

BODY SECTION

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.

This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.

Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

**HVAC SYSTEM
(HEATER, VENTILATOR AND A/C)** AC

**HVAC SYSTEM (AUTO A/C)
(DIAGNOSTICS)** AC(diag)

AIRBAG SYSTEM AB

AIRBAG SYSTEM (DIAGNOSTICS) AB(diag)

SEAT BELT SYSTEM SB

LIGHTING SYSTEM LI

WIPER AND WASHER SYSTEMS WW

ENTERTAINMENT ET

COMMUNICATION SYSTEM COM

GLASS/WINDOWS/MIRRORS GW

BODY STRUCTURE BS

INSTRUMENTATION/DRIVER INFO IDI

SEATS SE

SECURITY AND LOCKS SL

**SUNROOF/T-TOP/CONVERTIBLE TOP
(SUNROOF)** SR

EXTERIOR/INTERIOR TRIM EI

EXTERIOR BODY PANELS EB

BODY SECTION

CRUISE CONTROL SYSTEM CC

CRUISE CONTROL SYSTEM (DIAGNOSTICS) CC(diag)

IMMOBILIZER (DIAGNOSTICS) IM(diag)

LAN SYSTEM (DIAGNOSTICS) LAN(diag)

ENTERTAINMENT

ET

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1. General Description

A: CAUTION

- Before disassembling or reassembling parts, always disconnect the battery ground cable. When replacing the audio, control unit, and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory will be erased.
- Reassemble the parts in the reverse order of disassembly unless otherwise indicated.
- Adjust parts to the given specifications.
- Connect the connectors securely during reassembly.
- After reassembly, make sure the functional parts operate smoothly.

B: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Conductive silver composition (DUPONT No. 4817 or equivalent)	Used for repairing antenna wire.

2. Audio System

A: WIRING DIAGRAM

<Ref. to WI-116, WIRING DIAGRAM, Audio System.>

B: INSPECTION

Symptom	Repair order
No power coming in. (No display and no sound from speakers)	(1) Check the fuse and power supply for audio. (2) Check the audio ground. (3) Remove the audio and repair it.
A specific speaker does not operate.	(1) Check the speaker. (2) Check the output circuit between audio and speaker.
Audio generates noise with engine running.	(1) Check the audio ground. (2) Check the generator. (3) Check the ignition coil. (4) Remove the audio and repair it.
AM (MW, LW: Europe only) and FM modes are weak or noisy.	(1) Check the antenna. (2) Check the antenna amplifier. (3) Check the noise suppressor. (4) Check the audio ground. (5) Remove the audio and repair it.

3. Front Accessory Power Supply Socket System

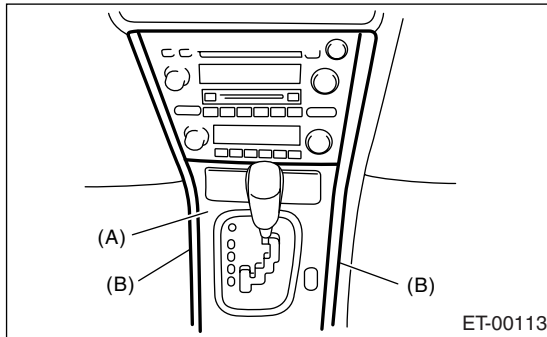
A: WIRING DIAGRAM

<Ref. to WI-242, WIRING DIAGRAM, Front Accessory Power Supply Socket System.>

4. Audio

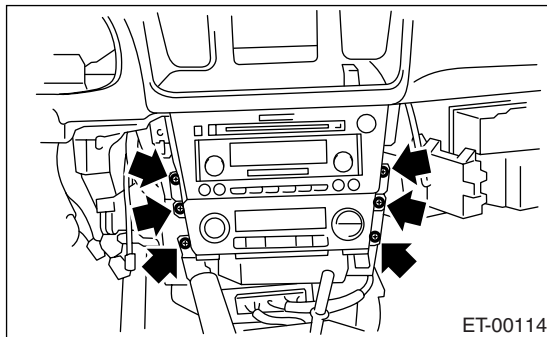
A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the console box. <Ref. to EI-53, REMOVAL, Console Box.>
- 3) Remove the console front panel. <Ref. to EI-54, REMOVAL, Center Console.>
- 4) Remove the console side garnish. <Ref. to EI-54, REMOVAL, Center Console.>



- (A) Console front panel
- (B) Console side garnish

- 5) Remove the screws, and slightly pull the audio out from center console.



- 6) Disconnect the harness connector and antenna feeder cord, and then remove the audio.

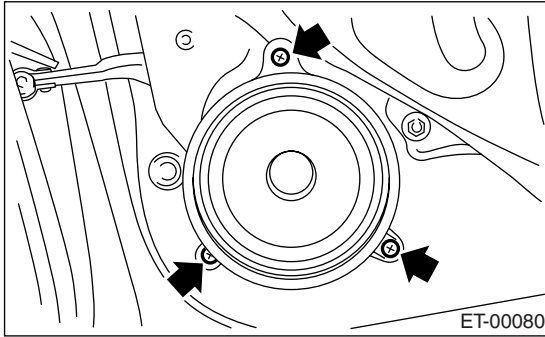
B: INSTALLATION

Install in the reverse order of removal.

5. Front Speaker

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the front door trim. <Ref. to EI-48, REMOVAL, Door Trim.>
- 3) Remove the front speaker mounting screws.



- 4) Disconnect the harness connector and remove front speaker.

B: INSTALLATION

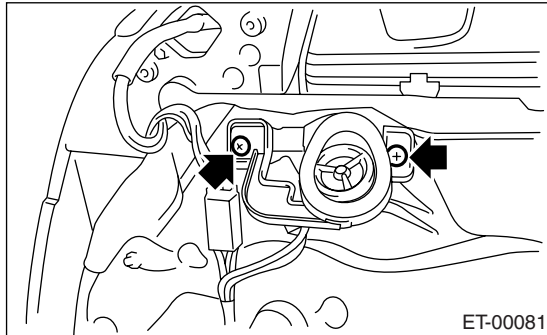
Install in the reverse order of removal.

6. Tweeter

A: REMOVAL

1. MODEL WITH TWEETER

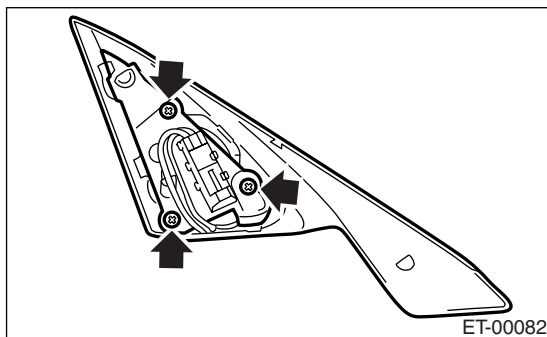
- 1) Disconnect the ground cable from battery.
- 2) Remove the front door trim. <Ref. to EI-48, REMOVAL, Door Trim.>
- 3) Remove the tweeter mounting screws.



- 4) Disconnect the harness connector and remove tweeter.

2. MODEL WITH MCINTOSH AUDIO SYSTEM

- 1) Disconnect the ground cable from battery.
- 2) Remove the front door trim. <Ref. to EI-48, REMOVAL, Door Trim.>
- 3) Remove the gusset cover. <Ref. to GW-18, REMOVAL, Outer Mirror Assembly.>
- 4) Disconnect the harness connector and remove tweeter.



B: INSTALLATION

Install in the reverse order of removal.

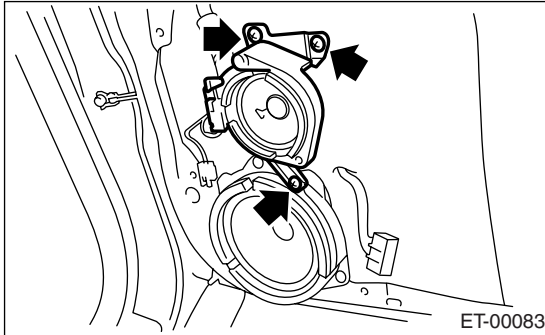
7. Squawker

A: REMOVAL

NOTE:

Model with McIntosh audio system only.

- 1) Disconnect the ground cable from battery.
- 2) Remove the front door trim. <Ref. to EI-48, REMOVAL, Door Trim.>
- 3) Remove the squawker mounting screws.



- 4) Disconnect the harness connectors and remove squawker.

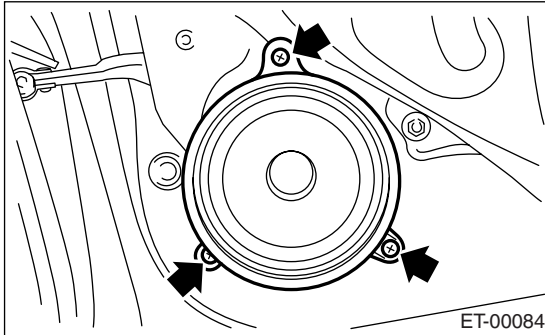
B: INSTALLATION

Install in the reverse order of removal.

8. Rear Speaker

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear door trim. <Ref. to EI-48, REMOVAL, Door Trim.>
- 3) Remove the rear speaker mounting screws.



- 4) Disconnect the harness connector and remove the rear speaker.

B: INSTALLATION

Install in the reverse order of removal.

9. Woofer

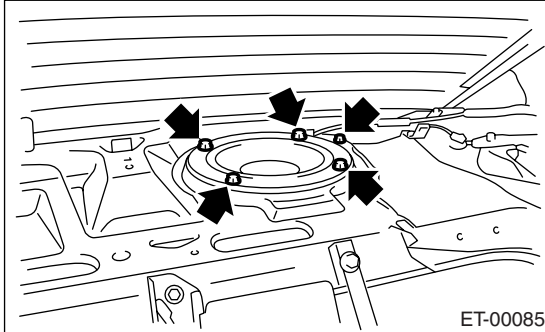
A: REMOVAL

1. SEDAN MODEL

NOTE:

Model with McIntosh audio system only.

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear shelf trim. <Ref. to EI-70, REMOVAL, Rear Shelf Trim.>
- 3) Remove the woofer mounting screws.



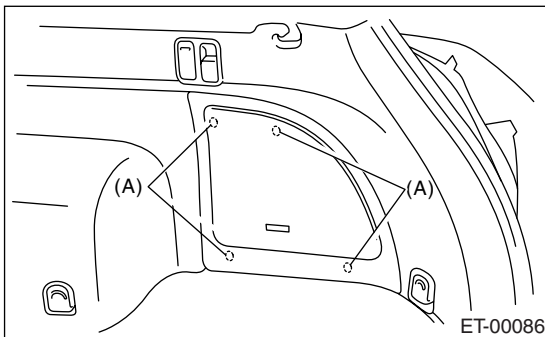
- 4) Disconnect the harness connector and detach woofer.

2. WAGON MODEL

NOTE:

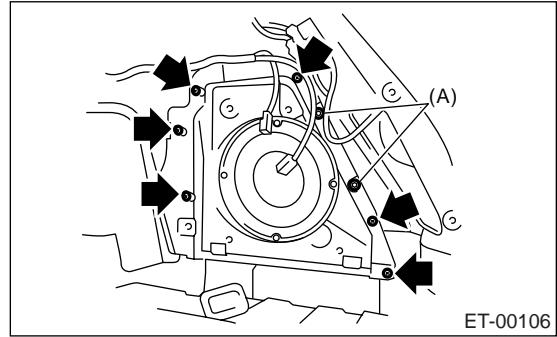
Model with McIntosh audio system only.

- 1) Disconnect the ground cable from battery.
- 2) Remove the hooks (A) and detach woofer cover. <Ref. to EI-63, REMOVAL, Rear Quarter Trim.>



- 3) Remove the quarter lower trim. <Ref. to EI-63, REMOVAL, Rear Quarter Trim.>

- 4) Remove the woofer bracket mounting clips (A) and screws, and then remove the woofer bracket.



- 5) Disconnect the harness connector and detach woofer.

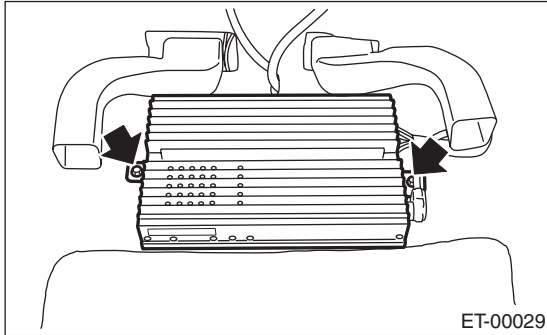
B: INSTALLATION

Install in the reverse order of removal.

10. Power Amplifier

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the passenger's seat. <Ref. to SE-7, REMOVAL, Front Seat.>
- 3) Disconnect the harness connector.
- 4) Remove the nuts to remove power amplifier.



B: INSTALLATION

Install in the reverse order of removal.

11. Antenna

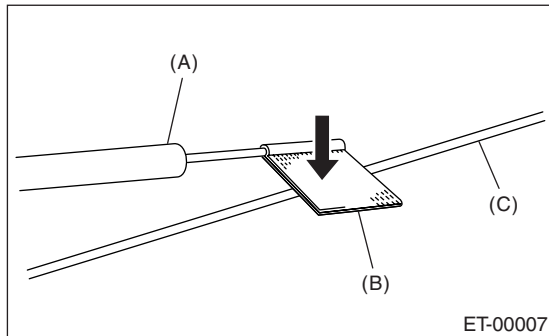
A: INSPECTION

Measure the resistance between antenna terminal and each antenna wire.

If an antenna wire is OK, resistance will be less than 1 Ω . If an antenna wire is broken, resistance will be more than 1 M Ω .

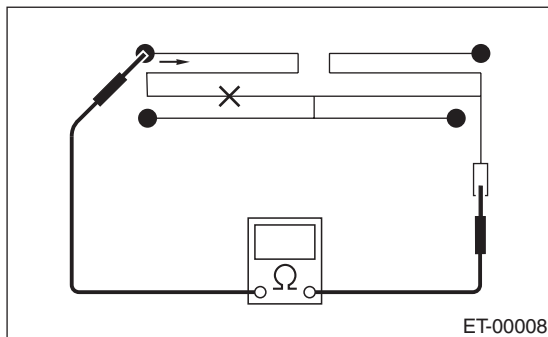
NOTE:

When checking the continuity, wind a piece of aluminum foil around the tip of tester probe and press the foil against wire with your finger.



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

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

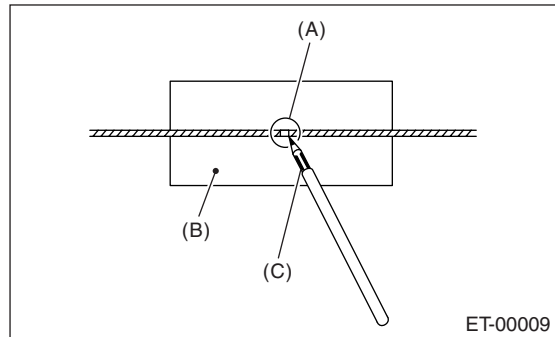


B: REPAIR

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 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.

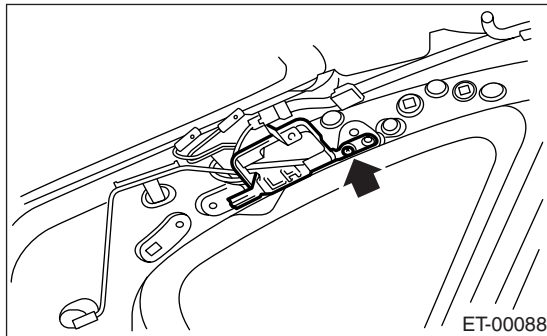
5) After repair has been completed, measure the resistance in repaired wire.

12. Antenna Amplifier

A: REMOVAL

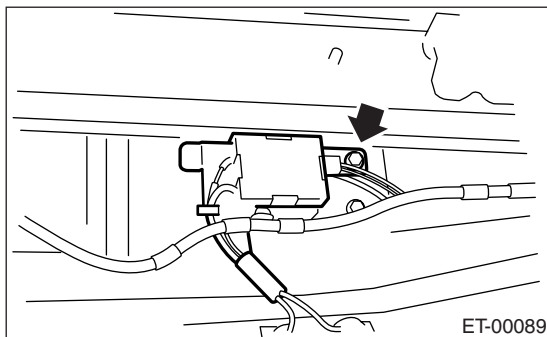
1. SEDAN MODEL

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear quarter trim. <Ref. to EI-63, SEDAN MODEL (MODEL WITH CURTAIN AIRBAG), REMOVAL, Rear Quarter Trim.>
- 3) Disconnect the harness connectors and terminals.
- 4) Remove the curtain airbag module. <Ref. to AB-18, REMOVAL, Curtain Airbag Module.>
- 5) Remove the screw and detach antenna amplifier.



2. WAGON MODEL

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear gate trim. <Ref. to EI-69, REMOVAL, Rear Gate Trim.>
- 3) Disconnect the harness connectors and terminals.
- 4) Remove the screw and detach antenna amplifier.



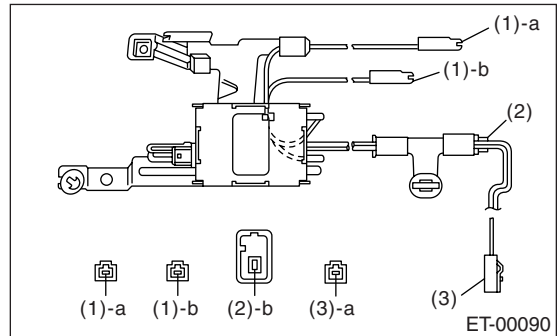
B: INSTALLATION

Install in the reverse order of removal.

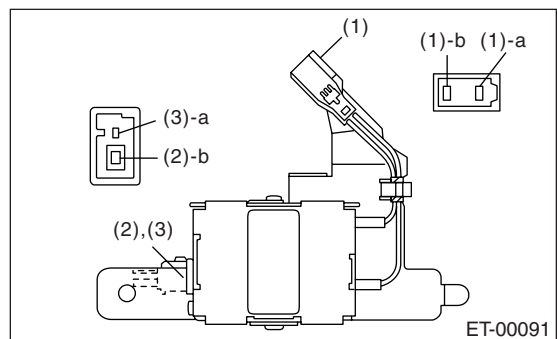
C: INSPECTION

Measure the resistance of antenna amplifier.

- Sedan model



- Wagon model



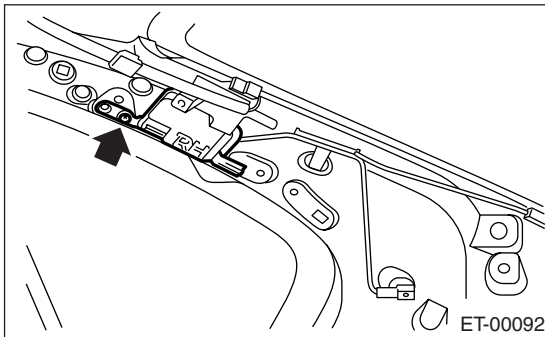
Terminal No.	Standard
1-a and Amplifier body	More than 10 kΩ
1-b and Amplifier body	More than 10 kΩ
2-a and Amplifier body	More than 10 kΩ
3-a and Amplifier body	More than 10 kΩ

13.Noise Suppressor

A: REMOVAL

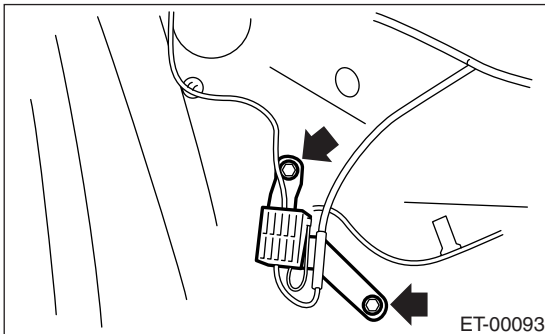
1. SEDAN MODEL

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear quarter trim. <Ref. to EI-63, SEDAN MODEL (MODEL WITH CURTAIN AIR-BAG), REMOVAL, Rear Quarter Trim.>
- 3) Remove the curtain airbag module. <Ref. to AB-18, REMOVAL, Curtain Airbag Module.>
- 4) Disconnect the harness connector from noise suppressor.
- 5) Remove the harness clip.
- 6) Remove the screw and detach noise suppressor.



2. WAGON MODEL

- 1) Disconnect the ground cable from battery.
- 2) Remove the rear gate trim. <Ref. to EI-69, REMOVAL, Rear Gate Trim.>
- 3) Disconnect the harness connector from noise suppressor.
- 4) Remove the screws and detach noise suppressor.



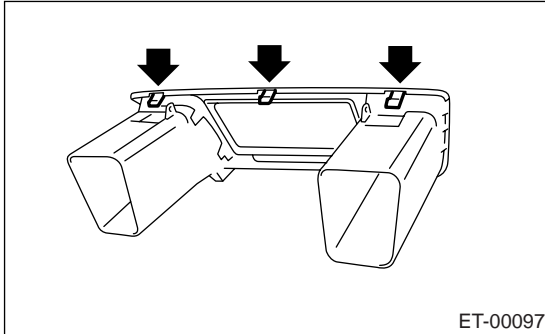
B: INSTALLATION

Install in the reverse order of removal.

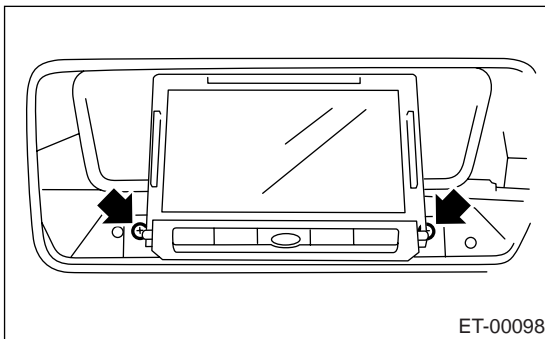
14. Navigation Display

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the clips, and then remove the center upper panel.



- 3) Remove the display mounting screws.



- 4) Disconnect the harness connector, and then remove the navigation display.

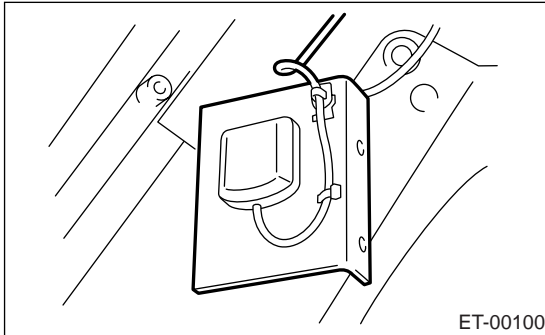
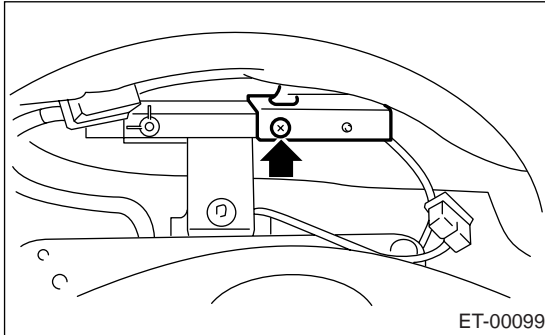
B: INSTALLATION

Install in the reverse order of removal.

15. GPS Antenna

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the combination meter. <Ref. to IDI-16, REMOVAL, Combination Meter Assembly.>
- 3) Remove the GPS antenna mounting screw, and then remove the GPS antenna.



- 4) Remove the audio. <Ref. to ET-5, REMOVAL, Audio.>
- 5) Remove the GPS antenna cord connector from steering support beam stay (on the driver's side).

B: INSTALLATION

Install in the reverse order of removal.

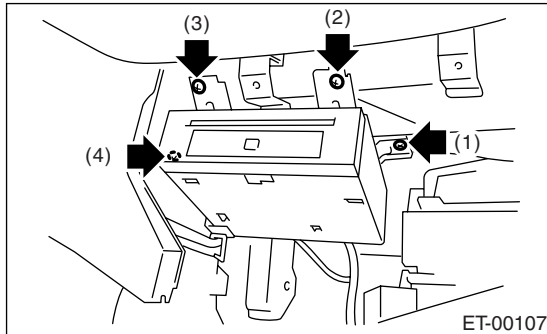
16. Navigation Body

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the glove box. <Ref. to EI-51, REMOVAL, Glove Box.>
- 3) Remove the navigation body mounting screws in numerical order and pull it out.

NOTE:

To remove the screw (4) easier, move the navigation body after removing the screw (3).



- 4) Remove the harness connector and antenna cable, and then remove the navigation body.

B: INSTALLATION

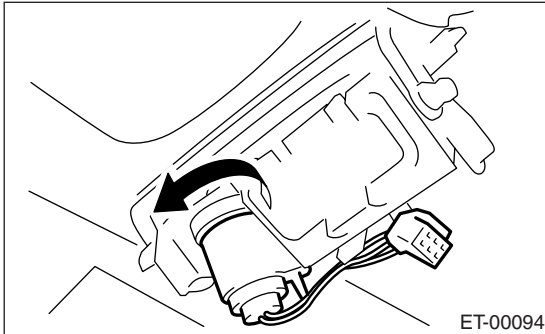
Install in the reverse order of removal.

17. Front Accessory Power Supply Socket

A: REMOVAL

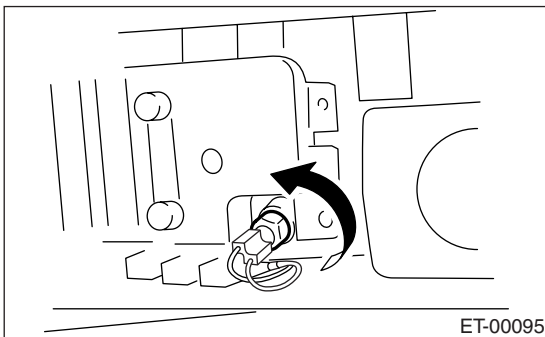
1. FRONT

- 1) Disconnect the ground cable from battery.
- 2) Remove the console front panel. <Ref. to EI-54, REMOVAL, Center Console.>
- 3) Disconnect the harness connector, and remove the accessory power supply socket.



2. REAR

- 1) Disconnect the ground cable from battery.
- 2) Remove the console box. <Ref. to EI-53, REMOVAL, Console Box.>
- 3) Disconnect the harness connector, and remove the accessory power supply socket.



B: INSTALLATION

Install in the reverse order of removal.

18. Steering Satellite Switch

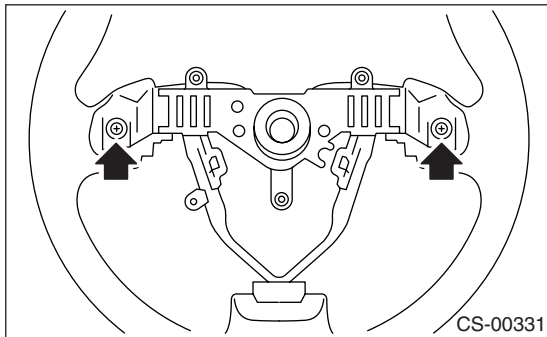
A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Set the tire to the straight-ahead position.
- 3) Remove the airbag module. <Ref. to AB-14, REMOVAL, Driver's Airbag Module.>

WARNING:

With the airbag module equipped, always refer to "Airbag System" when performing the airbag module repair service. <Ref. to AB-14, INSPECTION, Driver's Airbag Module.>

- 4) Remove the steering wheel. <Ref. to PS-20, REMOVAL, Steering Wheel.>
- 5) Remove the cover from steering wheel.
- 6) Remove each one of satellite switch mounting screw from the LH and RH side.



- 7) Remove the satellite switch.

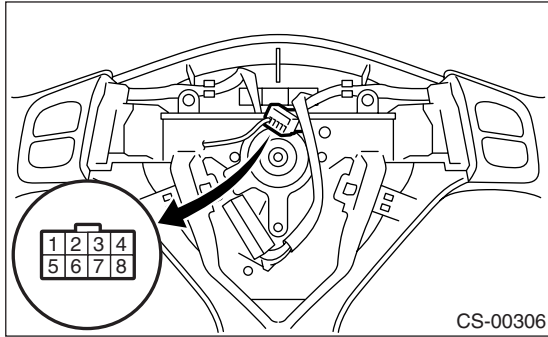
B: INSTALLATION

Install in the reverse order of removal.

Steering Satellite Switch

ENTERTAINMENT

C: INSPECTION



	Step	Check	Yes	No
1	MUTE SWITCH CONTINUITY CHECK. 1) Press the mute switch. 2) Measure the resistance between satellite switch connector terminals. Terminals No. 7 — No. 6:	Is the resistance approx. 22 Ω ?	Go to step 2.	Replace the satellite switch.
2	VOLUME SWITCH CONTINUITY CHECK. 1) Press the volume switch. 2) Measure the resistance between satellite switch connector terminals. Terminals No. 7 — No. 6: Volume up No. 7 — No. 6: Volume down	Is the resistance approx. 90 Ω ? (Volume up) Is the resistance approx. 200 Ω ? (Volume down)	Go to step 3.	Replace the satellite switch.
3	MODE SWITCH CONTINUITY CHECK. 1) Press the mode switch. 2) Measure the resistance between satellite switch connector terminals. Terminals No. 7 — No. 6:	Is the resistance approx. 360 Ω ?	Go to step 4.	Replace the satellite switch.
4	SEEK SWITCH CONTINUITY CHECK. 1) Press the seek switch. 2) Measure the resistance between satellite switch connector terminals. Terminals No. 7 — No. 6: Seek up No. 7 — No. 6: Seek down	Is the resistance approx. 690 Ω ? (Seek up) Is the resistance approx. 1.5 k Ω ? (Seek down)	Go to step 5.	Replace the satellite switch.
5	CHECK SATELLITE SWITCH INSULATION. 1) Not to operate the satellite switch. 2) Measure the resistance between satellite switch connector terminals. Terminals No. 7 — No. 6:	Is the resistance approx. 4.7 k Ω ?	Satellite switch is normal.	Replace the satellite switch.