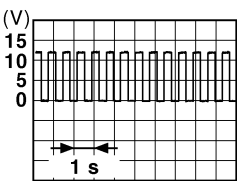
TERMINAL LAYOUT



BCM (BODY CONTROL MODULE)

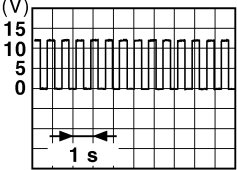
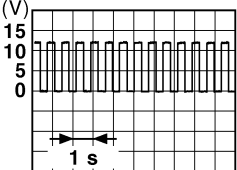
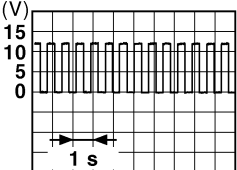
< ECU DIAGNOSIS >

PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		Battery voltage
5 (G/Y)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	Battery voltage
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (G/Y)	Ground	Rear RH door and rear LH door UNLOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC or ON	0 V
17 (G/B)	Ground	Turn signal RH (Front and door mirror)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 6.5 V

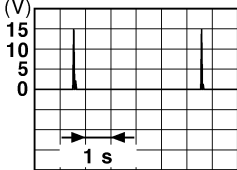
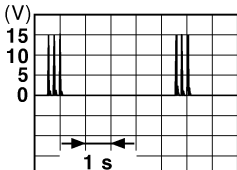
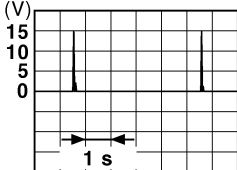
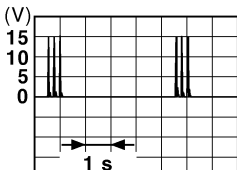
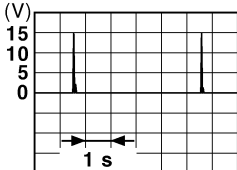
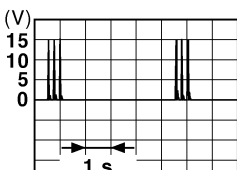
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
18 (G/Y)	Ground	Turn signal LH (Front and door mirror)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 6.5 V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
20 (G/B)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 6.5 V
23 (R)	Ground	Trunk lid opening	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	Battery voltage
					Other than OPEN (Trunk lid opener actuator is not activated)	0 V
24 (G)	Ground	Rear fog lamp	Output	Rear fog lamp	OFF	0 V
					ON	Battery voltage
25 (G/Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 6.5 V
30 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	OFF	0 V
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

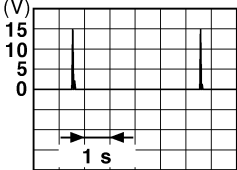
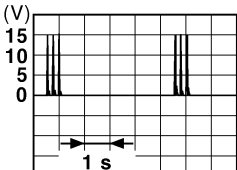
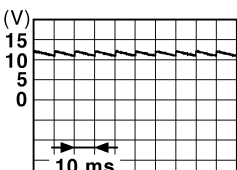
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
34 (B)	Ground	Trunk room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
35 (W)	Ground	Trunk room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (L/O)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid opener request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB

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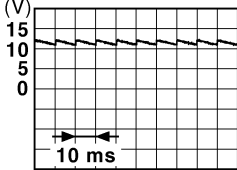
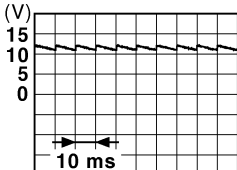
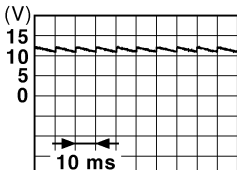
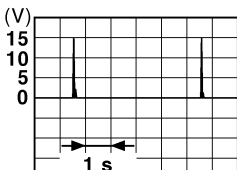
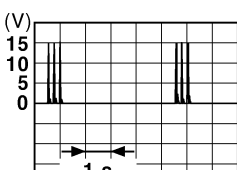
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
39 (BR/W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
				When Intelligent Key is not in the antenna detection area	When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (BR/W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
50 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (When trunk lid closes)	 JPMIA0011GB 11.8 V
					ON (When trunk lid opens)	0 V
52 (R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0.3 V
				Ignition switch OFF		0 V
61 (G/R)	Ground	Trunk lid request switch	Input	Trunk lid request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0 V
					Not sounding	Battery voltage

BCM (BODY CONTROL MODULE)

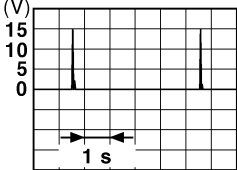
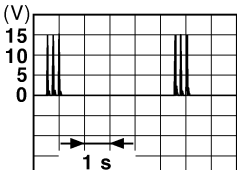
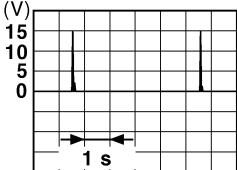
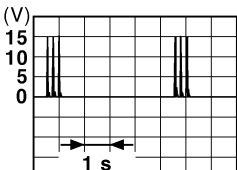
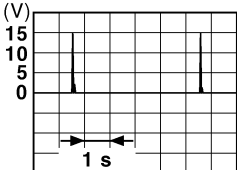
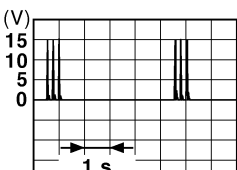
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
67 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0 V
					Not pressed	 JPMIA0011GB 11.8 V
68 (R/W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	 JPMIA0011GB 11.8 V
					ON (When rear RH door opens)	0 V
69 (R/B)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	 JPMIA0011GB 11.8 V
					ON (When rear LH door opens)	0 V
72 (B/R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

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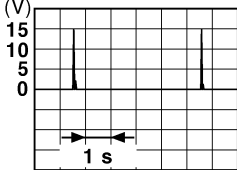
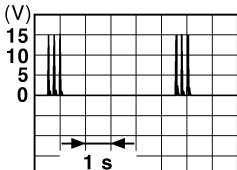
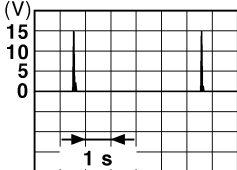
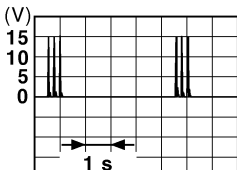
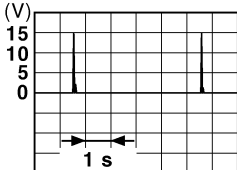
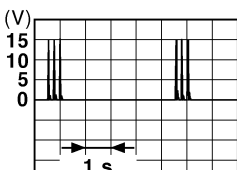
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
73 (W/R)	Ground	Room antenna 2 (+) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
74 (B/Y)	Ground	Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
75 (LG)	Ground	Passenger door an- tenna (+)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB

BCM (BODY CONTROL MODULE)

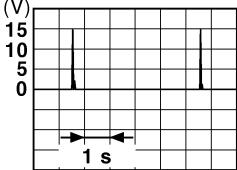
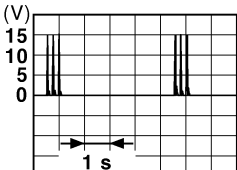
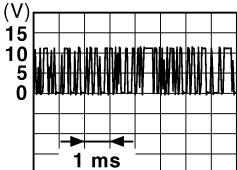
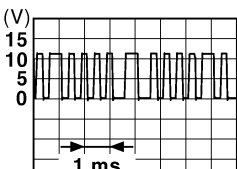
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
76 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
77 (P)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
78 (R)	Ground	Room antenna 1 (-) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

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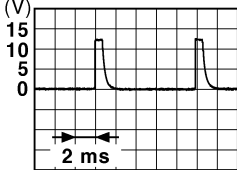
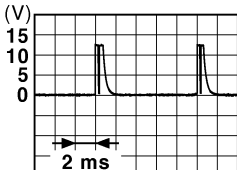
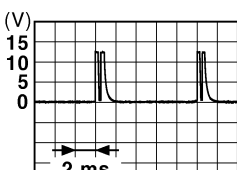
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
79 (G)	Ground	Room antenna 1 (+) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
80 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R/B)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
83 (L/O)	Ground	Remote keyless en- try receiver commu- nication	Input/ Output		During waiting	 JMKIA0064GB
					When operating either button on the key	 JMKIA0065GB

BCM (BODY CONTROL MODULE)

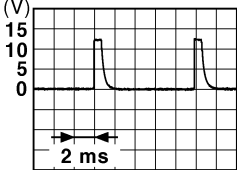
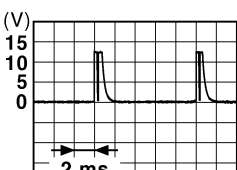
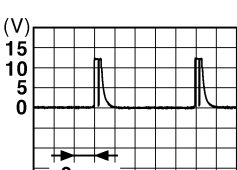
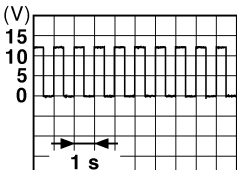
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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
87 (R/Y)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 1.3 V
					Rear fog lamp switch ON (Wiper intermittent dial 4)	 1.2 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 1.3 V

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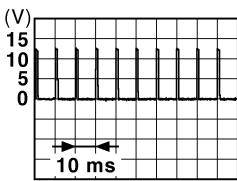
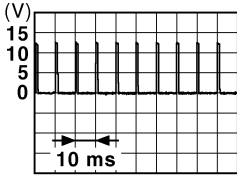
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
88 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Any of the conditions below with all switch OFF - Wiper intermittent dial 1 - Wiper intermittent dial 2 - Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
89 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	Battery voltage
90 (P)	Ground	CAN-L	Input/ Output	—	—	—
91 (L)	Ground	CAN-H	Input/ Output	—	—	—
92 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	Battery voltage
					Blinking	 JPMIA0015GB 6.5 V
					ON	0 V

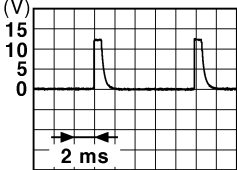
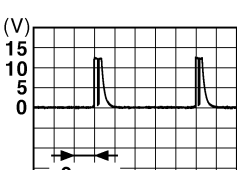
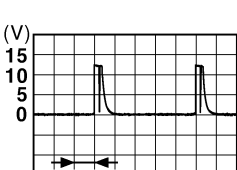
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
93 (Y)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON or ACC	0 V
95 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (Y/R)	Ground	Control device (detention switch) power supply	Output	—		Battery voltage
97 (L/O)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	Battery voltage
98 (G/R)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	Battery voltage
					UNLOCK status	0 V
99 (G/B)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (P/L)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMA0016GB 1.0 V
101 (B/W)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMA0016GB 1.0 V
102 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
103 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
106 (G/Y)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V

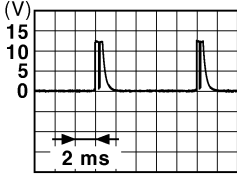
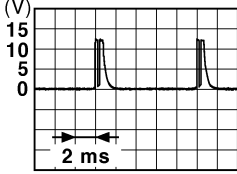
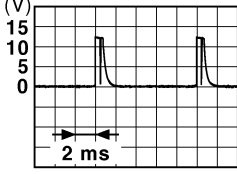
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
107 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	 JPMIA0041GB 1.4 V
					 JPMIA0037GB 1.3 V
					 JPMIA0036GB 1.3 V
					 JPMIA0038GB 1.3 V
					 JPMIA0039GB 1.3 V

BCM (BODY CONTROL MODULE)

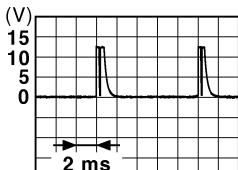
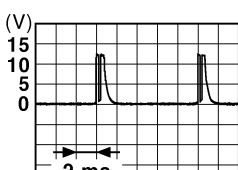
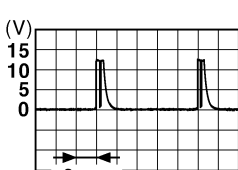
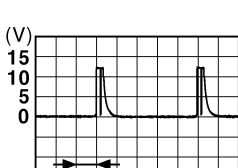
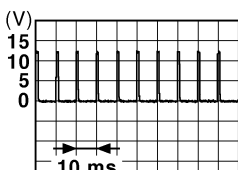
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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
108 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 1.3 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 1.3 V
					Any of the conditions be- low with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 1.3 V

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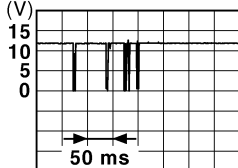
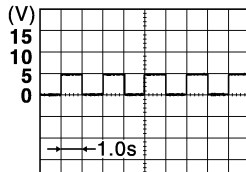
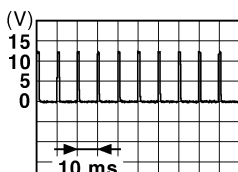
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
109 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V
110 (G/O)	Ground	Hazard switch	Input	Hazard switch	ON	0 V
					OFF	 JPMIA0012GB 1.1 V

BCM (BODY CONTROL MODULE)

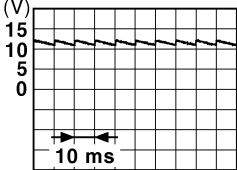
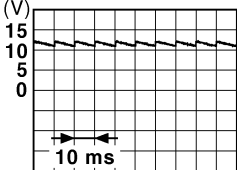
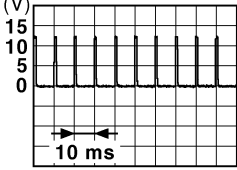
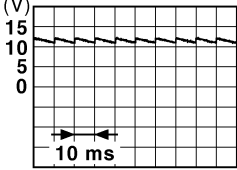
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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
111 (L/Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0 V
113 (P/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
115 (L)	Ground	Shock sensor	Input	Ignition switch	OFF	0 V
					ACC	5.0 V
					ON	 JPMIA1034GB
						2.5 V
116 (R/W)	Ground	Fuse check (Stop lamp switch)	Input	—		Battery voltage
118 (O/L)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is de- pressed)	Battery voltage
119 (G/W)	Ground	Front door lock as- sembly driver side (unlock sensor)	Input	Driver door	LOCK status (unlock sen- sor switch OFF)	 JPMIA0012GB
					UNLOCK status (unlock sensor switch ON)	0 V
						1.1 V
121 (Y)	Ground	Key slot switch	Input	When the key is inserted into key slot	Battery voltage	
				When the key is not inserted into key slot	0 V	
122 (V/R)	Ground	ACC feedback	Input	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
123 (G/W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

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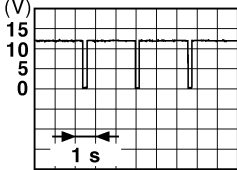
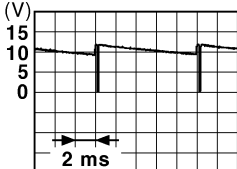
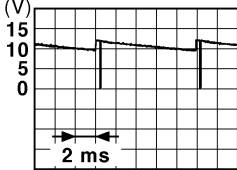
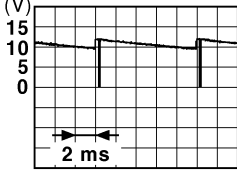
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
124 (R/B)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V
128 (GR)	Ground	Door lock and un- lock switch LOCK	Input	Door lock and un- lock switch [pow- er window main switch or front power window switch (passen- ger side)]	NEUTRAL position	 JPMIA0011GB 11.8 V
					LOCK position	0 V
130* (GR/W)	Ground	Rear window defog- ger switch	Input	Ignition switch ON	Rear window defogger switch OFF	 JPMIA0012GB 1.1 V
					Rear window defogger switch ON	0 V
131 (GR/R)	Ground	Door lock and un- lock switch UN- LOCK	Input	Door lock and un- lock switch [pow- er window main switch or front power window switch (passen- ger side)]	NEUTRAL position	 JPMIA0011GB 11.8 V
					UNLOCK position	0 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button igni- tion switch illum- ination	ON	9.5 V
					OFF	0 V
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (P)	Ground	Receiver and sen- sor ground	Input	Ignition switch ON		0 V
138 (V/W)	Ground	Receiver and sen- sor power supply output	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V
140 (R/G)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V

BCM (BODY CONTROL MODULE)

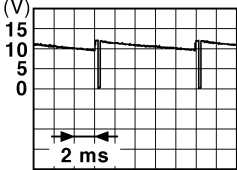
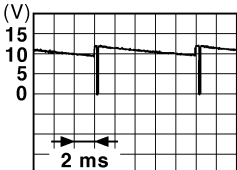
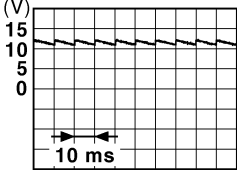
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
141 (L/O)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (LG/B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
					Any of the conditions be- low with all switch OFF	
					• Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	
144 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7 V
					Any of the conditions be- low with all switch OFF	
					• Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
145 (LG/R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front wiper switch INT	
					Front wiper switch LO	
					Lighting switch AUTO	
					Rear fog lamp switch ON	10.7 V
146 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front fog lamp switch ON	
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	10.7 V
150 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	
					ON (When driver door opens)	0 V
151 (G/R)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	0 V
					Not activated	Battery voltage

NOTE:

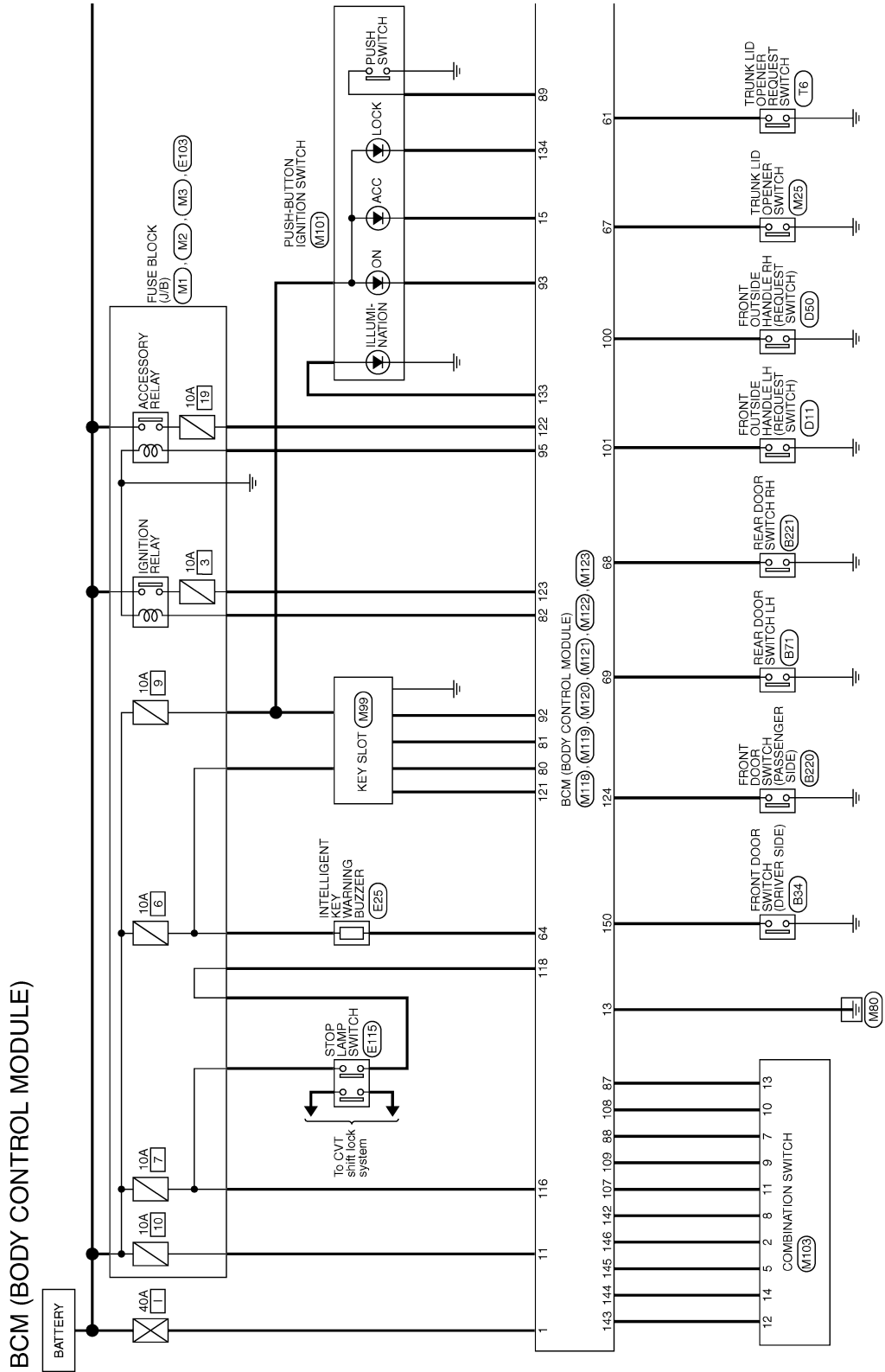
*: Without BOSE audio system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram - BCM -

INFOID:000000003888228



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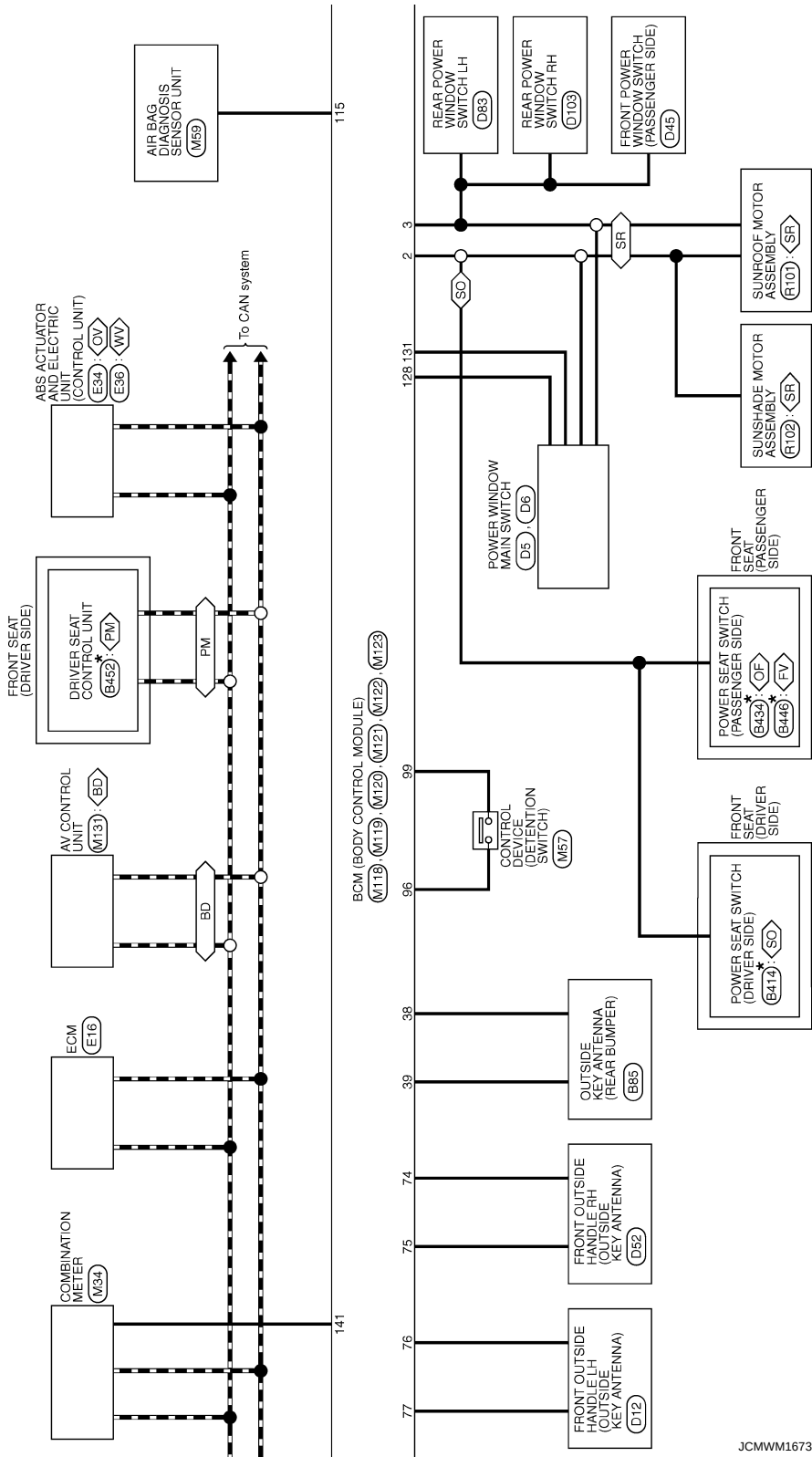


BCM (BODY CONTROL MODULE)

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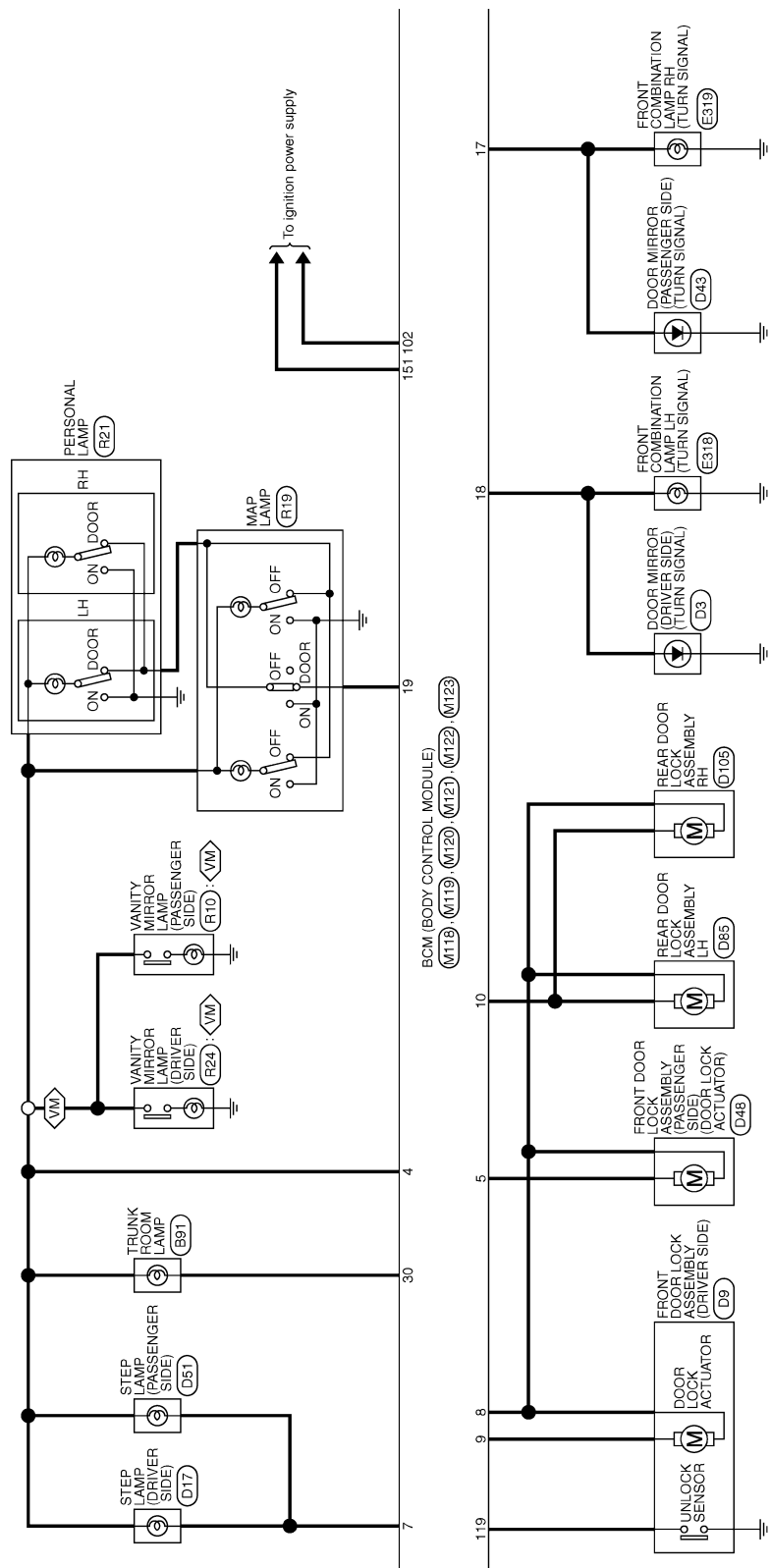
- WV : With VDC
- OV : Without VDC
- PM : With automatic drive positioner
- SO : With power seat without automatic drive positioner
- BD : With BOSE system or base audio and display system
- SR : With sunroof
- FV : With front ventilation seat
- OF : Without front ventilation seat

★: This connector is not shown in "Harness Layout".



JCMWWM1673GI

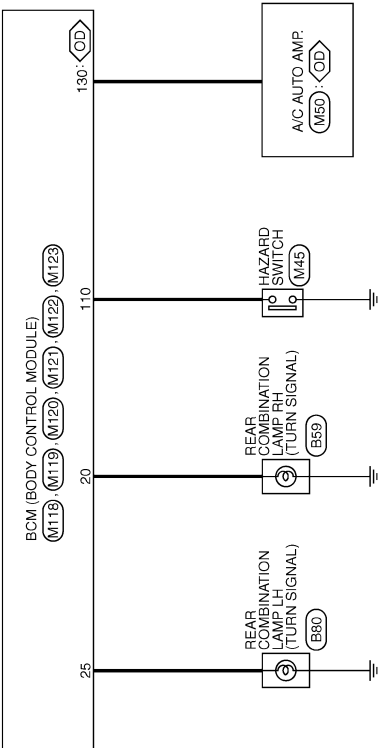
< ECU DIAGNOSIS >

**RF-46**

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

⬡ : Without BOSE system or base audio and display system



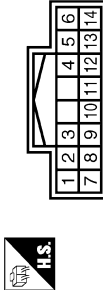
JCMWWM1675G1

BCM (BODY CONTROL MODULE)

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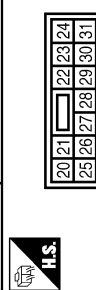
BCM (BODY CONTROL MODULE)

Connector No.	M103
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	G/Y	OUTPUT 4
5	LG/R	OUTPUT 3
7	R/G	INPUT 3
8	LG/B	OUTPUT 5
9	R/B	INPUT 2
10	P/B	INPUT 4
11	R/W	INPUT 1
12	L/W	OUTPUT 1
13	R/Y	INPUT 5
14	G/B	OUTPUT 2

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



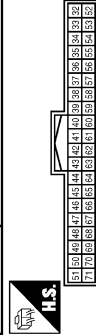
Terminal No.	Color of Wire	Signal Name [Specification]
20	G/B	TURN SIGNAL RH (REAR)
23	R	TRUNK OPEN OUTPUT
24	G	REAR FOG LAMP OUTPUT
25	G/Y	TURN SIGNAL LH (REAR)
30	V/W	TRUNK LAMP OUTPUT

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



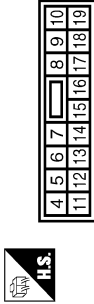
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)
2	R/Y	POWER WINDOW POWER SUPPLY (BAT)
3	L/W	POWER WINDOW POWER SUPPLY (IGN)

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	B	TRUNK ANT 1 B
35	W	TRUNK ANT 1 A
38	L/O	RR BUMPER ANT B
39	BR/W	RR BUMPER ANT A
47	BR/W	IGN RELAY IPDM E/R CONT
50	W	TRUNK SW
52	R	IGN RELAY IPDM E/R CONT
61	G/R	TRUNK REQUEST SW
64	GR	REQUEST SW BUZZER
67	L/R	INTERIOR TRUNK SW
68	R/W	REAR RH DOOR SW

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
4	P/W	INTERIOR ROOM LAMP POWER SUPPLY
5	G/Y	PASSENGER DOOR UNLOCK OUTPUT
7	R/W	STEP LAMP OUTPUT
8	V	ALL DOOR LOCK OUTPUT
9	G	DRIVER DOOR UNLOCK OUTPUT
10	G/Y	REAR DOOR UNLOCK OUTPUT
11	Y/R	BAT (FUSE)
13	B	GND
15	Y	ACC IND
17	G/B	TURN SIGNAL RH (FRONT D/MIRROR)
18	G/Y	TURN SIGNAL LH (FRONT D/MIRROR)

Connector No.	
Connector Name	REAR LH DOOR SW

19	Y	ROOM LAMP TIMER CONTROL
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JCMWM1676G

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72
111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent - Starter control relay signal - Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent - Selector lever P position switch signal - P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled - Ignition switch is in the ON position - Selector lever P position switch signal: Except P position (battery voltage) - Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled - Ignition switch is in the ON position - Selector lever P position switch signal: Except P position (battery voltage) - Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled - Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON - Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled - Status 1 - Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF - Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent - Steering lock relay signal (Request signal) - Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent - Steering lock relay signal (Request signal) - Steering lock relay signal (Condition signal)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent - Starter motor relay control signal - Starter relay status signal (CAN)
B2609: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When the following steering lock conditions agree - BCM steering lock control status - Steering lock condition No. 1 signal status - Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled - IGN relay (IPDM E/R) control signal: OFF (Battery voltage) - Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) - Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled - Power position changes to ACC - Receives engine status signal (CAN)
B2612: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When any of the following conditions is fulfilled - Steering lock unit status signal (CAN) is received normally - The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RES	Inhibit engine cranking	When any of the following conditions is fulfilled - Power position changes to ACC - Receives engine status signal (CAN)
B26E9: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions is fulfilled - Steering condition No. 1 signal: LOCK (0 V) - Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

DTC Inspection Priority Chart

INFOID:000000003888230

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- B2190: NATS ANTENNA AMP - B2191: DIFFERENCE OF KEY - B2192: ID DISCORD BCM-ECM - B2193: CHAIN OF BCM-ECM

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Priority	DTC
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26E1: ENG STATE NO RES • B26E9: S/L STATUS • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

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NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data and IGN Counter, refer to [BCS-16, "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)"](#).

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warn- ing lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-33
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-34
U0415: VEHICLE SPEED SIG	—	—	—	BCS-35
B2013: ID DISCORD BCM-S/L	×	×	—	SEC-46
B2014: CHAIN OF S/L-BCM	×	×	—	SEC-47
B2190: NATS ANTENNA AMP	×	—	—	SEC-39
B2191: DIFFERENCE OF KEY	×	—	—	SEC-42

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warn- ing lamp ON	Reference page	
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-43	A
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-45	B
B2553: IGNITION RELAY	—	×	—	PCS-49	
B2555: STOP LAMP	—	×	—	SEC-50	
B2556: PUSH-BTN IGN SW	—	×	×	SEC-52	C
B2557: VEHICLE SPEED	×	×	×	SEC-54	
B2560: STARTER CONT RELAY	×	×	×	SEC-55	
B2562: LOW VOLTAGE	—	×	—	BCS-36	D
B2601: SHIFT POSITION	×	×	×	SEC-56	
B2602: SHIFT POSITION	×	×	×	SEC-59	E
B2603: SHIFT POSI STATUS	×	×	×	SEC-61	
B2604: PNP SW	×	×	×	SEC-64	
B2605: PNP SW	×	×	×	SEC-67	F
B2606: S/L RELAY	×	×	×	SEC-69	
B2607: S/L RELAY	×	×	×	SEC-70	G
B2608: STARTER RELAY	×	×	×	SEC-72	
B2609: S/L STATUS	×	×	×	SEC-74	
B260A: IGNITION RELAY	×	×	×	PCS-51	H
B260B: STEERING LOCK UNIT	—	×	×	SEC-78	
B260C: STEERING LOCK UNIT	—	×	×	SEC-79	I
B260D: STEERING LOCK UNIT	—	×	×	SEC-80	
B260F: ENG STATE SIG LOST	×	×	×	SEC-81	
B2612: S/L STATUS	×	×	×	SEC-85	J
B2614: ACC RELAY CIRC	—	×	×	PCS-53	
B2615: BLOWER RELAY CIRC	—	×	×	PCS-55	
B2616: IGN RELAY CIRC	—	×	×	PCS-57	RF
B2617: STARTER RELAY CIRC	×	×	×	SEC-89	
B2618: BCM	×	×	×	PCS-59	L
B2619: BCM	×	×	×	SEC-91	
B261A: PUSH-BTN IGN SW	—	×	×	SEC-92	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-95	M
B2621: INSIDE ANTENNA	—	×	—	DLK-50	
B2622: INSIDE ANTENNA	—	×	—	DLK-52	N
B2623: INSIDE ANTENNA	—	×	—	DLK-54	
B26E1: ENG STATE NO RES	×	×	×	SEC-82	O
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	SEC-83	
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-84	P

SUNROOF MOTOR ASSEMBLY

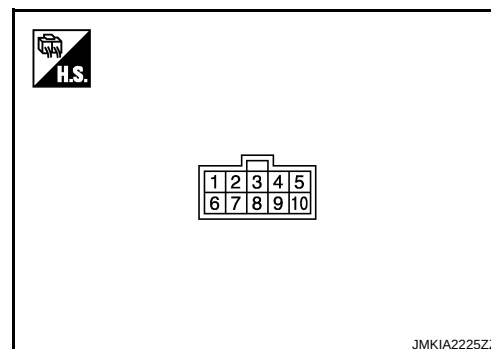
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SUNROOF MOTOR ASSEMBLY

Reference Value

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TERMINAL LAYOUT



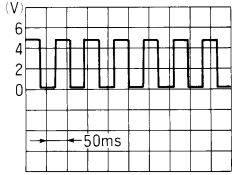
PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Voltage (V) (Approx.)
+	-	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	—	—	0
2 (B)	Ground	Ground	—	—	—	0
3 (L)	Ground	Retained power signal	Input	Ignition switch ON		Battery voltage
				Within 45 second after ignition switch is turned to OFF.		Battery voltage
				When driver side or passenger side door is opened during retained power operation or retained power operation is finished.		0
4 (Y)	Ground	Sunroof switch signal (PUSH)	Input	Sunroof switch	PUSH	0
					Other than above	Battery voltage
5 (LG)	Ground	Sunroof switch signal (OPEN)	Input	Sunroof switch	OPEN (1st and 2nd)	0
					Other than above	Battery voltage
6 (Y)	Ground	Battery voltage	—	—	—	Battery voltage
7 (P)	Ground	Communication line	Input/ Output	Ignition switch ON		

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SUNROOF MOTOR ASSEMBLY

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Voltage (V) (Approx.)
+	-	Signal name	Input/ Output			
8 (L)	Ground	Vehicle speed signal (2-pulse)	Input	Speed meter operated [When vehicle speed is approx. 40km/h (25MPH)]		
9 (W)	Ground	Sunroof switch signal (2nd)	Input	Sunroof switch	OPEN (2nd) or CLOSE (2nd)	0
					Other than above	Battery voltage
10 (V)	Ground	Sunroof switch signal (CLOSE)	Input	Sunroof switch	CLOSE (1st and 2nd)	0
					Other than above	Battery voltage

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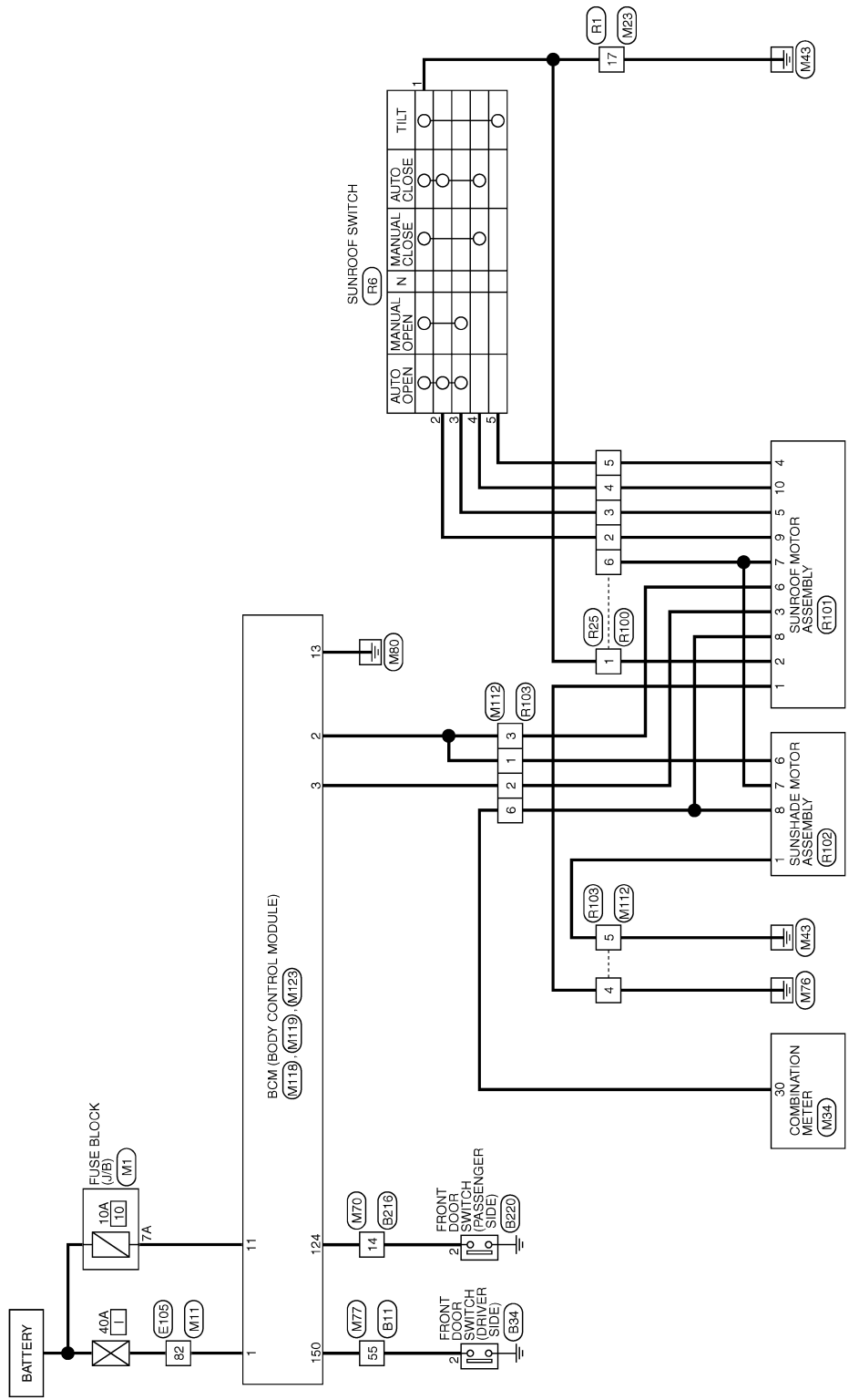
SUNROOF MOTOR ASSEMBLY

< ECU DIAGNOSIS >

Wiring Diagram - SUNROOF CONTROL SYSTEM -

INFOID:000000003941320

SUNROOF



2008/01/23

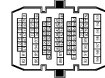
JCKWM1232Gf

SUNROOF MOTOR ASSEMBLY

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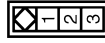
SUNROOF

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS19



Terminal No.	55	SB
Color of Wire		
Signal Name [Specification]		

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



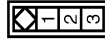
Terminal No.	2	SB
Color of Wire		
Signal Name [Specification]		

Connector No.	B216
Connector Name	WIRE TO WIRE
Connector Type	NS18MER-CS



Terminal No.	14	R
Color of Wire		
Signal Name [Specification]		

Connector No.	B220
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	2	R
Color of Wire		
Signal Name [Specification]		

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH70MW-CS10-M3



Terminal No.	82	LG
Color of Wire		
Signal Name [Specification]		

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS00FW-M2



Terminal No.	7A	Y/R
Color of Wire		
Signal Name [Specification]		

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH70FW-CS10-M3



Terminal No.	62	W/B
Color of Wire		
Signal Name [Specification]		

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	17	B
Color of Wire		
Signal Name [Specification]		

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JCKWM1233Gf

SUNROOF MOTOR ASSEMBLY

< ECU DIAGNOSIS >

SUNROOF

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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Terminal No.	Color of Wire	Signal Name [Specification]
30	L/B	VEHICLE SPEED SIGNAL (2-PULSE)

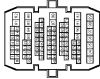
Connector No.	M70
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



7	6	5	4	3	2	1
16	15	14	13	12	11	10
9	8					

Terminal No.	Color of Wire	Signal Name [Specification]
14	R/B	-

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS19



Terminal No.	Color of Wire	Signal Name [Specification]
55	SB	-

Connector No.	M112
Connector Name	WIRE TO WIRE
Connector Type	NS36MW-CS



1	2
3	4
5	6

Terminal No.	Color of Wire	Signal Name [Specification]
1	R/Y	-
2	L/W	-
3	R/Y	-
4	B	-
5	B	-
6	L/B	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



1	2
---	---

Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)
2	R/Y	POWER WINDOW POWER SUPPLY (BAT)
3	L/W	POWER WINDOW POWER SUPPLY (IGN)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19					

Terminal No.	Color of Wire	Signal Name [Specification]
11	Y/R	BAT (FUSE)
13	B	GND

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
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Terminal No.	Color of Wire	Signal Name [Specification]
124	R/B	PASSENGER DOOR SW
150	SB	DRIVER DOOR SW

Connector No.	RI
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name [Specification]
17	B/W	-

JCKWM1234GE

SUNROOF MOTOR ASSEMBLY

< ECU DIAGNOSIS >

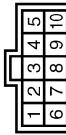
SUNROOF

Connector No.	R6	Connector No.	R101
Connector Name	SUNROOF SWITCH	Connector Name	SUNROOF MOTOR ASSEMBLY
Connector Type	TH08FW-NH	Connector Type	YEA10FGY



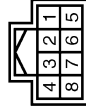
Terminal No.	Color of Wire	Signal Name [Specification]
1	G/W	-
2	W/R	-
3	LG	-
4	V	-
5	Y	-

Connector No.	R102
Connector Name	SUNSHADE MOTOR ASSEMBLY
Connector Type	YEA10FGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
6	R	BAT
7	P	COMM
8	L	SPEED/2P

Connector No.	R25
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH



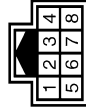
Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
2	W/R	-
3	LG	-
4	V	-
5	Y	-

Connector No.	R103
Connector Name	WIRE TO WIRE
Connector Type	NS00FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	Y	-
4	B	-
5	B	-
6	L	-

Connector No.	R100
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
2	W	-
3	LG	-
4	V	-
5	Y	-
6	P	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
2	B	GND
3	L	IGN
4	Y	PUSH SW
5	LG	OPEN SW
6	Y	BAT
7	P	COMM
8	L	SPEED/2P
9	W	2ND SW
10	V	CLOSE SW

JCKWM1235G1

SUNSHADE MOTOR ASSEMBLY

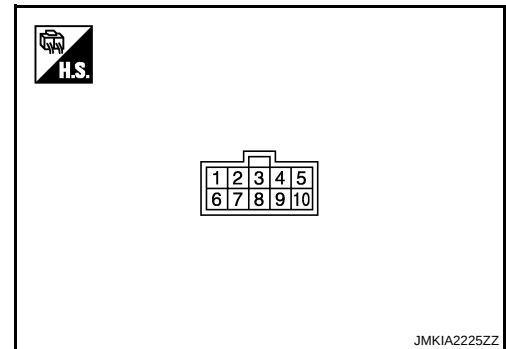
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SUNSHADE MOTOR ASSEMBLY

Reference Value

INFOID:000000003812869

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx.)
+	-	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0
6 (R)	Ground	Battery voltage	—	—	Battery voltage
7 (P)	Ground	Communication line	Input/ Output	Ignition switch ON	JMKIA1869ZZ
8 (L)	Ground	Vehicle speed signal (2-pulse)	Input	Speed meter operated [When vehicle speed is approx. 40km/h (25MPH)]	ELF1080D

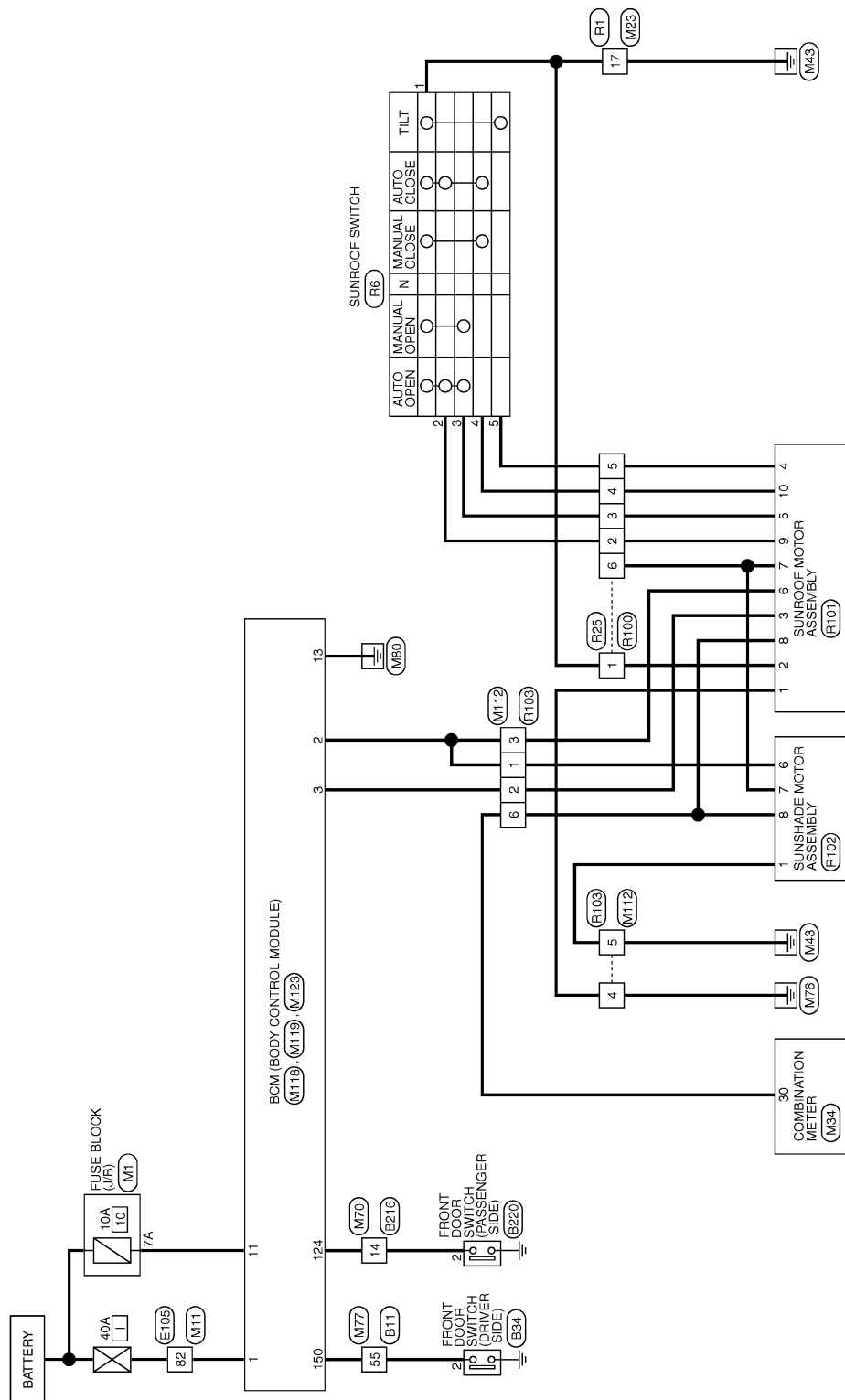
SUNSHADE MOTOR ASSEMBLY

< ECU DIAGNOSIS >

Wiring Diagram - SUNROOF CONTROL SYSTEM -

INFOID:000000003812870

SUNROOF

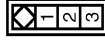


SUNSHADE MOTOR ASSEMBLY

< ECU DIAGNOSIS >

SUNROOF

Connector No.	B220
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	AG3FW



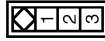
Terminal No.	2	Color of Wire	R	Signal Name [Specification]	
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Connector No.	B216
Connector Name	WIRE TO WIRE
Connector Type	NS16MBF-CS



Terminal No.	14	Color of Wire	R	Signal Name [Specification]	
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Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	AG3FW



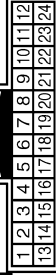
Terminal No.	2	Color of Wire	SB	Signal Name [Specification]	
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Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS19



Terminal No.	55	Color of Wire	SB	Signal Name [Specification]	
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Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	17	Color of Wire	B	Signal Name [Specification]	
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Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH10FW-CS10-M3



Terminal No.	82	Color of Wire	W/B	Signal Name [Specification]	
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Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



Terminal No.	7A	Color of Wire	Y/R	Signal Name [Specification]	
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Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH10MW-CS10-M3



Terminal No.	82	Color of Wire	LG	Signal Name [Specification]	
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JCKWM1233GI

SUNSHADE MOTOR ASSEMBLY

< ECU DIAGNOSIS >

SUNROOF

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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Terminal No.	Color of Wire	Signal Name [Specification]
30	L/B	VEHICLE SPEED SIGNAL (2-PULSE)

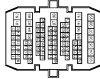
Connector No.	M70
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



7	6	5	4	3	2	1		
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name [Specification]
14	R/B	-

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS19



Terminal No.	Color of Wire	Signal Name [Specification]
55	SB	-

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Type	NS30MW-CS



1	2	6
3		5
4	5	6

Terminal No.	Color of Wire	Signal Name [Specification]
1	R/Y	-
2	L/W	-
3	R/Y	-
4	B	-
5	B	-
6	L/B	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LG



1	2
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Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



4	5	6	7		8	9	10	
11	12	13	14	15	16	17	18	19

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
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Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)
2	R/Y	POWER WINDOW POWER SUPPLY (BAT)
3	L/W	POWER WINDOW POWER SUPPLY (IGN)

Terminal No.	Color of Wire	Signal Name [Specification]
11	Y/R	BAT (FUSE)
13	B	GND

Terminal No.	Color of Wire	Signal Name [Specification]
124	R/B	PASSENGER DOOR SW
150	SB	DRIVER DOOR SW

Terminal No.	Color of Wire	Signal Name [Specification]
17	B/W	-

JCKWM1234Gf

SUNSHADE MOTOR ASSEMBLY

< ECU DIAGNOSIS >

SUNROOF

Connector No.	R6
Connector Name	SUNROOF SWITCH
Connector Type	TH08FW-NH



1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name [Specification]
1	G/W	-
2	W/R	-
3	LG	-
4	V	-
5	Y	-

Connector No.	R102
Connector Name	SUNSHADE MOTOR ASSEMBLY
Connector Type	YEA10FGY



1	2	3	4	5
6	7	8	9	10

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
6	R	BAT
7	P	COMM
8	L	SPEED(2P)

Connector No.	R25
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH



4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
2	W/R	-
3	LG	-
4	V	-
5	Y	-

Connector No.	R103
Connector Name	WIRE TO WIRE
Connector Type	NS06FW-CS



2	1		
6	5	4	3

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	Y	-
4	B	-
5	B	-
6	L	-

Connector No.	R100
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-NH



1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
2	W	-
3	LG	-
4	V	-
5	Y	-
6	P	-

Connector No.	R101
Connector Name	SUNROOF MOTOR ASSEMBLY
Connector Type	YEA10FGY



1	2	3	4	5
6	7	8	9	10

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
2	B	GND
3	L	IGN
4	Y	PUSH SW
5	LG	OPEN SW
6	Y	BAT
7	P	COMM
8	L	SPEED(2P)
9	W	2ND SW
10	V	CLOSE SW

JCKWM1235Gt

SUNROOF DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

SUNROOF DOES NOT OPERATE PROPERLY

SUNROOF DOES NOT OPEN

SUNROOF DOES NOT OPEN : Description

INFOID:000000003866181

Sunroof does not open when sunroof switch operated.

SUNROOF DOES NOT OPEN : Diagnosis Procedure

INFOID:000000003812871

1.CHECK SUNROOF MECHANISM

Check the following items.

- Operation malfunction caused by sunroof mechanism deformation, pinched harness or other foreign matter.
- Operation malfunction and interference with other parts by poor installation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK SUNROOF MOTOR ASSEMBLY POWER SUPPLY AND GROUND CIRCUIT

Check sunroof motor assembly power supply and ground circuit.

Refer to [RF-11. "SUNROOF MOTOR ASSEMBLY : Diagnosis Procedure"](#)

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK SUNROOF SWITCH

Check sunroof switch.

Refer to [RF-15. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35. "Intermittent Incident"](#).

NO >> GO TO 1.

SUNROOF DOES NOT CLOSE

SUNROOF DOES NOT CLOSE : Description

INFOID:000000003866182

Sunroof does not close though sunroof opens.

SUNROOF DOES NOT CLOSE : Diagnosis Procedure

INFOID:000000003866183

1.CHECK SUNROOF SWITCH

Check sunroof switch.

Refer to [RF-16. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35. "Intermittent Incident"](#).

SUNROOF DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

SUNROOF DOES NOT TILT UP OR DOWN

SUNROOF DOES NOT TILT UP OR DOWN : Description

INFOID:0000000003866184

Sunroof does not tilt though sunroof opens and closes.

SUNROOF DOES NOT TILT UP OR DOWN : Diagnosis Procedure

INFOID:0000000003866185

1.CHECK SUNROOF SWITCH

Check sunroof switch.

Refer to [RF-16. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35. "Intermittent Incident"](#).

NO >> GO TO 1.

SUNSHADE DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

SUNSHADE DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:000000003812872

1.CHECK SUNSHADE MECHANISM

Check the following items.

- Operation malfunction caused by sunshade mechanism deformation, pinched harness or other foreign matter.
- Operation malfunction and interference with other parts by poor installation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK SUNSHADE MOTOR ASSEMBLY POWER SUPPLY AND GROUND CIRCUIT

Check sunshade motor assembly power supply and ground circuit.

Refer to [RF-12. "SUNSHADE MOTOR ASSEMBLY : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK COMMUNICATION CIRCUIT

Check communication circuit.

Refer to [RF-14. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35. "Intermittent Incident"](#).

NO >> GO TO 1.

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RF

AUTO OPERATION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

AUTO OPERATION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000003812873

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to [RF-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Sunroof and sunshade system is normal.

NO >> GO TO 2.

2.CHECK SUNROOF SWITCH

Check sunroof switch.

Refer to [RF-15, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:000000003812874

1.CHECK DOOR SWITCH

Check door switch.

Refer to [RF-18, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

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ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000003812875

1.CHECK SUNROOF AND SUNSHADE MECHANISM

Check the following items.

- Operation malfunction caused by sunroof and sunshade mechanism deformation, pinched harness or other foreign matter.
- Operation malfunction and interference with other parts by poor installation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.PERFORM INITIALIZATION

Perform initialization procedure.

Refer to [RF-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Sunroof and sunshade system is normal.

NO >> GO TO 1.

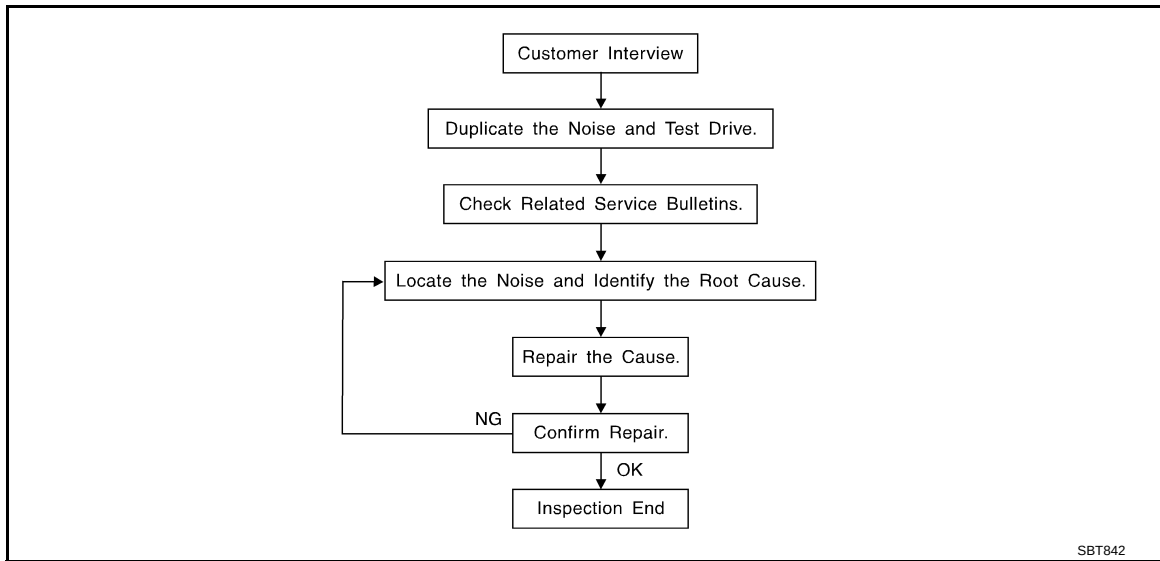
SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:000000003940146



CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any of the customer's comments; refer to [RF-75, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by a test drive with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak – (Like tennis shoes on a clean floor)
Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces = higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping
- Creak – (Like walking on an old wooden floor)
Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle – (Like shaking a baby rattle)
Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock – (Like a knock on a door)
Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick – (Like a clock second hand)
Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump – (Heavy, muffled knock noise)
Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz – (Like a bumble bee)
Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that a technician may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when the repair is reconfirmed.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
 - 2) Tap or push/pull around the area where the noise appears to be coming from.
 - 3) Rev the engine.
 - 4) Use a floor jack to recreate vehicle "twist".
 - 5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
 - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
 - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Engine Ear or mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
 - Removing the components in the area that is are suspected to be the cause of the noise.
Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
 - Tapping or pushing/pulling the component that is are suspected to be the cause of the noise.
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
 - Feeling for a vibration by hand by touching the component(s) that is are suspected to be the cause of the noise.
 - Placing a piece of paper between components that is are suspected to be the cause of the noise.
 - Looking for loose components and contact marks.
Refer to [RF-73, "Inspection Procedure"](#).

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
 - Separate components by repositioning or loosening and retightening the component, if possible.
 - Insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. These insulators are available through the authorized Nissan Parts Department.

CAUTION:

Never use excessive force as many components are constructed of plastic and may be damaged.

NOTE:

- URETHANE PADS
Insulates connectors, harness, etc.
- INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
- INSULATOR (Light foam block)
- FELT CLOTHTAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
The following materials, not available through NISSAN Parts Department, can also be used to repair squeaks and rattles.
- UHMW(TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.
- SILICONE GREASE
Used in place of UHMW tape that is be visible or does not fit.
Note: Will only last a few months.
- SILICONE SPRAY
Used when grease cannot be applied.
- DUCT TAPE
Used to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

Inspection Procedure

INFOID:000000003940147

Refer to Table of Contents for specific component removal and installation information.

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. Cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

CAUTION:

Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.

CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the following:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks to repair the noise.

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer.

In addition look for the following:

1. Trunk lid dumpers out of adjustment
2. Trunk lid striker out of adjustment
3. Trunk lid torsion bars knocking together
4. A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sunvisor shaft shaking in the holder
3. Front or rear windshield touching headlining and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

SEATS

When isolating seat noise it is important to note the position the seat is in and the load placed on the seat when the noise occurs. These conditions should be duplicated when verifying and isolating the cause of the noise.

Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. Rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

1. Any component mounted to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator mounting pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet

INFOID:000000003940148



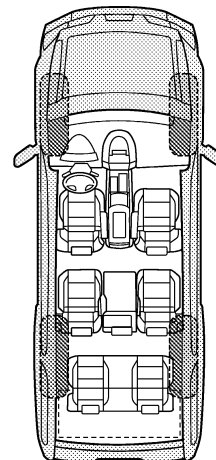
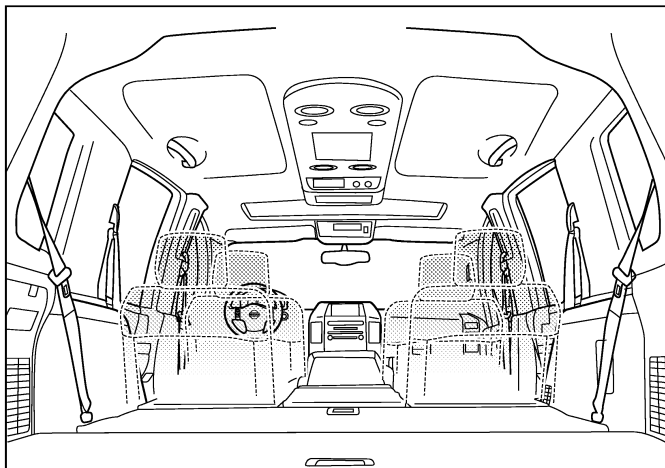
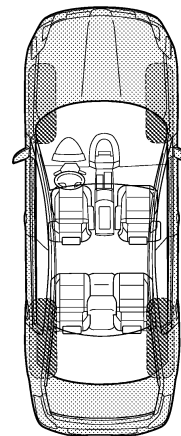
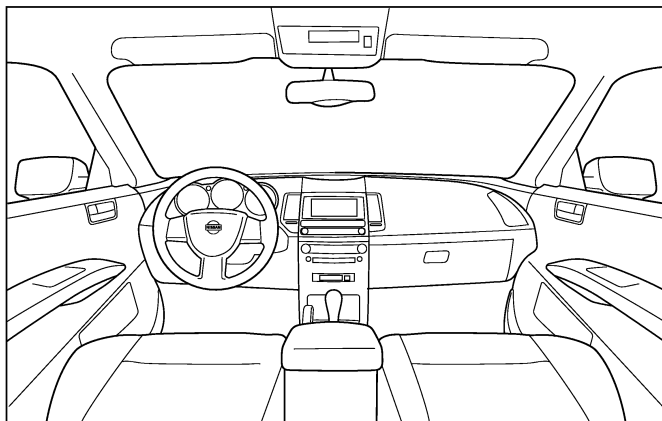
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:

We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.

I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

PIIB8740E

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

II. WHEN DOES IT OCCUR? (please check the boxes that apply)

- | | |
|---|--|
| ☐ anytime | ☐ after sitting out in the rain |
| ☐ 1st time in the morning | ☐ when it is raining or wet |
| ☐ only when it is cold outside | ☐ dry or dusty conditions |
| ☐ only when it is hot outside | ☐ other: |

III. WHEN DRIVING:

- ☐ through driveways
- ☐ over rough roads
- ☐ over speed bumps
- ☐ only about ____ mph
- ☐ on acceleration
- ☐ coming to a stop
- ☐ on turns: left, right or either (circle)
- ☐ with passengers or cargo
- ☐ other: _____
- ☐ after driving ____ miles or ____ minutes

IV. WHAT TYPE OF NOISE

- ☐ squeak (like tennis shoes on a clean floor)
- ☐ creak (like walking on an old wooden floor)
- ☐ rattle (like shaking a baby rattle)
- ☐ knock (like a knock at the door)
- ☐ tick (like a clock second hand)
- ☐ thump (heavy, muffled knock noise)
- ☐ buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

	YES	NO	Initials of person performing
Vehicle test driven with customer	☐	☐	_____
- Noise verified on test drive	☐	☐	_____
- Noise source located and repaired	☐	☐	_____
- Follow up test drive performed to confirm repair	☐	☐	_____

VIN: _____ Customer Name: _____
W.O.# _____ Date: _____

This form must be attached to Work Order

PIIB8742E

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000003940151

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

Service Notice

INFOID:000000003812880

- When removing or installing various parts, place a cloth or padding onto the vehicle body to prevent scratches.
- Handle trim, molding, instruments, grille, etc. carefully during removing or installing. Be careful not to oil or damage them.
- Apply sealing compound where necessary when installing parts.
- When applying sealing compound, be careful that the sealing compound does not protrude from parts.
- When replacing any metal parts (for example body outer panel, members, etc.), be sure to take rust prevention measures.

Precaution for Work

INFOID:000000003812881

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and keep them.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After re-installation is completed, be sure to check that each part works normally.
- Follow the steps below to clean components.
 - Water soluble foul: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the fouled area.
Then rub with a soft and dry cloth.
 - Oily foul: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the fouled area.
Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol, and gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

< PREPARATION >

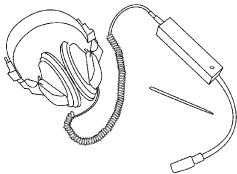
PREPARATION

PREPARATION

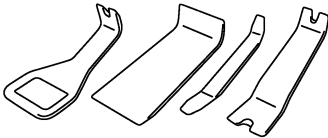
Commercial Service Tool

INFOID:000000003812883

Tool name	Description
Engine ear	Locating the noise
Remover tool	Removes the clips, pawls and metal clips



SIIA0995E



PIIB7923J

GLASS LID

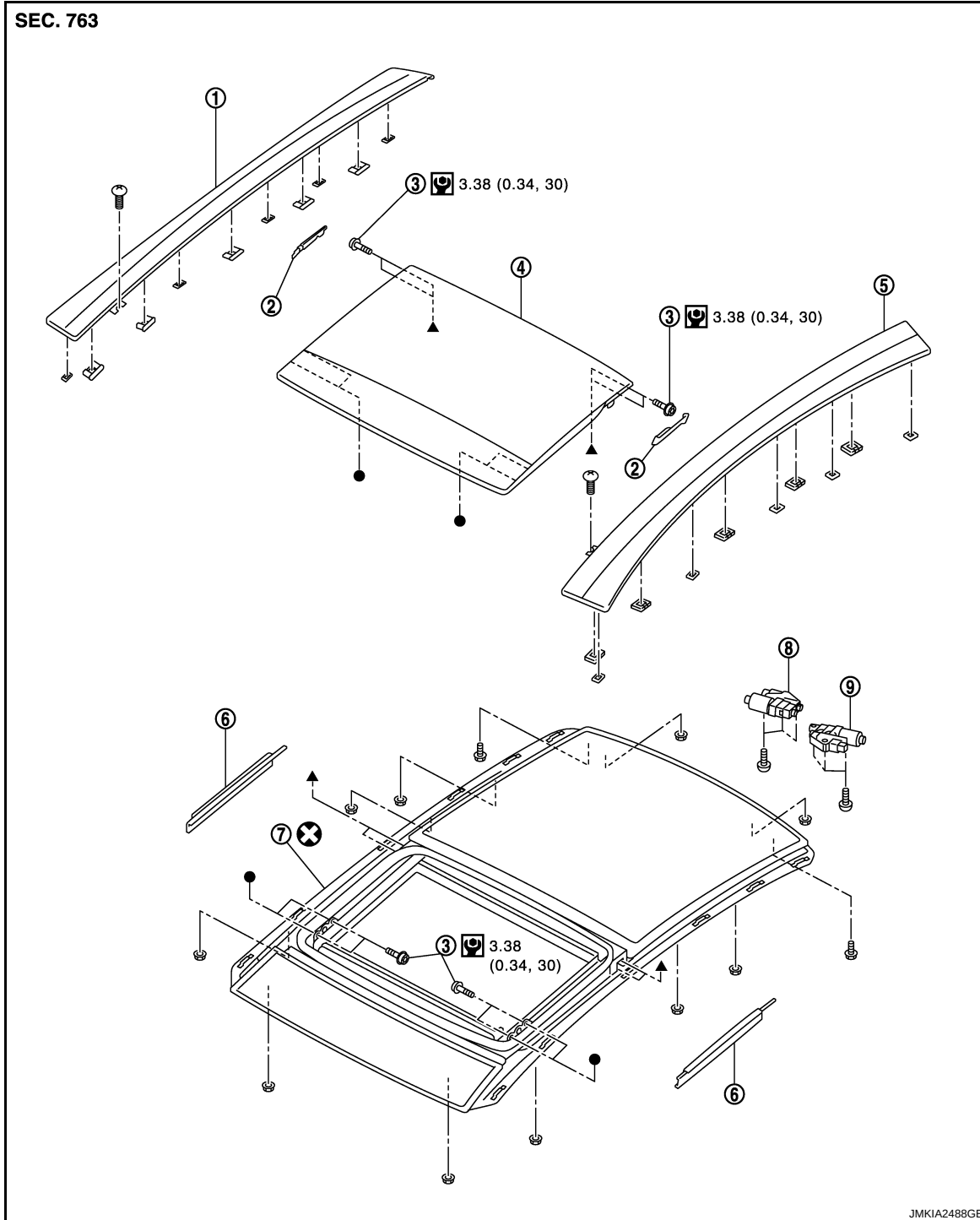
< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

GLASS LID

Exploded View

INFOID:000000003812884



- | | | |
|--------------------------|---------------------------|----------------------------|
| 1. Roof side finisher RH | 2. Rear link cover | 3. TORX bolt |
| 4. Glass lid | 5. Roof side finisher LH | 6. Inner blind |
| 7. Sunroof unit assembly | 8. Sunroof motor assembly | 9. Sunshade motor assembly |

Refer to [GI-4, "Components"](#) for symbols in the figure.

GLASS LID

< ON-VEHICLE REPAIR >

Removal and Installation

INFOID:000000003812885

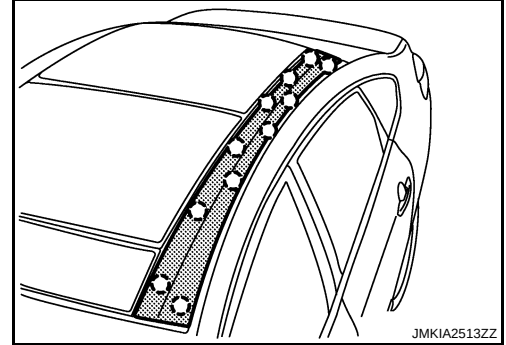
REMOVAL

CAUTION:

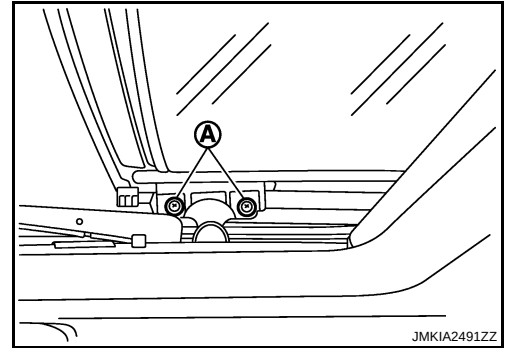
Always work with a helper.

1. Remove the roof side finisher.
 - Remove the mounting bolt.
 - Remove the clips, and then pull out roof side finisher.

 : Clip

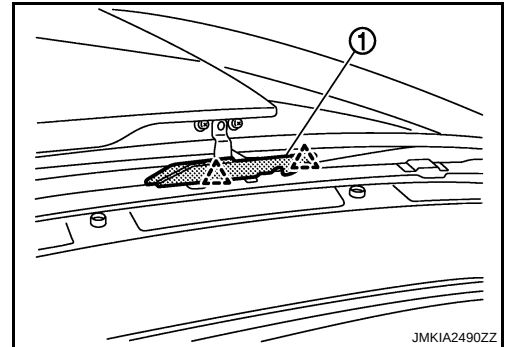


2. Half open the glass lid.
3. Remove the TORX bolts from inner side.
 - Remove the inner blind.
 - Remove the TORX bolts (A).

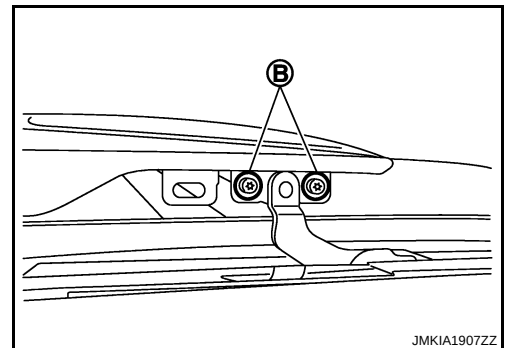


4. Remove the TORX bolts from outer side.
 - Remove the pawls, and then pull down rear link cover (1).

 : Pawl



- Remove the TORX bolts (B).



GLASS LID

< ON-VEHICLE REPAIR >

5. Remove the glass lid from the vehicle.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

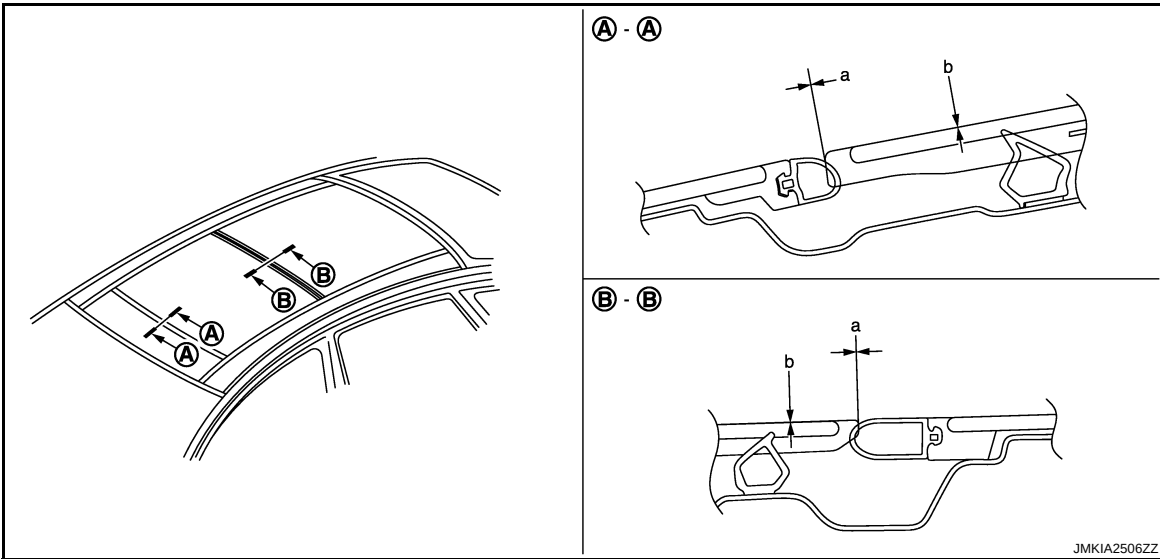
After installing the glass lid, perform the leak test and check that there is no malfunction.

NOTE:

After installation, carry out fitting adjustment. Refer to [RF-81, "Adjustment"](#).

Adjustment

INFOID:000000003812886



WEATHER-STRIP OVERLAP ADJUSTMENT AND SURFACE MISMATCH ADJUSTMENT

1. Tilt up glass lid, and then remove inner blind and rear link cover.
2. After loosening glass lid from TORX bolts (left and right), tilt down glass lid.
3. Adjust glass lid from outside of vehicle so it resembles "A - A" "B - B" as shown in the figure.

	a	b
A - A	0.2 - 4.6 mm (0.008 - 0.181 in)	-1.5 - 1.5 mm (-0.059 - 0.059 in)
B - B	0.5 - 4.9 mm (0.020 - 0.193 in)	-1.5 - 1.5 mm (-0.059 - 0.059 in)

4. To prevent glass lid from moving after adjustment, first tighten the TORX bolts of front left, and then tighten the TORX bolts of rear right.
5. Tighten remaining TORX bolts, being careful to prevent glass lid from moving.
6. Tilt glass lid up and down several times to check that it moves smoothly.

NOTE:

After adjusting the sunroof unit assembly, perform additional service. Refer to [RF-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

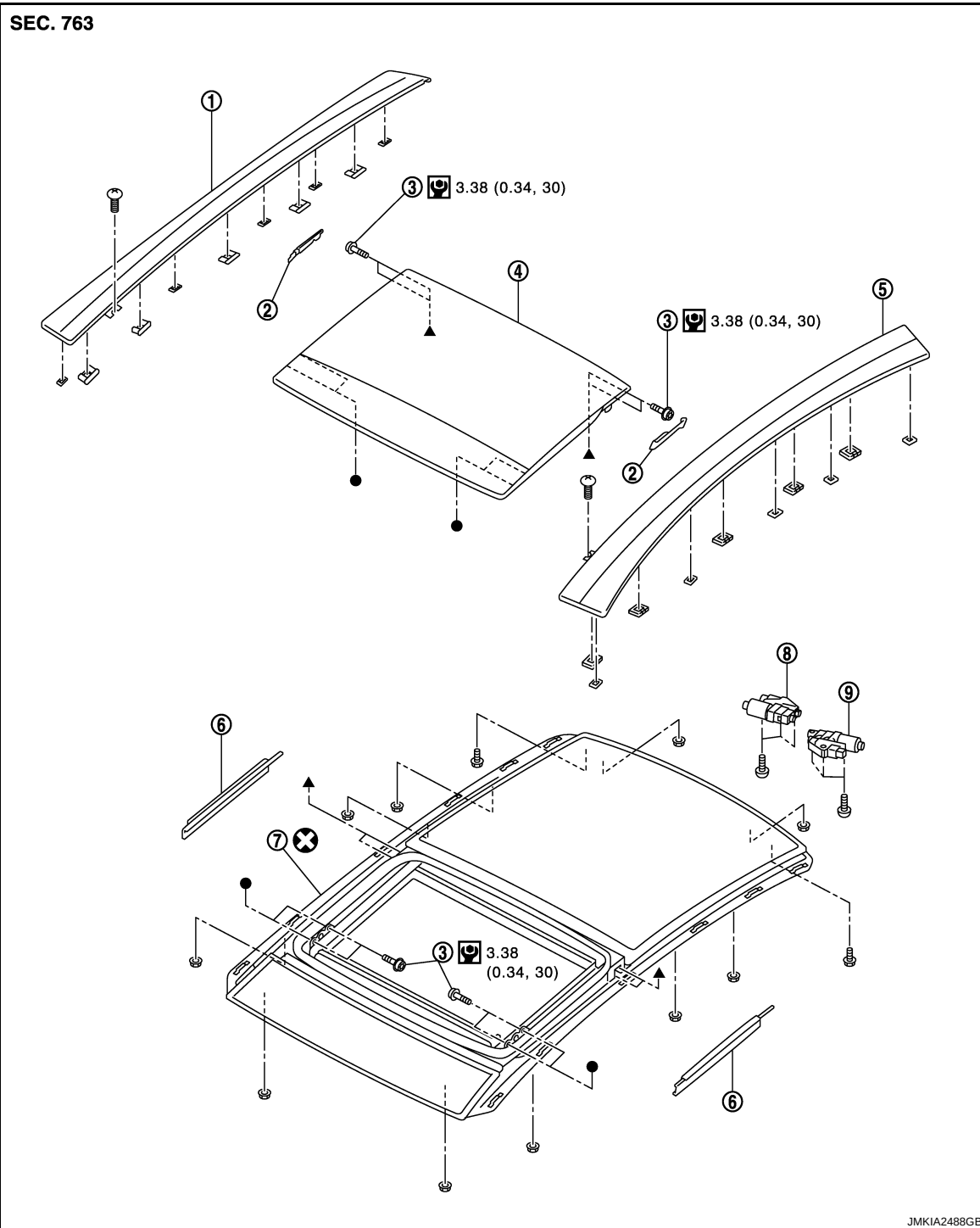
SUNROOF MOTOR ASSEMBLY

< ON-VEHICLE REPAIR >

SUNROOF MOTOR ASSEMBLY

Exploded View

INFOID:000000003812887



- | | | |
|--------------------------|---------------------------|----------------------------|
| 1. Roof side finisher RH | 2. Rear link cover | 3. TORX bolt |
| 4. Glass lid | 5. Roof side finisher LH | 6. Inner blind |
| 7. Sunroof unit assembly | 8. Sunroof motor assembly | 9. Sunshade motor assembly |

Refer to [GI-4, "Components"](#) for symbols in the figure.

SUNROOF MOTOR ASSEMBLY

< ON-VEHICLE REPAIR >

Removal and Installation

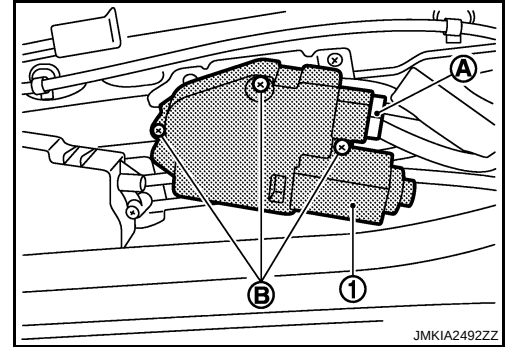
INFOID:000000003812888

REMOVAL

CAUTION:

- Before removing sunroof motor, check that glass lid is fully closed.
- After removing sunroof motor, never attempt to rotate sunroof motor assembly as a single unit.

1. Remove the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).
2. Remove the sunroof motor assembly.
 - Disconnect connector (A) from sunroof motor assembly (1).
 - Remove sunroof motor assembly mounting screws (B), and then remove sunroof motor assembly (1).



INSTALLATION

CAUTION:

Before installing the sunroof motor assembly, always place the link and wire assembly in the symmetrical and fully closed position.

1. Move the sunroof motor assembly laterally a little so that the gear is completely engaged into the wire on the sunroof unit assembly and mounting surface becomes parallel. Then secure the sunroof motor assembly with screws.
2. Install the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).

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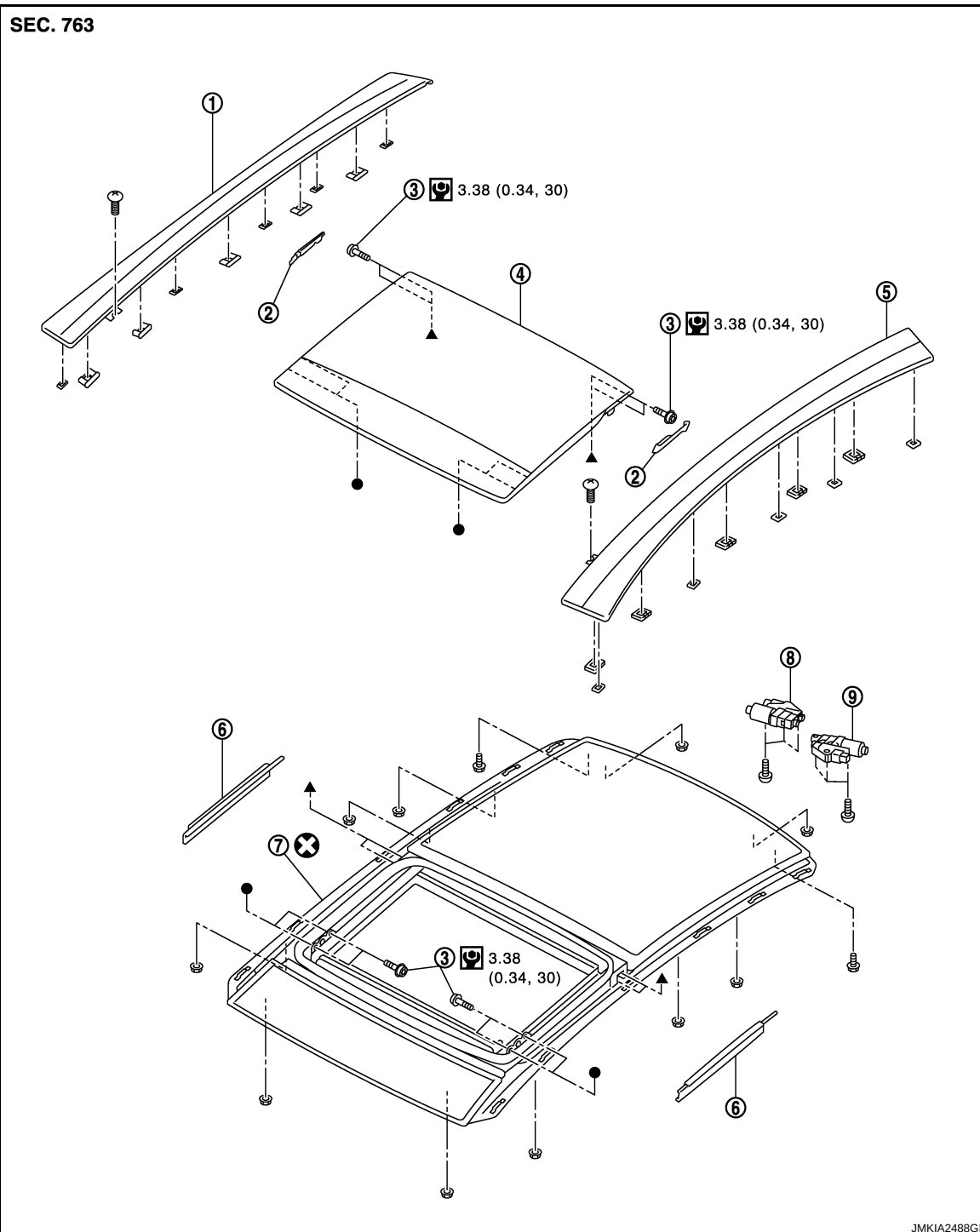
SUNSHADE MOTOR ASSEMBLY

< ON-VEHICLE REPAIR >

SUNSHADE MOTOR ASSEMBLY

Exploded View

INFOID:000000003812889



- | | | |
|--------------------------|---------------------------|----------------------------|
| 1. Roof side finisher RH | 2. Rear link cover | 3. TORX bolt |
| 4. Glass lid | 5. Roof side finisher LH | 6. Inner blind |
| 7. Sunroof unit assembly | 8. Sunroof motor assembly | 9. Sunshade motor assembly |

Refer to [GI-3, "Contents"](#) for symbols in the figure.

SUNSHADE MOTOR ASSEMBLY

< ON-VEHICLE REPAIR >

Removal and Installation

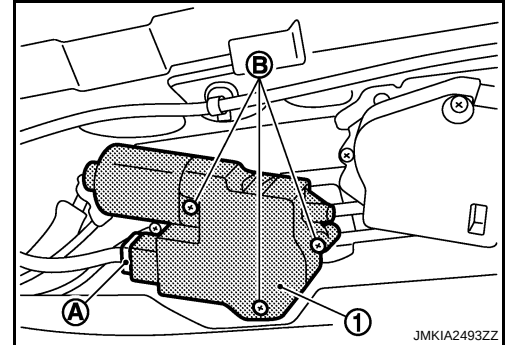
INFOID:000000003812890

REMOVAL

CAUTION:

- Before removing sunshade motor, check that glass lid is fully closed.
- After removing sunshade motor, never attempt to rotate sunshade motor assembly as a single unit.

1. Remove the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).
2. Remove the sunroof motor assembly.
 - Disconnect connector (A) from sunshade motor assembly (1).
 - Remove sunshade motor assembly mounting screws (B), and then remove sunshade motor assembly (1).



INSTALLATION

CAUTION:

Before installing the sunshade motor assembly, always place the link and wire assembly in the symmetrical and fully closed position.

1. Move the sunshade motor assembly laterally a little so that the gear is completely engaged into the wire on the sunroof unit assembly and mounting surface becomes parallel. Then secure the sunshade motor assembly with screws.
2. Install the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).

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RF

SUNROOF UNIT ASSEMBLY

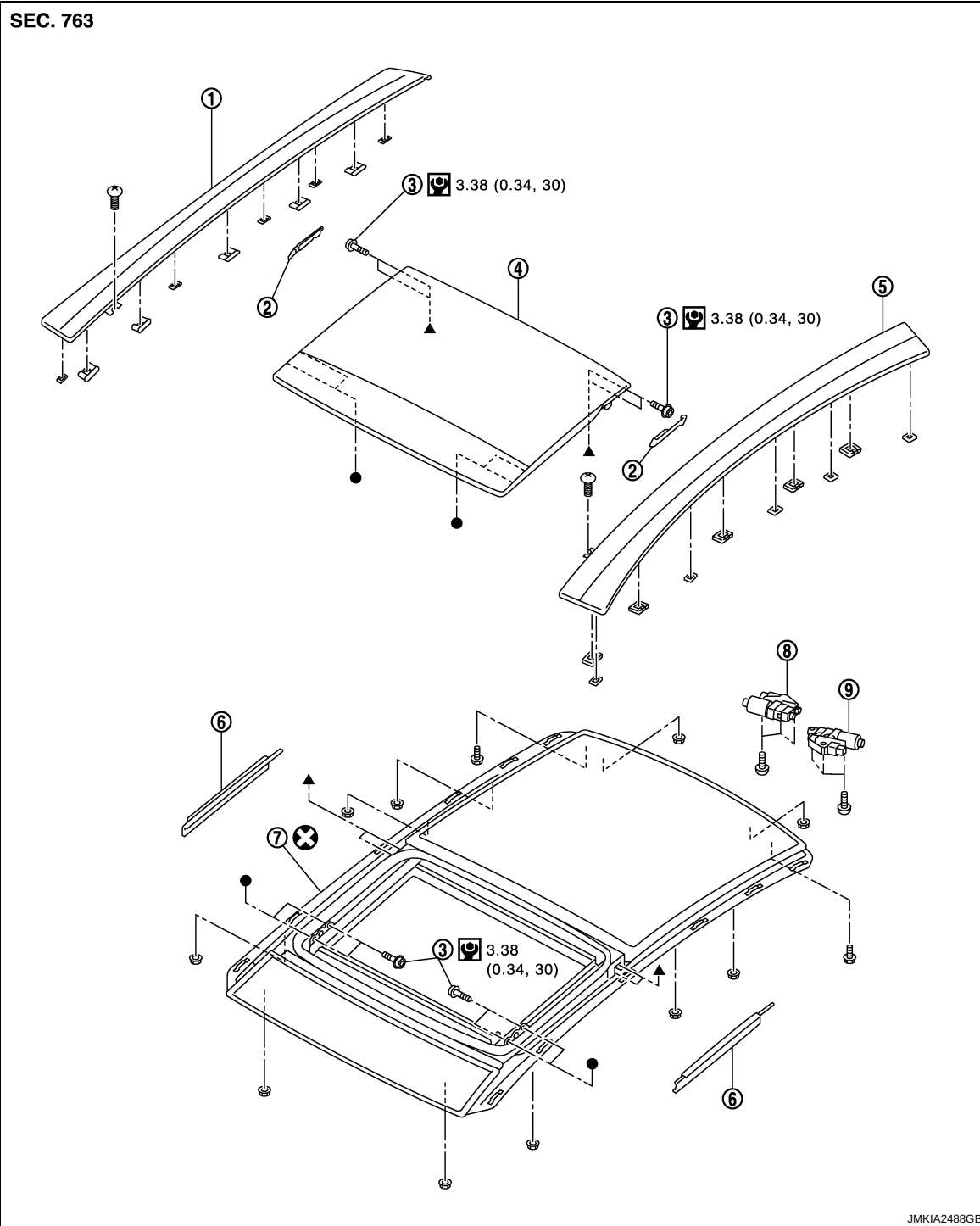
< ON-VEHICLE REPAIR >

SUNROOF UNIT ASSEMBLY

Exploded View

INFOID:000000003812891

REMOVAL

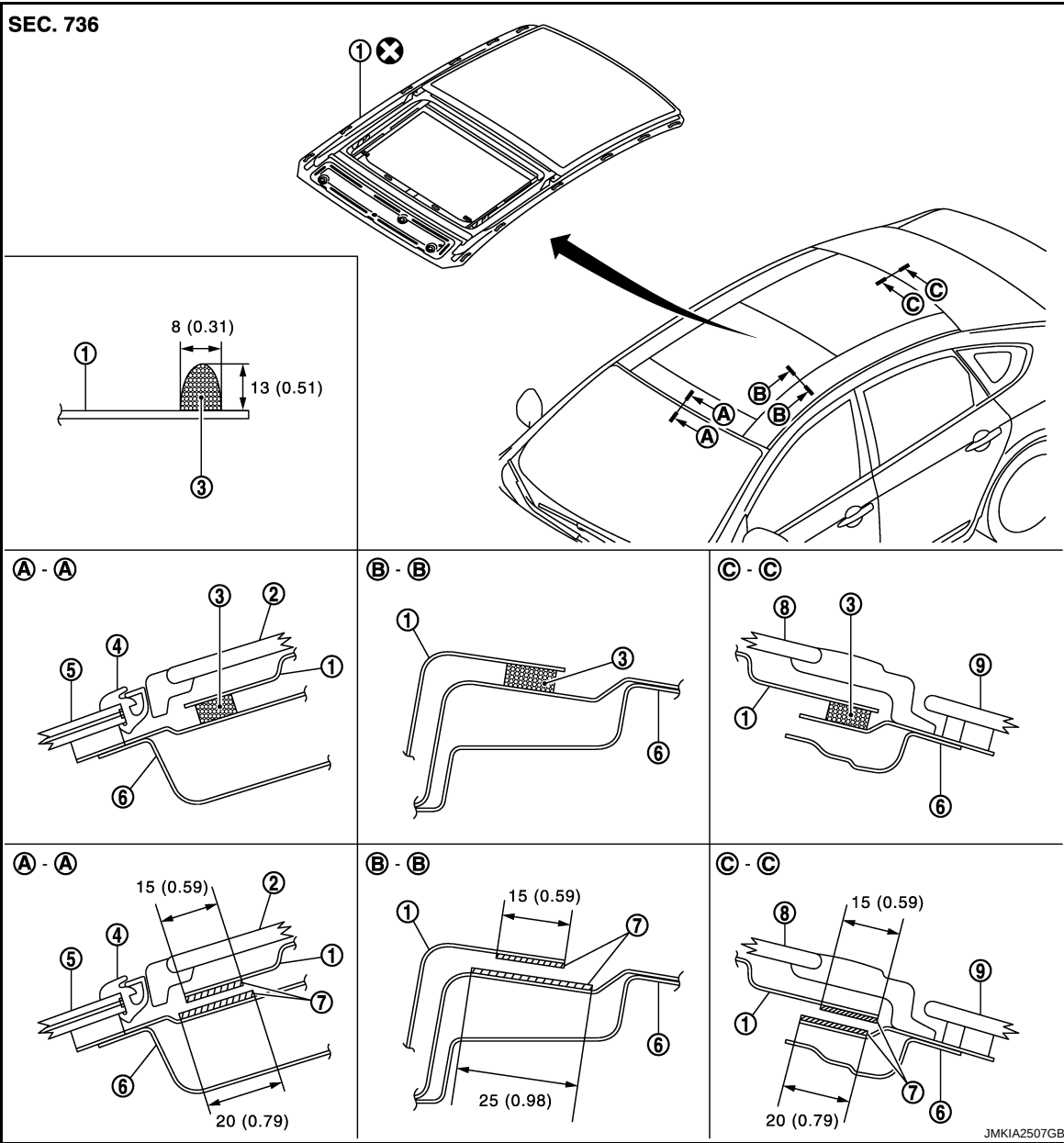


- | | | |
|--------------------------|---------------------------|----------------------------|
| 1. Roof side finisher RH | 2. Rear link cover | 3. TORX bolt |
| 4. Glass lid | 5. Roof side finisher LH | 6. Inner blind |
| 7. Sunroof unit assembly | 8. Sunroof motor assembly | 9. Sunshade motor assembly |

Refer to [GI-4, "Components"](#) for symbols in the figure.

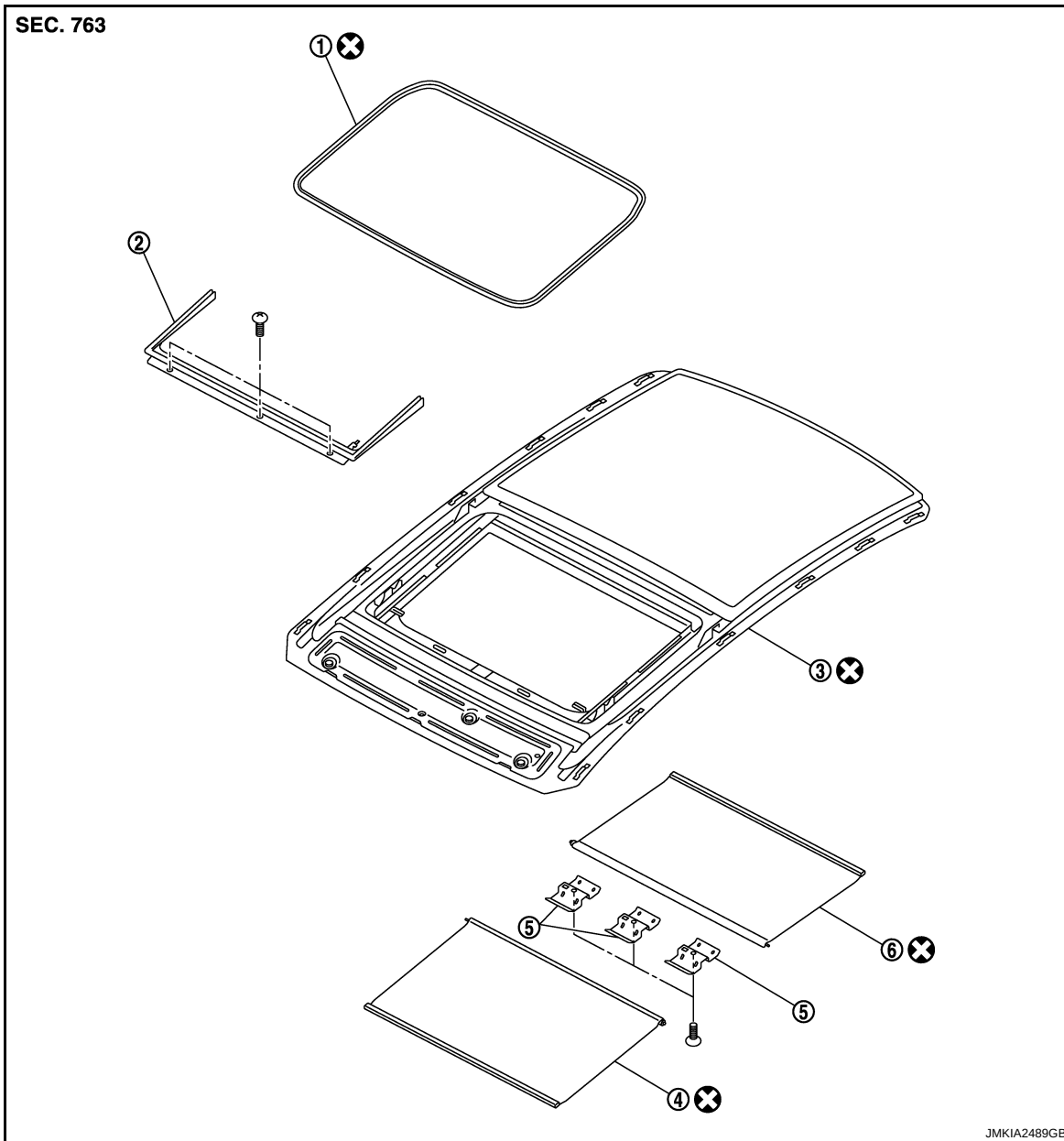
SUNROOF UNIT ASSEMBLY

< ON-VEHICLE REPAIR >



SUNROOF UNIT ASSEMBLY

< ON-VEHICLE REPAIR >



- | | | |
|-------------------|-------------------|------------------|
| 1. Weather-strip | 2. Wind deflector | 3. Sunroof frame |
| 4. Front sunshade | 5. Sunshade cover | 6. Rear sunshade |

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000003812892

REMOVAL

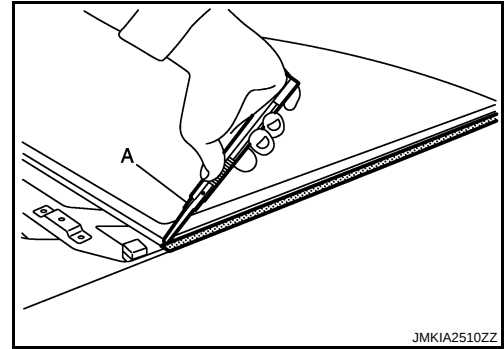
CAUTION:

- Always work with a helper.
 - Never reuse the front and rear sunroof glass which has been removed once.
1. Remove the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).
 2. Remove the glass lid. Refer to [RF-80, "Removal and Installation"](#).
 3. Remove the windshield molding. Refer to [GW-11, "Removal and Installation"](#).
 4. Paint matching marks on body before removing the sunroof unit assembly.
 5. Remove nuts and bolts from the front end, side rail and rear end.
 6. Apply protective tape around the roof panel to protect the surface from damage.

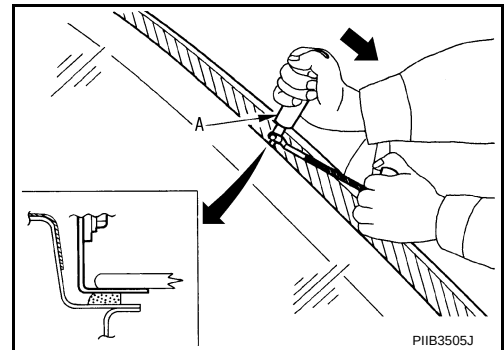
SUNROOF UNIT ASSEMBLY

< ON-VEHICLE REPAIR >

7. Remove the front sunroof glass. Refer to [RF-91. "Removal and Installation"](#).
8. Cut adhesive.
 - Cut the resin part of the rear sunroof glass rear using cutter (A).



- Cut the adhesive using windshield cutter (A).



- Pass piano wire through the adhesive with a wire pierce.
 - Tie both ends of piano wire to wire grip.
 - Pull piano wire in turn and cut off adhesive.
9. Remove sunroof unit assembly from vehicle.

INSTALLATION

WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Never let them in contact with the skin and eyes.
- Use in an open, well ventilated location. Never breathe the vapors. They may be harmful if inhaled. Move immediately to an area with fresh air if affected by vapor inhalation.

CAUTION:

After installing the sunroof unit assembly and glass lid, perform the leak test and check that there is no malfunction.

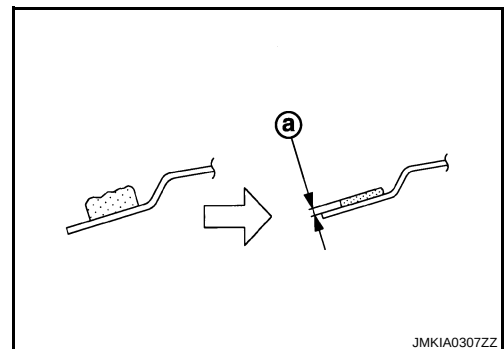
NOTE:

- Use a genuine Nissan Urethane Adhesive Kit (if available) or an equivalent and follow the instructions furnished with it.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (approximately 24 hours). Curing time varies with temperature and humidity.

1. Using a knife or spatula, trim the adhesive (sealant) remaining on body down to approximately 2 mm thick (a) so that the contour becomes smooth.

CAUTION:

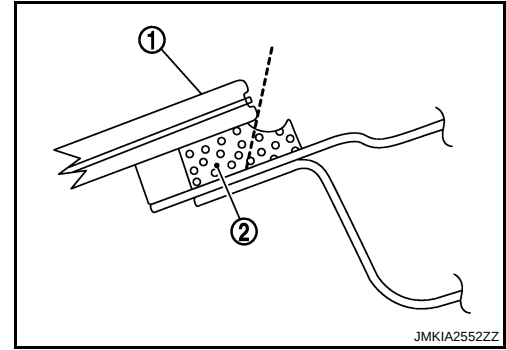
If bonded area on body is scratched, always repair it with 2-component urethane. Never use lacquer.



SUNROOF UNIT ASSEMBLY

< ON-VEHICLE REPAIR >

2. Install the windshield molding.
 - Cut off the adhesive (2) of the windshield glass (1) top side as shown in the figure.



- Apply paint primer to adhesive contact surface of the windshield molding.
 - Apply the groove with adhesive, and stick windshield molding.
3. Clean bonded area on sunroof frame and roof panel with white gasoline.
 4. Apply paint primer along the entire circumference of sunroof frame.

CAUTION:
There are 2 types of primer. Never confuse the application methods.
Paint primer: for painted surfaces
Glass primer: for glass
 5. Apply paint primer on areas where adhesive contacts on the side of vehicle body.

CAUTION:
If paint primer adheres to a painted surface other than bonding area, or if it overflows, quickly remove it with white gasoline.
 6. After applying primers, apply the adhesive along the entire circumference of the sunroof unit assembly as shown in the figure, and within the time specified in the instructions for the adhesive.
Open adhesive by cutting off the nozzle tip and set it in a sealant gun.
 7. Align matching marks on body and sunroof unit assembly. Install sunroof unit assembly to the body.
 8. Press entire surface of glass lightly to fit it completely.
 9. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.
 10. Remove protective tape.
 11. Temporarily tighten the mounting bolts and nuts to the sunroof unit assembly.
 12. Tighten the installation points diagonally around the roof opening.
 13. Install the glass lid. Refer to [RF-80, "Removal and Installation"](#).

NOTE:
After installation, carry out fitting adjustment. Refer to [RF-81, "Adjustment"](#).
 14. Install the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).
 15. Check for water leaks.

NOTE:

 - Perform the water leakage check more than 2 hours after sunroof unit assembly installation.
 - After glass lid fitting adjustment, carry out water leakage check by spreading water on the whole roof.

Disassembly and Assembly

INFOID:000000003812893

DISASSEMBLY

1. Remove the wind deflector. Refer to [RF-97, "Removal and Installation"](#).
2. Remove the front sunshade and rear sunshade. Refer to [RF-99, "Removal and Installation"](#).
3. Remove the weather-strip.

ASSEMBLY

Assemble in the reverse order of disassembly.

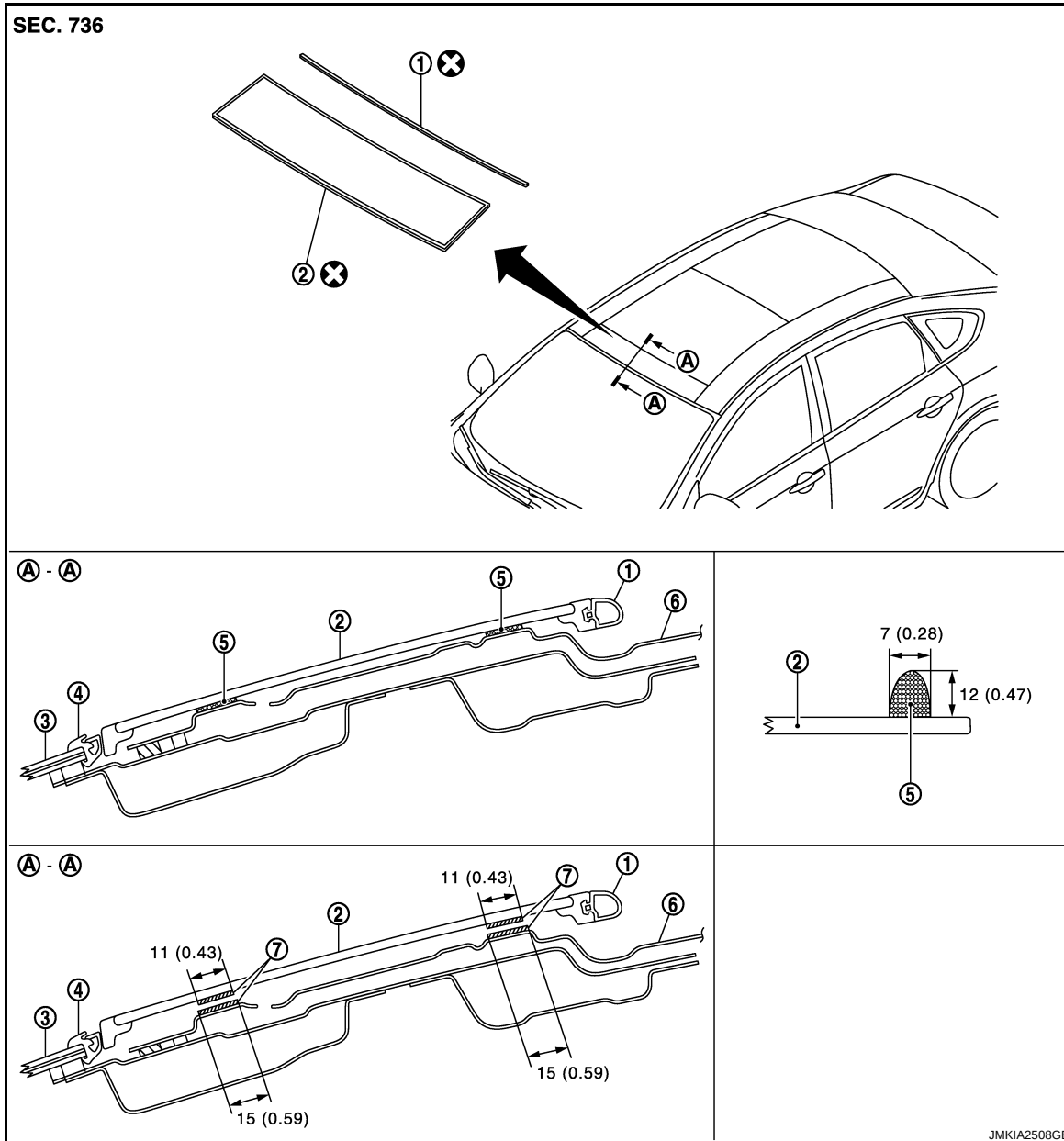
FRONT SUNROOF GLASS

< ON-VEHICLE REPAIR >

FRONT SUNROOF GLASS

Exploded View

INFOID:000000003812894



Removal and Installation

INFOID:000000003812895

REMOVAL

1. Remove the roof side finisher. Refer to [RF-88, "Removal and Installation"](#).
2. Fully open the glass lid.
3. Remove the windshield molding. Refer to [GW-11, "Removal and Installation"](#).
4. Paint matching marks on body before removing the front sunroof glass.

FRONT SUNROOF GLASS

< ON-VEHICLE REPAIR >

5. Apply protective tape around the roof panel and windshield to protect the surface from damage.
6. Remove weather-strip.
7. Cut adhesive.
 - Pass piano wire through the adhesive with a wire pierce.
 - Tie both ends of piano wire to wire grip.
 - Pull piano wire in turn and cut off adhesive.
8. Remove front sunroof glass from vehicle.

WARNING:

Always use safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands when cutting the glass from the vehicle.

CAUTION:

Never reuse the front sunroof glass which has been removed once.

INSTALLATION

WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Never let them in contact with the skin and eyes.
- Use in an open, well ventilated location. Never breathe the vapors. They may be harmful if inhaled. Move immediately to an area with fresh air if affected by vapor inhalation.

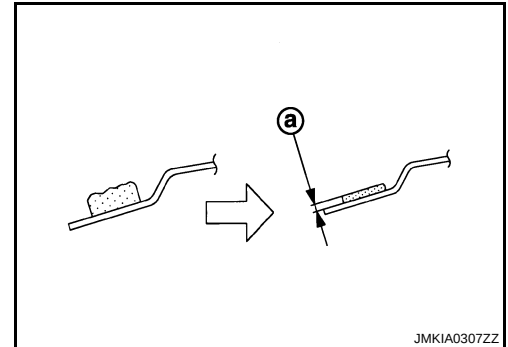
NOTE:

- Use a genuine Nissan Urethane Adhesive Kit (if available) or an equivalent and follow the instructions furnished with it.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (approximately 24 hours). Curing time varies with temperature and humidity.

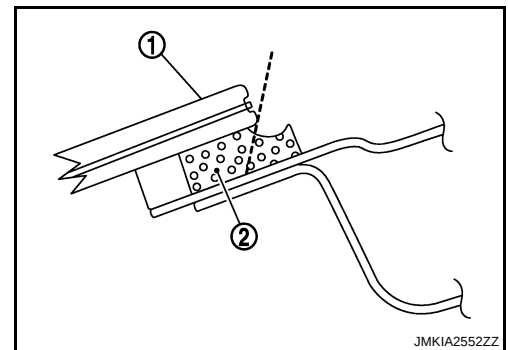
1. Using a knife or spatula, trim the adhesive (sealant) remaining on body down to approximately 2 mm thick (a) so that the contour becomes smooth.

CAUTION:

If bonded area on sunroof frame is scratched, always repair it with 2-component urethane. Never use lacquer.



2. Install the windshield molding.
 - Cut off the adhesive (2) of the windshield glass (1) top side as shown in the figure.



- Apply paint primer to adhesive contact surface of the windshield molding.
 - Apply the groove with adhesive, and stick windshield molding.
3. Clean bonded area on glass with white gasoline.
 4. Apply glass primer along the entire circumference of glass.

CAUTION:

There are 2 types of primer. Never confuse the application methods.

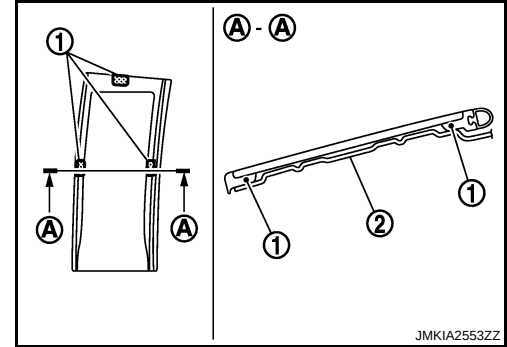
Paint primer: for painted surfaces

Glass primer: for glass

FRONT SUNROOF GLASS

< ON-VEHICLE REPAIR >

5. Apply paint primer on areas where adhesive contacts on the side of sunroof frame.
CAUTION:
If paint primer adheres to a painted surface other than bonding area, or if it overflows, quickly remove it with white gasoline.
6. After applying primers, apply the adhesive along the entire circumference of the glass as shown in the figure, and within the time specified in the instructions for the adhesive.
Open adhesive by cutting off the nozzle tip and set it in a sealant gun.
7. After setting suction lifter to glass, align matching marks on sunroof frame and glass. Install glass to the sunroof frame.
8. Press glass till positioning ribs (1) faces sunroof frame (2).



9. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.
10. Remove protective tape.
11. Install roof side finisher. Refer to [RF-88, "Removal and Installation"](#).

A
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C
D
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I
J
L
M
N
O
P

RF

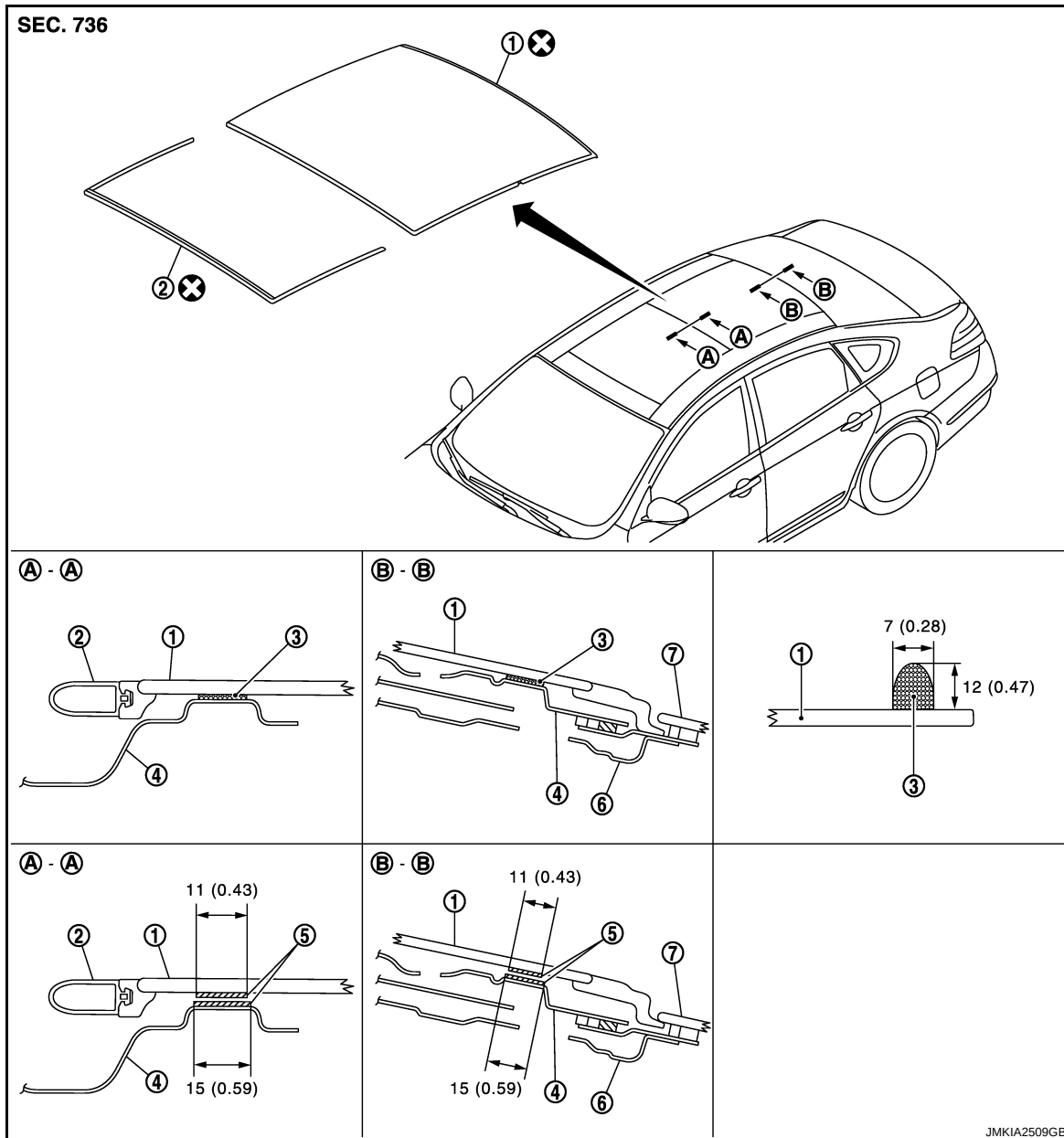
REAR SUNROOF GLASS

< ON-VEHICLE REPAIR >

REAR SUNROOF GLASS

Exploded View

INFOID:000000003812896



- | | | |
|-----------------------|------------------|---------------|
| 1. Rear sunroof glass | 2. Weather-strip | 3. Adhesive |
| 4. Sunroof frame | 5. Primer | 6. Roof panel |
| 7. Rear window glass | | |

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000003812897

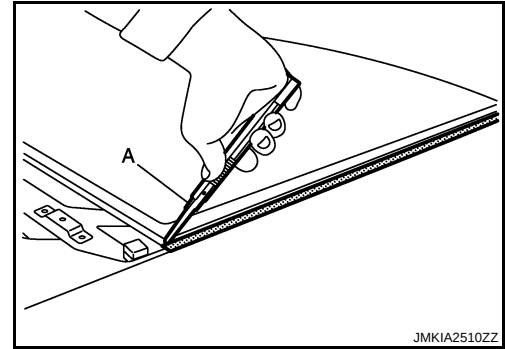
REMOVAL

1. Remove the roof side finisher. Refer to [RF-88, "Removal and Installation"](#).
2. Remove the glass lid. Refer to [RF-80, "Removal and Installation"](#).
3. Paint matching marks on body before removing the rear sunroof glass.
4. Apply protective tape around the roof panel and sunroof unit to protect the surface from damage.

REAR SUNROOF GLASS

< ON-VEHICLE REPAIR >

5. Remove weather-strip.
6. Cut adhesive.
 - Cut the resin part of the rear sunroof glass rear using cutter (A).



- Pass piano wire through the adhesive with a wire pierce.
 - Tie both ends of piano wire to wire grip.
 - Pull piano wire in turn and cut off adhesive.
7. Remove rear sunroof glass from vehicle using suction lifter.

WARNING:

Always use safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands when cutting the glass from the vehicle.

CAUTION:

Never reuse the rear sunroof glass which has been removed once.

INSTALLATION

WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Never let them in contact with the skin and eyes.
- Use in an open, well ventilated location. Never breathe the vapors. They may be harmful if inhaled. Move immediately to an area with fresh air if affected by vapor inhalation.

CAUTION:

After installing the rear sunroof glass, perform the leak test and check that there is no malfunction.

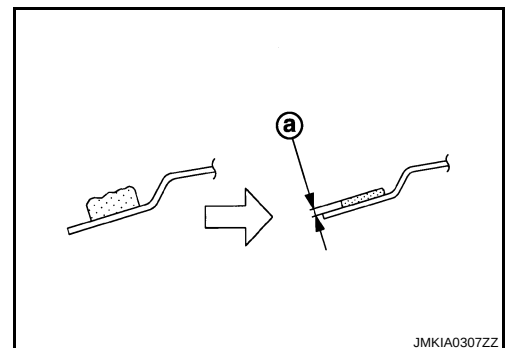
NOTE:

- Use a genuine Nissan Urethane Adhesive Kit (if available) or an equivalent and follow the instructions furnished with it.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (approximately 24 hours). Curing time varies with temperature and humidity.

1. Using a knife or spatula, trim the adhesive (sealant) remaining on body down to approximately 2 mm thick (a) so that the contour becomes smooth.

CAUTION:

If bonded area on sunroof frame is scratched, always repair it with 2-component urethane. Never use lacquer.



2. Clean bonded area on glass with white gasoline.
3. Apply glass primer along the entire circumference of glass.

CAUTION:

There are 2 types of primer. Never confuse the application methods.

Paint primer: for painted surfaces

Glass primer: for glass

4. Apply paint primer on areas where adhesive contacts on the side of sunroof frame.

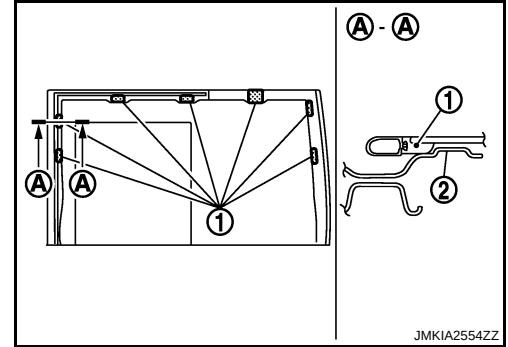
CAUTION:

REAR SUNROOF GLASS

< ON-VEHICLE REPAIR >

If paint primer adheres to a painted surface other than bonding area, or if it overflows, quickly remove it with white gasoline.

5. After applying primers, apply the adhesive along the entire circumference of the glass as shown in the figure, and within the time specified in the instructions for the adhesive.
Open adhesive by cutting off the nozzle tip and set it in a sealant gun.
6. After setting suction lifter to glass, align matching marks on sunroof frame and glass. Install glass to the sunroof frame.
7. Press glass till positioning ribs (1) faces sunroof frame (2).



8. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.
9. Remove protective tape.
10. Install glass lid. Refer to [RF-80, "Removal and Installation"](#).
11. Install roof side finisher. Refer to [RF-88, "Removal and Installation"](#).
12. Check for water leaks.

NOTE:

- Perform the water leakage check more than 2 hours after rear sunroof glass installation.
- After glass lid fitting adjustment, carry out water leakage check by spreading water on the whole roof.

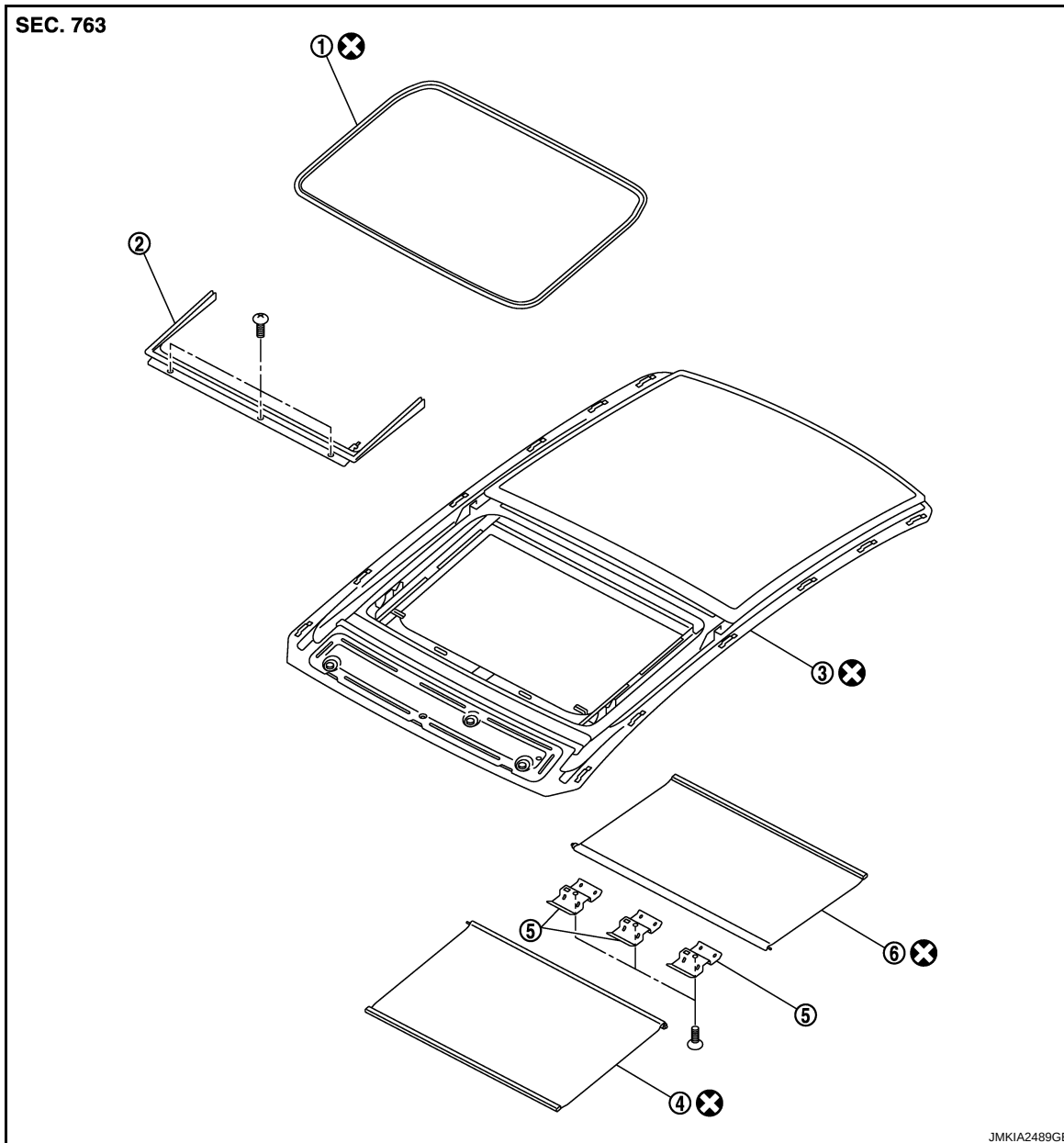
WIND DEFLECTOR

< ON-VEHICLE REPAIR >

WIND DEFLECTOR

Exploded View

INFOID:000000003812898



- | | | |
|-------------------|-------------------|------------------|
| 1. Weather-strip | 2. Wind deflector | 3. Sunroof frame |
| 4. Front sunshade | 5. Sunshade cover | 6. Rear sunshade |

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000003812899

REMOVAL

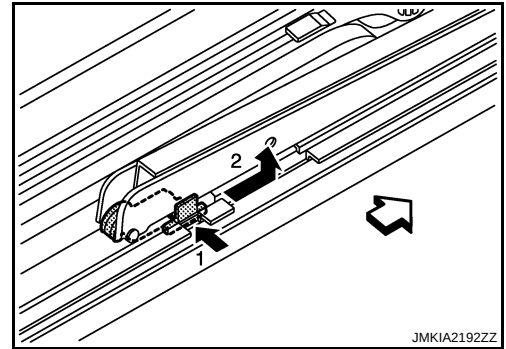
1. Fully open the glass lid.
2. Remove the Inner blind. Rerer to [RF-80, "Removal and Installation"](#).
3. Remove the wind deflector.

WIND DEFLECTOR

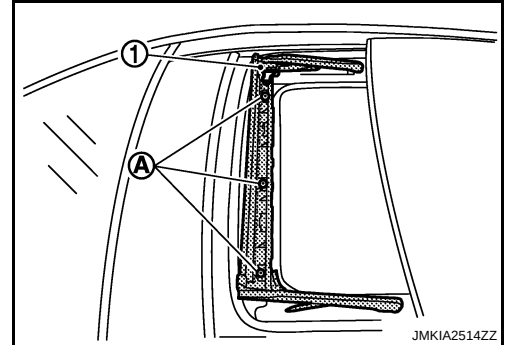
< ON-VEHICLE REPAIR >

- Push and slide the fastener as shown by the arrows (1) and (2) in the figure to remove.

⇐ : Vehicle front



- Remove the screws (A), and then remove wind deflector (1).



INSTALLATION

Install in the reverse order of removal.

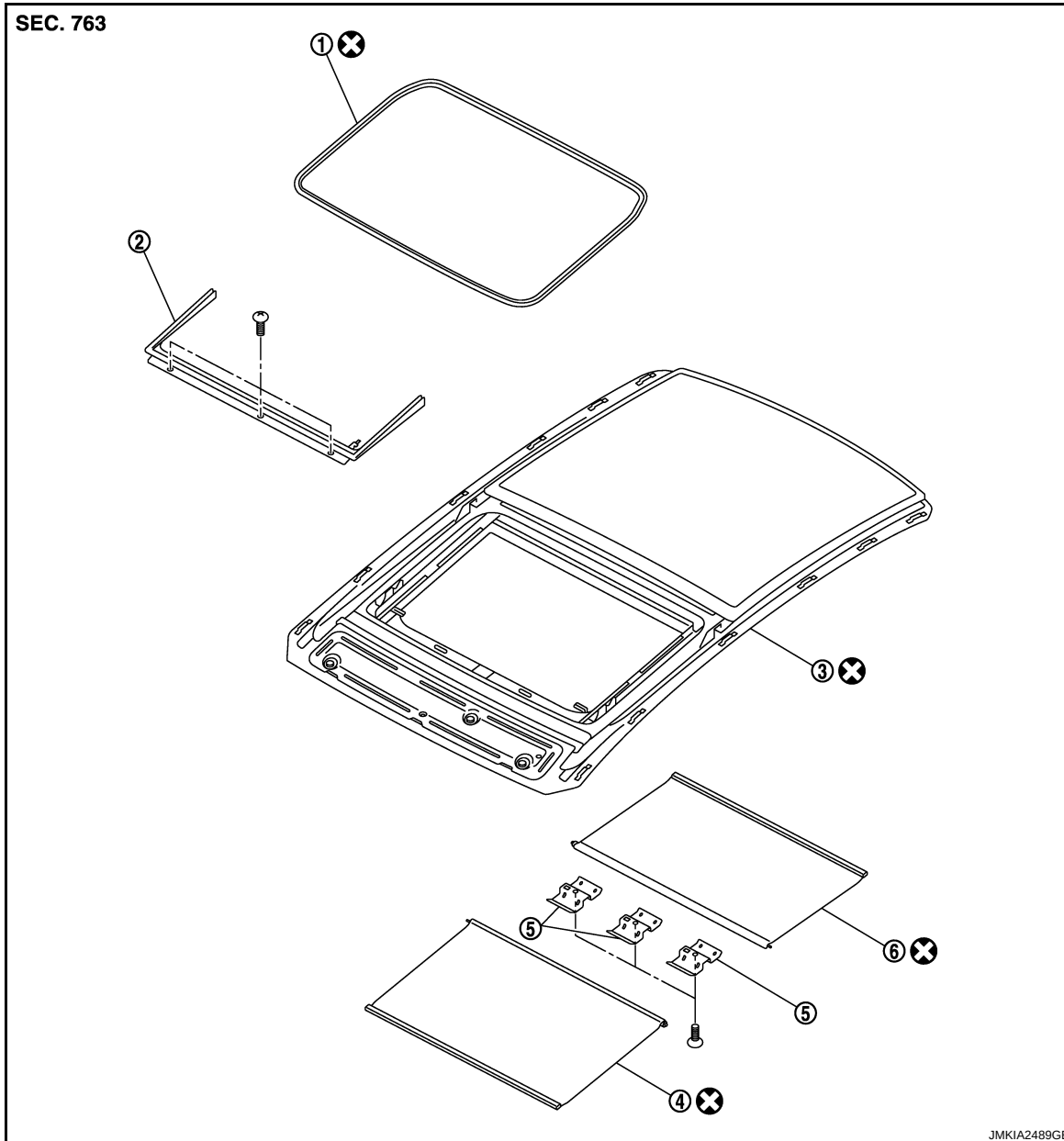
SUNSHADE

< ON-VEHICLE REPAIR >

SUNSHADE

Exploded View

INFOID:000000003843880



- | | | |
|-------------------|-------------------|------------------|
| 1. Weather-strip | 2. Wind deflector | 3. Sunroof frame |
| 4. Front sunshade | 5. Sunshade cover | 6. Rear sunshade |

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000003812901

REMOVAL

1. Remove the headlining. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).

2. Remove the sunshade cover.
Remove the screws, and then sunshade cover.

CAUTION:

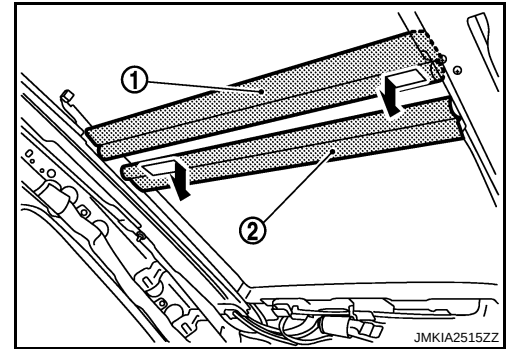
Be careful not to deform the sunshade covers during removal or installation.

3. Remove the front sunshade and rear sunshade.

SUNSHADE

< ON-VEHICLE REPAIR >

Remove it to the lower part while pushing the front sunshade (1) and rear sunshade (2) towards the direction of the arrow in the figure.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be careful not to release the spring when installing the sunshade.

SUNROOF SWITCH

< ON-VEHICLE REPAIR >

SUNROOF SWITCH

Exploded View

INFOID:000000003812902

Refer to [INT-53, "SUNROOF : Exploded View"](#).

Removal and Installation

INFOID:000000003812903

Removal

Remove the sunroof switch. Refer to [INT-54, "SUNROOF : Removal and Installation"](#).

Installation

Install in the reverse order of removal.

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- RF
- L
- M
- N
- O
- P