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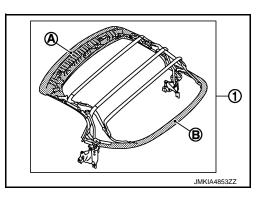
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< HOW TO USE THIS MANUAL >

HOW TO USE THIS MANUAL HOW TO USE THIS SECTION

Caution

In this section, portion (A) of soft top linkage assembly (1) is referred to as 1st bow and portion (B) is referred to as 5th bow.



< PRECAUTION > PRECAUTION PRECAUTIONS EXCEPT FOR MEXICO

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

EXCEPT FOR MEXICO : Precaution for Battery Service

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

EXCEPT FOR MEXICO : Precaution for Hydraulic System

CAUTION:

- Never bend or twist hydraulic hoses sharply, or strongly pull them.
- Serviceable parts for hydraulic circuit are not various. Before disassembly refer to <u>RF-226</u>, <u>"Exploded View"</u>.

WARNING:

- The soft top assembly and storage lid assembly 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.
- Never allow hydraulic fluid to come in contact with skin, eyes, fabrics, or.
- After touching hydraulic fluid, never 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.

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PRECAUTIONS

< PRECAUTION >

- If hydraulic fluid contacts eyes, immediately flush with water for 15 minutes and seek medical attention.

EXCEPT FOR MEXICO : Service Notice

• When removing or installing various parts, place a cloth or padding onto the vehicle body to prevent scratches.

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

EXCEPT FOR MEXICO : Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and keep them.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After re-installation is completed, be sure to check that each part works normally.
- Follow the steps below to clean components.
- Water soluble foul: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the fouled area.

Then rub with a soft and dry cloth.

- Oily foul: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the fouled area.

Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, and gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

FOR MEXICO

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

• When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with

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PRECAUTIONS

 a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causin serious injury. When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the sensor of the sensor of	A
battery, and wait at least 3 minutes before performing any service.	_
FOR MEXICO : Precaution for Battery Service	12148 B
Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatically window function will not work with the battery disconnected.	he _C
FOR MEXICO : Precaution for Hydraulic System	12149 D
CAUTION: Never bend or twist hydraulic hoses sharply, or strongly pull them. Serviceable parts for hydraulic circuit are not various. Before disassembly refer to <u>RF-22</u> <u>"Exploded View"</u>. WARNING:	2 <u>6.</u> E
 The soft top assembly and storage lid assembly may fall suddenly. Avoid working on the vehicle wi hydraulic circuit under pressure. Always depressurize the system before starting. To depressuri the system, disconnect both battery cables starting by negative terminal. 	
 Never allow hydraulic fluid to come in contact with skin, eyes, fabrics, or. After touching hydraulic fluid, never touch or rub your eyes until you have thoroughly washed yo hands. 	G
 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 atte tion. 	H en-
FOR MEXICO : Service Notice	2150
• When removing or installing various parts, place a cloth or padding onto the vehicle body to preve	ent
 scratches. Handle trim, molding, instruments, grille, etc. carefully during removing or installing. Be careful not to oil damage them. 	or
 Apply sealing compound where necessary when installing parts. When applying sealing compound, be careful that the sealing compound does not protrude from parts. When replacing any metal parts (for example body outer panel, members, etc.), be sure to take rust preve tion measures. 	RF en-
FOR MEXICO : Precaution for Work	2151
 When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth. When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the compone with a shop cloth or vinyl tape to protect it. 	IV
 Protect the removed parts with a shop cloth and keep them. 	N
 Replace a deformed or damaged clip. If a part is specified as a non-reusable part, always replace it with new one. Be sure to tighten bolts and nuts securely to the specified torque. After re-installation is completed, be sure to check that each part works normally. 	0
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- Oily foul: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and with	ре
the fouled area. Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub w a soft and dry cloth.	ith
 Do not use organic solvent such as thinner, benzene, alcohol, and gasoline. 	

• For genuine leather seats, use a genuine leather seat cleaner.

< PRECAUTION >

< PREPARATION > PREPARATION

PREPARATION

Commercial Service Tool

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

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION **COMPONENT PARTS**

Component Parts Location

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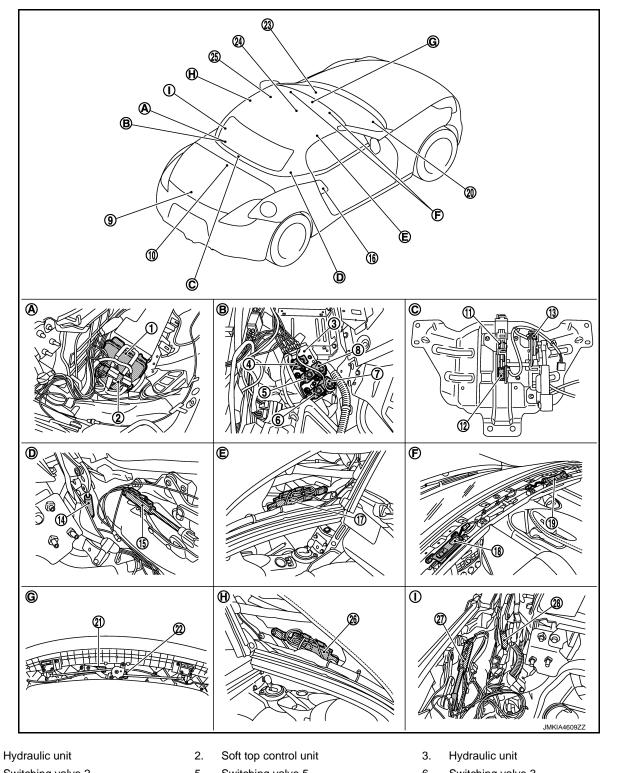
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- 1. 4. Switching valve 2
- Switching valve 1 7.
- 10. Trunk room lamp switch
- 5. Switching valve 5
- Switching valve 4 8.
- 11. 5th bow striker sensor
- 6. Switching valve 3
- 9. Trunk closure
- 12. 5th bow latch open sensor

COMPONENT PARTS

< SYSTEM DESCRIPTION >

13.	5th bow latch close sensor	14.	Roof drive cylinder RH (with roof status sensor RH)	15.	Storage lid drive cylinder RH (with stor- age lid status sensor RH)
16.	 Door outside handle LH (request switch) Door outside handle RH (request switch) 	17.	5th bow drive cylinder RH (with 5th bow status sensor RH)	18.	Roof striker sensor LH
19.	Roof striker sensor RH	20.	BCM Refer to <u>BCS-10, "Component Parts</u> <u>Location"</u>	21.	Roof latch cylinder
22.	Roof latch lock sensor	23.	Combination meter Refer to <u>MWI-10, "METER SYSTEM :</u> <u>Component Parts Location"</u>	24.	Roof open/close switch
25.	Power window main switch Refer to <u>PWC-96.</u> "Component Parts Location"	26.	5th bow drive cylinder LH (with 5th bow status sensor LH)	27.	Storage lid drive cylinder LH (with stor- age lid status sensor LH)
28.	Roof drive cylinder LH (with roof status sensor LH)				
Α.	Behind storage room trim LH	В.	Behind storage room trim LH	C.	Backside of storage lid
D.	Behind storage room trim RH	Ε.	2nd bow RH side	F.	Behind roof front finisher
G.	Behind front roof garnish	Н.	2nd bow LH side	I.	Behind storage room trim LH
0					

Component Description

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	Component	Reference page
Control unit	Soft top control unit	<u>RF-14</u>
	AV control unit	AV-11 (Base audio) AV-42 (Bose audio without navigation) AV-126 (Bose audio with navigation)
	BCM	BCS-9
	Combination meter	<u>MWI-10</u>
	5th bow latch close sensor	<u>RF-12</u>
	5th bow latch open sensor	<u>RF-13</u>
	5th bow status sensor (LH/RH)	<u>RF-13</u>
	5th bow striker sensor	<u>RF-13</u>
Input	Hydraulic pump temperature sensor	<u>RF-13</u>
Input	Roof latch lock sensor	<u>RF-13</u>
	Roof open/close switch	<u>RF-13</u>
	Roof striker sensor (LH/RH)	<u>RF-14</u>
	Storage lid status sensor (LH/RH)	<u>RF-14</u>
	Trunk room lamp switch	<u>DLK-185</u>
	Hydraulic pump relay (1/2)	<u>RF-13</u>
Quitout	Hydraulic pump motor	<u>RF-13</u>
Output	Switching valve (1/2/3/4/5)	<u>RF-14</u>
	Trunk opener actuator	DLK-185

5th Bow Latch Close Sensor

5th bow close sensor is installed to storage lid inside and detects 5th bow latch state by movement of linkage. ON signal (5th bow latch close signal) is transmitted to soft top control unit when linkage lock position is detected by hydraulic control.

COMPONENT PARTS

5th Bow Latch Open Sensor

5th bow latch open sensor is installed to storage lid inside and detects 5th bow latch state by movement of linkage.

ON signal (5th bow latch open signal) is transmitted to soft top control unit when linkage lock position is detected by hydraulic control.

5th Bow Status Sensor

< SYSTEM DESCRIPTION >

5th bow status sensor is installed to 5th bow drive cylinder and is a hall sensor.

When 5th bow drive bow cylinder is extended or retracted, the position of piston and sensor in the cylinder changes and the magnetic field around the sensor changes.

By this operation, sensor output current changes. Soft top control unit judges the state of 5th bow by this amount of current.

5th Bow Striker Sensor

5th bow striker sensor is installed to 5th bow latch linkage and detects engaging state of striker and latch. 5th bow striker sensor transmits ON signal to soft top control unit when engaging state of 5th bow striker and 5th bow latch is detected.

Hydraulic Pump Relay

Hydraulic pump relay is controlled by soft top control unit and controls the rotation direction of hydraulic pump ^G motor.

Hydraulic Pump Motor

Hydraulic pump motor drives hydraulic pump and controls the rotation direction using hydraulic pump motor relay.

Hydraulic Pump Temperature Sensor

Hydraulic pump temperature sensor measures the temperature of hydraulic pump motor. This sensor uses a thermistor and its electrical resistance varies as the temperature varies. Electrical resistance decreases as the temperature increases.

Hydraulic Unit

Hydraulic unit consists of hydraulic pump motor that drives hydraulic pump, hydraulic pump relay 1/2 that controls the rotation direction, switching valve 1/2/3/4/5 that switches the hydraulic circuits for each cylinder, and hydraulic pump temperature sensor that measures the temperature of hydraulic pump. Hydraulic pump controls hydraulic operation according to control signal from soft top control unit.

Roof Latch Lock Sensor

Roof latch lock sensor is installed in front roof garnish. The sensor detects the lock state by rod movement of roof lock assembly and transmits the signal to soft top control unit.

Soft top control unit uses this signal for judgement of roof latch cylinder hydraulic control or soft top lock state.

Roof Open/Close Switch

Soft top can be opened and closed by roof open/close switch operation. Soft top operates only while roof open/close switch is being operated.

Roof Status Sensor

Roof status sensor is installed to roof drive cylinder and is a hall sensor.

When roof drive cylinder is extended or retracted, the position of piston and sensor in the cylinder changes and the magnetic field around the sensor changes.

By this operation, sensor output current changes. Soft top control unit judges the state of soft top by this amount of current.

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

Roof Striker Sensor

Roof striker sensor is installed to roof front finisher LH and RH. It detects engaging state of roof lock assembly hook and front lock striker and transmits ON signal to soft top control unit.

Soft Top Control Unit

Soft top control unit is a main unit that controls soft top system. It is installed on the left side of soft top storage room.

Storage Lid Status Sensor

Storage lid status sensor is installed to storage lid drive cylinder and is a hall sensor.

When storage lid drive cylinder is extended or retracted, the position of piston and sensor in the cylinder changes and the magnetic field around the sensor changes.

By this operation, sensor output current changes. Soft top control unit judges storage lid state by this amount of current.

Switching Valve

Switching valve is integrated in hydraulic unit, switches hydraulic circuit by ON/OFF of valve 1/2/3/4/5, and controls hydraulic operation to each cylinder.

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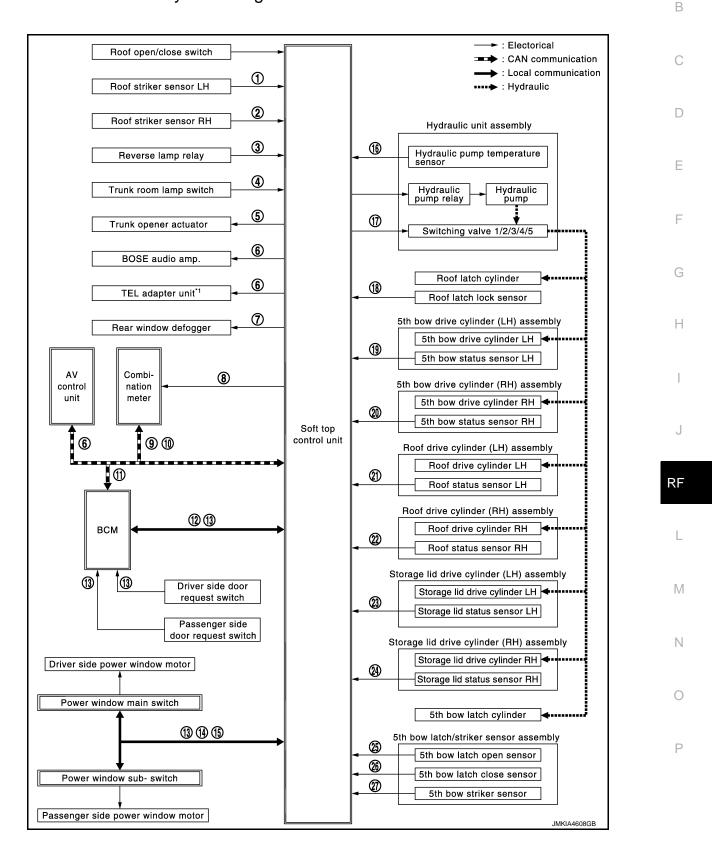
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< SYSTEM DESCRIPTION >

SYSTEM SOFT TOP SYSTEM

SOFT TOP SYSTEM : System Diagram



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< SYSTEM DESCRIPTION >

- 1. Roof striker position signal (LH)
- 4. Trunk lid open/close status signal
- 7. Rear window defogger on signal
- 10. Buzzer output signal
- 13. Door request switch signal
- 16. Hydraulic pump temperature signal
- 19. 5th bow status signal (LH)
- 22. Roof status signal (RH)
- 25. 5th bow latch open signal
- *1: Without navigation models

SOFT TOP SYSTEM : System Description

DESCRIPTION

Soft top system is a system that opens or closes roof using hydraulic pressure generated by each electric system part and hydraulic pump when operating roof open/close switch. Soft top control unit relates to the following function and control.

- Manual operation function
- Door request switch control
- Power window interlock control
- Rear window defogger control
- Soft top open/close control
- System protect control
- Trunk lid open control
- Warning control

SOFT TOP SYSTEM : Door Request Switch Control

DOOR REQUEST SWITCH CONTROL

In addition to roof open/close switch, door request switch (LH/RH) can perform an open operation. When BCM detects that door request switch is operated, BCM requests an open operation of soft top to soft top control unit via local communication.

SOFT TOP SYSTEM : Power Window Interlock Control

POWER WINDOW INTERLOCK CONTROL

If power window is not fully open during when open and close operations of soft top are performed, soft top control unit opens power window. Power window is operated via local communication between power window main switch/sub-switch.

Soft top control unit prohibits power window open control during roof intermediate position. Soft top control unit allows power window open control when soft top control unit released hydraulic pressure when roof position is intermediate.

SOFT TOP SYSTEM : Rear Window Defogger Control

REAR WINDOW DEFOGGER CONTROL

BCM turns rear window defogger relay ON when rear window defogger switch turns ON.

Power supply is supplied to soft top control unit when rear window defogger relay turns ON.

Soft top control unit judges soft top open/close state. Soft top control unit supplies power supply to rear window defogger when soft top is closed. Power supply is not supplied when sift top is open.

Indicator illuminates when rear window switch is pressed while soft top is open and power supply is not supplied to rear window defogger.

SOFT TOP SYSTEM : Soft Top Open/Close Control

Soft top open/close control

Open operation

Revision: 2012 August

Roof striker position signal (RH)

5. Trunk open signal

2.

- 8. Roof warning lamp signal
- 11. Ignition on signal
- 14. Power window open signal
- 17. Switching valve on/off signal
- 20. 5th bow status signal (RH)
- 23. Storage lid status signal (LH)
- 26. 5th bow latch close signal

- 3. Reverse signal
- 6. Roof position signal
- 9 Vehicle speed signal
- 12. Trunk open signal
- 15. Power window operation prohibition signal
- 18. Roof latch lock signal
- 21. Roof status signal (LH)
- 24. Storage lid status signal (RH)
- 27. 5th bow striker position signal

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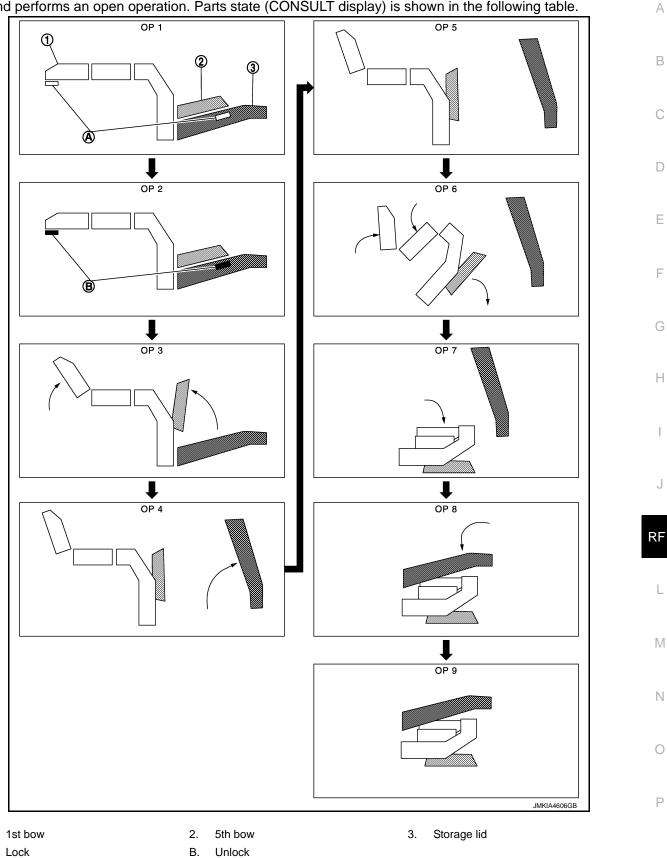
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< SYSTEM DESCRIPTION >

When roof open/close switch is operated to OPEN, soft top system checks that operation conditions are satisfied and performs an open operation. Parts state (CONSULT display) is shown in the following table.



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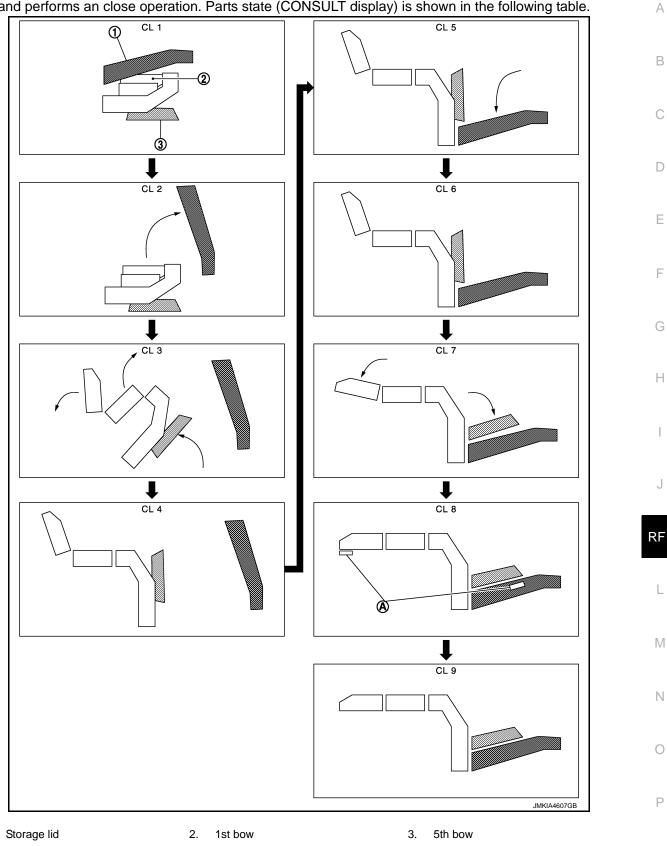
< SYSTEM DESCRIPTION >

	CONSULT								SOFT	TOP	STATE							
—	data monitor item	OP 1	\rightarrow	0P 2	\rightarrow	OP 3	\rightarrow	0P 4	\rightarrow	0P 5	\rightarrow	0P 6	\rightarrow	0P 7	\rightarrow	0P 8	\rightarrow	0P 9
	ROOF LATCHED LH	ON	_	OFF														
	ROOF LATCHED RH	ON	_	OFF														
	F/CENTER LOCK	ON	_	OFF														
	R/RAIL RAISED LH	ON	_	ON	_	ON		ON		ON	_	OFF	_	OFF		OFF		OFF
	R/RAIL RAISED RH	ON	_	ON	_	ON		ON		ON		OFF	_	OFF		OFF	_	OFF
	R/RAIL LOW- ERED	OFF		OFF		OFF	_	OFF	_	OFF	_	OFF		ON	_	ON	_	ON
Input	5TH BOW LOWERED	ON		ON		OFF		OFF		OFF	_	OFF	_	OFF		OFF	_	OFF
_	5TH BOW RAISED	OFF	Ι	OFF	Ι	ON		ON		ON	_	ON	-	ON		ON	_	ON
	S/LID OPEN LH	OFF		OFF		OFF	_	ON	_	ON	_	ON		ON	_	OFF	_	OFF
	S/LID OPEN RH	OFF	_	OFF	_	OFF	—	ON	_	ON	_	ON	—	ON	_	OFF	—	OFF
	S/LID CLOSE RH	ON		ON		ON		OFF		OFF	_	OFF	_	OFF		ON	_	ON
	5TH BOW STRIK LATCH	ON	_	OFF	_	OFF		OFF		OFF		OFF	_	OFF		OFF		OFF
	5TH BOW LATCH CL	ON		OFF		OFF	_	OFF	_	OFF	_	OFF		OFF		OFF	_	OFF
	5TH BOW LATCH OP	OFF	_	ON	_	ON	_	ON	_	ON	—	ON	_	ON	_	ON	—	ON
	PUMP OUT (RH)		ON	_	ON		ON	_	OFF	_								
	PUMP OUT (LH)		OFF	_	OFF		OFF	_										
	SWITCHING VALVE 1		ON	_	ON		ON	_	OFF	_								
Output	SWITCHING VALVE 2	_	OFF		OFF	_	ON	_	ON	_	ON	_	ON	_	OFF	_	OFF	
	SWITCHING VALVE 3	_	ON		ON		OFF	_	ON		ON		ON		ON		OFF	
	SWITCHING VALVE 4	_	ON	_	ON	_	ON	_	OFF	_								
	SWITCHING VALVE 5	_	OFF	—	ON	_	ON	_	ON	_	OFF	_	OFF	_	OFF	_	OFF	_

Close operation

< SYSTEM DESCRIPTION >

When roof open/close switch is operated to CLOSE, soft top system checks that operation conditions are satisfied and performs an close operation. Parts state (CONSULT display) is shown in the following table.



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< SYSTEM DESCRIPTION >

	CONSULT								SOFT	TOP	STATE							
—	data monitor item	CL 1	\rightarrow	CL 2	\rightarrow	CL 3	\rightarrow	CL 4	\rightarrow	CL 5	\rightarrow	CL 6	\rightarrow	CL 7	\rightarrow	CL 8	\rightarrow	CL 9
	ROOF LATCHED LH	OFF	_	ON	_	ON												
	ROOF LATCHED RH	OFF	_	OFF		OFF	_	OFF	_	OFF	-	OFF	-	OFF		ON		ON
	F/CENTER LOCK	OFF	_	OFF	_	OFF		OFF	_	OFF		OFF		OFF	_	ON		ON
	R/RAIL RAISED LH	OFF	_	OFF	_	ON		ON	_	ON		ON		ON	_	ON		ON
	R/RAIL RAISED RH	OFF	_	OFF	_	ON		ON	_	ON		ON		ON	_	ON		ON
	R/RAIL LOW- ERED	ON	_	ON		OFF		OFF	_	OFF		OFF		OFF		OFF		OFF
Input	5TH BOW LOWERED	OFF	_	ON	_	ON	_	ON										
-	5TH BOW RAISED	ON	_	ON	_	ON	-	ON	_	ON	_	ON	_	OFF	_	OFF	-	OFF
	S/LID OPEN LH	OFF	_	ON	_	ON	_	ON	_	OFF								
-	S/LID OPEN RH	OFF	_	ON	_	ON	_	ON	_	OFF								
-	S/LID CLOSE RH	ON	_	OFF	-	OFF	-	OFF	_	ON	_	ON	_	ON	_	ON	-	ON
	5TH BOW STRIK LATCH	OFF	_	ON	_	ON												
-	5TH BOW LATCH CL	OFF	_	ON	_	ON												
-	5TH BOW LATCH OP	ON	_	OFF	_	OFF												
	PUMP OUT (RH)	-	ON	_	ON	_	ON	_	ON	_	OFF	_	OFF	_	OFF	-	OFF	_
	PUMP OUT (LH)	-	OFF	_	ON	_	ON	-	OFF	_								
	SWITCHING VALVE 1	-	ON	_	OFF		OFF	_										
Output	SWITCHING VALVE 2	_	ON	_	ON	_	ON	_	OFF	_	OFF	_	OFF		OFF	_	OFF	_
-	SWITCHING VALVE 3		OFF		OFF		OFF		ON		ON		ON		ON		OFF	_
-	SWITCHING VALVE 4		OFF		ON		OFF	_										
	SWITCHING VALVE 5		OFF		OFF	_	ON		ON		ON		OFF	_	OFF		OFF	

SOFT TOP SYSTEM : System Protect Control

INFOID:000000008192176

System protect control

Soft top control unit restricts or inhibits the operation due to safety and system protection reasons, when detecting an operation and activation that are not normal.

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< SYSTEM DESCRIPTION >

PRECONDITIONS FOR SOFT TOP

If all of the following conditions are not satisfied, the roof system does not operate.

Item	Condition	
Air temperature	More than 0°C (32°F)	
Battery voltage	More than 10 V	
Ignition switch position	ON (not in START) *	
Power window system	State that can be operated	
Self diagnostic result	DTC is not detected	
Selector lever position	Not in R position	
Trunk lid	Closed	
	0 km/h (roof starts to operate)	
Vehicle speed	5 km/h or less (roof operates)	_

*: Except for operating with Intelligent Key (door request switch LH/RH).

THERMO PROTECT FUNCTION

Soft top control unit inhibits soft top operation due to system protection reasons under the following conditions.

- When soft top is operated excessively, operation is inhibited to avoid hydraulic pump or hydraulic system overheating and DTC is detected.
- Do not operate when ambient temperature is low or when operation may cause system or mechanism to be damaged.
- When soft top stops in the halfway position for 4 minutes or more, operation is inhibited and switching valve is released to avoid switching valve damage.
 CAUTION:

An unintentional operation of soft top or storage lid may occur due to its own weight because oil pressure is not maintained when switching valve is released. Be careful not to pinch hands. NOTE:

Open or close operation is possible 5 minutes after turning ignition switch OFF.

SOFT TOP SYSTEM : Trunk Lid Open Control

TRUNK LID OPEN CONTROL

Soft top control unit judges trunk lid open or close state by trunk room lamp switch signal. Soft top system RF does not operate when trunk lid is open.

Soft top control unit inhibits open operation by trunk opener when soft top is not in the fully open or close position.

SOFT TOP SYSTEM : Warning Control

WARNING CONTROL

Soft top control unit indicates soft top system state or warning by the warning lamp or buzzer in the combination meter.

WARNING LAMP FUNCTION

Combination meter displays the following items.

	Indicator lamp					
Condition	Not op	peration	Operation			
	Full open/close position	Half position	- Operation			
Ignition switch OFF	OFF	OFF	OFF	F		
Ignition switch ON	OFF	Lighting	Lighting			
Trunk lid is not close	OFF	Lighting	Lighting			
Ambient temperature is too low	OFF	Lighting	Lighting			
When the vehicle speed exceeds 5 km/h	OFF	Blinking	Blinking			
Voltage malfunction of power window system	OFF	Blinking	Blinking			

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< SYSTEM DESCRIPTION >

	Indicator lamp					
Condition	Not op	Operation				
	Full open/close position	Half position	Operation			
Shift selector position is R	OFF	Blinking	Blinking			
Battery voltage (10.5 V or less/16 V or more)	Lighting *	Lighting	Lighting			
DTC is detected	Lighting *	Lighting	Lighting			

*: It is not illuminated when ignition switch OFF. (It does not illuminate or blink.)

BUZZER FUNCTION

Buzzer sounds due to the following conditions.

Operation/condition	Buzzer sounds	Cause	Action
 Normal When roof open /close switch is turned ON Operation is complete (fully closed or fully open) 	Pi-	_	<u>-</u>
Release roof open/close switch		Roof state is not in end position (not in fully close or fully open position)	Operate soft top to end position.
		Shift selector position is R	Shift the shift selector to P or N
	Pi, Pi	Trunk lid is not closed	Close trunk lid
Soft top system does not oper- ate		Impossible operation is requested (A close operation while the roof is fully closed or an open operation while the roof is fully open)	_
The vehicle is driven	Pi	Soft top is not fully closed or fully open	Fully close or fully open soft top
Open operation by door re- quest switch	Not sound	_	I

SOFT TOP SYSTEM : Fail-safe

INFOID:000000008660434

FAIL-SAFE CONTROL BY DTC

Soft top control unit performs fail-safe control when any of the following DTCs is detected.

	Display contents of CONSULT	Fail-safe	Cancellation
U1000	CAN COMM CIRCUIT	Inhibit soft top operation.	Communication is normal.
U1010	CONTROL UNIT (CAN)	Inhibit soft top operation.	Communication is normal.
U0140	LOCAL COMM-1	Inhibit soft top operation.	Communication is normal.
U0215	LOCAL COMM-2	Inhibit soft top operation.	Communication is normal.
B1701	ROOF CONTROL UNIT	Inhibit soft top operation.	Replace soft top control unit.
B1702	ROOF CONTROL UNIT	Inhibit soft top operation.	Replace soft top control unit.
B1709	ROOF SWITCH(OPEN)	Inhibit soft top operation.	Detects roof open/close switch (OPEN) is OFF.
B170A	ROOF SWITCH(CLOSE)	Inhibit soft top operation.	Detects roof open/close switch (CLOSE) is OFF.
B170F	SENSOR POWER SUPPLY	Inhibit soft top operation.	Detects normal value.
B171A	HYDRAULIC PMP(LH)	Inhibit soft top operation.	Detects normal value.
B171B	HYDRAULIC PMP(RH)	Inhibit soft top operation.	Detects normal value.
B171C	SWITCHING VALVE 1	Inhibit soft top operation.	Detects normal value.
B171D	SWITCHING VALVE 2	Inhibit soft top operation.	Detects normal value.
B172C	ROOF STATE SIG(TRUNK)*	Inhibit soft top operation.	Detects normal value.
B1731	HYDRAULIC STATE 1	Inhibit soft top operation.	Turn ignition switch OFF.

< SYSTEM DESCRIPTION >

	Display contents of CONSULT	Fail-safe	Cancellation
B1758	THERMO PROTECTION	Inhibit soft top operation.	Turn ignition switch OFF and wait at least 5 minutes.
B175C	PWR SOURCE(ROOF)	Inhibit soft top operation.	Power source is 11.4 (V) or more for 0.5 second.
B175D	PWR SOURCE(ROOF)	Inhibit soft top operation.	Power source is14.5 (V) or more for 4 seconds.
B175E	PWR SOURCE(WINDOW)	Inhibit soft top operation and rear power window operation.	Power source (power window) is 9.5 (V) or more.
B175F	PWR SOURCE(WINDOW)	Inhibit soft top operation and rear power window operation.	Power source (power window) is 15.5 (V) or more.
B1766	SWITCHING VALVE 3	Inhibit soft top operation.	Detects normal value.
B1767	SWITCHING VALVE 4	Inhibit soft top operation.	Detects normal value.
B1768	SWITCHING VALVE 5	Inhibit soft top operation.	Detects normal value.
B176A	THERMO PROTECTION	Inhibit soft top operation.	Turn ignition switch OFF and wait at least 5 minutes.
B176B	ROOF WARNING LAMP	Inhibit soft top operation.	Detects normal value.
B176C	STRIKER SENSOR RH	Inhibit soft top operation.	Detects normal value.
B176D	STRIKER SENSOR LH	Inhibit soft top operation.	Detects normal value.
B176E	ROOF LATCH LOCK SEN- SOR	Inhibit soft top operation.	Detects normal value.
B176F	ROOF STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1770	ROOF STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1771	ROOF STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1772	5BOW STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1773	5BOW STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1774	S/LID STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1775	S/LID STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1776	S/LID STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1777	REAR DEF OUT SIG	Inhibit soft top and rear win- dow defogger operation.	Detects normal value.
B1778	TRUNK OPEN OUT SIG	Inhibit soft top and trunk lid opener actuator operation.	Detects normal value.
B1779	THERMO PROTECTION	Inhibit soft top operation.	Detects normal value.
B177A	ROOF STATE INCORRECT	Inhibit soft top operation.	Detects normal value.
B177B	ROOF STATE INCORRECT	Inhibit soft top operation.	Detects normal value.
B177C	THERMO PROTECTION	Inhibit soft top operation.	Detects normal value.
B177D	5BOW LATCH OPEN SEN	Inhibit soft top operation.	Detects normal value.
B177E	5BOW LATCH CLOSE SEN	Inhibit soft top operation.	Detects normal value.
B177F	5BOW STRIKER SENSOR	Inhibit soft top operation.	Detects normal value.

*: This item indicates the roof status signal (Audio).

SOFT TOP SYSTEM : Correspondence in Emergency

If the soft top cannot be operated electrically because of a discharged battery or any other system malfunction, the soft top needs to be closed manually or opened manually according to the following procedures.

MANUAL OPERATION (SOFT TOP FULLY OPEN \Rightarrow FULLY CLOSE)

- 1. Open Trunk Lid.
- 2. Open storage lid

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< SYSTEM DESCRIPTION >

- Remove trunk finisher front (2) inside of trunk by removing clips (1).
- Pull emergency cable (right and left) (3). Close trunk lid.
- Manually open storage lid from left and right side of the vehicle.

CAUTION:

Use a cloth or other tool to protect your hands when pulling on the lock release.

CAUTION:

Close soft top.

3.

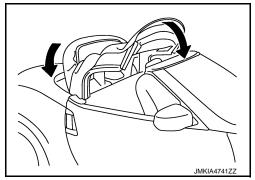
- This is a heavy component. 2 workers are required.
- Fully close trunk lid before opening storage lid. Otherwise, storage lid may contact with trunk lid.

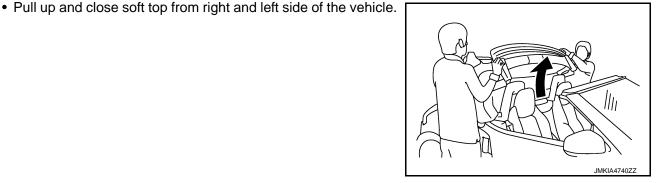
• Close top storage lid. Close the front and rear parts of soft top. CAUTION:

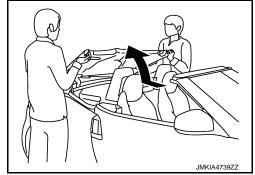
Fully close storage lid. Otherwise, storage lid may contact with soft top.

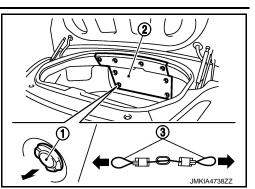
4. Lock the 1st Bow of soft top.









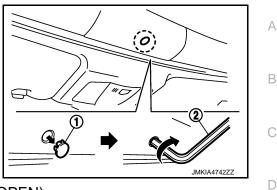


< SYSTEM DESCRIPTION >

- Remove cap (1).
- Insert a hexagonal wrench (2) into the hole and turn clockwise. CAUTION:

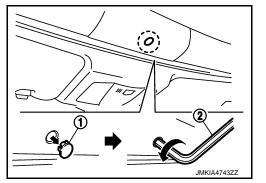
Be careful not to leave the vehicle outside for a long period of time or drive at high speeds.

The soft top is not locked completely, and this may allow wind, rain and foreign matter to get into the vehicle.



MANUAL OPERATION (SOFT TOP FULLY CLOSE \Rightarrow FULLY OPEN)

- 1. Unlock the 1st Bow of soft top.
 - Remove cap (1).
 - Insert a hexagonal wrench (2) into the hole and turn counterclockwise.



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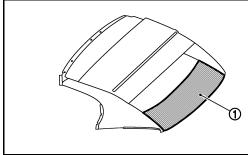
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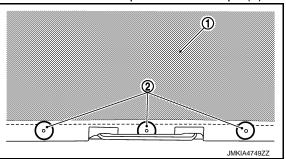
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- 2. Remove rear lock striker.
 - Remove storage lid deflector. Refer to <u>INT-58</u>, "STORAGE LID DEFLECTOR : Removal and Installation".
 - Lift up soft top cover inner (1) from passenger room and remove soft top cover inner clips (2).

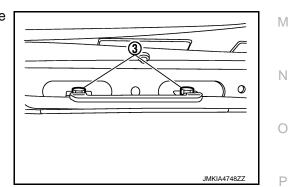




• Remove rear lock striker mounting bolts (3) from the service hole.

CAUTION:

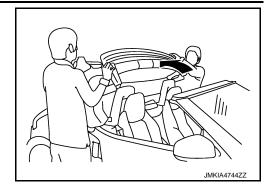
Be careful not to damage storage lid during the operation.

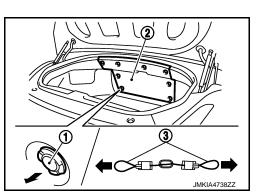


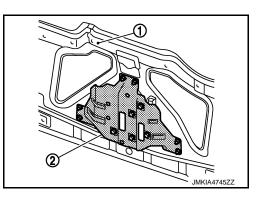
3. Open 1st bow and 5th bow.

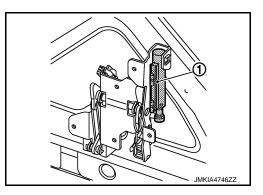
< SYSTEM DESCRIPTION >

Simultaneously lift up 1st bow and 5th bow. Fold soft top.









- 4. Open Trunk Lid.
- 5. Open storage lid.
 - Remove trunk finisher front (2) inside of trunk by removing clips (1).
 - Pull emergency cables (right and left) (3). Close trunk lid.
 - Manually open storage lid from left and right side of the vehicle.
 - Place soft top in storage lid.

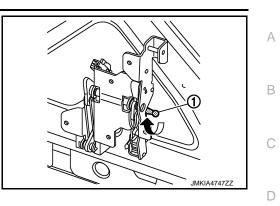
CAUTION:

- Use a cloth or other tool to protect your hands when pulling on the lock release.
- This is a heavy component. 2 workers are required.
- Fully close trunk lid before opening storage lid. Otherwise, storage lid may contact with trunk lid.
- 6. Release 5th bow holder. Remove rear lock striker.
 - Remove storage bracket assembly (2) from storage lid (1).

• Remove hydraulic cylinder (1).

< SYSTEM DESCRIPTION >

• Rotate hydraulic cylinder mounting pivot (1). Release 5th bow. Remove the striker.



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DIAGNOSIS SYSTEM (SOFT TOP CONTROL UNIT)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (SOFT TOP CONTROL UNIT)

CONSULT Function

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APPLICATION ITEM

CONSULT performs the following functions via CAN communication with soft top control unit.

Diag	nosis mode	Function Description
ECU Identification		The soft top control unit part number is displayed.
Self Diagnostic Result		Displays the diagnosis results judged by soft top control unit.
	Freeze Frame Data	The soft top control unit records the vehicle condition at the time when the DTC is detected, and displays.
Data Monitor		The soft top control unit input/output signals are displayed.
Active Test		The signals used to activate each device are forcibly supplied from soft top control unit.
CAN Diag Support Monitor		Monitors the reception status of CAN communication viewed from soft top control unit. Refer to CONSULT operation manual.

SELF-DIAG RESULT Refer to <u>RF-40, "DTC Index"</u>.

Freeze Frame Data

The soft top control unit records the following vehicle condition at the time when the DTC is detected, and displays on CONSULT.

CONSULT display		Description
Item	Indication	- Description
ROOF SW (OPEN)	ON/OFF	OPEN input state of roof open/close switch is displayed.
ROOF SW (CLOSE)	ON/OFF	CLOSE input state of roof open/close switch is displayed.
ROOF LATCHED LH	ON/OFF	Input state of roof striker sensor LH is displayed.
ROOF LATCHED RH	ON/OFF	Input state of roof striker sensor RH is displayed.
F/CENTER LOCK	ON/OFF	Input state of roof latch lock sensor is displayed.
R/RAIL RAISED LH	ON/OFF	Input state of roof status sensor LH is displayed.
R/RAIL RAISED RH	ON/OFF	Input state of roof status sensor RH is displayed.
R/RAIL LOWERED	ON/OFF	Input state of roof status sensor LH is displayed.
5BOW LOWERED	ON/OFF	Input state of 5th bow status sensor LH is displayed.
5BOW RAISED	ON/OFF	Input state of 5th bow status sensor RH is displayed.
TRUNK STATUS SEN	ON/OFF	Input state of trunk status sensor is displayed.
S/LID OPEN LH	ON/OFF	Input state of storage lid status sensor LH is displayed.
S/LID OPEN RH	ON/OFF	Input state of storage lid status sensor RH is displayed.
S/LID CLOSE RH	ON/OFF	Input state of storage lid status sensor RH is displayed.
5TH BOW LATCH OP	ON/OFF	Input state of 5th bow latch open sensor is displayed.
5TH BOW LATCH CL	ON/OFF	Input state of 5th bow latch close sensor is displayed.
5BOW STRIK LATCH	ON/OFF	Input state of 5th bow striker sensor is displayed.
FLPD LIMIT SW(DWN)	ON/OFF	Input state of flipper door limit switch (DOWN) is displayed.
SWITCH VALVE 1	ON/OFF	Output state to switching valve 1 is displayed.
SWITCH VALVE 2	ON/OFF	Output state to switching valve 2 is displayed.
SWITCH VALVE 3	ON/OFF	Output state to switching valve 3 is displayed.
SWITCH VALVE 4	ON/OFF	Output state to switching valve 4 is displayed.
SWITCH VALVE 5	ON/OFF	Output state to switching valve 5 is displayed.

DIAGNOSIS SYSTEM (SOFT TOP CONTROL UNIT)

< SYSTEM DESCRIPTION >

CONSULT display			Description	
-	Item	Indication	Description	А
PUMP OUT (LH)		ON/OFF	Right rotation output state to hydraulic motor is displayed.	
PUMP OUT (RH)		ON/OFF	Left rotation output state to hydraulic motor is displayed.	В

DATA MONITOR

NOTE:

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

CONSULT display Item Indication/Unit		Description	
		- Description	
ROOF LATCHED LH	ON/OFF/NG	Input state of roof striker sensor LH is displayed.	
ROOF LATCHED RH	ON/OFF/NG	Input state of roof striker sensor RH is displayed.	
F/CENTER LOCK	ON/OFF/NG	Input state of roof latch lock sensor is displayed.	
R/RAIL RAISED LH	ON/OFF/NG	Input state of roof status sensor LH is displayed.	
R/RAIL RAISED RH	ON/OFF/NG	Input state of roof status sensor RH is displayed.	
R/RAIL LOWERED	ON/OFF/NG	Input state of roof status sensor LH is displayed.	
5TH BOW LOWERED	ON/OFF/NG	Input state of 5th bow status sensor LH is displayed.	
5TH BOW RAISED	ON/OFF/NG	Input state of 5th bow status sensor RH is displayed.	
S/LID OPEN LH	ON/OFF/NG	Input state of storage lid status sensor LH is displayed.	
S/LID OPEN RH	ON/OFF/NG	Input state of storage lid status sensor RH is displayed.	
S/LID CLOSE RH	ON/OFF/NG	Input state of storage lid status sensor RH is displayed.	
5TH BOW LATCH OP	ON/OFF/NG	Input state of 5th bow latch open sensor is displayed.	
SWITCHING VALVE 1	ON/OFF/NG	Output state to switching valve 1 is displayed.	
SWITCHING VALVE 2	ON/OFF/NG	Output state to switching valve 2 is displayed.	
SWITCHING VALVE 3	ON/OFF/NG	Output state to switching valve 3 is displayed.	
SWITCHING VALVE 4	ON/OFF/NG	Output state to switching valve 4 is displayed.	
SWITCHING VALVE 5	ON/OFF/NG	Output state to switching valve 5 is displayed.	
PUMP OUT (RH)	ON/OFF/NG	Right rotation output state to hydraulic motor is displayed.	
PUMP OUT (LH)	ON/OFF/NG	Left rotation output state to hydraulic motor is displayed.	
5TH BOW LATCH CL	ON/OFF/NG	Input state of 5th bow latch close sensor is displayed.	
ROOF SW (OPEN)	ON/OFF	OPEN input state of roof open/close switch is displayed.	
ROOF SW (CLOSE)	ON/OFF	CLOSE input state of roof open/close switch is displayed.	
SHIFT R SIGNAL	ON/OFF	Input state of shift position (R position) is displayed.	
TRUNK OPEN OUT	ON/OFF	Output state to trunk open signal is displayed.	
THER PROTEC PUMP	OK/NG	Non-operation state of thermo protection (hydraulic pump) is displayed.	
THER PROTEC RCU	OK/NG	Non-operation state of thermo protection (soft top control unit) is displayed.	
PWR COND RCU	OK/NG	Diagnosis result of power supply (soft top control unit) is displayed.	
PWR COND P/W	OK/NG	Diagnosis result of power supply (power window) is displayed.	
LOCAL COMM 1	NG/SLEEP/NG	State of serial link 1 is displayed.	
LOCAL COMM 2	NG/SLEEP/NG	State of serial link 2 is displayed.	
REAR DEF OUT	OK/NG	Output state to rear window defogger is displayed.	
5BOW STRIK LATCH	ON/OFF/NG	G Input state of 5th bow striker sensor is displayed.	
P/W OP REQ SW SIG	ON/OFF	Input state of power window open signal from request switch is displayed.	
PROHIBIT P/W UP	ON/OFF	Output state to power window operation prohibition signal is displayed.	

DIAGNOSIS SYSTEM (SOFT TOP CONTROL UNIT)

< SYSTEM DESCRIPTION >

CONSULT di	splay	Description	
Item	Indication/Unit		
		Receiving state of ignition ON signal from BCM is displayed.	
		Input state of soft top open signal from request switch is displayed.	

ACTIVE TEST

CONSULT display		- Description		
Item	Indication			
ROOF LATCHED LH/RH	LOCK	Roof lock assembly performs lock operation.		
	UNLOCK	Roof lock assembly performs unlock operation.		
STORAGE LID	OPEN	Storage lid performs open operation.		
STORAGE LID	CLOSE	Storage lid performs close operation.		
SOFT TOP SYSTEM	UP	Soft top performs close operation.		
SOFT TOP STSTEM	DOWN	Soft top performs open operation.		
ROOF SYSTEM	OPEN	Soft top system performs open operation.		
ROOPSTSTEM	CLOSE	Soft top system performs close operation.		
5TH BOW SYSTEM	OPEN	1st bow and 5th bow performs fold operation.		
	CLOSE	1st bow and 5th bow performs spread operation.		
HYDRAULIC PRESSURE RELEASE	ON	Switching valve performs OFF operation.		
TRUNK OPENER	ON	Trunk lid opener actuator performs unlock operation.		
ROOF STATE OUTPUT (AUDIO)	ON	Full open position signal of roof is transmitted to audio unit.		
	OFF	Full close position signal of roof is transmitted to audio unit.		
	UP	Power window (LH/RH) performs close operation.		
POWER WINDOW (LH/RH)	DOWN	Power window (LH/RH) performs open operation.		
REAR WINDOW DEFOGGER	ON	Rear window defogger performs ON operation.		
REAR WINDOW DEFOGGER	OFF	Rear window defogger performs OFF operation.		

ECU DIAGNOSIS INFORMATION SOFT TOP CONTROL UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

CONSULT MONITOR ITEM

CONSULT MONITOR ITEM		Condition	Status/Value	_		
Monitor Item						
		Lock position	ON	_		
ROOF LATCHED RH	State of roof lock is in roof latch RH	Other than above	OFF			
		Roof striker sensor RH circuit is open or short	NG			
		Lock position	ON			
ROOF LATCHED LH	State of roof lock is in roof	Other than above	OFF			
	latch LH	Roof striker sensor LH circuit is open or short	NG			
		Lock	ON			
F/CENTER LOCK	State of roof latch cylinder	Other than above	OFF			
		Roof latch lock sensor circuit is open or short	NG			
		Soft top is close	ON			
R/RAIL RAISED LH	State of roof drive cylinder	Other than above	OFF			
	LH	Roof status sensor LH circuit is open or short	NG			
	State of roof drive cylinder	Soft top is close	ON	_		
RAIL RAISED RH		Other than above	OFF			
	RH	Roof status sensor RH circuit is open or short	NG	F		
		Soft top is open	ON	_		
R/RAIL LOWERED	State of roof drive cylinder	Other than above	OFF	_		
	LH	Roof status sensor LH circuit is open or short	NG			
		5th bow is close	ON			
5TH BOW LOWERED	State of 5th bow drive cylin-	Other than above	OFF			
	der LH	5th bow status sensor LH circuit is open or short	NG			
		5th bow is open	ON			
5TH BOW RAISED	State of 5th bow drive cylin-	Other than above	OFF			
	der RH	5th bow status sensor RH circuit is open or short	NG			
		Storage lid is open	ON			
S/LID OPEN LH	State of storage lid drive cyl-	Other than above	OFF			
	inder LH	Storage lid status sensor LH circuit is open or short	NG	_		

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В

< ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Status/Value
		Storage lid is open	ON
S/LID OPEN RH	State of storage lid drive cyl-	Other than above	OFF
	inder RH	Storage lid status sensor RH circuit is open or short	NG
		Storage lid is close	ON
S/LID CLOSE RH	State of storage lid drive cyl-	Other than above	OFF
	inder RH	Storage lid status sensor RH circuit is open or short	NG
		Unlock	ON
5TH BOW LATCH OP	State of 5th bow latch cylin-	Other than above	OFF
	der	5th bow latch open sensor circuit is open or short	NG
		Operate	ON
SWITCHING VALVE 1	Operation of switching valve 1	Stop	OFF
		Switching valve 1 circuit is short	NG
		Operate	ON
SWITCHING VALVE 2	Operation of switching valve 2	Stop	OFF
		Switching valve 2 circuit is short	NG
		Operate	ON
SWITCHING VALVE 3	Operation of switching valve 3	Stop	OFF
		Switching valve 3 circuit is short	NG
		Operate	ON
SWITCHING VALVE 4	Operation of switching valve 4	Stop	OFF
		Switching valve 4 circuit is short	NG
		Operate	ON
SWITCHING VALVE 5	Operation of switching valve 5	Stop	OFF
		Switching valve 5 circuit is short	NG
	_	Turning clockwise	ON
PUMP OUT (RH)	Operation of hydraulic pump motor	Other than above	OFF
		Hydraulic pump motor (RH) circuit is short	NG
		Turning counterclockwise	ON
PUMP OUT (LH)	Operation of hydraulic pump motor	Other than above	OFF
		Hydraulic pump motor (LH) circuit is short	NG
		Lock	ON
5TH BOW LATCH CL	State of 5th bow latch cylin-	Other than above	OFF
	der	5th bow latch close sensor circuit is open or short	NG
	State of roof open/close	OPEN operation is in operation	ON
ROOF SW (OPEN)	switch	Other than above	OFF
	State of roof open/close	CLOSE operation is in operation	ON
ROOF SW (CLOSE)	switch	Other than above	OFF
	Chitt persition	R position	ON
SHIFT R SIGNAL	Shift position	Other than R position	OFF
	Operation of trunk lid open-	OPEN operation is in operation	ON
TRUNK OPEN OUT	er actuator	Other than above	OFF

< ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Status/Value	
	Thermo protection hydraulic	In non-operation	OK	
THER PROTEC PUMP	pump	In operation	NG	
THER PROTEC RCU	Thermo protection soft top	In non-operation	OK	
THER PROTEC RCO	control unit	In operation	NG	
PWR COND RCU	Power supply voltage state	Normal	OK	
	of soft top control unit	Malfunction	NG	_
PWR COND P/W	Power supply voltage state	Normal	OK	
	of power window	Malfunction	NG	_
		Normal	OK	_
LOCAL COMM 1	State of local communica- tion 1	It is in sleep mode	SLEEP	_
		Communication error	NG	
		Normal	OK	
LOCAL COMM 2	State of local communica- tion 2	It is in sleep mode	SLEEP	
		Communication error	NG	
REAR DEF OUT	Operation of rear window	Roof position is full close	OK	
REAR DEF OUT	defogger	Other than above	NG	
		5th bow striker is in 5th bow latch	ON	
5BOW STRIK LATCH	State of 5th bow latch	Other than above	OFF	_
		5th bow striker sensor circuit is open or short	NG	
P/W OP REQ SW SIG	State of request switch sig-	OPEN operation is in operation	ON	
F/W OF REQ 3W 310	nal	Stop	OFF	
PROHIBIT P/W UP	Prohibit of power window up	In operation	ON	
		In non-operation	OFF	
IGN ON SIG(BCM)	Power position signal	Ignition switch ON	ON	- _
		Other than above	OFF	— F
RF OP REQ SW SIG	State of request switch sig-	OPEN operation is in operation	ON	_
IN OF NEW SW SIG	nal	Stop	OFF	

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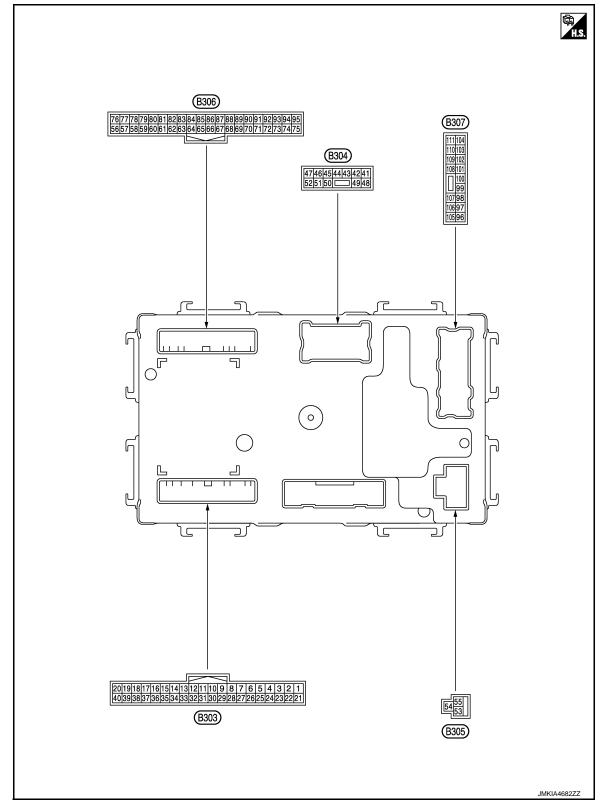
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< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
1 (BR)	Ground	Sensor power supply (Roof striker sensor LH)	Output	[Engine is running]		12 V	
3 (DG)	Ground	Roof striker sensor RH	Input	[Engine is running] Roof lock assembly 	Hooked Released	0.8 V 3.0 V	
4 (W)	Ground	Roof striker sensor LH	Input	[Engine is running] • Roof lock assembly	Hooked	0.8 V	
8				[Ignition switch: ON]	Released R position	3.0 V Battery voltage	
(Y)	Ground	Back up lamp signal	Input	Shift position	Other than above	0 V	
9 (SB)	Ground	Power source (Power window)	Input	[Ignition switch: OFF]	_	Battery voltage	
10		Trunk lid open re-		[Ignition switch: ON]	Operate	$0 \text{ V} \rightarrow \text{Battery voltage} \rightarrow 0 \text{ V}$	
(O)	Ground	quest signal (BCM)	Input	Trunk opener	Other than above	0 V	
11	Ground	Roof status signal (Indicator lamp)	Output	[Engine is running] • Soft top indicator lamp	Illuminate	0 V	
(O)					Not illuminate	Battery voltage	
12		Roof status signal		[Engine is running]	Fully open	9.5 V	
(SB)	Ground	(Audio)	Output	Soft top system	Other than above	0 V	
14		Roof open/close		[Engine is running]	Pressed	0 V	
(L)	Ground	switch (Close)	Input	Close switch	Released	Battery voltage	
15	Ground	Roof open/close switch	Input	[Engine is running]	Pressed	0 V	
(LG)	Cround	(Open)	mput	Open switch	Released	Battery voltage	
16		Trunk room lamp		[Ignition switch: ON]	Open	0 V	
(V)	Ground	switch	Input	Trunk lid	Other than above	Battery voltage	
17 (BG)	Ground	CAN-H	Input/ Output			-	
18 (P)	Ground	CAN-L	Input/ Output	_			
19 (LG)	Ground	Local communication (Power window)	Input/ Output	_		(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0	
20 (V)	Ground	Local communication (BCM)	Input/ Output			(V) 15 10 5 0 •••••10ms JMKIA4024GB	

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value
+	-	Signal name	Input/ Output	Condition		
21 (BR)	Ground	Sensor power supply (Roof striker sensor RH)	Output	[Engine is running]		12 V
29 (DG)	Ground	Ground	_	_		_
35 (P)	Ground	Ground (Roof open/close switch)	_	_		_
41 (DG)	Ground	Trunk lid opener ac- tuator	Output	Trunk lid opener	Operate Stop	$0 V \rightarrow Battery voltage \rightarrow 0 V$ 0 V
48 (R)	Ground	Power source (Rear window defog- ger)	Input	[Engine is running] • Rear window defogger	Active Not active	Battery voltage 0 V
49		Power source		[Engine is running]	Active	Battery voltage
(R)	Ground	(Rear window defog- ger)	Input	Rear window defogger	Not active	0 V
53 (R)	Ground	Power source (Roof)	Input	[Engine is running]		Battery voltage
54 (B)	Ground	Ground (Roof)	_	_		_
56		5th bow latch close		[Engine is running]	Lock	0.8 V
(W)	Ground	sensor	Input	5th bow latch	Other than above	3.0 V
57		5th bow latch open		[Engine is running]	Unlock	0.8 V
(G)	Ground	sensor	Input	• 5th bow latch	Other than above	3.0 V
58		Storage lid status		[Engine is running]	Full open	0.8 V
(LG)	Ground	sensor RH (Open)	Input	Storage lid	Other than above	3.0 V
59		Storage lid status		[Engine is running]	Full close	0.8 V
(W)	Ground	sensor RH (Close)	Input	Storage lid	Other than above	3.0 V
60		Storage lid status		[Engine is running]	Full open	0.8 V
(DG)	Ground	sensor LH (Open)	Input	Storage lid	Other than above	3.0 V
61		Roof status sensor		[Engine is running]	Raised	0.8 V
61 (Y)	Ground	RH (Close)	Input	 Soft top 	Other than above	3.0 V
		Roof status sensor			Lowered	0.8 V
66 (L)	Ground	LH (Open)	Input	[Engine is running] • Soft top	Other than above	3.0 V
68		Eth how status		[Engine is running]	Raised	0.8 V
68 (P)	Ground	5th bow status sen- sor RH	Input	5th bow	Other than above	3.0 V
60		Roof status sensor		(Coning in surveine)	Raised	0.8 V
69 (V)	Ground	LH (Close)	Input	[Engine is running] • Soft top	Other than above	3.0 V

< ECU DIAGNOSIS INFORMATION >

Termir (Wire	nal No. color)	Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
70 (O)	Ground	5th bow status sen- sor LH	Input	[Engine is running] • 5th bow	Lowered Other than above	0.8 V 3.0 V
71 (SB)	Ground	Roof latch lock sen- sor	Input	[Engine is running] • Roof lock assembly	Lock Other than above	0.8 V 3.0 V
72 (W/R)	Ground	Hydraulic pump tem- perature sensor	Input	[Engine is running]		0 - 4.8 V Output voltage varies with hy- draulic pump temperature.
73 (R)	Ground	Hydraulic pump relay 2 ON signal	Input	[Engine is running]Hydraulic pump motor (Right rotation)	Active Inactive	12 V 0 V
74 (R/B)	Ground	Hydraulic pump relay 1 ON signal	Input	[Engine is running] • Hydraulic pump motor (Left rotation)	Active Inactive	12 V 0 V
75 (BR)	Ground	Sensor power supply (Roof status sensor LH//5th bow latch open sensor/5th bow latch close sensor/ 5th bow striker sen- sor)	Output	[Engine is running]		12 V
76 (L)	Ground	5th bow striker sen- sor	Input	[Engine is running] • 5th bow striker	Hooked Released	0.8 V 3.0 V
92 (BG)	Ground	Sensor ground (Hydraulic pump tem- perature sensor)	_	_		_
93 (BR)	Ground	Sensor power supply (Roof status sensor RH/Storage lid status sensor RH)	Output	[Engine is running]		12 V
94 (BR)	Ground	Sensor power supply (Roof latch lock sen- sor/5th bow status sensor LH)	Output	[Engine is running]		12 V
95 (BR)	Ground	Sensor power supply (Storage lid status sensor/5th bow sta- tus sensor RH)	Output	[Engine is running]		12 V
96 (W)	Ground	Switching valve 4	Output	[Engine is running] Switching valve 4 	Active Inactive	12 V 0 V
97 (LG)	Ground	Switching valve 3	Output	[Engine is running] • Switching valve 3	Active Inactive	12 V 0 V
98 (L)	Ground	Switching valve 2	Output	[Engine is running] • Switching valve 2	Active Inactive	12 V 0 V
99 (O)	Ground	Switching valve 1	Output	[Engine is running] • Switching valve 1	Active Inactive	12 V 0 V
100 (BR)	Ground	Hydraulic pump relay 2	Output	[Engine is running]Hydraulic pump motor (Right rotation)	Active Inactive	12 V 0 V

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description	Condition		Condition	
+	_	Signal name	Input/ Output	Condition		(Approx.)
101		Hydraulic pump relay	0.1.1	[Engine is running]	Active	12 V
(SB)	Ground	1	Output	 Hydraulic pump motor (Left rotation) 	Inactive	0 V
102	Ground	Switching valve 5	Output	[Engine is running]	Active	12 V
(P)	Giouna	Switching valve 5	Output	 Switching valve 5 	Inactive	0 V
103 (B)	Ground	Hydraulic unit ground	_	_		_
		5		[Engine is running]	Active	Battery voltage
104 (R)	Ground	Rear window defog- ger power supply	Output	Rear window defogger NOTE: Roof is fully closed.	Not active	0 V
		5		[Engine is running]	Active	Battery voltage
111 (R)	Ground	Rear window defog- ger power supply	Output	Rear window defogger NOTE: Roof is fully closed.	Not active	0 V

Fail-safe

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FAIL-SAFE CONTROL BY DTC

Soft top control unit performs fail-safe control when any of the following DTCs is detected.

	Display contents of CONSULT	Fail-safe	Cancellation
U1000	CAN COMM CIRCUIT	Inhibit soft top operation.	Communication is normal.
U1010	CONTROL UNIT (CAN)	Inhibit soft top operation.	Communication is normal.
U0140	LOCAL COMM-1	Inhibit soft top operation.	Communication is normal.
U0215	LOCAL COMM-2	Inhibit soft top operation.	Communication is normal.
B1701	ROOF CONTROL UNIT	Inhibit soft top operation.	Replace soft top control unit.
B1702	ROOF CONTROL UNIT	Inhibit soft top operation.	Replace soft top control unit.
B1709	ROOF SWITCH(OPEN)	Inhibit soft top operation.	Detects roof open/close switch (OPEN) is OFF.
B170A	ROOF SWITCH(CLOSE)	Inhibit soft top operation.	Detects roof open/close switch (CLOSE) is OFF.
B170F	SENSOR POWER SUPPLY	Inhibit soft top operation.	Detects normal value.
B171A	HYDRAULIC PMP(LH)	Inhibit soft top operation.	Detects normal value.
B171B	HYDRAULIC PMP(RH)	Inhibit soft top operation.	Detects normal value.
B171C	SWITCHING VALVE 1	Inhibit soft top operation.	Detects normal value.
B171D	SWITCHING VALVE 2	Inhibit soft top operation.	Detects normal value.
B172C	ROOF STATE SIG(TRUNK)*	Inhibit soft top operation.	Detects normal value.
B1731	HYDRAULIC STATE 1	Inhibit soft top operation.	Turn ignition switch OFF.
B1758	THERMO PROTECTION	Inhibit soft top operation.	Turn ignition switch OFF and wait at least 5 minutes.
B175C	PWR SOURCE(ROOF)	Inhibit soft top operation.	Power source is 11.4 (V) or more for 0.5 second.
B175D	PWR SOURCE(ROOF)	Inhibit soft top operation.	Power source is14.5 (V) or more for 4 seconds.
B175E	PWR SOURCE(WINDOW)	Inhibit soft top operation and rear power window operation.	Power source (power window) is 9.5 (V) or more.
B175F	PWR SOURCE(WINDOW)	Inhibit soft top operation and rear power window operation.	Power source (power window) is 15.5 (V) or more.
B1766	SWITCHING VALVE 3	Inhibit soft top operation.	Detects normal value.
B1767	SWITCHING VALVE 4	Inhibit soft top operation.	Detects normal value.

< ECU DIAGNOSIS INFORMATION >

	Display contents of CONSULT	Fail-safe	Cancellation
B1768	SWITCHING VALVE 5	Inhibit soft top operation.	Detects normal value.
B176A	THERMO PROTECTION	Inhibit soft top operation.	Turn ignition switch OFF and wait at least 5 minutes.
B176B	ROOF WARNING LAMP	Inhibit soft top operation.	Detects normal value.
B176C	STRIKER SENSOR RH	Inhibit soft top operation.	Detects normal value.
B176D	STRIKER SENSOR LH	Inhibit soft top operation.	Detects normal value.
B176E	ROOF LATCH LOCK SEN- SOR	Inhibit soft top operation.	Detects normal value.
B176F	ROOF STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1770	ROOF STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1771	ROOF STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1772	5BOW STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1773	5BOW STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1774	S/LID STATUS SEN LH	Inhibit soft top operation.	Detects normal value.
B1775	S/LID STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1776	S/LID STATUS SEN RH	Inhibit soft top operation.	Detects normal value.
B1777	REAR DEF OUT SIG	Inhibit soft top and rear win- dow defogger operation.	Detects normal value.
B1778	TRUNK OPEN OUT SIG	Inhibit soft top and trunk lid opener actuator operation.	Detects normal value.
B1779	THERMO PROTECTION	Inhibit soft top operation.	Detects normal value.
B177A	ROOF STATE INCORRECT	Inhibit soft top operation.	Detects normal value.
B177B	ROOF STATE INCORRECT	Inhibit soft top operation.	Detects normal value.
B177C	THERMO PROTECTION	Inhibit soft top operation.	Detects normal value.
B177D	5BOW LATCH OPEN SEN	Inhibit soft top operation.	Detects normal value.
B177E	5BOW LATCH CLOSE SEN	Inhibit soft top operation.	Detects normal value.
B177F	5BOW STRIKER SENSOR	Inhibit soft top operation.	Detects normal value.

*: This item indicates the roof status signal (Audio).

DTC Inspection Priority Chart

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

Priority		Display contents of CONSULT	
	U1000	CAN COMM CIRCUIT	
	U1010	CONTROL UNIT (CAN)	
	B170F	SENSOR POWER SUPPLY	
	B175C	PWR SOURCE(ROOF)	
1	B175D	PWR SOURCE(ROOF)	
	B175E	PWR SOURCE(WINDOW)	
	B175F	PWR SOURCE(WINDOW)	
	B1701	ROOF CONTROL UNIT	
	B1702	ROOF CONTROL UNIT	

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< ECU DIAGNOSIS INFORMATION >

Priority		Display contents of CONSULT
	B1709	ROOF SWITCH(OPEN)
	B170A	ROOF SWITCH(CLOSE)
	B176B	ROOF WARNING LAMP
	B176C	STRIKER SENSOR RH
	B176D	STRIKER SENSOR LH
	B176E	ROOF LATCH LOCK SEN
	B176F	ROOF STATUS SEN LH
	B1770	ROOF STATUS SEN RH
2	B1771	ROOF STATUS SEN LH
	B1772	5BOW STATUS SEN LH
	B1773	5BOW STATUS SEN RH
	B1774	S/LID STATUS SEN LH
	B1775	S/LID STATUS SEN RH
	B1776	S/LID STATUS SEN RH
	B177D	5BOW LATCH OPEN SEN
	B177E	5BOW LATCH CLOSE SEN
	B177F	5BOW STRIKER SENSOR
	U0140	LOCAL COMM-1
	U0215	LOCAL COMM-2
	B171A	HYDRAULIC PMP(LH)
	B171B	HYDRAULIC PMP(RH)
	B171C	SWITCHING VALVE 1
	B171D	SWITCHING VALVE 2
	B172C	ROOF STATE SIG(TRUNK)*
	B1731	HYDRAULIC STATE 1
	B1758	THERMO PROTECTION
3	B1766	SWITCHING VALVE 3
	B1767	SWITCHING VALVE 4
	B1768	SWITCHING VALVE 5
	B176A	THERMO PROTECTION
	B1777	REAR DEF OUT SIG
	B1778	TRUNK OPEN OUT SIG
	B1779	THERMO PROTECTION
	B177A	ROOF STATE INCORRECT
	B177B	ROOF STATE INCORRECT

*: This item indicates the roof status signal (Audio).

DTC Index

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NOTE:

For details of Freeze Frame Data, refer to <u>RF-28, "CONSULT Function"</u>.

	Display contents of CONSULT	Fail-safe	Freeze Frame Data	Reference page
No DTC is o	detected. Further testing may be required.	—		_
U1000	U1000 CAN COMM CIRCUIT		×	<u>RF-59</u>

< ECU DIAGNOSIS INFORMATION >

	Display contents of CONSULT	Fail-safe	Freeze Frame Data	Reference page
U1010	CONTROL UNIT (CAN)	×	×	<u>RF-60</u>
U0140	LOCAL COMM-1	×	×	<u>RF-61</u>
U0215	LOCAL COMM-2	×	×	<u>RF-62</u>
B1701	ROOF CONTROL UNIT	×	×	<u>RF-64</u>
B1702	ROOF CONTROL UNIT	×	×	<u>RF-65</u>
B1709	ROOF SWITCH-OPEN	×	×	<u>RF-66</u>
B170A	ROOF SWITCH-CLOSE	×	×	<u>RF-68</u>
B170F	SENSOR POWER SUPPLY	×	×	<u>RF-70</u>
B171A	HYDRAULIC PMP(LH)	×	×	<u>RF-73</u>
B171B	HYDRAULIC PMP(RH)	×	×	<u>RF-76</u>
B171C	SWITCHING VALVE 1	×	×	<u>RF-79</u>
B171D	SWITCHING VALVE 2	×	×	<u>RF-81</u>
B172C	ROOF STATE SIG(TRUNK)*	×	×	<u>RF-83</u>
B1731	HYDRAULIC STATE 1	×	×	<u>RF-85</u>
B1758	THERMO PROTECTION	×	×	<u>RF-86</u>
B175C	PWR SOURCE(ROOF)	×	×	<u>RF-87</u>
B175D	PWR SOURCE(ROOF)	×	×	<u>RF-88</u>
B175E	PWR SOURCE(WINDOW)	×	×	<u>RF-89</u>
B175F	PWR SOURCE(WINDOW)	×	×	<u>RF-91</u>
B1766	SWITCHING VALVE 3	×	×	<u>RF-93</u>
B1767	SWITCHING VALVE 4	×	×	<u>RF-95</u>
B1768	SWITCHING VALVE 5	×	×	<u>RF-97</u>
B176A	THERMO PROTECTION	×	×	<u>RF-99</u>
B176B	ROOF WARNING LAMP	×	×	<u>RF-100</u>
B176C	STRIKER SENSOR RH	×	×	<u>RF-102</u>
B176D	STRIKER SENSOR LH	×	×	<u>RF-104</u>
B176E	ROOF LATCH LOCK SEN	×	×	<u>RF-106</u>
B176F	ROOF STATUS SEN LH	×	×	<u>RF-108</u>
B1770	ROOF STATUS SEN RH	×	×	<u>RF-110</u>
B1771	ROOF STATUS SEN LH	×	×	<u>RF-112</u>
B1772	5BOW STATUS SEN LH	×	×	<u>RF-114</u>
B1773	5BOW STATUS SEN RH	×	×	<u>RF-116</u>
B1774	S/LID STATUS SEN LH	×	×	<u>RF-118</u>
B1775	S/LID STATUS SEN RH	×	×	<u>RF-120</u>
B1776	S/LID STATUS SEN RH	×	×	<u>RF-122</u>
B1777	REAR DEF OUT SIG	×	×	<u>RF-124</u>
B1778	TRUNK OPEN OUT SIG	×	×	<u>RF-125</u>
B1779	THERMO PROTECTION	×	×	<u>RF-127</u>
B177A	ROOF STATE INCORRECT	×	×	<u>RF-129</u>
B177B	ROOF STATE INCORRECT	×	×	<u>RF-130</u>
B177C	THERMO PROTECTION	×	×	RF-131
B177D	5BOW LATCH OPEN SEN	×	×	<u>RF-132</u>
B177E	5BOW LATCH CLOSE SEN	×	×	<u>RF-134</u>
B177F	5BOW STRIKER SENSOR	×	×	RF-136

Revision: 2012 August

< ECU DIAGNOSIS INFORMATION >

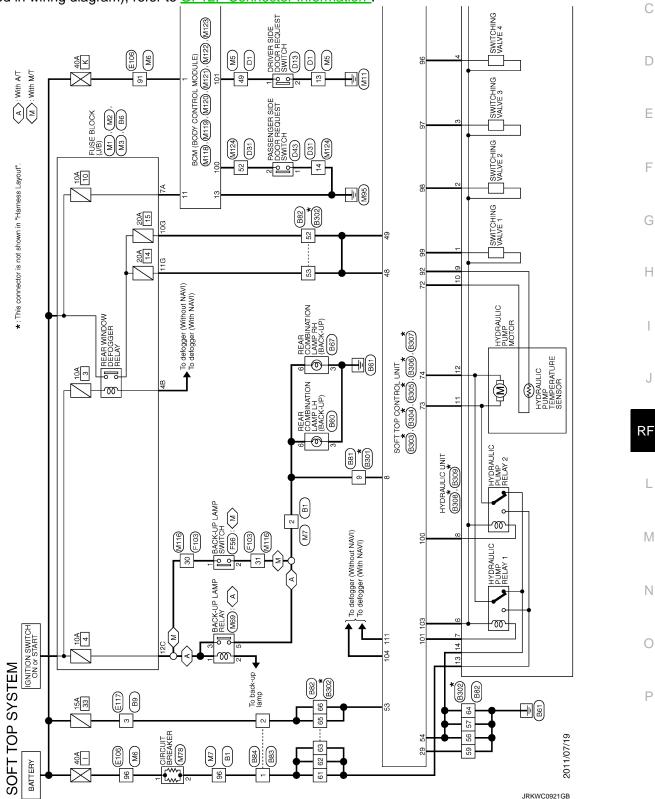
*: This item indicates the roof status signal (Audio).

< WIRING DIAGRAM >

WIRING DIAGRAM SOFT TOP SYSTEM

Wiring Diagram

For connector terminal arrangements, harness layouts, and alphabets in a 🔿 (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



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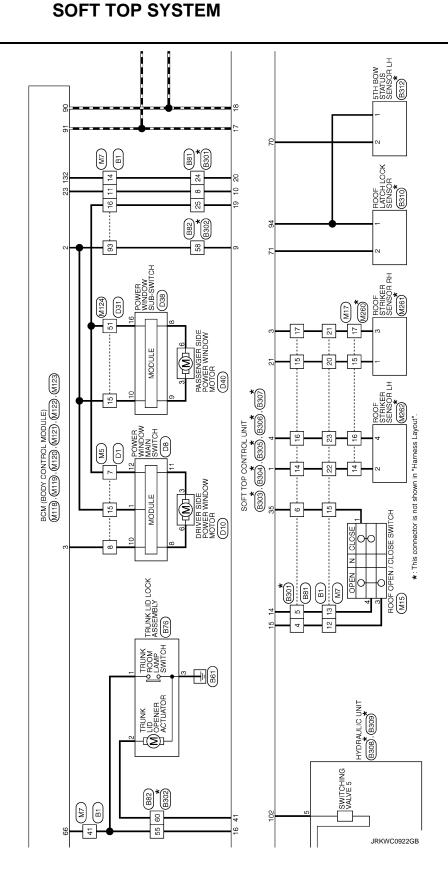
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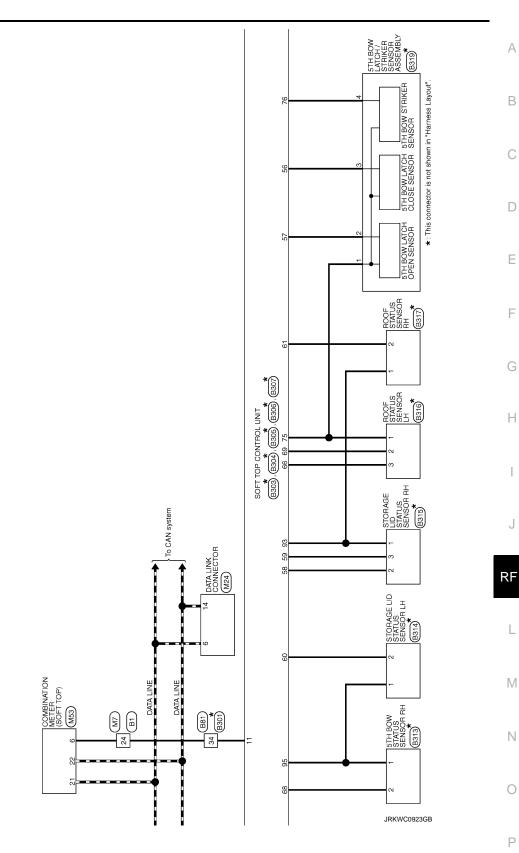
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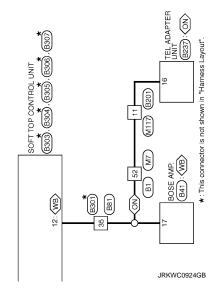
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< WIRING DIAGRAM >

Revision: 2012 August





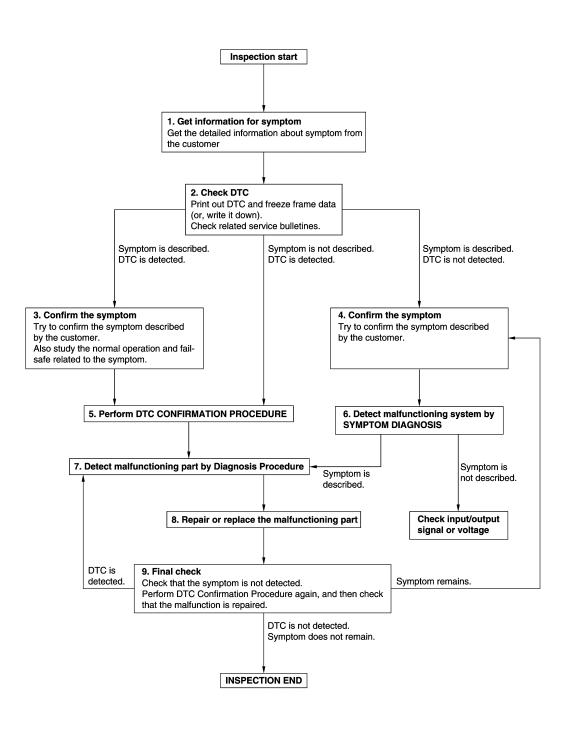
<pre>> BASIC INSPECTION ></pre>	
BASIC INSPECTION	А
DIAGNOSIS AND REPAIR WORK FLOW	
Work Flow	В
OVERALL SEQUENCE NOTE:	С
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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

Perform operation manually if roof does not open/close automatically. Refer to <u>RF-23, "SOFT TOP SYSTEM :</u> <u>Correspondence in Emergency"</u>.



DETAILED FLOW **NOTE:** Perform operation manually if roof does not open/close automatically. Refer to <u>RF-23, "SOFT TOP SYSTEM :</u> <u>Correspondence in Emergency"</u>.

1.GET INFORMATION FOR SYMPTOM

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

 Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs). Check operation condition of the function that is malfunctioning.
>> GO TO 2.
2.CHECK DTC
1. Check DTC.
2. Perform the following procedure if DTC is detected.
 Record DTC and freeze frame data (Print them out using CONSULT.) Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.
Are any symptoms described and any DTC detected?
Symptom is described, DTC is detected>>GO TO 3. Symptom is described, DTC is not detected>>GO TO 4.
Symptom is not described, DTC is detected>>GO TO 5.
3. CONFIRM THE SYMPTOM
Try to confirm the symptom described by the customer.
Also study the normal operation and fail-safe related to the symptom. Verify relation between the symptom and the condition when the symptom is detected.
>> GO TO 5.
4.CONFIRM THE SYMPTOM
Try to confirm the symptom described by the customer.
Verify relation between the symptom and the condition when the symptom is detected.
>> GO TO 6.
5. PERFORM DTC CONFIRMATION PROCEDURE
Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected
again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.
If two or more DTCs are detected, refer to DTC INSPECTION PRIORITY CHART, and determine trouble diag- nosis order.
NOTE:
Freeze frame data is useful if the DTC is not detected. Detecte
 Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during
this check.
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIR- MATION PROCEDURE.
Is DTC detected?
YES >> GO TO 7.
NO >> Check according to <u>GI-45, "Intermittent Incident"</u> .
6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS
Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.
Is the symptom described?
YES >> GO TO 7. NO >> Monitor input data from related sensors or check voltage of related module terminals using CON-
NO >> Monitor input data from related sensors or check voltage of related module terminals using CON- SULT.
7. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE
Inspect according to Diagnosis Procedure of the system.

Inspect according to Diagnosis Procedure of the system. Is malfunctioning part detected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

YES >> GO TO 8.

NO >> Check according to <u>GI-45, "Intermittent Incident"</u>.

8.REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 2. Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement.
- 3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

9.FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

< BASIC INSPECTION >

WATER LEAKAGE TROUBLE DIAGNOSIS

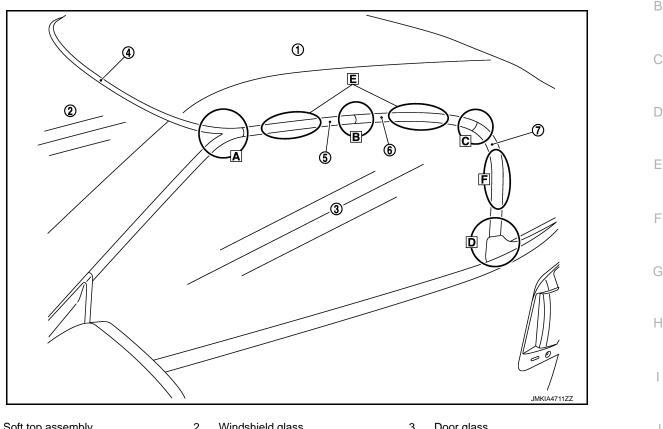
Repairing Method for Water Leakage Around Doors

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Soft top assembly 1.

4.

Windshield glass 2.

Front rail weather-strip

5.

- Door glass 3.
- 6. Center rail weather-strip

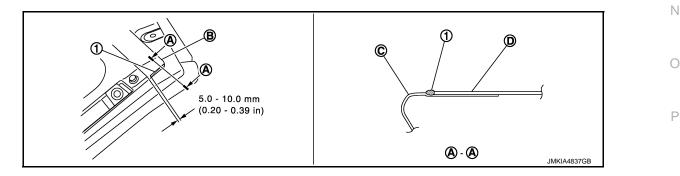
Rear rail weather-strip 7.

WATER LEAKAGE FROM A

Front side glass run assembly

1. Water may be entering passenger room through back of front pillar. CAUSE: It is determined that butyl tape between front side glass run assembly and front roof panel is not completely fitted and the water leaks into passenger room through peeling portion. Repair Procedure 1

- Check that glass run assembly drain is not blocked.
- Replace front side glass run assembly with a new one. Refer to EXT-37, "FRONT PILLAR FINISHER Μ (Roadster) : Removal and Installation".
- Apply butyl tape (1) from corner end (B) to a point 5-10mm (0.20-0.39in) short of next step.



NOTE:

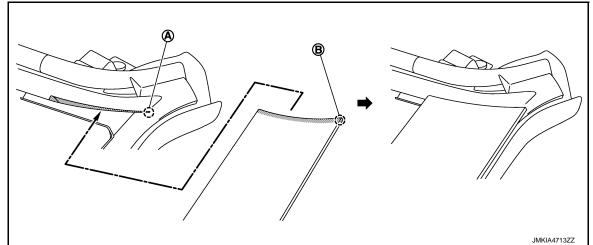
Check that no step or clearance is detected between front pillar panel (C) and front roof panel (D). **CAUTION:**

< BASIC INSPECTION >

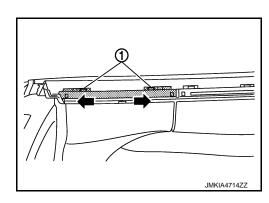
Completely fit butyl tape of front side glass run assembly to front roof panel.

Position alignment when installing front side glass run assembly

- Align position mark (A) of front side glass run assembly to corner (B) of front pillar finisher.
- Align shape of front side glass run assembly to corner of front pillar finisher.
- There must not be a difference in height between the front side glass run assembly and the front pillar finisher.

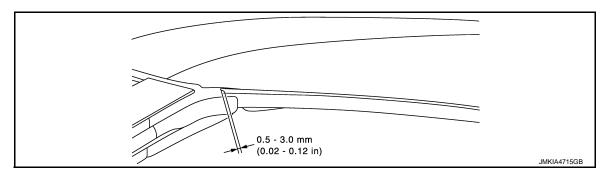


- Water may be entering through connection between front pillar finisher and front edge of soft top. Cause: There may be a gap between front side glass run assembly and front rail weather-strip of soft top. Repair Procedure 2
 - Replace front side glass run assembly with a new one. Refer to <u>EXT-37</u>, "FRONT PILLAR FINISHER (Roadster): Removal and Installation".
 - If the step or the gap is not eliminated after replacing front side glass run assembly, then perform the following procedure.
 - **Repair Procedure 3**
 - Loosen retainer screws (1).



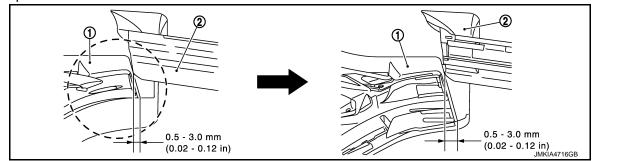
 Adjust overlap value of front rail weather-strip and front side glass run assembly to the following standard.



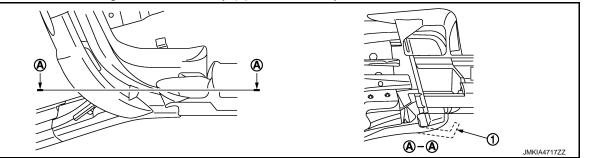


< BASIC INSPECTION >

Close soft top until front side glass run assembly (1) contacts front rail wether strip (2). Measure the lower end position.



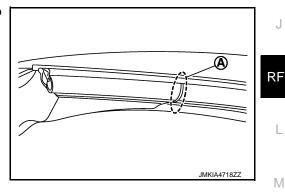
Check that front side glass run assembly (1) fitted normally.



WATER LEAKAGE FROM B

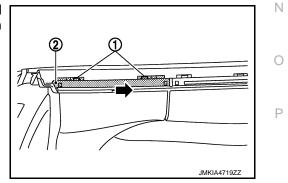
Water may be entering through a joint between soft top weather-strips. Cause: There may be a step or a gap at the weather-strips joint. (A) Repair Procedure 4

- Replace weather-strip (front rail and center rail) and retainer with a new one. Refer to <u>RF-188</u>, "ROOF SEALING : Removal and Installation".
 - If the step or the gap is not eliminated after replacing weather-strip and retainer, then perform the following procedure.



Repair Procedure 5

- Loosen retainer screws (1).
- Adjust retainer (2) frontward and rearward. Check that front rail weather-strip and center rail weather-strip completely contact each other.



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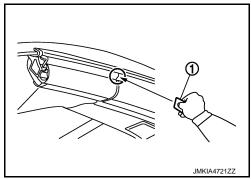
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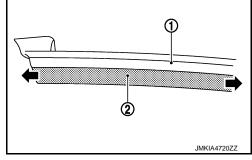
< BASIC INSPECTION >

Use a thin plastic card (1) to check that resistance is detected, when card is inserted, because weather-strips completely contact each other.



CAUTION:

Weather-strip is compressed. Extend both ends of weatherstrip (2) when installing retainer (1) and weather-strip.

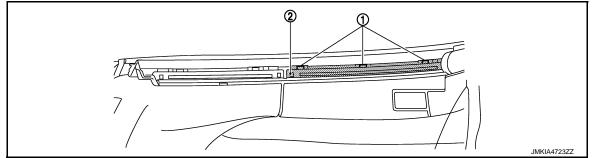


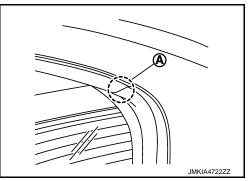
WATER LEAKAGE FROM C

Water may be entering through a joint between soft top weather-strips. Cause: There may be a step or a gap at the weather-strips joint. (A)



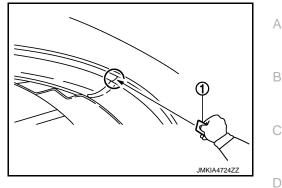
- Replace weather-strip (center rail and rear rail) and retainer with a new one. Refer to <u>RF-188, "ROOF SEAL-</u> ING : Removal and Installation".
- If the step or the gap is not eliminated after replacing weather-strip, and retainer, then perform the following procedure.
- Repair Procedure 7
- Loosen retainer screws (1).
- Adjust retainer (2) frontward and rearward. Check that front rail weather-strip and center rail weather-strip completely contact each other.





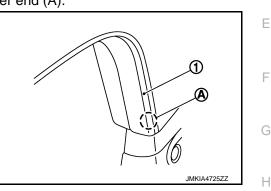
< BASIC INSPECTION >

Use a thin plastic card (1) to check that resistance is detected, when card is inserted, because weather-strips completely contact each other.



WATER LEAKAGE FROM D

- 1. Water may be entering passenger room through weather-strip lower end (A). Cause: There may be poor contact between rear rail weather
 - strip (1) of soft top and door glass.



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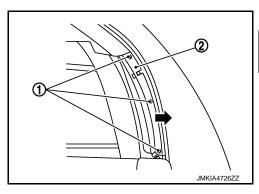
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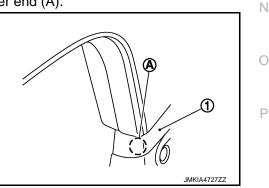
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Repair Procedure 8

- Replace rear rail weather-strip with a new one. Refer to RF-188, "ROOF SEALING : Removal and Installation".
- If the step or the gap is not eliminated after replacing rear rail weather-strip, then perform the following procedure.
- Repair Procedure 9
- Loosen retainer screws (1).
- Adjust retainer (2) toward vehicle outside.



2. Water may be entering passenger room through weather-strip lower end (A). Cause: There may be poor contact between body side weatherstrip (1) of soft top and door glass.

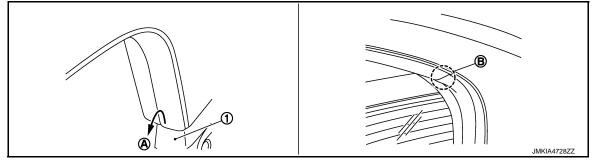


Repair Procedure 10

< BASIC INSPECTION >

- Replace body side weather-strip new one. Refer to <u>EXT-37, "FRONT PILLAR FINISHER (Roadster) :</u> <u>Exploded View"</u>.
- 3. The water overflows (A) from body side weather-strip (1) and leaks to passenger room.

CAUSE: It is estimated that gap or clearance occurs at connecting point (B) of weather-strip and the entering water level exceeds the allowable drainage volume.

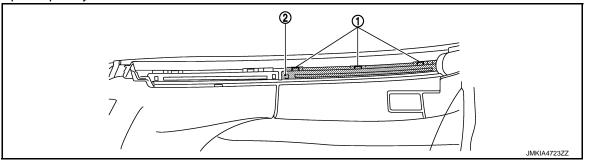


Repair Procedure 11

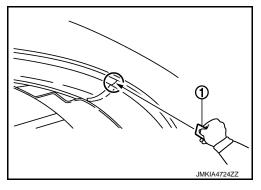
- Check that body side weather-strip drain is not blocked.
- Replace weather-strip (center rail and rear rail) and retainer with a new one. Refer to <u>RF-188, "ROOF</u> <u>SEALING : Removal and Installation"</u>.
- If the step or the gap is not eliminated after replacing weather-strip, and retainer, then perform the following procedure.

Repair Procedure 12

- Loosen retainer screws (1).
- Adjust retainer (2) frontward and rearward. Check that front rail weather-strip and center rail weatherstrip completely contact each other.



Use a thin plastic card (1) to check that resistance is detected, when card is inserted, because weather-strips completely contact each other.

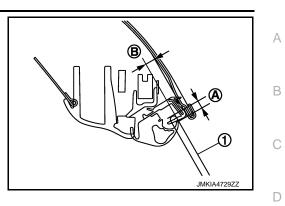


WATER LEAKAGE FROM E

Water may be entering through door glass upper inside edge. Cause: There may be poor contact between weather-strip of soft top and door glass. Repair Procedure 13

< BASIC INSPECTION >

- Adjust door glass (1) position frontward/backward or upward/ downward against soft top assembly.
 - (A): 5.4 mm (0.21 in)(B): 7.6 mm (0.3 in)

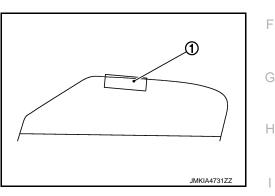


 Adjust door glass tilt contact by rotating adjusting bolt on regulator lower edge.Refer to<u>GW-24, "Inspection</u> and Adjustment"

Adjust door glass tilt contact by rotating adjusting bolt on regulator lower edge.

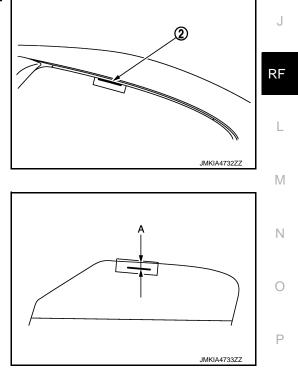
Checking procedure for overlap value of weather-strip and door glass

• Apply tape (1) to door glass upper end.



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• Fully close glass. Put a mark (2) on tape that shows the weatherstrip lower end position.



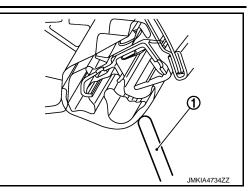
• Open door glass and measure (A).

CAUTION:

• Visually check that weather-strip is not twisted by door glass (1) upper end.

< BASIC INSPECTION >

 Soft top assembly position may be incorrect when glass upper position is low even if door glass adjustment is performed. Perform soft top assembly adjustment, if necessary. Refer to <u>RF-158</u>, "<u>SOFT TOP ASSEMBLY</u>: <u>Adjustment</u>"

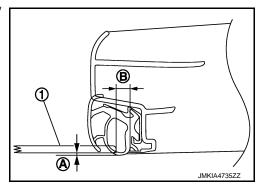


WATER LEAKAGE FROM F

Water may be entering through inside door glass rear.

Cause: There may be poor contact between rear weather-strip of soft top and door glass. Repair Procedure 14

- Adjust door glass (1) position frontward/backward or upward/ downward against soft top.
 - (A): 1.2 5.2 mm (0.05 0.20 in)
 - (B): 6.4 10.4 mm (0.25 0.41 in)



 Adjust door glass tilt contact by rotating adjusting bolt on regulator lower edge.Refer to<u>GW-24, "Inspection</u> and Adjustment"

CAUTION:

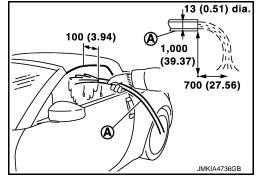
Soft top assembly position may be incorrect in the case of glass upper position is low even if door glass adjustment is performed.Perform soft top assembly adjustment if necessary. Refer to<u>RF-158.</u> <u>"SOFT TOP ASSEMBLY : Adjustment"</u>

Water Leakage Test

INFOID:000000008192189

Visually check for water leakage after repairing.

- 1. 2 workers are required. One worker checks inside the vehicle, and the other one washes with water.
- 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.)
- 3. 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.
- 4. Visually check for water leakage.



DTC/CIRCUIT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

-	DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause	
_	U1000	CAN COMM CIRCUIT	When soft top control unit cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system	(

Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 3. Check DTC.

Is DTC detected?

- YES >> Refer to <u>LAN-15</u>, "Trouble Diagnosis Flow Chart".
- NO >> Refer to <u>GI-45, "Intermittent Incident"</u>.

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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000008192193

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
U1010	CONTROL UNIT (CAN)	Soft top control unit detected internal CAN commu- nication circuit malfunction.	Soft top control unit

Diagnosis Procedure

INFOID:000000008192194

1.REPLACE SOFT TOP CONTROL UNIT

When DTC "U1010" is detected, replace soft top control unit.

>> Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

U0140 LOCAL COMMUNICATION-1

< DTC/CIRCUIT DIAGNOSIS >

U0140 LOCAL COMMUNICATION-1

Description

Door request switch signal is transmitted to soft top control unit via communication line.

DTC Logic

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DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
U0140	LOCAL COMM-1	The communication between soft top control unit and BCM is interrupted for a period of time.	Communication line BCM	Е
DTC CON	FIRMATION PROCE	DURE		
1.PERFOR	RM DTC CONFIRMAT	ION PROCEDURE		F
	e soft top to fully open 'Self Diagnostic Result	and fully close. " mode of "CONVERTIBLE ROOF" using CON	SULT.	G
Is DTC dete	ected?			Н
	Perform diagnosis pro	ocedure. Refer to <u>RF-61. "Diagnosis Procedure</u>	<u>ə"</u> .	
Diagnosi	s Procedure		INFOID:00000008192197	I
1.снеск	COMMUNICATION LI	NE		

1. Turn ignition switch OFF.

- 2. Disconnect soft top control unit and BCM connector.
- 3. Check continuity between soft top control unit harness connector and BCM harness connector.

Soft top control unit		BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B303	20	M123	132	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-95, "Removal and Installation"</u>.

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOSIS >

U0215 LOCAL COMMUNICATION-2

Description

INFOID:000000008192198

Soft top control unit performs local communication with BCM, power window main switch and power window sub-switch using communication line.

DTC Logic

INFOID:000000008192199

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
U0215	LOCAL COMM-2	The communication between soft top control unit, power window main switch and power window sub-switch is in- terrupted for a period of time.	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start engine.
- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>RF-62, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192200

1. CHECK POWER WINDOW MAIN SWITCH

Check power window main switch. Refer to <u>PWC-101, "POWER WINDOW MAIN SWITCH : Diagnosis Proce-</u> dure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning part.

2. CHECK POWER WINDOW SUB-SWITCH

Check power window sub-switch. Refer to <u>PWC-102, "POWER WINDOW SUB-SWITCH : Diagnosis Proce-</u> dure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning part.

3.CHECK COMMUNICATION LINE-I

- 1. Turn ignition switch OFF.
- Disconnect soft top control unit, power window main switch connector and power window sub-switch connector.
- 3. Check continuity between soft top control unit harness connector and power window main switch harness connector.

Soft top control unit		Soft top control unit Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B303	19	D8	12	Existed

4. Also check harness for short to ground and short to power.

U0215 LOCAL COMMUNICATION-2

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK COMMUNICATION LINE-II

1. Check continuity between soft top control unit harness connector and power window sub-switch harness connector.

-	Soft top control unit		Power window sub-switch		Continuity	
_	Connector Terminal		Connector	Terminal	Continuity	
_	B303 19		D38	16	Existed	
2.	Also check harness for short to ground and short to power.					

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u> .	YES	>> Check intermittent incident. F	Refer to <u>GI-45.</u>	"Intermittent Incident".
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NO >> Repair or replace harness.

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< DTC/CIRCUIT DIAGNOSIS >

B1701 ROOF CONTROL UNIT

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B1701	ROOF CONTROL UNIT	Soft top control unit detects internal malfunc- tion.	Soft top control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 3. Check DTC.

Is DTC detected?

- YES >> Refer to <u>RF-64</u>, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192202

INFOID:000000008192201

1.REPLACE SOFT TOP CONTROL UNIT

- 1. Turn ignition switch OFF.
- 2. Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.
- 3. Perform DTC Confirmation Procedure. Refer to <u>RF-64, "DTC Logic"</u>.

>> INSPECTION END

B1702 ROOF CONTROL UNIT

	UIT DIAGNOSIS >	JNIT	
DTC Logic	2		INFOID:00000008192203
NOTE:		efer to <u>RF-39, "DTC Inspection Pric</u>	ority Chart", and determine trouble
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B1702	ROOF CONTROL UNIT	Soft top control unit detects internal mal- function.	Soft top control unit
1. Turn igni 2. Select "S 3. Check D Is DTC detect YES >> F NO >> I	TC.	PROCEDURE	g CONSULT. INFOID:000000008192204
1.REPLACE	SOFT TOP CONTROL	UNIT	
2. Replace		er to <u>RF-235, "Removal and Installati</u> dure. Refer to <u>RF-65, "DTC Logic"</u> .	<u>on"</u> .
>>	NSPECTION END		

>> INSPECTION ENL

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B1709 ROOF OPEN/CLOSE SWITCH (OPEN)

< DTC/CIRCUIT DIAGNOSIS >

B1709 ROOF OPEN/CLOSE SWITCH (OPEN)

DTC Logic

INFOID:000000008192205

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosi	s name	DTC detecting condition	Possible cause
B1709	ROOF SWITCH- OPEN	[TIMEOUT]	Soft top control unit detects roof open/close switch (open) operation for 120 seconds	 Harness or connectors (The roof open/close switch circuit is shorted.) Soft top control unit Roof open/close switch

DTC CONFIRMATION PROCEDURE

1.CHECK ROOF OPEN/CLOSE SWITCH SIGNAL

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-66, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192206

1.CHECK ROOF OPEN/CLOSE SWITCH POWER SUPPLY CIRCUIT-I

- 1. Turn ignition switch OFF.
- 2. Disconnect roof open/close switch harness connector.
- 3. Turn ignition switch ON.
- 4. Check the voltage between roof open/close switch harness connector and ground.

(+	-)			
Roof open/c	close switch	()	Voltage (V) (Approx.)	
Connector	Terminal		(, + +)	
M15	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK ROOF OPEN/CLOSE SWITCH POWER SUPPLY CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Check the continuity between soft top control unit harness connector and roof open/close switch harness connector.

Soft top control unit		Roof open/close switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B303	15	M15	3	Existed	

4. Also check harness for short to ground.

Is the inspection result normal?

YES >> Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

NO >> Repair open circuit or short to ground in harness or connectors.

RF-66

B1709 ROOF OPEN/CLOSE SWITCH (OPEN)

< DTC/CIRC	B1709 R(UIT DIAGNOSIS >	OOF OPEN/C	LOSE SWITCH (OF	PEN)
-	OOF OPEN/CLOSE S	WITCH		
	pen/close switch. Refer		onent Inspection".	
	ion result normal?			
	GO TO 4. Ceplace roof open/close	switch Refer to	RF-234, "Removal and Ins	stallation"
4	SOFT TOP CONTRO			<u>stanation</u> .
	top control unit. Refer t		al and Installation"	
•	ion result normal?		<u>arana motanatorr</u> .	
	NSPECTION END			
_	O TO 5.			
Refer to <u>GI-4</u>	5. "Intermittent Incident	·		
>> II	NSPECTION END			
Componer	nt Inspection			INFOID:00000008192207
	-			
	OOF OPEN/CLOSE S	MICH		
	tion switch OFF. ect roof open/close swit	ch harness conne	ctor	
			tch terminals under the fo	llowing conditions.
Terminal	Conditi	on	Continuity	
Terminar	Conditi	Open pressed	Continuity Existed	
1 and 3		Except above	Not existed	
	Roof open/close switch	Close pressed	Existed	
1 and 4	-	Except above	Not existed	
•	ion result normal?			
	NSPECTION END	switch Pofor to	RF-234, "Removal and Ins	stallation"
				<u>stanation</u> .

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B170A ROOF OPEN/CLOSE SWITCH (CLOSE)

< DTC/CIRCUIT DIAGNOSIS >

B170A ROOF OPEN/CLOSE SWITCH (CLOSE)

DTC Logic

INFOID:000000008192208

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause	
B170A	ROOF SWITCH- CLOSE	[TIMEOUT]	Soft top control unit detects roof open/close switch (close) operation for 120 seconds	 Harness or connectors (The roof open/close switch circuit is shorted.) Soft top control unit Roof open/close switch 	

DTC CONFIRMATION PROCEDURE

1.CHECK ROOF OPEN/CLOSE SWITCH SIGNAL

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-68, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192209

1.CHECK ROOF OPEN/CLOSE SWITCH POWER SUPPLY CIRCUIT-I

- 1. Turn ignition switch OFF.
- 2. Disconnect roof open/close switch harness connector.
- 3. Turn ignition switch ON.
- 4. Check the voltage between roof open/close switch harness connector and ground.

(-	-)		Voltage (V) (Approx.)	
Roof open/o	close switch	()		
Connector Terminal			()	
M15	4	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK ROOF OPEN/CLOSE SWITCH POWER SUPPLY CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Check the continuity between soft top control unit harness connector and roof open/close switch harness connector.

Soft top of	control unit	Roof open/c	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B303	14	M15	4	Existed	

4. Also check harness for short to ground.

Is the inspection result normal?

YES >> Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

NO >> Repair open circuit or short to ground in harness or connectors.

RF-68

B170A ROOF OPEN/CLOSE SWITCH (CLOSE)

< DIC/CIRC	UIT DIAGNOSIS >			
3.CHECK R	OOF OPEN/CLOSE SV	VITCH		
Check roof op	pen/close switch. Refer ion result normal?		onent Inspection".	
YES >> 0	GO TO 4.	switch. Refer to F	RF-234, "Removal and In	stallation".
4	SOFT TOP CONTROL			
•	top control unit. Refer to	o <u>RF-235, "Remov</u>	val and Installation".	(
	ion result normal? NSPECTION END			1
_	GO TO 5.			I
Refer to GI-4	5. "Intermittent Incident	<u>.</u> .		I
>> II	NSPECTION END			
Componer	nt Inspection			INFOID:00000008192210
1.CHECK R	OOF OPEN/CLOSE SV	VITCH		
	tion switch OFF.			(
	ect roof open/close swite e continuity between ro		ctor. tch terminals under the fo	bllowing conditions.
	,			0
Terminal	Conditio		Continuity	
Terminal	Conditio	Open pressed	Existed	
1 and 3	Condition - Roof open/close switch			
		Open pressed Except above	Existed Not existed	
1 and 3 1 and 4 Is the inspect YES >> II	Roof open/close switch	Open pressed Except above Close pressed Except above	Existed Not existed Existed	stallation".
1 and 3 1 and 4 Is the inspect YES >> II	Roof open/close switch	Open pressed Except above Close pressed Except above	Existed Not existed Existed Not existed	istallation".
1 and 3 1 and 4 Is the inspect YES >> II	Roof open/close switch	Open pressed Except above Close pressed Except above	Existed Not existed Existed Not existed	Istallation".
1 and 3 1 and 4 Is the inspect YES >> II	Roof open/close switch	Open pressed Except above Close pressed Except above	Existed Not existed Existed Not existed	istallation".
1 and 3 1 and 4 Is the inspect YES >> II	Roof open/close switch	Open pressed Except above Close pressed Except above	Existed Not existed Existed Not existed	istallation".
1 and 3 1 and 4 Is the inspect YES >> II	Roof open/close switch	Open pressed Except above Close pressed Except above	Existed Not existed Existed Not existed	istallation".

< DTC/CIRCUIT DIAGNOSIS >

B170F SENSOR POWER SUPPLY

DTC Logic

INFOID:000000008192211

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagn	osis name	DTC detecting condition	Possible cause
B170F	SENSOR POWER SUPPLY	[GND-SHORT]	Sensor power supply circuit is open, short to ground or short to power.	 Harness or connectors (Roof striker sensor LH circuit is open or shorted.) (Roof striker sensor RH circuit is open or shorted.) (Roof latch lock sensor circuit is open or shorted.) (Sof latch lock sensor circuit is open or shorted.) (5th bow status sensor LH cir- cuit is open or shorted.) (5th bow status sensor RH cir- cuit is open or shorted.) (Roof status sensor RH cir- cuit is open or shorted.) (Roof status sensor RH cir- cuit is open or shorted.) (Strage lid status sensor RH circuit is open or shorted.) (Strage lid status sensor RH circuit is open or shorted.) (Strage lid status sensor RH circuit is open or shorted.) (Strage lid status sensor RH circuit is open or shorted.) (Sth bow latch open sensor cir- cuit is open or shorted.) (5th bow latch close sensor cir- cuit is open or shorted.) (5th bow striker sensor circuit is open or shorted.) (5th bow status sensor Circuit is open or shorted.) (5th bow status sensor Circuit is open or shorted.) (5th bow latch lock sensor circuit sensor RH, strage lid status sensor RH) (5th bow latch close sensor or 5th bow striker sensor sembly (5th bow latch close sensor or 5th bow striker sensor sor) Soft top control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to <u>RF-71, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

B170F SENSOR POWER SUPPLY

Diagnosis	Procedur	e				INFOID:000000008192212	А
1. CHECK	ENSOR PO	WER SUPPLY CIRCUIT-I					
 Disconr Turn igr 	ition switch C	er sensor LH harness conne		nector and g	round.		B
		(+)					0
	Roof str	iker sensor LH	(—)		Voltage (Appro		
C	onnector	Terminal				,	
	M262	2	Ground		12		
NO >> 2.CHECKS	ect following	WER SUPPLY CIRCUIT-II parts harness connector.					E
 Roof lat 5th bow 5th bow Roof station Roof station Strage I Strage I Strage I Sth bow Soft top Check t 	control unit ne continuity	or or LH or RH H H sor LH					G H J
	control unit		Sensor			Continuity	0
Connecto	r Terminal	Name		Connector	Terminal		
B303	1	Roof striker sensor LH		M262	2	F	RF

B303	1	Roof striker sensor LH	M262	2	Existed	RF
D303	21	Roof striker sensor RH	M261	1		
	75	Roof status sensor LH	B316	1		
		5th bow latch/striker sensor assembly	B319	1	- Existed	L
	93	Strage lid status sensor RH	B315	1		
B306		Roof status sensor RH	B317	1		M
D300	94	Roof latch lock sensor	B310	1		
		5th bow status sensor LH	B312	1		
	95	5th bow status sensor RH	B313	1		N
		Strage lid status sensor LH	B314	1		

3. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit, short to ground or short to power in harness connectors.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235. "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4. Ο

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B170F SENSOR POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

 ${\bf 4.} {\bf CHECK} \text{ INTERMITTENT INCIDENT}$

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B171A HYDRAULIC PUMP (LH)

< DTC/CIRCUIT DIAGNOSIS >

B171A HYDRAULIC PUMP (LH)

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis r	name	DTC detecting condition	Possible causes
B171A	HYDRAULIC PMP(LH)	[GND- SHORT] [PWR- SHORT/ OPEN] [GND- SHORT]	Hydraulic pump relay 1 or hydraulic pump motor circuit is open, short to ground or short to power.	 Harness or connectors (The hydraulic pump relay-1 circuit is open or shorted.) (The hydraulic pump motor circuit is open or shorted.) Hydraulic unit (Hydraulic pump relay 1 or hydraulic pump motor) Soft top control unit
отс со	NFIRMATION PRO	CEDURE		
1. PERF	ORM DTC CONFIRM	IATION P	ROCEDURE	
2. Opera 3. Selec 4. Chec	engine. ate soft top to fully op tt "Self Diagnostic Res k DTC. <u>etected?</u>	en and ful sult" mode	lly close. e of "CONVERTIBLE ROOF" using CONS	ULT.
YES >	> Go to <u>RF-73, "Diac</u> >> INSPECTION END		ocedure".	
YES > NO >	>> Go to <u>RF-73, "Diac</u>		ocedure".	INFOID:0000000081922
YES NO Diagnos	>> Go to <u>RF-73, "Diac</u> >> INSPECTION END sis Procedure		ocedure".	INFOID:000000081922
YES NO Diagnos 1.CHEC Check 40 S the insp YES NO	 > Go to <u>RF-73, "Diac</u> > INSPECTION END sis Procedure K FUSIBLE LINK A fusible link (letter I). bection result normal? > GO TO 2. > Replace fusible linl)	pairing the applicable circuit.	INFOID:000000081922
YES NO Diagnos 1.CHEC Check 40 S the insp YES NO 2.CHEC	 > Go to <u>RF-73, "Diac</u> > INSPECTION END sis Procedure K FUSIBLE LINK A fusible link (letter I). bection result normal? > GO TO 2. > Replace fusible linl K HYDRAULIC PUMF)		INFOID:000000081922
YES NO Diagnos 1.CHEC Check 40 S the insp YES NO 2.CHEC 1. Turn 2. Disco	 >> Go to <u>RF-73, "Diac</u> >> INSPECTION END sis Procedure K FUSIBLE LINK A fusible link (letter I). Dection result normal? >> GO TO 2. >> Replace fusible linl K HYDRAULIC PUMF ignition switch OFF. onnect hydraulic unit h 	k after rep RELAY	pairing the applicable circuit. 1 POWER SUPPLY CIRCUIT-I	INFOID:000000081922
YES NO Diagnos 1.CHEC Check 40 S the insp YES NO 2.CHEC 1. Turn 2. Disco	 >> Go to <u>RF-73, "Diac</u> >> INSPECTION END sis Procedure K FUSIBLE LINK A fusible link (letter I). Dection result normal? >> GO TO 2. >> Replace fusible linl K HYDRAULIC PUMF ignition switch OFF. onnect hydraulic unit h 	k after rep RELAY	pairing the applicable circuit. 1 POWER SUPPLY CIRCUIT-I	
YES NO Diagnos 1.CHEC Check 40 S the insp YES NO 2.CHEC 1. Turn 2. Disco	 >> Go to <u>RF-73, "Diac</u> >> INSPECTION END sis Procedure K FUSIBLE LINK A fusible link (letter I). Dection result normal? >> GO TO 2. >> Replace fusible link K HYDRAULIC PUMF ignition switch OFF. onnect hydraulic unit h k the voltage betweer 	k after rep P RELAY harness co hydraulio	pairing the applicable circuit. 1 POWER SUPPLY CIRCUIT-I	INFOID:000000081922 Voltage (V) (Approx)
YES NO Diagnos 1.CHEC Check 40 S the insp YES NO 2.CHEC 1. Turn 2. Disco	>> Go to <u>RF-73, "Diac</u> >> INSPECTION END sis Procedure K FUSIBLE LINK A fusible link (letter I). <u>bection result normal?</u> >> GO TO 2. >> Replace fusible link K HYDRAULIC PUMF ignition switch OFF. onnect hydraulic unit h k the voltage betweer (+)	k after rep P RELAY narness co n hydraulio	pairing the applicable circuit. 1 POWER SUPPLY CIRCUIT-I connector. c unit harness connector and ground.	Voltage (V)

1. Disconnect circuit breaker harness connector.

2. Check the continuity between hydraulic unit harness connector and circuit breaker harness connector.

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INFOID:000000008192213

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B171A HYDRAULIC PUMP (LH)

< DTC/CIRCUIT DIAGNOSIS >

Hydraulic unit		Circuit	Continuity	
Connector Terminal		Connector	Terminal	Continuity
B309	13	M78	2	Existed

3. Also check harness for short to ground.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair open circuit or short to ground in harness or connectors.

4.CHECK CIRCUIT BREAKER

Check circuit breaker. Refer to <u>RF-74, "Component Inspection"</u>.

Is the inspection result normal?

YES >> Repair the harness or connector between circuit breaker and fusible link.

NO >> Replace circuit breaker.

5. CHECK CONTINUITY HYDRAULIC UNIT AND SOFT TOP CONTROL UNIT

1. Disconnect soft top control unit harness connector.

Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

Hydra	ulic unit	Soft top c	ontrol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	12	B306	74	
B308	7	B307	101	Existed
	6	D307	103	

3. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair open circuit, short to ground and short to power.

6.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 7.

7.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 8.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1.CHECK CIRCUIT BREAKER

1.	Turn	ignition	switch	OFF.

2. Disconnect circuit breaker harness connector.

3. Check resistance between circuit breaker terminals as follows.

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INFOID:000000008192215

B171A HYDRAULIC PUMP (LH)

< DTC/CIRCUIT DIAGNOSIS >

Terminals	Resistance (Ω)
1 and 2	Except 0 or ∞ [at 25°C (77°F)]
YES >	 >> INSPECTION END >> Replace circuit breaker.
NO 2	>> Replace circuit breaker.

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B171B HYDRAULIC PUMP (RH)

< DTC/CIRCUIT DIAGNOSIS >

B171B HYDRAULIC PUMP (RH)

DTC Logic

INFOID:000000008192216

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes
		[GND- SHORT]	Hydraulic pump relay 2 or hydraulic pump circuit is open, short to ground or short to power.	Harness or connectors (The hydraulic pump relay-2
B171B	HYDRAULIC PMP (RH)	[PWR- SHORT/ OPEN]		circuit is open or shorted.) (The hydraulic pump motor circuit is open or shorted.) • Hydraulic unit (Hydraulic
		[GND- SHORT]		pump relay 2 or hydraulic pump motor) • Soft top control unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to <u>RF-76, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

1.CHECK FUSIBLE LINK

Check 40A fusible link (letter I).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace fusible link after repairing the applicable circuit.

2. CHECK HYDRAULIC PUMP RELAY 2 POWER SUPPLY CIRCUIT-I

- 1. Turn ignition switch OFF.
- 2. Disconnect hydraulic unit harness connector.
- 3. Check the voltage between hydraulic unit harness connector and ground.

(-	+)			
Hydrau	Ilic unit	()	Voltage (V) (Approx)	
Connector	Terminal			
B309	B309 13		Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

3.CHECK HYDRAULIC PUMP RELAY 2 POWER SUPPLY CIRCUIT-II

1. Disconnect circuit breaker harness connector.

2. Check the continuity between hydraulic unit harness connector and circuit breaker harness connector.

INFOID:000000008192217

B171B HYDRAULIC PUMP (RH)

< DTC/CIRCUIT DIAGNOSIS >

Hydrau	ulic unit	Circuit	breaker	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B309	13	M78	2	Existed
	s for short to ground.			
the inspection result	normal?			
′ES >> GO TO 4. JO >> Repair ope	n circuit or short to gr	ound in barness or c	onnectors	
CHECK CIRCUIT B				
		opport increation"		
heck circuit breaker. F the inspection result		bonent inspection.		
•	harness or connector	between circuit brea	ker and fusible link.	
NO >> Replace cir				
CHECK CONTINUIT	Y HYDRAULIC UNIT	AND SOFT TOP CO	ONTROL UNIT	
	control unit harness			
	y between hydraulic	unit harness connect	or and soft top contr	ol unit harness connec-
tor.				
Hydrau	ulic unit	Soft top c	ontrol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	11	B306	73	
B308	8	B307	100	Existed
	6	2001	103	
	s for short to ground a	and short to power.		
the inspection result	normal?			
YES >> GO TO 6. NO >> Repair ope	n circuit, short to grou	ind and short to now	⊃r	
REPLACE HYDRAU	-		51.	
eplace hydraulic unit.		movel and Installatio	n "	
the inspection result			<u>II_</u> .	
YES >> INSPECTION				
NO >> GO TO 7.				
REPLACE SOFT TO	P CONTROL UNIT			
-		5. "Removal and Inst	allation".	
REPLACE SOFT TO eplace soft top contro	l unit. Refer to <u>RF-23</u> normal?	5, "Removal and Inst	allation".	
REPLACE SOFT TC eplace soft top contro the inspection result YES >> INSPECTIC	l unit. Refer to <u>RF-23</u> normal?	5. "Removal and Inst	allation".	
REPLACE SOFT TC eplace soft top contro the inspection result YES >> INSPECTIC NO >> GO TO 8.	l unit. Refer to <u>RF-23</u> <u>normal?</u> ON END	5, "Removal and Inst	allation".	
REPLACE SOFT TC eplace soft top contro the inspection result YES >> INSPECTIONO >> GO TO 8.	l unit. Refer to <u>RF-23</u> <u>normal?</u> ON END ENT INCIDENT	5, "Removal and Inst	allation".	
REPLACE SOFT TC eplace soft top contro the inspection result YES >> INSPECTIC NO >> GO TO 8.	l unit. Refer to <u>RF-23</u> <u>normal?</u> ON END ENT INCIDENT	5, "Removal and Inst	allation".	
REPLACE SOFT TC eplace soft top control the inspection result of YES >> INSPECTIONO >> GO TO 8. CHECK INTERMITT efer to <u>GI-45, "Intermi</u>	I unit. Refer to <u>RF-23</u> <u>normal?</u> ON END ENT INCIDENT <u>ttent Incident"</u> .	5, "Removal and Inst	<u>allation"</u> .	
REPLACE SOFT TC eplace soft top contro the inspection result in YES >> INSPECTIONO >> GO TO 8. CHECK INTERMITT efer to <u>GI-45, "Intermine</u> >> INSPECTION	I unit. Refer to <u>RF-23</u> normal? ON END ENT INCIDENT <u>ttent Incident"</u> . ON END	5. "Removal and Inst	allation".	
REPLACE SOFT TC eplace soft top control the inspection result of YES >> INSPECTIONO >> GO TO 8. CHECK INTERMITT efer to <u>GI-45, "Intermi</u>	I unit. Refer to <u>RF-23</u> normal? ON END ENT INCIDENT <u>ttent Incident"</u> . ON END	5, "Removal and Inst	<u>allation"</u> .	INFOID:000000008192218
REPLACE SOFT TC eplace soft top contro the inspection result in YES >> INSPECTIONO >> GO TO 8. CHECK INTERMITT efer to <u>GI-45, "Intermine</u> >> INSPECTION	I unit. Refer to <u>RF-23</u> normal? ON END ENT INCIDENT ttent Incident". ON END ction	5. "Removal and Inst	allation".	INFOID:0000000819221

2. Disconnect circuit breaker harness connector.

3. Check resistance between circuit breaker terminals as follows.

B171B HYDRAULIC PUMP (RH)

< DTC/CIRCUIT DIAGNOSIS >

Terminals	Resistance (Ω)			
1 and 2	Except 0 or ∞ [at 25°C (77°F)]			
le the ineraction requit normal?				

<u>Is the inspection result normal?</u> YES >> INSPECTION END

NO >> Replace circuit breaker.

B171C SWITCHING VALVE 1

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to RF-39, "DTC Inspection Priority Chart", and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes	
		[GND- SHORT]		Harness or connectors (The switching valve 1 cir-	D
B171C	SWITCHING VALVE 1	[PWR- SHORT/ OPEN]	T/ valve 1)		E
DTC CO	NFIRMATION PRO	DCEDUR	E		
1. PERF	ORM DTC CONFIR	MATION	PROCEDURE		F
 Operation Selection 	engine. ate soft top to fully o t "Self Diagnostic R k DTC.		ully close. de of "CONVERTIBLE ROOF" using CONSI	JLT.	G
<u>Is DTC de</u>					Н
	> Go to <u>RF-79, "Dia</u> >> INSPECTION EN		rocedure".		
Diagnos	sis Procedure			INFOID:00000008192220	
1. CHEC	K SWITCHING VAL	VE 1 POV	VER SUPPLY CIRCUIT		

- 1. Turn ignition switch OFF.
- 2. Disconnect hydraulic unit and soft top control unit harness connector.
- 3. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

Hydra	Hydraulic unit		control unit	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B308	1	B307	99	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit or short to ground or short to power in harness or connectors.

2.CHECK SWITCHING VALVE 1 GROUND CIRCUIT

1. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

Hydraulic unit		Soft top c	control unit	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	Ρ
B308	6	B307	103	Existed	_

2. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit or short to power in harness or connectors. А

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B171C SWITCHING VALVE 1

< DTC/CIRCUIT DIAGNOSIS >

3.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B171D SWITCHING VALVE 2

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to RF-39, "DTC Inspection Priority Chart", and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes	
		[GND- SHORT]		Harness or connectors (The switching valve 2 cir-	D
B171D	SWITCHING VALVE 2	[PWR- SHORT/ OPEN]	Switching valve 2 circuit is open, short to ground or short to power.	cuit is open or shorted.)Hydraulic unit (Switching valve 2)Soft top control unit	E
DTC CO	NFIRMATION PRO	CEDUR	RE		
1. PERF	ORM DTC CONFIR	MATION	PROCEDURE		F
 Operation Selection 	engine. ate soft top to fully o ct "Self Diagnostic Ro k DTC.		ully close. de of "CONVERTIBLE ROOF" using CONSI	JLT.	G
<u>Is DTC de</u>	etected?				Н
	> Go to <u>RF-79, "Dia</u> >> INSPECTION EN	-	rocedure".		
Diagnos	sis Procedure			INFOID:00000008192222	
1.CHEC	K SWITCHING VALV	/E 2 POV	VER SUPPLY CIRCUIT		

- 1. Turn ignition switch OFF.
- 2. Disconnect hydraulic unit and soft top control unit harness connector.
- 3. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

Hydraulic unit		Soft top o	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	L
B308	2	B307	98	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit or short to ground or short to power in harness or connectors.

2.CHECK SWITCHING VALVE 2 GROUND CIRCUIT

1. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

-	Hydraulic unit		Soft top o	control unit	Continuity	
_	Connector	Terminal	Connector	Terminal	Continuity	Р
	B308	6	B307	103	Existed	_

2. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit or short to power in harness or connectors.

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B171D SWITCHING VALVE 2

< DTC/CIRCUIT DIAGNOSIS >

3.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B172C ROOF STATUS SIGNAL (TRUNK)

< DTC/CIRCUIT DIAGNOSIS >

B172C ROOF STATUS SIGNAL (TRUNK)

Description

INFOID:00000008192223

- Soft top control unit transmits roof position signal to BOSE amp. and tel adapter unit (Without NAVI).
- BOSE amp. uses this signal for sound equalizer automatic switching function. Refer to <u>AV-41, "System</u> <u>Description"</u> (BOSE audio without navigation) or <u>AV-131, "MULTI AV SYSTEM : System Description"</u> (BOSE audio with navigation).
- Tel adapter unit (Without NAVI) uses this signal for voice recognition function. Refer to <u>AV-52</u>, "<u>Diagnosis</u> <u>C</u> <u>Description</u>".

DTC Logic

INFOID:000000008192224

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DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	s name	DTC detecting condition	Possible cause
B172C	ROOF STATE SIG(TRUNK)	[PWR- SHORT]	BOSE amp. or tel adapter unit (Without NAVI) circuit is short to power.	 Harness or connectors (The BOSE amp. or tel adapter unit circuit is shorted) BOSE amp. Tel adapter unit (Without NAVI) Soft top control unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start engine.
- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-79, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1. CHECK ROOF POSITION SIGNAL CIRCUIT-I

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between soft top control unit harness connector and ground.

Soft top control unit			(-)	Voltage (V)	
	Connector	Terminal	(¬)	(Approx.)	
	B303	12	Ground	9.5 V	0

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK ROOF POSITION SIGNAL CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect BOSE amp. and tel adapter unit (Without NAVI) harness connector.
- 3. Check continuity between soft top control unit harness connector and battery.

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INFOID:00000008192225

B172C ROOF STATUS SIGNAL (TRUNK)

< DTC/CIRCUIT DIAGNOSIS >

Soft top o	control unit		Continuity	
Connector	Terminal			
B303	12	Battery	Not existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair short to power in harness or connectors.

3.CHECK BOSE AMP.

Check BOSE amp. Refer to <u>AV-38, "Work Flow"</u> (BOSE audio without navigation) or <u>AV-173, "Work Flow"</u> (BOSE audio with navigation).

Is the inspection result normal?

YES-I >> BOSE audio without navigation: GO TO 4.

- YES-II >> BOSE audio with navigation: GO TO 6.
- NO >> Replace BOSE amp. Refer to <u>AV-112, "ROADSTER : Removal and Installation"</u> (BOSE audio without navigation) or <u>AV-251, "ROADSTER : Removal and Installation"</u> (BOSE audio with navigation).

4.CHECK TEL ADAPTER UNIT

Check tel adapter unit. Refer to AV-38, "Work Flow".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace tel adapter unit. Refer to <u>AV-118, "Removal and Installation"</u>.

5.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 6.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B1731 HYDRAULIC STATE 1

< DTC/CIRCUIT DIAGNOSIS >

B1731 HYDRAULIC STATE 1

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosi	s name	DTC detecting condition	Possible cause
B1731	HYDRAULIC STATE 1	[TIMEOUT]	When soft top operation is not detected after 15 seconds or more of operation.	Soft top system component
DTC COM	FIRMATION PROC	EDURE		
1. PERFC	ORM DTC CONFIRMA	TION PROC	EDURE	
	engine.			
2. Opera	te soft top to fully ope			
	t "Self Diagnostic Res < DTC.	ult" mode of	"CONVERTIBLE ROOF" using CONSL	JLI.
Is DTC de				
	> Go to <u>RF-85, "Diag</u>	nosis Proced	ure".	
NO >	> INSPECTION END			
Diagnos	is Procedure			INFOID:00000008192227
	SOFT TOP SYSTEM			
	ection result normal?	s pinched by	soft top system component.	
	> GO TO 2.			
•	> Remove foreign ma			
2.CHEC	SOFT TOP SYSTEM	I COMPONE	ENT-II	
Check tha	t soft top system com	ponent is inst	talled normally and is not damaged.	
•	ection result normal?			
	> INSPECTION END > Repair or replace m	alfunctioning	l port	
NO >		lanunctioning	part.	

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INFOID:000000008192226

B1758 THERMO PROTECTION

DTC Logic

INFOID:000000008192228

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
B1758	THERMO PRO- TECTION	[ACTIVE]	Thermo protection is active. (Thermo protection: Refer to <u>RF-20, "SOFT</u> <u>TOP SYSTEM : System Protect Control"</u>)	Soft top system is operated contin- uouslySoft top control unit

DTC CONFIRMATION PROCEDURE

1.COOL DOWN HYDRAULIC SYSTEM

Turn ignition switch OFF and wait at least 5 minutes.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 3. Check DTC.

Is DTC detected?

- YES >> Go to <u>RF-86. "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.REPLACE SOFT TOP CONTROL UNIT

1. Turn ignition switch OFF.

2. Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

>> INSPECTION END

INFOID:000000008192229

B175C POWER SOURCE (ROOF)

Description

Power supply (roof) voltage for soft top control unit is monitored. Soft top system operation is inhibited when by voltage outside the specified value is detected.

DTC Logic

INFOID:000000008192231

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DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39</u>, "<u>DTC Inspection Priority Chart</u>", and determine trouble diagnosis order.

DTC No.	Trouble diagno	sis name	DTC detecting condition	Possible causes
B175C	PWR SOURCE(ROOF)	[LOW VOLTAGE]	10.5 V or less input to soft top control unit power source (roof) terminal is detected.	Power source circuitBattery conditionCharging system
		_		
	DRM DTC CONFIRM	ATION PROCED	URE	
 Opera Select Chect 	k DTC.		NVERTIBLE ROOF" using CONS	SULT.
I <u>s DTC de</u> YES > NO >	<u>stected?</u> →> Go to <u>RF-86. "Diag</u> →> INSPECTION END	nosis Procedure	<u>.</u>	
Diagnos	sis Procedure			INFOID:00000008192232
1. CHEC	K CHARGING SYSTE	М		
Flow (Wit	arging system. Refer hout EXP-800 NI or G pection result normal?		K Flow (With EXP-800 NI or GR8)	- <u>1200 NI)"</u> or <u>CHG-7, "Work</u>
YES >	 > GO TO 2. > Repair or replace m 			
2.CHEC	K POWER SUPPLY A	ND GROUND C	IRCUIT	
Is the insp	wer supply and ground pection result normal?	d circuit for soft t	op control unit. Refer to <u>RF-138, '</u>	<u>'Diagnosis Procedure"</u> .
	 > Check intermittent i > Repair or replace m 		GI-45, "Intermittent Incident".	

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B175D POWER SOURCE (ROOF)

Description

INFOID:000000008192233

Power supply (roof) voltage for soft top control unit is monitored. Soft top system operation is inhibited when voltage outside the specified value is detected.

DTC Logic

INFOID:000000008192234

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible causes
B175D	PWR SOURCE(ROOF)	[HIGH VOLTAGE]	16.0 V or more input to soft top control unit power source (roof) terminal is detected.	Power source circuitBattery conditionCharging system

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start engine.
- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to <u>RF-86. "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192235

1.CHECK CHARGING SYSTEM

Check charging system. Refer to CHG-3, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-7, "Work Flow (Without EXP-800 NI or GR8-1200 NI)".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunction parts.

2.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit for soft top control unit. Refer to <u>RF-138. "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u>.

NO >> Repair or replace malfunction parts.

B175E POWER SOURCE (POWER WINDOW)

< DTC/CIRCUIT DIAGNOSIS >

B175E POWER SOURCE (POWER WINDOW)

Description

Soft top control unit watches power supply condition of power supply (power window) terminal.

DTC Logic

INFOID:000000008192237

INFOID:000000008192236

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagno	sis name	DTC detecting condition	Possible causes
B175E	PWR SOURCE(WIN- DOW)	[LOW VOLTAGE]	9.0 V or less input to soft top control unit power source (power window) terminal is detected.	 Power source circuit (for power window) Battery condition Charging system BCM power supply and ground Soft top control unit
DTC COI	VFIRMATION PROC	EDURE		
1.PERFC	ORM DTC CONFIRM	TION PROCED	URE	
 Opera Selec Check <u>Is DTC de</u> 	k DTC.	ult" mode of "CC	INVERTIBLE ROOF" using CONS	SULT.
NO >	INSPECTION END			
Diagnos	sis Procedure			INFOID:00000008192238
1.CHEC	K CHARGING SYSTE	М		
Flow (With	hout EXP-800 NI or G		<u> Flow (With EXP-800 NI or GR8</u>	<u>-1200 NI)"</u> or <u>CHG-7, "Work</u>
	Dection result normal? >> GO TO 2.			
NO >	Repair or replace m	•		
2.CHEC	K BCM POWER SUP	PLY AND GROU	ND CIRCUIT	
<u>Is the insp</u> YES >	M power supply and (<u> pection result normal?</u> >> GO TO 3. >> Repair or replace m		efer to <u>BCS-53, "Diagnosis Procee</u> rt.	<u>dure"</u> .
•		• •	R SUPPLY AND GROUND CIRC	UIT
1. Checl	k power window main	switch power s	upply and ground circuit. Refer to	
2. Checl	<u>SWITCH : Diagnosis I</u>	witch power supp	<u>e"</u> . Dy and ground circuit. Refer to <u>PV</u>	VC-102. "POWER WINDOW
	pection result normal?			
-	> GO TO 4. > Repair or replace m	alfunctioning na	rt	
		• ·	ER SUPPLY CIRCUIT	

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B175E POWER SOURCE (POWER WINDOW)

< DTC/CIRCUIT DIAGNOSIS >

- 2. Disconnect soft top control unit connector, power window main switch harness connector and power window sub-switch harness connector.
- 3. Check voltage between soft top control unit harness connector and ground.

(+)		Voltage (V) (Approx.)	
Soft top of	control unit	()		
Connector	Terminal			
B303	9	Ground	Battery voltage	

s the inspection result normal?

YES >> Replace soft top control unit. Refer to <u>RF-235. "Removal and Installation"</u>.

NO >> GO TO 5.

5. CHECK CONTINUITY POWER WINDOW POWER SUPPLY CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and soft top control unit harness connector.

BCM		Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M118	2	B303	9	Existed

3. Check continuity between soft top control unit harness connector and ground.

	(+)			
Soft top	control unit	()	Continuity	Continuity
Connector	Terminal			
B303	9	Ground	Not existed	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-95, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

B175F POWER SOURCE (POWER WINDOW)

< DTC/CIRCUIT DIAGNOSIS >

B175F POWER SOURCE (POWER WINDOW)

Description

Soft top control unit watches power supply condition of power supply (power window) terminal.

DTC Logic

INFOID:000000008192240

INFOID:000000008192239

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagno	osis name	DTC detecting condition	Possible causes
B175F	PWR SOURCE(WINDOW)	[HIGH VOLTAGE]	16.0 V or more input to soft top control unit power source (power window) terminal is detected.	 Power source circuit (for power window) Battery condition Charging system BCM power supply and ground Soft top control unit
DTC CO	NFIRMATION PROCE	DURE		
1.PERF	ORM DTC CONFIRMAT	ION PROCEDURE		
 Oper Select Check <u>Is DTC de</u> YES 	k DTC.	" mode of "CONVE	ERTIBLE ROOF" using CONSL	JLT.
Diagno	sis Procedure			INFOID:00000008192241
1.снес	K CHARGING SYSTEM			
			w (With EXP-800 NI or GR8-1	200 NI)" or <u>CHG-7, "Work</u>
	hout EXP-800 NI or GR8 pection result normal?	<u>3-1200 NI)"</u> .		
	>> GO TO 2.			
NO :	>> Repair or replace mal	•		
2.CHEC	K BCM POWER SUPPL	Y AND GROUND (CIRCUIT	
		ound circuit. Refer t	to <u>BCS-53, "Diagnosis Procedu</u>	ire".
	pection result normal? >> GO TO 3.			
	>> GO TO 3. >> Repair or replace mal	functioning part.		
•		• ·	JPPLY AND GROUND CIRCUI	Т
1. Chec		witch power supply	y and ground circuit. Refer to	
2. Chec		tch power supply a	nd ground circuit. Refer to <u>PWC</u>	C-102, "POWER WINDOW
	pection result normal?			
	>> GO TO 4.	functioning		
	>> Repair or replace mal K VOLTAGE POWER W	•		

1. Turn ignition switch OFF.

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B175F POWER SOURCE (POWER WINDOW)

< DTC/CIRCUIT DIAGNOSIS >

- 2. Disconnect soft top control unit connector, power window main switch harness connector and power window sub-switch harness connector.
- 3. Check voltage between soft top control unit harness connector and ground.

	+)	()	Voltage (V)
Soft top	control unit		(Approx.)
Connector	Terminal		
B303	9	Ground	Battery voltage

s the inspection result normal?

YES >> Replace soft top control unit. Refer to <u>RF-235. "Removal and Installation"</u>.

NO >> GO TO 5.

5. CHECK CONTINUITY POWER WINDOW POWER SUPPLY CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and soft top control unit harness connector.

BCM		Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M118	2	B303	9	Existed

3. Check continuity between soft top control unit harness connector and ground.

	(+)			
Soft top	control unit	(-)	Continuity	Continuity
Connector	Terminal			
B303	9	Ground	Not existed	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-95, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

B1766 SWITCHING VALVE 3

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to RF-39, "DTC Inspection Priority Chart", and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes	
		[GND- SHORT]	Switching value 2 aircuit is open, short to ground or	Harness or connectors (The switching valve 3 cir-	C
B1766	SWITCHING VALVE 3	[PWR- SHORT/ OPEN]	Switching valve 3 circuit is open, short to ground or short to power.	cuit is open or shorted.)Hydraulic unit (Switching valve 3)Soft top control unit	E
DTC COI	NFIRMATION PRO	OCEDUF	RE		
1. PERF	ORM DTC CONFIR	MATION	PROCEDURE		F
 Opera Selection 	engine. ate soft top to fully o tt "Self Diagnostic Ro k DTC.		ully close. de of "CONVERTIBLE ROOF" using CONSU	JLT.	G
Is DTC de	-				F
	> Go to <u>RF-97, "Dia</u> >> INSPECTION EN	-	rocedure".		
Diagnos	sis Procedure			INFOID:00000008192243	
1. CHEC	K SWITCHING VALV	/E 3 PO\	VER SUPPLY CIRCUIT		

- 1. Turn ignition switch OFF.
- 2. Disconnect hydraulic unit and soft top control unit harness connector.
- 3. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

Hydra	Hydraulic unit		Soft top control unit		
Connector	Terminal	Connector	Terminal	Continuity	l
B308	3	B307	97	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit or short to ground or short to power in harness or connectors.

2.CHECK SWITCHING VALVE 3 GROUND CIRCUIT

1. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

—	Continuity	Soft top control unit		Hydraulic unit	
Р	Continuity	Terminal	Connector	Terminal	Connector
	Existed	103	B307	6	B308

2. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit or short to power in harness or connectors.

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B1766 SWITCHING VALVE 3

< DTC/CIRCUIT DIAGNOSIS >

3.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B1767 SWITCHING VALVE 4

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to RF-39, "DTC Inspection Priority Chart", and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes	
		[GND- SHORT]	Quitabing uplus 4 singuitie anon abort to ground an	Harness or connectors (The switching valve 4 cir-	C
B1767	SWITCHING VALVE 4	[PWR- SHORT/ OPEN]	Switching valve 4 circuit is open, short to ground or short to power.	cuit is open or shorted.)Hydraulic unit (Switching valve 4)Soft top control unit	E
DTC COI	NFIRMATION PRO	CEDUF	RE		
1. PERF	ORM DTC CONFIR	MATION	PROCEDURE		F
 Opera Select 	engine. ate soft top to fully o t "Self Diagnostic Ro k DTC.		ully close. de of "CONVERTIBLE ROOF" using CONSI	JLT.	G
	etected? So to <u>RF-97, "Dia</u> INSPECTION EN		rocedure".		Η
Diagnos	sis Procedure			INFOID:00000008192245	
1. CHEC	K SWITCHING VALV	/E 4 POV	VER SUPPLY CIRCUIT		

- 1. Turn ignition switch OFF.
- 2. Disconnect hydraulic unit and soft top control unit harness connector.
- Check the continuity between hydraulic unit harness connector and soft top control unit harness connec-3. tor.

Hydra	Hydraulic unit		Soft top control unit		
Connector	Terminal	Connector	Terminal	Continuity	L
B308	4	B307	96	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit or short to ground or short to power in harness or connectors.

2.CHECK SWITCHING VALVE 4 GROUND CIRCUIT

1. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

	Continuity	Soft top control unit		Hydraulic unit	
Р	Continuity	Terminal	Connector	Terminal	Connector
	Existed	103	B307	6	B308

2. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit or short to power in harness or connectors.

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B1767 SWITCHING VALVE 4

< DTC/CIRCUIT DIAGNOSIS >

3.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B1768 SWITCHING VALVE 5

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes	
		[GND- SHORT]		Harness or connectors (The switching valve 5 cir-	D
B1768	SWITCHING VALVE 5	[PWR- SHORT/ OPEN]	Switching valve 5 circuit is open, short to ground or short to power.	cuit is open or shorted.)Hydraulic unit (Switching valve 5)Soft top control unit	E
DTC CO	DTC CONFIRMATION PROCEDURE				
1. PERF	ORM DTC CONFIR	MATION	PROCEDURE		F
 Operation Selection 					
Is DTC de	-				Н
YES >> Go to <u>RF-97, "Diagnosis Procedure"</u> . NO >> INSPECTION END					
Diagnosis Procedure					
1.CHEC	1. CHECK SWITCHING VALVE 5 POWER SUPPLY CIRCUIT				

- 1. Turn ignition switch OFF.
- 2. Disconnect hydraulic unit and soft top control unit harness connector.
- 3. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

Hydraulic unit		Soft top control unit		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	l
B308	5	B307	102	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit or short to ground or short to power in harness or connectors.

2.CHECK SWITCHING VALVE 5 GROUND CIRCUIT

1. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

-	Hydrau	ulic unit	Soft top o	control unit	Continuity	•
_	Connector	Terminal	Connector	Terminal	Continuity	Р
	B308	6	B307	103	Existed	_

2. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit or short to power in harness or connectors.

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B1768 SWITCHING VALVE 5

< DTC/CIRCUIT DIAGNOSIS >

3.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B176A THERMO PROTECTION

< DTC/CIRCUIT DIAGNOSIS >

B176A THERMO PROTECTION

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagno	osis name	DTC detecting condition	Possible cause	
B176A	THERMO PRO- TECTION	[ACTIVE]	Thermo protection is active. (Thermo protection: Refer to <u>RF-20, "SOFT</u> <u>TOP SYSTEM : System Protect Control"</u>)	Soft top control unit	D
DTC CON	FIRMATION PR	ROCEDURI			Е
1.PERFC	RM DTC CONFI	RMATION P	ROCEDURE		_
2. Turn ig	gnition switch ON : "Self Diagnostic		e ambient temperature is 0°C or more e of "CONVERTIBLE ROOF" using CC		F
	<u>tected?</u> > Go to <u>RF-131, '</u> > INSPECTION E		rocedure".		G
Diagnos	is Procedure			INFOID:00000008192249	Н
1. REPLA	CE SOFT TOP C	ONTROL UI	NIT		I
	gnition switch OF		to RF-235, "Removal and Installation".		1
·	- > INSPECTION E				J

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INFOID:000000008192248

B176B ROOF WARNING LAMP

DTC Logic

INFOID:000000008192250

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B176B	ROOF WARNING LAMP	Roof warning lamp circuit is short to battery.	 Harness or connectors (The roof warning lamp circuit is shorted.) Combination meter Soft top control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start engine.
- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to <u>RF-100, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192251

1. CHECK ROOF WARNING LAMP CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector and combination meter harness connector.
- 3. Check continuity between soft top control unit harness connector and battery.

Soft top of	control unit		Continuity	
Connector	Terminal		Continuity	
B303	11	Battery	Not existed	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair short to power in harness or connectors.

2.REPLACE COMBINATION METER

Replace combination meter. Refer to MWI-92, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

B176B ROOF WARNING LAMP

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B176C STRIKER SENSOR (RH)

DTC Logic

INFOID:000000008192252

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors
B176C	STRIKER SEN- SOR RH	SEN- [PWR-SHORT/ OPEN] Roof striker sensor RH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit	
		[OPEN]		 Roof striker sensor RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-102, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192253

1. CHECK ROOF STRIKER SENSOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect roof striker sensor RH and soft top control unit harness connector.
- 3. Check the continuity between roof striker sensor RH harness connector and soft top control unit harness connector.

Roof striker sensor RH		Soft top c	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
M261	3	B303	3	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE ROOF STRIKER SENSOR RH

Replace roof striker sensor RH. Refer to RF-184, "FRONT LOCK STRIKER : Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

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4.CHECK INTERMITTENT INCIDENT

B176C STRIKER SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS >	
Refer to GI-45. "Intermittent Incident".	A
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B176D STRIKER SENSOR (LH)

DTC Logic

INFOID:000000008192254

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors (The second principal second secon
B176D	STRIKER SEN- SOR LH	N- [PWR-SHORT/ OPEN] Roof striker sensor LH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit	
		[OPEN]		Roof striker sensor LH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to RF-104, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192255

1. CHECK ROOF STRIKER SENSOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect roof striker sensor LH and soft top control unit harness connector.
- 3. Check the continuity between roof striker sensor LH harness connector and soft top control unit harness connector.

Roof striker sensor LH		Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M262	4	B303	4	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE ROOF STRIKER SENSOR LH

Replace roof striker sensor LH. Refer to RF-184, "FRONT LOCK STRIKER : Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

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4.CHECK INTERMITTENT INCIDENT

B176D STRIKER SENSOR (LH)

< DTC/CIRCUIT DIAGNOSIS >	-,
Refer to GI-45, "Intermittent Incident".	A
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B176E ROOF LATCH LOCK SENSOR

DTC Logic

INFOID:000000008192256

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
	B176E ROOF LATCH [PWR-SHORT] LOCK SEN [OPEN] [OPEN]	[GND-SHORT]	Roof latch lock sensor circuit is open, short to ground or short to power.	 Harness or connectors (The sensor circuit is open or shorted.) Soft top control unit
B176E		•		
			 Roof latch lock sensor 	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to RF-106, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192257

1.CHECK ROOF LATCH LOCK SENSOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect roof latch lock sensor and soft top control unit harness connector.
- 3. Check the continuity between roof latch lock sensor harness connector and soft top control unit harness connector.

Roof latch lock sensor		Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B310	2	B306	71	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE ROOF LATCH LOCK SENSOR

Replace roof striker sensor RH. Refer to <u>RF-236, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

B176E ROOF LATCH LOCK SENSOR

< DTC/CIRCUIT DIAGNOSIS >	
Refer to GI-45, "Intermittent Incident".	
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B176F ROOF STATUS SENSOR (LH)

DTC Logic

INFOID:000000008192258

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
B176F ROOF STATUS SEN LH		[GND-SHORT]		Harness or connectors
	[PWR-SHORT/ OPEN]	Roof status sensor LH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit	
		[OPEN]		 Hydraulic unit (Roof status sensor LH)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to <u>RF-108</u>, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192259

1. CHECK ROOF STATUS SENSOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect roof status sensor LH and soft top control unit harness connector.
- 3. Check the continuity between roof status sensor LH harness connector and soft top control unit harness connector.

Roof status sensor LH		Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B316	2	B306	69	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235. "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

B176F ROOF STATUS SENSOR (LH)

< DTC/CIRCUIT DIAGNOSIS >	,
Refer to GI-45, "Intermittent Incident".	A
>> INSPECTION END	~
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< DTC/CIRCUIT DIAGNOSIS >

B1770 ROOF STATUS SENSOR (RH)

DTC Logic

INFOID:000000008192260

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
	1770 ROOF STATUS SEN RH [GND-SHORT] [PWR-SHORT/ OPEN] Roof status sensor RH circuit is open, short to ground or short to power. [OPEN] [OPEN]	[GND-SHORT]		Harness or connectors
B1770		(The sensor circuit is open or shorted.)Soft top control unit		
			Hydraulic unit (Roof status sen- sor RH)	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to <u>RF-110</u>, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192261

1. CHECK ROOF STATUS SENSOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect roof status sensor RH and soft top control unit harness connector.
- 3. Check the continuity between roof status sensor RH harness connector and soft top control unit harness connector.

Roof status	status sensor RH Soft top control unit Continuity		Soft top control unit		
Connector	Terminal	Connector	Terminal	Continuity	
B317	2	B306	61	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235. "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

B1770 ROOF STATUS SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS >	
Refer to GI-45, "Intermittent Incident".	٨
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< DTC/CIRCUIT DIAGNOSIS >

B1771 ROOF STATUS SENSOR (LH)

DTC Logic

INFOID:000000008192262

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
B1771 ROOF S SEN LH		[GND-SHORT]	Roof status sensor LH circuit is open, short to ground or short to power.	 Harness or connectors (The sensor circuit is open or shorted.) Soft top control unit
	ROOF STATUS SEN LH	OPENI		
	[OPEN]		 Hydraulic unit (Roof status sensor LH) 	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to <u>RF-112</u>, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192263

1. CHECK ROOF STATUS SENSOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect roof status sensor LH and soft top control unit harness connector.
- 3. Check the continuity between roof status sensor LH harness connector and soft top control unit harness connector.

Roof status	sensor LH	Soft top control unit		trol unit Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B316	3	B306	66	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

B1771 ROOF STATUS SENSOR (LH)

< DTC/CIRCUIT DIAGNOSIS >	
Refer to <u>GI-45, "Intermittent Incident"</u> .	A
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B1772 5TH BOW STATUS SENSOR (LH)

< DTC/CIRCUIT DIAGNOSIS >

B1772 5TH BOW STATUS SENSOR (LH)

DTC Logic

INFOID:000000008192264

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
	[GND-SHORT]		Harness or connectors	
B1772	5BOW STATUS SEN LH	[PWR-SHORT/ OPEN]	shorted.	(The sensor circuit is open or shorted.)Soft top control unit
	[OPEN]	 5th bow status sensor LH 		

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-114, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192265

1.CHECK 5TH BOW STATUS SENSOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect 5th bow status sensor LH and soft top control unit harness connector.
- 3. Check the continuity between 5th bow status sensor LH harness connector and soft top control unit harness connector.

5th bow status	s sensor LH	Soft top c	Soft top control unit		
Connector	Terminal	Connector	Terminal	Continuity	
B312	2	B306	70	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

B1772 5TH BOW STATUS SENSOR (LH)

< DTC/CIRCUIT DIAGNOSIS >	
Refer to GI-45, "Intermittent Incident".	A
>> INSPECTION END	A
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B1773 5TH BOW STATUS SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS >

B1773 5TH BOW STATUS SENSOR (RH)

DTC Logic

INFOID:000000008192266

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
[GND-SHORT]		Harness or connectors (The second provide second		
B1773	5BOW STATUS SEN RH	[PWR-SHORT/ OPEN]	5th bow status sensor RH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit
	[OPEN]	 5th bow status sensor RH 		

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-116, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192267

1.CHECK 5TH BOW STATUS SENSOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect 5th bow status sensor RH and soft top control unit harness connector.
- 3. Check the continuity between 5th bow status sensor RH harness connector and soft top control unit harness connector.

5th bow status	5th bow status sensor RH		Soft top control unit		
Connector	Terminal	Connector	Terminal	Continuity	
B313	2	B306	68	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

B1773 5TH BOW STATUS SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS >	
Refer to GI-45, "Intermittent Incident".	A
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B1774 STORAGE LID STATUS SENSOR (LH)

< DTC/CIRCUIT DIAGNOSIS >

B1774 STORAGE LID STATUS SENSOR (LH)

DTC Logic

INFOID:000000008192268

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors
B1774	S/LID STATUS SEN LH	[PWR-SHORT/ OPEN]	Strage lid status sensor LH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit
		[OPEN]		 Strage lid status sensor LH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-118, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192269

1. CHECK STRAGE LID STATUS SENSOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect strage lid status sensor LH and soft top control unit harness connector.
- 3. Check the continuity between strage lid status sensor LH harness connector and soft top control unit harness connector.

Strage lid statu	d status sensor LH Soft top control unit		Continuity		
Connector	Terminal	Connector Terminal		Continuity	
B314	2	B306	60	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

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< DTC/CIRCUIT DIAGNOSIS > Refer to <u>GI-45, "Intermittent Incident"</u> .	
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B1775 STORAGE LID STATUS SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS >

B1775 STORAGE LID STATUS SENSOR (RH)

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors
B1775	S/LID STATUS SEN RH	[PWR-SHORT/ OPEN]	Strage lid status sensor RH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit
		[OPEN]		Strage lid status sensor RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to <u>RF-120, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192271

INFOID:000000008192270

1. CHECK STRAGE LID STATUS SENSOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect and strage lid status sensor and soft top control unit harness connector.
- 3. Check the continuity between strage lid status sensor RH harness connector and soft top control unit harness connector.

Strage lid statu	is sensor RH	Soft top control unit		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B315	2	B306	58	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

B1775 STORAGE LID STATUS SENSOR (RH)

BITTS STORAGE LID STATUS SENS	
< DTC/CIRCUIT DIAGNOSIS > Refer to <u>GI-45. "Intermittent Incident"</u> .	
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B1776 STORAGE LID STATUS SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS >

B1776 STORAGE LID STATUS SENSOR (RH)

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors
B1776	S/LID STATUS SEN RH	[PWR-SHORT/ OPEN]	Strage lid status sensor RH circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit
		[OPEN]		Strage lid status sensor RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to RF-122, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192273

INFOID:00000008192272

1. CHECK STRAGE LID STATUS SENSOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect strage lid status sensor RH and soft top control unit harness connector.
- 3. Check the continuity between strage lid status sensor RH harness connector and soft top control unit harness connector.

Strage lid statu	s sensor RH	Soft top control unit		Continuity	
Connector	Terminal	Connector Terminal			
B315	3	B303	59	Existed	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to <u>RF-226, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

B1776 STORAGE LID STATUS SENSOR (RH)

< DTC/CIRCUIT DIAGNOSIS > Refer to <u>GI-45. "Intermittent Incident"</u> .	
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B1777 REAR WINDOW DEFOGGER OUTPUT SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

B1777 REAR WINDOW DEFOGGER OUTPUT SIGNAL

DTC Logic

INFOID:000000008192274

INFOID:000000008192275

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
B1777	REAR DEF OUT SIG	[PWR-SHORT]	Rear window defogger output signal circuit is short to power.	 Harness or connectors (Rear window defogger output signal circuit is shorted.) Rear window defogger

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

2. Operate soft top to fully open and fully close.

3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.

4. Check DTC.

Is DTC detected?

YES >> Go to <u>RF-124</u>, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

Refer to DEF-89, "Diagnosis Procedure".

B1778 TRUNK OPEN OUTPUT SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

B1778 TRUNK OPEN OUTPUT SIGNAL

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Tro	uble diagr	nosis name		DTC detecting con	dition	Possible cause
B1778	TRUNK C	PEN	[PWR-SHORT/ OPEN]		d opener output signal ground or short to pov		Harness or connectors (Trunk lid opener output signal circuit is open or shorted.)
	001 010		[GND-SHORT]	3101110	ground or short to por		Trunk lid lock assembly
отс со	NFIRMA	TION F	ROCEDURE				
1.PERF	ORM DT	C CONF	IRMATION PR	ROCEDI	JRE		
	engine.						
			ly open and fu c Result" mode		NVERTIBLE ROC)F" usina CO	NSULT
4. Cheo	k DTC.	lagnoot					
<u>ls DTC d</u> YES		DE 105		roodure	, "		
	>> G0 10 >> INSPE		<u>. "Diagnosis P</u> END	ocedure	<u>.</u> .		
Diagno	sis Pro	cedure	;				INFOID:00000008192
1 <u> 1</u> <u> </u>			PENER OUTP		NIAI		
	ignition s			01 313			
2. Disco	onnect tru	unk lid lo	ck assembly h	arness	connector.		
	ignition s		N. E ROOF" usin	g CONS	SULT.		
5. Sele	ct "TRUN	K OPEN	IER" in "ACTI\	/E TESI	" mode.	arnass conr	nector and ground.
0. 10uc		CHECK	ollage betwee				
	(+						Voltage (V)
	runk lid loc	k assemb Term		(—)	Activ	/e test	(Approx.)
	376	2		ound	TRUNK OPENER	ON	$0 \rightarrow Battery voltage \rightarrow 0$
Is the ins	pection re	esult nor	mal?			-	
YES	>> GO T(O 3.					
• ·	>> GO T(-					
			PENER OUTP				
			ntrol unit harn			otor and aaf	t top control unit harness co

 Check continuity between soft top control unit harness connector and soft top control unit harness connector.

Trunk lid loo	ck assembly	Soft top control unit		Continuity	F
Connector	Terminal	Connector	Terminal	Continuity	
B76	2	B303	10	Existed	-

3. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> Replace soft top control unit. Refer to <u>RF-235. "Removal and Installation"</u>.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

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INFOID:000000008192276

B1778 TRUNK OPEN OUTPUT SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

3. CHECK TRUNK LID OPENER ACTUATOR GROUND

Check continuity between trunk lid lock assembly harness connector and ground.

-	Trunk lid lo	ck assembly		Continuity
_	Connector Terminal		Ground	Continuity
_	B76	3		Existed
ls t	he inspection result norm	al?		

YES >> Replace trunk lid lock assembly. NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B1779 HYDRAULIC PUMP TEMPERATURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

B1779 HYDRAULIC PUMP TEMPERATURE SENSOR

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagno	osis name	[OTC detecting condition	n	Possible cause	
	HYDRAULIC PMP	[GND- SHORT]	Hydraulic p	ump temperature sens	sor circuit is	 Harness or connectors (Hydraulic pump temperature ser sor circuit is open or shorted.) 	
B1779	T/SEN	[PWR- SHORT/ OPEN]		t to ground or short to p		 Hydraulic unit (Hydraulic pump temperature) Soft top control unit 	
DTC CON	FIRMATION PR	ROCEDUR	E				
.PERFO	RM DTC CONFI	RMATION P	ROCEDUF	RE			
2. Select 3. Check <u> s DTC det</u> YES >>	DTC.	Result" mod ' <u>Diagnosis F</u>		VERTIBLE ROOF	" using CC	DNSULT.	
Diagnosi	is Procedure					INFOID:00000008192	
				SENSOR POWER			
1. Turn ig 2. Discon	gnition switch OF	nit harness c	connector.				
1. Turn ig 2. Discon 3. Turn ig	nect hydraulic ur gnition switch ON the voltage betw	nit harness c		ness connector and			
I. Turn ig 2. Discon 3. Turn ig	nnect hydraulic ur gnition switch ON the voltage betw (+)	hit harness c een hydraul		ness connector and		Voltage (V)	
1. Turn ig 2. Discon 3. Turn ig 4. Check	nect hydraulic ur gnition switch ON the voltage betw	hit harness c een hydraul	ic unit harn				
1. Turn ig 2. Discon 3. Turn ig 4. Check Co	nnect hydraulic ur gnition switch ON the voltage betw (+) Hydraulic onnector B308	nit harness c een hydraul unit Termir 10	ic unit harn	ness connector and		Voltage (V)	
1. Turn ig 2. Discon 3. Turn ig 4. Check Co Is the inspective YES >> NO >> 2.CHECK 1. Turn ig	(+) (+) (+) Hydraulic (+) Hydraulic prinector B308 ection result norm > GO TO 3. > GO TO 3. > GO TO 2. (HYDRAULIC PU gnition switch OF	nit harness c een hydraul unit Termir 10 nal? JMP TEMPE F.	ic unit harn	ess connector and (-) Ground	d ground.	Voltage (V) (Approx.) 5	
1. Turn ig 2. Discon 3. Turn ig 4. Check Co Is the inspective YES >> NO >> 2.CHECK 1. Turn ig 2. Discon	(+) (+) (+) Hydraulic onnector B308 ection result norm > GO TO 3. > GO TO 3. > GO TO 2. (HYDRAULIC PU onition switch OF onect soft top con the continuity be	hit harness c een hydraul unit Termir 10 hal? JMP TEMPE F. trol unit harr	ic unit harn	(-) Ground SENSOR POWER ector. arness connector a	d ground.	Voltage (V) (Approx.) 5	
1. Turn ig 2. Discon 3. Turn ig 4. Check Co Is the inspe YES >> NO >> 2.CHECK 1. Turn ig 2. Discon 3. Check tor.	(+) Hydraulic ur (+) Hydraulic mnector B308 ection result norn > GO TO 3. > GO TO 3. > GO TO 2. CHYDRAULIC PU gnition switch OF mect soft top con the continuity be Hydraulic unit	hit harness c een hydraul unit Termir 10 nal? JMP TEMPE F. trol unit harr etween hydra	ERATURE S	(–) Ground SENSOR POWER ector. arness connector a Soft top control u	d ground.	Voltage (V) (Approx.) 5 CIRCUIT-II	
1. Turn ig 2. Discon 3. Turn ig 4. Check Co Co Is the inspective YES >= NO >= 2.CHECK 1. Turn ig 2. Discon 3. Check tor. Conr	(+) (+) (+) Hydraulic onnector B308 ection result norm > GO TO 3. > GO TO 3. > GO TO 2. (HYDRAULIC PU onition switch OF onect soft top con the continuity be	hit harness c een hydraul unit Termir 10 hal? JMP TEMPE F. trol unit harr	ERATURE S	(-) Ground SENSOR POWER ector. arness connector a	d ground.	Voltage (V) (Approx.) 5 CIRCUIT-II op control unit harness connec	

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

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B1779 HYDRAULIC PUMP TEMPERATURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK HYDRAULIC PUMP TEMPERATURE SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Check the continuity between hydraulic unit harness connector and soft top control unit harness connector.

5th bow latch/striker sensor assembly		Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B308	9	B306	92	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

4.REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-226, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B177A ROOF STATUS INCORRECT

< DTC/CIRCUIT DIAGNOSIS >

B177A ROOF STATUS INCORRECT

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B177A	ROOF STATE INCORRECT	When soft top control unit detects that soft top status is not normal.	Soft top system component
DTC CON	FIRMATION PROCEDU	JRE	
1.ADJUST	SOFT TOP POSITION		
•	nition switch OFF and wa lly operate soft top to fully		
•	GO TO 2.		
2.PERFOR	RM DTC CONFIRMATION	N PROCEDURE	
	e soft top to fully open an "Self Diagnostic Result" n DTC.	d fully close. node of "CONVERTIBLE ROOF" using COI	NSULT.
YES >>	Go to <u>RF-130, "Diagnosi</u> INSPECTION END	is Procedure".	
Diagnosis	s Procedure		INFOID:0000000819228
1.снеск	SOFT TOP SYSTEM CO	MPONENT	
Check that	soft top system compone	nt is installed normally and is not damaged	
•	ction result normal?		
	INSPECTION END	nctioning part.	

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INFOID:000000008192280

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< DTC/CIRCUIT DIAGNOSIS >

B177B ROOF STATUS INCORRECT

DTC Logic

INFOID:000000008192282

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B177B	ROOF STATE INCORRECT	When soft top is not set by soft top control unit.	Soft top statusSoft top control unit

DTC CONFIRMATION PROCEDURE

1.ADJUST SOFT TOP POSITION

- 1. Turn ignition switch OFF and wait at least 4 minutes.
- 2. Manually operate soft top to fully open.

>> GO TO 2.

$2. {\tt perform \ dtc \ confirmation \ procedure}$

- 1. Start engine.
- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to <u>RF-130, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192283

1.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure. Refer to <u>RF-130, "DTC Logic"</u>.

Is the DTC displayed again?

- YES >> Replace soft top control unit. Refer to <u>RF-235. "Removal and Installation"</u>.
- NO >> INSPECTION END

B177C THERMO PROTECTION

< DTC/CIRCUIT DIAGNOSIS >

B177C THERMO PROTECTION

DTC Logic

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B177C	THERMO PROTEC- TION	Thermo protection is active. (Thermo protection: Refer to <u>RF-20, "SOFT TOP</u> <u>SYSTEM : System Protect Control"</u>)	Soft top system is operated continu- ouslySoft top control unit
DTC CONF	FIRMATION PROC	CEDURE	
1.cool d	OWN HYDRAULIC	SYSTEM	
Furn ignitior	n switch off and wait	at least 5 minutes.	
	GO TO 2.		
~		ATION PROCEDURE	
		ult" mode of "CONVERTIBLE ROOF" using	g CONSULT.
s DTC dete			
	Go to <u>RF-131, "Dia</u> INSPECTION END	gnosis Procedure".	
-	s Procedure		INFOID:00000008192285
	C Confirmation Proc displayed again?	edure. Refer to <u>RF-64, "DTC Logic"</u> .	
		ntrol unit. Refer to <u>RF-235, "Removal and l</u>	Installation"
	INSPECTION END		initialitation.

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INFOID:000000008192284

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B177D 5TH BOW LATCH OPEN SENSOR

< DTC/CIRCUIT DIAGNOSIS >

B177D 5TH BOW LATCH OPEN SENSOR

DTC Logic

INFOID:00000008192286

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause	
		[GND-SHORT]		Harness or connectors	
B177D	5BOW LATCH OPEN SEN	[PWR-SHORT/ OPEN]	5th bow latch open sensor circuit is open, short to ground or short to power.	ORI/ 5th bow latch open sensor circuit is open, short shorted	(The sensor circuit is open or shorted.)Soft top control unit
		[OPEN]		 5th bow latch open sensor 	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to RF-132, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192287

1.CHECK 5TH BOW LATCH OPEN SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect 5th bow latch/striker sensor assembly and soft top control unit harness connector.
- 3. Check the continuity between 5th bow latch/striker sensor assembly harness connector and soft top control unit harness connector.

5th bow latch/striker	sensor assembly	Soft top c	ontrol unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B319	2	B306	57	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE 5TH BOW LATCH/STRIKER SENSOR ASSEMBLY

Replace 5th bow latch/striker sensor assembly. Refer to RF-237, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

B177D 5TH BOW LATCH OPEN SENSOR

< DTC/CIRCUIT DIAGNOSIS >	
Refer to GI-45, "Intermittent Incident".	٨
>> INSPECTION END	A
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B177E 5TH BOW LATCH CLOSE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

B177E 5TH BOW LATCH CLOSE SENSOR

DTC Logic

INFOID:000000008192288

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause	
		[GND-SHORT]		Harness or connectors	
B177E	5BOW LATCH CLOSE SEN	[PWR-SHORT/ OPEN]	5th bow latch close sensor circuit is open, short to ground or short to power.	IOR I/ 5th bow latch close sensor circuit is open, short to around or short to power	(The sensor circuit is open or shorted.)Soft top control unit
		[OPEN]		 5th bow latch close sensor 	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

YES >> Go to RF-134, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192289

1.CHECK 5TH BOW LATCH CLOSE SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect 5th bow latch/striker sensor assembly and soft top control unit harness connector.
- 3. Check the continuity between 5th bow latch/striker sensor assembly harness connector and soft top control unit harness connector.

5th bow latch/striker	sensor assembly	Soft top c	ontrol unit	Continuity
Connector	Terminal	Connector	Connector Terminal	
B319	3	B306	56	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE 5TH BOW LATCH/STRIKER SENSOR ASSEMBLY

Replace 5th bow latch/striker sensor assembly. Refer to RF-237, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

 $\mathbf{3}.$ REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-235, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

76 *6*

<pre></pre>	NSOR
Refer to <u>GI-45, "Intermittent Incident"</u> .	
>> INSPECTION END	A
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< DTC/CIRCUIT DIAGNOSIS >

B177F 5TH BOW STRIKER SENSOR

DTC Logic

INFOID:000000008192290

DTC DETECTION LOGIC

NOTE:

If two or more DTCs are detected, refer to <u>RF-39, "DTC Inspection Priority Chart"</u>, and determine trouble diagnosis order.

DTC No.	Trouble diagr	nosis name	DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors (The second prime is a second prime
B177F	5BOW STRIKER SENSOR	[PWR-SHORT/ OPEN]	5th bow striker sensor circuit is open, short to ground or short to power.	(The sensor circuit is open or shorted.)Soft top control unit
		[OPEN]		 5th bow striker sensor

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.

- 2. Operate soft top to fully open and fully close.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

Is DTC detected?

- YES >> Go to RF-136, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000008192291

1.CHECK 5TH BOW STRIKER SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect 5th bow latch/striker sensor assembly and soft top control unit harness connector.
- 3. Check the continuity between 5th bow latch/striker sensor assembly harness connector and soft top control unit harness connector.

5th bow latch/striker	th bow latch/striker sensor assembly		Soft top control unit	
Connector	Terminal	Connector	Terminal	Continuity
B319	4	B306	76	Existed

4. Also check harness for short to ground and short to power.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.REPLACE 5TH BOW LATCH/STRIKER SENSOR ASSEMBLY

Replace 5th bow latch/striker sensor assembly. Refer to RF-237, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

B177F 5TH BOW STRIKER SENSOR

< DTC/CIRCUIT DIAGNOSIS > Refer to <u>GI-45, "Intermittent Incident"</u> .	
	А
>> INSPECTION END	
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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

1.CHECK FUSE

Check 15 A fuse (No. 33).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the fuse after repairing the applicable circuit.

2. CHECK SOFT TOP CONTROL UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect soft top control unit connectors.

3. Check voltage between soft top control unit harness connector and ground.

	(+)		
Soft top	Soft top control unit		Voltage (Approx.)
Connector	Connector Terminal		()
B305	53		Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK SOFT TOP CONTROL UNIT GROUND CIRCUIT

Check continuity between soft top control unit harness connector and ground.

Soft top	control unit		Continuity
Connector	Terminal	Ground	Continuity
B303	29	Ground	Existed
B305	54		EXISIEU

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

INFOID:000000008192292

< DTC/CIRCUIT DIAGNOSIS >
BACK-UP LAMP CIRCUIT

	.			
Component Functio	n Check			INFOID:00000008192293
1. CHECK FUNCTION				
With CONSULT 1. Turn ignition switch O 2. Check "SHIFT R SIG"		R" mode of "CONVER	TIBLE ROOF" using	g CONSULT.
Monitor item		Condition		Status
SHIFT R SIG	Shift position	Other than R position	position	OFF ON
	I END , "Diagnosis Proced	ure".		
Diagnosis Procedure	9			INFOID:000000008192294
1. CHECK BACK-UP LAN	MP RELAY OR BAC	K-UP LAMP SWITCH	POWER SUPPLY	
 Turn ignition switch O Disconnect back-up la Check the voltage be ness connector and g 	amp relay (A/T mode tween back-up lamp	els) or back-up lamp s o relay (A/T models) o	witch (M/T models) or back-up lamp sw	harness connector. itch (M/T models) har-
	(+)			Voltage (V)
Rook-	up lamp relay			
			(-)	(Approx.)
Connector M69	Terminal		round	
Connector	Terminal			(Approx.) Battery voltage
Connector M69	(+)	Gr	round	Battery voltage
Connector M69 Back-u	(+) up lamp switch	Gr		
Connector M69 Back-u Connector F56	(+) up lamp switch 1	Gr	round	Battery voltage Voltage (V)
Connector M69 Back-u Connector F56 S the inspection result no YES >> GO TO 2. NO-1 >> Check 10 A fu NO-2 >> Check harnes switch (M/T m 2.CHECK BACK-UP LAN 1. Disconnect soft top co	Terminal 3 (+) up lamp switch Imal? use [No. 4 located in ss for open or shor nodels) and fuse. MP RELAY OR BAC ontrol unit connector between soft top co	the fuse block (J/B)]. t between back-up la K-UP LAMP SWITCH	round (-) round amp relay (A/T more GROUND CIRCUI	Battery voltage Voltage (V) (Approx.) Battery voltage dels) or back-up lamp
Connector M69 Back-u Connector F56 S the inspection result no YES >> GO TO 2. NO-1 >> Check 10 A fu NO-2 >> Check harnes switch (M/T m 2.CHECK BACK-UP LAN 1. Disconnect soft top co 2. Check the continuity els) or back-up lamp s	Terminal 3 (+) up lamp switch Terminal 1 rmal? use [No. 4 located in ss for open or shor nodels) and fuse. MP RELAY OR BAC ontrol unit connector between soft top co switch (M/T models)	the fuse block (J/B)]. the fuse block (J/B)]. t between back-up la K-UP LAMP SWITCH ntrol unit harness con harness connector.	round (-) round amp relay (A/T mor GROUND CIRCUI anector and back-up	Battery voltage Voltage (V) (Approx.) Battery voltage dels) or back-up lamp
Connector M69 Back-u Connector F56 S the inspection result no YES >> GO TO 2. NO-1 >> Check 10 A fu NO-2 >> Check harnes switch (M/T m 2.CHECK BACK-UP LAN 1. Disconnect soft top co 2. Check the continuity	Terminal 3 (+) up lamp switch Terminal 1 rmal? use [No. 4 located in ss for open or shor nodels) and fuse. MP RELAY OR BAC ontrol unit connector between soft top co switch (M/T models)	the fuse block (J/B)]. t between back-up la K-UP LAMP SWITCH	round (-) round amp relay (A/T mor GROUND CIRCUI anector and back-up	Battery voltage Voltage (V) (Approx.) Battery voltage dels) or back-up lamp
Connector M69 Back-u Connector F56 S the inspection result no YES >> GO TO 2. NO-1 >> Check 10 A fu NO-2 >> Check harnes switch (M/T m 2.CHECK BACK-UP LAN 1. Disconnect soft top co 2. Check the continuity els) or back-up lamp s	Terminal 3 (+) up lamp switch Terminal 1 rmal? use [No. 4 located in ss for open or shor nodels) and fuse. MP RELAY OR BAC ontrol unit connector between soft top co switch (M/T models)	the fuse block (J/B)]. t between back-up la K-UP LAMP SWITCH ntrol unit harness con harness connector.	round (-) round amp relay (A/T more GROUND CIRCUI amp relay	Battery voltage Voltage (V) (Approx.) Battery voltage dels) or back-up lamp T
Connector M69 Back-u Connector F56 Is the inspection result no YES YES > GO TO 2. NO-1 > Check 10 A ft NO-2 > Check harnes switch (M/T m 2.CHECK BACK-UP LAN 1. Disconnect soft top co 2. Check the continuity els) or back-up lamp s Soft top con Connector B303	Terminal 3 (+) up lamp switch Terminal 1 rmal? use [No. 4 located in ss for open or shor nodels) and fuse. MP RELAY OR BAC ontrol unit connector between soft top co switch (M/T models) ntrol unit Terminal 8	the fuse block (J/B)]. the fuse block (J/B)]. t between back-up la K-UP LAMP SWITCH ntrol unit harness con harness connector. Back-up la Connector M69	round (-) round amp relay (A/T more GROUND CIRCUI amp relay Terminal 5	Battery voltage Voltage (V) (Approx.) Battery voltage dels) or back-up lamp T o lamp relay (A/T mod-
Connector M69 Back-u Connector F56 Is the inspection result no YES >> GO TO 2. NO-1 >> Check 10 A fu NO-2 >> Check harnes switch (M/T m 2.CHECK BACK-UP LAN 1. Disconnect soft top col 2. Check the continuity els) or back-up lamp s Soft top con Connector	Terminal 3 (+) up lamp switch Terminal 1 rmal? use [No. 4 located in ss for open or shor nodels) and fuse. MP RELAY OR BAC ontrol unit connector between soft top co switch (M/T models) ntrol unit Terminal 8	the fuse block (J/B)]. the fuse block (J/B)]. t between back-up la K-UP LAMP SWITCH ntrol unit harness con harness connector. Back-up la Connector	round (-) round amp relay (A/T more GROUND CIRCUI amp relay Terminal 5	Battery voltage Voltage (V) (Approx.) Battery voltage dels) or back-up lamp T o lamp relay (A/T mod-

3. Also check harness for short to ground and short to power.

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

3.CHECK BACK-UP LAMP RELAY OR BACK-UP LAMP SWITCH

Check back-up lamp relay (A/T models) (refer to <u>TM-149</u>, "<u>Diagnosis Flow</u>") or back-up lamp switch (M/T models) (refer to <u>TM-17</u>, "<u>Component Inspection</u>")

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning part.

4.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

ROOF OPEN/CLOSE SWITCH

mponent Functio	on Check			INFOID:0000000819229
	/CLOSE SWITCH FUNCT	ION		
Turn ignition switch C	OPEN)" and "ROOF SW ((CLOSE)" in "E	DATA MONITOR"	mode of "CONVERTIBLE
Monitor item		Condition		Status
		Open		ON
ROOF SW (OPEN)	Roof open/close switch	Closed		OFF
		Open		OFF
ROOF SW (CLOSE)	Roof open/close switch	Closed		ON
the inspection result no	ormal?			
	ose switch is normal. 141, "Diagnosis Procedure	<u>e</u> .		
anagia Dragadur	е			INFOID:0000000819229
agnosis Procedur				
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open	OOF OPEN/CLOSE SWIT(OFF. n/close switch connector.	CH POWER SI	JPPLY	
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be	DOF OPEN/CLOSE SWIT(DFF. n/close switch connector. DN. etween roof open/close sw		onnector and grou	
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be	DOF OPEN/CLOSE SWITC DFF. h/close switch connector. DN. etween roof open/close sw (+) pen/close switch			nd. Voltage (V) (Approx.)
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be	DOF OPEN/CLOSE SWIT(DFF. n/close switch connector. DN. etween roof open/close sw (+) pen/close switch Terminal		onnector and grou	Voltage (V)
Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be Roof op	DOF OPEN/CLOSE SWITC DFF. h/close switch connector. DN. etween roof open/close sw (+) pen/close switch	itch harness co	onnector and grou	Voltage (V)
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be Roof op Connector M15 he inspection result no ES >> GO TO 3. O >> GO TO 2.	DOF OPEN/CLOSE SWITC DFF. h/close switch connector. DN. etween roof open/close sw (+) pen/close switch Terminal 3 4 prmal?	itch harness co	onnector and grou (–) Ground	Voltage (V) (Approx.)
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be Roof op Connector M15 he inspection result nc ES >> GO TO 3. O >> GO TO 2. CHECK ROOF OPEN Turn ignition switch C Disconnect soft top c	DOF OPEN/CLOSE SWITC DFF. h/close switch connector. DN. etween roof open/close sw (+) pen/close switch (+) pen/close switch a a brimal CLOSE SWITCH POWER	R SUPPLY CIR	onnector and grou (-) Ground	Voltage (V) (Approx.) Battery voltage
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be Roof op Connector M15 he inspection result no ES >> GO TO 3. O >> GO TO 2. CHECK ROOF OPEN, Turn ignition switch C Disconnect soft top c Check the continuity	DOF OPEN/CLOSE SWITC DFF. h/close switch connector. DN. etween roof open/close sw (+) ben/close switch (+) Den/close switch 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0	R SUPPLY CIR	onnector and grou (–) Ground	Voltage (V) (Approx.) Battery voltage
CHECK VOLTAGE RC Turn ignition switch C Disconnect roof open Turn ignition switch C Check the voltage be Roof op Connector M15 the inspection result no ES >> GO TO 3. O >> GO TO 2. CHECK ROOF OPEN Turn ignition switch C Disconnect soft top c Check the continuity connector.	DOF OPEN/CLOSE SWITC DFF. h/close switch connector. DN. etween roof open/close sw (+) ben/close switch (+) ben/close switch 3 4 0 CLOSE SWITCH POWER DFF. control unit harness connect between soft top control u	R SUPPLY CIR	onnector and grou (–) Ground	Voltage (V) (Approx.) Battery voltage

YES >> Replace soft top control unit. Refer to <u>RF-235. "Removal and Installation"</u>.

NO >> Repair open circuit, short to ground or short to power in harness or connectors.

3. CHECK ROOF OPEN/CLOSE SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.

ROOF OPEN/CLOSE SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- 2. Disconnect soft top control unit connector.
- 3. Check the continuity between soft top control unit harness connector and roof open/close switch harness connector.

Soft top of	Soft top control unit		Roof open/close switch Continui	
Connector	Terminal	Connector	Terminal	Continuity
B303	35	M15	1	Existed

4. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair open circuit and short to power in harness or connectors.

4.CHECK ROOF OPEN/CLOSE SWITCH

Refer to RF-67, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace roof open/close switch. Refer to <u>RF-234</u>, "<u>Removal and Installation</u>".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

< DTC/CIRCUIT DIAGN				
ROOF WARNING	S LAMP			
Component Function	on Check			INFOID:00000008192297
1.CHECK ROOF WAR	NING LAMP FUNCTI	ON		
3. Make sure that roof <u>Is the inspection result n</u> YES >> INSPECTIO		ates.		
Diagnosis Procedu	-	<u>lure</u> .		INFOID:00000008192298
		. .		INI OLD.00000000132230
 CHECK ROOF WARI Turn ignition switch Disconnect soft top 	OFF.	· ·		
3. Turn ignition switch	control unit harness c ON. een soft top control u		or and ground.	
Soft	top control unit			
	(+)		()	Voltage (V) (Approx.)
Connector	Terminal			Detter
B303 Is the inspection result n	11	6	round	Battery voltage
YES >> GO TO 3. NO >> GO TO 2. 2.CHECK ROOF WARI	NING LAMP CIRCUI	Γ-ΙΙ		
	tion meter harness c		ctor and combinat	tion meter harness connec-
Soft top co	ontrol unit	Combin	ation meter	Continuity
Connector	Terminal	Connector	Terminal	
B303	11	B87	2	Existed
Is the inspection result n YES >> Replace cor	nbination meter. Refe circuit, short to grou P CONTROL UNIT unit. Refer to <u>RF-235</u>	er to <u>MWI-92, "Remo</u> nd or short to power	in harness or cor	
YES >> INSPECTIO NO >> GO TO 4.	N END			
4. CHECK INTERMITTE	INCIDENT			
Refer to GI-45, "Intermit	ent Incident".			

>> INSPECTION END

TRUNK ROOM LAMP SWITCH

Component Function Check

1.CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT.
- 2. Select "DOOR SW-BK" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
DOOR SW-BK	Trunk lid	Open	ON
		Closed	OFF

Is the inspection result normal?

- YES >> Trunk room lamp switch is OK.
- NO >> Refer to <u>RF-144. "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000008192300

INFOID:000000008192299

1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect trunk lid lock assembly connector.
- 3. Check signal between trunk lid lock assembly harness connector and ground using oscilloscope.

(+) Trunk lid lock assembly Connector Terminal		(-)	Signal (Reference value)	
B76	1	Ground	(V) 15 10 5 0 10 ms JPMIA0011GB	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK TRUNK ROOM LAMP SWITCH CIRCUIT

1. Disconnect BCM connector and soft top control unit connector.

2. Check continuity between BCM harness connector and trunk lid lock assembly harness connector.

BCM		Trunk lid lock assembly		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M121	66	B76	1	Existed

3. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
 Connector	Terminal	Ground	Continuity
 M121	66		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-95, "Removal and Installation"</u>.

NO >> Repair harness or connector.

TRUNK ROOM LAMP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK TRUNK ROOM LAMP SWITCH GROUND

Check continuity between trunk lid lock assembly harness connector and ground.

Trunk lid lo	ck assembly		Continuity
Connector	Terminal	Ground	Continuity
B76	3		Existed
Is the inspection result norm	al?		
YES >> GO TO 4.			
NO >> Repair or replac			
4. CHECK TRUNK ROOM L	AMP SWITCH		
Refer to <u>RF-145, "Compone</u>	<u>nt Inspection"</u> .		
Is the inspection result norm	al?		
YES >> GO TO 5.			
NO >> Replace trunk lic	•		
5. CHECK INTERMITTENT	INCIDENT		
Refer to GI-45, "Intermittent	Incident".		
>> INSPECTION E	ND		
Component Inspectior			INFOID:00000008192301
1. CHECK TRUNK ROOM L	AMP SWITCH		
 Turn ignition switch OFF Disconnect trunk lid lock Check continuity between 		terminals.	

Trunk lid lock assembly		Condition		Continuity
Те	rminal	Condition		Continuity
1	2		Unlocked	Existed
1 3	Trunk lid lock assembly	Locked	Not existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace trunk lid lock assembly.

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Revision: 2012 August

SOFT TOP DOES NOT OPERATE USING DOOR REQUEST SWITCH

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS SOFT TOP DOES NOT OPERATE USING DOOR REQUEST SWITCH

Description

INFOID:000000008192302

INFOID:000000008192303

Soft top does not operate using door request switch.

Diagnosis Procedure

1.CHECK DOOR LOCK FUNCTION

Check door lock function (with door request switch LH/RH).

Does door lock/unlock with door request switch (LH/RH)?

YES >> GO TO 2.

NO (All request switch) >>Refer to <u>DLK-279, "ALL DOOR : Diagnosis Procedure"</u>.

NO (Door request switch LH) >> Refer to DLK-279, "DRIVER SIDE : Diagnosis Procedure".

NO (Door request switch RH) >> Refer to DLK-280, "PASSENGER SIDE : Diagnosis Procedure".

2.confirm the operation

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u>.

NO >> Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u>.

SOFT TOP DOES NOT OPERATE USING ROOF OPEN/CLOSE SWITCH < SYMPTOM DIAGNOSIS >

SOFT TOP DOES NOT OPERATE USING ROOF OPEN/CLOSE SWITCH

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Description		
Soft top does not operate using roof open/close switch.	В	
Diagnosis Procedure		
1.CHECK TRUNK ROOM LAMP SIGNAL	С	
Check trunk room ramp switch circuit. Refer to DLK-247, "Diagnosis Procedure".		
Is the inspection result normal?	D	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.		
2. CHECK BACK-UP LAMP SIGNAL	_	
Check back-up lamp circuit. Refer to <u>RF-139, "Component Function Check"</u> .	E	
Is the inspection result normal?		
YES >> GO TO 3.	F	
NO >> Repair or replace the malfunctioning parts.		
3.CHECK ROOF OPEN/CLOSE SWITCH	G	
Check roof open/close switch circuit. Refer to RF-141, "Component Function Check".	0	
Is the inspection result normal?		
YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts.	Н	
4. REPLACE SOFT TOP CONTROL UNIT		
Replace soft top control unit. Refer to <u>RF-235, "Removal and Installation"</u> . Is the inspection result normal?		
YES >> INSPECTION END		
NO >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u> .	J	

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ROOF WARNING LAMP DOES NOT ILLUMINATE WHEN SOFT TOP OPERATES

< SYMPTOM DIAGNOSIS >

ROOF WARNING LAMP DOES NOT ILLUMINATE WHEN SOFT TOP OP-ERATES

Description

INFOID:000000008192306

INFOID:000000008192307

Roof warning lamp does not illuminate when soft top operates.

Diagnosis Procedure

1.CHECK ROOF WARNING LAMP SIGNAL

Check roof warning lamp signal circuit. Refer to RF-100, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to <u>RF-143, "Diagnosis Procedure"</u>.

Is the inspection result normal?

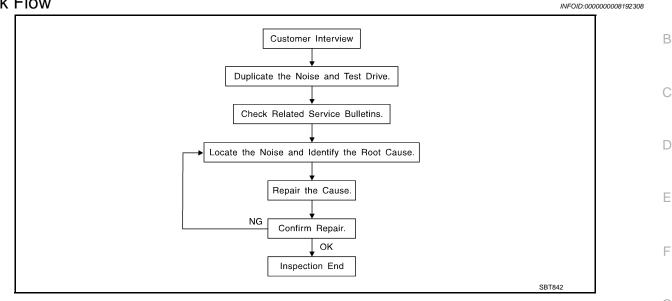
YES >> INSPECTION END

NO >> Check intermittent incident. Refer to <u>GI-45. "Intermittent Incident"</u>.

< SYMPTOM DIAGNOSIS >

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any of Н the customer's comments; refer to RF-153, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by a test drive with the customer.
- · After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak (Like tennis shoes on a clean floor) RF 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 depen-L dent 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 Μ 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.
- Ρ Often the degree of acceptable noise level will vary depending upon the person. A noise that a technician may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

DUPLICATE THE NOISE AND TEST DRIVE

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

RF-149

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< SYMPTOM DIAGNOSIS >

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Engine Ear or mechanics stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- Removing the components in the area that is are suspected to be the cause of the noise.
 Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- Tapping or pushing/pulling the component that is are suspected to be the cause of the noise. Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- Feeling for a vibration by hand by touching the component(s) that is are suspected to be the cause of the noise.
- Placing a piece of paper between components that is are suspected to be the cause of the noise.
- Looking for loose components and contact marks. Refer to <u>RF-151, "Inspection Procedure"</u>.

REPAIR THE CAUSE

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

CAUTION:

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

URETHANE PADS

Insulates connectors, harness, etc.

- INSULATOR (Foam blocks) Insulates components from contact. Can be used to fill space behind a panel.
- INSULATOR (Light foam block)
- FELT CLOTHTAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications.

The following materials, not available through NISSAN Parts Department, can also be used to repair squeaks and rattles.

• UHMW(TEFLON) TAPE

Insulates where slight movement is present. Ideal for instrument panel applications.

- SILICONE GREASE Used in place of UHMW tape that is be visible or does not fit. Note: Will only last a few months.
- SILICONE SPRAY
- Used when grease cannot be applied.
- DUCT TAPE

Used to eliminate movement.

CONFIRM THE REPAIR

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

RF-150

< SYMPTOM DIAGNOSIS >

Inspection Procedure
•
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
 A/C defroster duct and duct joint
These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.
CAUTION:
Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck
of repair becomes impossible.
CENTER CONSOLE
Components to pay attention to include:
1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
Wiring harnesses behind audio and A/C control unit
The instrument panel repair and isolation procedures also apply to the center console.
DOORS
Pay attention to the following:
1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops
Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks to repair the noise.
TRUNK
Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer. In addition look for the following:
1. Trunk lid dumpers out of adjustment
2. Trunk lid striker out of adjustment
3. Trunk lid torsion bars knocking together
4. A loose license plate or bracket
Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.
SUNROOF/HEADLINING
Noises in the sunroof/headlining area can often be traced to one of the following:
1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sunvisor shaft shaking in the holder
3. Front or rear windshield touching headlining and squeaking
Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

RF-151

< SYMPTOM DIAGNOSIS >

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet



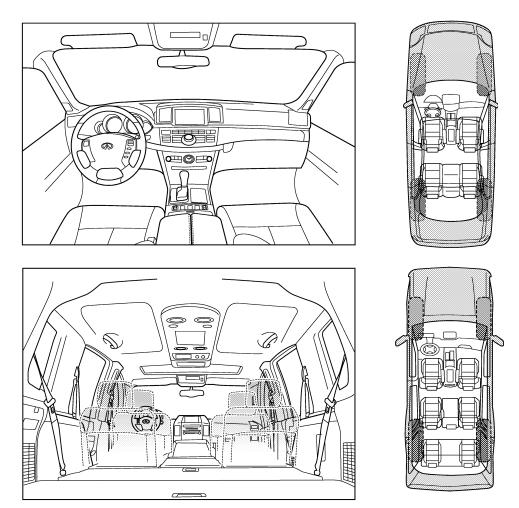
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Infiniti Customer:

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

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

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



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

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< SYMPTOM DIAGNOSIS >

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

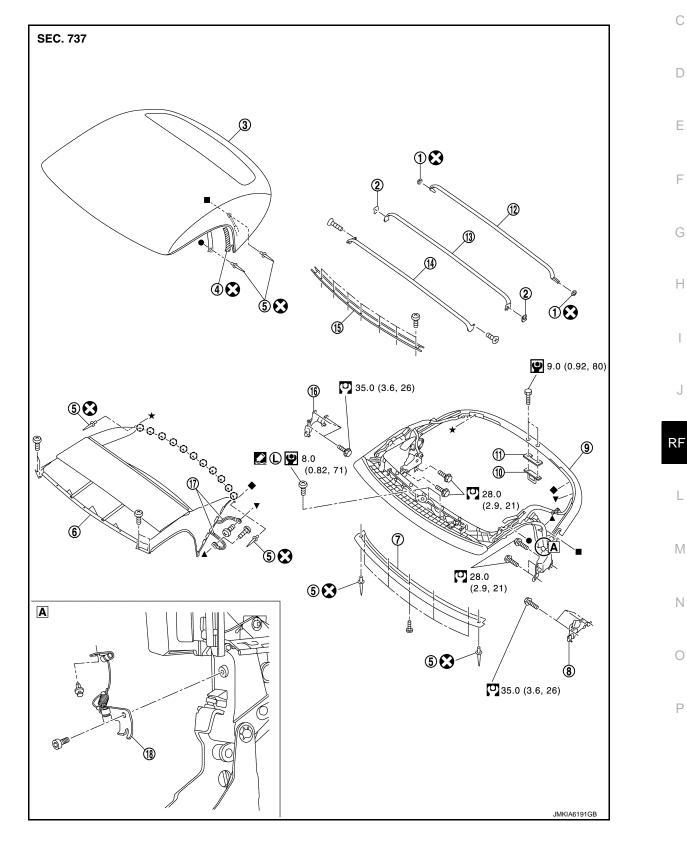
II. WHEN DOES IT OCCUR? (please check the boxes that apply)		
 anytime 1st time in the morning only when it is cold outside only when it is hot outside 	 after sitting out in the rain when it is raining or wet dry or dusty conditions other: 	
III. WHEN DRIVING:	IV. WHAT TYPE OF NOISE	
 through driveways over rough roads over speed bumps only about mph on acceleration coming to a stop on turns: left, right or either (circle) with passengers or cargo other: after driving miles or minu 	 squeak (like tennis shoes on a clean floor) creak (like walking on an old wooden floor) rattle (like shaking a baby rattle) knock (like a knock at the door) tick (like a clock second hand) thump (heavy, muffled knock noise) buzz (like a bumble bee) 	

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

< REMOVAL AND INSTALLATION > **REMOVAL AND INSTALLATION** SOFT TOP SOFT TOP ASSEMBLY SOFT TOP ASSEMBLY : Exploded View



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< REMOVAL AND INSTALLATION >

1. Push on nut

10. Rear lock striker

Double-sided tape

16. Soft top mounting bracket RH

- 2. Retaining plate
- 5. Rivet
- 7. Soft top cover outer front retainer 8.
 - 8. Soft top mounting bracket LH
 11. Rear lock striker bracket
 - 14. 2nd bow
 - 17. Bungee cord

- 3. Soft top cover outer
- 6. Soft top cover inner
- 9. Soft top linkage assembly
- 12. 4th bow
- 15. Soft top cover inner retainer
- 18. Flipper door cable

([^]) : Clip

13. 3rd bow

4.

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

SOFT TOP ASSEMBLY : Removal and Installation

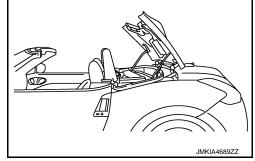
REMOVAL

CAUTION:

Protect the vehicle body using fender cover.

 Operate soft top assembly as shown in the figure.
 CAUTION: Storage lid assembly may close due to low oil pressure.

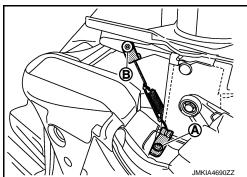
Always support storage lid assembly to the fully open position using a supporting block.



- 2. Remove seat belt shoulder anchor bolt (LH and RH). Refer to <u>SB-7, "SEAT BELT RETRACTOR :</u> <u>Exploded View"</u>.
- 3. Remove kicking plate inner (LH and RH), body side welt (LH and RH) (rear side finisher portion), and rear side finisher (LH and RH). Refer to <u>INT-18, "Exploded View"</u>.
- 4. Remove seat belt from seat belt guide (LH and RH). Refer to <u>SB-7, "SEAT BELT RETRACTOR :</u> <u>Exploded View"</u>.
- 5. Remove mounting screw (A) and clip (B). Remove flipper door cable.

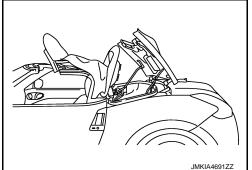
CAUTION:

Be careful not to drop mounting screw and clip into storage lid room.



6. Operate soft top assembly as shown in the figure.

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly to the fully open position using a supporting block.



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< REMOVAL AND INSTALLATION >

- 7. Disconnect battery cable from negative terminal.
- Remove bumper rubber, and then pull up storage room finisher. Refer to <u>RF-222</u>, "<u>STORAGE ROOM</u> A <u>FINISHER : Exploded View</u>".
- 9. Remove storage room spacer. Refer to <u>RF-222, "STORAGE ROOM FINISHER : Exploded View"</u>.
- Remove harness bracket from storage device assembly. Refer to <u>RF-214, "STORAGE LID DEVICE</u> ^B <u>ASSEMBLY : Exploded View"</u>.
- 11. Remove oil pressure hose fixing clips from storage lid assembly.
 NOTE: Write a short note to describe the fixing clip positions.
 CAUTION: Never sharply bend, twist, or strongly pull oil pressure hose.
- Disconnect 5th bow latch cylinder and harness connector from storage lid bracket assembly. Refer to <u>RF-</u> 217, "STORAGE LID BRACKET ASSEMBLY : Removal and Installation".
- 13. Disconnect storage lid drive cylinder from storage lid device assembly (LH and RH). Refer to <u>RF-215</u>, <u>"STORAGE LID DEVICE ASSEMBLY : Removal and Installation"</u>. CAUTION:

Never sharply bend, twist or strongly pull oil pressure hose.

14. Remove oil pressure hose fixing clips and bolts located in storage room. **NOTE:**

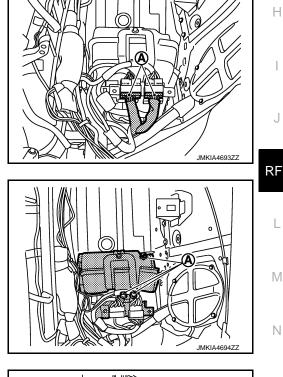
Write a short note to describe the fixing clip positions.

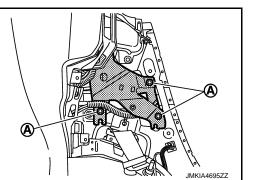
Never sharply bend, twist, or strongly pull oil pressure hose.

15. Disconnect vehicle harness connectors (A).

16. Remove hydraulic pump mounting nuts (A).

 Remove soft top assembly mounting bolts (A) (LH and RH).
 CAUTION: Never remove soft top mounting bracket.





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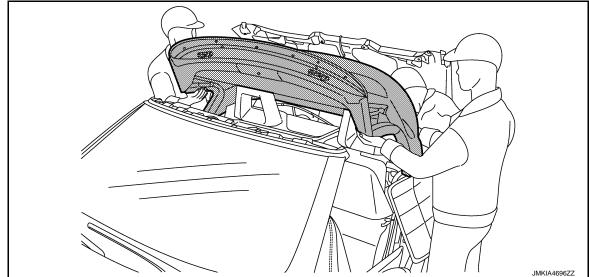
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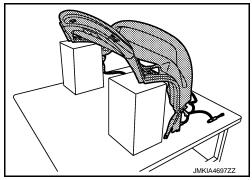
< REMOVAL AND INSTALLATION >

18. Remove soft top assembly.



CAUTION:

- This is a heavy component. 3 or more workers are required.
- Be careful that soft top assembly does not interfere with the vehicle body.
- Never sharply bend, twist, or strongly pull oil pressure hose.
- Place soft top assembly after removal as shown in the figure.



INSTALLATION

Note the following items, and install in the reverse order of removal.

• Manually operate and check that soft top assembly operates without interfering with other portions of the vehicle body.

Before manually operating each cylinder of the hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and therefore it takes a period of time to lower oil pressure.)

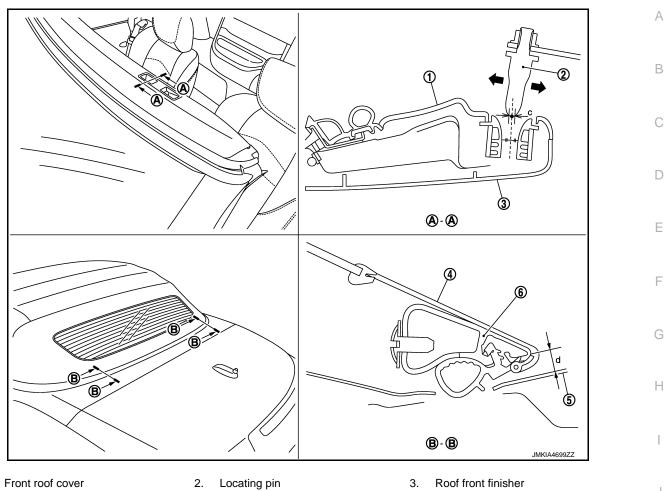
- Perform fitting adjustment after installing soft top assembly. Refer to <u>RF-158, "SOFT TOP ASSEM-BLY : Adjustment"</u>.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-21</u>, <u>"Inspection and Adjustment"</u>.
- Perform leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>.

SOFT TOP ASSEMBLY : Adjustment

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FITTING ADJUSTMENT

< REMOVAL AND INSTALLATION >



4. Soft top assembly

1.

5.

Storage lid assembly

- (-2.0) (+2.0) mm [(-0.079) (+0.079) in] c.
- 7.0 13.0 mm (0.276 0.512 in) d.

Visually and tactually check that the clearance and surface height difference of the soft top assembly and each part satisfy the standard. If they are outside the specified value, adjust them with the following procedure. CAUTION:

6.

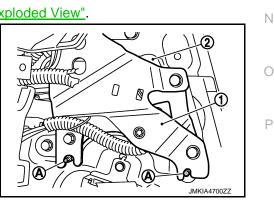
5th bow

Before manually operating each cylinder of hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and therefore it takes a period of time to lower oil pressure.)

FITTING ADJUSTMENT PROCEDURE

- 1. Check soft top installation status.
 - Remove the rear side finisher (LH and RH). Refer to INT-18, "Exploded View",
 - Check that soft top assembly (1) overrides front and rear pins (A) of soft top mounting bracket (2) without clearance.

Check and adjust the locating pin position. 2. Check the position.

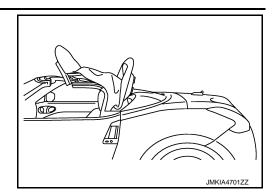


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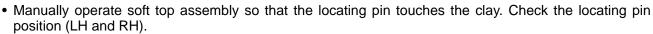
< REMOVAL AND INSTALLATION >

• Operate soft top as shown in the figure.



A

• Set clay (A) on the position that striker locating pin enters (LH and RH).

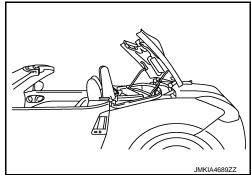


Position adjustment

• Fully open storage lid assembly. Completely store soft top assembly.

CAUTION:

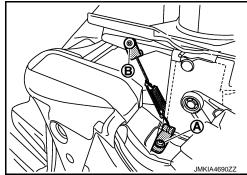
Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position.



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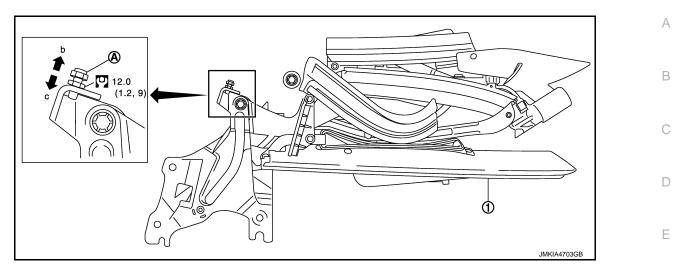
 Remove mounting screw (A) and clip (B). Remove flipper door cable (LH and RH).
 CAUTION:

Be careful not to drop mounting screw and clip into storage lid room.

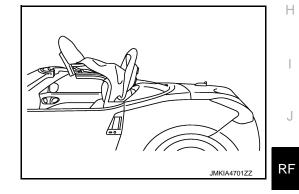


• Adjust the position using adjusting bolt (A) so that the locating pin comes to (-2.0) - (+2.0) mm [(-0.079) - (+0.079) in] of the striker center position.

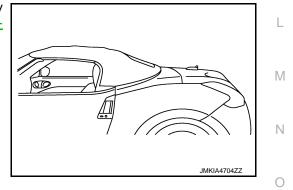
< REMOVAL AND INSTALLATION >



- 1. Soft top assembly
- b. Adjusting direction when the locating pin position is excessively frontward
- c. Adjusting direction when the locating pin position is excessively rearward
- Install the removed parts.
- 3. Check and adjust the 5th bow position. Check the position.
 - Operate soft top as shown in the figure.



 Manually open storage lid assembly and soft top assembly fully. Lock 1st bow latch. Refer to <u>RF-23, "SOFT TOP SYS-TEM : Correspondence in Emergency"</u>.



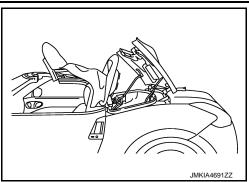
• Check the clearance between 5th bow and storage lid assembly. Position adjustment

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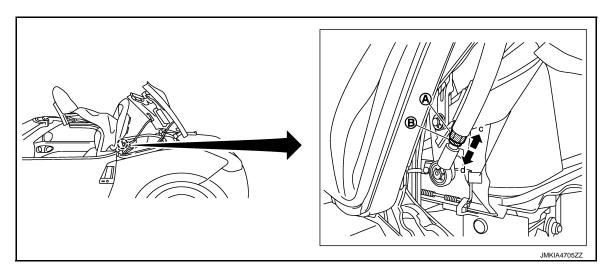
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< REMOVAL AND INSTALLATION >

 Operate soft top as shown in the figure.
 CAUTION: Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



• Adjust the clearance between 5th bow and storage lid assembly to the standard using adjusting bolt.



A. Adjusting bolt

- B. Lock nut
- c. Clearance is narrowed.d. Clearance is widened.
-

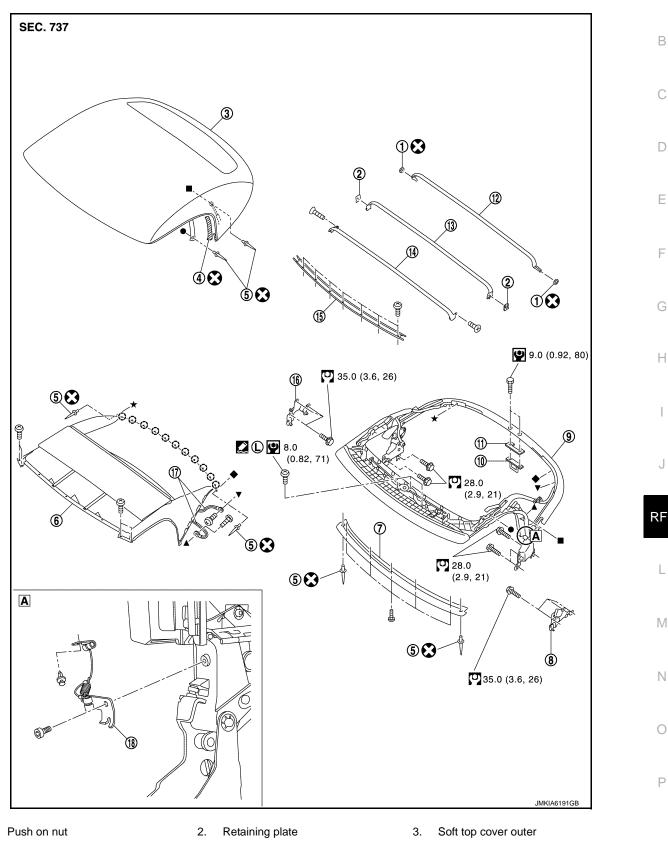
4. Install the removed parts. SOFT TOP COVER OUTER

< REMOVAL AND INSTALLATION >

SOFT TOP COVER OUTER : Exploded View

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4. Double-sided tape

1.

- 7. Soft top cover outer front retainer
- 10. Rear lock striker
- 5. Rivet
- 8. Soft top mounting bracket LH
- 11. Rear lock striker bracket
- 6. Soft top cover inner
- 9. Soft top linkage assembly
- 12. 4th bow

2. Remove front rail weather-strip (LH and RH). Refer to <u>RF-188, "ROOF SEALING : Exploded View"</u>.

Remove front rail weather-strip retainer (LH and RH). Refer to RF-188, "ROOF SEALING : Exploded

< REMOVAL AND INSTALLATION >

- 13. 3rd bow
- 16. Soft top mounting bracket RH 17. Bungee cord
- () : Clip

Refer to GI-4, "Components" for symbols in the figure.

SOFT TOP COVER OUTER : Removal and Installation

14. 2nd bow

REMOVAL

3.

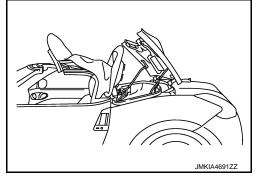
View".

1. Operate soft top as shown in the figure. **CAUTION:**

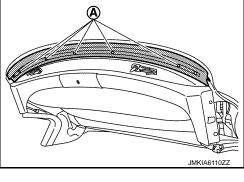
Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

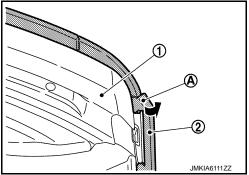
- 5. Lift up soft top cover outer front retainer (1), and then pull up soft top cover outer (2) portion (A) to outside (both LH and RH).

4. Remove soft top cover outer front retainer mounting screws (A).



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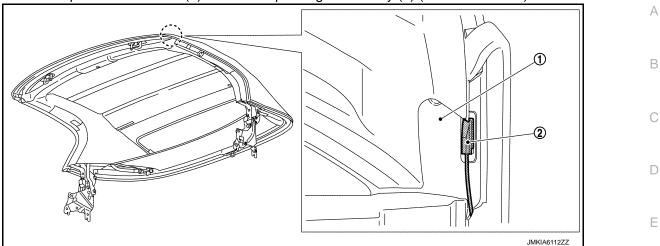


15. Soft top cover inner retainer

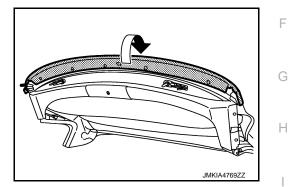
18. Flipper door cable

< REMOVAL AND INSTALLATION >

6. Pull out soft top cover outer wire (2) from soft top linkage assembly (1) (both LH and RH).

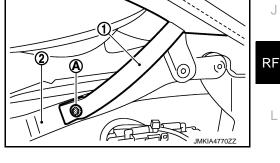


7. Pull up front end of soft top cover outer.



8. Remove mounting rivet (A) of soft top outer bungee cord (1) from soft top linkage assembly (2) (LH and RH). **CAUTION:**

Cover the surrounding area because iron powder is spread when using a drill.



NOTE: Removal and Installation of Rivet

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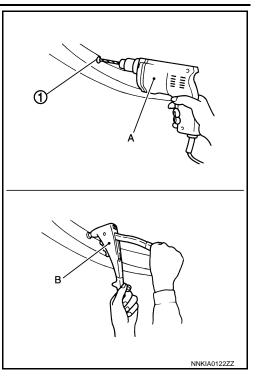
< REMOVAL AND INSTALLATION >

- Grind the head of rivet (1) with a drill (A) [bit of ϕ 4.0 mm (ϕ 0.157 in)].
- Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

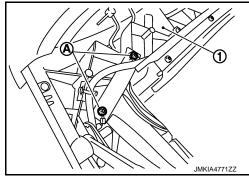
 Crimping thickness
 : 9.5 - 12.7 mm (0.374 - 0.500 in)

 Prepared hole diameter
 : ϕ 4.1 - 4.2 mm (0.161 - 0.165 in)

 Used rivet head diameter
 : ϕ 7.5 mm (0.295 in)

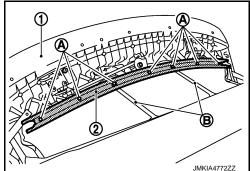


 Remove soft top cover inner mounting screws (A) from 1st bow (1) (LH and RH).

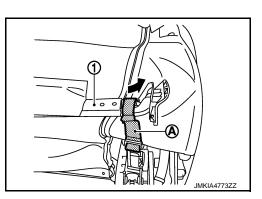


Remove mounting screws (A) of soft top cover inner retainer (2) from 1st bow (1).
 NOTE:

Soft top cover inner straps (B) and soft top cover inner are tightened together to 1st bow.

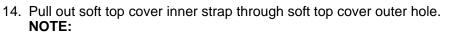


- 11. Remove 2nd bow mounting bolts.
- 12. Remove soft top linkage assembly bungee cord (A) from 2nd bow (1) (LH and RH).

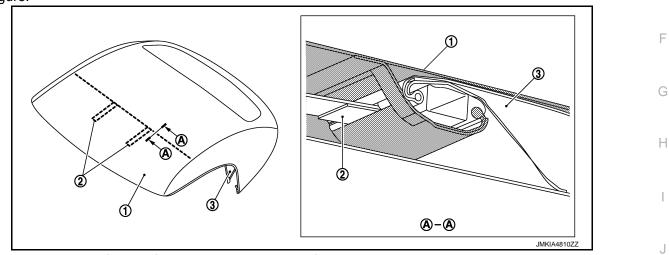


< REMOVAL AND INSTALLATION >

13. Pull out wire (2) from soft top cover outer (1) (LH and RH).



Locations of soft top cover outer (1), strap (2), and soft top cover inner (3) for 2nd bow are as shown in the figure.



15. Pull out 2nd bow from soft top cover outer and soft top cover inner.

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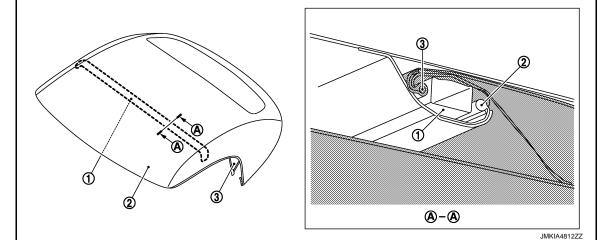
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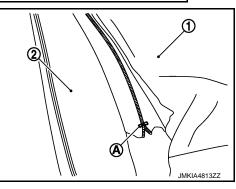
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< REMOVAL AND INSTALLATION >

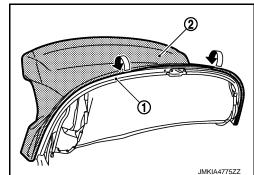
Locations of soft top cover outer (2) and soft top cover inner (3) for 2nd bow (1) are as shown in the figure.



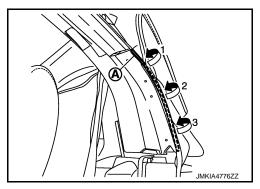
16. Remove stopper. Manually disconnect zipper connection (A) of soft top cover outer (1) and soft top cover inner (2).



- 17. Remove rear rail weather-strip. Refer to RF-188, "ROOF SEALING : Exploded View".
- 18. Remove rear rail weather-strip retainer (LH and RH). Refer to <u>RF-188, "ROOF SEALING : Exploded</u> <u>View"</u>.
- 19. Remove rear end of soft top cover outer (2) from 5th bow (1).



20. Pull up soft top cover outer lateral side to outside from upper to lower. Remove double-sided tape (A) (LH and RH).



< REMOVAL AND INSTALLATION >

 Remove E-clips (A). Disengage connection of soft top cover outer wire (2) from soft top linkage assembly pin (1) (LH and RH).

⟨□ : Vehicle front

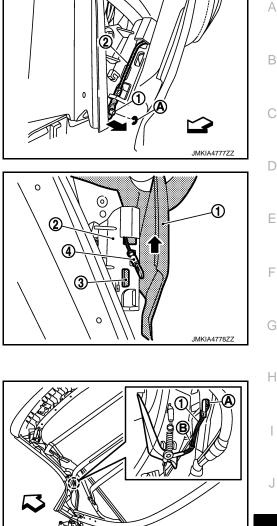
 Slide soft top cover outer (1) in the direction shown by the arrow. Simultaneously pull out retainer (3) and wire (4) from soft top linkage assembly (2) (LH and RH).
 CAUTION:

Write a short note to describe the wire locations and the retainer mounting positions.

- 23. Manually operate soft top linkage assembly to the open position.
- 24. Pull up soft top cover outer lateral side to outside. Remove rivet
 (A) and screw (B) that secure soft top cover outer bungee cord
 (1) (LH and RH).
 CAUTION:

Cover the surrounding area because iron powder is spread when using a drill.





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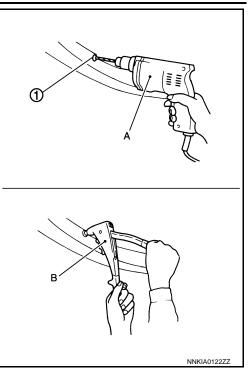
< REMOVAL AND INSTALLATION >

- Grind the head of rivet (1) with a drill (A) [bit of ϕ 4.0 mm (ϕ 0.157 in)].
- Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

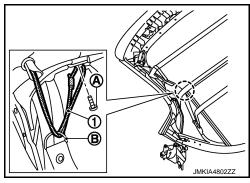
 Crimping thickness
 : 4.8 - 8.0 mm (0.189 - 0.315 in)

 Prepared hole diameter
 : φ 4.1 - 4.2 mm (0.161 - 0.165 in)

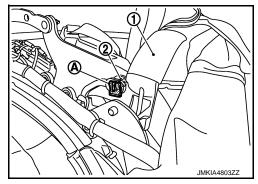
 Used rivet head diameter
 : φ 12.0 mm (0.472 in)



- 25. Remove rear defogger connector. Pull out rear defogger harness from soft top inner (LH and RH).
- 26. Pull up soft top cover outer rear end. CAUTION: Be careful when performing operation because rear
 - Be careful when performing operation because rear glass is moved.
- 27. Remove mounting screw (A). Pull out soft top cover outer bungee cord (1) from D-ring (B) (LH and RH).



28. Remove retaining plate (A) of 3rd bow (1), and then remove pin (2) (LH and RH).



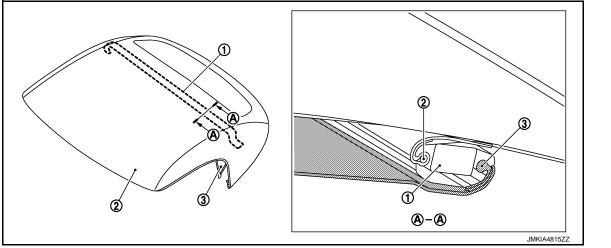
< REMOVAL AND INSTALLATION >

29. Press inside 3rd bow soft top linkage assembly mounting portion. Disengage and remove the connections (A) one side at a time.

- 30. Remove push on nut (A) from 4th bow (1) (LH and RH).
- 31. Remove 4th bow from soft top linkage assembly.

- 32. Pull out and remove 4th bow and soft top cover outer from soft top cover inner as a set.
- 33. Pull out and remove soft top cover outer from 4th bow. **NOTE:**

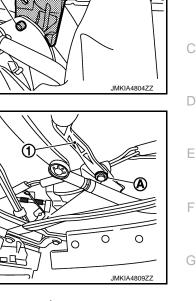
Locations of soft top cover outer (2) and soft top cover inner (3) for 4th bow (1) are as shown in the figure.



INSTALLATION

Note the following items, and install in the reverse order of removal.

- CAUTION:
- Replace double-sided tape that fixes soft top cover outer to soft top linkage assembly with new tape.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-21</u>, <u>"Inspection and Adjustment"</u>.
- Perform leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>. NOTE:



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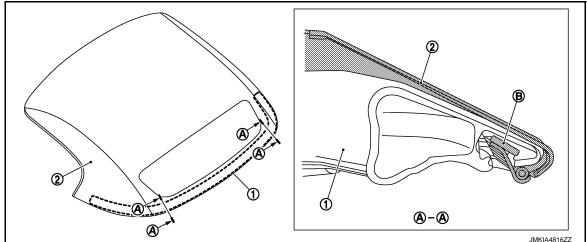
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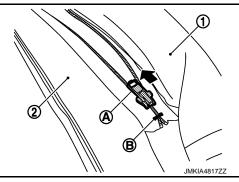
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< REMOVAL AND INSTALLATION >

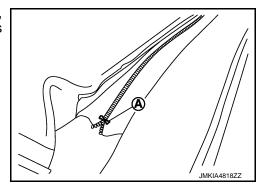
• When installing soft top cover outer (2) to 5th bow (1), install soft top cover outer portion (B) to 5th bow rear end groove using a removal tool as shown in the figure.



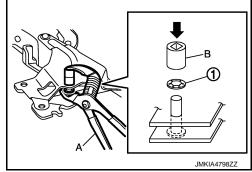
- · Connecting procedure for soft top cover outer and soft top cover inner
- Connect using a slider (A).
- Align zipper ends of soft top cover outer (1) and soft top cover inner (2). Slightly slide slider. Fix connecting portion of zipper using a stopper (B).



- Slide slider until slider is removed from zipper. Using a stopper (A), fix connection portion of zipper on the side where slider is removed.



- When installing push on nut (1), crimp it using water pump pliers (A) and socket (B).



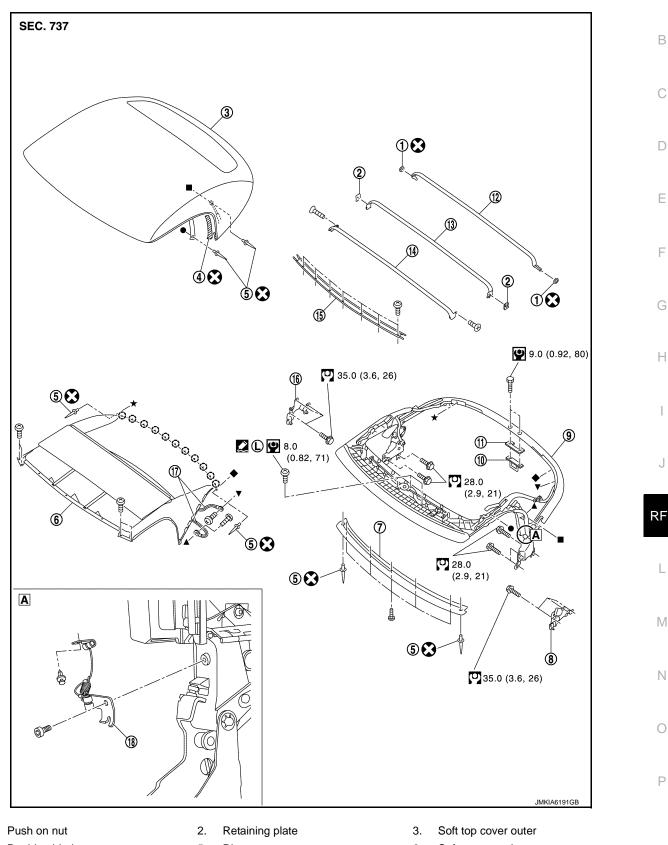
SOFT TOP COVER INNER

< REMOVAL AND INSTALLATION >

SOFT TOP COVER INNER : Exploded View

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4. Double-sided tape

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- 7. Soft top cover outer front retainer
- 10. Rear lock striker
- 5. Rivet
- 8. Soft top mounting bracket LH
- 11. Rear lock striker bracket
- 6.
- Soft top cover inner 9.
- Soft top linkage assembly
- 12. 4th bow

2. Remove front rail weather-strip. (LH and RH) Refer to <u>RF-188, "ROOF SEALING : Exploded View"</u>.

Remove front rail weather-strip retainer. (LH and RH) Refer to RF-188, "ROOF SEALING : Exploded

< REMOVAL AND INSTALLATION >

- 13. 3rd bow
- 16. Soft top mounting bracket RH 17. Bungee cord
- () : Clip

Refer to GI-4, "Components" for symbols in the figure.

SOFT TOP COVER INNER : Removal and Installation

14. 2nd bow

REMOVAL

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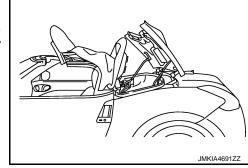
View".

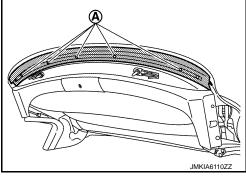
1. Operate soft top as shown in the figure. CAUTION:

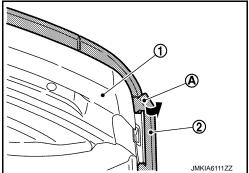
Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

- 5. Lift up soft top cover outer front retainer (1), and then pull up soft top cover outer (2) portion (A) to outside (both LH and RH).

4. Remove soft top cover outer front retainer mounting screws (A).







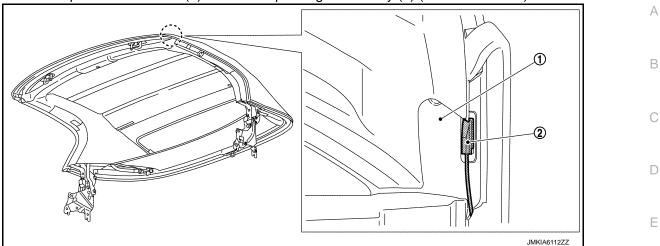
15. Soft top cover inner retainer

18. Flipper door cable

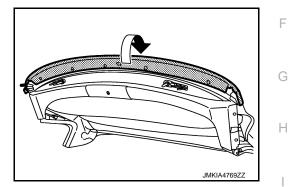
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< REMOVAL AND INSTALLATION >

6. Pull out soft top cover outer wire (2) from soft top linkage assembly (1) (both LH and RH).

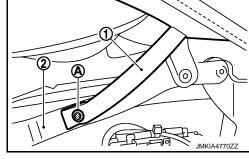


7. Pull up front end of soft top cover outer.



Remove mounting rivet (A) of soft top outer bungee cord (1) from soft top linkage assembly (2) (LH and RH).
 CAUTION:

Cover the surrounding area because iron powder is spread when using a drill.



NOTE: Removal and Installation of Rivet

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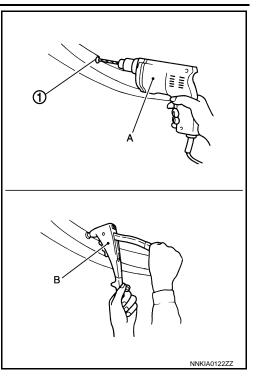
< REMOVAL AND INSTALLATION >

- Grind the head of rivet (1) with a drill (A) [bit of ϕ 4.0 mm (ϕ 0.157 in)].
- Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

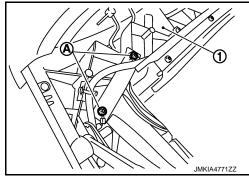
 Crimping thickness
 : 9.5 - 12.7 mm (0.374 - 0.500 in)

 Prepared hole diameter
 : ϕ 4.1 - 4.2 mm (0.161 - 0.165 in)

 Used rivet head diameter
 : ϕ 7.5 mm (0.295 in)

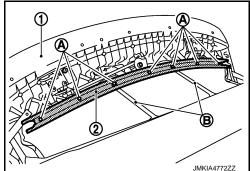


 Remove soft top cover inner mounting screws (A) from 1st bow (1) (LH and RH).

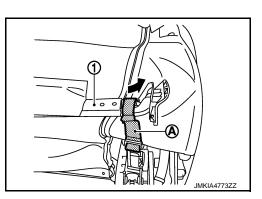


Remove mounting screws (A) of soft top cover inner retainer (2) from 1st bow (1).
 NOTE:

Soft top cover inner straps (B) and soft top cover inner are tightened together to 1st bow.



- 11. Remove 2nd bow mounting bolts.
- 12. Remove soft top linkage assembly bungee cord (A) from 2nd bow (1) (LH and RH).



< REMOVAL AND INSTALLATION >

13. Pull out wire (2) from soft top cover outer (1) (LH and RH).

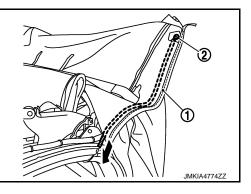
- 14. Remove rear rail weather-strip. Refer to RF-188. "ROOF SEALING : Exploded View".
- 15. Remove rear rail weather-strip retainer (LH and RH). Refer to <u>RF-188, "ROOF SEALING : Exploded</u> <u>View"</u>.
- 16. Remove rear end of soft top cover outer (2) from 5th bow (1).

17. Pull up soft top cover outer lateral side to outside from upper to lower. Remove double-sided tape (A) (LH and RH).

 Remove E-clips (A). Disengage connection of soft top cover outer wire (2) from soft top linkage assembly pin (1) (LH and RH).

<□ : Vehicle front





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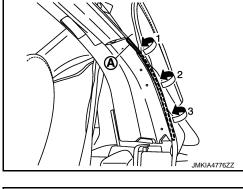
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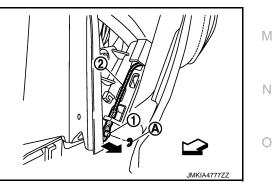
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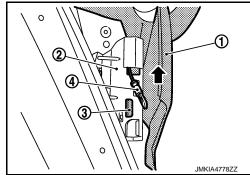
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< REMOVAL AND INSTALLATION >

 Slide soft top cover outer (1) in the direction shown by the arrow. Simultaneously pull out retainer (3) and wire (4) from soft top linkage assembly (2) (LH and RH).
 CAUTION:

Write a short note to describe the wire locations and the retainer mounting positions.

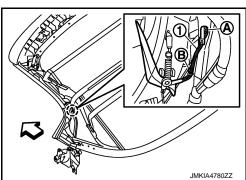


- 20. Manually operate soft top linkage assembly to the open position.
- Pull up soft top cover outer lateral side to outside. Remove rivet

 (A) and screw (B) that secure soft top cover outer bungee cord
 (1) (LH and RH).

CAUTION:

Cover the surrounding area because iron powder is spread when using a drill.

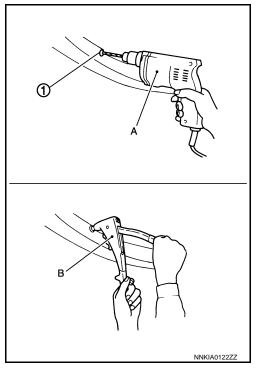


NOTE:

Removal and Installation of Rivet

- Grind the head of rivet (1) with a drill (A) [bit of ϕ 4.0 mm (ϕ 0.157 in)].
- Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

Crimping thickness	: 4.8 - 8.0 mm (0.189 - 0.315 in)
Prepared hole diameter	:
Used rivet head diameter	: () 12.0 mm (0.472 in)



- 22. Remove rear defogger connector. Pull out rear defogger harness from soft top inner (LH and RH).
- Pull up soft top cover outer rear end.
 CAUTION:

Be careful when performing operation because rear glass is moved.

< REMOVAL AND INSTALLATION >

24. Remove mounting screw (A). Pull out soft top cover outer bungee cord (1) from D-ring (B) (LH and RH).

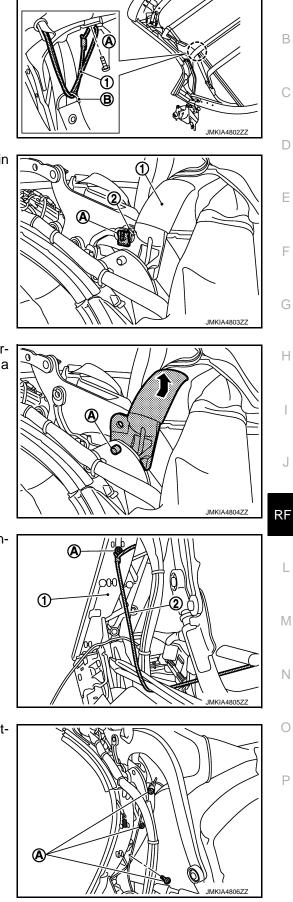
25. Remove retaining plate (A) of 3rd bow (1), and then remove pin (2) (LH and RH).

26. Press inside 3rd bow soft top linkage assembly mounting portion. Disengage and remove the connections (A) one side at a time.

27. Remove mounting screw (A). Remove soft top inner cover bungee cord (2) from soft top linkage assembly (1) (LH and RH).

28. Remove mounting screws (A). Remove soft top cover inner lateral portion from soft top linkage assembly (LH and RH).

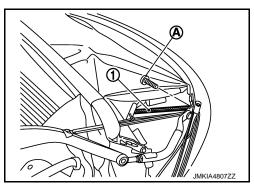
RF-179



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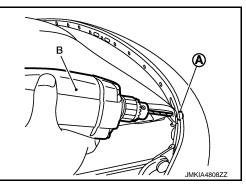
< REMOVAL AND INSTALLATION >

29. Remove mounting screw (A). Remove soft top cover inner bungee cord (1) (LH and RH).



- 30. Remove rear lock striker. Refer to <u>RF-186, "REAR LOCK STRIKER : Exploded View"</u>.
- 31. Remove clip from soft top cover inner rear end.
- 32. Remove rivet (A) from soft top cover inner rear end using a drill (B) (LH and RH).CAUTION:

Cover the surrounding area because iron powder is spread when using a drill.



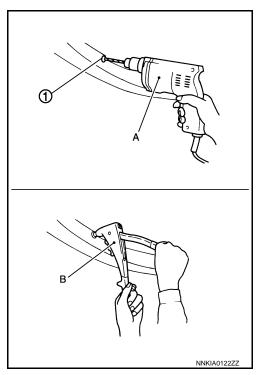
NOTE:

Removal and Installation of Rivet

- Grind the head of rivet (1) with a drill (A) [bit of $\phi.0$ mm (ϕ 0.197 in)]
- Securely crimp the soft top cover inner with the soft top linkage assembly using a hand riveter (B).

Crimping thickness	: 3.2 - 6.4 mm (0.126 - 0.252 in)
Prepared hole diameter	:

Used rivet head diameter : ϕ 9.0 mm (0.354 in)



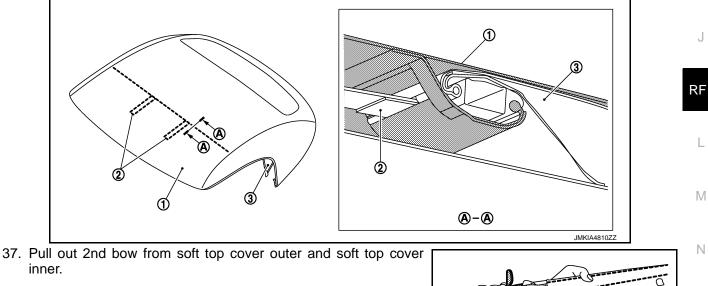
< REMOVAL AND INSTALLATION >

33. Remove push on nut (A) from 4th bow (1) (LH and RH).

- 34. Remove 2nd bow, 4th bow, soft top cover outer, and soft top cover inner from soft top linkage as a set.
- 35. Pull out and remove soft top cover inner retainer (2) from soft top cover inner (1).

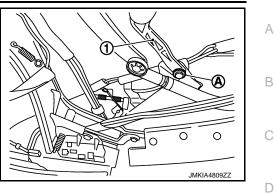
36. Pull out soft top cover inner strap through soft top cover outer hole. NOTE:

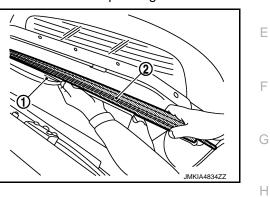
Locations of soft top cover outer (1), strap (2), and soft top cover inner (3) for 2nd bow are as shown in the figure.





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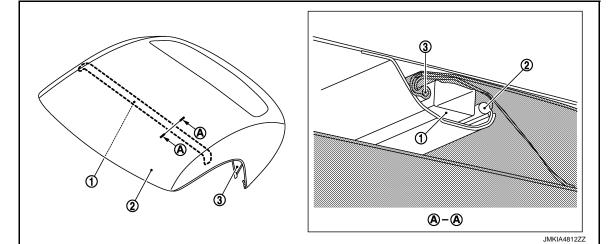
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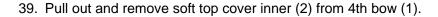
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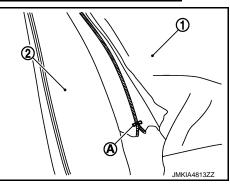
< REMOVAL AND INSTALLATION >

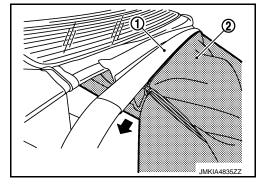
Locations of soft top cover outer (2) and soft top cover inner (3) for 2nd bow (1) are as shown in the figure.



38. Remove stopper. Manually disconnect zipper connection (A) of soft top cover outer (1) and soft top cover inner (2).

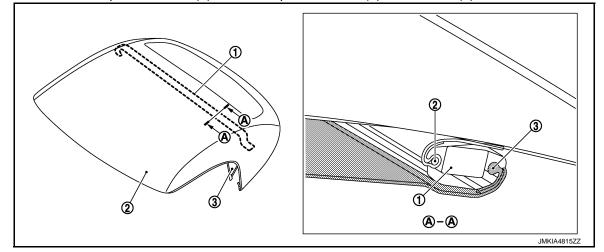








Locations of soft top cover outer (2) and soft top cover inner (3) for 4th bow (1) are as shown in the figure.



< REMOVAL AND INSTALLATION >

INSTALLATION

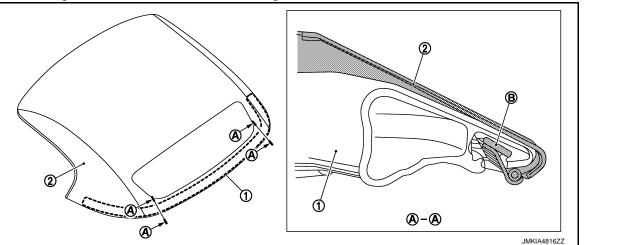
Note the following items, and install in the reverse order of removal. **CAUTION:**

- Replace double-sided tape that fixes soft top cover outer to soft top linkage assembly with new tape.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-21</u>, <u>"Inspection and Adjustment"</u>.

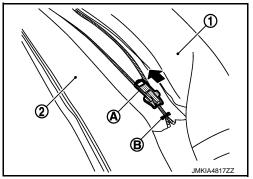
Perform leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>.

NOTE:

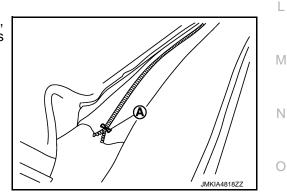
When installing soft top cover outer (2) to 5th bow (1), install soft top cover outer portion (B) to 5th bow rear ^C end groove using a removal tool as shown in the figure.



- · Connecting procedure for soft top cover outer and soft top cover inner
- Connect using a slider (A).
- Align zipper ends of soft top cover outer (1) and soft top cover inner (2). Slightly slide slider. Fix connecting portion of zipper using a stopper (B).



- Slide slider until slider is removed from zipper. Using a stopper (A), fix connection portion of zipper on the side where slider is removed.



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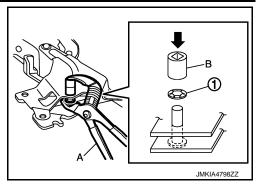
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< REMOVAL AND INSTALLATION >

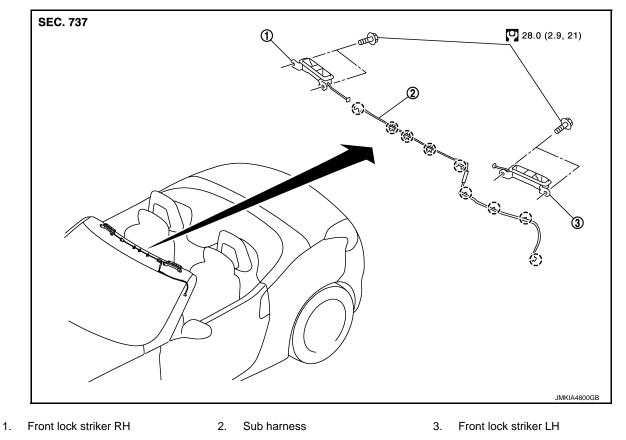
- When installing push on nut (1), crimp it using water pump pliers (A) and socket (B).



FRONT LOCK STRIKER

FRONT LOCK STRIKER : Exploded View

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(]) : Clip

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

FRONT LOCK STRIKER : Removal and Installation

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REMOVAL

1. Remove front roof cover. Refer to EXT-37, "FRONT PILLAR FINISHER (Roadster) : Exploded View".

< REMOVAL AND INSTALLATION >

- 2. Mark 3 positions (a), (b), and (c) on the body side.
- 3. Disconnect front lock striker harness connector (D).

Front lock striker RH

3.

4. Loosen front lock striker mounting bolts (A).

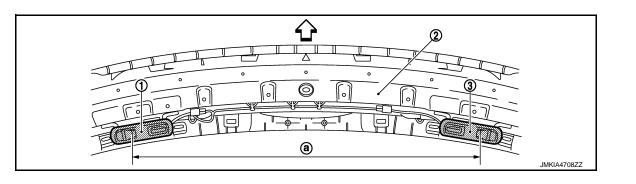
5. Press down roof front finisher. Remove mounting bolts.

6. Remove front lock striker.

INSTALLATION

Note the following items, and install in the reverse order of removal. **CAUTION:**

- After installation, check soft top open/close lock/unlock operation.
- Install front lock striker aligning with the marks.
- Check dimensions between front lock striker (LH and RH).



Front roof rail

2.

- 1. Front lock striker LH
- a. 774.6 mm (30.496 in)
- $\triangleleft : \mathsf{Vehicle front}$

REAR LOCK STRIKER

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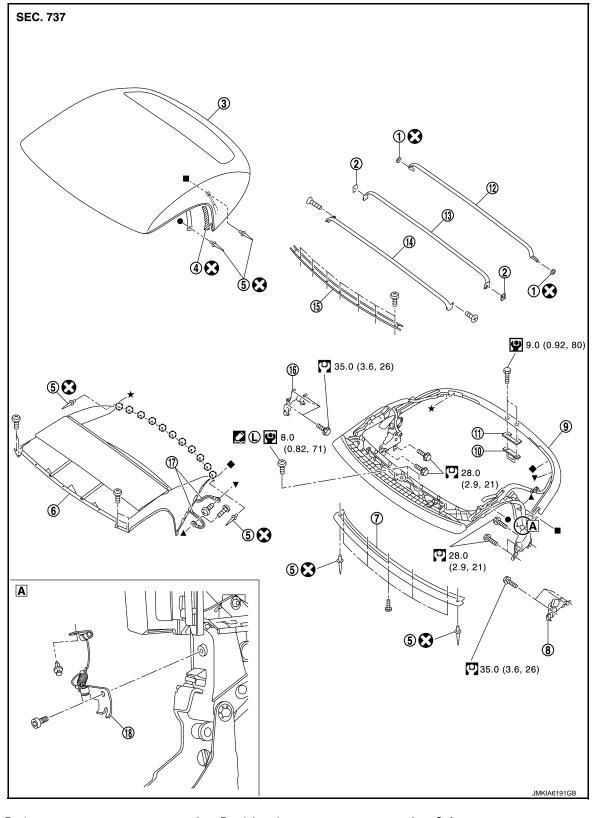
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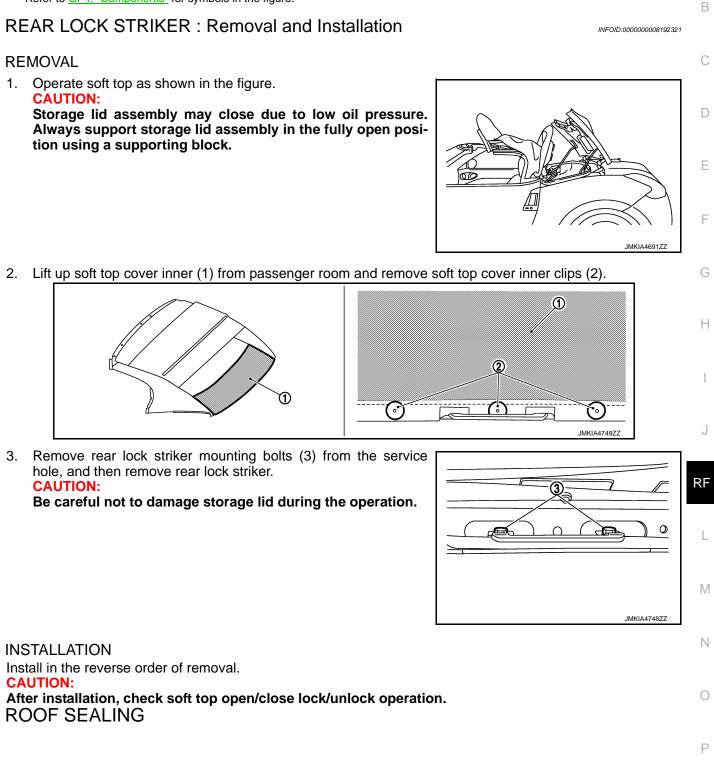
< REMOVAL AND INSTALLATION >

REAR LOCK STRIKER : Exploded View



- 1. Push on nut
- 4. Double-sided tape
- 7. Soft top cover outer front retainer
- 10. Rear lock striker

- 2. Retaining plate
- 5. Rivet
- 8. Soft top mounting bracket LH
- 11. Rear lock striker bracket
- 3. Soft top cover outer
- 6. Soft top cover inner
- 9. Soft top linkage assembly
- 12. 4th bow



15. Soft top cover inner retainer

18. Flipper door cable

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< REMOVAL AND INSTALLATION >

- 13. 3rd bow
- 14. 2nd bow 16. Soft top mounting bracket RH 17. Bungee cord

() : Clip

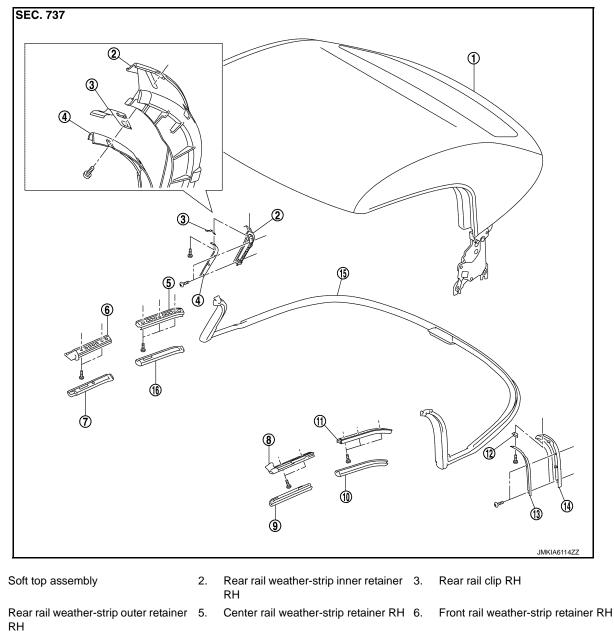
Refer to GI-4, "Components" for symbols in the figure.

Revision: 2012 August

< REMOVAL AND INSTALLATION >

ROOF SEALING : Exploded View

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- 7. Front rail weather-strip RH
- 10. Center rail weather-strip LH
- 13. Rear rail weather-strip outer retainer 14. Rear rail weather-strip inner retainer 15. Rear rail weather-strip LH
- 16. Center rail weather-strip RH

ROOF SEALING : Removal and Installation

8.

LH

FRONT RAIL WEATHER-STRIP

Removal

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Front rail weather-strip LH

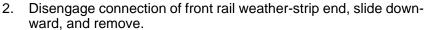
9.

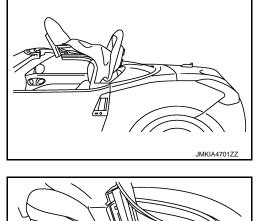
Front rail weather-strip retainer LH

11. Center rail weather-strip retainer LH 12. Rear rail clip LH

< REMOVAL AND INSTALLATION >

1. Operate soft top assembly as shown in the figure.





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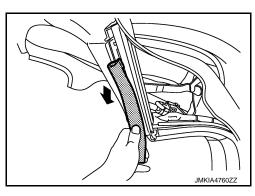
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Installation

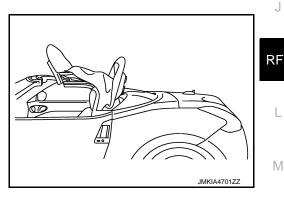
Note the following items, and install in the reverse order of removal.

- **CAUTION:**
- Perform door glass fixing adjustment. Refer to <u>GW-21, "Inspection and Adjustment"</u>.
- Perform leakage test. Refer to RF-58, "Water Leakage Test".

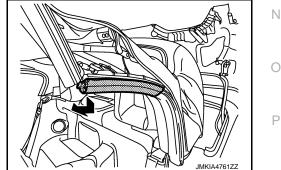
CENTER RAIL WEATHER-STRIP

Removal

1. Operate soft top assembly as shown in the figure.



2. Disengage connection of center weather-strip end, slide forward, and remove.



Installation

Note the following items, and install in the reverse order of removal.

CAUTION:

Perform door glass fixing adjustment. Refer to <u>GW-21, "Inspection and Adjustment"</u>.

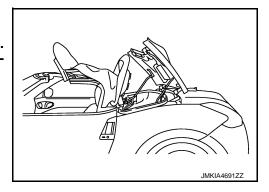
< REMOVAL AND INSTALLATION >

• Perform leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>.

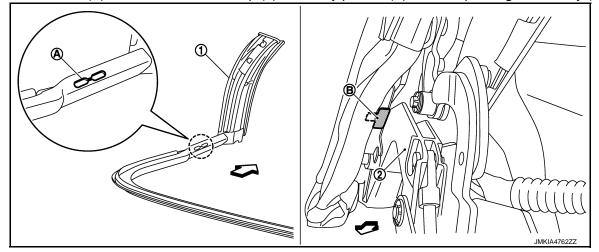
REAR RAIL WEATHER-STRIP

Removal

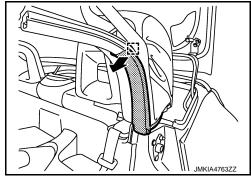
 Operate soft top assembly as shown in the figure. CAUTION: Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



2. Remove cutout (A) of rear rail weather-strip (1) from stay portion (B) of soft top linkage assembly (2).



- 3. Disengage rear rail weather-strip fixing metal clipe.
- 4. Disengage connection of rear rail weather-strip end and pull back (LH and RH).
 - : Metal clip



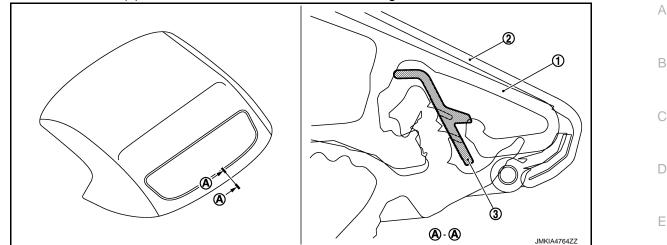
5. Remove rear rail weather-strip from 5th bow.

Installation

- 1. Install rear rail weather-strip to 5th bow.
 - Check that rear end of soft top cover outer (2) is fitted in 5th bow (1).

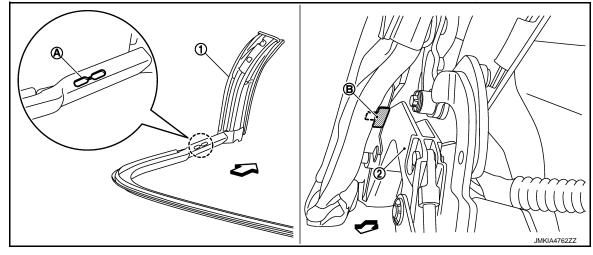
< REMOVAL AND INSTALLATION >

• Check that retainer (3) is installed to 5th bow as shown in the figure.



• Install rear rail weather-strip rear end to 5th bow. **NOTE:**

- Apply soapy water to rear rail weather-strip rear end for smooth fitting.
- If rear rail weather-strip is not easily fitted to 5th bow, lightly tap the weather-strip using a rubber hammer and install.
- 2. Install rear rail weather-strip to rear rail weather-strip retainer (LH and RH).
- 3. Install cutout (A) of rear rail weather-strip (1) to stay portion (B) of soft top linkage assembly (2).



└□ : Vehicle front

- 4. Install the removed parts.
 - **CAUTION:**
 - Perform door glass fixing adjustment. Refer to <u>GW-21, "Inspection and Adjustment"</u>.
 Perform leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>.

1ST BOW LATCH

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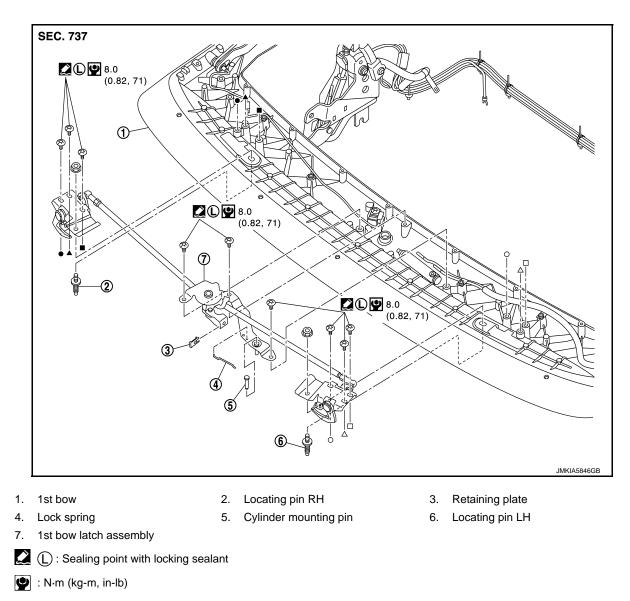
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< REMOVAL AND INSTALLATION >

1ST BOW LATCH : Exploded View

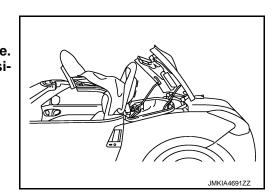


1ST BOW LATCH : Removal and Installation

REMOVAL

 Operate soft top assembly as shown in the figure.
 CAUTION: Storage lid assembly may close due to low oil pressure. Always support storage lid assembly to the fully open posi-

tion using a supporting block.



- Remove front rail weather-strip (LH and RH). Refer to <u>RF-188, "ROOF SEALING : Removal and Installa-</u> tion".
- 3. Remove front rail weather-strip retainer (LH and RH). Refer to <u>RF-188, "ROOF SEALING : Removal and Installation"</u>.

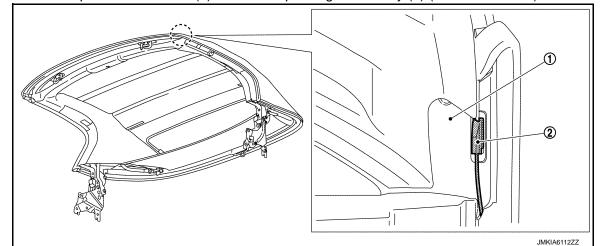
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< REMOVAL AND INSTALLATION >

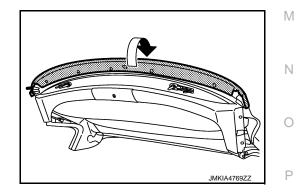
4. Remove soft top cover outer front retainer mounting screws (A).

5. Lift up soft top cover outer front retainer (1), and then pull up soft top cover outer (2) portion (A) to outside (both LH and RH).

6. Pull out soft top cover outer wire (2) from soft top linkage assembly (1) (both LH and RH).



7. Pull up front end of soft top cover outer.



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< REMOVAL AND INSTALLATION >

Remove soft top cover inner mounting screws (A) from 1st bow (1) (LH and RH).

Remove mounting screws (A) of soft top cover inner retainer (2) from 1st bow (1).
 NOTE:

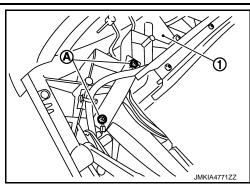
Soft top cover inner straps (B) and soft top cover inner are tightened together to 1st bow.

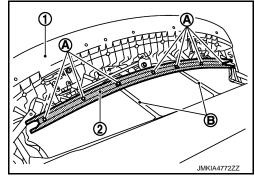
- 10. Mark (A) on 1st bow (2) for positioning of locating pin (1) (both LH and RH).

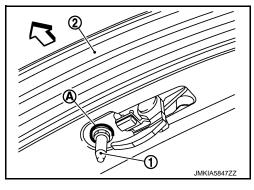
- 11. Remove 1st bow latch assembly mounting bolts (A) and locating pin mounting nut (B) (both LH and RH).
 - <□ : Vehicle front

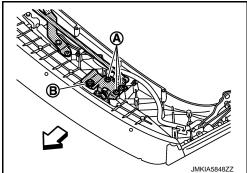
- 12. Remove spring lock (A). Pull out cylinder mounting pin (1) toward upper side of vehicle.
- 13. Remove TORX bolts (B). Remove soft top lock assembly center bracket (2).

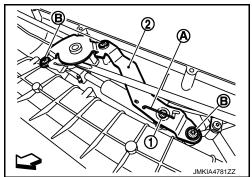
<□ : Vehicle front





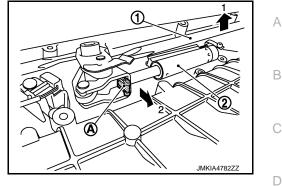






< REMOVAL AND INSTALLATION >

14. Lift up center portion of 1st bow latch assembly (1). Remove retaining plate (A) of roof latch cylinder (2).

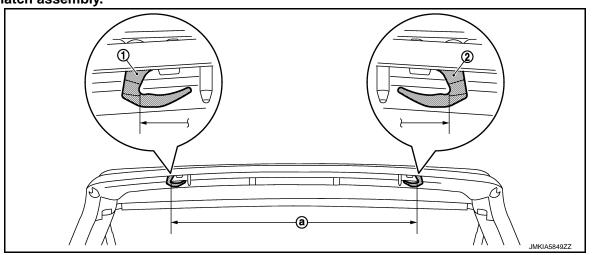


15. Remove 1st bow latch assembly from 1st bow.

INSTALLATION

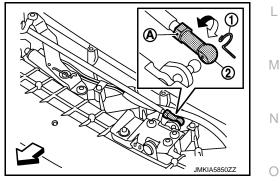
Note the following items, and install in the reverse order of removal. **CAUTION:**

- Apply "" when installing 1st bow latch assembly mounting bolts.
- Check that dimension between hook RH (1) and hook LH (2) is within the standard after installing 1st bow latch assembly.



(a) Standard : 772.11 – 773.11 mm (30.398 – 30.437 in)

• Adjust the push rod length by loosening nut (A), removing snap pin (1), and turning stud ball cap when the dimension (a) is outside the standard.



- Align locating pins with marks and install.
- Adjust hook contact length of 1st bow latch hook (LH and RH). Refer to <u>RF-195, "1ST BOW LATCH :</u> <u>Inspection and Adjustment"</u>.
- Check the open/close operation of soft top assembly after installation.
- Perform water leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>.

1ST BOW LATCH : Inspection and Adjustment

Inspection and Adjustment

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< REMOVAL AND INSTALLATION >

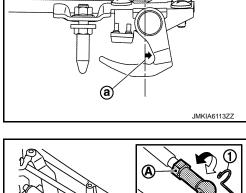
- 1. Open soft top, and then apply red lead or dye penetrant testing agent to 1st bow latch hook [engagement with striker (both for LH and RH)].
- 2. Fully open soft top, and then engage 1st bow latch.
- 3. Open soft top, and then check that the red lead or dye penetrant testing agent peeled off from the 1st bow latch exceeds ""

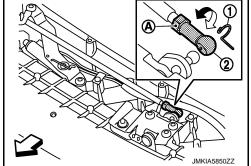
- If not exceeded, adjust hook contact length of 1st bow latch hook (LH and RH), and then adjust the push rod length by loosening nut (A), removing clip (1), and turning stud ball cap (2). CAUTION:
 - Adjust front lock rod LH and front lock rod RH simultaneously.
 - Check that dimension between hook RH and hook LH is within the standard.

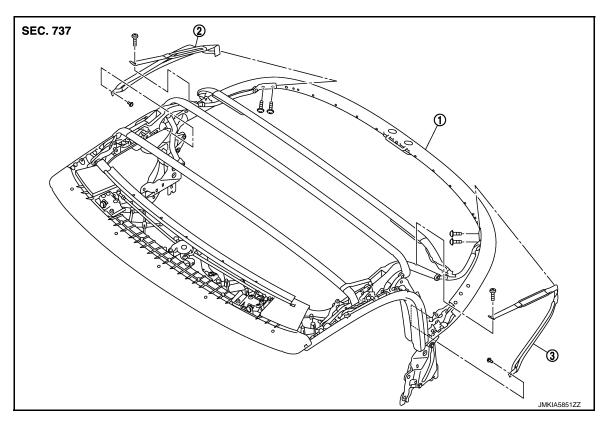
CAUTION:

If 1st bow latch hook (center) does not exceed "" 5TH BOW BUNGEE CORD

5TH BOW BUNGEE CORD : Exploded View







< REMOVAL AND INSTALLATION >

- 1. Soft top linkage assembly
- 2. 5th bow bungee cord RH

3. 5th bow bungee cord LH

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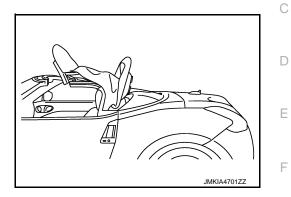
5TH BOW BUNGEE CORD : Removal and Installation

CAUTION:

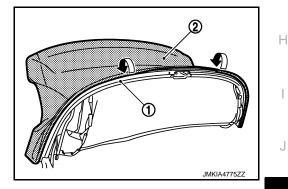
Two or more workers are required. Reaction force of bungee cord is very large.

REMOVAL

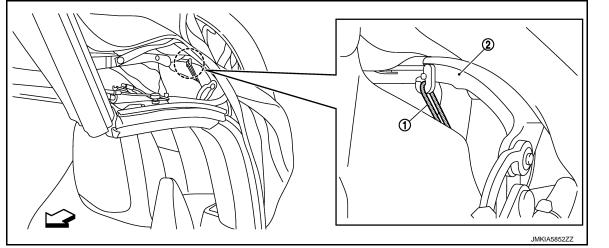
1. Operate soft top assembly as shown in the figure.



- 2. Remove rear rail weather-strip from 5th bow. Refer to RF-188, "ROOF SEALING : Removal and Installation".
- 3. Remove rear end of soft top cover outer (2) from 5th bow (1).

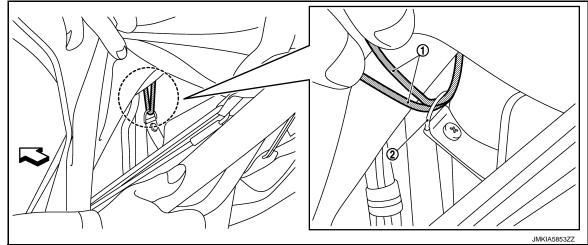


Remove 3rd bow bungee cord (1) from 3rd bow (2). 4.

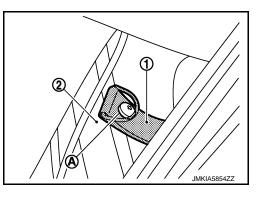


< REMOVAL AND INSTALLATION >

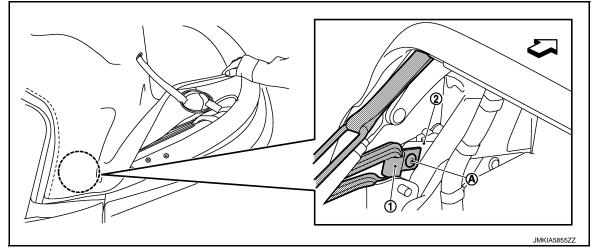
5. Pull out 3rd bow bungee cords (1) from 5th bow bungee cord ring (2).



6. Remove 5th bow bungee cord ring screw (A). Remove 5th bow bungee cord (1) front end from soft top linkage assembly (2).

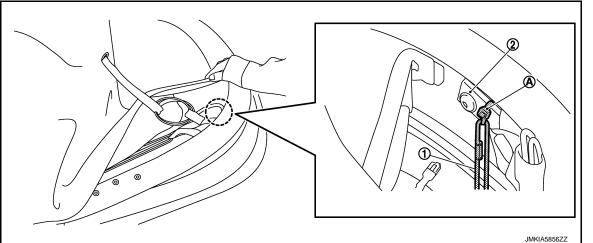


7. Move 5th bow and remove screw (A), and then remove 5th bow bungee cord (1) center from soft top linkage assembly (2).

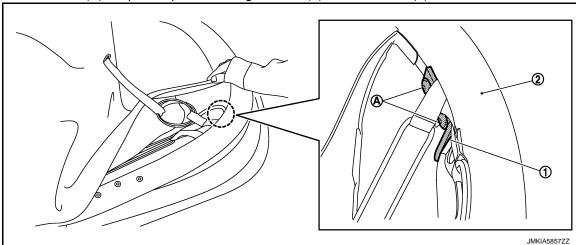


< REMOVAL AND INSTALLATION >

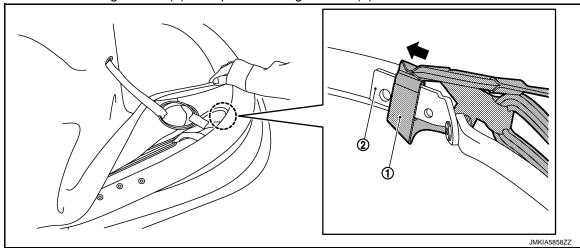
8. Cut tie wrap (A), and then remove soft top cover inner bungee cord (1) from pressure ring bracket (2).



9. Remove screws (A). Separate pressure ring bracket (1) from 5th bow (2).



10. Pull out 5th bow bungee cord (1) from pressure ring bracket (2).



11. Remove 5th bow bungee cord from the vehicle body.

INSTALLATION

Note the following items, and install in the reverse order of removal.

CAUTION:

 Never reuse tie wraps that secure soft top cover inner bungee cord. Always replace them with new one.

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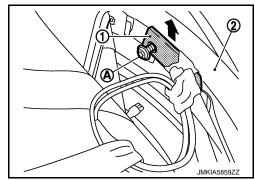
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< REMOVAL AND INSTALLATION >

• Pressure ring bracket (1) mounting hole is a long hole. When installing to 5th bow (2), temporarily tighten screw (A), set pressure ring bracket to fully upward position, and then tighten. (for securing clearance between pressure ring and storage lid when soft top is closed)

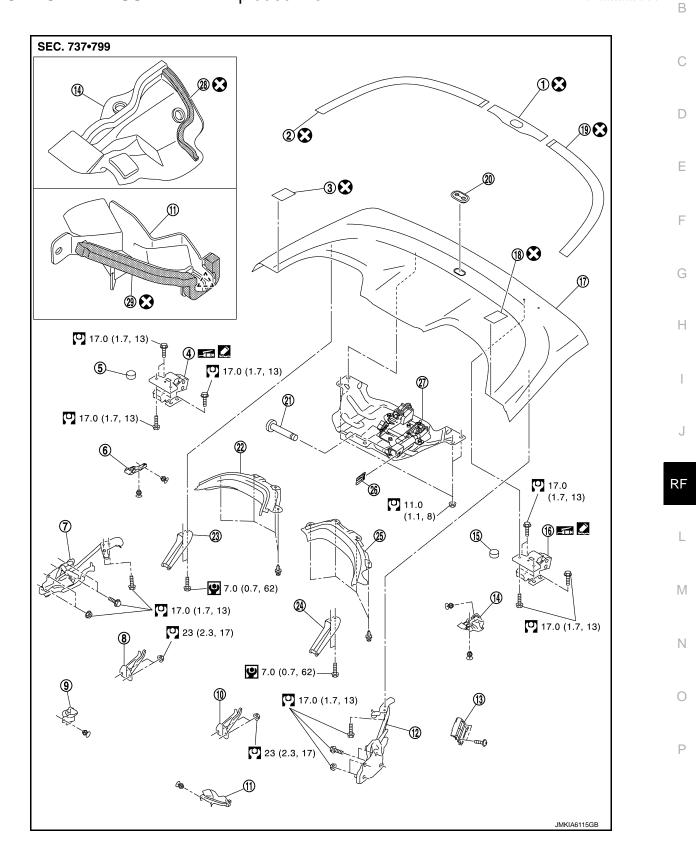


- Check the open/close operation of soft top assembly after installation.
- Perform water leakage test. Refer to <u>RF-58, "Water Leakage Test"</u>.

< REMOVAL AND INSTALLATION >

STORAGE LID STORAGE LID ASSEMBLY

STORAGE LID ASSEMBLY : Exploded View



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< REMOVAL AND INSTALLATION >

- 1. Storage outer protector (center)
- 4. Storage lid hinge (RH)
- 7. Storage lid device assembly (RH)
- 10. Storage lid lock (LH)
- 13. Harness bracket
- 16. Storage lid hinge (LH)
- 19. Storage outer protector (LH)
- 22. Rear parcel board (RH)
- 25. Rear parcel board (LH)
- 28. Butyl tape
- ∠____: Pawl

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

STORAGE LID ASSEMBLY : Removal and Installation

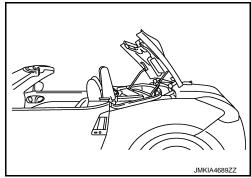
- 2. Storage outer protector (RH)
- 5. Cap
- 8. Storage lid lock (RH)
- 11. Storage lid drip (LH)
- 14. Front rubber seal (LH)
- 17. Storage lid assembly
- 20. Soft top lock protector
- 23. Storage lid striker (RH)
- 26. Cylinder mounting clip
- 29. Butyl tape

- 3. Front storage outer protector (RH)
- 6. Front rubber seal (RH)
- 9. Storage lid drip (RH)
- 12. Storage lid device assembly (LH)
- 15. Cap
- 18. Front storage outer protector (LH)
- 21. Cylinder mounting pin
- 24. Storage lid striker (LH)
- 27. Storage bracket assembly

REMOVAL

1. Operate soft top as shown in the figure.

CAUTION: Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



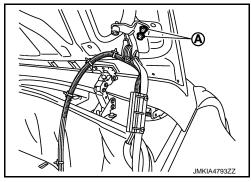
2. Remove oil pressure hose fixing clips from storage lid assembly. **NOTE:**

Write a short note to describe the fixing clip positions. **CAUTION:**

Never sharply bend, twist or strongly pull oil pressure hose.

- Disconnect storage lid bracket assembly. Refer to <u>RF-216</u>, "STORAGE LID BRACKET ASSEMBLY : <u>Exploded View</u>".
- Remove bolts (A). Disconnect storage lid device assembly from storage lid assembly (LH and RH). Refer to <u>RF-214, "STORAGE</u> <u>LID DEVICE ASSEMBLY : Exploded View"</u>. CAUTION:

Always support storage lid assembly so that storage lid hinge link does not contact with the trunk lid.

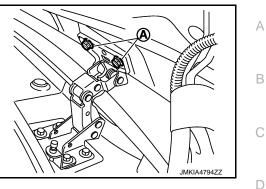


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lid assembly

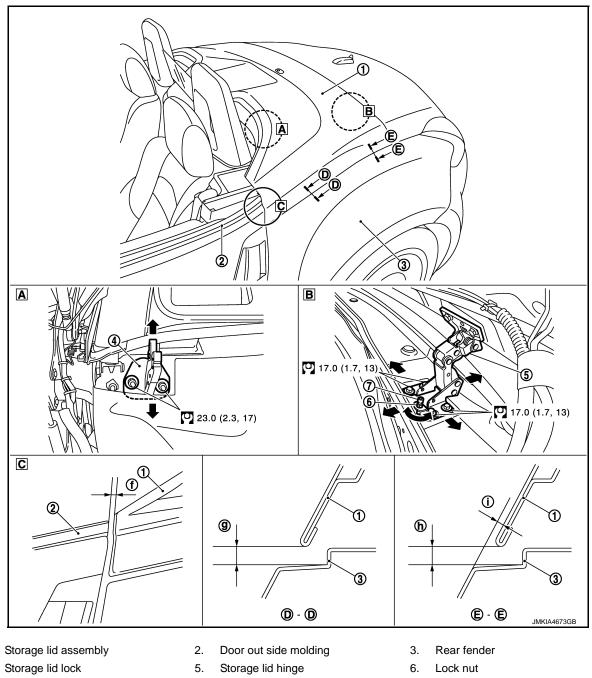
< REMOVAL AND INSTALLATION >

- Remove bolts (A). Remove storage lid assembly from storage lid hinge. Refer to <u>RF-208</u>, "<u>STORAGE LID HINGE</u> : <u>Exploded</u> <u>View</u>".
 CAUTION:
 - Always support storage lid assembly so that it does not drop.
 - This is a heavy component. It requires 2 workers for removal and installation.



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 6. Remove the following parts after removing storage lid assembly. Remove the storage lid striker. Refer to <u>RF-210</u>, <u>"STORAGE LID STRIKER : Exploded View"</u>. Remove clips and then remove front rubber seal (LH and RH). Remove rear parcel board. Refer to <u>INT-55</u>, <u>"Exploded View"</u>. Remove soft top lock protector. Remove storage outer protector. 	D
INSTALLATION	F
Note the following items, and install in the reverse order of removal. CAUTION: After installing storage lid assembly, perform fitting adjustment. Refer to <u>RF-203</u> , <u>"STORAGE LID</u> ASSEMBLY : Adjustment".	G
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< REMOVAL AND INSTALLATION >



7. Adjust bolt

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Refer to <u>GI-4, "Components"</u> for the symbols shown in the figure.

Visually and tactually check that the clearance and surface height difference of the storage lid assembly and each part satisfy the standard. If they are outside the specified value, adjust them with the following procedure.

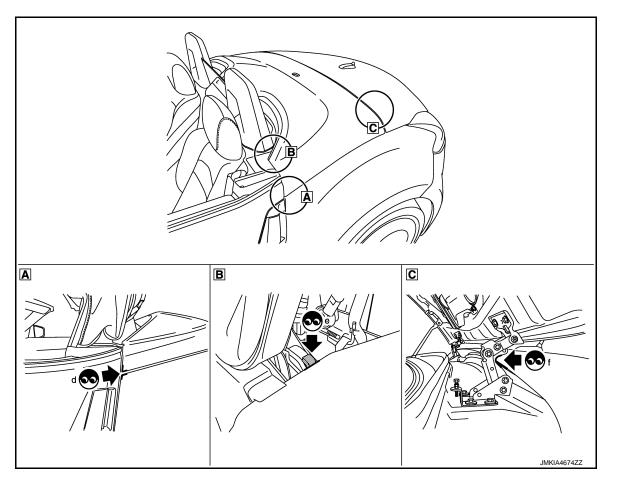
Portion				Standard	Difference between
Storage lid front end and door outside molding	С	f	Clearance	3.5 - 6.5 mm (0.138 - 0.256 in)	_
Storage lid front end and rear fender	D - D	g	Clearance	5.0 mm (0.197 in)	_

< REMOVAL AND INSTALLATION >

Portion				Standard	Difference between	А
Storage lid rear end and rear fender		h	Clearance	5.0 mm (0.197 in)	—	
	E-E	i	Surface difference	(–1.5) - (+1.5) mm [(–0.059) - (+0.059) in]	—	В

FITTING ADJUSTMENT PROCEDURE

1. Manually operate and check that storage lid assembly opens and closes without interfering with other portions of the vehicle body.



- d : Interference of rear fender and storage lid assembly
- e : Interference of soft top assembly and storage lid assembly
- f : Interference of trunk lid and storage lid hinge

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

CAUTION:

- Before manually operating each cylinder of the hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and therefore it takes a period of time to lower oil pressure.)
- Be careful since the storage lid assembly may interfere with rear fender while opening and closing when clearance is 5.0 mm (0.197 in) or less.
- 2. Close storage lid assembly and soft top assembly using the auto operation.
- 3. Measure clearance and surface height difference.

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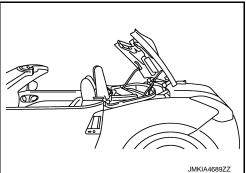
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< REMOVAL AND INSTALLATION >

 Operate soft top as shown in the figure.
 CAUTION: Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



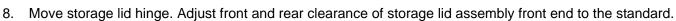
5. Loosen front bolts (A) of storage lid hinge mounting bolts. CAUTION:

Never loosen storage lid hinge mounting bolts (B) while storage lid assembly is open.

(A)

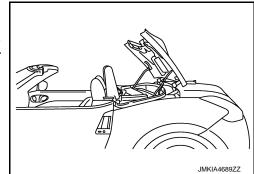
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- 6. Close storage lid assembly and soft top assembly using the auto operation.
- 7. Open trunk lid. Loosen rear bolts (A) of storage lid hinge mounting bolts.



- 9. Move storage lid hinge. Adjust surface height difference to the standard.
- 10. Tighten rear bolts of storage hinge mounting bolts. Close trunk lid.
- 11. Operate soft top as shown in the figure. CAUTION:

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



- 12. Tighten front bolts of storage lid hinge mounting bolts.
- 13. Loosen storage lid lock assembly mounting nuts.
- 14. Move storage lid lock. Adjust upper and lower clearance of storage lid assembly front end to the standard. CAUTION:

Be careful since the storage lid assembly may interfere with rear fender while opening and closing when clearance is 5.0 mm (0.197 in) or less.



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< REMOVAL AND INSTALLATION >	
15. Tighten storage lid lock assembly mounting nuts.	
16. Loosen storage lid hinge adjusting lock nut.	А
17. Move adjuster bolt upward or downward. Adjust upper and lower clearance of storage lid assembly rear end to the standard.	
18. Tighten storage lid hinge adjusting lock nut.	В
19. Repeat the above operation, if necessary.	
STORAGE LID HINGE	С
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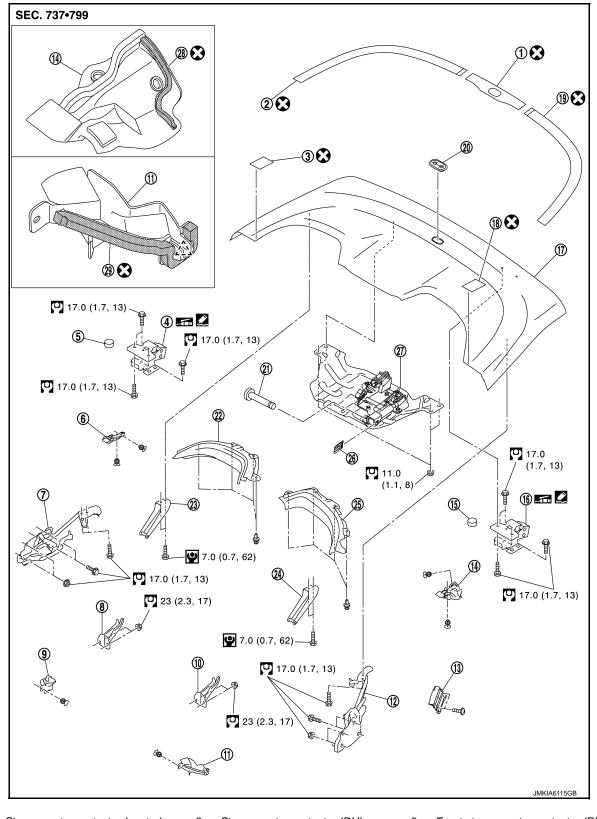
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< REMOVAL AND INSTALLATION >

STORAGE LID HINGE : Exploded View



- 1. Storage outer protector (center)
- 4. Storage lid hinge (RH)
- 7. Storage lid device assembly (RH)
- 10. Storage lid lock (LH)
- 2. Storage outer protector (RH)
- 5. Cap
- 8. Storage lid lock (RH)
- 11. Storage lid drip (LH)
- 3. Front storage outer protector (RH)
- 6. Front rubber seal (RH)
- 9. Storage lid drip (RH)
- 12. Storage lid device assembly (LH)

14. Front rubber seal (LH)

17. Storage lid assembly

20. Soft top lock protector

Storage lid striker (RH)

Cylinder mounting clip

23.

26.

29. Butyl tape

< REMOVAL AND INSTALLATION >

- 13. Harness bracket
- 16. Storage lid hinge (LH)
- 19. Storage outer protector (LH)
- 22. Rear parcel board (RH)
- 25. Rear parcel board (LH)
- 28. Butyl tape
- <u>^</u>:Pawl

Refer to GI-4, "Components" for symbols in the figure.

STORAGE LID HINGE : Removal and Installation

REMOVAL

1. Operate soft top as shown in the figure. CAUTION:

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

 Remove bolts. Disconnect storage lid hinge from storage lid assembly. NOTE:

Support storage lid assembly so that it does not drop. When replacing, replace storage lid hinges one side at a time.

3. Remove storage lid hinge mounting bolts. Remove storage lid hinge.

INSTALLATION

Note the following items, and install in the reverse order of removal.

CAUTION:

After installing storage lid assembly, perform fitting adjustment. Refer to <u>RF-203, "STORAGE LID</u> <u>RFASSEMBLY : Adjustment"</u>.

STORAGE LID STRIKER

- 15. Cap
- 18. Front storage outer protector (LH)
- 21. Cylinder mounting pin
- 24. Storage lid striker (LH)
- 27. Storage bracket assembly

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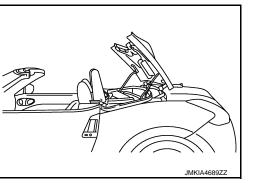
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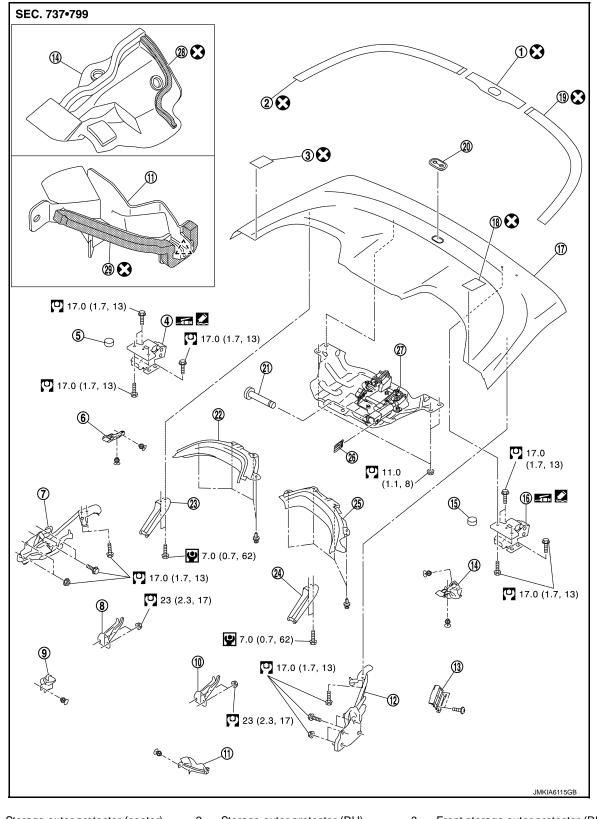
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< REMOVAL AND INSTALLATION >

STORAGE LID STRIKER : Exploded View



- 1. Storage outer protector (center)
- 4. Storage lid hinge (RH)
- 7. Storage lid device assembly (RH)
- 10. Storage lid lock (LH)
- 2. Storage outer protector (RH)
- 5. Cap
- 8. Storage lid lock (RH)
- 11. Storage lid drip (LH)
- 3. Front storage outer protector (RH)
- 6. Front rubber seal (RH)
- 9. Storage lid drip (RH)
- 12. Storage lid device assembly (LH)

< REMOVAL AND INSTALLATION >

- 13. Harness bracket
- 16. Storage lid hinge (LH)
- 19. Storage outer protector (LH)
- 22. Rear parcel board (RH)
- 25. Rear parcel board (LH)
- 28. Butyl tape
- 六:Pawl

Refer to GI-4, "Components" for symbols in the figure.

STORAGE LID STRIKER : Removal and Installation

REMOVAL

1. Operate soft top as shown in the figure. CAUTION:

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

2. Remove storage lid striker mounting bolts, and then remove storage lid striker.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

After installation, check storage lid open/close lock/unlock operation.

STORAGE LID LOCK

- 14. Front rubber seal (LH)
- Storage lid assembly
 Soft top lock protector
- Son top lock protector
 Storage lid striker (RH)
- 26. Cylinder mounting clip
- 29. Butyl tape

15. Cap

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- 18. Front storage outer protector (LH)
- 21. Cylinder mounting pin
- 24. Storage lid striker (LH)
- 27. Storage bracket assembly

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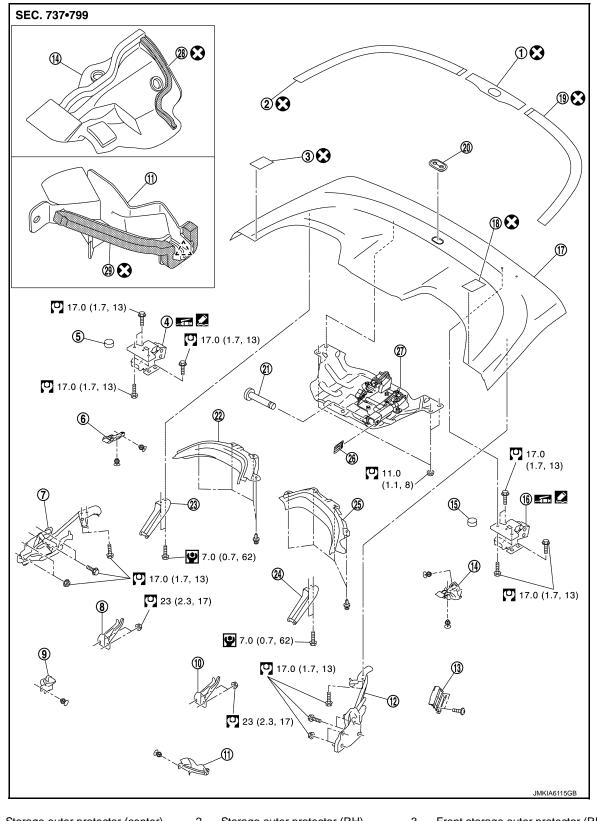
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< REMOVAL AND INSTALLATION >

STORAGE LID LOCK : Exploded View



- 1. Storage outer protector (center)
- 4. Storage lid hinge (RH)
- 7. Storage lid device assembly (RH)
- 10. Storage lid lock (LH)
- 2. Storage outer protector (RH)
- 5. Cap
- 8. Storage lid lock (RH)
- 11. Storage lid drip (LH)
- 3. Front storage outer protector (RH)
- 6. Front rubber seal (RH)
- 9. Storage lid drip (RH)
- 12. Storage lid device assembly (LH)

14. Front rubber seal (LH)

17. Storage lid assembly

20. Soft top lock protector

Storage lid striker (RH)

Cylinder mounting clip

23.

26.

29. Butyl tape

< REMOVAL AND INSTALLATION >

- 13. Harness bracket
- 16. Storage lid hinge (LH)
- 19. Storage outer protector (LH)
- 22. Rear parcel board (RH)
- 25. Rear parcel board (LH)
- 28. Butyl tape
- <u>/</u>] :Pawl

Refer to GI-4, "Components" for symbols in the figure.

STORAGE LID LOCK : Removal and Installation

REMOVAL

1. Operate soft top as shown in the figure. CAUTION:

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

2. Remove storage lid lock mounting nuts. Remove storage lid lock.

INSTALLATION

Note the following items, and install in the reverse order of removal. **CAUTION:**

After installing storage lid assembly, perform fitting adjustment. Refer to RF-203, "STORAGE LID ASSEMBLY : Adjustment".

STORAGE LID DEVICE ASSEMBLY

15. Cap

- 18. Front storage outer protector (LH)
- 21. Cylinder mounting pin
- 24. Storage lid striker (LH)
- 27. Storage bracket assembly

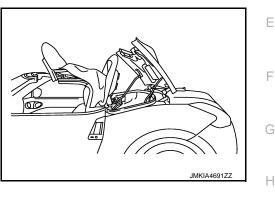
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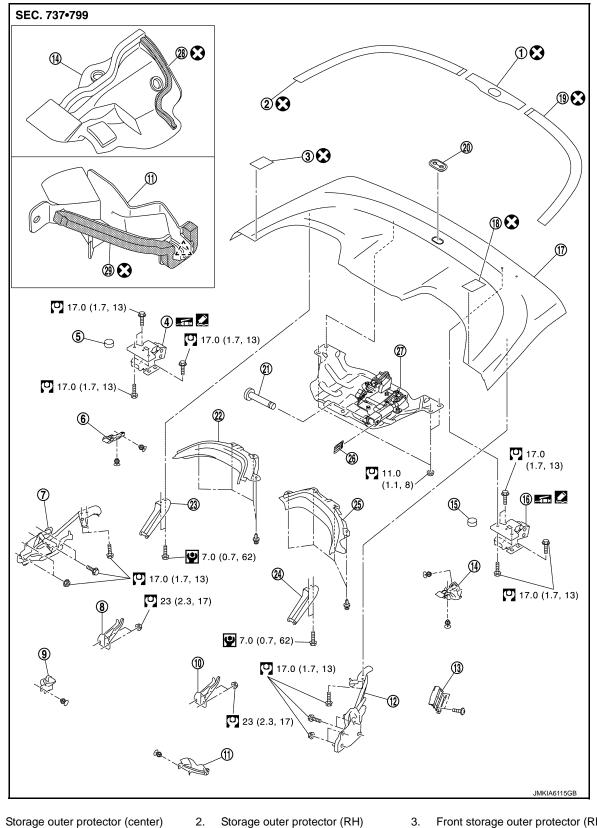
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< REMOVAL AND INSTALLATION >

STORAGE LID DEVICE ASSEMBLY : Exploded View



- 1.
- 4. Storage lid hinge (RH)
- 7. Storage lid device assembly (RH)
- 10. Storage lid lock (LH)
- 2. Storage outer protector (RH)
- 5. Cap
- 8. Storage lid lock (RH)
- 11. Storage lid drip (LH)
- Front storage outer protector (RH) 3.
- 6. Front rubber seal (RH)
- Storage lid drip (RH) 9.
- 12. Storage lid device assembly (LH)

< REMOVAL AND INSTALLATION >

19. Storage outer protector (LH)

22. Rear parcel board (RH)

25. Rear parcel board (LH)

28. Butyl tape

<u> </u> : Pawl

- 13. Harness bracket 16. Storage lid hinge (LH)
- 14. Front rubber seal (LH)
- 17. Storage lid assembly 20. Soft top lock protector
- 23. Storage lid striker (RH)
- 26. Cylinder mounting clip
- 29. Butyl tape

- 15. Cap
 - 18. Front storage outer protector (LH)
 - 21. Cylinder mounting pin
 - 24. Storage lid striker (LH)
 - 27. Storage bracket assembly

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STORAGE LID DEVICE ASSEMBLY : Removal and Installation

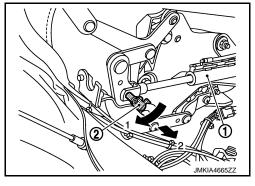
REMOVAL

1. Operate soft top as shown in the figure. CAUTION:

Refer to GI-4, "Components" for symbols in the figure.

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

- 2. Remove emergency cable from storage lid device assembly. Refer to <u>RF-223</u>, "STORAGE LID EMER-GENCY OPENER : Exploded View".
- Remove harness bracket from storage device assembly. (LH only)
- Disengage cylinder mounting pin (2) from storage lid drive cylin-4 der (1). Pull and remove to vehicle inside.



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- Disengage metal clip using a flat-bladed screwdriver (A). Dis-5. connect storage lid drive cylinder from storage lid device assembly.

CAUTION:

- Before manually operating each cylinder of hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and it takes a period time to lower oil pressure.)
- Never sharply bend, twist or strongly pull oil pressure hose.
- Remove bolts. Disconnect storage lid device assembly from storage lid assembly. CAUTION:

Always support storage lid so that storage lid hinge does not contact with trunk lid.

Remove storage lid device mounting bolts and nuts. Remove storage lid device assembly. 7. CAUTION:

Always support storage lid so that storage lid hinge does not contact with trunk lid.

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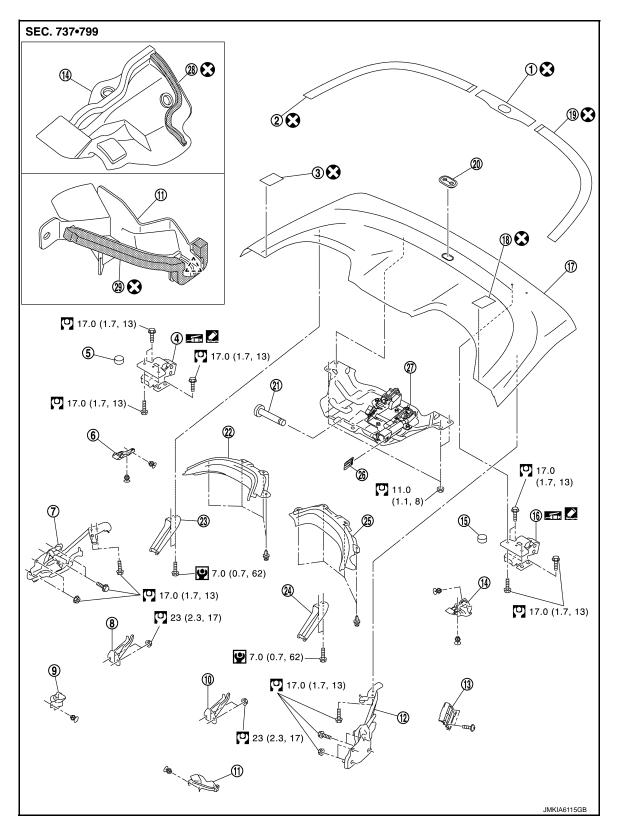
INSTALLATION

Install in the reverse order of removal.

CAUTION:

After installation, check storage lid open/close lock/unlock operation. STORAGE LID BRACKET ASSEMBLY

STORAGE LID BRACKET ASSEMBLY : Exploded View



Storage outer protector (RH)

Storage lid lock (RH)

Storage lid drip (LH)

Storage lid assembly

Storage lid striker (RH)

14. Front rubber seal (LH)

20. Soft top lock protector

26. Cylinder mounting clip

3.

6.

9.

12.

15. Cap

< REMOVAL AND INSTALLATION >

- 1. Storage outer protector (center)
- 4. Storage lid hinge (RH)
- 7. Storage lid device assembly (RH)
- 10. Storage lid lock (LH)
- 13. Harness bracket
- 16. Storage lid hinge (LH)
- 19. Storage outer protector (LH)
- 22. Rear parcel board (RH)
- 25. Rear parcel board (LH)
- 28. Butyl tape
- 2 : Pawl

Refer to GI-4, "Components" for symbols in the figure.

STORAGE LID BRACKET ASSEMBLY : Removal and Installation

29. Butyl tape

2.

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17.

23.

Cap

REMOVAL

1. Operate soft top as shown in the figure.

CAUTION: Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

- in posi-
- 2. Remove oil pressure hose fixing clips from storage lid assembly. **NOTE:**

Write a short note to describe the fixing clip positions. CAUTION:

Never sharply bend, twist or strongly pull oil pressure hose.

- 3. Remove storage lid bracket assembly mounting nuts. Pull out storage lid bracket assembly from storage lid assembly.
- 4. Disconnect harness connector that enters in storage lid bracket assembly.

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Installation

Front storage outer protector (RH)

Storage lid device assembly (LH)

18. Front storage outer protector (LH)

Front rubber seal (RH)

Storage lid drip (RH)

21. Cylinder mounting pin

24. Storage lid striker (LH)

27. Storage bracket assembly

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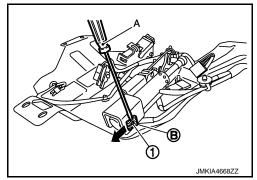
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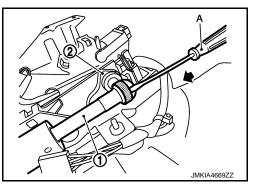
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< REMOVAL AND INSTALLATION >

5. Remove cylinder mounting clip (B) using a flat-bladed screwdriver (A). Remove cylinder mounting pin (1).



- 6. Manually retract 5th bow latch cylinder. CAUTION:
 - Before manually operating each cylinder of hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and it takes a period time to lower oil pressure.)
 - Never sharply bend, twist or strongly pull oil pressure hose.
- 7. Disengage metal clip using a flat-bladed screwdriver (A). Disconnect 5th bow latch cylinder (1) from storage lid bracket assembly (2).



8. Remove storage bracket assembly.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

After installation, check storage lid open/close lock/unlock operation. STORAGE OUTER PROTECTOR

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STORAGE OUTER PROTECTOR : Exploded View

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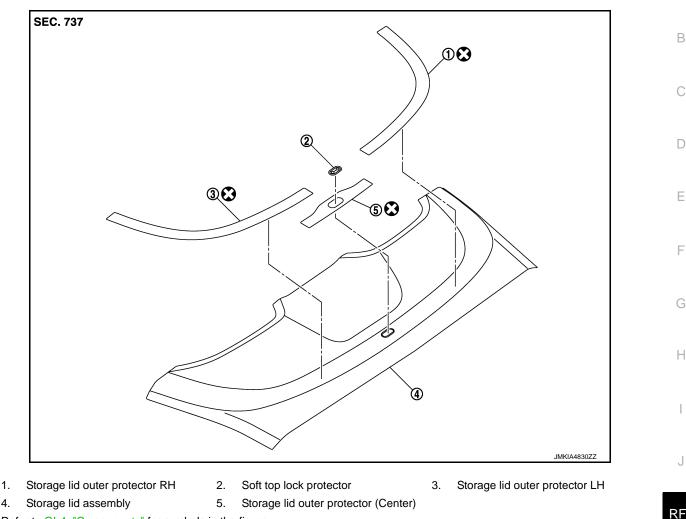
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Refer to GI-4, "Components" for symbols in the figure.

STORAGE OUTER PROTECTOR : Removal and Installation

REMOVAL

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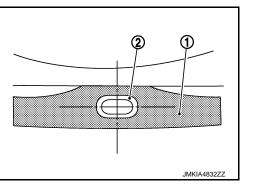
Heat bonded area of storage lid outer protector using a dryer and remove storage lid outer protector. NOTE:

Do not reuse storage lid outer protector.

INSTALLATION

- 1. Clean storage lid surface.
- 2. Apply IPA solution (isopropyl alcohol : water = 1 : 1) on the lid, and set the storage outer protector position from one side. Perform the same procedure to the side.
- 3. Align storage lid outer protector (center) (1) to soft top lock protector (2). Affix storage lid outer protector (center) to storage lid assembly while peeling pattern paper. CAUTION:

When affixing, gradually peel pattern paper while bleeding air.



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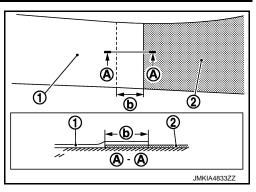
< REMOVAL AND INSTALLATION >

4. Overlap storage lid outer protector LH (1) end to storage lid outer protector (center) (2) end as shown in the figure and affix to storage lid assembly while peeling pattern paper.

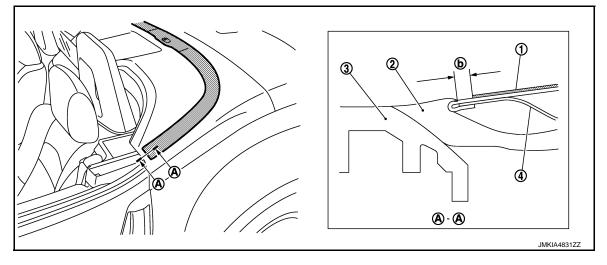
(b) : 19.0 - 21.0 mm (0.748 - 0.827 in)

CAUTION:

When affixing, gradually peel pattern paper while bleeding air.



5. Install storage lid outer protector end to storage lid assembly front end as shown in the figure.



- 1. Storage lid outer protector
- Front rubber seal
- 3. Body side weather-strip

4. Storage lid assembly

(b) : 0.0 - 5.0 mm (0.000 - 0.197 in)

 Affix storage outer protector RH as well. CAUTION: When affixing, gradually peel pattern paper while bleeding air.
 STORAGE LID WEATHER-STRIP

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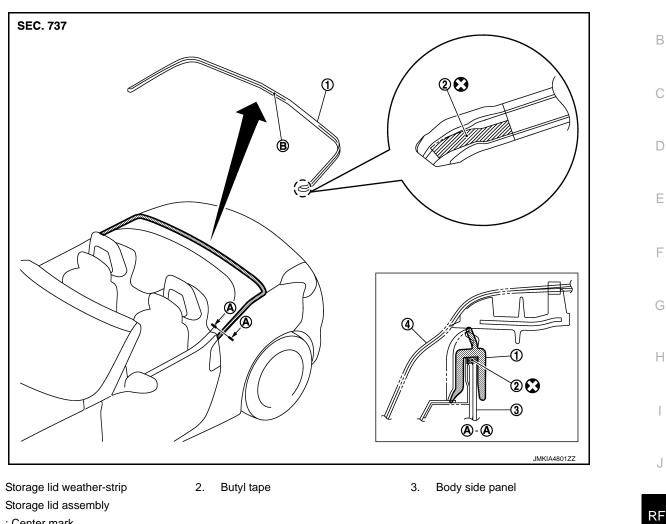
STORAGE LID WEATHER-STRIP : Exploded View

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B : Center mark

Refer to <u>GI-4, "Components"</u> for symbols in the figure.

STORAGE LID WEATHER-STRIP : Removal and Installation

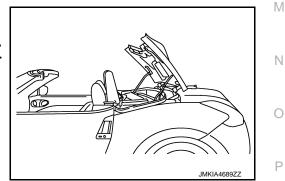
REMOVAL

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1. Operate soft top as shown in the figure. CAUTION:

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



- Pull upward, disconnect engagement of weather-strip and vehicle body, and then remove weather-strip. CAUTION:
 - Never strongly pull weather-strip while disconnecting and removing.
 - Install after peeling off butyl tape on body panel and cleaning body panel. NOTE:

Install after aligning body center mark and weather-strip center mark.

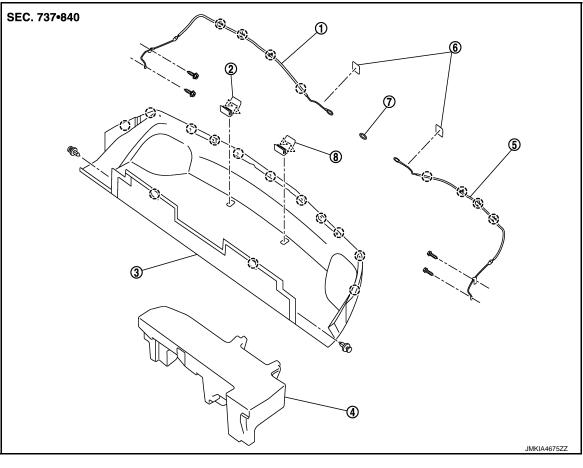
RF-221

< REMOVAL AND INSTALLATION >

INSTALLATION Install in the reverse order of removal. STORAGE ROOM FINISHER

STORAGE ROOM FINISHER : Exploded View

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Emergency cable (LH)

Soft top bumper rubber (LH)

- Emergency cable (RH) 1.
- 4. Storage room spacer
- 7. Grommet
- () : Clip
- 2 : Pawl

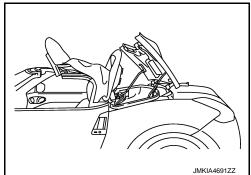
STORAGE ROOM FINISHER : Removal and Installation

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REMOVAL

1. Operate soft top as shown in the figure. **CAUTION:**

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.



Storage room finisher

3.

6.

Tape

2. Soft top bumper rubber (RH)

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< REMOVAL AND INSTALLATION >

- 2. Remove emergency cable from storage lid device assembly (LH and RH). Refer to RF-223, "STORAGE LID EMERGENCY OPENER : Exploded View".
- 3. Remove bumper rubber (LH and RH).
- 4. Disengage mounting clips. Remove storage room finisher.

INSTALLATION

Install in the reverse order of removal. STORAGE LID EMERGENCY OPENER

STORAGE LID EMERGENCY OPENER : Exploded View

SEC. 737•840 ⓓ (5) * (3 4 IMKIA467577 Emergency cable (RH) 2. Soft top bumper rubber (RH) 3. Storage room finisher Storage room spacer Tape 5. Emergency cable (LH) 6. Grommet 8. Soft top bumper rubber (LH) : Clip 八:Pawl STORAGE LID EMERGENCY OPENER : Removal and Installation INFOID:000000008192349

REMOVAL

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Remove trunk finisher front. Refer to INT-75, "Exploded View". 1.

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- < REMOVAL AND INSTALLATION >
- 2. Remove tapes (1).

3. Operate soft top as shown in the figure.

Storage lid assembly may close due to low oil pressure. Always support storage lid assembly in the fully open position using a supporting block.

4. Remove bolts (A). Remove emergency cable upward.

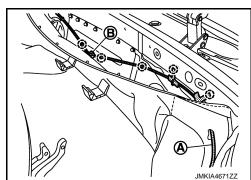
- 5. Remove rear mounting clips of storage room finisher.
- 6. Pull out emergency cable through storage room finisher hole (A).
- 7. Pull out emergency cable through hole (B) to trunk room.

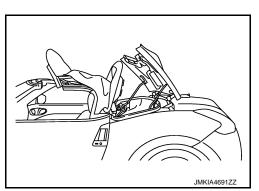
([^]) : Clip

8. Disengage clip connecting emergency cable. Remove emergency cable.

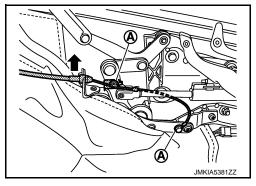
INSTALLATION

- Install in the reverse order of removal. **CAUTION:**
- After installation, check storage lid open/close lock/unlock operation.



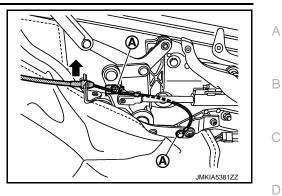


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• When installing emergency cable, route it behind storage lid cylinder and fix using mounting bolts (A), for prevention of unwinding while soft top is retracted.



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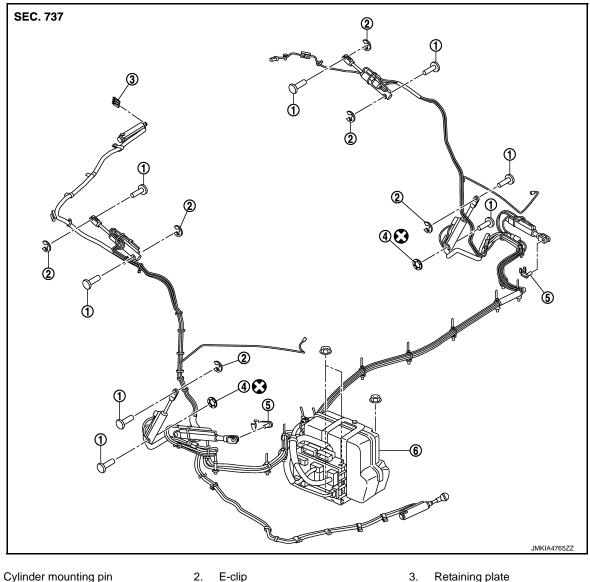
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HYDRAULIC SYSTEM

Exploded View

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1. Push on nut

5. Piston rod bracket

- Retaining plate 3.
- 6. Hydraulic unit assembly

Refer to GI-4, "Components" for the symbols shown in the figure.

Removal and Installation

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CAUTION:

4.

It is prohibited to disassemble the hydraulic unit assembly components. Never remove cylinders and oil pressure hoses.

REMOVAL

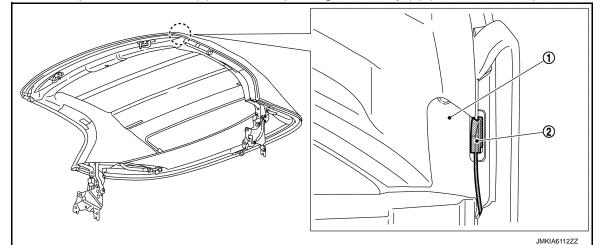
- Remove soft top assembly from the vehicle. Refer to <u>RF-155, "SOFT TOP ASSEMBLY : Exploded View"</u>.
- Remove soft top control unit. Refer to RF-235, "Exploded View". 2.
- 3. Remove bolt. Remove hydraulic pump bracket and hydraulic pump case.
- 4. Remove front rail weather-strip (LH and RH). Refer to RF-188, "ROOF SEALING : Exploded View".
- 5. Remove front rail weather-strip retainer (LH and RH). Refer to RF-188. "ROOF SEALING : Exploded View".

< REMOVAL AND INSTALLATION >

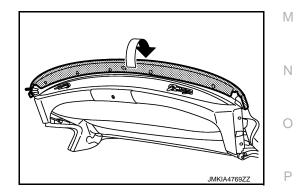
6. Remove soft top cover outer front retainer mounting screws (A).

7. Lift up soft top cover outer front retainer (1), and then pull up soft top cover outer (2) portion (A) to outside (both LH and RH).

8. Pull out soft top cover outer wire (2) from soft top linkage assembly (1) (both LH and RH).



9. Pull up front end of soft top cover outer.



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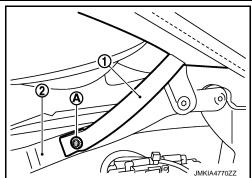
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< REMOVAL AND INSTALLATION >

Remove mounting rivet (A) of soft top outer bungee cord (1) from soft top linkage assembly (2) (LH and RH).
 CAUTION:

Cover the surrounding area because iron powder is spread when using a drill.

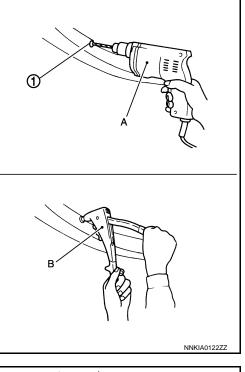


NOTE:

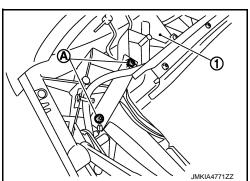
Removal and Installation of Rivet

- Grind the head of rivet (1) with a drill (A) [bit of ϕ 4.0 mm (ϕ 0.157 in)].
- Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

Crimping thickness	: 9.5 - 12.7 mm (0.374 - 0.500 in)
Prepared hole diameter	:
Used rivet head diameter	:



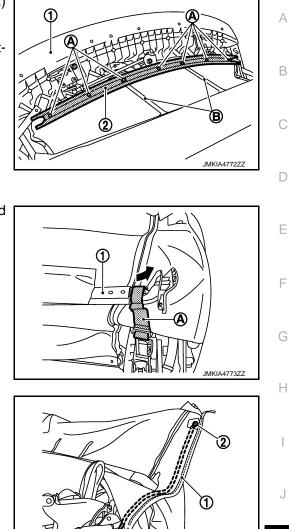
11. Remove soft top cover inner mounting screws (A) from 1st bow (1) (LH and RH).



< REMOVAL AND INSTALLATION >

12. Remove mounting screws (A) of soft top cover inner retainer (2) from 1st bow (1).NOTE:

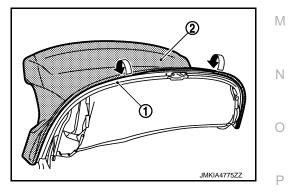
Soft top cover inner strap (B) and soft top cover inner are tightened together to 1st bow.



- 13. Remove 2nd bow mounting bolts.
- 14. Remove soft top linkage assembly bungee cord (A) from 2nd bow (1) (LH and RH).

15. Pull out wire (2) from soft top cover outer (1) (LH and RH).

- 16. Remove rear rail weather-strip. Refer to RF-188. "ROOF SEALING : Exploded View".
- 17. Remove rear rail weather-strip retainer (LH and RH). Refer to <u>RF-188, "ROOF SEALING : Exploded</u> <u>View"</u>.
- 18. Remove rear end of soft top cover outer (2) from 5th bow (1).



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< REMOVAL AND INSTALLATION >

 Pull up soft top cover outer lateral side to outside from upper to lower. Remove double-sided tape (A) (LH and RH).

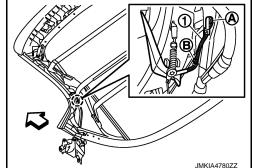
- 20. Remove E-clips (A). Disengage connection of soft top cover outer wire (2) from soft top linkage assembly pin (1) (LH and RH).
- Slide soft top cover outer (1) in the direction shown by the arrow. Simultaneously pull out retainer (3) and wire (4) from soft top linkage assembly (2) (LH and RH).
 CAUTION:

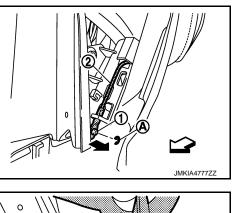
Write a short note to describe the wire locations and the retainer mounting positions.

22. Manually operate soft top linkage assembly to the open position.

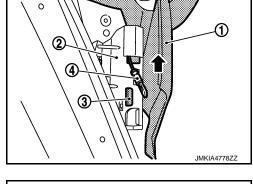
23. Pull up soft top cover outer lateral side to outside. Remove rivet (A) and screw (B) that secure soft top cover outer bungee cord (1) (LH and RH).
CAUTION:

Cover the surrounding area because iron powder is spread when using a drill.





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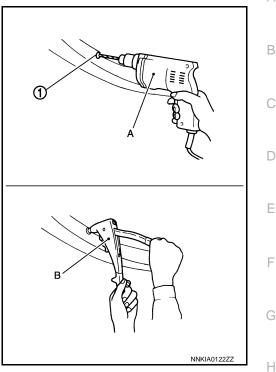
< REMOVAL AND INSTALLATION >

NOTE:

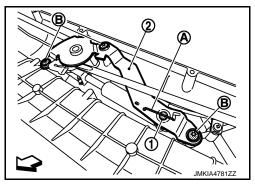
Removal and Installation of Rivet

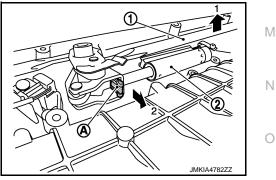
- 0.157 in)].
- · Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

Crimping thickness	: 4.8 - 8.0 mm (0.189 - 0.315 in)
Prepared hole diameter	:
Used rivet head diameter	:



- 24. Remove rear defogger connector. Pull out rear defogger harness from soft top inner (LH and RH).
- Remove roof latch lock sensor harness connector. Refer to <u>RF-236</u>, "Exploded View".
- 26. Remove spring lock (A). Pull out cylinder mounting pin (1) toward upper side of vehicle.
- 27. Remove TORX bolts (B). Remove 1st bow latch assembly center bracket (2).
 - : Vehicle front
- 28. Lift up center portion of 1st bow latch assembly (1). Remove retaining plate (A) of roof latch cylinder (2).





29. Remove band and screw that fix oil pressure hose to soft top linkage assembly. NOTE: Write a short note to describe the band and screw locations.

CAUTION:

Never sharply bend, twist or strongly pull oil pressure hose.

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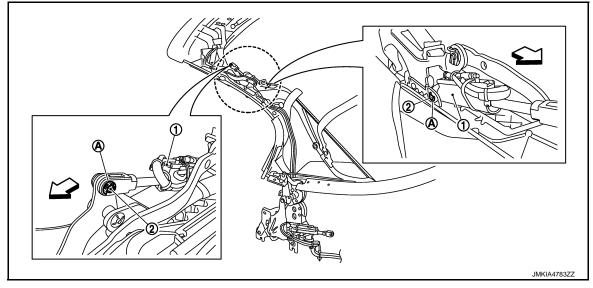
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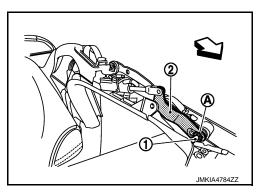
< REMOVAL AND INSTALLATION >

30. Remove E-clips (A) of 5th bow drive cylinder (1). Remove cylinder mounting pins (2) (LH and RH).



<□ : Vehicle front

- 31. Remove E-clip (A) and pin (1).
- 32. Lift up linkage (2). Pull out roof latch cylinder and oil pressure hose.



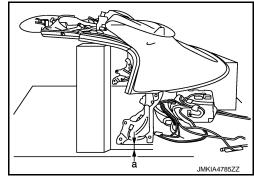
33. Place soft top assembly as shown in the figure. Maintain clearance (a).

NOTE:

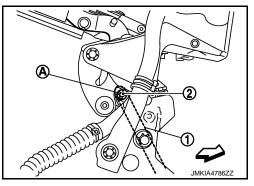
Do not allow soft top assembly to apply its own weight to installation portion of the vehicle body.

CAUTION:

Be careful not to turn over soft top assembly.



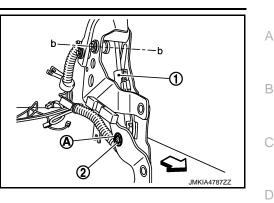
34. Remove E-clip (A). Remove mounting pin (2) of roof drive cylinder (1) (LH and RH).



< REMOVAL AND INSTALLATION >

Remove push on nut (A). Remove mounting pin (2) of roof drive cylinder (1) (LH and RH).
 CAUTION:

Be careful not to allow excessive twisting of rotating axis portion (b).



36. Remove hydraulic unit assembly from soft top linkage assembly. CAUTION:

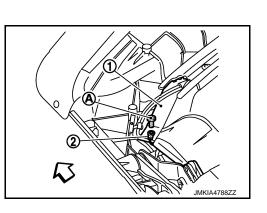
Never sharply bend, twist or strongly pull oil pressure hose.

INSTALLATION

Note the following items, and install in the reverse order of removal. **CAUTION:**

• Tighten soft top cover inner front end and bungee cord (2) together to soft top linkage assembly using screw (A), when installing soft top cover inner (1).

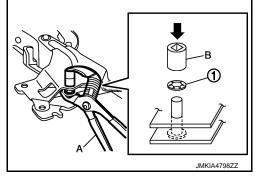




- After installing hydraulic unit assembly, manually operate soft top linkage assembly and check that oil pressure hose is not pinched.
- Manually operate and check that soft top assembly operates without interfering with other portions of the vehicle body.
- Before manually operating each cylinder of the hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and therefore it takes a period of time to lower oil pressure.)
- Perform fitting adjustment after installing soft top assembly. Refer to <u>RF-158, "SOFT TOP ASSEM-BLY : Adjustment"</u>.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-21</u>, <u>"Inspection and Adjustment"</u>.
- Perform leakage test.

NOTE:

 When installing push on nut (1), crimp it using water pump pliers (A) and socket (B).



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ROOF OPEN/CLOSE SWITCH

< REMOVAL AND INSTALLATION >

ROOF OPEN/CLOSE SWITCH

Exploded View

Refer to IP-25, "Exploded View".

Removal and Installation

Removal

- 1. Remove cup holder assembly. Refer to <u>IP-26, "Removal and Installation"</u>.
- 2. Remove roof open/close switch and disconnect the connector.

Installation

Install in the reverse order of removal.

SOFT TOP CONTROL UNIT

< REMOVAL AND INSTALLATION >

SOFT TOP CONTROL UNIT

Exploded View

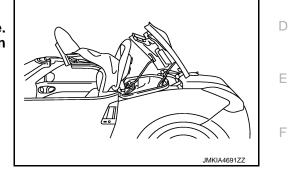
Refer to RF-11, "Component Parts Location".

Removal and Installation

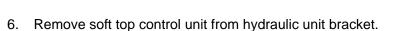
REMOVAL

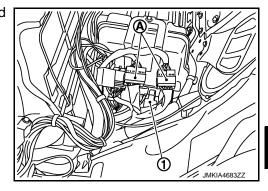
1. Operate soft top as shown in the figure. CAUTION:

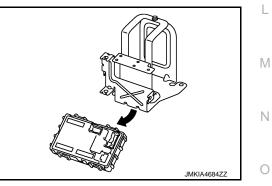
Storage lid and 5th bow may close due to low oil pressure. Always support storage lid and 5th bow in the fully open position using a support block.



- 2. Turn ignition switch OFF.
- 3. Disconnect battery cable from the negative terminal. Refer to <u>PG-113</u>, "Removal and Installation".
- 4. Remove storage room finisher LH. Refer to <u>RF-222</u>, "STORAGE ROOM FINISHER : Removal and Installation".
- 5. Disconnect soft top control unit (1) harness connector and hydraulic unit harness connectors (A).







INSTALLATION Install in the reverse order of removal.

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ROOF LATCH LOCK SENSOR

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ROOF LATCH LOCK SENSOR

Exploded View

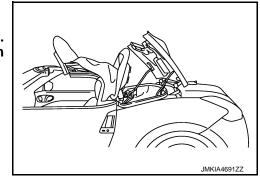
Refer to RF-163, "SOFT TOP COVER OUTER : Exploded View".

Removal and Installation

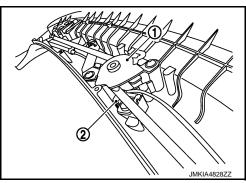
REMOVAL

1. Operate soft top as shown in the figure. CAUTION:

Storage lid and 5th bow may close due to low oil pressure. Always support storage lid and 5th bow in the fully open position using a support block.



- 2. Turn ignition switch OFF.
- 3. Pull up front end of soft top cover outer. Refer to <u>RF-164, "SOFT TOP COVER OUTER : Removal and Installation"</u>.
- 4. Remove roof lock assembly center (1).
- 5. Lift up roof lock assembly and remove roof latch lock sensor (2).



INSTALLATION Install in the reverse order of removal.

5TH BOW LATCH/STRIKER SENSOR ASSEMBLY

< REMOVAL AND INSTALLATION >

5TH BOW LATCH/STRIKER SENSOR ASSEMBLY

Exploded View

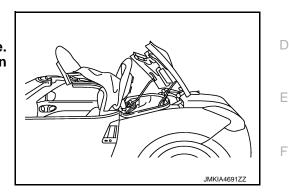
Refer to RF-201, "STORAGE LID ASSEMBLY : Exploded View".

Removal and Installation

REMOVAL

1. Operate soft top as shown in the figure. CAUTION:

Storage lid and 5th bow may close due to low oil pressure. Always support storage lid and 5th bow in the fully open position using a support block.



- 2. Turn ignition switch OFF.
- 3. Remove storage lid bracket assembly mounting nuts. Pull out storage lid bracket assembly from storage lid assembly.
- 4. Disconnect 5th bow latch/striker sensor assembly harness connector.
- 5. Remove 5th bow latch/striker sensor assembly.

INSTALLATION

Install in the reverse order of removal.

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