

SECTION **RF**  
ROOF

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# PRECAUTIONS

## PRECAUTIONS

PFP:00001

### Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

EIS00419

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 and SB section of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not 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

EIS0015C

- Disconnect both battery cables in advance.
- Disconnect air bag system line in advance.
- Do not tamper with or force air bag lid open, as this may adversely affect air bag performance.
- Be careful not to scratch pad and other parts.
- When removing or disassembling any part, be careful not to damage or deform it. Protect parts, which may get in the way with cloth.
- When removing parts with a screwdriver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If a clip is deformed or damaged, replace it.
- If an un reusable part is removed, replace it with a new one.
- Tighten bolts and nuts firmly to the specified torque.
- After re-assembly has been completed, make sure each part functions correctly.
- Remove stains in the following way.

Water-soluble stains:

Dip a soft cloth in warm water, and then squeeze it tightly. After wiping the stain, wipe with a soft dry cloth.

Oil stain:

Dissolve a synthetic detergent in warm water (density of 2 to 3% or less), dip the cloth, then clean off the stain with the cloth. Next, dip the cloth in fresh water and squeeze it tightly. Then clean off the detergent completely. Then wipe the area with a soft dry cloth.

- Do not use any organic solvent, such as thinner or benzene.

# PREPARATION

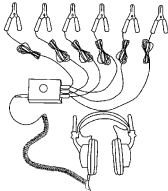
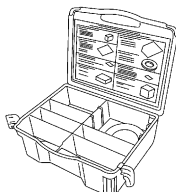
## PREPARATION

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### Special Service Tools

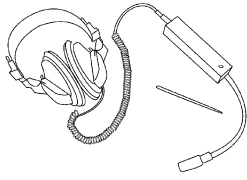
E/S000ZA

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
(J-39570) Chassis ear   SIIA0993E	Locating the noise
(J-43980) NISSAN Squeak and Rattle Kit   SIIA0994E	Repairing the cause of noise

### Commercial Service Tools

E/S000ZB

Tool name	Description
Engine ear   SIIA0995E	Locating the noise

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

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### Work Flow

EIS000ZC



### 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 customer's comments; refer to [RF-8, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving 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 bumble bee)  
Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you 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.

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## 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 you confirm the repair.

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

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

## 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 you suspect the noise is coming from.  
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 you suspect is causing 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 with your hand by touching the component(s) that you suspect is (are) causing the noise.
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks.  
Refer to [RF-6, "Generic Squeak and Rattle Troubleshooting"](#).

## 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-43980) is available through your authorized Nissan Parts Department.

### CAUTION:

**Do not use excessive force as many components are constructed of plastic and may be damaged.**

**Always check with the Parts Department for the latest parts information.**

**The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). 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)**

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

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## **INSULATOR (Light foam block)**

80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97 in)

## **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 will be visible or not fit.

Note: Will only last a few months.

## **SILICONE SPRAY**

Use when grease cannot be applied.

## **DUCT TAPE**

Use 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.

## **Generic Squeak and Rattle Troubleshooting**

EIS000ZD

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:**

**Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.**

## **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:

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. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J-43980) to repair the noise.

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:

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 seat is in and the load placed on the seat when the noise is present. 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.

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## Diagnostic Worksheet

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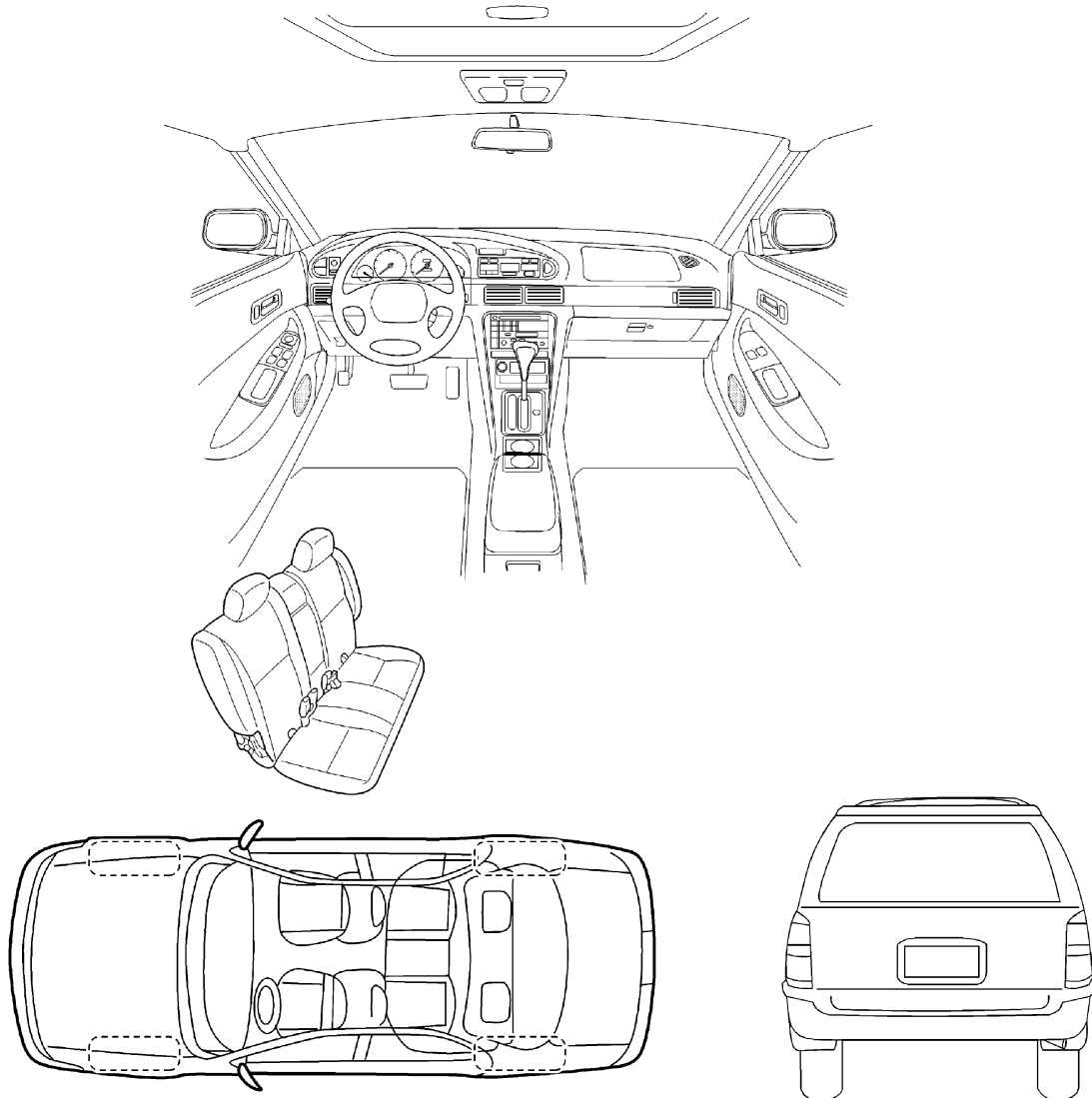
### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Infiniti Customer:

We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti 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 the back 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.

SBT860



# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

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

- |  |   |
|--|---|
| <input type="checkbox"/> anytime                             | <input type="checkbox"/> after sitting out in the sun |
| <input type="checkbox"/> 1 <sup>st</sup> time in the morning | <input type="checkbox"/> when it is raining or wet    |
| <input type="checkbox"/> only when it is cold outside        | <input type="checkbox"/> dry or dusty conditions      |
| <input type="checkbox"/> only when it is hot outside         | <input type="checkbox"/> other: _____                 |

### III. WHEN DRIVING:

- through driveways
- over rough roads
- over speed bumps
- only at 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 on a 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:

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	YES	NO	Initials of person performing
Vehicle test driven with customer	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise verified on test drive	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise source located and repaired	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Follow up test drive performed to confirm repair	<input type="checkbox"/>	<input type="checkbox"/>	_____

VIN: \_\_\_\_\_ Customer Name: \_\_\_\_\_

W.O. #: \_\_\_\_\_ Date: \_\_\_\_\_

SBT844

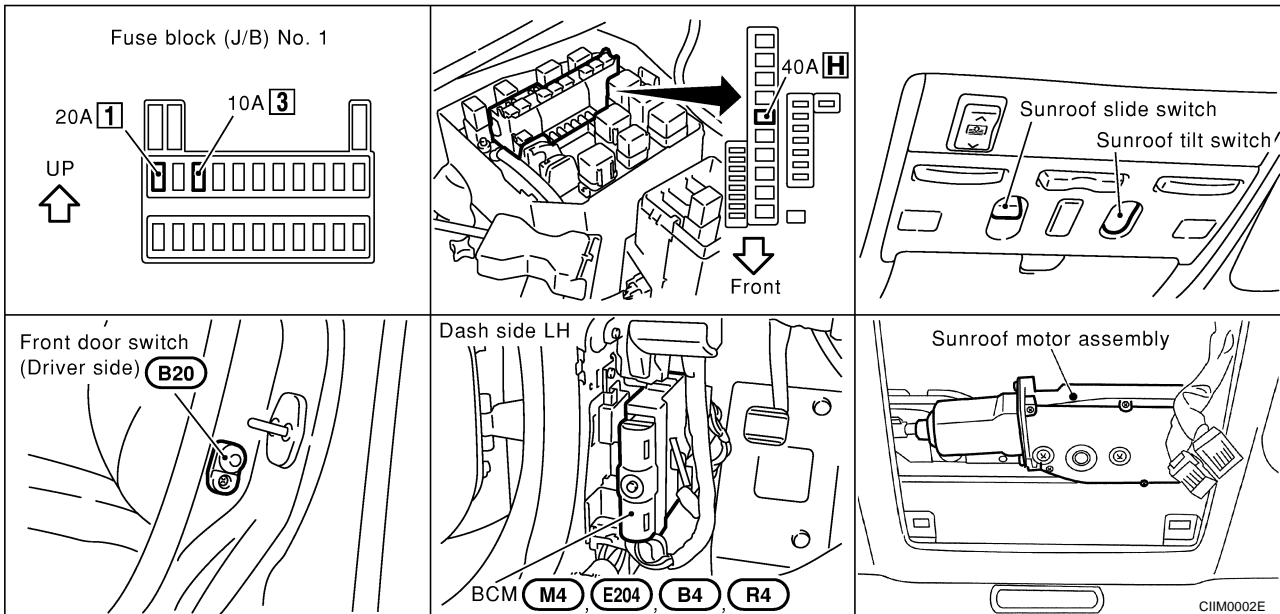
This form must be attached to Work Order

## SUNROOF

PFP:91210

### Component Parts and Harness Connector Location

EIS000JQ



### System Description OUTLINE

EIS000JP

Electric sunroof system consists of

- Sunroof switch
- Sunroof motor assembly
- Front door switches
- BCM (Body Control Module)

BCM controls power supply for the operation of sunroof motor. Power is supplied from BCM to sunroof motor assembly. Sunroof will be operated depending on sunroof switch condition.

### OPERATION

Sunroof can be opened or closed and tilted up or down with sunroof switch.

### AUTO OPERATION

The power sunroof AUTO feature makes it possible to open and close the sunroof without holding the sunroof switch in the down or up position.

### DELAYED POWER OPERATION

When the ignition switch is turned to the OFF position, the sunroof will still operate for up to approximately 45 seconds unless driver's side or passenger side door is opened.

### ANTI-PINCH SYSTEM

The CPU of sunroof motor monitors the sunroof motor operation and the sunroof position (full closed or other) by the signals from sunroof motor. When sunroof motor detects interruption during the following close operation, sunroof switch controls the motor for open and the sunroof will operate about 150 mm (5.91 in).

The operation condition is the following.

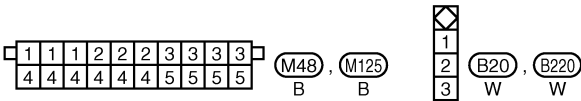
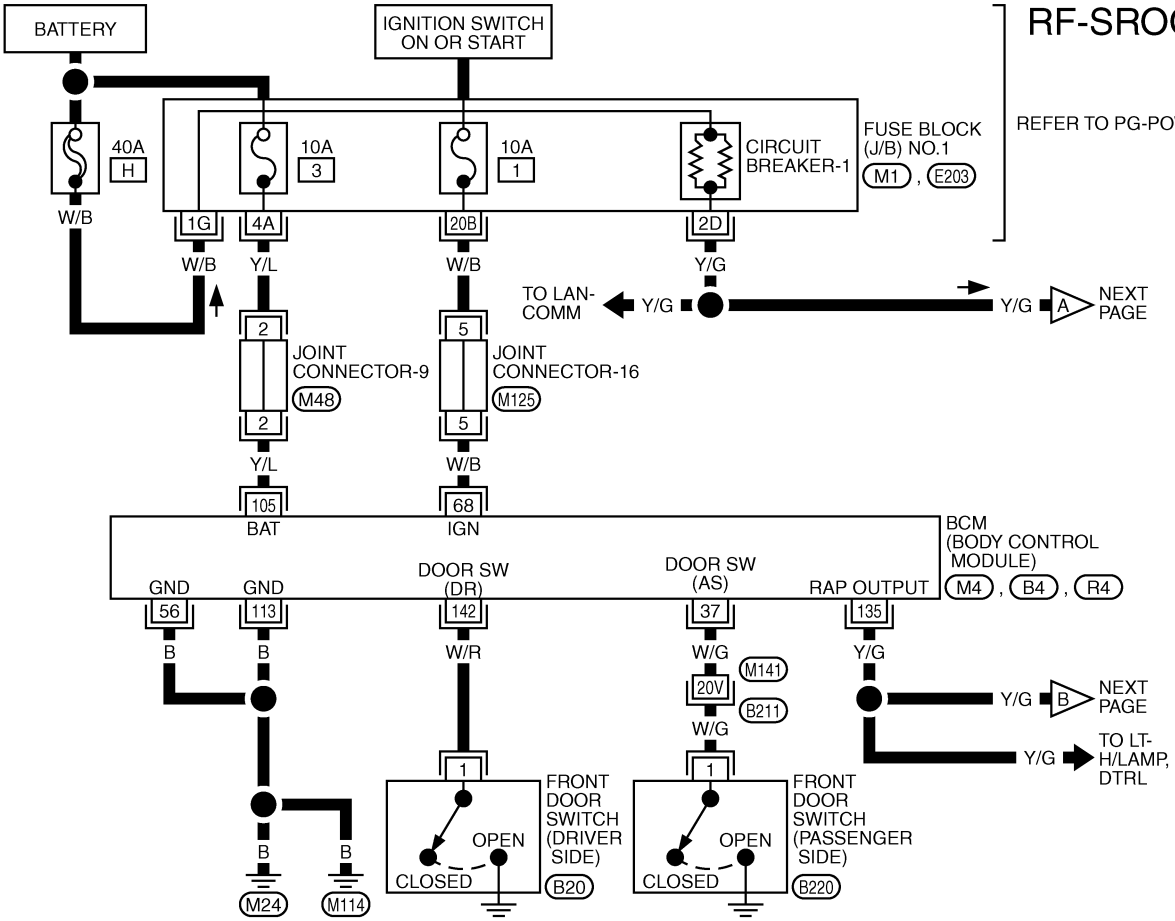
- automatic close operation when ignition switch is in the ON position
- automatic close operation during retained power operation

# SUNROOF

## Wiring Diagram — SROOF —

E/S000JR

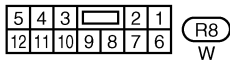
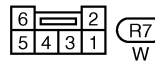
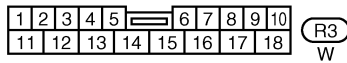
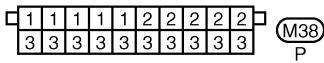
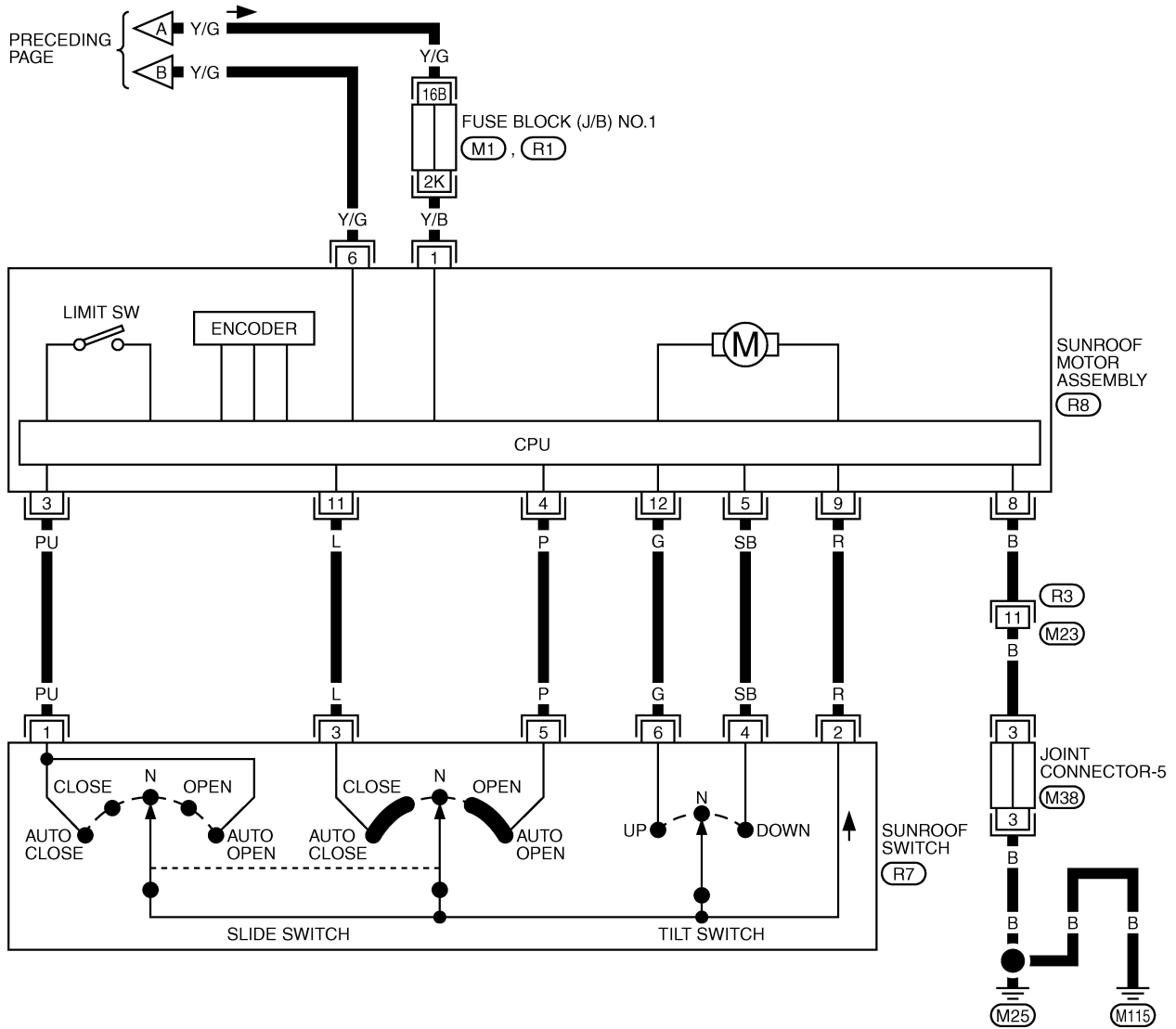
RF-SROOF-01



REFER TO THE FOLLOWING.

- (B21) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (E203) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (M4), (B4), (R4) -ELECTRICAL UNITS

TIWM0234E



REFER TO THE FOLLOWING.  
(M1), (R1) - FUSE BLOCK-  
JUNCTION BOX (J/B) NO.1

# SUNROOF

## Terminals and Reference Value for BCM

EIS0046F

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
37	W/G	Front door switch passenger side	Door open (ON) → close (OFF)	0 → Battery voltage
56	B	Ground	—	0
68	W/B	Ignition switch (ON)	Ignition switch (ON or START position)	Battery voltage
105	Y/L	Power source (Fusible link)	—	Battery voltage
113	B	Ground	—	0
135	Y/G	RAP signal	Ignition switch ON	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			When driver side or passenger side door is open in timer operates	0
142	W/R	Front door switch driver side	Door open (ON) → close (OFF)	0 → Battery voltage

## Terminals and Reference Value for Sunroof Motor

EIS000JS

Terminal	Wire color	Item	Condition	Voltage (V) (Approx.)
1	Y/B	Power source (Fuse)	—	Battery voltage
3	PU	Sunroof AUTO open / close signal	Sunroof switch AUTO operation	0
			Except the above-mentioned	Battery voltage
4	P	Sunroof OPEN switch signal	Sunroof switch OPEN operation	0
			Except the above-mentioned	Battery voltage
5	SB	Sunroof TILT DOWN switch signal	Sunroof switch TILT DOWN operation	0
			Except the above-mentioned	Battery voltage
6	Y/G	RAP signal	Ignition switch ON	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			When driver side or passenger side door is open in timer operates	0
8	B	Ground	—	0
9	R	Sunroof switch ground	—	0
11	L	Sunroof CLOSE switch signal	Sunroof switch CLOSE operation	0
			Except the above-mentioned	Battery voltage
12	G	Sunroof TILT UP switch signal	Sunroof switch TILT UP operation	0
			Except the above-mentioned	Battery voltage

## CONSULT-II Function

EIS000JT

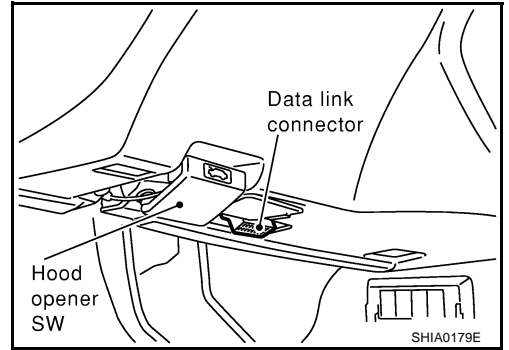
CONSULT-II executes the following functions by combining data reception and command transmission via the communication line from the BCM.

Self-diagnosis mode	Content
Date monitor	Displays BCM input date on real-time basis.
Active test	It can confirm whether the sunroof control signal is active or inactive.

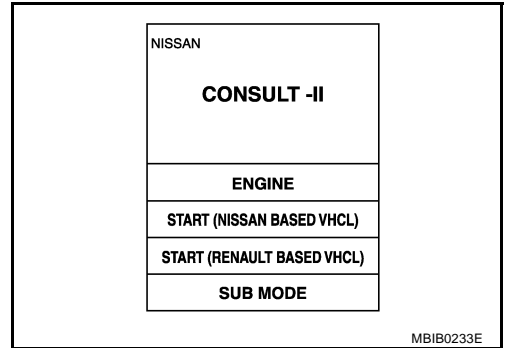
# SUNROOF

## CONSULT-II INSPECTION PROCEDURE

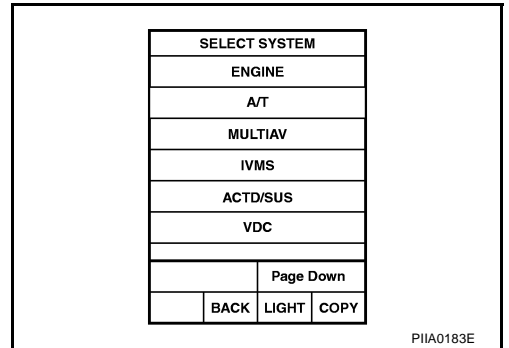
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II and CONVERTER to the data link connector, and turn the ignition switch ON.



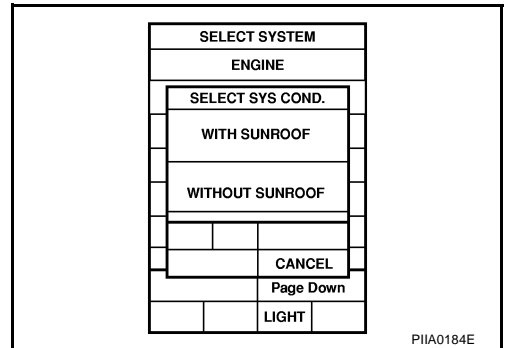
2. Touch "START (NISSAN BASED VHCL)".



3. Touch "IVMS" on the "SELECT SYSTEM" screen.  
If "IVMS" is not indicated, go to [GI-38, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#)

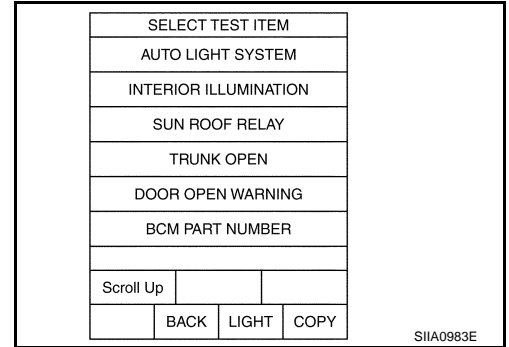


4. Touch "WITH SUNROOF" on the "SELECT SYS COND" screen.
5. Touch "OK". If the selection is wrong, touch "CANCEL".



# SUNROOF

6. Touch "SUNROOF RELAY" on the "SELECT TEST ITEM" screen.



A  
B  
C  
D  
E  
F  
G  
H  
RF  
J  
K  
L  
M

## DATA MONITOR

### Display Item List

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH

## ACTIVE TEST

### Display Item List

Sunroof signal	Sunroof
ON	Operated.
OFF	Not operated.

## Trouble Diagnosis Chart by Symptom

E/S00000

Symptom	Diagnosis service procedure	Refer to page
Sunroof does not operate.	1. Sunroof switch system check.	<a href="#">RF-16</a>
	2. Sunroof motor assembly power supply and ground circuit check.	<a href="#">RF-16</a>
	3. Sunroof motor assembly circuit system check.	<a href="#">RF-17</a>
	4. Replace the sunroof motor assembly.	<a href="#">RF-24</a>
Anti-pinch system does not operate properly.	Replace Sunroof motor assembly.	<a href="#">RF-24</a>
Motor does not stop at the sunroof fully open or fully closed position.		<a href="#">RF-24</a>
Delayed power operation does not operate properly.	1. Door switch check.	<a href="#">RF-17</a>
	2. Harness for open short between BCM and power window main switch (LCU01).	<a href="#">LAN-7</a>
	3. Replace BCM.	-

# SUNROOF

## Sunroof Switch System Check

EIS000JV

### 1. CHECK SUNROOF SWITCH

1. Turn ignition switch OFF.
2. Operate each sunroof switch, and check the continuity between terminals 1, 3, 4, 5, 6 and terminal 2 on the sunroof switch connector R7.

#### AUTO open/close switch operation

1 (PU) – 2 (R) :Continuity should exist.

#### CLOSE switch operation

3 (L) – 2 (R) :Continuity should exist.

#### TILT DOWN operation

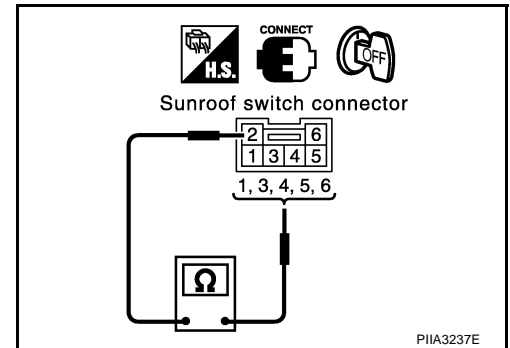
4 (SB) – 2 (R) :Continuity should exist.

#### OPEN switch operation

5 (P) – 2 (R) :Continuity should exist.

#### TILT UP switch operation

6 (G) – 2 (R) :Continuity should exist.



#### OK or NG

- OK >> Sunroof switch is OK.  
NG >> Replace sunroof switch.

## Sunroof Motor Assembly Power Supply and Ground Circuit Check

EIS000JW

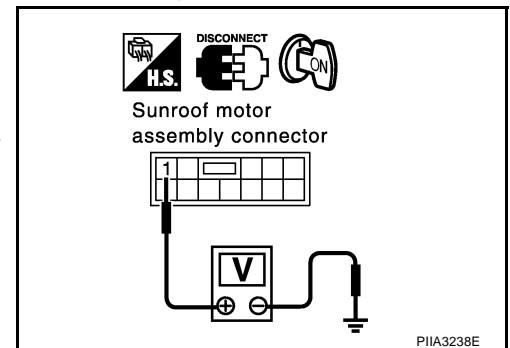
### 1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sunroof motor connector.
3. Turn ignition switch ON.
4. Check voltage between sunroof motor assembly connector R8 terminal 1 and ground.

1 (Y/B) – Ground : Battery voltage

#### OK or NG

- OK >> GO TO 2.  
NG >> Check harness for open or short between sunroof motor assembly and circuit breaker-1



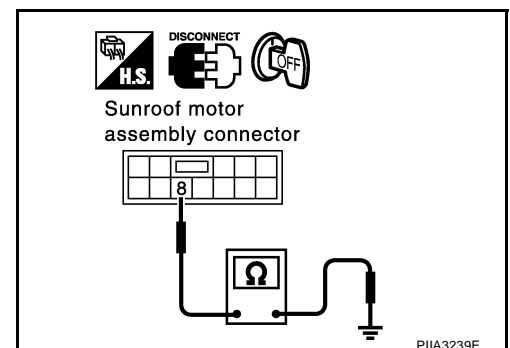
### 2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between sunroof motor assembly connector R8 terminal 8 and ground.

8 (B) – Ground : Continuity should exist.

#### OK or NG

- OK >> Sunroof motor assembly power supply and ground is OK.  
NG >> Repair or replace harness.





## Sunroof Motor Assembly Circuit System Check

EIS000JX

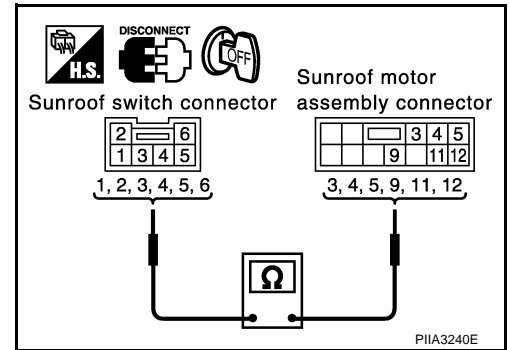
### 1. CHECK HARNESS CONTINUITY

1. Turn the ignition switch OFF.
2. Disconnect sunroof switch and sunroof motor assembly connectors.
3. Check continuity between sunroof switch connector R7 terminals 1, 2, 3, 4, 5, 6 and sunroof motor assembly connector R8 terminals 3, 4, 5, 9, 11, 12.

- 1 (PU) – 3 (PU) : Continuity should exist.
- 2 (R) – 9 (R) : Continuity should exist.
- 3 (L) – 11 (L) : Continuity should exist.
- 4 (SB) – 5 (SB) : Continuity should exist.
- 5 (P) – 4 (P) : Continuity should exist.
- 6 (G) – 12 (G) : Continuity should exist.

#### OK or NG

- OK >> Check the condition of the harness and the connector.
- NG >> Repair or replace harness.



## Door Switch Check

EIS0046G

### 1. CHECK DOOR SWITCH INPUT SIGNAL

#### ☑ With CONSULT-II

- Check door switch in "DATE MONITOR" mode with CONSULT-II. Refer to [RF-15](#)

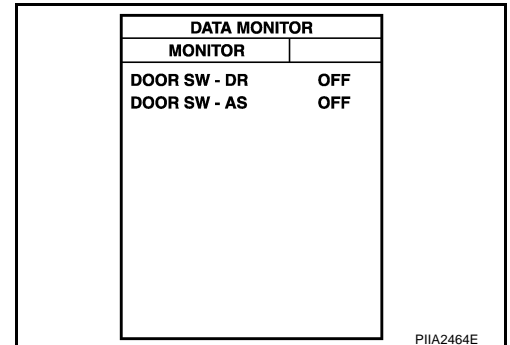
- When door is opened : DOOR SW ON
- When door is closed : DOOR SW OFF

#### ☒ Without CONSULT-II

- Check all door switches in switch monitor mode. Refer to Remote keyless entry system [BL-81](#), "SWITCH MONITOR".

#### OK or NG

- OK >> Door switch is OK.
- NG >> GO TO 2



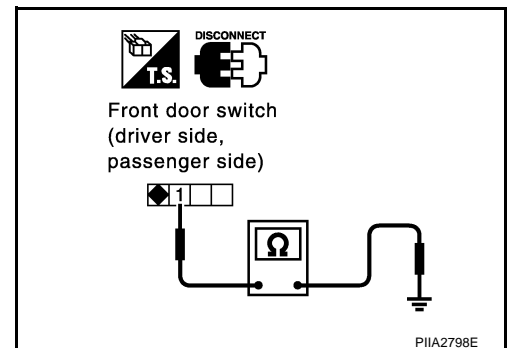
### 2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between following terminals and ground.

Door switch connector		Terminals (Wire color)		Condition	Continuity
Front door switch (driver side)	B20	1(W/R)	Ground	Pressed	No
				Repressed	Yes
Front door switch (passenger side)	B220			Pressed	No
				Repressed	Yes

#### OK or NG

- OK >> Repair or replace following item, when there is a malfunction.
  - Door switch ground condition
  - Harness for open or short between door switch and BCM
- NG >> Replace door switch.

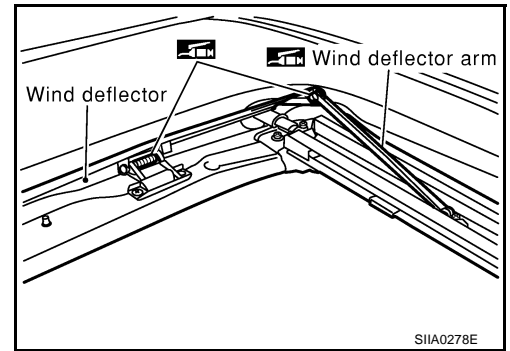


# SUNROOF

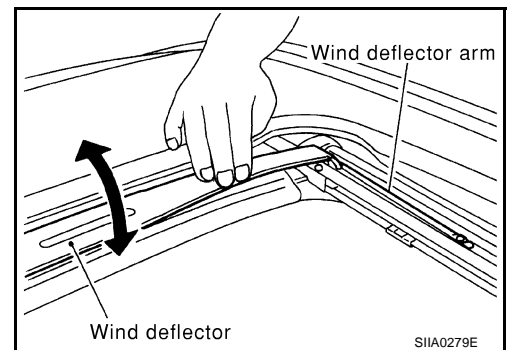
## Wind Deflector Inspection

EIS000JY

1. Open glass lid.
2. Visually check that it is installed properly.
3. Check that the wind deflector is properly greased. If necessary, apply grease.



4. Check that the wind deflector is properly raised by manual. If a malfunction is detected, remove and visually check it. If it is damaged, replace it with a new one. If no damage is found, reinstall it properly.



## Link and Wire Assembly

EIS000JZ

### NOTE:

Before replacing a suspect part, carefully ensure it is the source of noise being experienced.

1. Check link to determine if coated film has peeled off to such an extent that substrate is visible. Check also to determine if link is the source of noise. If it is, replace it.
2. Visually check to determine if a sufficient amount of grease has been applied to wire or rail groove. If not, add grease as required.
3. Check wire for any damage or deterioration. If any damage is found, remove rear guide, then replace wire.

## Fitting Adjustment

EIS000KO

Diagram illustrating the fitting adjustment of the lid assembly. The diagram shows the roof panel, glass lid, and lid assembly. Dimensions 'a' and 'b' are indicated. The table below provides the required dimensions for different lid assembly configurations.

	a	b
A - A	14.6 - 16.0 (0.575 - 0.630)	0.8 - 2.2 (0.031 - 0.087)
B - B	15.2 - 16.6 (0.598 - 0.654)	0.3 - 1.7 (0.012 - 0.067)
C - C	15.7 - 17.1 (0.618 - 0.673)	0.2 - 1.6 (0.008 - 0.063)

Unit: mm (in)

Diagram SIA0280E

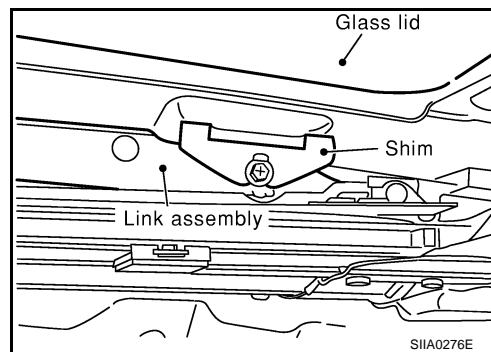
# SUNROOF

## GAP ADJUSTMENT

1. Open sun shade.
2. Tilt glass lid up and then remove side trims.
3. Loosen glass lid securing nuts (2 each on left and right sides), then tilt glass lid down.
4. Adjust glass lid from outside of vehicle so it resembles "A – A" as shown in the figure above.
5. Tilt glass lid up and down until it is adjusted to "C – C" as shown in the figure above.
6. After adjusting glass lid, tilt glass lid up and then tighten nuts.
7. Tilt glass lid up and down several times to check that it moves smoothly.

## HEIGHT DIFFERENCE ADJUSTMENT

1. Tilt glass lid up and down.
2. Check height difference between roof panel and glass lid to see if it is as "A – A" as shown in the figure above.
3. If necessary, adjust it by using one of following procedures.
  - Adjust by adding or removing adjustment shim(s) between glass lid and link assembly.
  - If glass lid protrudes above roof panel, add shim(s) or plain washer at sunroof mounting bracket or stud bolt locations to adjust sunroof installation as required.



EIS000K1

## Removal and Installation

- After any adjustment, check sunroof operation and lid alignment.
- Handle finisher plate and glass lid with care so not to cause damage.
- It is desirable for easy installation to mark each point before removal.

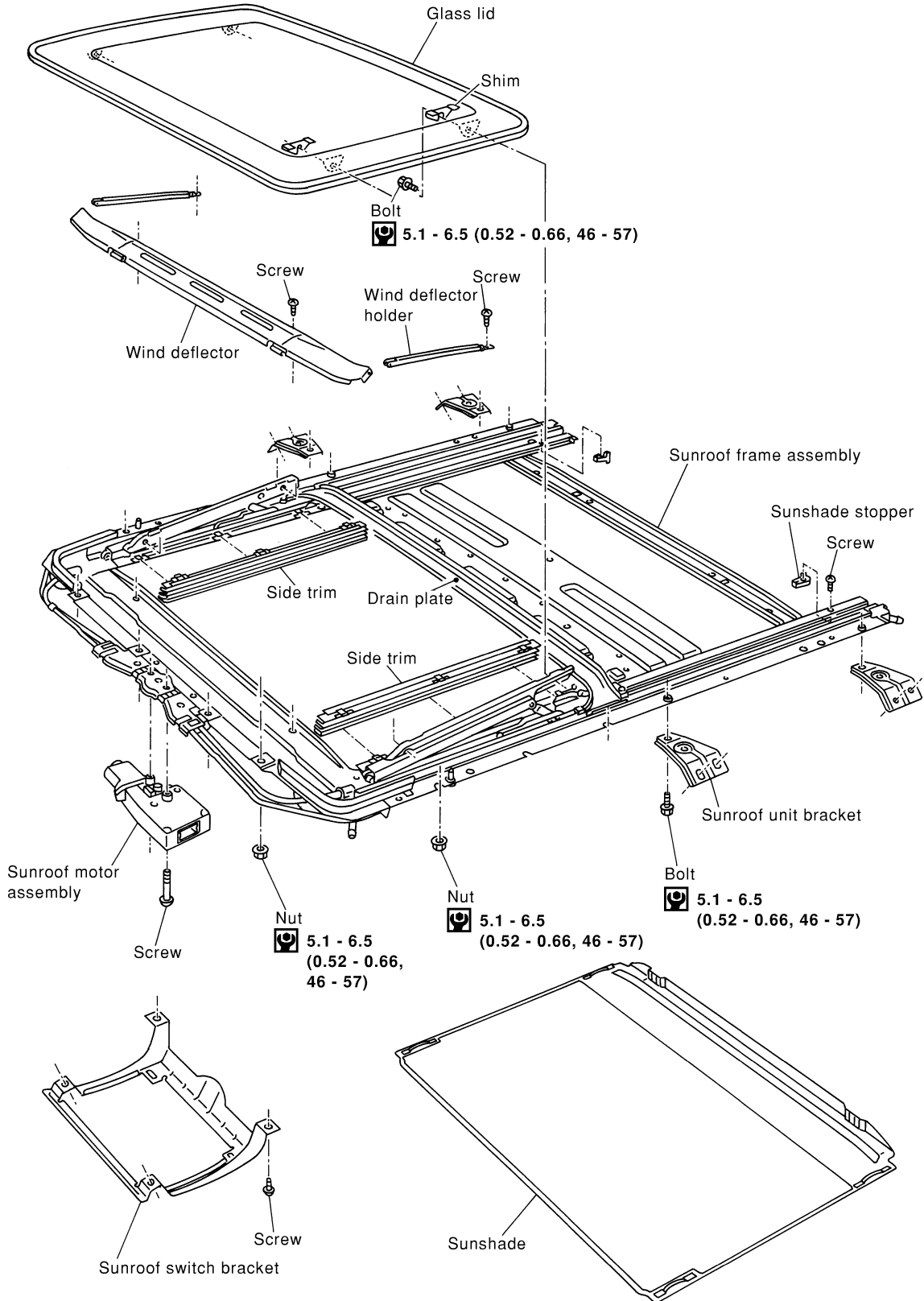
### CAUTION:

- Always work with a helper.

# SUNROOF

- Fully close the glass lid assembly, before removal, then do not operate motor assembly after removal.

SEC. 736



: N•m (kg-m, in-lb)

S1IA0277E

# SUNROOF

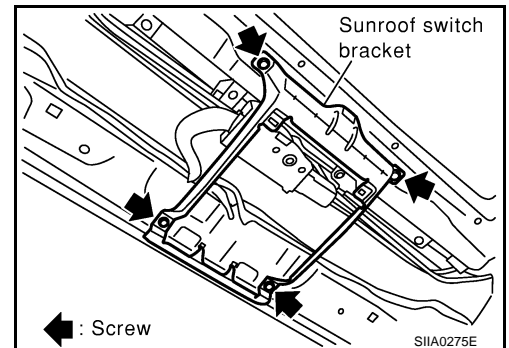
## SUNROOF UNIT

### Removal

#### CAUTION:

- Always work with a helper.
- When taking sunroof unit out, use clothes to protect the seats and trim from damage.
- After installing the sunroof unit and glass lid, be sure to carry out the leak test and check that there is no malfunction.

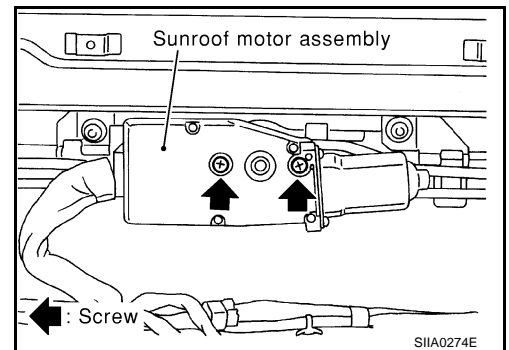
1. Remove the headlining. Refer to [EI-56, "Removal and Installation"](#) .
2. Disconnect drain hoses.
3. Remove glass lid. Refer to [RF-23, "GLASS LID"](#) .
4. Remove screws, then remove the sunroof switch bracket.



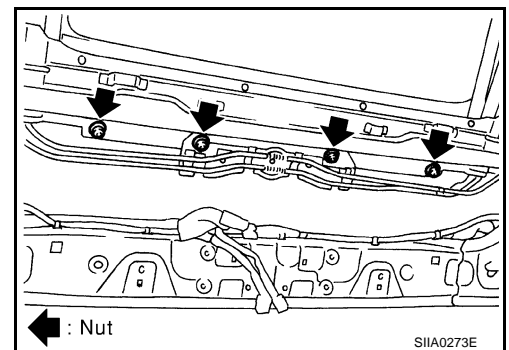
5. Remove motor mounting screws. Disconnect connector from sunroof motor and then remove sunroof motor.

#### CAUTION:

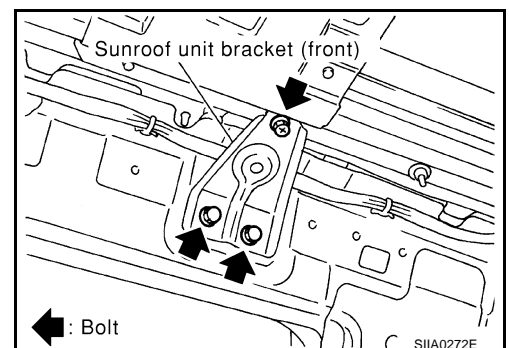
- Before removing sunroof motor, make sure that sunroof lid is fully closed.
- After removing sunroof motor, do not attempt to rotate sunroof motor as a single unit.



6. Remove nuts from the front end and side rail.

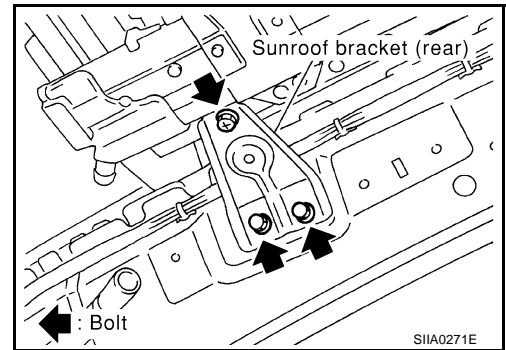


7. Remove front sunroof bracket bolts.



# SUNROOF

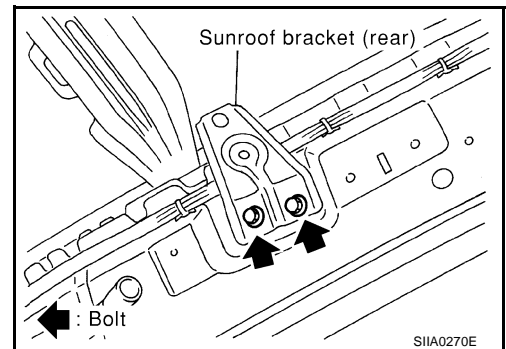
8. Remove rear sunroof bracket bolts, and then remove sunroof unit from roof panel.



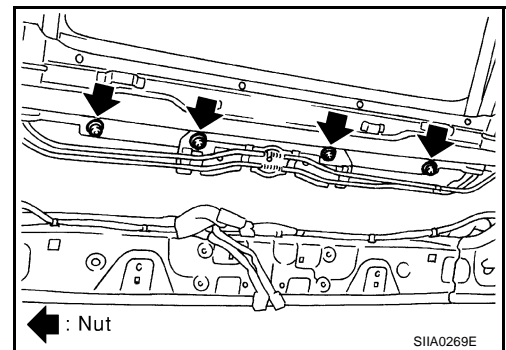
9. Remove sunroof unit through the passenger compartment while being careful not to damage the seats and trim.

## Installation

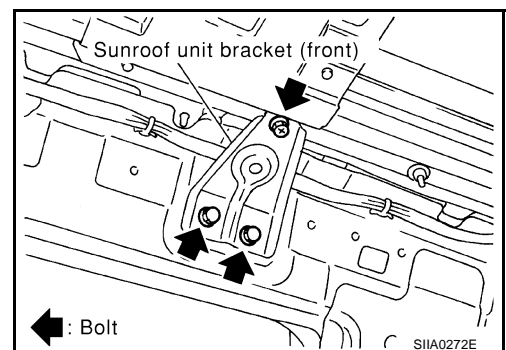
1. Temporarily tighten the mounting bolts to the rear sunroof brackets (RH/LH).



2. Bring sunroof unit into passenger compartment and then place the rear end of the rail onto the rear sunroof brackets.
3. Temporarily tighten the mounting nuts to the front end of sunroof unit.



4. Tighten the installation points diagonally excluding the installation point of the sunroof bracket around the roof opening.
5. Tighten the front sunroof bracket bolts of the vehicle side, and then tighten the bolt of the rail side.
6. Tighten the rear sunroof bracket bolts of the vehicle side, and then tighten the bolt of the rail side.

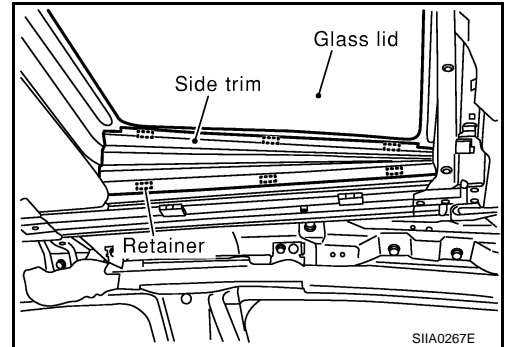


# SUNROOF

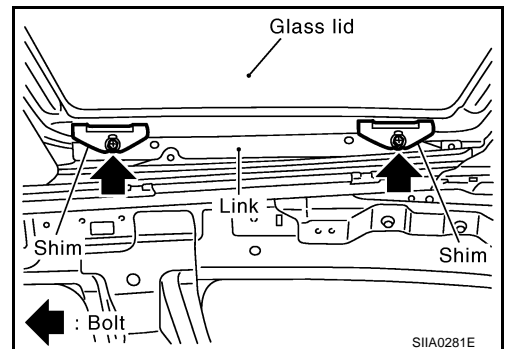
## GLASS LID

### Removal

1. Tilt up glass lid.
2. Pull the side trim inside of the retainer and then remove side trim.



3. Check the number of shims between glass lid and link. Remove mounting bolt and then remove glass lid.



### Installation

1. Tighten bolts diagonally on the glass lid.
2. After installation, carry out fitting adjustment.

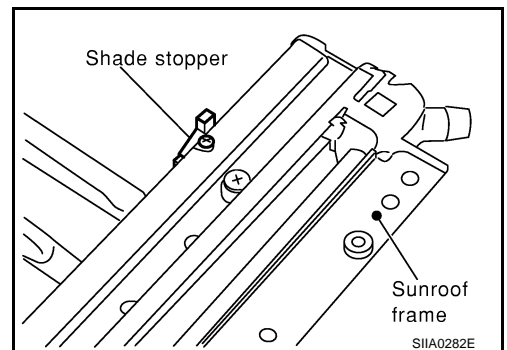
## SUNSHADE

### Removal

#### CAUTION:

Before removing or installing the sunshade, be sure to remove the sunroof unit from the vehicle.

1. Remove sunshade stopper mounting screws from the rear end of the sunroof frame and then remove sunshade stopper.
2. Remove sunshade from the rear end of the sunroof frame.



### Installation

Install in the reverse order of removal.

A  
B  
C  
D  
E  
F  
G  
H

RF

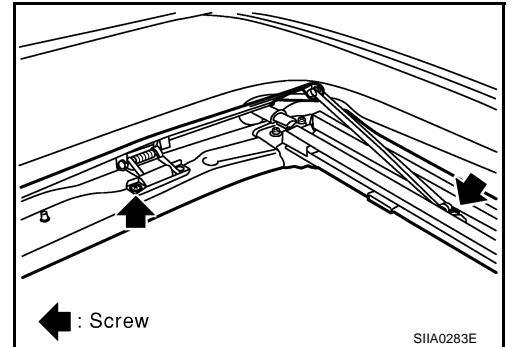
J  
K  
L  
M

# SUNROOF

## WIND DEFLECTOR

### Removal

1. Remove deflector arm mounting screws.
2. Remove spring hinge screws and then remove hinge from the sunroof frame.



### Installation

Install in the reverse order of removal.

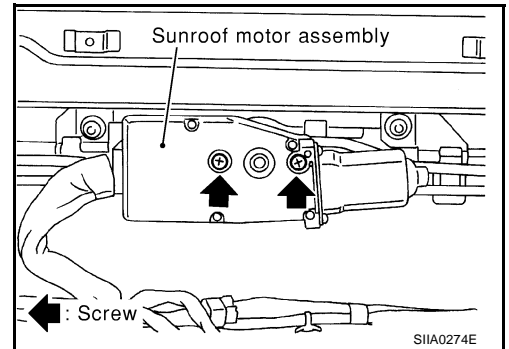
## SUNROOF MOTOR

### Removal

1. Remove headlining. Refer to [EI-56, "Removal and Installation"](#).
2. Remove sunroof motor mounting screws.
3. Disconnect harness connector from sunroof motor and then remove sunroof motor.

### CAUTION:

- When removing the sunroof motor, be sure that the sunroof is in the fully open position.
- Do not run the removed sunroof motor as a single unit.



### Installation

Move the sunroof motor laterally little by little so that the gear is completely engaged into the wire on the sunroof unit and the mounting surface becomes parallel. Then secure the sunroof motor with screws.

### CAUTION:

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