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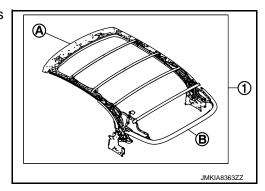
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# HOW TO USE THIS MANUAL

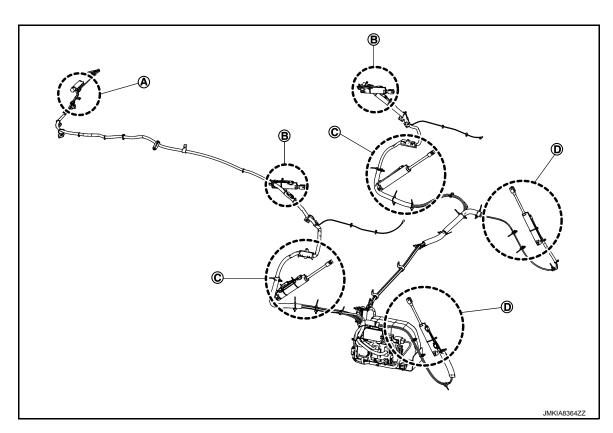
# HOW TO USE THIS SECTION

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.



- In this section, the name for each part of the hydraric system is as per the following list.
  - (A) :Roof latch cylinder
  - (B) :5th bow drive cylinder
  - (C) :Roof drive cylinder
  - (D) :Storage lid drive cylinder



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# **PRECAUTION**

### **PRECAUTIONS**

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 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.

## **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.

## 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 <a href="RF-238"><u>RF-238</u></a>, <a href="Exploded View"</a>.

#### **WARNING:**

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

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#### < PRECAUTION >

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.

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.

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# **PREPARATION**

# **PREPARATION**

# **Commercial Service Tool**

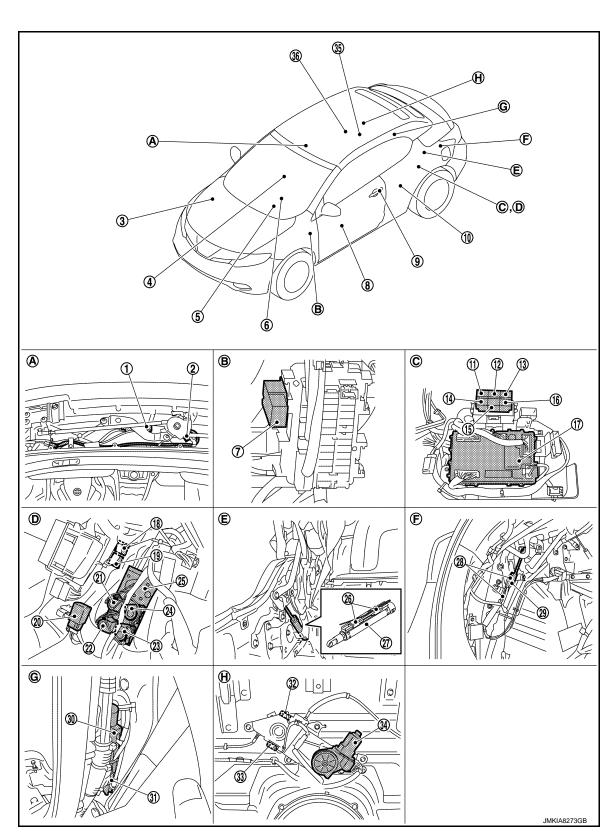
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	Tool name	Description	
Engine ear	SIIA0995E	Locates the noise	
Remover tool	JMKIA3050ZZ	Removes the clips, pawls and metal clips	

# SYSTEM DESCRIPTION

# **COMPONENT PARTS**

**Component Parts Location** 



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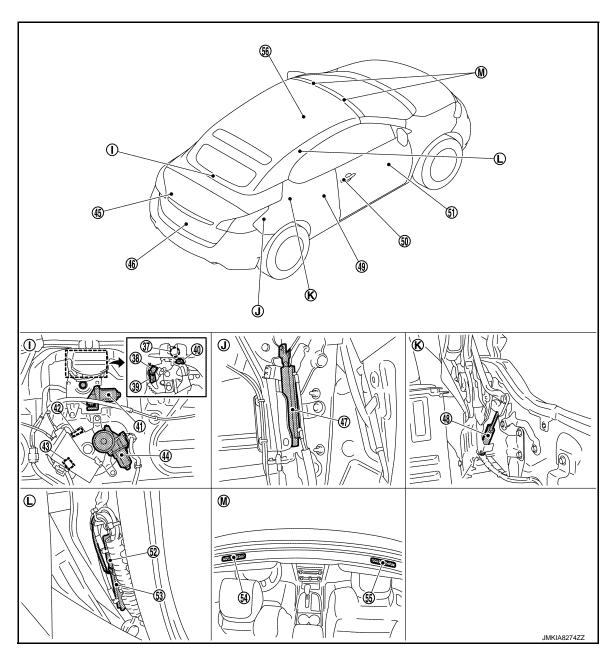
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- A. Behind front roof garnish
- D. Behind trunk room trim LH
- G. 3.5 bow LH side

- B. Behind instrument lower panel LH
- E. Storage room LH side
- H. Behind rear seat back
- C. Behind trunk room trim LH
- F. Behind trunk room trim LH



I. Backside of storage lid

L. 3.5 bow RH side

- J. Behind trunk room trim RH
- M. Behind roof front finisher

K. Storage room RH side

No.	Item	Function
1.	Roof latch cylinder	Soft top control unit operates the roof latch cylinder by hydraulic pressure to lock and unlock the roof lock assembly.
2.	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 judgment of roof latch cylinder hydraulic control or soft top lock state.

## **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

No.	Item	Function		
3.	ABS actuator and electric unit (control unit)	Transmits vehicle speed signal to CAN communication line.  When the vehicle speed is more than 5 km/h, soft top control unit prohibits any roof operation Refer to <a href="https://example.com/BRC-8">BRC-8</a> , "Component Parts Location" for detailed installation location.		
4.	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.		
5.	BCM	Transmits rear window defogger ON signal, trunk lid open signal, power window up/down signal, and roof open/close signal (door request switch operation) to soft top control unit.  Refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location" for detailed installation location.		
6.	Combination meter	Transmits vehicle speed signal to CAN communication line. When the vehicle speed is more than 5 km/h, soft top control unit prohibits any roof operation.		
7.	Back-up lamp relay	Transmits reverse signal.  When the reverse signal is ON, soft top control unit prohibits any roof operation.		
8.	Power window main switch	The soft top control unit supplies power supply to up/down windows.		
9.	Door request switch (front outside handle LH)	Request switch can perform an open operation.		
10.	Rear power window switch LH	The soft top control unit supplies power supply to up/down windows.		
11.	Storage lid lock relay 2	Storage lid lock relay 2 is controlled by soft top control unit and controls the close operation of closure motor (storage lid lock assembly).		
12.	Storage lid lock relay 1	Storage lid lock relay 1 is controlled by soft top control unit and controls the open operation of closure motor (storage lid lock assembly).		
13.	Outside flap motor relay 2	Outside flap motor relay 2 is controlled by soft top control unit and controls the storage operation of outside motor.		
14.	Outside flap motor relay 1	Outside flap motor relay 1 is controlled by soft top control unit and controls the deployment operation of outside motor.		
15.	Inside flap motor relay 2	Inside flap motor relay 2 is controlled by soft top control unit and controls the storage operation of inside motor.		
16.	Inside flap motor relay 1	Inside flap motor relay 1 is controlled by soft top control unit and controls the deployment operation of outside motor.		
17.	Soft top control unit	Soft top control unit is a main unit that controls soft top system.  It is behind trunk room trim LH.		
18.	Hydraulic pump relay 1	Hydraulic pump relay 1 is controlled by soft top control unit and controls the left rotation direction of hydraulic pump motor.		
19.	Hydraulic pump relay 2	Hydraulic pump relay 2 is controlled by soft top control unit and controls the right rotation direction of hydraulic pump motor.		
20.	Circuit breaker	Circuit breaker protects electrical circuits from damage caused by overload or short to power.		
21.	Switching valve 4			
22.	Switching valve 3	Switching valve is integrated in hydraulic unit, switches hydraulic circuit by ON/OFF of valve 1/		
23.	Switching valve 2	2/3/4, and controls hydraulic operation to each cylinder.		
24.	Switching valve 1			
25.	Hydraulic unit	<ul> <li>Hydraulic pump motor and hydraulic pump temperature sensor are integrated in hydrauli unit.</li> <li>Hydraulic pump motor: Hydraulic pump motor drives hydraulic pump and controls the rotati direction using hydraulic pump motor relay.</li> <li>Hydraulic pump temperature sensor: Hydraulic pump temperature sensor measures the temperature of hydraulic pump motor. This sensor uses a thermistor and its electrical resistan varies as the temperature varies. Electrical resistance decreases as the temperature increes.</li> </ul>		
26.	Roof status sensor LH	Roof status sensor LH is installed to roof drive cylinder LH. The sensor consists of a permanent magnet and Hall IC. When roof drive cylinder is open or closed, 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 roof by this amount of current.		

# **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

No.	Item	Function	
27.	Roof drive cylinder LH	The soft top control operates the roof drive cylinder LH by hydraulic pressure to open and close the roof.	
28.	Storage lid status sensor LH	Storage lid status sensor LH is installed to storage lid drive cylinder LH.  The sensor consists of a permanent magnet and Hall IC.  When storage lid drive cylinder is open or closed, 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 storage lid by this amount of current.	
29.	Storage lid drive cylinder LH	The soft top control operates the storage lid drive cylinder LH by hydraulic pressure to open and close the storage lid.	
30.	5th bow drive cylinder LH	Soft top control unit operates the 5th bow drive cylinder LH by hydraulic pressure to raised and lowered the 5th bow.	
31.	5th bow status sensor LH	5th bow status sensor LH is installed to 5th bow drive cylinder LH.  The sensor consists of a permanent magnet and Hall IC.  When 5th bow drive cylinder is raised or lowered, 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.	
32.	Storage switch (inside flap sensor)	Inputs inside flap storage condition to soft top control unit.	
33.	Deployment switch (inside flap sensor)	Inputs inside flap deployment condition to soft top control unit.	
34.	Inside flap motor	Inputs deployment/storage signal from soft top control unit and activates the inside flap operation.	
35.	TEL adapter unit (without navigation)	Soft top control unit transmits roof position signal to TEL adapter unit.  TEL adapter unit uses this signal for voice recognition function.  Refer to AV-10, "Component Parts Location" for detailed installation location.	
36.	BOSE amp. (with navigation)	Soft top control unit transmits roof position signal to BOSE amp.  BOSE amp. uses this signal for sound equalizer automatic switching function.  Refer to AV-138, "Component Parts Location" for detailed installation location.	
37.	Storage lid door switch (storage lid lock assembly)	Inputs storage lid open/close condition to soft top control unit.	
38.	Open switch (storage lid lock assembly)	Inputs closure motor open operate condition to soft top control unit.	
39.	Close switch (storage lid lock assembly)	Inputs closure motor close operate condition to soft top control unit.	
40.	Half latch switch (storage lid assembly)	Half latch switch detects engaging state of striker and latch.	
41.	Closure motor (storage lid lock assembly)	Inputs open/close signal from soft top control unit and activates the storage lid closure operation.	
42.	Storage switch (outside flap sensor)	Inputs outside flap storage condition to soft top control unit.	
43.	Deployment switch (outside flap sensor)	Inputs outside flap deployment condition to soft top control unit.	
44.	Outside flap motor	Inputs deployment/storage signal from soft top control unit and activates the outside flap oper ation.	
45.	Tonneau board switch	Tonneau board switch detects tonneau board condition for the precondition.	
46.	Trunk lid lock assembly	<ul> <li>Trunk lid opener actuator and trunk room lamp switch are integrated in trunk lid lock assembly.</li> <li>Trunk lid opener actuator: Opens the trunk lid with the open signal from BCM.</li> <li>Trunk room lamp switch: Detects trunk lid open/close condition.</li> </ul>	
47.	Storage lid drive cylinder RH	The soft top control operates the storage lid drive cylinder RH by hydraulic pressure to open and close the storage lid.	
48.	Roof drive cylinder RH	The soft top control operates the roof drive cylinder RH by hydraulic pressure to open and close the roof.	

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

No.	Item	Function	
49.	Rear power window switch RH	The soft top control unit supplies power supply to up/down windows.	
50.	Door request switch (front outside handle RH)	Request switch can perform an open operation.	
51.	Power window switch (passenger side)	The soft top control unit supplies power supply to up/down windows.	
52.	5th bow status sensor RH	5th bow status sensor LH is installed to 5th bow drive cylinder LH.  The sensor consists of a permanent magnet and Hall IC.  When 5th bow drive cylinder is raised or lowered, the position of piston and sensor in the cinder 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.	
53.	5th bow drive cylinder RH	Soft top control unit operates the 5th bow drive cylinder RH by hydraulic pressure to raise and lower the 5th bow.	
54.	Roof striker sensor RH	Roof striker sensor is installed to roof front finisher RH. It detects engaging state of roof lock assembly hook and front lock striker and transmits ON signal to soft top control unit.	
55.	Roof striker sensor LH	Roof striker sensor is installed to roof front finisher LH. It detects engaging state of roof lock assembly hook and front lock striker and transmits ON signal to soft top control unit.	
56.	Air bag diagnosis sensor unit	Transmits the pop-up roll bar deployment signal and malfunction signal when air bag diagnosis sensor unit detects roll over.  Refer to <a href="SRC-7">SRC-7</a> , "Component Parts Location" for detailed installation location.	

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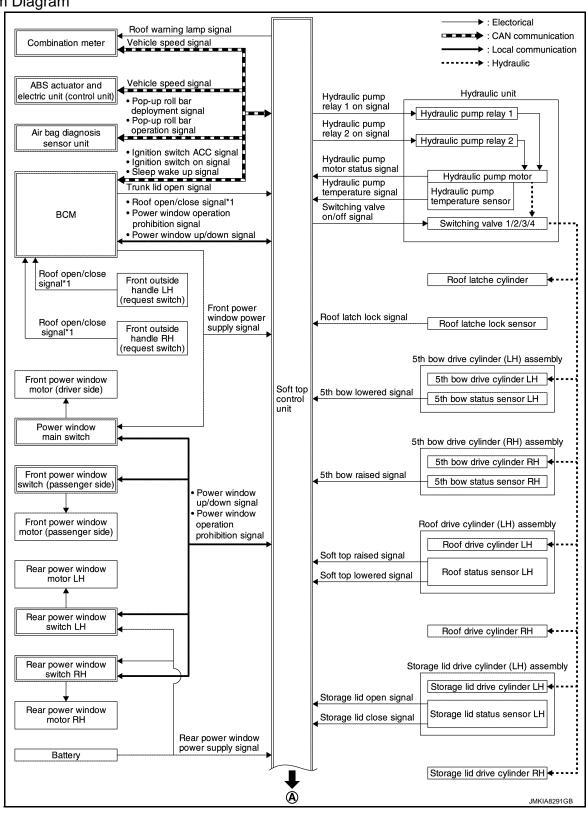
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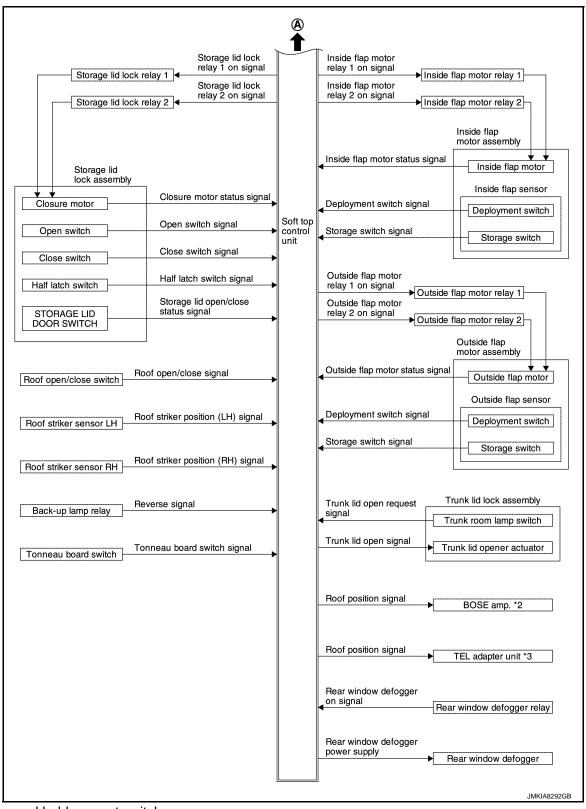
### SOFT TOP SYSTEM

# SOFT TOP SYSTEM: System Description

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- \*1: Press and hold request switch.
- \*2: With navigation system.
- \*3: Without navigation system.

#### SYSTEM 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.

The roof system operates only if all of the following conditions are satisfied.

Α

Item	Condition
Air temperature	More than 0°C (32°F)
Soft top control unit power supply	More than 10.5 V
Ignition switch position	ON (not in START) *
Pop-up roll bar	Air bag diagnosis sensor unit does not detect DTC related to pop-up roll bar
Power window system	State that can be operated
Self diagnostic result	DTC is not detected
Selector lever position	Not in R position
Thermo protection	Not active
Tonneau board	Hooked
Trunk lid	Closed
Vahiala anaad	0 km/h (roof starts to operate)
Vehicle speed	5 km/h or less (roof operates)

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

### 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	Operation		
	Full open/closed position	Half position	Operation	
Ignition switch OFF	OFF	OFF	OFF	
Ignition switch ON	OFF	Lighting	Lighting	
Trunk lid is not closed	OFF	Lighting	Lighting	
Ambient temperature is too low	OFF	Lighting	Lighting	
Tonneau board is not set	OFF	Lighting	Lighting	
When the vehicle speed exceeds 5 km/h	OFF	Blinking	Blinking	
Voltage malfunction of power window system	OFF	Blinking	Blinking	
Shift selector position is R	OFF	Blinking	Blinking	
Soft top control unit power supply (10.5 V or less/16 V or more)	Lighting *	Lighting	Lighting	
DTC is detected	Lighting *	Lighting	Lighting	

<sup>\*:</sup>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)	Sounds once	_	

#### < SYSTEM DESCRIPTION >

Operation/Condition	Buzzer sounds	Cause	Action
Release roof open/close switch		Roof state is not in end position (not in fully closed or fully open position)	Operate roof system to end position.
		Shift selector position is R	Shift the shift selector to P or N
	_	Trunk lid is not closed	Closed trunk lid
Doof avatam doos not aparata	Sounds twice	Tonneau board is not set	Set tonneau board
Roof system does not operate		Impossible operation is requested (A closed operation while the roof is fully closed or an open operation while the roof is fully open)	_
The vehicle is driven	Sounds once, long	Roof state is not in end position (not in fully closed or fully open position)	Fully closed or fully open roof system
Open operation by door request switch	Not sound	_	

#### THERMO PROTECT FUNCTION

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

- Do not operate when ambient temperature is low or when operation may cause system or mechanism to be damaged (The ambient temperature is built into soft top control unit).
- 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:**

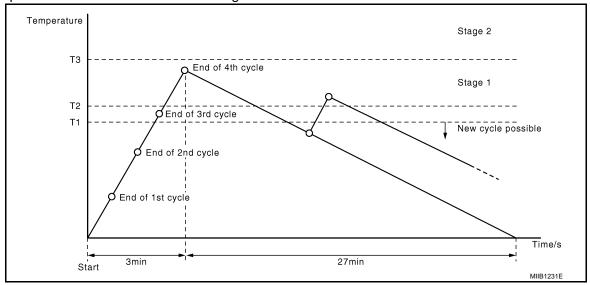
An unintentional operation of soft top or storage lid may occur due to its own weight because oil pressure is not maintained when switching valve is released. Be careful not to pinch hands.

NOTE:

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

 When roof open/close operation is continuously performed for 3–4 times, thermo protection is activated to prevent over heating and roof system operation is inhibited.

Soft top control unit controls of the following items.



Thermo protection Operation			
Stage 1 New soft top cycle is not possible (Between T2 and T3)			
Stage 2	All soft top operation is not possible (Above T3)		
_	After cooling down, all operations are possible (Bellow T1)		

#### SOFT TOP OPEN/CLOSE CONTROL

**Open Operation** 

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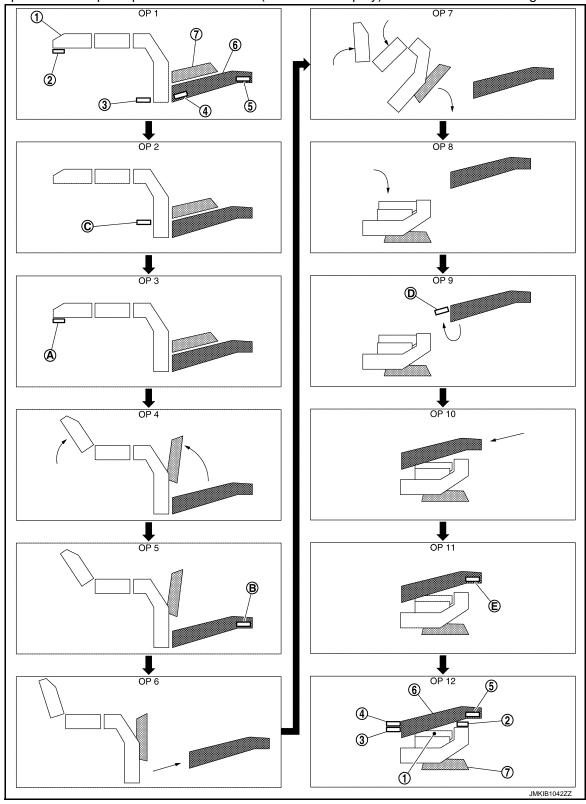
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When roof open/close switch is operated to OPEN, soft top system checks that operation conditions are satisfied and performs an open operation. Parts state (CONSULT display) is shown in the following table.



- 1. 1st bow
- 4. Outside flap
- 7. 5th bow
- A. Unlock
- D. Deployment (outside flap)
- 2. Front lock striker
- 5. Storage lid lock assembly
- B. Unlatch
- E. Latch

- 3. Inside flap
- 6. Storage lid
- C. Deployment (inside flap)

## < SYSTEM DESCRIPTION >

	state: OP1→OP6					SOF	T TOP S	TATE				
_	CONSULT data monitor item	0P 1	$\rightarrow$	OP 2	$\rightarrow$	OP 3	$\rightarrow$	0P 4	$\rightarrow$	OP 5	$\rightarrow$	0P 6
	ROOF LATCHED LH	ON	_	ON	_	OFF	_	OFF	_	OFF	_	OFF
	ROOF LATCHED RH	ON	_	ON	_	OFF	_	OFF		OFF	_	OFF
	F/CENTER LOCK	ON	_	ON	_	OFF	_	OFF	_	OFF	_	OFF
	R/RAIL RAISED LH	ON		ON		ON		ON		ON	_	ON
	R/RAIL LOWERED	OFF		OFF		OFF		OFF	_	OFF	_	OFF
	5TH BOW LOWERED	ON	_	ON	_	ON	-	OFF	-	OFF	_	OFF
	5TH BOW RAISED	OFF	_	OFF	_	OFF	_	ON	_	ON	_	ON
	S/LID OPEN LH	OFF	_	OFF		OFF		OFF		OFF	_	ON
Input	STORAGE LID CLOSE LH	ON	_	ON		ON		ON		ON	_	OFF
_	INSIDE FLAP DEPLOYMENT	OFF	_	ON								
	INSIDE FLAP STORAGE	ON	_	OFF	_	OFF	_	OFF		OFF	_	OFF
	OUTSIDE FLAP DEPLOYMENT	OFF	_	OFF	_	OFF		OFF		OFF	_	OFF
	OUTSIDE FLAP STORAGE	ON	_	ON								
	STORAGE LID DOOR SWITCH	ON	_	ON	_	ON		ON		OFF	_	OFF
	S/LID LOCK HALF LATCH SW	OFF	_	OFF		OFF	ON*	ON		ON	_	ON
	S/LID LOCK OPEN SW	OFF	_	OFF		OFF	ON*	OFF		OFF	_	OFF
	S/LID LOCK CLOSE SW	OFF	_	OFF	_	OFF	ON*	OFF	_	OFF	_	OFF
	PUMP OUT (RH)	_	OFF	_	ON	_	ON	_	OFF	_	ON	
	PUMP OUT (LH)		OFF		OFF	_	OFF	_	OFF		OFF	_
	SWITCHING VALVE 1	_	OFF	_	ON	_	ON	_	ON	_	ON	_
	SWITCHING VALVE 2		OFF		OFF	_	ON	_	ON		OFF	
	SWITCHING VALVE 3	_	OFF	_	OFF	_	ON	_	ON	_	ON	
but	SWITCHING VALVE 4	_	OFF	_	ON	_	ON	_	ON	_	ON	
Output	INSIDE FLAP MOTOR RELAY 1		ON		OFF	_	OFF	_	OFF		OFF	
	INSIDE FLAP MOTOR RELAY 2		OFF		OFF	_	OFF	_	OFF		OFF	
	OUTSIDE FLAP MOTOR RELAY 1		OFF		OFF	_	OFF	_	OFF		OFF	
	OUTSIDE FLAP MOTOR RELAY 2	_	OFF									
	STORAGE LID LOCK RELAY 1	_	OFF	_	OFF	_	OFF		ON*	_	OFF	
	STORAGE LID LOCK RELAY 2	_	OFF	_	OFF	_	OFF		ON*	_	OFF	

<sup>\*:</sup> For storage lid closure control, refer to RF-29. "STORAGE LID CLOSURE CONTROL: System Description".

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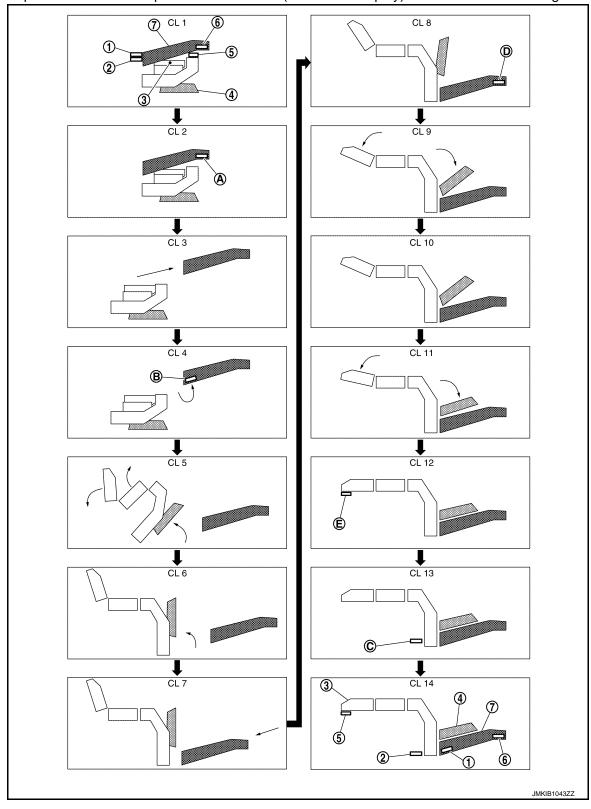
## < SYSTEM DESCRIPTION >

Оре	Open state: OP6→OP12													
							SOF	TOP S	STATE					
_	CONSULT data monitor item	0P 6	$\rightarrow$	0P 7	$\rightarrow$	OP 8	$\rightarrow$	OP 9	$\rightarrow$	OP 10	$\rightarrow$	OP 11	$\rightarrow$	OP 12
	ROOF LATCHED LH	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	ROOF LATCHED RH	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	F/CENTER LOCK	OFF	_	OFF		OFF	_	OFF	_	OFF	_	OFF	_	OFF
	R/RAIL RAISED LH	ON		OFF		OFF	_	OFF	_	OFF	_	OFF	_	OFF
	R/RAIL LOWERED	OFF		OFF		ON	_	ON	_	ON	_	ON	_	ON
	5TH BOW LOWERED	OFF		OFF		OFF	_	OFF	_	OFF	_	OFF	_	OFF
	5TH BOW RAISED	ON	1	ON		ON	_	ON	_	ON	_	ON	_	ON
_	S/LID OPEN LH	ON		ON		ON	_	ON	_	OFF	_	OFF	_	OFF
Input	STORAGE LID CLOSE LH	OFF		OFF	_	OFF	_	OFF	_	ON	_	ON		ON
	INSIDE FLAP DEPLOYMENT	ON		ON		ON	_	OFF	_	OFF	_	OFF	_	OFF
	INSIDE FLAP STORAGE	OFF	_	OFF	_	OFF	_	ON	_	ON	_	ON	_	ON
	OUTSIDE FLAP DEPLOYMENT	OFF	_	OFF	_	OFF	_	ON	_	ON	_	ON	_	ON
	OUTSIDE FLAP STORAGE	ON	_	ON	_	ON	_	OFF	_	OFF	_	OFF	_	OFF
	STORAGE LID DOOR SWITCH	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	ON	_	ON
	S/LID LOCK HALF LATCH SW	ON		ON	1	NO		NO	_	ON	OFF*	OFF		OFF
	S/LID LOCK OPEN SW	OFF		OFF		OFF		OFF	_	OFF	ON*	OFF		OFF
	S/LID LOCK CLOSE SW	OFF	_	OFF	_	OFF	_	OFF	_	OFF	ON*	OFF	_	OFF
	PUMP OUT (RH)	_	ON	_	ON		OFF		ON	_	OFF		OFF	_
	PUMP OUT (LH)	_	OFF	_	OFF		OFF		OFF	_	OFF		OFF	_
	SWITCHING VALVE 1	_	ON	_	ON		NO		ON	_	ON		OFF	_
	SWITCHING VALVE 2	_	OFF	_	OFF		OFF		ON	_	ON		OFF	
	SWITCHING VALVE 3	_	ON	_	ON		OFF	_	OFF	_	OFF		OFF	
Output	SWITCHING VALVE 4	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_
Õ	INSIDE FLAP MOTOR RELAY 1	_	OFF	_	OFF		OFF	_	OFF	_	OFF		OFF	
	INSIDE FLAP MOTOR RELAY 2	_	OFF	_	OFF		ON	_	OFF	_	OFF		OFF	
	OUTSIDE FLAP MOTOR RELAY 1	_	OFF	_	OFF	_	ON	_	OFF	_	OFF	_	OFF	_
	OUTSIDE FLAP MOTOR RELAY 2	_	OFF		OFF	_	OFF	_	OFF	_	OFF	_	OFF	_
	STORAGE LID LOCK RELAY 1	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_	OFF	_
	STORAGE LID LOCK RELAY 2	_	OFF	_	OFF	_	OFF		OFF	_	OFF	_	OFF	

<sup>\*:</sup> For storage lid closure control, refer to RF-29, "STORAGE LID CLOSURE CONTROL: System Description".

**Close Operation** 

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



- 1. Storage lid
- 4. 1st bow
- 7. Storage lid lock assembly
- A. Unlatch

Revision: 2014 February

D. Latch

- 2. Outside flap
- 5. 5th bow
- B. Storage (outside flap)
- E. Lock

- 3. Inside flap
- 6. Front lock striker
- C. Storage (inside flap)

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## < SYSTEM DESCRIPTION >

Close	state: CL1→CL6				200	T TOD C	TATE			
	CONCLUT data magnitum itama		T	_	501	T TOP S	IAIE		T	_
	CONSULT data monitor item	CL 1	$\rightarrow$	CL 2	$\rightarrow$	CT 3	$\rightarrow$	CL 4	$\rightarrow$	CL 5
	ROOF LATCHED LH	OFF	_	OFF	_	OFF		OFF	_	OFF
	ROOF LATCHED RH	OFF	_	OFF		OFF	_	OFF	_	OFF
	F/CENTER LOCK	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	R/RAIL RAISED LH	OFF	_	OFF	_	OFF		OFF	_	OFF
	R/RAIL LOWERED	ON	_	ON	_	ON	_	ON	_	OFF
	5TH BOW LOWERED	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	5TH BOW RAISED	ON	_	ON		ON	_	ON	_	ON
	S/LID OPEN LH	OFF	_	OFF		ON	_	ON	_	ON
Input	STORAGE LID CLOSE LH	ON	_	ON	_	OFF	_	OFF	_	OFF
_	INSIDE FLAP DEPLOYMENT	OFF	_	OFF	_	OFF	_	ON	_	ON
	INSIDE FLAP STORAGE	ON	_	ON	_	ON	_	OFF	_	OFF
	OUTSIDE FLAP DEPLOYMENT	ON	_	ON	_	ON	_	OFF	_	OFF
	OUTSIDE FLAP STORAGE	OFF	_	OFF	_	OFF	_	ON	_	ON
	STORAGE LID DOOR SWITCH	ON	_	OFF	_	OFF	_	OFF	_	OFF
	S/LID LOCK HALF LATCH SW	OFF	ON*	ON	_	ON	-	ON	_	ON
	S/LID LOCK OPEN SW	OFF	ON*	OFF	_	OFF	_	OFF	_	OFF
	S/LID LOCK CLOSE SW	OFF	ON*	OFF	_	OFF	_	OFF	_	OFF
-	PUMP OUT (RH)	_	OFF	_	ON	_	OFF	_	ON	_
	PUMP OUT (LH)	_	OFF	_	OFF	_	OFF	_	OFF	_
	SWITCHING VALVE 1	_	OFF	_	ON	_	ON		ON	_
	SWITCHING VALVE 2	_	OFF	_	OFF	_	OFF		OFF	_
	SWITCHING VALVE 3	_	OFF	_	ON	_	ON	_	OFF	_
Output	SWITCHING VALVE 4	_	OFF	_	ON	_	ON	_	ON	_
Ont	INSIDE FLAP MOTOR RELAY 1	_	OFF	_	OFF	_	ON		OFF	_
	INSIDE FLAP MOTOR RELAY 2	_	OFF	_	OFF	_	OFF		OFF	_
	OUTSIDE FLAP MOTOR RELAY 1	_	OFF	_	OFF		OFF	_	OFF	_
	OUTSIDE FLAP MOTOR RELAY 2	_	OFF	_	OFF	_	ON	_	OFF	_
	STORAGE LID LOCK RELAY 1	_	ON*	_	OFF	_	OFF	_	OFF	_
	STORAGE LID LOCK RELAY 2	_	ON*	_	OFF	_	OFF	_	OFF	_

<sup>\*:</sup> For storage lid closure control, refer to RF-29, "STORAGE LID CLOSURE CONTROL: System Description".

Oper	state: OP6→OP12						T TC 5 -					
			T .			SOF	T TOP S	TATE		T.	T .	
_	CONSULT data monitor item	CL 5	$\rightarrow$	CL 6	$\rightarrow$	CL 7	$\rightarrow$	CL 8	$\rightarrow$	CL 9	$\rightarrow$	CL 10
	ROOF LATCHED LH	OFF	_	OFF								
	ROOF LATCHED RH	OFF	_	OFF								
	F/CENTER LOCK	OFF	_	OFF								
	R/RAIL RAISED LH	OFF	_	ON								
	R/RAIL LOWERED	OFF	_	OFF								
	5TH BOW LOWERED	OFF	_	OFF								
	5TH BOW RAISED	ON	_	ON	_	ON	_	ON	_	OFF	_	OFF
	S/LID OPEN LH	ON	_	ON	_	OFF	_	OFF	_	OFF	_	OFF
Input	STORAGE LID CLOSE LH	OFF	_	OFF	_	ON	_	ON	_	ON	_	ON
_	INSIDE FLAP DEPLOYMENT	ON	_	ON								
	INSIDE FLAP STORAGE	OFF	_	OFF								
	OUTSIDE FLAP DEPLOYMENT	OFF	_	OFF								
	OUTSIDE FLAP STORAGE	ON	_	ON								
	STORAGE LID DOOR SWITCH	OFF	_	OFF	_	OFF	_	ON	_	ON	_	ON
	S/LID LOCK HALF LATCH SW	ON	_	ON	_	ON	OFF*	OFF	_	OFF	_	OFF
	S/LID LOCK OPEN SW	OFF	_	OFF	_	OFF	ON*	OFF	_	OFF	_	OFF
	S/LID LOCK CLOSE SW	OFF	_	OFF	_	OFF	ON*	OFF	_	OFF	_	OFF
	PUMP OUT (RH)	_	ON		ON		OFF		OFF	_	OFF	_
	PUMP OUT (LH)	_	OFF	_	OFF	_	OFF	_	ON	_	OFF	_
	SWITCHING VALVE 1	_	ON		ON		ON		ON	_	ON	_
	SWITCHING VALVE 2	_	OFF		ON		ON		ON	_	ON	_
	SWITCHING VALVE 3	_	OFF		OFF		OFF		OFF	_	OFF	_
Output	SWITCHING VALVE 4	_	ON		ON		ON		ON	_	ON	_
Ont	INSIDE FLAP MOTOR RELAY 1	_	OFF		OFF		OFF		OFF	_	OFF	_
	INSIDE FLAP MOTOR RELAY 2	_	OFF	_								
	OUTSIDE FLAP MOTOR RELAY 1	_	OFF	_								
	OUTSIDE FLAP MOTOR RELAY 2	_	OFF		OFF		OFF		OFF	_	OFF	_
	STORAGE LID LOCK RELAY 1	_	OFF	_	OFF	_	ON*	_	OFF	_	OFF	_
	STORAGE LID LOCK RELAY 2	_	OFF	_	OFF	_	ON*	_	OFF	_	OFF	_

<sup>\*:</sup> For storage lid closure control, refer to RF-29. "STORAGE LID CLOSURE CONTROL: System Description".

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	state: OP6→OP12				SO	T TOP S	STATE			
_	CONSULT data monitor item	CL 10	$\rightarrow$	CL 11	$\rightarrow$	CL 12	$\rightarrow$	CL 13	$\rightarrow$	CL 14
-	ROOF LATCHED LH	OFF	_	OFF	_	ON	_	ON	_	ON
	ROOF LATCHED RH	OFF	_	OFF	_	ON	_	ON	_	ON
	F/CENTER LOCK	OFF	_	OFF	_	ON	_	ON	_	ON
	R/RAIL RAISED LH	ON	_	ON	_	ON	_	ON	_	ON
	R/RAIL LOWERED	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	5TH BOW LOWERED	OFF	_	ON	_	ON	_	ON	_	ON
	5TH BOW RAISED	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	S/LID OPEN LH	OFF	_	OFF	_	OFF	_	OFF	_	OFF
Input	STORAGE LID CLOSE LH	ON	_	ON	_	ON	_	ON	_	ON
_	INSIDE FLAP DEPLOYMENT	ON	_	ON	_	ON	_	OFF	_	OFF
	INSIDE FLAP STORAGE	OFF	_	OFF	_	OFF	_	ON	_	ON
	OUTSIDE FLAP DEPLOYMENT	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	OUTSIDE FLAP STORAGE	ON	_	ON	_	ON	_	ON	_	ON
	STORAGE LID DOOR SWITCH	ON	_	ON	_	ON	_	ON	_	ON
	S/LID LOCK HALF LATCH SW	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	S/LID LOCK OPEN SW	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	S/LID LOCK CLOSE SW	OFF	_	OFF	_	OFF	_	OFF	_	OFF
	PUMP OUT (RH)	_	OFF	_	OFF	_	OFF	-	OFF	_
	PUMP OUT (LH)	_	ON	_	ON	_	OFF	-	OFF	
	SWITCHING VALVE 1	_	ON	_	OFF	_	OFF	_	OFF	_
	SWITCHING VALVE 2	_	ON	_	ON	_	OFF	_	OFF	_
	SWITCHING VALVE 3	_	OFF	_	OFF	_	OFF	_	OFF	_
but	SWITCHING VALVE 4	_	ON	_	ON	_	OFF	_	OFF	_
Output	INSIDE FLAP MOTOR RELAY 1	_	OFF	_	OFF	_	OFF	_	OFF	_
	INSIDE FLAP MOTOR RELAY 2	_	OFF	_	OFF	_	ON	_	OFF	_
	OUTSIDE FLAP MOTOR RELAY 1	_	OFF	_	OFF	_	OFF	_	OFF	_
	OUTSIDE FLAP MOTOR RELAY 2	_	OFF	_	OFF	_	OFF		OFF	
	STORAGE LID LOCK RELAY 1	_	OFF	_	OFF	_	OFF	_	OFF	_
	STORAGE LID LOCK RELAY 2	_	OFF	_	OFF	_	OFF	_	OFF	_

<sup>\*:</sup> For storage lid closure control, refer to RF-29. "STORAGE LID CLOSURE CONTROL: System Description".

#### 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.

#### POWER WINDOW INTERLOCK CONTROL

If power window is not fully open when open and closed 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, power window switch (passenger side), rear power window switch LH, and rear power window switch RH.

Soft top control unit prohibits power window open control when roof position is intermediate.

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

#### REAR WINDOW DEFOGGER CONTROL

#### **SYSTEM**

< SYSTEM DESCRIPTION > 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/closed state. Soft top control unit supplies power supply to rear window defogger when soft top is closed. Power supply is not supplied when soft top is open. В Indicator illuminates when rear window switch is pressed while soft top is open and power supply is not supplied to rear window defogger. TRUNK LID OPEN CONTROL C Soft top control unit judges trunk lid open/closed state by trunk room lamp switch signal. Soft top system 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/closed posi-D tion. Е Н

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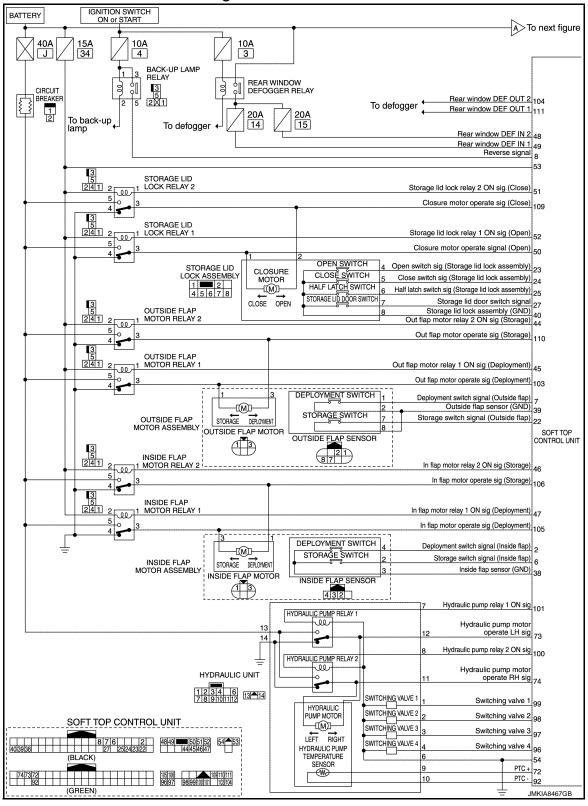
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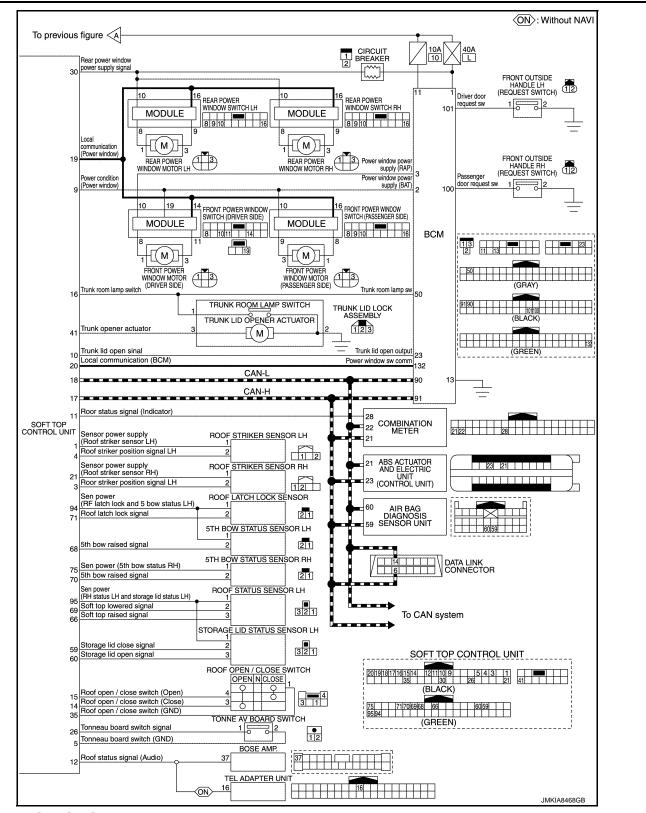
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Revision: 2014 February

# SOFT TOP SYSTEM: Circuit Diagram

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SOFT TOP SYSTEM: Fail-safe

### FAIL-SAFE CONTROL BY DTC

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

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	Display contents of CONSULT	Fail-safe	Cancellation
U1000	CAN COMM CIRCUIT	Inhibit roof open/close operation	Communication is normal
U1010	CONTROL UNIT (CAN)	Inhibit roof open/close operation	Communication is normal
U0140	LOCAL COMM-1	Inhibit roof open/close operation	Communication is normal
U0215	LOCAL COMM-2	Inhibit roof open/close operation	Communication is normal
B1701	ROOF CONTROL UNIT	Inhibit roof open operation	Replace soft top control unit
B1709	ROOF SWITCH(OPEN)	Inhibit roof open/close operation	Detects roof open/close switch (OPEN) is OFF
B170A	ROOF SWITCH(CLOSE)	Inhibit roof open/close operation	Detects roof open/close switch (CLOSE) is OFF
B170F	SENSOR POWER SUPPLY	Inhibit roof open/close operation	Detects normal value
B171A	HYDRAULIC PMP(LH)	Inhibit roof open/close operation	Detects normal value
B171B	HYDRAULIC PMP(RH)	Inhibit roof open/close operation	Detects normal value
B171C	SWITCHING VALVE 1	Inhibit roof open/close operation	Detects normal value
B171D	SWITCHING VALVE 2	Inhibit roof open/close operation	Detects normal value
B1731	HYDRAULIC STATE 1	Inhibit roof open/close operation	Turn ignition switch OFF
B1758	THERMO PROTECTION	Inhibit roof open/close operation	Turn ignition switch OFF and wait at least 5 minutes
B175C	PWR SOURCE(ROOF)	Inhibit roof open/close operation	Power source is 11.4 V or more for 0.5 second
B175D	PWR SOURCE(ROOF)	Inhibit roof open/close operation	Power source is 14.5 V or more for 4 seconds
B175E	PWR SOURCE(WINDOW)	Inhibit roof open/close operation and front power window operation	Power source (front power window) is 9 V or less
B175F	PWR SOURCE(WINDOW)	Inhibit roof open/close operation and front power window operation	Power source (front power window) is 16 V or more
B1766	SWITCHING VALVE 3	Inhibit roof open/close operation	Detects normal value
B1767	SWITCHING VALVE 4	Inhibit roof open/close operation	Detects normal value
B176A	THERMO PROTECTION	Inhibit roof open/close operation	Air temperature is 0°C (32°F) or more
B176B	ROOF WARNING LAMP	Inhibit roof open/close operation	Detects normal value
B176C	STRIKER SENSOR RH	Inhibit roof open/close operation	Detects normal value
B176D	STRIKER SENSOR LH	Inhibit roof open/close operation	Detects normal value
B176E	ROOF LATCH LOCK SENSOR	Inhibit roof open/close operation	Detects normal value
B176F	ROOF STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1771	ROOF STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1772	5BOW STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1773	5BOW STATUS SEN RH	Inhibit roof open/close operation	Detects normal value
B1774	S/LID STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1776	S/LID STATUS SEN RH*	Inhibit roof open/close operation	Detects normal value
B1777	REAR DEF OUT SIG	Inhibit rear window defogger operation	Detects normal value
B1778	TRUNK OPEN OUT SIG	Inhibit trunk lid opener actuator operation	Detects normal value
B1779	HYDRAULIC PMP T/SEN	Inhibit roof open operation	Detects normal value
B177A	ROOF STATE INCORRECT	Inhibit roof open/close operation	Detects normal value
B177B	ROOF STATE INCORRECT	Inhibit roof open/close operation	Detects normal value
B177C	THERMO PROTECTION	Inhibit roof open/close operation	Detects normal value
B1780	OUTSIDE FLAP MOTOR RELAY 1	Inhibit roof open/close operation	Detects normal value

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#### < SYSTEM DESCRIPTION >

	Display contents of CONSULT	Fail-safe	Cancellation		
B1781	OUTSIDE FLAP MOTOR RELAY 2	Inhibit roof open/close operation	Detects normal value		
B1782	INSIDE FLAP MOTOR RELAY 1	Inhibit roof open/close operation	Detects normal value		
B1783	INSIDE FLAP MOTOR RELAY 2	Inhibit roof open/close operation	Detects normal value		
B1784	STORAGE LID LOCK RELAY 1	Inhibit roof open/close operation	Detects normal value		
B1785	STORAGE LID LOCK RELAY 2	Inhibit roof open/close operation	Detects normal value		
B1786	OUTSIDE FLAP SENSOR	Inhibit roof open/close operation	Detects normal value		
B1787	INSIDE FLAP SENSOR	Inhibit roof open/close operation	Detects normal value		
B1788	STORAGE LID LOCK ASSEMBLY	Inhibit roof open/close operation	Detects normal value		
B1789	PWR SOURCE(WINDOW)	Inhibit roof open/close operation and rear power window operation	Power source (front power window) is 9 V or less     Power source (front power window) is 16 V or more		

<sup>\*:</sup> This item indicates the storage lid status sensor LH signal.

### STORAGE LID CLOSURE CONTROL

# STORAGE LID CLOSURE CONTROL: System Description

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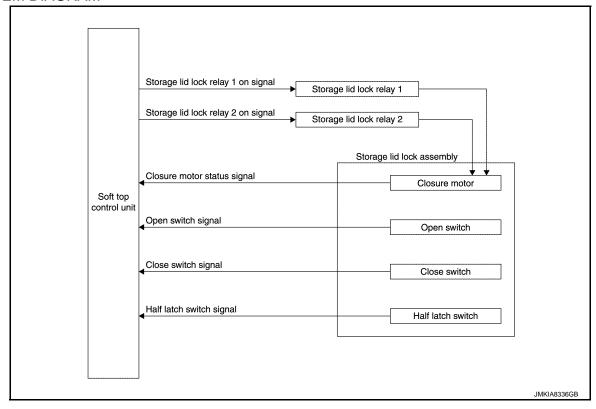
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#### SYSTEM DIAGRAM



### **CLOSURE OPERATION**

When storage lid is closed to the half-latched position, closure motor operates to rotate the latch lever from the half-latched to fully latched position and automatically closes storage lid.

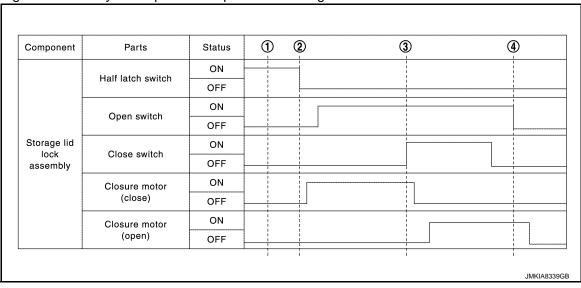
Then, closure motor reverses to the neutral position.

FROM FULLY OPEN TO FULLY CLOSED OPERATION

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The storage lid closure system operates as per the following.



No.	Stor	age lid lock assembly condition
1	Neutral position  2  JMKIAB341GB  1: Half-latch switch 2: Close switch 3: Open switch	Storage lid is fully open.
2	Closed operation	Storage lid closure motor starts the closed operation after turning half- latch switch OFF.

No.	Stor	age lid lock assembly condition
3	Closed position  JMKIAB343GB  Open operation  JMKIAB344GB	Storage lid closure motor stops the closed operation and starts the open operation after turning close switch ON.
4	Neutral position  JMKIAB348GB	Storage lid closure motor stops the open operation and returns the latch to the neutral position after turning open switch OFF.

#### **OPEN OPERATION**

When soft top state are OP3 or CL1 (refer to RF-14, "SOFT TOP SYSTEM: System Description"), soft top control unit transmits the storage lid lock relay ON signal to storage lid lock relay 1 and closure motor opens storage lid.

### FROM FULLY CLOSED TO FULLY OPEN OPERATION

The storage lid open system operates as per the following.

Component	Parts	Status	1 0	2)	3	4	\$
Storage lid lock assembly	Half latch switch	ON		!	!	-	
		OFF	<del></del>	} }			
	Open switch	ON		1			
		OFF					i
	Close switch	ON				i	
		OFF				1	
	Closure motor (close)	ON		1			
		OFF		1			
	Closure motor (open)	ON					
		OFF				1	

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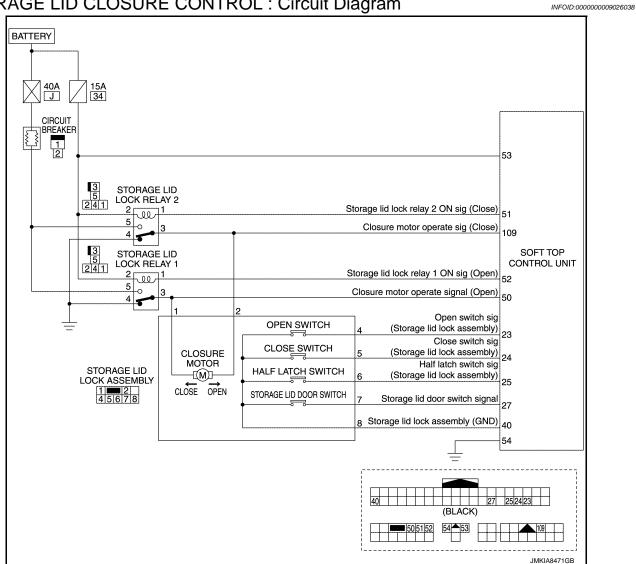
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No.	Storage lid lock assembly condition		
1	Neutral position  2  JMKIAB341GB  1: Half-latch switch 2: Close switch 3: Open switch	Storage lid is fully closed.	
2	Open operation  JMKIA8345GB	Storage lid closure motor starts the open operation after soft top state OP3 or CL1 (refer to RF-14, "SOFT TOP SYSTEM: System Description").	
3	Open position  JMKIA8346GB	Storage lid closure motor stops the open operation after turning open switch ON.	
4	Closed operation  JMKIA8347GB	Storage lid closure motor starts the closed operation after turning half latch switch ON.	
5	Neutral position  JMKIA8348GB	Storage lid closure motor stops the close operation and returns the latch to the neutral position after turning close switch OFF.	

# STORAGE LID CLOSURE CONTROL : Circuit Diagram



INSIDE FLAP CONTROL

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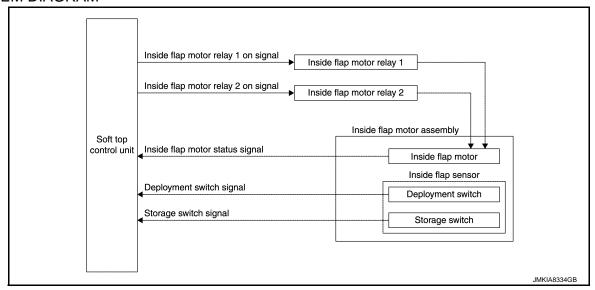
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# INSIDE FLAP CONTROL: System Description

INFOID:0000000009026039

### SYSTEM DIAGRAM



#### SYSTEM DESCRIPTION

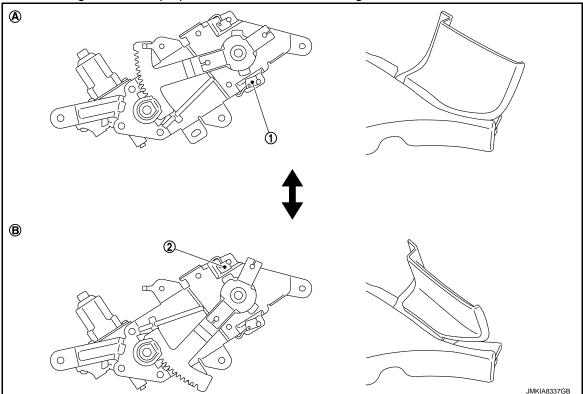
Inside flap motor assembly integrates inside flap motor and inside flap sensor (deployment switch and storage switch).

Deployment and storage operations are performed by inside flap motor.

Deployment and storage positions of inside flap are detected by inside flap sensor (deployment switch and storage switch).

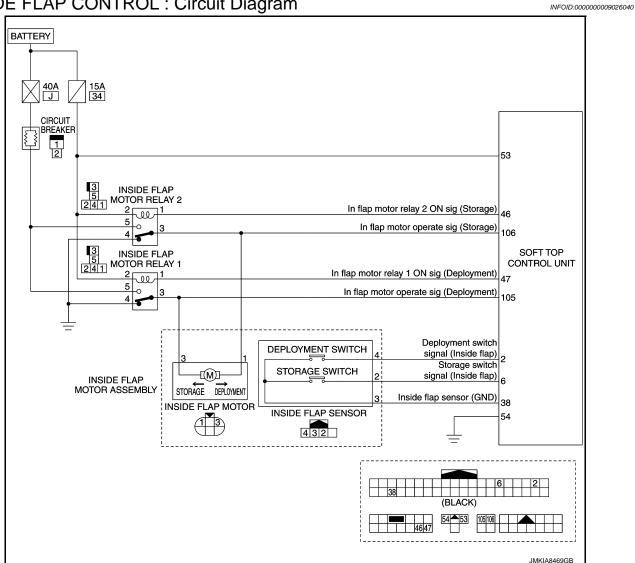
Soft top control unit performs deployment and storage operations of soft top system interlocking with inside flap and other soft top components.

Parts state according to inside flap operation is as shown in the figure.



- Deployment switch
  - Deployment position
- Storage switch
- B. Storage position





**OUTSIDE FLAP CONTROL** 

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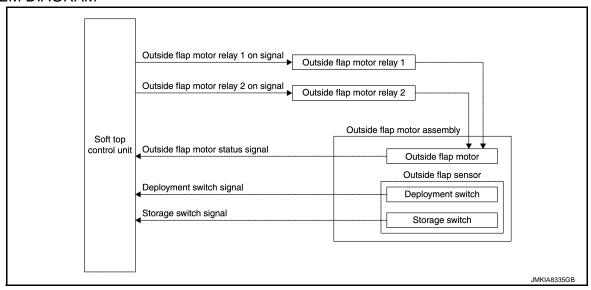
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# **OUTSIDE FLAP CONTROL: System Description**

INFOID:0000000009026041

### SYSTEM DIAGRAM



#### SYSTEM DESCRIPTION

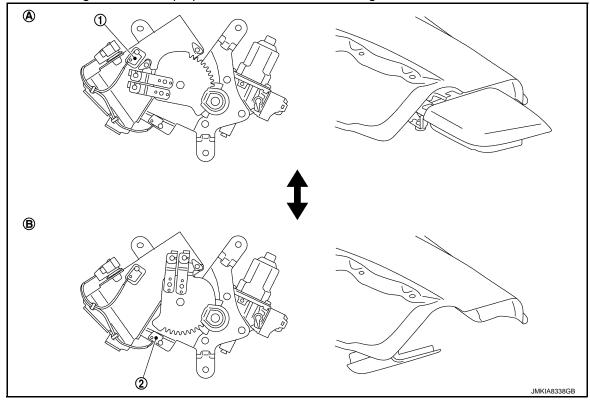
Outside flap motor assembly integrates outside flap motor and outside flap sensor (deployment switch and storage switch).

Deployment and storage operations are performed by outside flap motor.

Deployment and storage positions of outside flap are detected by outside flap sensor (deployment switch and storage switch).

Soft top control unit performs deployment and storage operations of soft top system interlocking with outside flap and other soft top components.

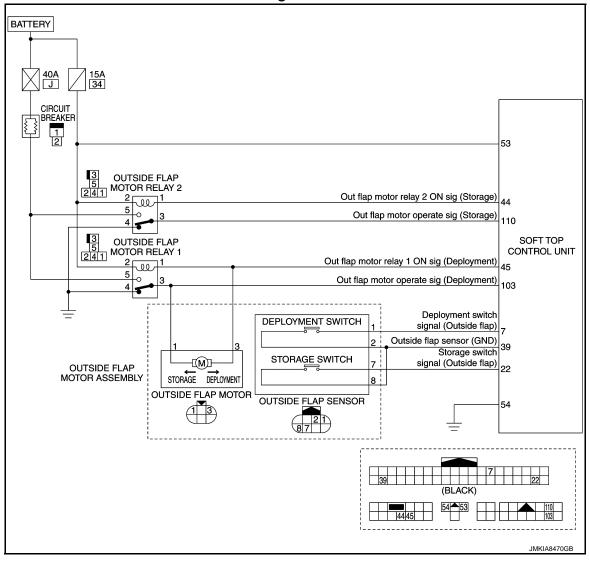
Parts state according to outside flap operation is as shown in the figure.



- 1. Deployment switch
- A. Deployment position

- Storage switch
- B. Storage position

## OUTSIDE FLAP CONTROL : Circuit Diagram



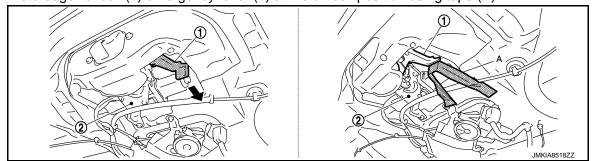
#### CORRESPONDENCE IN EMERGENCY

## CORRESPONDENCE IN EMERGENCY : System Description

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 open manually according to the following procedures.

## MANUAL OPERATION (SOFT TOP FULLY OPEN ⇒ FULLY CLOSE)

- 1. Open trunk lid.
- Open storage lid.
  - Fix storeage lid lock (2) emergency lever (1) at the unlock position using tape (A).



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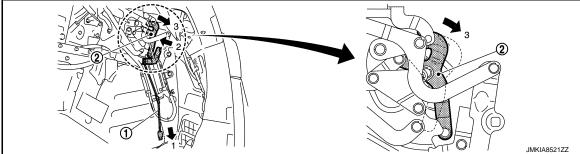
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#### < SYSTEM DESCRIPTION >

- Remove wheel rear finisher (LH and RH). Refer to <a href="INT-35">INT-35</a>, "WHEEL REAR FINISHER: Removal and Installation".
- Pull emergency cable (1) (LH and RH). Close trunk lid.



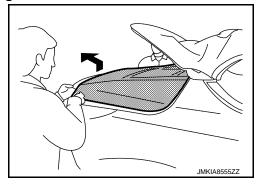
#### NOTE:

Unlock storage lid device assembly by pushing the linkage (2) directly using a tool, when storage lid device assembly cannot be unlocked by pulling storage lid device assembly emergency cable (1).

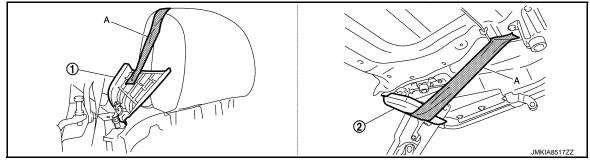
• Manually open storage lid from left and right side of the vehicle.

#### **CAUTION:**

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



- 3. Close soft top.
  - Disengage inside flap motor cable and storage lid hinge. Refer to <u>INT-30</u>, "<u>REAR PARCEL SHELF FRONT FINISHER</u>: <u>Removal and Installation</u>".
  - Fix inside flap (1) (LH and RH) and outside flap (2) (LH and RH) using tape (A).



- Pull up and close soft top from right and left side of the vehicle.
- Close storage lid. Close 1st bow and 5th bow at the same time.

#### **CAUTION:**

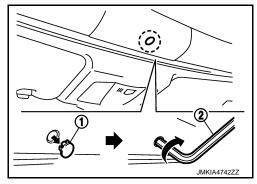
Fully close storage lid. Otherwise, storage lid may contact with soft top.

Lock the 1st Bow of soft top.

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

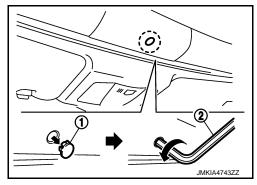
Be careful not to leave the vehicle outside for a long period of time or drive at high speeds.

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

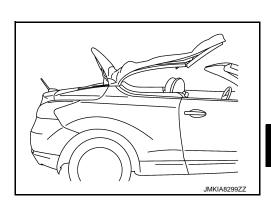


#### MANUAL OPERATION (SOFT TOP FULLY CLOSE ⇒ FULLY OPEN)

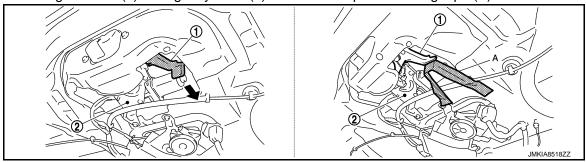
- 1. Unlock the 1st Bow of soft top.
  - Remove cap (1).
  - Insert a hexagonal wrench (2) into the hole and turn counterclockwise.



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



- 3. Open Trunk Lid.
- Open storage lid
  - Fix storeage lid lock (2) emergency lever (1) at the unlock position using tape (A).



• Remove wheel rear finisher (LH and RH). Refer to <a href="INT-35">INT-35</a>, "WHEEL REAR FINISHER: Removal and Installation".

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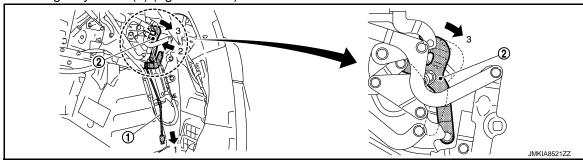
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• Pull emergency cable (1) (right and left). Close trunk lid.



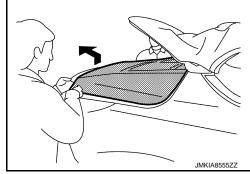
#### NOTE:

Unlock storage lid device assembly by pushing the linkage (2) derectly using a tool, when storage lid device assembly cannot be unlockde by pulling storage lid device assembly emergency cable (1).

• 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.



- Close storage lid.
  - Remove outside flap motor cable mounting nut (LH and RH).
  - Disengage inside flap motor and storagelid hinge. Refer to <a href="INT-30">INT-30</a>, "REAR PARCEL SHELF FRONT FINISHER: Removal and Installation".
  - Fix inside flap open psition using tape.

#### < SYSTEM DESCRIPTION >

## **DIAGNOSIS SYSTEM (SOFT TOP CONTROL UNIT)**

# CONSULT Function

#### INFOID:0000000009026044

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### **APPLICATION ITEM**

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

Diagnosis 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.	

#### **SELF-DIAG RESULT**

Refer to RF-57, "DTC Index".

#### 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	
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 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.	
S/LID OPEN LH	ON/OFF	Input state of storage lid status sensor LH is displayed.	
STORAGE LID CLOSE LH	ON/OFF	Input state of storage lid status sensor LH 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.	
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.	
OUTSIDE FLAP DEPLOYMENT	ON/OFF	Input state of outside flap sensor (deployment switch) is displayed.	
OUTSIDE FLAP STORAGE	ON/OFF	Input state of outside flap sensor (storage switch) is displayed.	
INSIDE FLAP DEPLOYMENT	ON/OFF	Input state of inside flap sensor (deployment switch) is displayed.	
INSIDE FLAP STORAGE	ON/OFF	Input state of inside flap sensor (storage switch) is displayed.	
S/LID LOCK OPEN SW	ON/OFF	Input state of storage lid lock assembly (open switch) is displayed.	
S/LID LOCK CLOSE SW	ON/OFF	Input state of storage lid lock assembly (close switch) is displayed.	
S/LID LOCK HALF LATCH SW	ON/OFF	Input state of storage lid lock assembly (half latch switch) is displayed.	

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## < SYSTEM DESCRIPTION >

CONSULT display		Description
STORAGE LID DOOR SWITCH	ON/OFF	Input state of storage lid lock assembly (storage lid door switch) is displayed.
OUT FLAP MOTOR RELAY 1	ON/OFF	Input state of outside flap motor relay 1 is displayed.
OUT FLAP MOTOR RELAY 2	ON/OFF	Input state of outside flap motor relay 2 is displayed.
INSIDE FLAP MOTOR RELAY 1	ON/OFF	Input state of inside flap motor relay 1 is displayed.
INSIDE FLAP MOTOR RELAY 2	ON/OFF	Input state of inside flap motor relay 2 is displayed.
STORAGE LID LOCK RELAY 1	ON/OFF	Input state of storage lid lock relay 1 is displayed.
STORAGE LID LOCK RELAY 2	ON/OFF	Input state of storage lid lock relay 2 is displayed.
TONNEAU BOARD SWITCH	ON/OFF	Input state of tonneau board switch is displayed.
TRUNK LID OP/CL STATUS	OPEN/CLOSE	Input state of trunk lid lock assembly (trunk room lamp switch) is displayed.

#### **DATA MONITOR**

#### NOTE:

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

CONSULT display		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 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.	
STORAGE LID CLOSE LH	ON/OFF/NG	Input state of storage lid status sensor LH 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.	
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.	
OUTSIDE FLAP DEPLOYMENT	ON/OFF/NG	Input state of outside flap sensor (deployment switch) is displayed.	
OUTSIDE FLAP STORAGE	ON/OFF/NG	Input state of outside flap sensor (storage switch) is displayed.	
INSIDE FLAP DEPLOYMENT	ON/OFF/NG	Input state of inside flap sensor (deployment switch) is displayed.	
INSIDE FLAP STORAGE	ON/OFF/NG	Input state of inside flap sensor (storage switch) is displayed.	
S/LID LOCK OPEN SW	ON/OFF/NG	Input state of storage lid lock assembly (open switch) is displayed.	
S/LID LOCK CLOSE SW	ON/OFF/NG	Input state of storage lid lock assembly (close switch) is displayed.	
S/LID LOCK HALF LATCH SW	ON/OFF/NG	Input state of storage lid lock assembly (half latch switch) is displayed.	
STORAGE LID DOOR SWITCH	ON/OFF/NG	Input state of storage lid lock assembly (storage lid door switch) is displayed.	
OUT FLAP MOTOR RELAY 1	ON/OFF/NG	Input state of outside flap motor relay 1 is displayed.	
OUT FLAP MOTOR RELAY 2	ON/OFF/NG	Input state of outside flap motor relay 2 is displayed.	
INSIDE FLAP MOTOR RELAY 1	ON/OFF/NG	Input state of inside flap motor relay 1 is displayed.	
INSIDE FLAP MOTOR RELAY 2	ON/OFF/NG	Input state of inside flap motor relay 2 is displayed.	
STORAGE LID LOCK RELAY 1	ON/OFF/NG	Input state of storage lid lock relay 1 is displayed.	
STORAGE LID LOCK RELAY 2	ON/OFF/NG	Input state of storage lid lock relay 2 is displayed.	
ROOF SW (OPEN)	ON/OFF	OPEN input state of roof open/close switch is displayed.	

## < SYSTEM DESCRIPTION >

CONSULT display		Description	
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 REQUEST SIG	ON/OFF	Input state of trunk open request signal from BCM is displayed.	
TRUNK LID OP/CL STATUS	OPEN/CLOSE	Input state of trunk lid lock assembly (trunk room lamp switch) 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 (front power window) is displayed.	
POWER COND REAR P/W	OK/NG	Diagnosis result of power supply (rear 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.	
TONNEAU BOARD SWITCH	ON/OFF	Input state of tonneau board switch 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.	
IGN ON SIG (BCM)	ON/OFF	Receiving state of ignition ON signal from BCM is displayed.	
RF OP REQ SW SIG	ON/OFF	Input state of soft top open signal from request switch is displayed.	

## **ACTIVE TEST**

CONSULT disp	lay	Operation/condition	Description
Item	Indication	Operation/condition	Description
ROOF LATCHED LH/RH	LOCK	Soft top is fully closed posi-	Roof lock assembly performs lock operation.
ROOF LATCHED LH/RH	UNLOCK	tion.	Roof lock assembly performs unlock operation.
STORAGE LID	OPEN	Storage lid is neutral posi-	Storage lid performs open operation.
STORAGE LID	CLOSE	tion.	Storage lid performs close operation.
	UP	Storage lid is fully open	Soft top performs closed operation.
SOFT TOP SYSTEM	DOWN	<ul><li>position.</li><li>Outside flap is fully closed position.</li></ul>	Soft top performs open operation.
ROOF SYSTEM	OPEN		Soft top system performs open operation.
ROOF STSTEM	CLOSE	_	Soft top system performs closed operation.
	OPEN	Roof lock is unlock posi-	1st bow and 5th bow performs fold operation.
5TH BOW SYSTEM CLOSE	CLOSE	<ul><li>tion.</li><li>Storage lid is fully closed position.</li></ul>	1st bow and 5th bow performs spread operation.
HYDRAULIC PRESSURE RELEASE	ON	_	Switching valve performs OFF operation.  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.  To prevent injury, be careful not to pinch hands.
TRUNK OPENER	ON	Soft top is fully open/closed position.	Trunk lid opener actuator performs unlock operation.
ROOF STATE OUTPUT	ON	Roof lock is unlock position.	Full open position signal of roof is transmitted to audio unit.
(AUDIO)	OFF	Roof lock is utilock position.	Full closed position signal of roof is transmitted to audio unit.
	UP	Soft top is fully open/	Power window (LH/RH) performs closed operation.
POWER WINDOW (LH/ RH)	DOWN	<ul><li>closed position.</li><li>Power window system is initialized.</li></ul>	Power window (LH/RH) performs open operation.

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## < SYSTEM DESCRIPTION >

CONSULT display		Operation/condition	Deparieties	
Item	Indication	Operation/condition	Description	
REAR WINDOW DEFOG-	ON	Soft top is fully closed posi-	Rear window defogger performs ON operation.	
GER	OFF	tion.	Rear window defogger performs OFF operation.	
	DEPLOY	Soft top is in the storage	Outside flap motor performs deployment operation.	
OUTSIDE FLAP MOTOR	STORAGE	<ul><li>room.</li><li>Storage lid is fully open position.</li></ul>	Outside flap motor performs storage operation.	
INSIDE FLAP MOTOR	DEPLOY	Storage lid is fully open po-	Inside flap motor performs deployment operation.	
INSIDE PLAF WOTOR	STORAGE	sition.	Inside flap motor performs storage operation.	
	OP POS		Storage lid closure motor performs open operation.	
STORAGE LID CLOSURE MOTOR CL PO		Storage lid is fully closed position.	Storage lid closure motor performs closed operation.  NOTE:  Closure motor stops the closed operation and starts the neutral operation after turning close switch ON.	

< ECU DIAGNOSIS INFORMATION >

## **ECU DIAGNOSIS INFORMATION**

## SOFT TOP CONTROL UNIT

Reference Value INFOID:0000000009026045

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

CONSULT	MONITOR	ITEM
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Monitor Item		Condition	Status/Value
		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 latch LH	Other than above	OFF
		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 raised	ON
R/RAIL RAISED LH	State of roof drive cylinder LH	Other than above	OFF
		Roof status sensor LH circuit is open or short	NG
		Soft top is lowered	ON
R/RAIL LOWERED	State of roof drive cylinder LH	Other than above	OFF
		Roof status sensor LH circuit is open or short	NG
5TH BOW LOWERED		5th bow is lowered	ON
	State of 5th bow drive cylinder LH	Other than above	OFF
		5th bow status sensor LH circuit is open or short	NG
		5th bow is raised	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 raised	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
		Storage lid is lowered	ON
STORAGE LID CLOSE LH	State of storage lid drive cyl-	Other than above	OFF
5. 5. 4. 4. 5 E. 5 E. 5 E. 6 E. 1	inder LH	Storage lid status sensor LH circuit is open or short	NG
		Operate	ON
SWITCHING VALVE 1	Operation of switching valve	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

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#### < ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Status/Value
		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
		Turning clockwise	ON
PUMP OUT (RH)	Operation of hydraulic pump motor	Other than above	OFF
	motor	Hydraulic pump motor (RH) circuit is short	NG
		Turning counterclockwise	ON
PUMP OUT (LH)	Operation of hydraulic pump motor	Other than above	OFF
	motor	Hydraulic pump motor (LH) circuit is short	NG
		Outside flap is deployment	ON
OUTSIDE FLAP DEPLOYMENT	State of outside flap	Other than above	OFF
OUTSIDE FEAT DEFECTIVE INT	State of outside hap	Outside flap sensor circuit is open or state of outside flap is not recognized	NG
		Outside flap is storage	ON
OUTSIDE FLAP STORAGE	State of outside flop	Other than above	OFF
OUTSIDE FLAP STORAGE	State of outside flap	Outside flap sensor circuit is open or state of outside flap is not recognized	NG
	State of inside flap	Inside flap is deployment	ON
INSIDE FLAP DEPLOYMENT		Other than above	OFF
INSIDE FLAF DEFLOTMENT		Inside flap sensor circuit is open or state of inside flap is not recognized	NG
		Inside flap is storage	ON
INSIDE FLAP STORAGE	State of inside flap	Other than above	OFF
INCIDE LEAF CTORAGE		Inside flap sensor circuit is open or state of inside flap is not recognized	NG
		For the details, refer to RF-29, "STORAGE LID	ON
S/LID LOCK OPEN SW	State of storage lid lock as-	CLOSURE CONTROL : System Description".	OFF
3/LID LOCK OPEN 3W	sembly	State of storage lid lock assembly is not recognized	NG
		For the details, refer to RF-29, "STORAGE LID	ON
S/LID LOCK OLOSE SW	State of storage lid lock as-	CLOSURE CONTROL : System Description".	OFF
S/LID LOCK CLOSE SW	sembly	State of storage lid lock assembly is not recognized	NG
		For the details, refer to RF-29, "STORAGE LID	ON
C/LID LOCK LIALE LATOURON	State of storage lid lock as-	CLOSURE CONTROL: System Description".	OFF
S/LID LOCK HALF LATCH SW	sembly	State of storage lid lock assembly is not recognized	NG
		Storage lid is closed	ON
CTODACE LID DOOD CMITCH	State of storage lid lock as-	Storage lid is open	OFF
STORAGE LID DOOR SWITCH	sembly	State of storage lid lock assembly is not recognized	NG

**RF-46** 

## < ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Status/Value
		Deployment operation	ON
OUT FLAP MOTOR RELAY 1	Operation of outside flap mo-	Other than above	OFF
	tor	Outside flap motor relay 1 circuit is open or short	NG
		Storage operation	ON
OUT FLAP MOTOR RELAY 2	Operation of outside flap mo-	Other than above	OFF
	tor	Outside flap motor relay 2 circuit is open or short	NG
		Deployment operation	ON
INSIDE FLAP MOTOR RELAY 1	Operation of inside flap motor	Other than above	OFF
		Inside flap motor relay 1 circuit is open or short	NG
		Storage operation	ON
INSIDE FLAP MOTOR RELAY 2	Operation of inside flap motor	Other than above	OFF
	tor	Inside flap motor relay 2 circuit is open or short	NG
		Open operation	ON
STORAGE LID LOCK RELAY 1	Operation of storage lid clo-	Other than above	OFF
STORAGE EID LOOK KLEAT T	sure motor	Storage lid closure motor relay 1 circuit is open or short	NG
		Closed operation	ON
STORAGE LID LOCK RELAY 2	Operation of storage lid clo- sure motor	Other than above	OFF
STORAGE LID LOCK RELAY 2		Storage lid closure motor relay 2 circuit is open or short	NG
	State of roof open/close switch	OPEN operation is in operation	ON
ROOF SW (OPEN)		Other than above	OFF
2005 014 (01 005)	State of roof open/close	CLOSE operation is in operation	ON
ROOF SW (CLOSE)	switch	Other than above	OFF
SHIFT R SIGNAL	Obite a said a	R position	ON
SHIFT K SIGNAL	Shift position	Other than R position	OFF
TOUNK ODEN DEOUGET OF	State of trunk an anar awitch	Open operation is in operation	ON
TRUNK OPEN REQUEST SIG	State of trunk opener switch	Other than R position	OFF
TOUNILLID OD/OL CTATUO	Otata afternal lid	Trunk lid is open	OPEN
TRUNK LID OP/CL STATUS	State of trunk lid	Trunk lid is closed	CLOSE
THE DOCTED DUMP	Thermo protection hydraulic	In non-operation	OK
THER PROTEC PUMP	pump	In operation	NG
THE PROTECTOR	Thermo protection soft top	In non-operation	OK
THER PROTEC RCU	control unit	In operation	NG
DWD COND DOLL	Power supply voltage state	Normal	OK
PWR COND RCU	of soft top control unit	Malfunction	NG
DWD COND DAY	Power supply voltage state	Normal	OK
PWR COND P/W	of front power window	Malfunction	NG
DOMED COMP DE LE SAN	Power supply voltage state	Normal	OK
POWER COND REAR P/W	of rear power window	Malfunction	NG
		Normal	OK
LOCAL COMM 1	State of local communication 1	It is in sleep mode	SLEEP
	1	Communication error	NG

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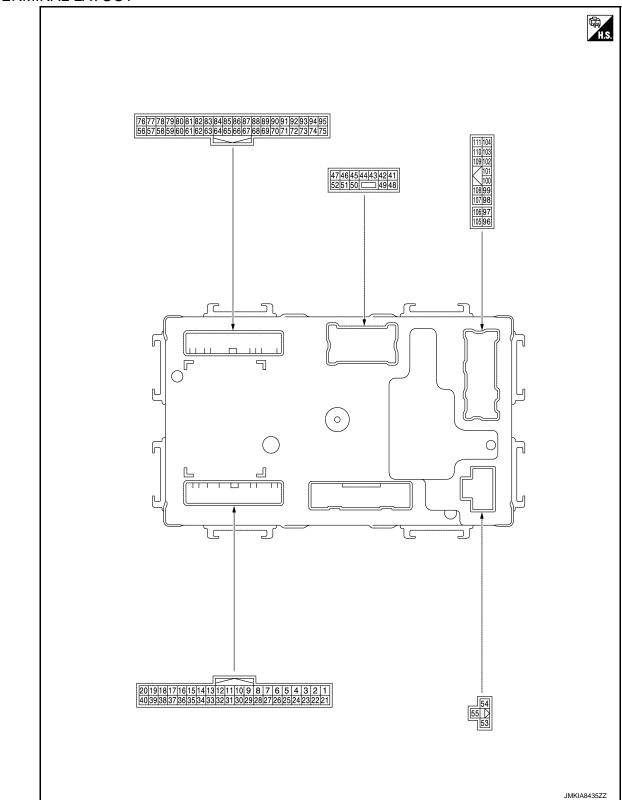
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## < ECU DIAGNOSIS INFORMATION >

Monitor Item		Status/Value	
		Normal	OK
LOCAL COMM 2	State of local communication 2	It is in sleep mode	SLEEP
	_	Communication error	NG
DEAD DEE OUT	Operation of rear window de-	Roof position is full close	OK
REAR DEF OUT	fogger	Other than above	NG
TONNEAU BOARD SWITCH	State of tonneau board	Set	ON
	State of tonneau board	Other than above	OFF
	State of request switch signal	OPEN operation is in operation	ON
P/W OP REQ SW SIG		Stop	OFF
PROHIBIT P/W UP	Drobibit of novement window up	In operation	ON
PROHIBIT P/W UP	Prohibit of power window up	In non-operation	OFF
IONI ONI CIO/DOM)	Danier a sitian simual	Ignition switch ON	ON
IGN ON SIG(BCM)	Power position signal	Other than above	OFF
DE OD DEO OM CIO	Otata af an accept acceptable airmed	OPEN operation is in operation	ON
RF OP REQ SW SIG	State of request switch signal	Stop	OFF

**RF-48** 

## TERMINAL LAYOUT



PHYSICAL VALUES

Revision: 2014 February

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## < ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
1 (GR)	Ground	Sensor power supply (roof striker sensor LH)	Output	[Engine is running]		12 V
2	Ground	Deployment switch signal (outside flap	Input	[Engine is running]	Deployment position	0 V
(LG)		sensor)		Outside flap	Other than above	12 V
3 (BR)	Ground	Roof striker sensor RH	Input	[Engine is running]  Roof lock assembly	Hooked	0.8 V
(BIV)				-	Released	3.0 V
4 (B)	Ground	Roof striker sensor LH	Input	<ul><li>[Engine is running]</li><li>Roof lock assembly</li></ul>	Hooked	0.8 V
				-	Released Hooked	3.0 V
5 (G)	Ground	Tonneau board switch	Input	<ul><li>[Engine is running]</li><li>Tonneau board</li></ul>	Released	12 V
(-)					Storage posi-	
6	Ground	Storage switch signal	Input	[Engine is running]	tion	0 V
(G)	Cround	(outside flap sensor)	mpat	Outside flap	Other than above	12 V
7	Ground	Deployment switch signal (inside flap	Input	[Engine is running]	Deployment position	0 V
(V)	Giodila	sensor)	input	Inside flap	Other than above	12 V
0				[Ignition switch: ON]	R position	Battery voltage
8 (R)	Ground	Back up lamp signal	Input	Shift position	Other than above	0 V
9 (GR)	Ground	Power source (front power window)	Input	[Ignition switch: OFF]		12 V
10	Ground	Trunk lid open re-	Input	[Ignition switch: ON]	ON	12 V
(Y)	Giodila	quest signal (BCM)	прис	Trunk lid opener switch	OFF	0 V
11	Ground	Roof status signal	Output	[Engine is running]	Illuminate	0 V
(R)	Ciodila	(indicator lamp)	Output	Soft top indicator lamp	Not illuminate	12 V
12		Roof status signal		[Engine is running]	Fully closed	9.5 V
(P)	Ground	(audio)	Output	Roof system	Other than above	0 V
14	Ground	Roof open/close	Input	[Engine is running]	Pressed	0 V
(W)	Ciodila	switch (close)	Прис	Close switch	Released	12 V
15	Ground	Roof open/close	Input	[Engine is running]	Pressed	0 V
(O)	2.34114	switch (open)		Open switch	Released	12 V
16		Trunk room lamp	to a s	[Ignition switch: ON]	Open	0 V
(L)	Ground	switch	Input	Trunk lid	Other than above	12 V
17 (L)	Ground	CAN-H	Input/ Output	_		_
18 (P)	Ground	CAN-L	Input/ Output	_		_

## < ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Condition		Value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
19 (G)	Ground	Local communication (power window)	Input/ Output	_		(V) 15 10 5 0 ++10ms JMKIA4024GB	
20 (V)	Ground	Local communication (BCM)	Input/ Output	_		(V) 15 10 5 0 ++10ms  JMKIA4024GB	
21 (SB)	Ground	Sensor power supply (roof striker sensor RH)	Output	[Engine is running]		12 V	_
22 (L)	Ground	Storage switch signal (inside flap sensor)	Input	[Engine is running] • Inside flap	Storage position  Other than above	0 V 12 V	=
23 (P)	Ground	Open switch signal (storage lid lock assembly)	Input	[Engine is running] • Open switch	OFF ON	12 V 0 V	=
24 (Y)	Ground	Close switch signal (storage lid lock assembly)	Input	[Engine is running] • Close switch	OFF ON	12 V 0 V	- -
25 (O)	Ground	Half latch switch sig- nal (storage lid lock assembly)	Input	[Engine is running] • Half latch switch	OFF ON	0 V 12 V	-
26 (R)	Ground	Ground (tonneau board switch)	_	_		_	_
27 (BR)	Ground	Storage lid door switch signal (stor- age lid lock assem- bly)	Input	[Engine is running] • Storage lid	Open	0 V 12 V	_
30 (P)	Ground	Power source (rear power window)	Input	[Ignition switch: OFF]		Battery voltage	_
35 (V)	Ground	Ground (roof open/ close switch)	_	_		_	_
38 (SB)	Ground	Ground (inside flap sensor)	_	_		_	_
39 (G)	Ground	Ground (outside flap sensor)	_	_		_	_
40 (B)	Ground	Ground (soft top control unit)	_	_		_	_
41 (O)	Ground	Trunk lid opener actuator	Output	Trunk lid opener actuator	Operate Stop	$0 \text{ V} \rightarrow 12 \text{ V} \rightarrow 0 \text{ V}$ $0 \text{ V}$	_

## < ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
44 (V)	Ground	Outside flap motor relay 2 ON signal	Input	[Engine is running]  Outside flap motor	Active (storage operation)	0 V
					Inactive	12 V
45 (W)	Ground	Outside flap motor relay 1 ON signal	Input	[Engine is running]  Outside flap motor	Active (de- ployment op- eration)	0 V
					Inactive	12 V
46 (Y)	Ground	Inside flap motor re- lay 2 ON signal	Input	[Engine is running] • Inside flap motor	Active (storage operation)	0 V
					Inactive	12 V
47 (G)	Ground	Inside flap motor re- lay 1 ON signal	Input	[Engine is running] • Inside flap motor	Active (de- ployment op- eration)	0 V
					Inactive	12 V
48	Ground	Power source (rear	Input	[Engine is running]	ON	Battery voltage
(G)	Oloulia	window defogger)	iliput	Rear window defogger	OFF	0 V
49	Ground	Power source (rear	lanut	[Engine is running]	ON	Battery voltage
(G)	Giouria	window defogger)	Input	<ul> <li>Rear window defogger</li> </ul>	OFF	0 V
50 (W)	Ground	Closure motor status signal (open)	Input	[Engine is running]  • Closure motor	Active (open operation)	8 V
(**)		signal (open)		Olosure motor	Inactive	0 V
51 (G)	Ground	Storage lid lock relay 2 ON signal	Input	[Engine is running]  • Closure motor	Active (close operation)	0 V
(-)					Inactive	12 V
52 (V)	Ground	Storage lid lock relay 1 ON signal	Input	[Engine is running]  • Closure motor	Active (open operation)	0 V
(-)					Inactive	12 V
53 (Y)	Ground	Power source (soft top control unit)	Input	[Engine is running]		Battery voltage
54 (B)	Ground	Ground (soft top control unit)	_	_		_
59		Storage lid status		[Engine is running]	Lowered	0.8 V
(G)	Ground	sensor LH (lowered)	Input	Storage lid	Other than above	3.0 V
60		Ctorogo lid ototuo		[Engine is running]	Raised	0.8 V
60 (W)	Ground	Storage lid status sensor LH (raised)	Input	Storage lid	Other than above	3.0 V
66		Roof status sensor		[Engine is running]	Raised	0.8 V
(L)	Ground	LH (raised)	Input	Soft top	Other than above	3.0 V
68		5th bow status sen-		[Engine is rupping]	Lowered	0.8 V
(P)	Ground	sor LH	Input	<ul><li>[Engine is running]</li><li>5th bow</li></ul>	Other than above	3.0 V
60		Poof status sansar		[Engine is rupping]	Lowered	0.8 V
69 (V)	Ground	Roof status sensor LH (lowered)	Input	[Engine is running] • Soft top	Other than above	3.0 V

## < ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
70		Ed. L		re	Raised	0.8 V
70 (O)	Ground	5th bow status sen- sor RH	Input	[Engine is running] • 5th bow	Other than above	3.0 V
74		Destination of the second		re	Lock	0.8 V
71 (SB)	Ground	Roof latch lock sen- sor	Input	[Engine is running] • Roof lock assembly	Other than above	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 (G)	Ground	Hydraulic pump motor status signal (left	Input	[Engine is running]  • Hydraulic pump motor	Active (left rotation)	12 V
(G)		rotation)		- Hydradiic pullip motor	Inactive	0 V
74 (B)	Ground	Hydraulic pump mo- tor status signal (right	Input	[Engine is running]	Active (right rotation)	12 V
(R)		rotation)	-	Hydraulic pump motor	Inactive	0 V
75 (BR)	Ground	Sensor power supply (5th bow status sen- sor RH)	Output	[Engine is running]		12 V
92 (GR)	Ground	Sensor ground (hydraulic pump temperature sensor)	_	_		_
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 LH/roof status sensor LH)	Output	[Engine is running]		12 V
96	Cround	Custobing value 4	Outnut	[Engine is running]	Active	12 V
(W)	Ground	Switching valve 4	Output	<ul> <li>Switching valve 4</li> </ul>	Inactive	0 V
97	Ground	Switching valve 3	Output	[Engine is running]	Active	12 V
(LG)	Giodila	Switching valve 5	Output	Switching valve 3	Inactive	0 V
98	Ground	Switching valve 2	Output	[Engine is running]	Active	12 V
(L)	Ground	Owntoning valve 2	Output	Switching valve 2	Inactive	0 V
99	Ground	Switching valve 1	Output	[Engine is running]	Active	12 V
(O)	Ciodila	Switching valve i		Switching valve 1	Inactive	0 V
100	Constitution	Hydraulic pump relay	0	[Engine is running]	Active	12 V
(BR)	Ground	2 ON signal	Output	Hydraulic pump motor (right rotation)	Inactive	0 V
101	Ground	Hydraulic pump relay	Output	<ul><li>[Engine is running]</li><li>Hydraulic pump motor</li></ul>	Active	12 V
(SB)	Ciodila	1 ON signal	Guiput	(left rotation)	Inactive	0 V
103 (L)	Ground	Outside flap motor status signal (deploy-	Input	[Engine is running]  Outside flap motor	Active (deployment operation)	12 V
(-)		ment)		Satisfas hap motor	Inactive	0 V

## < ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
104 (R)	Ground	Rear window defog- ger power supply	Output	[Engine is running] • Rear window defogger NOTE: Roof is fully closed.	Active Not active	12 V 0 V
105 (GR)	Ground	Inside flap motor sta- tus signal (deploy- ment)	Input	[Engine is running] • Inside flap motor	Active (de- ployment op- eration)	12 V
		menty			Inactive	0 V
106 (BR)	Ground	Inside flap motor sta- tus signal (storage)	Input	[Engine is running] • Inside flap motor	Active (storage operation)	12 V
					Inactive	0 V
109 (R)	Ground	Closure motor status signal (close)	Input	[Engine is running]  • Closure motor	Active (close operation)	8 V
(14)		signal (close)		Closure motor	Inactive	0 V
110 (GR)	Ground	Outside flap motor status signal (storage)	Input	[Engine is running] • Outside flap motor	Active (storage operation)	12 V
		aye,			Inactive	0 V
				[Engine is running]	Active	12 V
111 (R)	Ground	Rear window defog- ger power supply	Output	Rear window defogger     NOTE:     Roof is fully closed.	Not active	0 V

Fail-safe

## 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 roof open/close operation	Communication is normal
U1010	CONTROL UNIT (CAN)	Inhibit roof open/close operation	Communication is normal
U0140	LOCAL COMM-1	Inhibit roof open/close operation	Communication is normal
U0215	LOCAL COMM-2	Inhibit roof open/close operation	Communication is normal
B1701	ROOF CONTROL UNIT	Inhibit roof open operation	Replace soft top control unit
B1709	ROOF SWITCH(OPEN)	Inhibit roof open/close operation	Detects roof open/close switch (OPEN) is OFF
B170A	ROOF SWITCH(CLOSE)	Inhibit roof open/close operation	Detects roof open/close switch (CLOSE) is OFF
B170F	SENSOR POWER SUPPLY	Inhibit roof open/close operation	Detects normal value
B171A	HYDRAULIC PMP(LH)	Inhibit roof open/close operation	Detects normal value
B171B	HYDRAULIC PMP(RH)	Inhibit roof open/close operation	Detects normal value
B171C	SWITCHING VALVE 1	Inhibit roof open/close operation	Detects normal value
B171D	SWITCHING VALVE 2	Inhibit roof open/close operation	Detects normal value
B1731	HYDRAULIC STATE 1	Inhibit roof open/close operation	Turn ignition switch OFF
B1758	THERMO PROTECTION	Inhibit roof open/close operation	Turn ignition switch OFF and wait at least 5 minutes

### < ECU DIAGNOSIS INFORMATION >

	Display contents of CONSULT	Fail-safe	Cancellation
B175C	PWR SOURCE(ROOF)	Inhibit roof open/close operation	Power source is 11.4 V or more for 0.5 second
B175D	PWR SOURCE(ROOF)	Inhibit roof open/close operation	Power source is 14.5 V or more for 4 seconds
B175E	PWR SOURCE(WINDOW)	Inhibit roof open/close operation and front power window operation	Power source (front power window) is 9 V or less
B175F	PWR SOURCE(WINDOW)	Inhibit roof open/close operation and front power window operation	Power source (front power window) is 16 V or more
B1766	SWITCHING VALVE 3	Inhibit roof open/close operation	Detects normal value
B1767	SWITCHING VALVE 4	Inhibit roof open/close operation	Detects normal value
B176A	THERMO PROTECTION	Inhibit roof open/close operation	Air temperature is 0°C (32°F) or more
B176B	ROOF WARNING LAMP	Inhibit roof open/close operation	Detects normal value
B176C	STRIKER SENSOR RH	Inhibit roof open/close operation	Detects normal value
B176D	STRIKER SENSOR LH	Inhibit roof open/close operation	Detects normal value
B176E	ROOF LATCH LOCK SENSOR	Inhibit roof open/close operation	Detects normal value
B176F	ROOF STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1771	ROOF STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1772	5BOW STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1773	5BOW STATUS SEN RH	Inhibit roof open/close operation	Detects normal value
B1774	S/LID STATUS SEN LH	Inhibit roof open/close operation	Detects normal value
B1776	S/LID STATUS SEN RH*	Inhibit roof open/close operation	Detects normal value
B1777	REAR DEF OUT SIG	Inhibit rear window defogger operation	Detects normal value
B1778	TRUNK OPEN OUT SIG	Inhibit trunk lid opener actuator operation	Detects normal value
B1779	HYDRAULIC PMP T/SEN	Inhibit roof open operation	Detects normal value
B177A	ROOF STATE INCORRECT	Inhibit roof open/close operation	Detects normal value
B177B	ROOF STATE INCORRECT	Inhibit roof open/close operation	Detects normal value
B177C	THERMO PROTECTION	Inhibit roof open/close operation	Detects normal value
B1780	OUTSIDE FLAP MOTOR RELAY 1	Inhibit roof open/close operation	Detects normal value
B1781	OUTSIDE FLAP MOTOR RELAY 2	Inhibit roof open/close operation	Detects normal value
B1782	INSIDE FLAP MOTOR RELAY 1	Inhibit roof open/close operation	Detects normal value
B1783	INSIDE FLAP MOTOR RELAY 2	Inhibit roof open/close operation	Detects normal value
B1784	STORAGE LID LOCK RELAY 1	Inhibit roof open/close operation	Detects normal value
B1785	STORAGE LID LOCK RELAY 2	Inhibit roof open/close operation	Detects normal value
B1786	OUTSIDE FLAP SENSOR	Inhibit roof open/close operation	Detects normal value
B1787	INSIDE FLAP SENSOR	Inhibit roof open/close operation	Detects normal value
B1788	STORAGE LID LOCK ASSEMBLY	Inhibit roof open/close operation	Detects normal value
B1789	PWR SOURCE(WINDOW)	Inhibit roof open/close operation and rear power window operation	<ul> <li>Power source (front power window) is 9 V or less</li> <li>Power source (front power window) is 16 V or more</li> </ul>

<sup>\*:</sup> This item indicates the storage lid status sensor LH signal.

## DTC Inspection Priority Chart

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

**RF-55** 

Priority		Display contents of CONSULT
	U1000	CAN COMM CIRCUIT
	U1010	CONTROL UNIT (CAN)
	U0140	LOCAL COMM-1
	U0215	LOCAL COMM-2
	B1701	ROOF CONTROL UNIT
	B1702	ROOF CONTROL UNIT
	B1758	THERMO PROTECTION
	B170F	SENSOR POWER SUPPLY
1	B175C	PWR SOURCE(ROOF)
	B175D	PWR SOURCE(ROOF)
	B175E	PWR SOURCE(WINDOW)
	B175F	PWR SOURCE(WINDOW)
	B176A	THERMO PROTECTION
	B177A	ROOF STATE INCORRECT
	B177B	ROOF STATE INCORRECT
	B177C	THERMO PROTECTION
	B1789	PWR SOURCE(WINDOW)
	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
2	B1771	ROOF STATUS SEN LH
	B1772	5BOW STATUS SEN LH
	B1773	5BOW STATUS SEN RH
	B1774	S/LID STATUS SEN LH
	B1776	S/LID STATUS SEN RH*2
	B1779	HYDRAULIC PMP T/SEN
	B1786	OUTSIDE FLAP SENSOR
	B1787	INSIDE FLAP SENSOR

## < ECU DIAGNOSIS INFORMATION >

Priority		Display contents of CONSULT
	B171A	HYDRAULIC PMP(LH)
	B171B	HYDRAULIC PMP(RH)
	B171C	SWITCHING VALVE 1
	B171D	SWITCHING VALVE 2
	B172B	ROOF STATE SIG(AUDIO)
	B172C	ROOF STATE SIG(TRUNK)*1
	B1731	HYDRAULIC STATE 1
	B1766	SWITCHING VALVE 3
3	B1767	SWITCHING VALVE 4
3	B1777	REAR DEF OUT SIG
	B1778	TRUNK OPEN OUT SIG
	B1780	OUTSIDE FLAP RELAY 1
	B1781	OUTSIDE FLAP RELAY 2
	B1782	INSIDE FLAP RELAY 1
	B1783	INSIDE FLAP RELAY 1
	B1784	STORAGE LID LOCK RELAY 1
	B1785	STORAGE LID LOCK RELAY 2
	B1788	STORAGE LID LOCK ASSEMBLY

DTC Index INFOID:0000000009026048

DTC	Display contents of DTC	Reference page
	No DTC is detected. Further testing may be required.	_
U1000	CAN COMM CIRCUIT	<u>RF-88</u>
U1010	CONTROL UNIT (CAN)	<u>RF-89</u>
U0140	LOCAL COMM-1	<u>RF-90</u>
U0215	LOCAL COMM-2	<u>RF-92</u>
B1701	ROOF CONTROL UNIT	<u>RF-94</u>
B1702	ROOF CONTROL UNIT	<u>RF-95</u>
B1709	ROOF SWITCH-OPEN	<u>RF-96</u>
B170A	ROOF SWITCH-CLOSE	<u>RF-98</u>
B170F	SENSOR POWER SUPPLY	<u>RF-100</u>
B171A	HYDRAULIC PMP(LH)	<u>RF-102</u>
B171B	HYDRAULIC PMP(RH)	<u>RF-105</u>
B171C	SWITCHING VALVE 1	<u>RF-108</u>
B171D	SWITCHING VALVE 2	<u>RF-110</u>
B172C	ROOF STATE SIG(TRUNK)*1	<u>RF-112</u>
B1731	HYDRAULIC STATE 1	<u>RF-113</u>
B1758	THERMO PROTECTION	<u>RF-114</u>
B175C	PWR SOURCE(ROOF)	<u>RF-115</u>
B175D	PWR SOURCE(ROOF)	<u>RF-116</u>
B175E	PWR SOURCE(WINDOW)	<u>RF-117</u>
B175F	PWR SOURCE(WINDOW)	<u>RF-119</u>

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<sup>\*1:</sup> This item indicates the roof status signal (Audio).\*2: This item indicates the storage lid status sensor LH signal.

## < ECU DIAGNOSIS INFORMATION >

DTC	Display contents of DTC	Reference page
B1766	SWITCHING VALVE 3	<u>RF-121</u>
B1767	SWITCHING VALVE 4	<u>RF-123</u>
B176A	THERMO PROTECTION	<u>RF-125</u>
B176B	ROOF WARNING LAMP	<u>RF-126</u>
B176C	STRIKER SENSOR RH	<u>RF-127</u>
B176D	STRIKER SENSOR LH	<u>RF-129</u>
B176E	ROOF LATCH LOCK SEN	<u>RF-131</u>
B176F	ROOF STATUS SEN LH	<u>RF-133</u>
B1771	ROOF STATUS SEN LH	<u>RF-135</u>
B1772	5BOW STATUS SEN LH	<u>RF-137</u>
B1773	5BOW STATUS SEN RH	<u>RF-139</u>
B1774	S/LID STATUS SEN LH	<u>RF-141</u>
B1776	S/LID STATUS SEN RH*2	<u>RF-143</u>
B1777	REAR DEF OUT SIG	<u>RF-145</u>
B1778	TRUNK OPEN OUT SIG	<u>RF-146</u>
B1779	HYDRAULIC PMP T/SEN	<u>RF-148</u>
B177A	ROOF STATE INCORRECT	<u>RF-150</u>
B177B	ROOF STATE INCORRECT	<u>RF-151</u>
B177C	THERMO PROTECTION	<u>RF-152</u>
B1780	OUTSIDE FLAP MOTOR RELAY 1	<u>RF-153</u>
B1781	OUTSIDE FLAP MOTOR RELAY 2	<u>RF-156</u>
B1782	INSIDE FLAP MOTOR RELAY 1	<u>RF-159</u>
B1783	INSIDE FLAP MOTOR RELAY 2	<u>RF-162</u>
B1784	STORAGE LID LOCK RELAY 1	<u>RF-165</u>
B1785	STORAGE LID LOCK RELAY 2	<u>RF-168</u>
B1786	OUTSIDE FLAP SENSOR	<u>RF-171</u>
B1787	INSIDE FLAP SENSOR	<u>RF-173</u>
B1788	STORAGE LID LOCK ASSEMBLY	<u>RF-175</u>
B1789	PWR SOURCE(WINDOW)	<u>RF-178</u>

<sup>\*1:</sup> This item indicates the roof status signal (Audio).\*2: This item indicates the storage lid status sensor LH signal.

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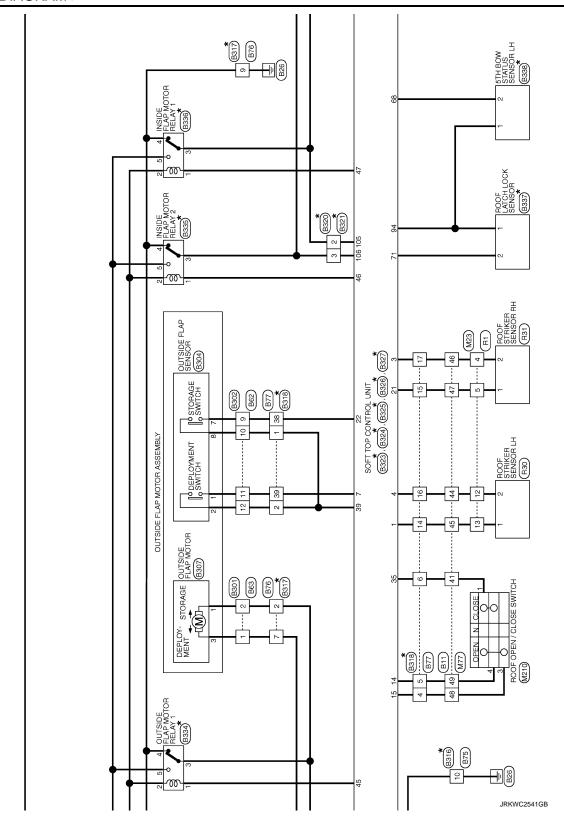
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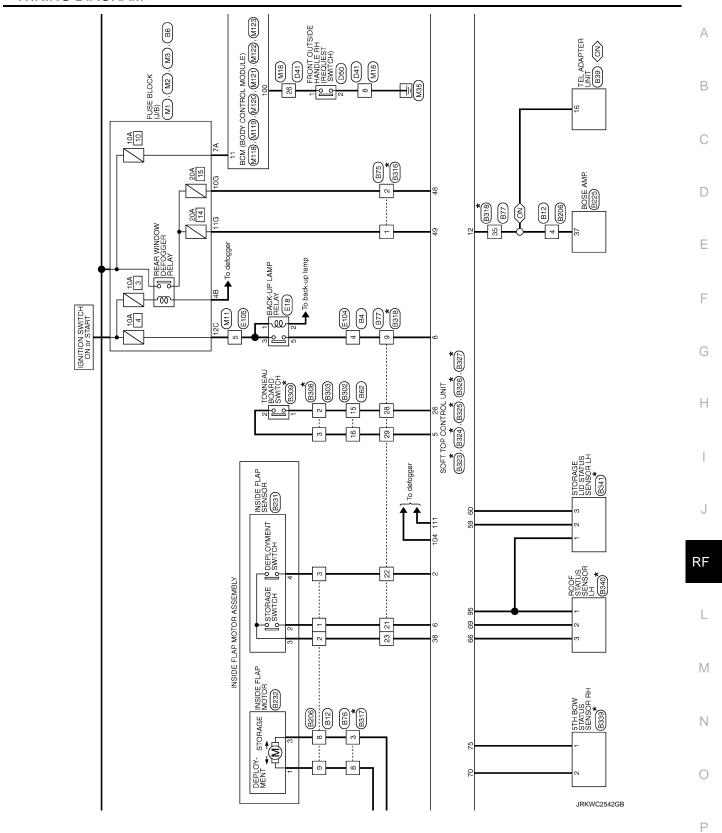
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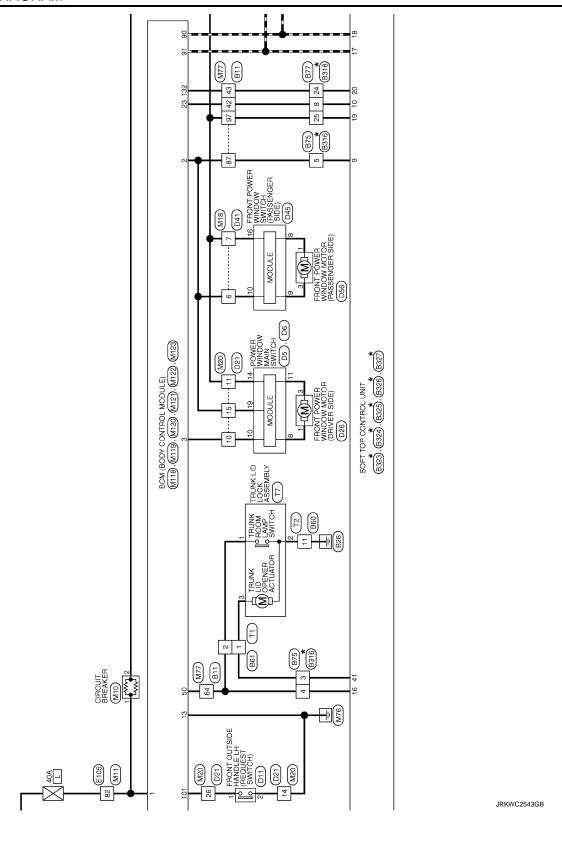
Р

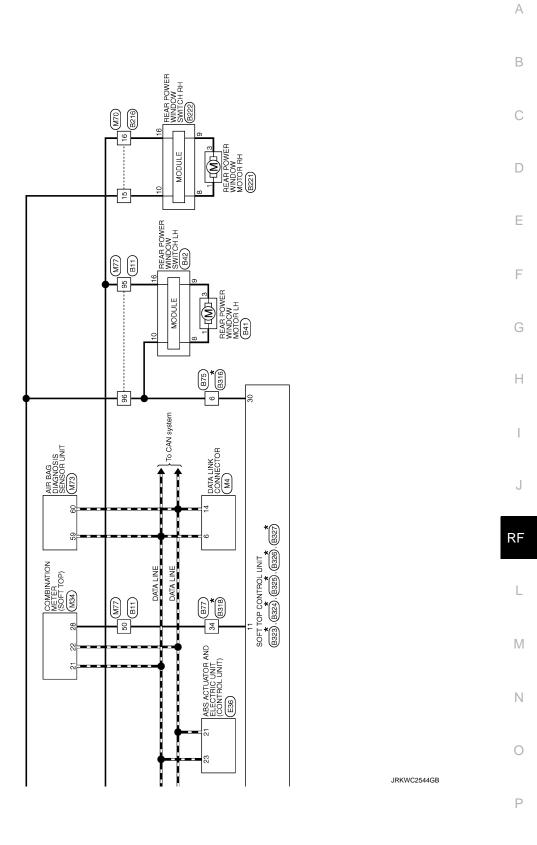
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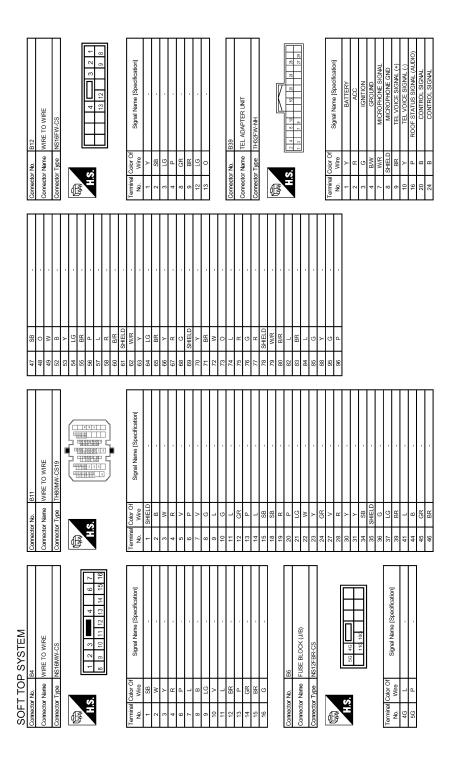
\*: This connector is not shown in "Harness Layout". SWITCHING VALVE 2 ON : Without NAVI P LATCH SWITCH SWITCHING VALVE 1 12 CLOSE SWITCH **₩** OPEN SWITCH HYDRAULIC PUMP MOTOR CLOSE OPEN B317, HYDRAULIC PUMP TEMPERATURE SENSOR LEFT RIGHT HYDRAULIC UNIT (B328), (B329) -w SOFT TOP SYSTEM CIRCUIT BREAKER M11 M77 (B11) B316 B316 B317 B317 2012/09/18 (B70) BATTERY 12











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20FT TOP SYSTEM           27         B         CONITROL SIGNAL           28         V         VHICLE SPEED (8-PULSE)           29         B/R         MICROPHONE VCC	Connector No. B60 Connector Name WIRE TO WIRE Connector Type TH12/MV-N4	Corrector No. B62 Corrector Name WIRE TO WIRE Corrector Type TH16MW-NH	Connector No. 870 Connector No. WIRE TO WIRE Connector Type MOTMW-GY-PS
stor No. B41 stor Type RS06FG	H.S. 1 2 3 4 5 6 11 11 12	H.S. 9 10 11 12 14 15 16	H.S.
H.S. H.S. H.S. H.S. H.S. H.S. H.S. H.S.	<u>a</u>	Terminal Color Of Signal Name (Specification) No. Wire 2 B	Terminal Color Of Signal Name (Specification) No. Wire 1 L
8	5 L C C C C C C C C C C C C C C C C C C	5	Connector No. 1875 Connector Name WIRE TO WIRE Connector Type NS10FW.CS
		1	H.S. 10 3 8 6 5 1
Corrector No. 842 Corrector Name REAR POWER WINDOW SWITCH LH Corrector Type NS16FW-CS	Corrector Type NSSMAW.CS	Cornector No. B83 Cornector Name WIRE TO WIRE Cornector Type INSTORMAN-CS	Terminal Coor Of Signal Name (Specification) 8 Y
HS. 8 9 10 11 12 15 16	Terminal Color Of Signal Name (Specification)	H.S.	Corrector No. Br6 Corrector Name WIRE TO WIRE Corrector Type NS12P-W.CS
Terminal Color Of   Signal Name (Specification)   No. Wire   W		Terminal Color Of	5 4 5 2 1 1 8 9 8 7 6 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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Cornector No. B221 Cornector Name REAR POWER WINDOW MOTOR RH Cornector Type RSiGEG  TH.S.  TH.S.	<u> </u>	Cornector Name   REAR POWER WINDOW SWITCH RRH	No. Wire Signal Name (Specinication) 3 W 4 4 R R 6 10 GR 7 11 B 7 12 Y 7 15 G 7 16 G 7 16 G 7 16 G 7 17 G 7 18 G 7 19 G 7 11 G 7 15 G 7 16 G 7 16 G 7 17 G 7 18 G 7 19 G 7
Corrector No. B206  Corrector Name WIRE TO WIRE  Corrector Type INSTRIMY.CS  The State of the St	Terminal Color Of No. Wire Wire Signal Name (Specification) No. Wire 1 G	Corrector Name WIRE TO WIRE  Corrector Type INSTGMBR-CS  M.S. 2 0 0 10 11 12 15 16	Terminal Color Of Number   Signal Name   Specification   Number   Signal Name   Specification   Signal Name   Specification   Signal Name   Specification   Signal Name   Specification   Signal Name   Signal Name
Cornector No. 1891 Cornector Name WIRE TO WIRE Cornector Type MIZEWALC	Terminal Codor Of Signal Name (Specification) No. Wine 1 Y 2 L Corrector No. B92 Corrector Name WIRE TO WIRE Corrector Type M02MW-LC	H.S.   Terminal Color Of Nurse   Signal Name (Specification)   Y   Y   Y   Y   Y   Y   Y   Y   Y	
SOFT TOP SYSTEM   Signal Name [Specification]   Name   Signal Name [Specification]   Name   Signal Name   Specification]   Name   Signal Name   Specification]   Name   Signal Name   Specification]   Name   Name   Signal Name   Specification]   Name   N	Corrector No. B77  Corrector Name WIRE TO WIRE  Corrector Type TH40FW/NH  LAG TH40FW/NH	Termineal Color Of Name (Specification) No. Wire Name (Specification) Na	

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SOFT TO	SOFT TOP SYSTEM	Terminal Color Of	Connector No. 18302	Competer No. 18304
Connector Name	ne BOSE AMP.	No. Wire Signal Name [Specification]	g.	g g
Connector Type	Connector Type SCA19FBR-SGA4	H	Connector Type TH16FW-NH	Connector Type RH08FB
1	[	4 LG .	Œ.	Œ.
季	35 34 33 32 31 30 29	Connector No. B232		With the second
	26 25 24 25 2 20 115 116 1 15	g.	18 15 14 17 11 10 9	$\left( \frac{8}{87} \right)$
		Connector Type RS06FG		
Terminal Color Of No. Wire	r Of Signal Name [Specification]	修	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]
15 R	SOUND SIGNAL REAR SQUAWKER LH (-)		2 B -	- ·
18 W	/ SOUND SIGNAL FRONT DOOR WOOFER LH (+)		3 0	2 G .
19 B	SOUND SIGNAL FRONT DOOR WOOFER LH (-)			
+	SOLIND SIGNA		+	┨
+	SOUND SIGNA	Terminal Color Of	10 LG	
25 W/L	SOUND SIGNA	No. Wire Signal Name [Specification]	11 V	Connector No. B305
26 GR/V		1 BR -	12 G -	VIGNOSTATION OF THE PROPERTY O
28 G	SOUND SIGNAL REA	3 GR -	14 G -	
	_		_	Connector Type NS08FW-CS
+	SOUND SIGNAL CE	- 1	16 G	
7	SOUND SIGNAL FRONT	Connector No. B301		
+	SOUND SIGNAL FRONT	Connector Name WIRE TO WIRE		
34 W/R	1	Connector Type NS06FW-CS		2 7 8 8 7 8
+	Ļ		Connector Name WIRE TO WIRE	
36 B/R	SOUND SIGNA	1	Connector Type TH04MW-NH	
37 P	ROOF STATUS SIGNAL (AUDIO)			
		22	匮	Terminal Color Of Signal Name [Specification] No.
Connector No.	B231	-11	S.	1 W Tonneau closure motor current OPEN
Compositor Nom	BINSIDE EL AB SENSOB			2 R Tonneau closure motor current CLOSE
			[6 2	4 BR Tormeau open switch
Connector Type	e TH04FW-NH	E I		5 Y Tonneau close switch
		0		
1		9	<u>a</u>	9
		+	0	8 Tonneau closure sensor GND
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a a	H	Н	23 SB 28 28 28 28 28 28 28 28 28 28 28 28 28		1123456	S >		Specification] H.S. [6 5 4 3 2 1]	Terminal Color Of Signal Name [Specification]	3 BR
Connector No. R247	a)	Connector Type NS12MW	HS. 6 7 8 9 9 6 7 8 8 9 9 6 7 8 8 9 9 6 7 8 8 9 9 6 7 8 8 9 9 6 7 8 8 9 9 6 7 8 8 9 9 9 6 7 8 8 9 9 9 6 7 8 8 9 9 9 9 7 8 7 8 9 9 9 9 7 8 7 8 7	Signal Name [Specification] No Ferminal Cobr Of No Signal Name [Specification] No Yes 1 No 1 N	RE 7 G	8 4 1 1 8 8 8 8 8	Signal Name [Specification]	Terminal Color Of   Signal Name (Specification)   No. Wire   No. Wire   Signal Name (Specification)   1   0   0   0   0   0   0   0   0   0	2 4 B	13 P P G P P P P P P P P P P P P P P P P
Connector No 18309	Connector Name	Connector Type C02FBR	#3.	Terminal Color Of No. Wire No. 2 G	Connector No. B316 Connector Name WIRE TO WIRE Connector Type NS10MW	H.S.	Terminal Color Of   No.   Wire   No.   Wire   No.   Wire   No.   No.			
SOFT TOP SYSTEM	يو ا	Connector Type RS06FG	H.S.		Connector No. B308 Connector Name WIRE TO WIRE Connector Type TH04FW-NH	H.S.	Terminal Color Of   Signal Name   Specification  No.   Wire   2   R			

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104   R   REAR WINDOW DEF OUT 2   105   GR   NI LL/W LOUGHEN IES BOLEN OWNEND   106   GR   NI LL/W LOUGHEN IES GOLEN OWNEND   109   R   NI LL/W LOUGHEN IES GOLEN OWNEND   110   GR   OUT LL/W LOUGH IES GOLEN OWNEND   111   R   OUT LL/W LOUGH GOLEN OWNEND   111   G   OUT LL/W LOUGH GOLEN OWNEND   111   G   OUT LL/W LOUGH GOLEN OWNEND   111   G   OUT LL/W LOUGH GOLEN OWNEND   111   OUT LL/W LOUGH GOOTH GOLEN OWNEND   111   OUT LL/W LOUGH GOLEN OWNEND   112   OUT LL/W LOUGH GOLEN OWNEND   113   OUT LL/W LOUGH GOLEN OWNEND   113	
Corrector No.   6326   Corrector Name   SOFT TOP CONTROL LINIT   Corrector Name   SOFT TOP CONTROL LINIT   Elementarial Color Of   Signal Name   Specification   No.   Wire   Soft TOP RAJECT SIGNAL   68   L   SOFT TOP RAJECT SIGNAL   68   L   SOFT TOP RAJECT SIGNAL   68   V   SOFT TOP LOWERED SIGNAL   77   SB   STHBOW LOWERED SIGNAL   77   SB   SOFT TOP LOWERED SIGNAL   77   SB   ROTH ROW RAJECT SIGNAL   77   SB   ROTH ROW SIATUS SIGNAL   77   SB   SENTOWER INTO LOCK SIGNAL   77   SB   SB   SB   SB   SB   SB   SB	97         LG         SWITCHNK VALVE 3           98         L         SWITCHNK VALVE 2           99         O         SWITCHNK VALVE 1           100         BR         HYDRALLIC PUMP RELNY 2 ON SIG           101         SB         HYDRALLIC PUMP RELXY 1 ON SIG           103         L         OUT IALP PROTOK OFFRANT SIG GREFT ON SIG           103         L         OUT IALP PROTOK OFFRANT SIG GREFT ON SIG
Corrector No.   8924   Corrector No.   8924   Corrector Name   SOFT TOP CONTROL UNIT   Corrector Type   TYCO 0-1674119-1	
Corrector No.   B323	

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Corrector No. 8336 Corrector Name INSIDE FLAP MOTOR RELAY 1 Corrector Type TYCO AMP 8-139232-4	HS. 241	Terminal Color Of   Signal Name (Specification)   No.   Wire     Signal Name (Specification)     1	5 P Connector No. B337	Connector Name ROOF LATCH LOCK SENSOR Connector Type TYCO 174056.2	H.S.	Terminal Color Of Signal Name [Specification] No. Wire 1 BR	2 SB .	п
Corrector No. 8334 Corrector Name OUTSIDE FLAP MOTOR RELAY 1 Corrector Type TYCO AMP 8-1383292-4	H.S.	Terminal Color Of   Signal Name   Specification   No.   Wire   1   W   2   8   1   2   8   4   8   4   8   4   8   4   8   4   8   4   8   4   8   8	5 P Connector No. 18335	Cornector Name INSIDE FLAP MOTOR RELAY 2 Cornector Type TYCO AMP 8-1393292-4	是 HS S HS S HS S HS S HS S HS S HS S HS	Terminal Color Of Signal Name [Specification] No. Wire 1 Y	2 B	Н
Connector No. 8332 Connector Name STORAGE LID LOCK RELAY 1 Connector TYCO AMP 8-1393292-4	HS. 241	Terminal Color Of   Signal Name   Specification  No.   Wire   Signal Name   Specification    1	5 P	Connector Name OUTSIDE FLAP MOTOR RELAY 2  Connector Type TYCO AMP 8-1383292-4	H.S. 2 4 1	Terminal Color Of Signal Name (Specification) No. Wire 1 V	2 B	H
SOFT TOP SYSTEM   Signal Name [Specification]	Corrector No. B330  Corrector Name CIRCUIT BREAKER  Corrector Type M02FW	HS.	Terminal Color Of Wire Signal Name [Specification] No. Wire Signal Name [Specification] 1 L	Connector No. B331	Connector Name STORAGE LID LOCK RELAY 2  Connector Type ITYCO AMP 8-1993292-4  M.S. 185	241	Terminal Color Of Signal Name [Specification] No. Wire	3 R R B C C C C C C C C C C C C C C C C C

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Corrector No. D11 Corrector Name FRONT OUTSDE HARDLE EN (RECUEST SWITCH) Corrector Type RHIZTE	Terminal Color Of No.   Signal Name [Specification]   No.   Wire   Wir	
Corrector No. DG  Corrector Name POWER WINDOW MAIN SWITCH  Corrector Type INSTGFW.CS	Terminal Color Of   Signal Name (Specification)   Name	
Corrector No. 8340  Corrector Name ROOF STATUS SENSOR LH  Corrector Type 17YCO 1-174921-1	Terminal Color Of   Signal Name [Specification]   Wire	
SOFT TOP SYSTEM Corrector Name 5TH BOW STATUS SENSOR LH Corrector Type TYCO 174463-1	Terminal Color Of   Signal Name (Specification)   No.   Wire   Wire   Woo   Woo   Cornector No.   8339   Cornector No.   8339   Cornector Name   STH BOW STATUS SENSOR RH   Cornector Type   TYCO 174463-1   Terminal Color Of   No.   Wire   Signal Name (Specification)   No.   Wire   Wire   Woo   Wire   Wire   Woo   Wire   Wire   Wire   Wire   Woo   Wire   Wi	
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Corrector No. D45 Corrector No. D56	Connection Name EPONT POWER BUTTON PROCESSED ONES	COLLECTOR MAINE PROPERTY CONTRACTOR (TASSENSENSEE) COLLECTOR MAINE	FW-CS15 Connector Type NS16FW-CS Connector Type RS06FG				3 4	8 9 10 11 12 14 15 16				al Color Of Signal Name (Specification) Terminal C	No. Wire Caracteristics No. Wire	3 W - 1 L - 1	. 4 R 2 R .	- I 91 E - I 8	. 9 LG . 4 W	- 10 P - 5 G 5 G 10 P 10 P 10 P 10 P 10 P -			- 14 R	. Connector No. E18	16 0	כמוושכומו ואפוופ באמוב וצדבעו		Connector No. D50	Connector Name FRONT OUTSDE HANDLE RH (REQUEST SWITCH)	O DO TO THE TOTAL OF THE TOTAL	Connector type Krtuzrib	\$ 5 X 1			((1 2)) Terminal Color Of	No. Wire Signal Name [Specification]	. 1 16	4 65	Signal Name [Specification]		
	SAUL HOTHWAN WATCH	Service and an arrangement of the service of the se	S				_	11 12				nal Name [Snecifi	monded annual man			-		-	-		-		-				DE HANDLE RH (RE					1	((1   2))				nal Name [Specifi		
D45	DOWN DOWN	LVOIS LOUIS	NS16FW-C					6	1																	D50		0.00	KHUZFB										
actor No.	owell solo	acioi Mallie	ector Type	[	•	<b>-</b>	۷ì	1				nal Color O	-	W	œ	٦	Н	L	Н	L	L	H	Н			ctor No.	actor Name	1	ctor 1ype		<b>\</b>	V	1			nal Color O	Wire	0	١
Conne	00000	5	Conne		QE	手	٦					Termin	ġ S	3	4	8	6	10	11	12	14	15	16			Conne	Conne	d	Conne	ą	图	1				Termir	Ź	-	ľ
D41	ngiw OT ngiw	WINE TO WINE	TH40FW-CS15				X   X   X   X   X   X   X   X   X   X							-		-										•		,				,							
tor No.	Company Nome	io Marie	Connector Type	[	1	_	S	1				_	Wire	9	>	B/R	BR	Ь	0	В	9	Υ	GR	BR	PΠ	PC	≥ (	> :	> 8	8 8	ď	9	œ	œ	O	-			
Connector No.	00000	00	Connec		Œ	手	٦					Terminal	Ö	-	2	4	2	9	7	8	16	17	18	19	20	24	52	07	8 8	3 8	32	33	36	44	45	48			
SOFT TOP SYSTEM		-	-				-			,	,		-	•		-			-		-			D26	FRONT POWER WINDOW MOTOR (DRIVER SIDE)		RS06FG			(123)	4 5 6				f Signal Name [Specification]				
는 [ 발	ď	9	>	_	ď	Я	9	۵	GR.	_	>	SB	œ	9	œ	۸	0	Ь	٦	SB	97			Connector No.	Connector Name		Connector Type	ľ	<b>-</b>	v	3				Terminal Color Of	-	~	PI	1
Äٳؖٷ	32	33	34	32	36	37	38	41	42	43	44	45	46	47	48	20	51	52	53	54	22			onnect	Connect		onnect	1	侈	Ę	1				Ferminal	-	2	က	ŀ

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		Connector Name FUSE BLOCK (J/B)	Connector Type NS06FW-M2			34 0	_	31			Terminal Color Of	No. Wire Signal Name [Specification]	t		- 8	+	- N N	+	+	8A Y		Commeter No.	Т	Connector Name FUSE BLOCK (J/B)	Connector Type NS10FW-CS		1	ALT.	46.38	9H 8H 6H 5B				ā	Wire	18 W	3B L	4B G -		$\dashv$	-	9B GR .											
	Terminal Color Of Signal Name [Specification] No. Wire	Н	7		+	7 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	+	+	+	- × 00	- 6	+	╀	ł	0 00	$^{+}$	+	Ŧ	00 00	+	51 [6	+		+	+	+	╀	H	╀	64 SHELD -	- w 99	H	X	+	+	+	+	75 BR -	+	$\dashv$	78 Y -	- × 62	- × 08	H	83 GR	1							
	25 W CAN 2 L 26 B/W VALVE / ECU GND			Connector No. E104	Connector Name WIRE TO WIRE	Compositor Tuno NS16EM CS		4		7 6 4	16 15 14 13 12 11 10 9 8			1	Torminal Otlar Of	No Mino Signal Name [Specification]	$^{+}$	Ŧ	+	+	Α 0	╀	Wa	t	10 GR	+	╀	H	┝	15 Y	16 L			Connector No. E105	Connector Name WIRE TO WIRE	+	Connector Type TH70MW-CS10-M3	[	F F F		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	<u> </u>											
Ö	Connector No. E33	Connector Name WIRE TO WIRE	Connector Type   M01FW-GY-LC			٤	1.3.					No. Wire Signal Name [Specification]			Commended No.		Connector Name ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)	O	CONTRECTOR Type AEZZZFB-AJZ4-LT			26 23 23 24 24 19 16 14		13 12 11 10 9 8 7 6 5 4 3 2 1			Terminal Color Of	<u>ති</u>	۲			4 GR CLUSTER SUPPLY	5 B WSS FR PWR (+)		E <sub>C</sub>	+	M	SB	Ь	>	13 B/W MOTOR GND	9		- R	20 GR IGN	<u> </u>	_	1					

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Connector No. M3	Connector No.	No. M10	99	S.	1	9	>	
2000			51	97		17	>	
Connector Name FUSE BLOCK (J/B)	Connector Name	Name CIRCUII BREANER	25	>		2	*	
Connector Type NS12FW-CS	Connector Type	Type M02FW-LC	53	>		19	œ	•
			54	SB		20	SB	
1	ąį		22	۵		24	97	
ALT.	手	ŀ	26	97		22	Υ	
	SH		09	>	-	56	۵	
			61	GR		59	GR	
120 110 100 80 70 80		]	62	æ		8	O	
			63	>		33	>	
			25	SHELD		32	*	
Terminal Color Of	Terminal C	Color Of	99	>		83	۵	
No. Wire Signal Name [Specification]		Wire Signal Name [Specification]	29	œ		8	. œ	,
10C SB	۲		88	>		44	2	
+			9			45		
: c			92			47	۵	
╀			77	0		48	-	
7C B	Connector No.	No. M11	72	Ж				
╄		Т	75	æ				
	Connector Name	Name WIRE TO WIRE	9/	œ		Connector No.	or No.	M20
	Connector Type	Type TH70FW-CS10-M3	77	ď	1			
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Corrector No. M210 Corrector Name ROOF OPEN/ CLOSE SWITCH Corrector Type TK06FW-1V  5 6 1	Terminal Color Of Number   Signal Name   Specification    1	
SOFT TOP SYSTEM Corrector No. M123 Corrector Name BCM (BODY CONTROL MODULE) Corrector Type TH40FG-NH  H.S.	Terminal Color Of No.   Signal Name (Specification)     No.   Wire   OPTICAL SENSOR	
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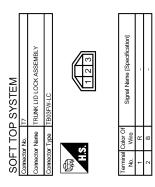
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< BASIC INSPECTION >

## **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

**OVERALL SEQUENCE** 

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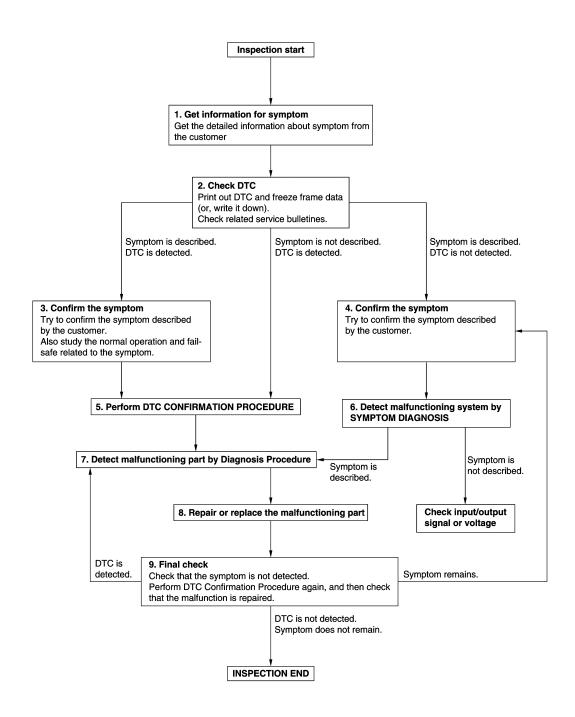
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#### < BASIC INSPECTION >

Perform operation manually if roof does not open/close automatically. Refer to <u>RF-37, "CORRESPONDENCE</u> IN EMERGENCY: System Description".



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#### **DETAILED FLOW**

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#### NOTE:

Perform operation manually if roof does not open/close automatically. Refer to <a href="RF-37"><u>RF-37</a>, "CORRESPONDENCE IN EMERGENCY: System Description".</u>

1.GET INFORMATION FOR SYMPTOM

#### < 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. В

## 2.check dtc

- Check DTC.
- 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.
- 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.

### f 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.

## ${f 5}$ .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 diagnosis order.

#### NOTE:

- Freeze frame data is useful if the DTC is not detected.
- 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

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 GI-42, "Intermittent Incident".

#### **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-

## 7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

#### Is malfunctioning part detected?

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#### < BASIC INSPECTION >

YES >> GO TO 8.

NO >> Check according to GI-42, "Intermittent Incident".

### 8.REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 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?

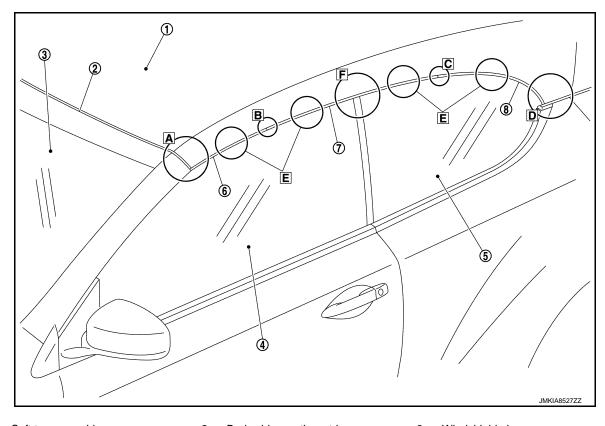
YES-1 >> DTC is detected: GO TO 7.

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

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

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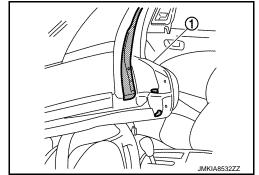
## Repairing Method for Water Leakage Around Doors



- Soft top assembly
- Door glass
- Center rail weather-strip
- Body side weather-strip 2.
- 5. Quarter window glass
- Rear rail weather-strip
- Windshield glass 3.
- 6. Front rail weather-strip

#### WATER LEAKAGE FROM A

- 1. Water may be entering through connection between front pillar finisher and front edge of soft top. Cause: There may be a gap between body side weather-strip and front rail weather-strip of soft top. Repair Procedure 1
  - Replace body side weather-strip with a new one. Refer to EXT-23, "Removal and Installation".
  - If the step or the gap is not eliminated after replacing body side weather-strip, then perform replace front rail weater-strip front with a new one. Refer to RF-221, "ROOF SEALING: Removal and Installation".
- The water overflows body side weather-strip and leaks to passenger room. Cause: Water drain is judged insufficient.
  - Repair Procedure 2
  - Clean drain route and drain hole of body side weater-strip (1).



WATER LEAKAGE FROM B

Water may be entering through a joint between soft top weather-strips.

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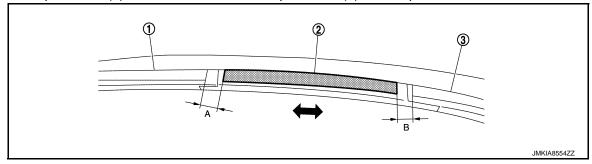
#### < BASIC INSPECTION >

Cause: There may be a step or a gap at the weather-strips joint. Repair Procedure 4

- Replace weather-strip (front rail, center or raile and rear rail) and retainer with a new one. Refer to <u>RF-221</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

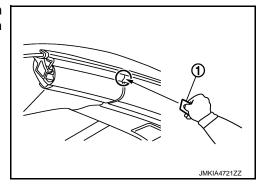
- Loosen center rail weater-strip retainer screws.
- Move center rail weather-strip retainer (2) toward front and rear, and adjust clealance between front rail weather-strip retainer (1) and rear rail weather-strip retainer (3) to the spedified value.



(A): 42.5 mm (1.7 in)

(B): 35.5 mm (1.4 in)

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



#### **CAUTION:**

Install center rail retaner while front rail weather-strip retainer and rear rail weather-strip retainer are in installed status.

#### 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.

#### Repair Procedure 6

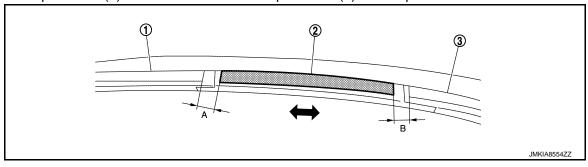
- Replace weather-strip (center rail and rear rail) and retainer with a new one. Refer to <u>RF-221, "ROOF SEAL-ING: Removal and Installation"</u>.
- If the step or the gap is not eliminated after replacing weather-strip, and retainer, then perform the following procedure.

Repair Procedure 7

• Loosen retainer screws (1).

#### < BASIC INSPECTION >

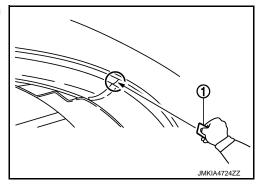
• Move center rail weather-strip retainer (2) toward front and rear, and adjust clealance between front rali weather-strip retainer (1) and rear rail weather-strip retainer (3) to the spedified value.



(A): 42.5 mm (1.7 in)

(B): 35.5 mm (1.4 in)

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

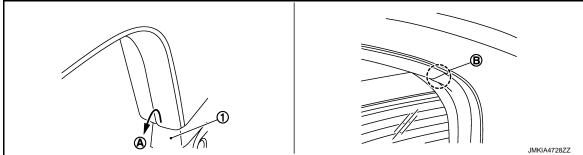


#### WATER LEAKAGE FROM D

Water may be entering passenger room through weather-strip lower end.
 Cause: There may be poor contact between rear rail weather-strip retainer and storage lid weather-strip.

Repair Procedure 8

- Replace rear rail weather-strip with a new one. Refer to <u>RF-221, "ROOF SEALING: Removal and Installation"</u>.
- If the step or the gap is not eliminated after replacing rear rail weather-strip, then perform the following procedure.
- The water overflows (A) from storage lid 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

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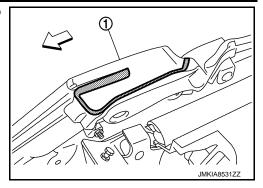
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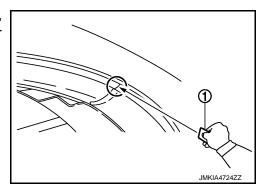
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#### < BASIC INSPECTION >

• Crean drain route and drain hose of storage lid weather-strip (1).



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.

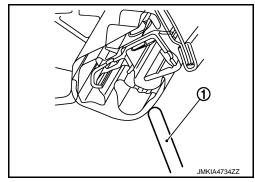
Cause: There may be poor contact between weather-strip of soft top and door glass, or weather-strip of soft top and quarter window glass.

Repair Procedure 13

- Adjust door glass position. Refer to GW-26, "Inspection and Adjustment".
- Adjust quater glass position. Refer to <u>GW-19</u>, "Inspection and Adjustment".

#### **CAUTION:**

- Visually check that weather-strip is not twisted by door glass (1) upper end.
- 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 RF-213, "SOFT TOP ASSEMBLY: Adjustment".



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#### Water Leakage Test

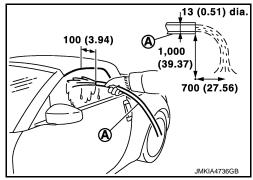
Visually check for water leakage after repairing.

1. 2 workers are required. One worker checks inside the vehicle, and the other one washes with water.

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#### < BASIC INSPECTION >

- 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.



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## DTC/CIRCUIT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

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

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

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## 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?

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YES >> Refer to LAN-15, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-42, "Intermittent Incident".

## **U1010 CONTROL UNIT (CAN)**

### < DTC/CIRCUIT DIAGNOSIS >

## U1010 CONTROL UNIT (CAN)

DTC Logic

### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000009026057

## 1. REPLACE SOFT TOP CONTROL UNIT

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

>> Replace soft top control unit. Refer to <a href="RF-244">RF-244</a>. "Removal and Installation".

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### U0140 LOCAL COMMUNICATION-1

DTC Logic

#### DTC DETECTION LOGIC

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

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Perform diagnosis procedure. Refer to RF-90, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000009026059

## 1. CHECK COMMUNICATION LINE SIGNAL-I

- 1. Turn ignition switch ON.
- 2. Check signal between BCM harness connector and ground using an oscilloscope.

(+) BCN		(–)	Signal
Connector	Terminal		
M123	132	Ground	(V) 15 10 5 0 10 ms JPMIA0013GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK COMMUNICATION LINE SIGNAL-II

- 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.

	+) control unit	(-)	Voltage (Approx.)
Connector	Terminal		(, 4, 1, 2, 1, 1)
B323	20	Ground	12 V

#### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> GO TO 3.

#### **U0140 LOCAL COMMUNICATION-1**

#### < DTC/CIRCUIT DIAGNOSIS >

## $\overline{\mathbf{3.}}$ CHECK COMMUNICATION LINE

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

Soft top o	control unit	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B323	20	M123	132	Existed

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B323	20		Not existed

### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness.

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### U0215 LOCAL COMMUNICATION-2

DTC Logic

#### DTC DETECTION LOGIC

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, front power window switch (passenger side), rear power window switch LH and rear power window switch RH is interrupted for a period of time.	<ul> <li>Communication line</li> <li>Power window main switch</li> <li>Front power window switch</li> <li>Rear power window switch LH</li> <li>Rear power window switch RH</li> </ul>

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Perform diagnosis procedure. Refer to RF-92, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026061

## 1. CHECK COMMUNICATION LINE SIGNAL-I

- 1. Turn ignition switch ON.
- 2. Check signal between soft top control unit harness connector and ground using an oscilloscope.

(+) Soft top control unit Connector Terminal		(-)	Signal (Reference value)
B323	19	Ground	(V) 15 10 10 10 ms  JPMIA0013GB

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2.

## 2.CHECK COMMUNICATION LINE SIGNAL-II

- 1. Turn ignition switch OFF.
- 2. Disconnect power window main switch harness connector, front power window switch harness connector, rear power window switch LH harness connector and rear power window switch RH harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power window switch harness connector and ground.

#### **U0215 LOCAL COMMUNICATION-2**

#### < DTC/CIRCUIT DIAGNOSIS >

(+)	(–)	Voltage (Approx.)		
Power window sw				
Connector Terminal				
Power window main switch	D5	14		
Front power window switch (passenger side) D45 16		Craund	40.1/	
Rear power window switch LH	B42	16	Ground 12 V	
Rear power window switch RH	B222	16		

#### Is the inspection result normal?

YES >> Replace malfunctioning power window switch. Refer to PWC-73, "Removal and Installation".

NO >> GO TO 3.

## 3.check power window switch circuit

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check continuity between soft top control unit harness connector and power window switch harness connector.

Soft top c	ontrol unit	Power window switch		Continuity	
Connector	Terminal	Connector Terminal			Continuity
	Power window main switch	D5	14		
B323	19	Front power window switch (passenger side)	D45	16	Existed
B323 19	Rear power window switch LH	B42	16	Existed	
		Rear power window switch RH	B222	16	

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B323	19		Not existed

#### Is the inspection result normal?

>> Replace soft top control unit. Refer to RF-244, "Removal and Installation". YES

NO >> Repair or replace harness or connector.

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#### **B1701 ROOF CONTROL UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B1701 ROOF CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B1701	ROOF CONTROL UNIT	Soft top control unit detects internal malfunction.	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 RF-94, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026063

## 1. REPLACE SOFT TOP CONTROL UNIT

1. Turn ignition switch OFF.

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- 2. Replace soft top control unit. Refer to RF-244, "Removal and Installation".
- 3. Perform DTC Confirmation Procedure. Refer to RF-94, "DTC Logic".

>> INSPECTION END

#### **B1702 ROOF CONTROL UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B1702 ROOF CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

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

#### 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 RF-95, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

## 1. REPLACE SOFT TOP CONTROL UNIT

- Turn ignition switch OFF.
   Replace soft top control unit. Refer to <u>RF-244, "Removal and Installation"</u>.
- 3. Perform DTC Confirmation Procedure. Refer to RF-95, "DTC Logic".

#### >> INSPECTION END

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**RF-95** 

2014 Murano Cross Cabriolet

## **B1709 ROOF OPEN/CLOSE SWITCH (OPEN)**

#### < DTC/CIRCUIT DIAGNOSIS >

## B1709 ROOF OPEN/CLOSE SWITCH (OPEN)

DTC Logic

#### DTC DETECTION LOGIC

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. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-96, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000009026067

## 1. CHECK ROOF OPEN/CLOSE SWITCH CIRCUIT

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

Soft top control unit		Roof open/o	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B232	15	M210	3	Existed

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B232	15		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

#### 2.CHECK ROOF OPEN/CLOSE SWITCH

Check roof open/close switch. Refer to RF-96, "Component Inspection".

#### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Replace roof open/close switch. Refer to RF-243, "Removal and Installation".

## Component Inspection

INFOID:0000000009026068

## 1. CHECK ROOF OPEN/CLOSE SWITCH

- Turn ignition switch OFF.
- Disconnect roof open/close switch harness connector.
- 3. Check the continuity between roof open/close switch terminals under the following conditions.

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## **B1709 ROOF OPEN/CLOSE SWITCH (OPEN)**

### < DTC/CIRCUIT DIAGNOSIS >

Terminal	Cond	Continuity	
1 and 3		Open pressed	Existed
i anu 3	Roof open/close switch	Except above	Not existed
1 and 4		Close pressed	Existed
i aliu 4		Except above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace roof open/close switch. Refer to RF-243, "Removal and Installation".

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### **B170A ROOF OPEN/CLOSE SWITCH (CLOSE)**

#### < DTC/CIRCUIT DIAGNOSIS >

## B170A ROOF OPEN/CLOSE SWITCH (CLOSE)

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosi	s 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. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-98, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000009026070

## 1. CHECK ROOF OPEN/CLOSE SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector and roof open/close switch harness connector.
- 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		Roof open/close switch	
Connector	Terminal	Connector Terminal		Continuity
B232	14	M210	4	Existed

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

Soft top o	control unit		Continuity
Connector	Terminal	Ground	Continuity
B232	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

#### 2.CHECK ROOF OPEN/CLOSE SWITCH

Check roof open/close switch. Refer to RF-96, "Component Inspection".

#### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Replace roof open/close switch. Refer to RF-243, "Removal and Installation".

### Component Inspection

INFOID:0000000009026071

## 1. CHECK ROOF OPEN/CLOSE SWITCH

- Turn ignition switch OFF.
- 2. Disconnect roof open/close switch harness connector.
- 3. Check the continuity between roof open/close switch terminals under the following conditions.

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## **B170A ROOF OPEN/CLOSE SWITCH (CLOSE)**

### < DTC/CIRCUIT DIAGNOSIS >

Terminal	Con	Continuity	
1 and 3		Open pressed	Existed
i anu s	- Roof open/close switch	Except above	Not existed
1 and 4		Close pressed	Existed
r and 4		Except above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace roof open/close switch. Refer to RF-243, "Removal and Installation".

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## **B170F SENSOR POWER SUPPLY**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagn	osis name	DTC detecting condition	Possible cause
B170F	SENSOR POWER SUPPLY	[PWR-SHORT/OPEN]	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.)     (5th bow status sensor LH circuit is open or shorted.)     (5th bow status sensor RH circuit is open or shorted.)     (Roof status sensor LH circuit is open or shorted.)     (Storage lid status sensor LH circuit is open or shorted.)     Storage lid status sensor LH     Roof striker sensor LH     Roof striker sensor RH     Roof latch lock sensor     Hydraulic unit (5th bow status sensor LH, 5th bow status sensor LH     or storage lid status sensor LH     or storage lid status sensor LH     Soft top control unit

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-100, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026073

## 1.CHECK SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY

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

	(+)			
Soft top	Soft top control unit		Voltage	
Connector	Terminal			
B323	1	Ground	0 V	
D323	21			
	75			
B326	94			
	95			

#### Is the inspection result normal?

#### **B170F SENSOR POWER SUPPLY**

#### < DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 2.

NO >> Replace harness connectors. Refer to RF-238, "Removal and Installation".

## 2.CHECK SENSOR CIRCUIT FOR OPEN AND SHORT TO GROUND

1. Check the continuity between the following terminals.

Soft top control unit		Continuity		
Connector	Ter	minal	Name	Continuity
B323	1	4	Roof striker sensor LH	
B323	21	3	Roof striker sensor RH	
	75		5th bow status sensor RH	
0.4	94	68	5th bow status sensor LH	
		71	Roof latch lock sensor	Existed
B326		59	Ot	
95	Storage lid status sensor LH	Storage lid status serisor Ln		
	90	66	Roof status sensor LH	
	69	KOOI SIAIUS SEIISOI LIT		

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

Soft top control unit			Continuity	
Connector	Connector Terminal		Continuity	
P222	1	-		
B323	21	Ground		
	75		Not existed	
B326	94	=		
	95			

#### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Replace harness connectors. Refer to RF-238, "Removal and Installation".

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## **B171A HYDRAULIC PUMP (LH)**

#### < DTC/CIRCUIT DIAGNOSIS >

## B171A HYDRAULIC PUMP (LH)

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis r	name	DTC detecting condition	Possible causes
	[GND- SHORT]		Harness or connectors     (The hydraulic pump relay 1)	
B171A	B171A HYDRAULIC PMP(LH)  [PWR-SHORT/OPEN]  [GND-SHORT]	SHORT/ Hydraulic pump relay 1 or hydraulic pump moto	Hydraulic pump relay 1 or hydraulic pump motor circuit is open, short to ground or short to power.	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	

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

- Start engine.
- 2. Operate soft top to fully open and fully closed.
- 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:0000000009026075

## 1. CHECK FUSIBLE LINK

Check 40 A fusible link (letter J).

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2.CHECK HYDRAULIC PUMP RELAY 1 POWER SUPPLY CIRCUIT

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

	+)		
Hydra	ulic unit	(–)	Voltage
Connector	Terminal		
B329	13	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

## 3. CHECK HYDRAULIC PUMP RELAY 1 CIRCUIT FOR SHORT TO POWER SUPPLY

- 1. Disconnect soft top control unit harness connector.
- 2. Check the voltage between hydraulic unit harness connector and ground.

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## **B171A HYDRAULIC PUMP (LH)**

#### < DTC/CIRCUIT DIAGNOSIS >

	(+)		
Hydr	aulic unit	(-)	Voltage
Connector	Terminal		
	6		
B328	7	Ground	0 V
	12	Ground	
B329	14		

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### 4. CHECK HYDRAULIC PUMP RELAY 1 GROUND CIRCUIT

Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Cround	Continuity
B328	Ground 6		Existed
B329	14		Existed

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace harness connector. Refer to <a href="https://removal.and.installation">RF-238, "Removal and Installation"</a>.

# 5.check hydraulic unit and soft top control unit circuit for open and short to ground

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

Hydra	ulic unit	Soft top control unit  Connector Terminal		Continuity
Connector	Terminal			Continuity
B328	7	B327	101	Existed
D320	12	B326	73	LAISIGU

2. Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Ground	Continuity
B328	7	Not existe	Not existed
	12		ivoi existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

#### **6.**REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 7.

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### 7. REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

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## **B171A HYDRAULIC PUMP (LH)**

### < DTC/CIRCUIT DIAGNOSIS >

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

### **B171B HYDRAULIC PUMP (RH)**

#### < DTC/CIRCUIT DIAGNOSIS >

## B171B HYDRAULIC PUMP (RH)

DTC Logic INFOID:0000000009026076

#### DTC DETECTION LOGIC

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

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-105, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

## 1. CHECK FUSIBLE LINK

Check 40 A fusible link (letter J).

#### 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

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

	(+)			
Hydra	ulic unit	(-)	Voltage	
Connector	Terminal			
B329	13	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

## 3.CHECK HYDRAULIC PUMP RELAY 2 CIRCUIT FOR SHORT TO POWER SUPPLY

- Disconnect soft top control unit harness connector.
- Check the voltage between hydraulic unit harness connector and ground.

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INFOID:0000000009026077

**RF-105** 

### **B171B HYDRAULIC PUMP (RH)**

#### < DTC/CIRCUIT DIAGNOSIS >

	(+)			
Hydra	aulic unit	(-)	Voltage	
Connector	Terminal			
	6	Ground	0 V	
B328	8			
	11	Ground		
B329	14			

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 4. CHECK HYDRAULIC PUMP RELAY 2 GROUND CIRCUIT

Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit	Ground	Continuity
Connector	Terminal		Continuity
B328	6	Ground	Existed
B329	14		LXISIGU

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace harness connector. Refer to <a href="https://removal.and.installation">RF-238, "Removal and Installation"</a>.

# 5. CHECK HYDRAULIC UNIT AND SOFT TOP CONTROL UNIT CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Hydra	ulic unit	Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B328	8	B327	100	Existed
D320	11	B326	74	LAISIEU

2. Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Ground	
B328	8	Ground	Not existed
D320	11		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace harness connector. Refer to <a href="https://removal.and.installation">RF-238, "Removal and Installation"</a>.

#### **6.**REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

#### 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 RF-244, "Removal and Installation".

#### Is the inspection result normal?

YES >> INSPECTION END

## **B171B HYDRAULIC PUMP (RH)**

< DTC/CIRCUIT DIAGNOSIS > >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO Α В С D Е F G Н RF M Ν

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### **B171C SWITCHING VALVE 1**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes
		[GND- SHORT]	Switching valve 1 circuit is open, short to ground or	Harness or connectors     (The switching valve 1 circuit is open or shorted.)
B171C	SWITCHING VALVE 1	[PWR- SHORT/ OPEN]	short to power.	Hydraulic unit (switching valve 1)     Soft top control unit

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

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

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000009026079

## 1. CHECK SWITCHING VALVE 1 CIRCUIT FOR SHORT TO POWER SUPPLY

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

	(+)	(-)	Voltage	
Hydra	ulic unit			
Connector	Terminal			
B328	1	Ground	0 V	
	6	Ground	U V	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### 2.CHECK SWITCHING VALVE 1 POWER SUPPLY CIRCUIT FOR OPEN AND SHORT TO GROUND

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
B328	1	B327	99	Existed

2. Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Ground	Continuity
B328	1		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

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## **B171C SWITCHING VALVE 1**

## < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3.CHECK SWITCHING VALVE 1 GROUND CIRCUIT

Check the continuity between hydraulic unit harness connector and ground.

	+)		Continuity
Hydra	ulic unit	(–)	
Connector	Terminal		
B328	6	Ground	Existed

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

## 4. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

## 5. REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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## **B171D SWITCHING VALVE 2**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes
		[GND- SHORT]	Switching valve 2 circuit is open, short to ground or	Harness or connectors     (The switching valve 2 circuit is open or shorted.)
B171D	SWITCHING VALVE 2	[PWR- SHORT/ OPEN]	short to power.	<ul> <li>Hydraulic unit (Switching valve 2)</li> <li>Soft top control unit</li> </ul>

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

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

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026081

# 1. CHECK SWITCHING VALVE 2 CIRCUIT FOR SHORT TO POWER SUPPLY

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

	(+)	(-)	Voltage	
Hydra	ulic unit			
Connector	Terminal			
B328	2	Ground	0 V	
D320	6	Giodila	0 V	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 2.CHECK SWITCHING VALVE 2 POWER SUPPLY CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Hydraulic unit		Soft top of	control unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B328	2	B327	98	Existed

2. Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Ground	Continuity
B328	2		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

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## **B171D SWITCHING VALVE 2**

## < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3.CHECK SWITCHING VALVE 2 GROUND CIRCUIT

Check the continuity between hydraulic unit harness connector and ground.

	(+)			
Hydra	ulic unit	(–)	Continuity	
Connector	Terminal			
B328	6	Ground	Existed	

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

## 4. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

## 5. REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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## **B172C ROOF STATUS SIGNAL (TRUNK)**

### < DTC/CIRCUIT DIAGNOSIS >

# B172C ROOF STATUS SIGNAL (TRUNK)

DTC Logic

#### DTC DETECTION LOGIC

#### NOTE:

This item indicates the roof status signal (Audio).

DTC No.	Trouble diagnosis 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

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

#### Is DTC detected?

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

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026083

# 1. CHECK ROOF POSITION SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Disconnect BOSE amp. harness connector or TEL adapter unit (Without NAVI) harness connector.
- 4. Turn ignition switch ON.
- 5. Check voltage between soft top control unit harness connector and ground.

Soft top o	ontrol unit	(_)	Voltago
Connector	Terminal	(-)	Voltage
B323	12	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

## 2.CHECK BOSE AMP. OR TEL ADAPTER UNIT

Check BOSE amp. (Refer to AV-193, "Work Flow") or TEL adapter unit (Refer to AV-67, "Work Flow").

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning part.

## 3.REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

## **B1731 HYDRAULIC STATE 1**

## < DTC/CIRCUIT DIAGNOSIS >

# B1731 HYDRAULIC STATE 1

DTC Logic

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause	
B1731	HYDRAULIC STATE 1	[TIMEOUT]	When roof operation is not detected after 15 seconds or more of operation.	Roof system component	

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-113, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

## 1. CHECK SOFT TOP SYSTEM COMPONENT-I

Check that no foreign material is pinched by roof system component.

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Remove foreign material from soft top system.

# 2.CHECK SOFT TOP SYSTEM COMPONENT-II

Check that roof system component is installed normally and is not damaged.

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning part.

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## **B1758 THERMO PROTECTION**

## < DTC/CIRCUIT DIAGNOSIS >

## **B1758 THERMO PROTECTION**

DTC Logic

## DTC DETECTION LOGIC

DTC No.	Trouble diagno	sis name	DTC detecting condition	Possible cause
B1758	THERMO PRO- TECTION	[ACTIVE]	Thermo protection is active. (Thermo protection: Refer to RF-14, "SOFT TOP SYSTEM: System Description")	<ul><li>Roof system is operated continuously</li><li>Soft top control unit</li></ul>

## 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 RF-114, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000009026087

# 1. REPLACE SOFT TOP CONTROL UNIT

1. Turn ignition switch OFF.

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2. Replace soft top control unit. Refer to RF-244, "Removal and Installation".

>> INSPECTION END

## **B175C POWER SOURCE (ROOF)**

### < DTC/CIRCUIT DIAGNOSIS >

## **B175C POWER SOURCE (ROOF)**

**DTC** Logic INFOID:0000000009026088

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis 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.	<ul><li>Power source circuit</li><li>Battery condition</li><li>Charging system</li></ul>

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Start engine.
- 2. Operate soft top to fully open and closed.
- Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.

### Is DTC detected?

>> Go to RF-115, "Diagnosis Procedure". YES

>> INSPECTION END NO

## Diagnosis Procedure

## 1. CHECK CHARGING SYSTEM

Check charging system. Refer to CHG-14, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-18, "Work Flow (Without EXP-800 NI or GR8-1200 NI)".

### Is the inspection result normal?

YES >> GO TO 2.

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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 RF-180, "Diagnosis Procedure". Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace malfunction parts. RF

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**RF-115** 

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## **B175D POWER SOURCE (ROOF)**

### < DTC/CIRCUIT DIAGNOSIS >

# **B175D POWER SOURCE (ROOF)**

DTC Logic

### DTC DETECTION LOGIC

DTC No.	Trouble diagr	nosis 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.	<ul><li>Power source circuit</li><li>Battery condition</li><li>Charging system</li></ul>

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Start engine.
- 2. Operate soft top to fully open and fully closed.
- 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:0000000009026091

## 1. CHECK CHARGING SYSTEM

Check charging system. Refer to <u>CHG-14</u>, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or <u>CHG-18</u>, "Work Flow (Without EXP-800 NI or GR8-1200 NI)".

### Is the inspection result normal?

YES >> GO TO 2.

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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-180, "Diagnosis Procedure"</u>. Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace malfunction parts.

## **B175E POWER SOURCE (POWER WINDOW)**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B175E POWER SOURCE (POWER WINDOW)**

DTC Logic INFOID:0000000009026092

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis 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 (front power window) terminal is detected.	<ul> <li>Power source circuit (for front power window)</li> <li>Battery condition</li> <li>Charging system</li> <li>BCM power supply and ground</li> <li>Soft top control unit</li> </ul>

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

>> Go to RF-117, "Diagnosis Procedure". YES

NO >> INSPECTION END

## Diagnosis Procedure

## 1. CHECK CHARGING SYSTEM

Check charging system. Refer to CHG-14, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-18, "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 BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to BCS-80, "Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning part.

# 3.CHECK POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT

- Check power window main switch power supply and ground circuit. Refer to PWC-35, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".
- 2. Check front power window switch (passenger side) power supply and ground circuit. Refer to PWC-36. "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure".

### Is the inspection result normal?

YFS >> GO TO 4.

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NO >> Repair or replace malfunctioning part.

## 4. CHECK VOLTAGE POWER WINDOW POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector, power window main switch harness connector and front power window switch (passenger side) harness connector.
- Check voltage between soft top control unit harness connector and ground.

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**RF-117** 

## **B175E POWER SOURCE (POWER WINDOW)**

### < DTC/CIRCUIT DIAGNOSIS >

	(+)		Voltage	
Soft top	control unit	(–)	Voltage (Approx.)	
Connector	Connector Terminal			
B323	9	Ground	12 V	

## s the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> GO TO 5.

# $5. \mathsf{CHECK}$ CONTINUITY POWER WINDOW POWER SUPPLY CIRCUIT

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

В	ВСМ		Soft top control unit	
Connector	Terminal	Connector	Terminal	Continuity
M118	2	B323	9	Existed

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

(	+)		
Soft top of	control unit	(–)	Continuity
Connector	Terminal		
B323	9	Ground	Not existed

## Is the inspection result normal?

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YES >> Replace BCM. Refer to <u>BCS-87</u>, "Removal and Installation".

NO >> Repair or replace harness or connector.

## **B175F POWER SOURCE (POWER WINDOW)**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B175F POWER SOURCE (POWER WINDOW)**

DTC Logic INFOID:0000000009026094

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis 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 front power window)     Battery condition     Charging system     BCM power supply and ground     Soft top control unit	-

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-119, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

## CHECK CHARGING SYSTEM

Check charging system. Refer to CHG-14, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-18, "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 BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to BCS-80, "Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning part.

# 3.CHECK POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window main switch power supply and ground circuit. Refer to PWC-35, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

Check front power window switch (passenger side) power supply and ground circuit. Refer to PWC-36. "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 4.

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NO >> Repair or replace malfunctioning part.

## f 4.CHECK VOLTAGE POWER WINDOW POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector, power window main switch harness connector and front power window switch (passenger side) harness connector.
- Check voltage between soft top control unit harness connector and ground.

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**RF-119** 

## **B175F POWER SOURCE (POWER WINDOW)**

### < DTC/CIRCUIT DIAGNOSIS >

	+)		Vallana	
Soft top of	control unit	(–)	Voltage (Approx.)	
Connector	Terminal		, , ,	
B323	9	Ground	12 V	

## s the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> GO TO 5.

# $5. \mathsf{CHECK}$ CONTINUITY POWER WINDOW POWER SUPPLY CIRCUIT

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

В	ВСМ		Soft top control unit	
Connector	Terminal	Connector	Terminal	Continuity
M118	2	B323	9	Existed

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

(	+)		
Soft top of	control unit	(–)	Continuity
Connector	Terminal		
B323	9	Ground	Not existed

## Is the inspection result normal?

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YES >> Replace BCM. Refer to <u>BCS-87</u>, "Removal and Installation".

NO >> Repair or replace harness or connector.

## **B1766 SWITCHING VALVE 3**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis	name	DTC detecting condition	Possible causes
		[GND- SHORT]	Switching value 2 circuit is onen abort to ground or	Harness or connectors     (The switching valve 3 cir-
B1766	SWITCHING VALVE 3	[PWR- SHORT/ OPEN]	Switching valve 3 circuit is open, short to ground or short to power.	<ul><li>cuit is open or shorted.)</li><li>Hydraulic unit (Switching valve 3)</li><li>Soft top control unit</li></ul>

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

YES >> Go to RF-121, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK SWITCHING VALVE 3 CIRCUIT FOR SHORT TO POWER SUPPLY

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

	(+)	(-)	Voltage	
Connector	ulic unit Terminal			
B328	3	Ground	0 V	
B320	6	Ground	0 V	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 2.CHECK SWITCHING VALVE 3 POWER SUPPLY CIRCUIT FOR OPEN AND SHORT TO GROUND

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	
B328	3	B327	97	Existed	

2. Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Ground	Continuity
B328	3		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

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## **B1766 SWITCHING VALVE 3**

### < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3.CHECK SWITCHING VALVE 3 GROUND CIRCUIT

Check the continuity between hydraulic unit harness connector and ground.

(	+)		
Hydra	ulic unit	(–)	Continuity
Connector	Terminal		
B328	B328 6		Existed

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 4. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

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## 5. REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

## **B1767 SWITCHING VALVE 4**

**DTC Logic** INFOID:0000000009026098

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible causes
		[GND- SHORT]	Switching valve 4 circuit is open, short to ground or	Harness or connectors     (The switching valve 4 circuit is open or shorted.)
B1767	SWITCHING VALVE 4	[PWR- SHORT/ OPEN]	short to power.	<ul> <li>Hydraulic unit (Switching valve 4)</li> <li>Soft top control unit</li> </ul>

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

YES >> Go to RF-123, "Diagnosis Procedure".

>> INSPECTION END NO

## Diagnosis Procedure

# 1. CHECK SWITCHING VALVE 4 CIRCUIT FOR SHORT TO POWER SUPPLY

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector and hydraulic unit harness connector.
- Check the voltage between hydraulic unit harness connector and ground.

	(+)		Voltage	
Hydra	ulic unit	(–)		
Connector	Connector Terminal			
B328	4	Ground	0 V	
	6	Ground	U V	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 2.CHECK SWITCHING VALVE 4 POWER SUPPLY CIRCUIT FOR OPEN AND SHORT TO GROUND

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
B328	4	B327	96	Existed

Check the continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Connector Terminal		Continuity
B328	4		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

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## **B1767 SWITCHING VALVE 4**

### < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3.CHECK SWITCHING VALVE 4 GROUND CIRCUIT

Check the continuity between hydraulic unit harness connector and ground.

(	+)		
Hydra	ulic unit	(–)	Continuity
Connector	Terminal		
B328	B328 6		Existed

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 4. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

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## 5. REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

## **B176A THERMO PROTECTION**

## < DTC/CIRCUIT DIAGNOSIS >

# **B176A THERMO PROTECTION**

DTC Logic

## DTC DETECTION LOGIC

DTC No.	Trouble diagno	sis name	DTC detecting condition	Possible cause	
B176A	THERMO PRO- TECTION	[ACTIVE]	Thermo protection is active. (Thermo protection: Refer to RF-14, "SOFT TOP SYSTEM: System Description")	Soft top control unit	(

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Move the vehicle to a location where ambient temperature is 0°C or more and wait for a period of time.
- 2. Turn ignition switch ON.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- Check DTC.

### Is DTC detected?

YES >> Go to RF-125, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

1. REPLACE SOFT TOP CONTROL UNIT

- 1. Turn ignition switch OFF.
- Replace soft top control unit. Refer to <u>RF-244, "Removal and Installation"</u>.

>> INSPECTION END

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Revision: 2014 February

## **RF-125**

## **B176B ROOF WARNING LAMP**

### < DTC/CIRCUIT DIAGNOSIS >

## **B176B ROOF WARNING LAMP**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B176B	ROOF WARNING LAMP	Roof warning lamp circuit is short to power.	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.
- Operate soft top to fully open and fully closed.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

### Is DTC detected?

YES >> Go to RF-126, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

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# 1. CHECK ROOF WARNING LAMP CIRCUIT FOR SHORT TO POWER SUPPLY

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

(+)			
Soft top o	Soft top control unit		Voltage
Connector	Connector Terminal		
B323	11	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

## 2. REPLACE COMBINATION METER

Replace combination meter. Refer to MWI-79, "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-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-126 2014 Murano Cross Cabriolet

## **B176C STRIKER SENSOR (RH)**

### < DTC/CIRCUIT DIAGNOSIS >

# B176C STRIKER SENSOR (RH)

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors  (T)
B176C	STRIKER SEN- SOR RH	[PWR-SHORT/ OPEN]	Roof striker sensor RH circuit is open, short to ground or short to power.	<ul><li>(The sensor circuit is open or shorted.)</li><li>Soft top control unit</li></ul>
		[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 closed.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- Check DTC.

#### Is DTC detected?

YES >> Go to RF-127, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK ROOF STRIKER SENSOR RH CIRCUIT FOR SHORT TO POWER SUPPLY

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

(+)			
Soft top control unit		(–)	Voltage
Connector Terminal		( )	
B323 3		Ground	0 V

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

# 2.check roof striker sensor rh circuit for open and short to ground

- Disconnect roof striker sensor RH harness connector.
- Check the continuity between roof striker sensor RH harness connector and soft top control unit harness connector.

Soft top control unit		Roof striker sensor RH		Continuity
Connector	Terminal	Connector Terminal		Continuity
B323	3	R31	2	Existed

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B323	3		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

Revision: 2014 February

NO >> Repair or replace harness or connector.

**RF-127** 

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## **B176C STRIKER SENSOR (RH)**

## < DTC/CIRCUIT DIAGNOSIS >

# 3. REPLACE ROOF STRIKER SENSOR RH

Replace roof striker sensor RH. Refer to RF-220, "FRONT LOCK STRIKER: Removal and Installation".

## 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-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-128 2014 Murano Cross Cabriolet

## **B176D STRIKER SENSOR (LH)**

### < DTC/CIRCUIT DIAGNOSIS >

## B176D STRIKER SENSOR (LH)

DTC Logic INFOID:0000000009026106

#### DTC DETECTION LOGIC

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

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

>> Go to RF-129, "Diagnosis Procedure". YES

>> INSPECTION END NO

## Diagnosis Procedure

# 1.check roof striker sensor LH circuit for short to power supply

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check voltage between soft top control unit harness connector and ground.

(+)			
Soft top control unit		(–)	Voltage
Connector	Connector Terminal		
B323	B323 4		0 V

## Is the inspection result normal?

YES >> GO TO 2.

>> Repair or replace harness or connector.

# 2.CHECK ROOF STRIKER SENSOR LH CIRCUIT FOR OPEN AND SHORT TO GROUND

- Disconnect roof striker sensor LH harness connector.
- Check the continuity between roof striker sensor LH harness connector and soft top control unit harness connector.

Soft top of	control unit	Roof strike	r sensor LH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B323	4	R30	2	Existed

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B323	4		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

Revision: 2014 February

NO >> Repair or replace harness or connector.

**RF-129** 

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## **B176D STRIKER SENSOR (LH)**

## < DTC/CIRCUIT DIAGNOSIS >

# 3. REPLACE ROOF STRIKER SENSOR LH

Replace roof striker sensor LH. Refer to RF-220, "FRONT LOCK STRIKER: Removal and Installation".

## 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-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-130 2014 Murano Cross Cabriolet

## **B176E ROOF LATCH LOCK SENSOR**

< DTC/CIRCUIT DIAGNOSIS >

## **B176E ROOF LATCH LOCK SENSOR**

DTC Logic INFOID:0000000009026108

#### DTC DETECTION LOGIC

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

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

>> Go to RF-131, "Diagnosis Procedure". YES

>> INSPECTION END NO

# Diagnosis Procedure

# 1. CHECK ROOF LATCH LOCK SENSOR CIRCUIT FOR SHORT TO POWER

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check voltage between soft top control unit harness connector and ground.

(+)			
Soft top control unit		(–)	Voltage
Connector	Terminal	,	
B326	71	Ground	0 V

### Is the inspection result normal?

YES >> GO TO 2.

>> Repair or replace harness or connector.

# 2.CHECK ROOF LATCH LOCK SENSOR CIRCUIT FOR OPEN AND SHORT TO GROUND

- Disconnect roof latch lock sensor harness connector.
- Check the continuity between roof latch lock sensor harness connector and soft top control unit harness connector.

Soft top of	control unit	Roof latch	lock sensor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B326	71	B337	2	Existed

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

Soft top of	Soft top control unit		Continuity
Connector	Terminal	Ground	Continuity
B326	71		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

Revision: 2014 February

NO >> Repair or replace harness or connector.

**RF-131** 

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## **B176E ROOF LATCH LOCK SENSOR**

## < DTC/CIRCUIT DIAGNOSIS >

# 3. REPLACE ROOF LATCH LOCK SENSOR

Replace roof latch lock sensor. Refer to RF-245, "Removal and Installation".

## 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-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-132 2014 Murano Cross Cabriolet

## **B176F ROOF STATUS SENSOR (LH)**

### < DTC/CIRCUIT DIAGNOSIS >

## B176F ROOF STATUS SENSOR (LH)

DTC Logic

### DTC DETECTION LOGIC

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

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

YES >> Go to RF-133, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK ROOF STATUS SENSOR LH CIRCUIT FOR SHORT TO POWER SUPPLY

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

(+)			
Soft top control unit		(–)	Voltage
Connector	Terminal		
B326	69	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>. "Removal and Installation".

## 2.CHECK ROOF STATUS SENSOR LH CIRCUIT FOR OPEN AND SHORT TO GROUND

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

	Soft top control unit		
Connector	Terr	Continuity	
B326	69	Existed	

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

Soft top control unit			Continuity
Connector	Terminal	Ground	Continuity
B326	69		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

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Revision: 2014 February

## **B176F ROOF STATUS SENSOR (LH)**

## < DTC/CIRCUIT DIAGNOSIS >

# 3. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

## 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-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-134 2014 Murano Cross Cabriolet

## **B1771 ROOF STATUS SENSOR (LH)**

### < DTC/CIRCUIT DIAGNOSIS >

## B1771 ROOF STATUS SENSOR (LH)

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagr	nosis name	DTC detecting condition	Possible cause
		[GND-SHORT]	_	Harness or connectors     (The sensor circuit is open or shorted.)     Soft top control unit
B1771	ROOF STATUS SEN LH	[PWR-SHORT/ OPEN]		
		[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 closed.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

### Is DTC detected?

YES >> Go to RF-135, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK ROOF STATUS SENSOR LH CIRCUIT FOR SHORT TO POWER SUPPLY

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

(+)			
Soft top control unit		(–)	Voltage
Connector	Terminal		
B326	66	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

## 2.CHECK ROOF STATUS SENSOR LH CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Soft top control unit			Continuity
Connector	Terr	Continuity	
B326	66 95		Existed

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

Soft top control unit			Continuity
Connector Terminal		Ground	Continuity
B326	66		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

Revision: 2014 February

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

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**RF-135** 

## **B1771 ROOF STATUS SENSOR (LH)**

## < DTC/CIRCUIT DIAGNOSIS >

# 3. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

## 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-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-136 2014 Murano Cross Cabriolet

## **B1772 5TH BOW STATUS SENSOR (LH)**

### < DTC/CIRCUIT DIAGNOSIS >

# B1772 5TH BOW STATUS SENSOR (LH)

DTC Logic INFOID:0000000009026114

#### DTC DETECTION LOGIC

DTC No.	Trouble diagr	osis name	DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors      The agent and a singuity in a great an
B1772	5BOW STATUS SEN LH	[PWR-SHORT/ OPEN]	5th bow status sensor LH circuit is open, short to ground or short to power.	<ul><li>(The sensor circuit is open or shorted.)</li><li>Soft top control unit</li></ul>
		[OPEN]	1	5th bow status sensor LH

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

>> Go to RF-137, "Diagnosis Procedure". YES

>> INSPECTION END NO

## Diagnosis Procedure

# 1.check 5th bow status sensor LH circuit for short to power supply

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check voltage between soft top control unit harness connector and ground.

(+)			
Soft top control unit		(–)	Voltage
Connector	Terminal	( )	
B326	68	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 2.

>> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

## 2.CHECK 5TH BOW STATUS SENSOR LH CIRCUIT FOR OPEN AND SHORT TO GROUND

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

	Continuity		
Connector	Terr	Continuity	
B326	68 94		Existed

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

Soft top control unit			Continuity
Connector	Terminal	Ground	Continuity
B326	68		Not existed

## Is the inspection result normal?

YES >> GO TO 3.

Revision: 2014 February

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3.REPLACE HYDRAULIC UNIT

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## **B1772 5TH BOW STATUS SENSOR (LH)**

## < DTC/CIRCUIT DIAGNOSIS >

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

### 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-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-138 2014 Murano Cross Cabriolet

## **B1773 5TH BOW STATUS SENSOR (RH)**

### < DTC/CIRCUIT DIAGNOSIS >

## B1773 5TH BOW STATUS SENSOR (RH)

DTC Logic INFOID:0000000009026116

### DTC DETECTION LOGIC

DTC No.	Trouble diagr	nosis name	DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors
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

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

#### Is DTC detected?

>> Go to RF-139, "Diagnosis Procedure". YES

>> INSPECTION END NO

## Diagnosis Procedure

# 1.check 5th bow status sensor RH circuit for short to power supply

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check voltage between soft top control unit harness connector and ground.

(+)			
Soft top control unit		()	Voltage
Connector	Terminal	( )	
B326	70	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 2.

>> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

## 2.CHECK 5TH BOW STATUS SENSOR RH CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Soft top control unit			Continuity
Connector	Terr	Continuity	
B326	70 75		Existed

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

Soft top of	Soft top control unit		Continuity	
Connector	Terminal	Ground	Continuity	
B326	70		Not existed	

**RF-139** 

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3.REPLACE HYDRAULIC UNIT

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Revision: 2014 February

## **B1773 5TH BOW STATUS SENSOR (RH)**

## < DTC/CIRCUIT DIAGNOSIS >

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

### 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-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-140 2014 Murano Cross Cabriolet

## **B1774 STORAGE LID STATUS SENSOR (LH)**

## < DTC/CIRCUIT DIAGNOSIS >

# B1774 STORAGE LID STATUS SENSOR (LH)

DTC Logic

### DTC DETECTION LOGIC

DTC No.	. Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors  (The agency singuity is a good as a second singuity is a good singuity in a good singuity is a good singuity in a good singuity is a good singuity in a good singuity in a good singuity is a good singuity in a good singuity in a good singuity is a good singuity in a
SEN LH OP	[PWR-SHORT/ OPEN]	Storage lid status sensor LH circuit is open, short to ground or short to power.	<ul><li>(The sensor circuit is open or shorted.)</li><li>Soft top control unit</li></ul>	
	[OPEN]		Storage lid status sensor LH	

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

YES >> Go to RF-141, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

# 1. CHECK STORAGE LID STATUS SENSOR LH CIRCUIT FOR SHORT TO POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector and storage lid status sensor harness connector.
- 3. Check voltage between soft top control unit harness connector and ground.

(+)			
Soft top control unit		()	Voltage
Connector	Terminal	( )	
B326	60	Ground	0 V

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to <u>RF-238</u>, "<u>Removal and Installation</u>".

## 2.CHECK STRAGE LID STATUS SENSOR LH CIRCUIT FOR OPEN AND SHORT TO GROUND

Check continuity between storage lid status sensor LH harness connector and soft top control unit harness connector.

Storage lid status sensor LH		Soft top control unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
B341	3	B326	60	Existed

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B326	60		Not existed

## Is the inspection result normal?

YES >> GO TO 3.

Revision: 2014 February

NO >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

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**RF-141** 

## **B1774 STORAGE LID STATUS SENSOR (LH)**

## < DTC/CIRCUIT DIAGNOSIS >

# 3. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

## 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-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-142 2014 Murano Cross Cabriolet

## **B1776 STORAGE LID STATUS SENSOR (RH)**

## < DTC/CIRCUIT DIAGNOSIS >

## B1776 STORAGE LID STATUS SENSOR (RH)

**DTC** Logic INFOID:0000000009026120

### DTC DETECTION LOGIC

#### NOTE:

This item indicates the storage lid status sensor LH signal.

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[GND-SHORT]		Harness or connectors
B1776	B1776 S/LID STATUS [PWR-SH OPEN] [OPEN]	[PWR-SHORT/ OPEN]	Storage 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]		Storage lid status sensor LH

## DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

>> Go to RF-143, "Diagnosis Procedure". YES

>> INSPECTION END NO

## Diagnosis Procedure

1.check storage lid status sensor LH circuit for short to power supply

- Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector and storage lid status sensor harness connector.
- Check voltage between soft top control unit harness connector and ground.

(+)			
Soft top control unit		(–)	Voltage
Connector	Connector Terminal		
B326	59	Ground	0 V

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

## 2.CHECK STRAGE LID STATUS SENSOR LH CIRCUIT FOR OPEN AND SHORT TO GROUND

Check continuity between storage lid status sensor LH harness connector and soft top control unit harness connector.

Storage lid state	us sensor LH	Soft top c	ontrol unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
B341	2	B326	59	Existed

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

Soft top of	control unit	Ground	Continuity
Connector	Terminal		Continuity
B326	59		Not existed

#### Is the inspection result normal?

>> GO TO 3. YES

**RF-143** Revision: 2014 February

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## **B1776 STORAGE LID STATUS SENSOR (RH)**

## < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 3. REPLACE HYDRAULIC UNIT

Replace hydraulic unit. Refer to RF-238, "Removal and Installation".

## 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-244, "Removal and Installation".

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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### **B1777 REAR WINDOW DEFOGGER OUTPUT SIGNAL**

### < DTC/CIRCUIT DIAGNOSIS >

## B1777 REAR WINDOW DEFOGGER OUTPUT SIGNAL

DTC Logic

### DTC DETECTION LOGIC

DTC No.	Trouble diagr	nosis 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 closed.
- 3. Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- 4. Check DTC.

### Is DTC detected?

YES >> Go to RF-145, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

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Refer to DEF-27, "Diagnosis Procedure".

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**RF-145** 

2014 Murano Cross Cabriolet

### **B1778 TRUNK OPEN OUTPUT SIGNAL**

### < DTC/CIRCUIT DIAGNOSIS >

## **B1778 TRUNK OPEN OUTPUT SIGNAL**

DTC Logic INFOID:0000000009026124

#### DTC DETECTION LOGIC

DTC No.	Trouble diagr	nosis name	DTC detecting condition	Possible cause
B1778	TRUNK OPEN	[PWR-SHORT/ OPEN]	Trunk lid opener output signal circuit is open,	Harness or connectors     (Trunk lid opener output signal
	OUT SIG	[GND-SHORT]	short to ground or short to power.	<ul><li>circuit is open or shorted.)</li><li>Trunk lid lock assembly</li></ul>

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

>> Go to RF-146, "Diagnosis Procedure". YES

>> INSPECTION END NO

### Diagnosis Procedure

INFOID:0000000009026125

# 1. CHECK TRUNK LID OPENER OUTPUT SIGNAL-I

- 1. Turn ignition switch OFF.
- Disconnect trunk lid lock assembly harness connector.
- Turn ignition switch ON.
- 4. Select "CONVERTIBLE ROOF" using CONSULT.
- 5. Select "TRUNK OPENER" in "ACTIVE TEST" mode.
- Touch "ON" to check voltage between trunk lid lock assembly harness connector and ground.

(+)			Active test		Voltage (Approx.)
Trunk lid lo	Trunk lid lock assembly				
Connector	Terminal				(11 - )
T7	3	Ground	TRUNK OPENER	ON	$0~V \rightarrow 12~V \rightarrow 0~V$

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.CHECK TRUNK LID OPENER OUTPUT SIGNAL CIRCUIT-II

- Disconnect soft top control unit harness connector.
- Check continuity between soft top control unit harness connector and trunk lid lock assembly harness connector.

Soft top of	control unit	Trunk lid lo	ck assembly	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B323	41	T7	3	Existed

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

Trunk lid lo	ck assembly		Continuity
Connector Terminal		Ground	Continuity
T7	3		Not existed

#### Is the inspection result normal?

### **B1778 TRUNK OPEN OUTPUT SIGNAL**

### < DTC/CIRCUIT DIAGNOSIS >

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Repair or replace harness or connector.

# 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
T7	2		Existed

### Is the inspection result normal?

YES >> Replace trunk lid lock assembly. Refer to <u>DLK-192. "Removal and Installation"</u>.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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### **B1779 HYDRAULIC PUMP TEMPERATURE SENSOR**

< DTC/CIRCUIT DIAGNOSIS >

## B1779 HYDRAULIC PUMP TEMPERATURE SENSOR

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagno	sis name	DTC detecting condition	Possible cause
	LIVERALILIC DME	[GND- SHORT]	Lhalandia ayan tagan ayat ya ayan a isayit is	Harness or connectors     (Hydraulic pump temperature sensitivities appeared by the description).
B1779	HYDRAULIC PMP T/SEN	[PWR- SHORT/ OPEN]	Hydraulic pump temperature sensor circuit is open, short to ground or short to power.	sor circuit is open or shorted.)  • Hydraulic unit (Hydraulic pump temperature)  • 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 >> Go to RF-148, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026127

# 1. CHECK HYDRAULIC PUMP TEMPERATURE SENSOR POWER SUPPLY CIRCUIT FOR SHORT TO POWER

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

(	+)		
Soft top of	control unit	(–)	Voltage
Connector	Terminal		
B326	72	Ground	0 V

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

# 2.CHECK HYDRAULIC PUMP TEMPERATURE SENSOR CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Hydra	ulic unit	Soft top of	control unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B328	9	B326	72	Existed
	10	D320	92	LAISIEU

2. Check continuity between hydraulic unit harness connector and ground.

Hydra	ulic unit		Continuity
Connector	Terminal	Ground	Continuity
B328	9 Ground		Not existed
D326	10		INOL EXISTED

### Is the inspection result normal?

## **B1779 HYDRAULIC PUMP TEMPERATURE SENSOR**

< DTC/CIRCUIT DIAGNOSIS > YES >> Replace soft top control unit. Refer to <a href="RF-244">RF-244</a>, "Removal and Installation". NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

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### **B177A ROOF STATUS INCORRECT**

### < DTC/CIRCUIT DIAGNOSIS >

## **B177A ROOF STATUS INCORRECT**

DTC Logic

### DTC DETECTION LOGIC

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 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. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-150, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000009026129

# 1. CHECK SOFT TOP SYSTEM COMPONENT

- 1. Check that soft top system component is installed normally and is not damaged.
- 2. Check that soft top open/close control. Refer to RF-14, "SOFT TOP SYSTEM: System Description".

### Is the inspection result normal?

YES >> INSPECTION END

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NO >> Repair or replace malfunctioning part.

### **B177B ROOF STATUS INCORRECT**

### < DTC/CIRCUIT DIAGNOSIS >

# **B177B ROOF STATUS INCORRECT**

DTC Logic

### DTC DETECTION LOGIC

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.	<ul><li>Soft top status</li><li>Soft top control unit</li></ul>

### 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. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-151, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

1.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure. Refer to RF-151, "DTC Logic".

### Is the DTC displayed again?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> INSPECTION END

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### **B177C THERMO PROTECTION**

### < DTC/CIRCUIT DIAGNOSIS >

# **B177C THERMO PROTECTION**

DTC Logic

## DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B177C	THERMO PROTECTION	Thermo protection is active. (Thermo protection: Refer to RF-14, "SOFT TOP SYSTEM: System Description")	Soft top system is operated continuously     Soft 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 RF-152, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000009026133

# 1. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure. Refer to RF-94, "DTC Logic".

### Is the DTC displayed again?

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YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> INSPECTION END

### **B1780 OUTSIDE FLAP MOTOR RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

## B1780 OUTSIDE FLAP MOTOR RELAY 1

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis r	name	DTC detecting condition	Possible causes
		[GND- SHORT] [PWR-		Harness or connectors     (The outside flap motor relay     1 circuit is open or shorted.)  The outside flap motor significant flap motors in the control of the contr
B1780	OUTSIDE FLAP MO- TOR RELAY 1	SHORT/ OPEN]	Outside flap motor relay 1 or outside flap motor circuit is open, short to ground or short to power.	<ul><li>(The outside flap motor circuit is open or shorted.)</li><li>Hydraulic unit (Outside flap</li></ul>
		[GND- SHORT]		motor relay 1)  Outside flap motor assembly (Outside flap 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 closed.
- Select "Self Diagnostic Result" mode of "CONVERTIBLE ROOF" using CONSULT.
- Check DTC.

#### Is DTC detected?

YES >> Go to RF-153, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

# 1. CHECK OUTSIDE FLAP MOTOR

- 1. Turn ignition switch OFF.
- Disconnect outside flap motor harness connector.
- Turn ignition switch ON.
- Select "CONVERTIBLE ROOF" using CONSULT.
- Select "OUTSIDE FLAP MOTOR" in "ACTIVE TEST" mode.
- 6. Touch "DEPLOY" and "STORAGE" to check voltage between soft top control unit harness connector and ground.

(+) Soft top control unit		(–)	Acti	Active test	
Connector	Terminal				(Approx.)
B324	45		OUTSIDE FLAP MOTOR	DEPLOY	0 V
D324	45	Ground		STORAGE	12 V
B327	103	Ground		DEPLOY	12 V
				STORAGE	0 V

### Is the inspection result normal?

YES >> Replace outside flap motor. Refer to <a href="RF-236">RF-236</a>, "OUTSIDE FLAP MOTOR: Removal and Installation".

**RF-153** 

NO >> GO TO 2.

# $2.\mathsf{CHECK}$ OUTSIDE FLAP MOTOR RELAY 1 ON SIGNAL CIRCUIT-I

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

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### **B1780 OUTSIDE FLAP MOTOR RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

	+) control unit	(-)	Voltage (Approx.)
Connector	Terminal		(/ (pprox.)
B324	45	Ground	12 V

### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

# 3.CHECK OUTSIDE FLAP MOTOR RELAY 1 ON SIGNAL CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect harness connectors B75 and B316.
- 3. Check voltage between B75 harness connector and ground.

(	+)	(_)	Voltage	
Connector	Terminal	( )	(Approx.)	
B75	8	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to RF-238, "Removal and Installation".

NO >> Replace the 15 A fuse (No.34) after repairing the applicable circuit.

# 4.CHECK OUTSIDE FLAP MOTOR RELAY 1 CIRCUIT-I

Check voltage between outside flap motor relay 1 harness connector and ground.

	+)	(-)	Voltage (Approx.)
Outside flap	motor relay 1		
Connector	Terminal		, , ,
B334	5	Ground	12 V

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

# 5. CHECK OUTSIDE FLAP MOTOR RELAY 1 CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect harness connectors B76 and B317.
- 3. Check voltage between B76 harness connector and ground.

(	+)	(_)	Voltage (Approx.)	
Connector	Connector Terminal		(Approx.)	
B76	5	Ground	12 V	
ы	12	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to RF-238, "Removal and Installation".

NO >> Replace the 40 A fusible link (No.J) after repairing the applicable circuit.

## 6.CHECK OUTSIDE FLAP MOTOR RELAY 1 CIRCUIT-III

Turn ignition switch OFF.

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- 2. Disconnect harness connectors B76 and B317.
- Check voltage between outside flap motor harness connector and ground, soft top control unit harness connector and ground.

### **B1780 OUTSIDE FLAP MOTOR RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

(+)			(-)	Voltage
Connector		Terminal	(-)	voltage
Outside flap motor	B307	1	Ground	0 V
Soft top control unit	B327	103	Giodila	0 0

Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Outside flap motor side: Repair or replace harness or connector.

NO-2 >> Soft top control unit side: Replace harness connector. Refer to RF-238, "Removal and Installation".

# 7.CHECK OUTSIDE FLAP MOTOR RELAY 1 CIRCUIT-IV

1. Check continuity between outside flap motor harness connector and B76 harness connector.

Outside flap motor		_		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B307	1	B76	2	Existed

2. Check continuity between outside flap motor harness connector and ground.

Outside	flap motor		Continuity
Connector	Terminal	Ground	Continuity
B307	1		Not existed

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

## 8.CHECK OUTSIDE FLAP MOTOR RELAY 1 CIRCUIT-V

1. Check continuity between soft top control unit harness connector and B317 harness connector.

Soft top control unit		_		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B327	103	B317	2	Existed
D321	103	B317	9	LXISteu

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B327	103		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### 9.CHECK OUTSIDE FLAP MOTOR RELAY 1 CIRCUIT-VI

Check continuity between B76 harness connector and ground.

Connector	Terminal	Ground	Continuity
B76	9	Ground	Existed

### Is the inspection result normal?

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YES >> Replace soft top control unit. Refer to <a href="Ref-244">RF-244</a>, "Removal and Installation".

NO >> Repair or replace harness or connector.

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### **B1781 OUTSIDE FLAP MOTOR RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

## B1781 OUTSIDE FLAP MOTOR RELAY 2

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible causes
	[GND- SHORT]		Harness or connectors     (The outside flap motor relay)	
B1781	OUTSIDE FLAP MO- TOR RELAY 2	[PWR- SHORT/ OPEN]	Outside flap motor relay 2 or outside flap motor circuit is open, short to ground or short to power.	2 circuit is open or shorted.)     (The outside flap motor circuit is open or shorted.)     Hydraulic unit (Outside flap
		[GND- SHORT]		motor relay 2)  Outside flap motor assembly (Outside flap motor)  Soft top control unit

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-156, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

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# 1. CHECK OUTSIDE FLAP MOTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect outside flap motor harness connector.
- 3. Turn ignition switch ON.
- Select "CONVERTIBLE ROOF" using CONSULT.
- Select "OUTSIDE FLAP MOTOR" in "ACTIVE TEST" mode.
- Touch "DEPLOY" and "STORAGE" to check voltage between soft top control unit harness connector and ground.

	(+) Soft top control unit		Acti	ve test	Voltage (Approx.)
Connector	Terminal				( ) ( )
B324	D204 44	(Fround		DEPLOY	12 V
D324	44		OUTSIDE FLAP	STORAGE	0 V
B327	110		MOTOR	DEPLOY	0 V
D321	110			STORAGE	12 V

### Is the inspection result normal?

YES >> Replace outside flap motor. Refer to <a href="RF-236">RF-236</a>, "OUTSIDE FLAP MOTOR: Removal and Installation".

NO >> GO TO 2.

# 2.CHECK OUTSIDE FLAP MOTOR RELAY 2 ON SIGNAL CIRCUIT-I

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

### **B1781 OUTSIDE FLAP MOTOR RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

	(+)		Valtana
Soft top	Soft top control unit		Voltage (Approx.)
Connector	Connector Terminal		,
B324	44	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

# ${f 3.}$ CHECK OUTSIDE FLAP MOTOR RELAY 2 ON SIGNAL CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect B75 and B316 harness connector.
- 3. Check voltage between B75 harness connector and ground.

(	+)	(-)	Voltage	
Connector	Connector Terminal		(Approx.)	
B75	8	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>. "Removal and Installation".

NO >> Replace the 15 A fuse (No.34) after repairing the applicable circuit.

# 4. CHECK OUTSIDE FLAP MOTOR RELAY 2 CIRCUIT-I

Check voltage between outside flap motor relay 2 harness connector and ground.

(+) Outside flap motor relay 2 Connector Terminal		(-)	Voltage (Approx.)

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

# 5. CHECK OUTSIDE FLAP MOTOR RELAY 2 CIRCUIT-II

- 1. Turn ignition switch OFF.
- Disconnect B76 and B317 harness connector.
- 3. Check voltage between B76 harness connector and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal	()	(Approx.)
B76	5	Ground	12 V
БТО	12	Giodila	12 V

#### Is the inspection result normal?

YES >> Replace harness connector. Refer to RF-238, "Removal and Installation".

NO >> Replace the 40 A fusible link (No.J) after repairing the applicable circuit.

## 6.CHECK OUTSIDE FLAP MOTOR RELAY 2 CIRCUIT-III

1. Turn ignition switch OFF.

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- Disconnect harness connectors B76 and B317.
- 3. Check voltage between outside flap motor harness connector and ground, soft top control unit harness connector and ground.

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### **B1781 OUTSIDE FLAP MOTOR RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

(+)			(-)	Voltage
Connector		Terminal	(-)	voltage
Outside flap motor	B307	3	Ground	0 V
Soft top control unit	B327	110	Giouna	U V

#### Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Outside flap motor side: Repair or replace harness or connector.

NO-2 >> Soft top control unit side: Replace harness connector. Refer to RF-238, "Removal and Installation".

# 7.CHECK OUTSIDE FLAP MOTOR RELAY 2 CIRCUIT-IV

1. Check continuity between outside flap motor harness connector and B76 harness connector.

Outside	flap motor	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B307	3	B76	7	Existed

2. Check continuity between outside flap motor harness connector and ground.

Outside f	lap motor		Continuity
Connector	Terminal	Ground	Continuity
B307	B307 3		Not existed

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

## 8.CHECK OUTSIDE FLAP MOTOR RELAY 2 CIRCUIT-V

1. Check continuity between soft top control unit harness connector and B317 harness connector.

Soft top of	control unit	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B327	B327 110 B317	R317	7	Existed
	110	5317	9	LAISIEU

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

Soft top of	control unit		Continuity
Connector	Connector Terminal		Continuity
B327	110		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### $oldsymbol{9}.$ CHECK OUTSIDE FLAP MOTOR RELAY 2 CIRCUIT-VI

Check continuity between B76 harness connector and ground.

Connec	ioi ie	rminal	Ground	Continuity
B76		9	Giodila	Existed

### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Repair or replace harness or connector.

### **B1782 INSIDE FLAP MOTOR RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

### B1782 INSIDE FLAP MOTOR RELAY 1

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis i	name	DTC detecting condition	Possible causes
B1782	INSIDE FLAP MOTOR	[GND- SHORT] [PWR- SHORT/ OPEN]	Inside flap motor relay 1 or inside flap motor circuit	Harness or connectors     (The inside flap motor relay     1 circuit is open or shorted.)     (The inside flap motor circuit is open or shorted.)      Hadraulia unit (Inside flap)
	RELATI	[GND- SHORT]	is open, short to ground or short to power.	<ul> <li>Hydraulic unit (Inside flap motor relay 1)</li> <li>Inside flap motor assembly (Inside flap motor)</li> <li>Soft top control unit</li> </ul>

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-159, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK INSIDE FLAP MOTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect inside flap motor harness connector.
- Turn ignition switch ON.
- Select "CONVERTIBLE ROOF" using CONSULT.
- Select "INSIDE FLAP MOTOR" in "ACTIVE TEST" mode.
- Touch "DEPLOY" and "STORAGE" to check voltage between soft top control unit harness connector and ground.

(+) Soft top control unit		(–)	Active test		Voltage (Approx.)	
Connector	Terminal					
B324	B324 47			DEPLOY	0 V	
B324	47	- Ground	Ground	INSIDE FLAP MO-	STORAGE	12 V
B327	105		TOR	DEPLOY	12 V	
D321	105			STORAGE	0 V	

#### Is the inspection result normal?

YES >> Replace inside flap motor. Refer to RF-236, "INSIDE FLAP MOTOR: Removal and Installation".

NO >> GO TO 2.

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# 2.CHECK INSIDE FLAP MOTOR RELAY 1 ON SIGNAL CIRCUIT-I

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

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### **B1782 INSIDE FLAP MOTOR RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

	(+)		Valtage	
Soft top	control unit	(–)	Voltage (Approx.)	
Connector	Connector Terminal			
B324	47	Ground	12 V	

### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

# 3.check inside flap motor relay 1 on signal circuit-ii

- 1. Turn ignition switch OFF.
- 2. Disconnect B75 and B316 harness connector.
- 3. Check voltage between B75 harness connector and ground.

(	+)	(-)	Voltage	
Connector	Terminal	( )	(Approx.)	
B75	8	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to RF-238, "Removal and Installation".

NO >> Replace the 15 A fuse (No.34) after repairing the applicable circuit.

# 4. CHECK INSIDE FLAP MOTOR RELAY 1 CIRCUIT-I

Check voltage between inside flap motor relay 1 harness connector and ground.

	+) motor relay 1	(-)	Voltage (Approx.)	
Connector	Connector Terminal			
B336	5	Ground	12 V	

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

# 5. CHECK INSIDE FLAP MOTOR RELAY 1 CIRCUIT-II

- 1. Turn ignition switch OFF.
- Disconnect B76 and B317 harness connector.
- 3. Check voltage between B76 harness connector and ground.

(	+)	(_)	Voltage (Approx.)
Connector	Terminal	(-)	(Approx.)
B76	5	Ground	12 V
ы	12	Ground	12 V

### Is the inspection result normal?

YES >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

NO >> Replace the 40 A fusible link (No.J) after repairing the applicable circuit.

## 6.CHECK INSIDE FLAP MOTOR RELAY 1 CIRCUIT-III

- Turn ignition switch OFF.
- 2. Disconnect harness connectors B76 and B317.
- Check voltage between inside flap motor harness connector and ground, soft top control unit harness connector and ground.

### **B1782 INSIDE FLAP MOTOR RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

	(+)		( )	Voltage
Connector		Terminal	(-)	Voltage
Inside flap motor	B232	3	Ground	0 V
Soft top control unit	B327	105	Giodila	O V

Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Inside flap motor side: Repair or replace harness or connector.

NO-2 >> Soft top control unit side: Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

# 7.CHECK INSIDE FLAP MOTOR RELAY 1 CIRCUIT-IV

1. Check continuity between inside flap motor harness connector and B76 harness connector.

Inside fl	Inside flap motor		_	
Connector	Terminal	Connector	Terminal	Continuity
B232	3	B76	3	Existed

2. Check continuity between inside flap motor harness connector and ground.

Outside flap motor				Continuity
Connect	or	Terminal	Ground	Continuity
B232		3		Not existed

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

## 8.CHECK INSIDE FLAP MOTOR RELAY 1 CIRCUIT-V

Check continuity between soft top control unit harness connector and B317 harness connector.

Soft top control unit		<del>-</del>		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B327	105 B317	R317	3	Existed
D321	103	B317	9	LXISteu

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B327	105		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

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NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### $oldsymbol{9}.$ CHECK INSIDE FLAP MOTOR RELAY 1 CIRCUIT-VI

Check continuity between B76 harness connector and ground.

Connector	Terminal	Ground	Continuity
B76	9	Ground	Existed

### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to <a href="Ref-244">RF-244</a>, "Removal and Installation".

NO >> Repair or replace harness or connector.

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### **B1783 INSIDE FLAP MOTOR RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

## B1783 INSIDE FLAP MOTOR RELAY 2

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis r	name	DTC detecting condition	Possible causes
	[GND- SHORT]		Harness or connectors     (The inside flap motor relay)	
B1783	INSIDE FLAP MOTOR RELAY 2	[PWR- SHORT/ OPEN]	Inside flap motor relay 2 or inside flap motor circuit is open, short to ground or short to power.	2 circuit is open or shorted.)     (The inside flap motor circuit is open or shorted.)     Hydraulic unit (Inside flap)
		[GND- SHORT]		motor relay 2) Inside flap motor assembly (Inside flap motor) Soft top control unit

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-162, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

INFOID:00000000009026141

# 1. CHECK INSIDE FLAP MOTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect inside flap motor harness connector.
- 3. Turn ignition switch ON.
- Select "CONVERTIBLE ROOF" using CONSULT.
- Select "INSIDE FLAP MOTOR" in "ACTIVE TEST" mode.
- Touch "DEPLOY" and "STORAGE" to check voltage between soft top control unit harness connector and ground.

(+) Soft top control unit		(–) Activ		ve test	Voltage (Approx.)
Connector	Terminal				( ) (
B324	B324 46		INSIDE FLAP MO- TOR	DEPLOY	12 V
B324	40	Ground		STORAGE	0 V
P227	B327 106	Ground		DEPLOY	0 V
B321				STORAGE	12 V

### Is the inspection result normal?

YES >> Replace inside flap motor. Refer to <u>RF-236, "INSIDE FLAP MOTOR: Removal and Installation"</u>. NO >> GO TO 2.

# 2.CHECK INSIDE FLAP MOTOR RELAY 2 ON SIGNAL CIRCUIT-I

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

### **B1783 INSIDE FLAP MOTOR RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

(+)			
Soft top	Soft top control unit		Voltage (Approx.)
Connector	Connector Terminal		,
B324	46	Ground	12 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.check inside flap motor relay 2 on signal circuit-ii

- Turn ignition switch OFF.
- Disconnect B75 and B316 harness connector.
- 3. Check voltage between B75 harness connector and ground.

(	+)	(-)	Voltage	
Connector	Connector Terminal		(Approx.)	
B75	8	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector (hydraulic unit side). Refer to RF-238, "Removal and Installation".

NO >> Replace the 15 A fuse (No.34) after repairing the applicable circuit.

# 4. CHECK INSIDE FLAP MOTOR RELAY 2 CIRCUIT-I

Check voltage between inside flap motor relay 2 harness connector and ground.

(+)  Inside flap motor relay 2  Connector Terminal		(–)	Voltage (Approx.)
B335	5	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

# 5. CHECK INSIDE FLAP MOTOR RELAY 2 CIRCUIT-II

- 1. Turn ignition switch OFF.
- Disconnect B76 and B317 harness connector.
- 3. Check voltage between B76 harness connector and ground.

(+)		(-)	Voltage (Approx.)	
Connector	Connector Terminal		(Approx.)	
B76	5	Ground	12 V	
БТО	12	Giodila	12 V	

#### Is the inspection result normal?

YES >> Replace harness connector (hydraulic unit side). Refer to RF-238, "Removal and Installation".

NO >> Replace the 40 A fusible link (No.J) after repairing the applicable circuit.

## 6.CHECK INSIDE FLAP MOTOR RELAY 2 CIRCUIT-III

1. Turn ignition switch OFF.

Revision: 2014 February

- Disconnect harness connectors B76 and B317.
- 3. Check voltage between inside flap motor harness connector and ground, soft top control unit harness connector and ground.

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**RF-163** 

### **B1783 INSIDE FLAP MOTOR RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

(+)			(-)	Voltage
Connector Terminal		(-)	vollage	
Inside flap motor	B232	1	Ground	0 V
Soft top control unit	B327	106	Giodila	0 V

#### Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Outside flap motor side: Repair or replace harness or connector.

NO-2 >> Soft top control unit side: Replace harness connector. Refer to RF-238, "Removal and Installation".

# 7.CHECK INSIDE FLAP MOTOR RELAY 2 CIRCUIT-IV

1. Check continuity between inside flap motor harness connector and B76 harness connector.

Inside fl	ap motor	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B232	1	B76	9	Existed

2. Check continuity between outside flap motor harness connector and ground.

Inside fl	ap motor		Continuity
Connector	Terminal	Ground	Continuity
B232	1		Not existed

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

## 8.CHECK INSIDE FLAP MOTOR RELAY 2 CIRCUIT-V

1. Check continuity between soft top control unit harness connector and B317 harness connector.

Soft top of	control unit	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B327	106	B317	8	Existed
B321	100	B317	9	LXISIEU

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

Soft top of	control unit		Continuity
Connector	Connector Terminal		Continuity
B327	106		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### 9.CHECK INSIDE FLAP MOTOR RELAY 2 CIRCUIT-VI

Check continuity between B76 harness connector and ground.

Connec	ioi ie	rminal	Ground	Continuity
B76		9	Giodila	Existed

### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Repair or replace harness or connector.

### **B1784 STORAGE LID LOCK RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

# B1784 STORAGE LID LOCK RELAY 1

DTC Logic INFOID:0000000009026142

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis r	name	DTC detecting condition	Possible causes	
		[GND- SHORT]		Harness or connectors     (The storage lid lock relay 1)	
B1784	STORAGE LID LOCK    Company   Storage lid lock relay 1 or closure motor circuit is   Storage lid lock relay 1 or closure	· ·	circuit is open or shorted.) (The closure motor circuit is open or shorted.)  Hydraulic unit (Storage lid	ı	
		[GND- SHORT]	open, short to ground or short to power.	lock relay 1)  Storage lid lock assembly (Closure motor)  Soft top control unit	ı

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

>> Go to RF-165, "Diagnosis Procedure". YES

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK CLOSURE MOTOR

- 1. Turn ignition switch OFF.
- Disconnect storage lid lock assembly harness connector. 2.
- Turn ignition switch ON.
- Select "CONVERTIBLE ROOF" using CONSULT.
- Select "STORAGE LID CLOSURE MOTOR" in "ACTIVE TEST" mode.
- Touch "OP POS" and "CL POS" to check voltage between soft top control unit harness connector and ground.

(+) Soft top control unit		(-)	Active test		Voltage (Approx.)
Connector	Terminal				
	52 B324 50	- Ground	STORAGE LID CLOSURE MO- TOR	OP POS	0 V
D224				CL POS	12 V
D324				OP POS	12 V
				CL POS	0 V

### Is the inspection result normal?

YES >> Replace storage lid lock assembly. Refer to RF-231, "STORAGE LID LOCK: Removal and Installation".

NO >> GO TO 2.

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# 2.check storage lid lock relay 1 on signal circuit-i

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

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**RF-165** 

### **B1784 STORAGE LID LOCK RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

	+) control unit	(-)	Voltage (Approx.)
Connector	Connector Terminal		(/ (pprox.)
B324	52	Ground	12 V

### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

# $3. \mathsf{CHECK}$ STORAGE LID LOCK RELAY 1 ON SIGNAL CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect B75 and B316 harness connector.
- 3. Check voltage between B75 harness connector and ground.

(	+)	(-)	Voltage	
Connector	Terminal	( )	(Approx.)	
B75	8	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

NO >> Replace the 15 A fuse (No.34) after repairing the applicable circuit.

# 4. CHECK STORAGE LID LOCK RELAY 1 CIRCUIT-I

Check voltage between storage lid lock relay 1 harness connector and ground.

( Storage lid	+) lock relay 1	(-)	Voltage (Approx.)	
Connector	Terminal		(11 - 7	
B332	5	Ground	12 V	

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

# 5. CHECK STORAGE LID LOCK RELAY 1 CIRCUIT-II

- Turn ignition switch OFF.
- Disconnect B76 and B317 harness connector.
- 3. Check voltage between B76 harness connector and ground.

(	+)	(-)	Voltage (Approx.)	
Connector	Terminal	(-)		
B76	5	Ground	12 V	
ы	12	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to RF-238, "Removal and Installation".

NO >> Replace the 40 A fusible link (No.J) after repairing the applicable circuit.

## 6.CHECK STORAGE LID LOCK RELAY 1 CIRCUIT-III

1. Turn ignition switch OFF.

Revision: 2014 February

- 2. Disconnect harness connectors B76 and B317.
- Check voltage between storage lid lock assembly harness connector and ground, soft top control unit harness connector and ground.

### **B1784 STORAGE LID LOCK RELAY 1**

### < DTC/CIRCUIT DIAGNOSIS >

	(+)		(-)	Voltage
Connector		Terminal	(-)	vollage
Storage lid lock assembly	B305	1	Ground	0 V
Soft top control unit	B324	50	Giodila	O V

Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Storage lid lock assembly side: Repair or replace harness or connector.

NO-2 >> Soft top control unit side: Replace harness connector. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".

# 7.CHECK STORAGE LID LOCK RELAY 1 CIRCUIT-IV

1. Check continuity between storage lid lock assembly harness connector and B76 harness connector.

Storage lid lo	ock assembly	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B305	1	B76	1	Existed

2. Check continuity between storage lid lock assembly harness connector and ground.

Storage lid le	ock assembly		Continuity
Connector Terminal		Ground	Continuity
B305	1		Not existed

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

## 8.CHECK STORAGE LID LOCK RELAY 1 CIRCUIT-V

1. Check continuity between soft top control unit harness connector and B317 harness connector.

Soft top of	control unit	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B324	50	B317	1	Existed
5524	30	D317	9	LAISIEU

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

Soft top of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B324	50		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### 9.CHECK STORAGE LID LOCK RELAY 1 CIRCUIT-VI

Check continuity between B76 harness connector and ground.

Connector	Terminal	Ground	Continuity
B76	9	Ground	Existed

### Is the inspection result normal?

Revision: 2014 February

YES >> Replace soft top control unit. Refer to <a href="Ref-244">RF-244</a>, "Removal and Installation".

NO >> Repair or replace harness or connector.

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### **B1785 STORAGE LID LOCK RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

# B1785 STORAGE LID LOCK RELAY 2

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis r	name	DTC detecting condition	Possible causes	
		[GND- SHORT]	Storage lid lock relay 2 or closure motor circuit is open, short to ground or short to power.	Harness or connectors     (The storage lid lock relay 2)	
B1785	STORAGE LID LOCK RELAY 2	[PWR- SHORT/ OPEN]		ORT/ Storage lid lock relay 2 or closure motor circuit is open	circuit is open or shorted.) (The closure motor circuit is open or shorted.)  • Hydraulic unit (Storage lid
		[GND- SHORT]		lock relay 2)  Storage lid lock assembly (Closure motor)  Soft top control unit	

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-168, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

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# 1. CHECK CLOSURE MOTOR

- 1. Turn ignition switch OFF.
- Disconnect storage lid lock assembly harness connector.
- 3. Turn ignition switch ON.
- 4. Select "CONVERTIBLE ROOF" using CONSULT.
- 5. Select "STORAGE LID CLOSURE MOTOR" in "ACTIVE TEST" mode.
- Touch "OP POS" and "CL POS" to check voltage between soft top control unit harness connector and ground.

	(+) Soft top control unit		(–) Ac	ive test	Voltage (Approx.)
Connector	Terminal				(11 - )
B324	E4			OP POS	12 V
D324	51	Ground	STORAGE LID CLOSURE MO-	CL POS	0 V
P227	B327 109	Ground	TOR	OP POS	0 V
D321				CL POS	12 V

### Is the inspection result normal?

YES >> Replace storage lid lock assembly. Refer to <a href="https://example.com/refer-to-nc-231">RF-231</a>, "STORAGE LID LOCK: Removal and Installation".

NO >> GO TO 2.

# 2.check storage lid lock relay 2 on 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.

### **B1785 STORAGE LID LOCK RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

(+)			V 1
Soft top	Soft top control unit		Voltage (Approx.)
Connector	Connector Terminal		, , ,
B324	51	Ground	12 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

# 3.check storage lid lock relay 2 on signal circuit-ii

- 1. Turn ignition switch OFF.
- 2. Disconnect B75 and B316 harness connector.
- 3. Check voltage between B75 harness connector and ground.

(	+)	(_)	Voltage	
Connector	Terminal	( )	(Approx.)	
B75	8	Ground	12 V	

### Is the inspection result normal?

YES >> Replace harness connector. Refer to <a href="RF-238">RF-238</a>. "Removal and Installation".

NO >> Replace the 15 A fuse (No.34) after repairing the applicable circuit.

# 4. CHECK STORAGE LID LOCK RELAY 2 CIRCUIT-I

Check voltage between storage lid lock relay 2 harness connector and ground.

(+) Storage lid lock relay 2 Connector Terminal		(-)	Voltage (Approx.)
B331	5	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

# 5. CHECK STORAGE LID LOCK RELAY 2 CIRCUIT-II

- 1. Turn ignition switch OFF.
- 2. Disconnect B76 and B317 harness connector.
- 3. Check voltage between B76 harness connector and ground.

(+)		(–)	Voltage (Approx.)	
Connector Terminal		(-)	(Approx.)	
B76	5	Ground	12 V	
ы	12	Giodila	12 V	

#### Is the inspection result normal?

YES >> Replace harness connector. Refer to <a href="https://removal.and.installation">RF-238</a>, "Removal and Installation".

NO >> Replace the 40 A fusible link (No.J) after repairing the applicable circuit.

## 6. CHECK STORAGE LID LOCK RELAY 2 CIRCUIT-III

1. Turn ignition switch OFF.

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- Disconnect harness connectors B76 and B317.
- Check voltage between storage lid lock assembly harness connector and ground, soft top control unit harness connector and ground.

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**RF-169** 

### **B1785 STORAGE LID LOCK RELAY 2**

### < DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Voltage	
Connector Terminal		Terminal	- (-)	vollage
Storage lid lock assembly	B305	2	Ground	0 V
Soft top control unit	B327	109	Giouria	O V

#### Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Outside flap motor side: Repair or replace harness or connector.

NO-2 >> Soft top control unit side: Replace harness connector. Refer to RF-238, "Removal and Installation".

# 7. CHECK STORAGE LID LOCK RELAY 2 CIRCUIT-IV

Check continuity between storage lid lock assembly harness connector and B76 harness connector.

Storage lid l	Storage lid lock assembly		_	
Connector	Terminal	Connector	Terminal	Continuity
B305	2	B76	6	Existed

2. Check continuity between outside flap motor harness connector and ground.

Outside t	flap motor		Continuity
Connector	Terminal	Ground	Continuity
B305	2		Not existed

#### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

## 8.CHECK STORAGE LID LOCK RELAY 2 CIRCUIT-V

Check continuity between soft top control unit harness connector and B317 harness connector.

Soft top of	control unit	-	_	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B327	109	B317	6	Existed
5321	109	5317	9	LAISIGU

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

Soft top of	control unit		Continuity
Connector	Connector Terminal		Continuity
B327	109		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace harness connector. Refer to RF-238, "Removal and Installation".

### $oldsymbol{9}.$ CHECK STORAGE LID LOCK RELAY 2 CIRCUIT-VI

Check continuity between B76 harness connector and ground.

Connector	Terminal	Ground	Continuity
B76	9	Ground	Existed

### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Repair or replace harness or connector.

### **B1786 OUTSIDE FLAP SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

# **B1786 OUTSIDE FLAP SENSOR**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[OPEN]	Outside flap sensor circuit is open.	Harness or connectors
B1786	OUTSIDE FLAP SEN- SOR	[TIMEOUT]	When outside flap operate is not detected.	<ul><li>(The outside flap sensor circuit is open.)</li><li>Soft top control unit</li><li>Outside flap sensor</li></ul>

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

### Is DTC detected?

YES >> Go to RF-171, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK OUTSIDE FLAP SENSOR POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect outside flap sensor harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between outside flap sensor harness connector and ground.

	+) lap sensor	(-)	Voltage (Approx.)	
Connector			(Approx.)	
B304	1	Ground	12 V	
D304	7	Giodila	12 V	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.check outside flap sensor circuit for open and short to ground

- 1. Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check continuity between outside flap sensor harness connector and soft top control unit harness connector.

Outside f	lap sensor	Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B304	B304 1 B323		7	Existed
5304	7	5323	22	LAISIGU

4. Check continuity between outside flap sensor harness connector and ground.

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### **B1786 OUTSIDE FLAP SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

Outside	flap sensor		Continuity
Connector	Connector Terminal		Continuity
B304	1	Ground	Not existed
5304	7		I NOT EXISTED

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness or connector.

# ${f 3.}$ CHECK OUTSIDE FLAP SENSOR GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector.
- Check continuity between outside flap sensor harness connector and soft top control unit harness connector.

Outside f	Outside flap sensor		Soft top control unit		
Connector	Terminal	Connector	Terminal	Continuity	
B304	2	B323	39	Existed	
<b>D</b> 304	8	D323	39	LAISIEU	

4. Check continuity between outside flap sensor harness connector and ground.

Outside	flap sensor		Continuity	
Connector	Terminal	Ground	Continuity	
B304	2	Ground	Not existed	
D304	8		INOL EXISTED	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

## 4. CHECK OUTSIDE FLAP SENSOR

Refer to RF-172, "Component Inspection".

### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Replace outside flap motor assembly. Refer to <a href="RF-236">RF-236</a>, "OUTSIDE FLAP MOTOR: Removal and <a href="Installation"</a>.

# Component Inspection

INFOID:00000000009026148

# 1. CHECK OUTSIDE FLAP SENSOR

- Turn ignition switch OFF.
- 2. Disconnect outside flap sensor harness connector.
- 3. Check the continuity between outside flap sensor terminals under the following conditions.

	Outside flap sensor Terminal		Condition	
1	2		Deployment position Storage position	Existed  Not existed
7	Ω	Outside flap	Deployment position	Not existed
1	8		Storage position	Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace outside flap motor assembly. Refer to <a href="RF-236">RF-236</a>, "OUTSIDE FLAP MOTOR: Removal and <a href="Installation"</a>.

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### **B1787 INSIDE FLAP SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

### **B1787 INSIDE FLAP SENSOR**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible cause
		[OPEN]	Inside flap sensor circuit is open.	Harness or connectors
B1787	INSIDE FLAP SEN- SOR	[TIMEOUT]	When inside flap operate is not detected.	<ul><li>(The inside flap sensor circuit is open.)</li><li>Soft top control unit</li><li>Inside flap sensor</li></ul>

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-173, "Diagnosis Procedure".

NO >> INSPECTION END

## Diagnosis Procedure

# 1. CHECK INSIDE FLAP SENSOR POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect inside flap sensor harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between inside flap sensor harness connector and ground.

	+) ap sensor	(-)	Voltage (Approx.)	
Connector	Connector Terminal		(/ .pp. 5/)	
B231	4	Ground	12 V	
D231	2	Giodila	12 V	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK INSIDE FLAP SENSOR CIRCUIT FOR OPEN AND SHORT TO GROUND

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- Check continuity between inside flap sensor harness connector and soft top control unit harness connector.

Inside fla	ap sensor	Soft top control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B231	4	B323	2	Existed
D231	2	5323	6	LAISIGU

4. Check continuity between inside flap sensor harness connector and ground.

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### **B1787 INSIDE FLAP SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

Inside	lap sensor		Continuity
Connector	Terminal	Ground	Continuity
B231	4	Ground	Not existed
DZJ1	2		NOT EXISTED

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness or connector.

# 3.check inside flap sensor ground circuit

- Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- Check continuity between inside flap sensor harness connector and soft top control unit harness connector.

Inside fla	Inside flap sensor		Soft top control unit		
Connector	Terminal	Connector Terminal		Continuity	
B231	3	B323	38	Existed	

Check continuity between inside flap sensor harness connector and ground.

Inside fla	ap sensor		Continuity
Connector	Terminal	Ground	Continuity
B231	3		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO

NO >> Repair or replace harness or connector.

# 4. CHECK INSIDE FLAP SENSOR

Refer to RF-174, "Component Inspection".

### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

>> Replace inside flap motor assembly. Refer to <a href="RF-236">RF-236</a>, "INSIDE FLAP MOTOR: Removal and Installation".

# Component Inspection

INFOID:00000000009026151

# 1. CHECK INSIDE FLAP SENSOR

- Turn ignition switch OFF.
- 2. Disconnect inside flap sensor harness connector.
- 3. Check the continuity between inside flap sensor terminals under the following conditions.

	Inside flap sensor Terminal		Condition	
Terr				
4			Deployment position	Existed
4	2	Inside flap	Storage position	Not existed
2	3		Deployment position	Not existed
2			Storage position	Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace inside flap motor assembly. Refer to <a href="RF-236">RF-236</a>, "INSIDE FLAP MOTOR: Removal and <a href="Installation"</a>.

### **B1788 STORAGE LID LOCK ASSEMBLY**

### < DTC/CIRCUIT DIAGNOSIS >

## **B1788 STORAGE LID LOCK ASSEMBLY**

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis	s name	DTC detecting condition	Possible cause
B1788	STORAGE LID LOCK ASSEMBLY	[TIMEOUT]	When storage lid closure control is not detected after 4 seconds or more operation.	Harness or connectors     (The open switch, close switch, half latch switch and storage lid door switch circuit is open or shorted.)     Soft top control unit     Open switch (storage lid lock assembly)     Close switch (storage lid lock assembly)     Half latch switch (storage lid lock assembly)     Storage lid door switch (storage lid lock assembly)

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-175, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

1. CHECK STORAGE LID LOCK ASSEMBLY POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect storage lid lock assembly harness connector.
- Turn ignition switch ON.
- 4. Check voltage between storage lid lock assembly harness connector and ground.

(+) Storage lid lock assembly			(–)	Voltage (Approx.)	
Connector Terminal				(дрргох.)	
Open switch		4			
Close switch	B305	5	Ground	12 V	
Half latch switch	B305	6			
Storage lid door switch		7			

### Is the inspection result normal?

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

2.check storage lid lock assembly circuit for open and short to ground

- Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Check continuity between storage lid lock assembly harness connector and soft top control unit harness connector.

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RF-175

### **B1788 STORAGE LID LOCK ASSEMBLY**

### < DTC/CIRCUIT DIAGNOSIS >

Storage lid lock assembly			Soft top of	Continuity	
Connecto	or	Terminal	Connector	Terminal	Continuity
Open switch		4		23	
Close switch	Page	5	B323	24	Existed
Half latch switch	B305	6		25	
Storage lid door switch		7		27	

4. Check continuity between storage lid lock assembly harness connector and ground.

Storage lid lock assembly				Continuity
Connector Terminal				Continuity
Open switch		4	Ground	
Close switch	B305	5	Giouna	Not existed
Half latch switch	B305	6		Not existed
Storage lid door switch		7		

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness or connector.

# 3.CHECK STORAGE LID LOCK ASSEMBLY GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- Check continuity between storage lid lock assembly harness connector and soft top control unit harness connector.

Storage lid le	Storage lid lock assembly		control unit	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B305	8	B323	40	Existed	

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

Storage lid lo	Storage lid lock assembly		Continuity
Connector	Terminal	Ground	Continuity
B305	8		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO

NO >> Repair or replace harness or connector.

### 4. CHECK STORAGE LID LOCK ASSEMBLY

Refer to RF-176, "Component Inspection".

#### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

>> Replace storage lid lock assembly. Refer to <u>RF-231</u>, "STORAGE LID LOCK: Removal and Installation".

# Component Inspection

INFOID:0000000009026154

# 1. CHECK STORAGE LID LOCK ASSEMBLY

- Turn ignition switch OFF.
- Disconnect storage lid lock assembly harness connector.
- 3. Check the continuity between storage lid lock assembly terminals under the following conditions.

## **B1788 STORAGE LID LOCK ASSEMBLY**

## < DTC/CIRCUIT DIAGNOSIS >

Storage lid le	Storage lid lock assembly  Terminal		Condition Storage lid lock assembly	
Terr				
4		Open switch	Open position	Existed
4		Open switch	Neutral position	Not existed
5		Close switch	Close position	Existed
5	8		Neutral position	Not existed
e.	0	Half latch switch	Storage lid fully open	Existed
6		Hall laten Switch	Storage lid fully closed	Not existed
7	Store	Storage lid door quitab	Storage lid fully open	Existed
7		Storage lid door switch	Storage lid fully closed	Not existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace storage lid lock assembly. Refer to RF-231, "STORAGE LID LOCK: Removal and Installation".

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## **B1789 POWER SOURCE (POWER WINDOW)**

### < DTC/CIRCUIT DIAGNOSIS >

# B1789 POWER SOURCE (POWER WINDOW)

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name		DTC detecting condition	Possible causes
B1789	PWR SOURCE(WIN-	[LOW VOLTAGE]	9.0 V or less input to soft top control unit power source (rear power window) terminal is detected.	Power source circuit (for rear power window)     Battery condition
B1703	DOW)	[HIGH VOLTAGE]	16.0 V or more input to soft top control unit power source (rear power window) terminal is detected.	<ul><li>Charging system</li><li>BCM power supply and ground</li></ul>

### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### Is DTC detected?

YES >> Go to RF-178, "Diagnosis Procedure".

NO >> INSPECTION END

## **Diagnosis Procedure**

INFOID:0000000009026156

## 1. CHECK BATTERY

Check battery. Refer to PG-82, "How to Handle Battery".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunction parts.

### 2.CHECK CHARGING SYSTEM

Check charging system. Refer to CHG-14, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-18, "Work Flow (Without EXP-800 NI or GR8-1200 NI)".

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunction parts.

## 3.CHECK FUSIBLE LINK

Check 40 A fusible link (letter L).

#### Is the inspection result normal?

YES >> GO TO 4.

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

# 4. CHECK VOLTAGE REAR POWER WINDOW POWER SUPPLY CIRCUIT

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

(+)			
Soft top o	Soft top control unit		Voltage
Connector	Terminal		
B323	30	Ground	Battery voltage

#### Is the inspection result normal?

# **B1789 POWER SOURCE (POWER WINDOW)**

### < DTC/CIRCUIT DIAGNOSIS >

YES >> Replace soft top control unit. Refer to <a href="RF-244">RF-244</a>. "Removal and Installation".

NO >> GO TO 5.

## ${f 5.}$ CHECK REAR POWER WINDOW POWER SUPPLY CIRCUIT FOR OPEN AND SHORT TO GROUND

 Disconnect circuit breaker harness connector, rear power window switch LH and rear power window switch RH.

2. Check continuity between following parts harness connector and B75 harness connector.

Connector		Terminal	Connector	Terminal	Continuity
Circuit breaker	M10	2			
Rear power window switch LH	B42	10	B75	6	Existed
Rear power window switch RH	B222	10			

3. Check continuity between B75 harness connector and ground.

Connector	Terminal	Ground	Continuity
B75	6	Giodila	Not existed

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness or connector.

### 6.CHECK CIRCUIT BREAKER

Check circuit breaker. Refer to RF-179, "Component Inspection".

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace circuit breaker.

# 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.

Terminals	Resistance ( $\Omega$ )
1 and 2	Except 0 or ∞ [at 25°C (77°F)]

### Is the inspection result normal?

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YES >> INSPECTION END

NO >> Replace circuit breaker.

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**RF-179** 

2014 Murano Cross Cabriolet

### **POWER SUPPLY AND GROUND CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

## POWER SUPPLY AND GROUND CIRCUIT

## Diagnosis Procedure

INFOID:0000000009026158

# 1. CHECK SOFT TOP CONTROL UNIT POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage	
Soft top control unit				
Connector	Terminal			
B325	53	Ground	Battery voltage	

### Is the measurement value normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.CHECK FUSE

Check 15 A fuse (No. 34).

### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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

# 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	
B325	54		Existed	

### Is the inspection result normal?

YES >> INSPECTION END

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NO >> Repair or replace harness or connector.

### **BACK-UP LAMP CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## BACK-UP LAMP CIRCUIT

# Component Function Check

# 1. CHECK FUNCTION

- Turn ignition switch ON.
- Check "SHIFT R SIG" in "DATA MONITOR" mode of "CONVERTIBLE ROOF" using CONSULT.

Monitor item	Con	Status	
SHIFT R SIG Shift position	Shift position	Other than R position	OFF
	Offile position	R position	ON

#### Is the inspection result normal?

>> INSPECTION END YES

NO >> Go to RF-181, "Diagnosis Procedure".

# Diagnosis Procedure

# 1. CHECK BACK-UP LAMP RELAY POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect back-up lamp relay harness connector.
- 3. Turn ignition switch ON.
- Check the voltage between back-up lamp relay harness connector and ground.

(+) Back-up lamp relay		(-)	Voltage	
Connector	Terminal			
E18	1	Ground Rattony voltage		
E10	3	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK FUSE

Check 10 A fuse (No. 4).

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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

# 3.check back-up lamp relay circuit for short to power supply

- Turn ignition switch OFF.
- Disconnect soft top control unit harness connector. 2.
- Check the voltage between soft top control unit harness connector and ground.

(+)			Voltage
Soft top control unit		(–)	
Connector	Terminal		
B323	8	Ground	0 V

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

## f 4.CHECK BACK-UP LAMP RELAY CIRCUIT FOR OPEN AND SHORT TO GROUND

Check the continuity between soft top control unit harness connector and back-up lamp relay harness connector.

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**RF-181** 

## **BACK-UP LAMP CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

Soft top of	control unit	Back-up lamp relay		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B323	8	E18	5	Existed

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

Soft top control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B323	8		Not existed	

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connector.

## 5. CHECK BACK-UP LAMP RELAY

Check back-up lamp relay. Refer to RF-182, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back-up lamp relay.

# Component Inspection

INFOID:0000000009026161

# 1. CHECK BACK-UP LAMP RELAY

- 1. Turn ignition switch OFF.
- 2. Remove back-up lamp relay.
- 3. Check the continuity between back-up lamp relay terminals under the following conditions.

Terminals	Conditions	Continuity
3 and 5	12 V direct current supply between terminals 1 and 2	
3 and 3	No current supply	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

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NO >> Replace back-up lamp relay.

## **ROOF OPEN/CLOSE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## ROOF OPEN/CLOSE SWITCH

# Component Function Check

#### INFOID:00000000009026162

# 1. CHECK ROOF OPEN/CLOSE SWITCH FUNCTION

- Turn ignition switch ON.
- Check "ROOF SW (OPEN)" and "ROOF SW (CLOSE)" in "DATA MONITOR" mode of "CONVERT ROOF" using CONSULT.

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Monitor item	Condition		Status
ROOF SW (OPEN)	Roof open/close switch	Open	ON
ROOF SW (OF LIV)	1001 open/close switch	Closed	OFF
POOE SW (CLOSE)	Roof open/close switch	Open	OFF
ROOF SW (CLOSE)		Closed	ON

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#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to RF-183, "Diagnosis Procedure".

## Diagnosis Procedure

#### INFOID:0000000009026163

# 1. CHECK ROOF OPEN/CLOSE SWITCH POWER SUPPLY

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

(+) Roof open/close switch		(–)	Voltage (Approx.)
Connector	Terminal		( ) 1 - /
M210	3 4	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.CHECK ROOF OPEN/CLOSE SWITCH CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Soft top of	control unit	Roof open/close switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B323	14	M210	4	Existed
	15	IMZTO	3	LAISted

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

Soft top control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B323	14	Ground	Not existed	
D323	15		Not existed	

#### Is the inspection result normal?

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## **RF-183**

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## **ROOF OPEN/CLOSE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

YES >> Replace soft top control unit. Refer to RF-244, "Removal and Installation".

NO >> Repair or replace harness or connector.

# ${f 3.}$ CHECK ROOF OPEN/CLOSE SWITCH GROUND CIRCUIT

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

Soft top of	control unit	Roof open/close switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
B323	35	M210	1	Existed

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

Soft top control unit			Continuity
Connector	Terminal	Ground	Continuity
B323	35		Not existed

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

### 4. CHECK ROOF OPEN/CLOSE SWITCH

Refer to RF-96, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace roof open/close switch. Refer to RF-243, "Removal and Installation".

# Component Inspection

INFOID:0000000009026164

# 1. CHECK ROOF OPEN/CLOSE SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect roof open/close switch harness connector.
- 3. Check the continuity between roof open/close switch terminals under the following conditions.

Terminal	Con	Continuity	
1 and 3  Roof open/o		Open pressed	Existed
	Doof oney/alone quitab	Except above	Not existed
	Roof open/close switch	Close pressed	Existed
		Except above	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace roof open/close switch. Refer to RF-243, "Removal and Installation".

#### < DTC/CIRCUIT DIAGNOSIS >

## **ROOF WARNING LAMP**

# Component Function Check

#### INFOID:0000000009026165

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# 1. CHECK ROOF WARNING LAMP FUNCTION

- Start engine.
- 2. Operate soft top to fully open and fully closed.
- Make sure that roof warning lamp illuminates. Refer to RF-14, "SOFT TOP SYSTEM: System Descrip-

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Go to RF-185, "Diagnosis Procedure".

## Diagnosis Procedure

## INFOID:0000000009026166

# 1. CHECK ROOF WARNING LAMP CIRCUIT-I

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

Soft top control unit			Voltage (Approx.)
(.	(+)		
Connector	Terminal		(11 - 7
B323	11	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.CHECK ROOF WARNING LAMP CIRCUIT-II

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

Soft top of	Soft top control unit		Combination meter	
Connector	Terminal	Connector	Terminal	Continuity
B323	11	M34	28	Existed

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

Soft top control unit			Continuity
Connector	Connector Terminal		Continuity
B323	11		Not existed

#### Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-79, "Removal and Installation".

NO >> Repair or replace harness or connector.

# 3. CHECK INTERMITTENT INCIDENT

## Refer to GI-42, "Intermittent Incident".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace soft top control unit. Refer to RF-244, "Removal and Installation". RF

## **TONNEAU BOARD SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## TONNEAU BOARD SWITCH

# Component Function Check

## 1. CHECK FUNCTION

- 1. Turn ignition switch ON.
- Check "TONNEAU BOARD SWITCH" in "DATA MONITOR" mode of "CONVERTIBLE ROOF" using CON-SULT.

Monitor item	Condition		Status
TONNEAU BOARD SWITCH	Tonneau board	Hooked	ON
	Torineau board	Released	OFF

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to <u>RF-186, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

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# 1. CHECK TONNEAU BOARD SWITCH POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect tonneau board switch harness connector.
- 3. Turn ignition switch ON.
- 4. Check the voltage between tonneau board switch harness connector and ground.

(+) Tonneau board switch		(–)	Voltage (Approx.)	
Connector	Terminal		(* *******)	
B309	2	Ground	12 V	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.check tonneau board switch circuit for open and short to ground

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

Soft top of	Soft top control unit		Tonneau board switch	
Connector	Terminal	Connector	Terminal	Continuity
B323	5	B309	2	Existed

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

Soft top control unit			Continuity
Connector	Terminal	Ground	Continuity
B323	5		Not existed

#### Is the inspection result normal?

YES >> Replace soft top control unit. Refer to <a href="RF-244">RF-244</a>, "Removal and Installation".

NO >> Repair or replace harness or connector.

# 3.check tonneau board switch ground circuit

1. Turn ignition switch OFF.

Revision: 2014 February

2. Disconnect soft top control unit connector.

### **TONNEAU BOARD SWITCH**

## < DTC/CIRCUIT DIAGNOSIS >

3. Check the continuity between soft top control unit harness connector and tonneau board switch harness connector.

Soft top of	Soft top control unit		Tonneau board switch	
Connector	Terminal	Connector	Terminal	Continuity
B323	26	B309	1	Existed

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

Soft top control unit			Continuity	
	Connector Terminal		Ground	Continuity
	B323	26		Not existed

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

## 4. CHECK TONNEAU BOARD SWITCH

Refer to RF-187, "Component Inspection".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace tonneau board switch. Refer to <a href="INT-35">INT-35</a>, "WHEEL REAR FINISHER: Removal and Installation".

# Component Inspection

# 1. CHECK TONNEAU BOARD SWITCH

- Turn ignition switch OFF.
- 2. Disconnect tonneau board switch harness connector.
- 3. Check continuity between tonneau board switch terminals.

Tonneau board switch Terminal		Condition		Continuity
	2	Tonneau board	Released	Not existed

#### Is the inspection result normal?

Revision: 2014 February

YES >> INSPECTION END

NO >> Replace tonneau board switch. Refer to <a href="INT-35">INT-35</a>, "WHEEL REAR FINISHER: Removal and Installation".

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**RF-187** 

## TRUNK ROOM LAMP SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

## TRUNK ROOM LAMP SWITCH

# Component Function Check

## 1. CHECK FUNCTION

1. Turn ignition switch ON.

2. Check "TRUNK LID OP/CL STATUS" in "DATA MONITOR" mode of "CONVERTIBLE ROOF" using CONSULT.

Monitor item	Con	Status	
TRUNK LID OP/CL STATUS	Tonneau board	Hooked	ON
	Torineau board	Released	OFF

#### Is the inspection result normal?

YES >> Trunk room lamp switch is OK.

NO >> Refer to RF-188, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000009026171

INFOID:0000000009026170

# 1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect soft top control unit harness connector.
- 3. Check signal between soft top control unit harness connector and ground using oscilloscope.

	+) control unit Terminal	(-)			Signal (Reference value)
B323	16	Ground	Trunk lid lock assembly	Unlocked	(V) 15 10 5 0 JPMIA0011GB

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

Revision: 2014 February

# 2.CHECK TRUNK ROOM LAMP SWITCH CIRCUIT FOR OPEN AND SHORT TO GROUND

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

Soft top of	control unit			
Connector	Terminal	Connector	Terminal	Continuity
B323	16	M121	50	Existed

Check continuity between soft top control unit harness connector and trunk lid lock assembly harness connector.

Soft top of	control unit	Trunk lid lo	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B323	16	T7	1	Existed

4. Check continuity between BCM harness connector and ground.

## TRUNK ROOM LAMP SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

Soft top of	ontrol unit		Continuity
Connector	Terminal	Ground	Continuity
B323	16		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness or connector.

# 3.CHECK TRUNK ROOM LAMP SWITCH GROUND

- 1. Disconnect trunk lid lock assembly harness connector.
- 2. Check continuity between trunk lid lock assembly harness connector and ground.

Trunk lid lo	ck assembly		Continuity
Connector	Terminal	Ground	Continuity
T7	2		Existed

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

## 4. CHECK TRUNK ROOM LAMP SWITCH

Refer to RF-189, "Component Inspection".

## Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace trunk lid lock assembly. Refer to <u>DLK-192</u>, "Removal and Installation".

# Component Inspection

# 1. CHECK TRUNK ROOM LAMP SWITCH

Turn ignition switch OFF.

- 2. Disconnect trunk lid lock assembly connector.
- 3. Check continuity between trunk lid lock assembly terminals.

Trunk lid lock assembly		Condition	Continuity	
Terminal		Condition		
1	2 Trunk lid lock assembly		Unlocked	Existed
ı	2	Trutik iiu lock assembly	Locked	Not existed

### Is the inspection result normal?

YES >> INSPECTION END

Revision: 2014 February

NO >> Replace trunk lid lock assembly. Refer to <u>DLK-192, "Removal and Installation"</u>.

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**RF-189** 

2014 Murano Cross Cabriolet

## SOFT TOP DOES NOT OPERATE USING DOOR REQUEST SWITCH

< SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS

# SOFT TOP DOES NOT OPERATE USING DOOR REQUEST SWITCH

Soft top does not operate using door request switch.

Diagnosis Procedure

INFOID:0000000009026174

## 1. CHECK DOOR REQUEST SWITCH

Check door request switch. Refer to DLK-88, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning part.

2. REPLACE SOFT TOP CONTROL UNIT

Replace soft top control unit. Refer to RF-244, "Removal and Installation".

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Revision: 2014 February RF-190

## SOFT TOP DOES NOT OPERATE USING ROOF OPEN/CLOSE SWITCH

< SYMPTOM DIAGNOSIS >

SOFT TOP DOES NOT OPERATE USING ROOF OPEN/CLOSE SWITCH	A
Description	, ,
Soft top does not operate using roof open/close switch.	В
Diagnosis Procedure	26176
1. CHECK TRUNK ROOM LAMP SIGNAL	С
Check trunk room ramp switch circuit. Refer to <a href="RF-188">RF-188</a> , "Component Function Check".  Is the inspection result normal?  YES >> GO TO 2.	D
NO >> Repair or replace the malfunctioning parts.  2.CHECK BACK-UP LAMP SIGNAL	E
Check back-up lamp circuit. Refer to RF-181, "Component Function Check".  Is the inspection result normal?	
YES >> GO TO 3.  NO >> Repair or replace the malfunctioning parts.  3. CHECK ROOF OPEN/CLOSE SWITCH	F
Check roof open/close switch circuit. Refer to RF-183, "Component Function Check".  Is the inspection result normal?	<u> </u>
YES >> GO TO 4.  NO >> Repair or replace the malfunctioning parts.  4.REPLACE SOFT TOP CONTROL UNIT	Н
Replace soft top control unit. Refer to <u>RF-244, "Removal and Installation"</u> . <u>Is the inspection result normal?</u>	<del>-</del>
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".	J

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Revision: 2014 February

## ROOF WARNING LAMP DOES NOT ILLUMINATE WHEN SOFT TOP OPERATES

< SYMPTOM DIAGNOSIS >

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

Roof warning lamp does not illuminate when soft top operates.

Diagnosis Procedure

INFOID:00000000009026178

# 1. CHECK ROOF WARNING LAMP SIGNAL

Check roof warning lamp signal circuit. Refer to RF-126, "Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

Revision: 2014 February

NO >> Repair or replace malfunctioning parts.

# 2. REPLACE SOFT TOP CONTROL UNIT

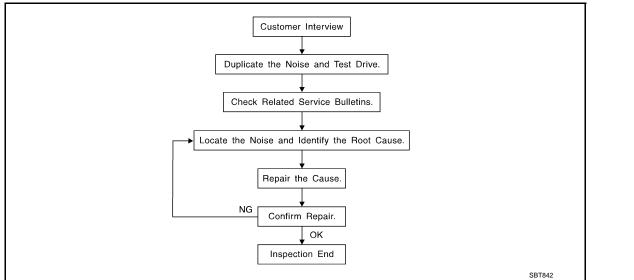
Replace soft top control unit. Refer to RF-244, "Removal and Installation".

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Work Flow INFOID:0000000009026179



#### **CUSTOMER INTERVIEW**

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any of the customer's comments; refer to RF-197, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

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

Revision: 2014 February

- Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that a technician may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

#### DUPLICATE THE NOISE AND TEST DRIVE

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

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2014 Murano Cross Cabriolet

#### < SYMPTOM DIAGNOSIS >

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

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

#### LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Engine Ear or mechanics stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- Removing the components in the area that is are suspected to be the cause of the noise.

  Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- Tapping or pushing/pulling the component that is are suspected to be the cause of the noise.
   Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- Feeling for a vibration by hand by touching the component(s) that is are suspected to be the cause of the noise.
- Placing a piece of paper between components that is are suspected to be the cause of the noise.
- Looking for loose components and contact marks.
   Refer to RF-195, "Inspection Procedure".

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#### 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.

## < SYMPTOM DIAGNOSIS > Inspection Procedure INFOID:00000000009026180 Α Refer to Table of Contents for specific component removal and installation information. INSTRUMENT PANEL В Most incidents are caused by contact and movement between: Cluster lid A and instrument panel Acrylic lens and combination meter housing 3. Instrument panel to front pillar garnish Instrument panel to windshield 5. Instrument panel mounting pins D Wiring harnesses behind the combination meter A/C defroster duct and duct joint Е 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 har-F 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 Н 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 Inside handle escutcheon to door finisher Wiring harnesses tapping RF 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 Trunk lid striker out of adjustment Ν Trunk lid torsion bars knocking together 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 Р Noises in the sunroof/headlining area can often be traced to one of the following: Sunroof lid, rail, linkage or seals making a rattle or light knocking noise

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Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these

2.

Sunvisor shaft shaking in the holder

Front or rear windshield touching headlining and squeaking

incidents. Repairs usually consist of insulating with felt cloth tape.

#### < 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:

- Headrest rods and holder
- 2. A squeak between the seat pad cushion and frame
- 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
- Loose radiator mounting pins
- Hood bumpers out of adjustment
- 6. Hood striker out of adjustment

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

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## **Diagnostic Worksheet**

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**SQUEAK & RATTLE DIAGNOSTIC WORKSHEET**  INFOID:0000000009026181

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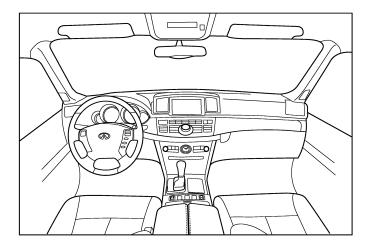
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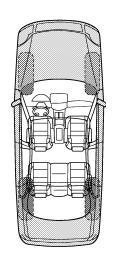
Dear Infiniti Customer:

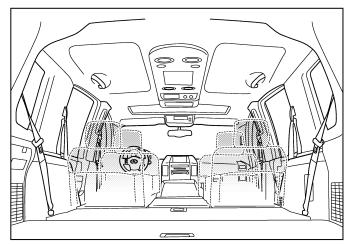
We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may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

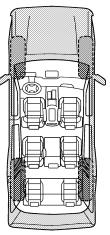
I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

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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Revision: 2014 February

Briefly describe the location where the n	oise occurs:			
II. WHEN DOES IT OCCUR? (please change anytime  1st time in the morning  only when it is cold outside only when it is hot outside	☐ after☐ whe	r sitting ou n it is rain or dusty co	it in the ra	
III. WHEN DRIVING:	IV. WH	AT TYPE	OF NOIS	E
<ul> <li>□ through driveways</li> <li>□ over rough roads</li> <li>□ over speed bumps</li> <li>□ only about mph</li> <li>□ on acceleration</li> <li>□ coming to a stop</li> <li>□ on turns: left, right or either (circle)</li> <li>□ with passengers or cargo</li> <li>□ other:</li> <li>□ after driving miles or m</li> </ul>	crea	ık (like wa e (like sha ck (like a k (like a cloo	lking on a kking a ba knock at th ck second , muffled l	ne door) hand) knock noise)
TO BE COMPLETED BY DEALERSHIF Test Drive Notes:	PERSONI			
		YES	NO	Initials of person performing
Vehicle test driven with customer				
<ul><li>Noise verified on test drive</li><li>Noise source located and repaired</li><li>Follow up test drive performed to confile</li></ul>	rm repair			

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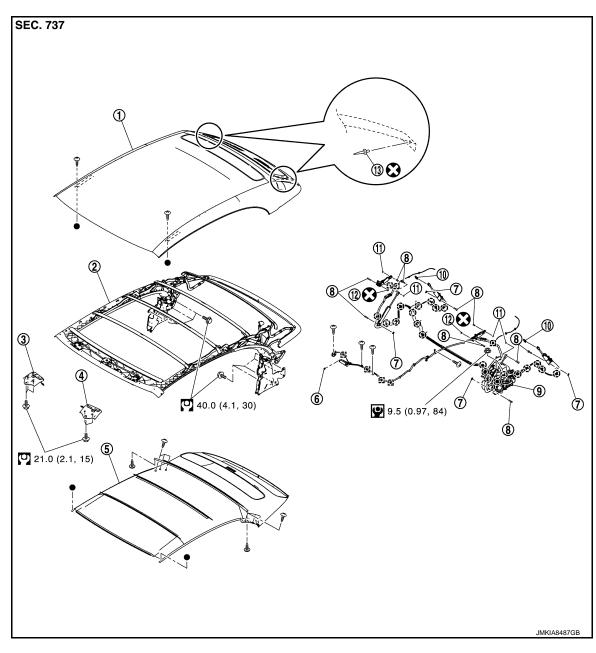
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# REMOVAL AND INSTALLATION

# **SOFT TOP**

**Exploded View** INFOID:0000000009026182

**REMOVAL** 



- Soft top cover outer
- Front lock striker LH 4.
- Retaining plate 7.
- 10. Piston rod bracket
- 13. Rivet
- : Clip
- : Metal clip

Revision: 2014 February

: Always replace after every disassembly.

- Soft top linkage assembly 3.
- 5. Folding roof headlining
- Cylinder mounting pin 8.
- 11. E-clip

2.

- Front lock striker RH
- 6. Retaining plate
- Hydraulic unit assembly 9.
- 12. Push on nut

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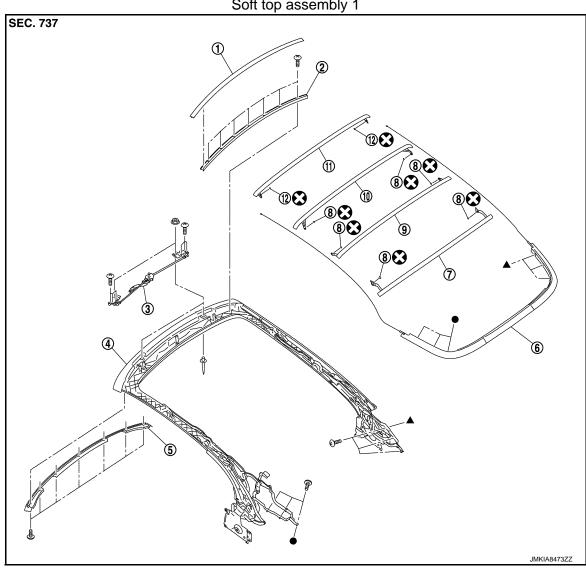
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: N·m (kg-m, in-lb)

: N·m (kg-m, ft-lb)

### **DISASSEMBLY**

Soft top assembly 1



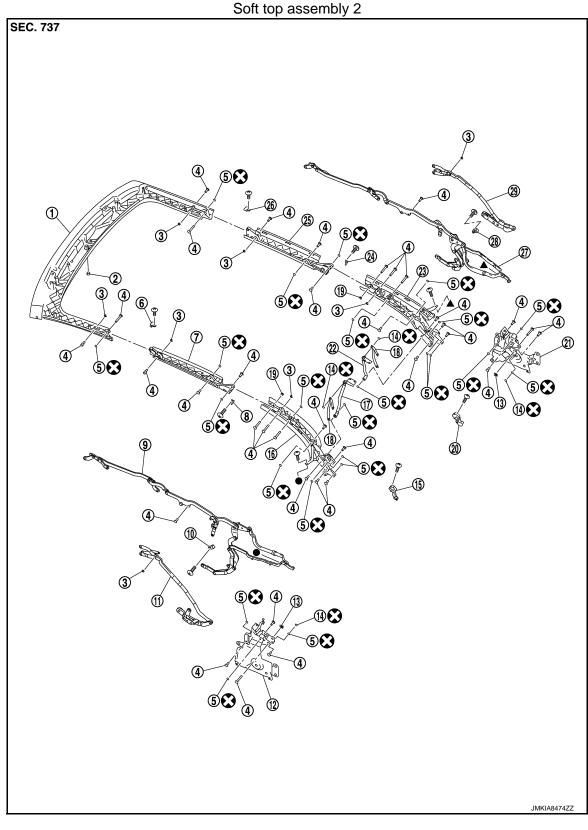
- Folding roof headlining retainer upper 2.
- Soft top frame and linkage assembly 5.
- 4th bow 7.
- 10. 3rd bow

Revision: 2014 February

- Folding roof headlining retainer lower 3.
  - Soft top cover outer front retainer
  - Push on nut 8.
  - 11. 2nd bow

- 1st bow latch
- 5th bow
- 3.5th bow 9.
- 12. Push on nut

: Always replace after every disassembly.



- 1st bow 1.
- Pin 4.
- 7. Center rail LH
- 10. 5th bow stopper LH
- 13. Retaining plate
- 16. Rear rail LH

- 2. Cap
- 5. Push on nut
- 8. Bumper stopper center rail rear LH
- 11. Folding roof lower linkage assembly LH 12.

**RF-201** 

- 14. Push nut cover
- 17. Sky light glass linkage LH
- 3. e-clip
- Bumper stop center rail front LH
- Folding roof upper linkage assembly LH
- Folding roof mounting assembly LH
- 18. Bungee cord

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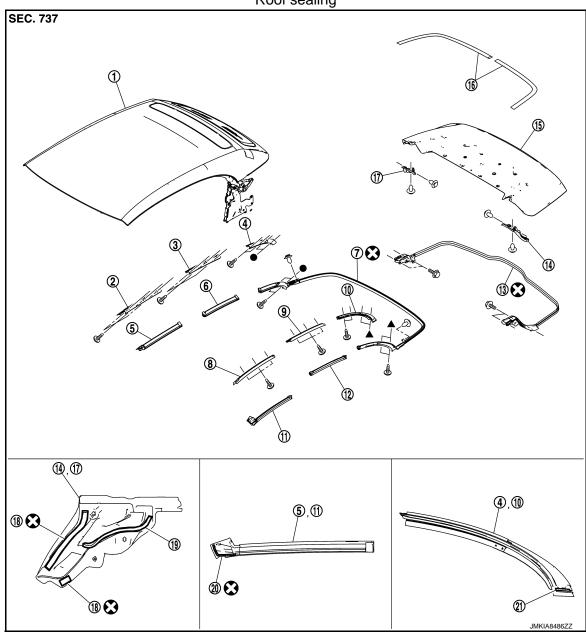
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### < REMOVAL AND INSTALLATION >

: Always replace after every disassembly.

- 19. Retention clip
- 22. Sky light glass linkage RH
- 25. Center rail RH
- 5th bow stopper RH
- 20. Rear bumper stopper RH
- 23. Rear rail RH
- 26. Bumper stopper center rail front RH
- Folding roof lower linkage assembly RH
- 21. Folding roof mounting assembly RH
- 24. Bumper stopper center rail rear RH
- 27. Folding roof upper linkage assembly RH





- Soft top assembly
- Rear rail weather-strip retainer RH
- Rear rail weather-strip 7.
- 10. Rear rail weather-strip retainer LH
- 13. Storage lid weather-strip
- 16. Storage lid protector
- 19. EPT seal [t: 5.0 mm (0.197 in)]
- Front rail weather-strip retainer RH
- Front rail weather-strip RH
- Front rail weather-strip retainer LH
- 11. Front rail weather-strip LH
- 14. Seal rubber LH
- 17. Seal rubber RH
- 20. Butyl tape [t: 2.0 mm (0.079 in)]
- Center rail weather-strip retainer RH
- Center rail weather-strip RH
- Center rail weather-strip retainer LH
- 12. Center rail weather-strip LH
- 15. Storage lid
- 18. Double-sided tape [t: 0.8 mm (0.031 in)]
- 21. EPT seal [t: 7.0 mm (0.276 in)]

: Always replace after every disassembly.

## SOFT TOP ASSEMBLY: Removal and Installation

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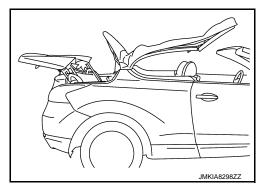
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#### REMOVAL

#### **CAUTION:**

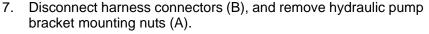
- Protect the vehicle body using fender cover.
- Always be careful not to damage oil pressure hose by bend or crush during the operation.
- Replace hydraulic unit assembly when oil pressure hose is damaged by bend or crush.
- 1. Slide front seat to frontmost position.
- 2. Remove rear side finisher (LH and RH). Refer to <a href="INT-22">INT-22</a>, "REAR SIDE FINISHER: Removal and Installation".
- 3. Remove rear seatback side support assembly. Refer to <a>SE-56</a>, "Exploded View"</a>.
- 4. Remove wheel rear finisher (LH and RH). Refer to <a href="INT-35">INT-35</a>, "WHEEL REAR FINISHER: Removal and Installation".
- 5. Operate soft top assembly as shown in the figure.

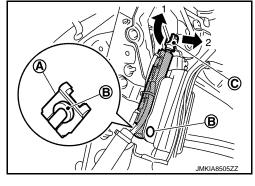


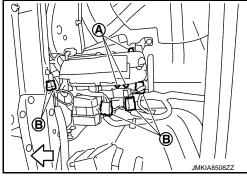
- 6. Remove storage lid drive cylinder from storage lid device assembly.
  - Disengage retaining plate (A) from cylinder mounting pin (B), and then remove shaft from storage lid drive cylinder.
  - Remove piston rod bracket (C).

#### **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.







8. Remove oil pressure hose fixing clips.

#### CALITION:

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

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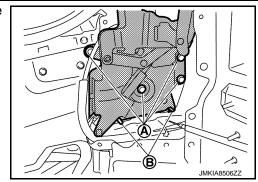
## **SOFT TOP**

## < REMOVAL AND INSTALLATION >

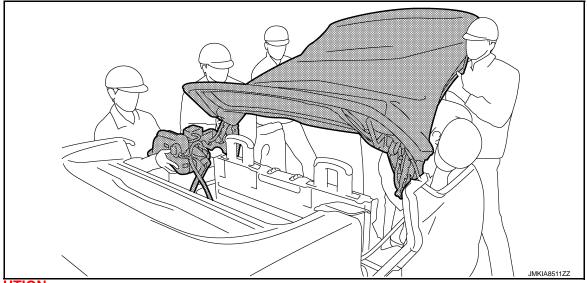
9. Remove soft top assembly mounting bolts (A), and disengage pin (B) (LH and RH).

### **CAUTION:**

Never remove soft top mounting bracket.

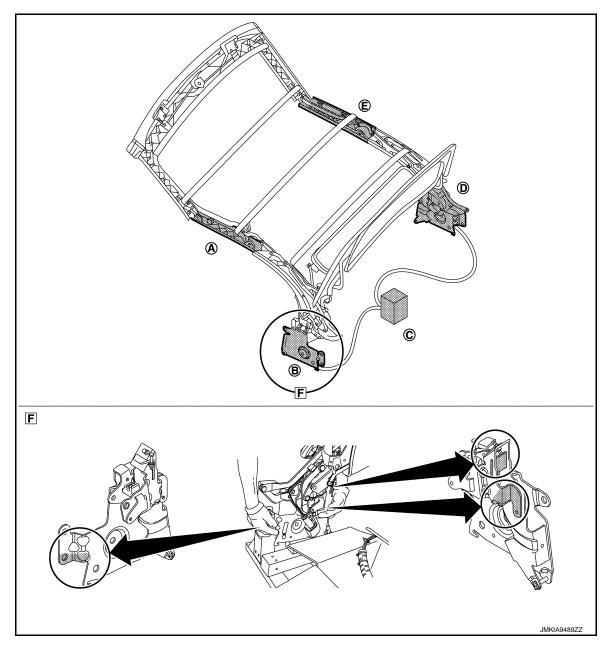


- 10. Disengage folding roof headlining and soft top linkage, and then fix inside frap using tape.
- 11. Remove soft top assembly from vehicle toward driver side.



#### **CAUTION:**

- This is a heavy component. 5 or more workers are required.
- Support the following portions.



- A. Center rail portion LH
- B. Folding roof bracket portion LH
- C. Hydraulic unit assembly

- D. Folding roof bracket portion RH
- E. Center rail portion RH
- Always hold the folding roof bracket portion at the specified position, as shown in the figure.

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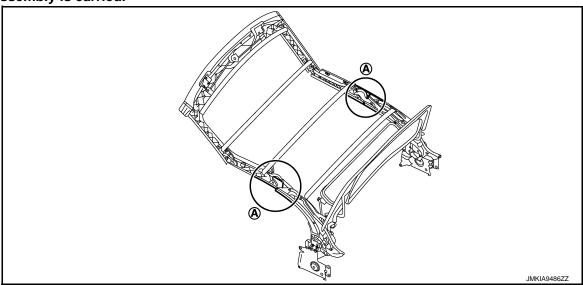
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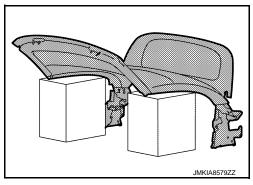
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• Be careful that connection portion (A) of center rail and rear rail does not move while soft top assembly is carried.



- 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.

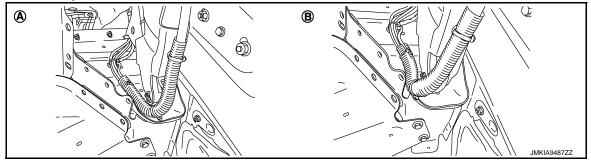


#### INSTALLATION

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

#### **CAUTION:**

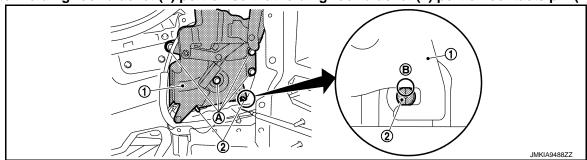
- Manually operate and check that soft top assembly operates without interfering with other portions
  of the vehicle body.
- Before manually operating each cylinder of the hydraulic system, turn ignition switch OFF or disconnect battery cable from the negative terminal, then wait for 4 minutes or more. (Each cylinder maintains oil pressure and therefore it takes a period of time to lower oil pressure.)
- Always be careful not to damage oil pressure hose by bend or crush during the operation.
- Replace hydraulic unit assembly when oil pressure hose is damaged by bend or crush.
- Be careful not to trap and damage oil pressure hose and harness with the folding roof bracket and the vehicle body.



A : OK B : NG

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Tighten folding roof bracket (1) portion so that folding roof bracket (1) portion contacts pin (2).



Α : Bolt

В : Contacting point

- Perform fitting adjustment after installing soft top assembly. Refer to RF-213, "SOFT TOP ASSEM-**BLY: Adjustment".**
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to GW-26. "Inspection and Adjustment".
- Perform leakage test. Refer to <u>RF-86, "Water Leakage Test"</u>.

SOFT TOP ASSEMBLY : Disassembly and Assembly

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#### DISASSEMBLY

#### **CAUTION:**

- Always be careful not to damage oil pressure hose by bend or crush during the operation.
- Replace hydraulic unit assembly when oil pressure hose is damaged by bend or crush.

Folding Roof Upper Linkage Assembly

- 1. Remove soft top assembly.
- Remove soft top cover outer. Refer to RF-216, "SOFT TOP COVER OUTER: Removal and Installation".
- 3. Remove holding roof headlining. Refer to RF-219, "SOFT TOP COVER INNER: Removal and Installation".
- Remove hydraulic unit assembly. Refer to RF-238, "Removal and Installation".
- 5. Remove push on nuts, and then remove 3.5th bow and 4th bow.
- Remove screws, and then remove 5th bow.
- 7. Remove push on nuts and e-clips, and then remove pins.
- Remove folding roof lower linkage assembly from soft top frame and linkage assembly.

Folding Roof Lower Linkage Assembly

- Remove soft top assembly. 1.
- Remove soft top cover outer. Refer to RF-216, "SOFT TOP COVER OUTER: Removal and Installation".
- 3. Remove holding roof headlining. Refer to RF-219, "SOFT TOP COVER INNER: Removal and Installation".
- Remove hydraulic unit assembly. Refer to <u>RF-238</u>, "<u>Removal and Installation</u>".
- 5. Remove push on nuts and e-clips, and then remove pins.
- Remove folding roof lower linkage assembly from soft top frame and linkage assembly. 6.

Folding Roof Mounting Assembly

- Remove soft top assembly.
- Remove soft top cover outer. Refer to RF-216, "SOFT TOP COVER OUTER: Removal and Installation".
- 3. Remove holding roof headlining. Refer to RF-219, "SOFT TOP COVER INNER: Removal and Installation".
- Remove hydraulic unit assembly. Refer to <u>RF-238</u>, "<u>Removal and Installation</u>".
- Remove push on nuts and e-clip, and then remove pins from folding roof mounting assembly.
- 6. Remove folding roof mounting assembly from soft top frame and linkage assembly.

1st Bow

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### **SOFT TOP**

#### < REMOVAL AND INSTALLATION >

- Remove soft top assembly.
- Remove soft top cover outer. Refer to <u>RF-216</u>, "SOFT TOP COVER OUTER: Removal and Installation".
- Remove holding roof headlining. Refer to <u>RF-219</u>, "SOFT TOP COVER INNER: Removal and Installation".
- 4. Remove hydraulic unit assembly. Refer to RF-238, "Removal and Installation".
- 5. Remove push on nuts and e-clips, and then remove pins.
- Disengage 1st bow from center rail.

#### Center Rail

- 1. Remove soft top assembly.
- Remove soft top cover outer. Refer to RF-216, "SOFT TOP COVER OUTER: Removal and Installation".
- Remove holding roof headlining. Refer to <u>RF-219</u>, "SOFT TOP COVER INNER: Removal and Installation".
- 4. Remove hydraulic unit assembly. Refer to <a href="RF-238">RF-238</a>, "Removal and Installation".
- 5. Remove folding roof upper & lower linkage assembly.
- 6. Remove push on nuts and e-clips, and then remove pins.
- 7. Disengage center rail from 1st bow and rear rail.

#### Rear Rail

- 1. Remove soft top assembly.
- Remove soft top cover outer. Refer to <u>RF-216</u>, "SOFT TOP COVER OUTER: Removal and Installation".
- 3. Remove holding roof headlining. Refer to RF-219, "SOFT TOP COVER INNER: Removal and Installation".
- 4. Remove hydraulic unit assembly. Refer to RF-238, "Removal and Installation".
- Remove folding roof upper linkage assembly, folding roof lower linkage assembly and folding roof mounting assembly.
- 6. Remove push on nuts and e-clips, and then remove pins.
- 7. Disengage rear rail from center rail.

#### **ASSEMBLY**

Note the following items, and assemble in the reverse order of disassembly.

#### **CAUTION:**

- Replace tape that fixes wire to 1st bow assembly with new tape.
- Replace push on nut with new one.
- Replace sky light glass mounting nut with new one.
- 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-213, "SOFT TOP ASSEM-BLY: Adjustment"</u>.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-26</u>, <u>"Inspection and Adjustment"</u>.
- Perform leakage test. Refer to <u>RF-86, "Water Leakage Test"</u>.

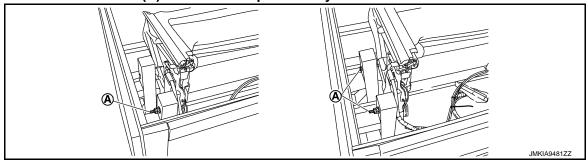
### SOFT TOP ASSEMBLY: Replacement

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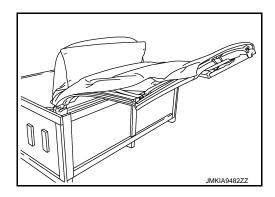
# INSTALLATION PROCEDURE OF SOFT TOP ASSEMBLY REPLACEMENT PART

- Always be careful not to damage oil pressure hose by bend or crush during the operation.
- Replace hydraulic unit assembly when oil pressure hose is damaged by bend or crush.
- Prepare replacement part. CAUTION:

Never remove the bolts (A) that fix soft top assembly to the box.

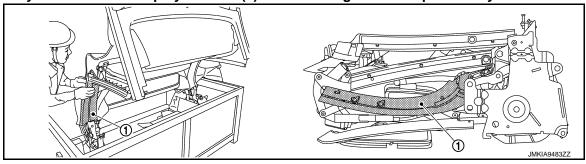


2. Set soft top assembly to the MID position.



#### **CAUTION:**

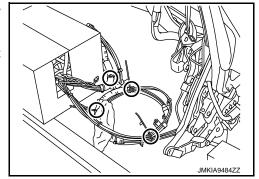
• Always move the soft top by rear rail (1) when moving the soft top manually.



- Never move the soft top by any portion other than rear rail. Otherwise, soft top linkage may be damaged.
- Since the part is fixed in a single location each at the both sides, folding roof bracket portion may rotate and damage oil pressure hose while the soft top is moved manually.
- Never allow folding roof bracket portion to rotate while soft top is moved manually.
- 3. Remove tie wrap to which yellow tape is affixed and which ties oil pressure hose and harness.

#### **CAUTION:**

Never remove any tie wrap to which yellow tape is not affixed.



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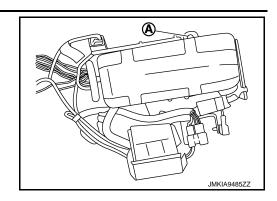
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## **SOFT TOP**

#### < REMOVAL AND INSTALLATION >

4. Remove hydraulic unit assembly fixing screw (A).



- 5. Locate storage lid drive cylinders on the top of hydraulic unit assembly.
- 6. Support folding roof mounting assembly (LH and RH) and center rail (LH and RH). Remove folding roof mounting assembly fixing bolts.

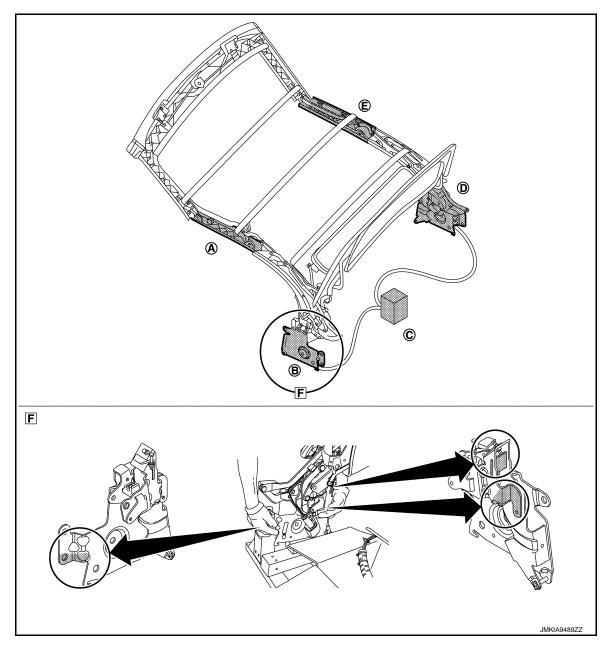
#### **CAUTION:**

Always support. Otherwise, soft top assembly and hydraulic tube may be damaged.

7. Place soft top assembly from the lateral side of the vehicle.

#### **CAUTION:**

- Operation must always be performed by 5 or more technicians.
- Support the following portions.



- A. Center rail portion LH
- B. Roof bracket portion LH
- C. Hydraulic unit assembly

- D. Roof bracket portion RH
- E. Center rail portion RH
- Always hold the folding roof bracket portion at the specified position, as shown in the figure.

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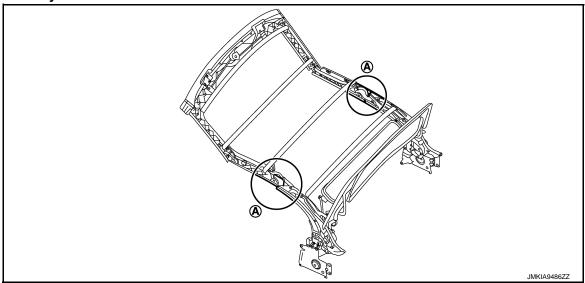
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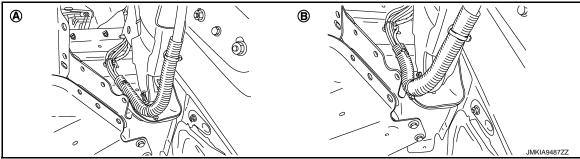
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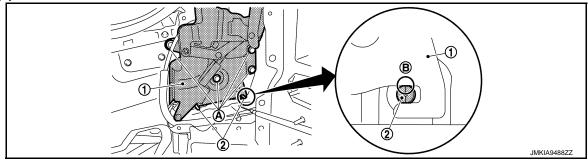
• Be careful that connection portion (A) of center rail and rear rail does not move while soft top assembly is carried.



• Be careful not to trap and damage oil pressure hose and harness with the folding roof bracket and the vehicle body.



- A : OK B : NG
- Tighten mounting bolts (A) to fix roof bracket (1).
   CAUTION:
  - Tighten folding roof bracket (1) portion so that folding roof bracket (1) portion contacts (B) pin (2).



A : Bolt

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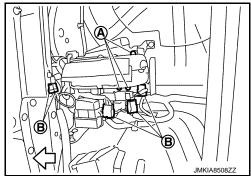
B : Contacting point

### **SOFT TOP**

#### < REMOVAL AND INSTALLATION >

Tighten mounting nuts (A) and connect harness connectors (B). Install hydraulic unit assembly.

⟨⇒ : Vehicle front



- 10. Install storage lid drive cylinder from storage lid device assembly. Refer to RF-203. "SOFT TOP ASSEM-BLY: Removal and Installation".
- 11. Install wheel rear finisher (LH and RH). Refer to INT-35, "WHEEL REAR FINISHER: Removal and Installation".
- 12. Install rear seatback side support assembly (LH and RH). Refer to SE-56, "Exploded View".
- 13. Install rear side finisher. Refer to INT-22, "REAR SIDE FINISHER: Removal and Installation".
- 14. Install rear parcel shelf front finisher. Refer to INT-30, "REAR PARCEL SHELF FRONT FINISHER: Removal and Installation".
- Install guard frame protector assembly. Refer to INT-29, "GUARD FRAME PROTECTOR ASSEMBLY: Removal and Installation".
- Install seatback assembly and headrest. Refer to SE-57, "SEATBACK: Removal and Installation".
- 17. After installation, note the following items.
  - CAUTION:
  - Perform fitting adjustment after installing soft top assembly. Refer to RF-213, "SOFT TOP ASSEMBLY: Adjustment".
  - Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to GW-26. "Inspection and Adjustment".
  - Perform leakage test. Refer to <u>RF-86, "Water Leakage Test"</u>.

SOFT TOP ASSEMBLY: Adjustment

FITTING ADJUSTMENT

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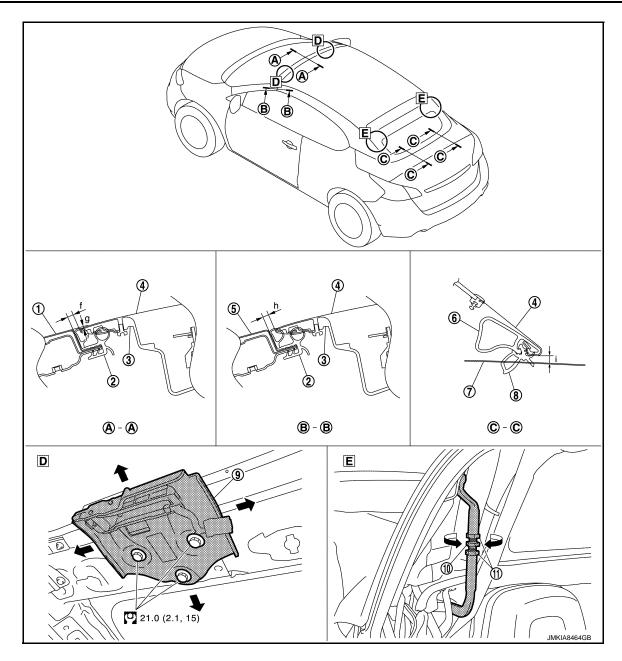
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- 1. Front roof cover
- 4. Soft top cover outer
- 7. Storage lid
- 10. Adjust bolt
- : N-m (kg-m, ft-lb)

- 2. Body side weather-strip
- Front pillar
- 8. Rear rail weather-strip
- 11. Lock nut

- 3. 1st bow
- 6. 5th bow
- 9. Front lock striker bracket

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.

Portion				Standard	Difference (RH/LH, MAX)
Soft top front end and roof panel		f	Clearance	4.4 - 8.4 mm (0.173 - 0.331 in)	_
	A - A	g	Surface difference	0.5 - (-4.5) mm [0.020 - (-0.177) in]	_

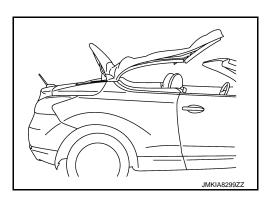
Portion				Standard	Difference (RH/LH, MAX)
Soft top front end and front pillar	B-B	h	Clearance	4.4 - 8.4 mm (0.173 - 0.331 in)	3.0mm (0.118 in)
Soft top rear end and storage lid	C - C	i	Clearance	1.8 - 8.5 mm (0.071 - 0.335 in)	_

#### **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 therefore it takes a period of time to lower oil pressure.)

## FITTING ADJUSTMENT PROCEDURE (FRONT END)

1. Operate soft top as shown in the figure.



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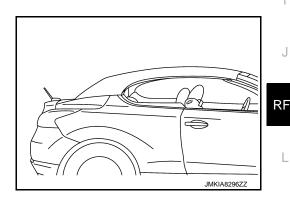
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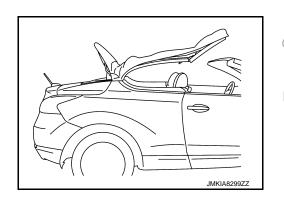
- Remove headlining. Refer to <u>INT-26</u>, "Removal and Installation".
- 3. Loosen front lock striker mounting bolts.
- 4. Operate soft top as shown in the figure.



- 5. Adjust the clearance of soft top front end according to the fitting standard dimension.
- 6. After adjustment tighten front lock striker mounting bolts to the specified torque.
- 7. Install the removed pars.

## FITTING ADJUSTMENT PROCEDURE (5TH BOW)

1. Operate soft top as shown in the figure.



2. Loosen adjust bolt lock nuts.

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## **SOFT TOP**

## < REMOVAL AND INSTALLATION >

- 3. Adjust the clearance between 5th bow and storage lid assembly to the standard using adjusting bolt.
- 4. After adjustment tighten adjust bolt lock nuts.

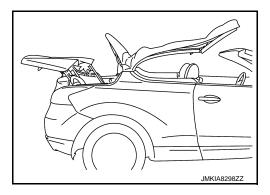
## SOFT TOP COVER OUTER

## SOFT TOP COVER OUTER: Removal and Installation

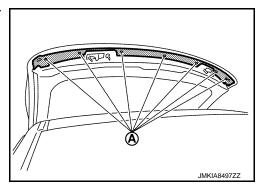
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#### **REMOVAL**

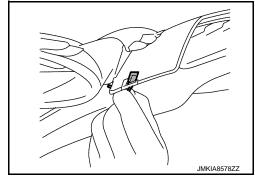
1. Operate soft top as shown in the figure.



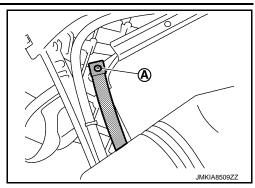
- 2. Remove front rail weather-strip (LH and RH). Refer to <a href="RF-221">RF-221</a>, "ROOF SEALING: Removal and Installation".
- 3. Remove front rail weather-strip retainer (LH and RH). Refer to RF-221, "ROOF SEALING: Removal and Installation".
- 4. Remove fixing screws (A), and then remove soft top cover outer front retainer.



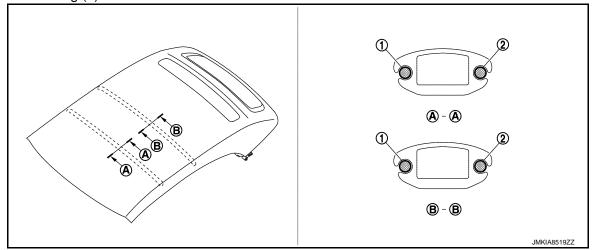
- 5. Pull up front end of soft top cover outer.
- 6. Pull out soft top cover outer wire from 1st bow assembly (both LH and RH).



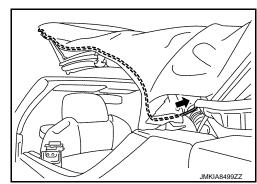
7. Remove fixing screw (A) of soft top outer bungee cord from front rail assembly (LH and RH).



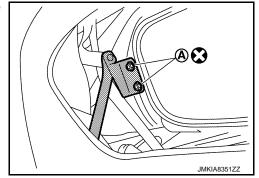
8. Remove push on nuts, and then remove 2nd bow and 3rd bow from soft top cover outer (1) and folding roof headlining (2).



- 9. Remove rear rail weather-strip. Refer to RF-221, "ROOF SEALING: Removal and Installation".
- 10. Remove rear rail weather-strip retainer (LH and RH). Refer to <a href="RF-221">RF-221</a>, "ROOF SEALING: Removal and Installation".
- 11. Pull out wire from soft top cover outer (LH and RH).



12. Remove sky light glass mounting nuts (A), and then disengage folding roof headlining retainer from sky light glass.



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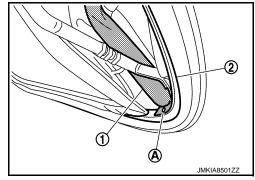
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- 13. Disengage folding roof headlining retainer from back light glass, and then disconnect rear defogger connector (LH and RH).
- 14. Remove mounting rivet (A), and then remove rear soft top outer bungee cord (1) from 5th bow (2).

#### **CAUTION:**

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



#### NOTE:

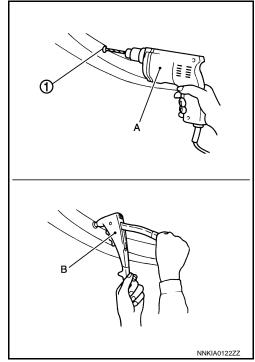
Removal and Installation of Rivet

- Grind the head of rivet (1) with a drill (A) [bit of  $\phi$  5.0 mm ( $\phi$  0.197 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 : \$\phi\$ 4.9 - 5.0 mm (0.193 - 0.197 in)

Used rivet head diameter :  $\phi$  9.6 mm (0.378 in)



- 15. Disengage rear end of soft top cover outer from 5th bow.
- 16. Remove soft top cover outer form the vehicle.

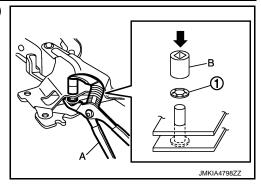
### INSTALLATION

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

### **CAUTION:**

- Replace tape that fixes wire to 1st bow assembly with new tape.
- Replace push on nut with new one.
- Replace sky light glass mounting nut with new one.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-26</u>, <u>"Inspection and Adjustment"</u>.
- Perform leakage test. Refer to <u>RF-86, "Water Leakage Test"</u>.
   NOTE:

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



# SOFT TOP COVER INNER

## SOFT TOP COVER INNER: Removal and Installation

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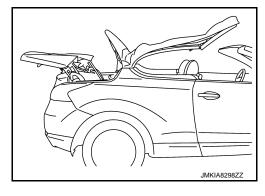
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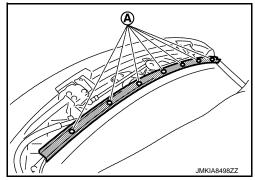
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## **REMOVAL**

1. Operate soft top as shown in the figure.



- 2. Remove soft top cover outer. Refer to RF-216, "SOFT TOP COVER OUTER: Removal and Installation".
- 3. Remove folding roof headlining retainer upper.
- 4. Remove fixing screws (A), and then remove folding roof headlining retainer lower.



5. Remove fixing screw, and then disengage folding roof headlining bungee cord from 3.5th bow.

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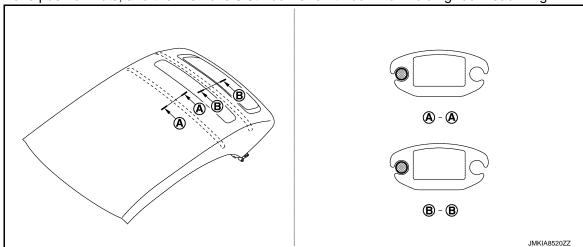
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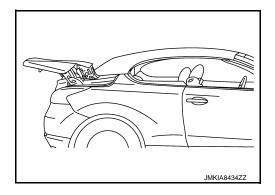
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6. Remove push on nuts, and then remove 3.5th bow and 4th bow from folding roof headlining.



- 7. Disengage folding roof headlining from 5th bow.
- 8. Operate soft top as shown in the figure.



9. Remove folding roof headlining fixing screws (rear side), and then remove folding roof headlining.

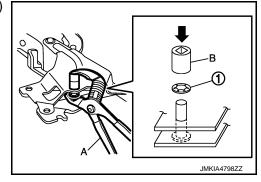
## INSTALLATION

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

## **CAUTION:**

- Replace tape that fixes wire to 1st bow assembly with new tape.
- Replace push on nut with new one.
- Replace sky light glass mounting nut with new one.
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <u>GW-26</u>, "Inspection and Adjustment".
- Perform leakage test. Refer to <u>RF-86, "Water Leakage Test"</u>.

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



FRONT LOCK STRIKER

FRONT LOCK STRIKER: Removal and Installation

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## **REMOVAL**

Remove headlining. Refer to <u>INT-26, "Removal and Installation"</u>.

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- Remove front lock striker mounting bolts.
- 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.
- Perform fitting adjustment after installing front lock striker. Refer to RF-213, "SOFT TOP ASSEMBLY : Adjustment".

## **ROOF SEALING**

**ROOF SEALING: Removal and Installation** 

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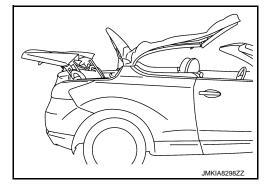
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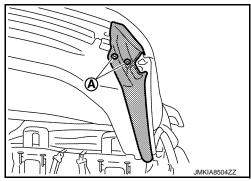
## FRONT RAIL WEATHER-STRIP

Removal

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



Remove fixing screws (A), and then remove front rail weatherstrip.



Remove fixing screws, and then remove front rail weather-strip retainer.

Installation

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

#### **CAUTION:**

- Replace butyl tape with new one.
- Perform door glass fixing adjustment. Refer to GW-26, "Inspection and Adjustment".
- Perform leakage test. Refer to RF-86, "Water Leakage Test".

### CENTER RAIL WEATHER-STRIP

Removal

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Revision: 2014 February

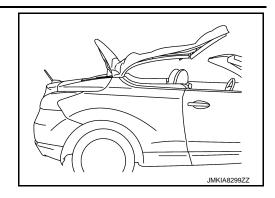
**RF-221** 

2014 Murano Cross Cabriolet

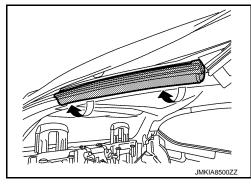
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1. Operate soft top assembly as shown in the figure.



Remove center rail weather-strip.



3. Remove fixing screws, and the remove center rail weather-strip retainer.

Installation

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

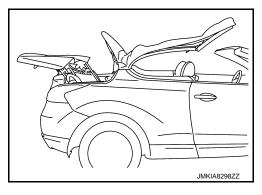
### **CAUTION:**

- Perform door glass fixing adjustment. Refer to GW-26, "Inspection and Adjustment".
- Perform leakage test. Refer to RF-86, "Water Leakage Test".

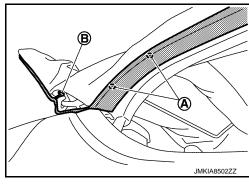
## REAR RAIL WEATHER-STRIP

## Removal

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



2. Remove fixing screws (A) and clip (B) (LH and RH).



3. Disengage connection of rear rail weather-strip end and pull back (LH and RH).

- 4. Remove rear rail weather-strip from 5th bow.
- 5. Remove fixing screws, and then remove rear rail weather-strip retainer (LH and RH).

Installation

- 1. Install rear rail weather-strip to 5th bow.
  - Check that rear end of soft top cover outer is fitted in 5th bow.
  - Check that retainer is installed to 5th bow.
  - 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 the removed parts.

**CAUTION:** 

- Perform door glass fixing adjustment. Refer to GW-26, "Inspection and Adjustment".
- Perform leakage test. Refer to RF-86, "Water Leakage Test".

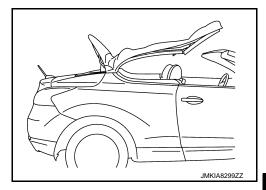
1ST BOW LATCH

1ST BOW LATCH: Removal and Installation

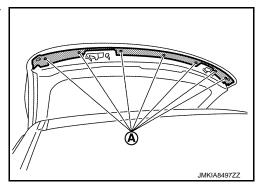
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REMOVAL

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



- Remove front rail weather-strip (LH and RH). Refer to <u>RF-221, "ROOF SEALING: Removal and Installation"</u>.
- Remove front rail weather-strip retainer (LH and RH). Refer to <u>RF-221, "ROOF SEALING: Removal and Installation"</u>.
- Remove fixing screws (A), and then remove soft top cover outer front retainer.



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

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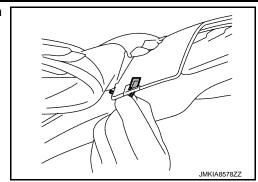
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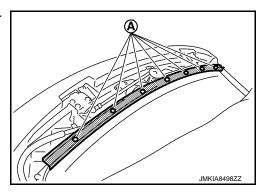
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Revision: 2014 February RF-223

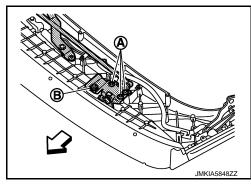
6. Pull out soft top cover outer wire from 1st bow assembly (both LH and RH).



- 7. Remove folding roof headlining retainer upper.
- 8. Remove fixing screws (A), and then remove folding roof headlining retainer lower.

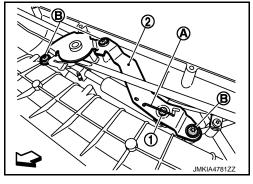


Remove 1st bow latch assembly mounting bolts (A) and locating pin mounting nut (B) (both LH and RH).

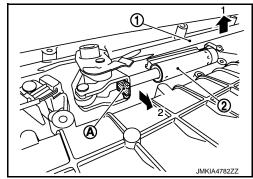


- 10. Remove spring lock (A). Pull out cylinder mounting pin (1) toward upper side of vehicle.
- 11. Remove TORX bolts (B). Remove soft top lock assembly center bracket (2).

 $\ \ \, \ \ \, \text{: Vehicle front}$ 



12. Lift up center portion of 1st bow latch assembly (1). Remove retaining plate (A) of roof latch cylinder (2).



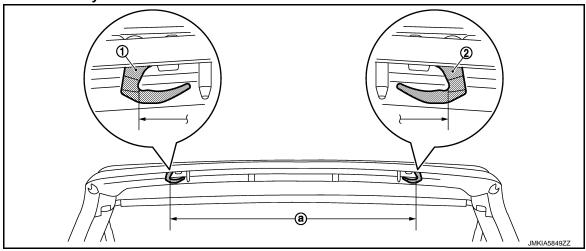
13. Remove 1st bow latch assembly from 1st bow.

### INSTALLATION

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

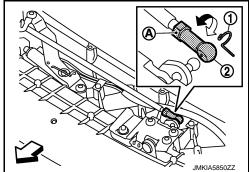
## **CAUTION:**

- 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.



: 772.11 - 773.11 mm (30.398 - 30.437 in) (a) Standard

 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.



- Adjust hook contact length of 1st bow latch hook (LH and RH). Refer to RF-225, "1ST BOW LATCH: Inspection and Adjustment".
- Check the open/close operation of soft top assembly after installation.
- Perform water leakage test. Refer to RF-86, "Water Leakage Test".

## 1ST BOW LATCH: Inspection and Adjustment

## Inspection and Adjustment

- 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)].
- Fully open soft top, and then engage 1st bow latch.

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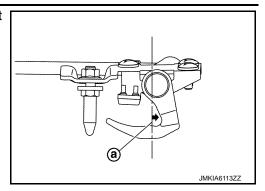
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## **SOFT TOP**

## < REMOVAL AND INSTALLATION >

3. Open soft top, and then check that the red lead or dye penetrant testing agent peeled off from the 1st bow latch exceeds.

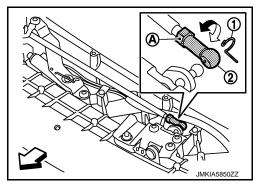


 If not exceeded, adjust hook contact length of 1st bow latch hook (LH and RH), and then adjust the push rod length by loosening nut (A), removing snap pin (1), and turning stud ball cap (2).

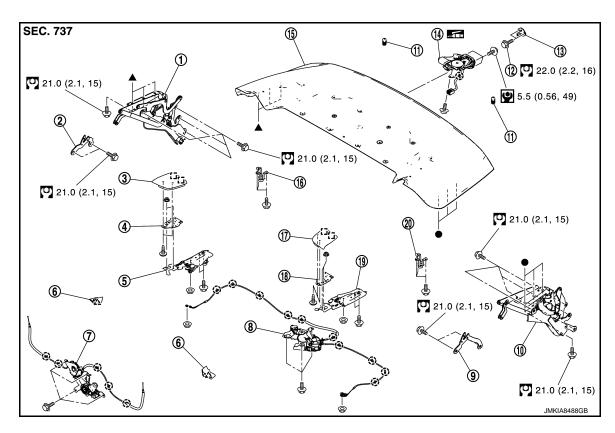
## **CAUTION:**

- Adjust front lock rod LH and front lock rod RH simultaneously.
- Check that dimension between hook RH and hook LH is within the standard.





Exploded View



- 1. Storage lid device assembly RH
- 4. Outside flap finisher bracket RH
- 7. Inside flap motor assembly
- 10. Storage lid device assembly LH
- 13. Storage lid lock striker
- 16. Stopper linkage RH
- 19. Outside flap assembly LH
- ( ) : Clip
- 八 : Pawl
- : Metal clip
- : N-m (kg-m, in-lb)
- : N·m (kg-m, ft-lb)
- : Body grease

Revision: 2014 February

- Tonneau pivot mounting front outer bracket RH
- 5. Outside flap assembly RH
- 8. Outside flap motor assembly
- 11. Bumper rubber
- 14. Storage lid lock assembly
- 17. Outside flap finisher LH
- 20. Stopper linkage LH

- 3. Outside flap finisher RH
- 6. Soft top protector
- 9. Tonneau pivot mounting front outer bracket LH
- 12. TORX bolt
- 15. Storage lid
- 18. Outside flap finisher bracket LH

# STORAGE LID ASSEMBLY

STORAGE LID ASSEMBLY: Removal and Installation

**REMOVAL** 

**RF-227** 

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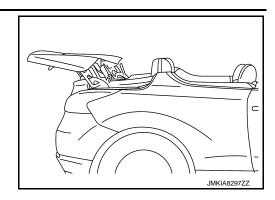
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## < REMOVAL AND INSTALLATION >

1. Operate soft top as shown in the figure.



- 2. Disconnect harness connectors.
- 3. Remove mounting bolts, and then remove storage lid assembly from storage lid device assembly (LH and RH).

## **INSTALLATION**

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

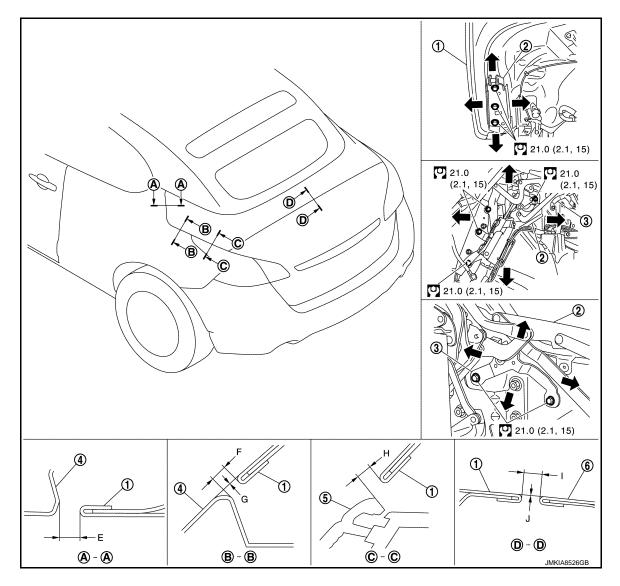
## **CAUTION:**

After installing storage lid assembly, perform fitting adjustment. Refer to RF-228, "STORAGE LID ASSEMBLY: Adjustment".

STORAGE LID ASSEMBLY: Adjustment

INFOID:0000000009026195

FITTING ADJUSTMENT



- Storage lid assembly 1.
- 2. Storage lid device assembly
- 5. Rear combination lamp
- Tonneu pivot mounting front outer bracket
- 6. Trunk lid

Rear fender : N·m (kg-m, ft-lb)

4.

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.

Porti	on			Standard	Difference between
Storage lid front end and rear fender	A - A	E	Clearance	2.23 - 6.23 mm (0.088 - 0.245 in)	_
Storage lid side end and rear fender	B - B	F	Clearance	1.35 - 5.35 mm (0.053 - 0.211 in)	_
		G	Surface difference	(-2.0) - (+2.0) mm [(-0.079) - (+0.079) in]	_
Storage lid side end and rear combination lamp	C-C	Н	Clearance	3.0 - 7.0 mm (0.118 - 0.276 in)	_

**RF-229** Revision: 2014 February 2014 Murano Cross Cabriolet

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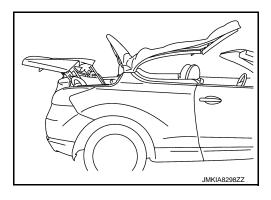
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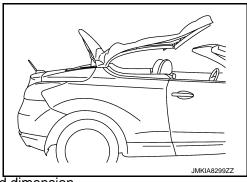
Portion				Standard	Difference between
Storage lid rear end and trunk lid	D - D		Clearance	3.0 - 7.0 mm (0.118 - 0.276 in)	_
		J	Surface difference	(-1.0) - (+1.5) mm [(-0.039) - (+0.059) in]	_

## FITTING ADJUSTMENT PROCEDURE

1. Operate soft top as shown in the figure.



- 2. Loosen storage lid mounting bolts.
- 3. Operate soft top as shown in the figure.



- 4. Adjust the clearance of storage lid according to the fitting standard dimension.
- 5. After adjustment tighten storage lid mounting bolts to the specified torque
- 6. Repeat the above operation, if necessary.

### **CAUTION:**

- Be careful that storage lid lock dose not contact storage lid weather-strip when storage lid is operated.
- · Adjust storage lid fitting, if necessary.
- Otherwise, storage lid weather-strip may be damaged.

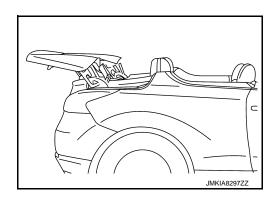
## STORAGE LID STRIKER

# STORAGE LID STRIKER: Removal and Installation

#### INFOID:0000000009026196

## **REMOVAL**

1. Operate soft top as shown in the figure.



## < REMOVAL AND INSTALLATION >

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

## STORAGE LID LOCK: Removal and Installation

### INFOID:0000000009026197

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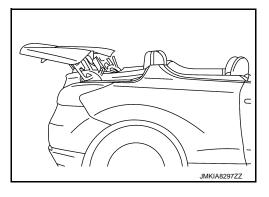
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### **REMOVAL**

1. Operate soft top as shown in the figure.



- Disconnect harness connector, and then remove storage lid lock mounting bolts.
- 3. 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-228, "STORAGE LID ASSEMBLY: Adjustment".

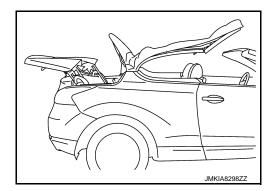
# STORAGE LID DEVICE ASSEMBLY

# STORAGE LID DEVICE ASSEMBLY: Removal and Installation

#### INFOID:0000000009026198

#### **REMOVAL**

1. Operate soft top as shown in the figure.



- Remove storage lid assembly. Refer to <u>RF-227</u>. "STORAGE LID ASSEMBLY: Removal and Installation".
- 3. Remove wheel rear finisher. Refer to <a href="INT-35">INT-35</a>, "WHEEL REAR FINISHER: Removal and Installation".

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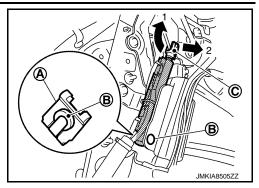
Revision: 2014 February RF-231 2014 Murano Cross Cabriolet

## < REMOVAL AND INSTALLATION >

- Remove storage lid drive cylinder from storage lid device assembly.
  - Disengage retaining plate (A) from cylinder mounting pin (B), and then remove pin from storage lid drive cylinder.
  - Remove piston rod bracket (C).

### **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.



5. Remove mounting bolts, and then remove storage lid device assembly.

### INSTALLATION

Install in the reverse order of removal.

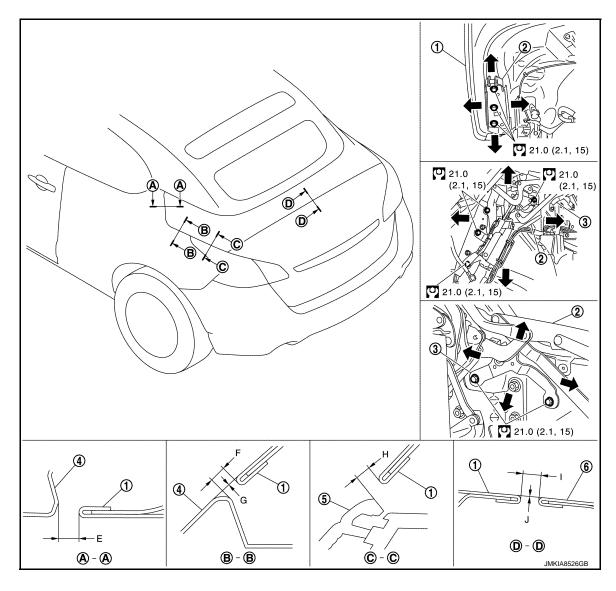
### **CAUTION:**

After installation, check storage lid open/close lock/unlock operation.

STORAGE LID DEVICE ASSEMBLY : Adjustment

INFOID:0000000009026199

### FITTING ADJUSTMENT



- 1. Storage lid assembly
- 2. Storage lid device assembly
- Tonneau pivot mounting front outer bracket

4. Rear fender

- 5. Rear combination lamp
- 6. Trunk lid

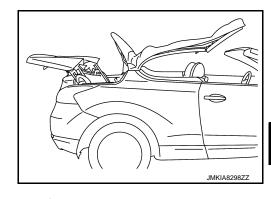
: N·m (kg-m, ft-lb)

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 rear fender	A - A	E	Clearance	2.23 - 6.23 mm (0.088 - 0.245 in)	_
Storage lid side end and rear fender	B - B	F	Clearance	1.35 - 5.35 mm (0.053 - 0.211 in)	_
		G	Surface difference	(-2.0) - (+2.0) mm [(-0.079) - (+0.079) in]	_
Storage lid side end and rear combination lamp	C-C	н	Clearance	3.0 - 7.0 mm (0.118 - 0.276 in)	_
Storage lid rear end and trunk lid	D - D	I	Clearance	3.0 - 7.0 mm (0.118 - 0.276 in)	
		J	Surface difference	(-1.0) - (+1.5) mm [(-0.039) - (+0.059) in]	_

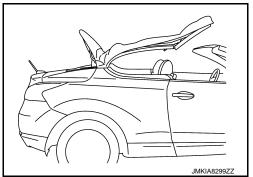
## FITTING ADJUSTMENT PROCEDURE

1. Operate soft top as shown in the figure.



- 2. Loosen storage lid device mounting bolts and tonneau pivot mounting front outer bracket mounting bolts.
- 3. Operate soft top as shown in the figure.

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- 4. Adjust the clearance of storage lid according to the fitting standard dimension.
- 5. After adjustment tighten storage lid device mounting bolts to the specified torque.
- 6. Tighten tonneau pivot mounting front outer bracket mounting bolts.

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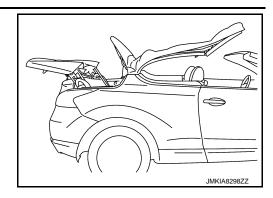
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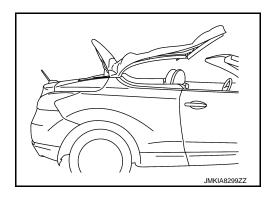
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7. Operate soft top as shown in the figure.



- 8. Loosen storage lid mounting bolts.
- 9. Operate soft top as shown in the figure.



- 10. Adjust the clearance of storage lid according to the fitting standard dimension.
- 11. After adjustment tighten storage lid mounting bolts to the specified torque.
- 12. Repeat the above operation, if necessary.

### **CAUTION:**

- Be careful that storage lid lock dose not contact storage lid weather-strip when storage lid is operated.
- · Adjust storage lid fitting, if necessary.
- Otherwise, storage lid weather-strip may be damaged.

## STORAGE OUTER PROTECTOR

## STORAGE OUTER PROTECTOR: Removal and Installation

INFOID:0000000009026200

## **REMOVAL**

Heat bonded area of storage lid outer protector using a dryer and remove storage lid outer protector.

#### NOTE:

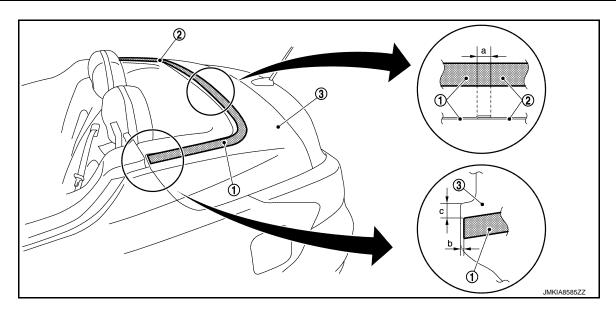
Do not reuse storage lid outer protector.

### INSTALLATION

- 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. Overlap storage lid outer protector LH (1) end to storage lid outer protector RH (2) end as shown in the figure and affix to storage lid assembly while peeling pattern paper.

Install storage lid outer protector end to storage lid assembly (3) front end as shown in the figure. CAUTION:

When affixing, gradually peel pattern paper while bleeding air.



- Storage lid outer protector LH
- 2. Storage lid outer protector RH
- Storage lid assembly

- (a) : 19.0 21.0 mm (0.748 0.827 in) (b) : 4.1 - 9.1 mm (0.161 - 0.358 in)
- (C) : 27 33 mm (1.063 1.299 in)

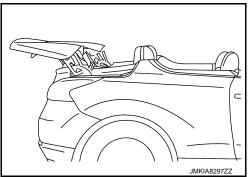
# STORAGE LID WEATHER-STRIP

STORAGE LID WEATHER-STRIP: Removal and Installation

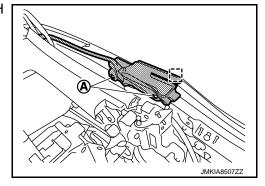
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## **REMOVAL**

Operate soft top as shown in the figure.



- Remove mounting bolts (A), and then disengage metal clip (LH and RH).
  - : Metal clip



- 3. Pull upward, disengage weather-strip from 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.

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## < REMOVAL AND INSTALLATION >

4. Remove clips, and then remove seal rubber (LH and RH).

### **INSTALLATION**

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

#### **CAUTION:**

Replace storage lid weather-strip with new one.

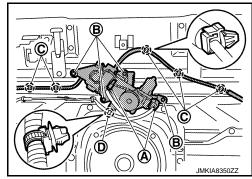
## INSIDE FLAP MOTOR

## INSIDE FLAP MOTOR: Removal and Installation

#### INFOID:0000000009026202

### **REMOVAL**

- 1. Remove rear seatback assembly. Refer to SE-57, "SEATBACK: Removal and Installation",
- Disengage inside flap motor cable from rear parcel shelf front finisher. Refer to <u>INT-30</u>, "<u>REAR PARCEL</u> SHELF FRONT FINISHER: Removal and Installation".
- 3. Disconnect harness connectors (A), and disengage harness clip (D).
- 4. Remove mounting bolts (B), and disengage inside flap motor cable fixing clips (C).
- 5. Remove inside flap motor assembly.



### INSTALLATION

Install in the reverse other of removal.

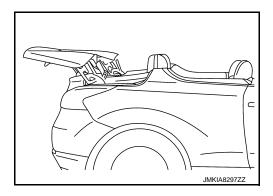
## **OUTSIDE FLAP MOTOR**

## OUTSIDE FLAP MOTOR: Removal and Installation

INFOID:0000000009026203

### **REMOVAL**

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



- 2. Remove mounting nuts, and then remove outside flap motor cable.
- Disconnect harness connector.
- 4. Remove mounting bolts, and then remove outside flap motor assembly.

#### INSTALLATION

Install in the reverse order of removal.

OUTSIDE FLAP ASSEMBLY

OUTSIDE FLAP ASSEMBLY: Removal and Installation

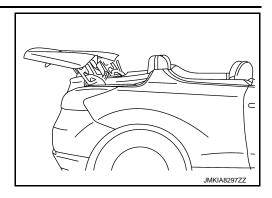
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**REMOVAL** 

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# < REMOVAL AND INSTALLATION >

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



- 2. Remove mounting nut, and then disengage outside flap motor cable.
- 3. Remove mounting bolts and nut, and then remove outside flap assembly.

## **INSTALLATION**

Revision: 2014 February

Install in the reverse order of removal.

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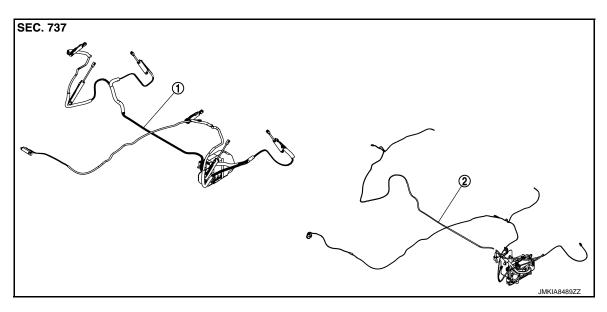
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Exploded View

**REMOVAL** 

Refer to RF-199, "Exploded View".

DISASSEMBLY



- 1. Hydraulic unit assembly
- Soft top control unit & harness assembly

## Removal and Installation

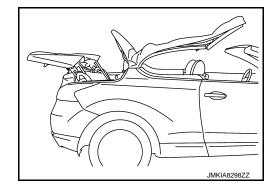
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### **CAUTION:**

It is prohibited to disassemble the hydraulic unit assembly components. Never remove cylinders and oil pressure hoses.

## **REMOVAL**

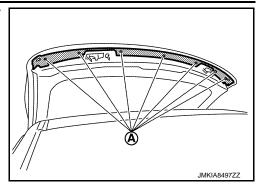
1. Operate soft top as shown in the figure.



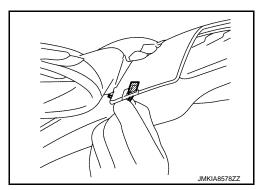
- 2. Remove soft top assembly. Refer to RF-203, "SOFT TOP ASSEMBLY: Removal and Installation".
- 3. Remove front rail weather-strip (LH and RH). Refer to RF-221, "ROOF SEALING: Removal and Installation".
- 4. Remove front rail weather-strip retainer (LH and RH). Refer to RF-221, "ROOF SEALING: Removal and Installation".

## < REMOVAL AND INSTALLATION >

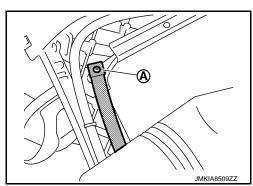
5. Remove fixing screws (A), and then remove soft top cover outer front retainer.



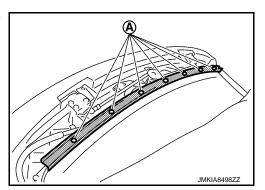
- 6. Pull up front end of soft top cover outer.
- 7. Pull out soft top cover outer wire from 1st bow assembly (both LH and RH).



8. Remove fixing screw (A) of soft top outer bungee cord from front rail assembly (LH and RH).



- 9. Remove folding roof headlining retainer upper.
- 10. Remove fixing screws (A), and then remove folding roof headlining retainer lower.



- 11. Remove rear rail weather-strip. Refer to RF-221, "ROOF SEALING: Removal and Installation".
- 12. Remove rear rail weather-strip retainer (LH and RH). Refer to RF-221, "ROOF SEALING: Removal and Installation".

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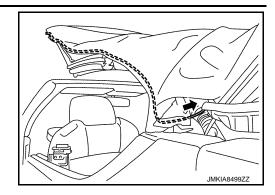
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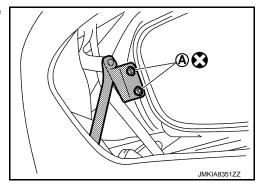
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## < REMOVAL AND INSTALLATION >

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



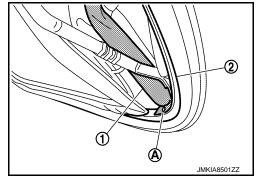
14. Remove sky light glass mounting nuts (A), and then disengage folding roof headlining retainer from sky light glass.



- 15. Disengage folding roof headlining retainer from back light glass, and then disconnect rear defogger connector (LH and RH).
- 16. Remove mounting rivet (A), and then remove rear soft top outer bungee cord (1) from 5th bow (2).

### **CAUTION:**

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



### NOTE:

Removal and Installation of Rivet

## < REMOVAL AND INSTALLATION >

diameter

• Grind the head of rivet (1) with a drill (A) [bit of φ 5.0 mm (φ 0.197 in)].

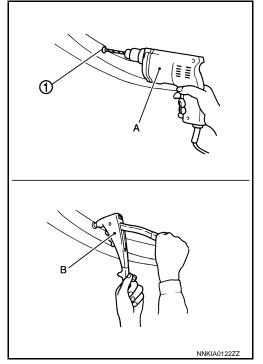
· Securely crimp the bungee cord with the soft top linkage assembly using a hand riveter (B).

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

Prepared hole : \$\phi 4.9 - 5.0 mm (0.193 - 0.197 in)

**Used rivet head** 

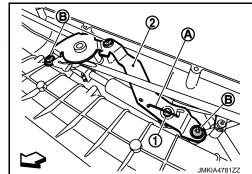
: \$\phi\$ 9.6 mm (0.378 in) diameter



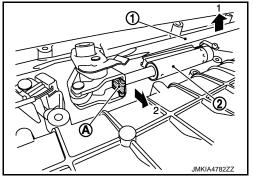
- 17. Disengage rear end of soft top cover outer from 5th bow.
- 18. Remove soft top control unit. Refer to <a href="RF-244">RF-244</a>, "Removal and Installation".
- 19. Remove bolt. Remove hydraulic pump bracket and hydraulic pump case.
- 20. Remove roof latch lock sensor harness connector. Refer to RF-245, "Removal and Installation".
- 21. Remove spring lock (A). Pull out cylinder mounting pin (1) toward upper side of vehicle.
- 22. Remove TORX bolts (B). Remove 1st bow latch assembly center bracket (2).

: Vehicle front

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23. Lift up center portion of 1st bow latch assembly (1). Remove retaining plate (A) of roof latch cylinder (2).



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24. Remove band and screw that fix oil pressure hose to soft top linkage assembly. **CAUTION:** 

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

- 25. Remove 5th bow drive cylinder mounting pin fixing E-clip and push on nut, and then remove 5th bow drive cylinder mounting pins (LH and RH).
- Manually operate soft top assembly to the open position.

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### < REMOVAL AND INSTALLATION >

27. Remove soft top drive cylinder mounting pin fixing E-clip and retaining plate, and then remove soft top drive cylinder mounting pin.

### **CAUTION:**

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

28. 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:**

- Replace sky light glass mounting nut with new one.
- 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 <a href="RF-213">RF-213</a>, "SOFT TOP ASSEMBLY: Adjustment".
- Perform door glass fitting adjustment after soft top assembly fitting adjustment. Refer to <a href="GW-26">GW-26</a>, <a href="Inspection and Adjustment"</a>.
- Perform leakage test. Refer to RF-86, "Water Leakage Test".

# **ROOF OPEN/CLOSE SWITCH**

# < REMOVAL AND INSTALLATION >

# **ROOF OPEN/CLOSE SWITCH**

# Removal and Installation

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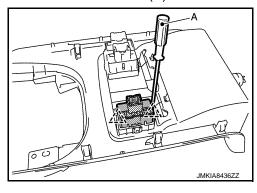
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## Removal

- 1. Remove front console pocket. Refer to IP-21, "Removal and Installation".
- 2. Remove roof open/close switch from front console pocket using flat-bladed screw driver (A).





## Installation

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Install in the reverse order of removal.

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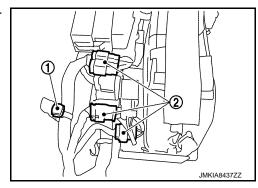
# SOFT TOP CONTROL UNIT

## Removal and Installation

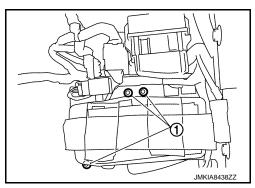
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## **REMOVAL**

- 1. Start engine.
- 2. Operate soft top to fully closed.
- 3. Turn ignition switch OFF.
- 4. Trunk lid is open.
- 5. Disconnect battery terminals and wait at least 3 minutes.
- 6. Remove wheel rear finisher LH. Refer to INT-35, "WHEEL REAR FINISHER: Removal and Installation".
- 7. Remove harness mounting clip (1) and disconnect harness connectors (2).



8. Remove soft top control unit mounting nuts (1).

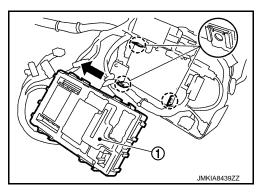


- 9. Disconnect soft top control unit harness connector.
- 10. Disengage soft top control unit from mounting bracket (3 positions), and then pull out soft top control unit (1).

### **CAUTION:**

Be careful not to damage to the parts, and note to the following items.

- Evenly disengage soft top control unit from mounting bracket (3 positions) so that soft top control unit does not incline.
- Never apply power forcibly.



## **INSTALLATION**

Install in the reverse order of removal.

# **ROOF LATCH LOCK SENSOR**

## < REMOVAL AND INSTALLATION >

# **ROOF LATCH LOCK SENSOR**

## Removal and Installation

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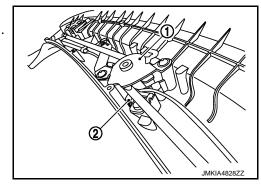
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## **REMOVAL**

- 1. Turn ignition switch OFF.
- 2. Pull up front end of soft top cover outer. Refer to RF-216, "SOFT TOP COVER OUTER: Removal and Installation".
- 3. Remove roof lock assembly center (1).
- 4. Lift up roof lock assembly and remove roof latch lock sensor (2).



## **INSTALLATION**

Install in the reverse order of removal.

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