



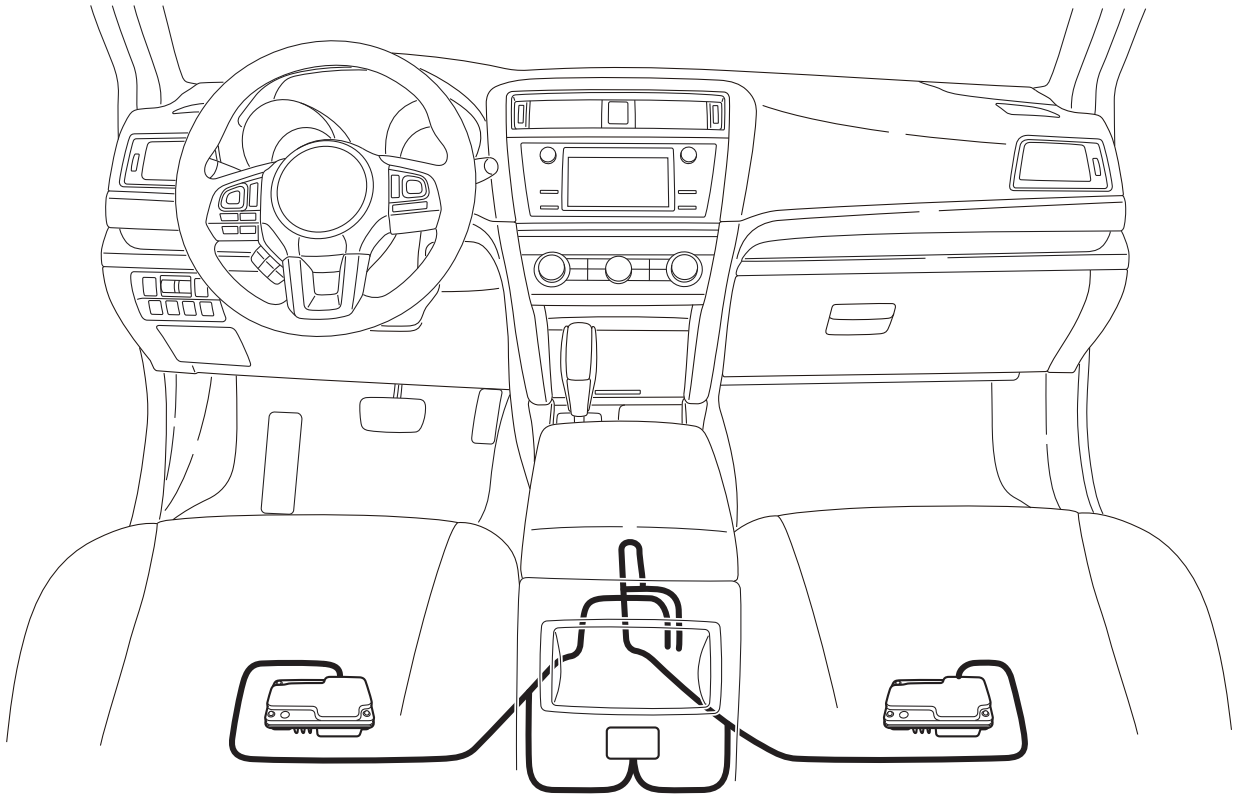
SUBARU AC 120V POWER OUTLET

INSTALLATION INSTRUCTIONS

Part Number : H7110AL100

Description : Legacy AC 120V Power Outlet

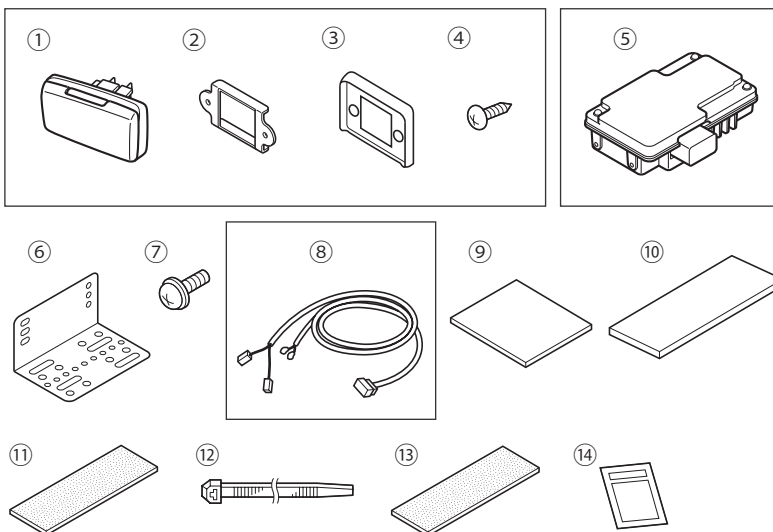
1. PRE INSTALLATION / INSTALLATION OVERVIEW



(In the case of car without RAB)

(In the case of car with RAB without Harman Kardon Audio)

2. KIT CONTENTS



No.	Part Name	Q'ty
①	OUTLET	1
②	BRACKET	1
③	RUBBER GASKET	1
④	TAPPING SCREW	2
⑤	INVERTER	1
⑥	BRACKET	2
⑦	SCREW (M4)	4
⑧	HARNESS	1
⑨	DOUBLE SIDED TAPE	1
⑩	ALUMINUM TAPE	10
⑪	FOAM TAPE (GRAY)	1
⑫	TIE WRAP (150mm)	1
⑬	FOAM TAPE (BLACK)	7
⑭	OWNERS MANUAL	1












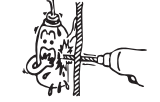


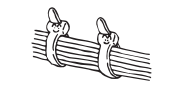


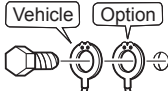
OUTLET KIT	H7110VA120	①,②,③,④
INVERTER	H7110AJ130	⑤,⑨
HARNESS	H7110AL110	⑧

3. TOOLS REQUIRED

PHILLIPS SCREWDRIVER
 FLAT BLADE SCREWDRIVER
 10mm, 14mm SOCKET WRENCH
 PLIERS
 φ 24mm (15/16") HOLE SAW
 φ 3.5mm (1/8") DRILL
 VOLT METER (or CIRCUIT TESTER)
 SIDE CUTTERS
 SCISSORS

UTILITY KNIFE
 CENTER PUNCH
 CHALK
 MASKING TAPE
 ELECTRICAL TAPE
 TRIM REMOVAL TOOL
 ISOPROPYL ALCOHOL
 CLEANING TOWEL

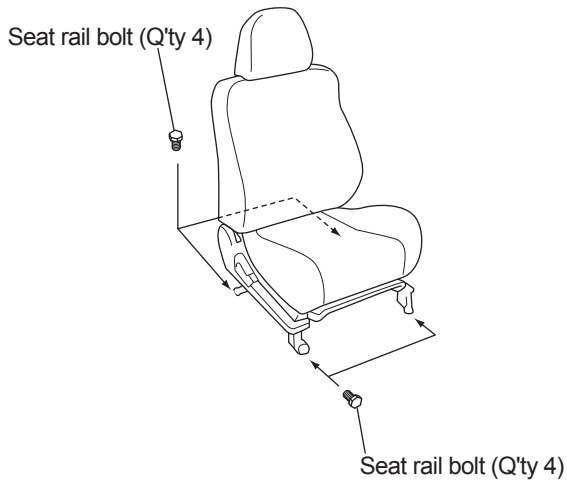
4. PRECAUTIONS FOR INSTALLATION

 CAUTION	This product requires removal of the passenger 's seat. As a result of the removal of the passenger 's seat it will be necessary to re-calibrate the Occupant Detection System. If not properly calibrated the Occupant Detection System may not operate as designed which may result in injuries to the front seat passenger. Therefore, it is strongly recommended that the product be installed at an authorized Subaru dealer.	
 CAUTION	Please follow the Instructions for your safety. If these Instructions are not followed. Personal injury. Vehicle damage or degraded performance of the 110V Outlet may result.	
 CAUTION		
	Always perform installation in a building or a room. Ventilate air to avoid exhaust gas-filled atmosphere when checking activation.	 Make sure to fully ungage and connect all wire plugs & receptacles and connectors to their individual mating parts. Use screws or other similar fasteners to secure all lead wire terminals in order to prevent connection failure and/or looseness caused by vibration or oscillation.
	To prevent potential damage to your vehicle during installation, use reasonable protective covers to cover the passenger compartment and body surface around the engine.	 Use a proper tool of correct size to tighten bolts and nuts. Fully tighten bolts and nuts with specified tightening torque as required. Inobservance of this instruction will cause a potential risk of damage to bolts and nuts.
	Remove the negative battery terminal before start of wiring work. With the battery kept connected, wiring work will lead to a potential risk of failure or of electric shock or injury due to short circuit.	 Do not apply an excessive force to pull off a vehicle wire harness, to prevent loose connectors, disconnection and/or damage.
	Check that all electrical systems of your vehicle are properly operative. Back up all memories of a radio and other electrical systems, to avoid any possible loss during recovery checks after installation.	 When installing parts and/or removed finishers, avoid dragging or pinching wires in order to prevent a potential risk of accident, electric shock or fire due to disconnection and/or short circuit.
	If the vehicle body needs to be drilled for installation, check the positions of pipings, tanks and electrical wirings before drilling and avoid any interference or contact with them.	 Use appropriate cleaner or mild detergent to remove all dirt and old grease before attaching one-sided and/or double-sided tapes during installation. Tapes applied onto an unclean area cannot demonstrate desirable.
	After removing clips and screws from your vehicle, sort them by individual components for subsequent reinstallation work to prevent use of wrong clips and screws. Use of wrong clips and screws will cause looseness and coming-off.	 When harnessing, follow all instructions provided in the Installation Instruction. Use reasonable bands or other similar materials to tack and secure wiring to prevent entrapment into the steering, shift lever and/or brake pedal.
	When disconnecting vehicle connectors, hold connectors (do not hold lead wires) to unlock them, to prevent disconnection in lead wires.	 After harnessing, check activations of all parts installed before recovery, to prevent wrong wiring.
	To secure an optional GND terminal together with a vehicle GND terminal, fasten them in a correct order (bolt → vehicle GND → optional GND → body panel).	

5. INSTALLATION PROCEDURE

1. REMOVAL OF INTERIOR TRIM COMPONENTS

(In the case of car without RAB)



1-1 Drivers Seat Removal:

1. Remove four seat rail bolts.

⚠ CAUTION

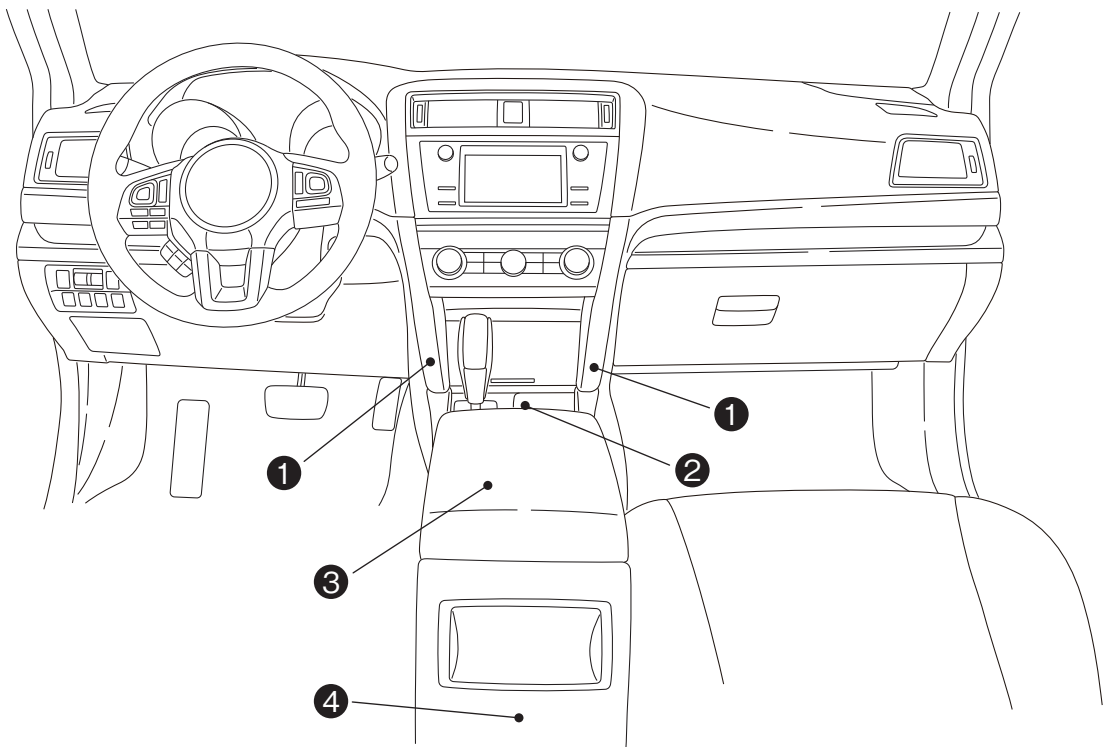
1. Before disconnecting any yellow (air bag) connectors, turn off ignition and disconnect (-) battery terminal for at least 20 seconds.
2. Be careful when working on the vehicle interior not to damage / scratch components.
3. Be careful when working to avoid injury.

2. Disconnect electronic components under the seat.
3. Protect seat frame rail legs with towel to avoid scratching.
4. Remove seat.

【Tightening torque should read 53 N·m
(5.4 kgfm, 39ft-lbs)】

1-2 Removal the following components :

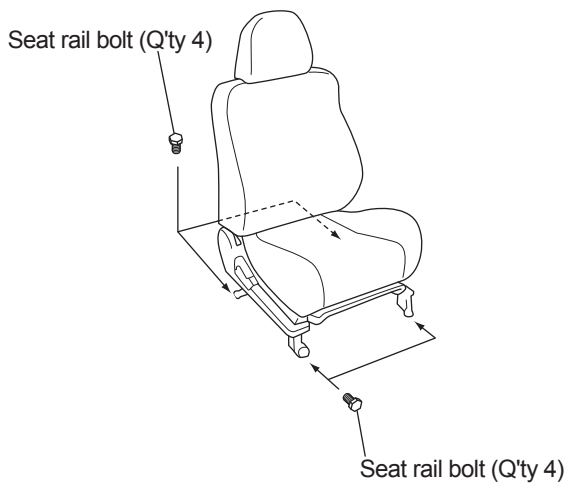
- ① Ornament panel-console
- ② Cover assembly-front
- ③ Console box assembly
- ④ Console cover



2. REMOVAL OF INTERIOR TRIM COMPONENTS

(In the case of car with RAB and Harman Kardon Speakers)

2-1 Passenger Seat Removal:



1. Remove four seat rail bolts.

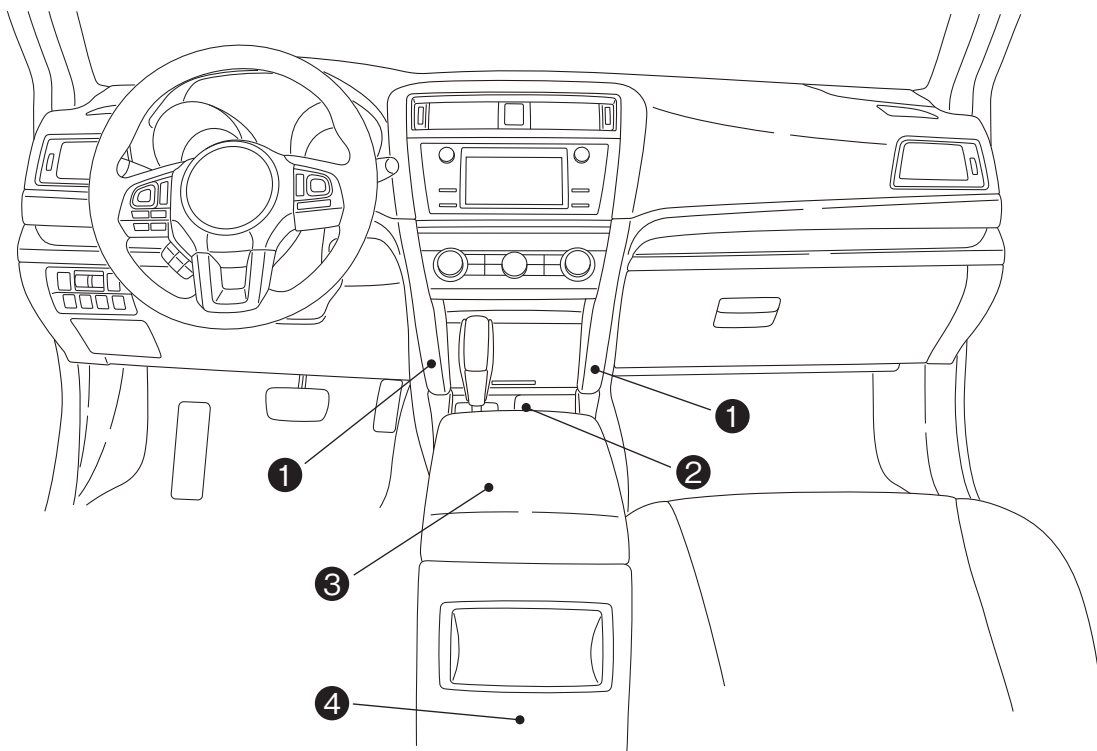
⚠ CAUTION

1. Before disconnecting any yellow (air bag) connectors, turn off ignition and disconnect (-) battery terminal for at least 20 seconds.
 2. Be careful when working on the vehicle interior not to damage / scratch components.
 3. Be careful when working to avoid injury.
2. Disconnect electronic components under the seat.
 3. Protect seat frame rail legs with towel to avoid scratching.
 4. Remove seat.

【Tightening torque should read 53 N·m
(5.4 kgfm, 39ft-lbs)】

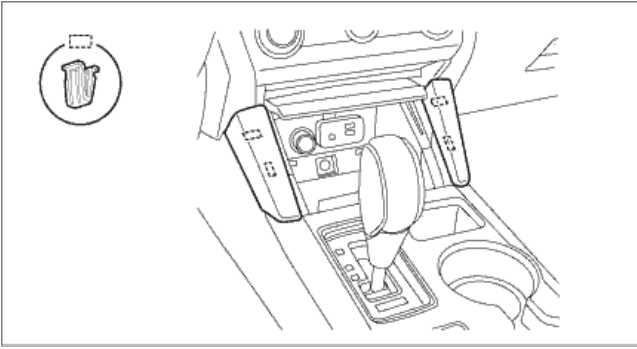
2-2 Removal the following components :

- ① Ornament panel-console
- ② Cover assembly-front
- ③ Console box assembly
- ④ Console cover

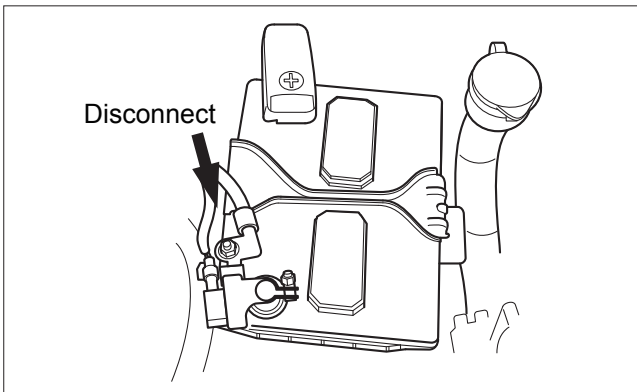


NOTE:

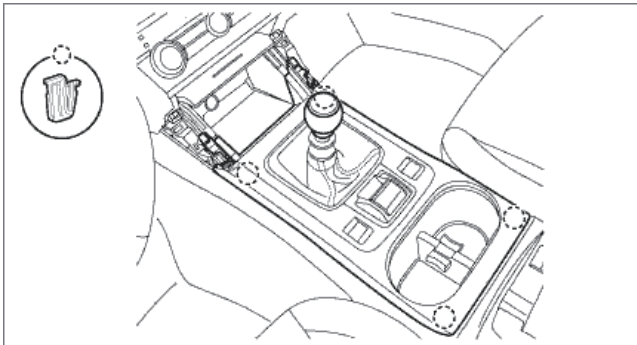
Shift the select lever into "N".



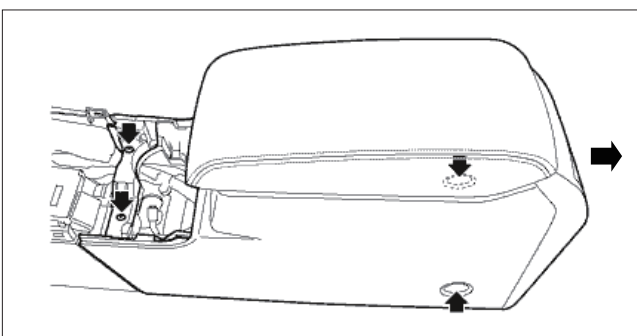
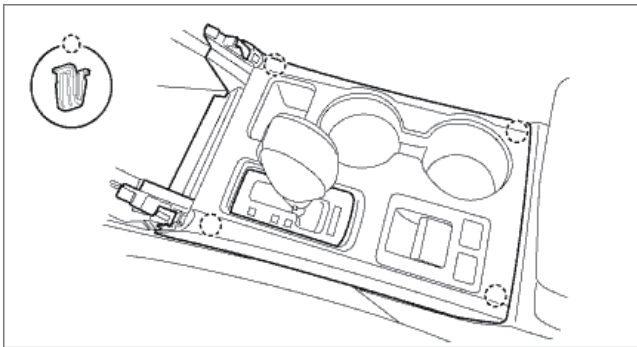
Release the clips, and remove the ornament panel - console.



Disconnect negative battery terminal.
Note : Some vehicle systems may need to be reconfigured after battery is reconnected. See service manual.

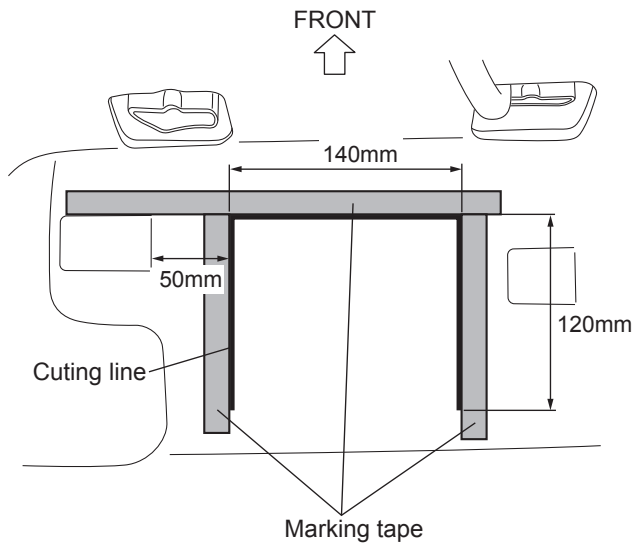


Remove the cover assembly - front.
(1) Remove the shift knob. (MT model)
(2) Pull up the cover assembly - front, and release the clips.
(3) Disconnect the connectors, and remove the cover assembly - front.



Remove the console box assembly.
(1) Remove the caps, and remove the bolts.
(2) Remove the screws, disconnect the harness connector and remove the console box assembly.
Remove the console cover.

3. TRIM FLOOR CARPET (In the case of car without RAB)

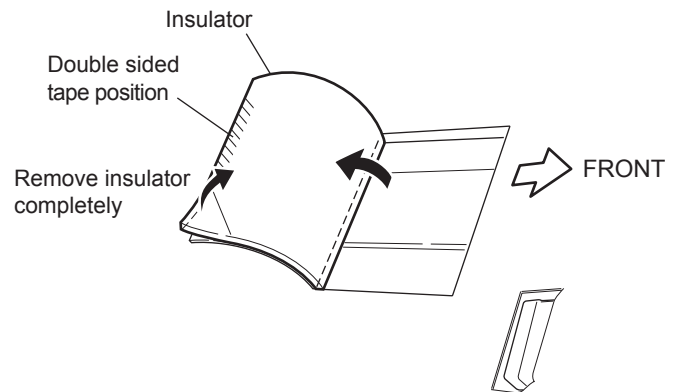


(Driver side, under seat area)

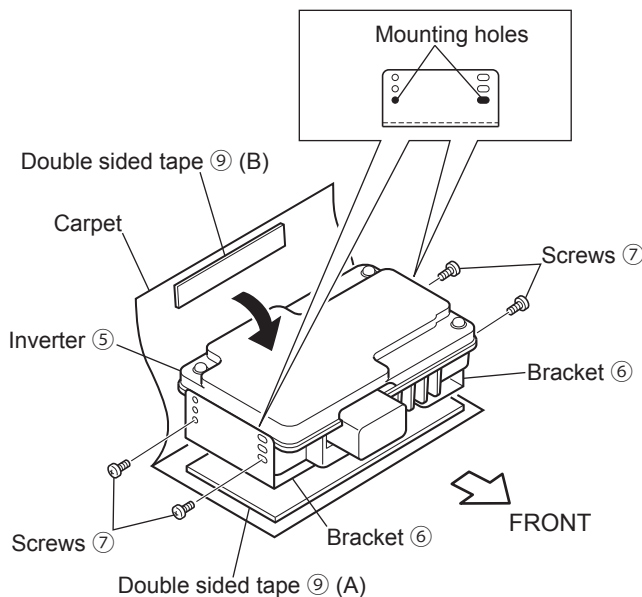
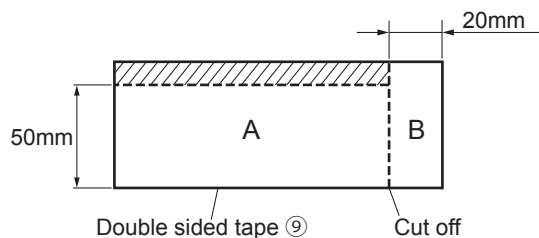
1. Apply masking tape to the floor carpet in the areas shown in the image on the left.
2. Cut out the floor carpet around the outside edge of the masking tape.
3. Lift up the floor carpet and cut out part of the insulation. Take care that there are no scraps of insulation around areas where butyl tape has been applied.

⚠ CAUTION

1. When cutting out the floor carpet, take care that you do not cut the vehicle harness.
2. Scraps of insulation from the floor carpet may cause the unit to become clogged, so remove all scraps after work is complete.



4. INVERTER UNIT INSTALLATION

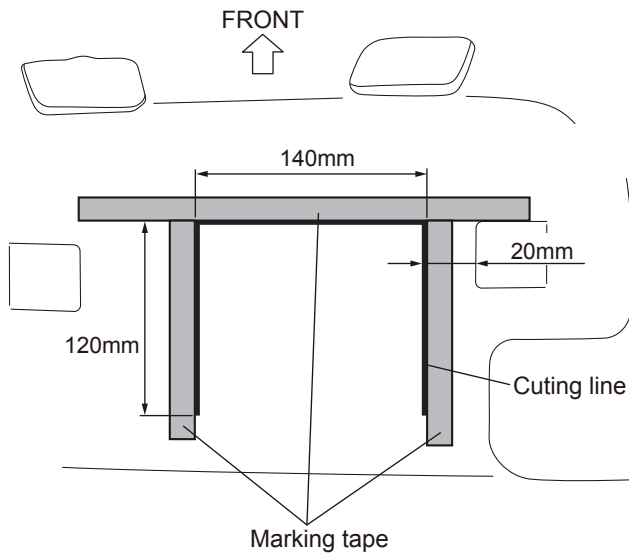


1. Cut off Double sided tape ⑨ as shown in left picture.
2. Fix the Brackets ⑥ on Inverter ⑤ with four Screws ⑦.
3. Apply the Double sided tape ⑨ (A) on the bottom of Bracket ⑥.
4. Locate position where Inverter ⑤ will be installed.
5. Pull up carpet and de-grease floor surface with Isopropyl alcohol where Inverter ⑤ will be installed.
6. Remove release liner from Double-sided tape ⑨ and apply on bottom of both Brackets ⑥.
7. Install Inverter ⑤ to center of cut area with connector facing driver.
8. Apply on the Inverter ⑤ after apply the Double sided tape ⑨ (B) on the Carpet.

⚠ CAUTION

1. Make sure that inverter is placed in correct direction and position.
2. Vehicle must be at room temperature.

5. TRIM FLOOR CARPET (In the case of car with RAB and Harman Kardon Speakers)

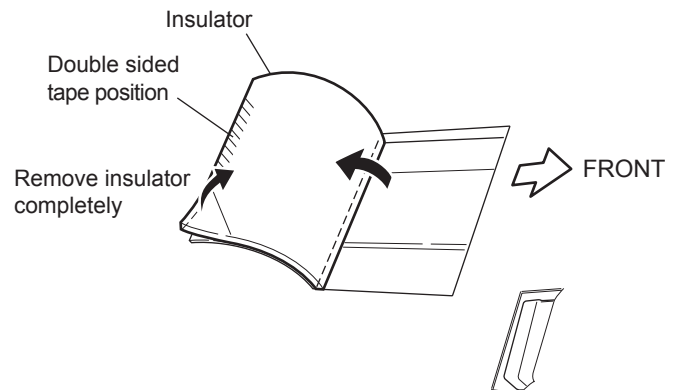


(Passenger side, under seat area)

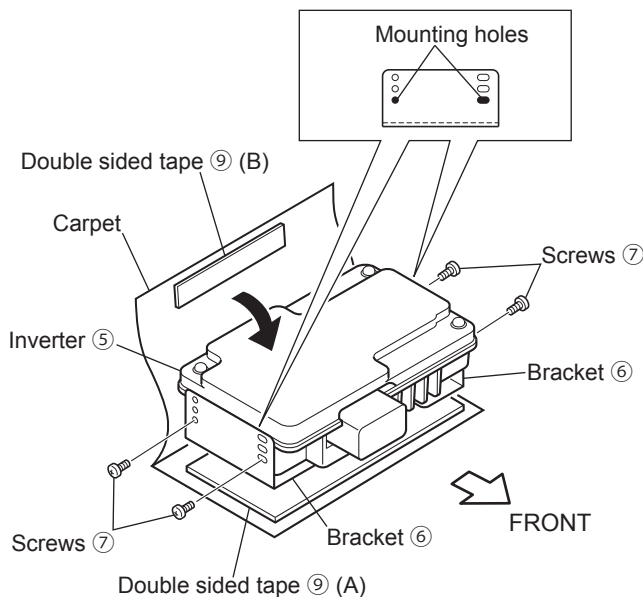
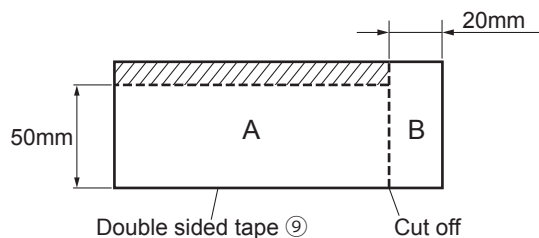
1. Apply masking tape to the floor carpet in the areas shown in the image on the left.
2. Cut out the floor carpet around the outside edge of the masking tape.
3. Lift up the floor carpet and cut out part of the insulation. Take care that there are no scraps of insulation around areas where butyl tape has been applied.

⚠ CAUTION

1. When cutting out the floor carpet, take care that you do not cut the vehicle harness.
2. Scraps of insulation from the floor carpet may cause the unit to become clogged, so remove all scraps after work is complete.



6. INVERTER UNIT INSTALLATION



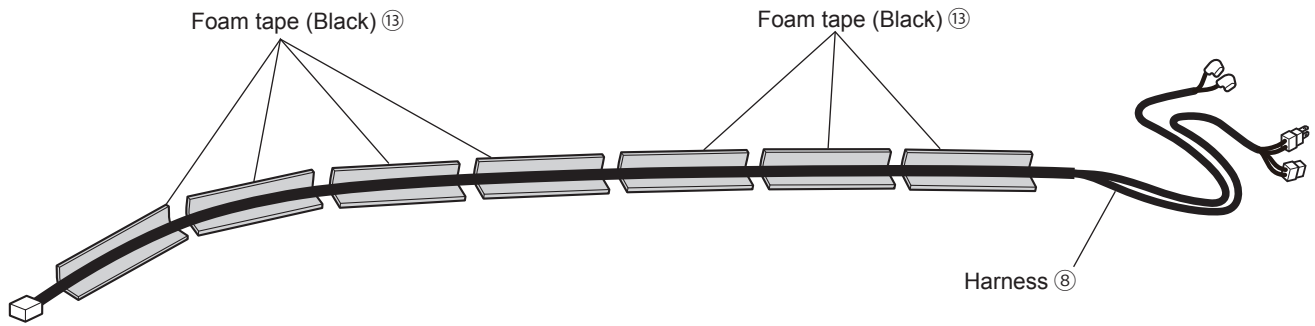
1. Cut off Double sided tape ⑨ as shown in left picture.
2. Fix the Brackets ⑥ on Inverter ⑤ with four Screws ⑦.
3. Apply the Double sided tape ⑨ (A) on the bottom of Bracket ⑥.
4. Locate position where Inverter ⑤ will be installed.
5. Pull up carpet and de-grease floor surface with Isopropyl alcohol where Inverter ⑤ will be installed.
6. Remove release liner from Double-sided tape ⑨ and apply on bottom of both Brackets ⑥.
7. Install Inverter ⑤ to center of cut area with connector facing driver.
8. Apply on the Inverter ⑤ after apply the Double sided tape ⑨ (B) on the Carpet.

⚠ CAUTION

1. Make sure that inverter is placed in correct direction and position.
2. Vehicle must be at room temperature.

7. HARNESS

1. Apply the 7 Foam tapes ⑬ as shown.

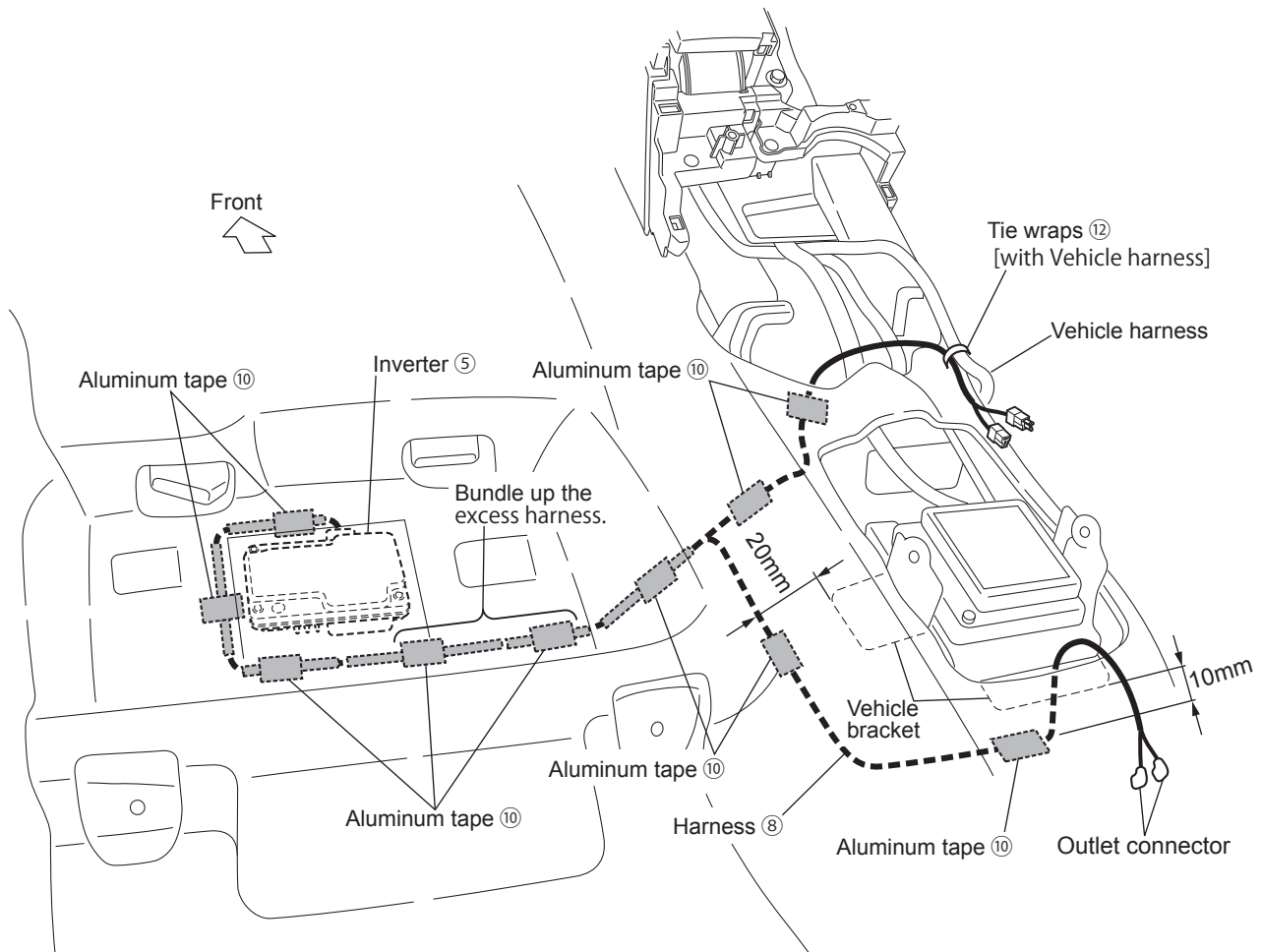


8. WIRE HARNESS INSTALLATION (In the case of car without RAB)

1. Route the harness to the floor carpet cutout area as shown.
2. Connect Harness ⑧ to the Inverter ⑤.
3. Apply the 10 Aluminum tapes ⑩ and Tie wrap ⑫ to secure as shown.

⚠ CAUTION

Be sure to route harness away from sharp edges.



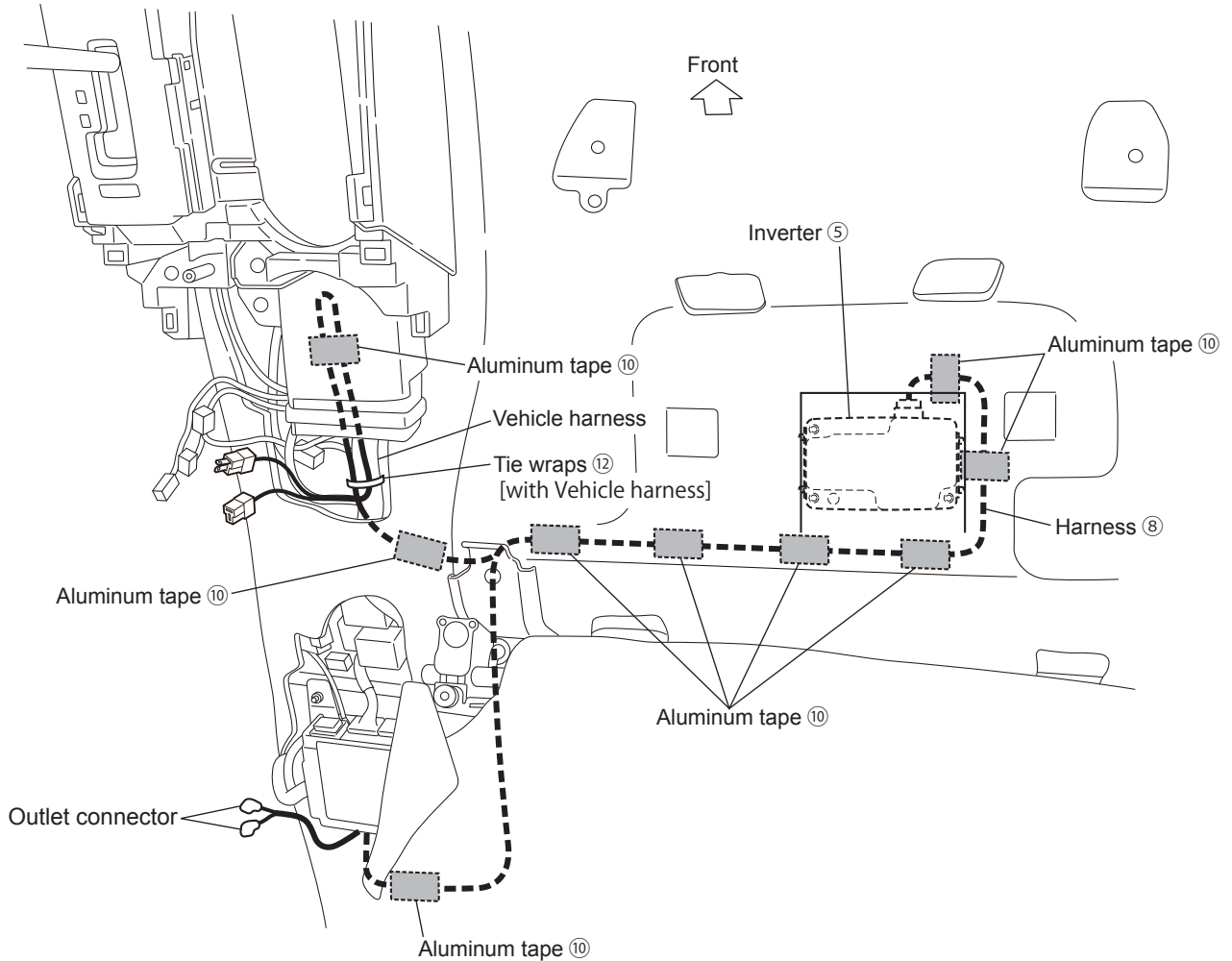
9. WIRE HARNESS INSTALLATION

(In the case of car with RAB and Harman Kardon Speakers)

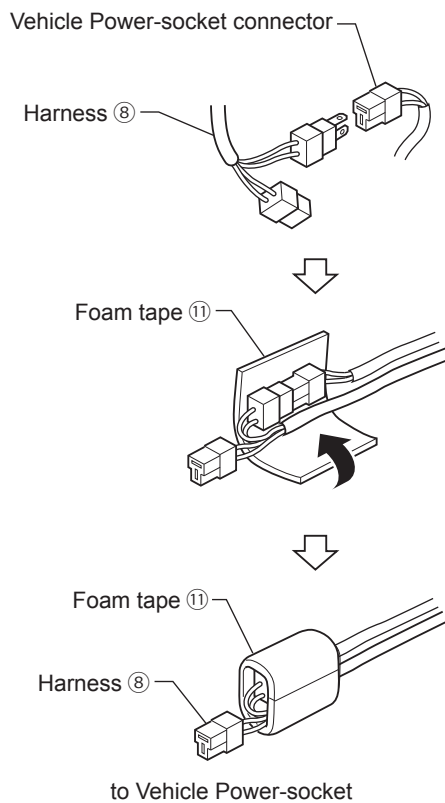
1. Route the harness to the floor carpet cutout area as shown.
2. Connect Harness ⑧ to the Inverter ⑤.
3. Apply the 10 Aluminum tapes ⑩ and Tie wrap ⑫ to secure as shown.

⚠ CAUTION

Be sure to route harness away from sharp edges.



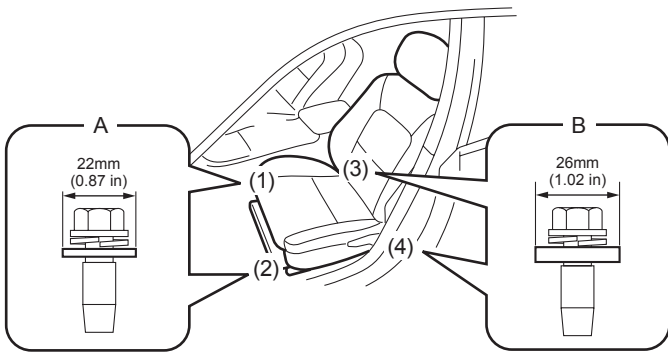
10. CONNECT HARNESS TO VEHICLE HARNESS



1. After disconnecting vehicle harness from 12V Power outlet, connect the Harness ⑧ connector as shown.

2. After all connections are made, overwrap in Foam tape ⑪ as shown.

11. DRIVER SEAT INSTALL (In the case of car without RAB)



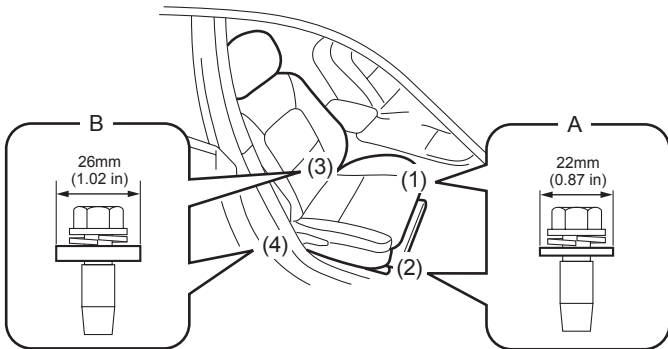
⚠ CAUTION

1. The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
2. Tighten the slide rail installing bolt gradually in several steps to the specified torque in the order as shown in the figure.

- Front (bolt A) : Washer diameter 22mm (0.87 in)
- Rear (bolt B) : Washer diameter 26mm (1.02 in)
- Tightening torque : Front seat assembly : 53N·m (5.4 kgf-m, 39.1 ft-lb)

12. PASSENGER SEAT INSTALL

(In the case of car with RAB and Harman Kardon Speakers)

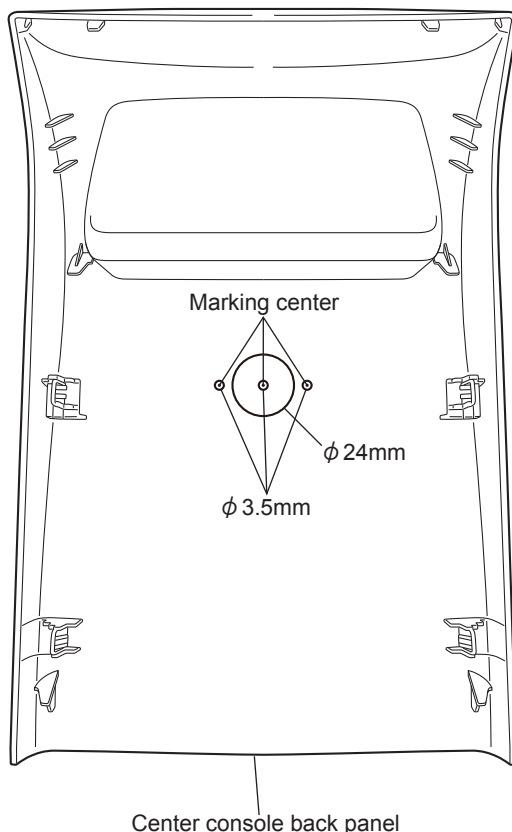


⚠ CAUTION

1. The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
2. Tighten the slide rail installing bolt gradually in several steps to the specified torque in the order as shown in the figure.

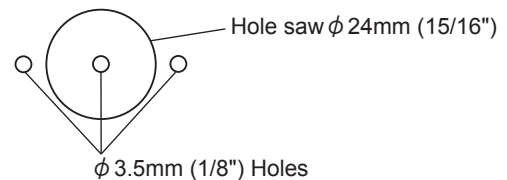
- Front (bolt A) : Washer diameter 22mm (0.87 in)
- Rear (bolt B) : Washer diameter 26mm (1.02 in)
- Tightening torque : Front seat assembly : 53N·m (5.4 kgf-m, 39.1 ft-lb)

13. OUTLET MOUNTING HOLE PROCESSING

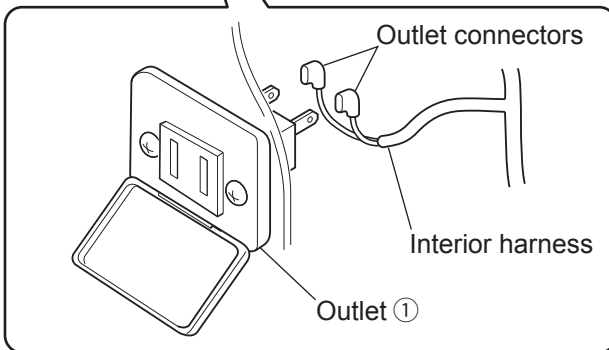
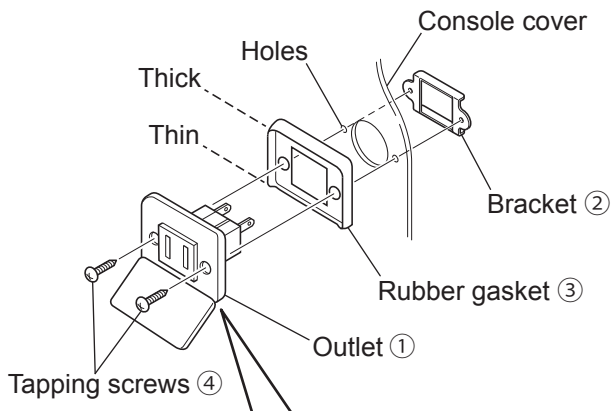


1. Drill three $\phi 3.5\text{mm}$ ($1/8''$) holes and then enlarge center hole $\phi 24\text{mm}$ ($15/16''$) with hole saw.

Drilling instruction



14. OUTLET INSTALLATION



1. Fit Rubber gasket (3) onto Outlet (1) and position Outlet (1) over holes drilled from the above step.
2. Place Bracket (2) on the other side of the center console and mount the Outlet (1) with the two supplied self Tapping screws (4).
3. Place console back in position and connect female receptacle connectors to back of Outlet (1) as shown and verify that the rubber caps are firmly secured.

⚠ CAUTION

When connecting the female receptacle connectors to the back of the Outlet, it does not matter which wire (color) is connected to each terminal.

15. CHECK THE OPERATION

⚠ CAUTION

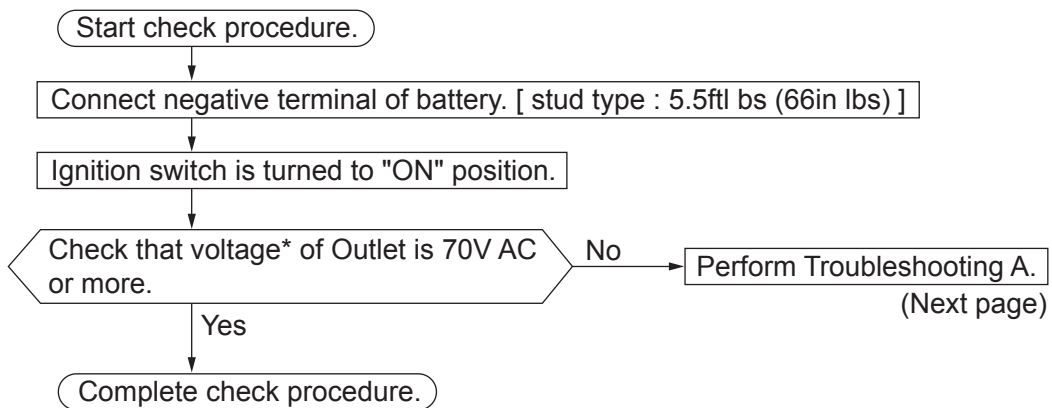
Verify that all yellow (Air bag) connectors are connected firmly.

1. POST-INSTALLATION CHECK

1. Check that all wiring and attaching points are correct.
2. Be careful not to pinch, strain, or crush wires during reassembly.
3. Be careful not to damage vehicle parts during reassembly.

2. CHECK VOLTAGE

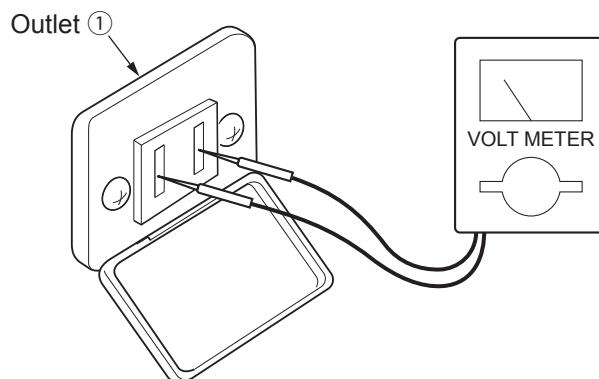
1. Use a volt meter to measure voltage. Strictly keep the volt meter set at range of "250V AC or more" for measuring any power supply of 110V AC or more.



* The volt meter voltage reading may be less than 110V AC depending on tester types.

* Output waveform is rectangular.

* When the battery voltage is low, the voltage of outlet may not maintain the rated 70V AC or more.



16. TROUBLESHOOTING


This section describes the inspection procedure for malfunction which may take place after installation is completed. Use a circuit tester for continuity and/or voltage testing.

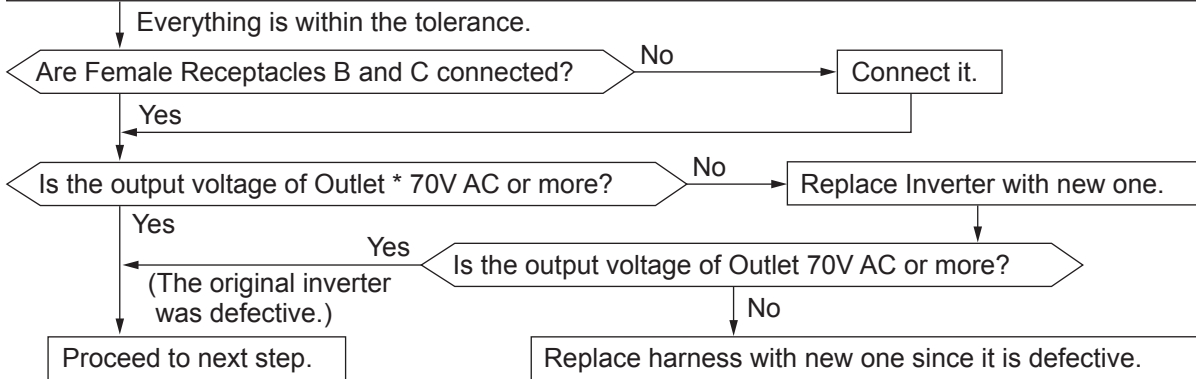
Checking Procedure A

Checking connectors of the main body

Check the continuity and/or voltage of connector terminals connected to the main body (with all other connectors still connected).

Terminal		Test parameter	Conditions	Tolerance	When outside the tolerance
Tester +	Tester -				
1	4	Voltage	Ignition key should be changed from OFF to ACC or ON position.	0V to 10V or more	Perform Checking Procedure C
3	Ground	Continuity	All the time	No continuity	Replace the harness with new one.
7	Ground	Continuity	All the time	No continuity	Replace the harness with new one.

①  (Female)

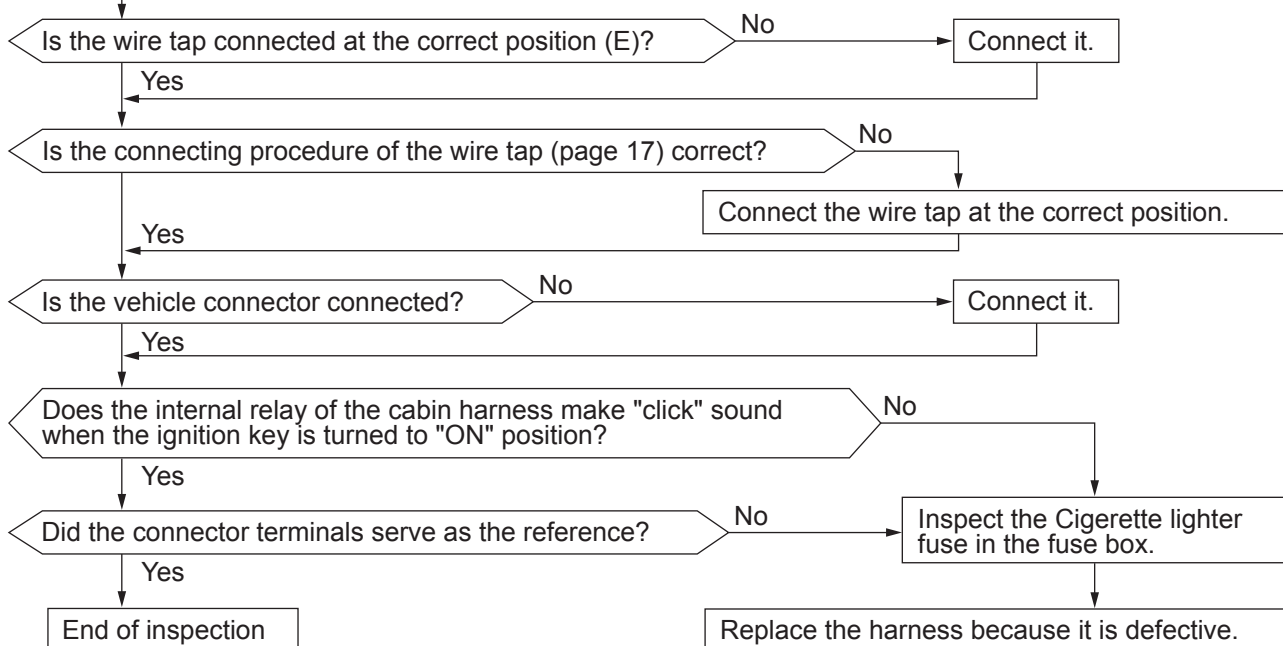


* The voltmeter voltage reading may be less than 115V AC depending on tester types.

* Output waveform is rectangular.

* When the battery voltage is being decreased, the voltage of outlet might not keep the rated 70V AC or more.

Checking Procedure B



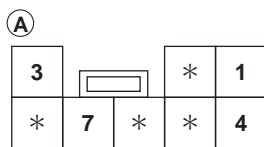
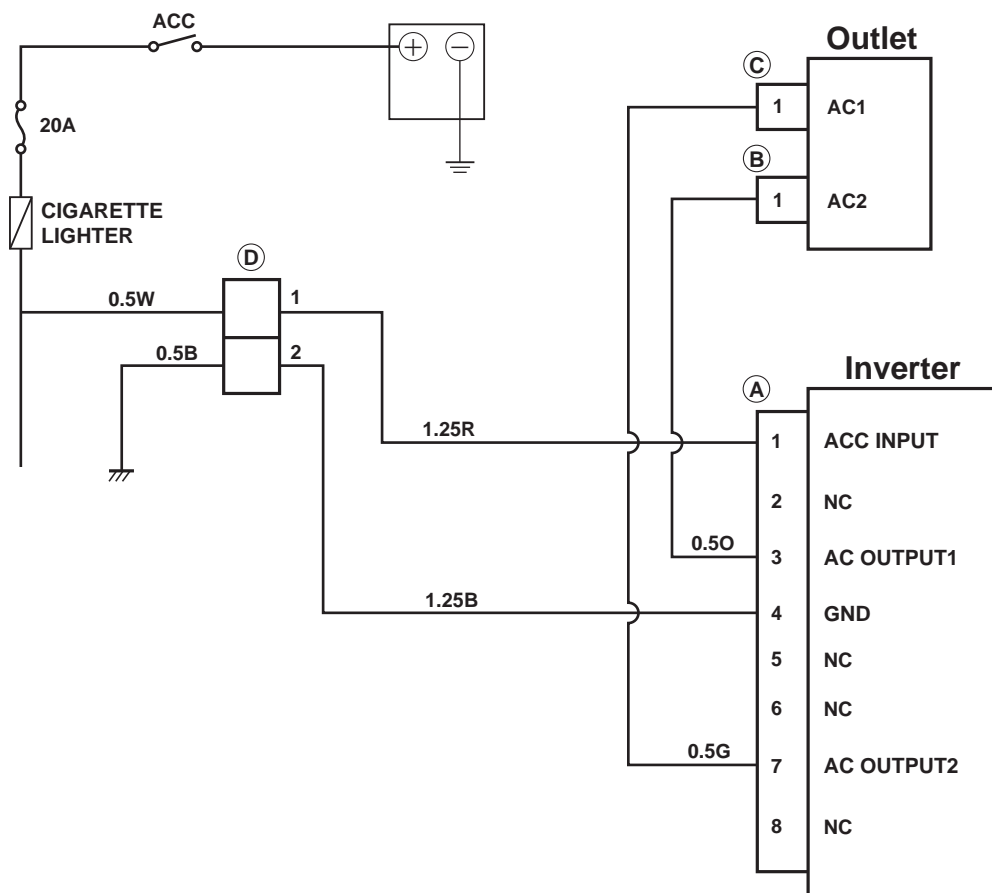
17. RE-ASSEMBLY

After the check procedure is completed, re-assemble all removed vehicle parts and components paying attention not to damage them.

⚠ CAUTION

1. Be careful to avoid pinching the harness or any vehicle harness, or damaging any vehicle parts when reassembling parts and/or components.

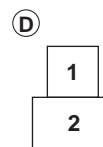
18. CIRCUIT DIAGRAM



(Female)



(Female Receptacle)



(Female)
(Vehicle's 2P connector)

AC output power (max continuous)	100W
AC output surge capacity (peak)	120W
AC output voltage (nominal)	120V
AC output frequency	60 Hz
AC input waveform	Modified Sine
Low input shutdown voltage (inverter)	DC11V