SECTION RF
ROOF

CONTENTS

Sunroof

Retractable Hard Top (C-View)

PRECAUTIONS

PFP:00001

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

EIS00DH1

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 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

EIS00DH2

- Disconnect both battery cables in advance.
- Disconnect air bag system line in advance.
- Never 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 unreusable 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 benzine.

SUNROOF

PFP:91210

System Description

EIS004NN

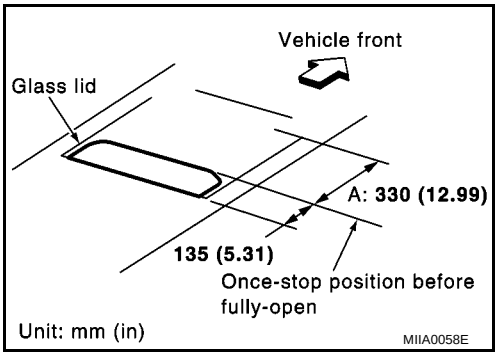
- Operating sunroof switch allows glass lid open/close, and tilt UP and DOWN.
- When sunroof switch is pressed firmly toward the OPEN side, glass lid automatically opens and automatic operation is stopped at a point 135 mm (5.31 in) to the fully closed position.

NOTE:
After the emergency handle is used to rotate the motor drive shaft, sunroof switch operation may not correspond to actual glass lid movement. When this happens, conduct resuming operation to restore normal operation.

RESUMING OPERATION

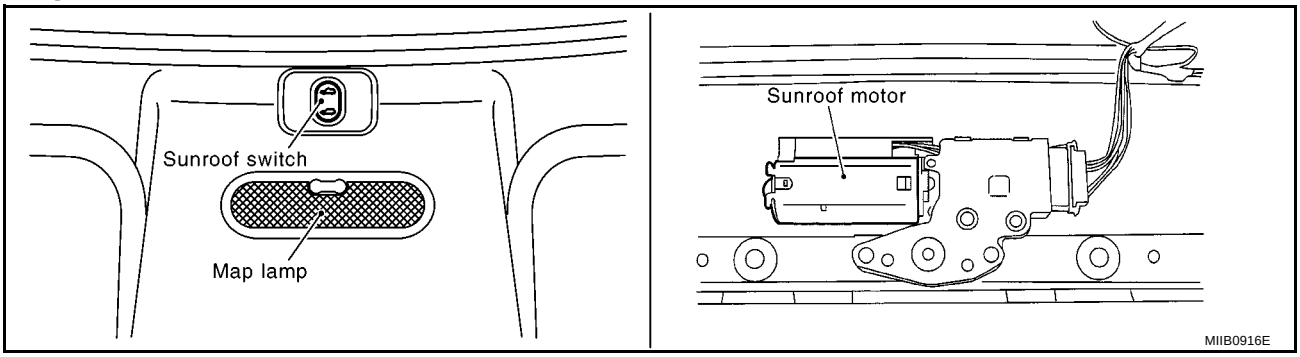
- If actual glass lid operation does not correspond to expected operation, operate sunroof switch to slide glass lid toward area A in the figure. This should result in resumption of normal operation.

CAUTION:
Before normal operation is resumed, expected sunroof switch operation and actual glass lid movement may not correspond. Make sure that neither head nor hands protrude from sunroof and conduct resuming operation.



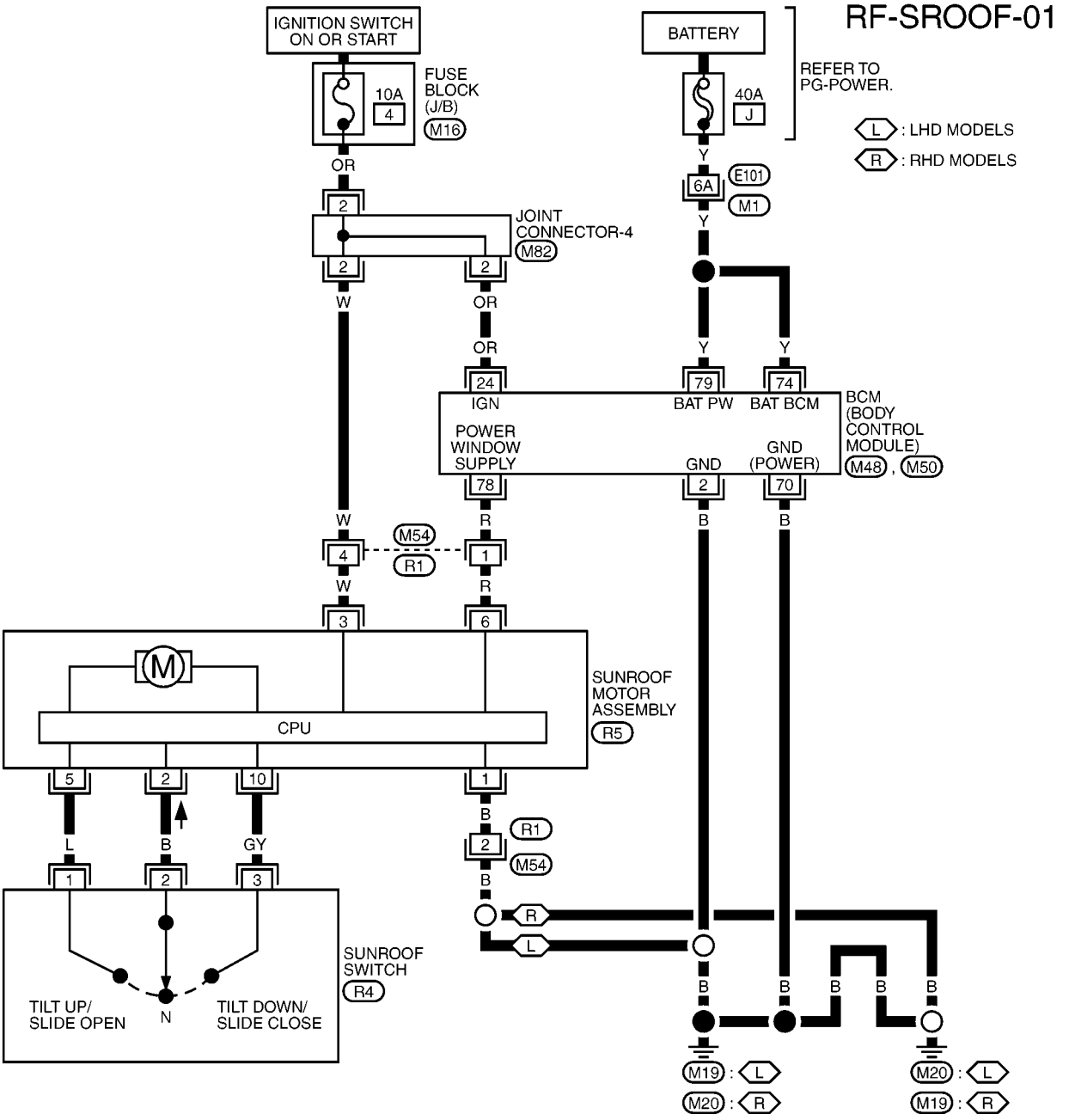
Component Parts Location

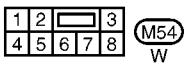
EIS004NO

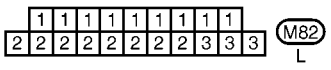


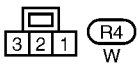
Wiring Diagram — SROOF —

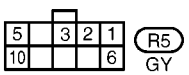
EIS004NP











REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)
M48, M50 -ELECTRICAL UNITS

MIWA0423E

Terminal and Reference Value for Sunroof Switch

EIS004NQ

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE(V) (Approx.)
1	L	Sunroof tilt UP or OPEN signal	Sunroof switch tilt UP or OPEN operation	0 → Battery voltage
2	B	IGN power supply	—	Battery voltage
3	GY	Sunroof tilt DOWN or CLOSE signal	Sunroof switch tilt DOWN or CLOSE operation	0 →Battery voltage

Sunroof Lid Weatherstrip Inspection

EIS004NR

If there is water leakage around glass lid, close glass lid and flush with water to determine whether it is from damaged parts or a gap.

1. Remove glass lid assembly.
2. Visually check weatherstrip for damage, deterioration, or deformation. If excess wear or damage is detected, replace glass lid assembly.

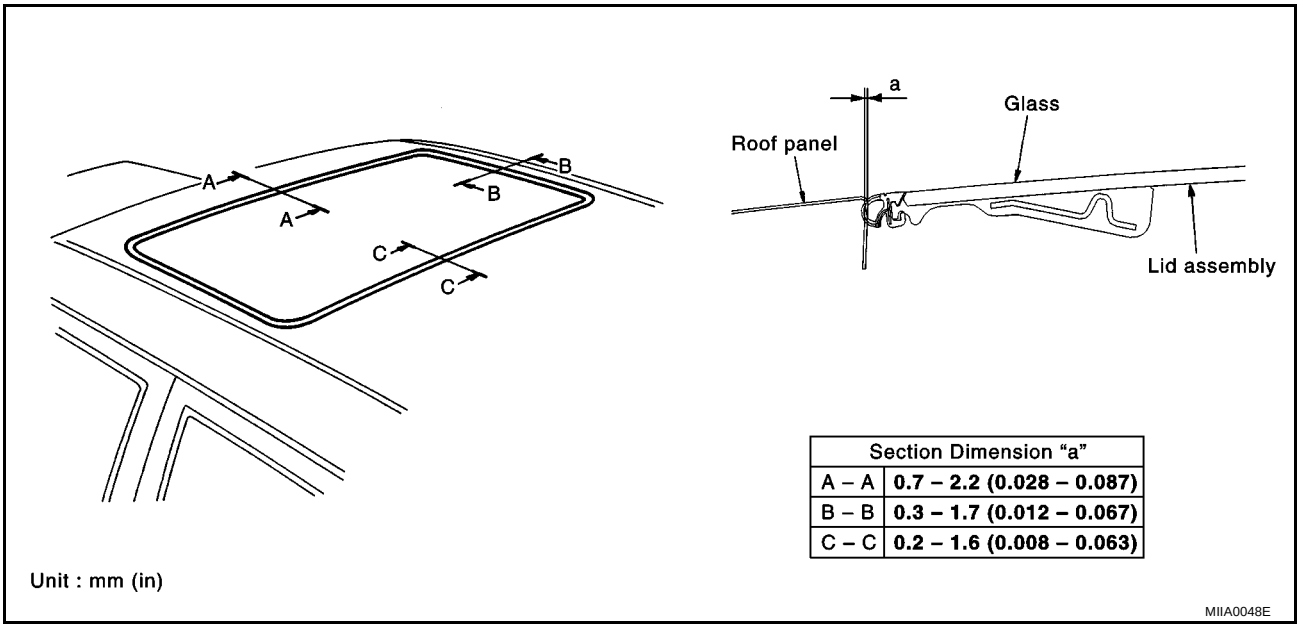
Link and Wire Assembly Inspection

EIS004NS

1. If the link coating peels off to show the base material and an abnormal noise is heard, replace it.
2. Visually confirm the wire and rail groove are properly greased. If necessary, apply body grease.

Fitting Adjustment

EIS004NT



Section Dimension "a"	
A – A	0.7 – 2.2 (0.028 – 0.087)
B – B	0.3 – 1.7 (0.012 – 0.067)
C – C	0.2 – 1.6 (0.008 – 0.063)

Unit : mm (in)

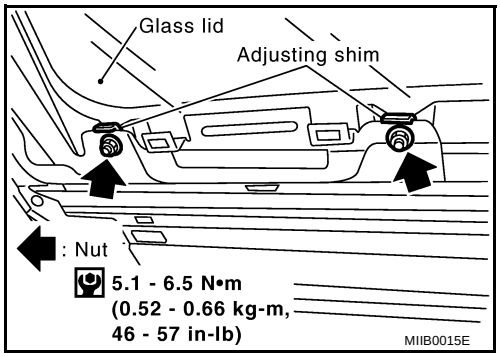
MIIA0048E

LONGITUDINAL/LATERAL CLEARANCE ADJUSTMENT

1. Tilt up glass lid to remove side trim upper and lower.
2. After loosening glass lid mounting bolts (Torx bolt: T25, 3 each on left/right), tilt down glass lid.
3. Adjust glass lid according to sections A–A, B–B, C–C as shown in the figure.
4. After adjusting glass lid, tighten nuts to the specified torque.
5. Tilt glass lid 4 to 5 times to check that it smoothly goes up and down.

SURFACE MISMATCH ADJUSTMENT

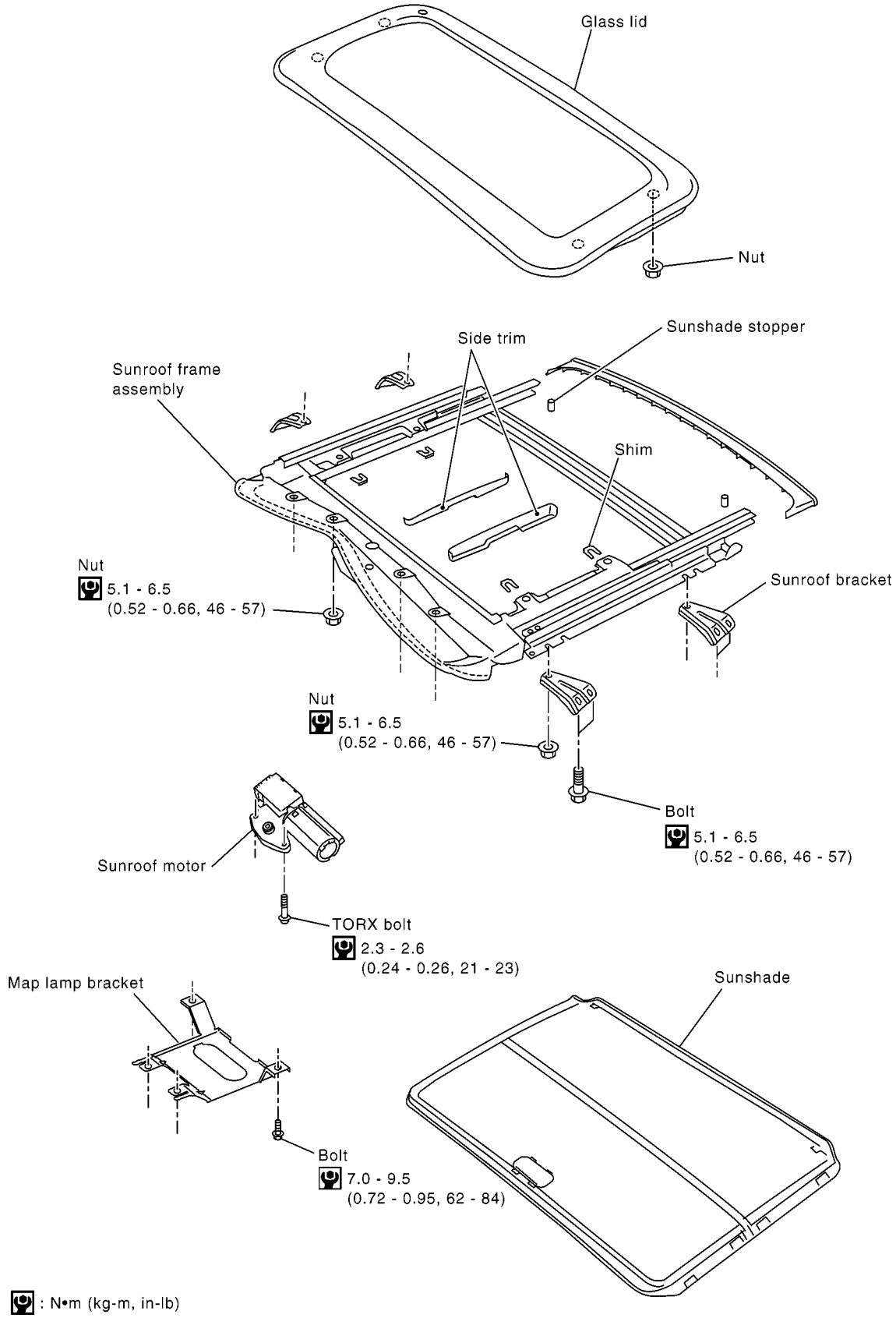
1. Adjust surface height of glass lid and roof panel to 0±1.5 mm (0±0.059 in) by altering the number of shims between glass lid and link assembly. (Standard: 2, max: 4)
2. After fitting adjustment, use a hose to flush the entire surface of the roof with water to check for leaks.



Removal and Installation

EIS004NU

SEC. 736



: N•m (kg-m, in-lb)

MIIB0998E

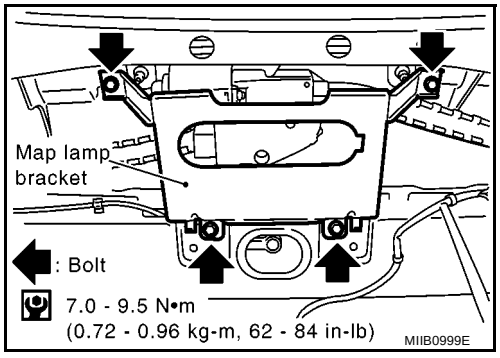
SUNROOF UNIT

Removal

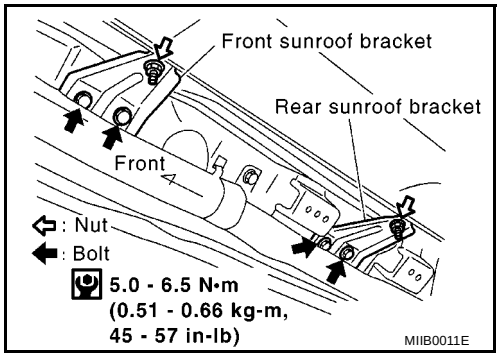
CAUTION:

- **Removal and installation of sunroof unit must be performed by 2 persons.**
- **When taking sunroof unit out, use shop cloths to protect seats and trim from damage.**
- **After installing sunroof unit and glass lid, be sure to carry out the leak test to confirm there is no more leakage.**

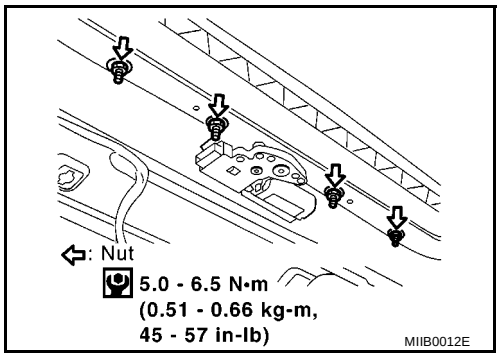
1. Remove headlining. Refer to EI-33, "HEADLINER" .
2. Disconnect drain hoses (4).
3. Disconnect interior lamp harness.
4. Remove sunroof map lamp bracket mounting bolt.
5. Remove sunroof motor assembly.



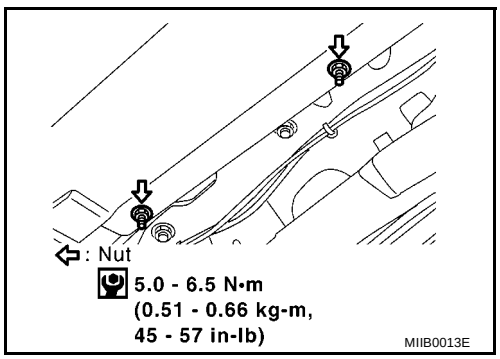
6. Remove both unit-side and body-side front sunroof bracket mounting bolts and nuts.
7. Remove both unit-side and body-side rear sunroof bracket mounting bolts.



8. Remove mounting nuts on the front end.

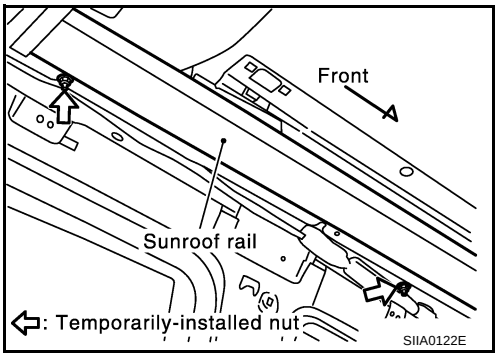


9. Remove mounting nuts on the side rails, and remove sunroof unit from the roof panel.
10. Remove the sunroof unit out of the passenger compartment while being careful not to damage the seats and trim.



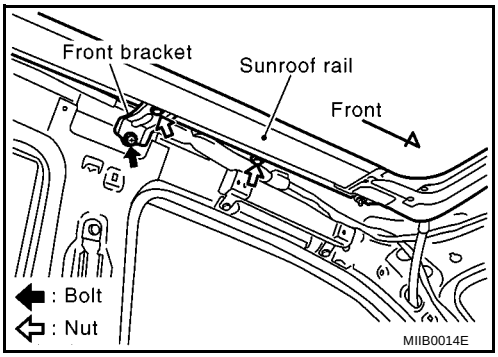
Installation

1. After bringing sunroof unit into the passenger compartment, tighten mounting nuts on the side rails (2 each on left/right). Start from the one at the front reference point.
2. Tighten mounting nuts (4) on the front end.



3. Align the front sunroof bracket to lower face of the rail and roof side mounting face, and tighten bolts. Then tighten bolts on the roof side.
4. Align the center and rear sunroof brackets to lower face of the rail and roof side mounting face, and tighten bolts. Then tighten bolts on the roof side.

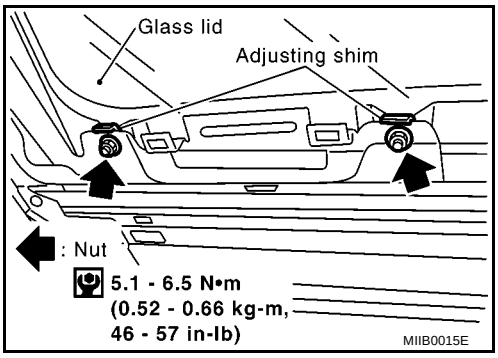
   NOTE:
   Install the sunroof bracket evenly so that the roof surface has no distortion.
5. Tighten bolts on motor bracket.
6. Connect the interior lamp harness.



GLASS LID

Removal

1. Tilt up glass lid.
2. Remove side trim.
3. Remove installation from glass lid.
4. Remove glass lid.



Installation

1. Tighten nuts on glass lid diagonally.
2. After installation, adjust the fit. Refer to RF-9, "Fitting Adjustment" .

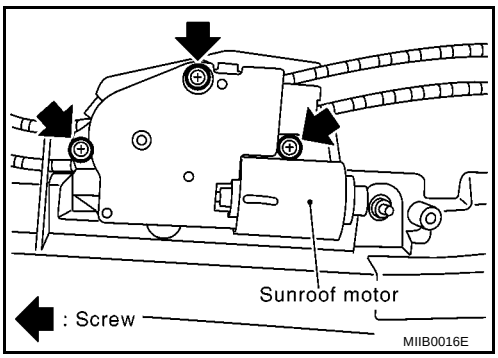
SUNROOF MOTOR

Removal

1. Remove motor mounting bolts (Torx bolt: T25).
2. Remove the harness connector, and remove the sunroof motor.

NOTE:

- Remove the sunroof motor when the sunroof is in the fully-closed position.
- Never rotate the removed motor as a single unit.



Installation

1. Move motor laterally little by little until the gear is completely engaged onto the wire on sunroof unit and the mounting surface becomes parallel. Then secure motor with screws and nuts.
2. Connect harness connector to motor, and perform initial operation for initialization.
   - To initialize, hold Tilt UP switch for approximately 10 seconds with sunroof tilted up. If this is not properly done, Tilt DOWN operation will not be performed normally.
3. After installation, check that sunroof operates normally.

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

PRECAUTIONS

PFP:00001

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

EIS00E7W

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 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 for Hydraulic System

EIS00E7X

CAUTION:

- **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
- **Note the identification number, location and routing of each hose before removal.**
- **After installation, hydraulic hoses must not move towards self-locking bands.**
- **Bleed the hydraulic circuit and check the hydraulic fluid level after any operation on the hydraulic system.**
- **While removing tubes, hydraulic fluid may spray out strongly. Protect the vehicle interior and luggage compartment with suitable covers.**
- **Do not allow a hydraulic tube disconnected. Prepare the new hydraulic component for quick replacement.**
- **Do not manipulate any hydraulic component or moving parts on the retractable hard top assembly while hydraulic tube are disconnected.**
- **Do not let any dirt entering in the hydraulic circuit.**
- **Serviceable parts for hydraulic circuit are not various. Before disassembly refer to RF-203, "Component Parts Drawing" .**

WARNING:

- **The retractable hard top may fall suddenly. Avoid working on the vehicle with hydraulic circuit under pressure. Always depressurize the system before starting. To depressurize the system, disconnect both battery cables starting by negative terminal.**
- **Do not allow hydraulic fluid to come in contact with skin, eyes, fabrics, or.**
- **After touching hydraulic fluid, do not touch or rub your eyes until you have thoroughly washed your hands.**
  - **If hydraulic fluid contacts cloths, change them immediately.**
  - **If hydraulic fluid contacts skin, wash skin with soap and water.**
  - **If hydraulic fluid contacts eyes, immediately flush with water for 15 minutes and seek medical attention.**

Precautions

EIS00E7Y

Disconnect both battery cables in advance starting with the negative terminal.

- 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 unreusable 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.

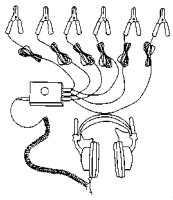
- Do not use any organic solvent, such as thinner or benzine.

PREPARATION

PFP:00002

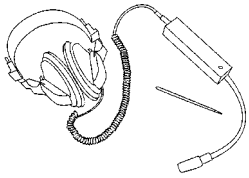
Special Service Tools

EIS00DZD

Tool name	Description
Chassis ear  SIIA0993E	Locating the noise
NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise

Commercial Service Tools

EIS00DZE

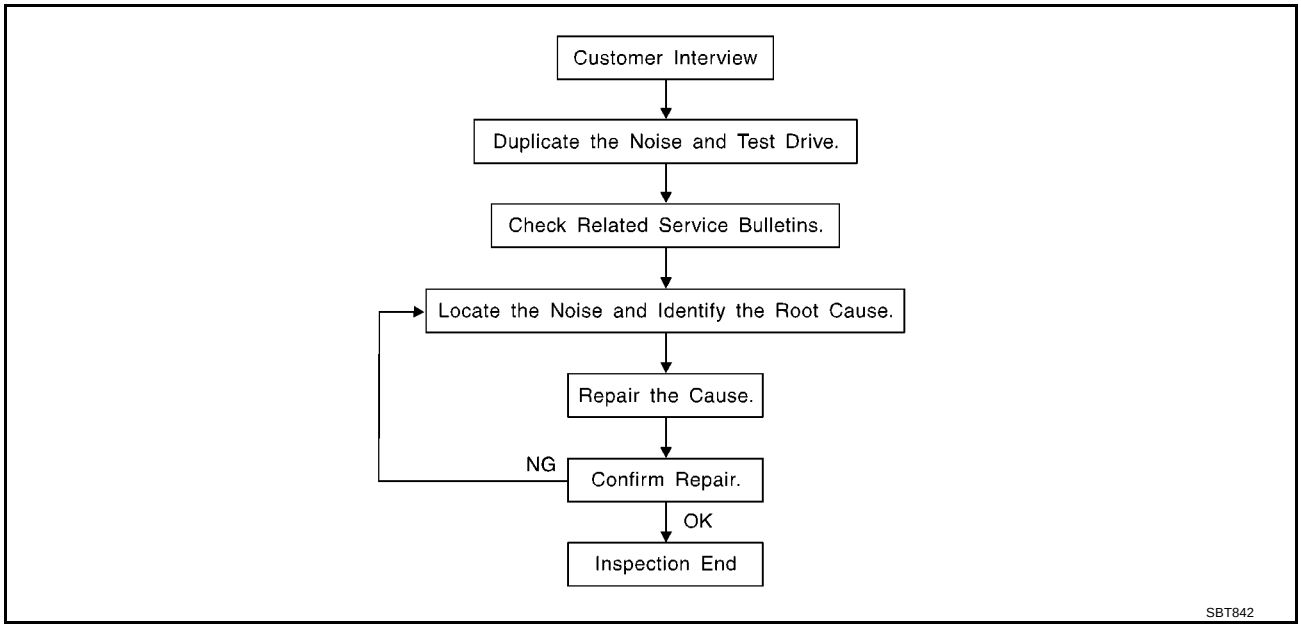
Tool name	Description
Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS00E7J



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-23, "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.

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 (Engine Ear or mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that 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-20, "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 are available through your authorized Nissan Parts Department.

CAUTION:
Do not 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.
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) think, 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 × 1.97 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 available through NISSAN Parts Department, can also be used to repair squeaks and rattles.
UHMW(TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.
SILICONE GREASE
Used in place of UHMW tape that 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

EIS00E7K

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. Cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint
   These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

   CAUTION:
   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 to repair the noise.

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. 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. 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.

RETRACTABLE HARD TOP

Rattle noises can occure in open or close positions.
In open position rattle noises are often caused by:

1. Bad adjustment of roof stop bumpers
2. Bad adjustment of link stop bampers
3. Absence of rubber bumper on trunk lid

In closed position rattle noises are often caused by:

1. Bad routing of hydraulic lines
2. Incorrect installation of headlining

3. Looseness of component in sunshade assembly

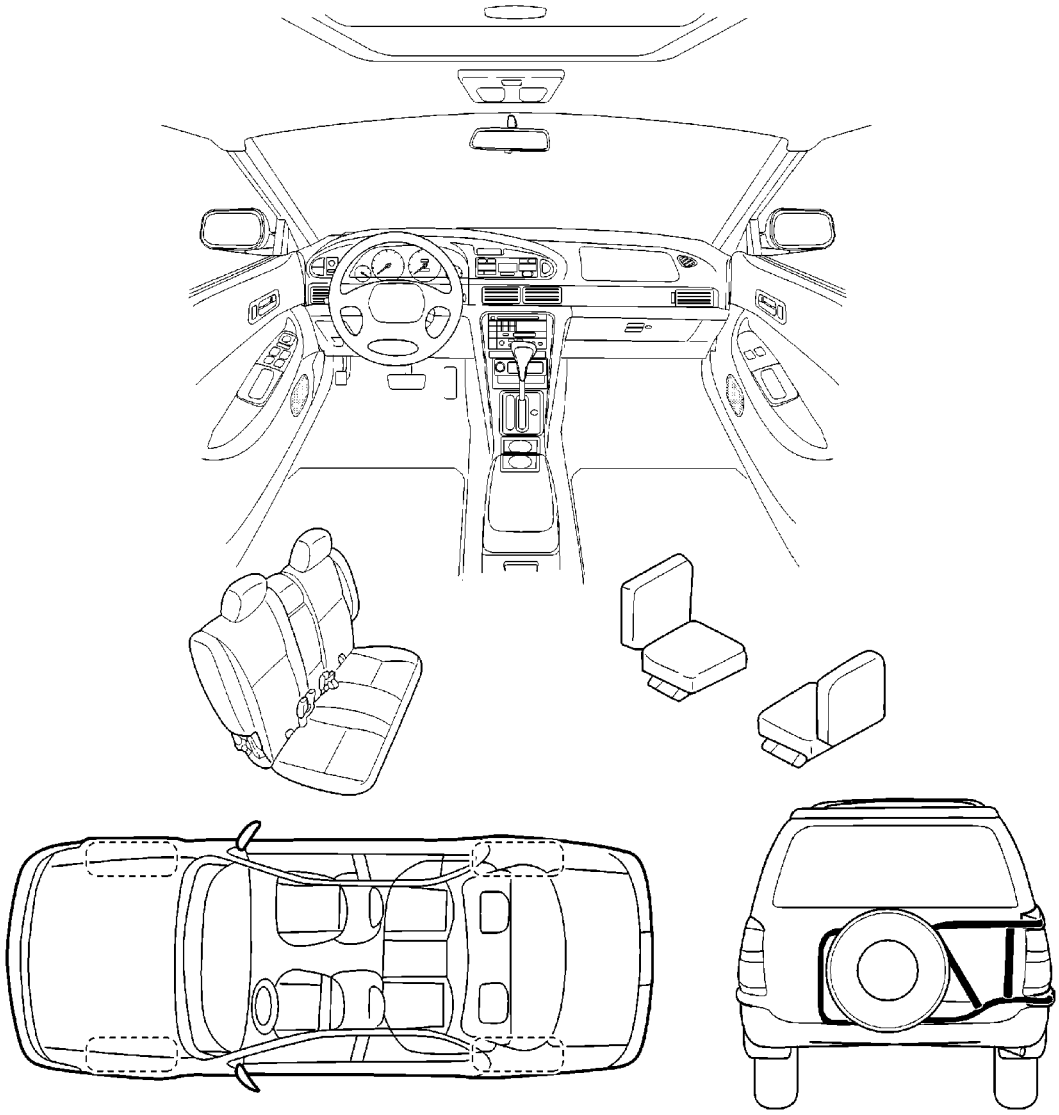
Diagnostic Worksheet

EIS00E7L

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 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.

PIIB0723E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

_____

_____

II. WHEN DOES IT OCCUR? (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 sun
- ❑ when it is raining or wet
- ❑ dry or dusty conditions
- ❑ 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:

_____

_____

	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

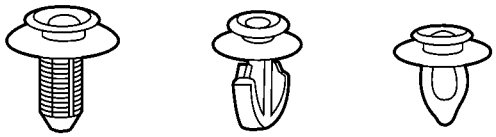
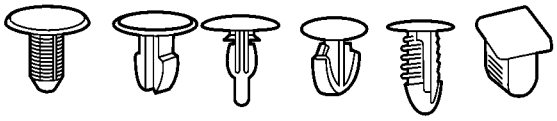
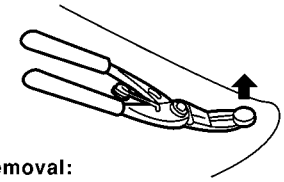
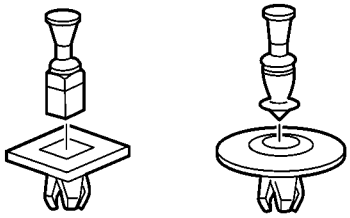
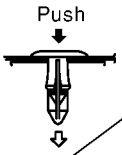
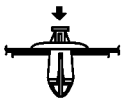
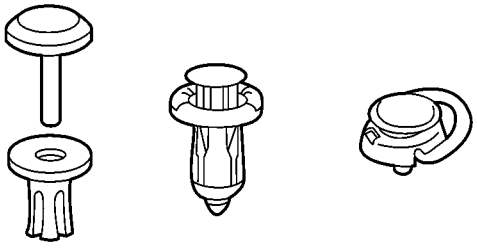
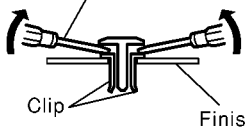
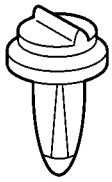
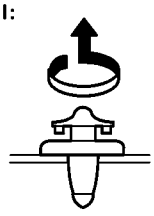
SBT844

CLIP AND FASTENER

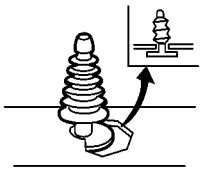
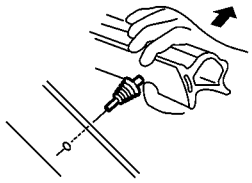
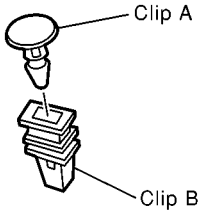
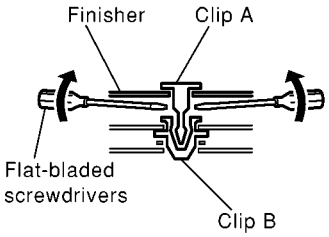
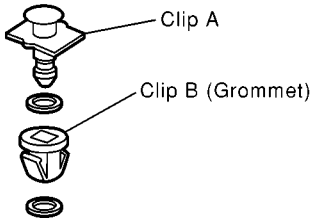
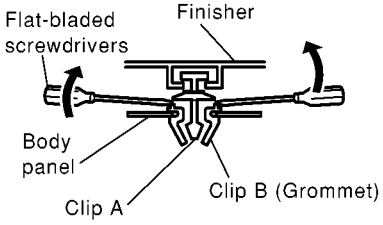
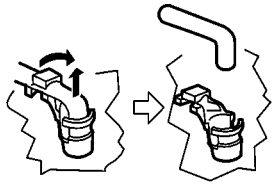
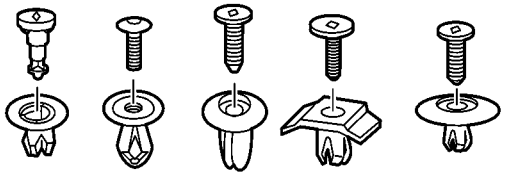
PFP:76906

Clip and Fastener

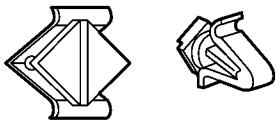
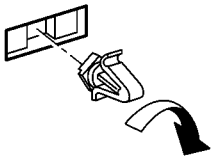
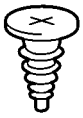
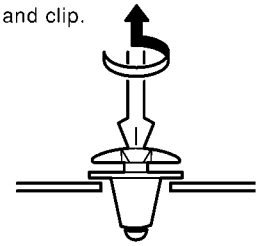
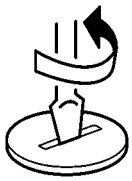
EIS00E7S

Symbol No.	Shapes	Removal & Installation
C101		**Removal:** Remove by bending up with flat-bladed screwdrivers or clip remover. 
C103		 **Removal:** Remove with a clip remover.
C203		**Removal:** Push center pin to catching position. (Do not remove center pin by hitting it.) Push  Push  **Installation:**
C205		**Removal:** Flat-bladed screwdriver  Clip Finisher
C206		**Removal:** 

SIIA0315E

Symbol No.	Shapes	Removal & Installation
CE103 		**Removal:** 
CF110 		**Removal:** 
CF118 		**Removal:** 
CR103		**Removal:** Holder portion of clip must be spread out to remove rod. 
CS101 		**Removal:** 1. Screw out with a Phillips screwdriver. 2. Remove female portion with flat-bladed screwdriver. 

SIIA0316E

Symbol No.	Shapes	Removal & Installation
CG101 		**Removal:**  Rotate 45° to remove  **Removal:** **Installation:** 
CS102 		
CS113 		**Removal:** Disconnect upper connection of clip with a flat-bladed screwdriver, then remove clip while inserting a flat-bladed screwdriver between body panel and clip. 
C111 		

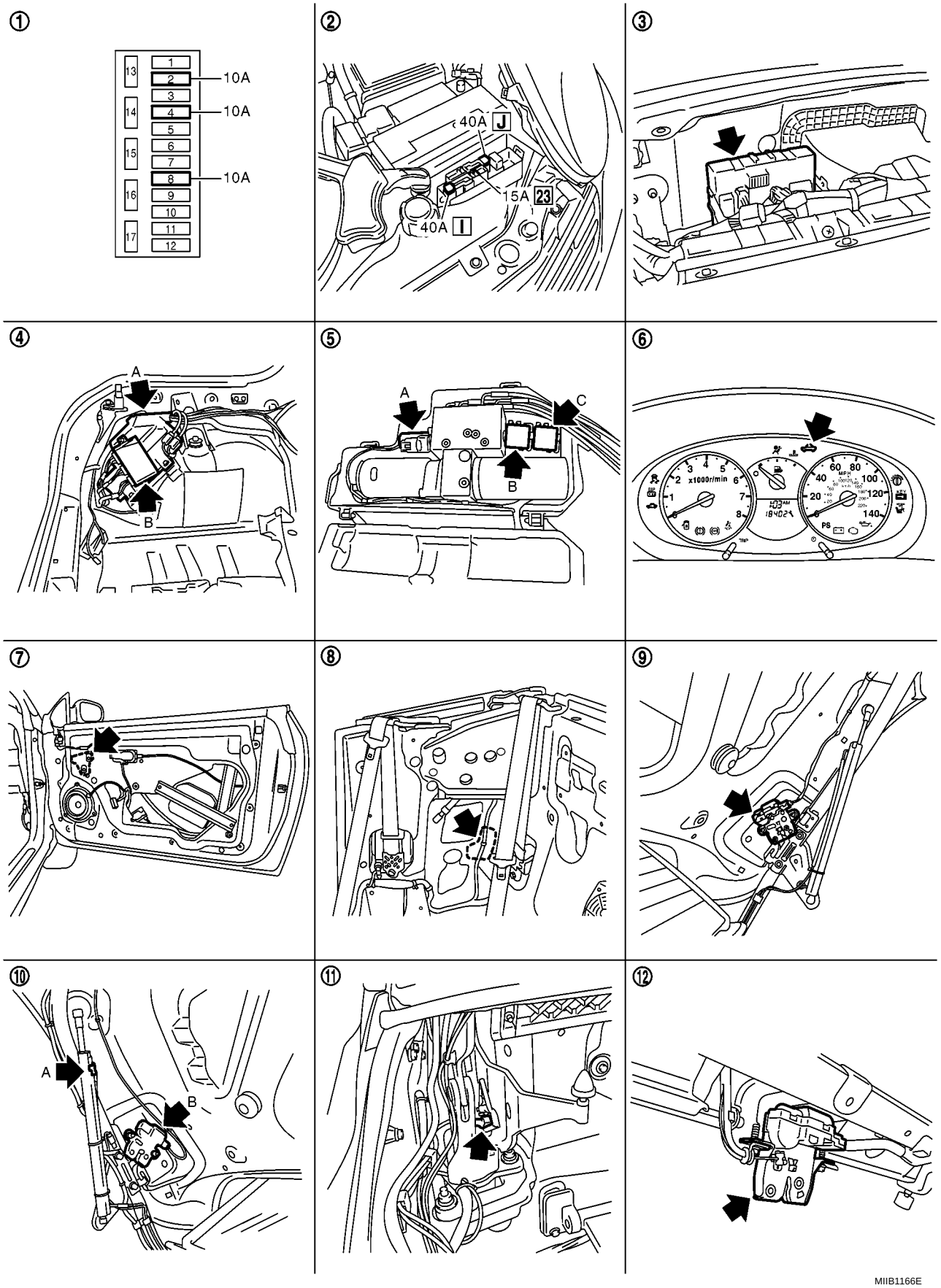
SIIA0317E

TROUBLE DIAGNOSIS

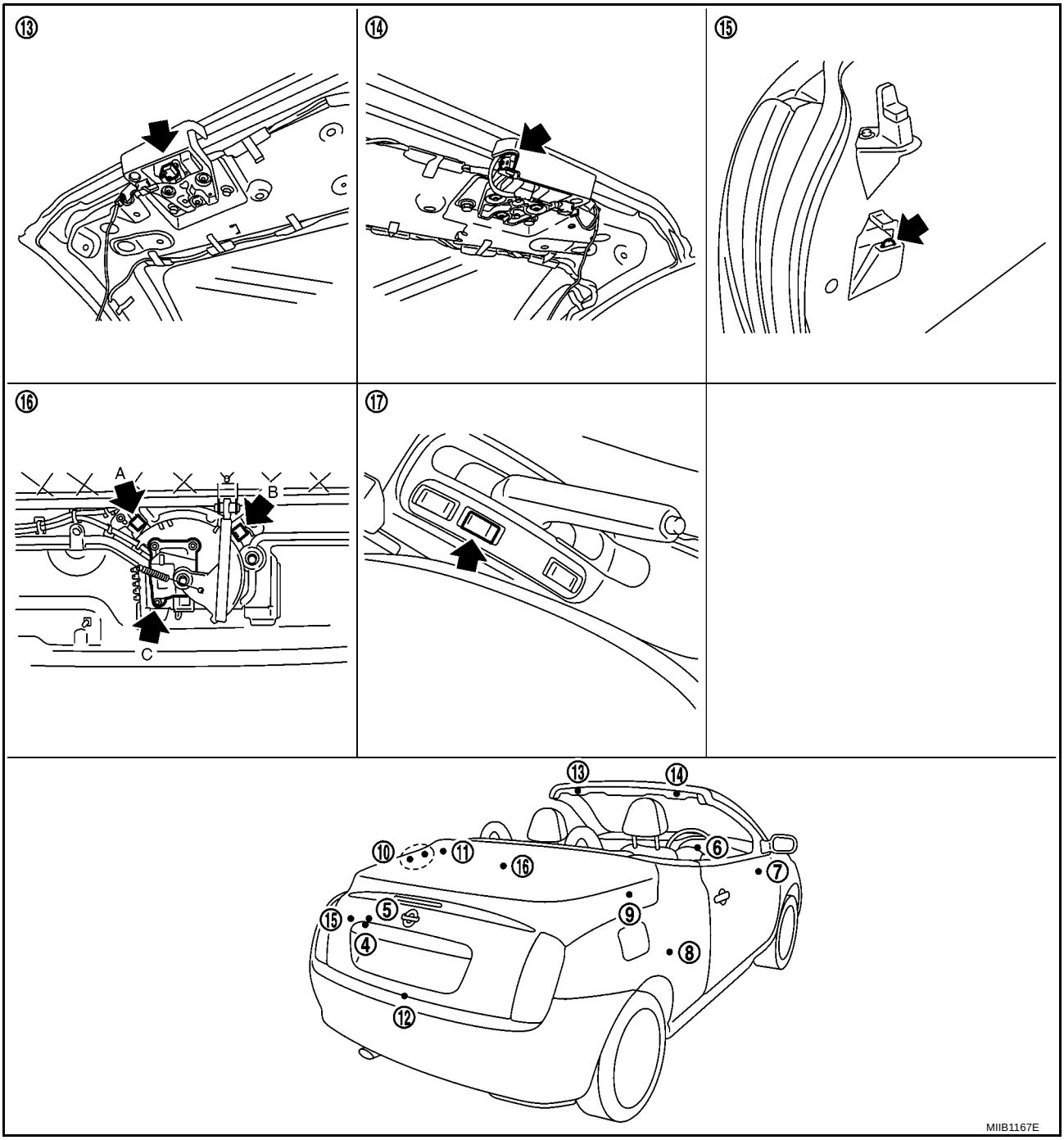
PFP:00004

Component Parts and Harness Connector Location

EIS00DZF



MIIB1166E

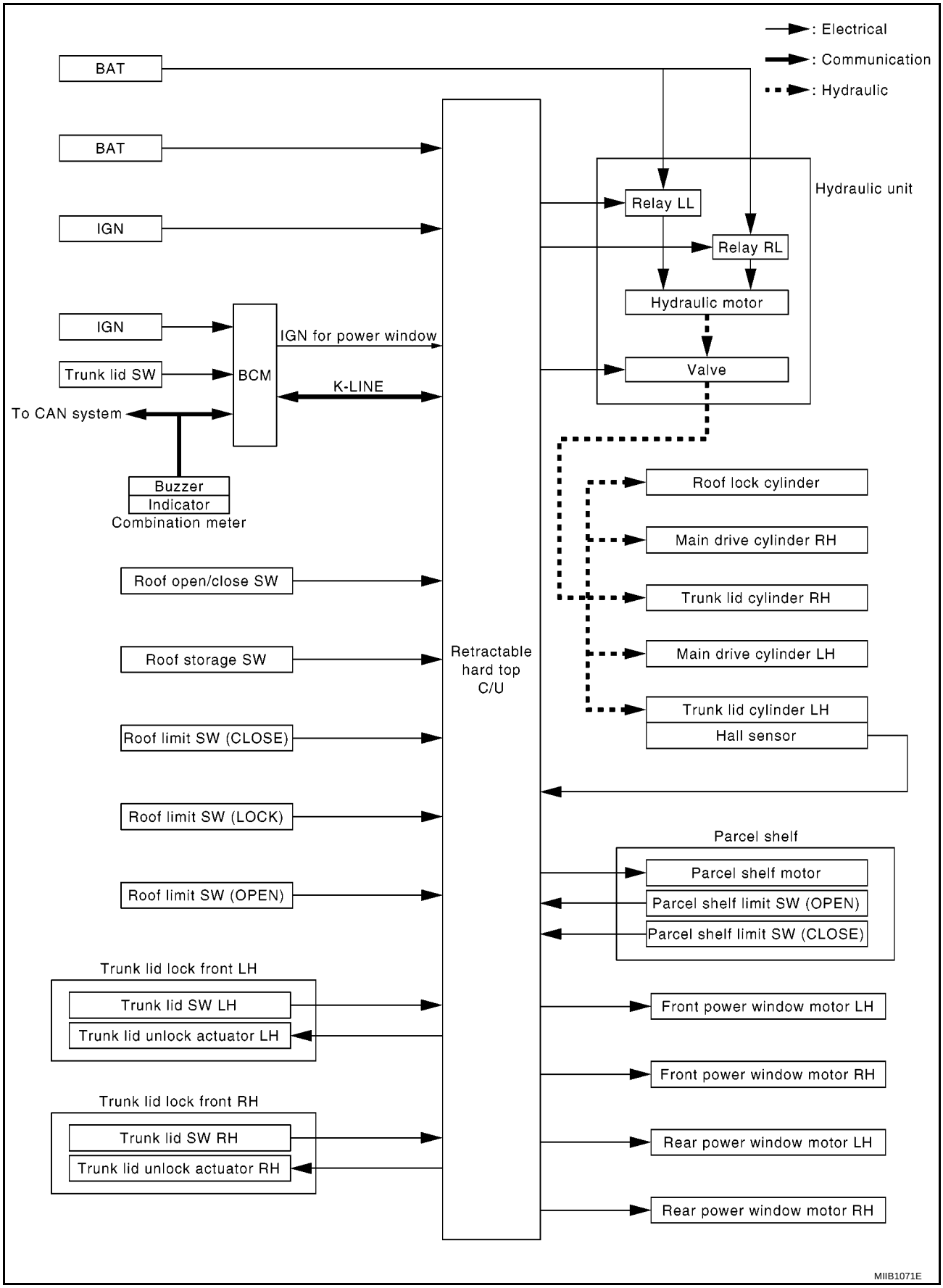


1. Fuse block (F/B) fuse layout
2. Fuse and fusible link box
3. BCM (View with upper instrument panel) M48, M49, M50
4. View with trunk lid finisher LH removed
   A. Hydraulic unit B77, B78
   B. Retractable hard top control unit B82, B83, B84
5. A. Hydraulic valve B405
   B. Hydraulic relay RL B404
   C. Hydraulic relay LL B403
6. Retractable hard top warning lamp (Combination meter) M22
7. Front power window motor RH LHD: D35 RHD: D5
8. Rear power window motor RH B67
9. Trunk lid side latch RH T5
10. A. Hall sensor B75
    B. Trunk lid side latch T6
11. Roof limit switch (OPEN) B74
12. Trunk lid switch (Trunk lid release actuator) B55
13. Roof limit switch (LOCK) R7
14. Roof limit switch (CLOSE) R10
15. Roof storage switch B79, B80
16. Parcel shelf
    A. Parcel shelf limit switch (CLOSE)
    B. Parcel shelf limit switch (OPEN)
    C. Parcel shelf motor
17. Roof open/close switch B66

System Description

EIS00DZG

SYSTEM DIAGRAM



INPUT	Switches and sensor	Roof open/close SW	The roof can be operated with Roof open/close SW.
		Hall sensor	The hall sensor detects the trunk state (fully open), located in the trunk cylinder LH.
		Roof limit SW (OPEN/CLOSE/LOCK)	The roof limit SW detects roof states (OPEN/CLOSE/LOCK), located in the roof latch assembly LH/RH (LH:CLOSE/RH:LOCK) and main bearing (OPEN).
		Trunk lid SW (LH/RH)	The trunk lid SW detects trunk lid side latch (LH/RH) state (LOCK/UNLOCK), located in the trunk lid side latch (LH/RH).
		Roof storage SW	The roof storage SW detects trunk tonneau cover state (Hooked or not), located in the trunk room.
		Parcel shelf limit SW (OPEN/CLOSE)	The parcel shelf SW detects parcel shelf states (OPEN/CLOSE), located in the parcel shelf.
	Signals [from BCM (K-line)]	Trunk status signal	The BCM detects the trunk lid lock (rear) state (LOCK/UNLOCK), and sends the trunk state signal to retractable hard top C/U. The signal is one of the operation condition for retractable hard top system.
		CDL SW signal	When lock the door with keyfob, the BCM detects the operation and sends CDL SW signal to retractable hard top C/U and ● Roof OPEN/CLOSE SW ● CDL SW ● Power window switches operations will be disable.
		Vehicle speed signal	The BCM monitors vehicle speed (via CAN communication) and sends the vehicle speed signal to retractable hard top C/U (via K-line). When the vehicle speed exceeds 5km/h, retractable hard top C/U prohibit any roof operation.
OUTPUT	Electrical	Power window motor	The retractable hard top C/U supply power to open/close windows for power window motor.
		Parcel shelf motor	The retractable hard top C/U supply power to open/close parcel shelf for power window motor.
		Trunk lid lock unlock actuator (LH/RH)	The retractable hard top C/U supply power to unlock trunk lid side latch (LH/RH).
		Hydraulic valve	The retractable hard top C/U supply power to switch hydraulic line.
		Hydraulic relay	The retractable hard top C/U supply power to switch hydraulic motor rotation.
	Hydraulic	Main drive cylinder	The retractable hard top C/U operates the main drive cylinder by hydraulic pressure to open and close the roof.
		Trunk lid cylinder	The retractable hard top C/U operates the trunk lid cylinder by hydraulic pressure to open and close the trunk lid.
		Roof lock cylinder	The retractable hard top C/U operates the roof lock cylinder by hydraulic pressure to lock and unlock the roof lock.
	Signals [to BCM (K-line)]	Buzzer request signal	The retractable hard top C/U sounds the buzzer to the user as warning information via K-line (retractable hard top C/U to BCM) and CAN communication (BCM to combination meter). The buzzer is located in the combination meter.
		Indicator request signal	The retractable hard top C/U blinks the indicator to the user as roof state information via K-line (retractable hard top C/U to BCM) and CAN communication (BCM to combination meter). The indicator is located in the combination meter

OPERATION DESCRIPTION

The Retractable Hard Top (C-View) system is a system that makes it possible to open and close the roof open/close switch with hydraulic and electrical system.
The retractable hard top C/U monitors the switches and the sensors state to provide and control the operation force from hydraulic and electrical system.

Operation Condition

- Ignition switch: ON
- Trunk lid: OFF (Closed)
- Roof storage SW: ON (Hooked)
- Vehicle speed below or equal 5 km/h

Stop Conditions for Roof System

If the conditions are not satisfied, the roof system will be stopped.

- Operation condition: Satisfied
- BCM data: Valid
- Roof position, Parcel shelf position: Valid
- Thermo protection: Not active
- Roof movement: Not time out [Less than 16(opening operation) seconds, 20(close operation) seconds]
- Parcel shelf movement: Not time out (Less than 5 seconds)
- Trunk lid unlock actuator LH/RH: Not time out (Less than 0.7 seconds)
- Hall sensor: Normal
- Relay LL/RL circuit, Trunk lid unlock actuator LH/RH circuit, Parcel shelf circuit: Normal
- Roof open/close switch: Pressed

NOTE:
The output of the hydraulic valve is active during stop condition.

General Results During Opening and Closing

- As for the operation of the roof, 3 - 4 times continuation is possible. If roof stops during operation, thermo protection is active. RF-43, "Thermo protection of The Hydraulic System" .
- Turn OFF the ignition switch while the roof open/close switch is pressed in any direction and hold the switch, the roof system will keep operating for 10 seconds.

Trunk Lid Inhibit Roof Opening Function

When the trunk lid (rear) is opened, the roof system is not operational. The state of the trunk lid is monitored by the retractable hard top C/U. The information (trunk lid close) is send from the BCM via K-line.
If the roof is not fully open or closed, the retractable hard top C/U inhibit trunk lid opening operation. The retractable hard top C/U sends the command to BCM via K-line.

Roof Open/Close Switch Inhibit Function

When the car is locked by keyfob, CDL switch is disabled. And the power window switch and roof open/close switch will be disabled by the retractable hard top control unit.
Retractable hard top function is disabled if the ignition switch is turned ON with an unregistered key.

Power Window Operation (During Roof Operation)

The retractable hard top C/U drive 4 window motors. The retractable hard top C/U receive the signal to open and close, the signal from power window switches (driver side and passenger side) and roof open/close switch.
It is necessary to wind down the windows before any further roof operation to avoid undesired interferences between the roof and windows. During the roof open/close switch is pressed the retractable hard top C/U sends the signal to open and close the windows. The window motors automatically turn OFF, if the windows achieve the fully open or fully closed position. The position of the windows is detected by electronic current.

OPENING WINDOWS DURING OPENING AND CLOSING THE ROOF
Start: Opening roof/Closing roof.
End: When roof movement finished.
CLOSING WINDOWS DURING OPENING THE ROOF
Start: When the roof fully opened and roof lid is closed and latched after 1 second.

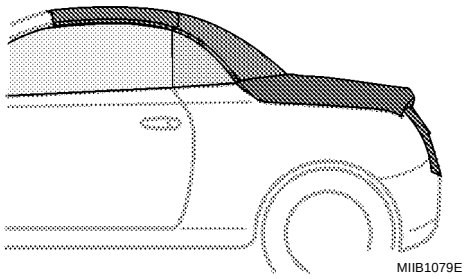
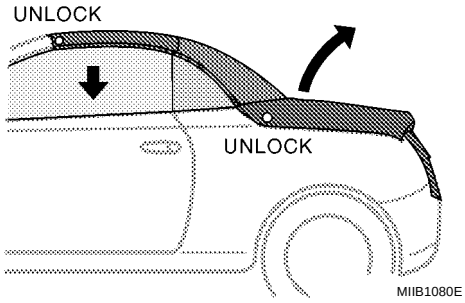
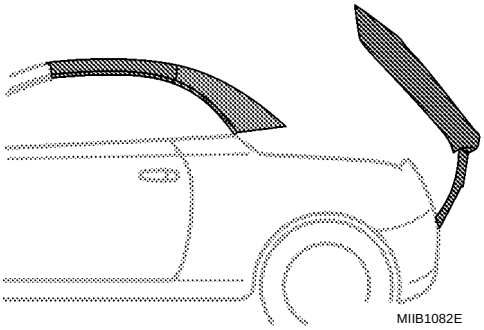
End: When turn off the roof-operating switch.

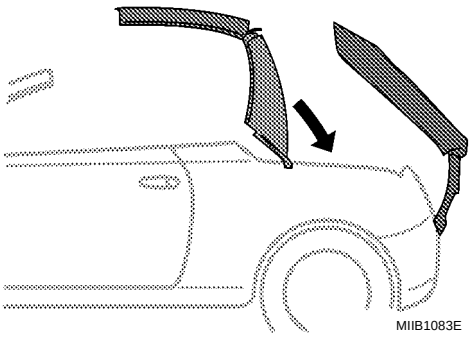
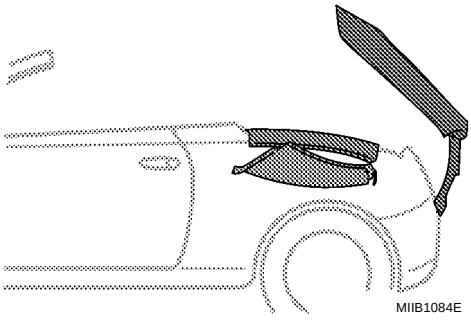
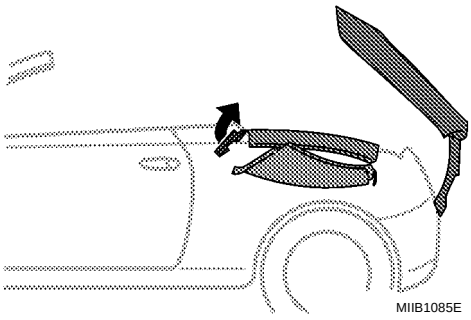
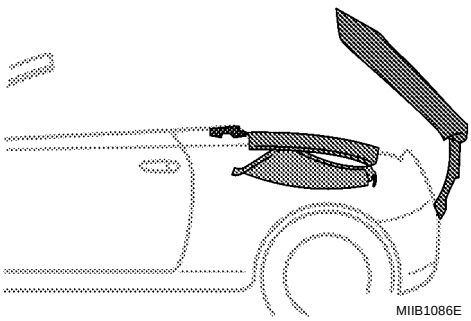
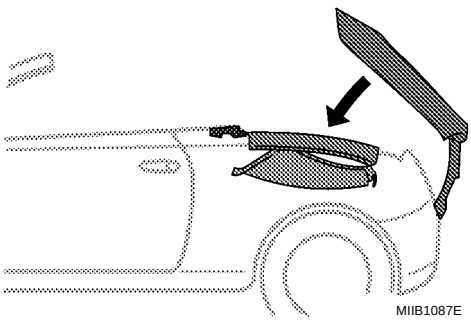
NOTE:
A further lifting of the windows is possible with the roof open/close switch within 10 seconds after releasing the roof open/close switch in roof fully closed position.

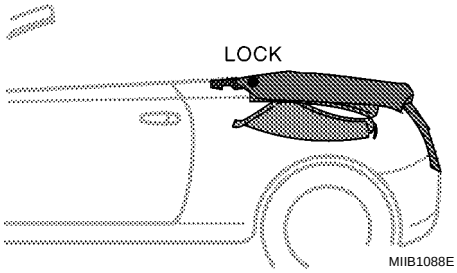
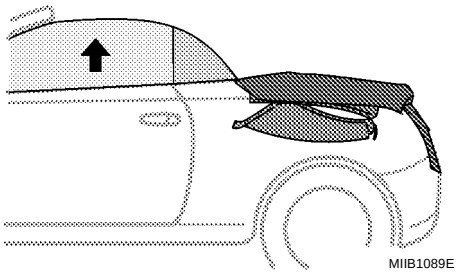
CLOSING WINDOWS DURING CLOSING THE ROOF
Start: When the roof fully closed and latched after 1 second.
End: When turn off the roof-closing switch.

NOTE:
A further lifting of the windows is possible with the roof open/close switch within 10 seconds after releasing the roof open/close switch in roof fully closed position.

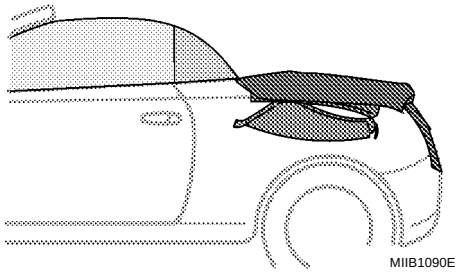
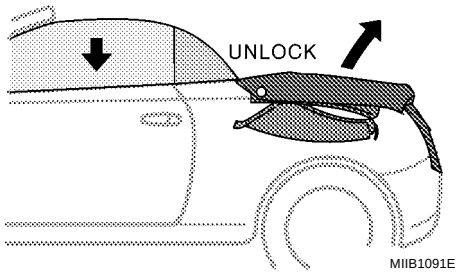
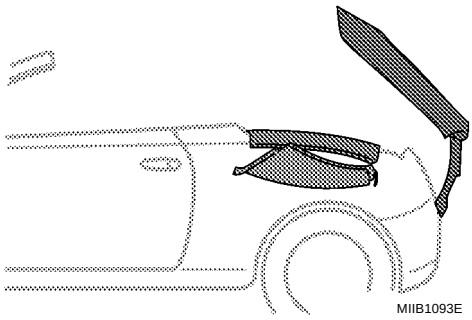
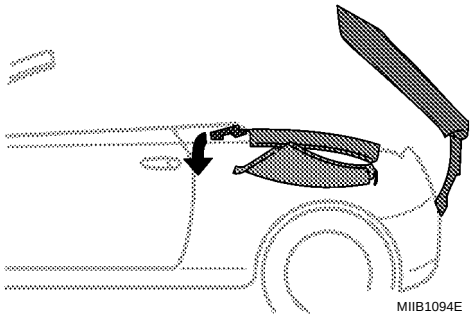
Full Close → Full Open Operation

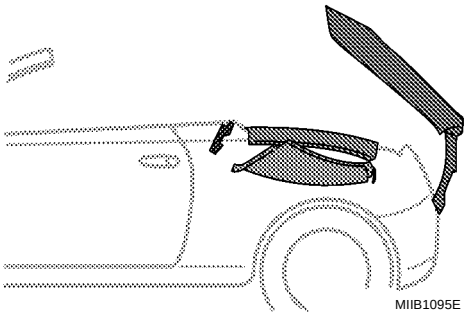
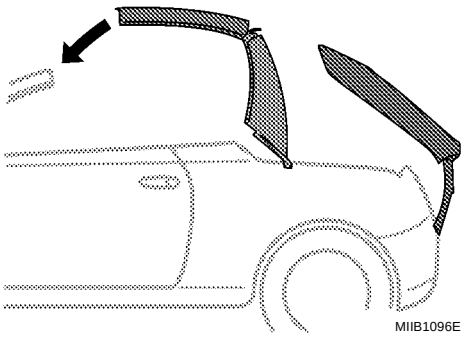
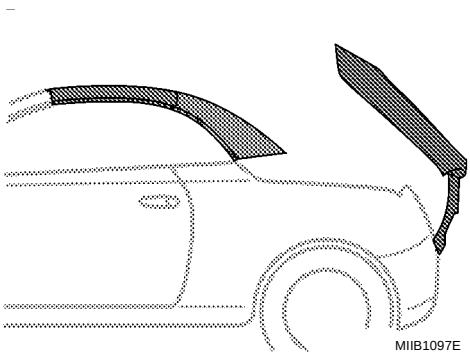
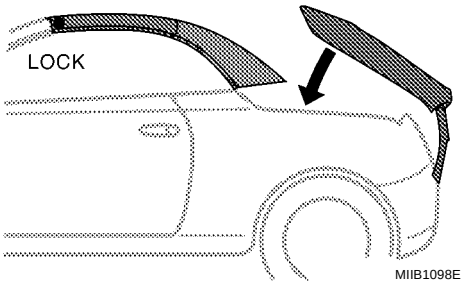
	Roof condition	Operation	INPUT/OUTPUT
OPEN 0	 MIIB1079E	—	**INPUT** ● IGN SW: ON ● Vehicle speed≤5km/h ● Trunk lid switch: OFF (CLOSED) ● Roof storage SW: ON (HOOKED)
OPEN 1	 MIIB1080E	● Roof lock: UNLOCK ● Trunk lid (front): UNLOCK ● Trunk lid (front): OPEN ● Front and rear windows (driver side/passenger side): FULLY OPEN (First front then rear)	**INPUT** ● Roof limit SW (LOCK): ON (LOCKED) ⇒ OFF (OTHER) ● Trunk lid SW (LH/RH): ON (LOCKED) ⇒OFF (OTHER) **OUTPUT** ● Trunk lid unlock actuator (LH/RH): UNLOCK ● Front and rear power window motor (driver side/passenger side): DOWN ● Roof lock cylinder: EXTENDED ● Trunk lid cylinder: EXTENDED
OPEN 2	 MIIB1082E	● Trunk lid: FULLY OPEN	**INPUT** ● Hall sensor: OFF (OTHER)⇒ON (FULLY OPEN)

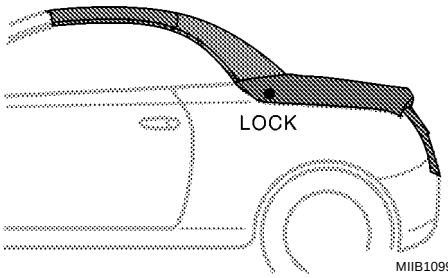
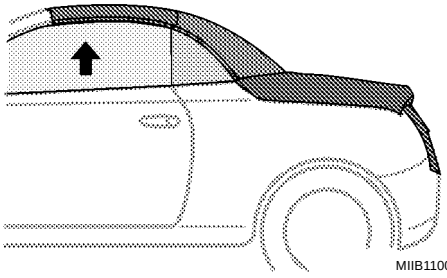
	Roof condition	Operation	INPUT/OUTPUT
OPEN 3	 MIIB1083E	● Roof: OPEN	**INPUT** ● Roof limit SW (CLOSE): ON (LOCKED/CLOSED)⇒OFF (OTHER) **OUTPUT** ● Main drive cylinder (LH/RH): RETRACTED
OPEN 4	 MIIB1084E	● Roof: FULLY OPEN	**INPUT** ● Roof limit SW (OPEN): OFF (OTHER)⇒ON (FULLY OPEN)
OPEN 5	 MIIB1085E	● Parcel shelf: MOVES UP	**INPUT** ● Parcel shelf limit SW (OPEN): ON (OPEN) ⇒OFF(OTHER) **OUTPUT** ● Parcel shelf motor: CLOSE
OPEN 6	 MIIB1086E	● Parcel shelf: CLOSE	**INPUT** ● Parcel shelf limit SW (CLOSE): OFF(OTHER) ⇒ON(CLOSED)
OPEN 7	 MIIB1087E	● Trunk lid: CLOSE	**INPUT** ● Hall sensor: ON (FULLY OPEN) ⇒OFF (OTHER) **OUTPUT** ● Trunk lid cylinder (LH/RH): RETRACTED

	Roof condition	Operation	INPUT/OUTPUT
OPEN 8	 MIIB1088E	● Trunk lid: LOCKED (Latch mechanically) ● Buzzer: SOUNDS (single)	**INPUT** ● Trunk lid SW (LH/RH): ON (LOCKED) ⇒ OFF (OTHER) **OUTPUT** ● Buzzer: SOUNDS
OPEN 9	 MIIB1089E	● Front and rear window: FULLY CLOSED (First rear then front)	**OUTPUT** ● Front power window motor (driver side/passenger side) and rear power window motor (LH/RH): UP

Full Open → Full Close Operation

	Roof condition	Operation	INPUT/OUTPUT
CLOSE 0	 MIIB1090E	—	**INPUT** ● IGN SW: ON ● Vehicle speed≤5km/h ● Trunk lid switch: OFF (CLOSED) ● Roof storage SW: ON (HOOKED)
CLOSE 1	 MIIB1091E	● Trunk lid (front): UNLOCK ● Front and rear windows (driver side/passenger side): FULLY OPEN (First front then rear)	**INPUT** ● Trunk lid SW (LH/RH): ON (LOCKED) ⇒OFF (OTHER) **OUTPUT** ● Trunk lid unlock actuator (LH/RH): UNLOCK ● Front and rear power window motor (driver side/passenger side): DOWN ● Trunk lid cylinder: EXTENDED
CLOSE 2	 MIIB1093E	● Trunk lid: FULLY OPEN	**INPUT** ● Hall sensor: OFF⇒ON
CLOSE 3	 MIIB1094E	● Parcel shelf: MOVES DOWN	**INPUT** ● Parcel shelf limit SW (CLOSE): ON (CLOSED) ⇒ OFF (OTHER) **OUTPUT** ● Parcel shelf motor: OPEN

	Roof condition	Operation	INPUT/OUTPUT
CLOSE 4	 MIIB1095E	● Parcel shelf: OPEN	**INPUT** ● Parcel shelf limit SW (OPEN): OFF (OTHER) ⇒ ON (OPEN)
CLOSE 5	 MIIB1096E	● Roof: CLOSE	**INPUT** ● Roof limit SW (OPEN): ON (FULLY OPEN) ⇒ ON (OTHER) **OUTPUT** ● Roof cylinder (LH/RH): EXTENDED
CLOSE 6	 MIIB1097E	● Roof: FULLY CLOSE	**INPUT** ● Roof limit SW (CLOSE): OFF (OTHER) ⇒ ON (CLOSE/ LOCKED)
CLOSE 7	 MIIB1098E	● Trunk lid: CLOSE ● Roof: LOCKED	**INPUT** ● Roof limit SW (LOCK): OFF (OTHER) ⇒ ON (LOCKED) **OUTPUT** ● Trunk cylinder LH/RH: RETRACTED ● Roof lock cylinder: RETRACTED

	Roof condition	Operation	INPUT/OUTPUT
CLOSE 8	 MIIB1099E	● Trunk lid: LOCKED (Latch mechanically) ● Buzzer: SOUNDS (single)	**INPUT** ● Trunk lid SW (LH/RH): OFF (OTHER) ⇒ ON (LOCKED) **OUTPUT** ● Buzzer: SOUNDS
CLOSE 9	 MIIB1100E	● Front and rear window: FULLY CLOSED (First rear then front)	**OUTPUT** ● Front power window motor (driver side/passenger side) and rear power window motor (LH/RH): UP

Input/Output Signal Chart - OPEN

		OPEN 0	OPEN 1	OPEN 2	OPEN 3	OPEN 4	OPEN 5	OPEN 6	OPEN 7	OPEN 8	OPEN 9	
Inputs	Roof open/close SW (OPEN)		×	×	×	×	×	×	×	×	×	×: ON (Open)
	Roof storage SW	×	×	×	×	×	×	×	×	×	×	×: ON (Hooked)
	Trunk lid switch	×	×	×	×	×	×	×	×	×	×	×: OFF (Closed)
	Roof limit SW (locked)	×										×: ON (Lock)
	Roof limit SW (closed)	×	×	×								×: ON (Closed)
	Roof limit SW (open)					×	×	×	×	×	×	×: ON (Open)
	Trunk lid SW (LH)	×								×	×	×: ON (Locked)
	Trunk lid SW (RH)	×								×	×	×: ON (Locked)
	Hall sensor			×	×	×	×	×				×: ON (Full open)
	Parcel shelf limit SW (open)	×	×	×	×	×						×: ON (Open)
	Parcel shelf limit SW (close)							×	×	×	×	×: ON (Close)

		OPEN 0	OPEN 1	OPEN 2	OPEN 3	OPEN 4	OPEN 5	OPEN 6	OPEN 7	OPEN 8	OPEN 9	
Outputs	Hydraulic valve		×	×	×	×	×	×				×: ON
	Hydraulic motor (right)				×	×			×			×: ON
	Hydraulic motor (left)		×	×								×: ON
	Trunk lid unlock actuator (LH)		×									×: Unlock
	Trunk lid unlock actuator (RH)		×									×: Unlock
	Beep									×		×: Sounds
	Parcel shelf motor (close)						×					×: Close
	Parcel shelf motor (open)											×: Open

Input/Output Signal Chart - CLOSE

		CLOSE 0	CLOSE 1	CLOSE 2	CLOSE 3	CLOSE 4	CLOSE 5	CLOSE 6	CLOSE 7	CLOSE 8	CLOSE 9	
Inputs	Roof open/ close SW (CLOSE)		×	×	×	×	×	×	×	×	×	×: ON (Close)
	Roof storage SW	×	×	×	×	×	×	×	×	×	×	×: ON (Hooked)
	Trunk lid switch	×	×	×	×	×	×	×	×	×	×	×: OFF (Closed)
	Roof limit SW (locked)								×	×	×	×: ON (Locked)
	Roof limit SW (closed)							×	×	×	×	×: ON (Closed)
	Roof limit SW (open)	×	×	×	×	×						×: ON (OPEN)
	Trunk lid SW (LH)	×								×	×	×: ON (Closed)
	Trunk lid SW (RH)	×								×	×	×: ON (Closed)
	Hall sensor			×	×	×	×	×				×: ON (Fully opened)
	Parcel shelf limit SW (open)					×	×	×	×	×	×	×: ON (Open)
	Parcel shelf limit SW (close)	×	×	×								×: ON (Close)

		CLOSE 0	CLOSE 1	CLOSE 2	CLOSE 3	CLOSE 4	CLOSE 5	CLOSE 6	CLOSE 7	CLOSE 8	CLOSE 9	
Outputs	Hydraulic valve		×	×	×	×	×	×				×: ON
	Hydraulic motor (right)		×	×								×: ON
	Hydraulic motor (left)						×	×	×			×: ON
	Trunk lid unlock actuator (LH)		×									×: Unlock
	Trunk lid unlock actuator (RH)		×									×: Unlock
	Beep									×		×: Sounds
	Parcel shelf motor (close)											×: Close
	Parcel shelf motor (open)				×							×: Open

INDICATOR LAMP AND BUZZER FUNCTION

Operation Description

The warning functions are as follows and are given to the user as warning information by using features of retractable hard top system. Warning lamp and buzzer are displayed in combination meter.

Roof Status	Roof position	Command Button	Lamp	Buzzer	Roof reaction
Normal roof operation	closed	open	Continuous	—	opening
	reaches closed pos.	close	Continuous	Single	closing
	intermediate position	open	Continuous	—	opening
		idle	Continuous	—	nothing
		close	Continuous	—	closing
	reaches opened pos.	open	Continuous	Single	opening
	open	close	Continuous	—	closing
Tonneau cover unhooked	closed	open	—	Double	nothing
	reaches closed pos.	close	Continuous	Single	closing
	intermediate position	open	Continuous	Double	nothing
		idle	Continuous	—	nothing
		close	Continuous	—	closing
	open	close	Continuous	—	closing
Trunk lid open	closed	open	—	Double	nothing
	intermediate position	open	Continuous	Double	nothing
		idle	Continuous	—	nothing
		close	Continuous	Double	nothing
	open	close	—	Double	nothing
Thermo protection stage 1 RF-43	closed	open	Flashing	—	nothing
	reaches closed pos.	close	Continuous	Single	closing
	intermediate position	open	Continuous	—	opening
		idle	Continuous	—	nothing
		close	Continuous	—	closing
	reaches opened pos.	open	Continuous	Single	opening
	open	close	Flashing	—	nothing

Roof Status	Roof position	Command Button	Lamp	Buzzer	Roof reaction
Thermo protection stage 2 RF-43	closed	open	Flashing	—	nothing
	intermediate position	any	Flashing	—	nothing
	open	close	Flashing	—	nothing
CDL switch disable	closed	open	Flashing	—	nothing
	intermediate position	any	Flashing	—	nothing
	open	close	Flashing	—	nothing
Vehicle speed > 5km/h, Vehicle speed not available	closed	open	—	Double	nothing
	intermediate position	any	Flashing	Continuous	nothing
	open	close	—	Double	nothing
BCM data invalid	closed	open	Flashing	—	nothing
	intermediate position	any	Flashing	—	nothing
	open	close	Flashing	—	nothing
30 seconds before end of stop condition	intermediate position	idle	Flashing	Continuous	nothing
Retractable hard top C/U malfunction	closed	any	Flashing	—	nothing
	intermediate position	open	Flashing	—	nothing
		idle	Flashing	—	nothing
		close	Flashing	—	nothing
	open	any	Flashing	—	nothing
Supply voltage out of range	closed	open	—	Double	nothing
	intermediate position	any	Flashing	Continuous	nothing
	open	close	—	Double	nothing
Active test request	any	any	Flashing	—	active test request

System Description of Hydraulic System

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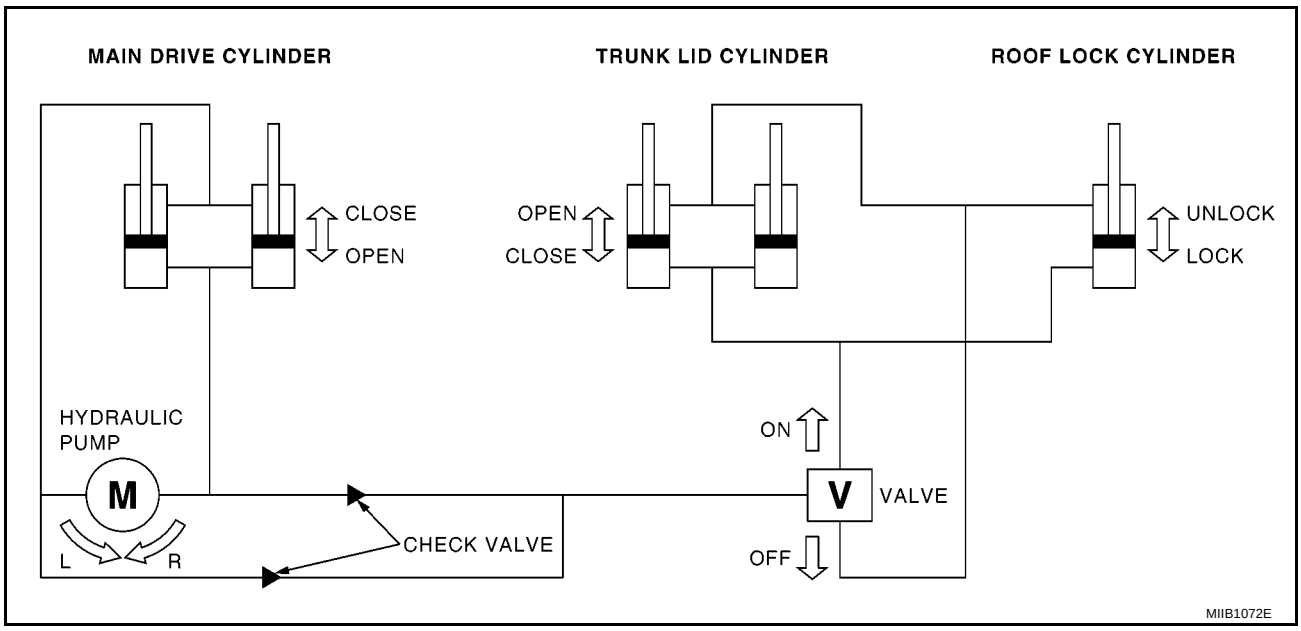
SYSTEM DISCRIPTION OF HYDRAULIC SYSTEM

The hydraulic system mainly consist of hydraulic pump, hydraulic valve (built in hydraulic unit) and hydraulic cylinders. The hydraulic system operate roof, trunk lid and roof system with controlled hydraulic pressure.

SYATEM DIAGRAM OF HYDRAULIC SYSTEM



Hydraulic pump	The hydraulic pump generates hydraulic pressure by the hydraulic motor, and switch the hydraulic line for the roof cylinder with motor rotation.
Hydraulic valve	The valve switches hydraulic line for trunk lid cylinder and roof lock cylinder with turning ON/OFF the valve.
Hydraulic cylinder	The each hydraulic cylinders operates roof, trunk lid and roof lock to expound and retract the cylinder.

PROTECTIVE FUNCTIONS OF HYDRAULIC SYSTEM

System voltage

If the battery voltage goes below the lower limit, the retractable hard top (C-View) control unit cut off all hydraulic related function to prevent excessive discharging.

Continuous Running of The Hydraulic Valve

The ON-period of the hydraulic valve during the stop condition is monitored. The stop condition breaks off after 10 minutes. 30 seconds before the stop operation breaks off, the buzzer and lamp (in the meter) will be activated.

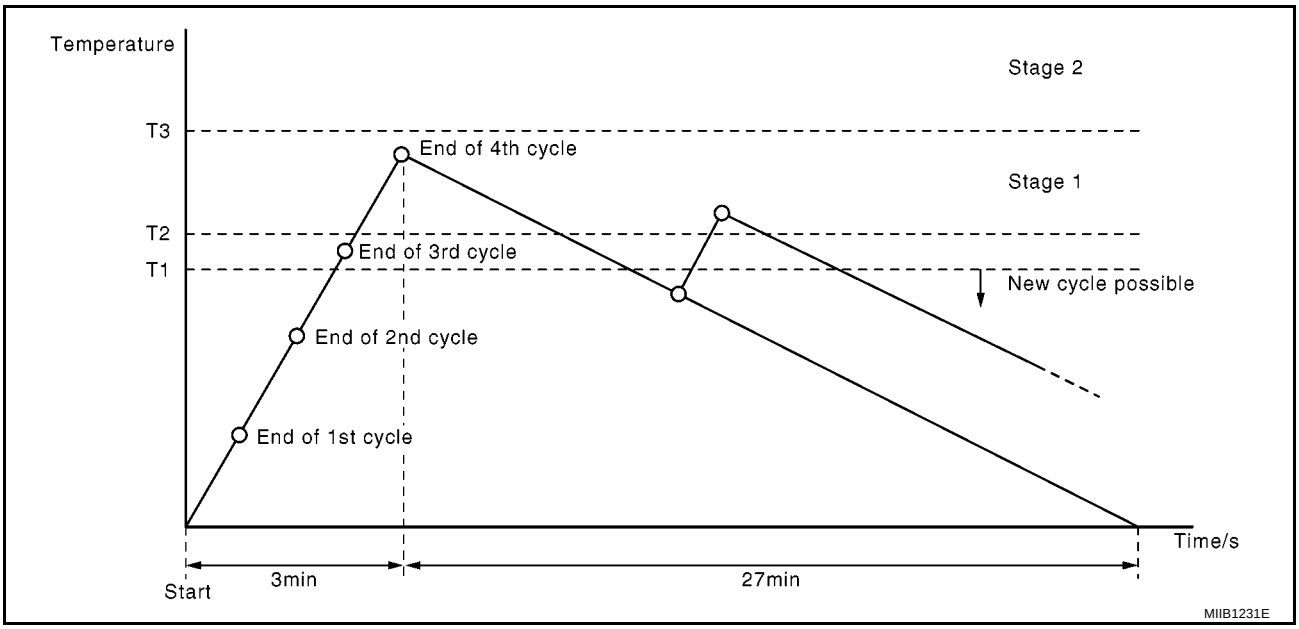
NOTE:
When the retractable hard top (C-View) is in intermediate position in stop condition, retractable hard top will move down after stop condition.

Thermo protection of The Hydraulic System

Only 3-4 roof cycles successive possible. If roof stops during operation, thermo protection will be activated to prevent over heating.

NOTE:
The temperature of the hydraulic pump is calculated by the activation time.
If thermo protection is active, wait 9 minutes and try again.

Thermo protection stage 1: New roof cycle is not possible. (between T2 and T3)
Thermo protection stage 2: Roof operation is not possible. (above T3)
After cooling down all function will be possible. (bellow T1)

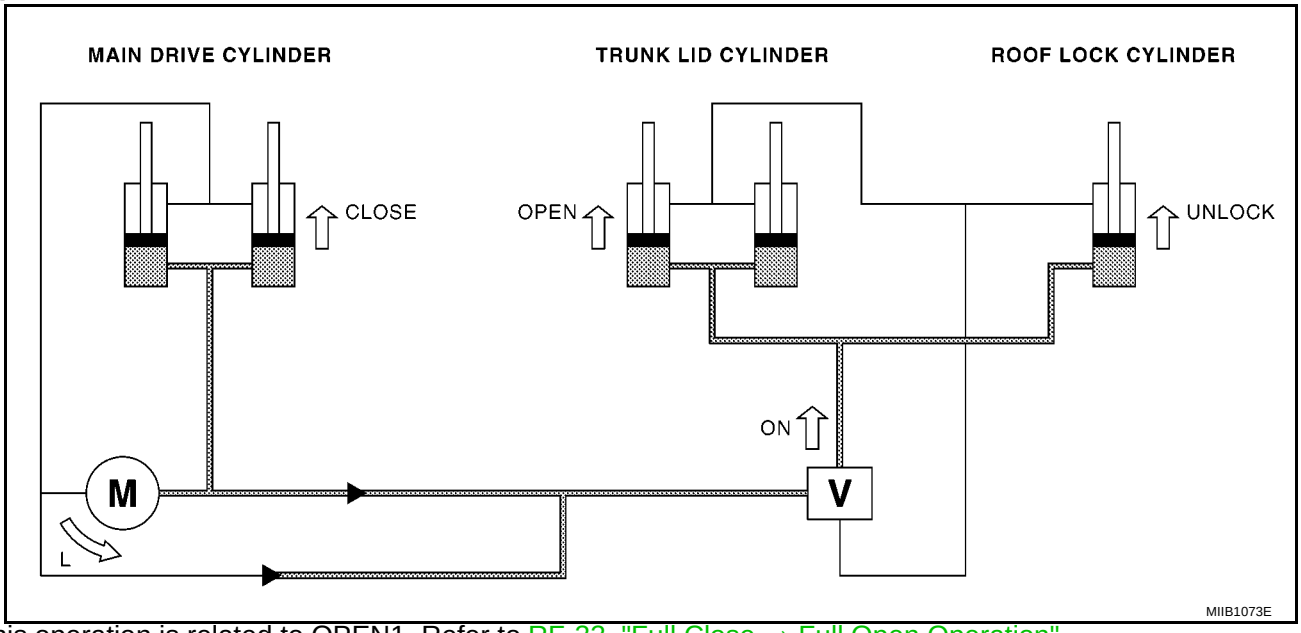


HALL SENSOR FUNCTION

The opened position of the trunk lid will be detected by hall sensor. The sensor is located at the end of the hydraulic cylinder LH to detect the state of the trunk (fully open or not).

OPERATION DISCRIPTION/OPEN

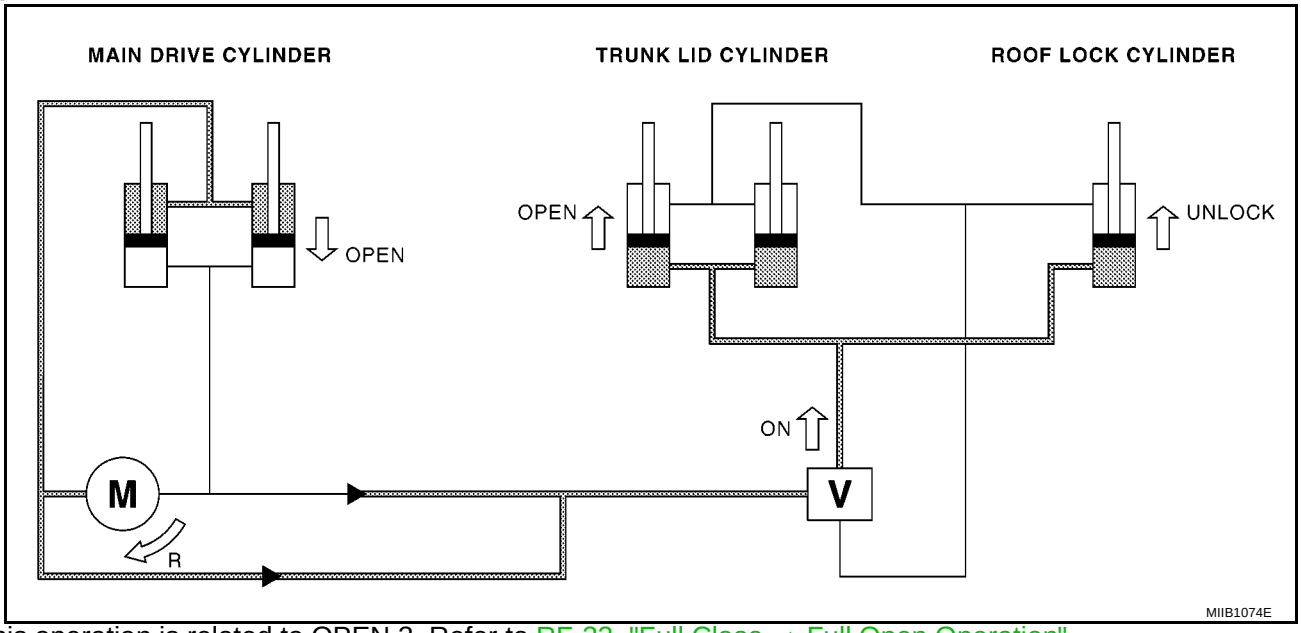
Open: 1



This operation is related to OPEN1. Refer to RF-33, "Full Close → Full Open Operation"

- Main drive cylinder: Extended (CLOSE)
- Trunk lid cylinder: Extended (OPEN)
- Roof lock cylinder: Extended (UNLOCK)
- Hydraulic pump: Left turn
- Hydraulic valve: ON

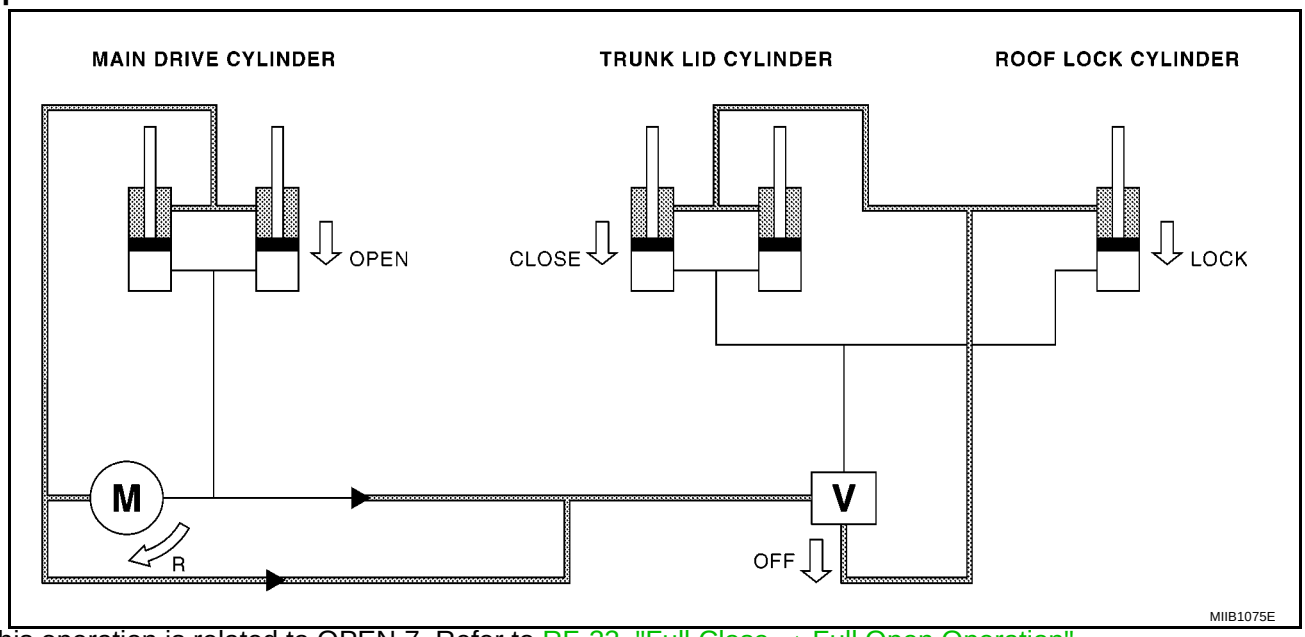
Open: 2



This operation is related to OPEN 3. Refer to RF-33, "Full Close → Full Open Operation"

- Main drive cylinder: Retracted (OPEN)
- Trunk lid cylinder: Extended (OPEN)
- Roof lock cylinder: Extended (UNLOCK)
- Hydraulic pump: Right turn
- Hydraulic valve: ON

Open: 3

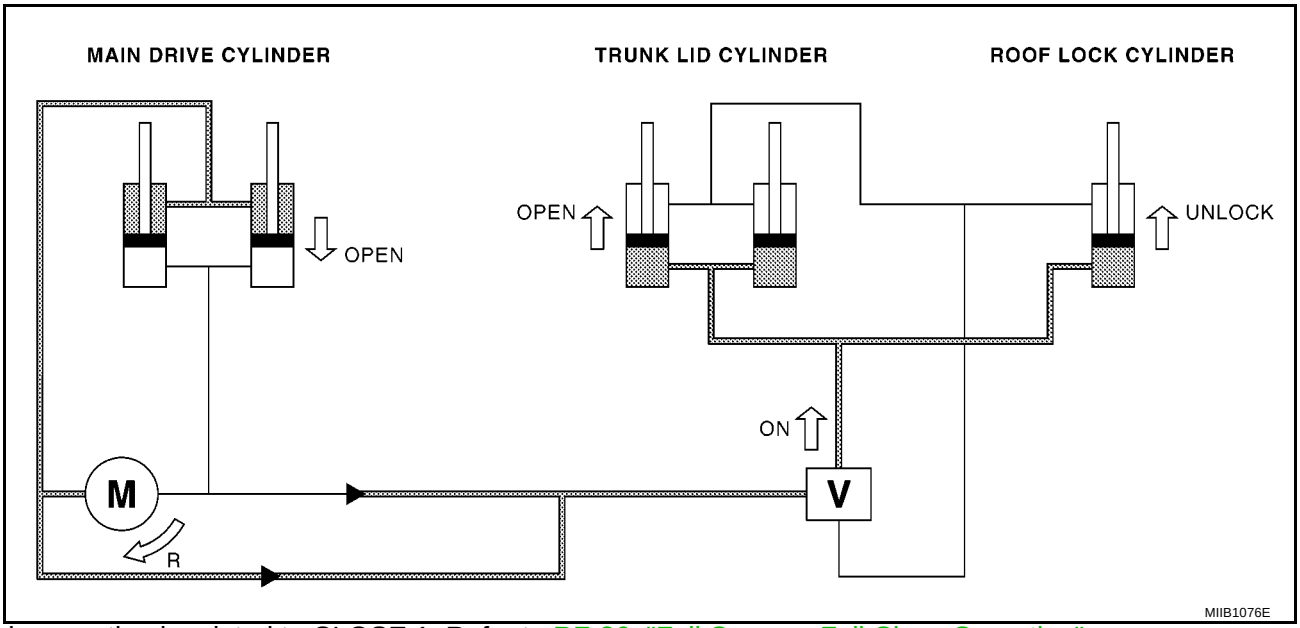


This operation is related to OPEN 7. Refer to RF-33, "Full Close → Full Open Operation" .

- Main drive cylinder: Retracted (OPEN)
- Trunk lid cylinder: Retracted (CLOSE)
- Roof lock cylinder: Retracted (LOCK)
- Hydraulic pump: Right turn
- Hydraulic valve: OFF

OPERATION DISCRIPTION/CLOSE

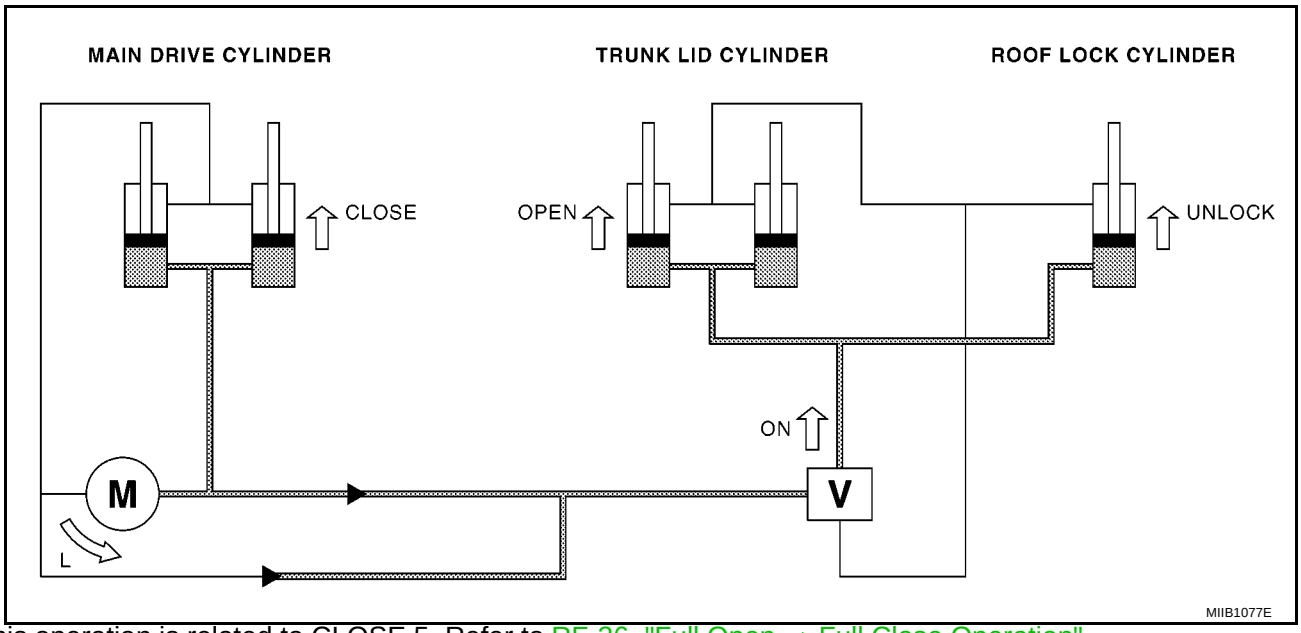
Close: 1



This operation is related to CLOSE 1. Refer to RF-36, "Full Open → Full Close Operation" .

- Main drive cylinder: Retracted (OPEN)
- Trunk lid cylinder: Extended (OPEN)
- Roof lock cylinder: Extended (UNLOCK)
- Hydraulic pump: Right turn
- Hydraulic valve: ON

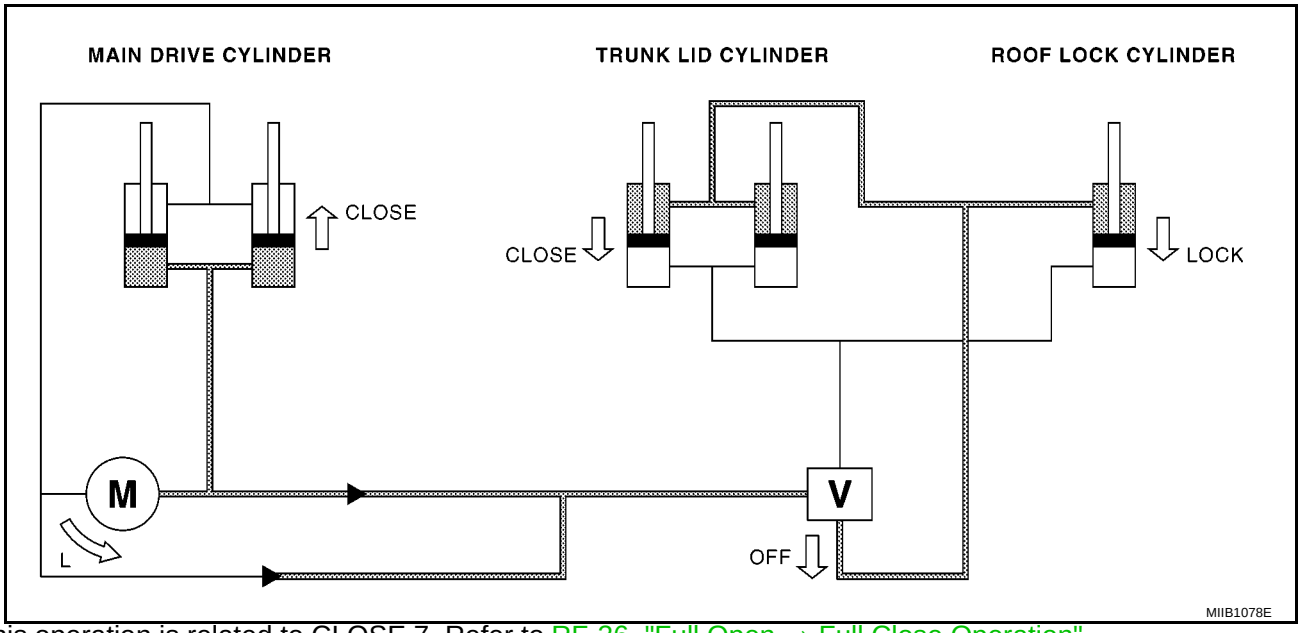
Close: 2



This operation is related to CLOSE 5. Refer to RF-36, "Full Open → Full Close Operation"

- Main drive cylinder: Extended (CLOSE)
- Trunk lid cylinder: Extended (OPEN)
- Roof lock cylinder: Extended (UNLOCK)
- Hydraulic pump: Left turn
- Hydraulic valve: ON

Close: 3



This operation is related to CLOSE 7. Refer to RF-36, "Full Open → Full Close Operation" .

- Main drive cylinder: Extended (CLOSE)
- Trunk lid cylinder: Retracted (CLOSE)
- Roof lock cylinder: Retracted (LOCK)
- Hydraulic pump: Left turn
- Hydraulic valve: OFF

CAN Communication

EIS00E6Y

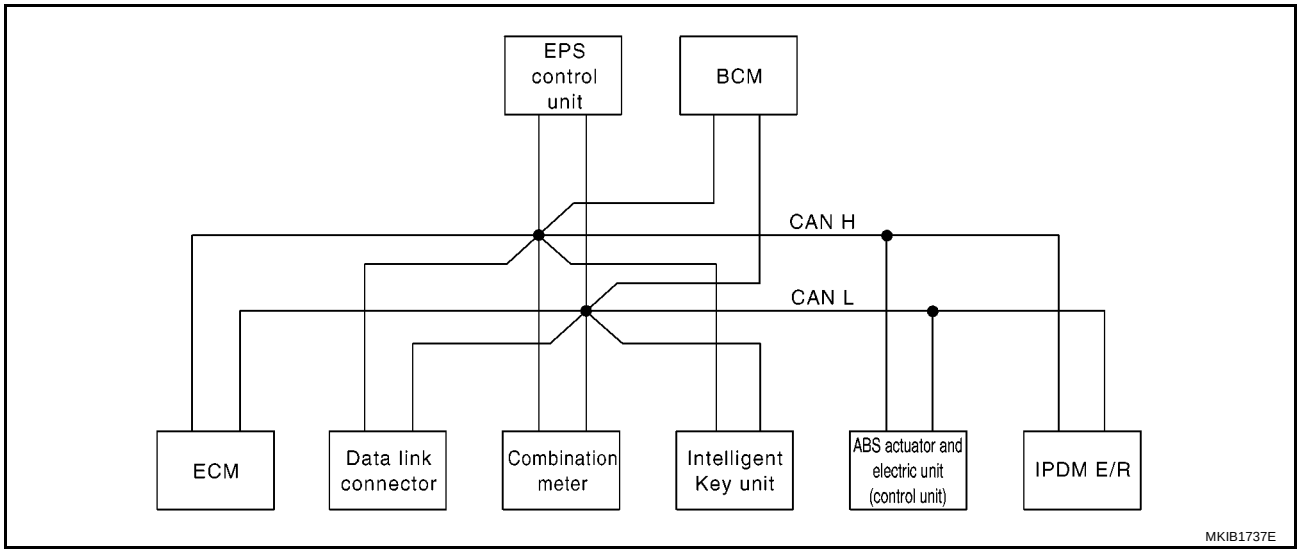
Body type	3door/5door/C+C				3door/5door/C+C			
Axle	2WD							
Engine	CR12DE/CR14DE		HR16DE		CR12DE/CR14DE		HR16DE	
Handle	LHD/RHD							
Brake control	ABS				ESP			
Transmission	M/T				M/T			
Intelligent Key system	×		×		×		×	
CAN communication unit								
ECM	×	×	×	×	×	×	×	×
Data link connector	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×
Intelligent Key unit	×		×		×		×	
EPS control unit	×	×	×	×	×	×	×	×
BCM	×	×	×	×	×	×	×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×	×	×
TCM								
IPDM E/R	×	×	×	×	×	×	×	×
CAN communication type	RF-48, "TYPE 3/TYPE 4/TYPE 5/TYPE 6"				RF-50, "TYPE 9/TYPE 10/TYPE 11/TYPE 12"			

×: Applicable

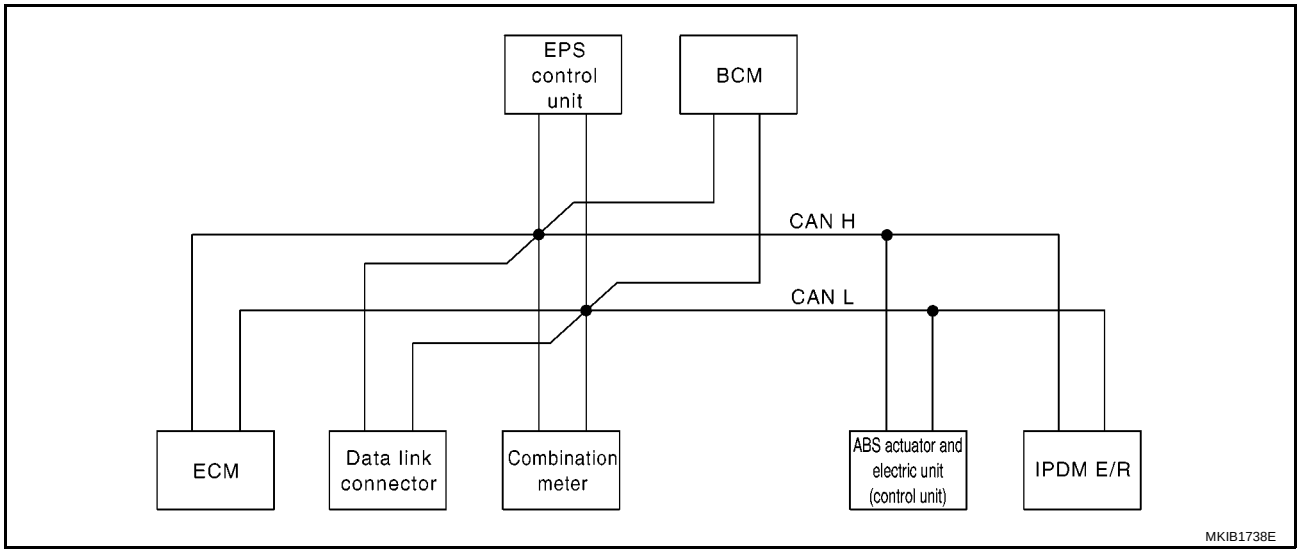
TYPE 3/TYPE 4/TYPE 5/TYPE 6

System diagram

- Type 3/Type 5



- Type 4/Type 6



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R					
Engine coolant temperature signal	T	R					
Fuel consumption monitor signal	T	R					
Oil pressure switch signal		R					T
A/C compressor request signal	T						R
Heater fan switch signal	R				T		
Cooling fan speed request signal	T						R
Position lights request signal		R			T		R
Low beam request signal					T		R

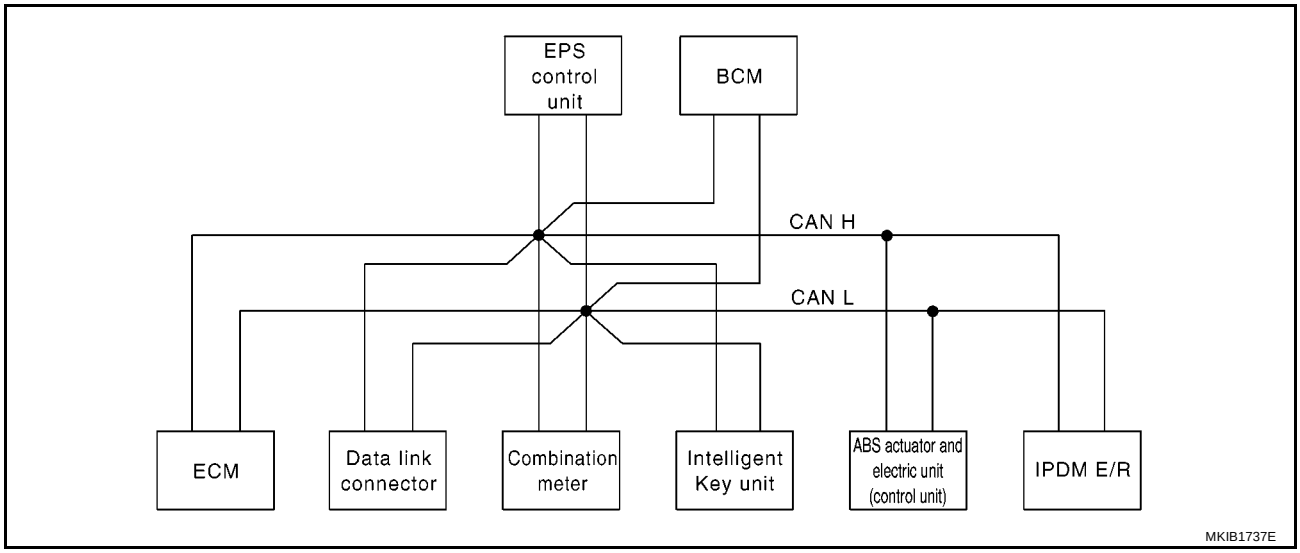
Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Low beam status signal	R						T
High beam request signal		R			T		R
High beam status signal	R						T
Day time light request signal					T		R
Vehicle speed signal	R	R		R		T	
	R	T	R	R	R		
Sleep/wake up signal		R	R		T		R
Door switch signal		R	R		T		R
Turn indicator signal		R			T		
Buzzer output signal		R			T		
		R	T				
MI signal	T	R					
Front wiper request signal					T		R
Front wiper stop position signal					R		T
Rear window defogger switch signal					T		R
Rear window defogger control signal	R						T
EPS warning indicator signal		R		T			
ABS warning lamp signal		R				T	
Brake warning lamp signal		R				T	
Back-up lamp signal				R	T		
Front fog lamp request signal		R			T		R
Rear fog lamp status signal		R			T		
Headlamp washer request signal					T		R
Door lock/unlock request signal			T		R		
Door lock/unlock status signal			R		T		
KEY indicator signal		R	T				
LOCK indicator signal		R	T				
Engine status signal	T			R			
A/C switch signal	R				T		
Brake system malfunction signal		T		R			
Parking brake switch signal		T		R			
R range signal					R		T
Retractable hard top warning lamp signal*		R			T		

*: C+C only

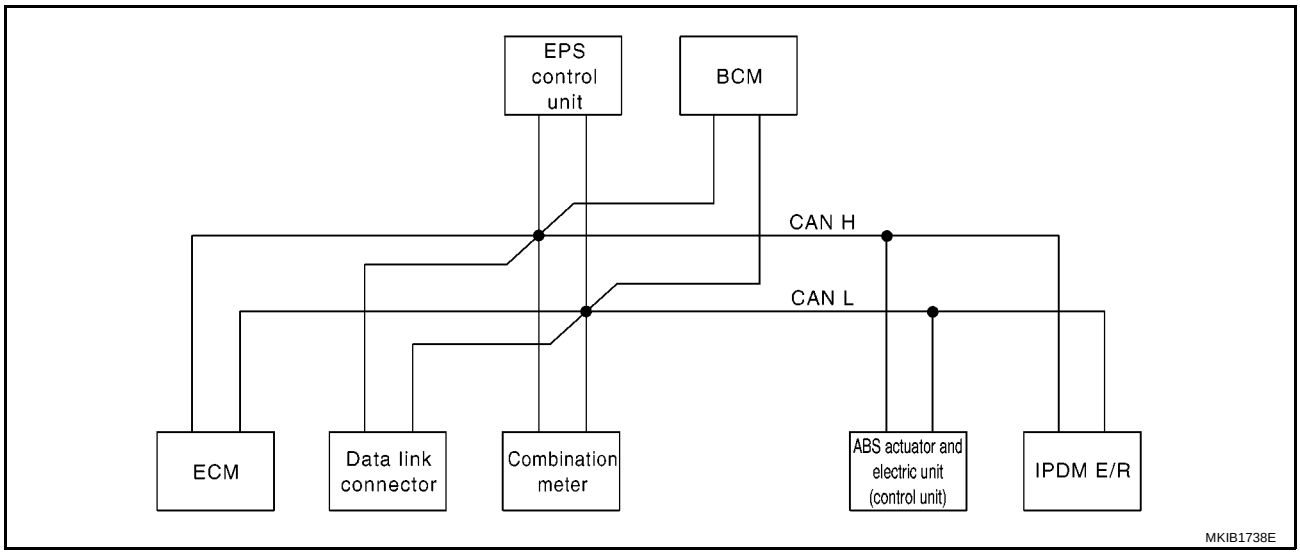
TYPE 9/TYPE 10/TYPE 11/TYPE 12

System diagram

- Type 9/Type 11



- Type 10/Type 12



Input/output signal chart

T: Transmit R: Receive

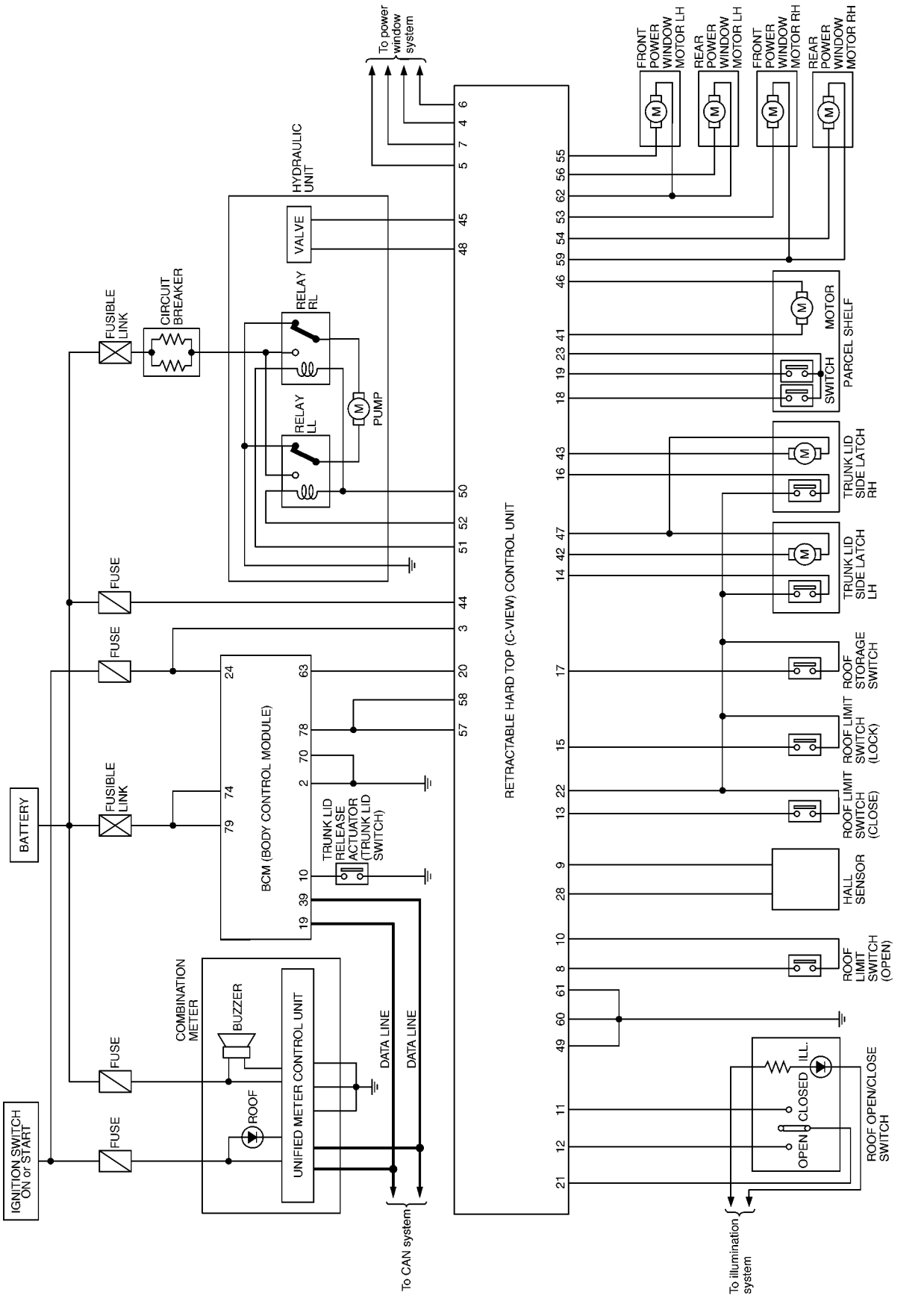
Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R				R	
Engine coolant temperature signal	T	R					
Fuel consumption monitor signal	T	R					
Accelerator pedal position signal	T					R	
Oil pressure switch signal		R					T
A/C compressor request signal	T						R
Heater fan switch signal	R				T		
Cooling fan speed request signal	T						R
Position lights request signal		R			T		R

Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Low beam request signal					T		R
Low beam status signal	R						T
High beam request signal		R			T		R
High beam status signal	R						T
Day time light request signal					T		R
Vehicle speed signal	R	R		R		T	
	R	T	R	R	R		
Sleep/wake up signal		R	R		T		R
Door switch signal		R	R		T		R
Turn indicator signal		R			T		
Buzzer output signal		R			T		
		R	T				
MI signal	T	R					
Front wiper request signal					T		R
Front wiper stop position signal					R		T
Rear window defogger switch signal					T		R
Rear window defogger control signal	R						T
EPS warning indicator signal		R		T			
ABS warning lamp signal		R				T	
ESP warning lamp signal		R				T	
ESP OFF indicator signal		R				T	
SLIP indicator lamp signal		R				T	
Steering angle signal				T		R	
Brake warning lamp signal		R				T	
Back-up lamp signal				R	T		
Front fog lamp request signal		R			T		R
Rear fog lamp status signal		R			T		
Headlamp washer request signal					T		R
Door lock/unlock request signal			T		R		
Door lock/unlock status signal			R		T		
KEY indicator signal		R	T				
LOCK indicator signal		R	T				
Engine status signal	T			R			
A/C switch signal	R				T		
Brake system malfunction signal		T		R			
Parking brake switch signal		T		R			
R range signal					R		T
Retractable hard top warning lamp signal*		R			T		

*: C+C only

Schematic

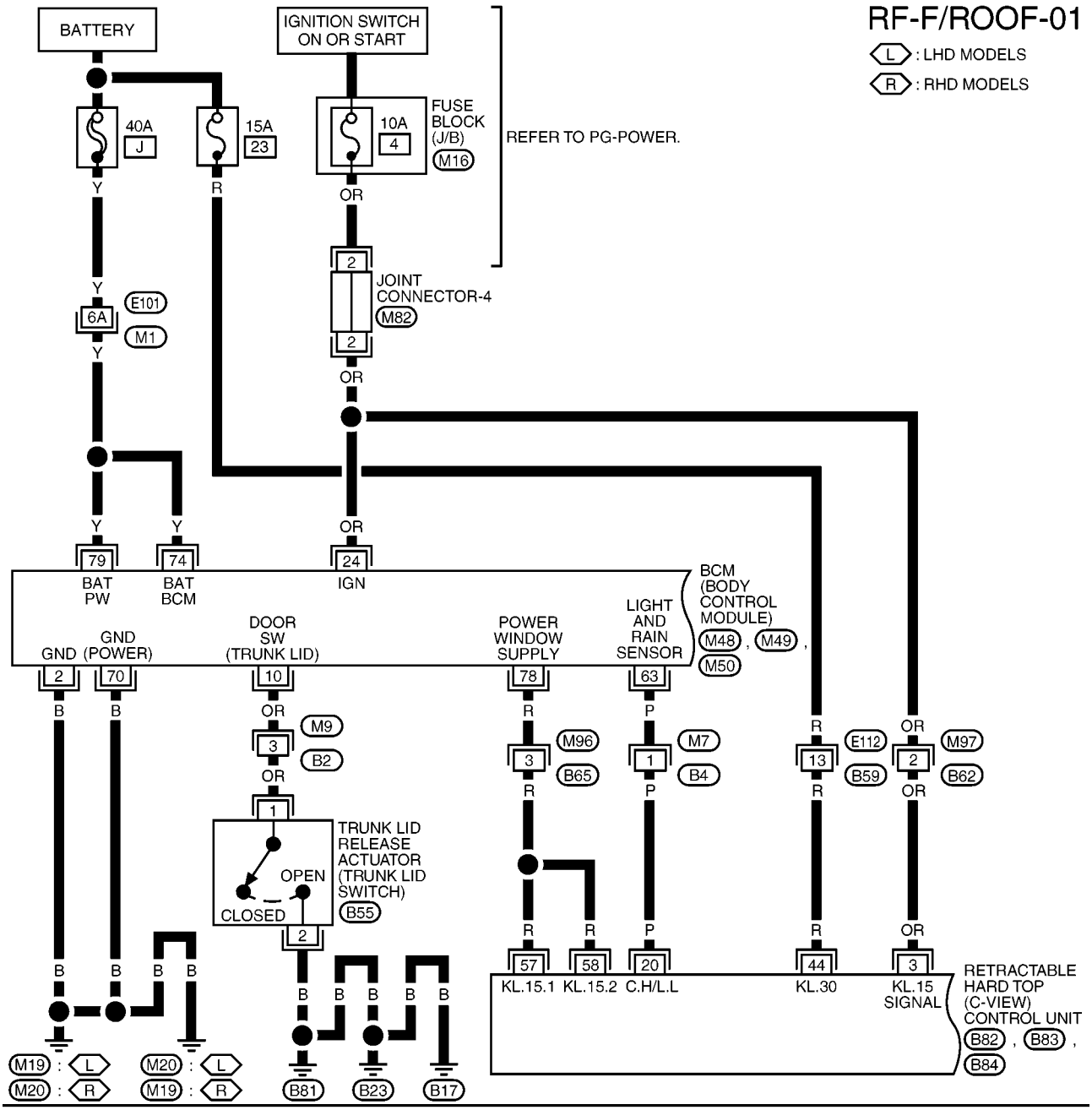
EIS00DZK

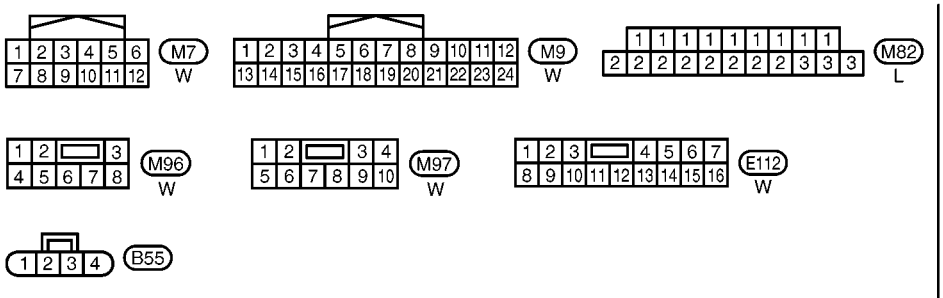


MIWA0589E

Wiring Diagram — F/ROOF—

EIS00DZL

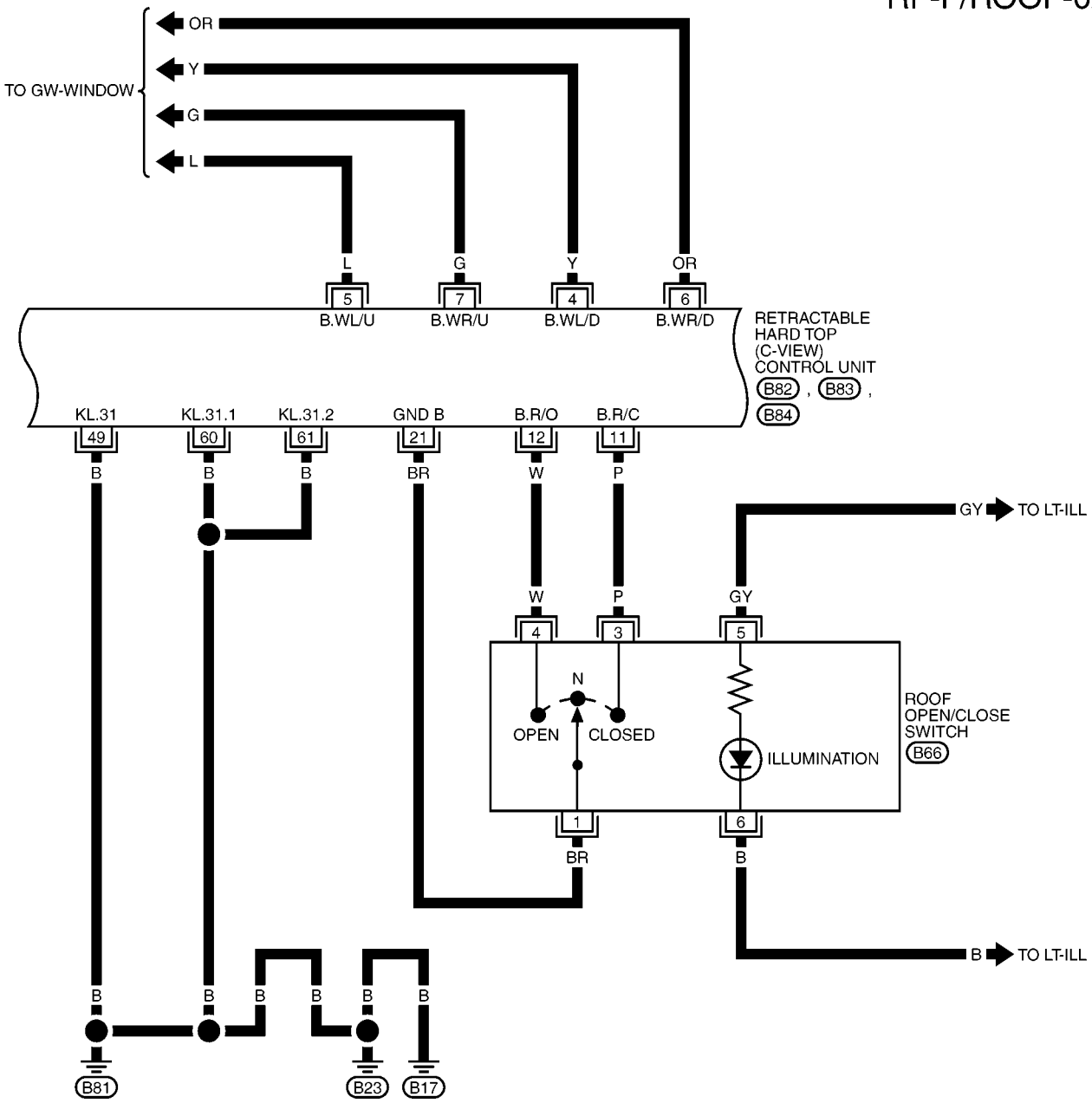


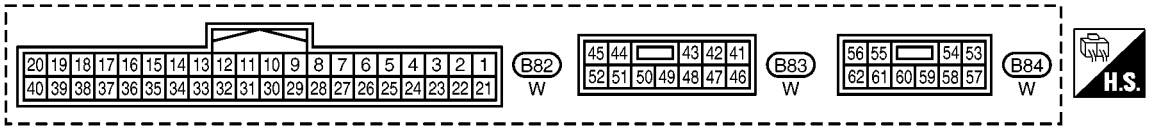


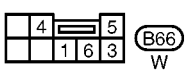
REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M16 - FUSE BLOCK - JUNCTION BOX (J/B)
M48, M49, M50, B82, B83, B84
- ELECTRICAL UNITS

MIWA0590E

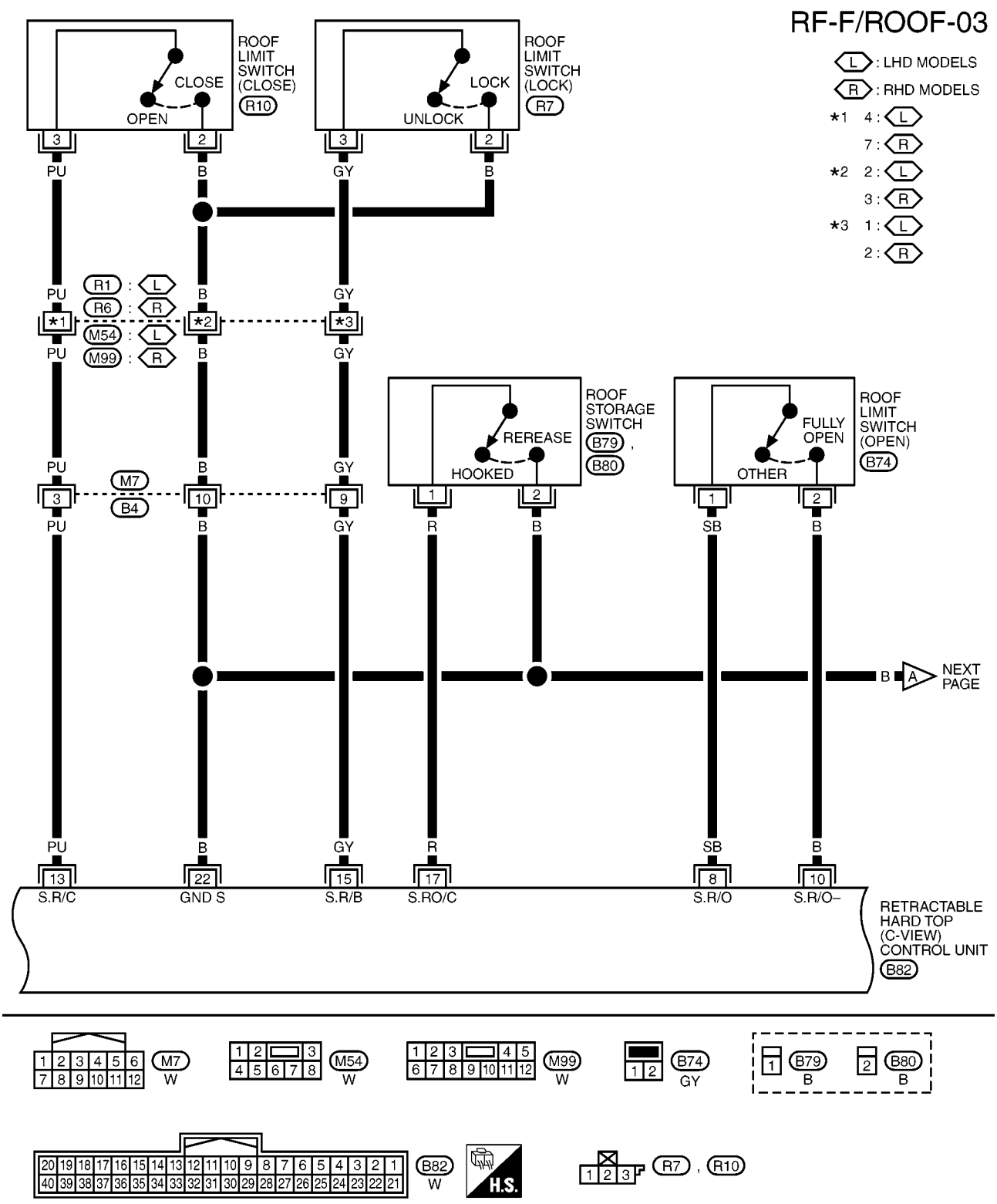
RF-F/ROOF-02





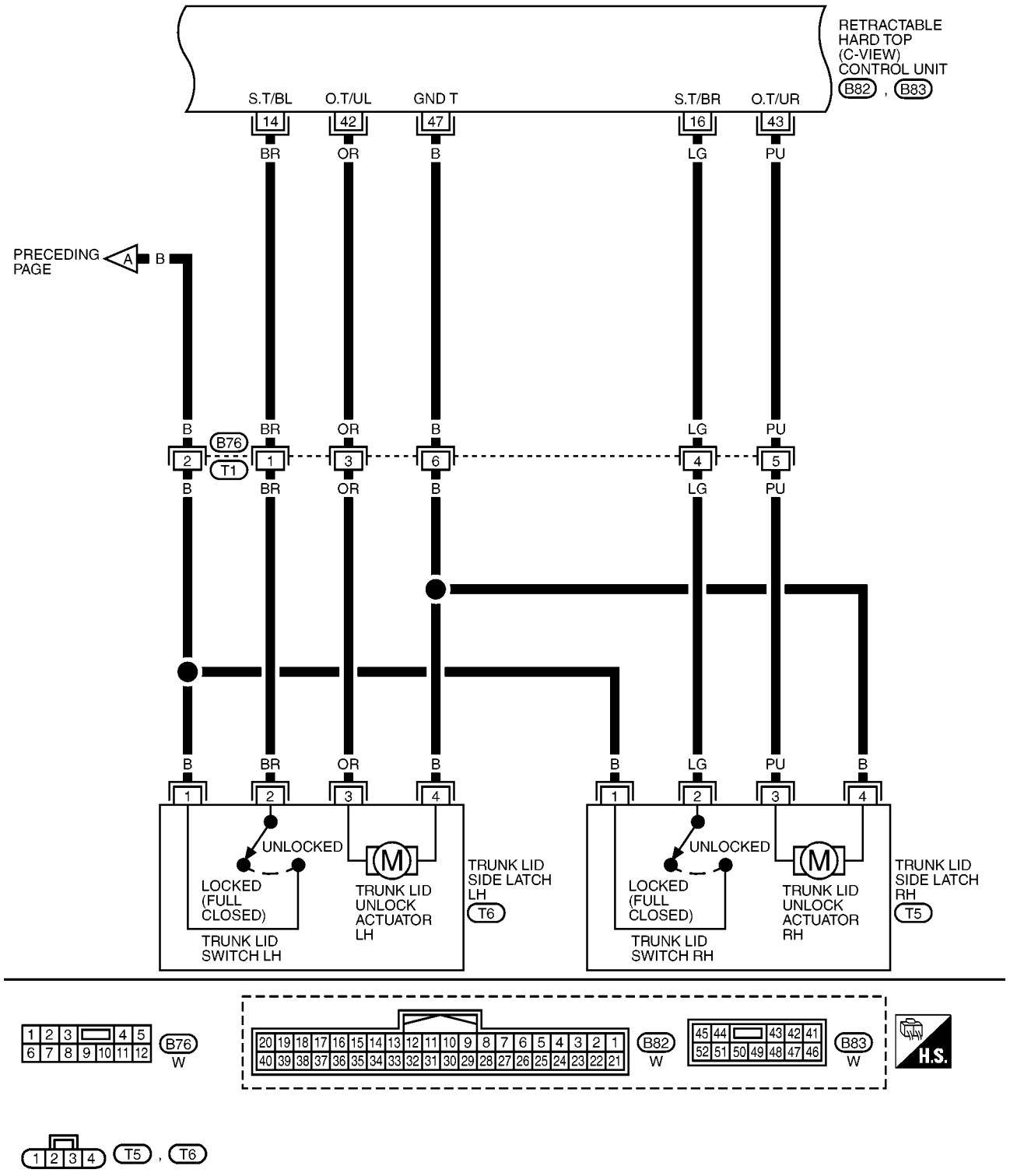


MIWA0591E


RF-F/ROOF-03
L : LHD MODELS
R : RHD MODELS
*1 4 : L
7 : R
*2 2 : L
3 : R
*3 1 : L
2 : R
ROOF LIMIT SWITCH (CLOSE) R10
CLOSE
OPEN
ROOF LIMIT SWITCH (LOCK) R7
LOCK
UNLOCK
ROOF STORAGE SWITCH B79, B80
REREASE
HOOKED
ROOF LIMIT SWITCH (OPEN) B74
FULLY OPEN
OTHER
R1 : L
R6 : R
M54 : L
M99 : R
M7
B4
NEXT PAGE
S.R/C
GND S
S.R/B
S.RO/C
S.R/O
S.R/O–
RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT B82
M7 W
M54 W
M99 W
B74 GY
B79 B
B80 B
B82 W
H.S.
R7, R10

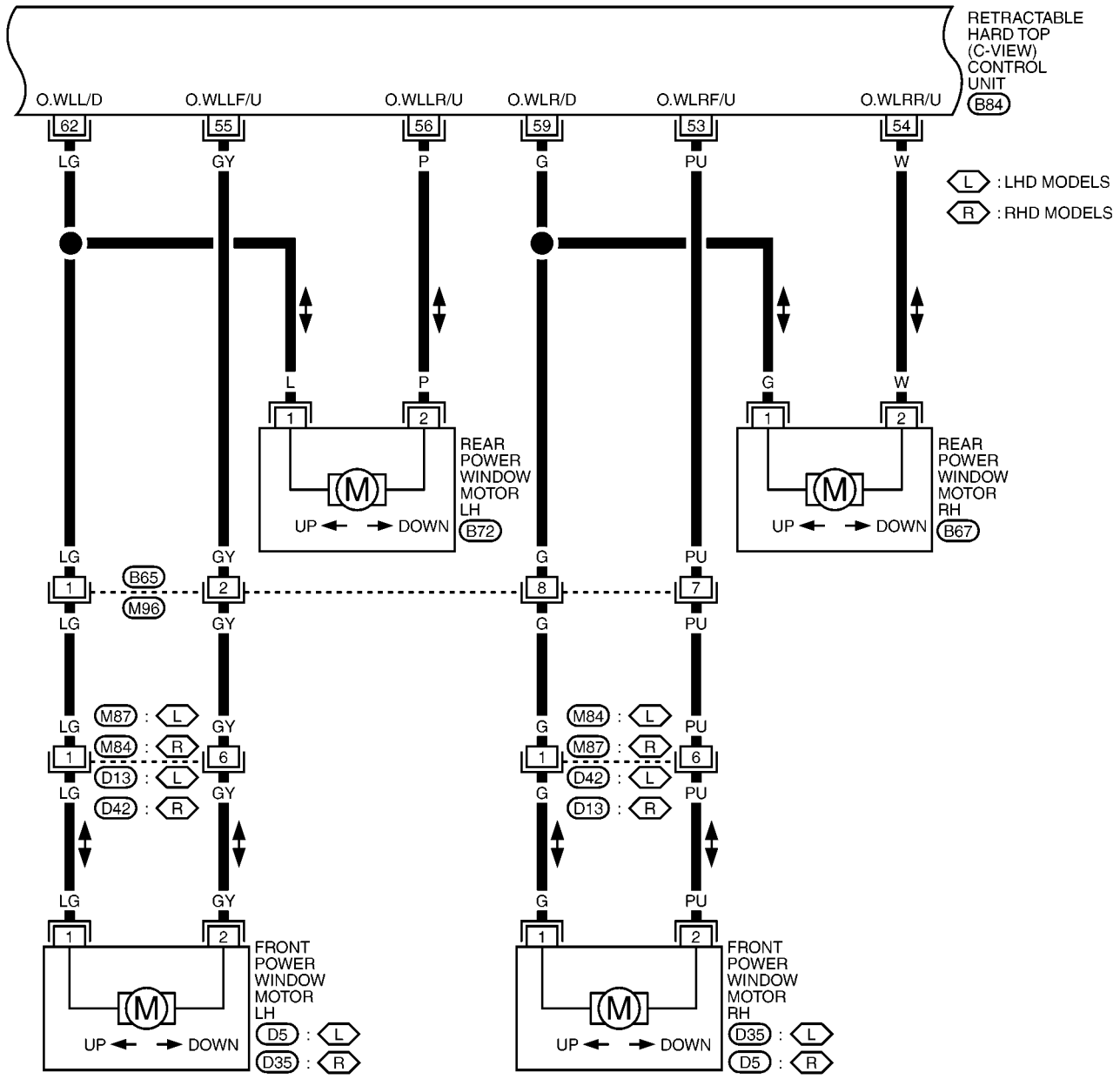
MIWA0592E

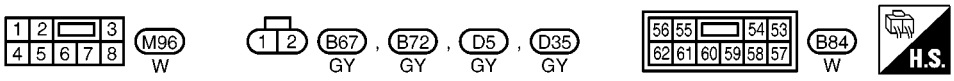
RF-F/ROOF-04

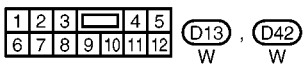


MIWA0593E

RF-F/ROOF-05

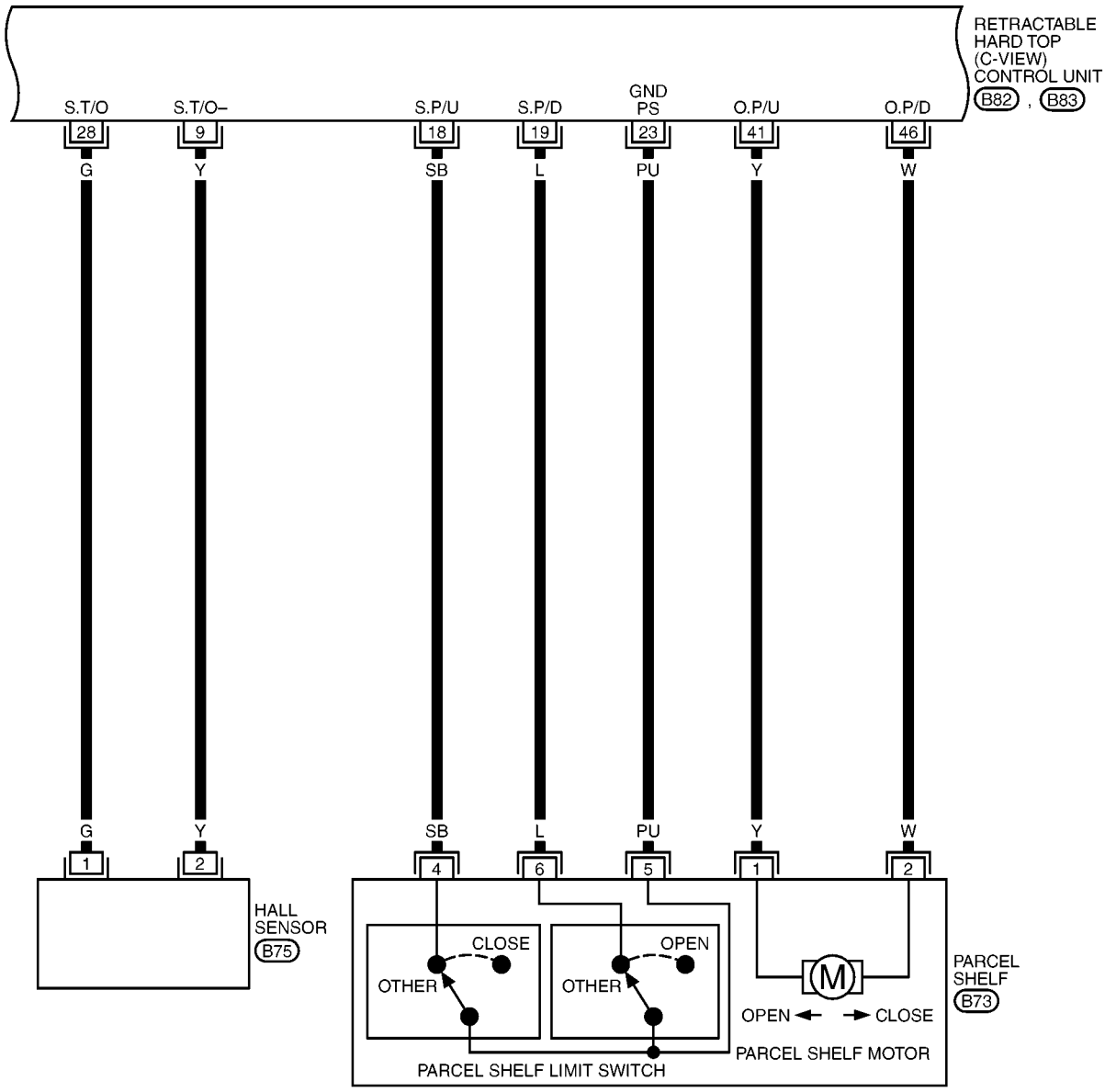


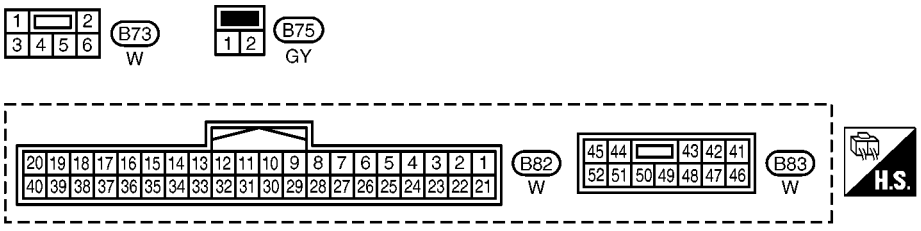




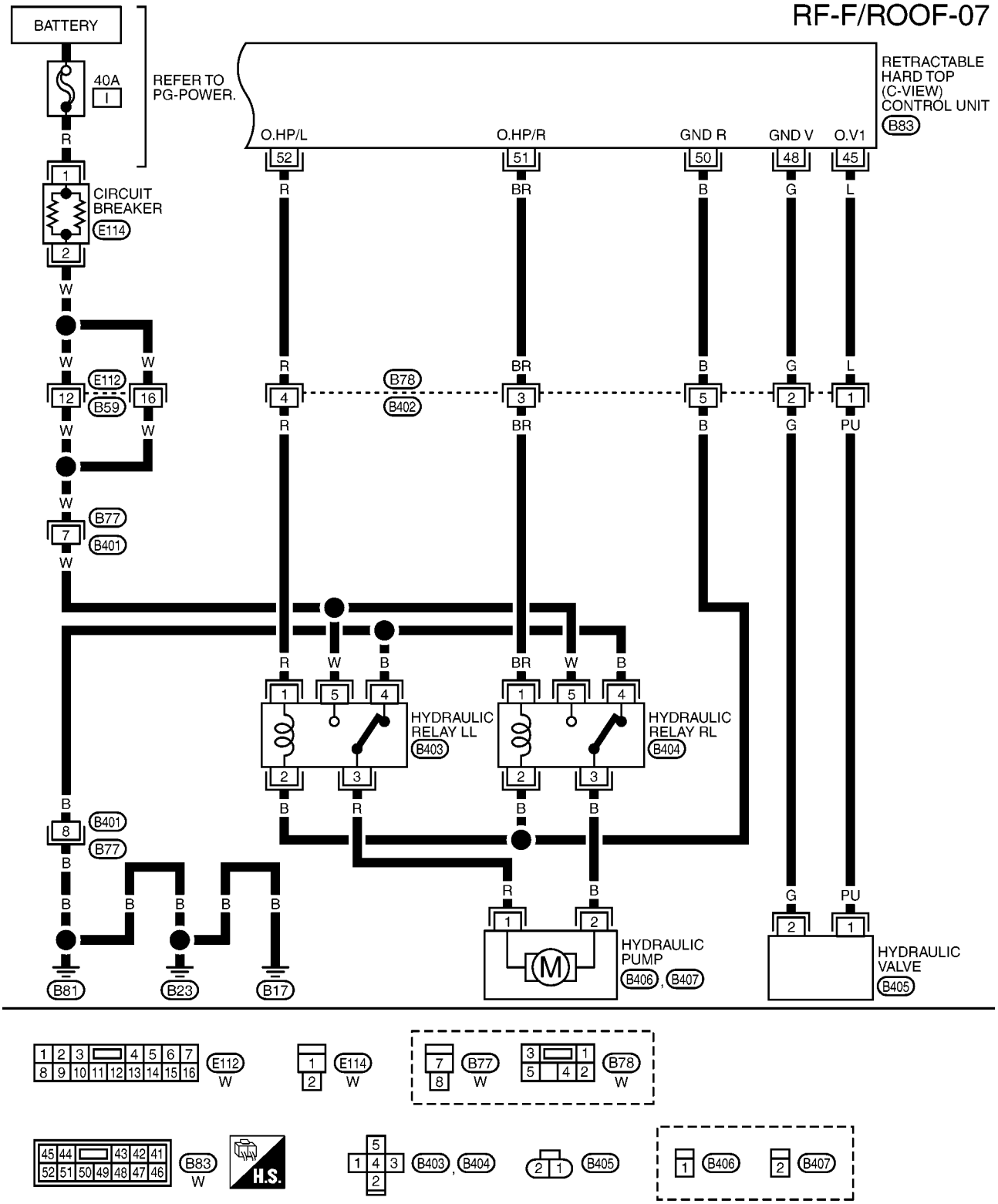
MIWA0594E

RF-F/ROOF-06





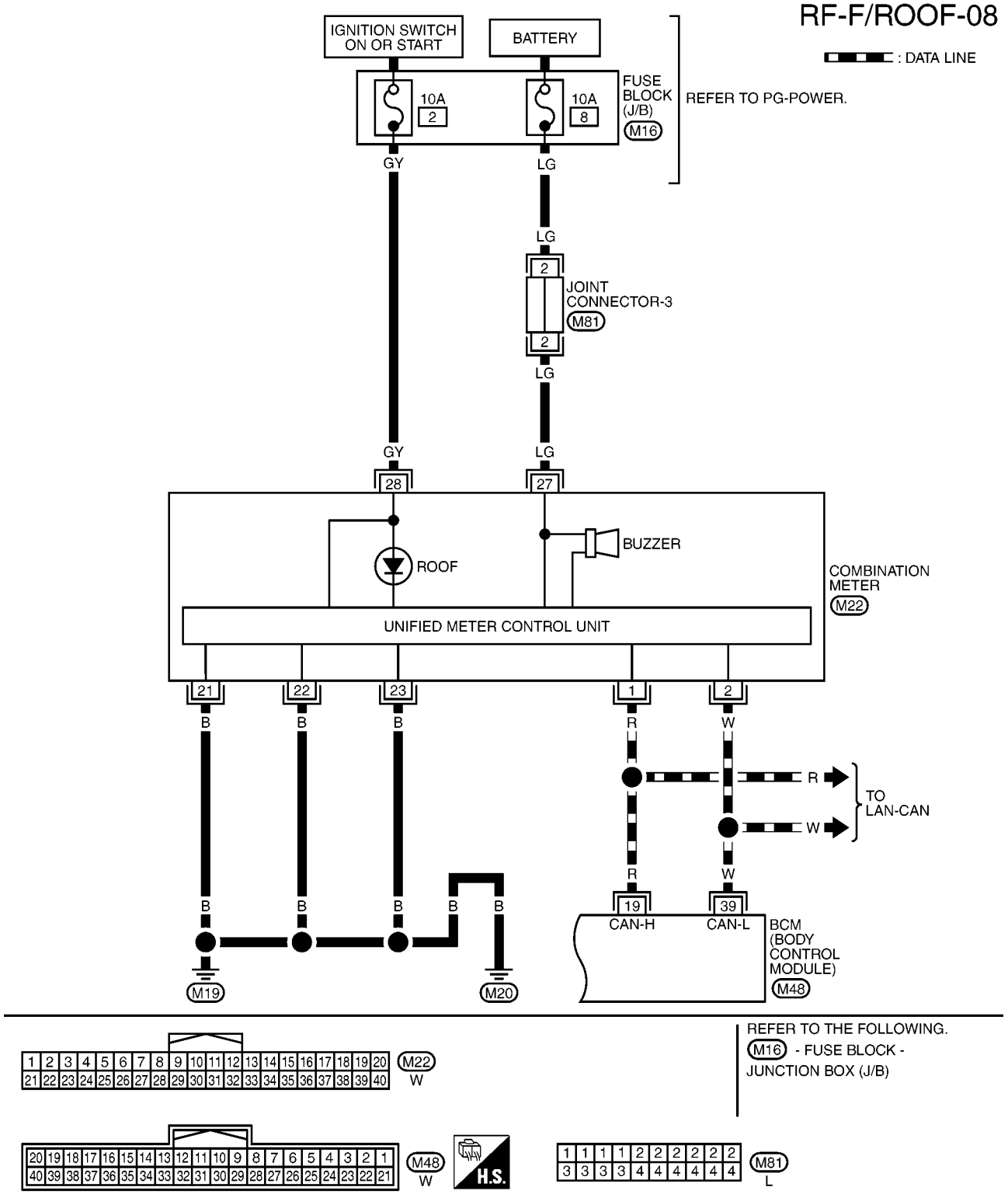
MIWA0595E


RF-F/ROOF-07
BATTERY
40A
I
REFER TO
PG-POWER.
CIRCUIT
BREAKER
E114
RETRACTABLE
HARD TOP
(C-VIEW)
CONTROL UNIT
B83
O.HP/L
O.HP/R
GND R
GND V
O.V1
52
51
50
48
45
R
BR
B
G
L
E112
B59
B78
B402
12
16
4
3
5
2
1
PU
B77
B401
7
8
HYDRAULIC
RELAY LL
B403
HYDRAULIC
RELAY RL
B404
HYDRAULIC
PUMP
B406
B407
HYDRAULIC
VALVE
B405
B81
B23
B17
W
B
M

E112
W
E114
W
B77
W
B78
W
B83
W
H.S.
B403
B404
B405
B406
B407

MIWA0596E

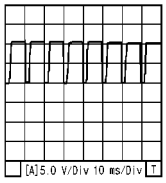
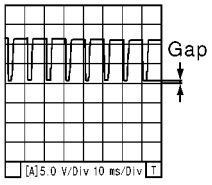
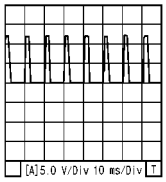
RF-F/ROOF-08

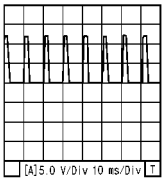
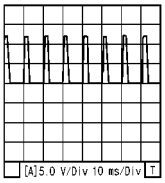
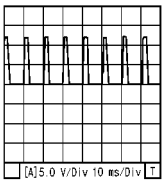
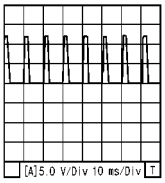
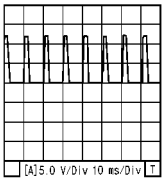
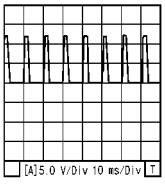


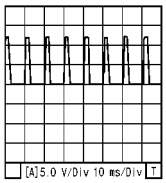
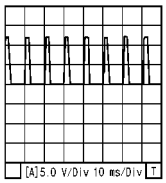
MIWA0597E

Terminals and Reference Value of Retractable Hard Top (C-view) Control Unit

EIS00DZM

Terminal No.	Wire color	Item	Measuring condition			Voltage [V] (approx.)
			Ignition switch	Operation or condition		
3	OR	IGN power supply	ON	—		Battery voltage
4	Y	Power window SW LH (DOWN) signal	ON	Power window SW (driver)*1 Power window SW (passenger)*2	: DOWN	Battery voltage
					: Other than above	0
5	L	Power window SW LH (UP) signal	ON	Power window SW (driver)*1 Power window SW (passenger)*2	: UP	Battery voltage
					: Other than above	0
6	OR	Power window SW RH (DOWN) signal	ON	Power window SW (passenger)*1 Power window SW (driver)*2	: DOWN	Battery voltage
					: Other than above	0
7	G	Power window SW RH (UP) signal	ON	Power window SW (passenger)*1 Power window SW (driver)*2	: UP	Battery voltage
					: Other than above	0
8	SB	Roof limit SW (OPEN) ground	ON	—		0
9	Y	Hall sensor signal	ON	Trunk (Front)	: Fully open	 MIIB1358E
					: Other than above	 MIIB1359E
10	B	Roof limit SW (OPEN) signal	ON	Roof	: Fully OPEN	0
					: Other than above	Battery voltage
11	P	Roof OPEN/CLOSE SW (CLOSE) signal	ON	Roof OPEN/ CLOSE SW	: CLOSE	0
					: Other than above	 MIIB1360E

Terminal No.	Wire color	Item	Measuring condition			Voltage [V] (approx.)
			Ignition switch	Operation or condition		
12	W	Roof OPEN/CLOSE SW (OPEN) signal	ON	Roof OPEN/ CLOSE SW	: OPEN	0
					: Other than above	 MIIB1360E
13	PU	Roof limit SW (CLOSE) signal	ON	Roof	: CLOSE	0
					: Other than above	 MIIB1360E
14	BR	Trunk limit SW (LH) signal	ON	Trunk (FRONT)	: CLOSE	 MIIB1360E
					: Other than above	0
15	GY	Roof limit SW (LOCK) signal	ON	Roof	: LOCKED	0
					: Other than above	 MIIB1360E
16	LG	Trunk limit SW (RH) signal	ON	Trunk (FRONT)	: CLOSE	 MIIB1360E
					: Other than above	0
17	R	Roof storage SW signal	ON	Tonneau cover	: Hooked	 MIIB1360E
					: Other than above	0

Terminal No.	Wire color	Item	Measuring condition			Voltage [V] (approx.)
			Ignition switch	Operation or condition		
18	SB	Parcel shelf limit SW (CLOSE)	ON	Parcel shelf	: CLOSE	 MIIB1360E
					: Other than above	0
19	L	Parcel shelf limit SW (OPEN)	ON	Parcel shelf	: OPEN	 MIIB1360E
					: Other than above	0
20	P	K-line	—	—		—
21	BR	Roof OPEN/CLOSE SW ground	ON	—		0
22	B	Roof limit SW (OPEN/CLOSE)/Trunk limit SW (LH/RH) ground	ON	—		0
23	PU	Parcel shelf limit SW ground	ON	—		0
28	G	Hall sensor power supply	ON	—		Battery voltage
41	Y	Parcel shelf motor (CLOSE)	ON	Parcel shelf	: CLOSE	Battery voltage
					: Other than above	0
42	OR	Trunk lid unlock actuator (LH)	ON	Trunk (FRONT)	: CLOSE → OPEN	0 → Battery voltage → 0
					: Other than above	0
43	PU	Trunk lid unlock actuator (RH)	ON	Trunk (FRONT)	: CLOSE → OPEN	0 → Battery voltage → 0
					: Other than above	0
44	R	Power source (Fuse)	OFF	—		Battery voltage
45	L	Hydraulic valve	ON	Roof	: Inter mediate	Battery voltage
					: Other than above	0
46	W	Parcel shelf motor (OPEN)	ON	Parcel shelf	: OPEN	Battery voltage
					: Other than above	0
47	B	Trunk lid unlock actuator (LH/RH) ground	ON	—		0
48	G	Hydraulic valve ground	ON	—		0
49	B	Ground	ON	—		0
50	B	Hydraulic pump relay ground	ON	—		0
51	BR	Hydraulic pump relay	ON	Hydraulic motor	: RIGHT Turn	Battery voltage
					: Other than above	0
52	R	Hydraulic pump relay	ON	Hydraulic motor	: LEFT Turn	Battery voltage
					: Other than above	0

Terminal No.	Wire color	Item	Measuring condition			Voltage [V] (approx.)
			Ignition switch	Operation or condition		
53	PU	Front power window motor (RH) UP	ON	Power window (driver)*2 Power window (passenger)*1	: UP (FRONT)	Battery voltage
					: DOWN (REAR)	Battery voltage
					: Other than above	0
54	W	Rear power window motor (RH) UP	ON	Power window (driver)*2 Power window (passenger)*1	: UP (REAR)	Battery voltage
					: DOWN (FRONT)	Battery voltage
					: Other than above	0
55	GY	Front power window motor (LH) UP	ON	Power window (passenger)*2 Power window (driver)*1	: UP (FRONT)	Battery voltage
					: DOWN (REAR)	Battery voltage
					: Other than above	0
56	P	Rear power window motor (LH) UP	ON	Power window (passenger)*2 Power window (driver)*1	: UP (REAR)	Battery voltage
					: DOWN (FRONT)	Battery voltage
					: Other than above	0
57	R	IGN power supply (Power window)	ON	—		Battery voltage
58	R	IGN power supply (Power window)	ON	—		Battery voltage
59	G	Front and rear power window motor (RH) DOWN	ON	Power window SW (driver)*2 Power window SW (passenger)*1	: DOWN	Battery voltage
					: Other than above	0
60	B	Ground (Power window)	ON	—		0
61	B	Ground (Power window)	ON	—		0
62	LG	Front and rear power window motor (LH) DOWN	ON	Power window SW (passenger)*2 Power window SW (driver)*1	: DOWN	Battery voltage
					: Other than above	0

*1: For LHD
*2: For RHD

Terminals and Reference Value for BCM

EIS00DZN

Terminal No.	Wire color	Item	Condition			Voltage [V] (Approx.)
			Ignition switch	Operation or conditions		
2	B	Ground	ON	—		0
10	OR	Trunk lid switch	—	Trunk lid	: OPEN	0
					: Other than above	Battery voltage
19	R	CAN-H	—	—		—
24	OR	Ignition power supply (ON or START)	ON	—		Battery voltage
39	W	CAN-L	—	—		—
63	P	K-line	—	—		—
70	B	Ground	ON	—		0

Terminal No.	Wire color	Item	Condition		Voltage [V] (Approx.)
			Ignition switch	Operation or conditions	
74	Y	Power source (Fusillade link)	OFF	—	Battery voltage
78	R	Power window power supply	ON	—	0
79	Y	Power source (Fusillade link)	OFF	—	Battery voltage

Terminals and Reference Value for Combination Meter

EIS00E1T

Terminal No.	Wire color	Item	Condition		Reference value [V] (Approx.)
			Ignition switch	Operation or condition	
1	R	CAN- H	—	—	—
2	W	CAN- L	—	—	—
21	B	Ground	ON	—	0
22	B	Ground	ON	—	0
23	B	Ground	ON	—	0
27	LG	Power source (Fuse)	OFF	—	Battery voltage
28	GY	IGN power supply	ON	—	Battery voltage

CONSULT-II Function (BCM)

EIS00DZO

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

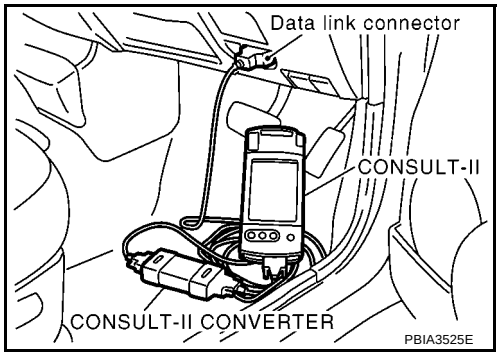
BCM diagnostic test item	Diagnosis mode	Content
RETRACTABLE HARD TOP	DATA MONITOR	Displays the input data of BCM in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them
	SELF-DIAG RESULTS	Display the retractable hard top (C-View) system self diagnosis results.

CONSULT-II INSPECTION PROCEDURE

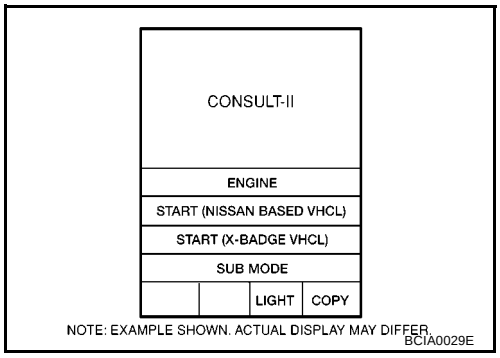
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

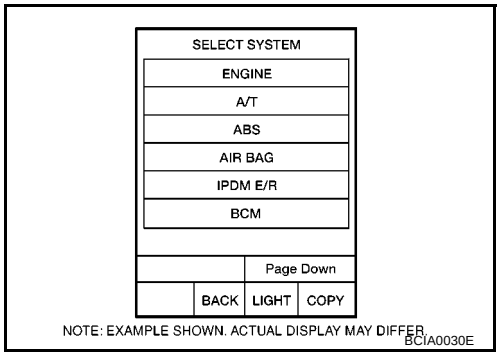
1. Turn ignition switch “ON”.
2. Connect “CONSULT-II and CONSULT-II CONVERTER” to the data link connector.



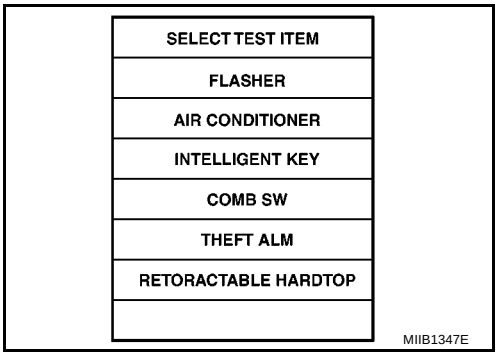
3. Turn ignition switch “ON”.
4. Touch “START (NISSAN BASED VHCL)”.



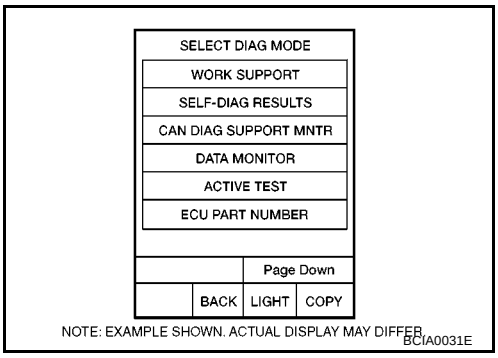
5. Touch “BCM”.
   If “BCM” is not indicated, go to Refer toGI-36, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “RETRACTABLE HARD TOP”.

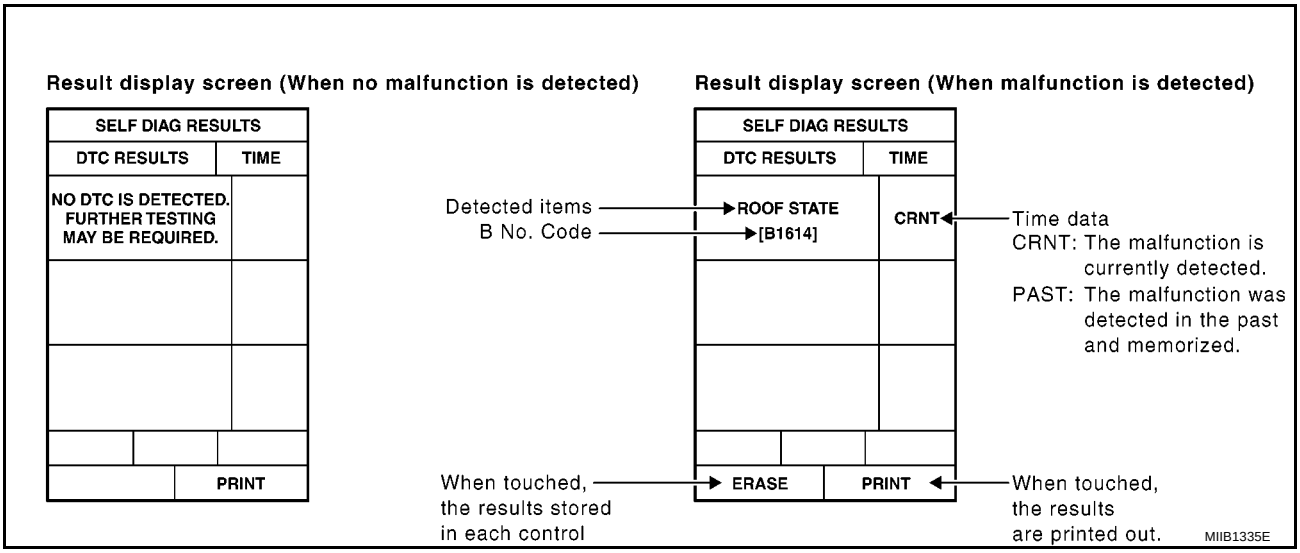


7. Select diagnosis mode.
“SELF DIAG RESURTS”, “DATA MONITOR” and “ACTIVE TEST” are available.



SELF DIAGNOSTIC RESULTS

How to Read SELF-DIAG RESULTS



CONSULT-II display		Diagnosed parts	Time	Refer to
[U1000]	CAN COMM	Malfunction is detected in CAN communication.	PAST/CRNT	LAN-5
[B1601]	HYD MOTOR LEFT	Hydraulic motor LEFT		RF-73
[B1602]	HYD MOTOR RIGHT	Hydraulic motor RIGHT		RF-73
[B1603]	DR FR WINDOW MOTOR	Front window motor DRIVER SIDE		RF-74
[B1604]	DR RR WINDOW MOTOR	Rear power window motor DRIVER SIDE		RF-74
[B1605]	AS FR WINDOW MOTOR	Front power window motor PASSENGER SIDE		RF-75
[B1606]	AS RR WINDOW MOTOR	Rear power window motor PASSENGER SIDE		RF-76
[B1607]	VALVE	Hydraulic valve		RF-77
[B1608]	TRUNK LOCK LEFT	Trunk lid side latch LH		RF-78
[B1609]	TRUNK LOCK RIGHT	Trunk lid side latch RH		RF-78
[B160A]	P SHELF MTR CLOSE	Parcel shelf motor CLOSE		RF-79
[B160B]	P SHELF MTR OPEN	Parcel shelf motor OPEN		RF-79
[B160C]	TRUNK SW	Trunk lid SW		RF-80
[B160D]	ROOF SW OPEN	Roof limit SW OPEN		RF-82
[B160E]	ROOF SW CLOSE	Roof limit SW CLOSE		RF-83
[B160F]	ROOF SW LOCK	Roof limit SW LOCK		RF-84
[B1610]	TRUNK SW LH	Trunk lid SW LH		RF-85
[B1611]	TRUNK SW RH	Trunk lid SW RH		RF-86
[B1612]	P SHELF SW OPEN	Parcel shelf limit SW OPEN		RF-86
[B1613]	P SHELF SW CLOSE	Parcel shelf limit SW CLOSE		RF-87
[B1614]	ROOF STATE	Roof state sensor		RF-88
[B1615]	ROOF OPEN SW	Roof open/close SW		RF-89
[B1616]	ROOF CLOSE SW	Roof open/close SW		RF-90
[B1617]	DR WIND SW DOWN	Driver side power window SW DOWN		RF-91
[B1618]	DR WIND SW UP	Driver side power window SW UP		RF-92
[B1619]	AS WIND SW DOWN	Passenger side power window switch DOWN		RF-93
[B161A]	AS WIND SW UP	Passenger side power window switch UP		RF-94
[B161B]	VOLTAGE LOW	Voltage LOW		RF-95
[B161C]	VOLTAGE HIGH	Voltage HIGH		RF-95
[B161D]	HYD PUMP TEMP	Hydraulic motor temperature		RF-96
[B161E]	RHT C/U	Retractable hard top (C-View) C/U		RF-96
[B161F]	PARCEL SHELF STATE	Parcel shelf state		RF-96

DATE MONITOR

CONSULT-II display	Operation or unit	Monitored item	Contents
DR WIN UP	[ON/OFF]	Driver side power window switch	The driver side power window SW operation “ON (UP) / OFF (Other than UP operation)” is displayed.
DR WIN DOWN	[ON/OFF]	Driver side power window switch	The driver side power window SW operation “ON (DOWN) / OFF (Other than DOWN operation)” is displayed.
AS WIN UP	[ON/OFF]	Passenger side power window switch	The passenger side power window SW operation “ON (UP) / OFF (Other than UP operation)” is displayed.
AS WIN DOWN	[ON/OFF]	Passenger side power window switch	The passenger side power window SW operation “ON (DOWN) / OFF (Other than DOWN operation)” is displayed.
ALL WIN UP	[NOTUP/UP]	All windows	The windows condition “ON (All of windows reached fully close condition) / OFF (Other than all of windows reached fully close condition)” is displayed.

CONSULT-II display	Operation or unit	Monitored item	Contents
ALL WIN DOWN	[NTDWN/ DOWN]	All windows	The windows condition “ON (All of windows reached fully open condition) / OFF (Other than all windows reached fully open condition)” is displayed.
ROOF CLOSE SW	[ON/OFF]	Roof open/close SW	The roof open/close switch operation “ON (CLOSE) / OFF (Other than CLOSE operation)” is displayed.
ROOF OPEN SW	[ON/OFF]	Roof open/close SW	The roof open/close switch operation “ON (OPEN) / OFF (Other than OPEN operation)” is displayed.
ROOF STATE	[CLOSE/MOVE / AJAR/OPEN]	Roof	The roof state “CLOSE (Roof is closed) / MOVE (Roof is during operation)/AJAR (Roof is stop in except opened and closed position)/OPEN (Roof is opened)” is displayed.
TRUNK SW	[ON/OFF]	Trunk SW	The hall sensor condition “OFF (Other than OPEN condition) / ON [Trunk lid (front) is fully opened]” is displayed.
TRUNK SW RH	[ON/OFF]	Trunk SW RH	The trunk switch (RH) condition “OFF (Other than OPEN condition) / ON [Trunk lid (front) is opened]” is displayed.
TRUNK SW LH	[ON/OFF]	Trunk SW LH	The trunk switch (LH) condition “OFF (Other than OPEN condition) / ON [Trunk lid (front) is opened]” is displayed.
ROOF SW OPEN	[ON/OFF]	Roof limit switch (OPEN)	The roof condition “ON (Roof is opened) / OFF (Other than opened condition)” is displayed.
ROOF SW CLOSE	[ON/OFF]	Roof limit switch (CLOSE)	The roof condition “ON (Roof is closed) / OFF (Other than closed condition)” is displayed.
ROOF SW LOCK	[ON/OFF]	Roof limit switch (LOCK)	The roof condition “ON (Roof is locked) / OFF (Other than locked condition)” is displayed.
P SHELF OPEN	[ON/OFF]	Parcel shelf limit switch (OPEN)	The parcel shelf switch (OPEN) condition “ON (Parcel shelf is fully opened) / OFF (Other than fully opened condition)” is displayed.
P SHELF CLOSE	[ON/OFF]	Parcel shelf limit switch (CLOSE)	The parcel shelf switch (CLOSE) condition “ON (Parcel shelf is fully closed) / OFF (Other than fully closed condition)” is displayed.
RHT C/U DATA	[NORML/FAULT]	RHT C/U	The RHT C/U data “NORML (NORMAL) / FAULT (INVALID)” is displayed.
BCM DATA	[NORML/FAULT]	BCM	The BCM data for RHT C/U “NORML (NORMAL) / FAULT (INVALID)” is displayed.
TRUNK RELEASE	[ENABL/DSABL]	Trunk lid opener system	The trunk release operation “ENABL(ENABLE) / DSABL (DISABLE)” is displayed.
RF STORAGE SW	[ON/OFF]	Tonneau cover switch	The tonneau cover condition “ON (Hooked) / OFF (Hooked)” is displayed.
CDL SW	[ENABL/DSABL]	Lock system	The CDL switch operation “ENABL(ENABLE) / DSABL (DISABLE)” is displayed. [When the car is locked by keyfob, the CDL switch is disabled. And the power window switch and roof open/close switch will be disabled. Retractable hard top function is disable if the ignition is turned ON with unregistered key, and “DISABLE” is displayed 30 seconds later.]
VEHICLE SPEED	[km/h]	Vehicle speed	The condition of vehicle speed is displayed.
HANDLE POSI	[LHD/RHD]	BCM	The BCM for handle position is displayed.

ACTIVE TEST

CONSULT-II display	Diagnosed parts	Contents
DR FR WINDOW	DRIVER FRONT WINDOW	Gives a drive signal to RHT C/U for the driver side front power window motor to activate (UP/DOWN) for 1 second.
AS FR WINDOW	ASSIST FRONT WINDOW	Gives a drive signal to RHT C/U for the Passenger side front power window motor to activate (UP/DOWN) for 1 second.
DR RR WINDOW	DRIVER REAR WINDOW	Gives a drive signal to RHT C/U for the driver side RR power window motor to activate (UP/DOWN) for 1 second.
AS RR WINDOW	ASSIST REAR WINDOW	Gives a drive signal to RHT C/U for the Passenger side RR power window motor to activate (UP/DOWN) for 1 second.
TRUNK	TRUNK LID	Gives a drive signal to RHT C/U for the trunk lid opener actuator to activate (UNLOCK).
PARCEL SHELF	PARCEL SHELF	Gives a drive signal to RHT C/U for parcel shelf motor to activate (OPEN/CLOSE) for 1 second.
VALVE	HYDRAULIC VALVE	Gives a drive signal to RHT C/U for hydraulic valve to activate (ON/OFF).
HYDRAULIC MOTOR	HYDRAULIC MOTOR	Gives a drive signal to RHT C/U for hydraulic motor to activate (LEFT/RIGHT) for 1 second.
ROOF	ROOF	Gives a drive signal to RHT C/U for roof to activate (OPEN/CLOSE) for 2 seconds.

Trouble Diagnosis Procedure

EIS00DZP

WORK FLOW

CAUTION:

Do not operate retractable hard top (C-View) system without connecting roof storage switch.

1. GET SYMPTOMS

Listen to customer complaints request. (Get symptoms)

>> GO TO 2.

2. FUNCTION COMFIRMATION

Understand retractable hard top (C-View) system. Refer to RF-30, "System Description" .

>> GO TO 3.

3. CHECK CAN COMMUNICATION SYSTEM

Check CAN communication system. Refer to LAN-5, "Precautions When Using CONSULT-II" .

>> GO TO 4.

4. CHECK FUNCTION OF POWER WINDOW SYSTEM

Does power window operate by power window switches?

YES or NO

YES >> GO TO 5.
NO >> Refer to GW-151, "Work Flow" .

5. CHECK MULTI-REMOTE CONTROL SYSTEM

Does the key fob operate properly when locking the vehicle?

YES or NO

YES >> GO TO 6.
NO >> Refer to BL-172, "TRUNK LID SWITCH (C+C)"

6. CHECK INPUT SIGNAL

Check input signals in “DATA MONITOR” mode with CONSULT-II. Refer to RF-68, "DATE MONITOR" .

Item	Condition			Display
BCM DATA	IGN: ON	–		NORML
RHT C/U DATA		–		NORML
VHICLE SPEED		–		Less than 5km/h
RF STORAGE SW		Tonneau cover	: Hooked	ON
CDL SW		–		ENABLE

OK or NG

OK >> GO TO 7.
NG >>
- BCM DATA: Refer to RF-145, "Check Communication Line (BCM)"
- RHT DATA: Refer to RF-143, "Check Communication Line [Retractable Hard Top (C-View) Control Unit]"
- VHICLE SPEED: Refer to DI-33, "Inspection/Vehicle Speed Signal" .
- RF STORAGE SW: Refer to RF-114, "Check Roof Storage Switch" .
- CDL SW: Refer to BL-294, "Diagnosis Procedure" .

7. PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of retractable hard top (C-View) system with CONSULT-II. Refer to RF-66, "CONSULT-II Function (BCM)" .

NOTE:
Perform “SELF-DIAGNOSIS” again after repairing the DTC.

“SELF-DIAG RESULTS” are displayed>>GO TO RF-67, "SELF DIAGNOSTIC RESULTS" .
“SELF-DIAG RESULTS” are not displayed>>GO TO 8.

8. CHECK RETRACTRABLE HARD TOP OPERATION 1

1. Erase DTC with CONSULT-II. Refer to RF-67, "How to Read SELF-DIAG RESULTS" .
2. Fully operate retractable hard top (C-View). (CLOSE → OPEN and OPEN → CLOSE)
3. Perform self-diagnosis of retractable hard top (C-View) system with CONSULT-II. Refer to RF-66, "CONSULT-II Function (BCM)" .

“SELF-DIAG RESULTS” are displayed>>GO TO RF-67, "SELF DIAGNOSTIC RESULTS" .
“SELF-DIAG RESULTS” are not displayed>> GO TO 9.

9. CHECK RETRACTABLE HARD TOP (C-VIEW) SYSTEM

According to the trouble diagnosis symptom chart, repair or replace the cause of the malfunction.

>> Refer to RF-98, "Trouble Diagnosis Symptom Chart for Roof Position" .

10. CHECK RETRACTRABLE HARD TOP OPERATION 2

Fully operate retractable hard top (C-View). (OPEN and CLOSE)

Does retractable hard top (C-View) operate normally?

Yes or No

Yes >> INSPECTION END
No >> GO TO 2.

DTC B1601 HYD MOTOR LEFT

EIS00DZQ

DIAGNOSIS DESCRIPTION

B1601 HYD MOTOR LEFT monitors the power supply condition to the relay LL (installed in hydraulic unit) relay. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
52	R	Hydraulic motor relay (LL)	ON	Hydraulic motor	:Turn left	Battery voltage
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1601	HYD MOTOR LEFT	● Retractable hard top (C-View) control unit detects voltage of terminal 52 during non roof operating. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 52 during roof operating.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and electrical unit) ● Retractable hard top (C-View) control unit ● Electrical unit (in the hydraulic unit)

DIAGNOSTIC PROCEDURE

Refer to RF-136, "Check Hydraulic Motor Relay LL Circuit" .

DTC B1602 HYD MOTOR RIGHT

EIS00DZR

DIAGNOSIS DESCRIPTION

B1602 HYD MOTOR RIGHT monitors the power supply condition to the relay RL (installed in hydraulic unit) relay. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
51	BR	Hydraulic pump relay (RL)	ON	Hydraulic motor	:Turn right	Battery voltage
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1602	HYD MOTOR RIGHT	● Retractable hard top (C-View) control unit detects voltage of terminal 51 during non roof operating. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 51 roof operating.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and electrical unit) ● Retractable hard top (C-View) control unit ● Electrical unit (in the hydraulic unit)

DIAGNOSTIC PROCEDURE

Refer to RF-139, "Check Hydraulic Motor Relay RL Circuit" .

DTC B1603 DR FR WINDOW MOTOR

EIS00DZS

DIAGNOSIS DESCRIPTION

B1603 DR FR WINDOW MOTOR monitors the power supply condition to the front driver side power window motor. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
55 (53)	GY (PU)	Front power window motor LH UP (Front power window motor RH UP)	ON	Front driver side power window	: UP	Battery voltage
					: DOWN	0
				Rear driver side power window	: UP	Battery voltage
					: DOWN	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1603	DR FR WINDOW MOTOR	● Retractable hard top (C-View) control unit detects voltage of terminal 55(53) during non front driver side power window UP operation. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 55(53) during front driver side power window UP operation.	● Harness and connector (Short in the circuit between the retractable hard top control unit and the front driver side power window motor) ● Retractable hard top (C-View) control unit ● Front driver side power window motor

(): For RHD

DIAGNOSTIC PROCEDURE

Refer to GW-161, "Front Power Window Motor LH Circuit Check 1" (for LHD models).
Refer to GW-163, "Front Power Window Motor RH Circuit Check 1" (for RHD models).

DTC B1604 DR RR WINDOW MOTOR

EIS00DZT

DIAGNOSIS DESCRIPTION

B1604 DR RR WINDOW MOTOR monitors the power supply condition to the rear driver side power window motor. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
56 (54)	P (W)	Rear power window motor LH UP (Rear power window motor RH UP)	ON	Rear driver side power window	: UP	Battery voltage
					: DOWN	0
				Front driver side power window	: UP	Battery voltage
					: DOWN	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1604	DR RR WINDOW MOTOR	● Retractable hard top (C-View) control unit detects voltage of terminal 56(54) during non rear driver side power window UP operation. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 56(54) during rear side power window UP operation.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the rear driver side power window motor) ● Retractable hard top (C-View) control unit ● Rear driver side power window motor

(): For RHD

DIAGNOSTIC PROCEDURE

Refer to GW-165, "Rear Power Window Motor LH Circuit Check 1" . (for LHD models)
Refer to GW-167, "Rear Power Window Motor RH Circuit Check 1" . (for RHD models)

DTC B1605 AS FR WINDOW MOTOR

EIS00DZU

DIAGNOSIS DESCRIPTION

B1605 AS FR WINDOW MOTOR monitors the power supply condition to the front passenger side power window motor. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
53 (55)	PU (GY)	Front power window motor RH UP (Front power window motor LH UP)	ON	Front passenger side power window	: UP	Battery voltage
					: DOWN	0
				Rear passenger side power window	: UP	Battery voltage
					: DOWN	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1605	AS FR WINDOW MOTOR	● Retractable hard top (C-View) control unit detects voltage of terminal 53(55) during non front passenger side power window UP operation. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 53(55) during front passenger side power window UP operation.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the front passenger power window motor) ● Retractable hard top (C-View) control unit ● Front passenger side power window motor

(): For RHD

DIAGNOSTIC PROCEDURE

Refer to GW-164, "Front Power Window Motor RH Circuit Check 2" . (for LHD models)
Refer to GW-162, "Front Power Window Motor LH Circuit Check 2" (for RHD models)

DTC B1606 AS RR WINDOW MOTOR

EIS00DZV

DIAGNOSIS DESCRIPTION

B1606 AS RR WINDOW MOTOR monitors the power supply condition to the rear passenger side power window motor. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
54 (56)	W (P)	Rear power window motor RH UP (Rear power window motor LH UP)	ON	Rear passenger side power window	: UP	Battery voltage
					: DOWN	0
				Front passenger side power window	: UP	Battery voltage
					: DOWN	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1606	AS RR WINDOW MOTOR	● Retractable hard top (C-View) control unit detects voltage of terminal 54(56) during non rear passenger side power window UP operation. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 54(56) during rear passenger side power window UP operation.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the rear passenger side power window motor) ● Retractable hard top (C-View) control unit ● Rear passenger side power window motor

DIAGNOSTIC PROCEDURE

Refer to GW-168, "Rear Power Window Motor RH Circuit Check 2" . (for LHD models)
Refer to GW-166, "Rear Power Window Motor LH Circuit Check 2" (fro RHD models)

DTC B1607 VALVE

EIS00DZW

DIAGNOSIS DESCRIPTION

B1607 VALVE monitors the power supply condition to the hydraulic valve (installed in hydraulic unit). If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
45	L	Hydraulic valve	ON	Hydraulic valve	:Activate	Battery voltage
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1607	VALVE	● Retractable hard top (C-View) control unit detects voltage of terminal 45 during non hydraulic valve operating conditions. ● Retractable hard top (C-View) retractable hard top (C-View) control unit does not detects voltage of terminal 45 during hydraulic valve operation condition.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the hydraulic unit) ● Retractable hard top (C-View) control unit ● Hydraulic unit

DIAGNOSTIC PROCEDURE

Refer to RF-135, "Check Hydraulic Valve" .

DTC B1608 TRUNK LOCK LEFT

EIS00DZX

DIAGNOSIS DESCRIPTION

B1608 TRUNK LOCK LEFT monitors the power supply condition to the trunk lid unlock actuator LH. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
42	OR	Trunk lid unlock actuator (LH)	ON	Trunk (FRONT)	: CLOSE → OPEN	0 → Battery voltage → 0
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1608	TRUNK LOCK LEFT	● Retractable hard top (C-View) control unit detects voltage of terminal 42 during non trunk unlock (front) operating conditions. ● Retractable hard top (C-View) retractable hard top (C-View) control unit does not detects voltage of terminal 42 during trunk unlock (front) operation condition.	● Harness and connector (Short in the circuit between the retractable control unit and the trunk lid side latch LH) ● Retractable hard top (C-View) control unit ● trunk lid side latch LH

DIAGNOSTIC PROCEDURE

Refer to RF-116, "Check Trunk Lid Unlock Actuator LH" .

DTC B1609 TRUNK LOCK RIGHT

EIS00DZY

DIAGNOSIS DESCRIPTION

B1609 TRUNK LOCK RIGHT monitors the power supply condition to the trunk lid unlock actuator RH. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
43	PU	Trunk lid unlock actuator (RH)	ON	Trunk (FRONT)	: CLOSE → OPEN	0 → Battery voltage → 0
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1609	TRUNK LOCK RIGHT	● Retractable hard top (C-View) control unit detects voltage of terminal 43 during non trunk unlock (front) operating conditions. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 43 during trunk unlock (front) operation condition.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) retractable hard top (C-View) control unit and the trunk lid side latch RH) ● Retractable hard top (C-View) control unit ● trunk lid side latch RH

DIAGNOSTIC PROCEDURE

Refer to RF-118, "Check Trunk Lid Unlock Actuator RH" .

DTC B160A P SHELF MTR CLOSE

EIS00DZZ

DIAGNOSIS DESCRIPTION

B160A P SHELF MTR CLOSE monitors the power supply condition to the parcel shelf motor. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
41	Y	Parcel shelf motor (CLOSE)	ON	Parcel shelf	: Moves UP	Battery voltage
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B160A	P SHELF MTR CLOSE	● Retractable hard top (C-View) control unit detects voltage of terminal 41 during non parcel shelf (CLOSE) operating conditions. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 41 during parcel shelf (CLOSE) operation condition.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the parcel shelf motor) ● Retractable hard top (C-View) control unit ● Parcel shelf motor

DIAGNOSTIC PROCEDURE

Refer to RF-133, "Check Parcel Shelf Motor" .

DTC B160B P SHELF MTR OPEN

EIS00E00

DIAGNOSIS DESCRIPTION

B160B P SHELF MTR OPEN monitors the power supply condition to the parcel shelf motor. If it is detected the short circuit, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or conditions		
46	W	Parcel shelf motor (OPEN)	ON	Parcel shelf	: Moves DOWN	Battery voltage
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B160B	P SHELF MTR OPEN	● Retractable hard top (C-View) control unit detects voltage of terminal 46 during non parcel shelf (OPEN) operating conditions. ● Retractable hard top (C-View) control unit does not detects voltage of terminal 46 during parcel shelf (OPEN) operation condition.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the parcel shelf motor) ● Retractable hard top (C-View) control unit ● Parcel shelf motor

DIAGNOSTIC PROCEDURE

Refer to RF-133, "Check Parcel Shelf Motor" .

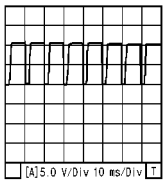
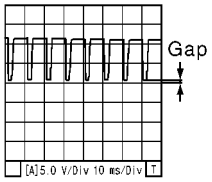
DTC B160C TRUNK SW

EIS00E01

DIAGNOSIS DESCRIPTION

B160C TRUNK SW monitors the hall sensor signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
9	Y	Hall sensor signal	ON	Trunk lid	: Fully OPEN	 MIIB1358E
					Other than above	 MIIB1359E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B160C	TRUNK SW	● Retractable hard top (C-View) control unit does not detect that hall sensor is ON for 16 seconds or more from turn ON trunk lid limit switch (LH/RH) in trunk lid opening sequence. ● Retractable hard top (C-View) control unit does not detect Hall sensor is OFF for 2 seconds or more from turn ON parcel shelf limit switch (CLOSE) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect Hall sensor is OFF for 2 seconds or more from turn ON roof limit switch (CLOSE) during roof closing operation. ● Retractable hard top (C-View) control unit does not detect Hall sensor is ON for 14 seconds or more from turn ON roof limit switch (LOCK) during roof closing operation. ● Retractable hard top (C-View) control unit does not detect hall sensor is ON and trunk lid limit switch (LH) is ON for 0.7 seconds or more from turn off trunk lid limit switch (RH) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect hall sensor is ON and trunk lid limit switch (RH) is ON for 0.7 seconds or more from turn off trunk lid limit switch (LH) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect hall sensor is ON and trunk lid limit switch (LH/RH) is ON for 0.7 seconds or more from turn off roof limit switch (LOCK) during roof opening operation. ● Retractable hard top (C-View) control unit terminals 9 and 28 detects unusual voltage.	● Harness and connector (Short and open in the circuit between the retractable hard top (C-View) control unit and the hall sensor) ● Retractable hard top (C-View) control unit ● Hall sensor ● Trunk lid mechanism ● Hydraulic system

DIAGNOSTIC PROCEDURE

Diagnosis/service procedure	Reference page
1. Check trunk mechanism deformation, interference with other parts and pinched foreign materials.	BL-251
2. Check hydraulic system.	RF-200
3. Check hall sensor.	RF-126

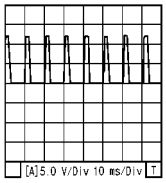
DTC B160D ROOF SW OPEN

EIS00E02

DIAGNOSIS DESCRIPTION

B160D ROOF SW OPEN monitors the roof limit switch (OPEN) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
10	SB	Roof limit switch (OPEN) signal	ON	Roof	: Fully OPEN	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B160D	ROOF SW OPEN	● Retractable hard top (C-View) control unit does not detect that roof limit switch (OPEN) is ON for 16 seconds or more from turn off roof limit switch (CLOSE) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect roof limit switch (OPEN) is OFF for 2 second or more from turn OFF parcel shelf limit switch (OPEN) during roof closing operation.	● Harness and connector [Short or open in the circuit between retractable hard top (C-View) control unit and the roof limit switch (OPEN)] ● Retractable hard top (C-View) control unit ● Roof limit switch (OPEN) ● Roof mechanism ● Hydraulic system

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check roof mechanism deformation. interference with other parts and pinched foreign materials.	RF-161
2. Check hydraulic system.	RF-200
3. Check roof limit switch (OPEN).	RF-111

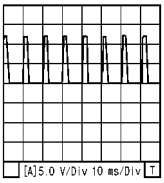
DTC B160E ROOF SW CLOSE

EIS00E03

DIAGNOSIS DESCRIPTION

B160E ROOF SW CLOSE monitors the roof limit switch (CLOSE) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
10	PU	Roof limit switch (CLOSE) signal	ON	Roof	: CLOSE	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B160E	ROOF SW CLOSE	● Retractable hard top (C-View) control unit does not detect that roof limit switch (CLOSE) is OFF for 2.5 seconds or more from turn OFF roof limit switch (LOCK) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect roof limit switch (CLOSE) is ON for 20 seconds or more from turn OFF roof limit switch (OPEN) during roof closing operation.	● Harness and connector [Short or open in the circuit between retractable hard top (C-View) control unit and the roof limit switch (CLOSE)] ● Retractable hard top (C-View) retractable hard top (C-View) control unit ● Roof limit switch (CLOSE) ● Roof mechanism ● Hydraulic system

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check roof mechanism deformation, interference with other parts and pinched foreign materials.	RF-161
2. Check hydraulic system.	RF-200
3. Check roof limit switch (CLOSE).	RF-108

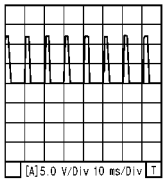
DTC B160F ROOF SW LOCK

EIS00E04

DIAGNOSIS DESCRIPTION

B160F ROOF SW LOCK monitors the roof limit switch (LOCK) signal condition to the retractable hard top (C-View) retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
15	GY	Roof limit switch (LOCK) signal	ON	Roof	: LOCKED	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B160F	ROOF SW LOCK	● Retractable hard top (C-View) control unit does not detect that roof limit switch (LOCK) is ON for 16 seconds or more from turn OFF trunk lid limit switch (LH/RH) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect roof limit switch (LOCK) is OFF for 1 second or more from turn ON any or more trunk lid limit switch (LH/RH) during roof closing operation. ● Retractable hard top (C-View) control unit does not detect hall sensor is ON and roof limit switch (LOCK) is ON for 16 seconds or more from turn off trunk lid limit switch (LH/RH) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect any or both trunk limit switch (LH/RH) are OFF and roof limit switch (LOCK) is ON for 14 seconds or more from turn off hall sensor during roof closing operation.	● Harness and connector [Short or open in the circuit between retractable hard top (C-View) control unit and the roof limit switch (LOCK)] ● Retractable hard top (C-View) control unit ● Roof limit switch (LOCK) ● Roof mechanism ● Hydraulic system

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check roof mechanism deformation, interference with other parts and pinched foreign materials.	RF-161
2. Check hydraulic system.	RF-200
3. Check roof limit switch (LOCK).	RF-105

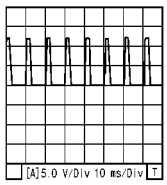
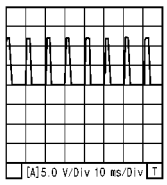
DTC B1610 TRUNK SW LH

EIS00E05

DIAGNOSIS DESCRIPTION

B1610 TRUNK SW LH monitors the trunk lid limit switch (LH/RH) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
14	BR	Trunk lid switch (LH) signal	ON	Trunk lid (Font)	: UNLOCK	0
					Other than above	 MIIB1360E
16	LG	Trunk lid switch (RH) signal	ON	Trunk lid (Font)	: UNLOCK	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1610	TRUNK SW LH	● Retractable hard top (C-View) control unit does not detect that trunk lid limit switch (LH) is OFF for 0.7 seconds or more from trunk lid limit switch (RH) is OFF in trunk opening sequence. ● Retractable hard top (C-View) control unit does not detect trunk lid switch (LH/RH) are ON for 14 second or more from turn OFF the hall sensor in trunk closing sequence. ● Retractable hard top (C-View) control unit dose not detects trunk lid switch (LH/RH) are OFF for 0.7 second or more from retractable hard top (C-View) control unit out put to trunk lid unlock actuators (LH/RH).	● Harness and connector (Short and open in the circuit between retractable hard top (C-View) control unit and the trunk kid limit switches) ● Retractable hard top (C-View) control unit ● Trunk limit switch (LH) ● Trunk mechanism ● Hydraulic system

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check trunk mechanism deformation, interference with other parts and pinched foreign materials.	BL-251
2. Check hydraulic system.	RF-200
3. Check trunk lid switch LH.	RF-120

DTC B1611 TRUNK SW RH

EIS00E06

DIAGNOSIS DESCRIPTION

B1611 TRUNK SW RH monitors the trunk kid switch front (RH) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or condition		
16	LG	Trunk lid switch (RH) signal	ON	Trunk lid (Font)	: CLOSE	Battery voltage
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1611	TRUNK SW RH	● Retractable hard top (C-View) control unit does not detect that trunk lid limit switch (RH) is OFF for 0.7 seconds or more from trunk lid limit switch (LH) is OFF in trunk opening sequence. ● Retractable hard top (C-View) control unit does not detect that trunk lid limit switch (RH) is ON for 1 second or more from trunk lid limit switch (LH) is ON in trunk closing sequence.	● Harness and connector (Short and open in the circuit between retractable hard top (C-View) control unit and the trunk lid limit switch RH) ● Retractable hard top (C-View) control unit ● Trunk limit switch (RH) ● Trunk mechanism ● Hydraulic system

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check trunk mechanism deformation, interference with other parts and pinched foreign materials.	BL-251
2. Check hydraulic system.	RF-200
3. Check trunk lid switch RH.	RF-123

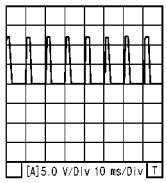
DTC B1612 P SHELF SW OPEN

EIS00E07

DIAGNOSIS DESCRIPTION

B1612 P SHELF SW OPEN monitors the parcel shelf limit switch (CLOSE) signal condition to the retractable hard top control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
19	L	Parcel shelf limit switch (OPEN) signal	ON	Parcel shelf	: OPEN	 MIIB1360E
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1612	P SHELF SW OPEN	● Retractable hard top (C-View) control unit does not detect that parcel shelf limit switch (OPEN) is ON for 5 seconds or more from turn OFF parcel shelf limit switch (CLOSE) during roof closing operation. ● Retractable hard top (C-View) control unit does not detect parcel shelf limit switch (CLOSE) is OFF for 1 second or more from turn on roof limit switch (OPEN) during roof opening operation.	● Harness and connector [Short or open in the circuit between retractable hard top (C-View) control unit and the parcel shelf limit switch (OPEN)] ● Retractable hard top (C-View) control unit ● Parcel shelf limit switch (OPEN) ● Parcel shelf mechanism ● Parcel shelf motor

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check parcel shelf mechanism deformation, interference with other parts and pinched foreign materials.	EI-38
2. Check parcel shelf motor.	RF-133
3. Check parcel shelf limit switch (OPEN).	RF-128

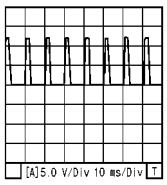
DTC B1613 P SHELF SW CLOSE

EIS00E08

DIAGNOSIS DESCRIPTION

B1613 P SHELF SW CLOSE monitors the parcel shelf limit switch (CLOSE) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
18	SB	Parcel shelf limit switch (CLOSE) signal	ON	Parcel shelf	: CLOSE	 MIIB1360E
					Other than above	0

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1613	P SHELF SW CLOSE	● Retractable hard top (C-View) control unit does not detect that parcel shelf limit switch (CLOSE) is ON for 5 seconds or more from turn OFF parcel shelf limit switch (OPEN) during roof opening operation. ● Retractable hard top (C-View) control unit does not detect parcel shelf limit switch (CLOSE) is OFF for 1 second or more from turn on hall sensor during roof closing operation.	● Harness and connector [Short or open in the circuit between retractable hard top (C-View) control unit and the parcel shelf limit switch (CLOSE)] ● Retractable hard top (C-View) control unit ● Parcel shelf limit switch (CLOSE) ● Parcel shelf mechanism ● Parcel shelf motor

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check parcel shelf mechanism deformation, interference with other parts and pinched foreign materials.	EI-38
2. Check parcel shelf motor.	RF-133
3. Check parcel shelf limit switch (CLOSE).	RF-131

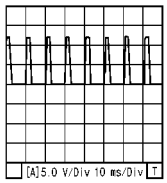
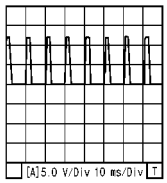
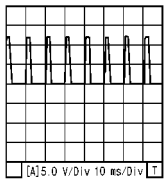
DTC B1614 ROOF STATE

EIS00E09

DIAGNOSIS DESCRIPTION

B1614 ROOF STATE monitors the roof limit switch (LOCK/CLOSE/OPEN), trunk lid switch (LH/RH) and hall sensor signal input condition to the retractable hard top (C-View) control unit. If it is detected the unusual input order of the signals, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
10	B	Roof limit switch (OPEN) signal	ON	Roof	: OPEN	0
					Other than above	 MIIB1360E
13	PU	Roof limit switch (CLOSE) signal	ON	Roof	: CLOSE	0
					Other than above	 MIIB1360E
15	GY	Roof limit switch (LOCK) signal	ON	Roof	: LOCK	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1614	ROOF STATE	● Retractable hard top (C-View) control unit terminal 10, 13 and 15 detects roof limit switch (OPEN), (CLOSE) and (LOCK) signal. Input order of the signals are not correct. ● Retractable hard top (C-View) control unit terminal 14 and 16 detects trunk lid switch (OPEN), (CLOSE) and (LOCK) signal. Input order of the signals are not correct. ● Retractable hard top (C-View) control unit terminal 9 detects hall sensor signal. Input order of the signal is not correct.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the roof limit switches) ● Retractable hard top (C-View) control unit ● Roof limit switch (OPEN) ● Roof limit switch (CLOSE) ● Roof limit switch (LOCK) ● Trunk lid switch LH ● Trunk lid switch RH ● Hall sensor

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check roof mechanism deformation, interference with other parts and pinched foreign materials.	BL-251
2. Check trunk mechanism deformation, interference with other parts and pinched foreign materials.	RF-200
3. Check roof limit switch (OPEN).	RF-111
4. Check roof limit switch (CLOSE).	RF-108
5. Check roof limit switch (LOCK).	RF-105
6. Check trunk lid switch LH.	RF-120
7. Check trunk lid switch RH.	RF-123
8. Check hall sensor.	RF-126

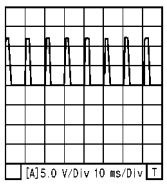
DTC B1615 ROOF OPEN SW

EIS00E0A

DIAGNOSIS DESCRIPTION

B1615 ROOF OPEN SW monitors the roof open/close switch (OPEN) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
11	P	Roof open/close switch (OPEN) signal	ON	Roof open/ close switch	: OPEN	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1615	ROOF OPEN SW	● Retractable hard top (C-View) control unit terminal 11 detects roof open/close switch (OPEN) signal for 60 seconds or more. ● Retractable hard top (C-View) control unit terminal 11 and 12 detects roof open/close switch (OPEN) and (CLOSE) signal at the same time.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the roof open/close switch) ● Retractable hard top (C-View) control unit ● Roof open/close switch

DIAGNOSTIC PROCEDURE

Refer to RF-102, "Check Roof Open/Close Switch" .

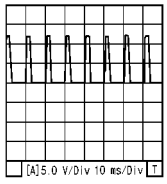
DTC B1616 ROOF CLOSE SW

EIS00E0B

DIAGNOSIS DESCRIPTION

B1616 ROOF CLOSE SW monitors the roof open/close switch (CLOSE) signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
12	W	Roof open/close switch (CLOSE) signal	ON	Roof open/ close switch	: CLOSE	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1616	ROOF CLOSE SW	● Retractable hard top (C-View) control unit terminal 12 detects roof open/close switch (CLOSE) signal for 60 seconds or more. ● Retractable hard top (C-View) control unit terminal 12 and 11 detects roof open/close switch (CLOSE) and (OPEN) signal at the same time.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the roof open/close switch) ● Retractable hard top (C-View) control unit ● Roof open/close switch

DIAGNOSTIC PROCEDURE

Refer to RF-102, "Check Roof Open/Close Switch" .

DTC B1617 DR WIND SW DOWN

EIS00E0C

DIAGNOSIS DESCRIPTION

B1617 DR WIND SW DOWN monitors the power window switch signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or condition		
4 (6)	Y (OR)	Power window motor LH DOWN (Power window motor RH DOWN)	ON	Power window main switch (driver side)	: OPEN	Battery voltage
					Other than above	0
5 (7)	L (G)	Power window motor RH UP (Power window motor LH UP)	ON	Power window main switch (driver side)	: CLOSE	Battery voltage
					Other than above	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1617	DR WIND SW DOWN	● Retractable hard top (C-View) control unit terminal 4 (6) detects driver side power window switch DOWN signal for 20 seconds or more. ● Retractable hard top (C-View) control unit terminal 4 (6) and 5 (7) detects driver side power window switch UP and DOWN signal at the same time.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the power window main switch) ● Retractable hard top (C-View) control unit ● Power window main switch

(): For RHD

DIAGNOSTIC PROCEDURE

For LHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 1.	GW-152
2. Check power window main switch ground circuit.	GW-169

For RHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 2.	GW-155
2. Check power window main switch ground circuit.	GW-169

DTC B1618 DR WIND SW UP

EIS00E0D

DIAGNOSIS DESCRIPTION

B1618 DR WIND SW UP monitors the power window switch signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or condition		
5 (7)	L (G)	Power window motor LH UP (Power window motor RH UP)	ON	Power window main switch (driver side)	: CLOSE	Battery voltage
					Other than above	0
4 (6)	Y (OR)	Power window motor RH DOWN (Power window motor LH DOWN)	ON	Power window main switch (driver side)	: OPEN	Battery voltage
					Other than above	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1618	DR WIND SW UP	● Retractable hard top (C-View) control unit terminal 5(7) detects driver side power window switch UP signal for 20 seconds or more. ● Retractable hard top (C-View) control unit terminal 5(7) and 4(6) detects driver side power window switch UP and DOWN signal at the same time.	● Harness and connector (Short in the circuit between the retractable hard top (C-View) control unit and the power window main switch) ● Retractable hard top (C-View) control unit ● Power window main switch

(): For RHD

DIAGNOSTIC PROCEDURE

For LHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 1.	GW-152
2. Check power window main switch ground circuit.	GW-169

For RHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 2.	GW-155
2. Check power window main switch ground circuit.	GW-169

DTC B1619 AS WIND SW DOWN

EIS00E0E

DIAGNOSIS DESCRIPTION

B1619 AS WIND SW DOWN monitors the power window switch signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or condition		
6 (4)	OR (Y)	Parcel shelf motor (OPEN)	ON	Power window main switch (passenger side)	: OPEN	Battery voltage
					Other than above	0
7 (5)	G (L)	Power window motor RH UP (Power window motor LH UP)	ON	Power window main switch (passenger side)	: CLOSE	Battery voltage
					Other than above	0

(): For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B1619	AS WIND SW DOWN	● Retractable hard top (C-View) control unit terminal 6 (4) detects passenger side power window switch DOWN signal for 20 seconds or more. ● Retractable hard top (C-View) control unit terminal 6 (4) and 7 (5) detects passenger side power window switch UP and DOWN signal at the same time.	● Harness and connector [Short in the circuit between the retractable hard top (C-View) control unit and the power window main switch or front power window switch (passenger side)] ● Retractable hard top (C-View) control unit ● Power window main switch ● Front power window switch (passenger side)

(): For RHD

DIAGNOSTIC PROCEDURE

For LHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 3	GW-157
2. Check power window circuit check 5	GW-159
3. Check power window circuit check 1	GW-152
4. Check power window main switch ground circuit.	GW-169

For RHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 4	GW-158
2. Check power window circuit check 6	GW-160
3. Check power window circuit check 2	GW-155
4. Check power window main switch ground circuit check.	GW-169

DTC B161A AS WIND SW UP

EIS00E0F

DIAGNOSIS DESCRIPTION

B161A AS WIND SW UP monitors the power window switch signal condition to the retractable hard top (C-View) control unit. If it is detected the unusual signal, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Voltage (V) (Approx.)
			IGN	Operation or condition		
7 (5)	G (L)	Power window motor RH UP (Power window motor LH UP)	ON	Power window main switch (passenger side)	: CLOSE	Battery voltage
					Other than above	0
6 (4)	OR (Y)	Power window motor RH DOWN (Power window motor LH DOWN)	ON	Power window main switch (passenger side)	: OPEN	Battery voltage
					Other than above	0

():For RHD

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B161A	AS WIND SW UP	● Retractable hard top (C-View) control unit terminal 7 (5) detects passenger side power window switch UP signal for 20 seconds or more. ● Retractable hard top (C-View) control unit terminal 7 (5) and 6 (4) detects passenger side power window switch UP and DOWN signal at the same time.	● Harness and connector [Short in the circuit between the retractable hard top (C-View) control unit and power window main switch of front power window switch (passenger side)] ● Retractable hard top (C-View) control unit ● Power window main switch ● Front power window switch (passenger side)

():For RHD

DIAGNOSTIC PROCEDURE

For LHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 3	GW-157
2. Check power window circuit check 5	GW-159
3. Check power window circuit check 1	GW-152
4. Check power window main switch ground circuit.	GW-169

For RHD models

Diagnosis/ service procedure	Reference page
1. Check power window circuit check 4	GW-158
2. Check power window circuit check 6	GW-160
3. Check power window circuit check 2	GW-155
4. Check power window main switch ground circuit check.	GW-169

DTC B161B VOLTAGE LOW

EIS00E0G

DIAGNOSIS DESCRIPTION

B161B VOLTAGE LOW monitors the battery voltage input to retractable hard top (C-View) control unit. When the condition that the voltage is 9.0V or less is detected for 0.5 second or more, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition		Voltage (V) (Approx.)
			IGN	Operation or condition	
3	OR	IGN power supply	ON	—	Battery voltage
44	R	Power source (fuse)	—	—	Battery voltage

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B161B	VOLTAGE LOW	● It is detected for 0.5 seconds or more that the battery voltage is 10.0V or less input to the retractable hard top (C-View) control unit.	● Fuse ● Harness and connector (Open in the circuit) ● Battery ● Charging system

DIAGNOSTIC PROCEDURE

Refer to SC-21, "Trouble Diagnoses (CR Engine Models)" . (for CR engine models)
Refer to SC-26, "Trouble Diagnoses (HR Engine Models)" . (for HR engine models)
Refer to SC-26, "Trouble Diagnoses (HR Engine Models)" . (for K9K engine models)

DTC B161C VOLTAGE HIGH

EIS00E0H

DIAGNOSIS DESCRIPTION

B161C VOLTAGE HIGH monitors the battery voltage input to retractable hard top (C-View) control unit. When the condition that the voltage is 15V or more is detected for 0.5 second or more, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code)

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition		Voltage (V) (Approx.)
			IGN	Operation or condition	
3	OR	IGN power supply	ON	—	Battery voltage
44	R	Power source (fuse)	—	—	Battery voltage

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B161C	VOLTAGE HIGH	● It is detected for 0.5 seconds or more that the battery voltage is 15.0V or more input to the retractable hard top (C-View) control unit.	● Harness and connector (Short in the circuit) ● Battery ● Charging system

DIAGNOSTIC PROCEDURE

Refer to SC-21, "Trouble Diagnoses (CR Engine Models)" . (for CR engine models)
Refer to SC-26, "Trouble Diagnoses (HR Engine Models)" . (for HR engine models)
Refer to SC-26, "Trouble Diagnoses (HR Engine Models)" . (for K9K engine models)

DTC B161D HYD PUMP TEMP

EIS00E0I

DIAGNOSIS DESCRIPTION

B161D HYD PUMP TEMP monitors the hydraulic system thermo protection is active or not.If thermo protection is active, it displays the DTC (Diagnostic Trouble Code).
When thermo protection is active, hydraulic system should be cooled down.Wait for 9 minutes and try again.

DTC B161E RHT C/U

EIS00E0J

DIAGNOSIS DESCRIPTION

B161E RHT C/U judges NG by self-detecting the retractable hard top (C-View) control unit internal malfunction. If this DTC (Diagnostic Trouble Code) is displayed, replace the retractable hard top (C-View) control unit.

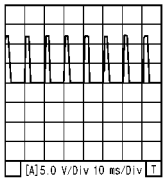
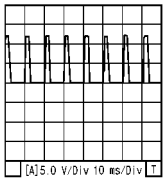
DTC B161F PARCEL SHELF STATE

EIS00E0K

DIAGNOSIS DESCRIPTION

B161F PARCEL SHELF STATE monitors the parcel shelf limit switch signal (CLOSE/OPEN) input to the retractable hard top (C-View) control unit. If it is detected the unusual input order of the signals, it judges that it is a malfunction and displays the DTC (Diagnostic Trouble Code).

TERMINALS AND REFERENCE VALUE FOR RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT

Terminal No.	Wire color	Item	Condition			Signal (Reference value)
			IGN	Operation or condition		
18	SB	Parcel shelf limit switch (CLOSE) signal	ON	Parcel shelf	: CLOSE	0
					Other than above	 MIIB1360E
19	L	Parcel shelf limit switch (OPEN) signal	ON	Parcel shelf	: OPEN	0
					Other than above	 MIIB1360E

SELF-DIAGNOSTIC LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B161F	PARCEL SHELF STATE	● Retractable hard top (C-View) control unit terminal 18 and 19 detects parcel shelf limit switch (OPEN) and (CLOSE) signal. Input order of the signals is not correct.	● Harness and connector (Open in the circuit between the retractable hard top (C-View) and the parcel shelf limit switches) ● Harness and connector (Open in the circuit between the retractable hard top (C-View) and the parcel shelf motor) ● Parcel shelf mechanism ● Parcel shelf limit switch (OPEN) ● Parcel shelf limit switch (CLOSE) ● Retractable hard top (C-View) control unit

DIAGNOSTIC PROCEDURE

Diagnosis/ service procedure	Reference page
1. Check parcel shelf mechanism deformation, interference with other parts and pinched foreign materials.	EI-38
2. Check parcel shelf limit switch (OPEN).	RF-128
3. Check parcel shelf limit switch (CLOSE).	RF-131

Trouble Diagnosis Symptom Chart for Roof Position

EIS00E0L

CAUTION:

Do not operate retractable hard top (C-View) system without connecting roof storage switch.

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to RF-71, "Trouble Diagnosis Procedure" .
- Start performing the diagnosis from retractable hard top (C-View) is fully closed position.

RETRACTABLE HARD TOP (C-VIEW) CYSTEM DOES NOT OPERTE

Roof state	Malfunction part [Malfunction function]	Diagnosis/service procedure	Reference page
–	–	1. Check roof open/close switch circuit.	RF-102

RETRACTABLE HARD TOP (C-VIEW) CYSTEM STOP ON THE WAY [OPEN OPERATION]

Roof state	Malfunction part [Malfunction function]	Diagnosis/service procedure	Reference page
OP0 → OP1	Roof [LOCK ⇒ UNLOCK]	1. Check and adjust front roof lock assembly.	RF-192
		2. Check leakage of hydraulic system.	RF-200
	Trunk lid [CLOSE ⇒ OPEN]	1. Check and adjust front trunk lid lock LH/RH and trunk lid.	BL-254
		2. Check leakage of hydraulic system.	RF-200
		3. Check trunk lid unlock actuator LH/RH circuit.	RF-116 (LH) RF-118 (RH)
		4. Check trunk lid switch LH/RH.	RF-120 (LH) RF-123 (RH)
		5. Check hydraulic motor relay RL circuit.	RF-139
		6. Check hydraulic motor circuit.	RF-143
		7. Check hydraulic valve circuit.	RF-135
		8. Replace retractable hard top (C-View) control unit.	RF-146
		9. Replace hydraulic unit.	RF-203
	Power window [CLOSE ⇒ OPEN]	1. Replace retractable hard top (C-View) control unit.	RF-146
OP2 → OP3	Roof [CLOSE ⇒ OPEN]	1. Check and adjust roof system.	RF-161
		2. Check leakage of hydraulic system.	RF-200
		3. Check hydraulic relay LL circuit.	RF-136
		4. Check roof limit switch (LOCK) circuit.	RF-105
		5. Check roof limit switch (CLOSE) circuit.	RF-108
		6. Check hall sensor circuit.	RF-126
		7. Replace retractable hard top (C-View) control unit.	RF-146
		8. Replace hydraulic unit.	RF-203
OP4 → OP5 → OP6	Parcel shelf [Moves UP]	1. Check parcel shelf mechanism.	RF-173
		2. Check roof limit switch (OPEN) circuit.	RF-111
		3. Check parcel shelf motor circuit.	RF-133
		4. Check parcel shelf limit switch (OPEN) circuit.	RF-128

Roof state	Malfunction part [Malfunction function]	Diagnosis/service procedure	Reference page
OP6 → OP7 → OP8	Trunk lid [OPEN ⇒ CLOSE]	1. Check and adjust trunk lid.	BL-251
		2. Check leakage of hydraulic system.	RF-200
		3. Check and adjust front trunk lid lock LH/RH.	BL-254
		4. Check parcel shelf limit switch (CLOSE) circuit.	RF-131
		5. Check hydraulic valve circuit.	RF-135
		6. Replace retractable hard top (C-View) control unit.	RF-146
		7. Replace hydraulic unit.	RF-203
	Buzzer [Sounds]	1. Replace retractable hard top (C-View) control unit.	RF-146
OP8 → OP9	Trunk lid [OPEN ⇒ CLOSE]	1. Replace retractable hard top (C-View) control unit.	RF-146

RETRACTABLE HARD TOP (C-VIEW) CYSTEM STOP ON THE WAY [CLOSE OPERATION]

Roof state	Malfunction part [Malfunction function]	Diagnosis/service procedure	Reference page
CL1 → CL2	Trunk lid [CLOSE ⇒ OPEN]	1. Check and adjust front trunk lid lock LH/RH and trunk lid.	BL-254
		2. Check leakage of hydraulic system.	RF-200
		3. Replace retractable hard top (C-View) control unit.	RF-146
		4. Replace hydraulic unit.	RF-203
	Power window [CLOSE ⇒ OPEN]	1. Replace retractable hard top (C-View) control unit.	RF-146
CL3 → CL4	Parcel shelf [Moves DOWN]	1. Check parcel shelf mechanism.	RF-173
		2. Check parcel shelf motor circuit.	RF-133
		3. Replace retractable hard top (C-View) control unit.	RF-146
CL4 → CL5 → CL6	Roof [OPEN ⇒ CLOSE]	1. Check and adjust roof system.	RF-161
		2. Check and adjust front roof lock assembly.	RF-192
		3. Check leakage of hydraulic system.	RF-200
		4. Replace retractable hard top (C-View) control unit.	RF-146
		5. Replace hydraulic unit.	RF-203
CL6 → CL7	Roof [CLOSE ⇒ LOCK]	1. Check and adjust front roof lock assembly.	RF-192
		2. Check leakage of hydraulic system.	RF-200
		3. Replace retractable hard top (C-View) control unit.	RF-146
		4. Replace hydraulic unit.	RF-203
	Trunk lid [OPEN ⇒ CLOSE]	1. Check and adjust trunk lid.	BL-251
		2. Check leakage of hydraulic system.	RF-200
		3. Replace retractable hard top (C-View) control unit.	RF-146
		4. Replace hydraulic unit.	RF-203
	Buzzer [Sounds]	1. Replace retractable hard top (C-View) control unit.	RF-146
CL8 → CL9	Power window [OPEN ⇒ CLOSE]	1. Replace retractable hard top (C-View) control unit.	RF-146

Check Power Supply and Ground Circuit for Retractable Hard Top (C-view) Control Unit

EIS00E0M

1. CHECK FUSE

Check if any of the following fuses in the retractable hard top (C-View) control unit are blown.

Unit	Power source	Fuse No.
Retractable hard top (C-View) control unit	Battery power supply	23 (15A)
	Ignition switch ON or STRAT signal	4 (10A)

NOTE:
Refer to RF-28, "Component Parts and Harness Connector Location" .

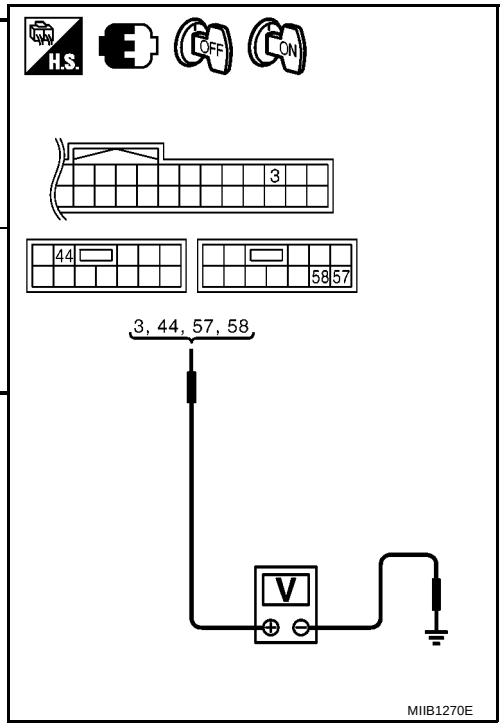
OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to PG-5, "POWER SUPPLY ROUTING" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.

Terminals (+)		Terminals (−)	Condition		Voltage (V) (Approx.)
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	3 (OR)	Ground	Key switch	ON	Battery voltage
B83	44 (R)			OFF	
B84	57 (R)			ON	
	58 (R)			ON	



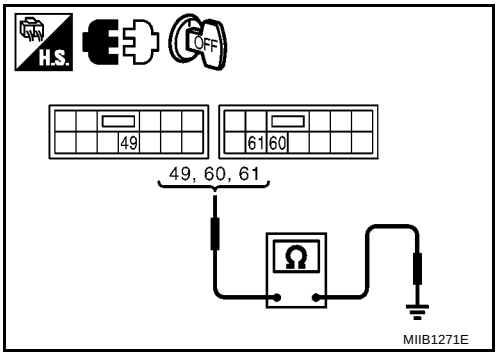
OK or NG

OK >> GO TO 3.
NG >> Repair or replace retractable hard top (C-View) control unit power supply circuit.

3. CHECK GROUND CIRCUIT

1. Disconnect retractable hard top (C-View) control unit connector.
2. Check continuity between retractable hard top (C-View) control unit harness connector and ground.

Retractable hard top (C-View) control unit connector	Terminal (Wire color)		Continuity
B83	49 (B)	Ground	Yes
B84	60 (B)		
	61(B)		



OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Repair or replace the retractable hard top (C-View) control unit ground circuit.

Check Roof Open/Close Switch

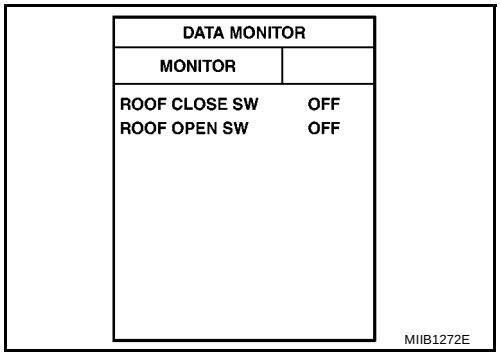
EIS00E0N

1. CHECK ROOF OPEN/CLOSE SWITCH INPUT SIGNAL

With CONSULT-II

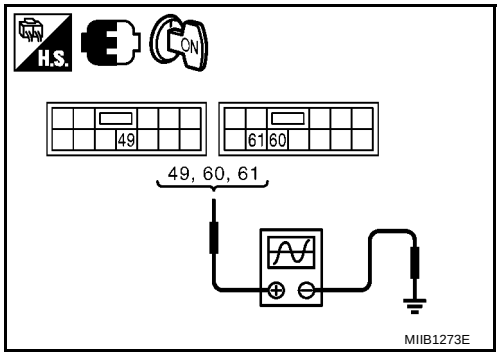
Check roof open/close switch (“ROOF OPEN SW” and “ROOF CLOSE SW”) in “DATA MONITOR” mode with CONSULT-II.

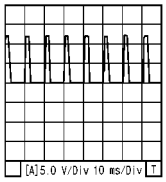
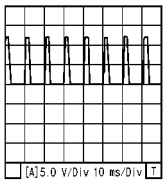
Monitor item	Condition
ROOF OPEN SW	The roof open/close switch is operated “OPEN”.
ROOF CLOSE SW	The roof open/close switch is operated “CLOSE”.



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	11 (P)	Ground	Roof open/ close switch	CLOSE	0
				Other than above	 MIIB1360E
	12 (W)			OPEN	0
				Other than above	 MIIB1360E

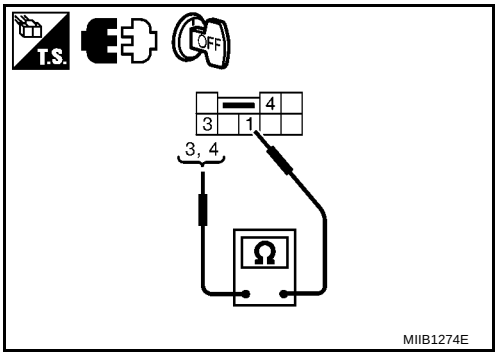
OK or NG

OK >> Retractable hard top (C-View) control unit circuit is OK.
NG >> GO TO 2.

2. CHECK ROOF OPEN/CLOSE SWITCH

1. Turn ignition switch OFF.
2. Disconnect roof open/close switch connector.
3. Check roof open/close switch continuity.

Terminal		Condition		Continuity
Roof open/close switch				
3	1	Roof open/close switch	OPEN	Yes
			Other than above	No
4			CLOSE	Yes
			Other than above	No



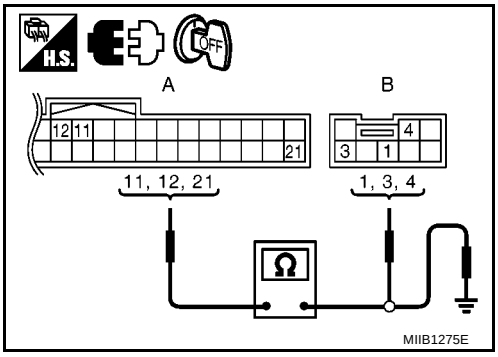
OK or NG

OK >> GO TO 3.
NG >> Replace roof open/close switch.

3. CHECK DOOR SWITCH CIRCUIT

1. Disconnect retractable hard top (C-View) control unit connector.
2. Check continuity between retractable hard top (C-View) control unit connector and roof open/close switch connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Roof open/close switch connector	Terminal (Wire color)	
B82	11 (P)	B66	3 (P)	Yes
	12 (W)		4 (W)	
	21 (BR)		1 (BR)	



3. Check continuity between retractable hard top (C-View) control unit connector and ground.

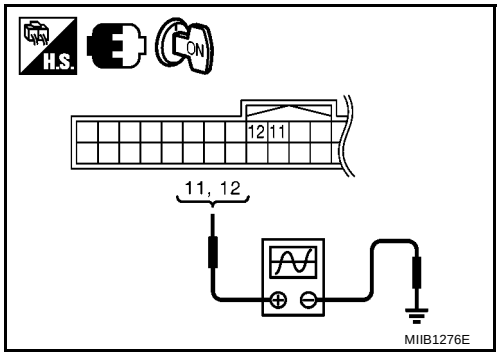
A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	11 (P)		No
	12 (W)		
	21 (BR)		

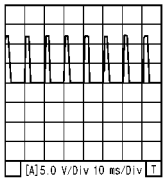
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness between retractable hard top (C-View) control unit connector and roof open/close switch.

4. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	11 (P)	Ground	 MIIB1360E
	12 (W)		

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Roof Limit Switch (Lock)

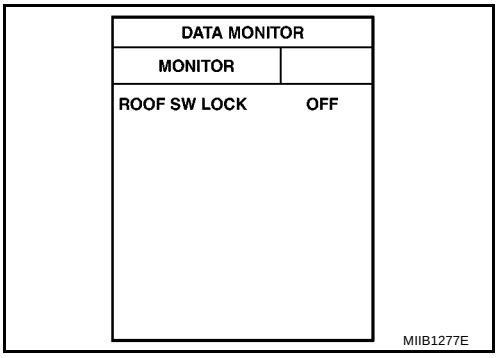
EIS00E0P

1. CHECK ROOF LIMIT SWITCH (LOCK)

With CONSULT-II

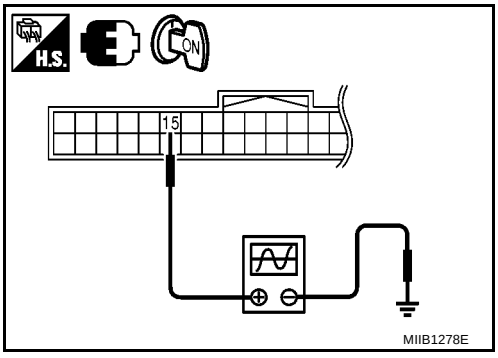
Check roof limit switch (lock) (“ROOF SW LOCK”) in “DATA MONITOR” mode.

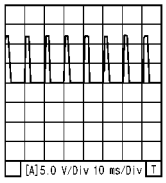
Monitor item	Condition
ROOF SW LOCK	Roof is locked: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	15 (GY)	Ground	Roof	Locked	0
				Other than above	 MIIB1360E

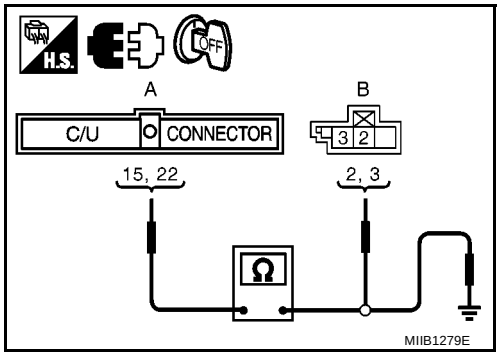
OK or NG

OK >> Roof limit switch (LOCK) is OK.
NG >> GO TO 2.

2. CHECK ROOF LIMIT SWITCH (LOCK) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and roof limit switch (LOCK) connector.
3. Check continuity between retractable hard top (C-View) control unit connector and roof limit switch (LOCK) connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Roof limit switch (LOCK) connector	Terminal (Wire color)	
B82	15 (GY)	R7	3 (GY)	Yes
	22 (B)		2 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	15 (GY)		No
	22 (B)		

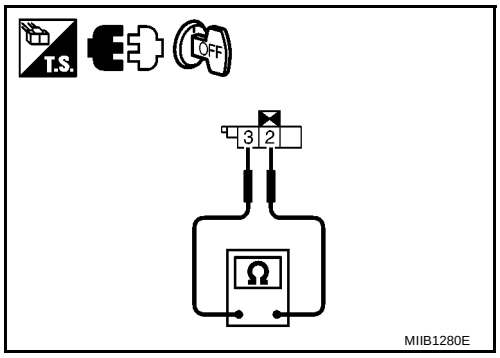
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and roof limit switch (LOCK).

3. CHECK ROOF LIMIT SWITCH (LOCK)

Check roof limit switch (LOCK) continuity.

Terminal		Condition		Continuity
Roof limit switch (LOCK)				
2	3	Roof	Locked	Yes
			Other than above	No



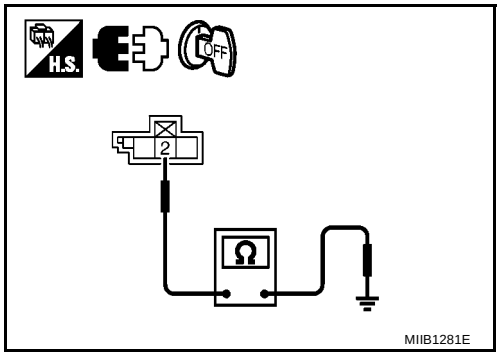
OK or NG

OK >> GO TO 4.
NG >> Replace roof limit switch (LOCK).

4. CHECK ROOF LIMIT SWITCH (LOCK) GROUND CIRCUIT

Check continuity between roof limit switch (LOCK) connector and ground.

Roof limit switch (LOCK) connector	Terminal (Wire color)	Ground	Continuity
R7	2 (B)		Yes

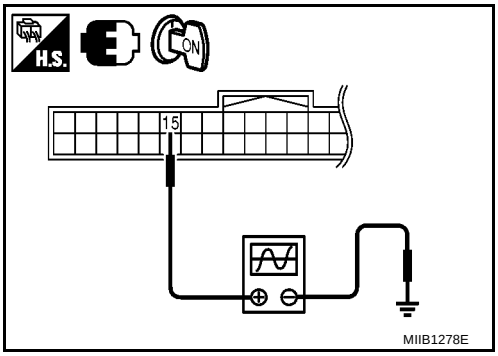


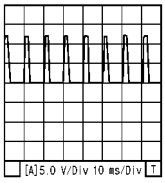
OK or NG

OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.

5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	15 (GY)	Ground	 MIIB1360E

OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Roof Limit Switch (Close)

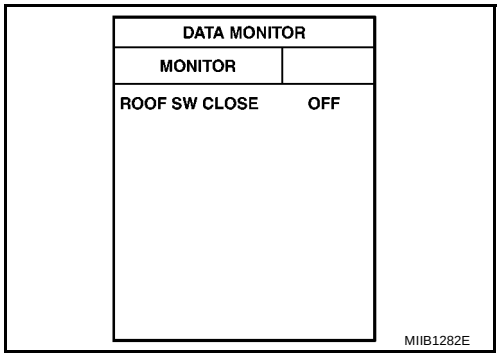
EIS00E0O

1. CHECK ROOF LIMIT SWITCH (CLOSE)

With CONSULT-II

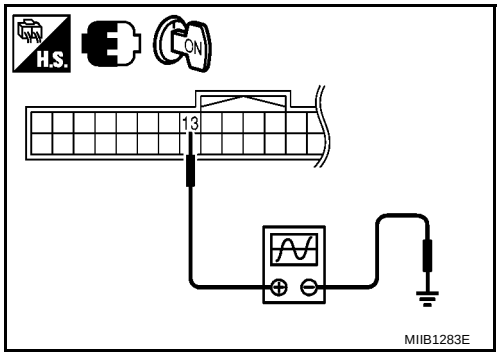
Check roof limit switch (CLOSE) (“ROOF SW CLOSE”) in “DATA MONITOR” mode.

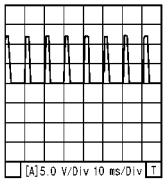
Monitor item	Condition
ROOF SW CLOSE	Roof is closed: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	13 (PU)	Ground	Roof	Closed	0
				Other than above	 MIIB1360E

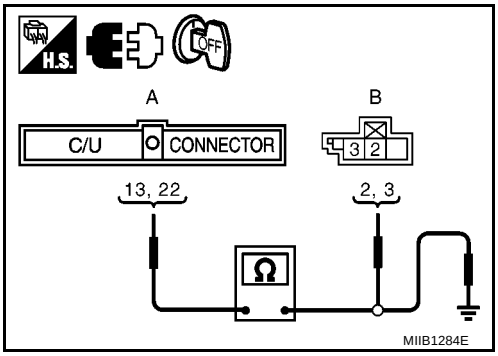
OK or NG

OK >> Roof limit switch (CLOSE) is OK.
NG >> GO TO 2.

2. CHECK ROOF LIMIT SWITCH (CLOSE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and roof limit switch (CLOSE) connector.
3. Check continuity between retractable hard top (C-View) control unit connector and roof limit switch (CLOSE) connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Roof limit switch (CLOSE) connector	Terminal (Wire color)	
B82	13 (PU)	R10	3 (PU)	Yes
	22 (B)		2 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	13 (PU)		No
	22 (BB)		

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and roof limit switch (CLOSE).

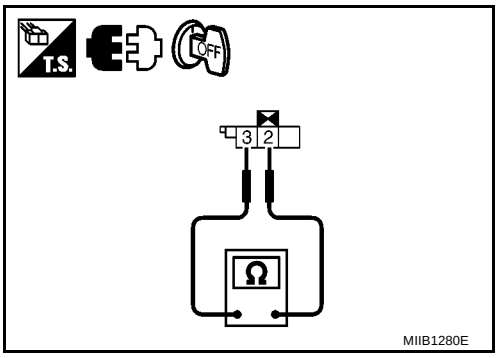
3. CHECK ROOF LIMIT SWITCH (CLOSE)

Check roof limit switch (CLOSE) continuity.

Terminal		Condition		Continuity
Roof limit switch (CLOSE)				
2	3	Roof	Closed	Yes
			Other than above	No

OK or NG

OK >> GO TO 4.
NG >> Replace roof limit switch (CLOSE).



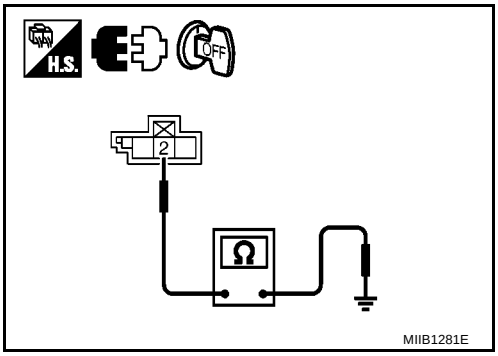
4. CHECK ROOF LIMIT SWITCH (CLOSE) GROUND CIRCUIT

Check continuity between roof limit switch (CLOSE) connector and ground.

Roof limit switch (CLOSE) connector	Terminal (Wire color)	Ground	Continuity
R10	2 (B)		Yes

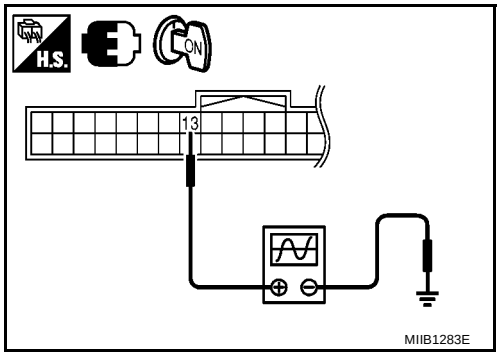
OK or NG

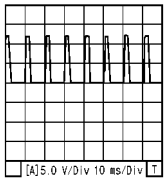
OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.



5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	13 (PU)	Ground	 MIIB1360E

OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Roof Limit Switch (Open)

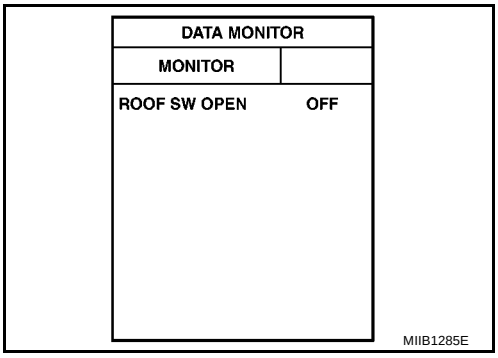
EIS00E6M

1. CHECK ROOF LIMIT SWITCH (OPEN)

With CONSULT-II

Check roof limit switch (OPEN) (“ROOF SW OPEN”) in “DATA MONITOR” mode.

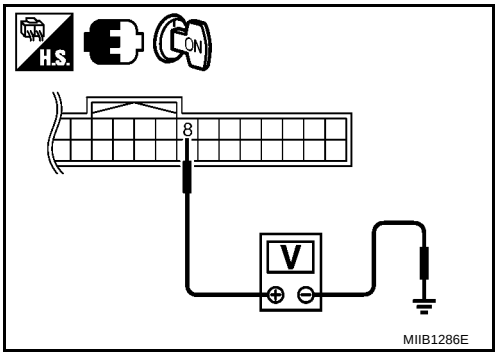
Monitor item	Condition
ROOF SW OPEN	Roof is fully open: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.

Terminals			Condition		Voltage (V) (Approx.)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	8 (SB)	Ground	Roof	Fully open	0
				Other than above	Battery voltage



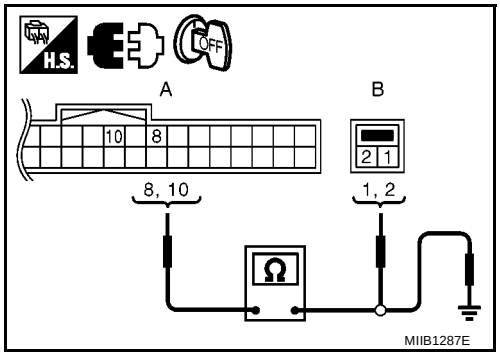
OK or NG

OK >> Roof limit switch (OPEN) is OK.
NG >> GO TO 2.

2. CHECK ROOF LIMIT SWITCH (OPEN) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and roof limit switch (OPEN) connector.
3. Check continuity between retractable hard top (C-View) control unit connector and roof limit switch (OPEN) connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Roof limit switch (OPEN) connector	Terminal (Wire color)	
B82	8 (SB)	B74	1 (SB)	Yes
	10 (B)		2 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	8 (SB)		No
	10 (B)		

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and roof limit switch (OPEN).

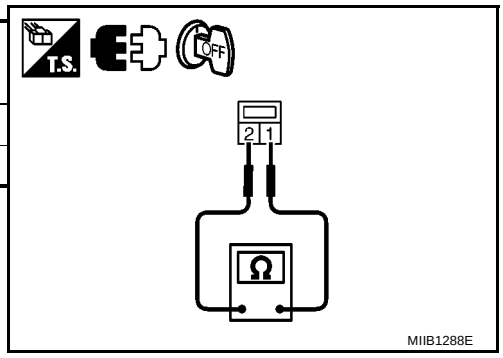
3. CHECK ROOF LIMIT SWITCH (OPEN)

Check roof limit switch (OPEN) continuity.

Terminal		Condition		Continuity
Roof limit switch (OPEN)				
1	2	Roof	Fully open	Yes
			Other than above	No

OK or NG

OK >> GO TO 4.
NG >> Replace roof limit switch (OPEN).



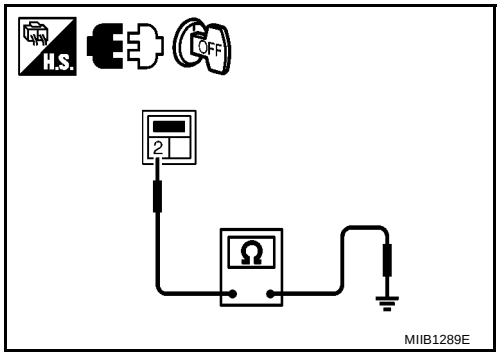
4. CHECK ROOF LIMIT SWITCH (OPEN) GROUND CIRCUIT

Check continuity between roof limit switch (OPEN) connector and ground.

Roof limit switch (OPEN) connector	Terminal (Wire color)	Ground	Continuity
B74	2 (B)		Yes

OK or NG

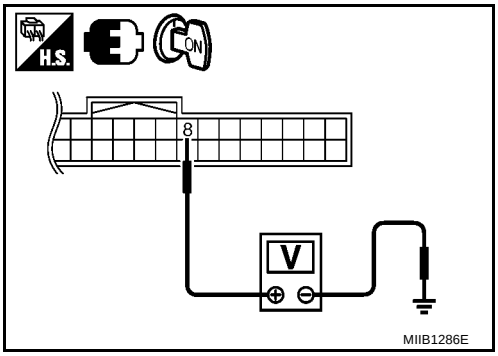
OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.



5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	8 (SB)	Ground	Battery voltage



OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Roof Storage Switch

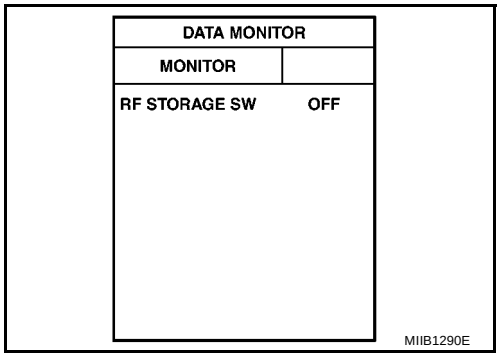
EIS00E0Q

1. CHECK ROOF STORAGE SWITCH

With CONSULT-II

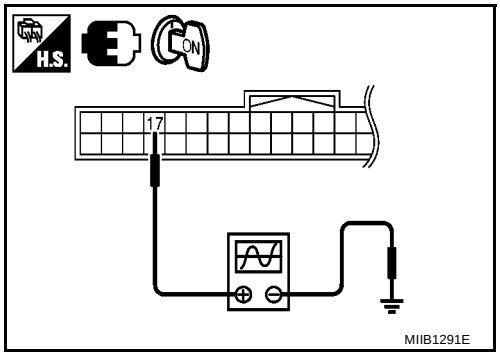
Check roof storage switch (“RF STORAGE SW”) in “DATA MONITOR” mode.

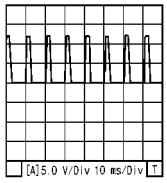
Monitor item	Condition
RF STORAGE SW	Tonneau cover is hooked: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	17 (R)	Ground	Tonneau cover	Hooked	 MIIB1360E
				Other than above	0

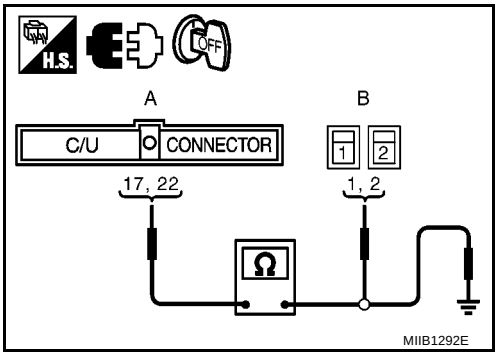
OK or NG

OK >> Roof storage switch is OK.
NG >> GO TO 2.

2. CHECK ROOF STORAGE SWITCH CIRCUIT

1. Disconnect retractable hard top (C-View) control unit and roof storage switch connector.
2. Turn ignition switch OFF.
3. Check continuity between retractable hard top (C-View) control unit connector and roof storage switch connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Roof storage switch connector	Terminal (Wire color)	
B82	17 (R)	B79	1 (R)	Yes
	22 (B)	B80	2 (B)	



MIIB1292E

4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal		
B82	17 (R)		No
	22 (B)		

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and roof storage switch.

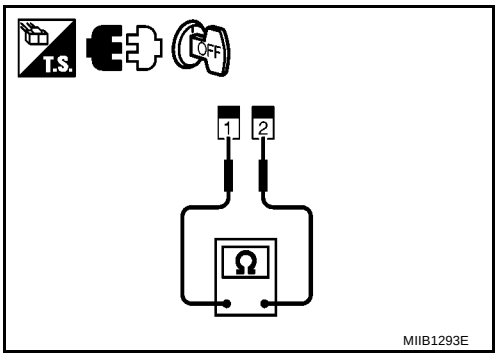
3. CHECK ROOF STORAGE SWITCH

Check roof storage switch continuity.

Terminal		Condition		Continuity
Roof storage				
1	2	Tonneau cover	Hooked	No
			Other than above	Yes

OK or NG

OK >> GO TO 4.
NG >> Replace roof storage switch.



MIIB1293E

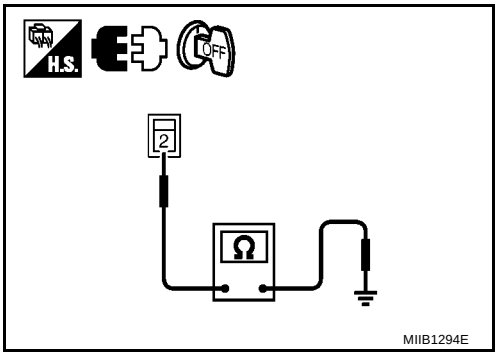
4. CHECK ROOF STORAGE SWITCH GROUND CIRCUIT

Check continuity between roof storage switch connector and ground.

Roof storage switch connector	Terminal	Ground	Continuity
B80	2 (B)		Yes

OK or NG

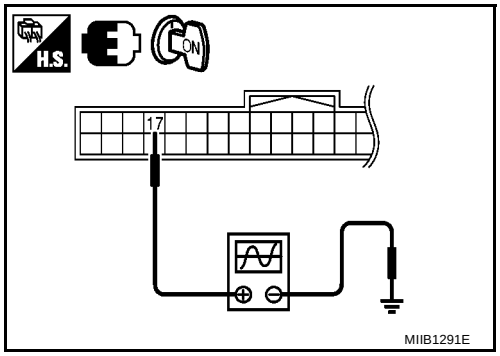
OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.

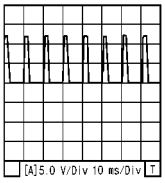


MIIB1294E

5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	17 (R)	Ground	

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Trunk Lid Unlock Actuator LH

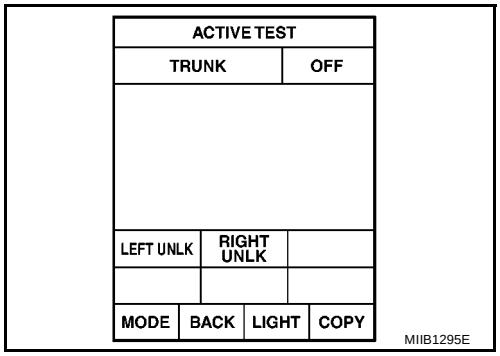
EIS00E0S

1. CHECK FUNCTION

With CONSULT-II

Check operation with “TRUNK” in ACTIVE TEST.

Test item	Description
TRUNK	The trunk lid unlock actuator LH/RH are activated by receiving the drive signal.



Is trunk lid open?

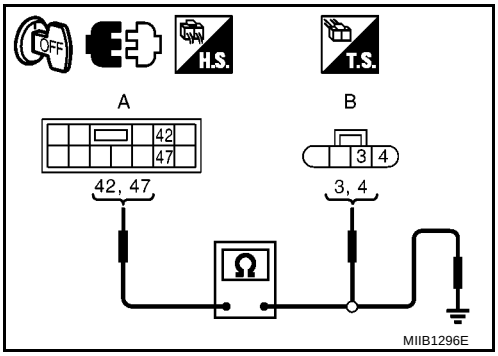
YES or NO

YES >> Trunk lid unlock actuator LH circuit is OK.
NO >> GO TO 2.

2. CHECK TRUNK LID UNLOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and trunk lid unlock actuator LH connector.
3. Check continuity between retractable hard top (C-View) control unit connector and trunk lid unlock actuator LH connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Trunk lid unlock actuator LH connector	Terminal (Wire color)	
B83	42 (OR)	T6	3 (OR)	Yes
	47 (B)		4 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B83	42 (OR)		No
	47 (B)		

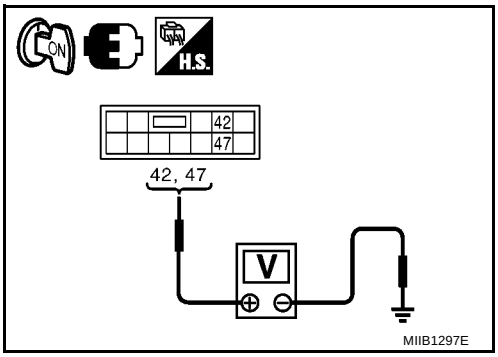
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and trunk lid unlock actuator LH.

3. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect the retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.

Retractable hard top (C-View) control unit connector	Terminals (Wire color)		Condition		Voltage (V) (Approx.)
	(+)	(–)			
B83	42 (OR)	Ground	Trunk lid	CLOSE → OPEN	0 → Battery voltage → 0
				Other than above	0
	47 (B)			–	0



OK or NG

OK >> Replace trunk lid unlock actuator.
NG >> Replace retractable hard top (C-View) control unit.

Check Trunk Lid Unlock Actuator RH

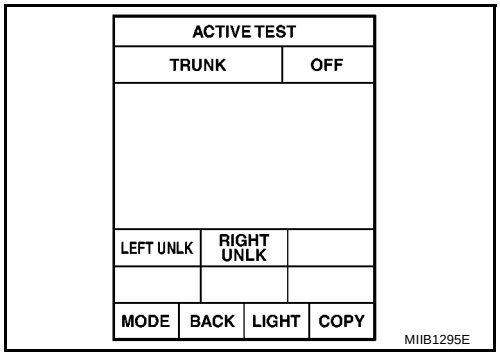
EIS00E0T

1. CHECK FUNCTION

With CONSULT-II

Check operation with “TRUNK” in ACTIVE TEST.

Test item	Description
TRUNK	The trunk lid unlock actuator LH/RH are activated by receiving the drive signal.



Is trunk lid open?

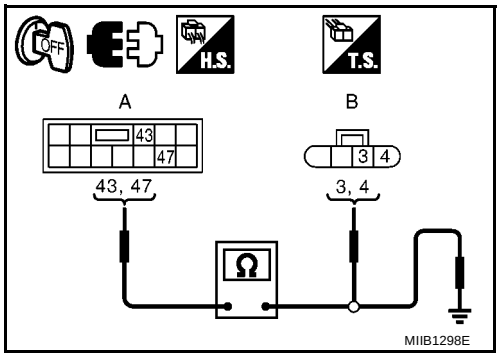
YES or NO

YES >> Trunk lid unlock actuator RH circuit is OK.
NO >> GO TO 2.

2. CHECK TRUNK LID UNLOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and trunk lid unlock actuator RH connector.
3. Check continuity between retractable hard top (C-View) control unit connector and trunk lid unlock actuator RH connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Trunk lid unlock actuator RH connector	Terminal (Wire color)	
B83	43 (PU)	T5	3 (PU)	Yes
	47 (B)		4 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B83	43 (PU)		No
	47 (B)		

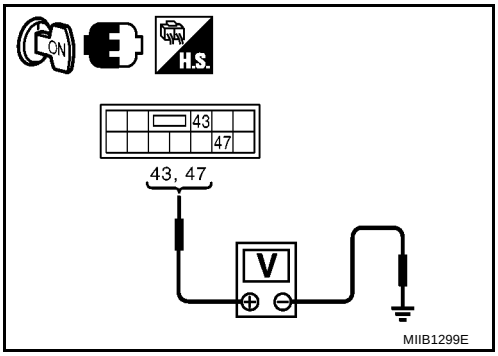
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and trunk lid unlock actuator RH.

3. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect the retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.

Retractable hard top (C-View) control unit connector	Terminals (Wire color)		Condition		Voltage (V) (Approx.)
	(+)	(–)			
B83	43 (PU)	Ground	Trunk lid	CLOSE → OPEN	0 → Battery voltage → 0
				Other than above	0
	47 (B)			–	0



OK or NG

OK >> Replace trunk lid unlock actuator.
NG >> Replace retractable hard top (C-View) control unit.

Check Trunk Lid Switch LH

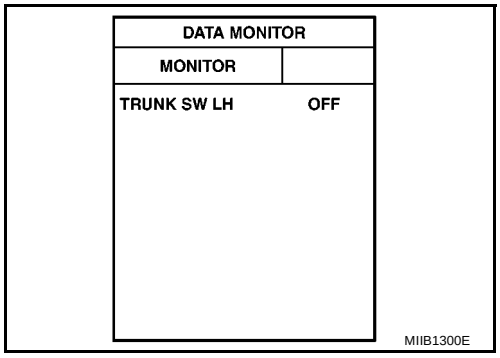
EIS00E0U

1. CHECK TRUNK LID SWITCH LH

With CONSULT-II

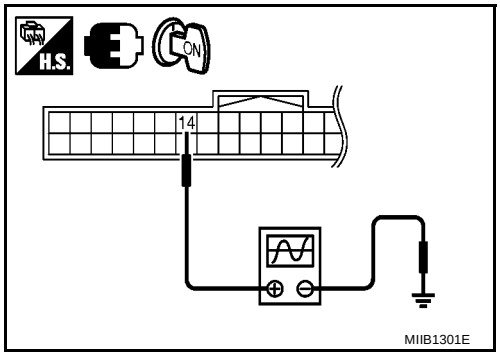
Check trunk lid switch LH (“TRUNK SW LH”) in “DATA MONITOR” mode.

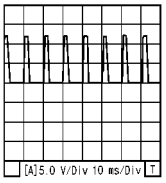
Monitor item	Condition
TRUNK SW LH	Trunk lid (front) is closed: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	14 (BR)	Ground	Trunk lid (front)	Closed	 MIIB1360E
				Other than above	0

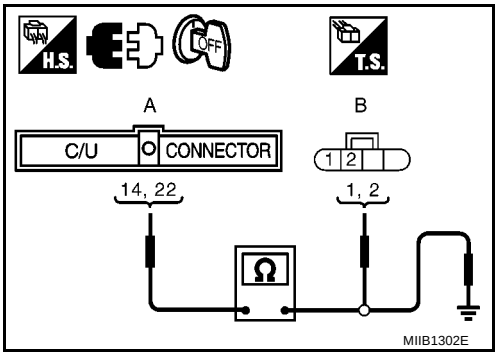
OK or NG

OK >> Trunk lid switch LH is OK.
NG >> GO TO 2.

2. CHECK TRUNK LID SWITCH LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and trunk lid lock LH connector.
3. Check continuity between retractable hard top (C-View) control unit connector and trunk lid lock LH connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Trunk lid lock LH connector	Terminal (Wire color)	
B82	14 (BR)	T6	2 (BR)	Yes
	22 (B)		1 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	14 (BR)		No
	22 (B)		

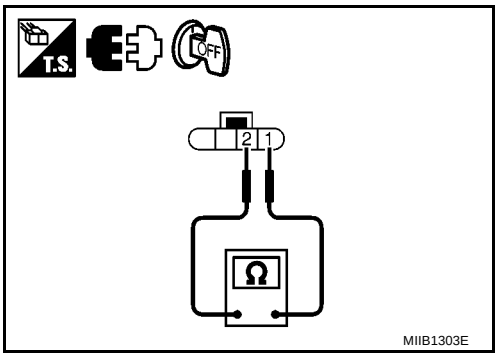
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and trunk lid lock LH.

3. CHECK TRUNK LID SWITCH LH OPERATION

Check trunk lid switch LH continuity.

Terminal		Condition		Continuity
Trunk lid switch LH				
1	2	Trunk lid (front)	Open	Yes
			Other than above	No



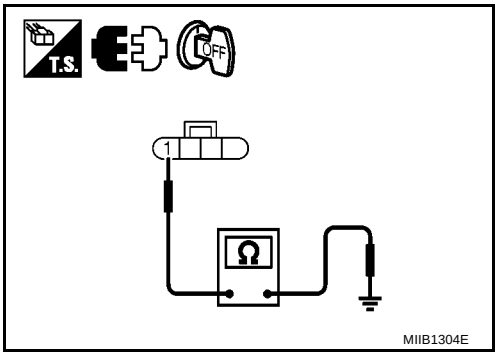
OK or NG

OK >> GO TO 4.
NG >> Replace trunk lid lock LH.

4. CHECK TRUNK LID SWITCH LH GROUND CIRCUIT

Check continuity between trunk lid lock LH connector and ground.

Connector	Terminal (Wire color)	Ground	Continuity
T6	1 (B)		Yes

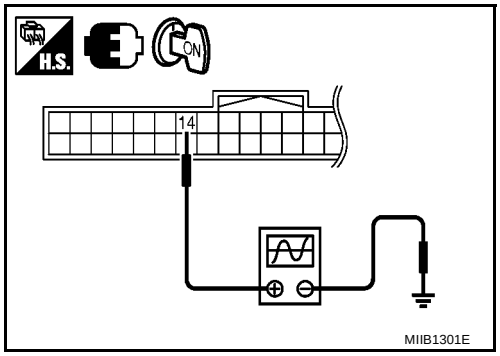


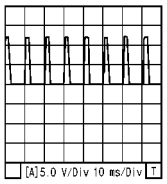
OK or NG

OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.

5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	14 (BR)	Ground	 MIIB1360E

OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Trunk Lid Switch RH

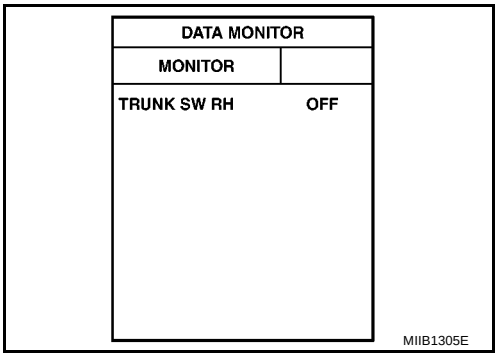
EIS00E0V

1. CHECK TRUNK LID SWITCH RH

With CONSULT-II

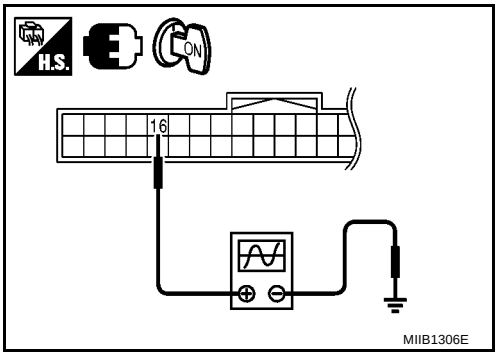
Check trunk lid switch RH (“TRUNK SW RH”) in “DATA MONITOR” mode.

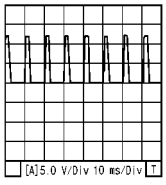
Monitor item	Condition
TRUNK SW RH	Trunk lid (front) is closed: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	16 (LG)	Ground	Trunk lid (front)	Closed	 MIIB1360E
				Other than above	0

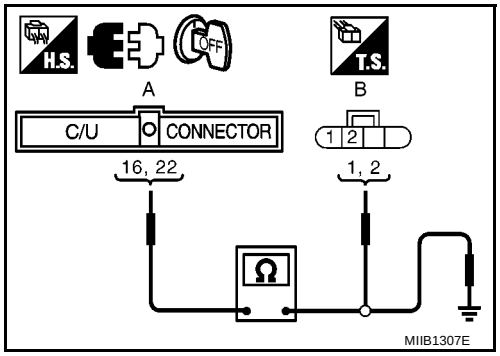
OK or NG

OK >> Trunk lid switch RH is OK.
NG >> GO TO 2.

2. CHECK TRUNK LID SWITCH RH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and trunk lid lock RH connector.
3. Check continuity between retractable hard top (C-View) control unit connector and trunk lid lock RH connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Trunk lid lock RH connector	Terminal (Wire color)	
B82	16 (LG)	T5	2 (LG)	Yes
	22 (B)		1 (B)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	16 (LG)		No
	22 (B)		

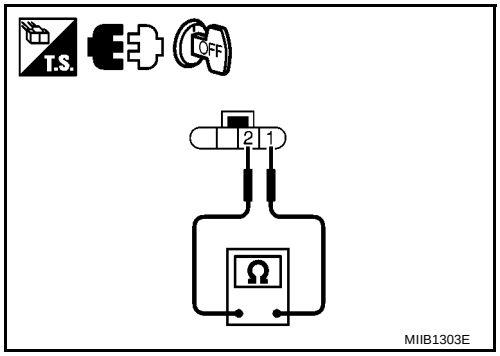
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and trunk lid lock RH.

3. CHECK TRUNK LID SWITCH RH OPERATION

Check trunk lid switch RH continuity.

Terminal		Condition		Continuity
Trunk lid switch RH				
1	2	Trunk lid (front)	Open	Yes
			Other than above	No



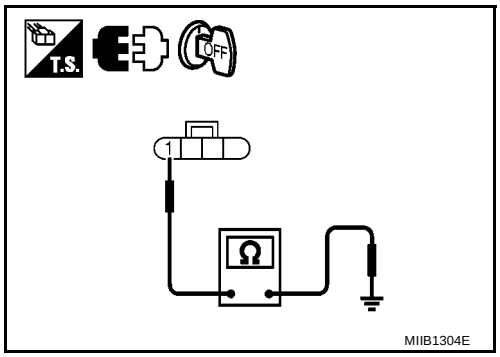
OK or NG

OK >> GO TO 4.
NG >> Replace trunk lid lock RH.

4. CHECK TRUNK LID SWITCH RH GROUND CIRCUIT

Check continuity between trunk lid lock RH connector and ground.

Connector	Terminal (Wire color)	Ground	Continuity
T5	1 (B)		Yes

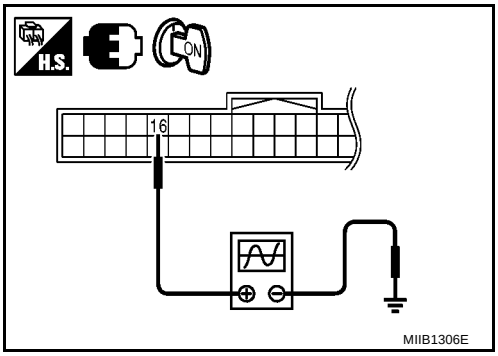


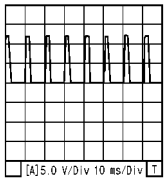
OK or NG

OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.

5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	16 (LG)	Ground	 MIIB1360E

OK or NG

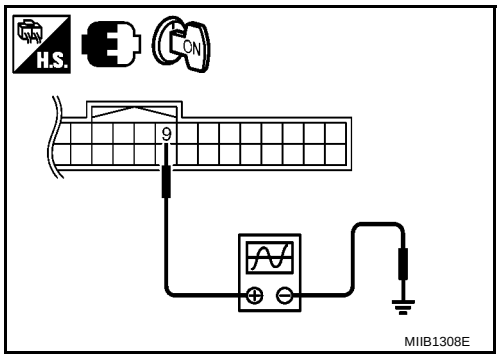
OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

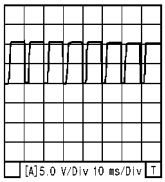
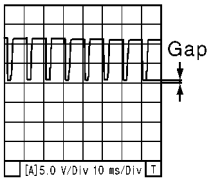
Check Hall Sensor

EIS00E0W

1. CHECK HALL SENSOR

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	9 (Y)	Ground	Trunk lid	Fully open	 MIIB1358E
				Other than above	 MIIB1359E

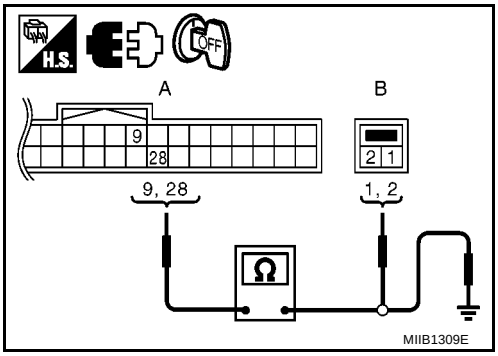
OK or NG

OK >> Hall sensor is OK.
NG >> GO TO 2.

2. CHECK HALL SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and hall sensor connector.
3. Check continuity between retractable hard top (C-View) control unit connector and hall sensor connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Hall sensor connector	Terminal (Wire color)	
B82	9 (Y)	B75	2 (Y)	Yes
	28 (G)		1(G)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	9 (Y)		No
	28 (G)		

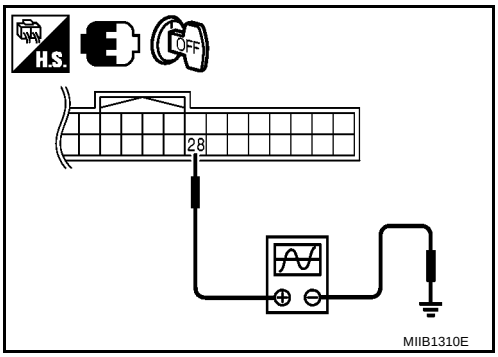
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and hall sensor.

3. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	28 (G)	Ground	Battery voltage



OK or NG

OK >> Replace hall sensor.
NG >> Replace retractable hard top (C-View) control unit.

Check Parcel Shelf Limit Switch (OPEN)

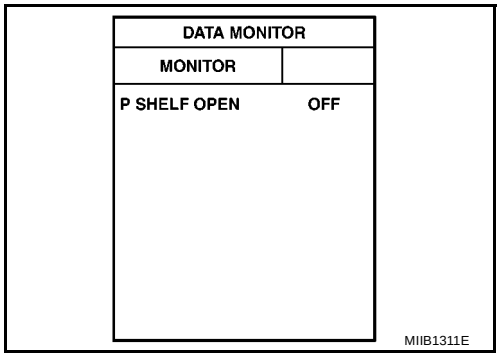
EIS00E0Y

1. CHECK PARCEL SHELF LIMIT SWITCH (OPEN)

With CONSULT-II

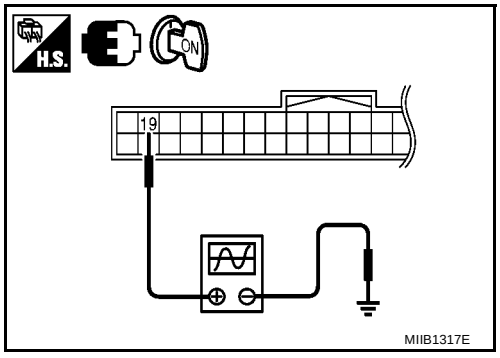
Check parcel shelf limit switch (OPEN) (“P SHELF OPEN”) in “DATA MONITOR” mode.

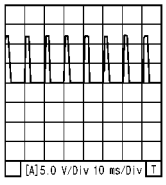
Monitor item	Condition
P SHELF OPEN	Parcel shelf is Open: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	19 (L)	Ground	Parcel shelf	Open	 MIIB1360E
				Other than above	0

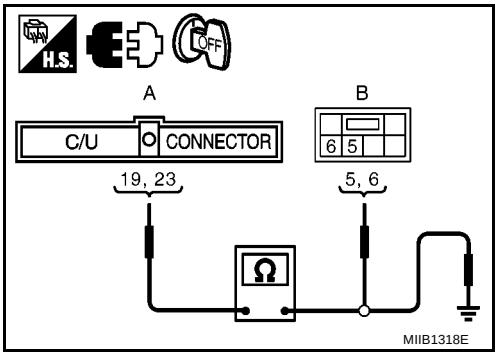
OK or NG

OK >> Parcel shelf limit switch (OPEN) is OK.
NG >> GO TO 2.

2. CHECK PARCEL SHELF LIMIT SWITCH (OPEN) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and parcel shelf connector.
3. Check continuity between retractable hard top (C-View) control unit connector and parcel shelf connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Parcel shelf limit switch connector	Terminal (Wire color)	
B82	19 (L)	B73	6 (L)	Yes
	23 (PU)		5 (PU)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	19 (L)		No
	23 (PU)		

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and parcel shelf.

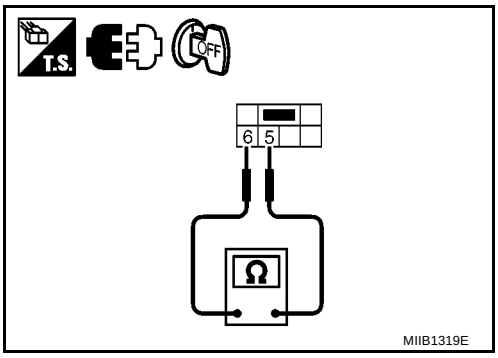
3. CHECK PARCEL SHELF LIMIT SWITCH (OPEN) OPERATION

Check parcel shelf limit switch (OPEN) continuity.

Terminal		Condition		Continuity
Parcel shelf				
6	5	Parcel shelf	Open	No
			Other than above	Yes

OK or NG

OK >> GO TO 4.
NG >> Replace parcel shelf limit switch.



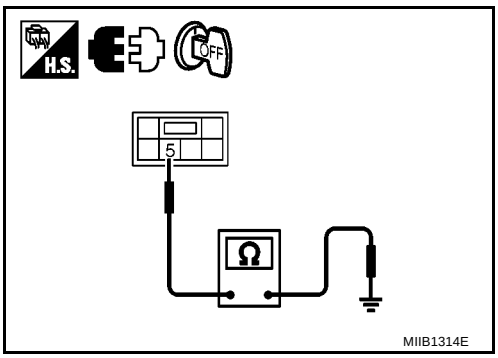
4. CHECK PARCEL SHELF LIMIT SWITCH (OPEN) GROUND CIRCUIT

Check continuity between parcel shelf connector and ground.

Parcel shelf connector	Terminal	Ground	Continuity
B73	5		Yes

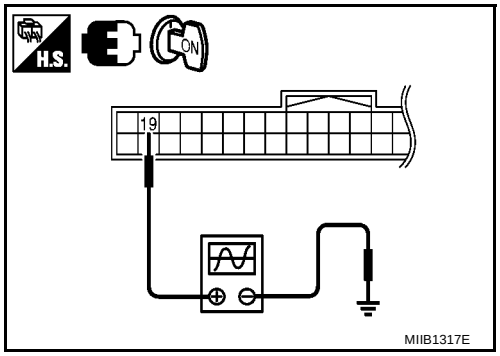
OK or NG

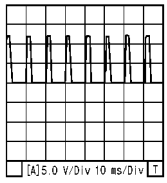
OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.



5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	19	Ground	 MIIB1360E

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Parcel Shelf Limit Switch (CLOSE)

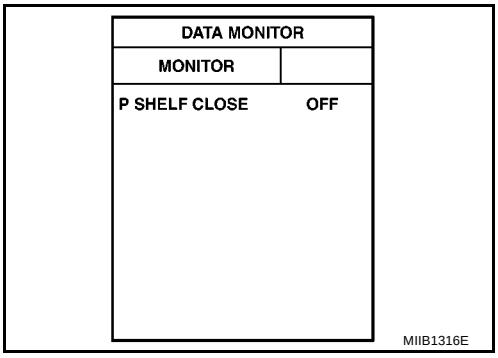
EIS00E0Z

1. CHECK PARCEL SHELF LIMIT SWITCH (CLOSE)

With CONSULT-II

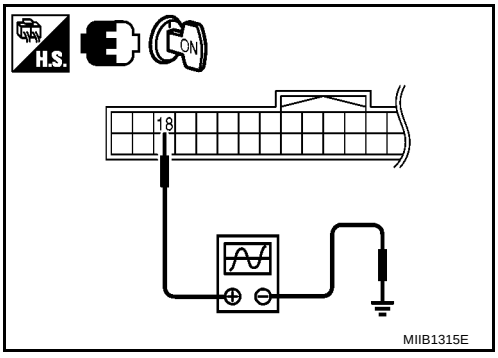
Check parcel shelf limit switch (CLOSE) (“P SHELF CLOSE”) in “DATA MONITOR” mode.

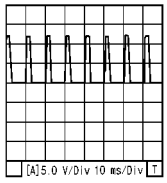
Monitor item	Condition
P SHELF CLOSE	Parcel shelf is close: ON
	Other than above: OFF



Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between retractable hard top (C-View) control unit harness connector and ground.



Terminals			Condition		Signal (Reference value)
(+)		(–)			
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B82	18	Ground	Parcel shelf	Close	 MIIB1360E
				Other than above	0

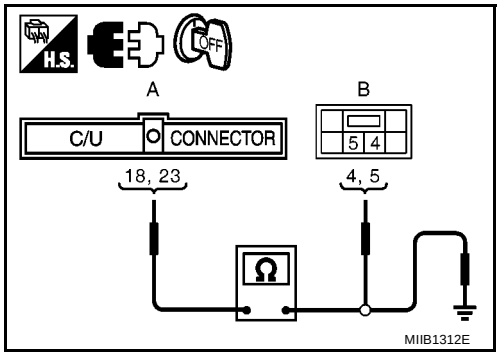
OK or NG

OK >> Parcel shelf limit switch (CLOSE) is OK.
NG >> GO TO 2.

2. CHECK PARCEL SHELF LIMIT SWITCH (CLOSE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and parcel shelf connector.
3. Check continuity between retractable hard top (C-View) control unit connector and parcel shelf connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Parcel shelf limit switch connector	Terminal (Wire color)	
B82	18 (SB)	B73	4 (SB)	Yes
	23 (PU)		5 (PU)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	18 (SB)		No
	23 (PU)		

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and parcel shelf.

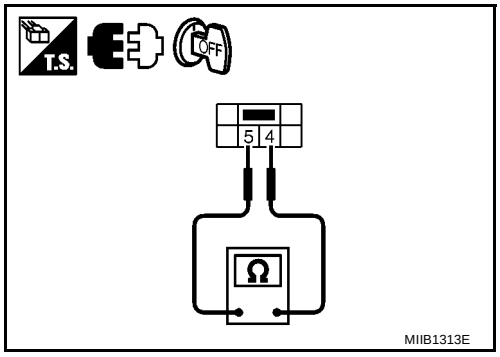
3. CHECK PARCEL SHELF LIMIT SWITCH (CLOSE) OPERATION

Check parcel shelf limit switch (CLOSE) continuity.

Terminal		Condition		Continuity
Parcel shelf				
4	5	Parcel shelf	Close	No
			Other than above	Yes

OK or NG

OK >> GO TO 4.
NG >> Replace parcel shelf limit switch.



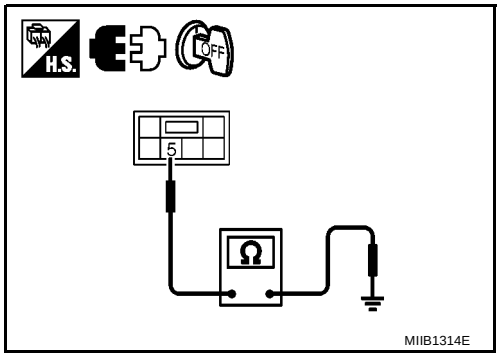
4. CHECK PARCEL SHELF LIMIT SWITCH (CLOSE) GROUND CIRCUIT

Check continuity between parcel shelf connector and ground.

Parcel shelf connector	Terminal (Wire color)	Ground	Continuity
B73	5 (PU)		Yes

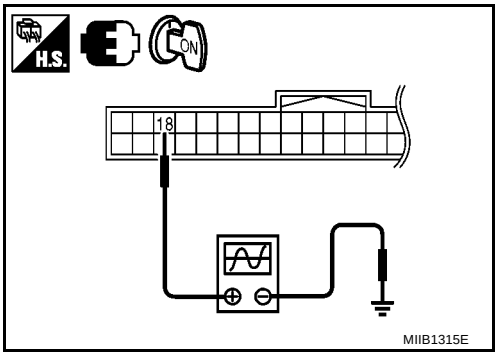
OK or NG

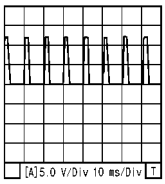
OK >> GO TO 5.
NG >> Check the condition of the harness and the connector.



5. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.



Terminals			Signal (Reference value)
(+)		(–)	
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	18 (SB)	Ground	 MIIB1360E

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Parcel Shelf Motor

EIS00E10

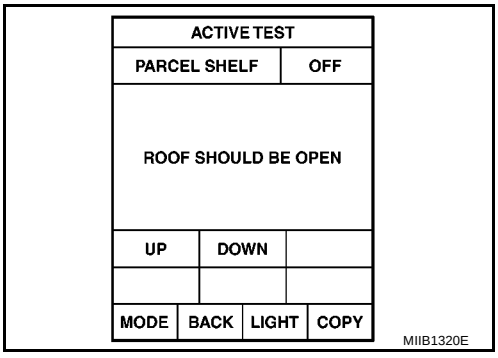
1. CHECK FUNCTION

With CONSULT-II

1. Full open the roof.
2. Check operation with “PARCEL SHELF” in ACTIVE TEST.

Test item	Description
PARCEL SHELF	The parcel shelf motor is activated by receiving the drive signal.

Is the parcel shelf move for 1 second?



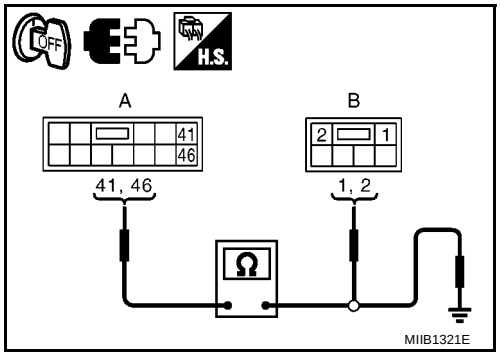
YES or NO

YES >> Parcel shelf motor is OK.
NO >> GO TO 2.

2. CHECK PARCEL SHELF MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and parcel shelf connector.
3. Check continuity between retractable hard top (C-View) control unit connector and parcel shelf connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Parcel shelf connector	Terminal (Wire color)	
B83	41 (Y)	B73	1 (Y)	Yes
	46 (W)		2 (W)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B83	41 (Y)		No
	46 (W)		

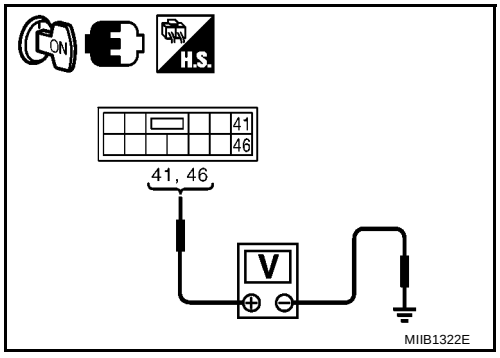
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and parcel shelf.

3. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

1. Connect the retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable hard top (C-View) control unit connector and ground.

Retractable hard top (C-View) control unit connector	Terminals (Wire color)		Condition		Voltage (V) (Approx.)
	(+)	(–)			
B83	41 (Y)	Ground	Parcel shelf	Close	Battery voltage
				Other than above	0
	46 (W)			Open	Battery voltage
				Other than above	0



OK or NG

OK >> Replace parcel shelf motor.
NG >> Replace retractable hard top (C-View) control unit.

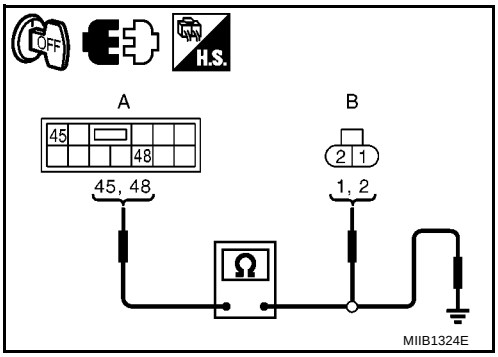
Check Hydraulic Valve

EIS00E11

1. CHECK HYDRAULIC VALVE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit and hydraulic valve connector.
3. Check continuity between retractable hard top (C-View) control unit connector and hydraulic valve connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Hydraulic valve connector	Terminal (Wire color)	
B83	45 (L)	B405	1 (PU)	Yes
	48 (G)		2 (G)	



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B83	45 (L)		No
	48 (G)		

OK or NG

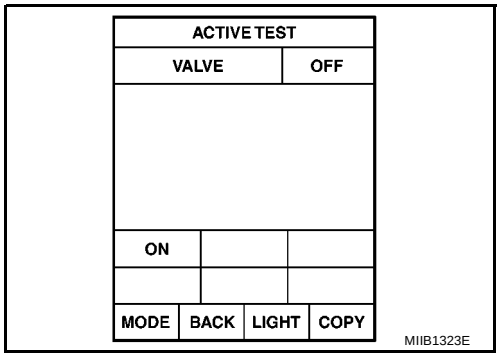
OK >> GO TO 2.
NG >> Repair or replace harness between retractable hard top (C-View) control unit and hydraulic valve.

2. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

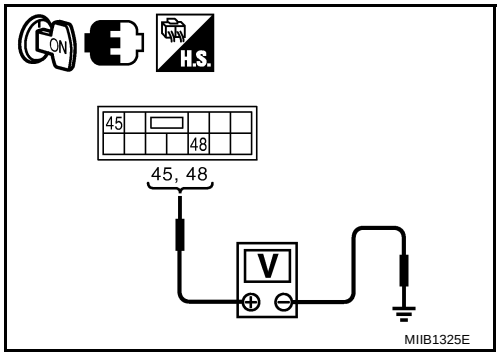
With CONSULT-II

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between retractable herd top control unit and ground with “VALVE” in ACTIVE TEST.

Test item	Description
VALVE	The VALVE is activated by receiving the drive signal.



Retractable hard top (C-View) control unit connector	Terminals (Wire color) (+)	Terminals (Wire color) (–)	Condition		Voltage (V) (Approx.)
B83	45 (L)	Ground	Hydraulic valve	ON	Battery voltage
				Other than above	0
	48 (G)			–	0



OK or NG

OK >> Replace hydraulic unit.
NG >> Replace retractable hard top (C-View) control unit.

Check Hydraulic Motor Relay LL Circuit

EIS00E12

1. CHECK FUSE

- Check 40A fuse (letter I, located in the fuse and fusible link box)

NOTE:
Refer to RF-28, "Component Parts and Harness Connector Location" .

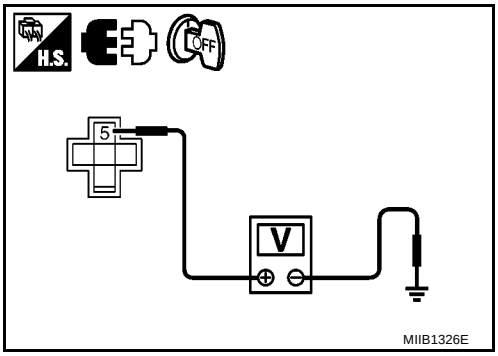
OK or NG

OK >> GO TO 2.
NG >> If fuse is blown out, be sure to eliminate cause of malfunction before installing new fuse, refer to PG-5, "POWER SUPPLY ROUTING" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove hydraulic motor relay LL.
3. Check voltage between hydraulic motor relay LL connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Hydraulic motor relay LL connector	Terminal (Wire color)		
B403	5 (W)	Ground	Battery voltage



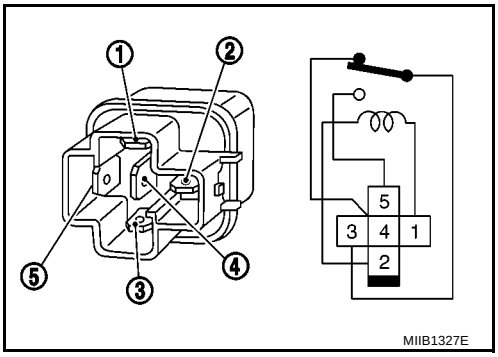
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between fuse and fusible link box and hydraulic motor relay LL.

3. CHECK HYDRAULIC MOTOR RELAY LL

Check hydraulic motor relay LL continuity.

Terminal		Condition	Continuity
Hydraulic motor relay LL			
3	4	12V direct current supply between terminals 1 and 2.	No
		No current supply	Yes
	5	12V direct current supply between terminals 1 and 2.	Yes
		No current supply	No



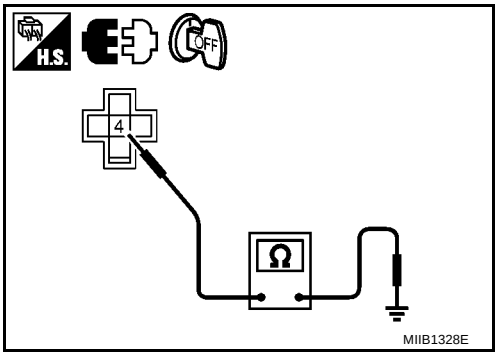
OK or NG

OK >> GO TO 4.
NG >> Replace hydraulic motor relay LL.

4. CHECK HYDRAULIC MOTOR RELAY LL GROUND CIRCUIT

Check continuity between hydraulic motor relay LL connector and ground.

Hydraulic motor relay LL connector	Terminal (Wire color)	Ground	Continuity
B403	4 (B)		Yes



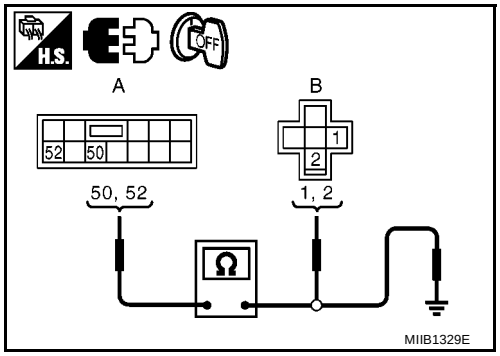
OK or NG

OK >> GO TO 5.
NG >> Repair or replace ground circuit.

5. CHECK HARNESS CONTINUITY

1. Disconnect retractable hard top (C-View) control unit connector.
2. Check continuity between retractable hard top (C-View) control unit connector and hydraulic motor relay LL connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Hydraulic motor relay LL connector	Terminal (Wire color)	
B83	50 (B)	B403	2 (B)	Yes
	52 (R)		1 (R)	



3. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B83	50 (B)		No
	52 (R)		

OK or NG

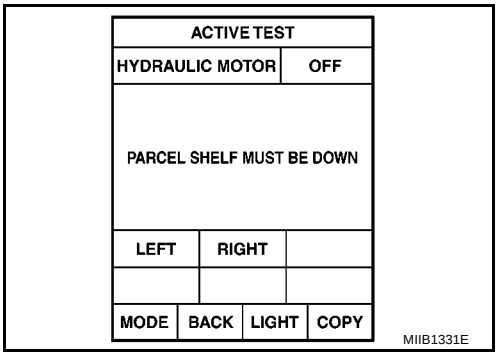
OK >> GO TO 6.
NG >> Repair or replace harness between retractable hard top (C-View) control unit connector and hydraulic motor relay LL.

6. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

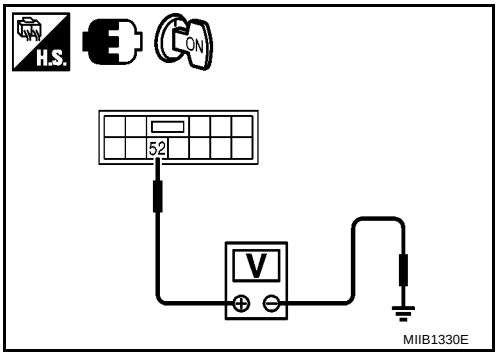
With CONSULT-II

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Operate the retractable hard top (C-View) until the parcel shelf open state.
4. Check voltage between retractable hard top (C-View) control unit connector and ground with “HYDRAULIC MOTOR” in ACTIVE TEST.

Test item	Description
HYDRAULIC MOTOR	The hydraulic motor relay LL or RL is activated by receiving the drive signal.



Terminals (+)		Terminals (–)	Condition		Voltage (V) (Approx.)
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B83	52 (R)	Ground	Hydraulic motor	Turn left	Battery voltage
				Other than above	0



OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

Check Hydraulic Motor Relay RL Circuit

EIS00E6N

1. CHECK FUSE

- Check 40A fuse (letter I, located in the fuse and fusible link box)

NOTE:
Refer to RF-28, "Component Parts and Harness Connector Location" .

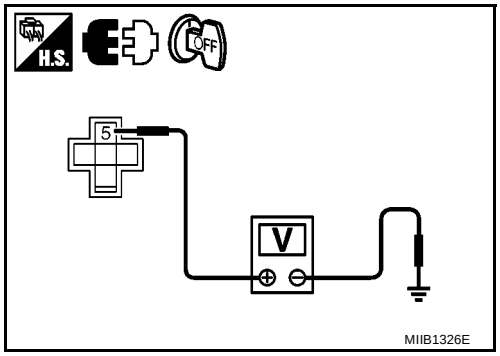
OK or NG

OK >> GO TO 2.
NG >> If fuse is blown out, be sure to eliminate cause of malfunction before installing new fuse, refer to PG-5, "POWER SUPPLY ROUTING" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove hydraulic motor relay RL.
3. Check voltage between hydraulic motor relay RL connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Hydraulic motor relay RL connector	Terminal (Wire color)		
B404	5 (W)	Ground	Battery voltage



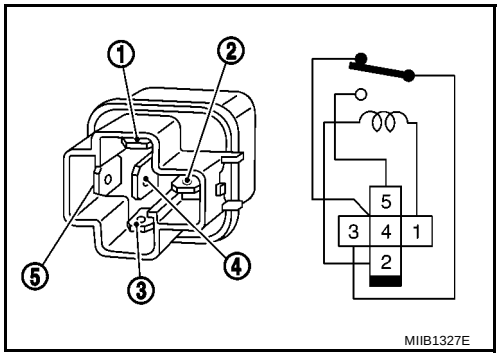
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between fuse and fusible link box and hydraulic motor relay RL.

3. CHECK HYDRAULIC MOTOR RELAY RL

Check rear hydraulic motor relay RL continuity.

Terminal		Condition	Continuity
Hydraulic motor relay RL			
3	4	12V direct current supply between terminals 1 and 2.	No
		No current supply	Yes
	5	12V direct current supply between terminals 1 and 2.	Yes
		No current supply	No



OK or NG

OK >> GO TO 4.
NG >> Replace hydraulic motor relay RL.

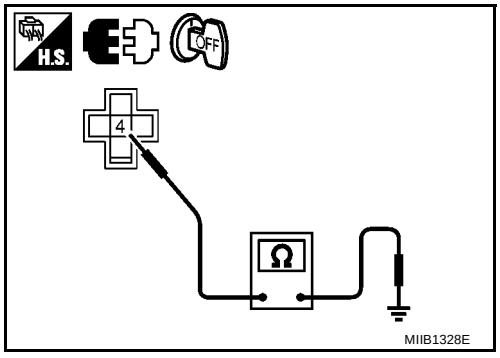
4. CHECK HYDRAULIC MOTOR RELAY RL GROUND CIRCUIT

Check continuity between hydraulic motor relay RL connector and ground.

Hydraulic motor relay RL connector	Terminal (Wire color)	Ground	Continuity
B403	4 (B)		Yes

OK or NG

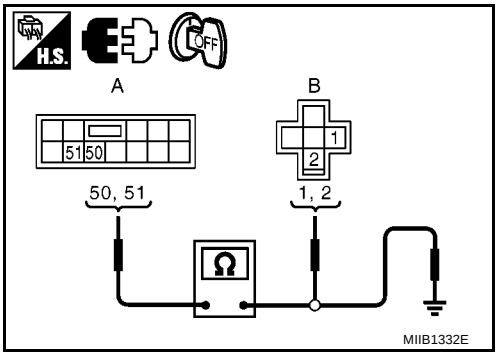
OK >> GO TO 5.
NG >> Repair or replace ground circuit.



5. CHECK HARNESS CONTINUITY

1. Disconnect retractable hard top (C-View) control unit connector.
2. Check continuity between retractable hard top (C-View) control unit connector and hydraulic motor relay RL connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	Hydraulic motor relay RL connector	Terminal (Wire color)	
B83	50 (B)	B404	2 (B)	Yes
	51 (BR)		1 (BR)	



3. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B83	50 (B)		No
	52 (BR)		

OK or NG

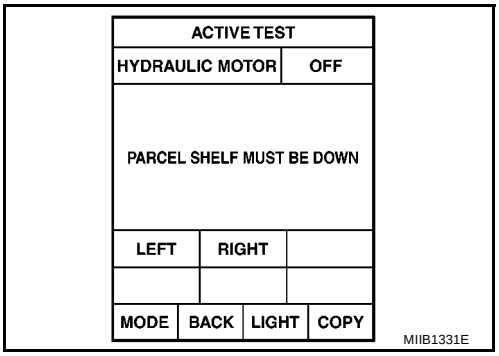
OK >> GO TO 6.
NG >> Repair or replace harness between retractable hard top (C-View) control unit connector and hydraulic motor relay RL.

6. CHECK RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT OUTPUT SIGNAL

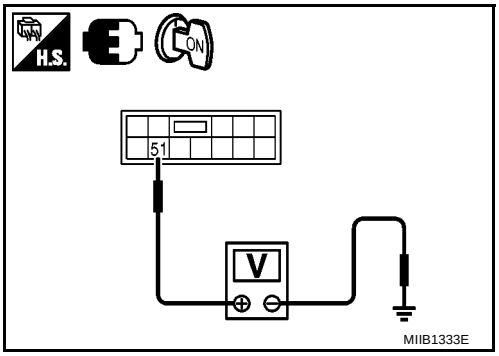
With CONSULT-II

1. Connect retractable hard top (C-View) control unit connector.
2. Turn ignition switch ON.
3. Operate the retractable hard top (C-View) until the parcel shelf open state.
4. Check voltage between retractable hard top (C-View) control unit connector and ground with “HYDRAULIC MOTOR” in ACTIVE TEST.

Test item	Description
HYDRAULIC MOTOR	The hydraulic motor relay LL or RL is activated by receiving the drive signal.



Terminals (+)		Terminals (–)	Condition		Voltage (V) (Approx.)
Retractable hard top (C-View) control unit connector	Terminal (Wire color)				
B83	51(BR)	Ground	Hydraulic motor	Turn left	Battery voltage
				Other than above	0



OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace retractable hard top (C-View) control unit.

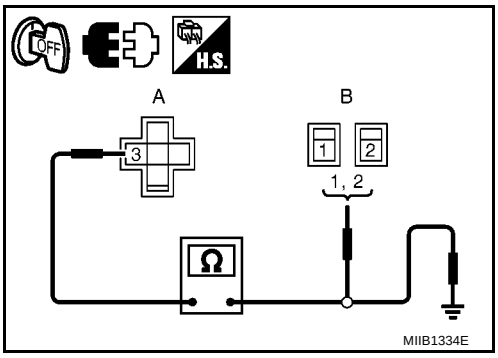
Check Hydraulic Motor Circuit

EIS00E6S

1. CHECK HYDRAULIC MOTOR CIRCUIT HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect hydraulic motor relay LL/RL and hydraulic motor connector.
3. Check continuity between hydraulic motor relay LL/RL connector and hydraulic motor connector.

A		B		Continuity
Hydraulic motor relay connector	Terminal (Wire color)	Hydraulic motor connector	Terminal (Wire color)	
B403 (LL)	3 (R)	B406	1 (R)	Yes
B404 (RL)	3 (B)	B407	2 (B)	



4. Check continuity between hydraulic motor relay LL/RL connector and ground.

A		Ground	Continuity
Hydraulic motor relay connector	Terminal (Wire color)		
B403 (LL)	3 (R)		No
B404 (RL)	3 (B)		

OK or NG

OK >> Hydraulic motor circuit is OK.
NG >> Repair or replace harness between hydraulic motor relay LL/RL and hydraulic motor connector.

Check Communication Line [Retractable Hard Top (C-View) Control Unit]

EIS00E7A

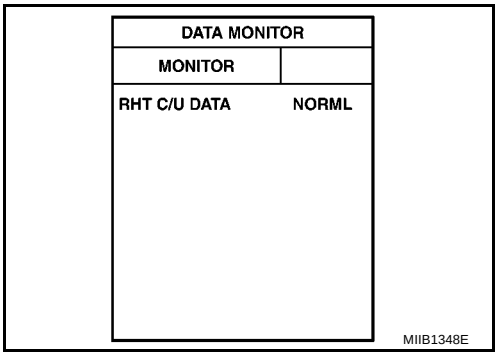
1. CHECK COMMUNICATION CONDITION

With CONSULT-II

1. Check the communication status with (“RHT C/U DATA”) in the DATA MONITOR.

Monitor item	Condition
RHT C/U DATA	RHT C/U sends valid data: NORML
	RHT C/U can not send valid data: FAULT

"NORML" is displayed?

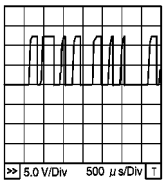


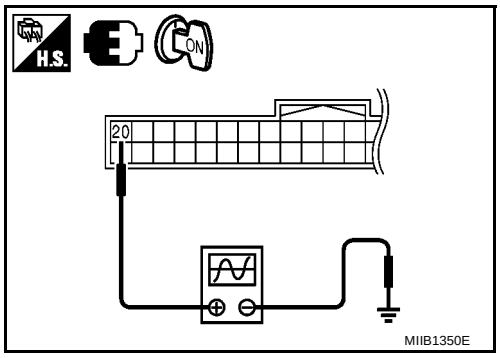
YES or NO

YES >> Communication line is OK.
NO >> GO TO 2.

2. CHECK COMMUNICATION SIGNAL

1. Turn ignition switch ON.
2. Check signal between retractable hard top (C-View) control unit connector and ground with oscilloscope.

Terminals			Condition	Signal (Reference value.)
(+)		(–)		
Retractable hard top (C-View) control unit connector	Terminal (Wire color)			
B82	20 (P)	Ground	Ignition switch OFF⇒ON	 MIIB1353E



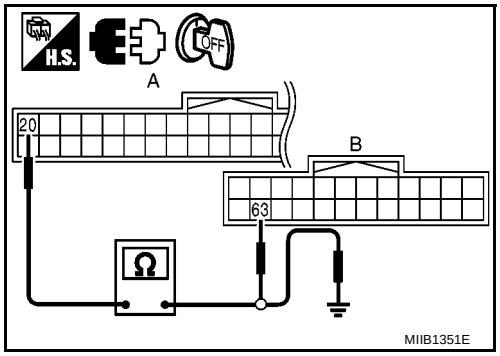
OK or NG

OK >> Check the condition of the harness and the connector.
NG >> GO TO 3.

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit connector and BCM connector.
3. Check continuity between retractable hard top (C-View) control unit connector and BCM connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	BCM connector	Terminal (Wire color)	
B82	20 (P)	M49	63 (P)	Yes



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)		
B82	20 (P)		No

OK or NG

OK >> Replace retractable hard top control unit.
NG >> Repair or replace harness between retractable hard top (C-View) control unit connector and BCM connector.

Check Communication Line (BCM)

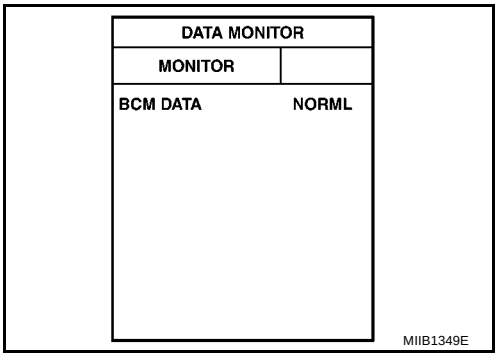
EIS00E7B

1. CHECK COMMUNICATION CONDITION

With CONSULT-II

1. Check the communication status with (“BCM DATA”) in the DATA MONITOR.

Monitor item	Condition
BCM DATA	BCM sends valid data: NORML
	BCM can not send valid data: FAULT



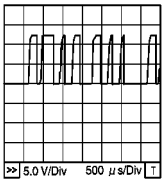
"NORMAL" is displayed?

YES or NO

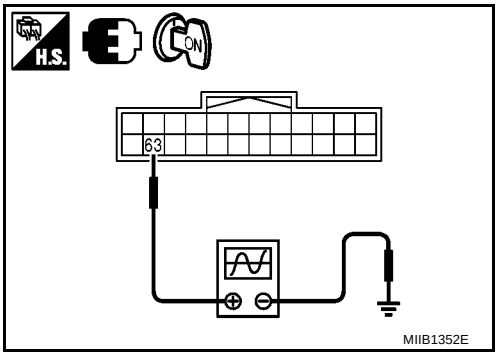
YES >> Communication line is OK.
NO >> GO TO 2.

2. CHECK COMMUNICATION SIGNAL

1. Turn ignition switch ON.
2. Check signal between BCM connector and ground with oscilloscope.

Terminals (+) BCM connector	Terminals (+) Terminal (Wire color)	Terminals (–)	Condition	Signal (Reference value.)
M49	63 (P)	Ground	Ignition switch OFF⇒ON	

MIIB1353E



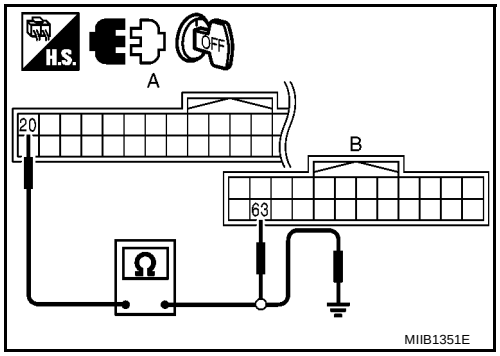
OK or NG

OK >> Communication line is OK.
NG >> GO TO 3.

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect retractable hard top (C-View) control unit connector and BCM connector.
3. Check continuity between retractable hard top (C-View) control unit connector and BCM connector.

A		B		Continuity
Retractable hard top (C-View) control unit connector	Terminal (Wire color)	BCM connector	Terminal (Wire color)	
B82	20 (P)	M49	63 (P)	Yes



4. Check continuity between retractable hard top (C-View) control unit connector and ground.

A		Ground	Continuity
Retractable hard top (C-View) control unit connector	Terminal		
B82	20 (P)		No

OK or NG

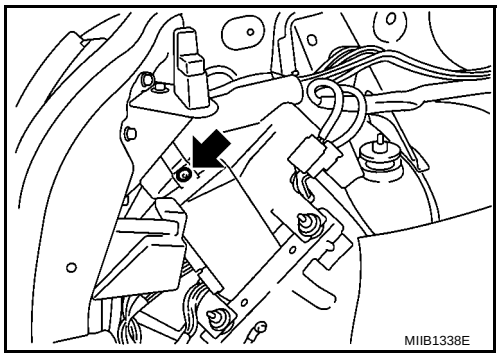
OK >> Replace BCM.
NG >> Repair or replace harness between retractable hard top (C-View) control unit connector and BCM connector.

Removal and Installation of Retractable Hard Top (C-view) Control Unit

EIS00E16

REMOVAL

1. Remove the trunk lid side finisher LH. Refer to EI-42, "TRUNK ROOM TRIM" .
2. Disconnect retractable hard top (C-View) control unit connector.
3. Remove retractable hard top (C-View) control unit mounting TORX bolt and then remove retractable hard top (C-View) control unit.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:
Perform initialization procedure when retractable hard top (C-View) control unit has been replaced a new one.

INITIALIZATION

1. Turn ignition switch ON.
2. Operate driver side power window fully open and close.
3. Perform inspection the function of the power window system.

Inspection The Function of The Power Window System

1. Fully open the driver side door glass.
2. Place a wooden pice (wooden hammer handle etc.) at near fully closed position.
3. Carry out fully closed position with auto up switch.

– Check that the glass stop when pinched wooden pice.

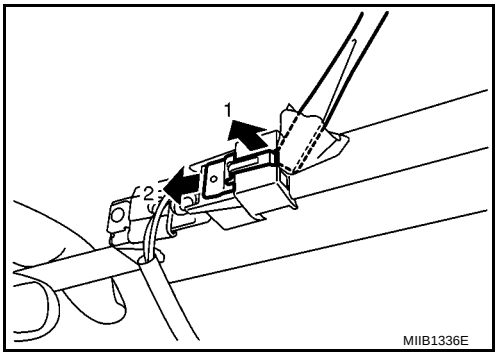
CAUTION:
Do not inspect with pinching a part of worker's body, a hand etc. Work carefully not to be pinched.

Removal and Installation of Hall Sensor

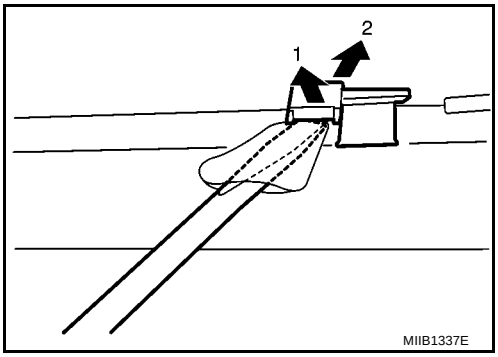
EIS00E78

REMOVAL

1. Cut off self locking band on trunk lid cylinder LH.
2. Disconnect hall sensor connector.
3. Remove metal clip.



4. Remove hall sensor.



INSTALLATION

Installation is in the reverse order of removal.

Closing in Manual Mode

EIS00E17

If the retractable hard top cannot be operated electrically or any other system malfunction, the retractable hard top needs to be closed manually according to the following procedures.

MANUAL OPERATION (FULLY OPEN ⇒ FULLY CLOSE)

CAUTION:

- **This operation requires two people.**
- **Keep hands away from the moving parts**
- **Fully open the power window (front and rear) when closing in manual.**

1. Open the Power Window

- Open all power window.

2. Depressurize The Hydraulic System

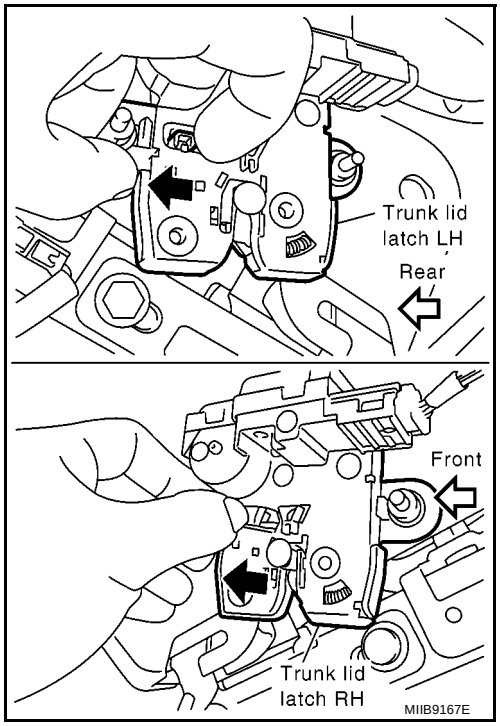
- Turn ignition switch ON.
- Turn ignition switch OFF with pressing the roof open/close switch and hold the switch for further 10 seconds.

NOTE:

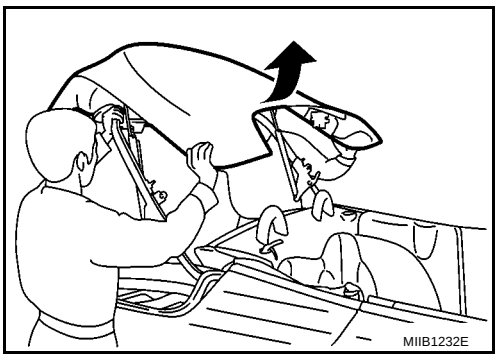
- If the pressure in the hydraulic system do not decrease, remove the fuse (15A,NO.23,located in the fuse and fusible link box).
- If the roof is in fully open position there is not pressure in the hydraulic system.

3. Open The Trunk Lid

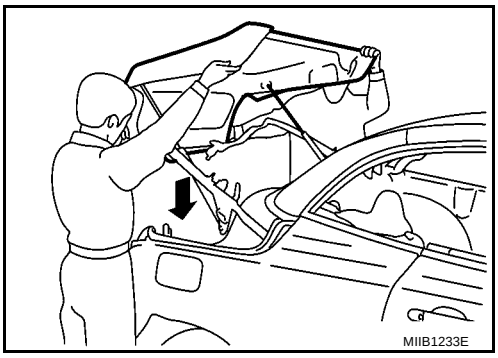
- Open the trunk lid.
- Remove trunk lid side trim LH and RH. Refer to EI-24, "TRUNK LID FINISHER" .
- Unlock the front trunk lid lock LH and RH.



- Open the trunk lid (front) completely.

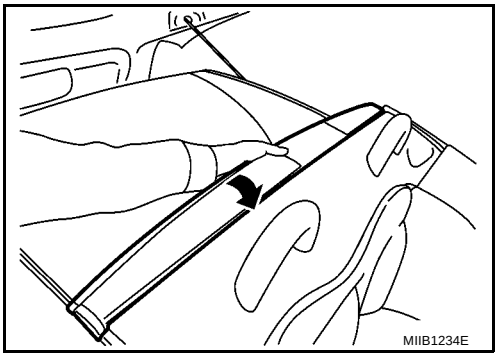


- Lock the trunk lid lock (rear).



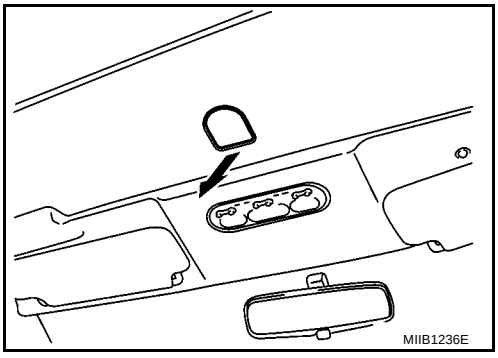
4. Open The Parcel Shelf

- Open the parcel shelf while holding it from the middle.



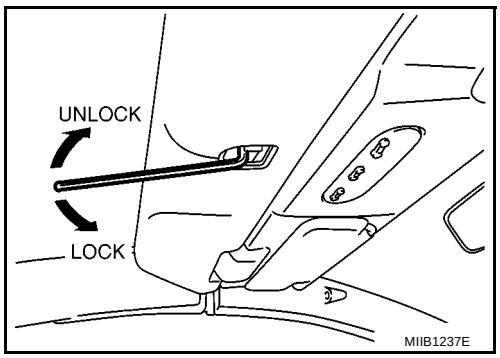
5. Close The Roof

- Moving it towards the roof and carefully mount it on latch assembly.
- Remove the cover.



- Unlock the roof lock system with allen key.

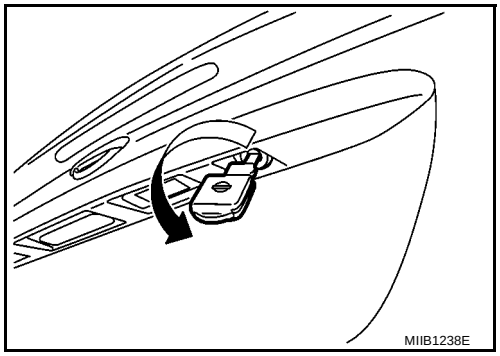
  CAUTION:
  Do not put on a hand around roof ratch assembly.



- Lock the roof lock completely with allen key.
- Install the cover.

6. Open The Trunk Lid

- Unlock the trunk lid with mechanical key.



7. Lock The Trunk Lid

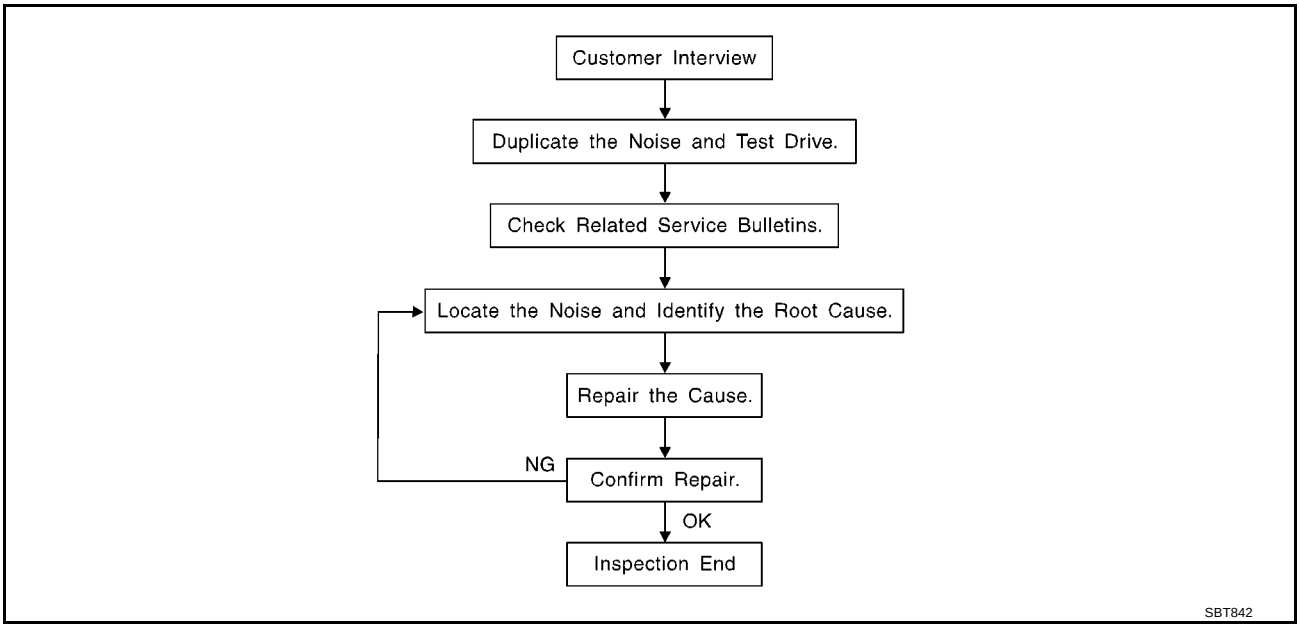
- Lock the front trunk lid lock LH and RH.
- Close the trunk lid.

WIND NOISE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS00E7N



CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. 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.

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. This information can be used to duplicate the same conditions when you confirm the repair.

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 (Engine Ear or mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
   - removing the components in the area that you suspect the noise is coming from.
   - tape components that you suspect are causing the noise.
   - looking for loose components.
   - Looking for incorrect adjustment between components (flatness, gap).

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is incorrect adjustment between components, adjust component. Refer to RF-167, "Adjustment of Retractable Hard Top Assembly" .

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.

WIND NOISE TEST

NOTE:
This operation requires two workers.

Preliminary Inspection

- Check the gaps and flatness deviations between openings elements. Refer to RF-167, "Adjustment of Retractable Hard Top Assembly" .
- Check the adjustment of door glass. Refer to GW-172, "FITTING INSPECTION" .
- Check the adjustment of side window glass. Refer to GW-176, "FITTING INSPECTION" .
- Check the flatness between door glass and side window glass.
- Check the windows are fully closed.
- Check the fitting and absence of gaps and deviations between weather-strips.
- Check the tire pressure. Refer to WT-8, "SERVICE DATA" .

Test Conditions

- If the wind speed is too high or side wind, do not proceed a wind noise test.
- If rainy condition, do not proceed a wind noise test.
- The road must be in good condition to reduce the tire noise.

Wind Noise Test

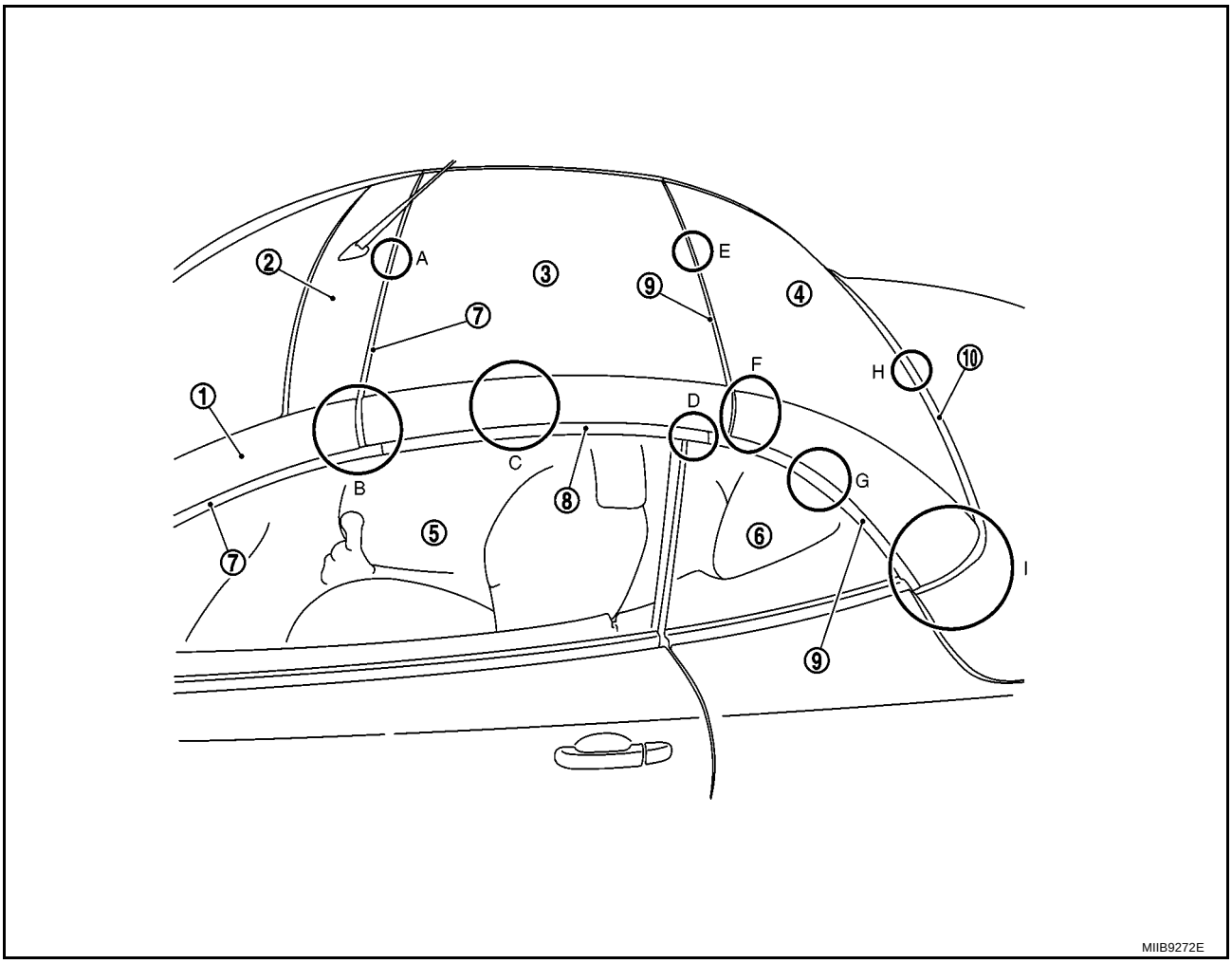
- Start the test at with a vehicle speed of 60 km/h (37 MPH)
- Increase the speed to reach the maximum speed authorized, by step of 10km/h.
- Drive with a constant speed between steps.
- Repeat the operation with two drivers in different seats.
  - First driver change place with the second driver in the driver seat.
  - One of the drivers takes place at front passenger seat at first test, and changes his seat to both rear seats.
- The passenger can use a mechanics stethoscope to locate more accurately the noise.
- Whenever the noise occurs, keep the vehicle at constant speed and identify approximate area of concern.
- Mask the suspect area using tapes, and repeat the test to make sure of the suspected area.

WATER LEAKAGE TROUBLE DIAGNOSES

PFP:00000

Repairing Method for Water Leakage Around Retractable Hard Top

EIS00E7O



1. Front pillar	2. Front roof finisher	3. Front roof assembly
4. Rear roof assembly	5. Door glass	6. Side window glass
7. Front pillar weather-strip	8. Front roof weather-strip	9. Rear roof weather-strip top
10. Rear roof weather-strip bottom		

WATER LEAKAGE FROM A

The root of water ingress might be from the poor contact between the front roof glass and front pillar weather-strip.
Cause: There might be incorrect adjustment between the front roof assembly and the body.

Repair Procedure 1

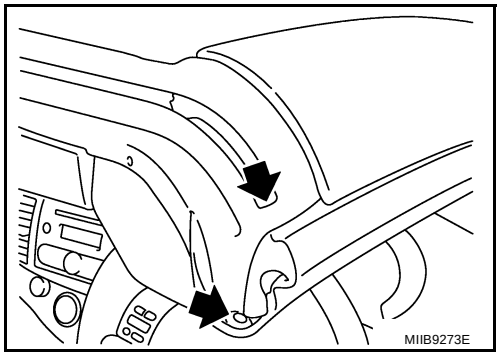
- Check and adjust if necessary the flatness deviation between the front roof glass and front roof finisher. Refer to RF-181, "ADJUSTMENT" .
- Check and adjust if necessary the gap between the front roof glass and front roof finisher. Refer to RF-181, "ADJUSTMENT" .

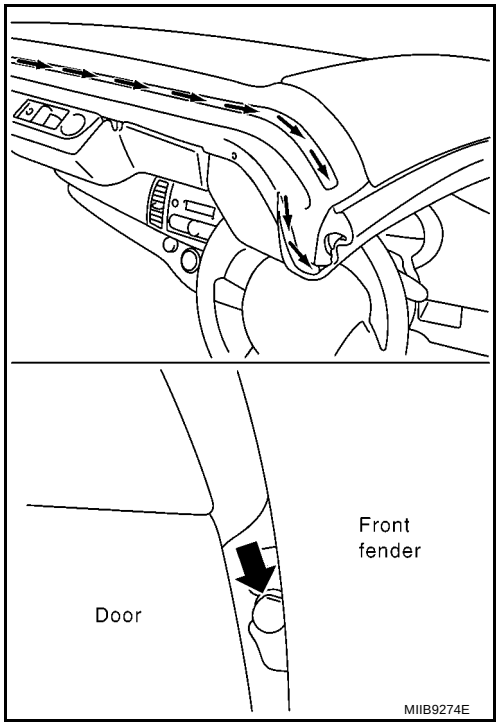
WATER LEAKAGE FROM B

- The root of water ingress might be from inefficiency of water evacuation.
  Cause: Front pillar weather-strip drains holes are plugged.
- The root of water ingress might be from the poor contact or gap between the front roof weather-strip and front pillar weather-strip.
  Cause: There might be a gap between the front roof weather-strip and front pillar weather-strip.

Repair Procedure 2

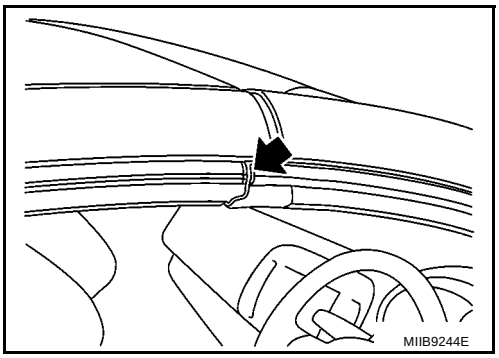
Unplug the drains holes on both side of front pillar weather-strip. Pour water into the weather-strip and make sure of proper evacuation.



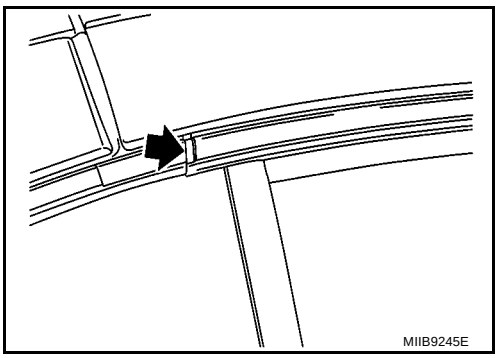


Repair Procedure 3

- Proceed as repair procedure 1.
- Slide slightly the front roof weather-strip to forward direction to eliminate the gap between the front roof weather-strip and front pillar weather-strip.



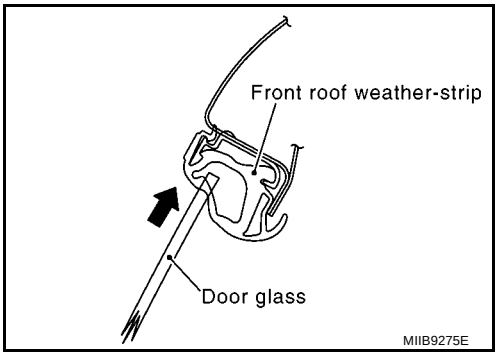
- Make sure to not create a new gap between the front roof weather-strip and rear roof weather-strip top.



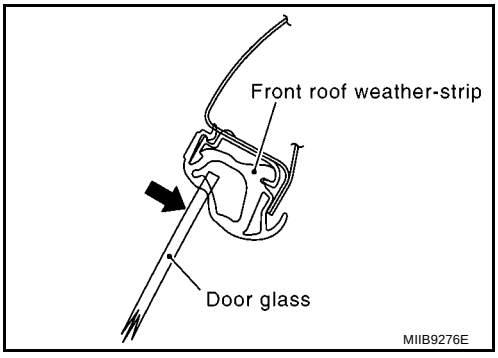
CAUTION:
Make sure of absence of gap and deviations between weather-strips.

WATER LEAKAGE FROM C

- The root of water ingress might be from the poor contact between the door glass and front roof weather-strip in vertical direction.
  Cause: The power window can not apply enough vertical pressure to the front roof weather-strip via the door glass.



- The root of water ingress might be from the poor contact between the door glass and front roof weather-strip in lateral direction.
  Cause: The power window can not apply enough lateral pressure to the front roof weather-strip via the door glass.



Repair Procedure 4

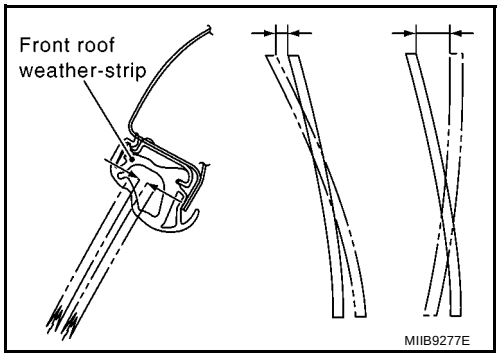
- Check the correct operation of the power window
  - Close the door
  - Close completely the door glass
  - Open the door
  - Pull up the power window switch.
  - If the side window raise again slightly the power window does not work properly.
- Grease the power window regulator and check again. Refer to GW-172, "Inspection after removal" .
- Replace the power window motor if the test is not successful.

Repair Procedure 5

Adjust the door glass. Refer to GW-172, "FITTING INSPECTION" .

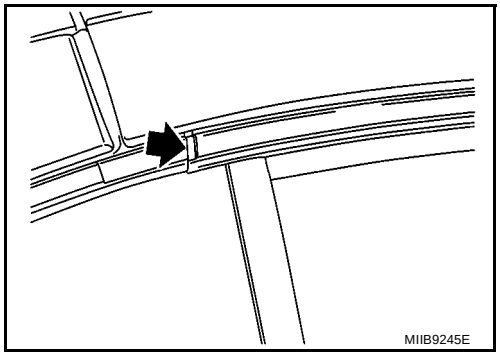
WATER LEAKAGE FROM D

- The root of water ingress might be from the poor contact or gap between the front roof weather-strip and rear roof weather-strip top.
  Cause: There might be a gap between the front roof weather-strip and rear roof weather-strip top.
- The root of water ingress might be between the top edges of side windows glasses and front roof weather-strip.
  Cause: The flatness between side window glasses is incorrect.



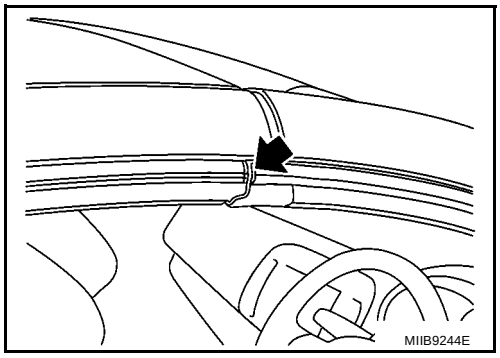
Repair Procedure 6

- Slide slightly the front roof weather-strip to forward direction to eliminate the gap between the front roof weather-strip and rear roof weather-strip top.



- Make sure to not create a new gap between the front roof weather-strip and front pillar weather-strip.

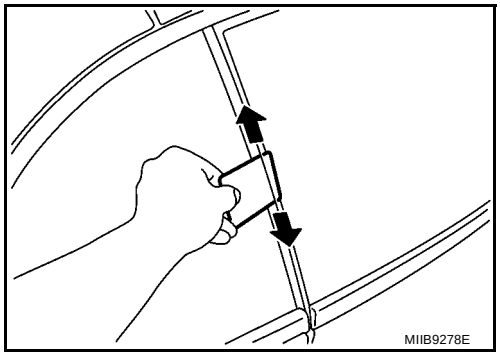
  CAUTION:
  Make sure of absence of gap and deviations between weather-strips.



Repair Procedure 7

- Check the flatness between the door glass and side window glass using a thin plastic card. The resistance must be same at each point.
- If the flatness is incorrect

– Adjust the Side window glass. Refer to GW-176, "FITTING INSPECTION" .
– Adjust the door glass. Refer to GW-172, "FITTING INSPECTION" .



WATER LEAKAGE FROM E

The root of water ingress might be from the poor contact between the front roof glass and rear roof weather-strip top.
Cause: There might be incorrect adjustment between the front roof assembly and the body.

Repair Procedure 8

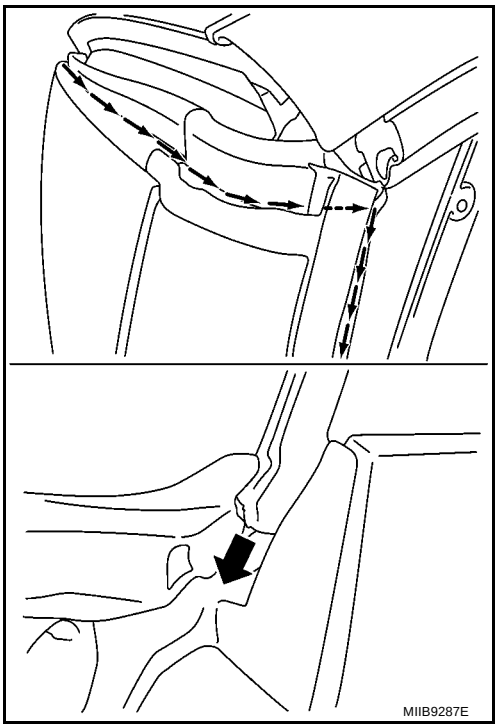
- Check and adjust if necessary the flatness deviation between the front roof glass and rear roof glass. Refer to RF-186, "ADJUSTMENT" .
- Check and adjust if necessary the gap between the front roof glass and rear roof glass. Refer to RF-186, "ADJUSTMENT" .

WATER LEAKAGE FROM F

The root of water ingress might be from inefficiency of water evacuation.
Cause: Front pillar weather-strip drains holes are plugged.

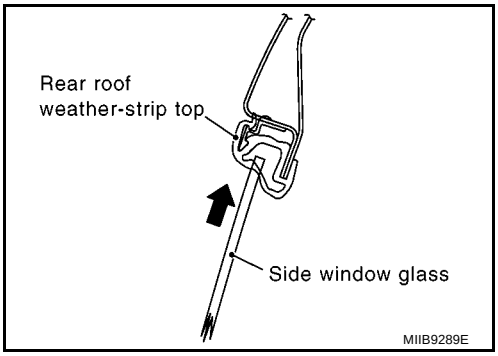
Repair Procedure 9

Unplug the drains holes on both side of rear roof weather-strip top. Pour water into weather-strip and make sure of proper evacuation.



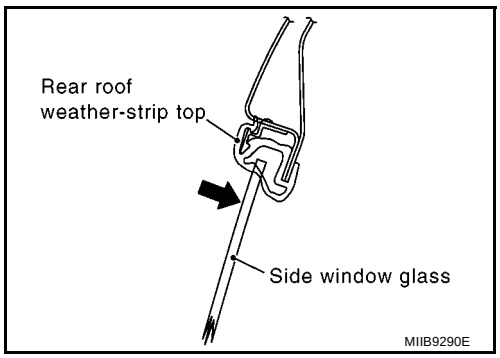
WATER LEAKAGE FROM G

- The root of water ingress might be from the poor contact between the side window glass and rear roof weather-strip top in vertical direction.
  Cause: The power window can not apply enough vertical pressure to the rear roof weather-strip top via the side window glass.



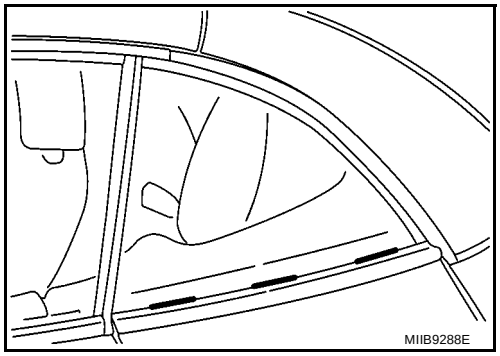
- The root of water ingress might be from the poor contact between the side window glass and rear roof weather-strip in lateral direction.

Cause: The power window can not apply enough lateral pressure to the rear roof weather-strip top via the side window glass.



Repair Procedure 10

- Check the correct operation of the power window
  - Close the retractable hard top
  - Close completely the side window glass
  - Using paint marks locate the position of the side window glass as shown
  - Open the retractable hard top
  - Pull up the power window switch.
  - If the side window glass raise again slightly the power window does not work properly.
- Grease the power window regulator and check again. Refer to GW-174, "SIDE WINDOW GLASS" .
- Replace the power window motor if the test is not successful.



Repair Procedure 11

Adjust the side window glass. Refer to GW-176, "FITTING INSPECTION" .

WATER LEAKAGE FROM H

The root of water ingress might be from the poor contact between the rear roof weather-strip bottom and trunk lid.
Cause: The adjustment of the trunk lid subframe might be incorrect.

Repair Procedure 12

Adjust the trunk lid. Refer to BL-251, "Clearance" .

WATER LEAKAGE FROM I

- The root of water ingress might be from the poor contact between the rear roof weather-strip bottom and trunk lid.
  Cause: The adjustment of the trunk lid subframe might be incorrect.
- The root of water ingress might be from the poor contact between the rear roof weather-strip bottom and rear roof frame.
  Cause: The adhesive tape on the weather-strip bottom is removed.

Repair Procedure 13

Same as repair procedure 12

Repair Procedure 14

- Check the good condition of the adhesive tape.
- Replace the rear roof weather-strip if the adhesive tape does not stick.

WATER LEAKAGE TEST

WARNING:

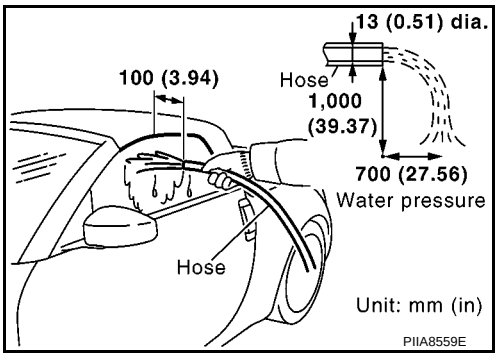
Avoid any slippery surfaces for a water leakage test.

Preliminary Inspection

- Check the gaps and flatness deviations between openings elements. Refer to RF-167, "FITTING ADJUSTMENT" .
- Check the adjustment of door glass. Refer to GW-172, "FITTING INSPECTION" .
- Check the adjustment of side window glass. Refer to GW-176, "FITTING INSPECTION" .
- Check the flatness between door glass and side window glass.
- Check the fitting and absence of gaps and deviations between weather-strips.

Water Pressure Adjustment

Use 13 mm (0.51 in) diameter hose. Adjust water pressure by following method. Hold the hose horizontally, and release water at 1000 mm (39.37 in) height from ground. Adjust the distance, between the ground point just below the hose and the water dropping point, to reach 700 mm (27.56 in). (See the figure.)



Water Leakage Test

- Two workers are required. One worker checks visually inside the vehicle with a hand lamp, and the other one washes with water.
- Spray water starting with lowers areas and finish by higher areas.

Water Leakage Between Rear Roof And Trunk Lid

1. Start the engine.
2. Lower all side glasses.
3. Open and close the doors.
4. Raise completely all windows.
5. Spray directly from 200 mm (7.87 in) height and for minimum 1 min the connection between the rear roof weather-strip bottom and the trunk lid.
6. Use a sponge to dry the trunk lid.
7. Open the trunk lid and check for leakage.

Water Leakage Around Side Windows

1. Start the engine.
2. Lower all side glasses.
3. Open and close the doors.
4. Raise completely all windows.

   NOTE:
   Worker inside the vehicle raise completely all windows to check the leakage with a hand lamp. To ensure the quality of the test the door must not be open after the window has been raised.
5. Spray the side windows from the door mirror to the corner of the side window glass via the upper connection with the retractable hard top.
6. Spray the connection between the door glass and side window glass.
7. Keeping the distance between the hose and the testing area by 100 mm (3.94 in), apply water along the area 3 times. During applying water, move the hose by 100 mm (3.94 in)/sec speed.
8. Visually check for water leakage.

NOTE:
Small water ingress between door glass and side window glass is permissible. Also water drain into the door panels or rear fender panels without entering in the passenger room is permissible.

Water Leakage Between Roof Panels

1. Start the engine.
2. Lower all side glasses.
3. Open and close the doors.
4. Raise completely all windows.

   NOTE:
   Worker inside the vehicle raise completely all windows to check the leakage with a hand lamp. To ensure the quality of the test the door must not be open after the window has been raised.
5. Spray directly from 200 mm (7.87 in) height and for minimum 1 min the connection between:
   - Front roof and front pillar weather-strip.
   - Front roof and rear roof weather-strip top.
6. Check the presence of water:
   - Between the front pillars weather-strip and front pillars garnish.
   - Behind rear roof headlining LH and RH.
   - Behind the front roof headlining RR.

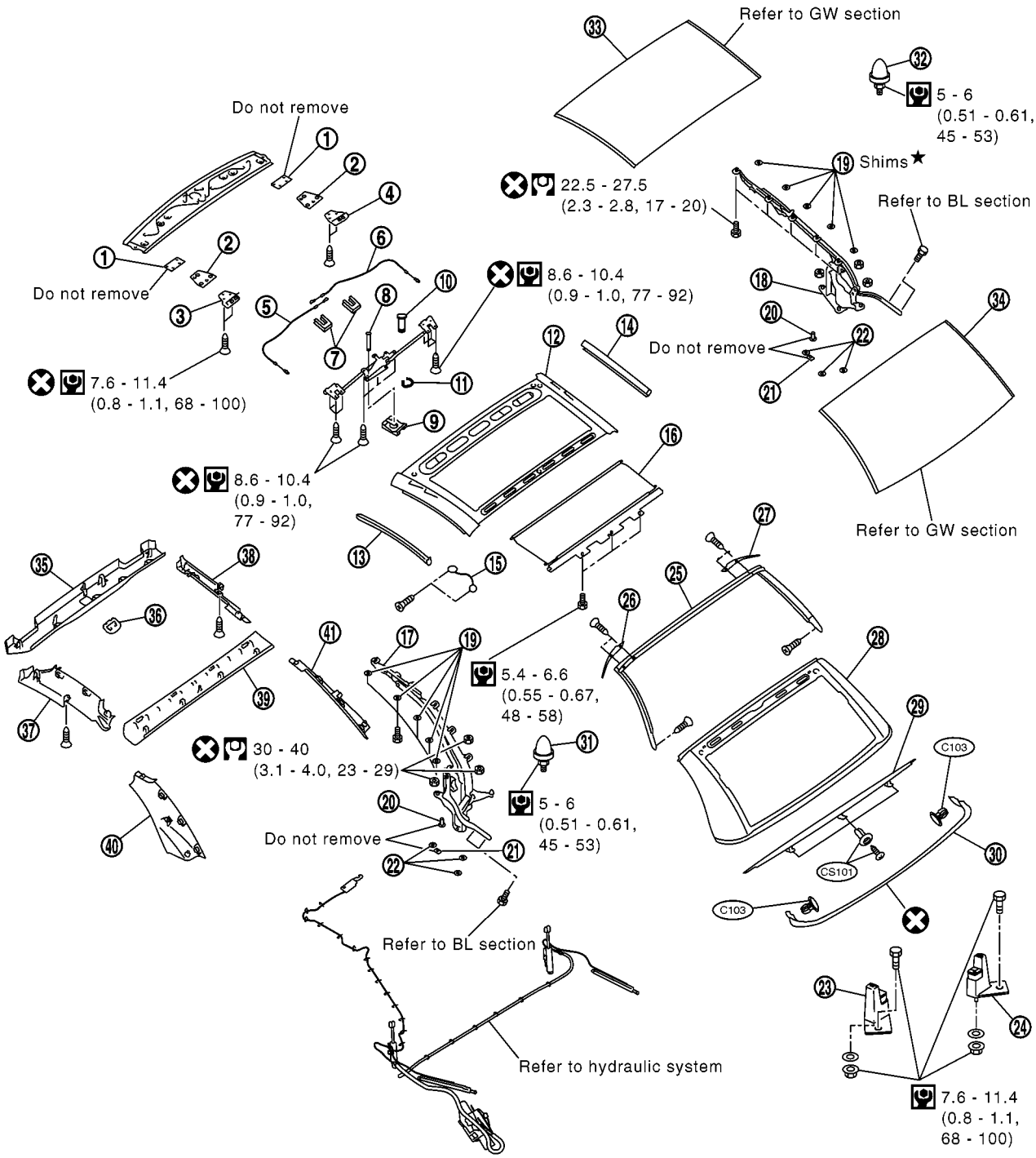
HARD TOP

PFP:97003

Component Parts Drawing

EIS00E51

SEC. 730



: N•m (kg-m, in-lb)

: N•m (kg-m, ft-lb)

★ : Select with proper thickness.

: Always replace after every disassembly.

MIIB9187E

1. Latch plate*
2. Latch shim
3. Latch assembly LH
4. Latch assembly RH
5. Unlocking cable LH
6. Unlocking cable RH
7. Clamp
8. Fastening bolt
9. Retaining clamp
10. Fastening bolt
11. Clamp
12. Front roof
13. Front roof weather-strip LH
14. Front roof weather-strip RH
15. Hoses liner
16. Sunshade assembly
17. Link assembly LH
18. Link assembly RH
19. Shim
20. Centering bolt*
21. Centering plate*
22. Shims*
23. Roof stop bumper LH
24. Roof stop bumper RH
25. Rear roof weather-strip top
26. Weather-strip plate LH
27. Weather-strip plate RH
28. Rear roof
29. Rear parcel shelf finisher
30. Rear roof weather-strip bottom
31. Link stop bumper LH
32. link stop bumper RH
33. Front roof glass
34. Rear roof glass
35. Front roof headlining FR
36. Headlining cap
37. Front roof headlining LH
38. Front roof headlining RH
39. Rear roof headlining FR
40. Rear roof headlining LH
41. Rear roof headlining RH

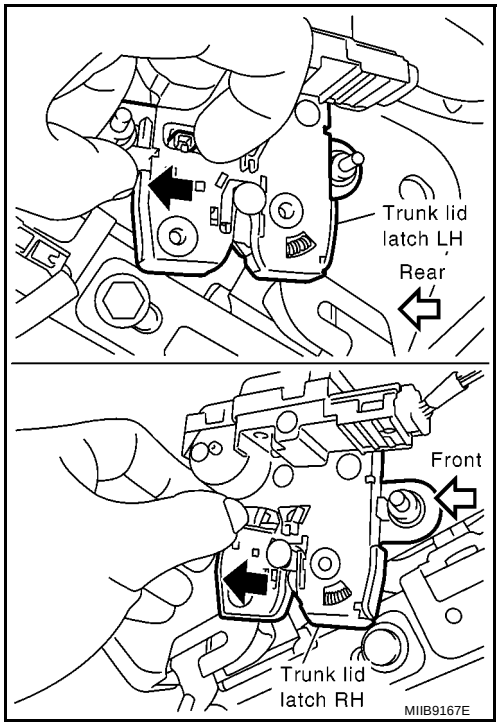
*: Do not remove

Intermediate Position for Service

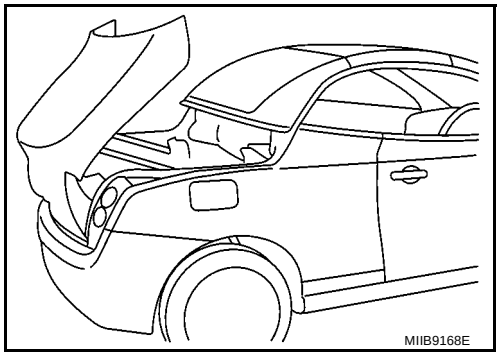
EIS00E6O

1. Lower all side Window Glasses.
2. Disconnect the both battery terminals starting by the negative.
3. Open the trunk lid using the key fob.
4. Remove Trunk Lid finisher LH and RH.
5. Operate Emergency Unlocking Clips LH and RH on Trunk Lid Latch, and release latches from the sub-frame.

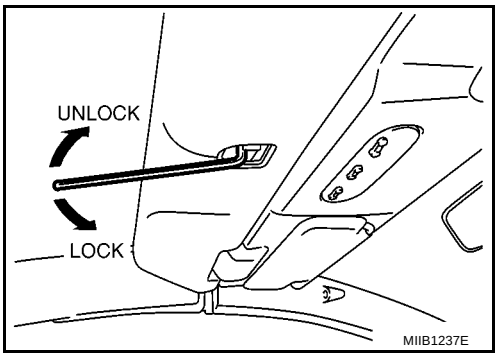
   NOTE:
   This operation and followings require two workers.



6. Open the Trunk Lid as shown.
7. Remove the Front Roof Headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .

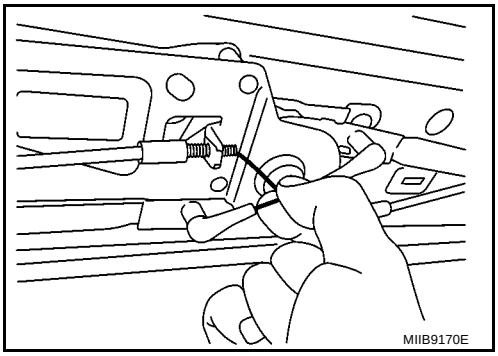


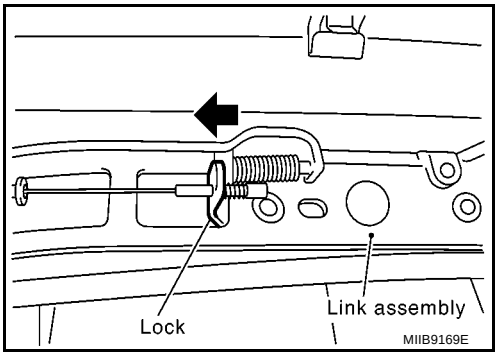
8. Using a hexagonal wrench, manually unlock the Retractable Hard Top.



9. Unlock the locks on the Links Assembly LH and RH as follow:
   - If the Lock Assembly and Unlocking Cables are not removed, bring closer both Unlocking Cables to release the locks on Links Assemblies LH and RH.

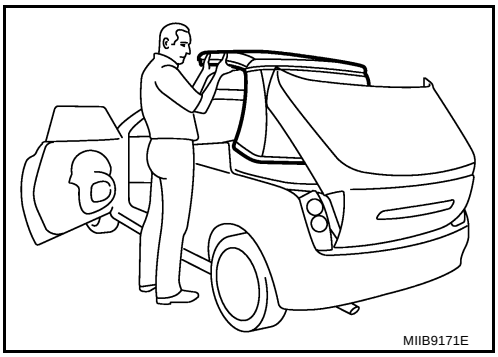
     NOTE:
     A click is heard when locks are released.
   - If the Lock Assembly or Unlocking Cables are removed, proceed as follow
   - Remove the Front Roof Headlining RR, refer to RF-171, "FRONT ROOF HEADLINING REAR" .
   - Remove both Front Roof Headlining LH and RH, refer to RF-171, "FRONT ROOF HEADLINING LH AND RH" .
   - Unlock Links Assemblies by pulling their locks to the front side as shown.





10. Push the Front Roof upward and rearward, and maintain the Retractable Hard Top as shown.

    CAUTION:
    - **Keep hands away from moving parts.**



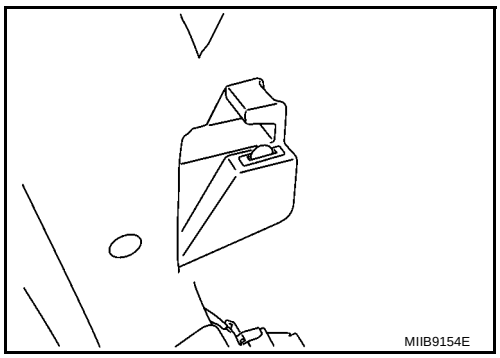
Removal and Installation of Retractable Hard Top Assembly

EIS00E18

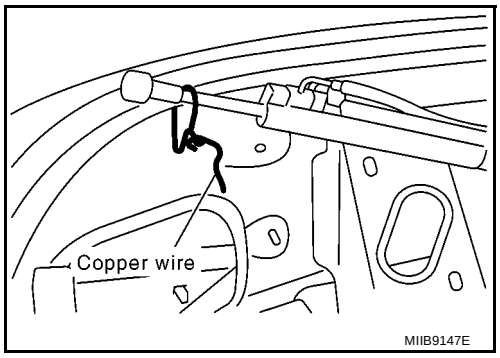
REMOVAL

1. Park the vehicle on a flat ground, with enough area to allow the removal of the retractable hard roof via the rear side of the vehicle.
2. With all side window glasses in lower position, retractable hard top in closed position and trunk lid opened, disconnect both battery cables, starting with the negative terminal.

3. Remove the tonneau cover and roof storage switch LH and RH.
4. Remove the rear seats. Refer to SE-19, "Removal and Installation (C+C)" .
5. Remove back side trim finisher. Refer to EI-39, "BACK SIDE TRIM" .
6. Remove trunk room trims. Refer to EI-42, "TRUNK ROOM TRIM" .
7. Remove the rear parcel shelf. Refer to EI-38, "REAR PARCEL SHELF" .

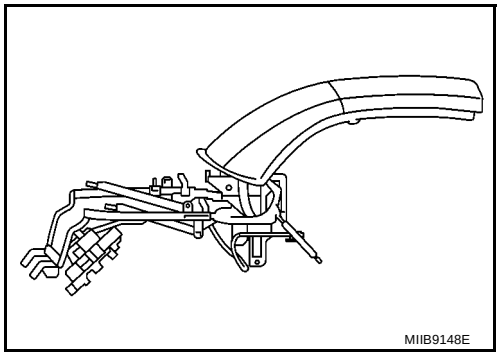


8. Disconnect both trunk lid cylinders balls joints from the trunk lid ball pivots, and using coppers wires, attach trunk lid cylinders to the sub frame as shown. Refer to RF-211, "Removal and Installation of Trunk Lid Cylinder" .



9. Remove the trunk lid from the sub-frame assembly. Refer to BL-252, "Removal and Installation of Trunk Lid Assembly" .

NOTE:
- This operation requires two people.
- Retractable hard top, hydraulic system and sub frame assembly should be removed together from the vehicle.

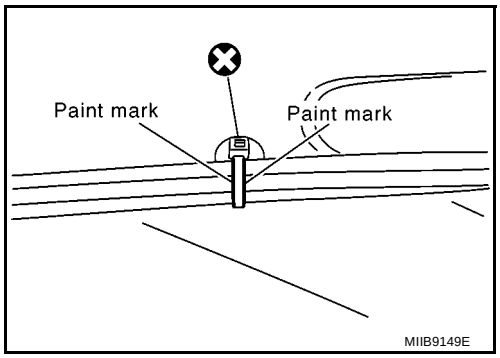


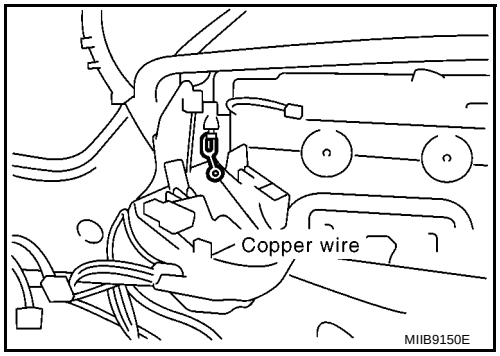
10. Locate the position of self lock bands on hydraulics hoses by meanings of paint marks.
11. Using a nipper, cut off self locking bands on the body and dispose.

CAUTION:
- **Avoid any contact between the nipper and hoses.**
- **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**

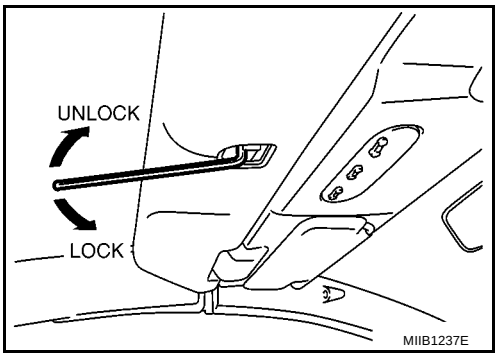
12. Remove partially the hydraulic control unit without disconnecting connectors. Refer to RF-146, "Removal and Installation of Retractable Hard Top (C-view) Control Unit" .
13. Remove the hydraulic pump without disconnecting tubes. Refer to RF-203, "Removal and Installation of Hydraulic Unit" , and attach it to the Link Assembly LH using copper wires.
14. Remove both Stay Assembly Trunk lid. Refer to BL-254, "Removal and Installation of Trunk Lid Stay" .

NOTE:
This operation requires two people.



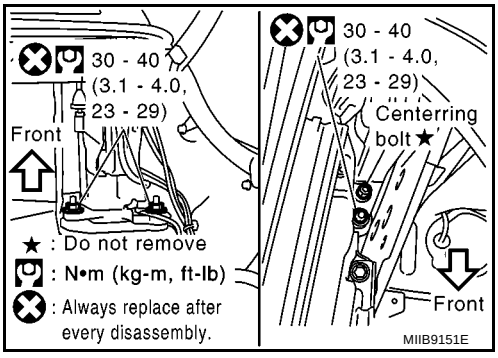


15. Using a hexagonal wrench, manually unlock the retractable hard top.



16. Remove three mountings nuts securing link assembly LH and RH to the body.

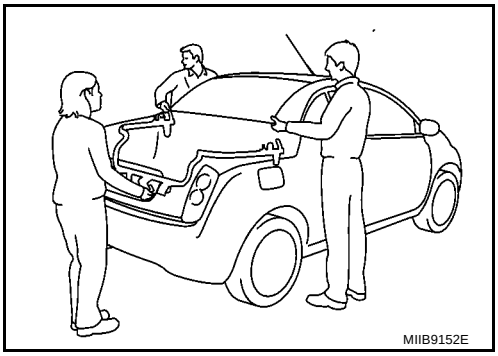
CAUTION:
Do not unscrew the centering bolt from the vehicle. The position of the centering bolt needs only to be checked or adjusted after a body repair.



17. Prepare a suitable area covered with a polystyrene panel or shop clothes as default to allow the reception of the retractable hard top.
18. Remove the retractable hard top via the rear side of the vehicle.

NOTE:
This operation requires three people.

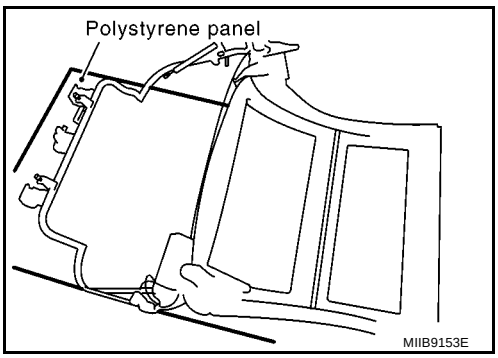
CAUTION:
- **Take all precaution to avoid any interference between the retractable hard top and the body.**
- **Do not stretch hydraulic hoses.**
- **Protect the rear fender with a fender protector.**

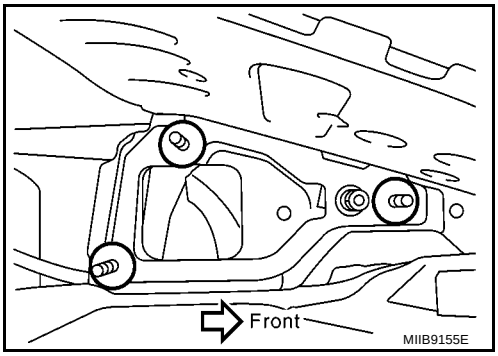


19. Turn over and lay down carefully the retractable hard top on the prepared area as shown.

NOTE:
This operation requires four people.

CAUTION:
Note the number of adjustments shims around each welded studs, so you can restore the original position.



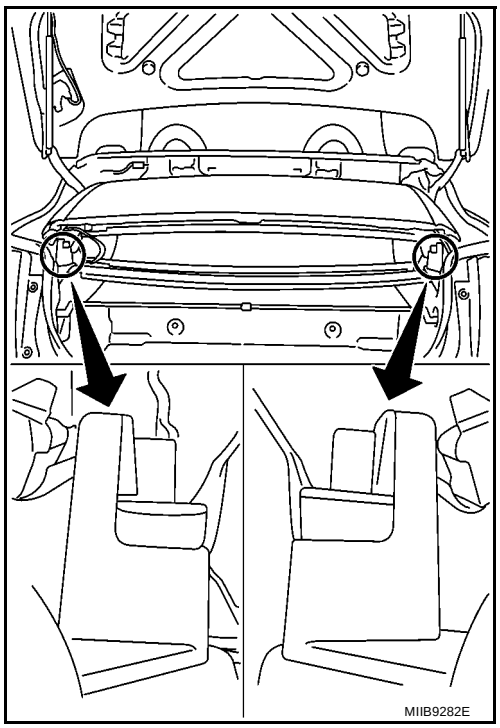


INSTALLATION

When installing pay attention to the followings points:

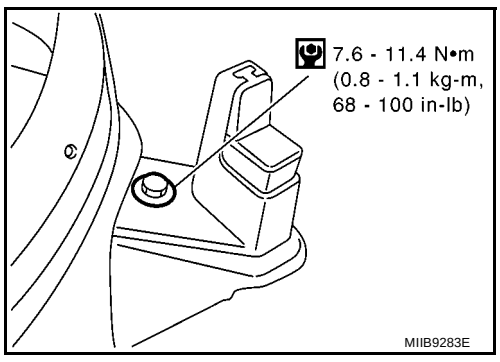
- Do not let hoses to be crushed between the link assembly and the body.
- Tighten the link assembly nuts to the specified torque. Refer to RF-161, "Component Parts Drawing" .
- Tighten the hydraulic pump nuts to the torque. Refer to RF-203, "Component Parts Drawing" .
- Reinstall the trunk lid and tighten bolts and nuts to the specified torque. Refer to BL-252, "Removal and Installation of Trunk Lid Assembly" .
- Check the correct installation and routing of each hose and harness.

  CAUTION:
  - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
  - **After installation, hydraulic hoses must not move towards self-locking bands**
  - **Do not let the ends of self-locking bands touch hydraulic hoses**
  - **Before closing the trunk lid, check if the trunk lid can be opened by the cylinder key.**
- Manually lock the retractable hard top and check the gap and flatness deviation between the retractable hard top and front roof finisher. Refer to RF-167, "FITTING ADJUSTMENT" .
- Check the gap between the retractable hard top and the trunk lid. Refer to RF-167, "FITTING ADJUSTMENT" .
- Check the gap between the trunk lid and the body. Refer to BL-251, "Clearance" .
- Operate manually the retractable hard top and the trunk lid several times to make sure there is no interference between parts.
- With the retractable hard top in closed position, check the absence of lateral gaps between the link assemblies and roof stop bumpers.


MIIB9282E

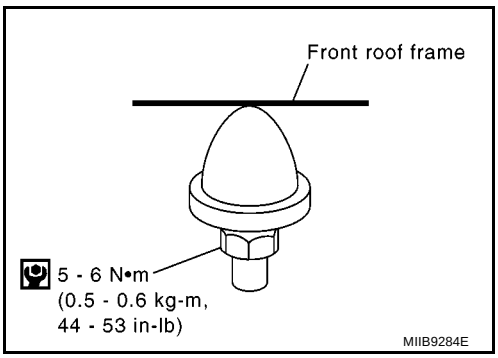
- If any gaps, untighten the roof stop bumpers bolts, and move roof stop bumpers to eliminate gaps, and retighten bolts to the specified torque.

  : 7.6 - 11.4 N·m (0.8 - 1.1 kg-m, 68 - 100 in-lb)



MIIB9283E

- Check the contact between link stop bumpers LH, RH and front roof frame in closed position. If incorrect adjustment, loosen the lock nut, adjust and tighten to the torque.
- Reconnect the battery starting with the positive terminal, and operate the retractable hard top several times to make sure of correct operation.
- Operate the power window to make sure of correct operation.
- Check the side window glass adjustment. Refer to GW-176, "FITTING INSPECTION" .
- Check the front door glass adjustment. Refer to GW-172, "FITTING INSPECTION" .



- Check the fluid level. Refer to RF-200, "CHECKING FLUID LEVEL" .
- Check the fluid leakage. Refer to RF-201, "CHECKING FLUID LEAKAGE" .
- Visually check for a possible water leakage. Refer to RF-159, "WATER LEAKAGE TEST" .
- Make a road test with retractable hard top in closed and opened position, and check for a rattle noise. Refer to RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .
- Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .

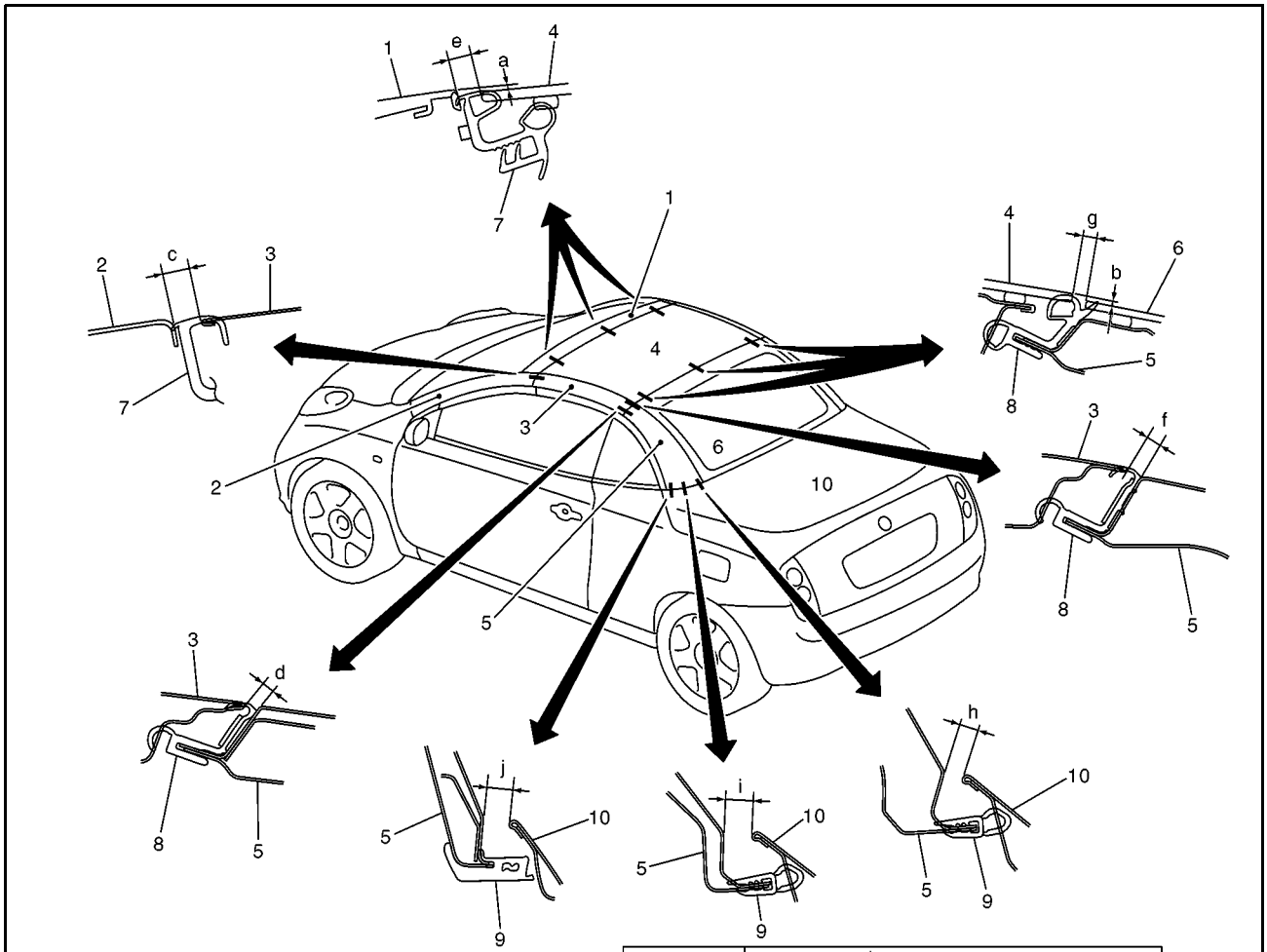
Adjustment of Retractable Hard Top Assembly

EIS00E7P

FITTING ADJUSTMENT

CAUTION:

- **The clearance values are given for information purposes. When making adjustments, certain rules must be observed:**
  - **maintain symmetry with respect to the opposite side,**
  - **After adjustment of an element, check that adjustment of peripheral elements still correct.**
- **Make sure of absence of gap and deviations between weather-strips.**
- **Always check the good operation of side windows after an operation.**
- **Always check the adjustment of side windows after an operation. Refer to GW-172, "FITTING INSPECTION" and GW-176, "FITTING INSPECTION" .**
- **Always perform a water leakage test after an adjustment. Refer to RF-159, "WATER LEAKAGE TEST" .**
- **Always perform a wind test after an adjustment. Refer to RF-152, "WIND NOISE TEST" .**



Flatness deviation	a : 0.5 - 3.5★ (0.02 - 0.14)
	b : 0.5 - 3.5★★(0.02 - 0.14)
gap	c : 7 - 11 (0.28 - 0.43)
	d : 5 - 7 (0.20 - 0.28)
	e : 7 - 11 (0.28 - 0.43)
	f : 6 - 8 (0.24 - 0.31)
	g : 6 - 7 (0.24 - 0.28)
	h : 7 - 10.5 (0.28 - 0.41)
	i : 11 - 14.5 (0.43 - 0.57)
	j : 10 - 14 (0.39 - 0.55)

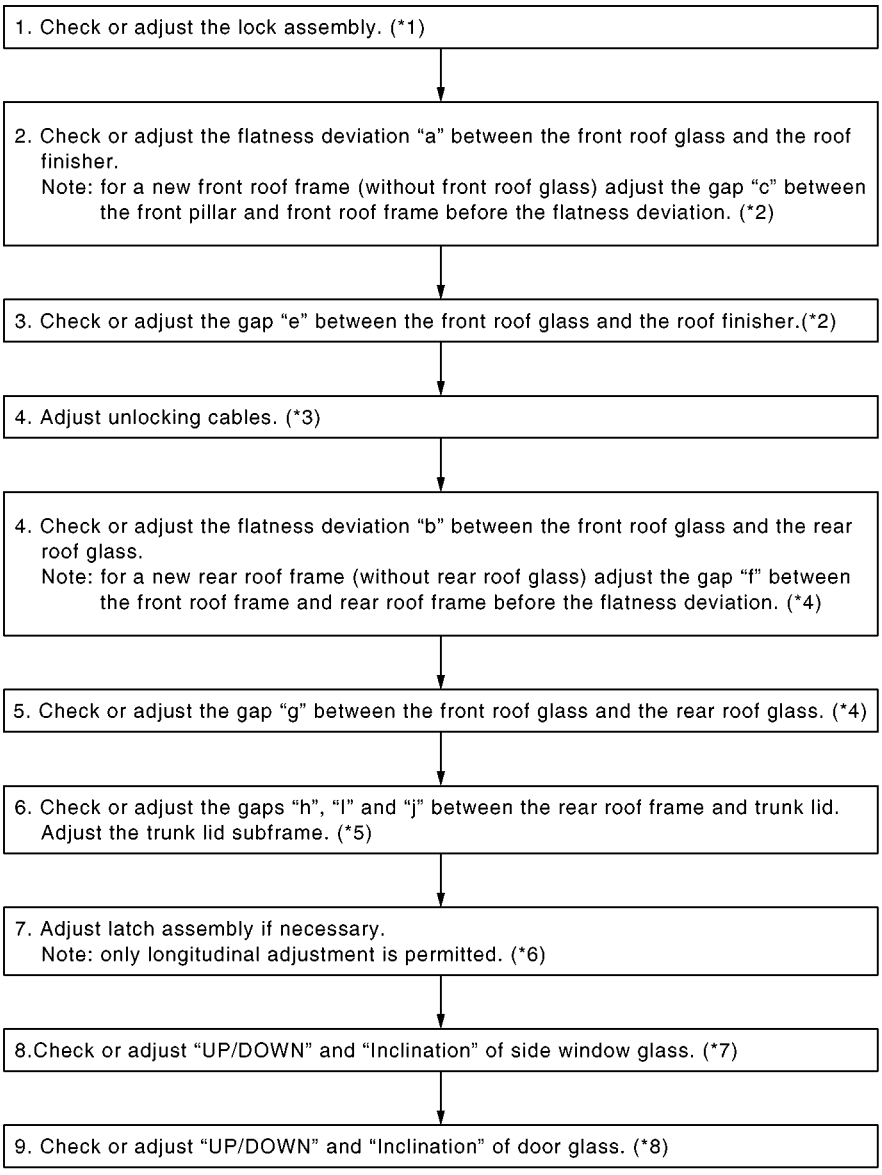
★ : Front roof glass level below the roof finisher level
★★: Rear roof glass level below the front roof glass level

Unit: mm (in)

MIIB9264E

1. Roof finisher
2. Front pillar
3. Front roof frame
4. Front roof glass
5. Rear roof frame
6. Rear roof glass
7. Front pillar weather-strip
8. Rear roof weather-strip top
9. Rear roof weather-strip bottom
10. Trunk lid

WORKFLOW

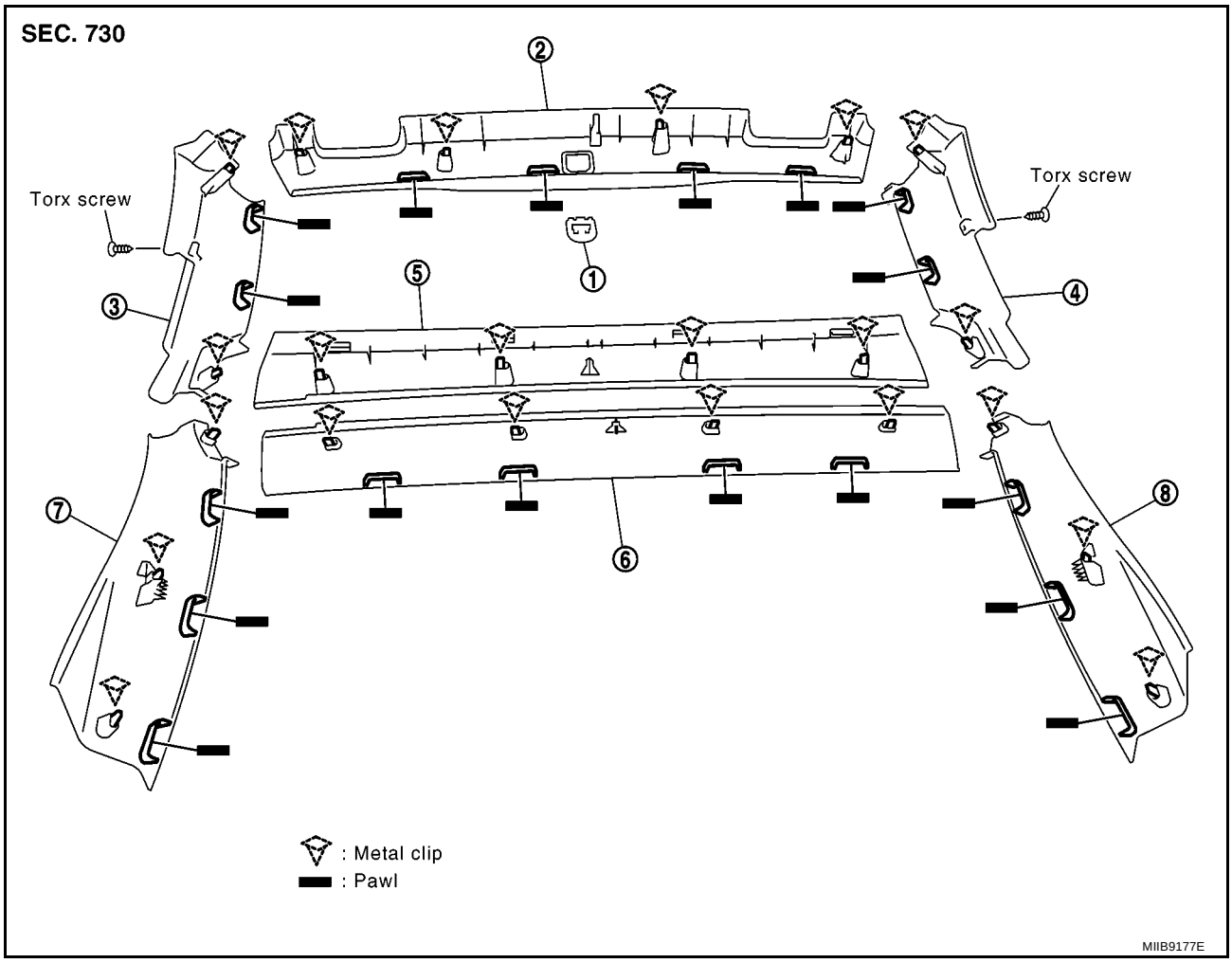


MIIB9293E

*1 RF-195 *2 RF-181, RF-198 *3 RF-192
*4 RF-186 *5 RF-167 *6 RF-199
*7 GW-176 *8 GW-172

Removal and Installation of Headlining

EIS00E1E

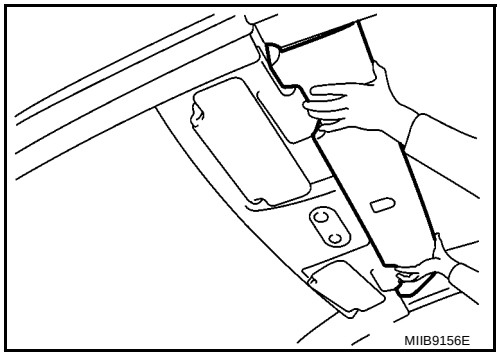


1. Headlining cap
2. Front roof headlining FR
3. Front roof headlining LH
4. Front roof headlining RH
5. Front roof headlining RR
6. Rear roof headlining FR
7. Rear roof headlining LH
8. Rear roof headlining RH

FRONT ROOF HEADLINING FRONT

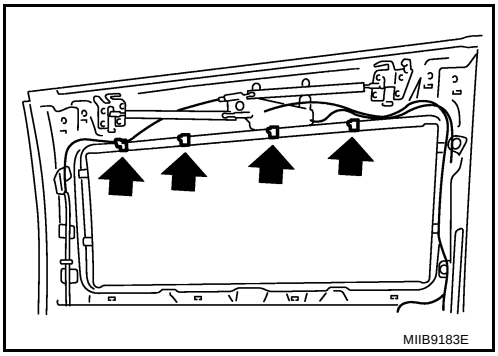
Removal

Pull the front roof headlining FR downward as shown.



Installation

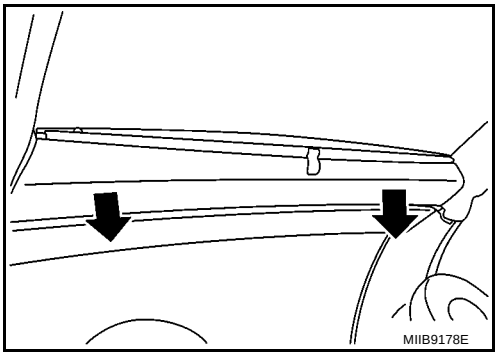
Make sure of the presence of all retaining clips. Install in the reverse order of removal.


MIIB9183E

FRONT ROOF HEADLINING REAR

Removal

Pull the front roof headlining RR downward as shown.


MIIB9178E

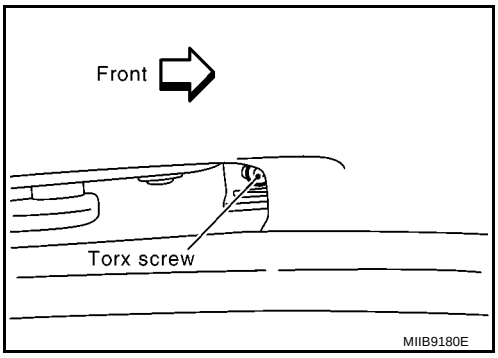
Installation

Install in the reverse order of removal.

FRONT ROOF HEADLINING LH AND RH

Removal

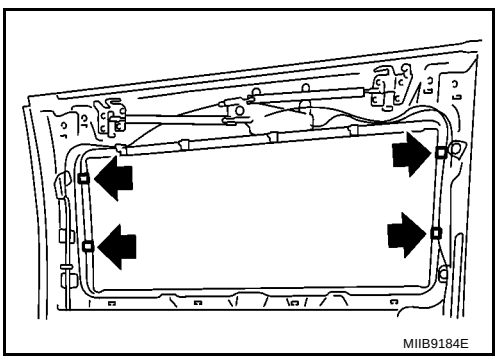
1. Remove the front roof headlining FR.
2. Remove the front roof headlining RR.
3. Remove the torx screw securing the headlining to the front roof assembly.
4. Pull the headlining downward.



MIIB9180E

Installation

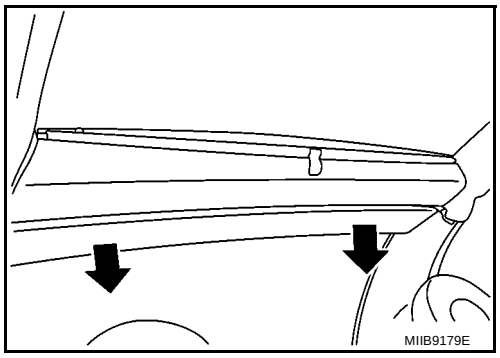
Make sure of the presence of all retaining clips. Install in the reverse order of removal.


MIIB9184E

REAR ROOF HEADLINING FRONT

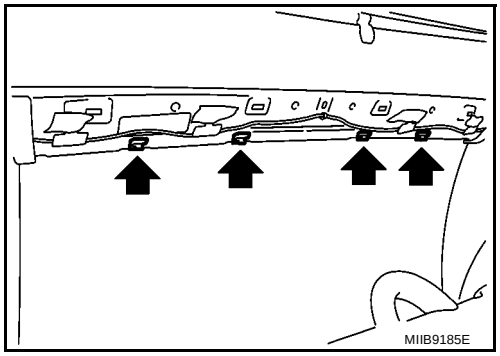
Removal

Pull the rear roof headlining front as shown.



Installation

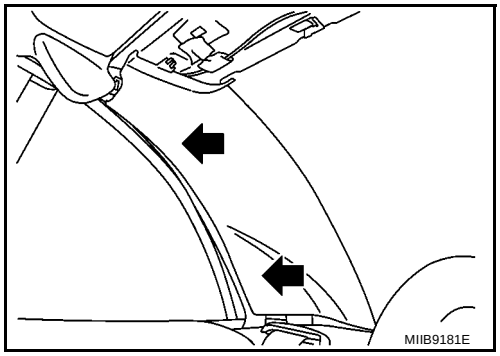
Make sure of the presence of all retaining clips. Install in the reverse order of removal.



REAR ROOF HEADLINING LH AND RH

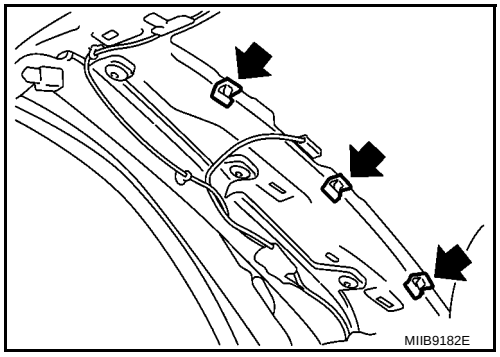
Removal

Pull the headlining to the front direction as shown.



Installation

Make sure of the presence of all retaining clips. Install in the reverse order of removal.



Removal and Installation of Rear Parcel Shelf Finisher

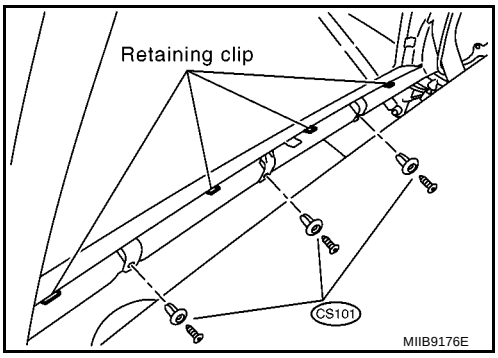
EIS00E5J

REMOVAL

1. Maintain the Retractable Hard Top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .

   NOTE:
   This operation requires two workers.

2. Remove three mountings screws and clips securing the Rear Parcel-Shelf Finisher to the Rear Roof assembly.
3. Pull the Rear Parcel-Shelf Finisher to upward direction and release it from the retaining clips.



INSTALLATION

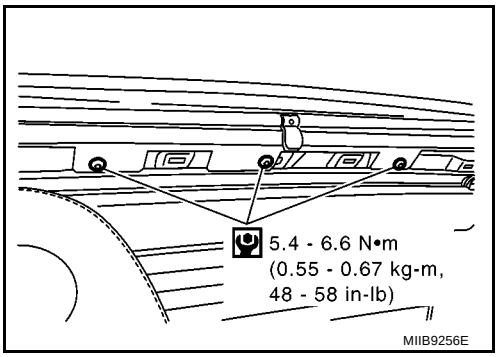
Make sure the presence of all retaining clips on the Rear Roof assembly. Install in the reverse order of removal.

Removal and Installation of Sunshade Assembly

EIS00E5K

REMOVAL

1. Remove the front roof headlining RR. Refer to RF-171, "FRONT ROOF HEADLINING REAR" .
2. Remove torx screws (3) securing the sunshade assembly to the front roof and remove the sunshade assembly.



INSTALLATION

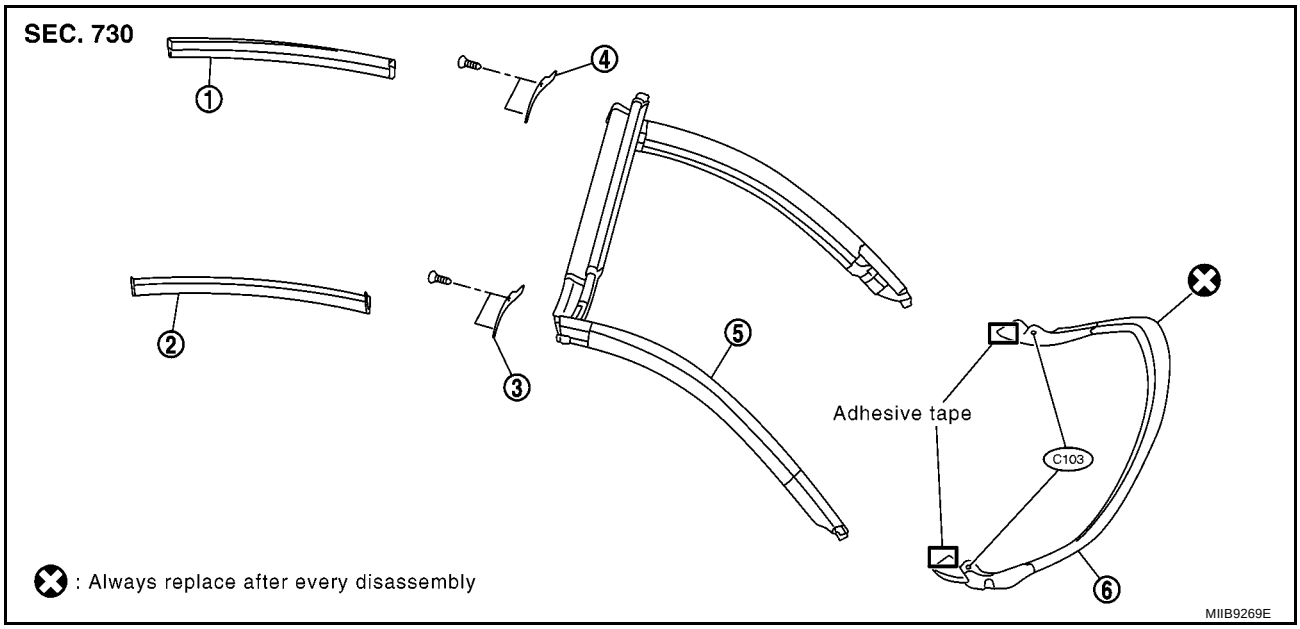
1. Tighten to the torques torx screws (3) securing the sunshade assembly to the front roof.

   : 5.4 – 6.6 N·m (0.55 – 0.67 kg-m, 48 – 58 in-lb)

2. Install the front roof headlining RR.

Removal and Installation of Roof Sealing

EIS00E5L



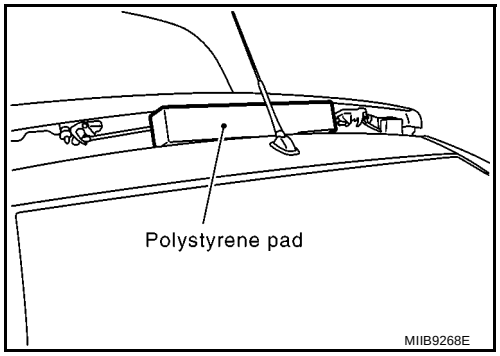
1. Front roof weather-strip RH
2. Front roof weather-strip LH
3. Weather-strip plate LH
4. Weather-strip plate RH
5. Rear roof weather-strip top
6. Rear roof weather-strip bottom

CAUTION:
The aluminum retainer rail must be free of dirt and paint.

FRONT ROOF WEATHER-STRIP

Removal

1. Lower all side windows.
2. Open slightly the retractable hard top.
3. Insert a polystyrene pad between the retractable hard top and fix roof.
4. Remove the retractable hard top fuse to maintain the polystyrene pad. Refer to RF-28, "Component Parts and Harness Connector Location" .



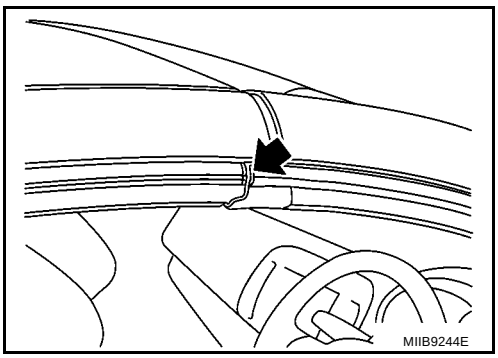
5. Take the front roof weather-strip from the front end and pull gently to detach it from the retainer rail.

Installation

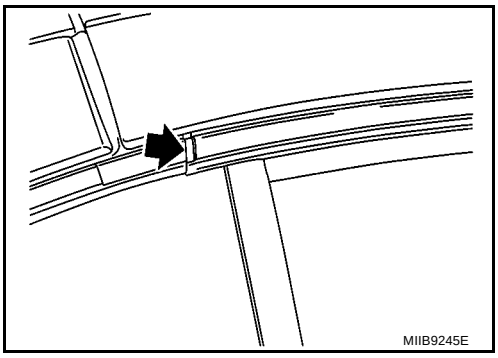
1. Apply tire soap between to the mating area between the front roof weather-strip and the retainer rail.
2. Apply pressure to weather-strip and insert it completely to the retainer rail.
3. Remove the polystyrene pad.
4. Install the retractable hard top and close the roof.

5. Slide the front roof weather-strip forward or rearward and ensure there is no gap between the front roof weather-strip and front pillar weather-strip, and also between the front roof weather-strip and rear roof weather-strip top.
6. Close all side windows and ensure the absence of the gap.
7. Operate the retractable hard top and make sure that weather-strip is not stressed.

CAUTION:
Make sure of absence of gaps and deviations between weather-strips.



8. Perform a water leakage test. Refer to RF-159, "WATER LEAKAGE TEST" .
9. Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .

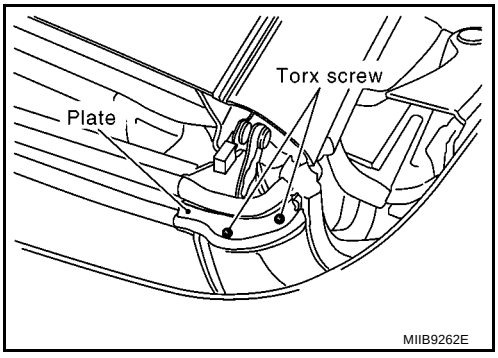


REAR ROOF WEATHER-STRIP TOP

Removal

NOTE:
This operation requires two workers.

1. Maintain the retractable hard top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .
2. Remove torx screws (2) from weather-strip plate LH and RH.
3. Detach the bottom end of the weather-strip from retainers, on both LH and RH side.
4. Pull gently to detach the weather-strip from the rear roof flange.
5. Detach the top edges of the weather-strip from retainers on both LH and RH corners, and pull gently to release the weather-strip from retainers.



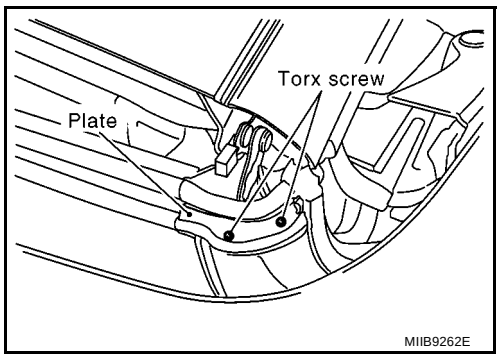
Installation

1. Clean consciously the rear roof flange and the retainer rail.

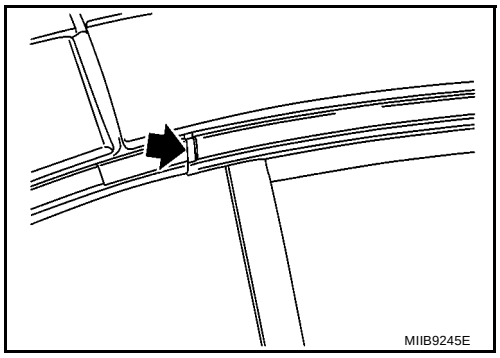
CAUTION:
The aluminium retainer rail must be free of dirt and paint.

2. Apply tire soap to the mating area between the rear roof weather-strip and the retainers rails.
3. Insert weather-strip into the both top edges of retainers rails LH and RH.
4. Insert weather-strip into the both bottom end of retainers rails LH and RH.
5. Apply pressure to weather-strip and insert it completely to retainers rails on both sides.
6. Install weather-strip onto the rear roof flange.

7. Ensure the good fitting of weather-strip and install weather-strip plates and torx screw (2) on both side.
8. Close the retractable hard top.

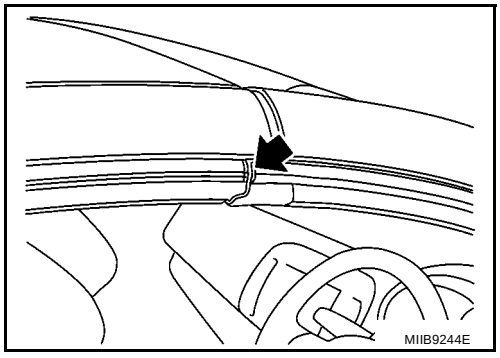


9. Ensure there is no gap between the front roof weather-strip and the rear roof weather-strip top.



10. If there is a gap, slide the front roof weather-strip forward or rearward and ensure there is no gap between the front roof weather-strip and front pillar weather-strip, and also between the front roof weather-strip and rear roof weather-strip top.

    CAUTION:
    Make sure of absence of gap and deviations between weather-strips.
11. Close all side windows and ensure the absence of the gap.
12. Operate the retractable hard top and make sure that weather-strip is not stressed.
13. Perform a water leakage test. Refer to RF-159, "WATER LEAKAGE TEST" .
14. Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .



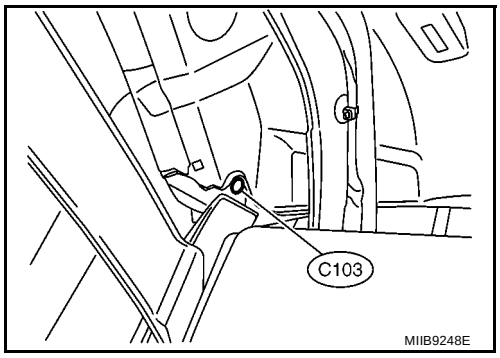
REAR ROOF WEATHER-STRIP BOTTOM

CAUTION:
Do not attempt to reuse the rear roof weather-strip bottom.

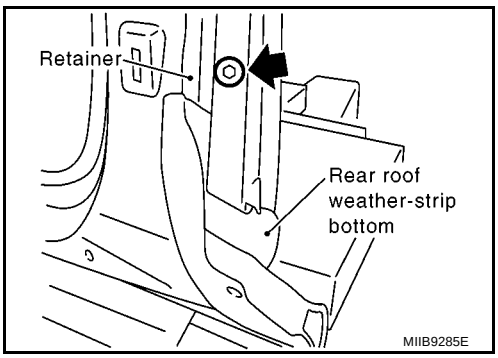
Removal

NOTE:
This operation requires two workers.

1. Maintain the retractable hard top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .
2. Remove clips (2) on the rear roof assembly.

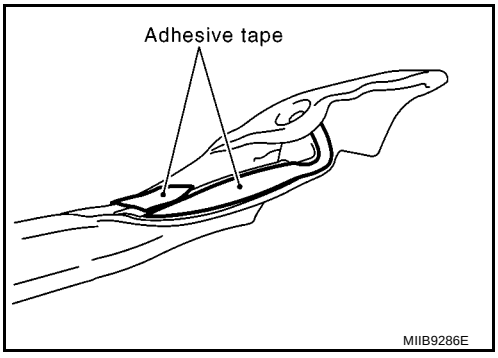


3. Detach the bottom end of rear roof weather-strip top from LH and RH retainers to access to the torx screw as shown.
4. Remove torx screws on both sides.
5. Take the rear roof weather-strip bottom from one end and pull to detach it from the rear roof.

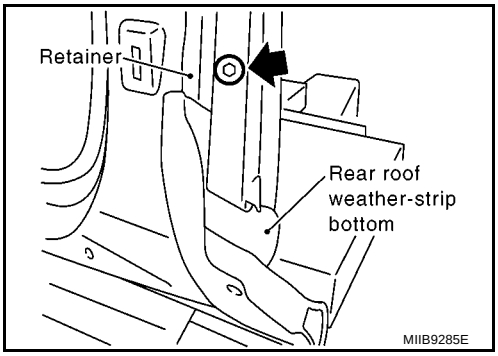


Installation

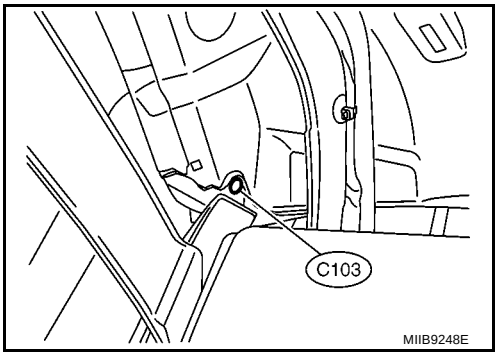
1. Clean consciously the rear roof flange and remove old sticking tape from the rear roof frame.
2. Apply tire soap onto the rear roof flange.
3. Remove double sided tapes from each side of the new weather-strip and stick them onto the rear roof.



4. Insert rear roof weather-strip bottom between retainers rails and rear roof frame, and install torx screws (1) on each side.



5. Reinstall clips (1) on each side of weather-strip.
6. Apply pressure to weather-strip and make sure of good fitting onto the rear roof flange.
7. Operate the retractable hard top to make sure weather-strip is not stressed.
8. Perform a water leakage test. Refer to RF-159, "WATER LEAKAGE TEST" .
9. Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .



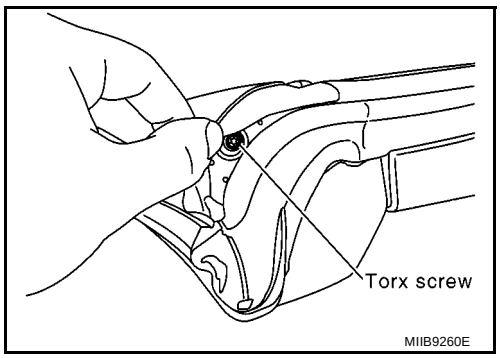
Removal and Installation of Front Pillars Sealing

EIS00E7Q

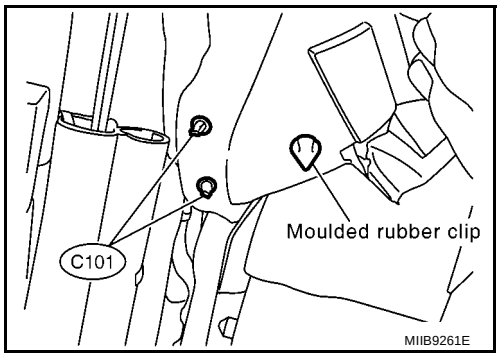
REMOVAL

1. Open completely the retractable hard top.
2. Remove the windshield finisher. Refer to EI-36, "WINDSHIELD FINISHER" .

3. Remove the torx screw (1) on both side of front pillar weather-strip as shown.



4. Using a clip remover, remove clips (2) maintaining the bottom end of the front pillars weather-strip to the body.
5. Take weather-strip from the bottom end and pull gently to detach it from the front pillar retainer rail, on both sides.
6. Pull weather-strip from the front pillars cross member flange.

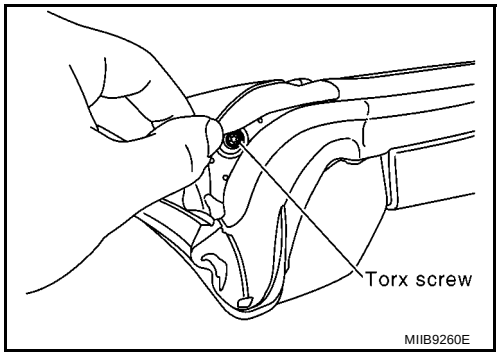


INSTALLATION

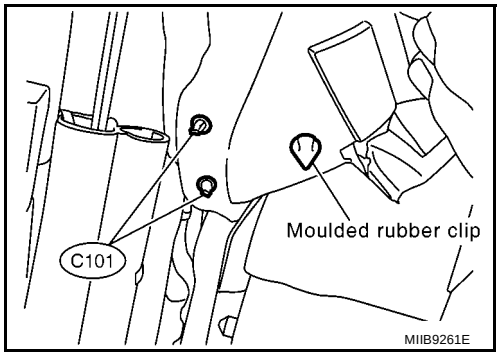
1. Clean mating area between weather-strip and the body.

   CAUTION:
   The aluminum retainer rail must be free of dirt and paint.
2. Apply tire soap to the mating area between weather-strip and the retainer rail.
3. Make sure of the presence of aluminum plates into the edge of weather-strip.
4. Insert weather-strip to the edge of front pillars.
5. Apply pressure to weather-strip and insert it completely to the front pillars retainer rails.
6. Install weather-strip onto the front pillars cross member flange.
7. Install torx screw (1) on both side of weather-strip.

   CAUTION:
   Be sure of the correct fitting and position of the front pillars weather-strips onto the body. Plates inside the front pillars weather-strip can cut weather-strip while closing the retractable hard top.

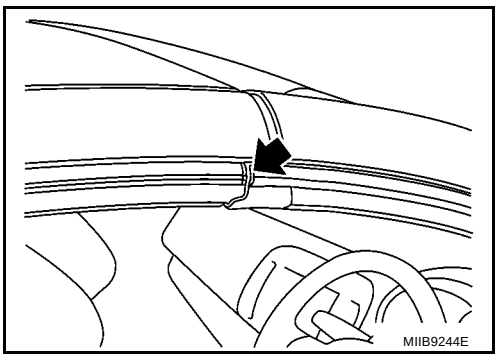


8. Insert weather-strip clips (2) into the body.

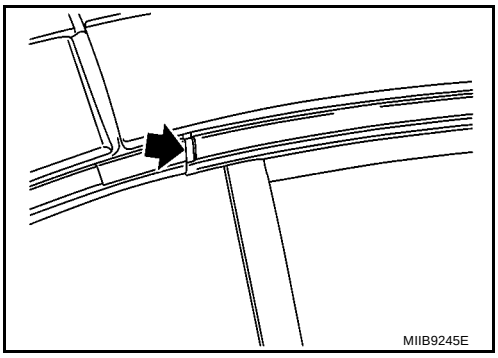


9. Slide the front roof weather-strip forward or rearward and ensure there is no gap between the front roof weather-strip and front pillars weather-strip, and also between the front roof weather-strip and rear roof weather-strip top.

CAUTION:
Make sure of absence of gap and deviations between weather-strips.


MIIB9244E

10. Close all side windows and ensure the absence of the gap.
11. Operate the retractable hard top and make sure that weather-strip is not stressed.
12. Perform a water leakage test. Refer to RF-159, "WATER LEAKAGE TEST" .
13. Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .

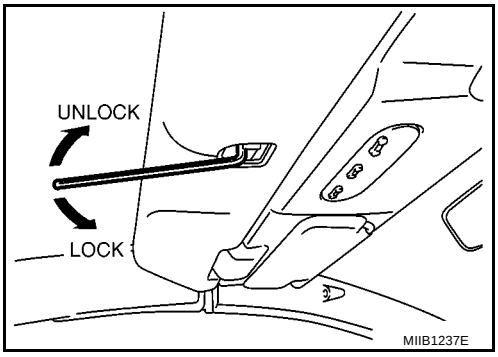

MIIB9245E

Removal and Installation of Front Roof

EIS00E5M

REMOVAL

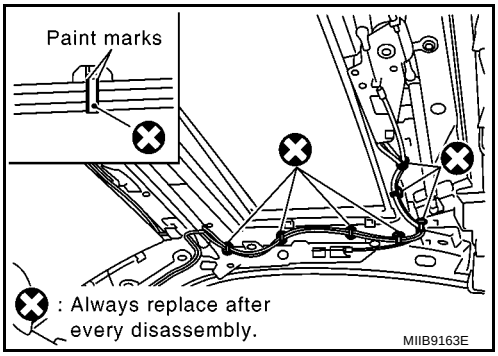
1. Lower all side window glasses.
2. Disconnect the both battery terminals starting by the negative.
3. Using a hexagonal wrench, manually unlock the Retractable Hard Top.
4. Remove Front Roof Headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
5. Remove Side Front Roof Headlining LH and RH. Refer to RF-171, "FRONT ROOF HEADLINING LH AND RH" .
6. Remove Front Roof Headlining RR. Refer to RF-171, "FRONT ROOF HEADLINING REAR" .



MIIB1237E

7. Locate the position of self lock bands on hydraulics hoses by meanings of paint marks.
8. Using a nipper, cut off self locking bands on the Front Roof and dispose.

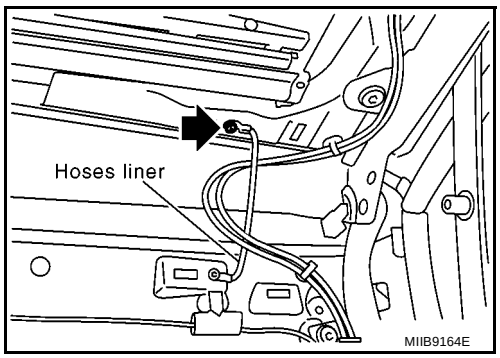
CAUTION:
Avoid any contact between the nipper and hoses.



MIIB9163E

9. Remove the screw securing the hoses liner to the Front Roof.
10. Remove Lock Assembly, and latch cylinder without disconnecting tubes. Refer to RF-192, "Removal and Installation of Lock Assembly" .

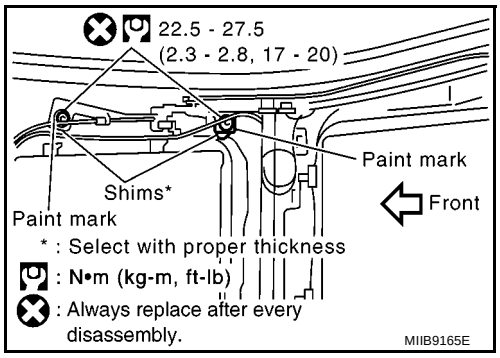
    CAUTION:
    Do not bend or twist hydraulic hoses sharply, or strongly pull them.
11. Remove Sunshade roller. Refer to RF-173, "Removal and Installation of Sunshade Assembly" .



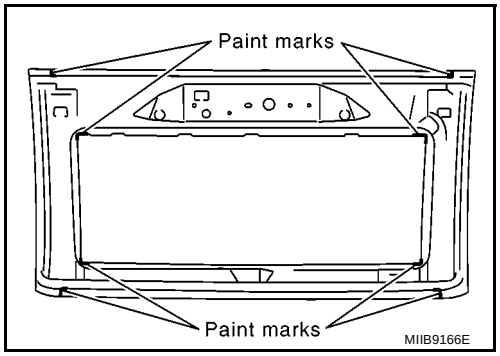
12. Using paint marks locate the positions of mountings bolts on Link Assembly LH and RH as shown.
13. Note the number of shims around each mountings bolt.
14. Prepare a suitable area covered with a polystyrene panel or thick shop clothes as default to allow the reception of the Front Roof.
15. Maintain the Retractable Hard Top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .

    NOTE:
    This operation requires two workers.
16. Remove mountings bolts LH and RH and shims from Front Roof.
17. Remove the Front Roof.

    NOTE:
    This operation requires three workers.



18. Remove Front Roof Weather-strips LH and RH. Refer to RF-174, "FRONT ROOF WEATHER-STRIP" .
19. If the Front Roof Glass is reused, locate the position of Front Roof Frame as shown.
20. Remove the Front Roof Glass. Refer to GW-92, "FRONT ROOF GLASS" .



INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the followings points.

- Reinstall the Front Roof Glass. Refer to GW-92, "FRONT ROOF GLASS" .

  NOTE:
  If the Front Roof Glass is broken, and Front Roof is reused, vacuum consciously the Front Roof Frame, and shake several times the Front Roof Frame to ensure that no small parts remain in the frame.
- Reinstall weather-strips and ensure their fittings into the Front Roof Retainers. Refer to RF-174, "FRONT ROOF WEATHER-STRIP" .
- Line up paint marks on the links assemblies LH and RH. Insert the exact number of shims around mountings bolts as removal, and provisory tighten old mounting bolts.
- Reinstall and adjust the Lock assembly. Refer to RF-192, "Removal and Installation of Lock Assembly" and RF-195, "ADJUSTMENT" .

  CAUTION:
  Do not bend or twist hydraulic hoses sharply, or strongly pull them.

- Reinstall and adjust both Unlocking cables. Refer to RF-191, "Removal and Installation of Unlocking Cable" .
- Reinstall hydraulics lines and the hoses liner and check their routings with paint marks.

CAUTION:
- **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
- **Do not let the ends of self-locking bands touch hoses.**

- Close the Retractable Hard Top and check if well adjusted. Refer to RF-181, "ADJUSTMENT" .
- Remove old mounting bolts each by each. Replace by new ones and tighten to the specified torque. Refer to RF-161, "Component Parts Drawing" .
- Before installation of headlining, manually operate the Retractable Hard Top and ensure there is no interference between parts.
- Reconnect the battery starting with the positive terminal.
- Operate the power window to make sure of correct operation.
- Check the side window glass adjustment. Refer to GW-176, "FITTING INSPECTION" .
- Check the front door glass adjustment. Refer to GW-172, "FITTING INSPECTION" .
- Operate the retractable Hard Top to make sure of correct operation.
- Perform a water leakage test. Refer to RF-159, "WATER LEAKAGE TEST" .
- Perform a rattle test. Refer to RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .
- Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .

ADJUSTMENT

CAUTION:

The clearance values are given for information purposes. When making adjustments, certain rules must be observed:

- **maintain symmetry with respect to the opposite side,**
- **After adjustment of an element, check that adjustment of peripheral elements still correct. Refer to RF-167, "FITTING ADJUSTMENT" .**

NOTE:

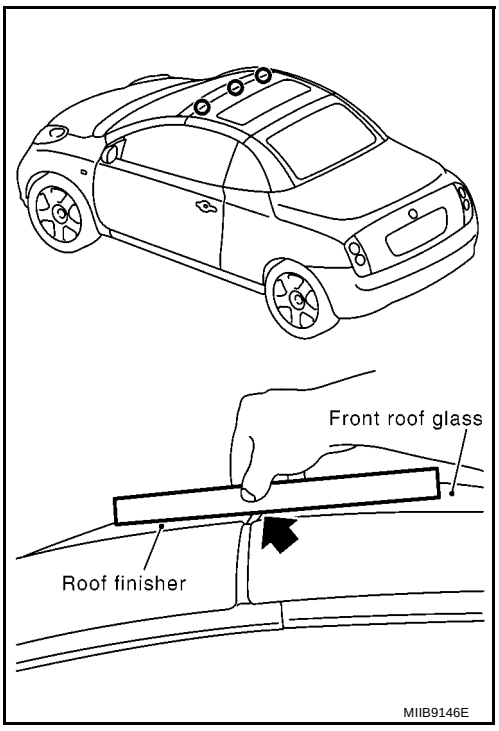
This operation requires two workers.

1. Park the vehicle on a flat ground.
2. Lower all side window glasses.
3. Remove front roof headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
4. Remove front roof headlining RR. Refer to RF-171, "FRONT ROOF HEADLINING REAR" .
5. Remove front roof headlining LH and RH. Refer to RF-171, "FRONT ROOF HEADLINING LH AND RH" .
6. Note the number of shims around each mounting bolts.

7. Measure the flatness deviation “a” between the roof finisher and front roof glass as shown.

   “a” = 0.5 - 3.5 mm (0.020 - 0.138 in)

   NOTE:
   - The front roof glass level must be lower than the roof finisher level.
   - For a new front roof (without front roof glass), adjust the flatness deviation after the adjustments of gaps and installation of the front roof glass). Refer to RF-169, "WORKFLOW" .



8. If flatness deviation is out of specification, unscrew the torx bolts (2) on each side of front roof and insert or remove adjusting shims to obtain a flatness deviation within the specification range.

   Shim thickness (service part):

   1mm (0.039 in)

   Shim thickness (vehicle equipped):

   1mm (0.039 in)

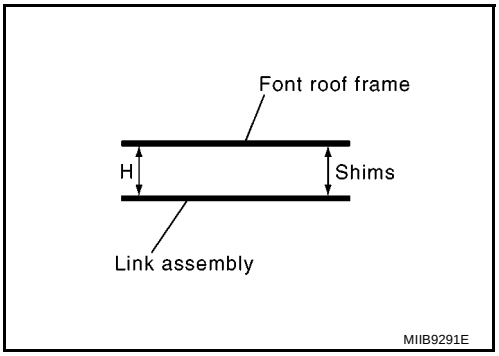
   2mm (0.079 in)

   Distance between the link and front roof frame

   Min: 0 mm (0.000 in)

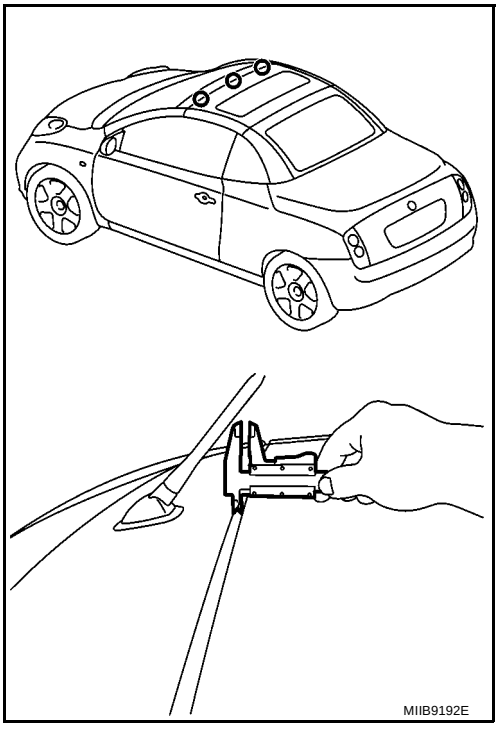
   Nominal: 2mm (0.079 in)

   Max: 4mm (0.157 in)



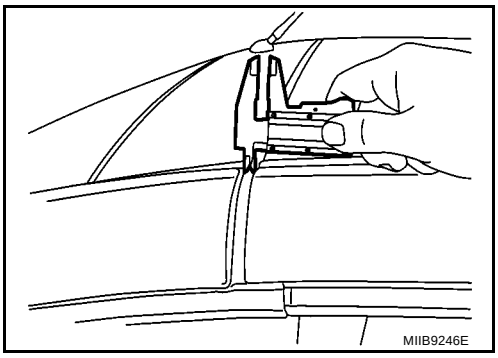
9. Install provisory old torx bolts.
10. Check the gaps between the front roof glass and roof finisher.

    “e” = 7 - 11 mm (0.276 - 0.433 in)

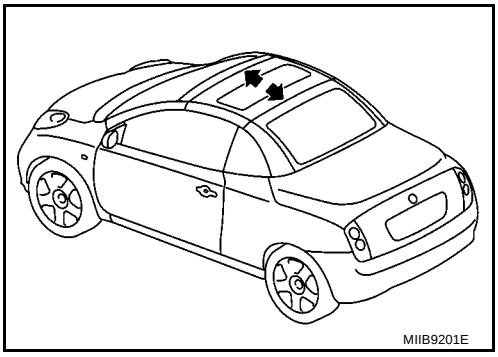


NOTE:
For a new roof (without front roof glass) adjust the gap between the front roof and front pillar as shown.

"c" = 7 - 11 mm (0.276 - 0.433 in)



11. If the gap is out of specification range, unscrew the torx bolts (2) on each side of front roof and slide the front roof to forward or rearward to obtain the same gaps as shown within the specification range.
12. Install provisory old torx bolts in this position.

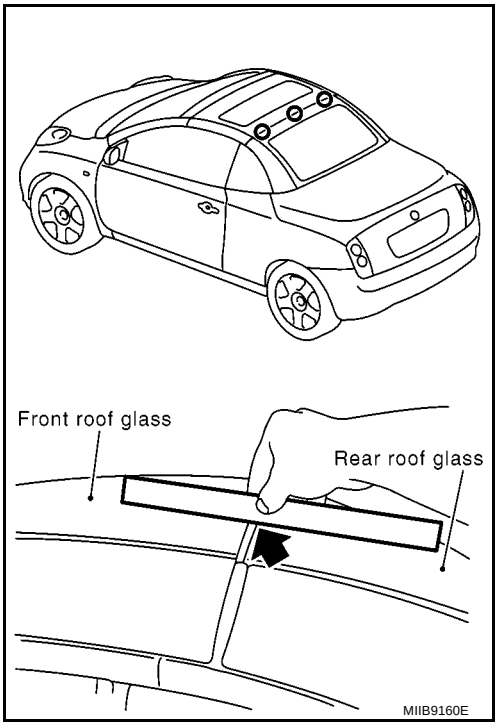


13. Measure the flatness deviation "b" between the front roof glass and rear roof glass as shown.

"b" = 0.5 - 3.5 mm (0.020 - 0.138 in)

NOTE:
The rear roof glass level must be lower than the front roof level.

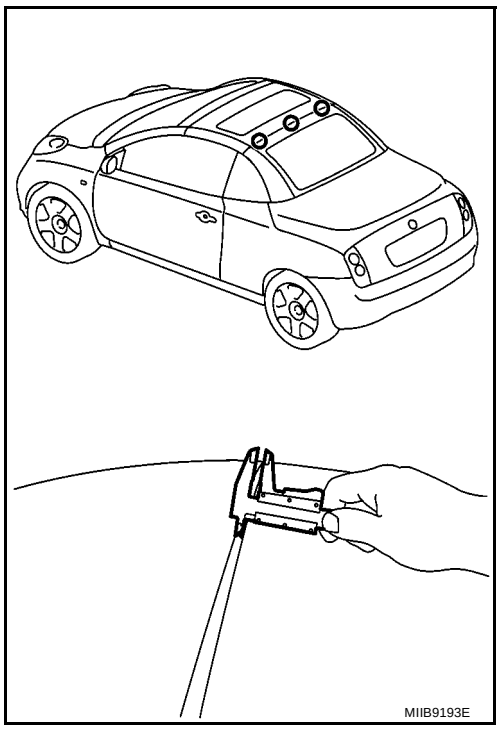
14. If flatness deviation is out of specification range, adjust the rear roof. Refer to RF-186, "ADJUSTMENT" .



15. Check the gaps between the front roof glass and rear roof glass.

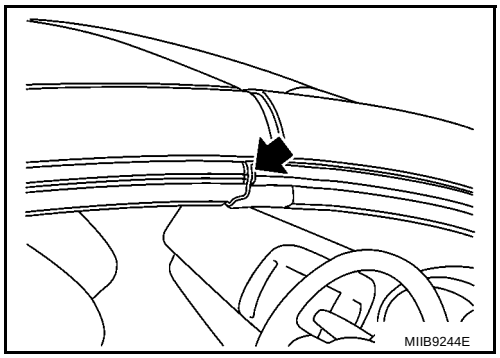
    "e" = 7 - 11 mm (0.276 - 0.433 in)

16. If the gap is out of specification range, adjust the rear roof. Refer to RF-186, "ADJUSTMENT" .

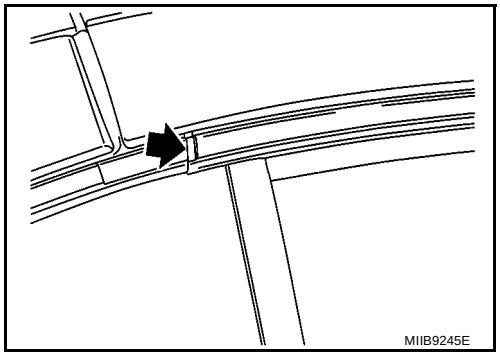


17. Slide the front roof weather-strip forward or rearward and ensure there is no gap between the front roof weather-strip and front pillar weather-strip, and also between the front roof weather-strip and rear roof weather-strip top.
18. Close all side windows and ensure the absence of gap.

    CAUTION:
    Make sure of absence of gap and deviations between weather-strips.



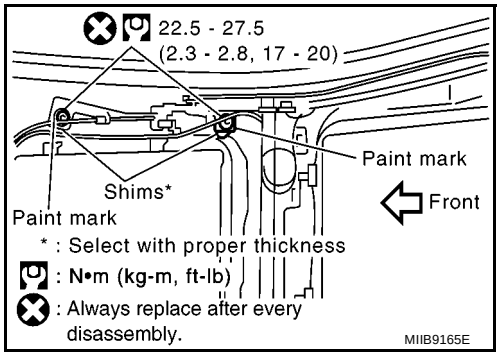
19. Test locking and unlocking several times using the open and close switch.
20. Adjust unlocking cables if necessary. Refer to RF-192, "ADJUSTMENT" .
21. Operate the retractable hard top and ensure that weather-strips are not stressed.
22. Remove old torx bolts one by one and replace by new ones.



23. Tighten new bolts to the specified torque.

    : 22.5 - 27.5 N·m (2.3 - 2.8 kg-m, 17-20 ft - lb)

24. Check the adjustment of side window glass. Refer to GW-176, "FITTING INSPECTION" .
25. Check the adjustment of the door glass. Refer to GW-172, "FITTING INSPECTION" .
26. Visually check for a water leakage. Refer to RF-159, "WATER LEAKAGE TEST" .
27. Reinstall front roof headlinings, and operate the retractable hard top to ensure the absence of interferences between parts.



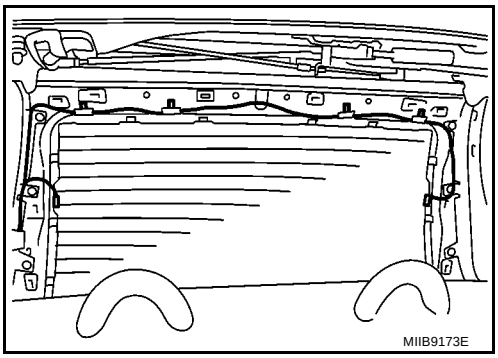
28. Make a road test with the retractable hard top in closed position, and check for wind noise. Refer to Refer to RF-152, "WIND NOISE TEST" .

Removal and Installation of Rear Roof

EIS00E5N

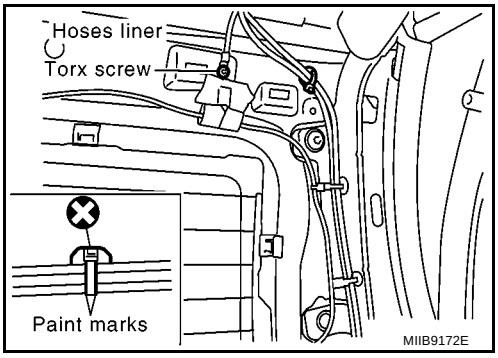
REMOVAL

1. Lower all side window glasses.
2. Disconnect the both battery terminals starting by the negative.
3. Remove the Rear Roof Headlining FR. Refer to RF-172, "REAR ROOF HEADLINING FRONT" .
4. Remove Rear Roof Headlining LH and RH. Refer to RF-172, "REAR ROOF HEADLINING LH AND RH" .
5. Disconnect the rear window defogger connectors LH & RH and unclip harness from the Rear Roof.



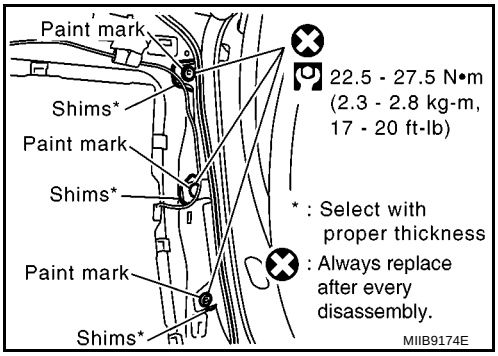
6. Locate the position of self-locking bands on hydraulics hoses by meaning of paint marks.
7. Using a nipper, cut off the self-locking band on the Rear Roof.

   CAUTION:
   Avoid any contact between the nipper and hoses.
8. Remove the screw securing the hoses liner to the Rear Roof.



9. Using Paint marks, locate the positions of mountings bolts on Link assembly LH and RH as show.
10. Note the number of shims around each mounting bolts.
11. Prepare a suitable area covered with a polystyrene panel or thick shop clothes as default to allow the reception of the Rear Roof.
12. Untighten mountings bolts and remove adjusting shims.

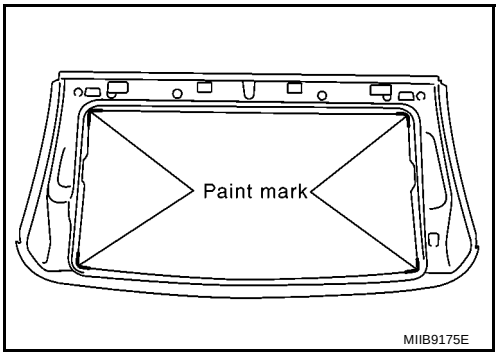
    NOTE:
    In this position adjusting shims can easily fall.
13. Maintain the Retractable Hard Top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .



14. Remove mountings bolts LH and RH and remove the Rear Roof from the rear side of the vehicle.

    NOTE:
    This operation requires three workers.
15. Remove the Rear Parcel-Shelf Finisher. Refer to RF-173, "Removal and Installation of Rear Parcel Shelf Finisher" .
16. Remove the Rear Roof weather-strip bottom, and dispose. Refer to RF-176, "REAR ROOF WEATHER-STRIP BOTTOM" .
17. Remove the Rear Roof weather-strip top. Refer to RF-175, "REAR ROOF WEATHER-STRIP TOP" .

18. If the Rear Roof Glass is reused, locate the position of rear Roof Frame as shown.
19. Remove the Rear Roof Glass. Refer to GW-94, "REAR ROOF GLASS" .



INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the followings points.

- Reinstall the Rear Roof Glass. Refer to GW-94, "REAR ROOF GLASS" .

  NOTE:
  If the Rear Roof Glass is broken, and Rear Roof is reused, vacuum consciously the Rear Roof Frame, and shake several times the Rear Roof Frame to ensure that no small parts remain in the frame.
- Reinstall weather-strips and ensure their fittings into the Rear Roof Retainers. Refer to RF-175, "REAR ROOF WEATHER-STRIP TOP" .

  CAUTION:
  Rear Roof Weather-strip Bottom is not reusable. Do not attempt to reuse it.
- Line up paint marks on the links assemblies LH and RH. Insert the exact number of shims around mountings bolts as removal, and provisory tighten old mounting bolts.
- Reinstall hydraulics lines and the hoses liner and check their routings with paint marks.

  CAUTION:
  - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
  - **Do not let the ends of self-locking bands touch hoses.**
- Close the Retractable Hard Top and check if well adjusted. Refer to RF-186, "ADJUSTMENT" .
- Remove old bolts each by each. Replace by new ones and tighten to the specified torque. Refer to RF-161, "Component Parts Drawing" .
- Before installation of headlining, manually operate the Retractable Hard Top and ensure there is no interference between parts.
- Reconnect the battery starting with the positive terminal.
- Operate the power window to make sure of correct operation.
- Check side window glass adjustment. Refer to GW-176, "FITTING INSPECTION" .
- Check front door glass adjustment. Refer to GW-172, "FITTING INSPECTION" .
- Operate the retractable Hard Top to make sure of correct operation.
- Check the operation of rear window defogger.
- Perform a water leakage test. Refer to RF-159, "WATER LEAKAGE TEST" .
- Perform a rattle test. Refer to RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .
- Perform a wind noise test. Refer to RF-152, "WIND NOISE TEST" .

ADJUSTMENT

CAUTION:
The clearance values are given for information purposes. When making adjustments, certain rules must be observed:

- **maintain symmetry with respect to the opposite side,**
- **After adjustment of an element, check that adjustment of peripheral elements still correct. Refer to RF-167, "FITTING ADJUSTMENT" .**

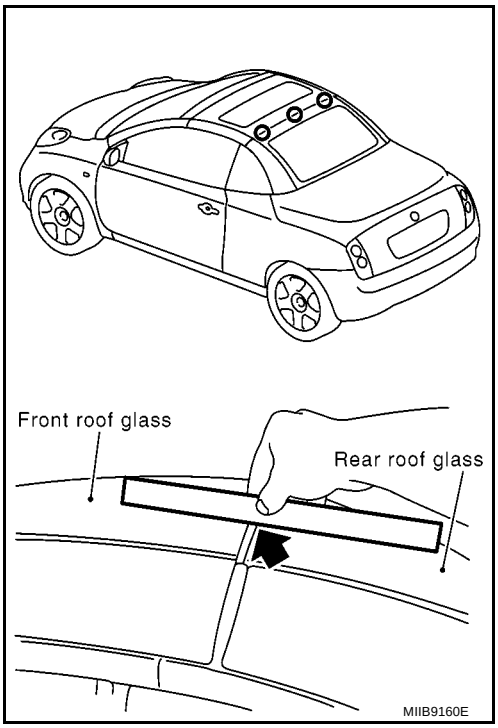
NOTE:
This operation requires two workers.

1. Park the vehicle on a flat ground.
2. Lower all side window glasses.

3. Check or adjust the flatness deviation between the front roof glass and roof finisher. Refer to RF-181, "ADJUSTMENT" .
4. Check or adjust the gap between the front roof glass and roof finisher. Refer to RF-181, "ADJUSTMENT" .
5. Remove rear roof headlining FR. Refer to RF-172, "REAR ROOF HEADLINING FRONT" .
6. Remove rear roof headlining LH and RH. Refer to RF-172, "REAR ROOF HEADLINING LH AND RH" .
7. Note the number of shims around each mounting bolts.
8. Measure the flatness deviation “a” between the roof finisher and front roof glass as shown.

   “b” = 0.5 -3.5 mm (0.020 - 0.138 in)

   NOTE:
   - The rear roof glass level must be lower than the front roof finisher level.
   - For a new rear roof (without front roof glass), adjust the flatness deviation after the adjustments of gaps and installation of the rear roof glass). Refer to RF-169, "WORKFLOW" .



9. If flatness deviation is out of specification, unscrew the torx bolts (3) on each side of front roof and insert or remove adjusting shims to obtain a flatness deviation within the specification range.

   NOTE:
   Rear roof adjusting shims fall easily when torx bolts are Untighten.

   Shim thickness (service part):

   1mm (0.039 in)

   Shim thickness (vehicle equipped):

   1mm (0.039 in)

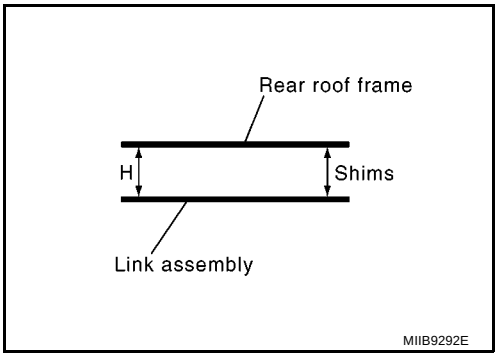
   2mm (0.079 in)

   Distance between the link and front roof frame

   Min: 0 mm (0.000 in)

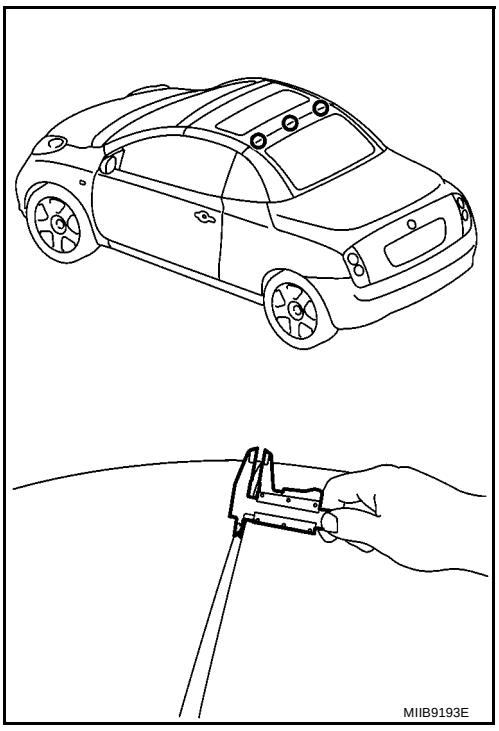
   Nominal: 2mm (0.079 in)

   Max: 4mm (0.157 in)

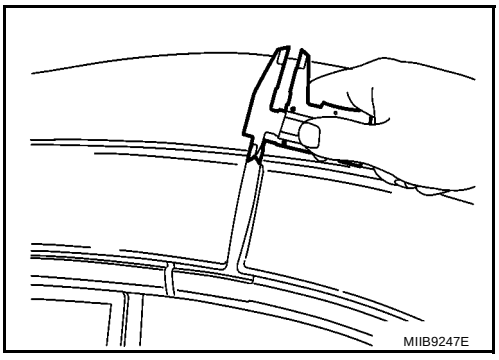


10. Install provisory old torx bolts.

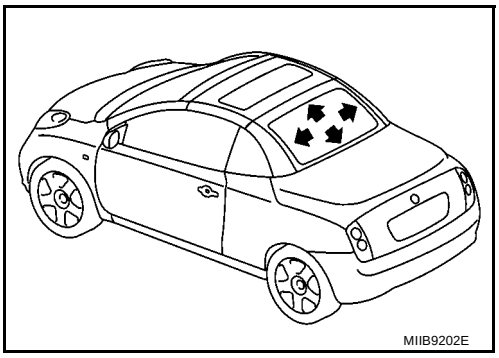
11. Check the gaps between the front roof glass and rear roof glass.
    "g" = 6 - 7 mm (0.236 - 0.276 in)



NOTE:
For a new rear roof (without rear roof glass) adjust the gap between the front roof and rear roof as shown.
"f" = 6 - 8 mm (0.24 - 0.31 in)

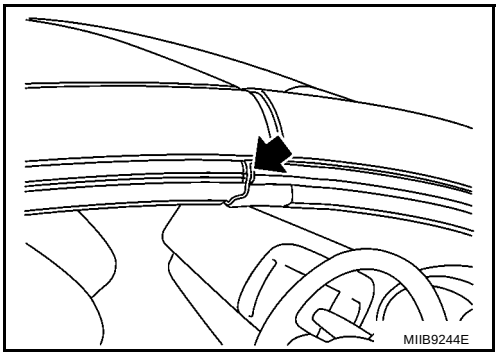


12. If the gap is out of specification range, unscrew the torx bolts (3) on each side of rear roof and slide the rear roof to forward or rearward to obtain the same gaps as shown within the specification range.
13. Slide the rear roof in the lateral direction to obtain the same flatness deviation between the front roof frame and rear roof frame on the left and right side.
14. Install provisory old torx bolts in this position.

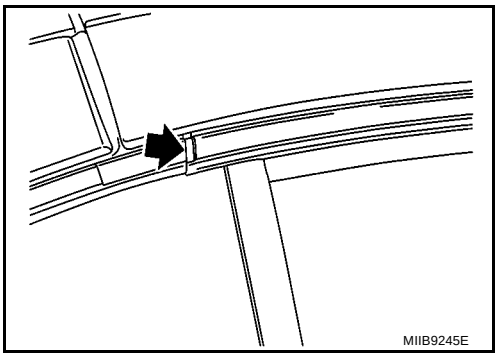


15. Slide the front roof weather-strip forward or rearward and ensure there is no gap between the front roof weather-strip and front pillar weather-strip, and also between the front roof weather-strip and rear roof weather-strip top.
16. Close all side windows and ensure the absence of gap.

    CAUTION:
    Make sure of absence of gap and deviations between weather-strips.

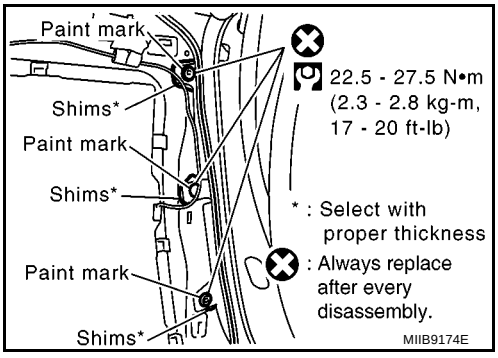


17. Test locking and unlocking several times using the open and close switch.
18. Operate the retractable hard top and ensure that weather-strips are not stressed.
19. Remove old torx bolts one by one and replace by new ones.



20. Tighten new bolts to the specified torque.

    : 22.5 - 27.5 N·m (2.3 - 2.8 kg-m, 17-20 ft - lb)



21. Check the adjustment of side window glass. Refer to GW-176, "FITTING INSPECTION" .
22. Check the adjustment of the door glass. Refer to GW-172, "FITTING INSPECTION" .
23. Visually check for a water leakage. Refer to RF-159, "WATER LEAKAGE TEST" .
24. Reinstall rear roof headlinings, and operate the retractable hard top to ensure the absence of interferences between parts.
25. Make a road test with the retractable hard top in closed position, and check for wind noise. Refer to Refer to RF-152, "WIND NOISE TEST" .

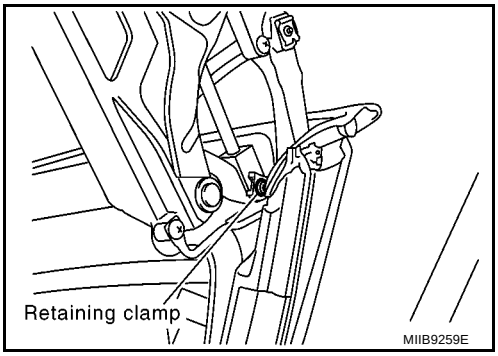
Removal and Installation of Link Assembly

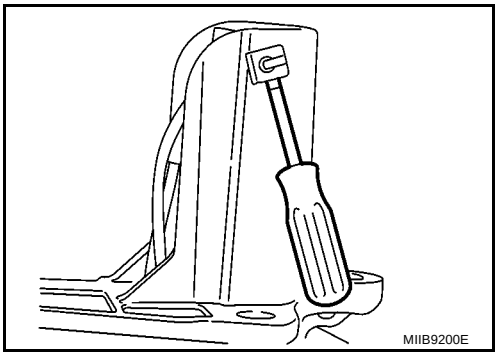
EIS00E5O

REMOVAL

1. Remove the retractable hard top assembly. Refer to RF-167, "Adjustment of Retractable Hard Top Assembly" .
2. Remove the subframe from the link assembly LH and RH. Refer to BL-252, "Removal and Installation of Trunk Lid Assembly" .
3. Remove all retractable hard top headlining. Refer to RF-170, "Removal and Installation of Headlining" .
4. Remove retaining upper and lower clamps and fastening bolts on the main drive cylinder LH and RH as shown.

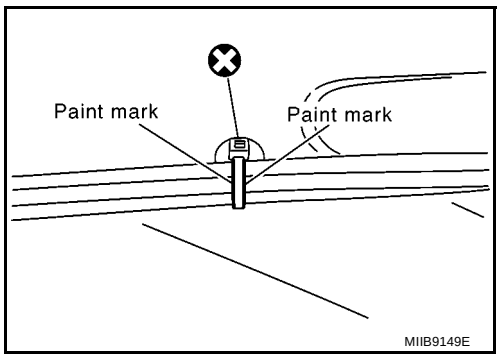
   CAUTION:
   Do not bend or twist hydraulic hoses sharply, or strongly pull them.

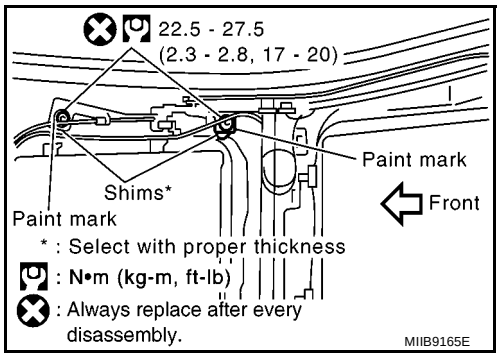




5. Locate the position of self lock bands on hydraulics hoses by meanings of paint marks.
6. Using a nipper, cut off self locking bands on the link assembly and dispose.

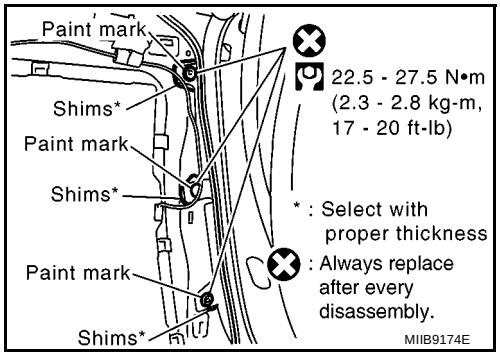
   CAUTION:
   Avoid any contact between the nipper and hoses.
7. Using a nipper, cut off self locking bands on securing the defogger harness.
8. Release unlocking cables LH and RH from the both link assemblies.
9. Note the number of adjusting shims between the link assembly and front and rear roof to install them in their original position.
10. Remove torx bolts (2) securing the front roof to the link assembly.





11. Remove torx bolts (3) securing the rear roof to the link assembly.

    NOTE:
    - When both link assemblies have to be replaced, provisory remove one and replace by a new one, before removing the other.
    - Install link assembly provisory to the front and rear roof using old torx bolts.



INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the followings points:

- Secure the hydraulic hoses to the link assembly in their original position.

  CAUTION:
  - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
  - **After installation, hydraulic hoses must not move towards self-locking bands.**
  - **Do not let the ends of self-locking bands touch hydraulic hoses.**
- Insert the same numbers of shims between the link assembly, front and rear roof.
- Adjust the front roof. Refer to RF-181, "ADJUSTMENT" .
- Adjust the rear roof. Refer to RF-186, "ADJUSTMENT" .
- Adjust the unlocking cables. Refer to RF-192, "ADJUSTMENT" .
- Adjust the trunk lid assembly. Refer to BL-251, "TRUNK LID" .

Removal and Installation of Unlocking Cable

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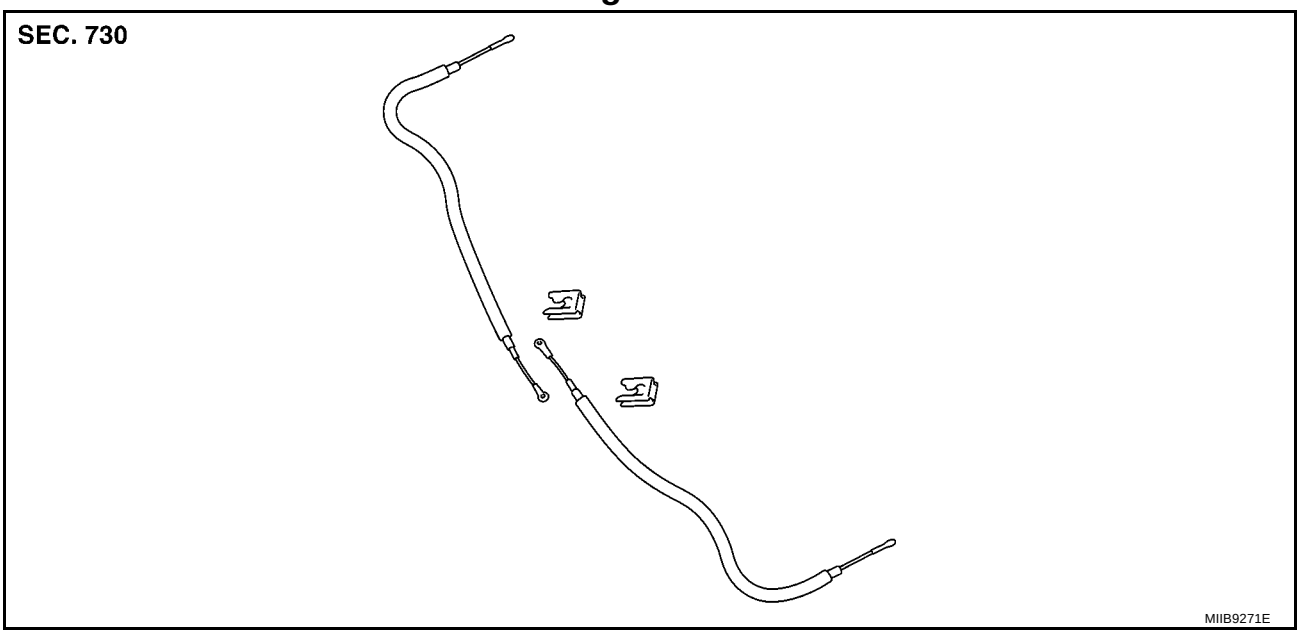
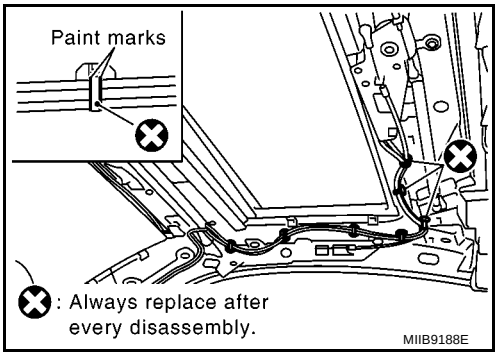


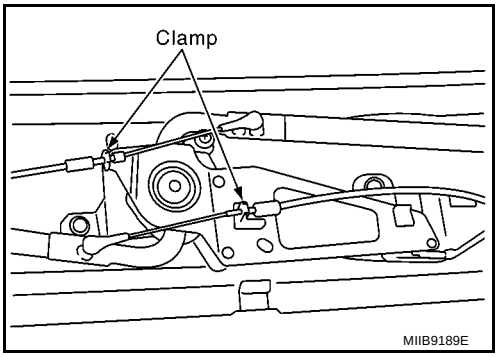
REMOVAL

1. Remove Front Roof Headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
2. Remove Front Roof Headlining RR. Refer to RF-171, "FRONT ROOF HEADLINING REAR" .
3. Remove Front Roof Headlining LH and RH. Refer to RF-171, "FRONT ROOF HEADLINING LH AND RH" .
4. For LH side, locate the position of self lock bands on hydraulics hoses by meanings of paint marks.
5. Using a nipper, cut off self locking bands on unlocking cables and dispose.

   CAUTION:
   - **Avoid any contact between the nipper and hoses.**
   - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**



6. Remove clamp from unlocking cable.
7. Pull down the ball joint to release unlocking cable from the ball pivot on the lock assembly.
8. Release the end of the cable from the link assembly.



INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the followings points:

- Reinstall hydraulics lines and check their routings with paint marks.

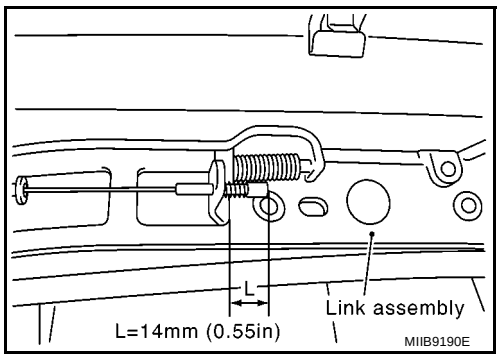
  CAUTION:
  - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
  - **Do not let the ends of self-locking bands touch hoses**

- **After installation, hydraulic hoses must not move towards self-locking bands.**
- Adjust unlocking cables. Refer to RF-192, "ADJUSTMENT" .
- Operate the retractable Hard Top to make sure of correct operation.
- Perform a squeak and rattle test. Refer to RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .

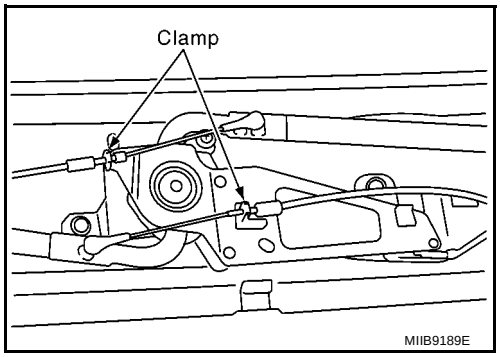
ADJUSTMENT

1. Remove Front Roof Headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
2. Remove Front Roof Headlining RR. Refer to RF-171, "FRONT ROOF HEADLINING REAR" .
3. Remove Front Roof Headlining LH and RH. Refer to RF-171, "FRONT ROOF HEADLINING LH AND RH" .
4. Check the distance between the end of unlocking cable and the beginning of the cut out on the link assembly on both side LH and RH.

   Unlocking cable adjustment: L= 14 mm (0.551 in)

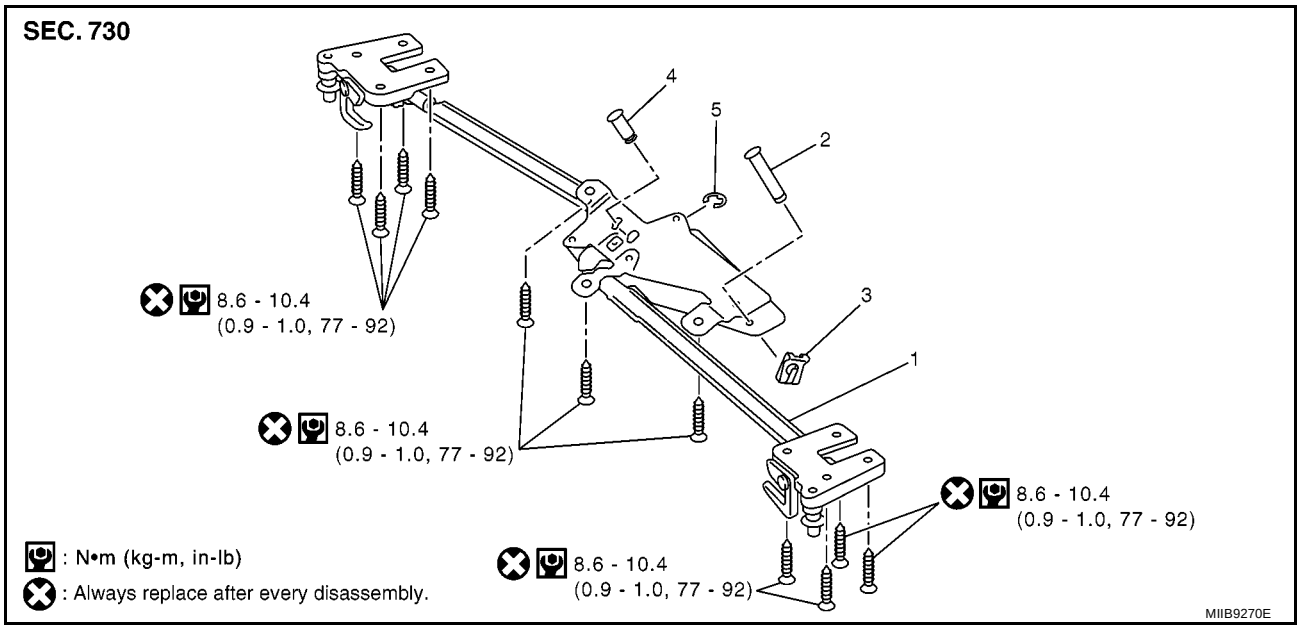


5. If out of specification, remove the unlocking clamp on the lock assembly and adjust unlocking cable.
6. Operate the retractable Hard Top to make sure of correct operation.
7. Perform a squeak and rattle test. Refer to RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .



Removal and Installation of Lock Assembly

EIS00E5Q



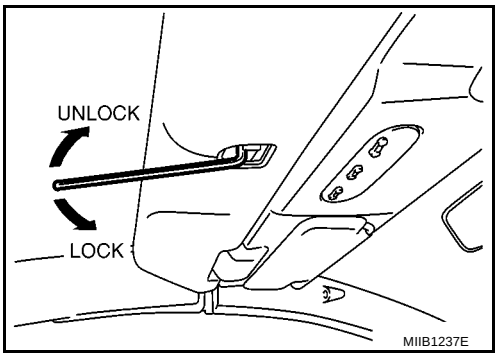
1. Lock assembly
2. Fastening bolt*
3. Retaining clamp*
4. Fastening bolt*
5. Clamp*

*: Refer to Hydraulic system

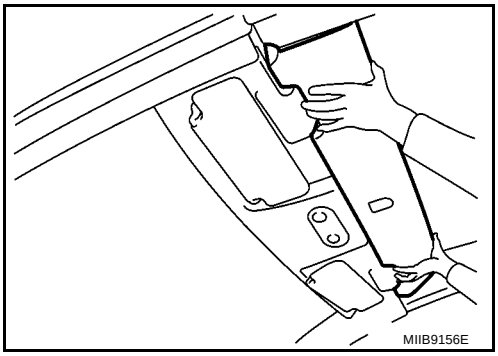
CAUTION:
Do not disassemble the lock assembly.

REMOVAL

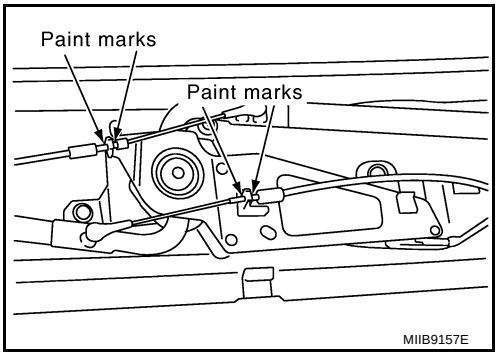
1. Park the vehicle on a flat ground.
2. Lower all side window glasses.
3. Using a hexagonal wrench, manually unlock the retractable hard top.



4. Remove the front roof headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
5. Maintain the retractable hard top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .



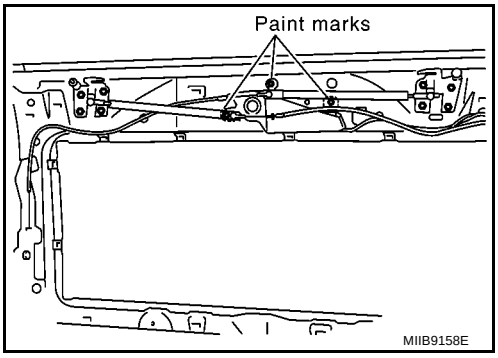
6. Put paint marks to locate the position of clamps on the threaded area of unlocking cables. Remove clamps (2) from unlocking cables and release cable from the lock assembly.



7. Remove bolts from the lock assembly as shown, and partially remove the lock assembly.

   NOTE:
   If the lock assembly is reused, put paint marks to restore the original position as shown.

   CAUTION:
   - **Do not attempt to loose locking nut on the connecting rod.**
   - **The lock assembly is not serviceable. Do not attempt to disassemble it.**



8. Partially remove the latch cylinder without disconnecting tubes. Refer to RF-212, "Removal and Installation of Latch Cylinder" .

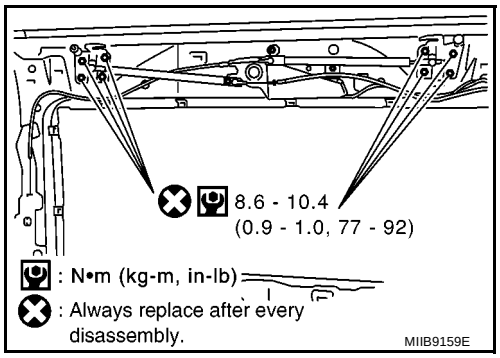
   CAUTION:
   - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
9. Remove the lock assembly.

INSTALLATION

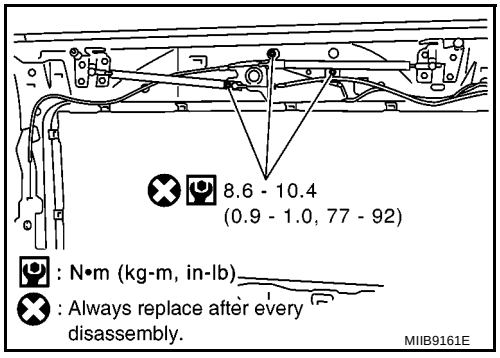
1. Reinstall the latch cylinder into the lock assembly. Refer to RF-213, "INSTALLATION" .

   CAUTION:
   - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**

2. Install new mounting screws and tighten to the torque.
3. Adjust the lock assembly.
   - If the lock assembly is reused, align up paint marks with those on the front roof.
   - If a new lock assembly is installed, adjust the lock assembly. Refer to RF-195, "ADJUSTMENT" .



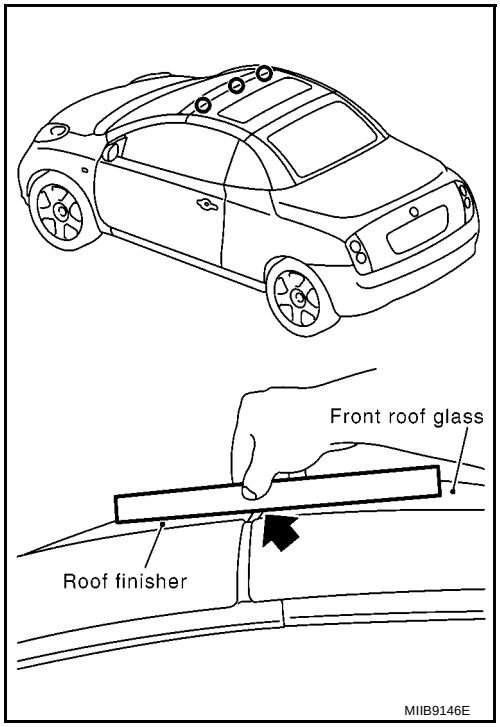
4. Pre-tighten lock centre plate screws using provisory old screws.
5. Manually lock the roof, and check there is no strain when locking.
6. Check if the retractable hard top sits correctly on the front pillars weather-strip.



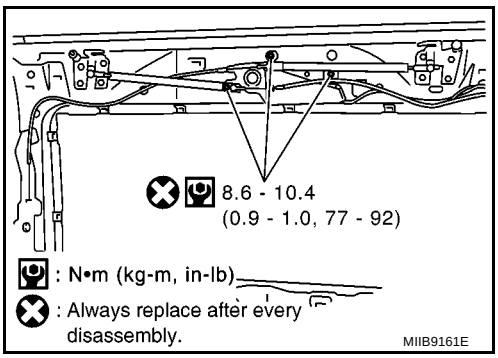
7. Lock completely the retractable hard top and check the flatness deviation “a” between the front roof glass and roof finisher.

   “a” = 0.5 – 3.5 mm (0.020 – 0.138 in)

   NOTE:
   The front roof glass level must be lower than the roof finisher level.
   If out of specification, adjust the front roof, refer to RF-181, "ADJUSTMENT" , or latch assembly in height, refer to RF-198, "INSTALLATION" .
8. Test locking and unlocking several times using the open and close switch.
9. Adjust unlocking cables if necessary. Refer to RF-192, "ADJUSTMENT" .



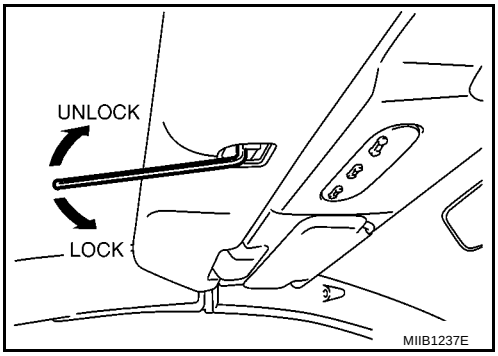
10. Remove centre plate old mounting screws each by each, replace by new ones and tighten to the torque.
11. Reconnect the battery starting with the positive terminal, and operate the retractable hard top several times to make sure of correct operation.
12. Visually check for a water leakage. Refer to RF-159, "WATER LEAKAGE TEST" .
13. Reinstall the front roof headlining FR.
14. Make a road test with the retractable hard top in closed position, and check for wind and rattle noise. Refer to RF-152, "WIND NOISE TEST" and RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .



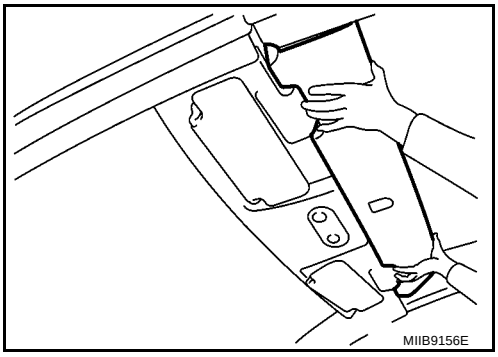
ADJUSTMENT

CAUTION:
Do not disassemble the lock assembly.

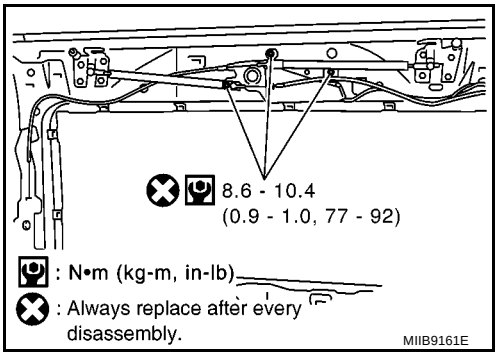
1. Park the vehicle on a flat ground.
2. Lower all side window glasses.
3. Using a hexagonal wrench, manually unlock the retractable hard top.



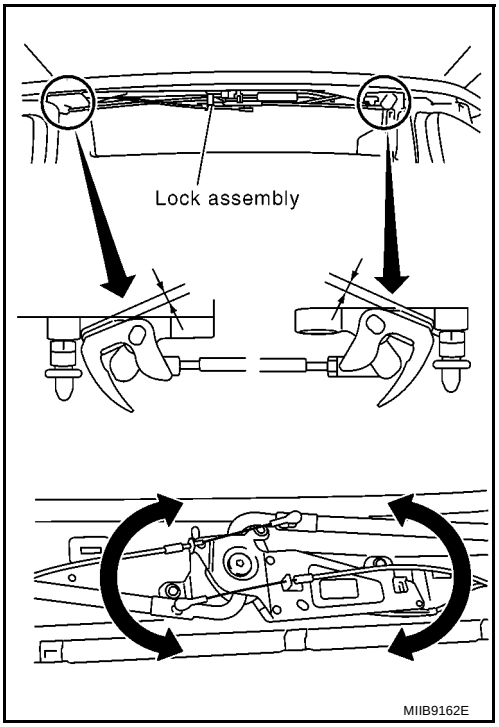
4. Remove the front roof headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
5. Maintain the retractable hard top in the intermediate position. Refer to RF-162, "Intermediate Position for Service" .



6. Unscrew 3 centre plate bolts.



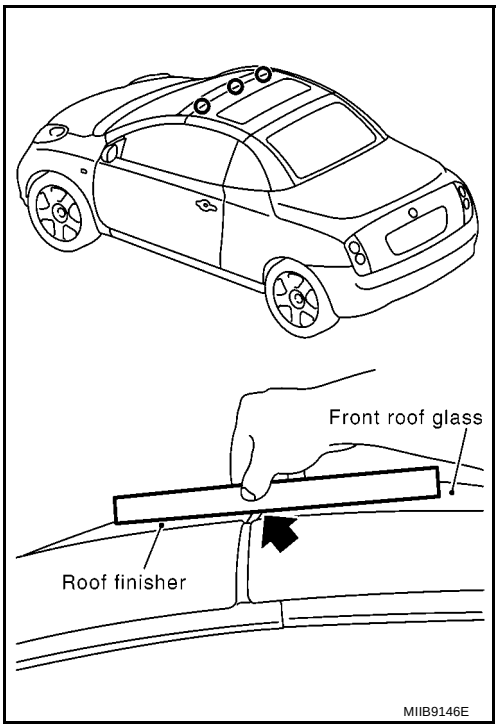
7. Rotate the lock centre plate as shown to have the same gap on left and right side.
8. Tighten provisory lock center plate with old screws.
9. Manually lock the roof, and check there is no strain when locking.
10. Check if the retractable hard top sits correctly on the front seal.



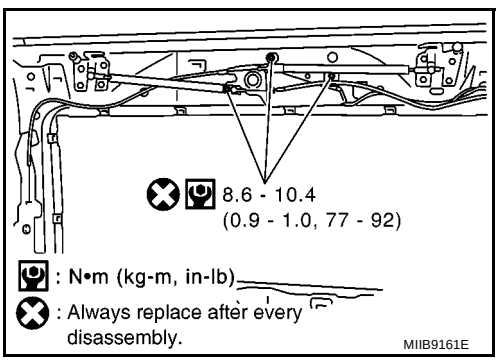
11. Lock completely the retractable hard top and check the flatness deviation “a” between the front roof glass and roof finisher.

    “a” = 0.5 – 3.5 mm (0.020 – 0.138 in)

    NOTE:
    The front roof glass level must be lower than the roof finisher level.
    If out of specification, adjust the front roof, refer to RF-181, "ADJUSTMENT" , or latch assembly in height, refer to RF-198, "INSTALLATION" .
12. Test locking and unlocking several times using the open and close switch.
13. Adjust unlocking cables if necessary. Refer to RF-192, "ADJUSTMENT" .



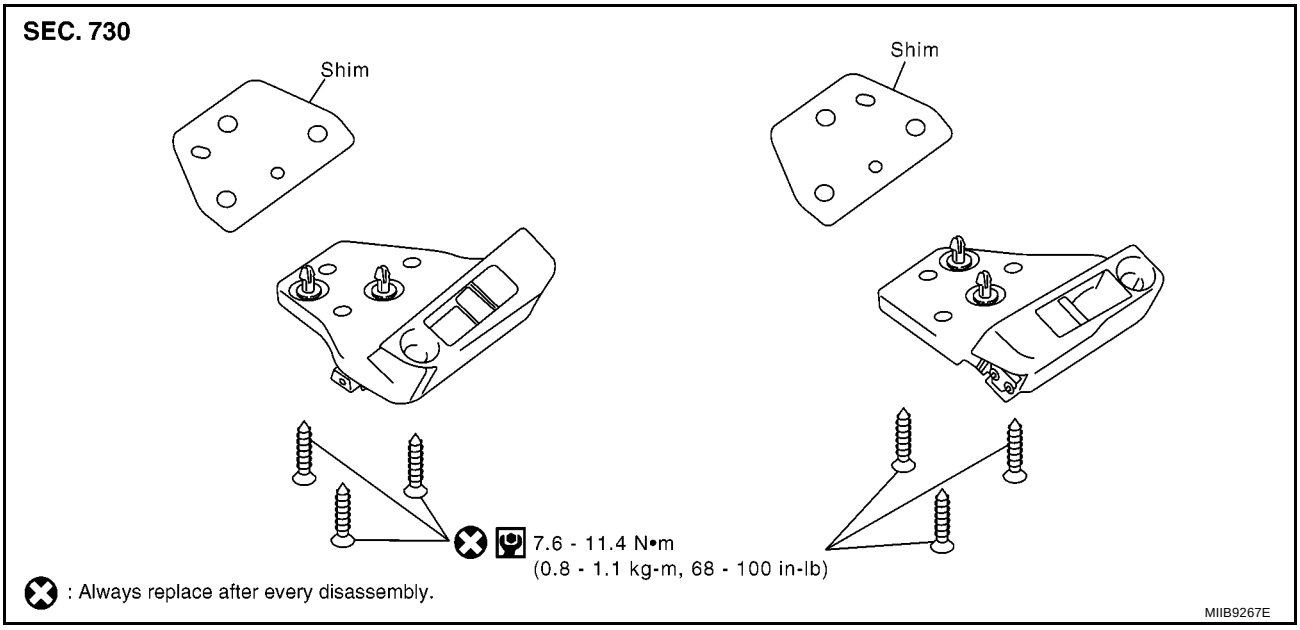
14. Remove centre plate old mounting screws each by each, replace by new ones and tighten to the torque.
15. Reconnect the battery starting with the positive terminal, and operate the retractable hard top several times to make sure of correct operation.
16. Visually check for a water leakage. Refer to RF-159, "WATER LEAKAGE TEST" .
17. Reinstall the front roof headlining front.



18. Make a road test with the retractable hard top in closed position, and check for wind and rattle noise. Refer to RF-152, "WIND NOISE TEST" and RF-151, "DUPLICATE THE NOISE AND TEST DRIVE" .

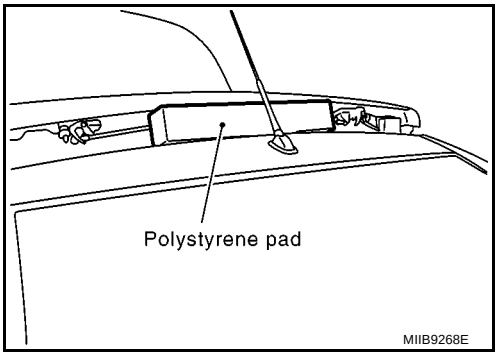
Removal and Installation of Latch Assembly

EIS00E5R



REMOVAL

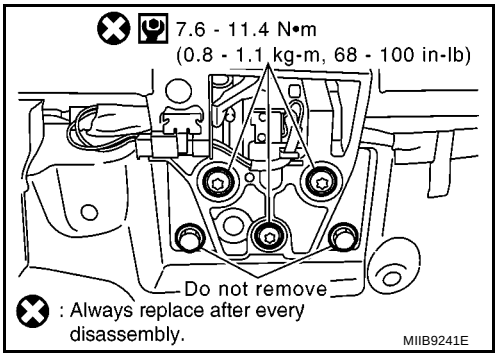
1. Remove the windshield finisher. Refer to EI-36, "WINDSHIELD FINISHER" .
2. Open slightly the retractable hard top.
3. Insert a polystyrene pad between the retractable hard top and fix roof.
4. Remove the retractable hard top fuse to maintain the polystyrene pad. Refer to RF-28, "Component Parts and Harness Connector Location" .



5. Disconnect harness from the latch assembly.
6. Remove torx screws (3) from the latch assembly.

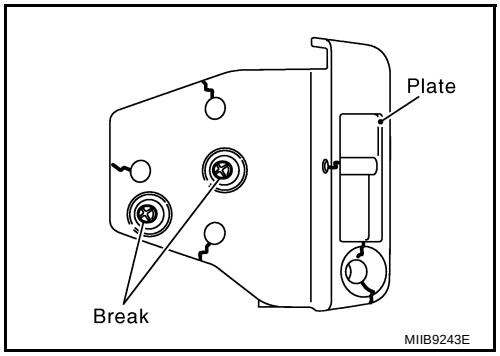
CAUTION:
Do not remove hexagonal bolts on the latch plate.

7. Note the number of adjusting shim between the latch assembly and the pillar cross member.



INSPECTION AFTER REMOVAL

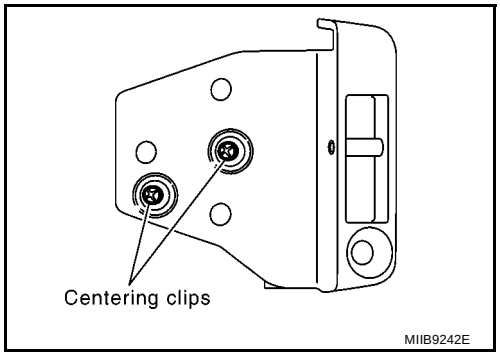
- Make sure of the presence of the plate on the latch assembly.
- Check the centering clips and mounting holes for break.
- Check centering hole for wear.



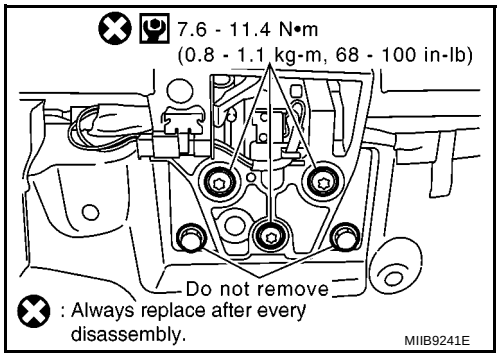
INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the following points:

- Insert same number of shims as removal.
- Insert centering clips into the fix roof.



- Provisory install old torx screws.



- Lock completely the retractable hard top and check the flatness deviation “a” between the front roof glass and roof finisher.

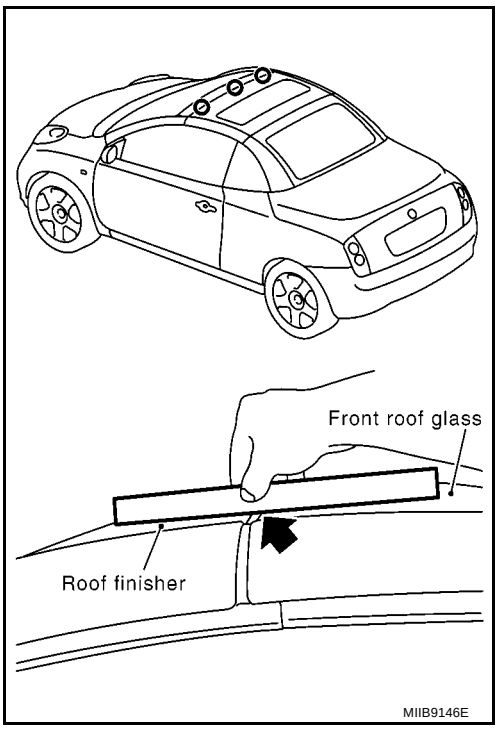
  “a” = 0.5 – 3.5 mm (0.020 – 0.138 in)

  NOTE:
  The front roof glass level must be lower than the roof finisher level.
  If out of specification, insert additional shims.

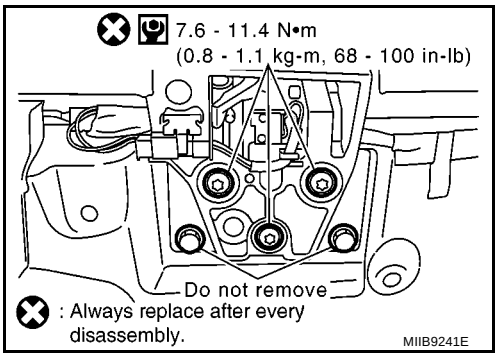
  Shim thickness: 1mm (0.039 in)

  Min: 0 shim

  Max: 3 shims



- Replace old screws by new ones and tighten to the specified torque.



ADJUSTMENT

NOTE:

- Latch assembly is adjustable in height by meaning of adjusting shims. Refer to RF-198, "INSTALLATION" .
- Latch assembly is adjustable by moving of latch plates. Adjustment is only permissible in longitudinal direction (forward, rearward).

CAUTION:

Do not attempt to adjust the latch plate in lateral direction.

Remove hexagonal bolts from the latch plate and slide to forward or rearward direction.

HYDRAULIC SYSTEM

PFP:97091

Checking Hydraulic System

EIS00E5S

CHECKING FLUID LEVEL

CAUTION:

Bleed the hydraulic circuit and check the hydraulic fluid level after any operation on the hydraulic system. Refer to RF-202, "AIR BLEEDING HYDRAULIC SYSTEM" .

WARNING:

Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

NOTE:

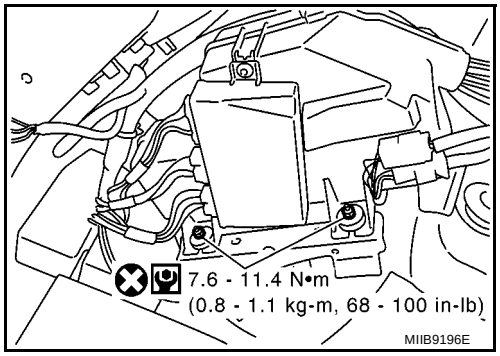
The hydraulic fluid must be checked with engine switched off and retractable hard top in complete closed position:

- Main drive cylinder completely extended
- Trunk lid cylinder completely retracted
- Latch cylinder completely retracted.

1. Remove the luggage side trim LH. Refer to EI-42, "Luggage Room Side Finisher" .
2. Cut off the self locking band on the sound proof housing and remove mountings nuts (2) as shown.

   CAUTION:

   Avoid any contact between the nipper and hoses.



3. Release the hydraulic unit from the sound proof housing.

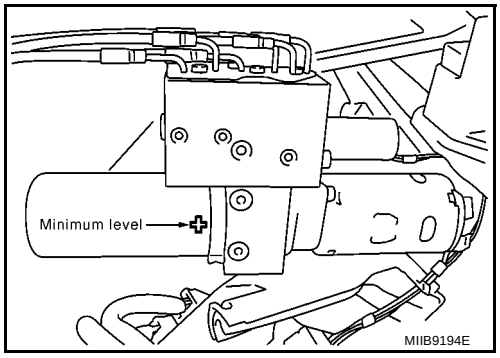
   CAUTION:

   Do not bend or twist hydraulic hoses sharply, or strongly pull them.

4. Maintain the hydraulic pump horizontally and check the fluid level.

   Min level: Centre of the cross

   Max level: 3mm (0.118 in) above the min level.



5. If the hydraulic fluid level is low, protect the luggage compartment with covers, and remove the filler plug on the hydraulic tank to adjust the level.

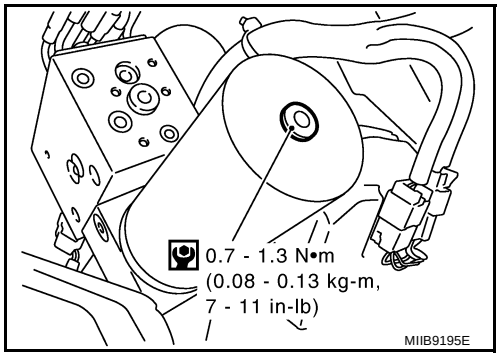
   Specified hydraulic fluid: ARAL VITAMOL 4004

   CAUTION:

   - **Never reuse drained hydraulic fluid.**
   - **Use only ARAL VITAMOL 4004.**

6. Reinstall the filler plug and tighten to the torque.

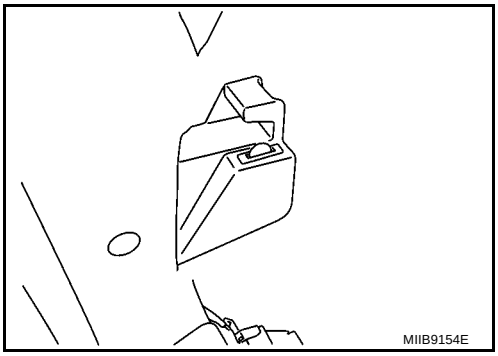
   : 0.7 - 1.3 N·m (0.08 – 0.13 kg-m, 7 – 11 in-lb)



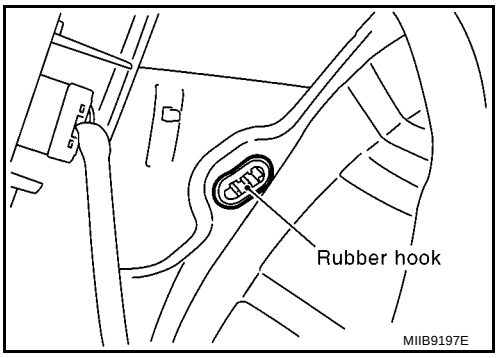
CAUTION:

If filler plug is tightened excessively, hydraulic unit tank may be damaged and hydraulic fluid will leak.

7. Install temporarily the roof storage switch and close the tonneau cover.
8. Bleed the hydraulic circuit if the level was to low, refer to RF-200, "CHECKING FLUID LEVEL" , RF-202, "AIR BLEEDING HYDRAULIC SYSTEM" , and recheck the level.
9. Close the sound proof housing and secure hydraulic lines with a new self locking band.



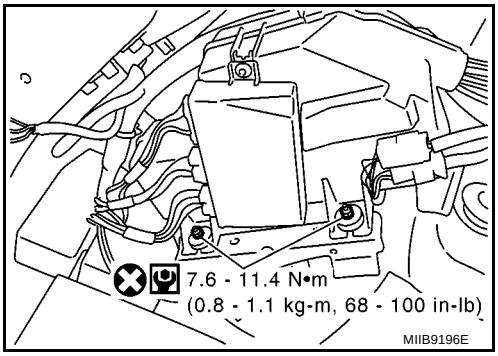
10. Insert completely the sound proof housing tab into rubber hook in the body.



11. Install the centring grommet (2), and using new mounting nuts secure the sound proof housing to the body to the specified torque.

: 7.6 – 11.4 N·m (0.8 – 1.1 kg-m, 68 – 100 in-lb)

12. Install the luggage side trim LH. Refer to EI-42, "Luggage Room Side Finisher" .



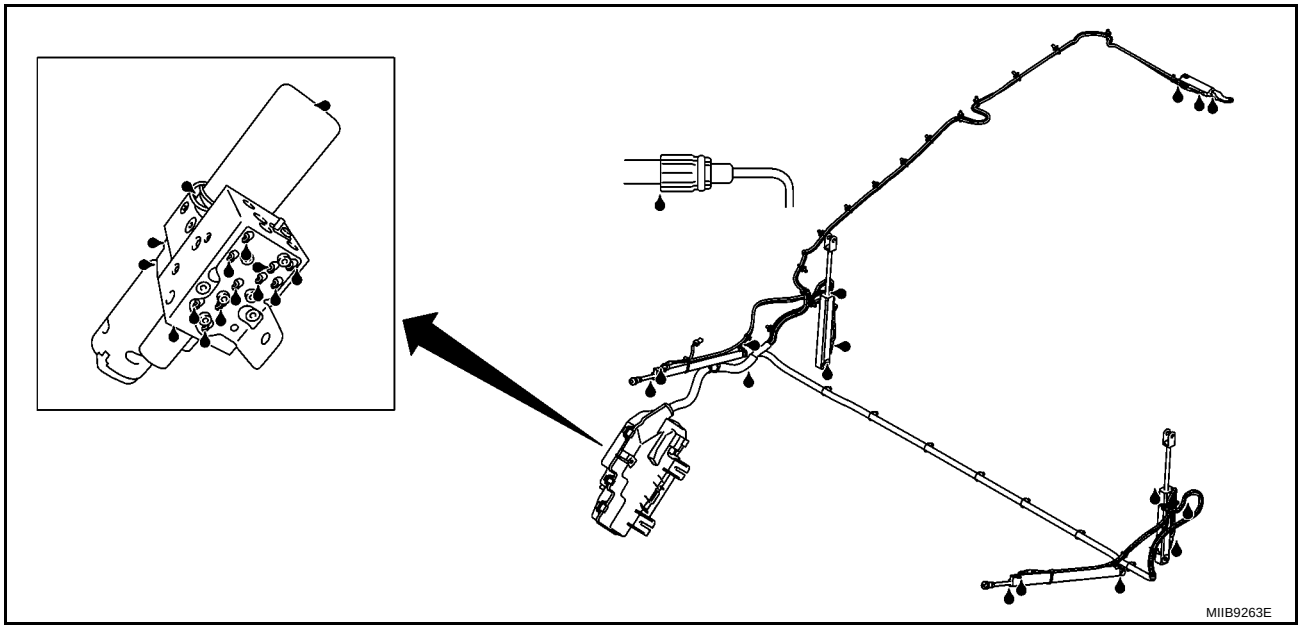
CHECKING FLUID LEAKAGE

WARNING:

- **While checking fluid leakage, hydraulic fluid may spray out strongly. Wear eyes protection.**
- **Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .**

CAUTION:

- **While checking fluid leakage, hydraulic fluid may spray out strongly. Protect the vehicle interior with suitable covers.**
- **Replace any damaged parts.**
- **After replacing the damaged part, operate few times the retractable hard top to ensure for good fitting.**



- Check hose, tube, and connections for hydraulic fluid leaks, damage, twist, deformation, contact with other parts, and loose connections.
- Check hydraulic lines (tube and hoses) for deterioration or other damages.
- Check hydraulic jacks sealed area for leak.
- Check hydraulic unit (motor, tank, filler plug, valve, body) for leakage.
- If any connection leaks, retighten it to the specified torque and operate the retractable hard top few times to ensure the good fitting, and there is no fluid leak.
- When leakage, the hydraulic fluid sprays strongly. Wipe off consciously the leak area with a suitable cloth to determine the faulty component.

AIR BLEEDING HYDRAULIC SYSTEM

CAUTION:

Bleed the hydraulic circuit and check the hydraulic fluid level after any operation on the hydraulic system.

1. Check the hydraulic fluid level, and fill the hydraulic tank to the maximum level. Refer to RF-200, "CHECKING FLUID LEVEL" .
2. Operate the retractable hard 3 times with the roof open/close switch to bleed air from hydraulic circuit.

   NOTE:

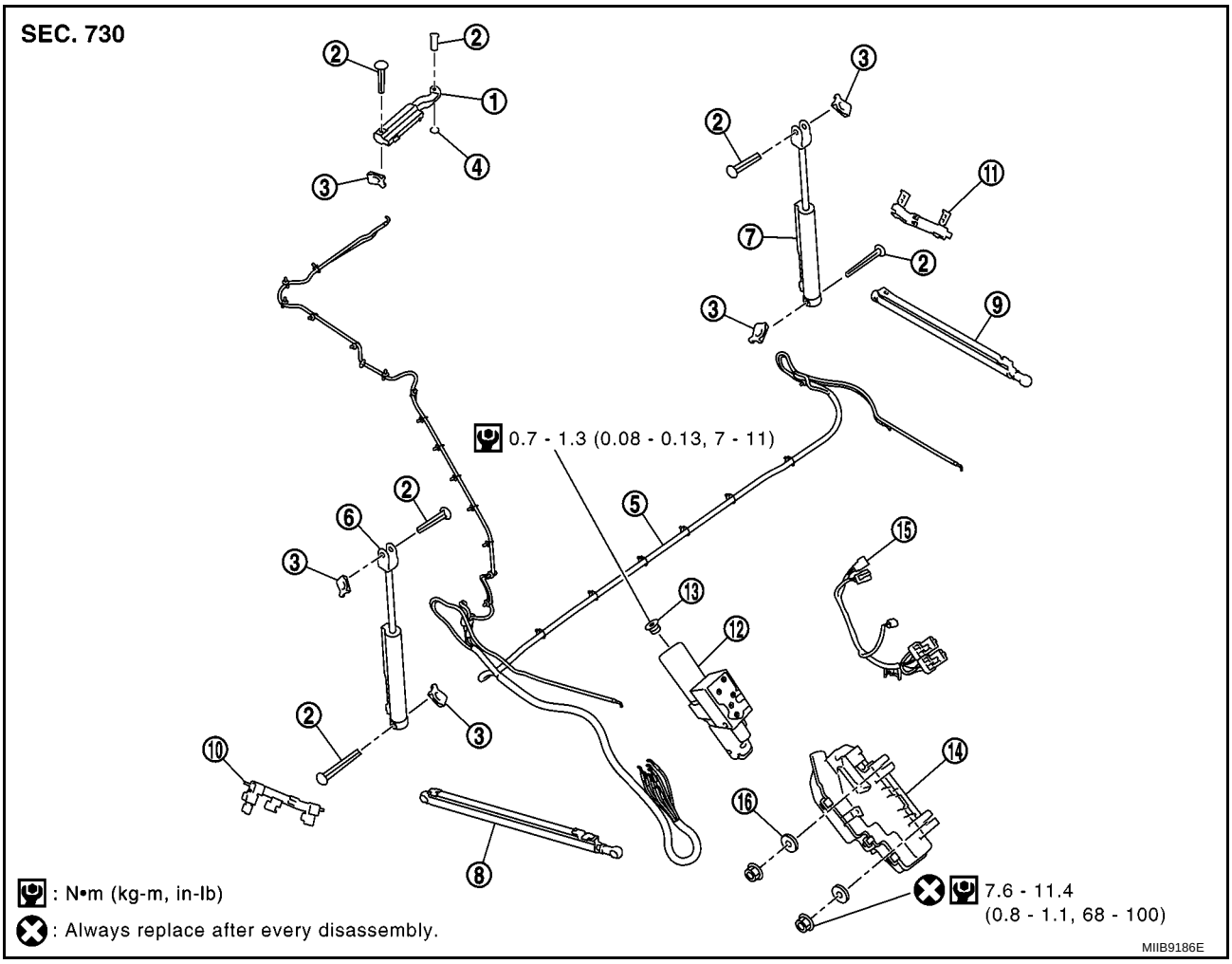
   This operation requires two workers.

   CAUTION:

   - **During this operation, the pressure in the circuit may fall due the presence of air, causing the chute of the retractable hard top. An additional worker is required to maintain manually the retractable hard top during this operation.**
   - **Keep hands away from the moving parts.**
3. Check the hydraulic fluid level again and fill the hydraulic tank to the maximum level. Refer to RF-200, "CHECKING FLUID LEVEL" .

Component Parts Drawing

EIS00E5T



1. Latch cylinder
2. Fastening bolt
3. Retaining clamp
4. Clamp
5. Hydraulic lines
6. Main drive cylinder LH
7. Main drive cylinder RH
8. Trunk lid cylinder LH
9. Trunk lid cylinder RH
10. Hydraulic line retainer LH
11. Hydraulic line retainer RH
12. Hydraulic unit assembly
13. Filler plug
14. Sound proof housing
15. Harness and relays
16. Centering grommet

Removal and Installation of Hydraulic Unit

EIS00E5U

CAUTION:

- **Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .**
- **The hydraulic unit is not serviceable, do not attempt to disassemble it.**

WARNING:

Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

REMOVAL

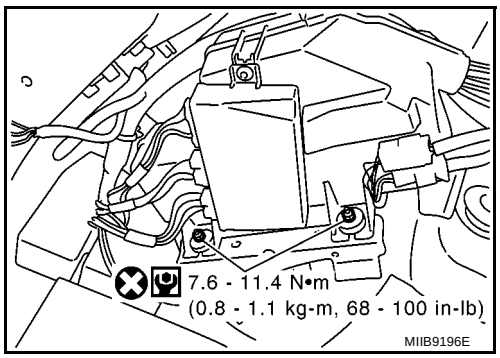
1. Disconnect the both battery cable starting with the negative terminal.
2. Remove the luggage side trim LH. Refer to EI-42, "Luggage Room Side Finisher" .

3. Cut off the self locking band on the sound proof housing and remove mountings nuts (2) as shown.

CAUTION:
Avoid any contact between the nipper and hoses.

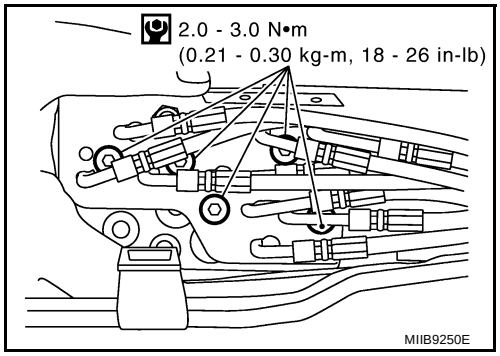
4. Release the hydraulic unit from the sound proof housing.

CAUTION:
Do not bend or twist hydraulic hoses sharply, or strongly pull them.



5. Disconnect harness from the hydraulic unit.
6. Remove bolts (5) securing the plate to the hydraulic unit body, and slide the plate to liberate hydraulic hoses.

CAUTION:
While removing tubes, hydraulic fluid may spray out strongly. Protect the luggage compartment with suitable covers.



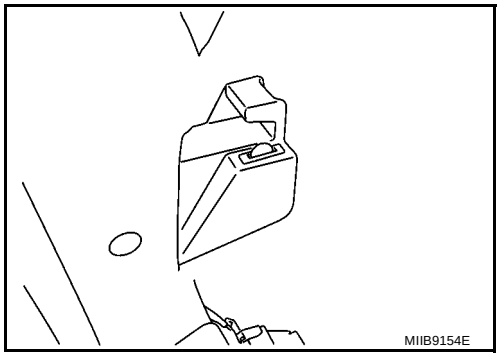
INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the followings points:

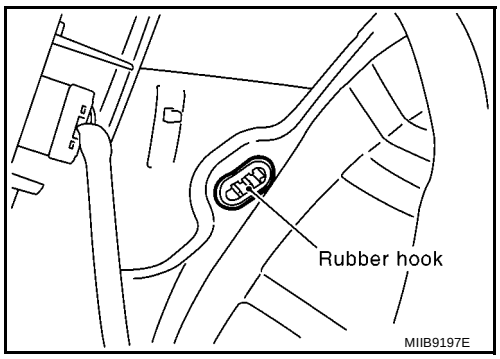
- Make sure that numbers on the hydraulic unit plate match with the paint inscription on the hoses. Refer to RF-205, "Removal and Installation of Hydraulic Hoses" .
- Tighten mounting plate bolts to the specified torque.

: 2 – 3 N·m (0.2 – 0.3 kg-m, 18 – 26 in-lb)

- Fill the hydraulic unit tank to the maximum level. Refer to RF-200, "CHECKING FLUID LEVEL" .
- Install temporarily the roof storage switch and close the tonneau cover.
- Bleed the hydraulic circuit, refer to RF-202, "AIR BLEEDING HYDRAULIC SYSTEM" , and recheck the level.
- Check the hydraulic unit for leakage. Refer to RF-201, "CHECKING FLUID LEAKAGE" .
- Close the sound proof housing and secure hydraulic lines with a new self locking band.

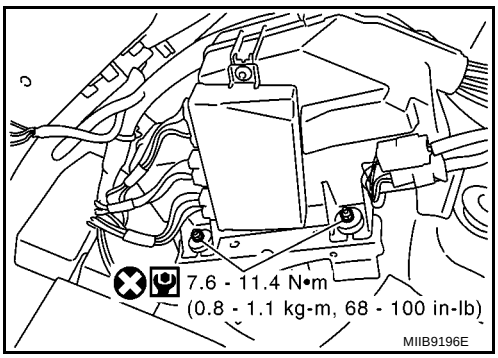


- Insert completely the sound proof housing tab into rubber hook in the body.



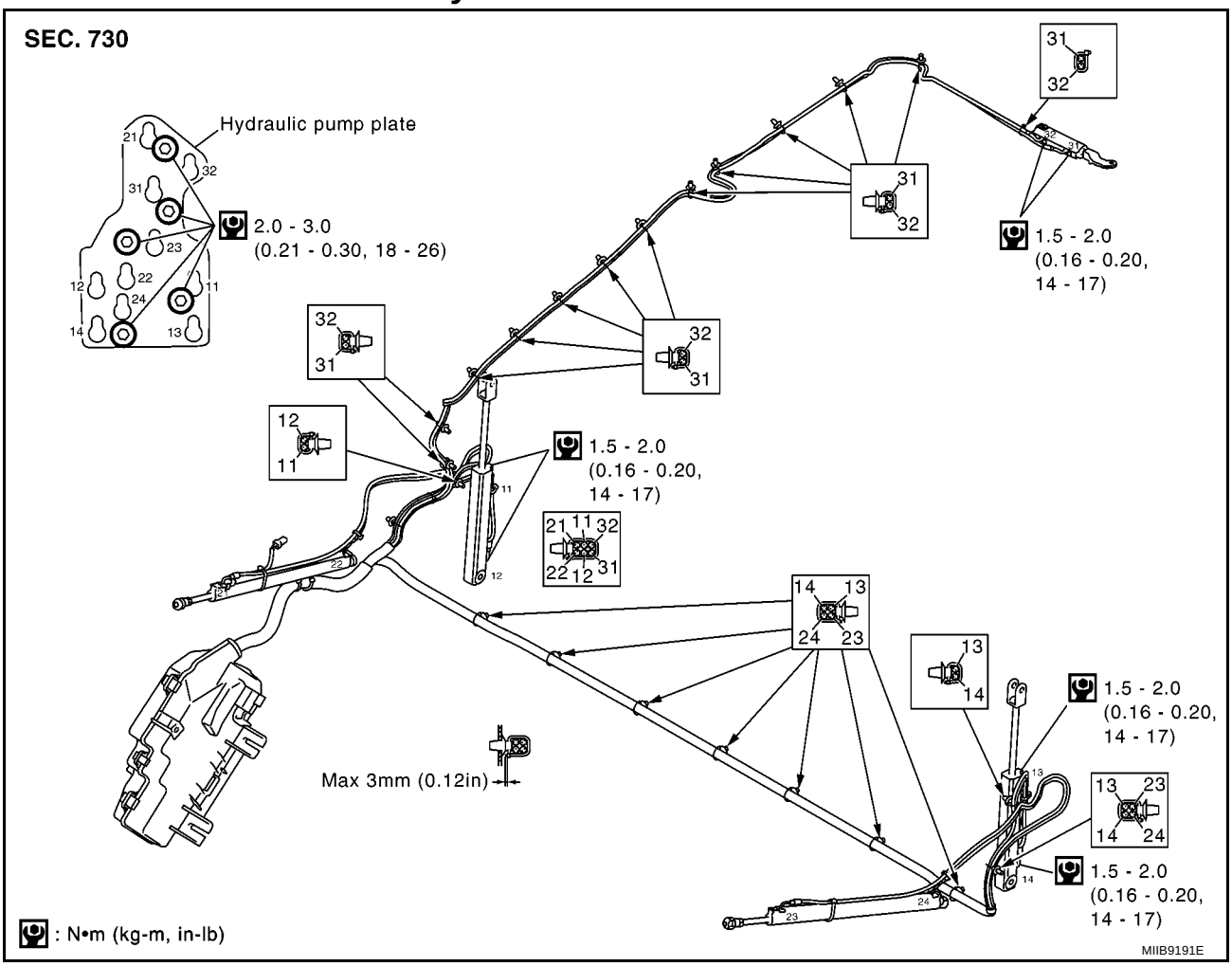
- Install the centring grommet (2) and using new mounting nuts, secure the sound proof housing to the body to the specified torque.

  : 7.6 – 11.4 N·m (0.8 – 1.1 kg-m, 68 – 100 in-lb)



Removal and Installation of Hydraulic Hoses

EIS00E5V



NOTE:
Hydraulic hoses are available in pair as service part. Hydraulic hoses are pre-filled with hydraulic fluid. It is important to make a quick replacement of hydraulic hoses to avoid air penetration in the hydraulic circuit.

CAUTION:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

WARNING:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

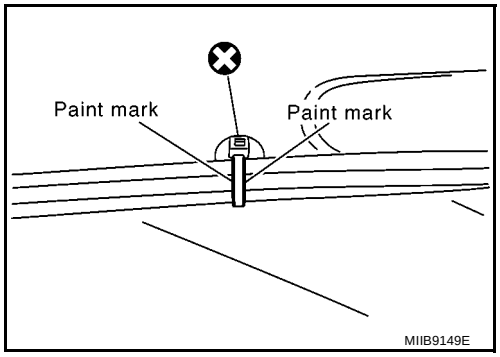
LATCH CYLINDER HYDRAULIC HOSES

Removal and Installation

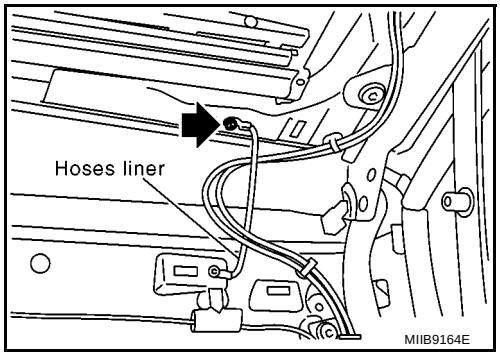
1. Remove the retractable hard top fuse to decrease the pressure in hydraulic lines. Refer to RF-28, "Component Parts and Harness Connector Location" .

2. Remove front roof headlining FR. Refer to RF-170, "FRONT ROOF HEADLINING FRONT" .
3. Remove front roof headlining RR. Refer to RF-171, "FRONT ROOF HEADLINING REAR" .
4. Remove front roof headlining LH. Refer to RF-171, "FRONT ROOF HEADLINING LH AND RH" .
5. Remove rear roof headlining FR. Refer to RF-172, "REAR ROOF HEADLINING FRONT" .
6. Remove rear roof headlining LH. Refer to RF-172, "REAR ROOF HEADLINING LH AND RH" .
7. Locate the position of self locking bands on hydraulic hoses by meanings of paint marks.
8. Using a nipper, cut off self locking bands on the retractable hard top and on the body and dispose.
9. Using paint marks, report on the new hydraulic hose the previous locations.
10. Install new hydraulic hoses on the retractable hard top and the body. Secure them with new self locking bands.

    CAUTION:
    Do not let the ends of self locking bands touch hydraulic hoses.



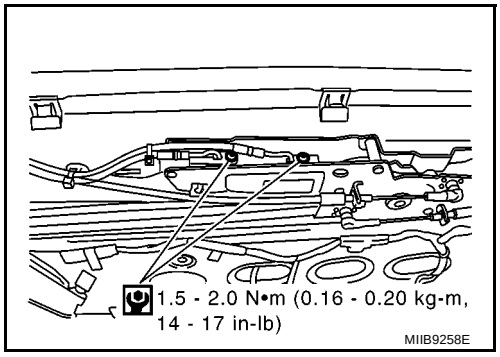
11. Make sure of the position of the hoses liner.
12. Protect the vehicle interior with suitable covers.



13. Remove bolts securing hydraulic tubes to the latch cylinder without releasing hydraulic hoses.

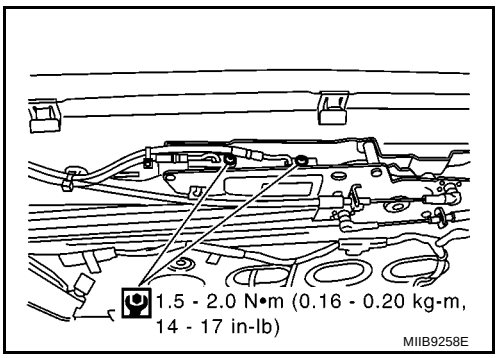
    CAUTION:
    Before disconnecting hydraulic lines, protect the vehicle interior with covers. The hydraulic fluid may spray out strongly.
14. Release plate on the hydraulic unit without disconnecting any tubes. Refer to RF-203, "Removal and Installation of Hydraulic Unit" .

    NOTE:
    For this operation it is not necessary to disconnect the battery, and hydraulic unit harness.



15. Release quickly one old hydraulic hoses from the latch cylinder.
16. Remove quickly cap from the new hydraulic hose and insert the tube into the latch cylinder.
17. Release quickly the old hydraulic tube from the hydraulic unit.
18. Remove quickly cap from the new hydraulic hose and insert the tube into the hydraulic unit.
19. Repeat step 15 to 18 for other hydraulic hose paying attention to the paint identification number on the hydraulic hoses.

20. Tighten to the specified torque bolts securing the hydraulic tubes to the latch cylinder.



: 1.5 – 2 N·m (0.16 – 0.20 kg-m, 14 – 17 in-lb)

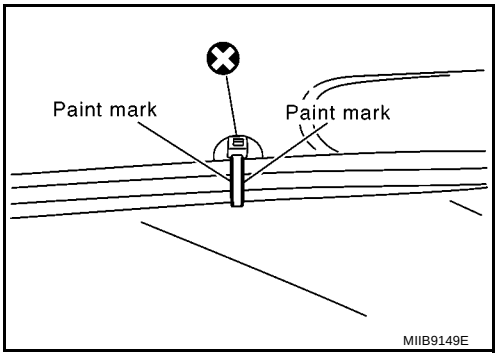
21. Install the retractable hard top fuse. Refer to RF-28, "Component Parts and Harness Connector Location" .
22. Install the hydraulic unit. Refer to RF-203, "Removal and Installation of Hydraulic Unit" .
23. Check the connection between latch cylinder and the hydraulic tubes for leakage.
24. Operate the retractable hard top and check if hydraulic hoses are not crushed between the front and rear roof assemblies.
25. Install retractable hard top assembly headlining. Refer to RF-170, "Removal and Installation of Headlining" .

MAIN DRIVE CYLINDER HYDRAULIC HOSES

Removal and Installation

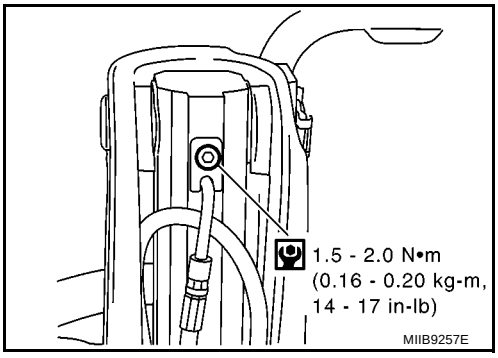
NOTE:
This operation requires the removal of the retractable hard top assembly and main drive cylinders.

1. Remove the retractable hard to assembly. Refer to RF-163, "Removal and Installation of Retractable Hard Top Assembly" .
2. Locate the position of self locking bands on hydraulic hoses by meanings of paint marks.
3. Using a nipper, cut off self locking bands on the retractable hard top and dispose.
4. Using paint marks, report on the new hydraulic hose the previous locations.
5. Remove hydraulic lines from the retractable hard top assembly without disconnecting tubes.
6. Install new hydraulic hoses on the retractable hard top. Secure them with new self locking bands.

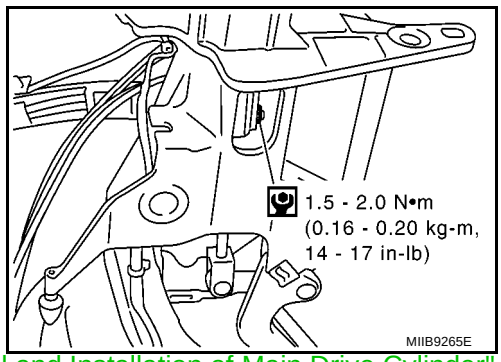


CAUTION:
Do not let the ends of self locking bands touch hydraulic hoses.

7. Remove main drive cylinders LH and RH without releasing hydraulic tubes. Refer to RF-209, "Removal and Installation of Main Drive Cylinder" .
8. Release plate on the hydraulic unit without disconnecting any tubes. Refer to RF-203, "Removal and Installation of Hydraulic Unit" .
9. Release quickly one old hydraulic hoses from the main drive cylinder.
10. Remove quickly cap from the new hydraulic hose and insert the tube into the main drive cylinder.
11. Release quickly the old hydraulic tube from the hydraulic unit.
12. Remove quickly cap from the new hydraulic hose and insert the tube into the hydraulic unit.
13. Repeat step 9 to 12 for other hydraulic hoses paying attention to the paint identification number on the hydraulic hoses.
14. Tighten to the specified torque bolts securing the hydraulic tubes to the Main drive cylinder.

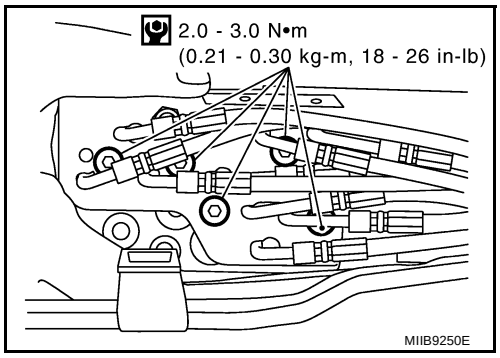


: 1.5 – 2 N·m (0.16 – 0.20 kg-m, 14 – 17 in-lb)

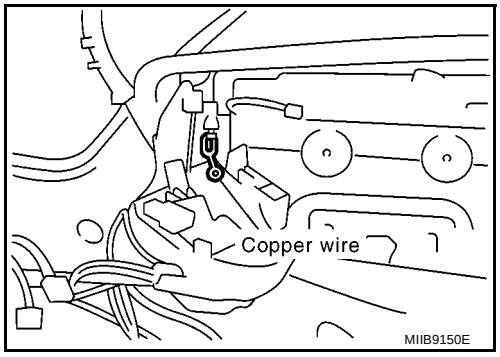


15. Install main drive cylinder LH and RH. Refer to RF-209, "Removal and Installation of Main Drive Cylinder" .
16. Tighten to the specified torque bolts (5) on the hydraulic unit plate.

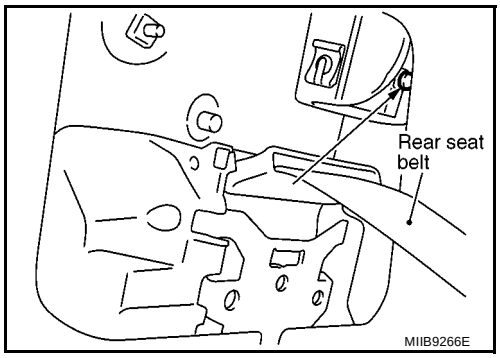
    : 2 – 3 N·m (0.2 – 0.3 kg-m, 18 – 26 in-lb)



17. Install temporarily the hydraulic unit to the sound proof housing, and attach the sound proof housing to the retractable hard to assembly.
18. Install the retractable hard top to the vehicle. Refer to RF-163, "Removal and Installation of Retractable Hard Top Assembly" .
19. Open the sound proof housing and check for hydraulic fluid leak.
20. Install the hydraulic unit. Refer to RF-203, "Removal and Installation of Hydraulic Unit" .



21. Check the connection between main drive cylinder and hydraulic tubes for leakage. The lower connection can be checked from the vehicle interior as shown.

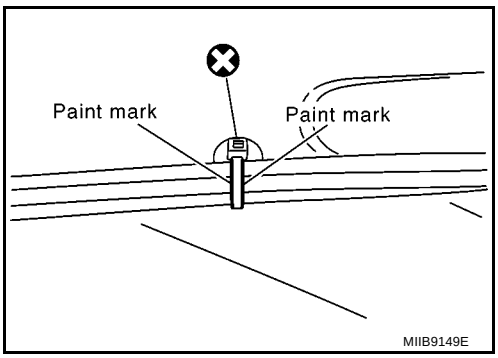


TRUNK LID CYLINDER HYDRAULIC HOSES

Removal and Installation

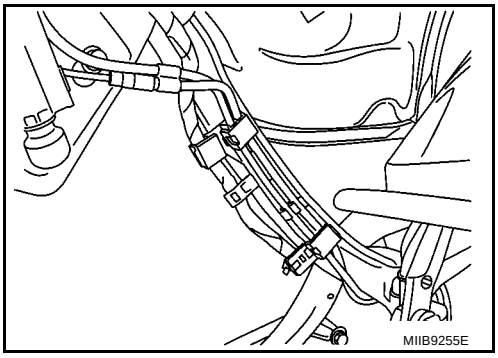
1. Remove the retractable hard top fuse to decrease the pressure in hydraulic lines. Refer to RF-28, "Component Parts and Harness Connector Location" .
2. Remove the luggage centre trim. Refer to EI-42, "Luggage Room Front Finisher" .
3. Remove the luggage side trim LH and RH. Refer to EI-42, "Luggage Room Side Finisher" .

4. Locate the position of self locking bands on hydraulic hoses by meanings of paint marks.
5. Using a nipper, cut off self locking bands on the retractable hard top and on the body and dispose.
6. Using paint marks, report on the new hydraulic hose the previous locations.
7. Install new hydraulic hoses on the retractable hard top and the body. Secure them with new self locking bands.



CAUTION:
Do not let the ends of self locking bands touch hydraulic hoses.

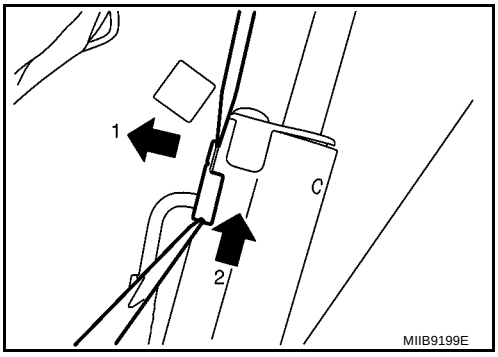
8. Secure the trunk lid hydraulic hoses into the hydraulic line retainer LH and RH.
9. Protect the luggage compartment with suitable covers.



10. Use a flat bladed screw driver to lift up the hydraulic tube connecting clip, and use a second flat bladed screw driver to push the clip as shown.

NOTE:
Do not release the hydraulic tube at this step.

11. Release plate on the hydraulic unit without disconnecting any tubes. Refer to RF-203, "Removal and Installation of Hydraulic Unit" .



NOTE:
For this operation it is not necessary to disconnect the battery, and hydraulic unit harness.

CAUTION:
Before disconnecting hydraulic lines, protect the vehicle interior with covers. The hydraulic fluid may spray out strongly.

12. Release quickly one old hydraulic hoses from the trunk lid cylinder.
13. Remove quickly cap from the new hydraulic hose and insert the tube into the trunk lid cylinder.
14. Release quickly the old hydraulic tube from the hydraulic unit.
15. Remove quickly cap from the new hydraulic hose and insert the tube into the hydraulic unit.
16. Secure the tube to the trunk lid cylinder by sliding the tube connecting clip.
17. Repeat step 12 to 16 for other hydraulic hoses paying attention to the paint identification number on the hydraulic hoses.
18. Install the retractable hard top fuse. Refer to RF-28, "Component Parts and Harness Connector Location" .
19. Install the hydraulic unit. Refer to RF-203, "Removal and Installation of Hydraulic Unit" .
20. Check the connection between trunk lid cylinder and the hydraulic tubes for leakage.

Removal and Installation of Main Drive Cylinder

EIS00E5W

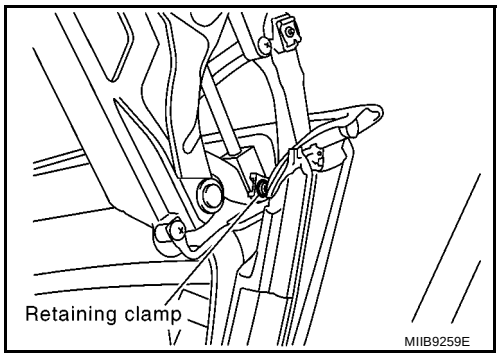
CAUTION:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

WARNING:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

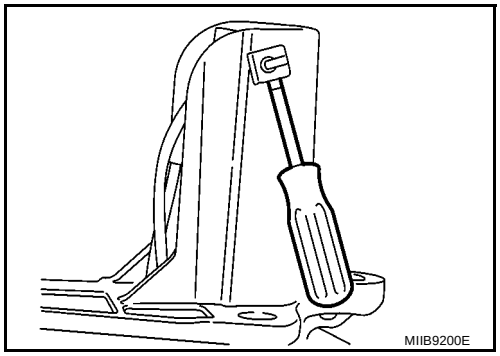
REMOVAL

NOTE:
This operation requires the removal of retractable hard top assembly.

1. Remove the retractable hard top assembly. Refer to RF-167, "Adjustment of Retractable Hard Top Assembly" .
2. Remove the main cylinder upper retaining clamp, and extract the fastening bolt.

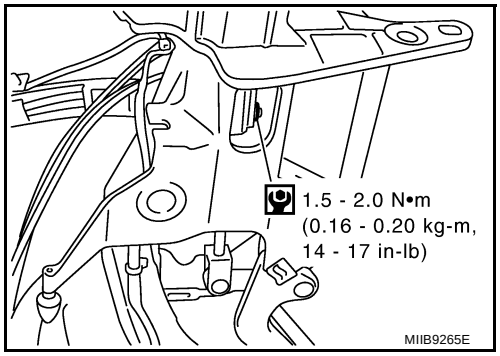


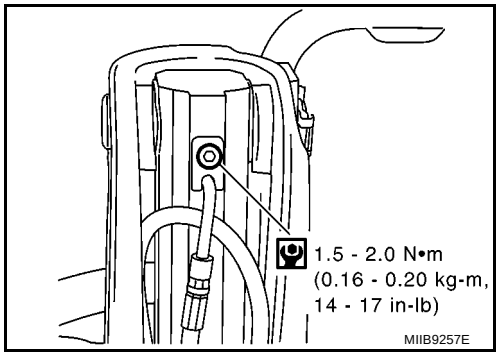
3. Remove the main cylinder lower retaining clamp, and extract the fastening bolt.



4. Remove bolts securing hydraulic tubes to the main drive cylinder and remove tubes from the main drive cylinder.

   CAUTION:
   - **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
   - **Do not allow a hydraulic tube disconnected. Prepare the new hydraulic component for quick replacement.**





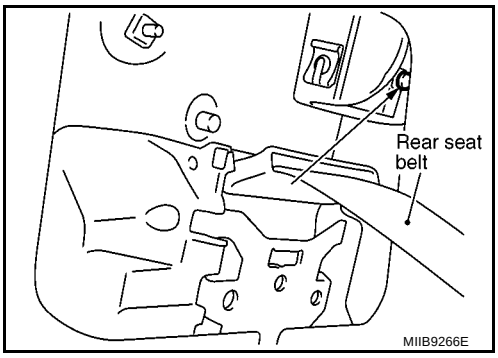
INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the following points:

- Tighten to the specified torque bolts securing hydraulic tubes to the main drive cylinder.

: 1.5 – 2 N·m (0.16 – 0.20 kg-m, 14 – 17 in-lb)

- Check the fluid level and bleed the hydraulic circuit. Refer to RF-200, "CHECKING FLUID LEVEL" and RF-202, "AIR BLEEDING HYDRAULIC SYSTEM" .
- Check the connection between main drive cylinder and hydraulic tubes for leakage. The lower connection can be checked from the vehicle interior as shown.



Removal and Installation of Trunk Lid Cylinder

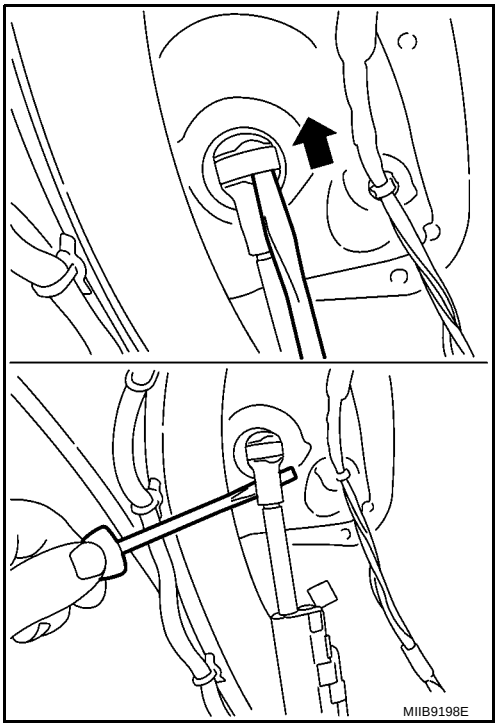
EIS00E5X

CAUTION:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

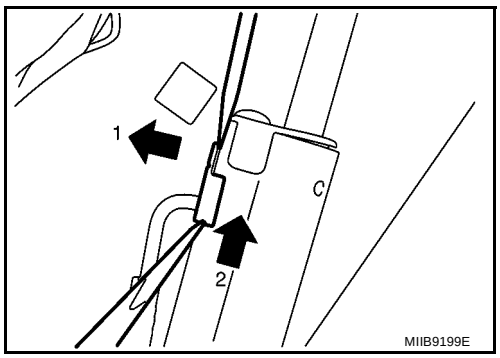
WARNING:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

REMOVAL

1. Remove the retractable hard top fuse to decrease the pressure in hydraulic lines. Refer to RF-28, "Component Parts and Harness Connector Location" .
2. Using a nipper, cut off the self locking band on the trunk lid cylinder and dispose.
3. Insert a flat blade screw driver to the trunk lid cylinder retaining clamp and push it to outside direction as shown. Make lever to release the ball joint from the ball pivot at trunk lid and sub frame side.
4. Remove the hall sensor from the trunk lid cylinder (LH side only). Refer to RF-147, "Removal and Installation of Hall Sensor" .
5. Protect the luggage compartment with suitable covers.



6. Use a flat bladed screw driver to lift up the hydraulic tube connecting clip, and use a second flat bladed screw driver to push the clip as shown.



CAUTION:

- **Do not bend or twist hydraulic hoses sharply, or strongly pull them.**
- **Do not allow a hydraulic tube disconnected. Prepare the new hydraulic component for quick replacement.**

INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the following points:

- Secure the tubes to the trunk lid cylinder by sliding the tube connecting clip.
- Make sure that the ball pivot is properly secured into the ball joint at trunk lid and sub frame side.
- Check the fluid level and bleed the hydraulic circuit. Refer to RF-200, "CHECKING FLUID LEVEL" and RF-202, "AIR BLEEDING HYDRAULIC SYSTEM" .
- Check the connection between the trunk lid cylinder and hydraulic tubes for leakage.

Removal and Installation of Latch Cylinder

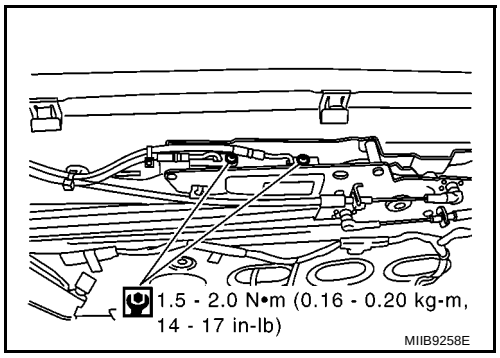
EIS00E5Y

CAUTION:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

WARNING:
Be sure to read “Precautions for Hydraulic System”. Refer to RF-15, "Precautions for Hydraulic System" .

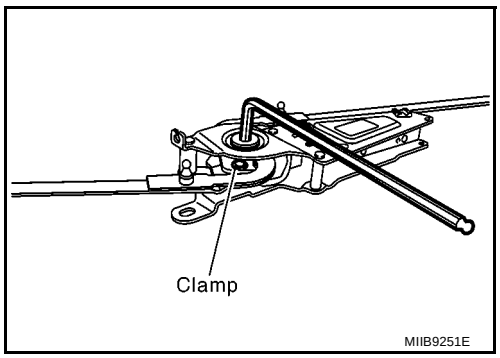
REMOVAL

1. Remove the lock assembly. Refer to RF-192, "Removal and Installation of Lock Assembly" .
2. Protect the vehicle interior with suitable covers.
3. Prepare two suitable rubber plug to plug hydraulic tubes, and remove bolts securing hydraulic tubes to the latch cylinder.

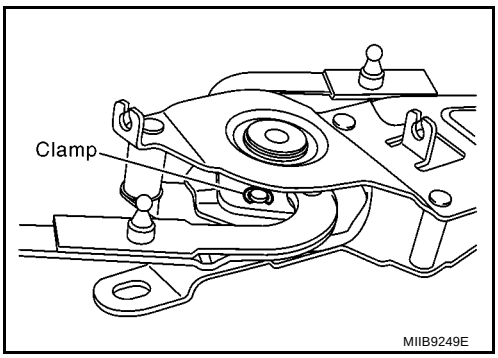


CAUTION:
Before disconnecting hydraulic lines, protect the vehicle interior with covers. The hydraulic fluid may spray out strongly.

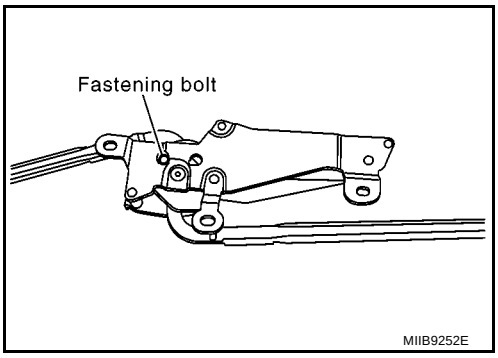
4. Using a hexagonal wrench, manually operate the lock assembly to access to the clamp retaining latch cylinder fastening bolt.



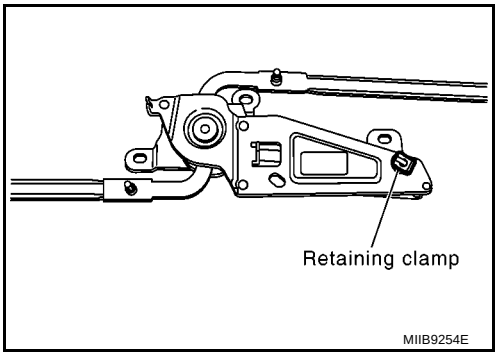
5. Remove the clamp from the lock assembly using a flat bladed screw driver.



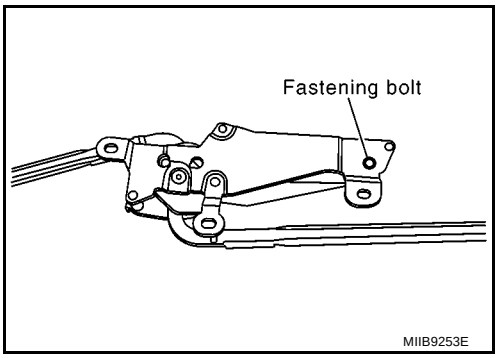
6. Rotate the lock assembly, and manipulate the mechanism to line up the fastening bolt with the access hole as shown, and extract the fastening bolt.



7. Remove the retaining clamp from the lock assembly.



8. Extract the fastening bolt and separate the latch cylinder from the lock assembly.



INSTALLATION

Install in the reverse order of removal.
When installing pay attention to the following points:

- Tighten to the specified torque bolts securing hydraulic tubes to the latch cylinder.

  : 1.5 – 2 N·m (0.16 – 0.20 kg-m, 14 – 17 in-lb)

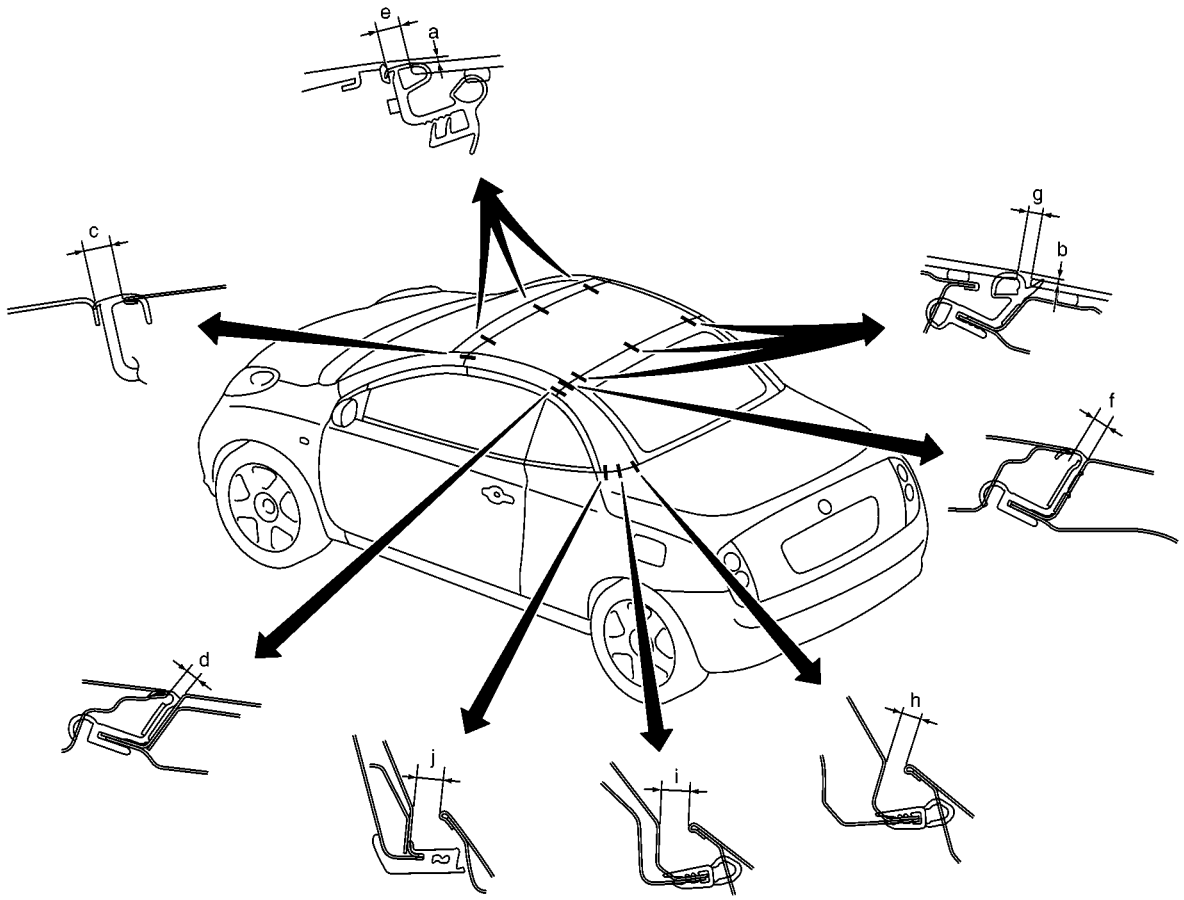
- Check the fluid level and bleed the hydraulic circuit. Refer to RF-200, "CHECKING FLUID LEVEL" and RF-202, "AIR BLEEDING HYDRAULIC SYSTEM" .
- Check the connection between the latch cylinder and hydraulic tubes for leakage.

SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Fitting Adjustment

EIS00E7T



Flatness deviation	a : 0.5 - 3.5★ (0.02 - 0.14)
	b : 0.5 - 3.5★★(0.02 - 0.14)
gap	c : 7 - 11 (0.28 - 0.43)
	d : 5 - 7 (0.20 - 0.28)
	e : 7 - 11 (0.28 - 0.43)
	f : 6 - 8 (0.24 - 0.31)
	g : 6 - 7 (0.24 - 0.28)
	h : 7 - 10.5 (0.28 - 0.41)
	i : 11 - 14.5 (0.43 - 0.57)
	j : 10 - 14 (0.39 - 0.55)

★ : Front roof glass level below the roof finisher level
★★: Rear roof glass level below the front roof glass level

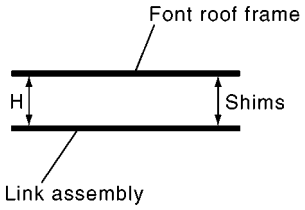
Unit: mm (in)

MIIB9294E

Adjusting Shims

EIS00E7U

Selective parts		Front roof		Rear roof		Latch assembly	
Shim thickness mm (in)		Vehicle equipped	Service part	Vehicle equipped	Service part	Vehicle equipped	Service part
		1 (0.039)	1 (0.039)	1 (0.039)	1 (0.039)	1 (0.039)	1 (0.039)
		2 (0.079)		2 (0.079)			
Distance “H” mm (in)	Min	0 (0.000)		0 (0.000)		—	
	Nominal	2 (0.079)		2 (0.079)		—	
	Max	4 (0.157)		4 (0.157)		—	
Max number of shims		—		—		3	



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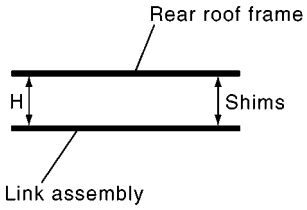

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Hydraulic Fluid

EIS00E7V

Specified hydraulic fluid	ARAL VITAMOL 4004