

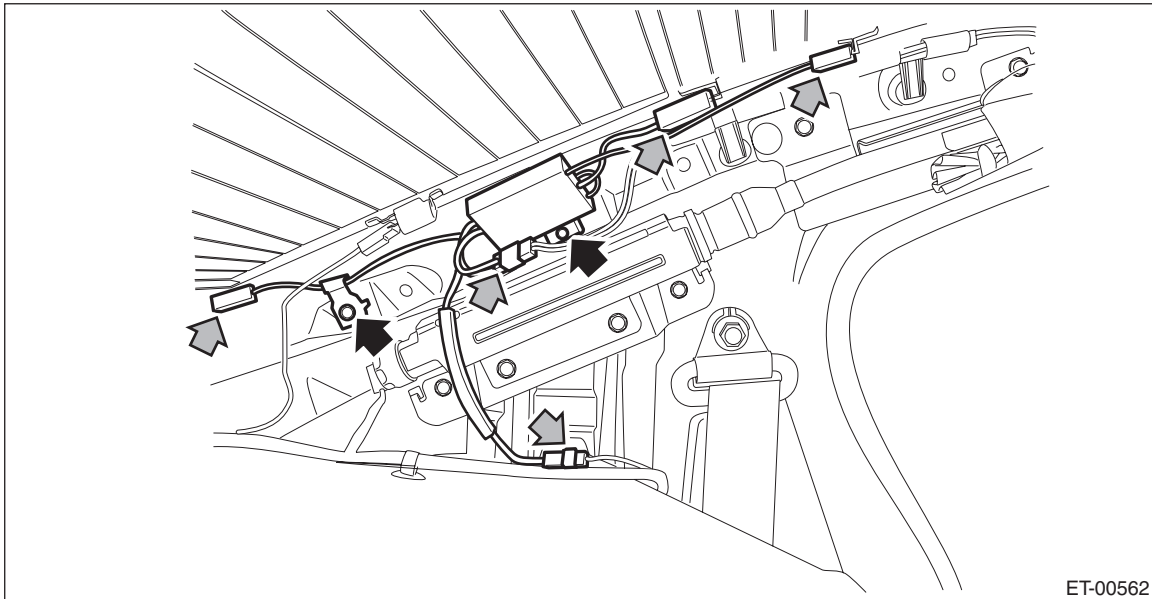
## 9. Antenna

### A: REMOVAL

#### 1. RADIO ANTENNA AMPLIFIER

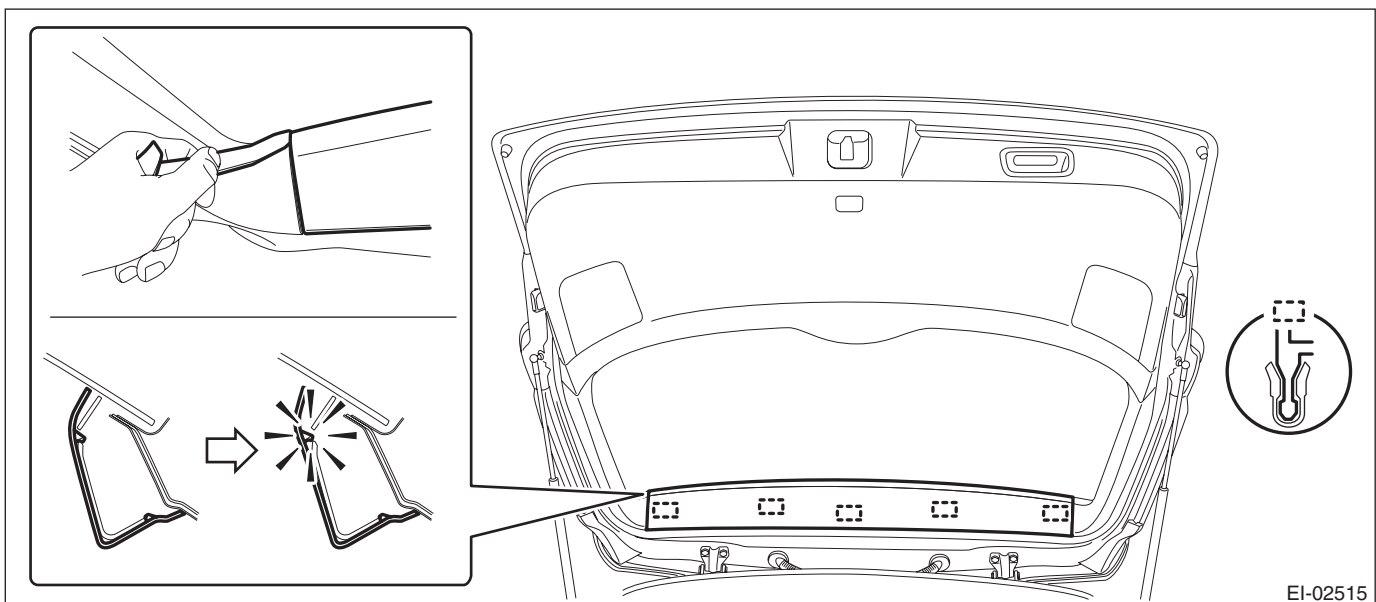
##### • Sedan model

- 1) Remove the rear quarter trim LH. <Ref. to EI-111, SEDAN MODEL, REMOVAL, Rear Quarter Trim.>
- 2) Remove the radio antenna amplifier assembly.
  - (1) Disconnect the connector.
  - (2) Remove the bolts, and then remove the radio antenna amplifier assembly.



##### • OUTBACK model

- 1) Remove the rear gate upper trim.
  - (1) Remove the claws on the trim edge.
  - (2) Disconnect the claws in the center of trim, and remove the rear gate upper trim.



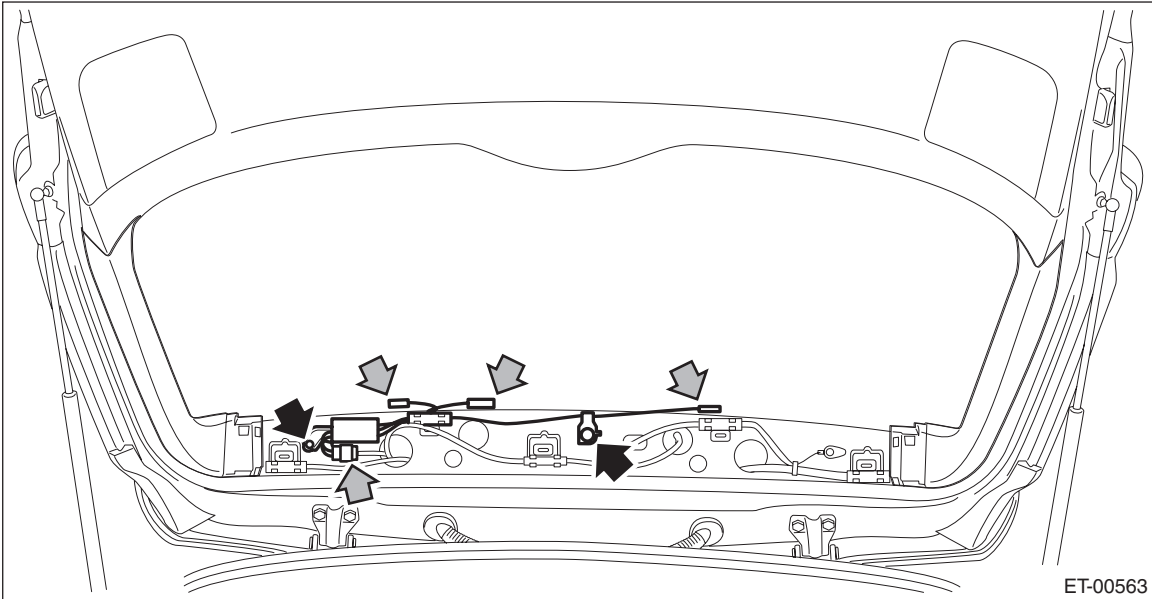
# Antenna

## ENTERTAINMENT

2) Remove the radio antenna amplifier assembly.

(1) Disconnect the connector.

(2) Remove the bolts, and then remove the radio antenna amplifier assembly.



## 2. ANTENNA FEEDER CORD

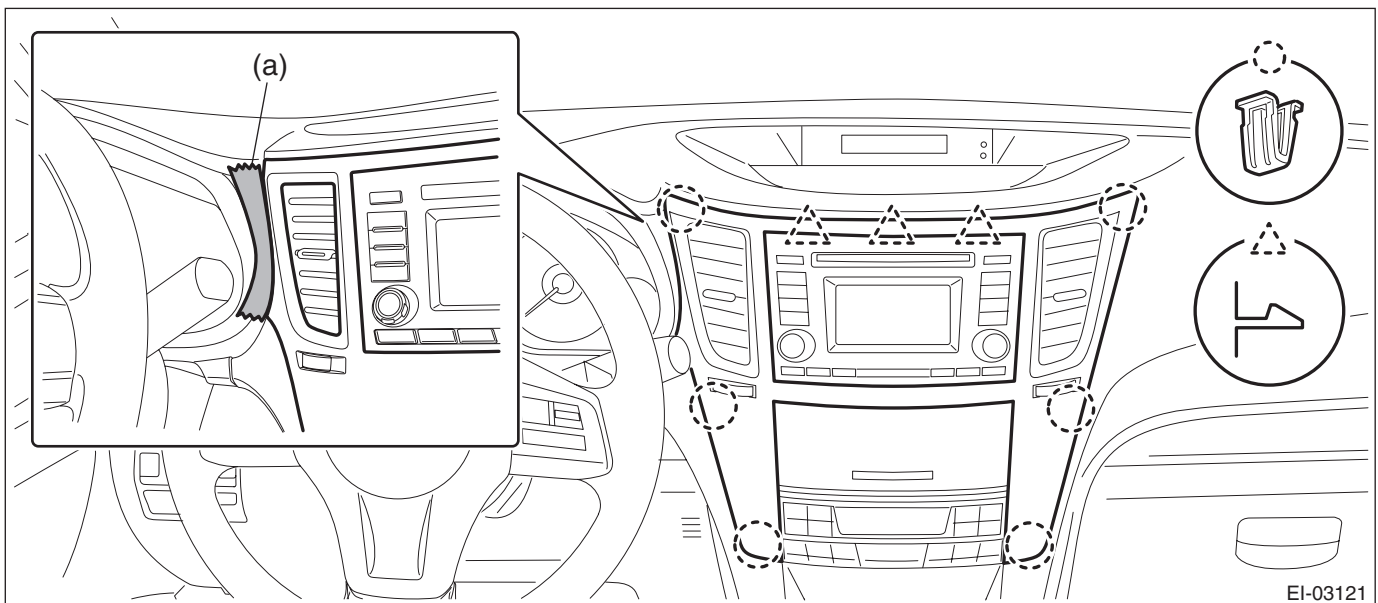
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

2) Remove the center panel assembly.

### CAUTION:

**Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.**

(1) Attach the protective tape (a) to the meter visor.



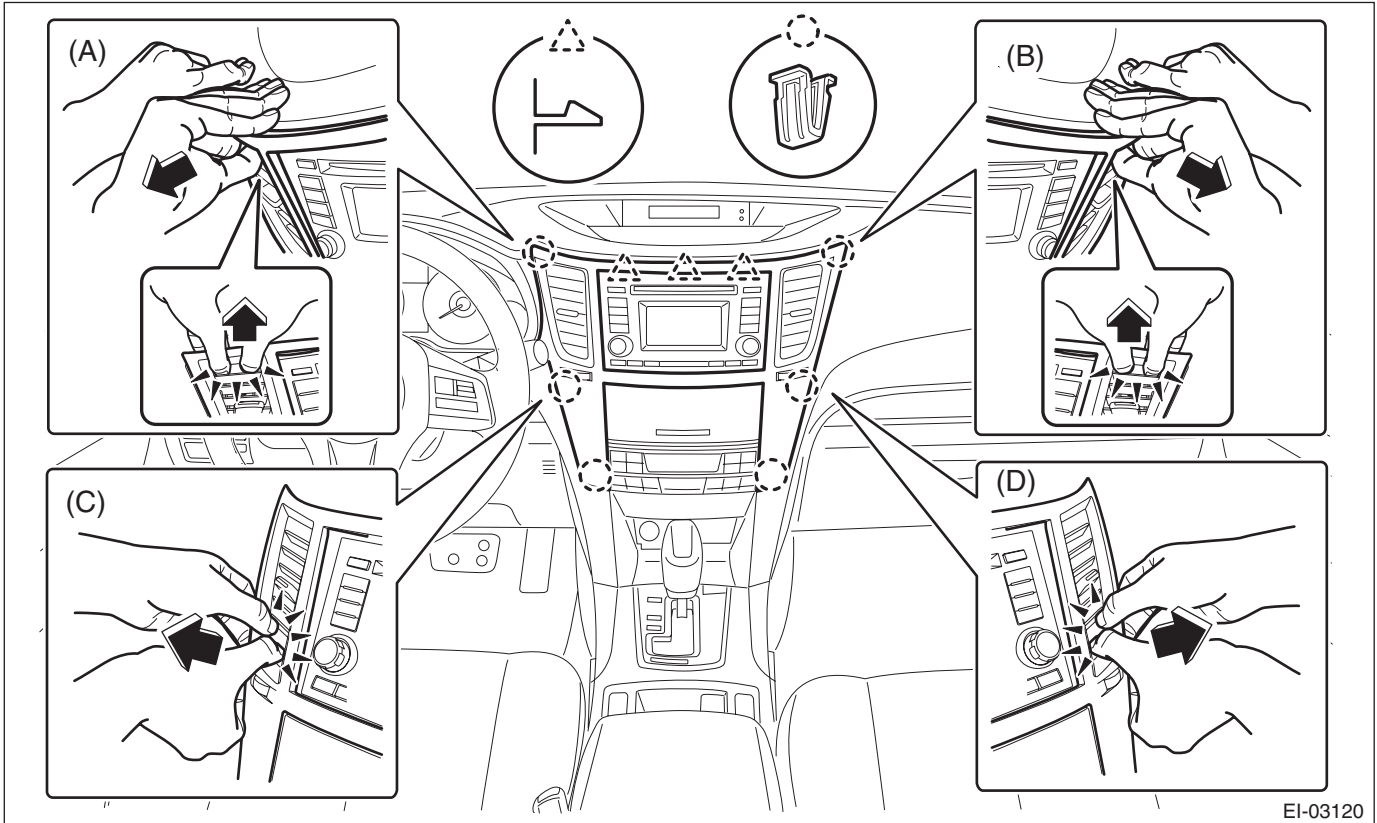
(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel.

(A), (B)

(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel.

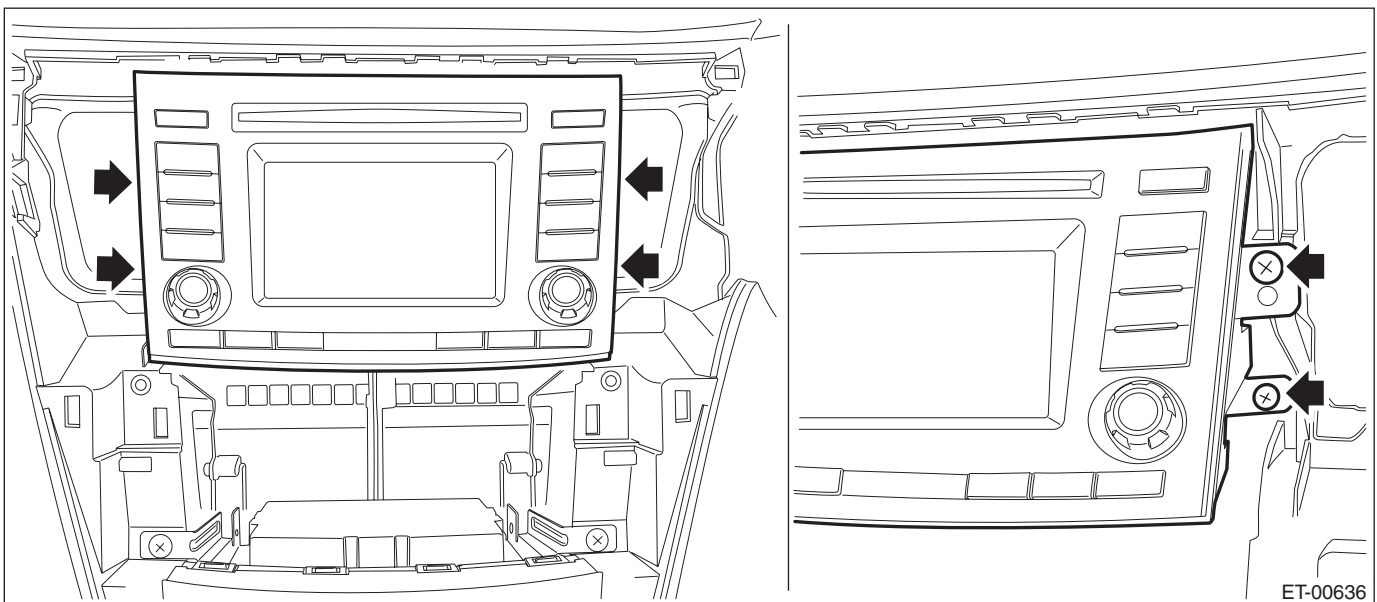
(C), (D)

(4) Release the clips at the bottom of the center panel and remove the center panel assembly.



3) Remove the audio assembly.

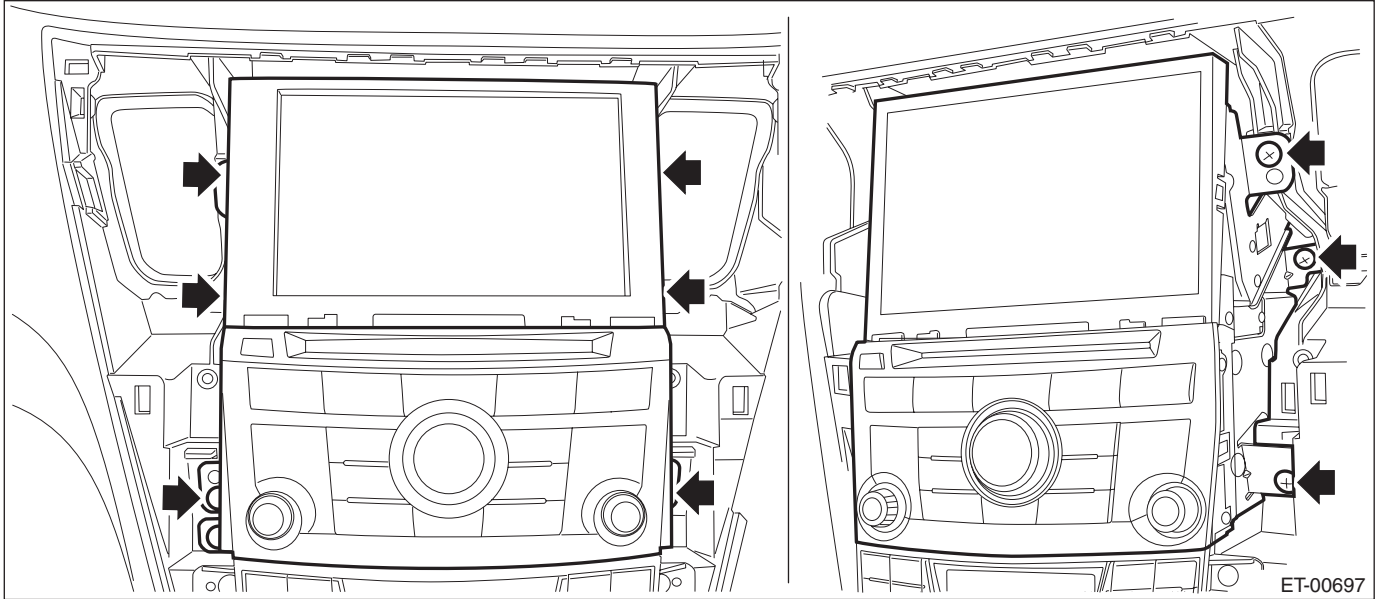
- (1) Remove the left and right screws, and partially pull the audio out from center console.
- (2) Disconnect the connectors, and remove the audio assembly.



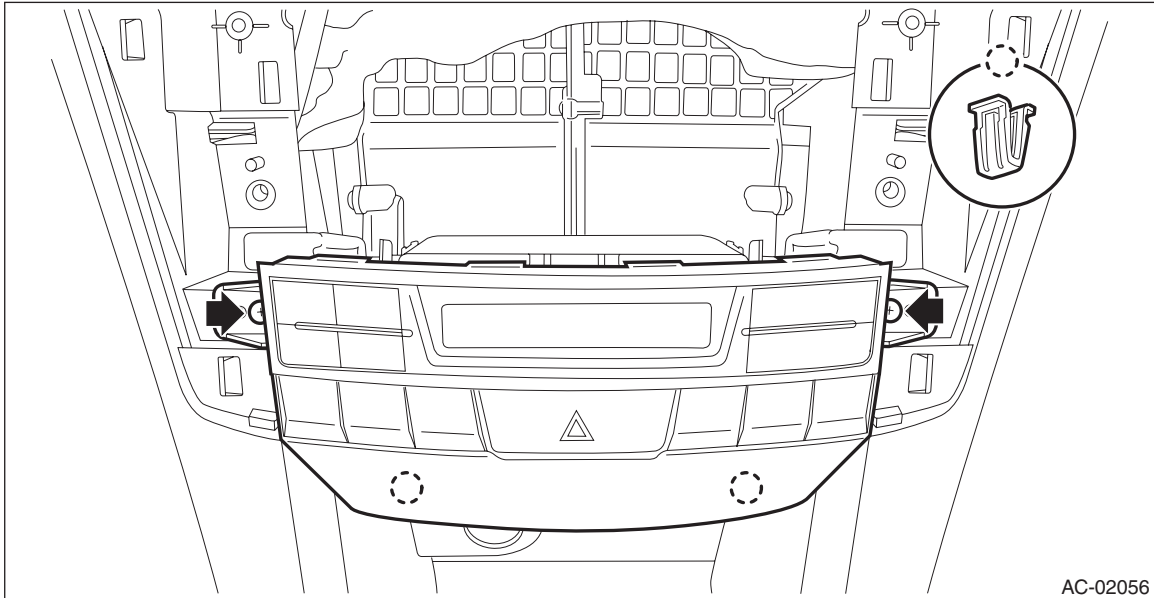
# Antenna

## ENTERTAINMENT

- 4) Remove the navigation assembly. (model with navigation)
  - (1) Remove the left and right screws.
  - (2) Disconnect the connectors, and remove the navigation assembly.

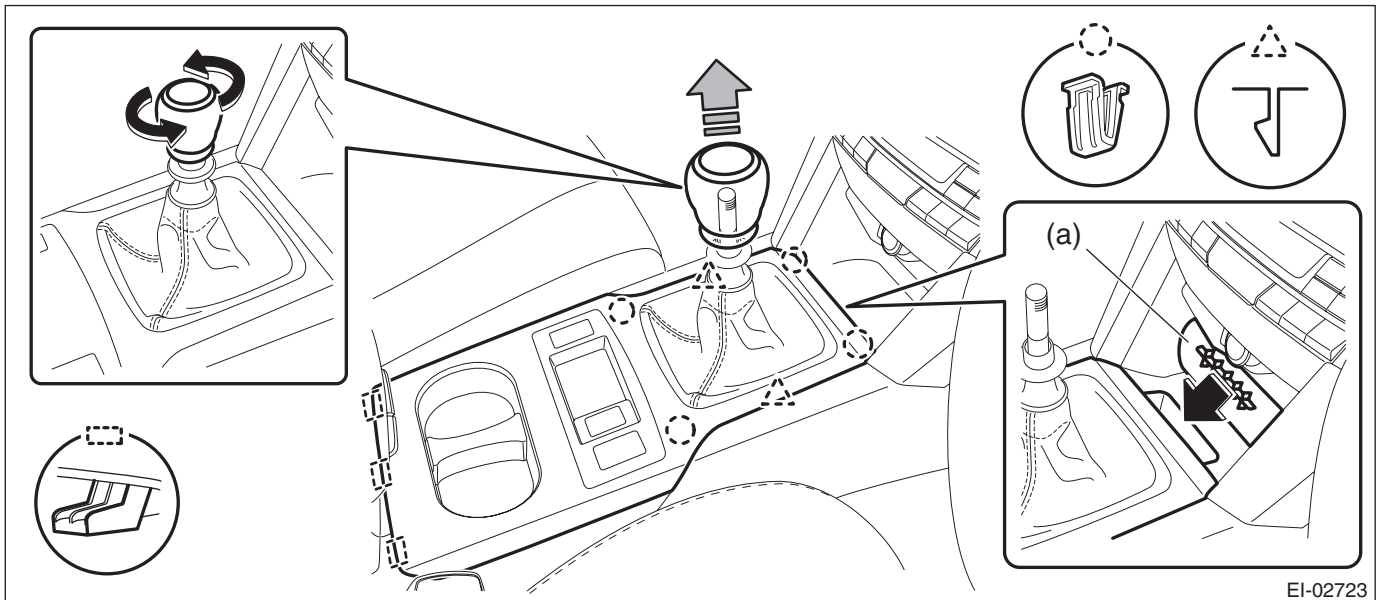


- 5) Remove the control panel assembly.
  - (1) Remove the screws, and pull out the control panel assembly toward you.
  - (2) Disconnect the connector, and remove the control panel assembly.



6) Remove the console front cover assembly.

- MT model
  1. Remove the shift knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



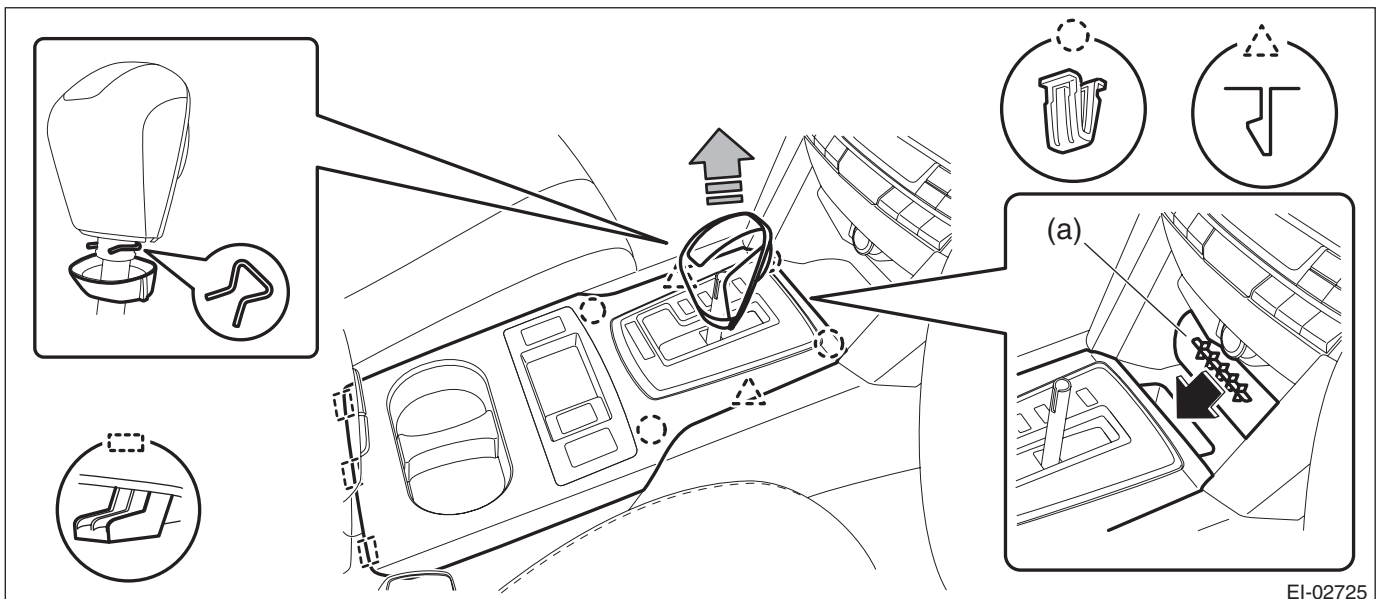
EI-02723

NOTE:

Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

3. Disconnect the harness connector and remove the console front cover assembly.

- AT/CVT model
  1. Remove the select lever knob.
    - a. Lower the cover grip AT.
    - b. Remove the clamp grip pin, then remove the select lever knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



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NOTE:

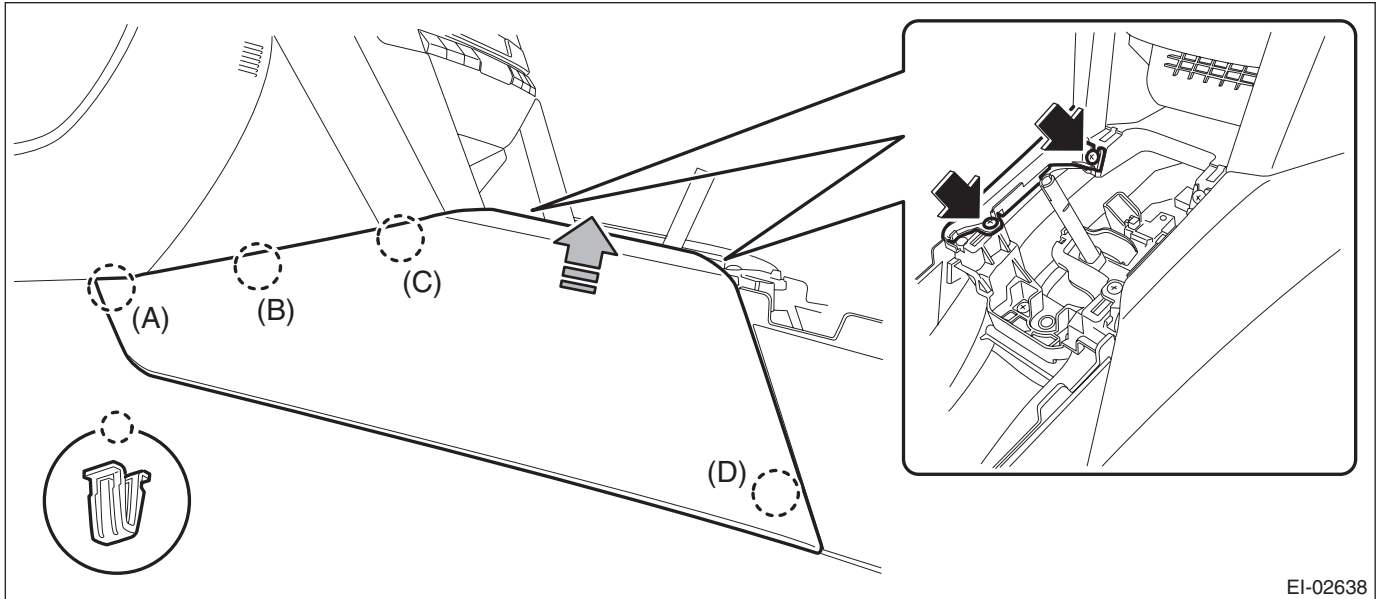
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

3. Disconnect the harness connector and remove the console front cover assembly.

# Antenna

## ENTERTAINMENT

- 7) Remove the console front side cover assembly LH.
  - (1) Remove the screws and release the clips (A) to (D) in order.
  - (2) Remove the console front side cover assembly by pulling it up.

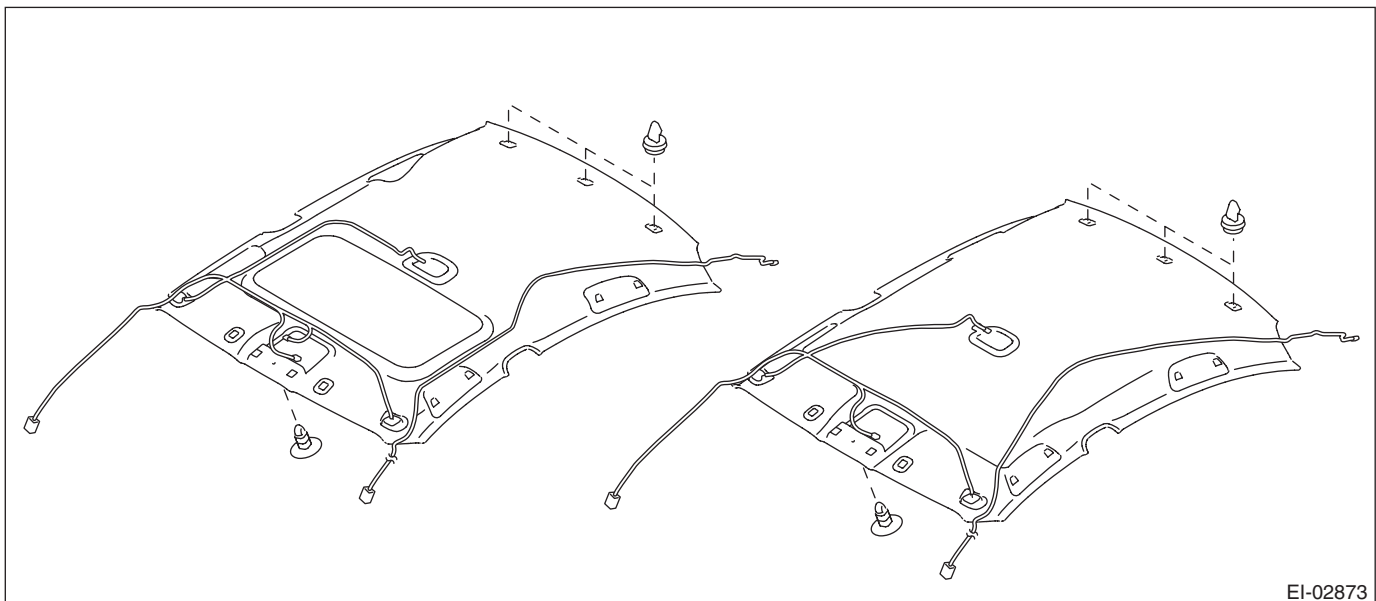


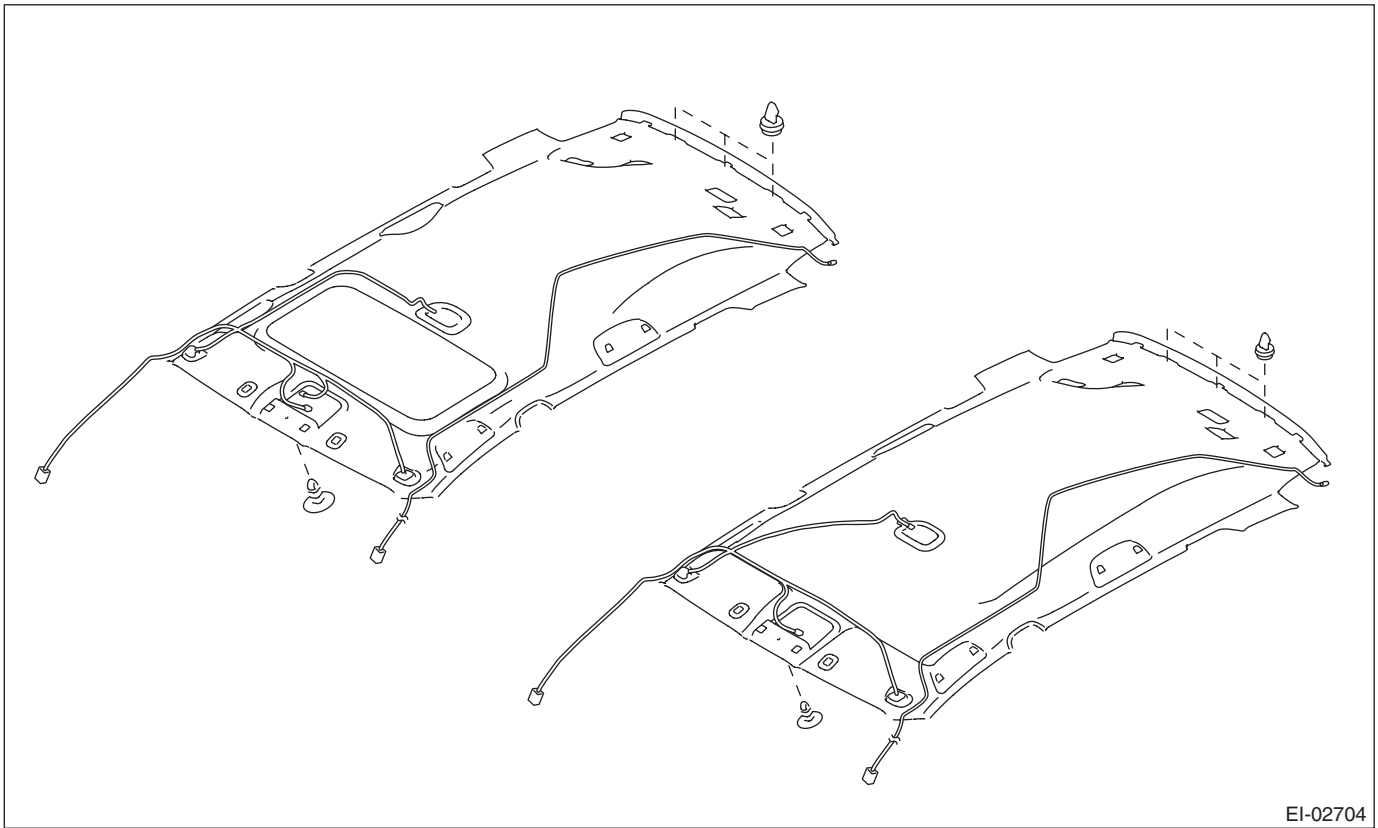
- 8) Turn over the floor mat and remove the harness clamp of the feeder cord.
- 9) Remove each pillar trim and quarter trim, and lower the roof trim. <Ref. to EI-134, REMOVAL, Roof Trim.>

### NOTE:

It is not necessary to take the roof trim out of the vehicle.

- (1) Disconnect the connector of the cord assembly - antenna feeder.
- (2) Remove the clips and the Velcro tape behind the room light.
- (3) Detach the connector of the cord assembly - antenna feeder from the trim panel - roof assembly.

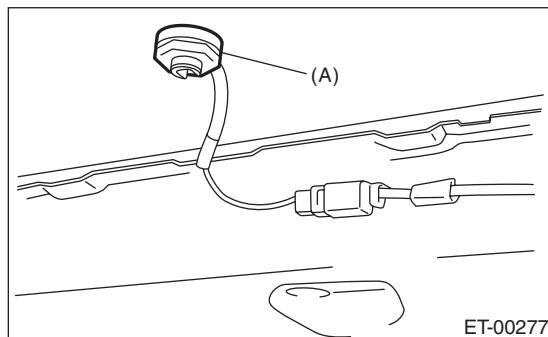




EI-02704

### 3. XM SATELLITE RADIO ANTENNA

- 1) Remove the roof trim. <Ref. to EI-134, REMOVAL, Roof Trim.>
- 2) Disconnect the harness connector and terminal, and remove the mounting nut (A).



ET-00277

- 3) Pull out the antenna from the roof top.

## B: INSTALLATION

### CAUTION:

- For installation of the stereo camera cover, refer to “INSTALLATION”, “Stereo Camera Cover” in the “EyeSight” section and observe the precautions for installation. <Ref. to ES-12, INSTALLATION, Stereo Camera.>

- Do not reuse the tether clips on the upper part of the front pillar trim. Always replace with a new part.

Once the tether clip is removed from the pillar trim, the retention power deteriorates and the front pillar trim may come off.

- Do not reuse the clips in the upper section of the center pillar trim. Once the clip is removed, its holding force is reduced. Be sure to replace it with a new clip.

- Before installing the front pillar trim, check the condition of (white) protective unwoven cloth of curtain airbag. If it is damaged (airbag module cloth is exposed), replace the curtain airbag module assembly with a new part.

Install each part in the reverse order of removal.

### Tightening torque:

*Radio antenna amplifier: 12 N·m (1.22 kgf-m, 8.9 ft-lb)*

*XM satellite radio antenna: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)*

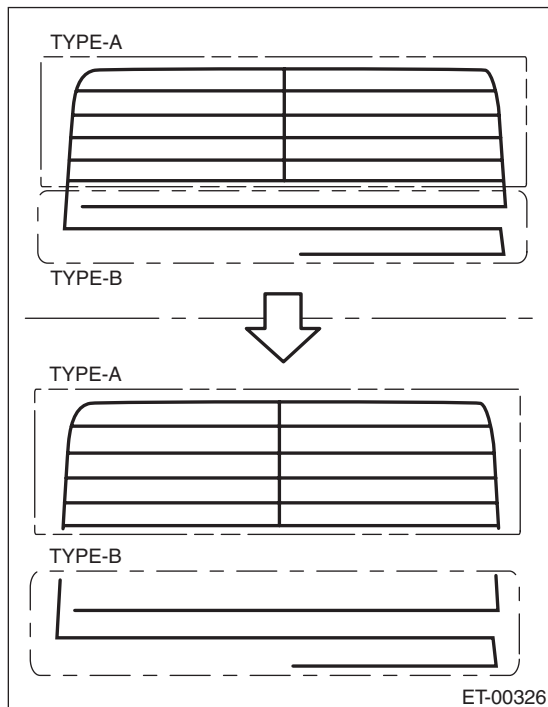
## C: INSPECTION

### 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



**1. TYPE-A**

1) Disconnect the ground cable from battery.

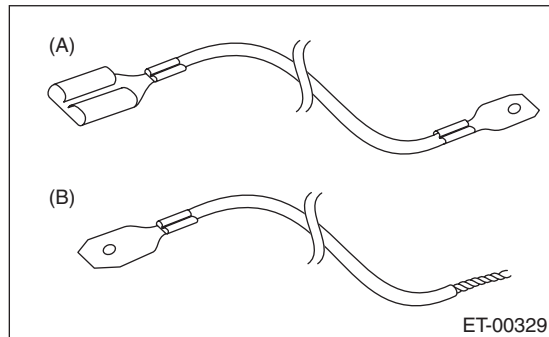
2) Remove the trim.

Sedan model: Remove the rear quarter trim rear on both sides. <Ref. to EI-111, SEDAN MODEL, REMOVAL, Rear Quarter Trim.>

OUTBACK model: Remove the rear gate trim. <Ref. to EI-166, 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 mm<sup>2</sup> (0.0032 sq in)).

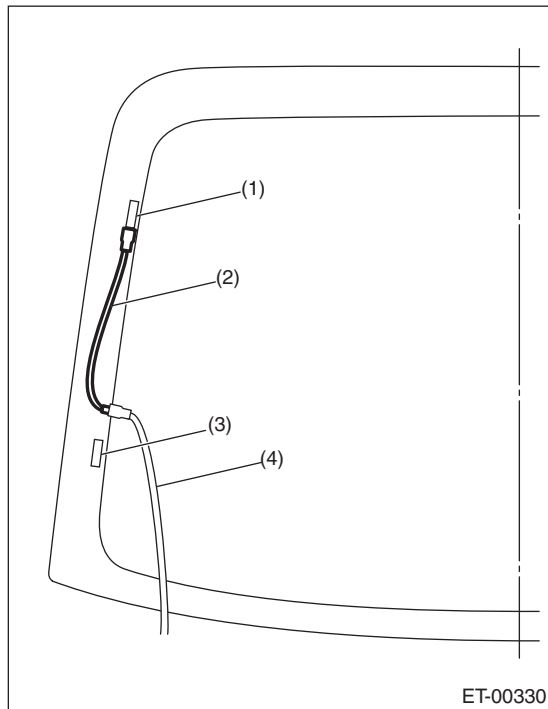
(B) Attach the flat terminal (female) to one side of the harness, another side to twist the harness of 2,000 mm (78.7 in) length (electrical wire unit dimensions approx. 2.0 mm<sup>2</sup> (0.0032 sq in)).

# Antenna

## ENTERTAINMENT

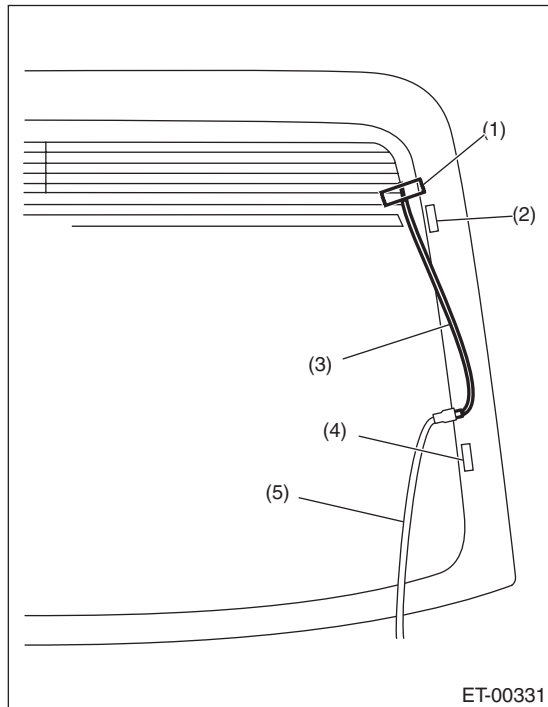
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5) Connect the extension harness (A) to rear defogger harness (power supply side) terminal and antenna terminal.



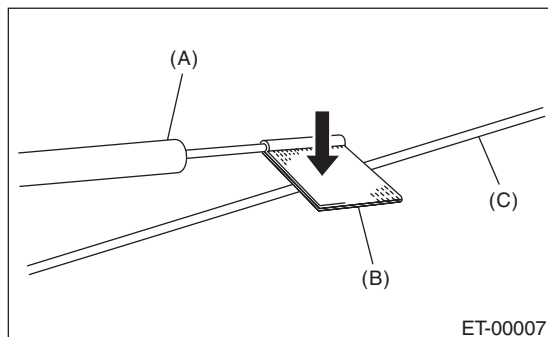
- (1) Antenna terminal
- (2) Extension harness (A)
- (3) Rear defogger terminal
- (4) Rear defogger harness (power supply side - red blue)

- 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) Antenna terminal
- (3) Extension harness (B)
- (4) Rear defogger terminal
- (5) 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.

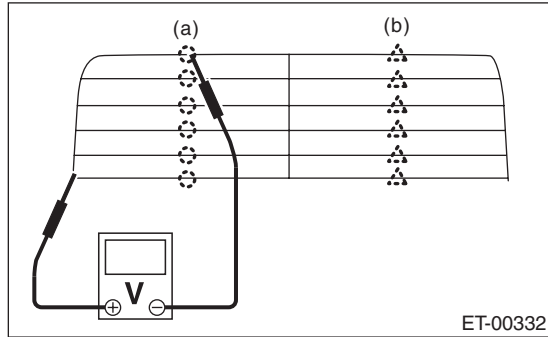


- (A) Tester probe
- (B) Aluminum foil
- (C) Antenna wire

# Antenna

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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)

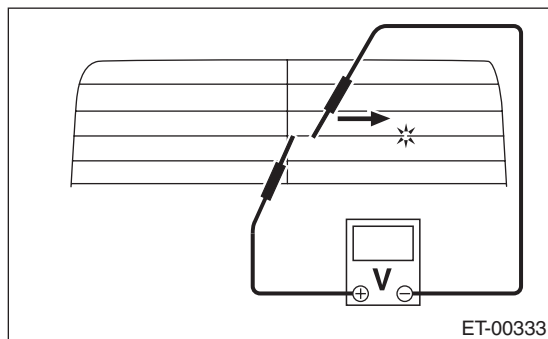
- If the measured value is 6 V, heat wire is open between antenna wire center and positive (+) terminal of probe.
- If it is 0 V, the circuit is open between antenna wire center and ground.

#### 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).

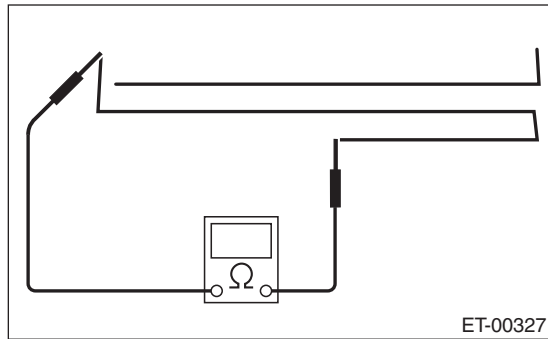
14) Search a point the voltage changes from 0 V, and move the negative (-) probe along antenna wire slowly.



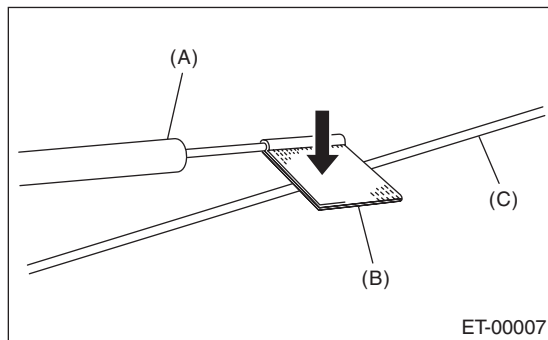
15) Repair the antenna wire if the place of the open circuit is identified. <Ref. to ET-34, REPAIR, Antenna.>

## 2. TYPE-B

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

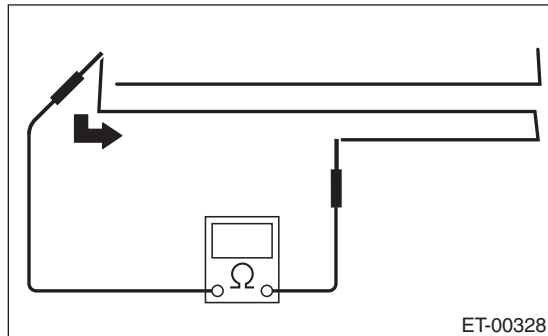


- 1) Disconnect the ground cable from battery.
- 2) Wrap a piece of aluminum foil around the tip of probe and press foil against antenna wire with your finger.



- (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  $\Omega$ .

If an antenna wire is broken, resistance will be more than 1 M $\Omega$ .

- 4) Repair the antenna wire if the place of the open circuit is identified. <Ref. to ET-34, REPAIR, Antenna.>

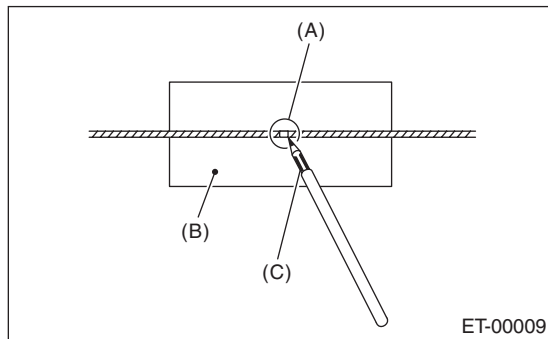
# Antenna

ENTERTAINMENT

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## D: REPAIR

- 1) Clean the external circumference of antenna wire and around with alcohol or appropriate cleaning solvent.
- 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.