ON-VEHICLE INSPECTION

1. CHECK AUTO SLIDE-OPEN / CLOSE FUNCTION

(a) Check that the sliding roof switch can operate the sliding roof glass as follows while the tilt-up / DOWN function is not operating.

Standard

Condition	Switch	Switch Operation	Roof Glass
• Ignition switch ON • Window lock switch OFF	SLIDE OPEN	Pressed for more than 0.3 sec.	Fully open
	TILT UP		Fully closed

HINT:
The sliding roof stops partway when the sliding roof switch is pushed on either side during AUTO operation.

2. CHECK AUTO TILT UP / DOWN FUNCTION

(a) Check that the sliding roof switch can operate the sliding roof as follows while the slide-OPEN / CLOSE function is not operating:

Standard

Condition	Switch	Switch Operation	Roof Glass
• Ignition switch ON • Window lock switch OFF	TILT UP	Pressed for more than 0.3 sec.	Fully tilted up
	SLIDE OPEN		Fully closed

HINT:
The sliding roof stops partway when the sliding roof switch is pushed on either side during AUTO operation.

3. CHECK SLIDING ROOF OPERATION FUNCTION AFTER IGNITION IS TURNED OFF

(a) When both of the following conditions are fulfilled, check that the power windows, the back door glass and the roof can be operated even after the ignition switch is turned OFF:
- Within 43 seconds after the ignition switch is turned OFF.
- Either of the front doors is opened.

4. CHECK DEFLECTOR OPERATION

(a) Check that the sliding roof automatically tilts UP / DOWN depending on the vehicle speed.
(1) Conditions that enable the sliding roof to automatically tilt DOWN:
- Sliding roof in fully open position
- Sliding roof in UP position
- Vehicle speed 70 km/h (43 mph) or less (during acceleration)

(2) Conditions that enable the sliding roof to automatically tilt UP:
- Sliding roof in fully open position
- Sliding roof in DOWN position
- Vehicle speed 65 km/h (40 mph) or less (during deceleration)

(b) Move the sliding roof into the fully open position from any position except the fully open position while the vehicle is driving in the vehicle speed of 85 km/h (53 mph) or more. Then operate the sliding roof switch on the TILT UP side. At this time, check that the sliding roof does not tilt UP.

5. CHECK JAM PROTECTION FUNCTION

HINT:

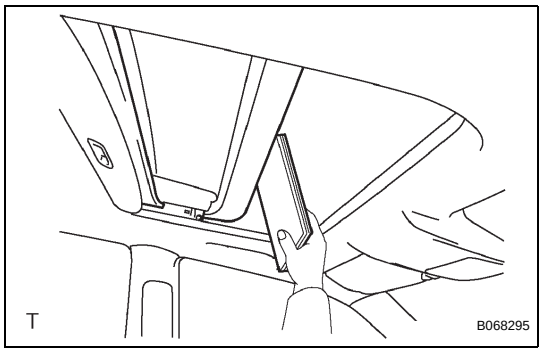
The jam protection function prevents any part of your body from getting caught by accident between the vehicle body and the roof glass during sliding roof operation.

Operative condition:

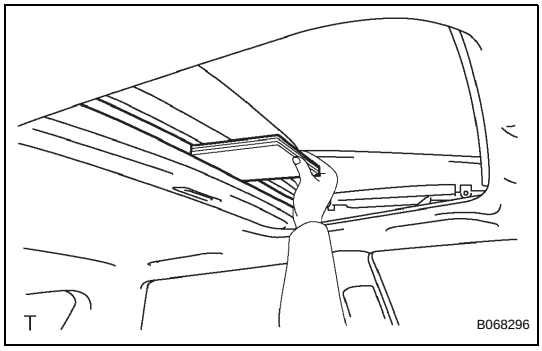
- AUTO CLOSE
- AUTO CLOSE during sliding roof operation after the ignition switch is turned OFF.
- AUTO TILT-DOWN
- AUTO TILT-DOWN during sliding roof operation after the ignition switch is turned OFF.

CAUTION:

- **Do not check this function using a part of your body such as your hand. Also, pay thorough attention that nothing gets caught by accident in this process.**
- **If checking this function with something thin (less than 5 mm (0.20 in.)) inserted between the roof glass and vehicle body, this function may not operate.**



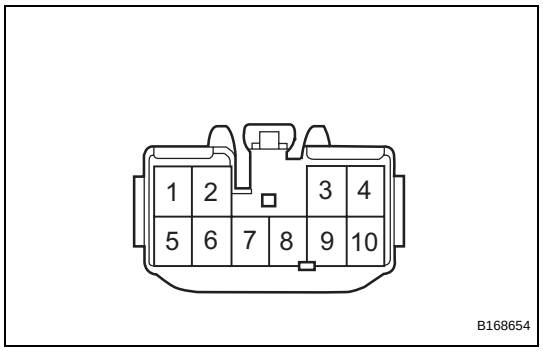
(a) When the slide-OPEN / CLOSE function is operating:
Check that the sliding roof opens by approximately 200 mm (7.87 in.) right when something gets caught between the vehicle body and the roof glass during sliding roof operation.



(b) When the tilt-UP / DOWN function is operating:
Check that the sliding roof tilts up fully when something gets caught between the vehicle body and the roof glass during sliding roof operation.

6. CHECK FAIL-SAFE FUNCTION

(a) If the sliding roof does not close because the jam protection function operates improperly, press the sliding roof switch on the TILT UP side and hold it until the sliding roof glass is fully tilted up. (It goes down a little after it is fully tilted up) Then, you can manually close the sliding roof.



7. CHECK SLIDING ROOF DRIVER GEAR SUB-ASSEMBLY

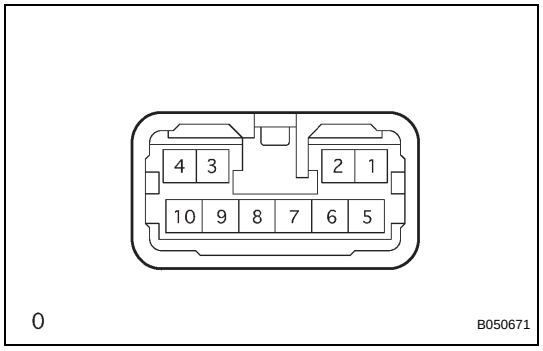
(a) Disconnect the drive gear wire harness connector.

(b) Check the resistance or voltage between the terminals of the wire harness side connector.

Standard

Terminal No.	Condition	Specified Condition
10 (B) - Body ground	Continuity	10 to 14 V
9 (IG) - Body ground	Ignition switch OFF → ON	0 → 10 to 14 V
4 (PWS) - Body ground	Ignition switch ON → Within 45 seconds after ignition switch is turned OFF	10 to 14 V → 0 V
6 (OPEN / DOWN) - Body ground	SW OFF → ON	10 kΩ or higher → Below 1 Ω
7 (CLOSE / UP) - Body ground	SW OFF → ON	10 kΩ or higher → Below 1 Ω
5 (SPD) - Body ground)	Vehicle speed 0 km/h (0 mph)	0 Hz
	Vehicle speed 70 km/h (43 mph)	49 Hz
	Vehicle speed 90 km/h (56 mph)	63 Hz

If the result is not as specified, the drive gear sub-assembly (sliding roof ECU) may have a malfunction.



(c) Reconnect the drive gear wire harness connector.

(d) Reset the sliding roof position (See page RF-2).

(e) Check the voltage of the terminals of the wire harness side connector.

Standard

Terminal No.	Condition	Specified Condition
6 (OPEN / DOWN) - Body ground	Ignition switch ON and OPEN / DOWN SW OFF → OPEN / DOWN SW ON	10 to 14 V → 0 V
7 (CLOSE / UP) - Body ground	Ignition switch ON and CLOSE / UP SW OFF → CLOSE / UP SW ON	10 to 14 V → 0 V

If the result is not as specified, the drive gear assembly (sliding roof ECU) may have a malfunction.