SECTION RF
ROOF

CONTENTS

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

WorkFlow

INFOID:0000000009719643

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000009719644

Initialization of system should be conducted after the following conditions.
- When the sunroof motor or sunshade motor is changed.
- When the sunroof of sunshade does not operate normally. (Incomplete initialization conditions)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000009719645

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 will move to forward and it will be stopped mechanically.
3. Release the sunroof switch, and press and hold the sunroof switch CLOSE (1st or 2nd) again. then sunroof and sunshade will automatically move to fully closed⇒fully open⇒fully closed.
4. Release sunroof switch, after the sunroof is fully closed.
5. Check sunroof and sunshade operation.

CHECK ANTI-PINCH FUNCTION

1. Full open the sunroof.
2. Place a piece of wood near fully closed position.
3. Close the sunroof completely with auto-slide close.
4. Check that sunroof lowers for approximately 150 mm (5.91in) or 2 seconds with out pinching a piece of wood and stop.
5. Full open the sunshade.
6. Place a piece of wood near fully closed position.
7. Close the sunroof completely with auto-slide close.
8. Check that sunroof lowers for approximately 150 mm (5.91in) or 2 seconds with out pinching a piece of wood and stop.

CAUTION:
- **Never check with hands and other part of body because they may be pinched. Never get pinched.**
- **Depending on environment and driving conditions, if a similar impact or lord 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.**

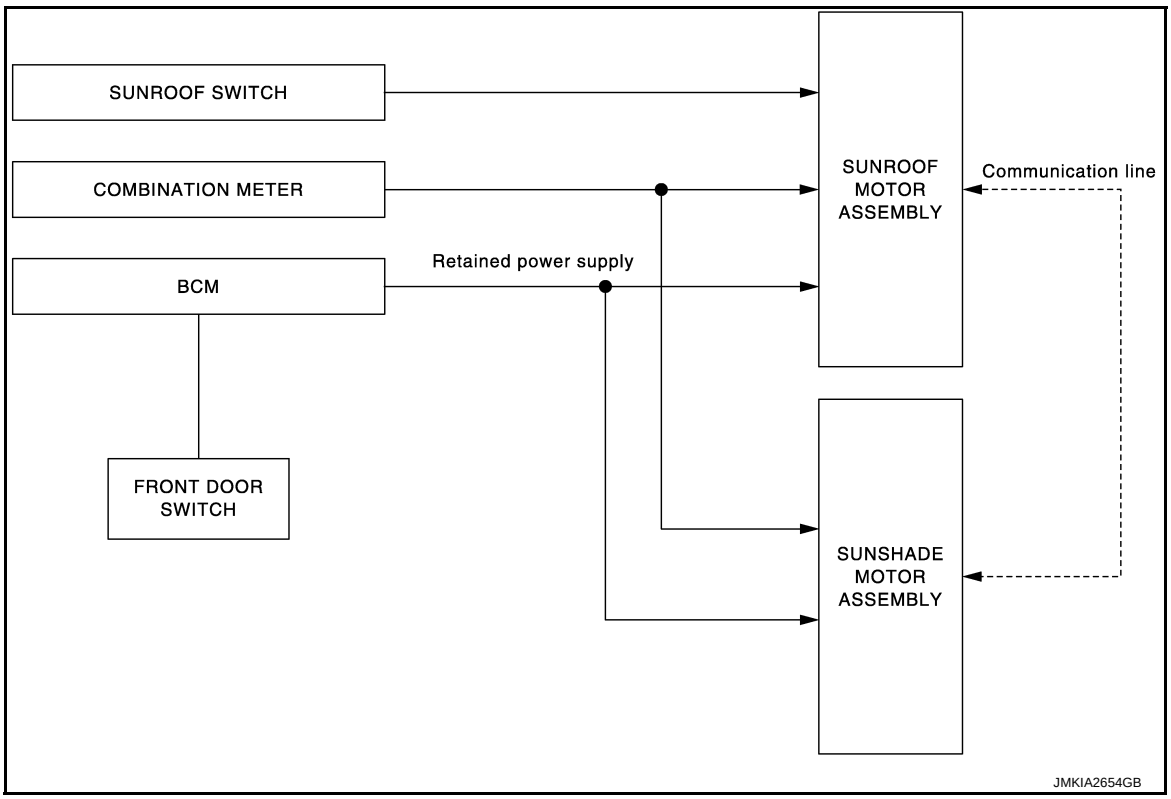
SYSTEM DESCRIPTION

SUNROOF SYSTEM

System Diagram

INFOID:0000000009719646

SUNROOF



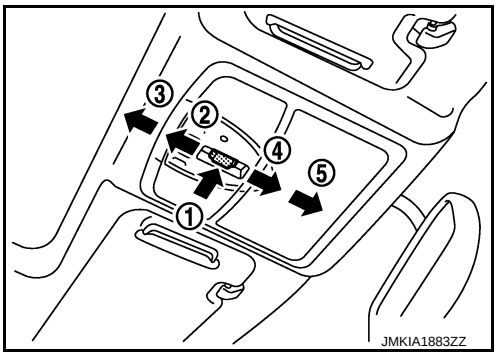
System Description

INFOID:0000000009719647

DESCRIPTION

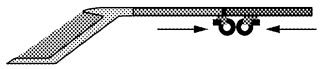
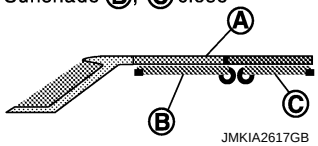
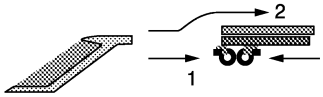
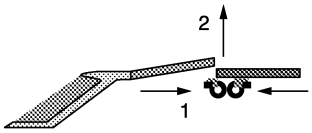
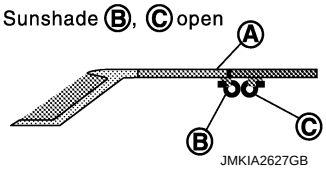
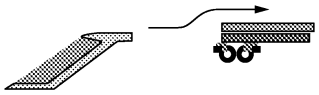
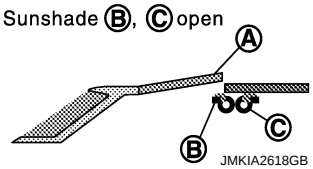
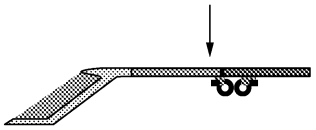
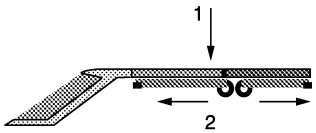
- Sunroof motor assembly and sunshade motor assembly operate with the power supplied from BCM while ignition switch is ON or retained power is operating.
- Sunroof motor assembly receives an operation signal from sunroof switch, and sends the signal to sunshade motor by communication line.
- Sunroof motor assembly and sunshade motor assembly receive a vehicle speed signal from combination meter and controls the sunroof motor and sunshade motor torque at the time of 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.

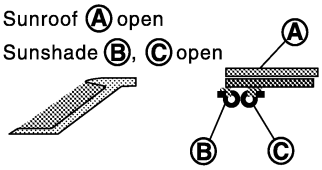
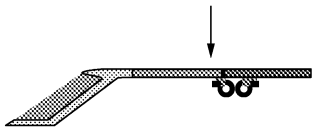
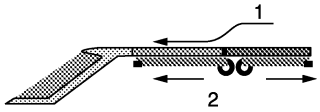
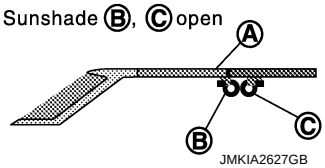
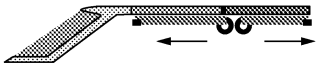
(1) PUSH
(2) OPEN 1st
(3) OPEN 2nd
(4) CLOSE 1st
(5) CLOSE 2nd



OPERATION DESCRIPTION

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

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

Before Operation	Switch condition	Roof and sunshade operation	After Operation
	PUSH	Tilts up	 JMKIA2625ZZ
Sunroof Ⓐ open Sunshade Ⓑ, Ⓒ open  JMKIA2624GB	CLOSE: 1st	Closes the sunroof	 JMKIA2622ZZ
	CLOSE: 2nd	The sunroof closes, and then the sunshade closes.	 JMKIA2626ZZ
Sunroof Ⓐ close Sunshade Ⓑ, Ⓒ open  JMKIA2627GB	CLOSE: 1st	Closes the sunshade	 JMKIA2629ZZ

AUTO OPERATION

The sunroof or sunshade operates automatically to the fully-open or fully-close 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 period 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

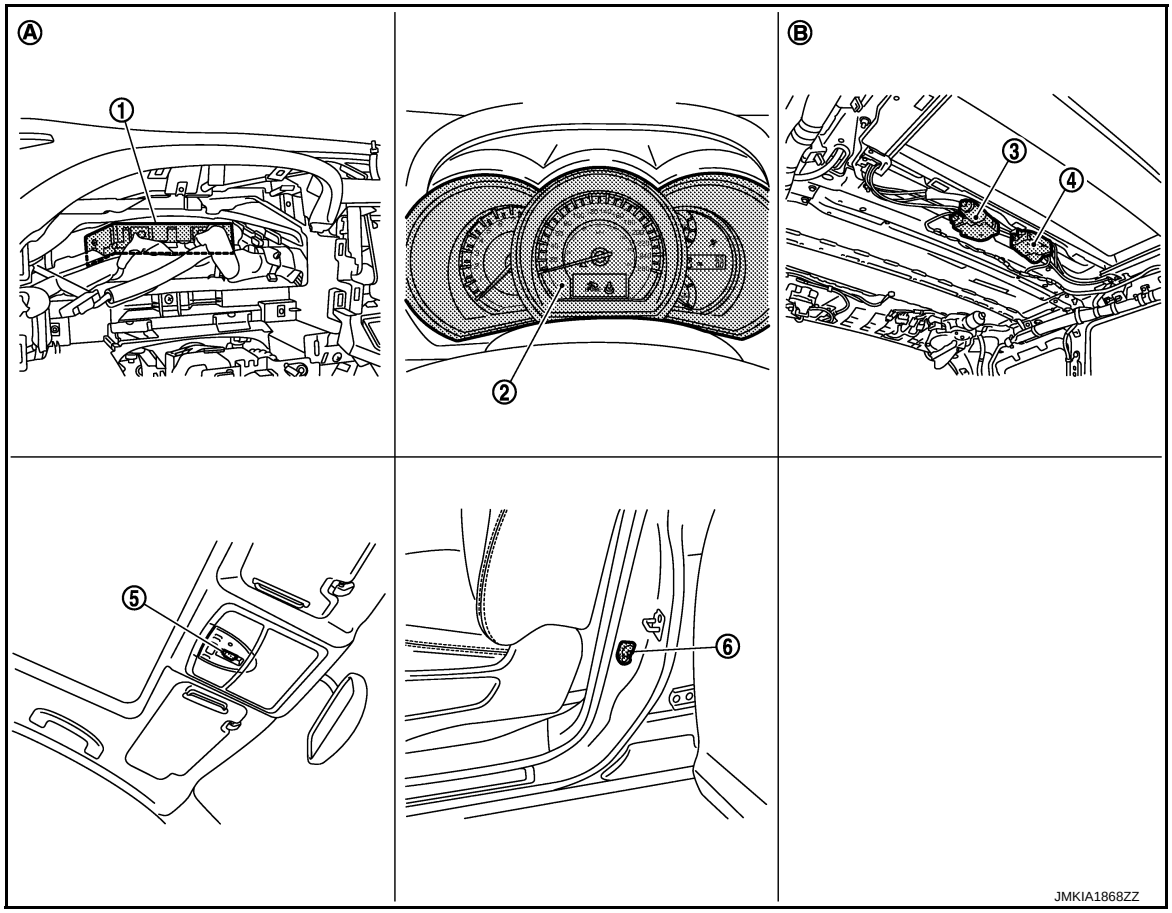
CAUTION:

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

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

Component Parts Location

INFOID:0000000009719648



1. BCM
2. Combination meter
3. Sunroof motor assembly
4. Sunshade motor assembly
5. Sunroof switch
6. Front door switch (driver side)

A. Behind the combination meter
B. Behind headlining

Component Description

INFOID:0000000009719649

Component	Function
BCM	Supplies power to sunroof motor assembly and sunshade motor assembly.
Combination meter	Transmits vehicle speed signal to sunroof motor assembly and sunshade motor assembly.
Sunroof motor assembly	It is sunroof motor and CPU integrated type that enables tilt up/down & slide open/close sunroof by sunroof switch operation. And sends sunroof switch operation signal to sunshade motor assembly via communication line.
Sunshade motor assembly	It is sunshade motor and CPU integrated type that enables open/close sunshade by sunroof switch operation.
Sunroof switch	Transmits switch operation signal to sunroof motor assembly.
Door switch	Detects door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010101256

APPLICATION ITEM
CONSULT 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.
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	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×*1	×	×
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: For models with rain sensor this mode is displayed, but is not used.
- *2: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	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”*
	OFF		Power supply position is “OFF” (Ignition switch OFF)
	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	0 - 39	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.	

NOTE:

*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.

- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000010112352

Data monitor

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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.

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000009719652

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	L
	10

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.

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

Is the measurement value normal?

YES >> GO TO 3.
NO >> Repair harness or connector.

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 harness or connector.

SUNROOF MOTOR ASSEMBLY

SUNROOF MOTOR ASSEMBLY : Diagnosis Procedure

INFOID:0000000009719653

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.

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 2.

2.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 >> Refer to BCS-98, "Removal and Installation".
NO >> Repair or replace harness.

3.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.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

SUNSHADE MOTOR ASSEMBLY

SUNSHADE MOTOR ASSEMBLY : Diagnosis Procedure

INFOID:0000000009719654

1.CHECK POWER SUPPLY

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

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

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 2.

2.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-98, "Removal and Installation".
NO >> Repair or replace harness.

3.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.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000009719655

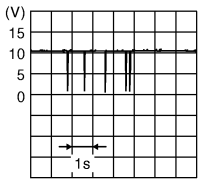
Detects door open/close condition.

Diagnosis Procedure

INFOID:0000000009719656

1.CHECK DOOR SWITCH INPUT 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.

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

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Is the inspection result normal?

YES >> INSPECTION END.
NO >> GO TO 2.

2.CHECK COMMUNICATION SIGNAL CIRCUIT

1. Disconnect sunroof motor assembly connector.
2. 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

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

Sunshade motor assembly		Ground	Continuity
Connector	Terminal		Not existed
R102	7		

Is the inspection result normal?

YES >> Replace sunroof motor assembly. Refer to RF-103, "Removal and Installation".
NO >> Repair or replace harness.

SUNROOF SWITCH

Description

INFOID:0000000009719657

Transmits switch operation signal to sunroof motor assembly.

Diagnosis Procedure

INFOID:0000000009719658

1.CHECK SUNROOF SWITCH INPUT SIGNAL

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

(+)		(–)	Condition	Voltage (V) (Approx.)
Sunroof motor assembly				
Connector	Terminals			
R101	4	Ground	Sunroof switch is operated PUSH	0
			Other than above	Battery voltage
	5		Sunroof switch is operated OPEN (1st or 2nd)	0
			Other than above	Battery voltage
	9		Sunroof switch is operated OPEN (2nd) or OPEN (2nd)	0
			Other than above	Battery voltage
	10		Sunroof switch is operated CLOSE (1st or 2nd)	0
			Other than above	Battery voltage

Is the inspection result normal?

YES >> Replace sunroof motor. Refer to RF-103, "Removal and Installation".
NO >> GO TO 2.

2.CHECK SUNROOF SWITCH CIRCUIT

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

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

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

Sunroof motor assembly			Continuity
Connector	Terminal		
R101	4	Ground	Not existed
	5		
	9		
	10		

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or the 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 harness.

4.CHECK SUNROOF SWITCH

Check sunroof switch.
Refer to RF-17, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace sunroof switch. Refer to RF-125, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009719659

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
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. Refer to RF-125, "Removal and Installation".

DOOR SWITCH

Description

INFOID:0000000009719660

Detects door open/close condition.

Component Function Check

INFOID:0000000009719661

1.CHECK FUNCTION

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

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?

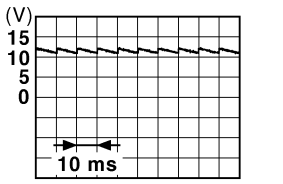
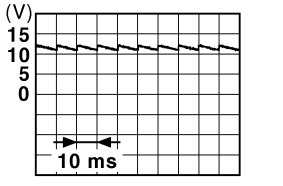
YES >> Door switch is OK.
NO >> Refer to RF-18, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009719662

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.

(+) Door switch			(–)	Voltage (V) (Approx.)
Connector		Terminal		
Driver side	B32	3	Ground	 JPMIA0011GB
Passenger side	B233	3		 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.

BCM		Door switch		Continuity
Connector	Terminal	Connector	Terminal	
M123 (Driver side)	150	B32 (Driver side)	3	Existed
M123 (Passenger side)	124	B233 (Passenger side)		

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123 (Driver side)	150		Not existed
M123 (Passenger side)	124		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "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-358, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009719663

1.CHECK DOOR SWITCH

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

Terminal			Condition	Continuity
Door switch				
Each door	3	Ground part of door switch	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-358, "Removal and Installation".

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000010101258

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT 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/AUTO	Off
	Front wiper switch INT/AUTO	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
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
	Rear wiper is not in STOP position	On
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

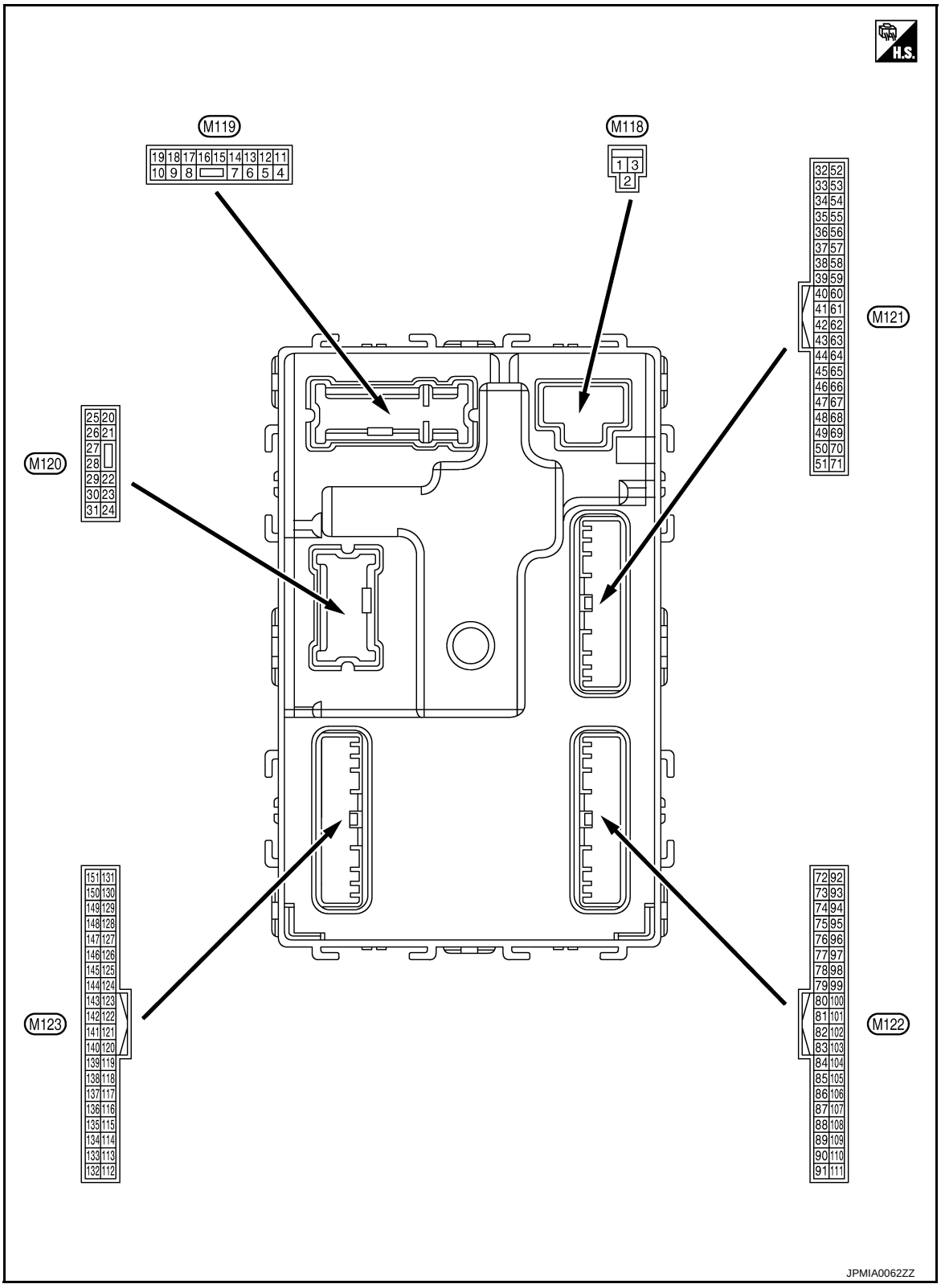
Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW **NOTE:** For models with BOSE audio system this item is not monitored.	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
TR CANCEL SW	**NOTE:** The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of Intelligent Key is not pressed	Off
	LOCK button of Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed	On
RKE-TR/BD	BACK DOOR OPEN button of Intelligent Key is not pressed	Off
	BACK DOOR OPEN button of Intelligent Key is pressed	On
RKE-PANIC	PANIC button of Intelligent Key is not pressed	Off
	PANIC button of Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed and held	On

Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of Intelligent 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
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	Back door request switch is not pressed	Off
	Back door 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
ACC RLY -F/B	**NOTE:** The item is indicated, but not monitored.	Off
CLUCH SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
	Stop lamp switch 1 signal circuit is normal	On
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	**NOTE:** The item is indicated, but not monitored.	Off
S/L -UNLOCK	**NOTE:** The item is indicated, but not monitored.	Off
S/L RELAY-F/B	**NOTE:** The item is indicated, but not monitored.	Off
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 any position other than P	Off
	Selector lever in P position	On

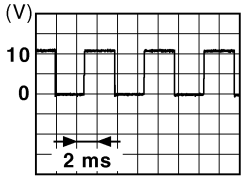
Monitor Item	Condition	Value/Status
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector 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	**NOTE:** The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	**NOTE:** The item is indicated, but not monitored.	Off
S/L RELAY-REQ	**NOTE:** The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed-ometer reading
VEH SPEED 2	While driving	Equivalent to speed-ometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Power supply position in LOCK position	Reset
	Power supply position in any position other than LOCK	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
KEY SW -SLOT	Intelligent Key is not inserted into key slot	Off
	Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
CONFRM ID ALL	The Intelligent Key ID that the key slot receives is not recognized by any Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by any Intelligent Key ID registered to BCM.	Done
CONFIRM ID4	The Intelligent Key ID that the key slot receives is not recognized by the fourth Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the fourth Intelligent Key ID registered to BCM.	Done

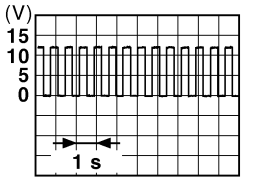
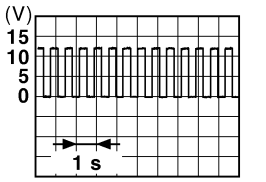
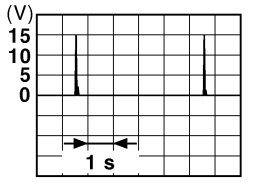
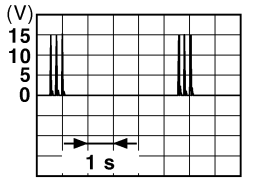
Monitor Item	Condition	Value/Status
CONFIRM ID3	The Intelligent Key ID that the key slot receives is not recognized by the third Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the third Intelligent Key ID registered to BCM.	Done
CONFIRM ID2	The Intelligent Key ID that the key slot receives is not recognized by the second Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the second Intelligent Key ID registered to BCM.	Done
CONFIRM ID1	The Intelligent Key ID that the key slot receives is not recognized by the first Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the first Intelligent Key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

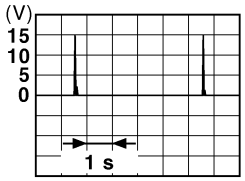
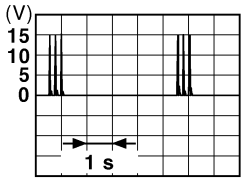
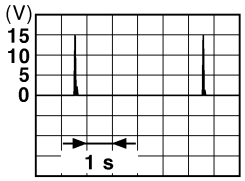
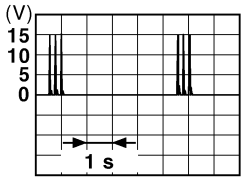
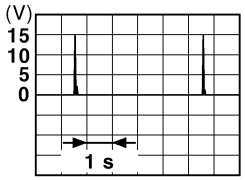
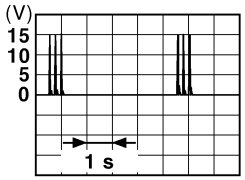
TERMINAL LAYOUT

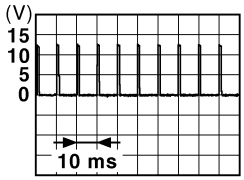
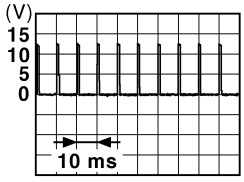
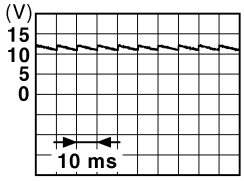
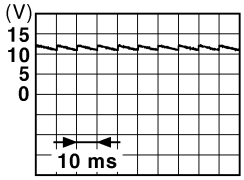


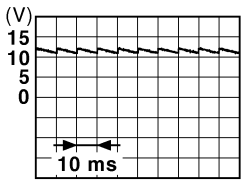
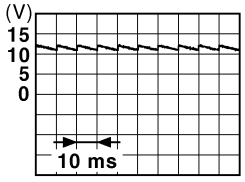
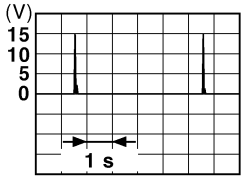
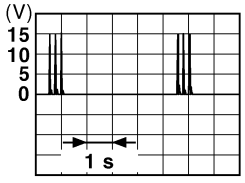
PHYSICAL VALUES

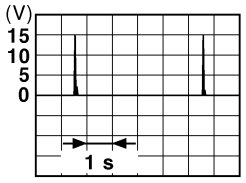
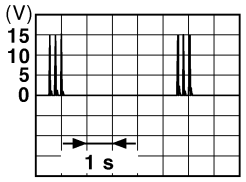
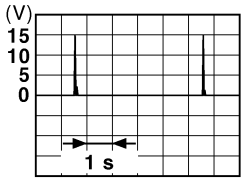
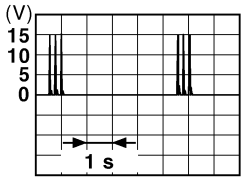
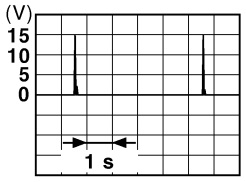
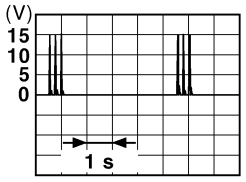
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (GR)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (L)	Ground	P/W power supply (IGN)	Output	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)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (W)	Ground	Step lamp control	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 (P)	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 (LG)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (O)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK and ON indicator lamps are not illuminated.)	Battery voltage
					ACC	0 V

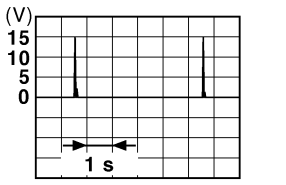
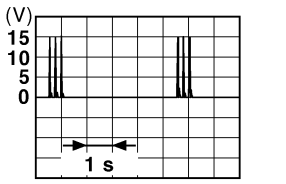
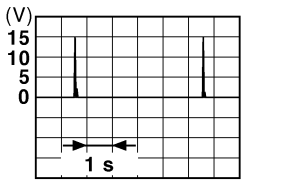
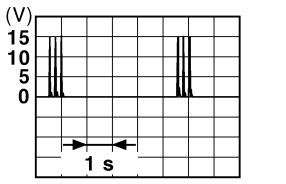
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
17 (G)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (Y)	Ground	Interior room lamp control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
23 (BR)	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage
					Other than OPEN (Back door opener actuator is not activated)	0 V
26 (G)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Operated)	Battery voltage
34 (B)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

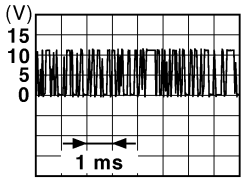
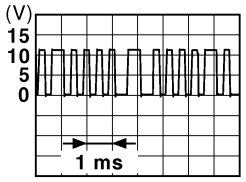
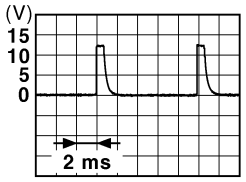
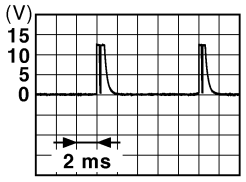
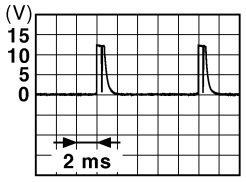
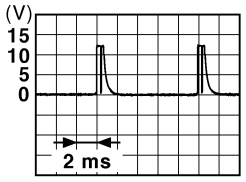
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (W)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (L)	Ground	Rear bumper antenna (-)	Output	When the back door 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	 JMKIA0063GB
39 (BR)	Ground	Rear bumper antenna (+)	Output	When the back door 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	 JMKIA0063GB
47 (L)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V

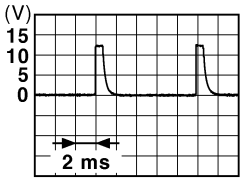
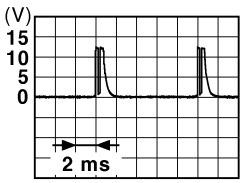
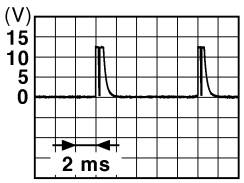
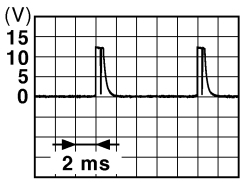
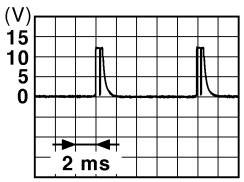
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
52 (R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0.3 V
				Ignition switch OFF		0 V
60 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	Battery voltage
61 (R)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (GR)	Ground	Intelligent key warning buzzer control	Output	Warning buzzer	Sounding	0 V
					Not sounding	Battery voltage
65 (O)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	 JPMIA0016GB 1.0 V
					Not in stop position	0 V
66 (Y)	Ground	Back door switch	Input	Back door switch	OFF (When back door closes)	 JPMIA0011GB 11.8 V
					ON (When back door opens)	0 V
67 (LG)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 JPMIA0011GB 11.8 V

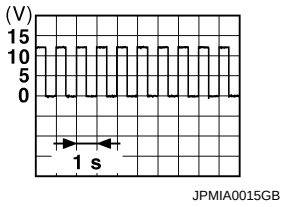
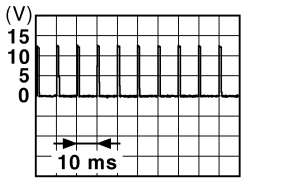
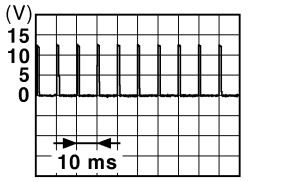
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
68 (W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	 JPMIA0011GB 11.8 V
					ON (When rear RH door opens)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	 JPMIA0011GB 11.8 V
					ON (When rear LH door opens)	0 V
72 (B)	Ground	Room antenna (-) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

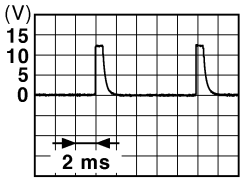
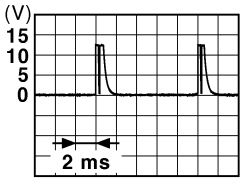
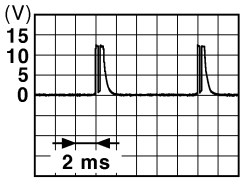
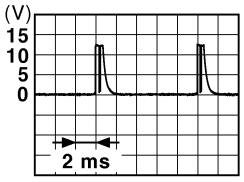
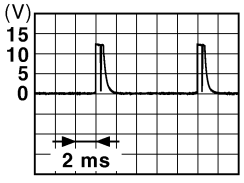
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
73 (W)	Ground	Room antenna (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
74 (Y)	Ground	Passenger door antenna (-)	Output	When the passenger door 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	 JMKIA0063GB
75 (LG)	Ground	Passenger door antenna (+)	Output	When the passenger door 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	 JMKIA0063GB

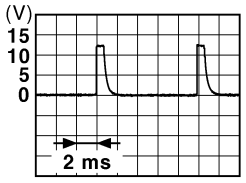
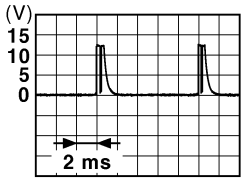
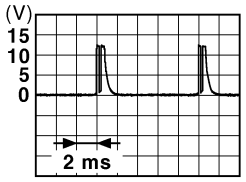
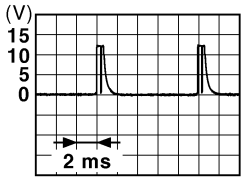
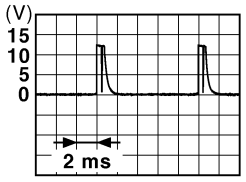
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
76 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
77 (P)	Ground	Driver door antenna (+)	Output	When the driver door 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	 JMKIA0063GB
80 (SB)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (O)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (BR)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

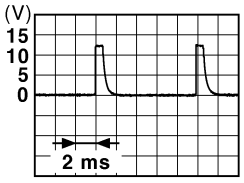
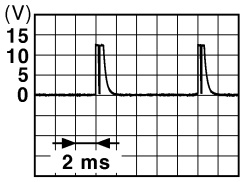
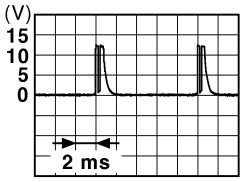
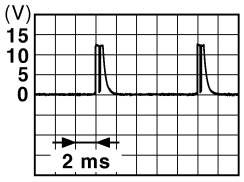
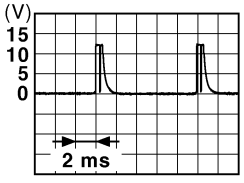
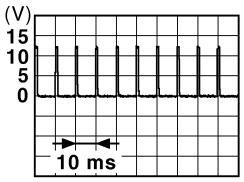
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
83 (P)	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
87 (R)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Rear wiper switch ON (Wiper intermittent dial 4)	 JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0040GB 1.3 V

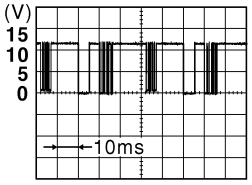
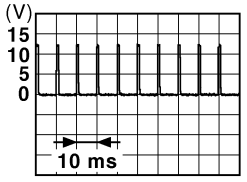
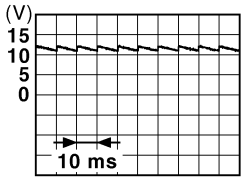
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (GR)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Rear washer switch ON (Wiper intermittent dial 4)	 JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
90 (P)	Ground	CAN-L	Input/ Output	—		—
91 (L)	Ground	CAN-H	Input/ Output	—		—

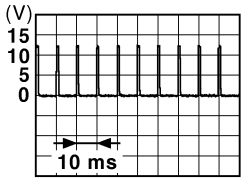
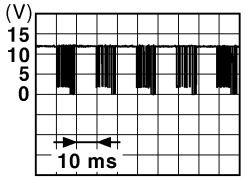
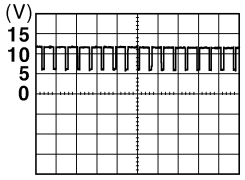
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
92 (R)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0 V
					Blinking	 JPMIA0015GB 6.5 V
					ON	Battery voltage
93 (P)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK and ACC indicator lamps are not illuminated.)	Battery voltage
					ON	0 V
95 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (Y)	Ground	CVT shift selector (detention switch) power supply	Output	—		Battery voltage
99 (V)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (P)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
101 (W)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
102 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
103 (L)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage

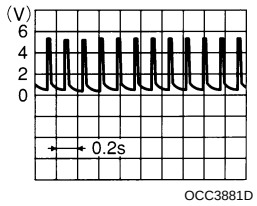
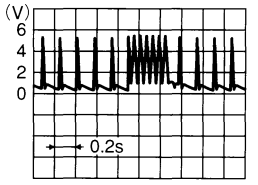
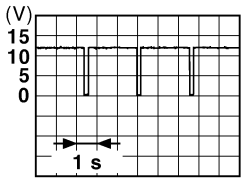
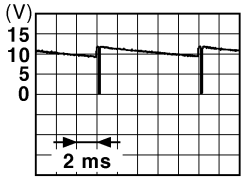
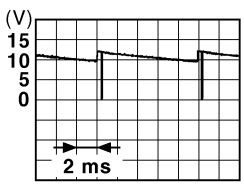
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
107 (O)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Turn signal switch LH	 JPMIA0037GB 1.3 V
					Turn signal switch RH	 JPMIA0036GB 1.3 V
					Front wiper switch LO	 JPMIA0038GB 1.3 V
					Front washer switch ON	 JPMIA0039GB 1.3 V

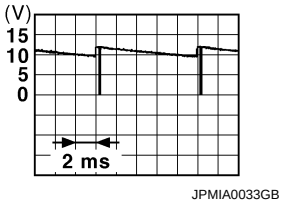
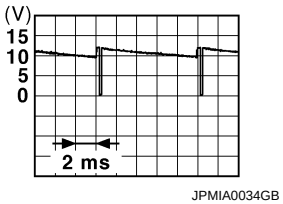
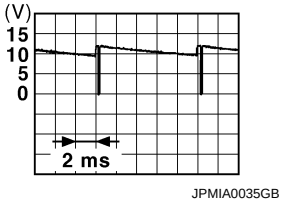
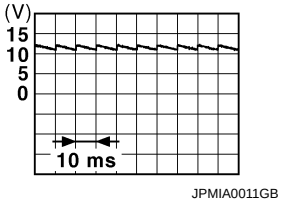
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
108 (P)	Ground	Combination switch INPUT 4	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Rear wiper switch INT (Wiper intermittent dial 4)	 JPMIA0040GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 JPMIA0039GB 1.3 V

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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		 JPMIA0156GB 8.7 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
116 (GR)	Ground	Stop lamp switch 1	Input	—		Battery voltage
118 (L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
119 (W)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (unlock sensor switch OFF)	 JPMIA0012GB 1.1 V
					UNLOCK status (unlock sensor switch ON)	0 V
121 (Y)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
				When Intelligent Key is not inserted into key slot		0 V
123 (G)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V

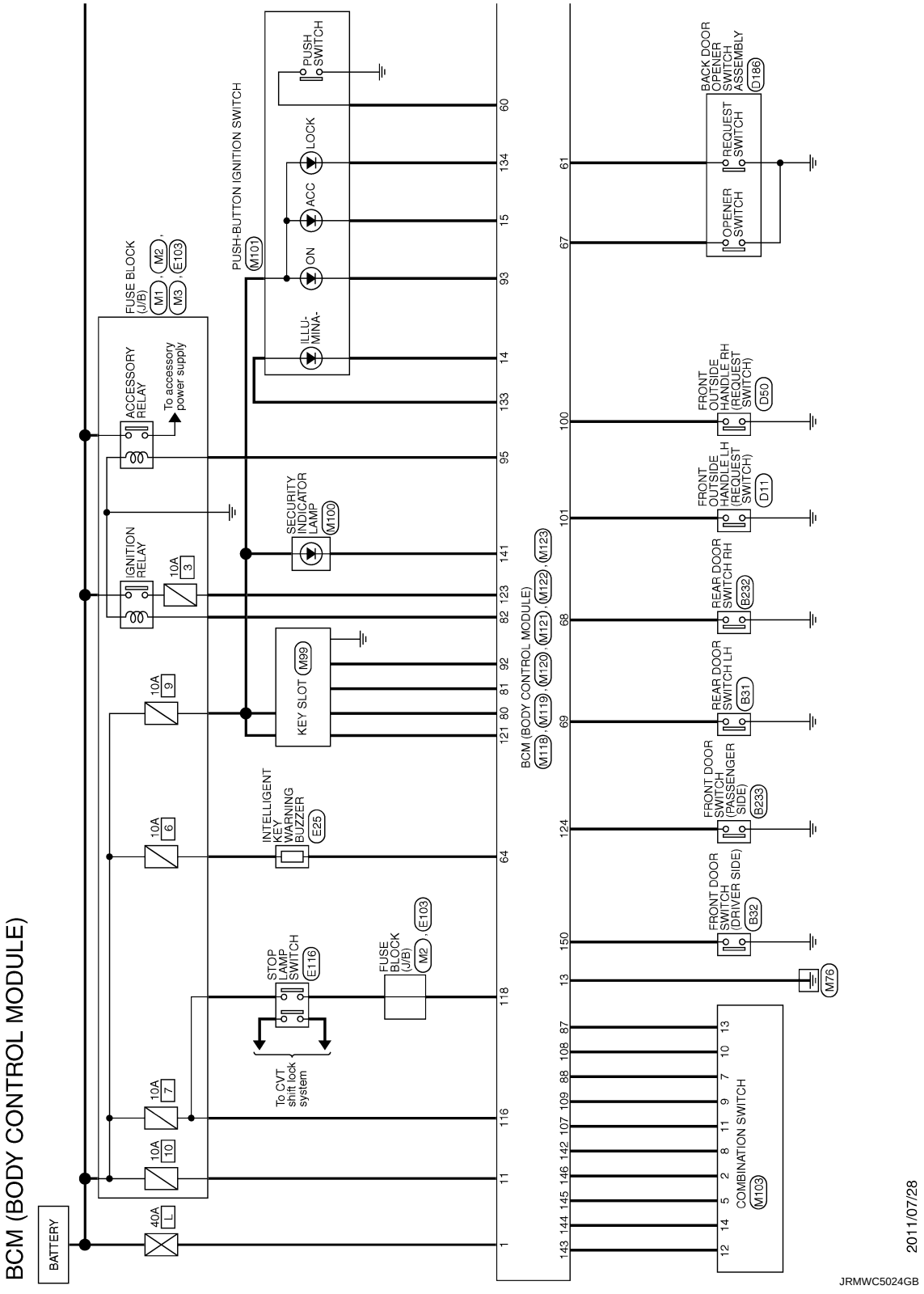
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
130 (BR)	Ground	Rear window defogger switch	Input	Ignition switch ON	Rear window defogger switch OFF	 JPMIA0012GB 1.1 V
					Rear window defogger switch ON	0 V
132 (G)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2 V
				Ignition switch OFF or ACC		Battery voltage
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps OFF)	9.5 V
					ON (When tail lamps ON)	**NOTE:** The pulse width of this wave is varied by the illumination brightening/dimming level.  JPMIA0159GB
					OFF	0 V
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF (ACC and ON indicator lamps are not illuminated.)	Battery voltage
					ON	0 V
137 (P)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (V)	Ground	Receiver and sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

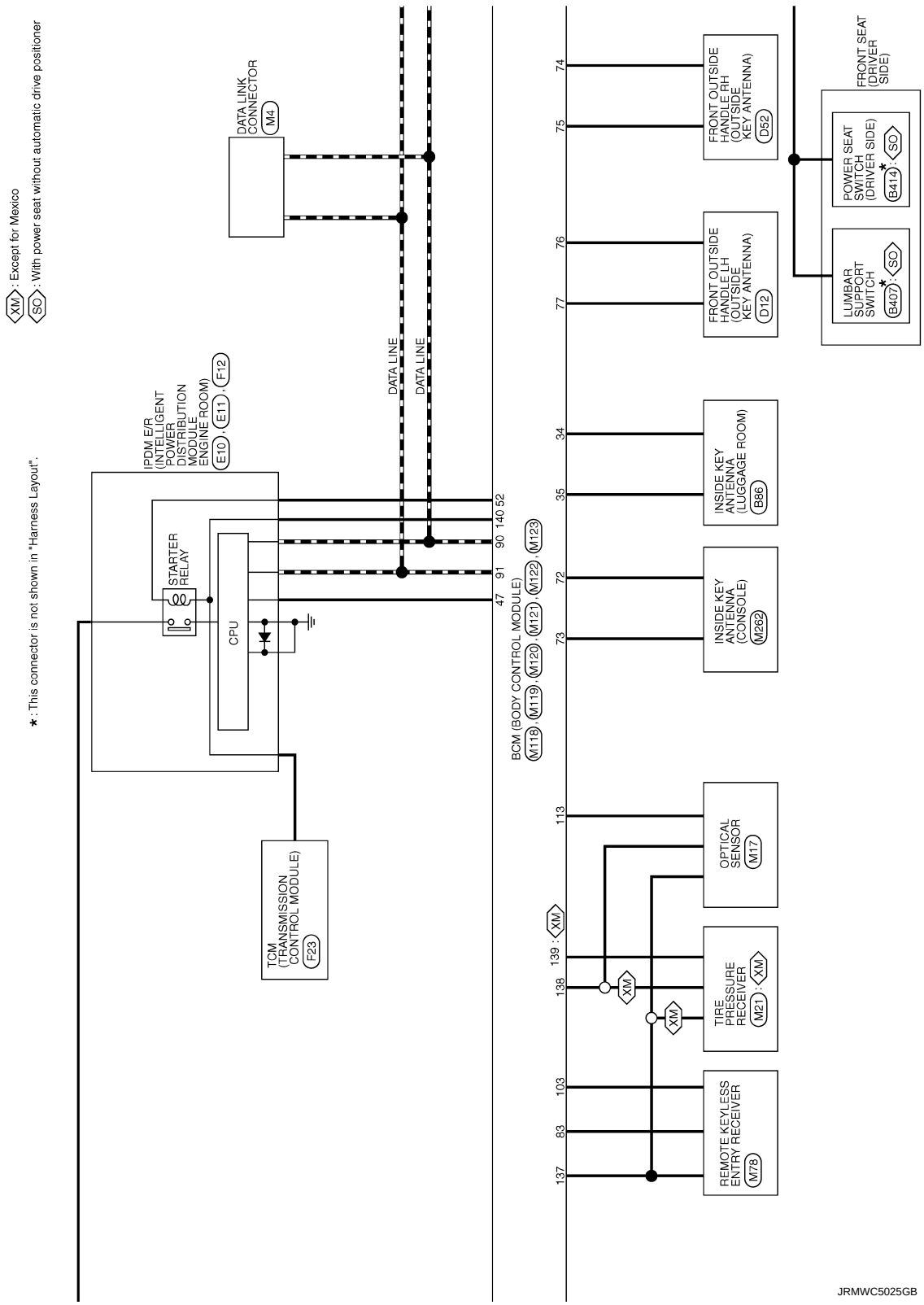
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
139 (O)	Ground	Tire pressure receiver communication	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
140 (GR)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V
141 (O)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (L)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

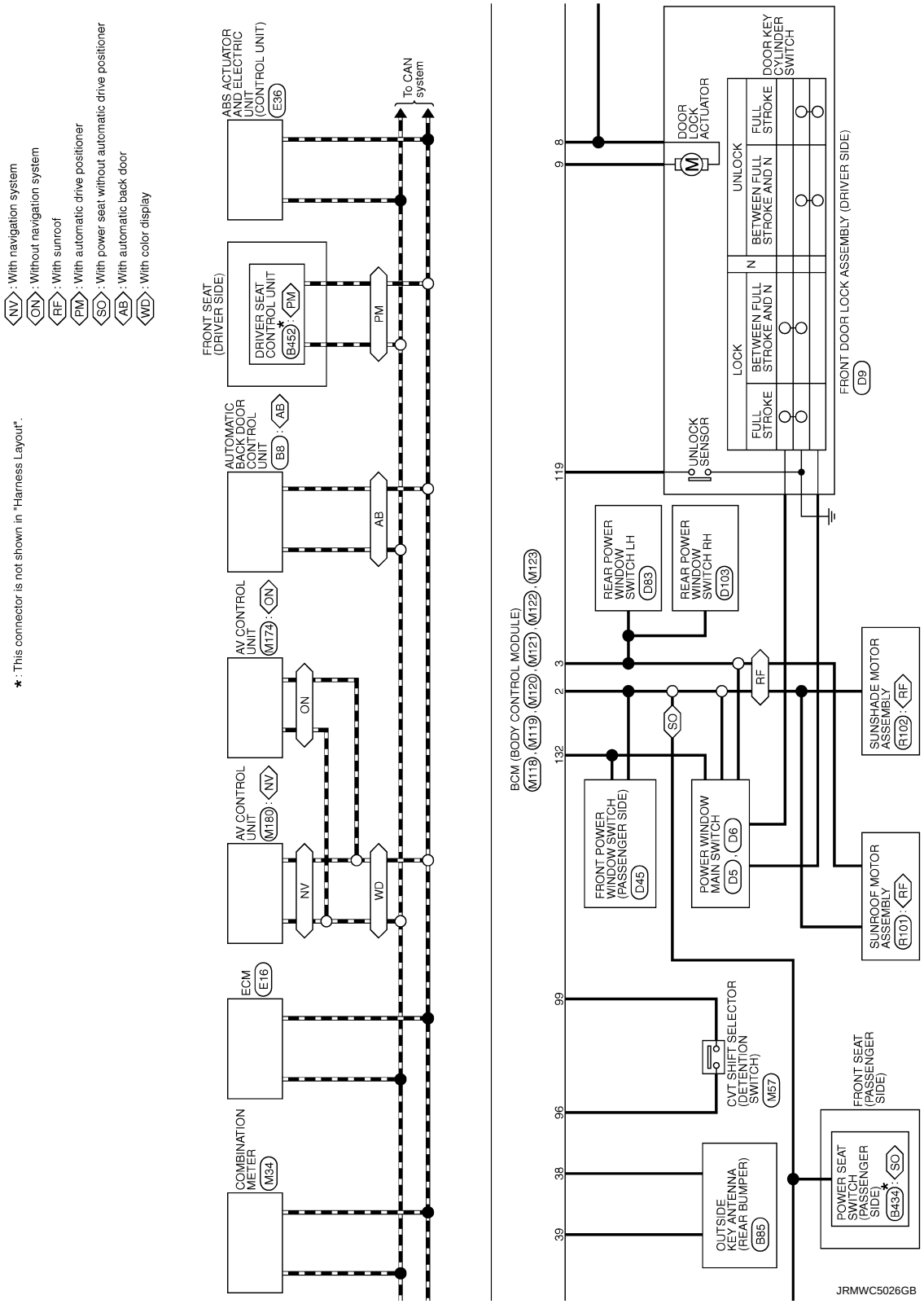
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
144 (P)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7 V
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
145 (V)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Front wiper switch INT/ AUTO	 JPMIA0034GB 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
146 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	 JPMIA0035GB 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	 JPMIA0011GB 11.8 V
					ON (When driver door opens)	0 V
151 (G)	Ground	Rear window defogger relay control	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

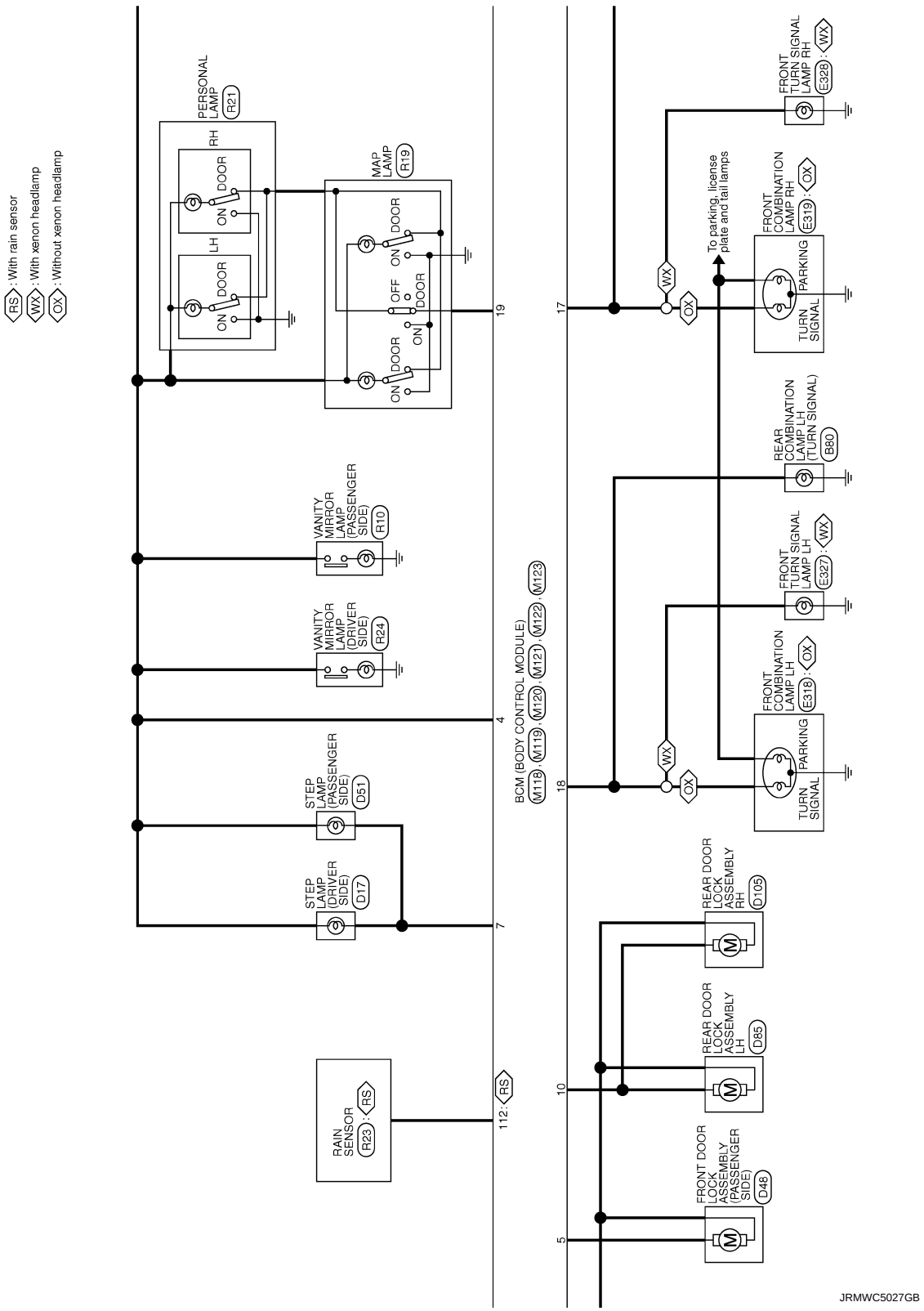
Wiring Diagram - BCM -

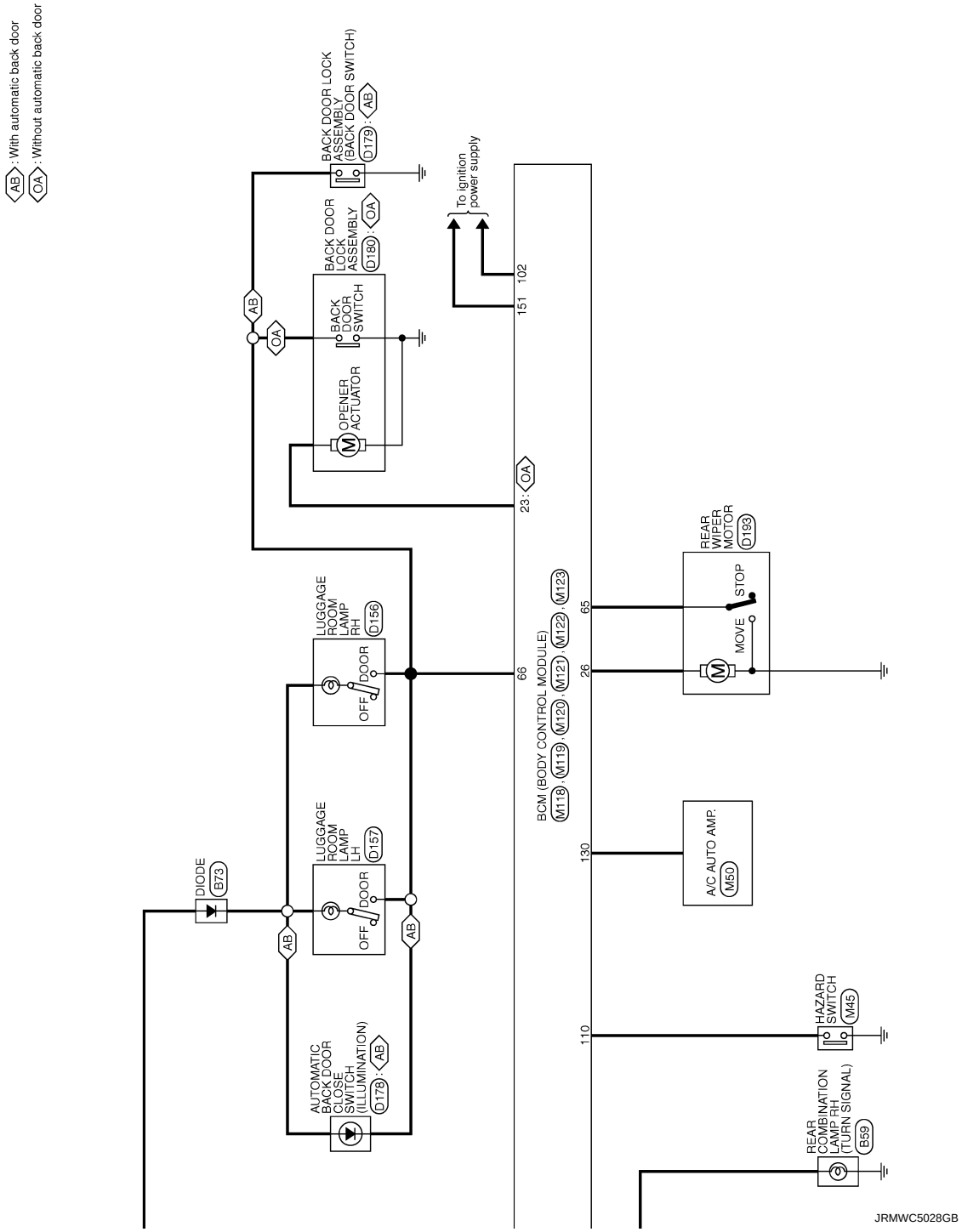
INFOID:0000000010101259

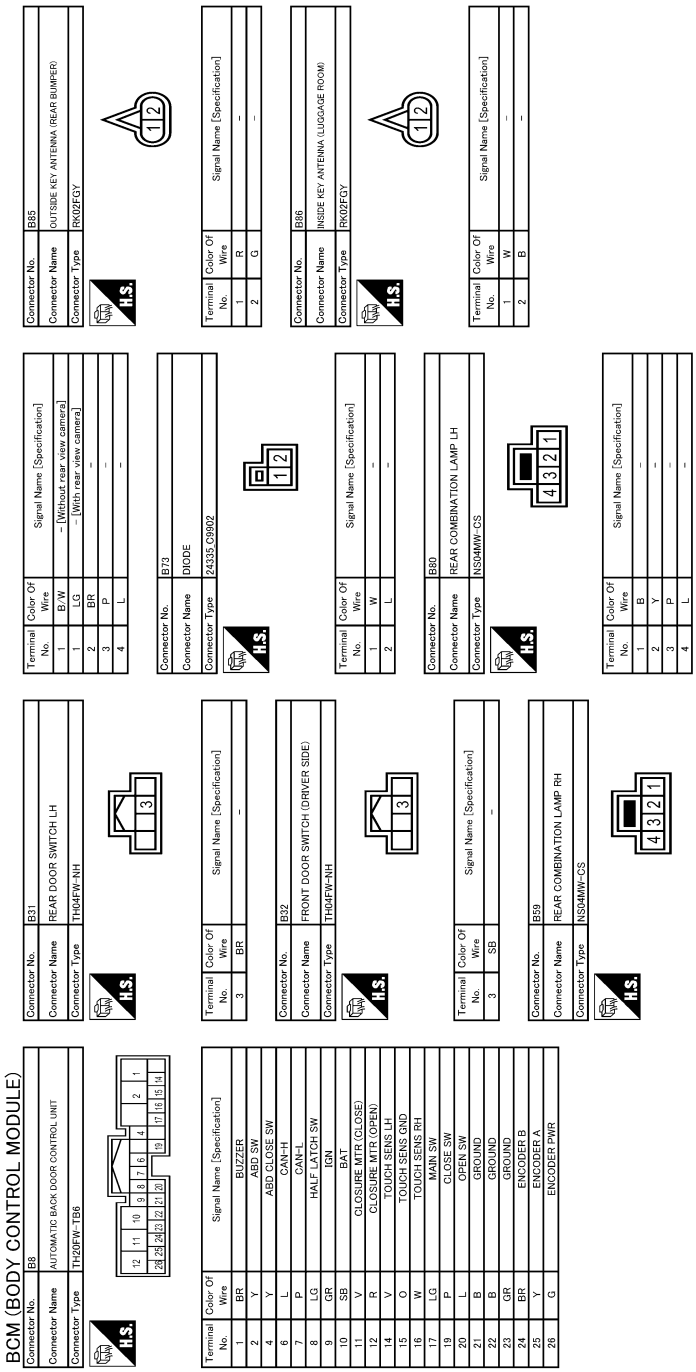



XM : Except for Mexico
SO : With power seat without automatic drive positioner
*: This connector is not shown in "Harness Layout".
DATA LINK CONNECTOR M4
DATA LINE
DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E10, E11, F12
STARTER RELAY
CPU
TCM (TRANSMISSION CONTROL MODULE) F23
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
47 91 90 140 52
137 83 103 138 139 113 73 72 35 34 77 76 75 74
REMOTE KEYLESS ENTRY RECEIVER M78
TIRE PRESSURE RECEIVER M21
OPTICAL SENSOR M17
INSIDE KEY ANTENNA (CONSOLE) M262
INSIDE KEY ANTENNA (LUGGAGE ROOM) B86
FRONT OUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA) D12
FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA) D52
FRONT SEAT (DRIVER SIDE)
LUMBAR SUPPORT SWITCH B407
POWER SEAT SWITCH (DRIVER SIDE) B414
JRMWC5025GB

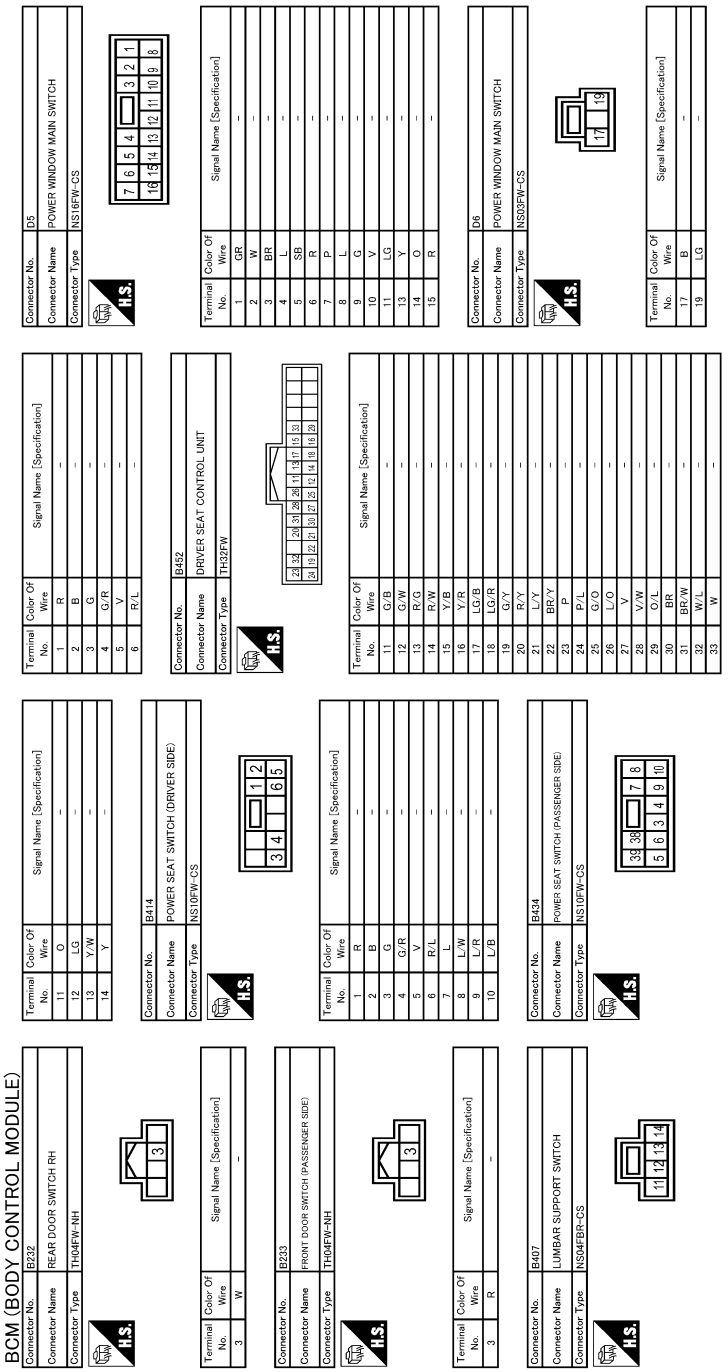

NV : With navigation system
ON : Without navigation system
RF : With sunroof
PM : With automatic drive positioner
SO : With power seat without automatic drive positioner
AB : With automatic back door
WD : With color display
*: This connector is not shown in "Harness Layout".
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E36
To CAN system
FRONT SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT B452*
PM
AUTOMATIC BACK DOOR CONTROL UNIT B8
AB
AV CONTROL UNIT M174
ON
AV CONTROL UNIT M180
NV
WD
ECM E16
COMBINATION METER M34
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
DOOR LOCK ACTUATOR
UNLOCK SENSOR
DOOR KEY CYLINDER SWITCH
LOCK
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D9
REAR POWER WINDOW SWITCH LH D83
REAR POWER WINDOW SWITCH RH D103
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D45
POWER WINDOW MAIN SWITCH D5, D6
SUNSHADE MOTOR ASSEMBLY R102
SUNROOF MOTOR ASSEMBLY R101
CVT SHIFT SELECTOR (DETENTION SWITCH) M57
OUTSIDE KEY ANTENNA (REAR BUMPER) B85
POWER SEAT SWITCH (PASSENGER SIDE)* B434
FRONT SEAT (PASSENGER SIDE)
JRMWC5026GB


RS : With rain sensor
WX : With xenon headlamp
OX : Without xenon headlamp
PERSONAL LAMP R21
RH
LH
DOOR
ON
MAP LAMP R19
OFF
VANITY MIRROR LAMP (PASSENGER SIDE) R10
VANITY MIRROR LAMP (DRIVER SIDE) R24
STEP LAMP (PASSENGER SIDE) D51
STEP LAMP (DRIVER SIDE) D17
RAIN SENSOR R23
112: RS
BCM (BODY CONTROL MODULE)
M118, M119, M120, M121, M122, M123
19
4
7
10
5
17
18
WX
OX
To parking, license plate and tail lamps
FRONT TURN SIGNAL LAMP RH E328
FRONT COMBINATION LAMP RH E319
TURN SIGNAL
PARKING
REAR COMBINATION LAMP LH (TURN SIGNAL) B80
FRONT TURN SIGNAL LAMP LH E327
FRONT COMBINATION LAMP LH E318
REAR DOOR LOCK ASSEMBLY RH D105
REAR DOOR LOCK ASSEMBLY LH D85
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D48
JRMWC5027GB


AB : With automatic back door
OA : Without automatic back door
BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH)
D179
AB
BACK DOOR LOCK ASSEMBLY
D180
OA
BACK DOOR SWITCH
OPENER ACTUATOR
To ignition power supply
151
102
23 : OA
LUGGAGE ROOM LAMP RH
D156
LUGGAGE ROOM LAMP LH
D157
DOOR
OFF
66
BCM (BODY CONTROL MODULE)
M118, M119, M120, M121, M122, M123
65
26
130
110
REAR WIPER MOTOR
D193
STOP
MOVE
A/C AUTO AMP.
M50
HAZARD SWITCH
M45
REAR COMBINATION LAMP RH (TURN SIGNAL)
B59
DIODE
B73
AUTOMATIC BACK DOOR CLOSE SWITCH (ILLUMINATION)
D178
JRMWC5028GB



JRMWE5830GB



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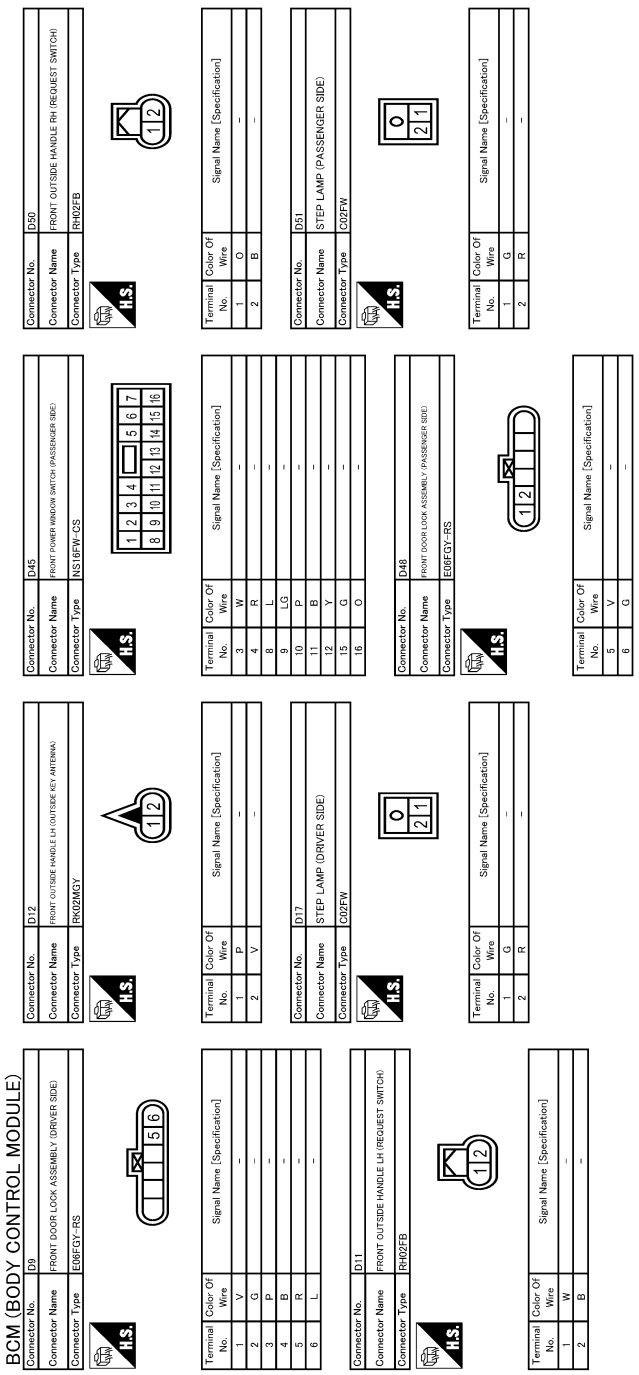

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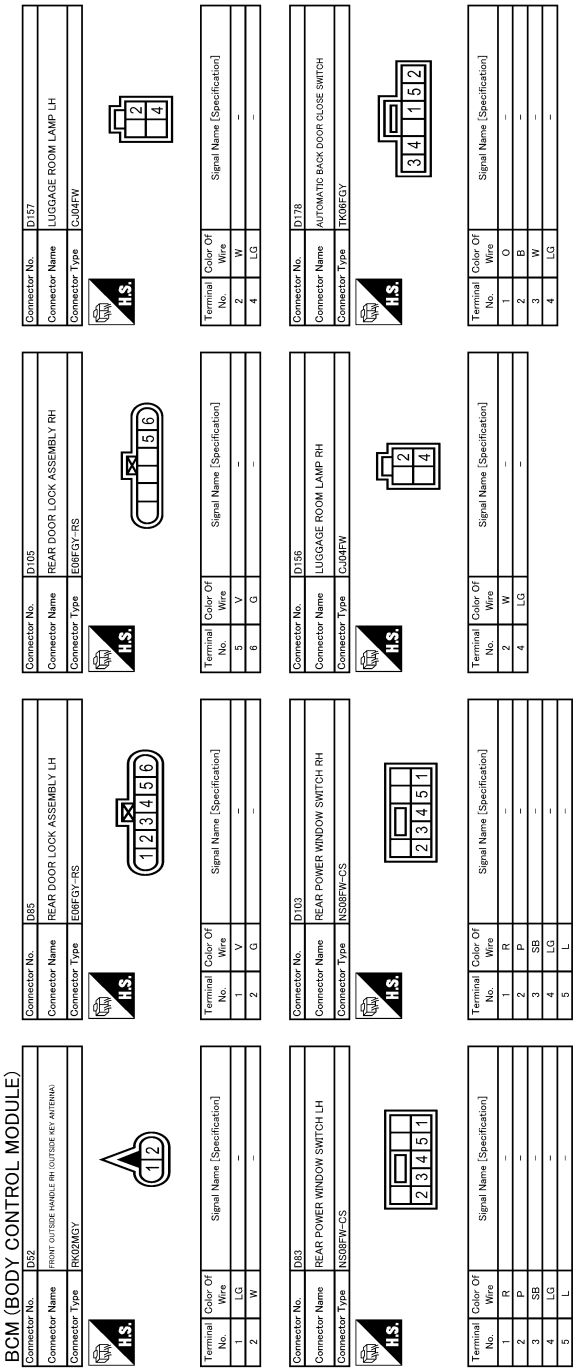

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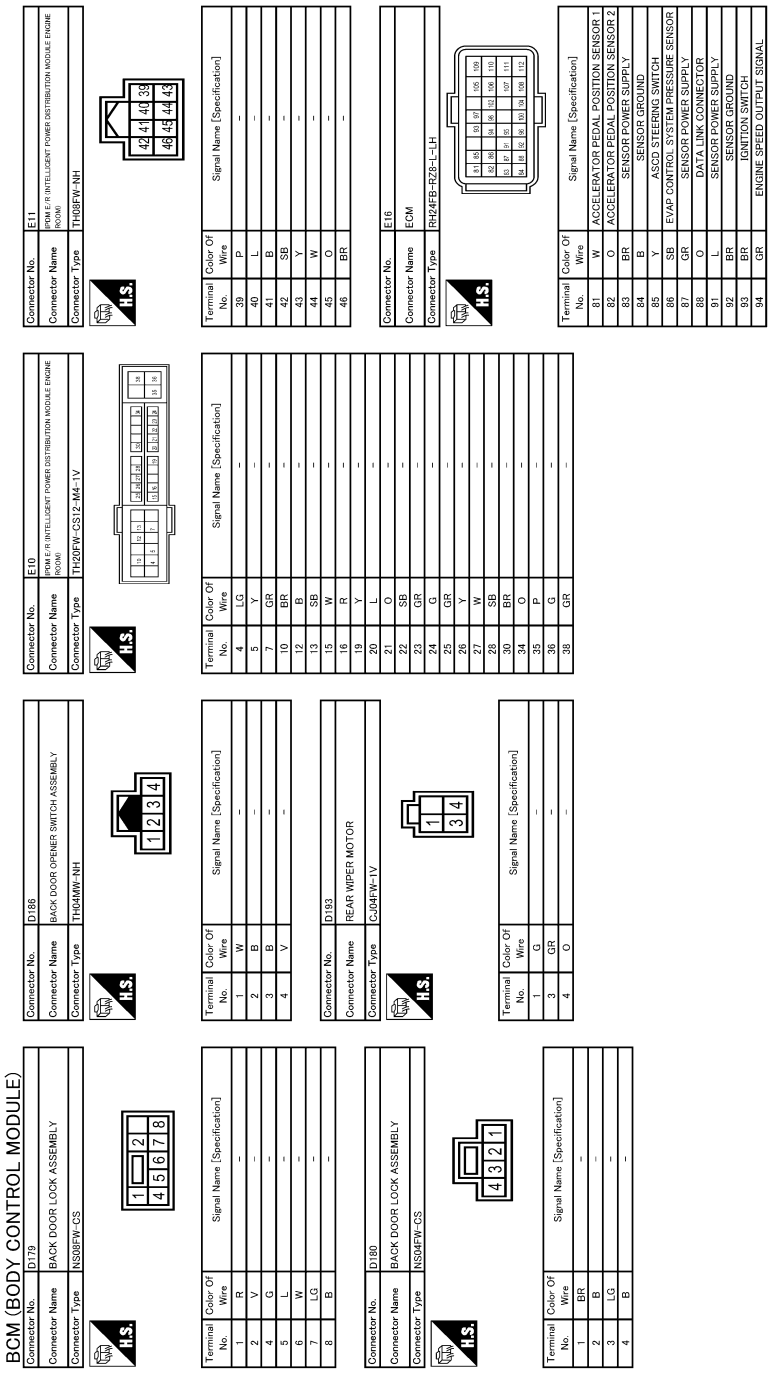

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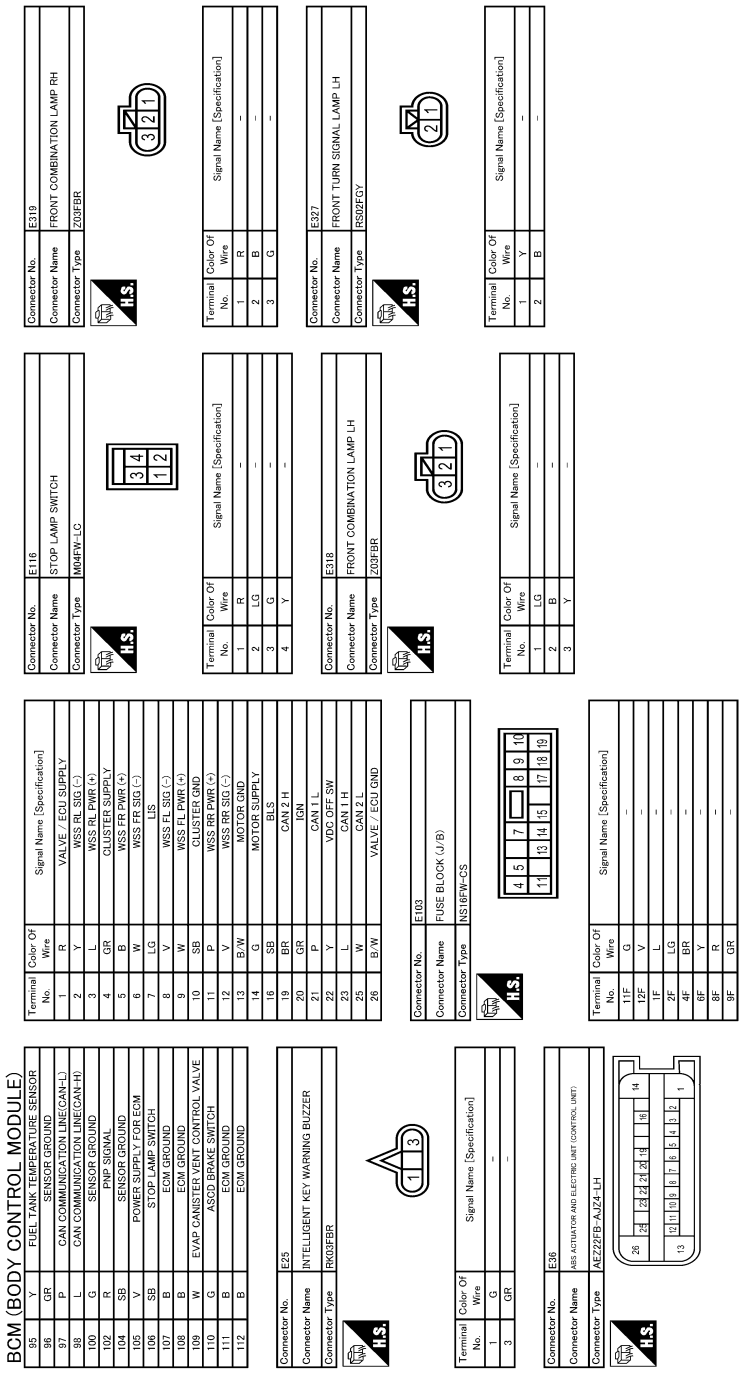

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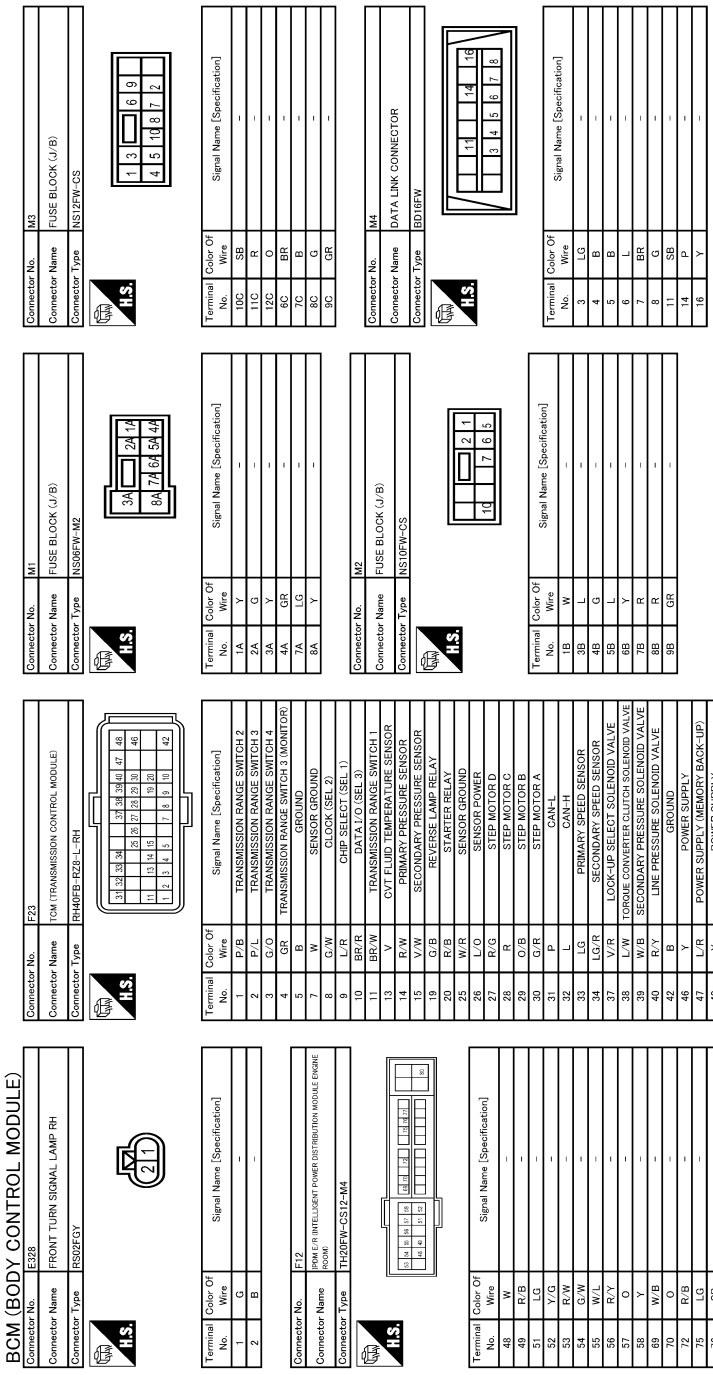

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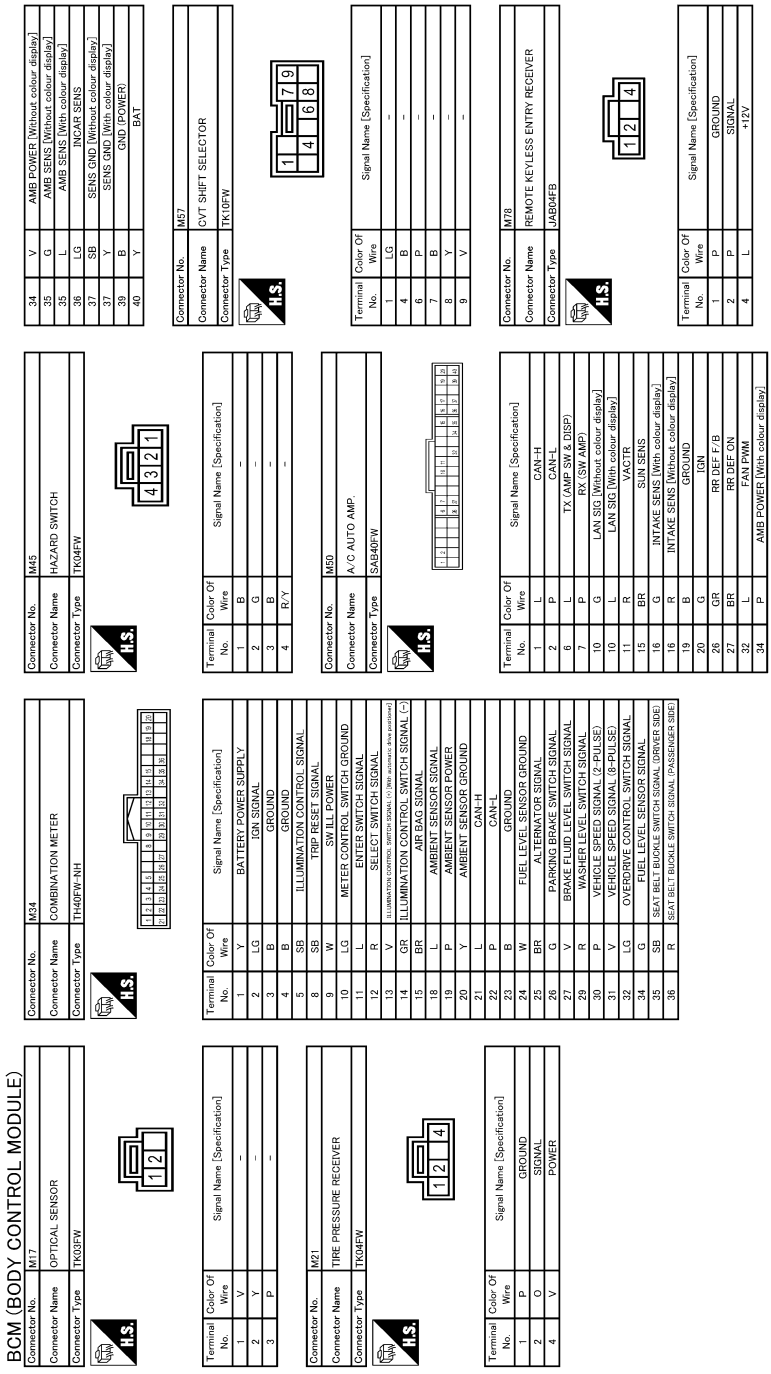

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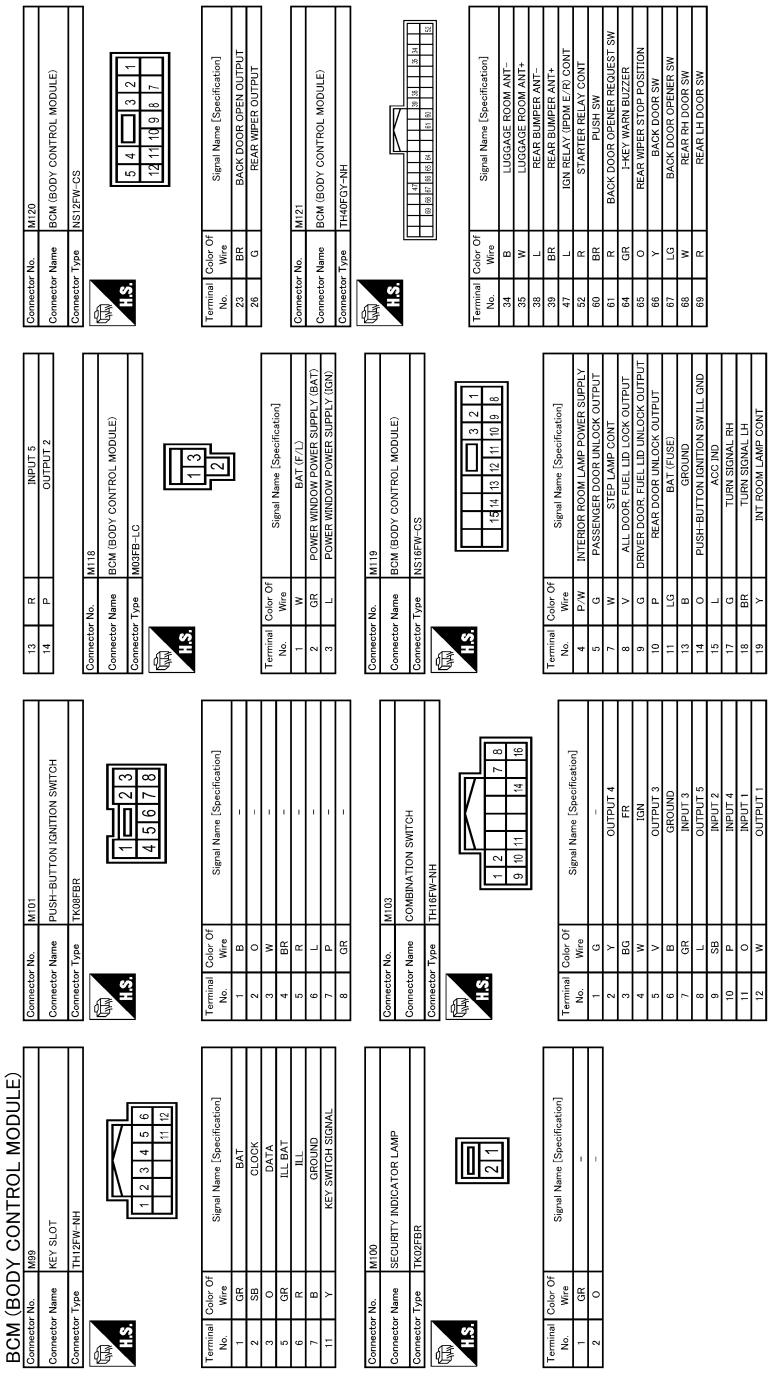


JRMWE5838GB

BCM (BODY CONTROL MODULE)

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

Terminal No.	Color Of Wire	Signal Name [Specification]
72	B	ROOM ANT–
73	W	ROOM ANT+
74	Y	PASSENGER DOOR ANT–
75	LG	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT–
77	P	DRIVER DOOR ANT+
80	SB	NATS ANT AMP.
81	O	NATS ANT AMP.
82	BR	IGN RELAY (F/B) CONT
83	P	KEYLESS ENTRY RECEIVER COMM
87	R	COMBI SW INPUT 5
88	GR	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
92	R	KEY SLOT ILL CONT
93	P	ON IND
95	L	ACC RELAY CONT
96	Y	CVT SHIFT SELECTOR POWER SUPPLY
99	V	SHIFT P
100	P	PASSENGER DOOR REQUEST SW
101	W	DRIVER DOOR REQUEST SW
102	Y	BLOWER RELAY CONT
103	L	KEYLESS ENTRY RECEIVER POWER SUPPLY
107	O	COMBI SW INPUT 1
108	P	COMBI SW INPUT 4
109	SB	COMBI SW INPUT 2
110	G	HAZARD SW

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

Terminal No.	Color Of Wire	Signal Name [Specification]
112	R	RAIN SENSOR SERIAL LINK
113	P/B	OPTICAL SENSOR
116	GR	STOP LAMP SW 1
118	L	STOP LAMP SW 2
119	W	DR DOOR UNLOCK SENSOR
121	Y	KEY SLOT SW
123	G	IGN F/B
124	R	PASSENGER DOOR SW
130	BR	REAR DEFOGGER SW
132	G	POWER WINDOW SW COMM
133	W	PUSH-BUTTON IGNITION SW ILL POWER
134	R	LOCK IND
137	P	RECEIVER SENSOR GND
138	V	RECEIVER SENSOR POWER SUPPLY
139	O	TIRE PRESS RECEIVER COMM
140	GR	SHIFT N/P
141	O	SECURITY IND LAMP CONT
142	L	COMBI SW OUTPUT 5
143	W	COMBI SW OUTPUT 1
144	P	COMBI SW OUTPUT 2
145	V	COMBI SW OUTPUT 3
146	Y	COMBI SW OUTPUT 4
150	SB	DRIVER DOOR SW
151	G	REAR WINDOW DEFOGGER RELAY CONT

Connector No.	M174
Connector Name	AV CONTROL UNIT
Connector Type	TH32FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
76	LG	AV COMM (L)
77	SB	AV COMM (H)
78	LG	AV COMM (L)
79	SB	AV COMM (H)
80	P	CAN-L
81	L	CAN-H
82	V	SW GND
86	SHIELD	SHIELD
87	R	TEL VOICE SIGNAL (+)
88	L	TEL VOICE SIGNAL (–)
92	V	VEHICLE SPEED SIGNAL (8-PULSE)
93	G	PARKING BRAKE [Without BOSE system]
94	SB	REVERSE
95	G	IGNITION
96	W	DISK EJECT SIGNAL
102	W	AUX SOUND SIGNAL GND
103	B	AUX SOUND SIGNAL LH (+)
104	R	AUX SOUND SIGNAL RH (+)

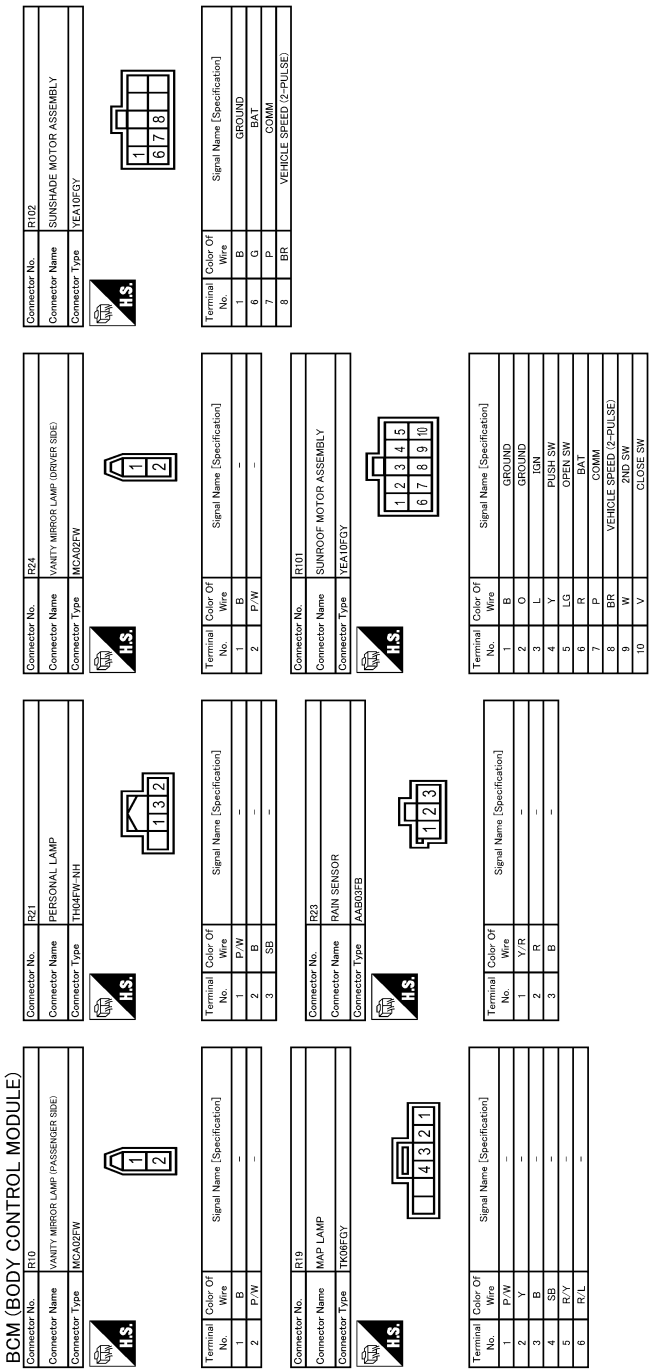
Connector No.	M180
Connector Name	AV CONTROL UNIT
Connector Type	TH32FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
65	LG	PARKING BRAKE
67	L	–
68	LG	–
71	SHIELD	SHIELD
72	B	MICROPHONE VCC
73	R	COMM (CONT– DISP)
74	P	CAN–L
75	LG	AV COMM (L)
76	LG	AV COMM (L)
79	R	ILLUMINATION SIGNAL
80	G	IGNITION
81	SB	REVERSE
82	V	VEHICLE SPEED SIGNAL (8-PULSE)
83	B	–
87	W	MICROPHONE SIGNAL
88	B	–
89	W	–
90	L	CAN–H
91	SB	AV COMM (H)
92	SB	AV COMM (H)

Connector No.	M262
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	–
2	B	–

JRMWE5839GB



JRMWE5840GB

Fail-safe

INFOID:0000000010101260

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

Display contents of CONSULT	Fail-safe	Cancellation
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
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Starter control relay signal • Starter relay status signal
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)
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 are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
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
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

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.

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:
If rain sensor malfunction is detected when ignition switch is turned OFF ⇒ ON and front wiper switch is INT/AUTO position, BCM operates a fail-safe control.

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.
When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation
1. More than 1 minute is passed after the rear wiper stop.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

INFOID:0000000010101261

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 • U1010: CONTROL UNIT(CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• 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 • B2608: STARTER RELAY • B260A: IGNITION RELAY • B260F: ENG STATE SIG LOST • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26EA: KEY REGISTRATION • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1734: CONTROL UNIT
6	• B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:0000000010101262

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, refer to RF-9, "COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM	—	—	—	—	BCS-42
U1010: CONTROL UNIT(CAN)	—	—	—	—	BCS-43
U0415: VEHICLE SPEED SIG	—	—	—	—	BCS-44
B2190: NATS ANTENNA AMP	×	—	—	—	SEC-42
B2191: DIFFERENCE OF KEY	×	—	—	—	SEC-45
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-46
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-48
B2195: ANTI SCANNING	×	—	—	—	SEC-49
B2553: IGNITION RELAY	—	×	—	—	PCS-50
B2555: STOP LAMP	—	×	—	—	SEC-50
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-52
B2557: VEHICLE SPEED	×	×	×	—	SEC-54
B2560: STARTER CONT RELAY	×	×	×	—	SEC-55
B2562: LOW VOLTAGE	—	×	—	—	BCS-45
B2601: SHIFT POSITION	×	×	×	—	SEC-56
B2602: SHIFT POSITION	×	×	×	—	SEC-59
B2603: SHIFT POSI STATUS	×	×	×	—	SEC-61
B2604: PNP SW	×	×	×	—	SEC-64
B2605: PNP SW	×	×	×	—	SEC-66
B2608: STARTER RELAY	×	×	×	—	SEC-68
B260A: IGNITION RELAY	×	×	×	—	PCS-52
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-70
B2614: ACC RELAY CIRC	—	×	×	—	PCS-54
B2615: BLOWER RELAY CIRC	—	×	×	—	PCS-57
B2616: IGN RELAY CIRC	—	×	×	—	PCS-60
B2617: STARTER RELAY CIRC	×	×	×	—	SEC-72
B2618: BCM	×	×	×	—	PCS-63
B261A: PUSH-BTN IGN SW	—	×	×	—	SEC-75
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	—	SEC-78
B2622: INSIDE ANTENNA	—	×	—	—	DLK-91
B2623: INSIDE ANTENNA	—	×	—	—	DLK-93
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	—	SEC-71
C1704: LOW PRESSURE FL	—	—	—	×	WT-23
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	

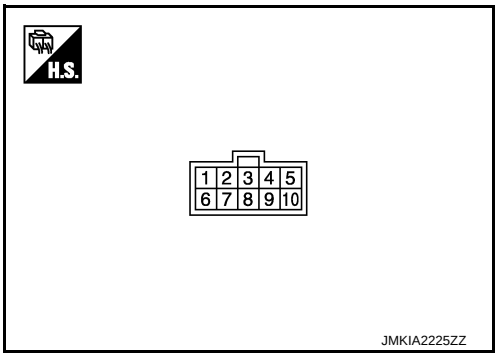
CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference
C1708: [NO DATA] FL	—	—	—	×	WT-25
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-28
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-29
C1734: CONTROL UNIT	—	—	—	×	WT-30

SUNROOF MOTOR ASSEMBLY

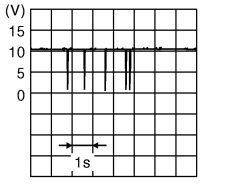
Reference Value

INFOID:0000000009719669

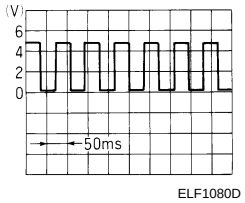
TERMINAL LAYOUT



PHYSICAL VALUES

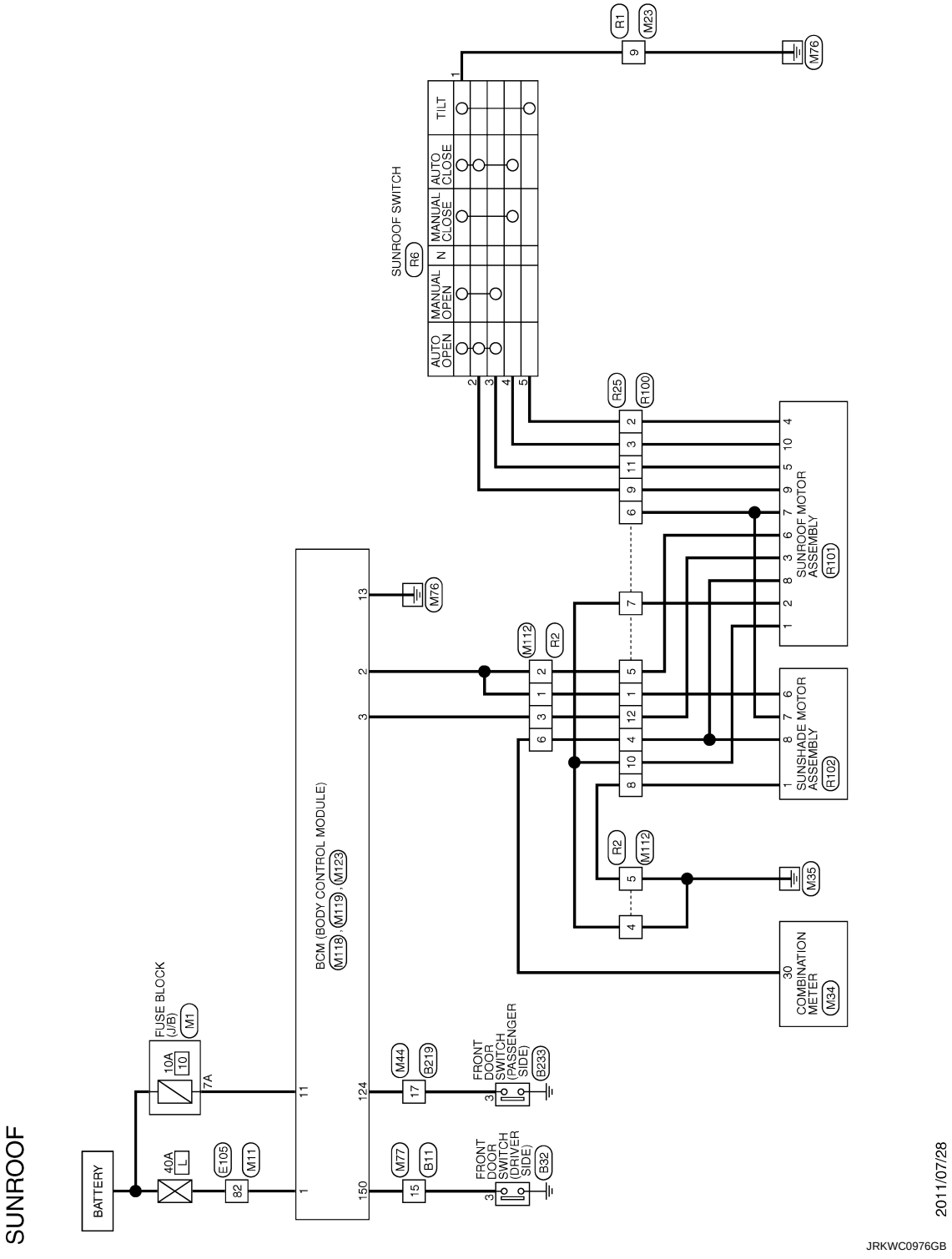
Terminal No. (Wire color)		Description		Condition		Voltage (V) (Approx.)
+	-	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	—		0
2 (O)	Ground	Ground	—	—		0
3 (L)	Ground	RAP signal	Input	Ignition switch ON		Battery voltage
				Within 45 second after ignition switch is turned to OFF.		Battery voltage
				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 (R)	Ground	Battery voltage	—	—		Battery voltage
7 (P)	Ground	Communication line	Input/ Output	Ignition switch ON		

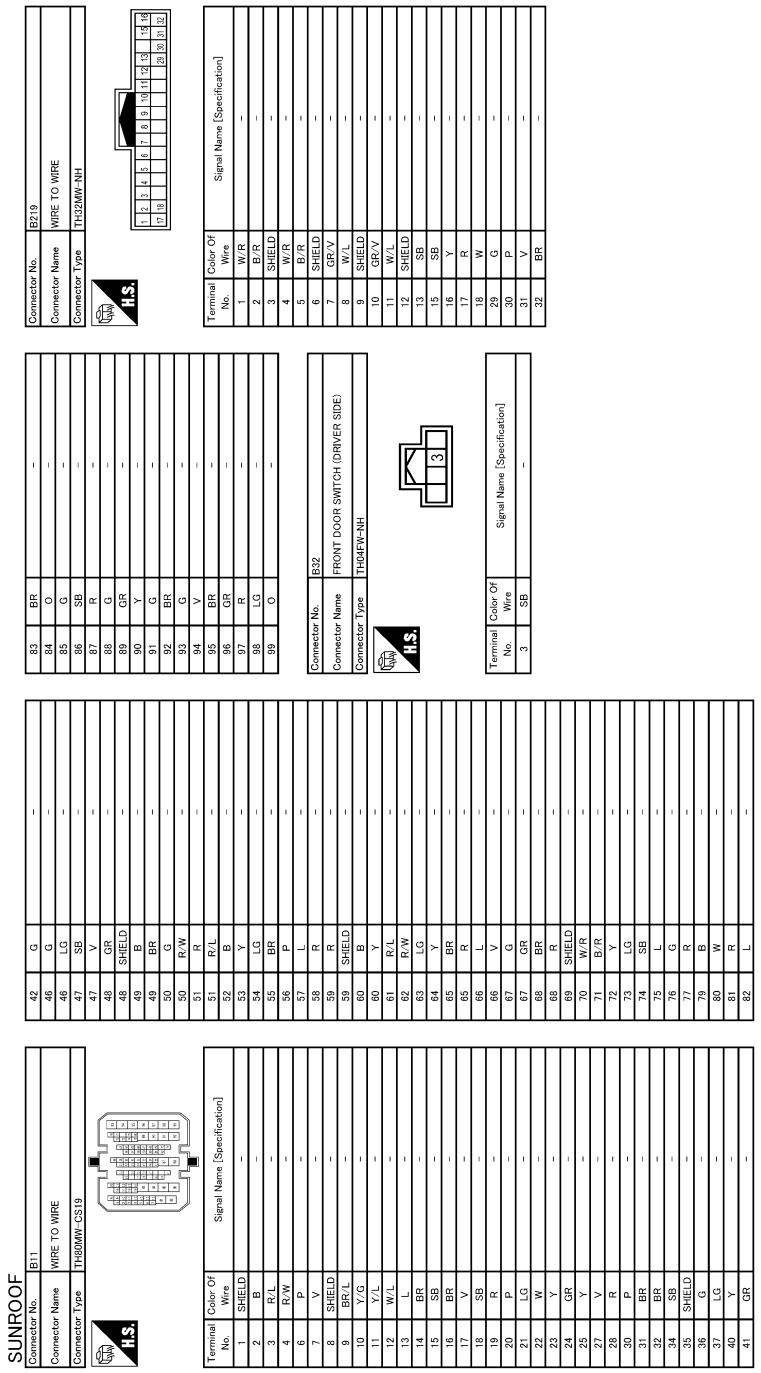
JMKIA1869ZZ

Terminal No. (Wire color)		Description		Condition		Voltage (V) (Approx.)
+	-	Signal name	Input/ Output			
8 (BR)	Ground	Vehicle speed signal (2-pulse)	Input	Speed meter operated [When vehicle speed is approx. 40km/h (25MPH)]		 ELF1080D
9 (W)	Ground	Sunroof switch signal (2nd)	Input	Sunroof switch	OPEN 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

Wiring Diagram - SUNROOF CONTROL SYSTEM -

INFOID:0000000009719670





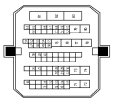
JRKWC8140GB

SUNROOF

Connector No.	B233
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	TH04FW-NH

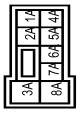
Terminal No.	Color Of Wire	Signal Name [Specification]
3	R	–

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



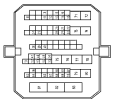
Terminal No.	Color Of Wire	Signal Name [Specification]
3	Y	–
5	LG	–
6	GR	–
8	G	–
11	P	–
12	L	–
13	Y	–
14	O	–
15	BR	–
20	Y	–
21	BR	–
22	P	–
24	L	–
25	O	–
28	SB	–
29	W	–
30	Y	–
38	R	–
39	L	–
40	B	–
47	P	–
48	L	–
49	SB	–
50	GR	–
51	LG	–
52	V	–
53	GR	–
54	BR	–
55	Y	–
56	W/L	–
60	V	–
61	BR	–
62	O	–
63	L/O	–
64	SHIELD	–
66	W	–
67	BR	–
68	Y	–
69	SB	–
70	GR	–
71	SB	–
72	Y	–
73	L	–
74	W	–
75	BR	–
76	GR	–
77	O	–
78	G	– [With iPod without navigation system]
78	V	– [Without iPod and navigation system]
78	Y	– [With navigation system]
79	Y	–
80	R	–
81	W	–
82	LG	–
83	O	–

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2



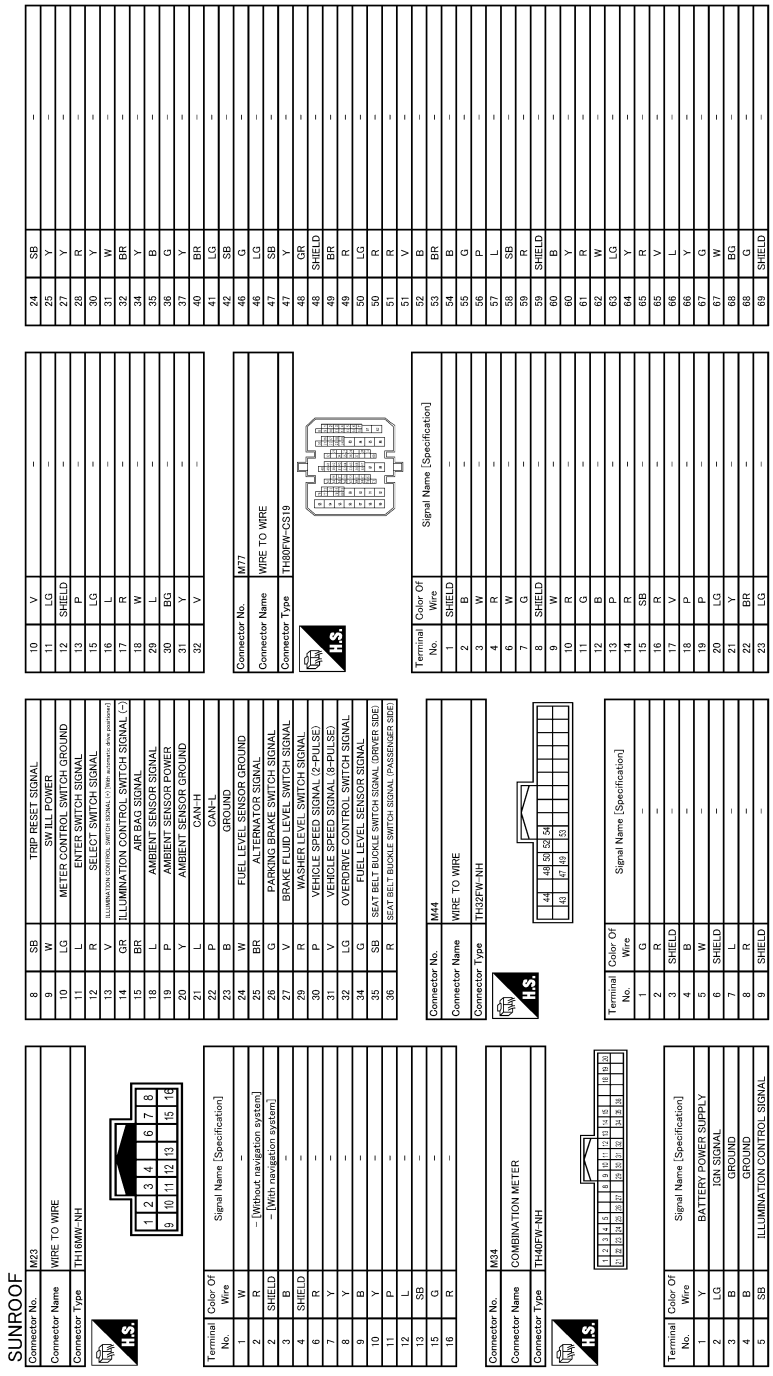
Terminal No.	Color Of Wire	Signal Name [Specification]
1A	Y	–
2A	G	–
3A	Y	–
4A	GR	–
7A	LG	–
8A	Y	–

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



Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	–
5	BR	–
5	O	–
6	G	–
8	R	–
11	P	–
12	L	–
13	V	–
14	Y	–
15	R	–
20	W	– [Without colour display]
20	Y	– [With colour display]
21	BR	–
22	LG	–
24	Y	–
25	L	–
28	BR	–
29	L	–
30	R	–
38	R	–
39	L	–
40	B	–
47	P	–
48	L	–
49	W	–
50	GR	–
51	LG	–
52	Y	–
53	V	–
54	SB	–
55	P	–
56	LG	–
60	V	–
61	GR	–
62	BR	–
63	V	–
64	SHIELD	–
66	W	–
67	R	–
68	W	–
69	P	–
70	G	–
71	G	–
72	BR	–
73	L	–
74	W	–
75	BR	–
76	R	–
77	G	–
78	Y	–
79	G	–
80	R	–
81	W	–
82	W	–
83	BG	–

JRKWC8141GB



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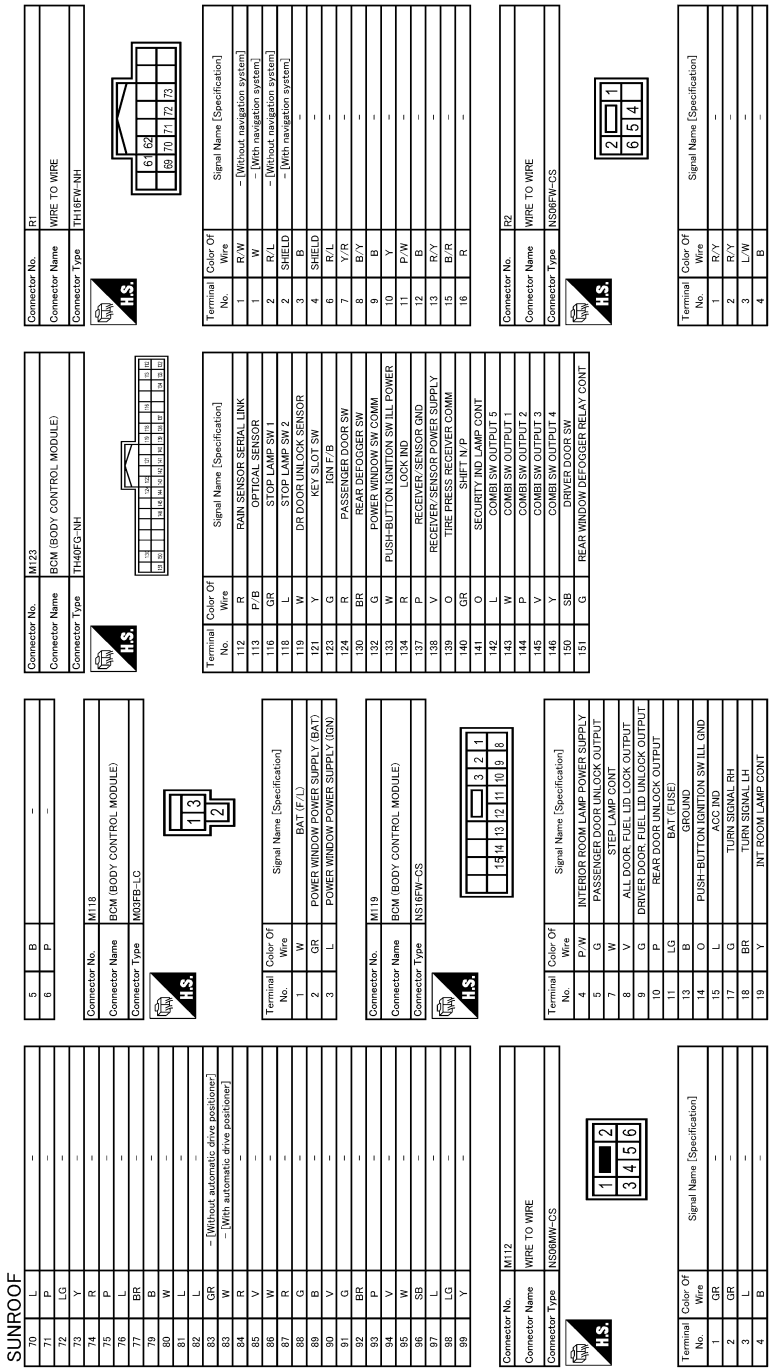

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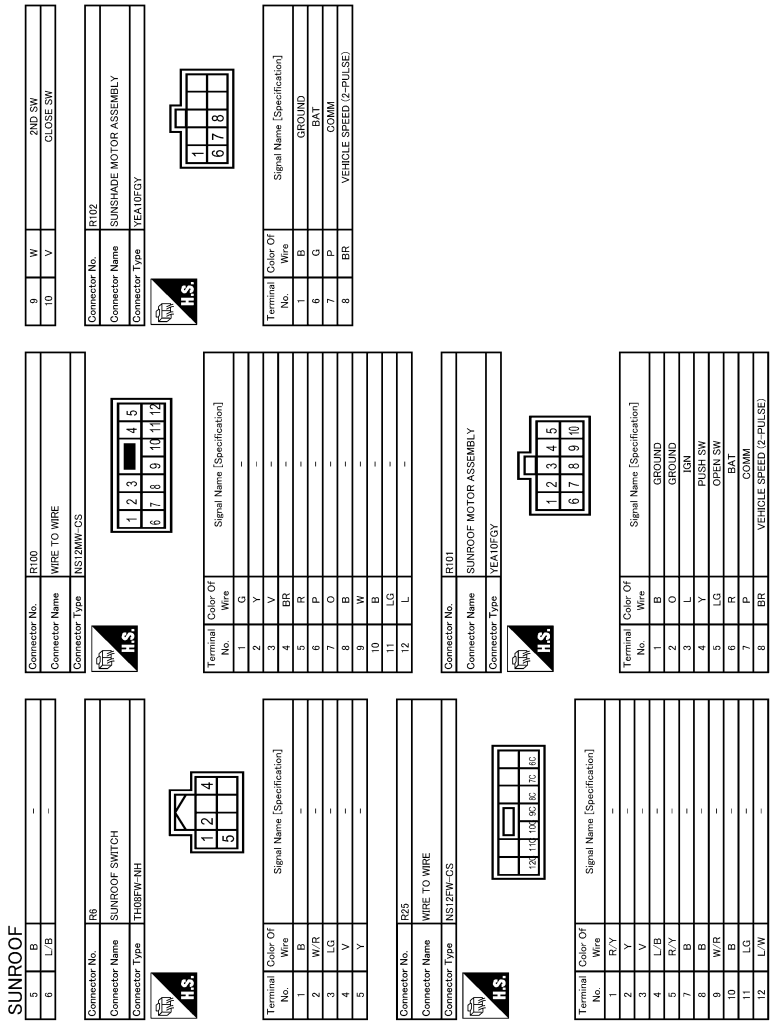


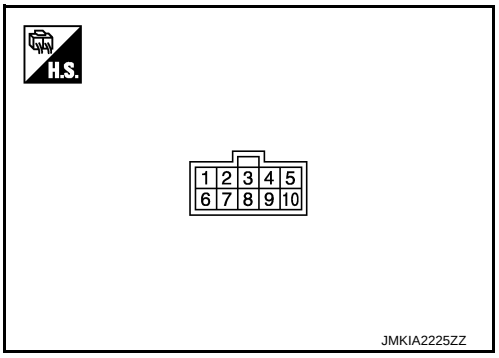
JRKWC8144GB

SUNSHADE MOTOR ASSEMBLY

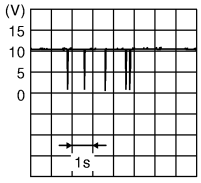
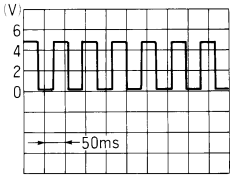
Reference Value

INFOID:0000000009719671

TERMINAL LAYOUT

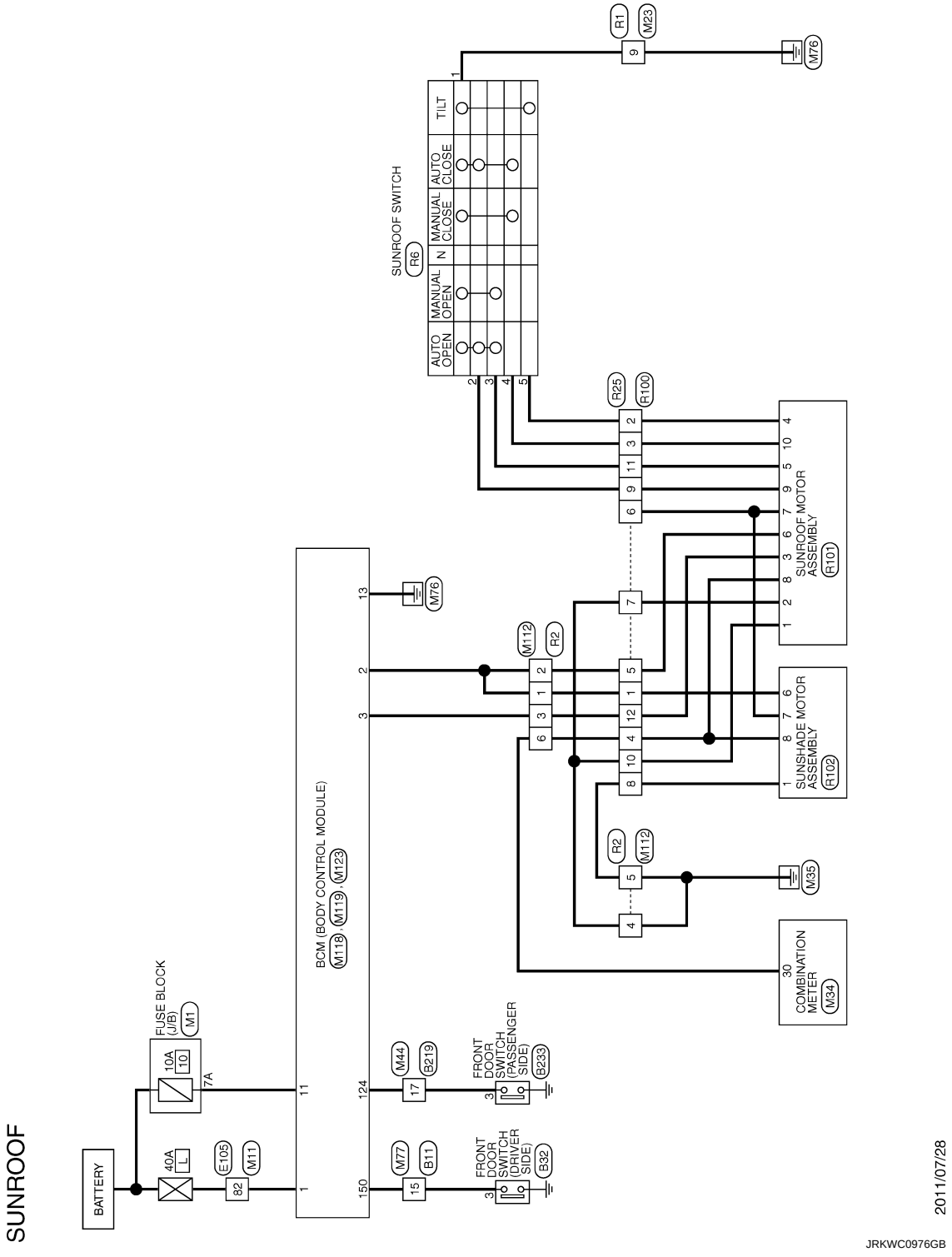


PHYSICAL VALUES

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

Wiring Diagram - SUNROOF CONTROL SYSTEM -

INFOID:0000000009719672



SUNROOF

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS19

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	–
2	B	–
3	R/L	–
4	R/W	–
6	P	–
7	V	–
8	SHIELD	–
9	BR/L	–
10	Y/G	–
11	Y/L	–
12	W/L	–
13	L	–
14	BR	–
15	SB	–
16	BR	–
17	V	–
18	SB	–
19	R	–
20	P	–
21	LG	–
22	W	–
23	Y	–
24	GR	–
25	Y	–
27	V	–
28	R	–
30	P	–
31	BR	–
32	BR	–
35	SHIELD	–
36	G	–
37	LG	–
40	Y	–
41	GR	–
42	G	–
46	G	–
46	LG	–
47	SB	–
47	V	–
48	GR	–
48	SHIELD	–
49	B	–
49	BR	–
50	G	–
50	R/W	–
51	R	–
51	R/L	–
52	B	–
53	Y	–
54	LG	–
55	BR	–
56	P	–
57	L	–
58	R	–
59	R	–
59	SHIELD	–
60	B	–
60	Y	–
61	R/L	–
62	R/W	–
63	LG	–
64	Y	–
65	BR	–
65	R	–
66	L	–
66	V	–
67	G	–
67	GR	–
68	BR	–
68	R	–
69	SHIELD	–
70	W/R	–
71	B/R	–
72	Y	–
73	LG	–
74	SB	–
75	L	–
76	G	–
77	R	–
79	B	–
80	W	–
81	R	–
82	L	–
83	BR	–
84	O	–
85	G	–
86	SB	–
87	R	–
88	G	–
89	GR	–
90	Y	–
91	G	–
92	BR	–
93	G	–
94	V	–
95	BR	–
96	GR	–
97	R	–
98	LG	–
99	O	–

Connector No.	B32
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH

H.S.

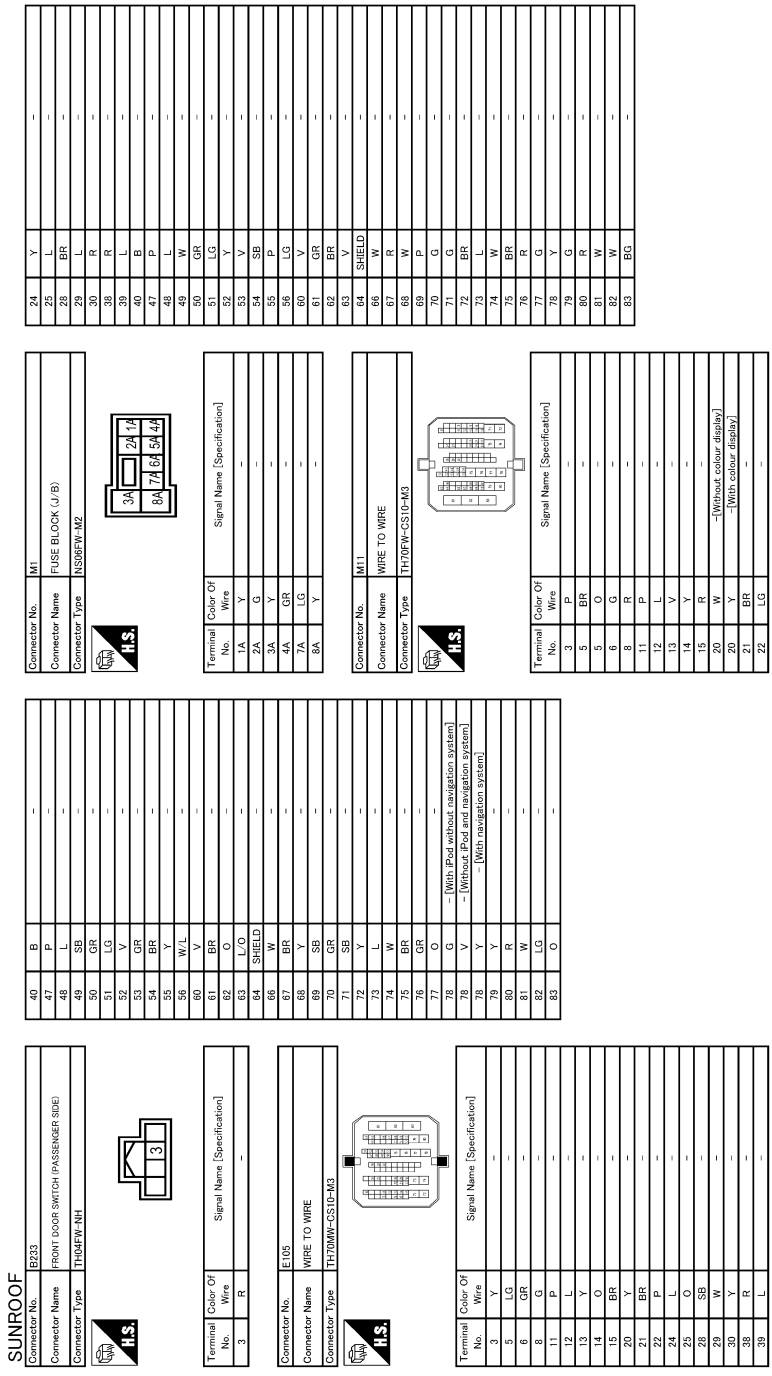
Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	–

Connector No.	B219
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W/R	–
2	B/R	–
3	SHIELD	–
4	W/R	–
5	B/R	–
6	SHIELD	–
7	GR/V	–
8	W/L	–
9	SHIELD	–
10	GR/V	–
11	W/L	–
12	SHIELD	–
13	SB	–
15	SB	–
16	Y	–
17	R	–
18	W	–
29	G	–
30	P	–
31	V	–
32	BR	–

JRKWC8140GB



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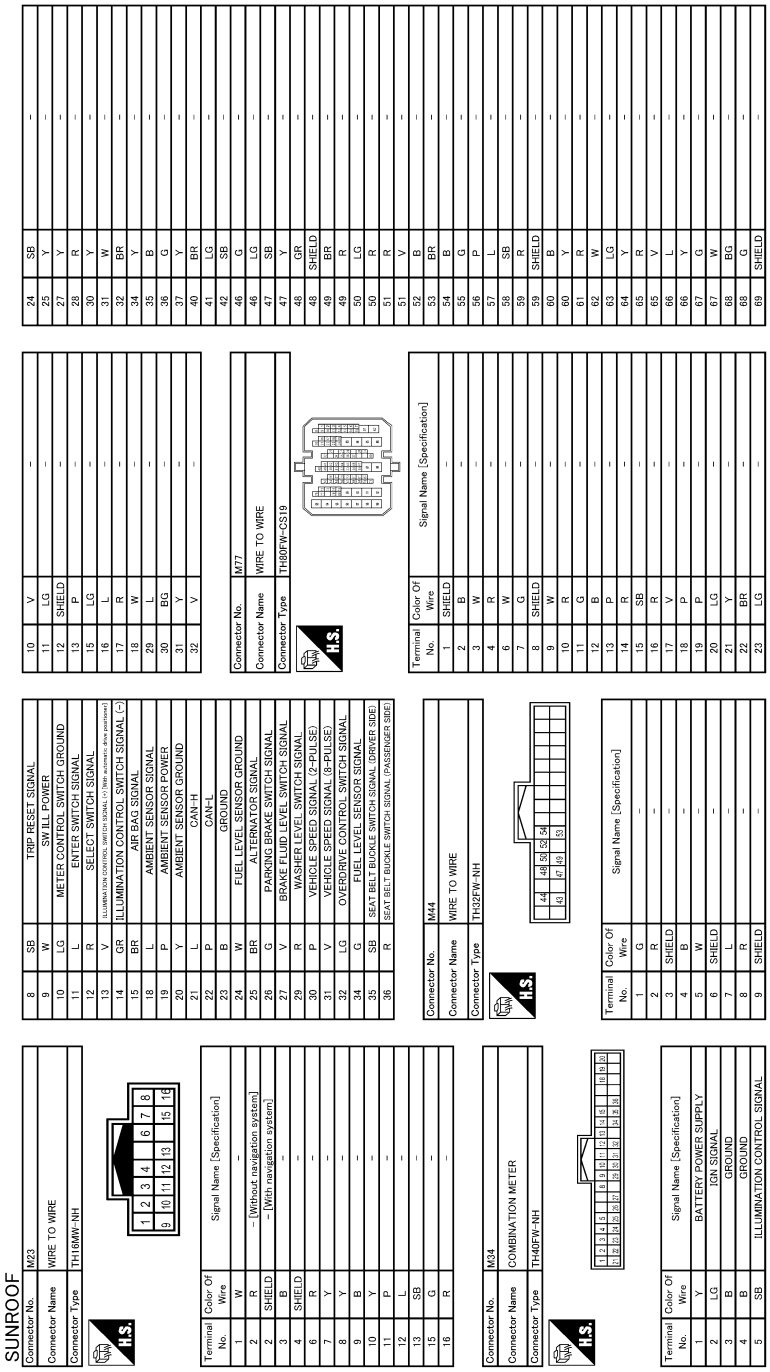

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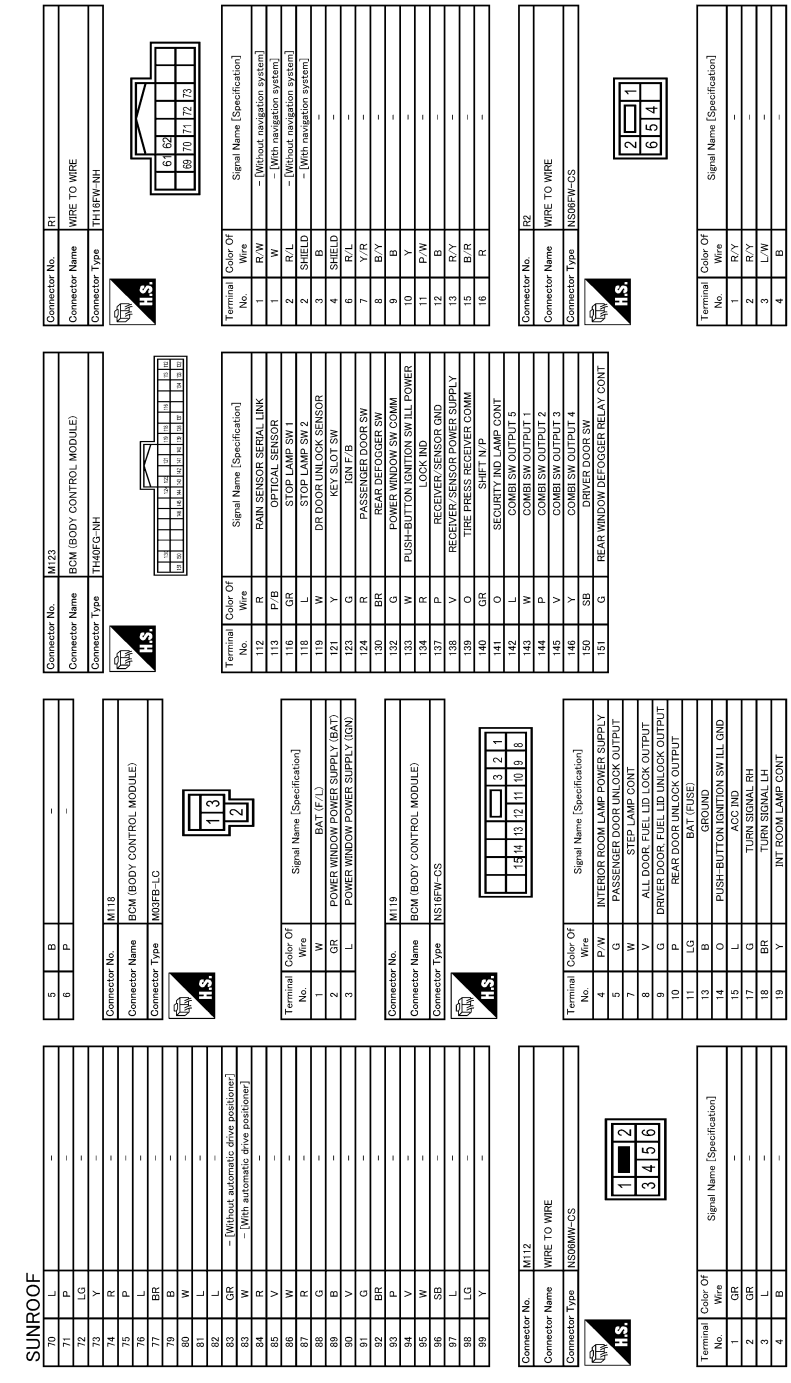

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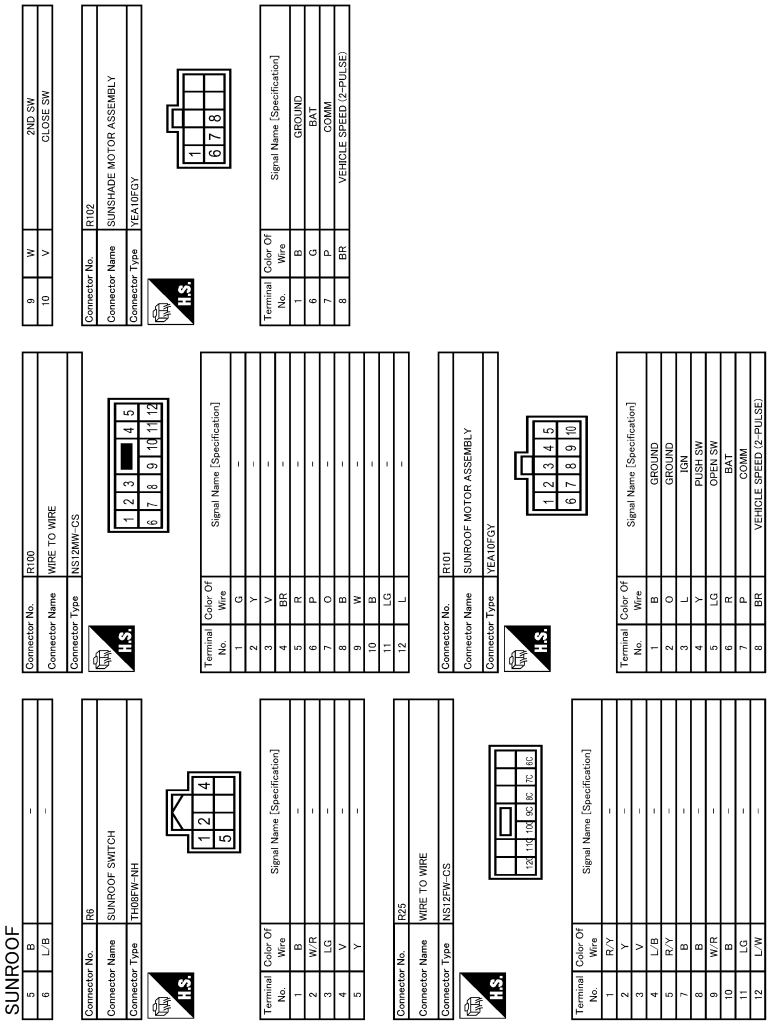


JRKWC8144GB

SYMPTOM DIAGNOSIS

SUNROOF DOES NOT OPERATE PROPERLY

Description

INFOID:0000000009719673

Sunroof does not operate normally.
- Glass lid does not slide or tilt.
- Judder occurs during sliding operation of glass lid.
- Sliding or tilting operation of glass lid is slow.

Diagnosis Procedure

INFOID:0000000009719674

1.CHECK GLASS LID

Check the following items.
- Cracks, damage, or deformation of weather-strip.
- Sticking of weather-strip.
- Loose or missing glass lid mounting blot.
- Misalignment of glass lid.
  Refer to RF-98, "Adjustment".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK SUNROOF FRAME ASSEMBLY

Check the following items.
- Damage, deformation or trapped foreign material of slide rail.
- Insufficient application of grease to sliding section of slide rail.
  Refer to RF-114, "Disassembly and Assembly".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CHECK SUNSHADE

Check sunshade for damage, deformation, of interference with other parts.
Refer to RF-124, "Removal and Installation".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4.CHECK SUNROOF MOTOR ASSEMBLY POWER SUPPLY AND GROUND CIRCUIT

Check sunroof motor assembly power supply and ground circuit.
Refer to RF-12, "SUNROOF MOTOR ASSEMBLY : Diagnosis Procedure"

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace the malfunctioning parts.

5.CHECK SUNROOF SWITCH

Check sunroof switch.
Refer to RF-16, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the malfunctioning parts.

6.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

SUNSHADE SYSTEM DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000009719675

1.CHECK SUNSHADE MECHANISM

Check the following.
- Operation malfunction caused by sunshade mechanism deformation, pinched harness or other foreign materials
- 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-13, "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-15, "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-44, "Intermittent Incident".
NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE

Description

INFOID:0000000009719676

Auto operation does not operate
- Auto operation of glass lid does not operate.
- Glass lid stops halfway.
- Anti-pinch function operates.

Diagnosis Procedure

INFOID:0000000009719677

1.CHECK GLASS LID

Check the following items.
- Cracks, damage, or deformation of weather-strip.
- Sticking of weather-strip.
- Loose or missing glass lid mounting blot.
- Misalignment of glass lid.

Refer to RF-98, "Adjustment".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK WIND DEFLECTOR

Check wind deflector for deformation and interference.
Refer to RF-122, "Removal and Installation".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CHECK SUNROOF FRAME ASSEMBLY

Check the following items.
- Damage, deformation or trapped foreign material of slide rail.
- Insufficient application of grease to sliding section of slide rail.

Refer to RF-114, "Disassembly and Assembly".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4.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 5.

5.CHECK SUNROOF SWITCH

Check sunroof switch.
Refer to RF-16, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the malfunctioning parts.

6.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000009719678

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-44, "Intermittent Incident".
NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000009719679

1.CHECK SUNROOF AND SUNSHADE MECHANISM

Check the following.
- Operation malfunction caused by sunroof and sunshade mechanism deformation, pinched harness or other foreign materials
- 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".

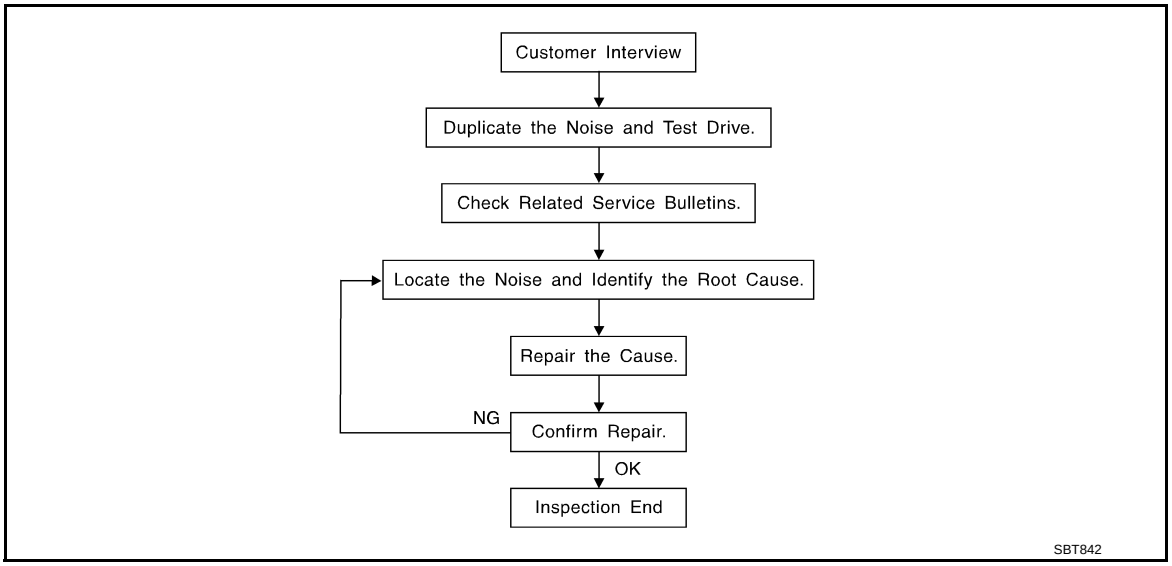
Is the inspection result normal?

YES >> Sunroof and sunshade system is normal.
NO >> GO TO 1.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000009719680



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 customer's comments; refer to RF-88, "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, perform a diagnosis and repair the noise that the customer is concerned about. This can be accomplished by performing a cruise test on the vehicle 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 bumblebee)
  Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending up on 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.

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 models, drive position on A/T models).
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.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.
If a TSB relates to the symptom, follow the procedure to repair the noise.

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 (Chassis ear: J-39570, Engine ear and 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 are suspected to be the cause of the noise.
- Looking for loose components and contact marks.
  Refer to RF-86, "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. A Nissan Squeak and Rattle Kit (J-50397) is available through the authorized Nissan Parts Department.

CAUTION:
Never use excessive force as many components are constructed of plastic and may be damaged.
NOTE:
Always check with the Parts Department for the latest parts information.
The following materials are contained in the Nissan Squeak and Rattle Kit (J-50397). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02:15 × 25 mm (0.59 × 0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)
INSULATOR (Light foam block)
80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97in)
FELT CLOTHTAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll
The following materials, not found in the kit, 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. 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.

Inspection Procedure

INFOID:0000000009719681

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The 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 from the Nissan Squeak and Rattle Kit (J-50397) 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. The 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.

SEATS

When isolating seat noise it's important to note the position the seats 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. The 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.

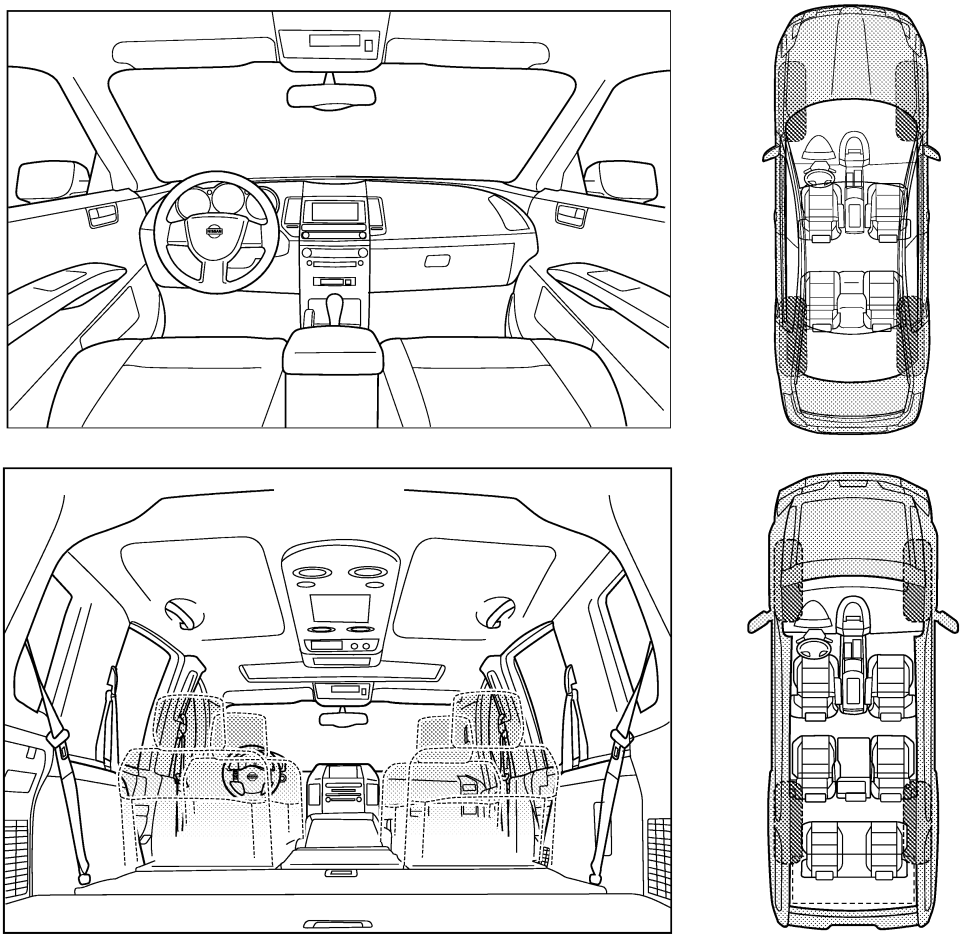
Diagnostic Worksheet

INFOID:0000000009719682

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

PRECAUTION

PRECAUTIONS

FOR USA AND CANADA

FOR USA AND CANADA : Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000009719683

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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 “SRS AIR BAG”.**
- **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.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

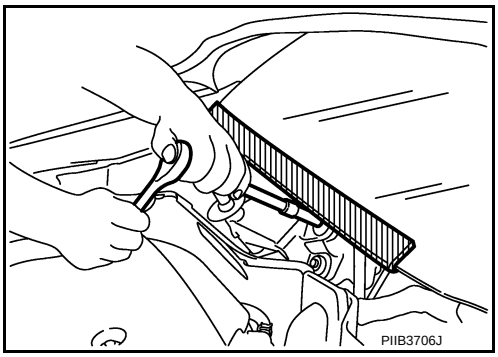
Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

FOR USA AND CANADA : Precaution for Procedure without Cowl Top Cover

INFOID:0000000009719684

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



FOR USA AND CANADA : Precautions For Xenon Headlamp Service

INFOID:0000000010108353

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**

- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

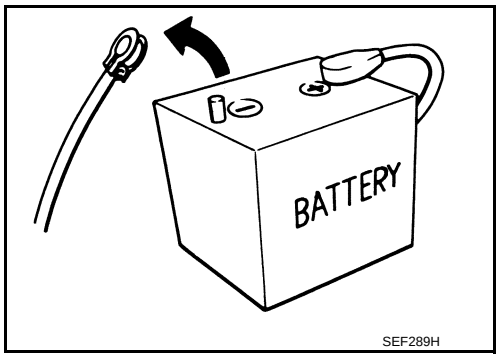
Comply with the following cautions to prevent any error and malfunction.

- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

FOR USA AND CANADA : Precautions for Removing of Battery Terminal

INFOID:0000000010108354

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

FOR MEXICO

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

INFOID:0000000009719685

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 AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 “SRS AIR BAG”.**
- **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.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

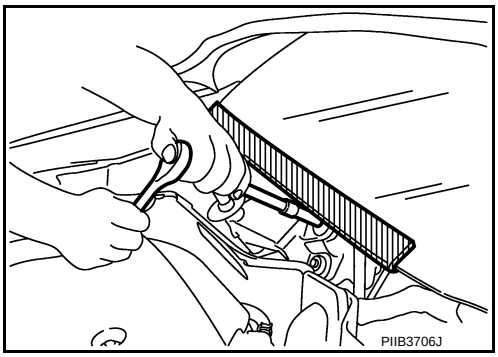
Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

FOR MEXICO : Precaution for Procedure without Cowl Top Cover

INFOID:0000000009719686

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



FOR MEXICO : Precautions For Xenon Headlamp Service

INFOID:0000000010108358

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

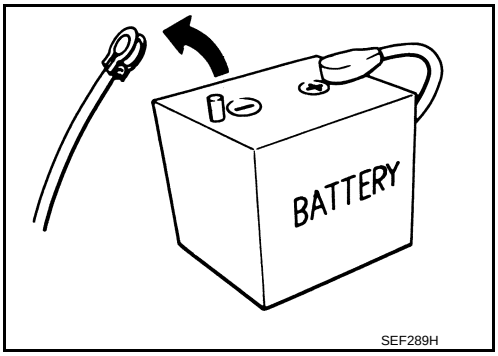
Comply with the following cautions to prevent any error and malfunction.

- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

FOR MEXICO : Precautions for Removing of Battery Terminal

INFOID:0000000010108357

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.



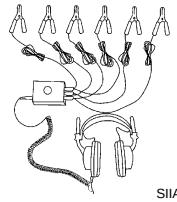
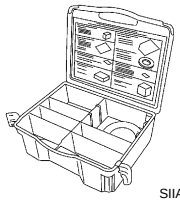
PREPARATION

PREPARATION

Special Service Tool

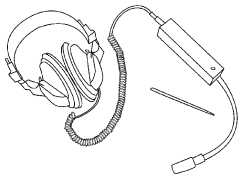
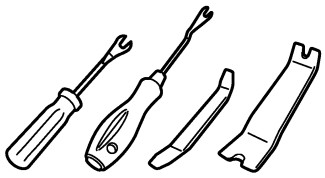
INFOID:0000000009719687

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
(J39570) Chassis ear  SIIA0993E	Locates the noise
(J50397) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairs the cause of noise

Commercial Service Tool

INFOID:0000000009719688

Tool name	Description
Engine ear  SIIA0995E	Locates the noise
Remover tool  JMKIA3050ZZ	Removes the clips, pawls and metal clips

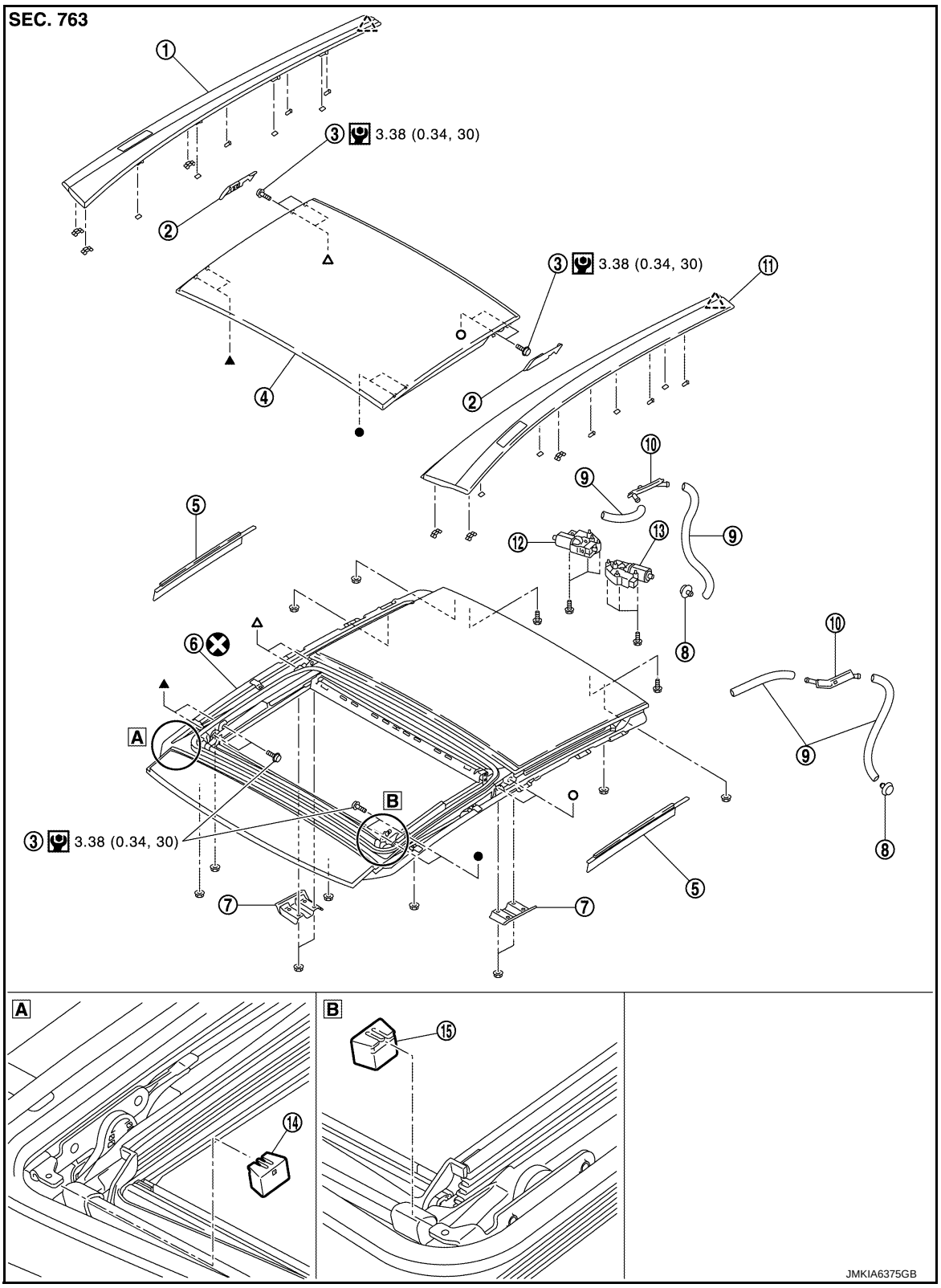
REMOVAL AND INSTALLATION

GLASS LID

Exploded View

INFOID:0000000009719689

FOR STANDARD SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly
7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

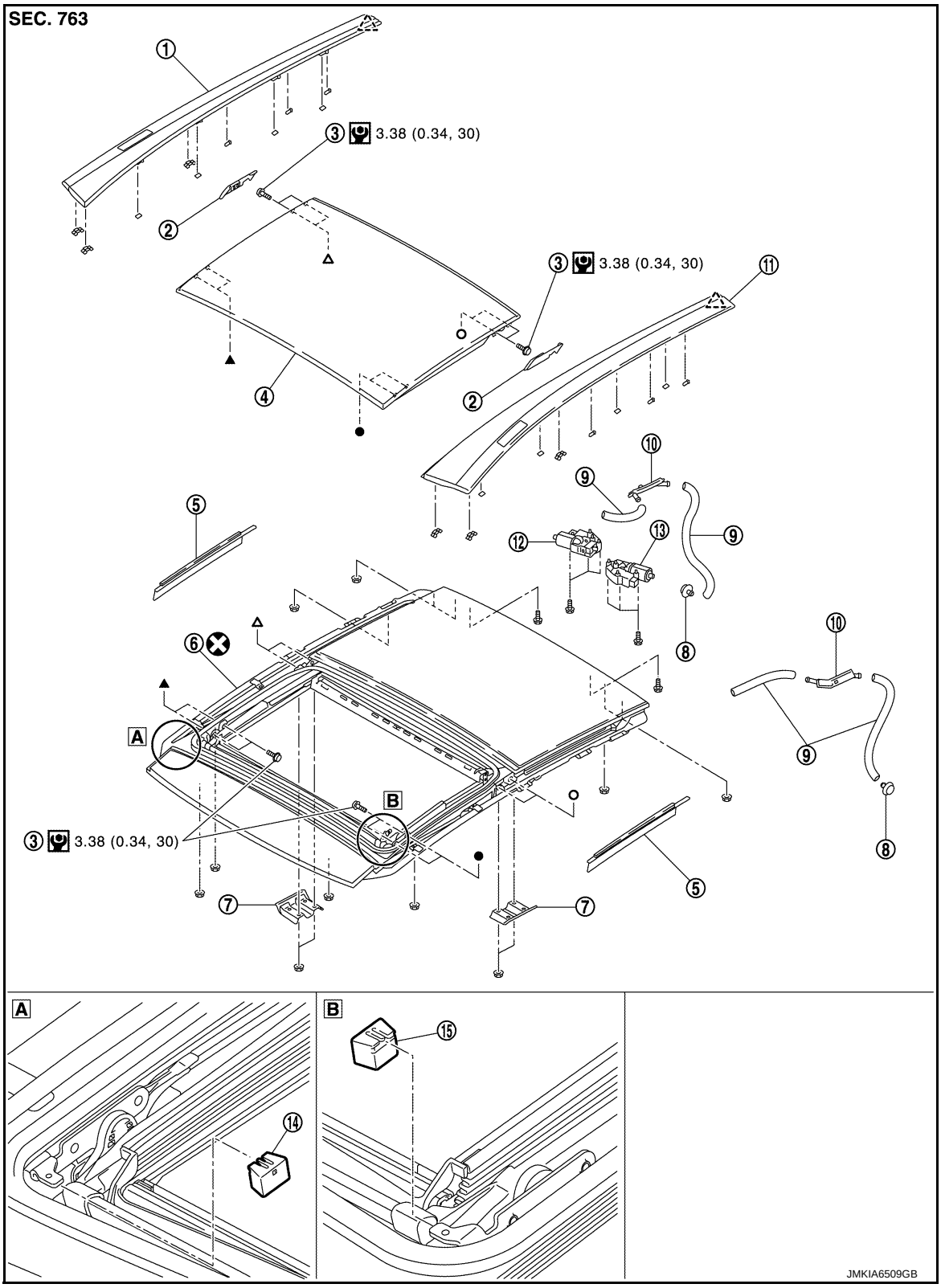
: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

FOR HIGH DURABILITY SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly
7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

INFOID:0000000009719690

REMOVAL

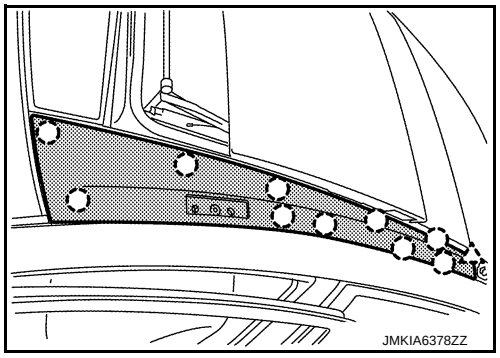
CAUTION:

Always work with a helper.

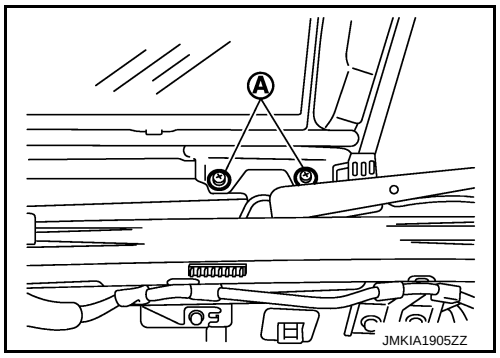
1. Remove the roof rail assembly. Refer to EXT-31, "Removal and Installation".
2. Remove the roof side finisher.
   Remove the clips, and then pull out roof side finisher.

: Clip

: Pawl

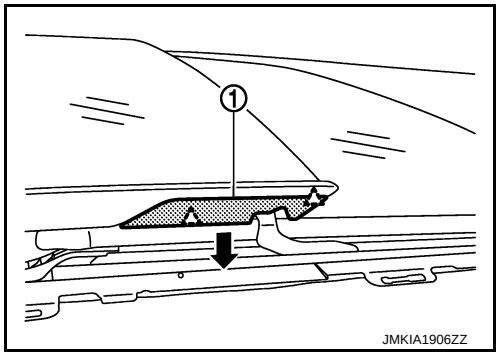


3. Half open the glass lid.
4. Remove the TORX bolts from inner side.
   - Remove the inner blind.
   - Remove the TORX bolts (A).

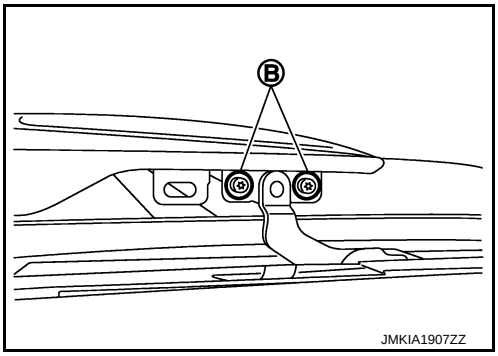


5. Remove the TORX bolts from outer side.
   - Remove the pawls, and then pull down rear link cover (1).

: Pawl



- Remove the TORX bolts (B).

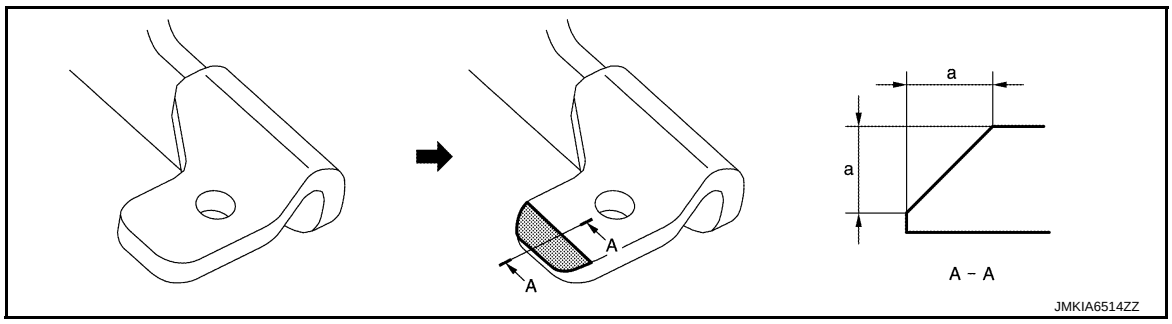


6. Remove the glass lid from the vehicle.
7. Remove the deflector knock (LH and RH).

INSTALLATION

CAUTION:

- **If deflector knock is not inserted smoothly, add chamfer to the end as shown in the figure. Always apply anti-corrosion treatment.**



a : 1.5mm (0.06 in)

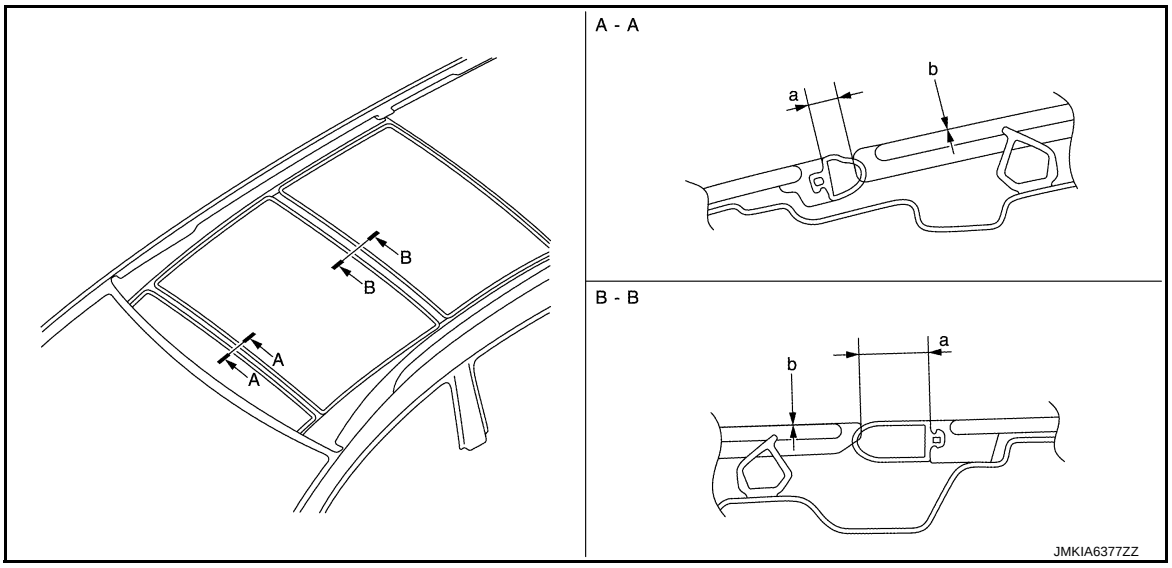
- **After installing the glass lid, perform the leak test and check that there is no malfunction.**

NOTE:

After installation carry out fitting adjustment. Refer to RF-98, "Adjustment".
Install in the reverse order of removal.

Adjustment

INFOID:0000000009719691



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.

Portion		a (Clearance)	b (Surface height)
Glass lid front end	A – A	8.3 mm (0.327 in)	(–1.5) – (+1.5) mm [(–0.059) – (+ 0.059) in]
Glass lid rear end	B – B	19.8 mm (0.780 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.

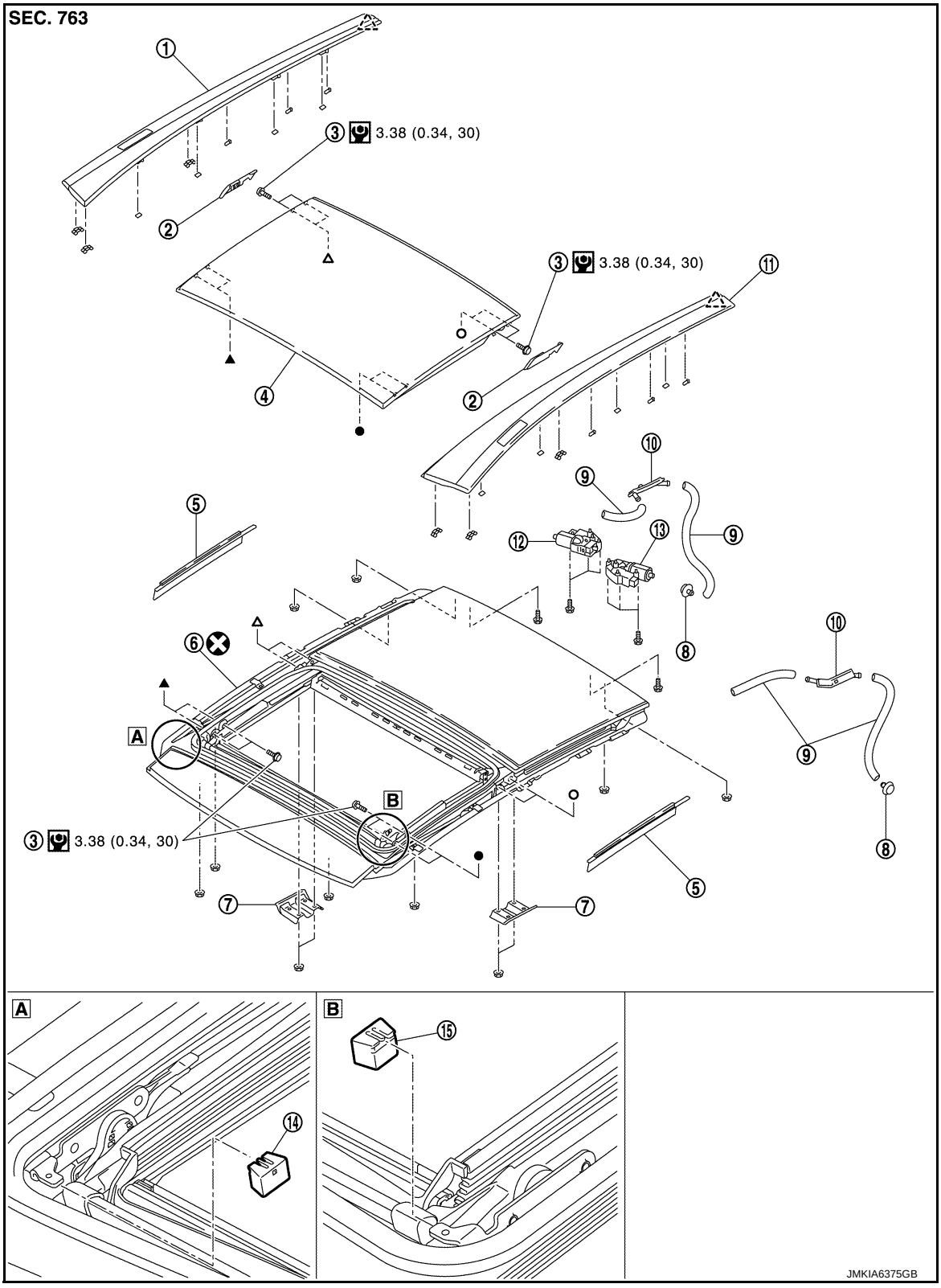
NOTE:
After adjustment the sunroof unit assembly, perform additional service. Refer to RF-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

SUNROOF MOTOR ASSEMBLY

Exploded View

INFOID:0000000009719692

FOR STANDARD SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly

7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

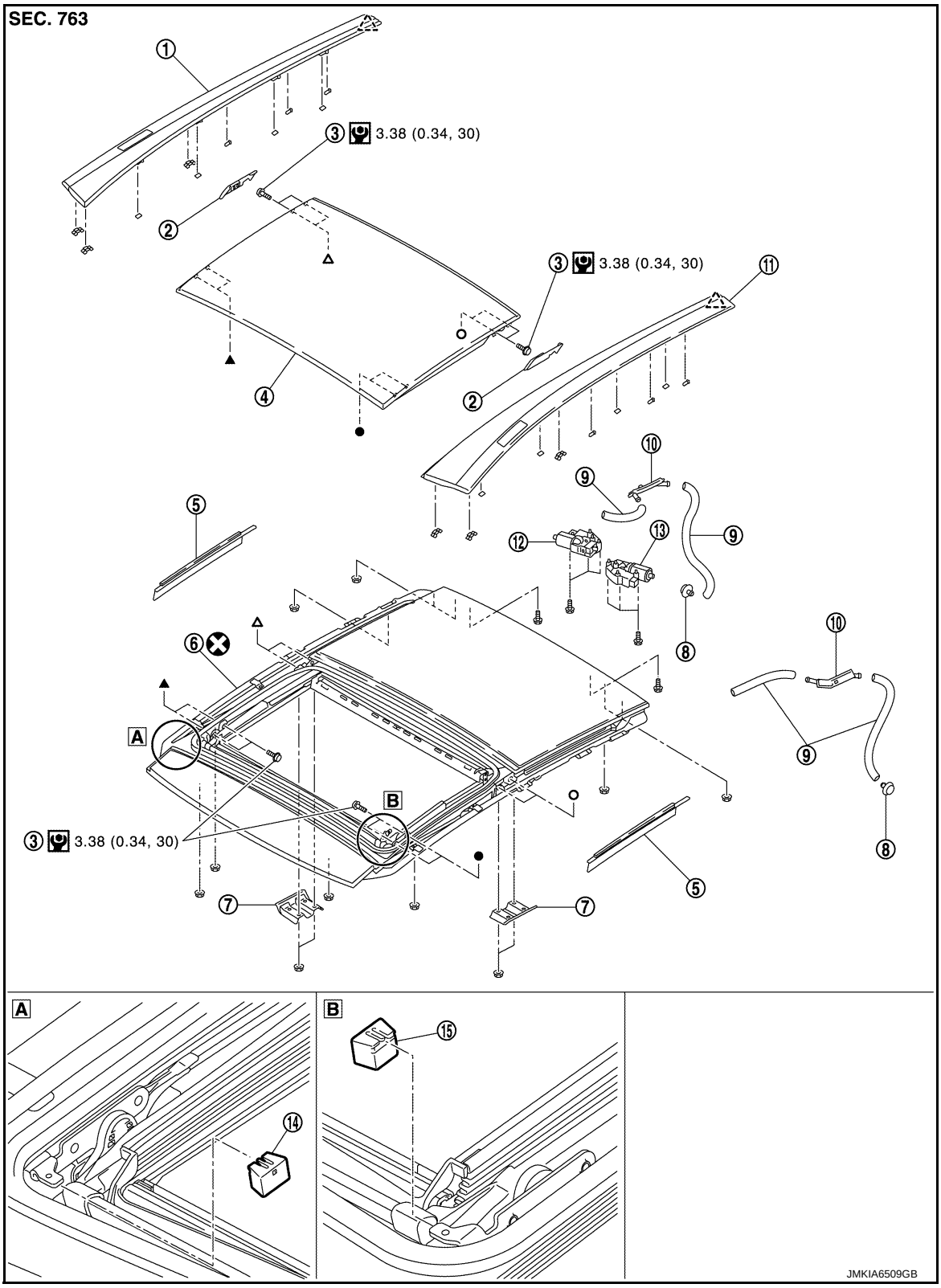
: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

FOR HIGH DURABILITY SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly
7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

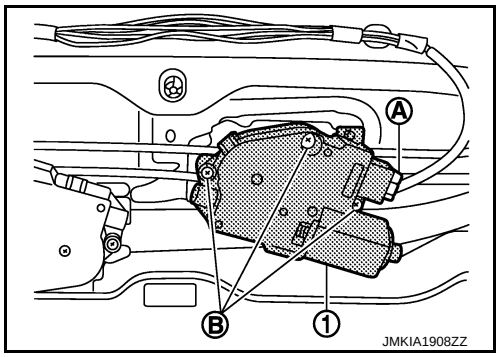
INFOID:0000000009719693

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-30, "SUNROOF : Removal and Installation".
2. Disconnect connector (A) from sunroof motor assembly (1). Remove sunroof motor assembly mounting screws (B), and then remove sunroof motor assembly.



INSTALLATION

CAUTION:

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

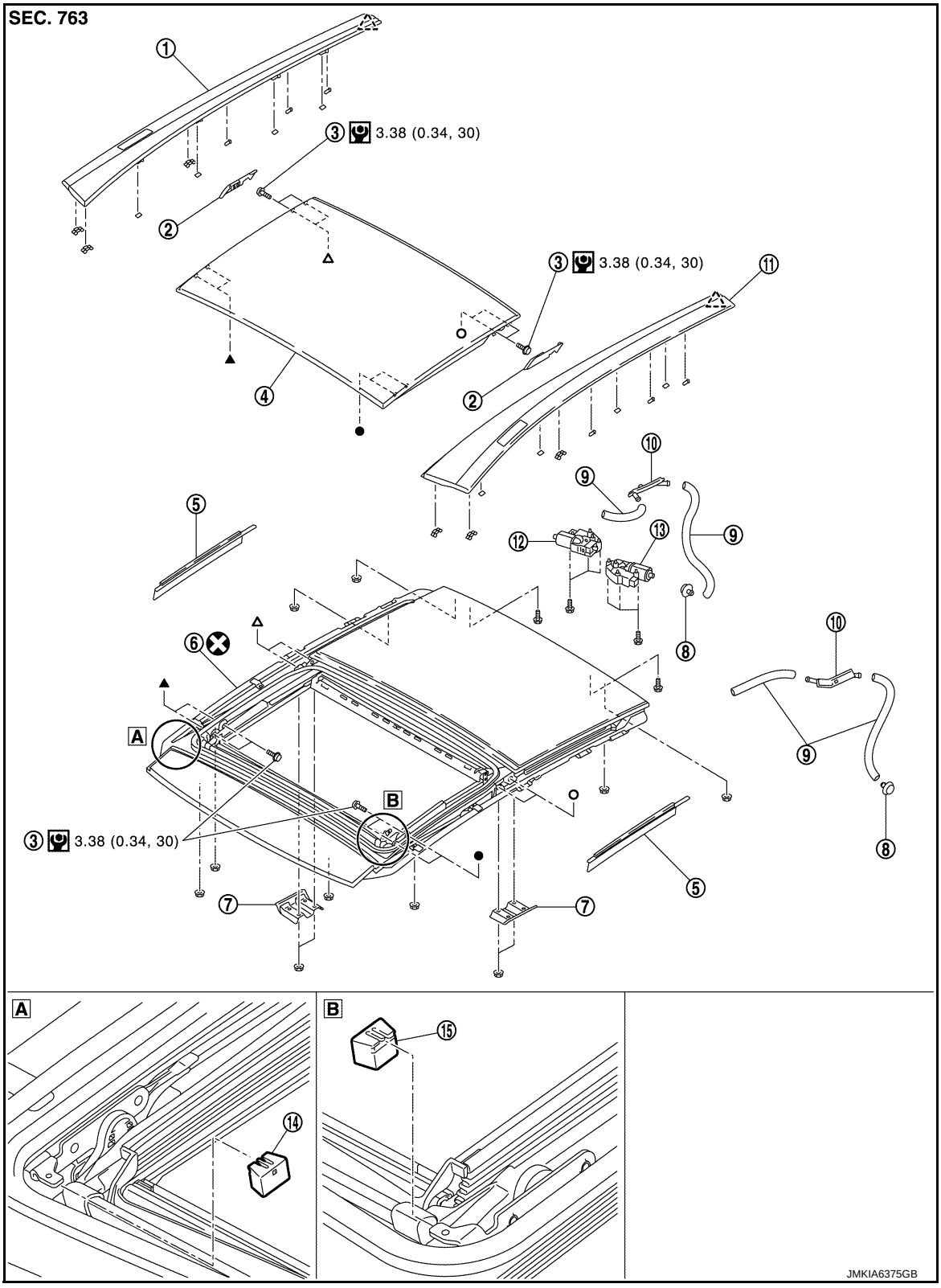
1. Move the sunroof motor assembly laterally by little so that the gear is completely engaged into the wire on the sunroof unit assembly and mounting surface becomes parallel. Then secure the sunroof motor assembly with screws.
2. Install the headlining. Refer to INT-30, "SUNROOF : Removal and Installation".

SUNSHADE MOTOR ASSEMBLY

Exploded View

INFOID:0000000009719694

FOR STANDARD SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly

7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

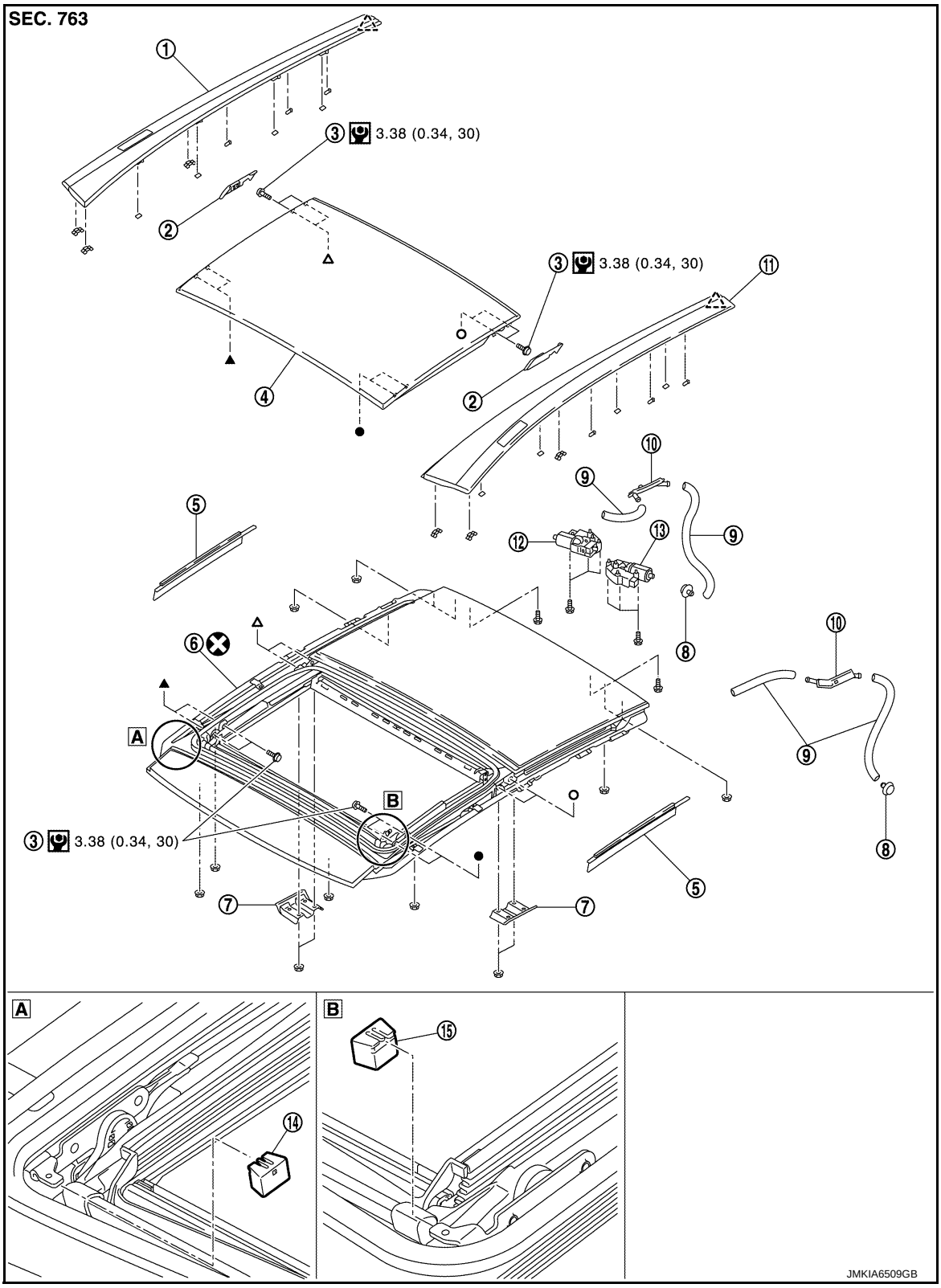
: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

FOR HIGH DURABILITY SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly
7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

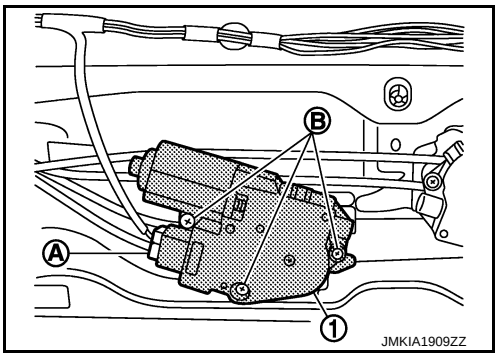
INFOID:0000000009719695

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-30, "SUNROOF : Removal and Installation".
2. Disconnect connector (A) from sunshade motor assembly (1). Remove sunshade motor assembly mounting screws (B), and then remove sunshade motor assembly



INSTALLATION

CAUTION:

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

1. Move the sunshade motor assembly laterally by 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-30, "SUNROOF : Removal and Installation".

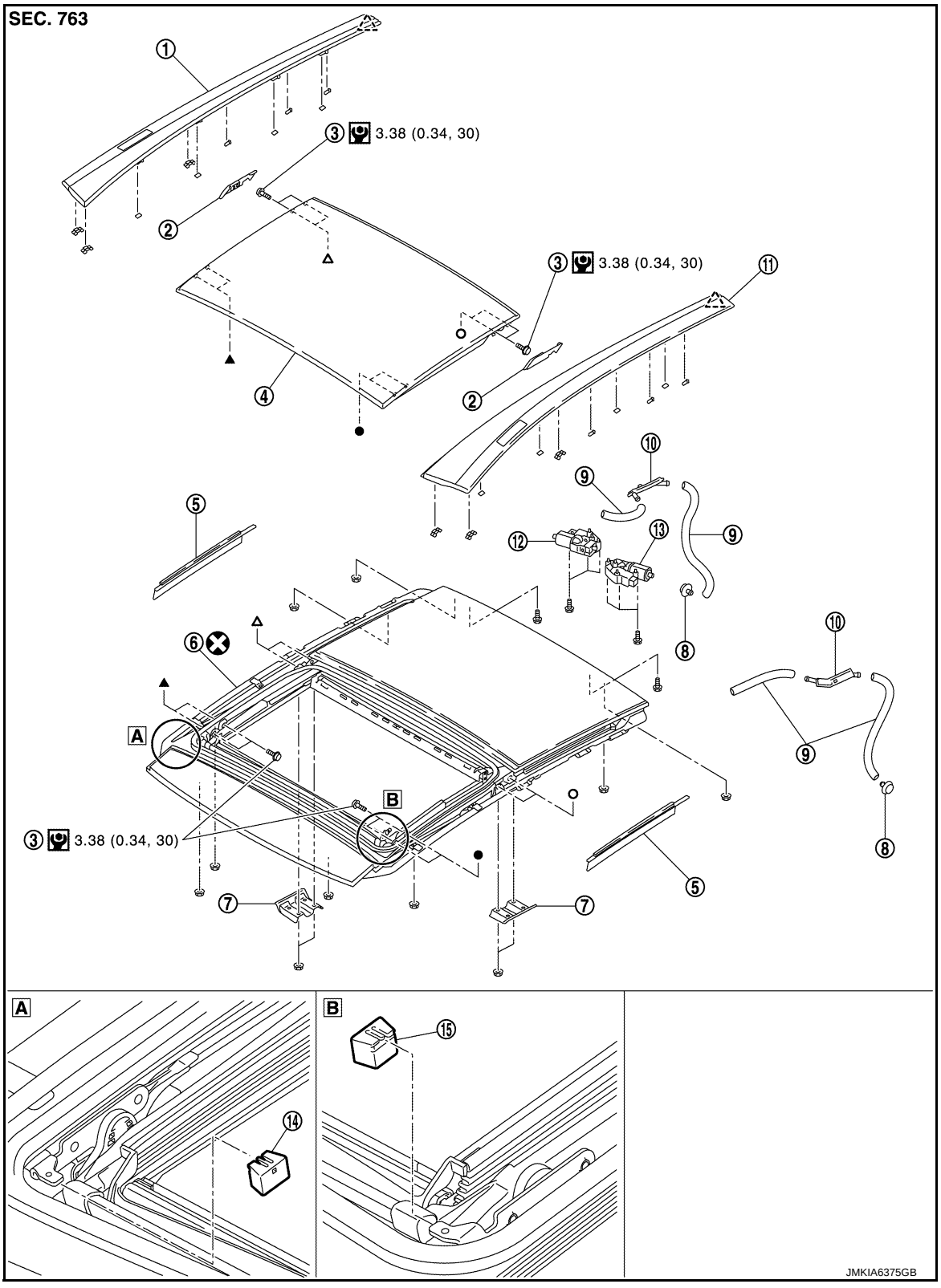
SUNROOF UNIT ASSEMBLY

Exploded View

INFOID:0000000009719696

REMOVAL

FOR STANDARD SPECIFICATION



1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly
7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

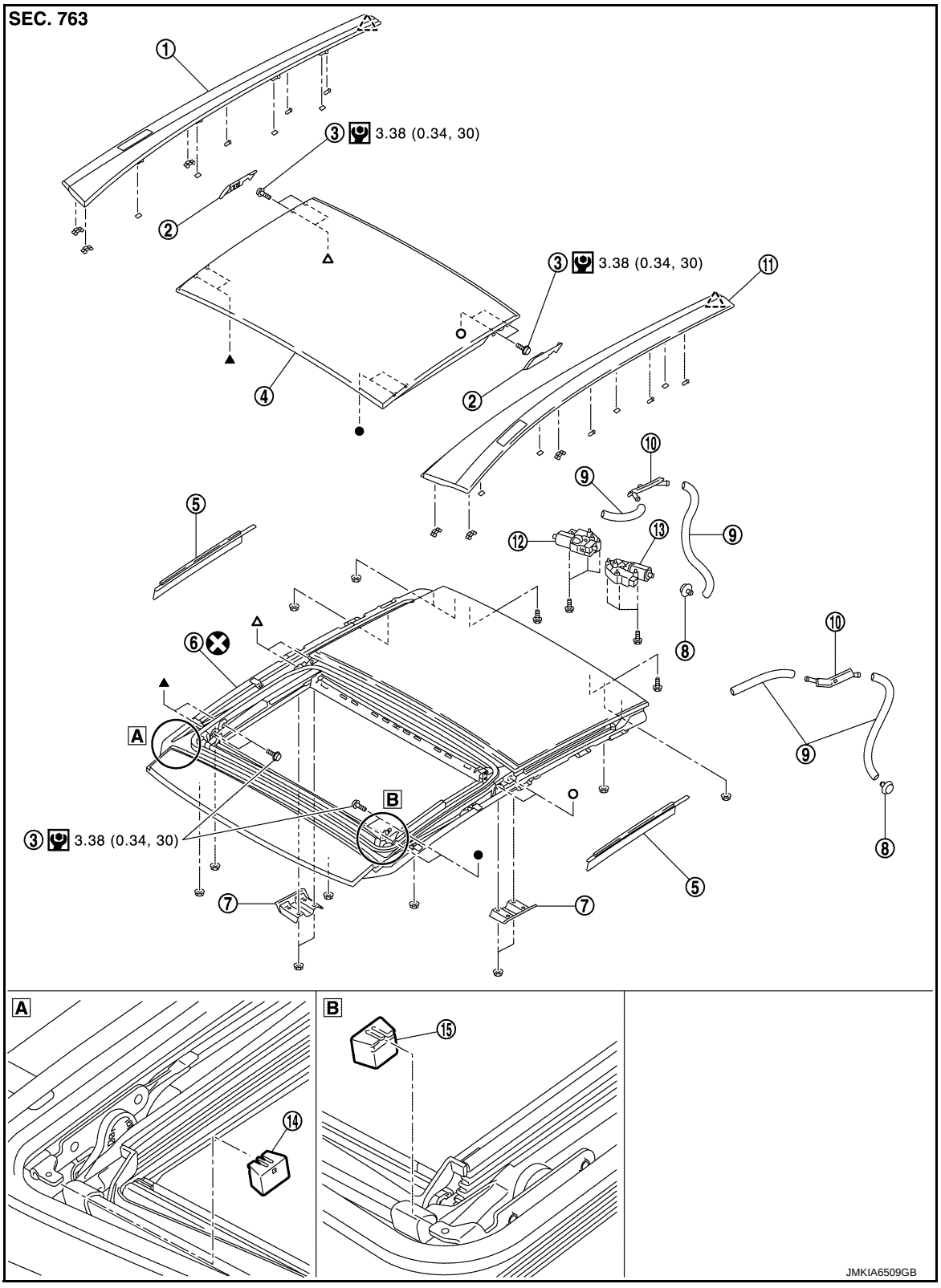
: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

FOR HIGH DURABILITY SPECIFICATION



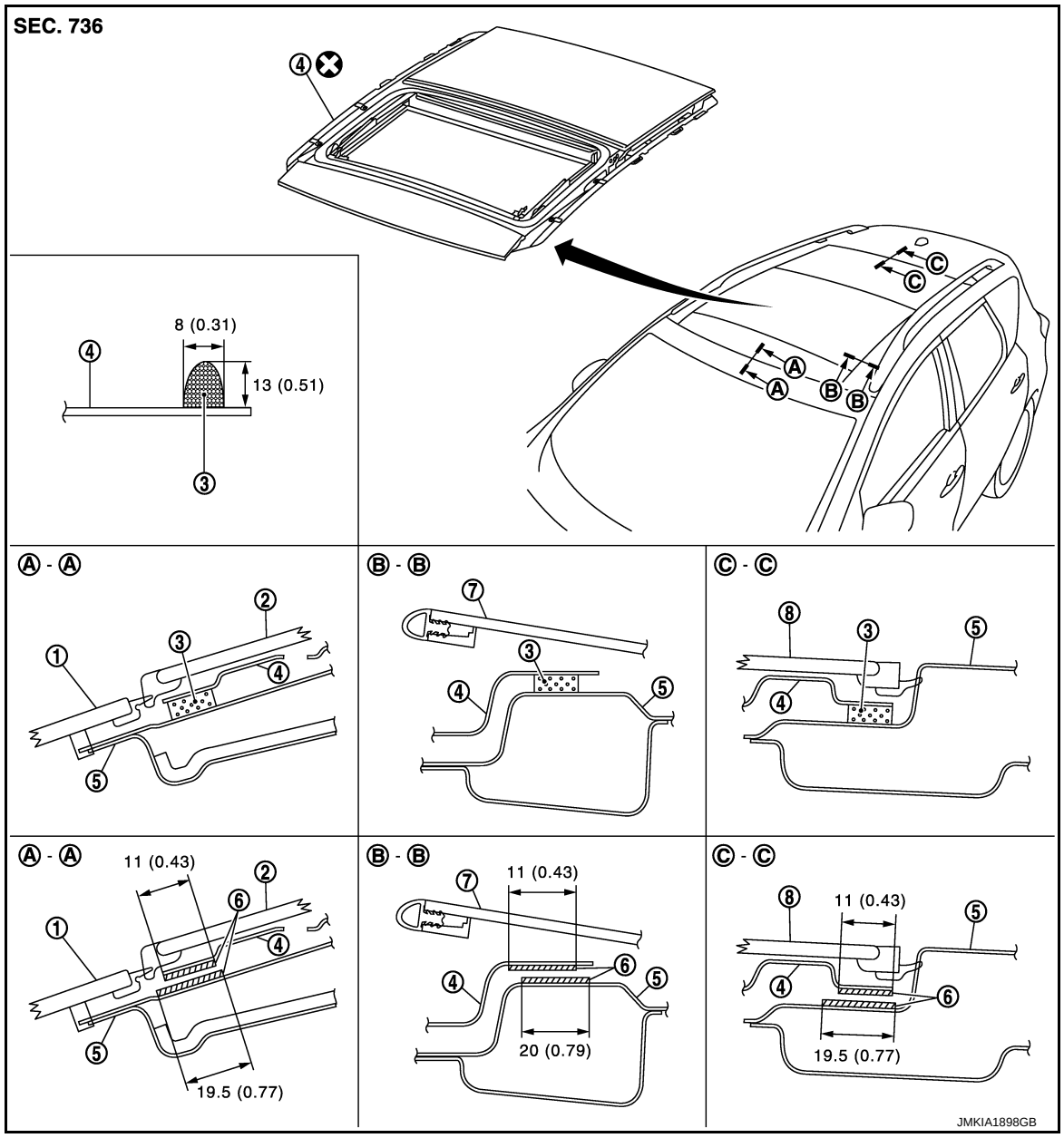
1. Roof side finisher RH
2. Rear link cover
3. TORX bolt
4. Glass lid
5. Inner blind
6. Sunroof unit assembly
7. Sunroof bracket
8. Drain plug
9. Drain hose
10. Drain connector
11. Roof side finisher LH
12. Sunroof motor assembly
13. Sunshade motor assembly
14. Deflector knock RH
15. Deflector knock LH

: Pawl

: Always replace after every disassembly.

: N·m (kg-m, in-lb)

●, ○, ▲, △ : Indicates that the part is connected at points with same symbol in actual vehicle.

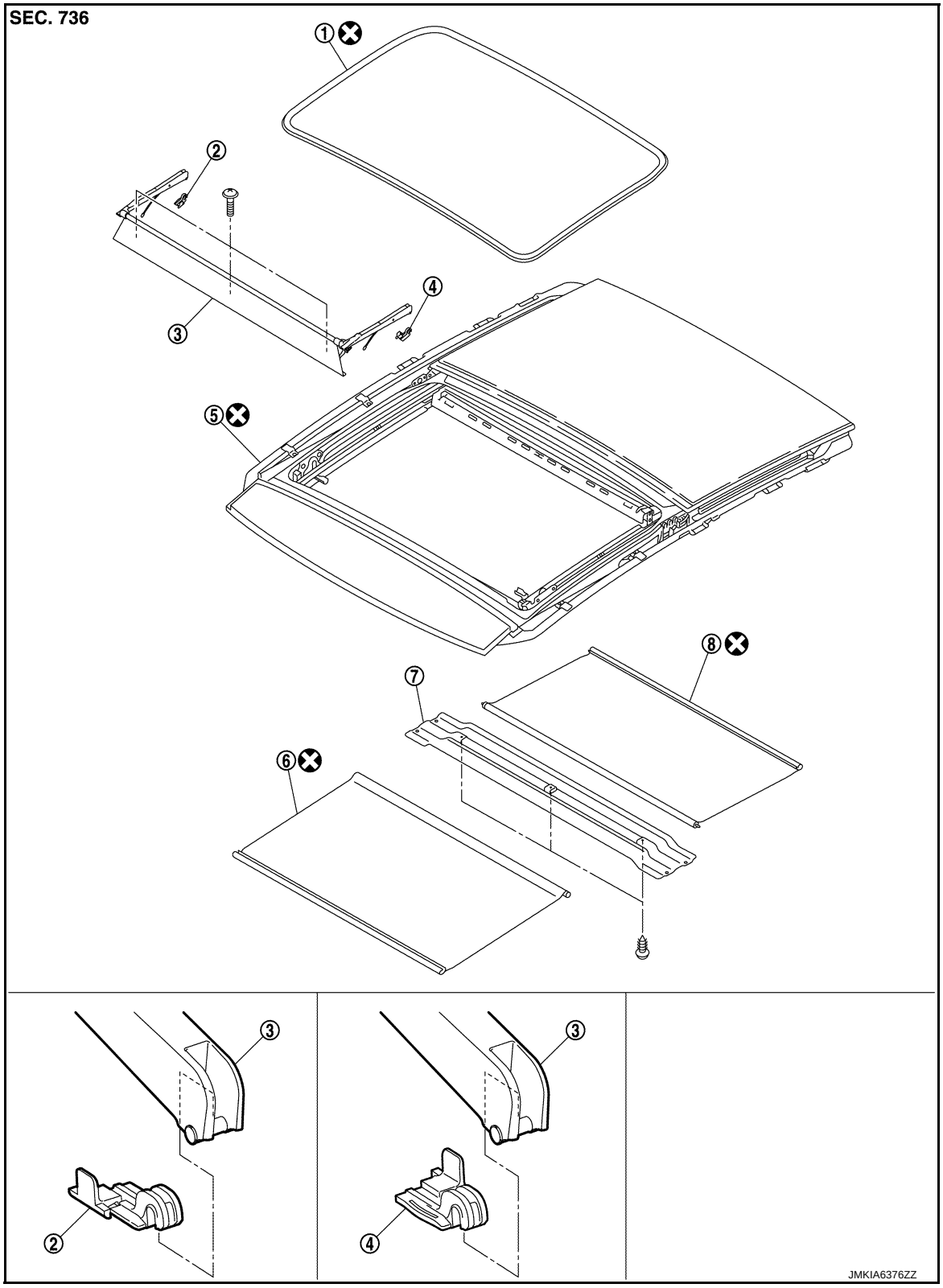


1.	Windshield glass	2.	Front sunroof glass	3.	Adhesive
4.	Sunroof frame	5.	Roof panel	6.	Primer
7.	Roof side finisher	8.	Rear sunroof glass		

: Always replace after every disassembly.

Unit : mm (in)

DISASSEMBLY



1. Weather-strip
2. Deflector arm fastener RH
3. Wind deflector
4. Deflector arm fastener LH
5. Sunroof frame
6. Front sunshade
7. Sunshade cover
8. Rear sunshade

: Always replace after every disassembly.

Removal and Installation

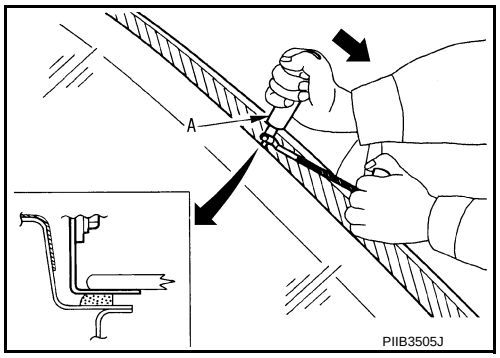
INFOID:0000000009719697

REMOVAL

CAUTION:

- **Always work with a helper.**
- **When taking sunroof unit assembly out, use cloths to protect the seats and trim from damage.**
- **Never reuse the front and rear sunroof glass which has been removed once.**

1. Remove the headlining. Refer to INT-30, "SUNROOF : Removal and Installation".
2. Remove the glass lid. Refer to RF-97, "Removal and Installation".
3. Disconnect drain hoses.
4. Remove the sunroof brackets (LH/RH).
5. Remove nuts and bolts from the front end, side rail and rear end.
6. Paint matching marks on body before removing the sunroof unit assembly.
7. Apply protective tape around the roof panel to protect the surface from damage.
8. Remove the front sunroof glass. Refer to RF-115, "Removal and Installation".
9. Cut adhesive.
   - Cut the adhesive using windshield cutter (A).



   - Pass piano wire though the adhesive with a wire pierce.
   - Tie piano wire both ends to wire grip.
   - Pull piano wire in turn and cut off adhesive.
10. 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.**

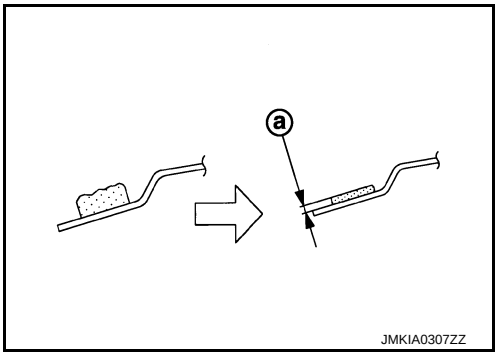
CAUTION:

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 (0.08 in) thick (a) so that the contour becomes smooth.
   CAUTION:
   If bonded area on body is scratched, be sure to repair it with a 2-component urethane. Never use lacquer.



2. Clean bonded area on sunroof frame with white gasoline.
3. 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
4. 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.
5. 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.
6. Align mating marks on body and sunroof unit assembly. Install sunroof unit assembly to the body.
7. Press entire surface of sunroof unit assembly lightly to fit it completely.
8. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.
9. Remove protective tape.
10. Temporarily tighten the mounting bolts and nuts to the of sunroof unit assembly.
11. Tighten the installation points diagonally excluding the installation point of the sunroof bracket around the roof opening.
12. Tighten the mounting bolts and nuts to the sunroof bracket.
13. Connect drain hoses.
14. Install the glass lid. Refer to RF-97, "Removal and Installation".
    NOTE:
    After installation, carry out fitting adjustment.Refer to RF-98, "Adjustment".
15. Install the headlining. Refer to INT-30, "SUNROOF : Removal and Installation".
16. 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 in the whole roof.

Disassembly and Assembly

INFOID:0000000009719698

DISASSEMBLY

1. Remove the wind deflector. Refer to RF-122, "Removal and Installation".
2. Remove the front sunshade and rear sunshade. Refer to RF-124, "Removal and Installation".

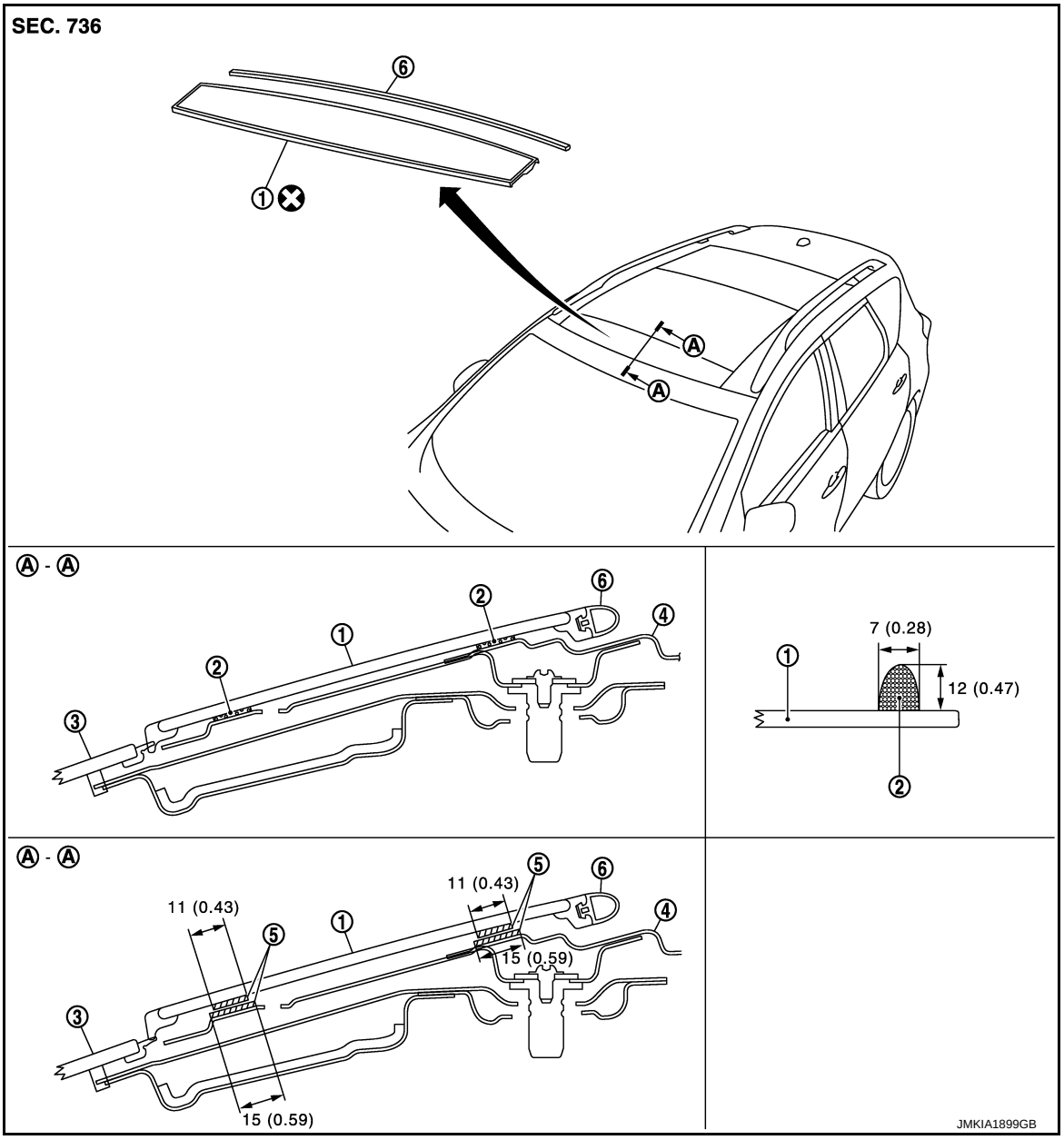
ASSEMBLY

Assemble in the reverse order of disassembly.

FRONT SUNROOF GLASS

Exploded View

INFOID:0000000009719699



1. Front sunroof glass
2. Adhesive
3. Windshield glass
4. Sunroof frame
5. Primer
6. Weather-strip

⊗ : Always replace after every disassembly.

Unit : mm (in)

Removal and Installation

INFOID:0000000009719700

REMOVAL

1. Remove the roof rail assembly. Refer to EXT-31, "Removal and Installation".
2. Remove the roof side finisher. Refer to RF-113, "Removal and Installation".
3. Fully open the glass lid.
4. Paint maching marks on sunroof frame before removing the front sunroof glass.

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

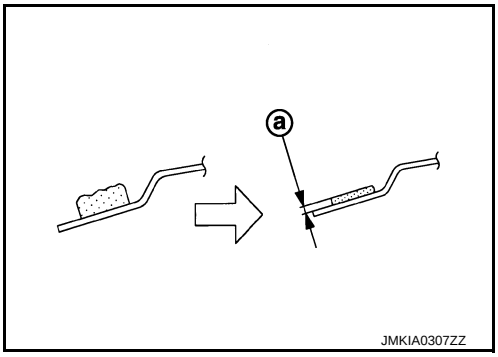
WARNING:
Always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands when cutting the glass from the vehicle.
CAUTION:
Never reuse the front sunroof glass which has been removed once.

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.**

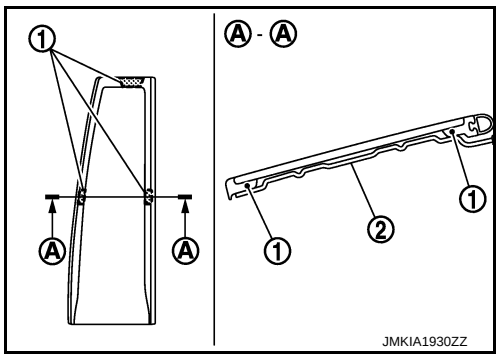
NOTE:
- Use a genuine Nissan Urethane Adhesive Kit (if available) or an equivalent and follow the instructions furnished with it.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (approximately 24 hours). Curing time varies with temperature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

1. Using a knife or spatula, trim the adhesive (sealant) remaining on body down to approximately 2 mm (0.08 in) thick (a) so that the contour becomes smooth.
   CAUTION:
   If bonded area on body is scratched, be sure to repair it with a 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:
   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 mating marks on sunroof frame and glass. Install glass to the sunroof frame.

7. Press glass till positioning ribs (1) faces with a sunroof frame (2).

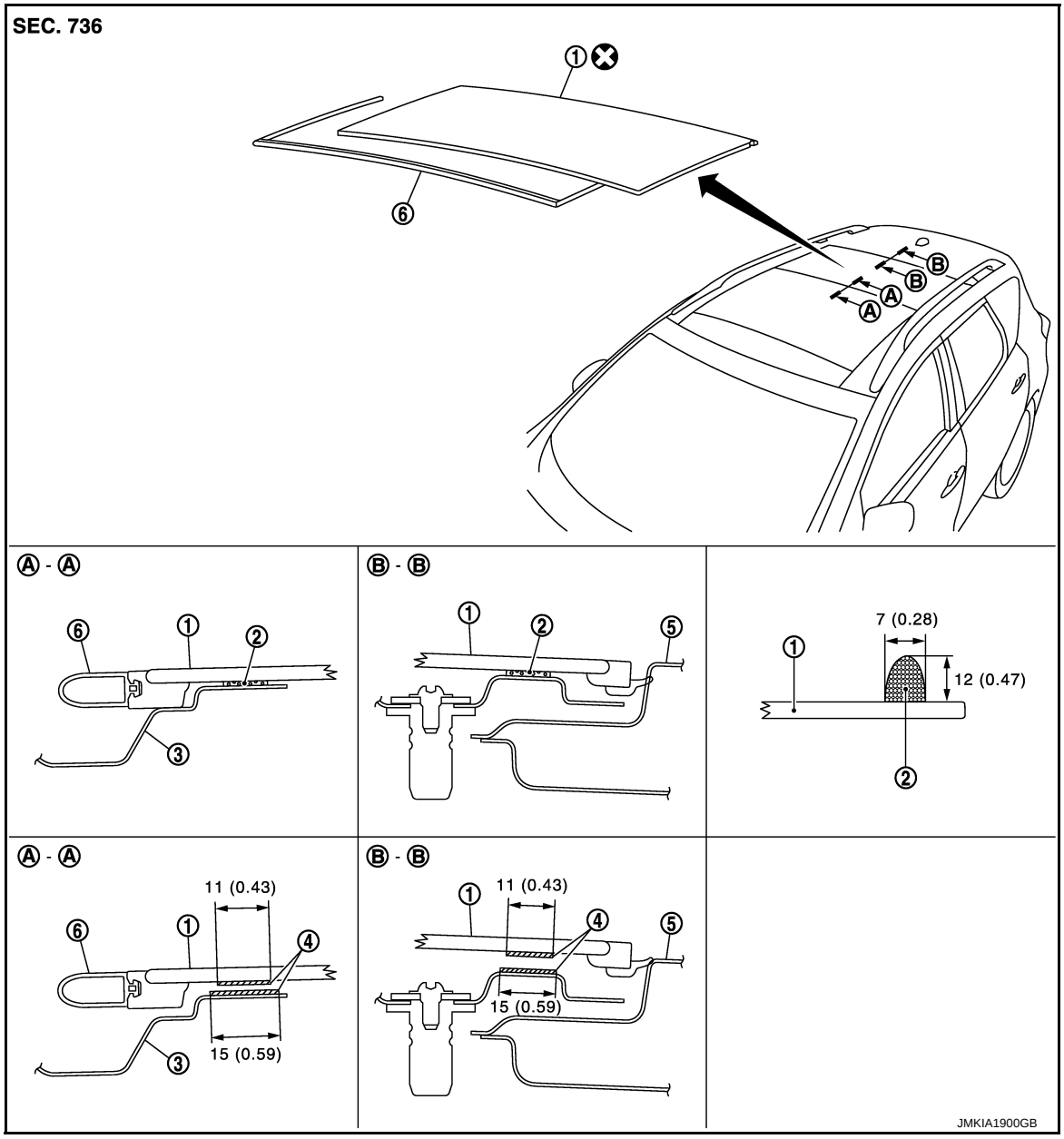


8. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.
9. Remove protective tape.
10. Install roof side finisher. Refer to RF-113, "Removal and Installation".
11. Install roof rail assembly. Refer to EXT-31, "Removal and Installation".

REAR SUNROOF GLASS

Exploded View

INFOID:0000000009719701



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

⊗ : Always replace after every disassembly.

Unit : mm (in)

Removal and Installation

INFOID:0000000009719702

REMOVAL

1. Remove the roof rail assembly. Refer to EXT-31, "Removal and Installation".
2. Remove the roof side finisher. Refer to RF-113, "Removal and Installation".
3. Remove the glass lid. Refer to RF-97, "Removal and Installation".
4. Paint matching marks on sunroof frame before removing the rear sunroof glass.

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

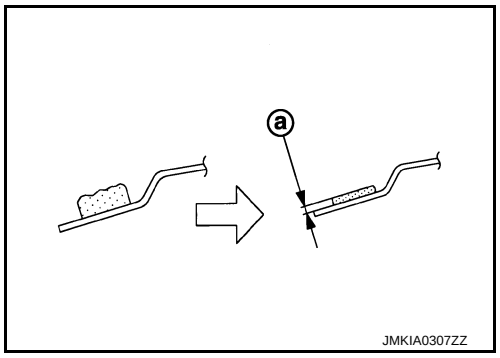
WARNING:
Always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands when cutting the glass from the vehicle.
CAUTION:
Never reuse the rear sunroof glass which has been removed once.

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.**

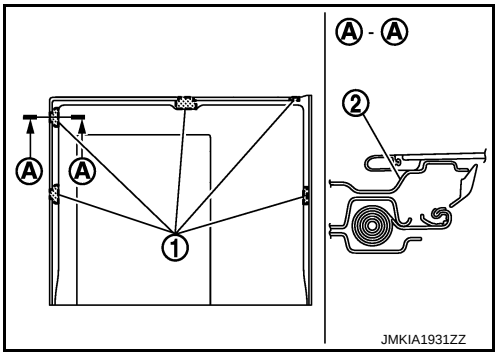
CAUTION:
After installing the rear sunroof glass, perform the leak test and check that there is no malfunction.
NOTE:
- Use a genuine Nissan Urethane Adhesive Kit (if available) or an equivalent and follow the instructions furnished with it.
- Inform the customer that the vehicle should remain stationary 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 (0.08 in) thick (a) so that the contour becomes smooth.
   CAUTION:
   If bonded area on body is scratched, be sure to repair it with a 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:
   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 mating marks on sunroof frame and glass. Install glass to the sunroof frame.

7. Press glass till positioning ribs (1) faces with a sunroof frame (2).

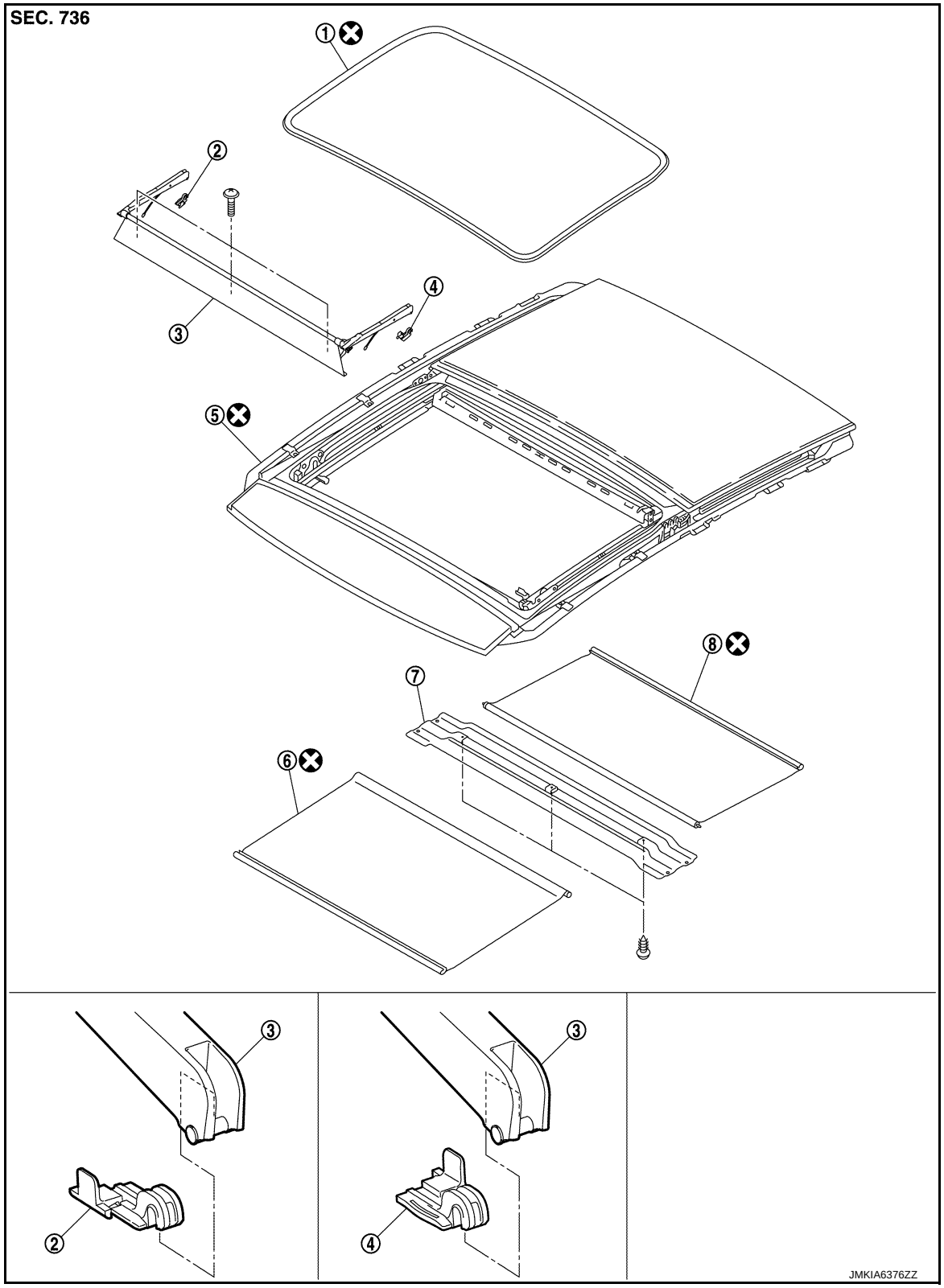


8. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.
9. Remove protective tape.
10. Install glass lid. Refer to RF-97, "Removal and Installation".
11. Install roof side finisher. Refer to RF-113, "Removal and Installation".
12. Install roof rail assembly. Refer to EXT-31, "Removal and Installation".
13. 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 in the whole roof.

WIND DEFLECTOR

Exploded View

INFOID:0000000009719703



1. Weather-strip
2. Deflector arm fastener RH
3. Wind deflector
4. Deflector arm fastener LH
5. Sunroof frame
6. Front sunshade

7. Sunshade cover
8. Rear sunshade

: Always replace after every disassembly.

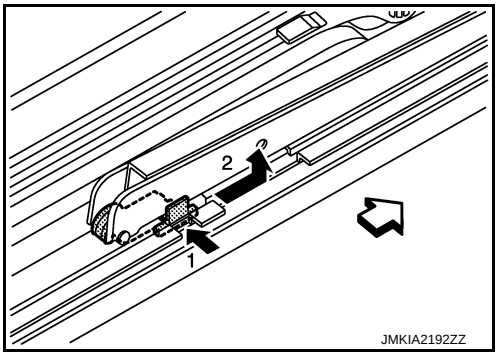
Removal and Installation

INFOID:0000000009719704

REMOVAL

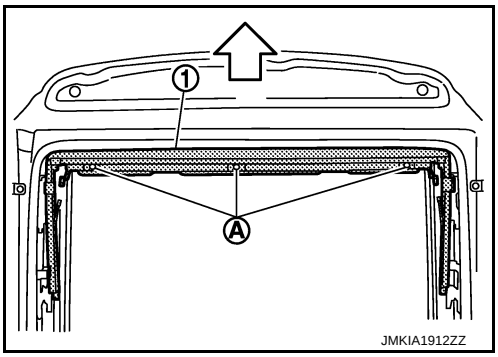
1. Fully open the glass lid.
2. Remove the wind deflector.
   - Push and slide the fastener as shown by the arrows (1) and (2) in the figure to remove.

     : Vehicle front



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

     : Vehicle front



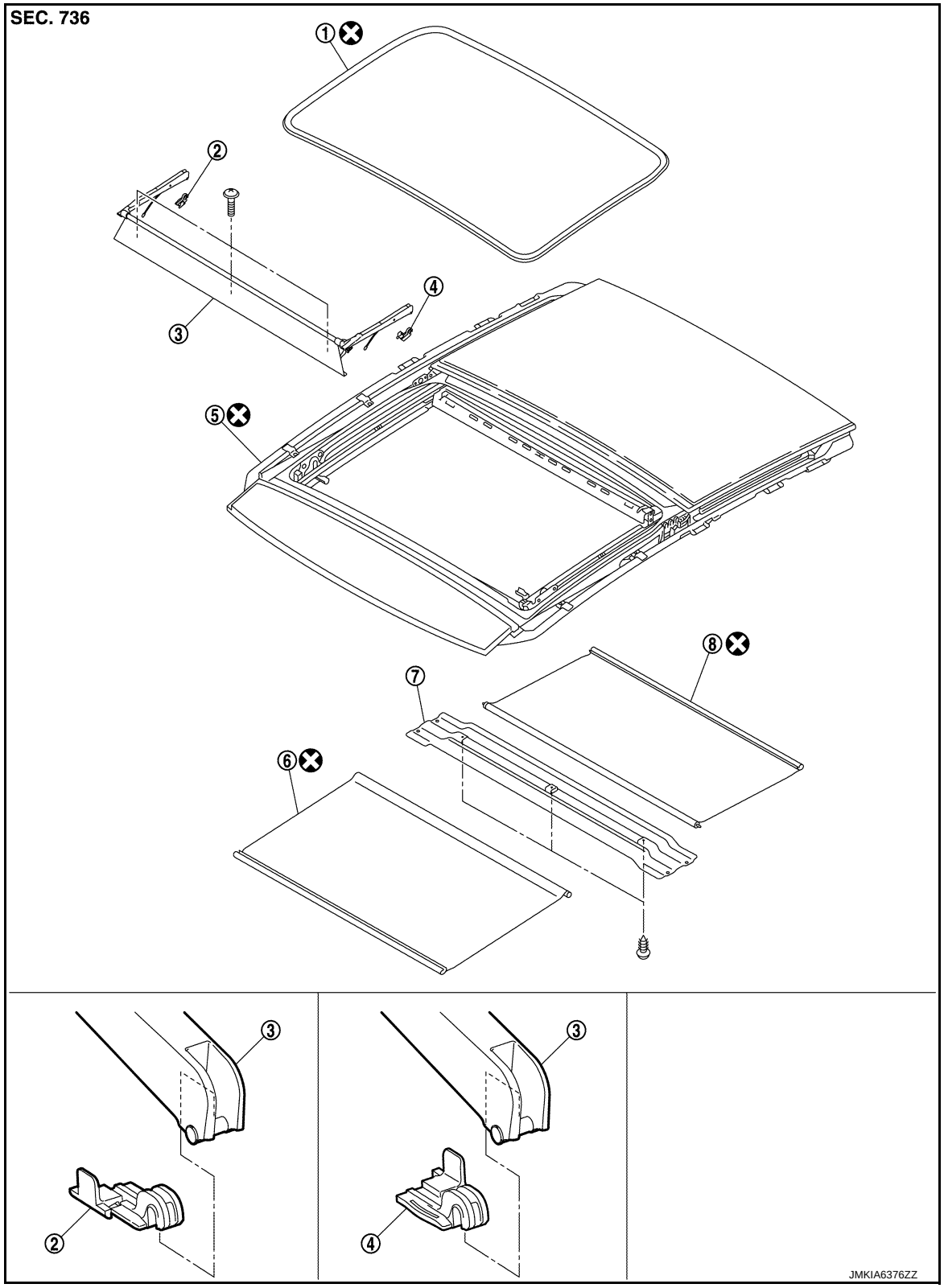
INSTALLATION

Install in the reverse order of removal.

SUNSHADE

Exploded View

INFOID:0000000009719705



1. Weather-strip
2. Deflector arm fastener RH
3. Wind deflector
4. Deflector arm fastener LH
5. Sunroof frame
6. Front sunshade

7. Sunshade cover
8. Rear sunshade

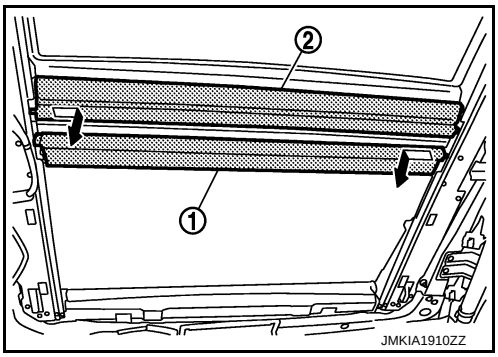
: Always replace after every disassembly.

Removal and Installation

INFOID:0000000009719706

REMOVAL

1. Remove the headlining. Refer to INT-30, "SUNROOF : Removal and Installation".
2. Remove the sunshade cover.
   - Remove the sunroof brackets (LH/RH).
   - Remove the screw, and then sunshade cover.
3. Remove the front sunshade and rear sunshade.
   Remove it to the lower part while pushing a front sunshade (1) and rear sunshade (2) to the arrow direction of the figure.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

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

SUNROOF SWITCH

Exploded View

INFOID:0000000009719707

Refer to INT-30, "SUNROOF : Exploded View".

Removal and Installation

INFOID:0000000009719708

Removal

Remove the sunroof switch. Refer to INT-30, "SUNROOF : Removal and Installation".

Installation

Install in the reverse order of removal.