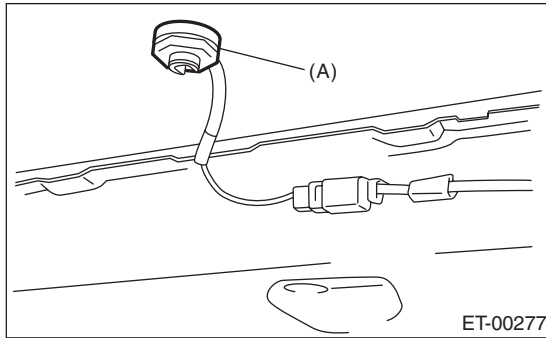


15. Antenna

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

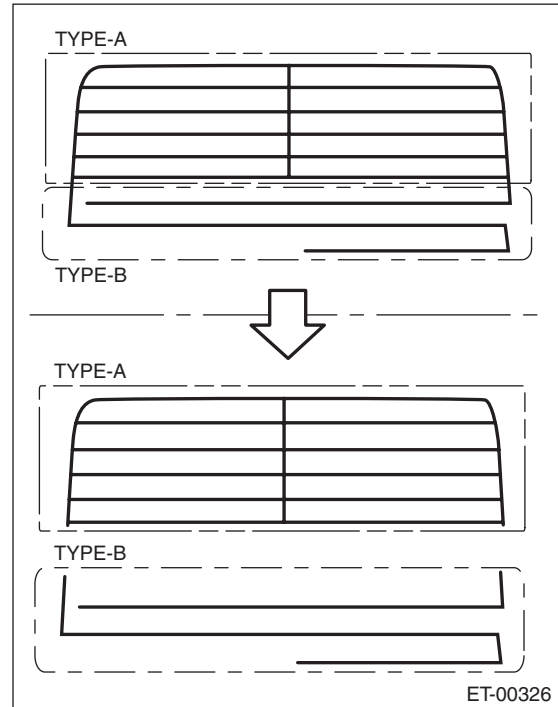
1. GLASS ANTENNA

CAUTION:

When wiping dirt off of the glass to avoid heat wire damage, be careful of the following.

- Use a dry and soft cloth.
- Move the cloth along the heat wire.

Inspection method of antenna, it is different from printing pattern of antenna.

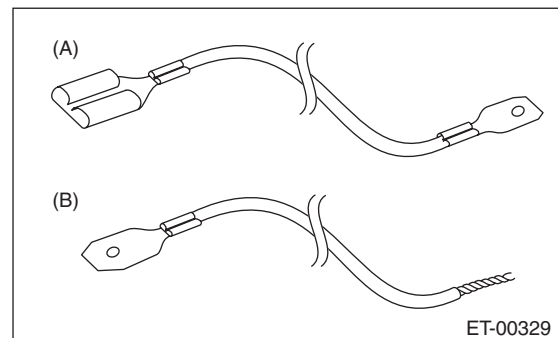


TYPE-A Printing pattern of grid

TYPE-B Printing pattern of straight

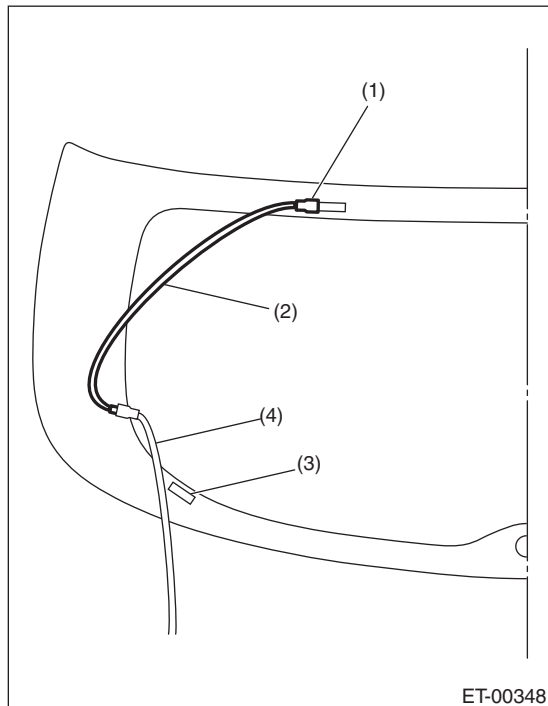
Type A

- 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 terminals.
- 4) Prepare the extension harness (A), (B).



- (A) Attach the flat terminals (male and female) to both ends of the harness of 2,000 mm (78.7 in) length (electrical wire unit dimensions approx. 2.0 mm² (0.0032 sp in)).
- (B) Attach the flat terminal (female) to one side of the harness of 2,000 mm (78.7 in) length (electrical wire unit dimensions approx. 2.0 mm² (0.0032 sp in)), and twist the another side of the harness.

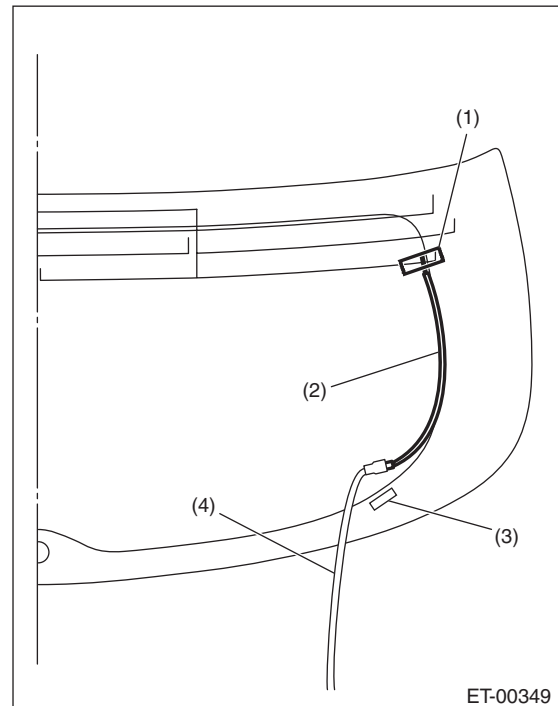
5) Connect the extension harness (A) to rear defogger harness (power supply side) terminal and antenna terminal.



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

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

7) Fasten the another side of extension harness (B) to end of antenna pattern of grid with tape.



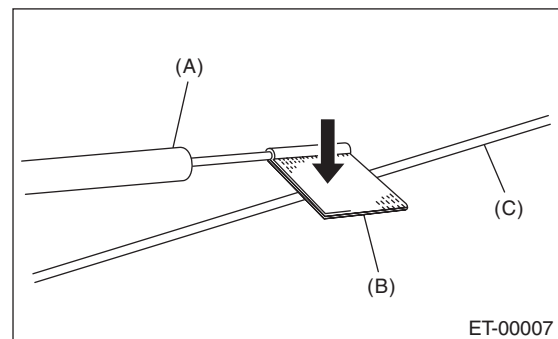
- (1) Tape
- (2) Extension harness (B)
- (3) Rear defogger terminal
- (4) Rear defogger harness (ground side - black)

8) Connect the ground cable to battery.

9) Turn the ignition switch to ON.

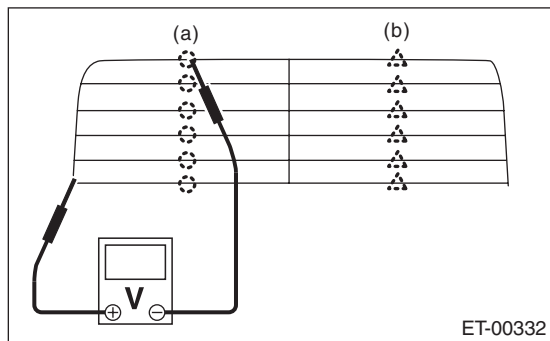
10) Turn the rear defogger switch to ON.

11) Wrap a piece of aluminum foil around the tip of tester probe and press foil against antenna wire with your finger.



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

12) Measure the voltage around an antenna wire (a) and (b).



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

NOTE:

Measuring point (a)

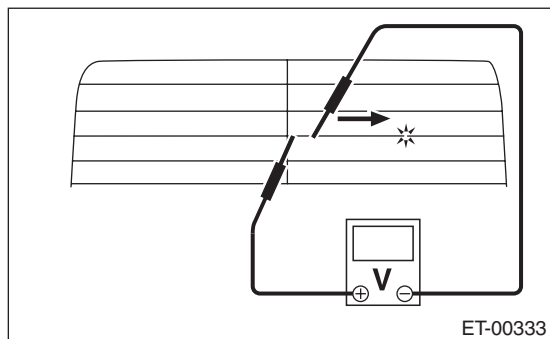
- If the measured value is 6 V, heat wire is open between antenna wire center and positive (+) terminal of probe.
- If it is 0 V, the circuit is open between antenna wire center and ground.

Measuring point (b)

- If the measured value is 12 V, heat wire is open between antenna wire center and positive (+) terminal of probe.
- If it is 6 V, the circuit is open between antenna wire center and ground.

13) Fasten the voltmeter positive (+) side and negative (–) side to end of open harness positive side of step 12).

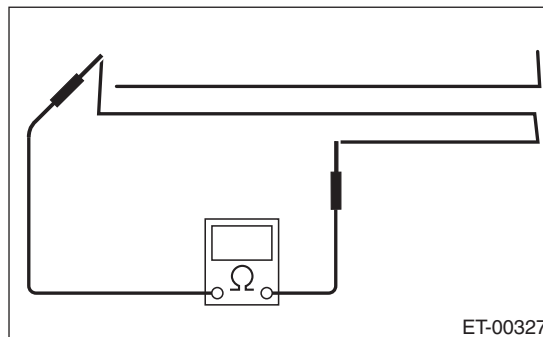
14) Search a point the voltage changes from 0 V, and move the negative (–) probe along antenna wire slowly.



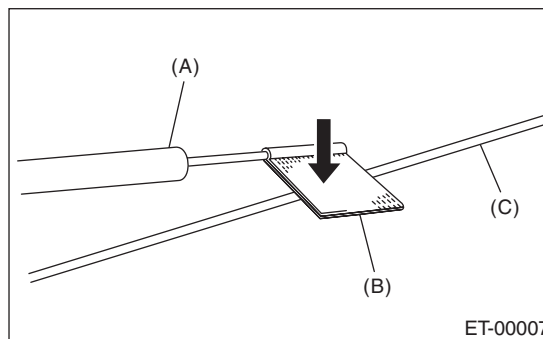
15) Repair the antenna wire if the place of the open circuit is identified. <Ref. to ET-23, REPAIR, Antenna.>

Type B

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

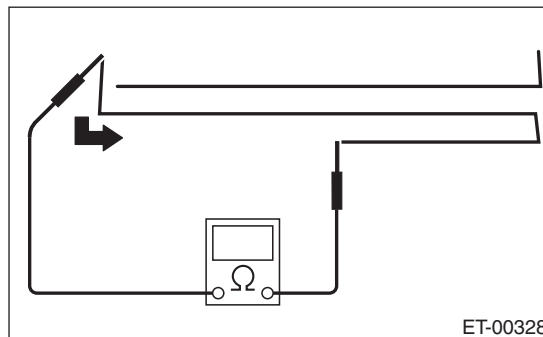


- 1) Disconnect the ground cable from battery.
- 2) Wrap a piece of aluminum foil around the tip of probe and press foil against antenna wire with your finger.



- (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) Repair the antenna wire if the place of the open circuit is identified. <Ref. to ET-23, REPAIR, Antenna.>

2. ROOF ANTENNA

Check for cracking or damage.

If any, replace the antenna.

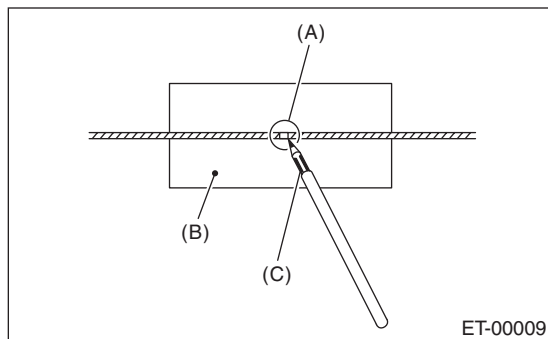
D: REPAIR

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.