7403Z−03

ON−VEHICLE INSPECTION

1. INSPECTION SLIDING ROOF FUNCTION

(a) Check the AUTO sliding open operation function.
  (1) Turn the ignition switch ON.
  (2) Slide close and tilt down the roof glass to the fully closed position.
  (3) Check that the roof glass automatically slides open and stops just before the roof glass is fully opened by operating the sliding roof switch OPEN for 0.3 seconds or more.

(b) Check the AUTO sliding close operation function.
  (1) Turn the ignition switch ON.
  (2) Check that the roof glass automatically slides close to the fully closed position by operating the sliding roof switch CLOSE for 0.3 seconds or more.
  (3) The roof glass stops sliding when the sliding roof switch is operated CLOSE or OPEN while the glass is moving.

(c) Check the AUTO tilting UP operation function.
  (1) Turn the ignition switch ON.
  (2) Slide close and tilt down the roof glass to the fully closed position.
  (3) Check that the roof glass automatically tilts up to the fully up position by operating the sliding roof switch UP for 0.3 seconds or more.

(d) Check the AUTO tilting DOWN operation function.
  (1) Turn the ignition switch ON.
  (2) Check that the roof glass automatically tilts down by operating the sliding roof switch DOWN when the roof glass is in the up position.

(e) Check the operation function after key−OFF.
  (1) After turning the ignition switch from ON to OFF, check that the roof glass can be operated via the sliding roof switch. However, operation is disabled after either of the front doors is opened.
  (2) When approximately 45 seconds have passed after the ignition switch is turned from ON to OFF, check that the roof glass can not be operated via the sliding roof switch.
  (3) After turning the ignition switch from ON to OFF with either of the front doors open, check that AUTO operation stops immediately.

(f) Check the jam protection function.

NOTICE:

- **Do not check this function using a part of your body such as a hand.**
- **Pay thorough attention that nothing gets caught by accident in this process.**
- **The roof might be deformed if something hard, such as a handle of hammer, is inserted in between.**

HINT:

The jam protection functions operate only during the following AUTO operations; AUTO close or AUTO down operation and AUTO close or AUTO down operation after key−OFF.

  (1) Fully close the roof glass.
  (2) Insert the handle of the hammer when the roof glass is almost in the fully closed position.

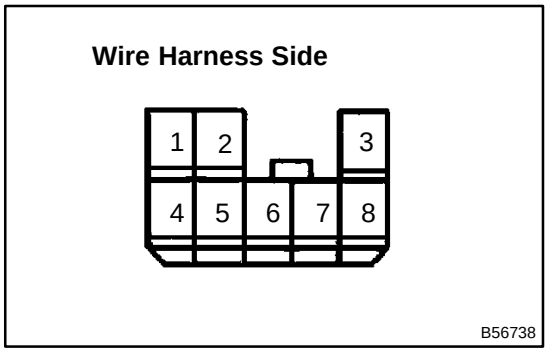
HINT:

Wrap the hammer handle well with cloth or something before use.

(3) When trying to operate the roof glass to the fully closed position via the AUTO close or down function, check that the glass movement is reversed by detecting the handle, so that the hammer handle is not caught

HINT:

- The reverse movement when the roof glass is sliding close stops when the glass slides open 200 mm or before the glass reaches the fully open position (for a maximum 20 seconds).
- The reverse movement when the roof glass is tilting down stops when the glass is in the fully up position or 2 seconds have passed.



2. INSPECT SLIDING ROOF RELAY AND SWITCH (TMMK MADE)

(a) Inspect the sliding roof relay and switch.

(1) Disconnect the connector from the sliding roof relay and inspect the connector on the wire harness side.

Standard:

Terminals No.	Wiring color	Condition	Specified condition
5 ⇔ Body ground	W−B ⇔ −	Constant	Continuity
7 ⇔ 5	L−W ⇔ W−B	Constant	10 − 14 V
3 ⇔ 5	R−L ⇔ W−B	Ignition switch OFF → ON	0 V → 10 − 14 V
1 ⇔ 5	R−W ⇔ W−B	Sliding roof switch → OPEN or DOWN	No continuity → Continuity
2 ⇔ 5	R−Y ⇔ W−B	Sliding roof switch → CLOSE or UP	No continuity → Continuity

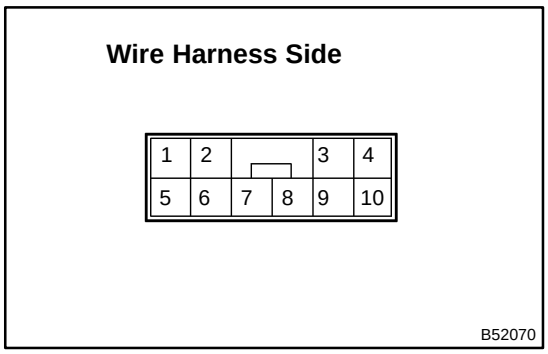
If the value is not as specified, there may be a malfunction on the wire harness side.

(2) Connect the connector, and inspect the voltage between the terminals of the connector.

Standard:

Terminals No.	Wiring color	Condition	Specified condition
1 ⇔ 5	R−W ⇔ W−B	Ignition switch OFF → ON Sliding roof switch → OPEN or DOWN	10 − 14 V → 0 V
2 ⇔ 5	R−Y ⇔ W−B	Ignition switch OFF → ON Sliding roof switch → CLOSE or UP	10 − 14 V → 0 V

If the value is not as specified, the sliding roof drive gear may be defective.



3. INSPECT SLIDING ROOF CONTROL ECU (TMC MADE)

(a) Inspect the sliding roof control ECU.

(1) Disconnect the connector from the ECU.

(2) Inspect the connector on the wire harness side.

Standard:

Symbols (Terminals No.)	Wiring color	Condition	Specified condition
E (7) ⇔ Body ground	W−B ⇔ −	Constant	Continuity
B (5) ⇔ E (7)	L−W ⇔ W−B	Constant	10 − 14 V
IG (8) ⇔ E (7)	R−L ⇔ W−B	Ignition switch OFF → ON	0 V → 10 − 14 V
DWN (9) ⇔E (7)	R−W ⇔ W−B	Sliding roof switch → OPEN or DOWN	No continuity → Continuity
UP (10) ⇔ E (7)	R−Y ⇔ W−B	Sliding roof switch → CLOSE or UP	No continuity → Continuity

If the value is not as specified, there may be a malfunction on the wire harness side.

(3) Connect the connector, and inspect the voltage between the terminals of the connector.

Standard:

Symbols (Terminals No.)	Wiring color	Condition	Specified condition
DWN(9) ⇔ E (7)	R−W ⇔ W−B	Ignition switch OFF → ON Sliding roof switch → OPEN or DOWN	10 − 14 V → 0 V
UP(10) ⇔ E (7)	R−Y ⇔ W−B	Ignition switch OFF → ON Sliding roof switch → CLOSE or UP	10 − 14 V → 0 V

If the value is not as specified, sliding roof drive gear or communication line may be defective.