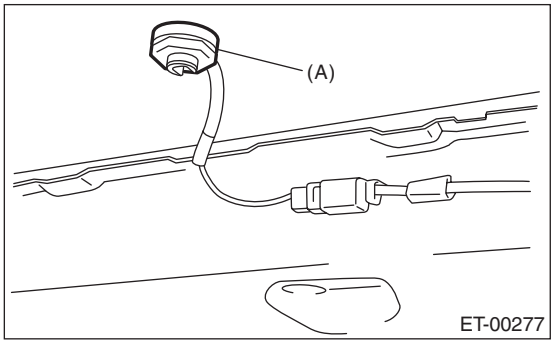
13.Antenna

A: REMOVAL

1. ROOF ANTENNA (WITH XM SATELLITE RADIO)

1) Remove the roof trim. <Ref. to EI-51, REMOVAL, Roof Trim.>
2) Disconnect the harness connector and terminal and remove the mounting nut (A).



3) Pull the antenna off roof top.

B: INSTALLATION

Install in the reverse order of removal.

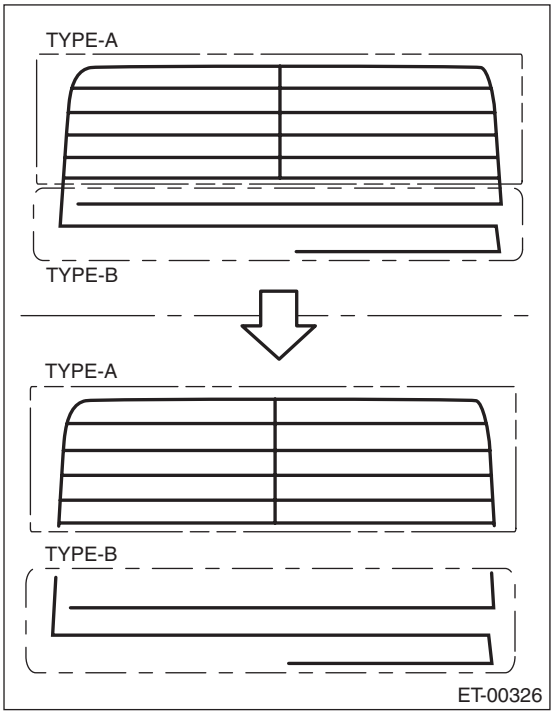
C: INSPECTION

1. GLASS ANTENNA

CAUTION:
When wiping off dirt from the glass, pay attention to the followings to avoid damaging the heat wire.

- **Use soft and dry cloth.**
- **Wipe the glass along the wires.**

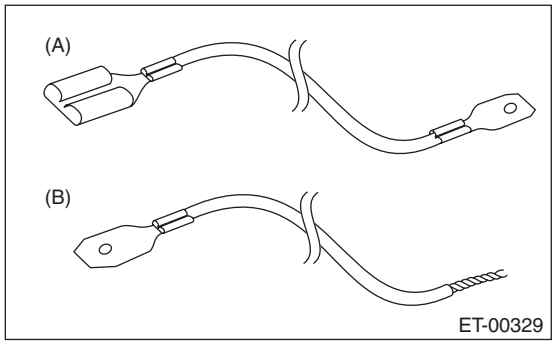
Inspection procedure of the antenna differs in its print pattern.



TYPE-A Plaid print pattern
TYPE-B Linear print pattern

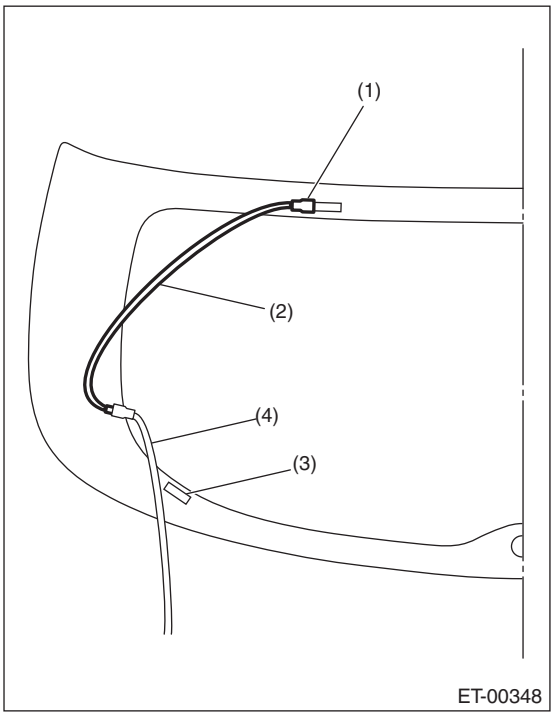
Type A

1) Disconnect the ground cable from battery.
2) Remove the rear gate trim. <Ref. to EI-52, REMOVAL, Rear Gate Trim.>
3) Disconnect the antenna harness connector and antenna terminal.
4) Prepare extension harnesses (A), (B).



(A) Attach a male and female flat type crimp terminal to each end of the harness of 2,000 mm (78.7 in) length (sectional area of wire approx. 2.0 mm^2 (0.0032 sq in)).
(B) Attach a female flat type crimp terminal to one end of the harness of 2,000 mm (78.7 in) length (sectional area of wire approx. 2.0 mm^2 (0.0032 sq in)), and twist the other end.

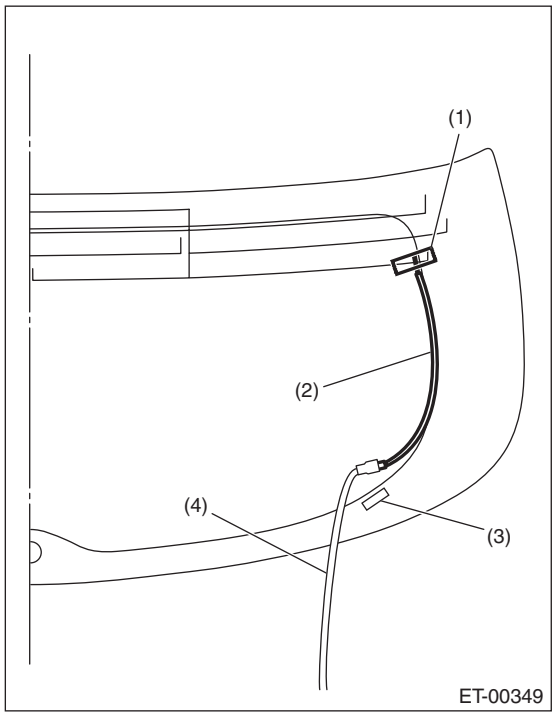
5) Connect extension harness (A) to rear defogger harness terminal (power supply side) and antenna terminal.



(1) Antenna terminal
(2) Extension harness (A)
(3) Rear defogger terminal
(4) Rear defogger harness (power supply side - red/blue)

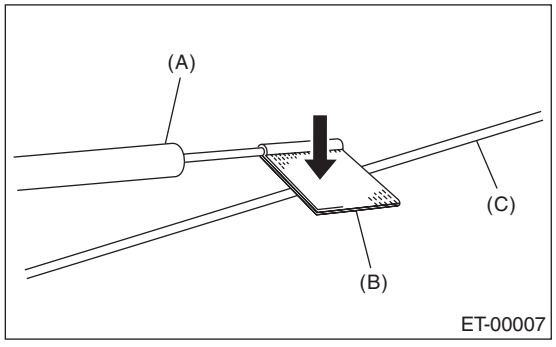
6) Connect extension harness (B) to rear defogger harness terminal (ground side).

7) Fix the other end of extension harness (B) to the end of plaid antenna pattern using adhesive tape.



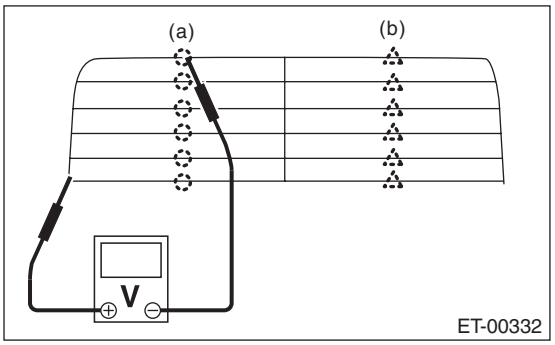
(1) Tape
(2) Extension harness (B)
(3) Rear defogger terminal
(4) Rear defogger harness (ground side - black)

8) Connect the ground cable to battery.
9) Turn the ignition switch to ON.
10) Turn the rear defogger switch to ON.
11) Wind a piece of aluminum foil around the tip of tester probe and press foil against the antenna wire with your finger.



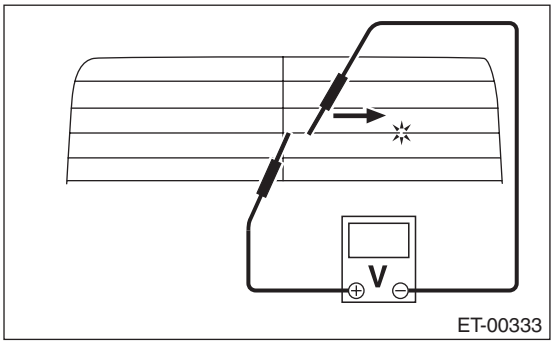
(A) Tester probe
(B) Aluminum foil
(C) Antenna wire

12) Measure the voltage near point (a) and (b) using a voltmeter.



	Measured voltage	Criteria
(a)	Approx. 3 V (standard)	Normal operation
	Approx. 6 V or 0 V	Open
(b)	Approx. 9 V (standard)	Normal operation
	Approx. 12 V or 6 V	Open

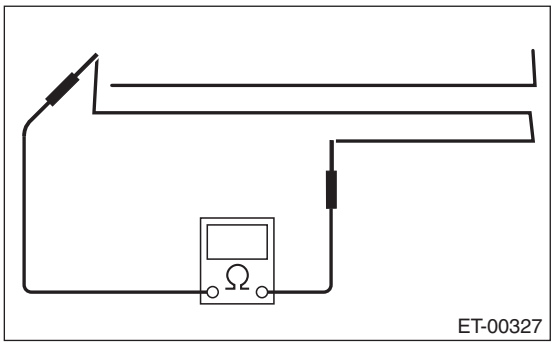
NOTE:
Measured point (a)
• If the measured value is 6 V, heat wire is open between heat wire center and positive (+) probe.
• If it is 0 V, the circuit is open between antenna wire center and ground.
Measured point (b)
• If the measured value is 12 V, heat wire is open between heat wire center and positive (+) probe.
• If it is 6 V, the circuit is open between antenna wire center and ground.
13) Place the positive (+) and negative (–) probes to the positive end of the section where there is presumably an open circuit from step 12).
14) Move the negative (–) probe slowly along the antenna wire to find the point where the voltage changes from 0 V.



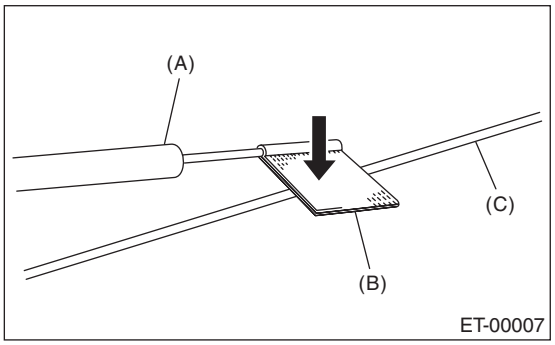
15) When locating the open point in the antenna wire, repair it. <Ref. to ET-21, REPAIR, Antenna.>

Type B

Measure the resistance between the antenna terminal and each antenna wire.

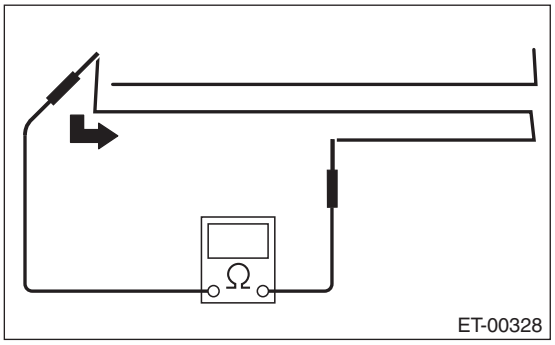


1) Disconnect the ground cable from battery.
2) Wind a piece of aluminum foil around the tip of tester probe and press foil against the antenna wire with your finger.



(A) Tester probe
(B) Aluminum foil
(C) Antenna wire

3) To locate the broken point, move the probe along antenna wire.



NOTE:
If an antenna wire is OK, resistance will be less than 20 Ω.
If an antenna wire is broken, resistance will be more than 1 MΩ.
4) When locating the open point in the antenna wire, repair it. <Ref. to ET-21, REPAIR, Antenna.>

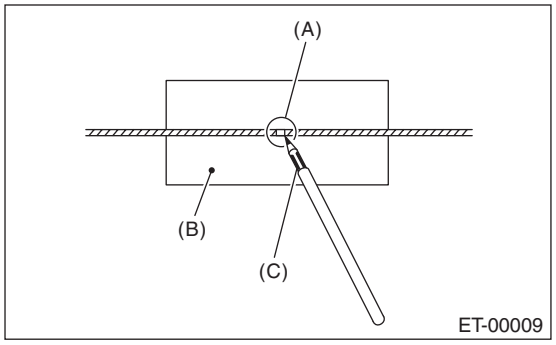
2. ROOF ANTENNA

Check for cracking or damage.
If any, replace the antenna.

D: REPAIR

1. GLASS ANTENNA

1) Clean the antenna wire and surrounding area with a cloth dampened by alcohol.
2) Paste a thin masking film on the glass along broken wire.
3) Apply the conductive silver composition (DUPONT No. 4817) on the broken portion with a drawing pen.



(A) Broken portion
(B) Masking film
(C) Conductive silver composition

4) Dry out the deposited portion.
5) After repair has been completed, measure the resistance in repaired wire.