

**Part Number: Mounting Kit PT546-0C080**  
**Tuner Assembly 86180-0W031**

**NOTE:** Part number of this accessory may not be the same as the part number shown.

**Tuner Assembly Kit Contents (86180-0W031)**

Item #	Quantity Req.	Description
1	1	Tuner Assy, Stereo Component

**Mounting Kit Contents (PT546-0C080)**

Item #	Quantity Req.	Description
1	1	Ground Cable
2	1	Wire, to Radio Installation
3	2	Tuner Bracket
4	2	Base Bracket
5	1	Template (to locate base bracket)
6	4	Cushion A (Butyl)
7	1	Antenna
8	3	Hardware Bag
9	1	XM Satellite Radio Brochure

**Hardware Bag Contents – 1 (PT546-0C080)**

Item #	Quantity Req.	Description
1	4	Nut (M6)
2	4	Screw (M5 x L8)

**Hardware Bag Contents – 2 (PT546-0C080)**

Item #	Quantity Req.	Description
1	18	Lock Tie A
2	4	Cushion Tape (cord styling)

**Hardware Bag Contents – 3 (PT546-0C080)**

Item #	Quantity Req.	Description
1	1	HFC Connector Housing
2	7	Sheet Tape (30mm x 30mm)
3	7	Lock Tie B
4	1	Cable Rail (10mm)
5	1	Butyl Sheet (15mm x 15mm)
6	2	Protective Sheet (20mm x 40mm)

**Additional Items Required For Installation**

Item #	Quantity Req.	Description

**Conflicts**

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**Recommended Tools**

<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
Safety Goggles	
Seat Covers	
Floor Protectors	
<b>Special Tools</b>	<b>Notes</b>
Arch (Carpet) Punch	5/16" Hole Diameter
<b>Installation Tools</b>	<b>Notes</b>
Ratchet	
Extension	
Socket	10 mm, 14 mm
Torque Wrench	4.1 N•m (36 lbf•in.): Battery Cable, 37 N•m (27 lbf•ft): Front Seat
Screwdriver	Philips #2
Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01
Masking Tape	(2" wide)
Mallet	
Side Cutter	
<b>Special Chemicals</b>	<b>Notes</b>
Cleaner	3M™ Prep Sol-70

**General Applicability**

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**Recommended Sequence of Application**






Item #	Accessory

\*Mandatory

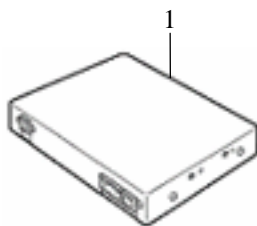
**Vehicle Service Parts** (may be required for reassembly)

Item #	Quantity Req.	Description

**Legend**

	<b>STOP:</b> Damage to the vehicle may occur. Do not proceed until process has been complied with.
	<b>OPERATOR SAFETY:</b> Use caution to avoid risk of injury.
	<b>CAUTION:</b> A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.
	<b>TOOLS &amp; EQUIPMENT:</b> Used in Figures calls out the specific tools and equipment recommended for this process.
	<b>REVISION MARK:</b> This mark highlights a change in installation with respect to previous issue.

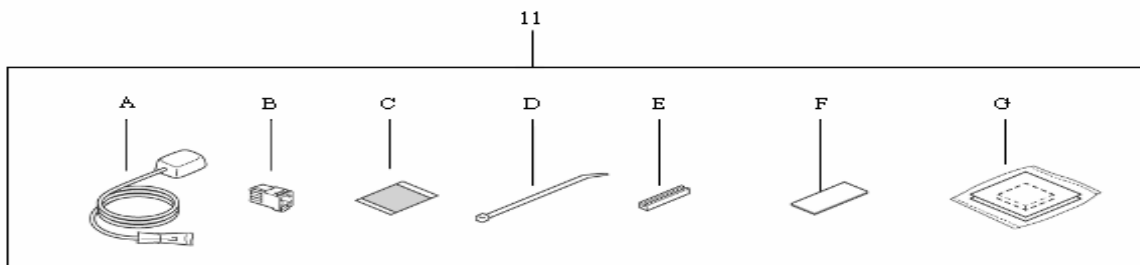
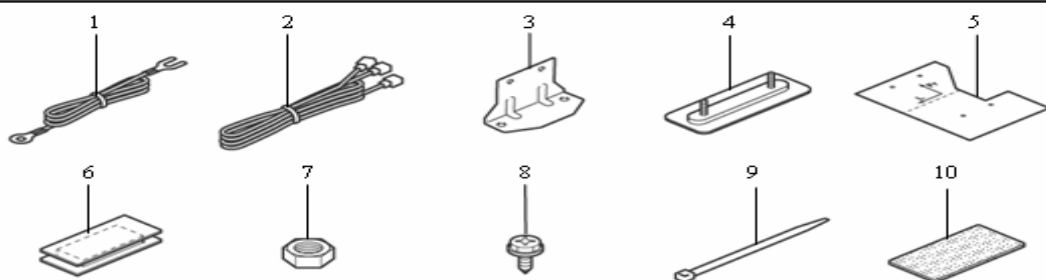
Parts Description of Tuner Assembly (86180-0W031)



Item #	Parts Name	Parts No.	Qty
1	Tuner Assy, Stereo Component* <sup>1</sup>	86180-0W031	1

\*<sup>1</sup>: In the installation instructions and figures, this is referred to as "Tuner".

Parts Description of Mounting Kit (PT546-0C080)



Item #	Parts Name	Qty
1	Ground Cable	1
2	Wire, to Radio Installation* <sup>2</sup>	1
3	Tuner Bracket	2
4	Base Bracket	2
5	Template (to locate base bracket)	1
6	Cushion A (Butyl)	4
7	Nut (M6)	4
8	Screw (M5 x L8)	4
9	Lock Tie A	18
10	Cushion Tape (cord styling)	4
11	A Antenna	1
	B HFC Connector Housing	1
	C Sheet Tape (30mm x 30mm)	7
	D Lock Tie B	7
	E Cable Rail (10mm)	1
	F Butyl Tape (15mm x 15mm)	1
	G Protective Tape (20mm x 40mm)	2

\*<sup>2</sup>: In the installation instructions and figures, this is referred to as "Tuner Cable".

**Procedure**

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Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as: -

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

Please see your Toyota dealer for a copy of this document.

## NOTES



Removed Parts: -

Place all removed parts on a protected surface.



Connectors: -

When disconnecting electrical connectors, do not pull on the wires; pull on the connectors.



Lock Ties: -

When using lock ties to secure harness, clip the lock ties after securing them.

Machine Screws: -

Start all machine screws by hand.



When disconnecting a yellow connector for the SRS airbag, wait 90 seconds or more after disconnecting the negative battery cable before performing the next task.



## 1. Vehicle Protection.

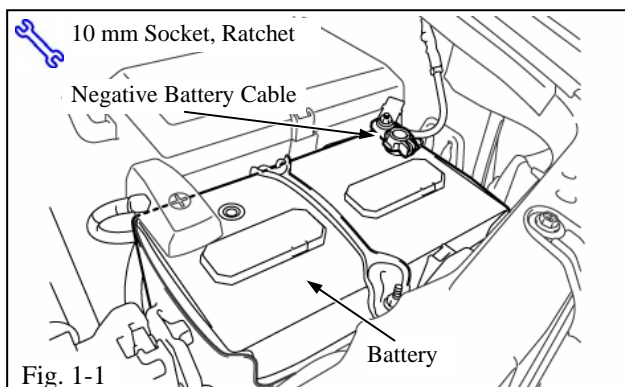
(a) Remove the negative battery cable. (Fig. 1-1)

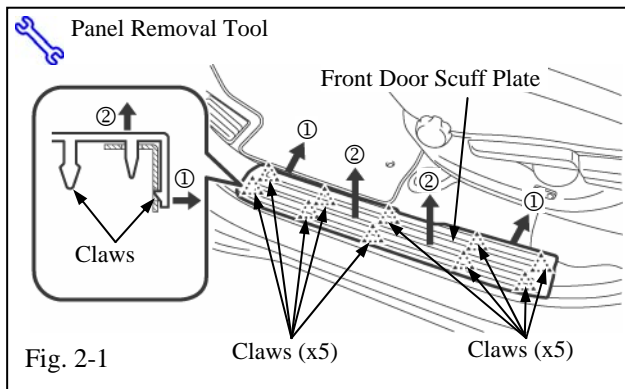


(1) Protect the fender before starting.



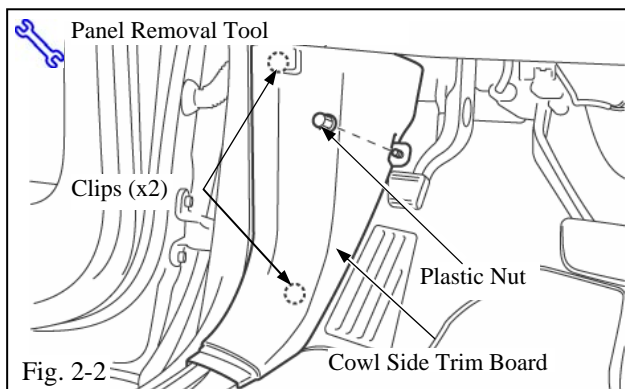
(2) Do not touch the positive terminal with any tool when removing cable.



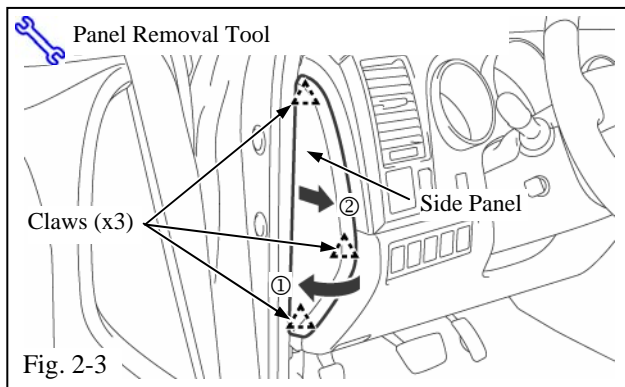


## 2. Disassembly of Vehicle.

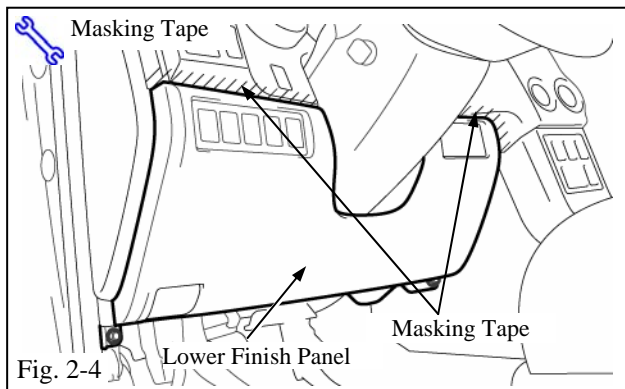
- (a) Disengage the ten (10) claws, then remove the left side front door scuff plate in the direction of arrow. (Fig. 2-1)



- (b) Remove the front left side cowl side trim board using the following steps.
  - (1) Remove the one (1) plastic nut. (Fig. 2-2)
  - (2) Disengage the two (2) clips, then remove the front left side cowl side trim board. (Fig. 2-2)



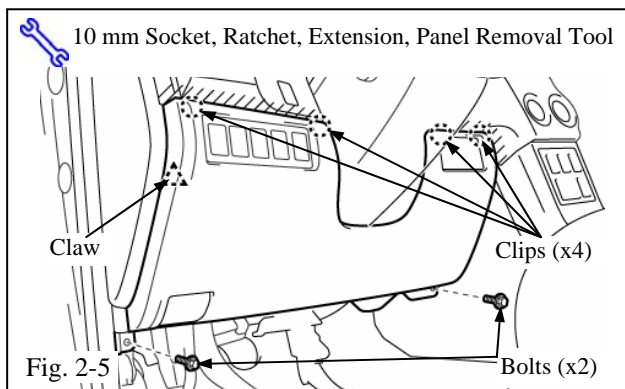
- (c) Disengage the three (3) claws, and then remove the side panel. (Fig. 2-3)



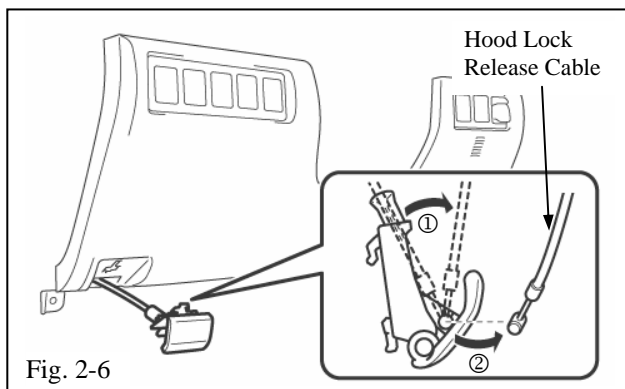
(d) Remove the lower finish panel.



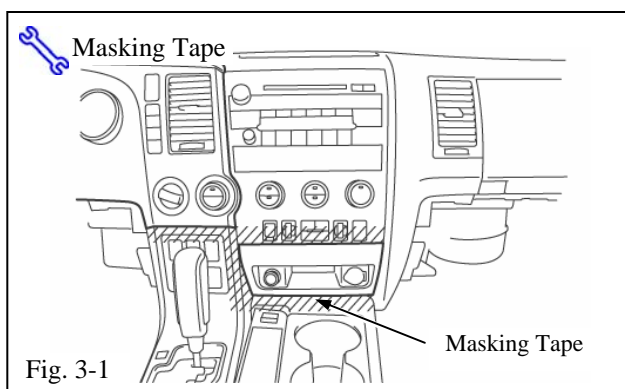
- (1) Apply masking tape around the instrument cluster finish panel which is located on the top of the lower finish panel shaded areas in the figure. (Fig. 2-4)



- (2) Remove the two (2) bolts. (Fig. 2-5)
- (3) Disengage the one (1) claw and four (4) clips, then remove the lower finish panel. (Fig. 2-5)
- (4) Disconnect the electrical connectors.



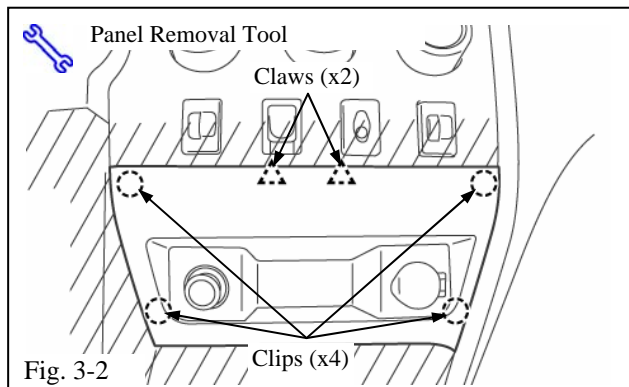
- (5) Disengage the hood lock release cable from the lever and then remove the hood lock release lever. (Fig. 2-6)



### 3. Remove Audio Head Unit.



- (a) In order to prevent scratches, apply masking tape around the center cluster (shaded areas in the figure) before performing the next step. (Fig. 3-1)

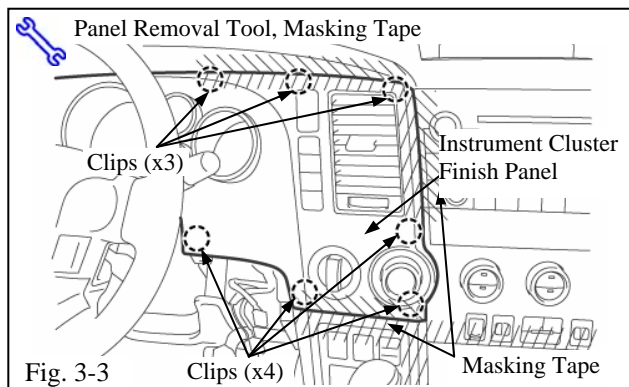


(b) Remove the cigarette lighter/accessory power panel.

(1) Disengage the two (2) claws and four (4) clips, and then remove the cigarette lighter/accessory power panel. (Fig. 3-2)

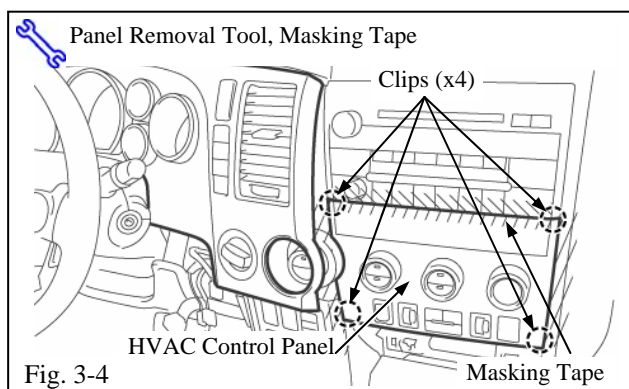
(2) Disconnect the electrical connectors.

(c) Remove the HVAC control panel.



(1) Apply masking tape around the instrument cluster finish panel shaded areas in the figure before performing the next step. (Fig. 3-3)

(2) In order to detach the instrument cluster finish panel from the HVAC control panel, disengage the seven (7) clips and pull the right side of the instrument cluster toward you to provide adequate clearance of about 40 mm (1.6 in.) so the HVAC control panel can be removed. (Fig. 3-3, 3-4)



(3) Apply masking tape around the audio head unit lower side and HVAC control panel upper side shaded areas in the figure before performing the next step. (Fig. 3-4)

(4) Disengage the four (4) clips, then remove the HVAC control panel. (Fig. 3-4)

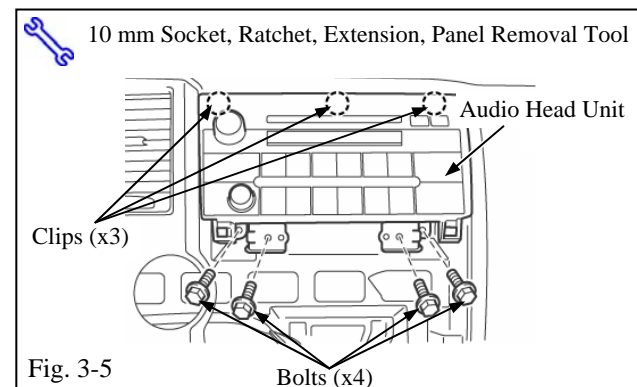
(5) Disconnect the electrical connectors.

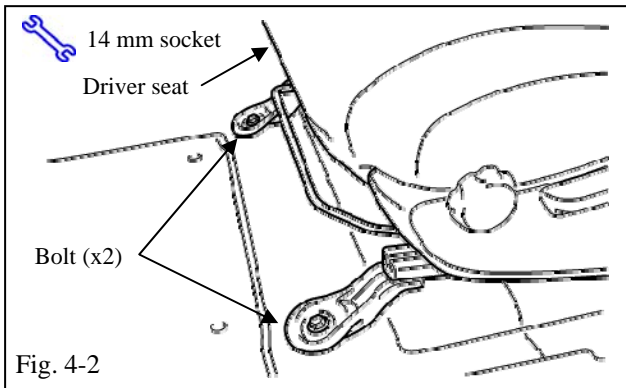
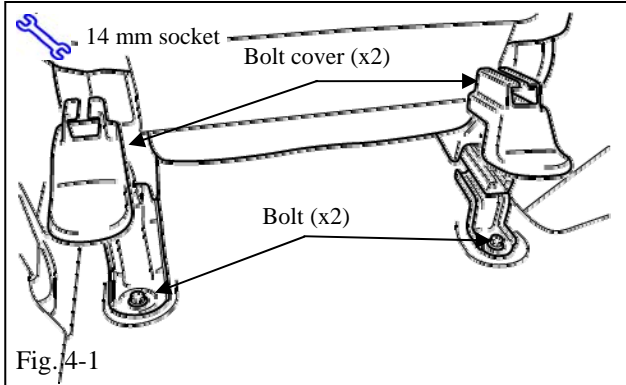
(d) Remove the audio head unit.

(1) Remove the four (4) bolts. (Fig. 3-5)

(2) Disengage the three (3) clips, then remove the audio head unit. (Fig. 3-5)

(3) Disconnect the electrical connectors.





#### 4. Driver Seat Removal

(a) Remove driver seat bolts.

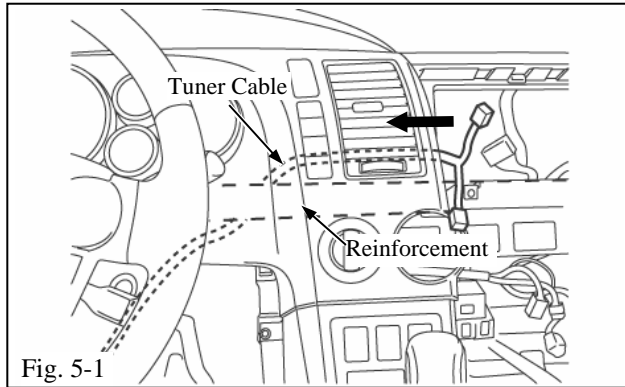
(1) Remove two (2) bolt covers and two (2) bolts from the rear mount brackets.

(Fig 4-1)

(2) Remove two (2) bolts from the front mount brackets; then tilt the seat back to access the floor area. (Fig 4-2)

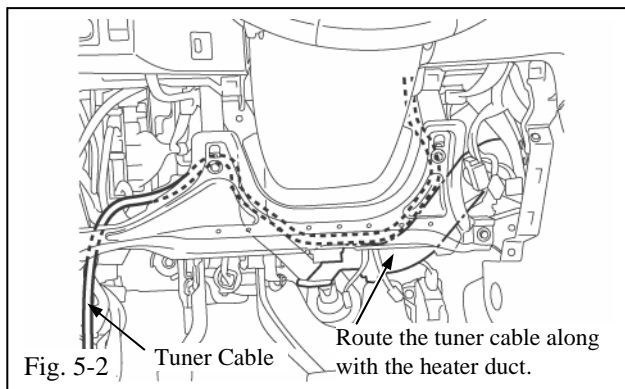


**NOTE:** Do not remove seat from vehicle. Tilt seat backwards. Do not remove electrical connectors.

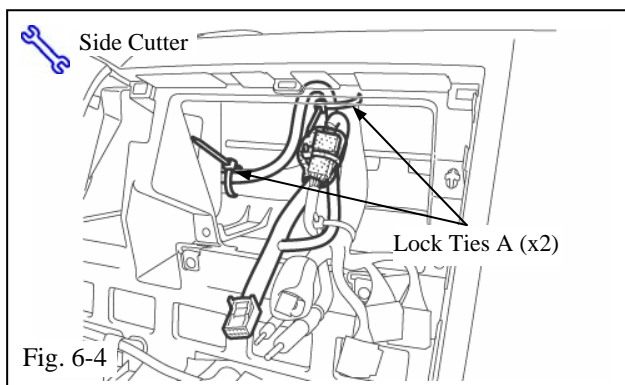
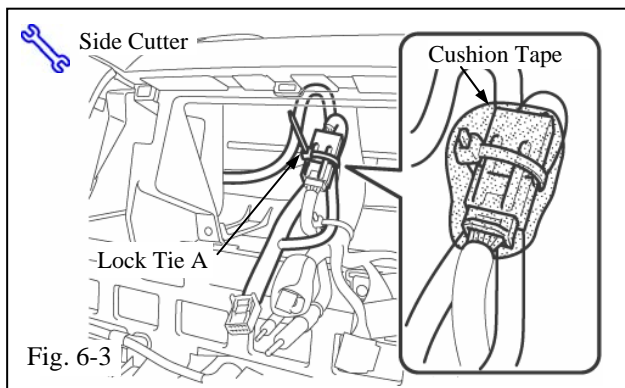
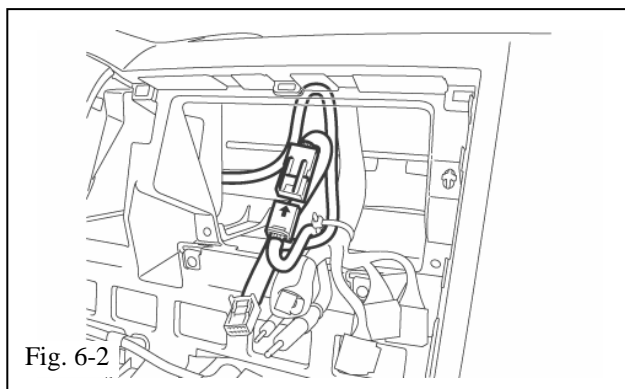
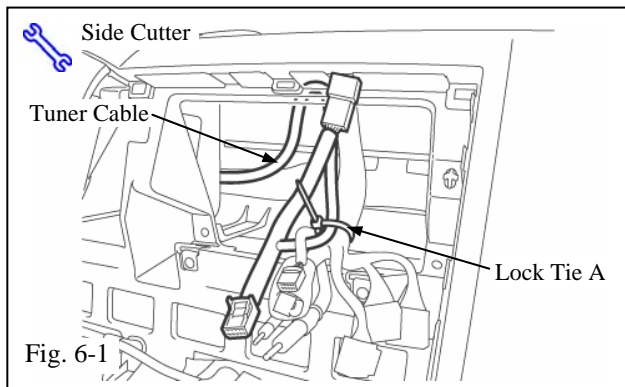


**5. Temporarily Set Tuner Cable into Instrument Panel**

- (a) Tilt up the steering wheel to the highest position.
- (b) Route the tuner cable through the space between the reinforcement and the front panel from the center cluster. (Fig. 5-1)



- (1) Route the tuner cable as shown in the figure. (Fig. 5-2)



## 6. Tuner Cable Wiring of Center Cluster Area (Model with Navigation Display)

**NOTE:** For the model without the navigation display, see page 10.

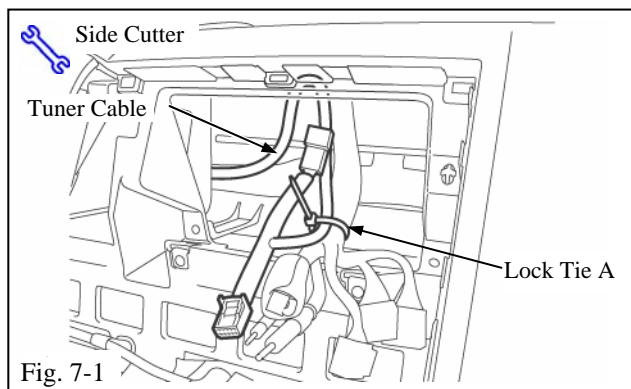
- (a) Secure the tuner cable with the one (1) lock tie A. (Fig.6-1)
- (b) Use the side cutter to cut off the excess lock tie length.

- (c) Bend the female connector of the tuner cable wire harness as shown, and connect to the black 12-pin connector of the vehicle wire harness. (Fig.6-2)

- (d) Secure the tuner cable to the radio harness of the body with one (1) lock tie A. (Fig. 6-3)
- (e) Use the side cutter to cut off the excess lock tie length.
- (f) Roll up the cushion tape on the secured connector fixed to the wire harness of the body. (Fig. 6-3)

- (g) Secure the tuner cable with two (2) lock ties A. (Fig. 6-4)
- (h) Use the side cutter to cut off the excess lock ties length.

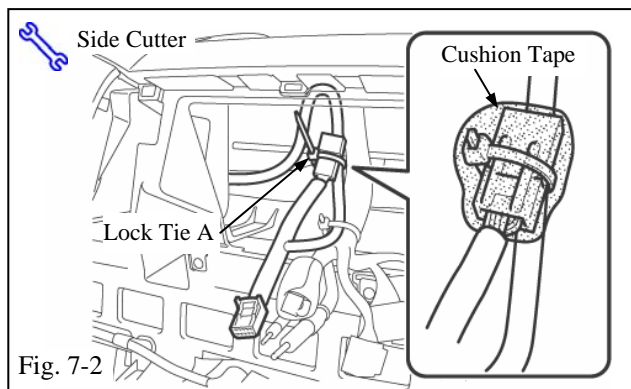
**NOTE:** For the rest of the procedure, see page 11.



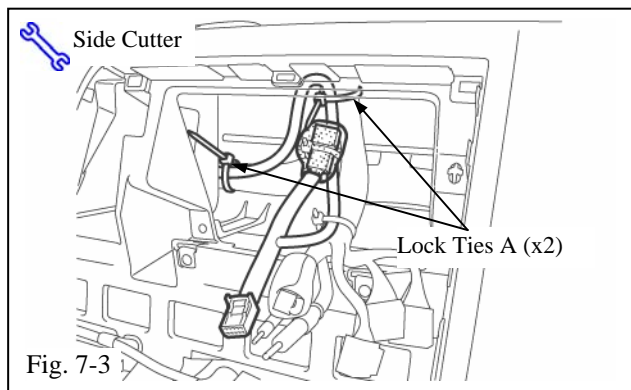
## 7. Tuner Cable Wiring of Center Cluster Area (Model without Navigation Display)

**NOTE:** For the model with the navigation display, see page 9.

- (a) Secure the tuner cable with the one (1) lock tie A. (Fig.7-1)
- (b) Use the side cutter to cut off the excess lock tie length.



- (c) Secure the female connector of tuner cable with the one (1) lock tie A. (Fig. 7-2)
- (d) Use the side cutter to cut off the excess lock tie length.
- (e) Roll up the cushion tape on the secured connector fixed to the wire harness of the body. (Fig. 7-2)



- (f) Secure the tuner cable with the two (2) lock ties A. (Fig. 7-3)
- (g) Use the side cutter to cut off the excess lock ties length.

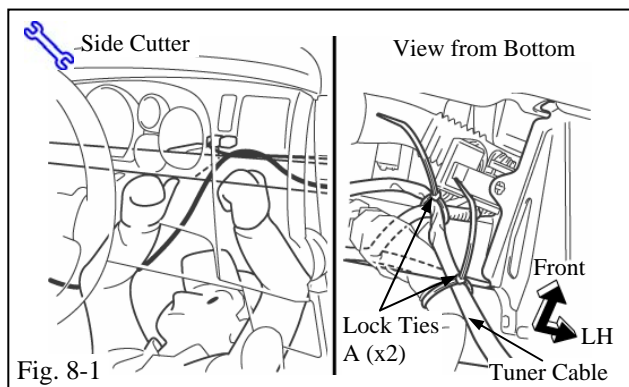


Fig. 8-1

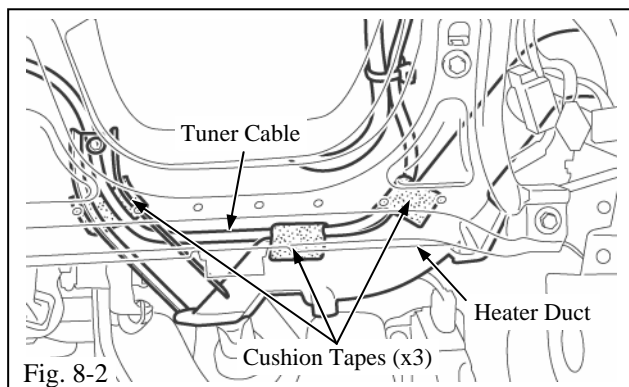


Fig. 8-2

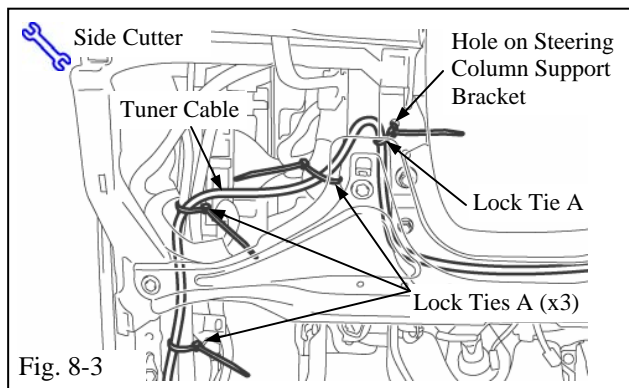


Fig. 8-3

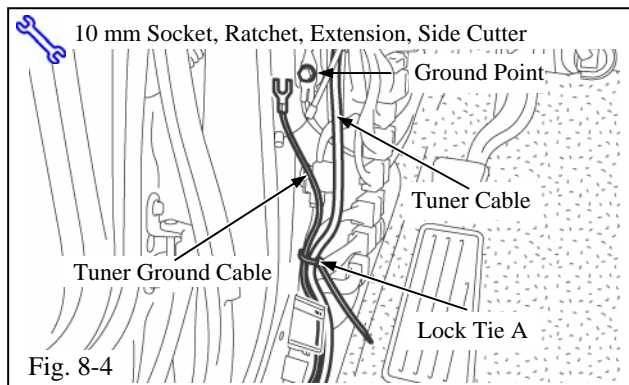


Fig. 8-4

## 8. Tuner Cable Wiring of Left Side Area

(a) Secure the tuner cable with the two (2) lock ties A. (Fig. 8-1)

(1) Secure the vehicle wire harness to the tuner cable at the position near the black connector using a lock tie A as shown. (Fig. 8-1)

(2) Secure the tuner cable to the vehicle wire harness using a lock tie A as shown. (Fig. 8-1)

(b) Use the side cutter to cut off the excess lock ties length.

(c) Use the cushion tapes to fix the tuner cable at the three (3) locations shown in the figure. (Fig.8-2)

(d) Secure the tuner cable with four (4) lock ties A. (Fig 8-3)

(1) Secure the tuner cable to the hole on the steering column support bracket using the one (1) lock tie A as shown.

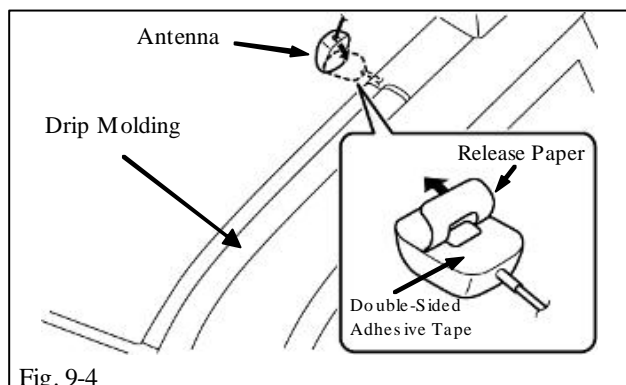
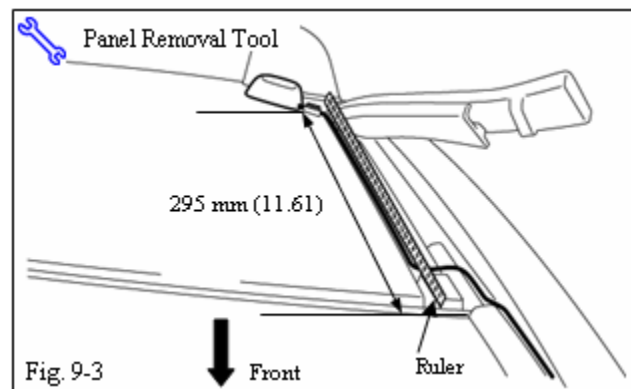
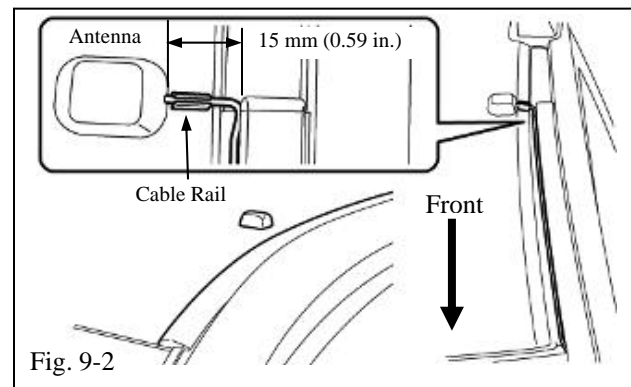
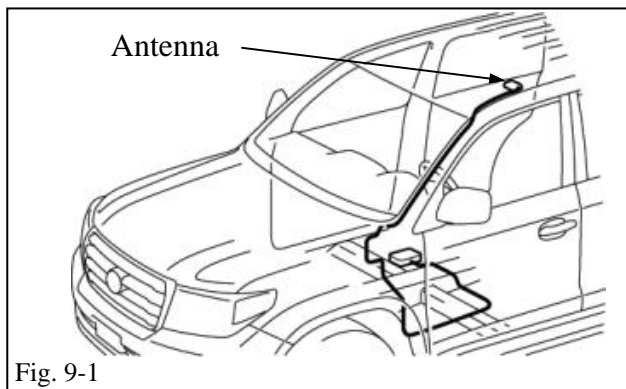
(2) Secure the tuner cable to the vehicle wire harness using the three (3) lock ties A as shown.

(e) Use the side cutter to cut off the excess lock ties length.

(f) Install the spade end of the tuner ground cable onto the bolt located on the cowl side. (Fig. 8-4)

(g) Secure the tuner ground cable and tuner cable to the vehicle wire harness using a lock tie A as shown. (Fig. 8-4)

(h) Use the side cutter to cut off the excess lock tie length.



## 9. Install Antenna.

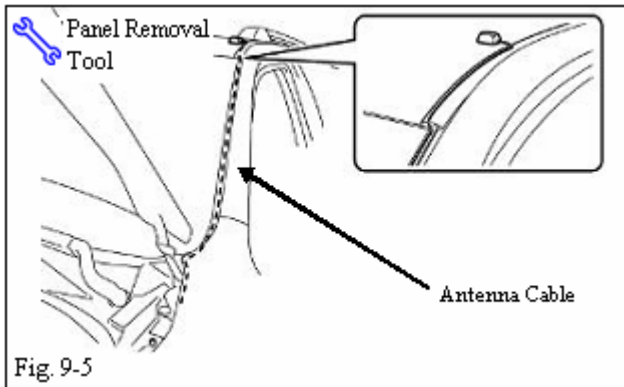
Antenna installation and wiring should be performed as illustrated in the following steps. (Fig. 9-1)

- (a) Clean the antenna cord rail mounting area with 3M Prep Sol-70 and cleaning method. (Fig. 9-2)
- (b) When cleaning with 3M Prep Sol-70.
 

**STOP** (1) Always use a clean (lint free scratch resistant) soft cloth (or wipe), and clean a small area at a time ( ~ 3 ft. × 3 ft. max.).

**STOP** (2) Apply 3M Prep Sol-70 to cloth or wipe. Do not spray cleaning solution directly on any vehicle surfaces.

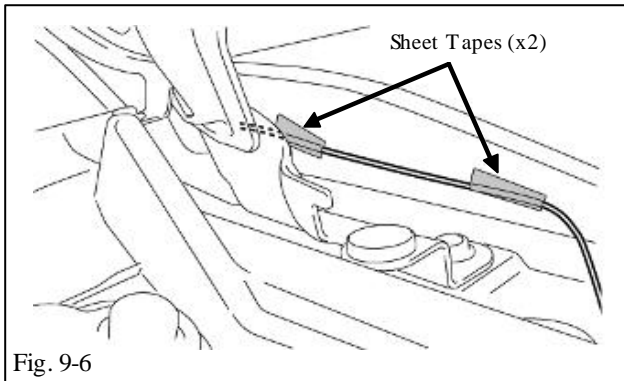
(3) Clean surface thoroughly and wipe dry immediately with a new clean cloth. Do not allow cleaner to air dry.
- (c) Temporarily place the antenna at the position as shown, and confirm the installation position. (Fig. 9-2)
- (d) Attach the cable rail on the left front of the roof. (Fig. 9-2)
- (e) Route the antenna cable as shown under the drip molding. (Fig. 9-3)
- (f) Remove the release paper from the back of antenna, and then install the antenna from the roof rail side as shown. (Fig. 9-4)



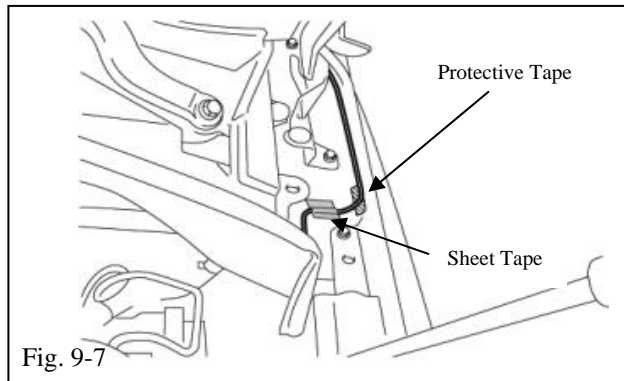
- (g) Bury the antenna cable into the front windshield weather strip using the panel clip removal tool or tools. (Fig. 9-5)

**NOTE:** Bury the antenna cable all the way into the weather strip.

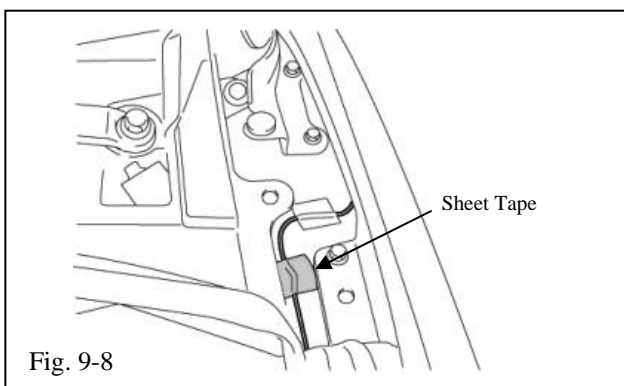
**NOTE:** Check for any gaps between the weather strip and the windshield.



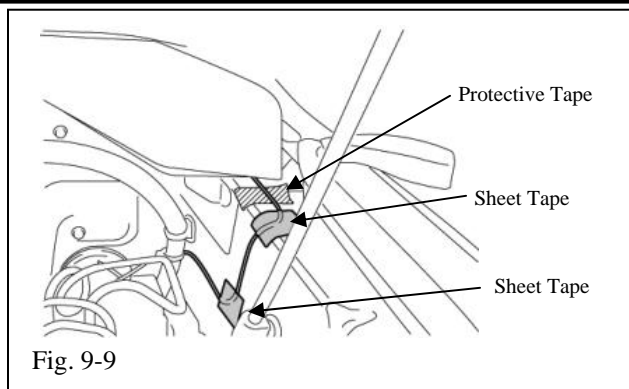
- (h) Route the antenna cable as shown, and then secure with two (2) sheet tapes. (Fig. 9-6)



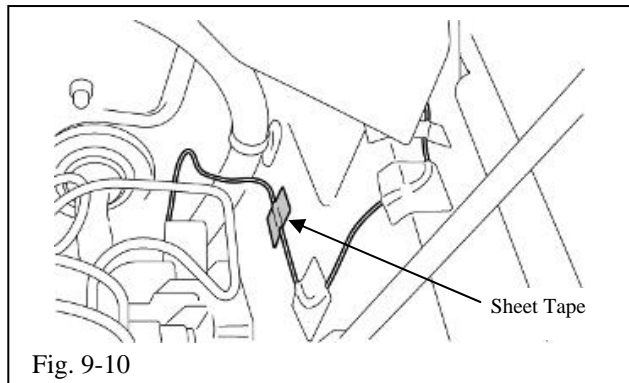
- (i) Route the antenna cable as shown, and then apply one (1) sheet tape and one (1) protective sheet as shown in the figure. (Fig. 9-7)



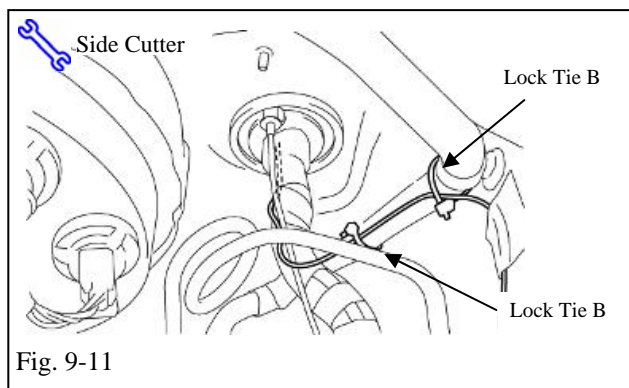
- (j) Route the antenna cable as shown, and then apply one (1) sheet tape as shown in the figure. (Fig. 9-8)



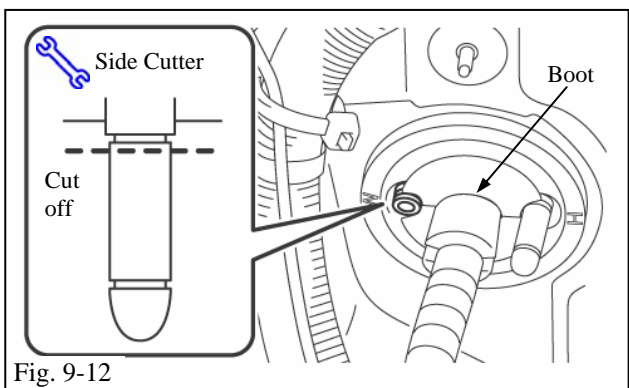
- (k) Route the antenna cable as shown, and then apply two (2) sheet tapes and one (1) protective sheet as shown in the figure. (Fig. 9-9)



- (l) Route the antenna cable back toward engine compartment and apply one (1) sheet tape as shown in the figure. (Fig. 9-10)



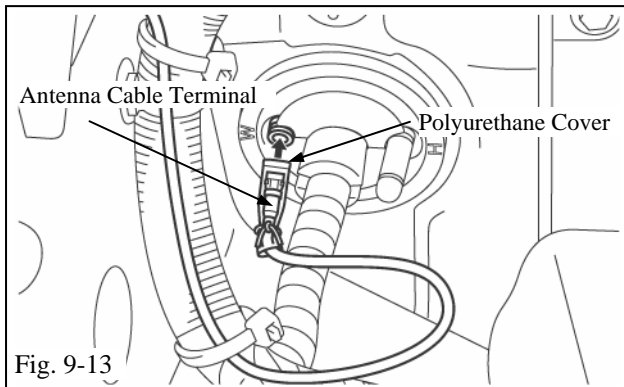
- (m) Secure the antenna cable to the vehicle wiring harness in the engine compartment with the two (2) lock ties B. (Fig. 9-11)
- (n) Use the side cutter to cut off the excess lock ties length.



- (o) Cut off the boot on the "W" side in the engine compartment. (Fig. 9-12)

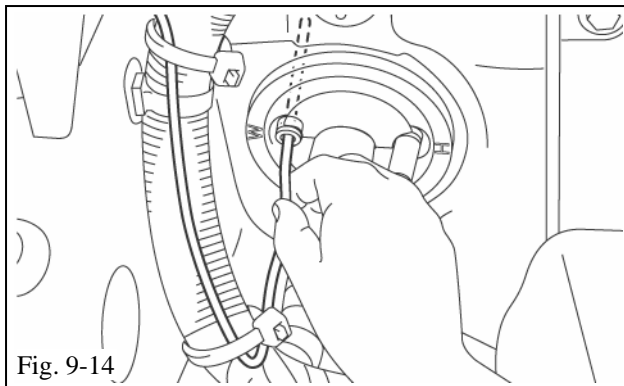


**NOTE:** Use soapy water as lubricant for the following steps of routing antenna cable through the boot into the cabin.



(p) Insert the antenna cable terminal with the polyurethane cover attached. (Fig. 9-13)

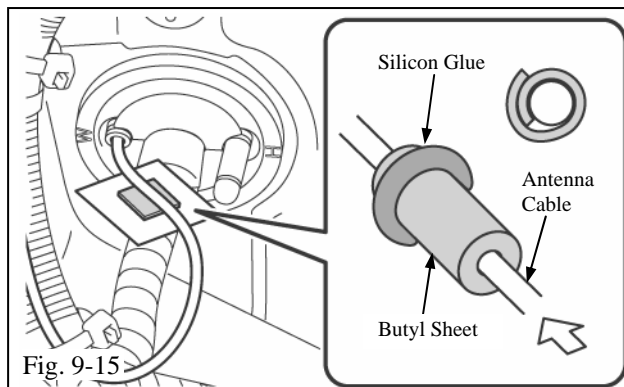
(1) When the antenna cable terminal passes through to the cabin, pull the antenna cable into the cabin.



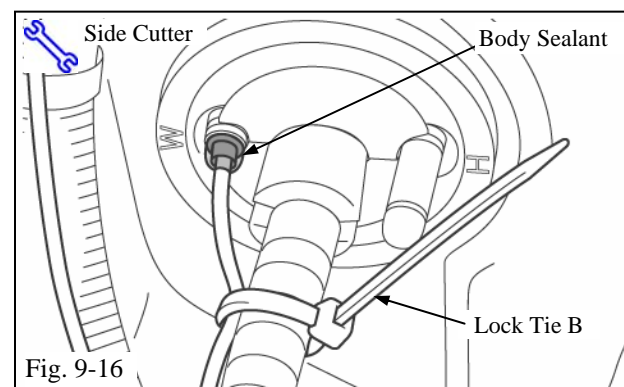
(q) Prevent water intrusion to the cabin.

(1) Pull the antenna cable a little back to the engine compartment, and then define the position to secure with slack in the antenna cable as shown. (Fig. 9-14)

(2) Pull the antenna cable a little paying attention not to pull the antenna cable terminal back to the engine compartment. Then, wrap the butyl sheet (15 x 15 mm, 0.59 x 0.59 in.) around the predefined position to secure. (Fig. 9-15)



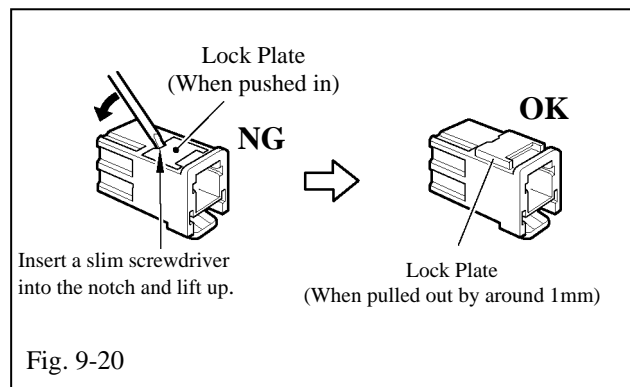
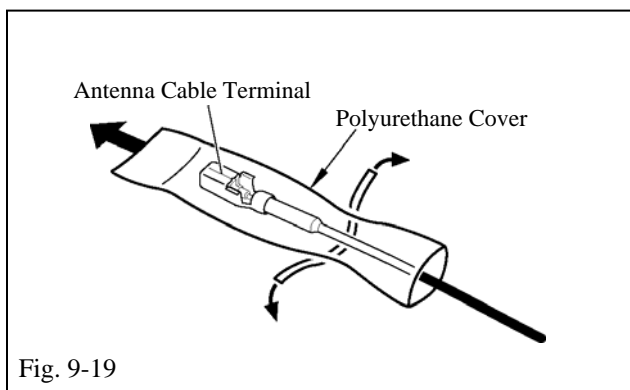
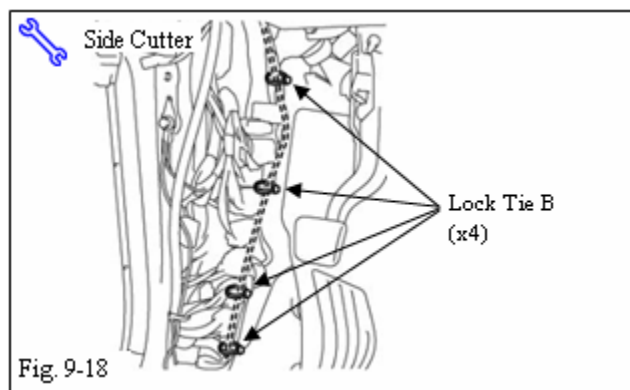
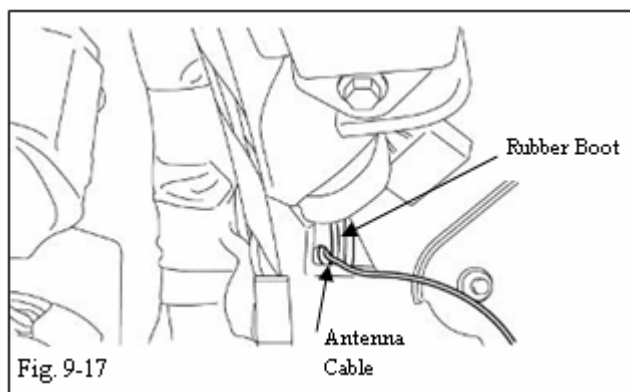
(3) Apply the body sealant on the outside of the butyl sheet, and then insert the antenna cable into the boot again. (Fig. 9-15)



(4) Apply more body sealant from the outside to make the boot hole airtight. (Fig. 9-16)

(5) Secure the antenna cable to the vehicle wiring harness in front of the boot with the lock tie B. (Fig. 9-16)

(6) Use the side cutter to cut off the excess lock tie length.



(r) Wiring in the cabin.

(1) Pull antenna wire into the interior of vehicle thru rubber boot as shown.

(Fig. 9-17)

(2) Route antenna cable down the cowl side trim adjacent to the floor carpet as shown. Secure antenna cable with four (4) lock ties. (Fig. 9-18)

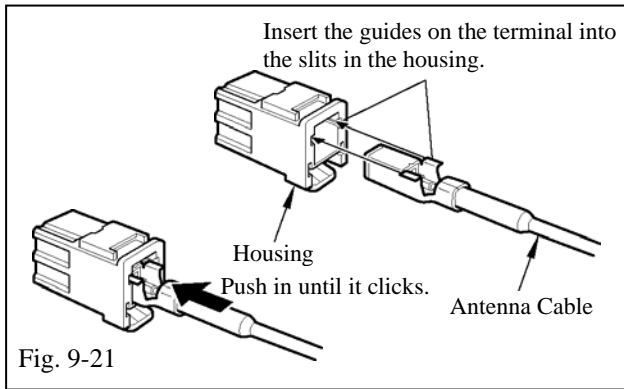
(3) Use the side cutter to cut off the excess lock tie length.

(s) Attach housing to the antenna cable terminal.

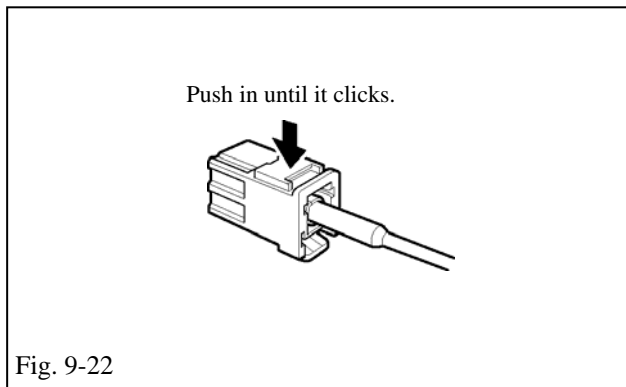
(1) Remove the polyurethane cover from the terminal. (Fig. 9-19)

(2) If the lock plate of the housing is pushed in, pull it out. (Fig. 9-20)

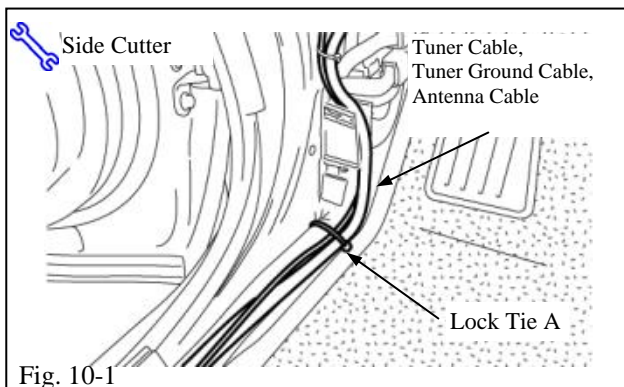
**NOTE:** This step is not required if the lock plate is already pulled out.



(3) Push the terminal into the housing. (Fig. 9-21)



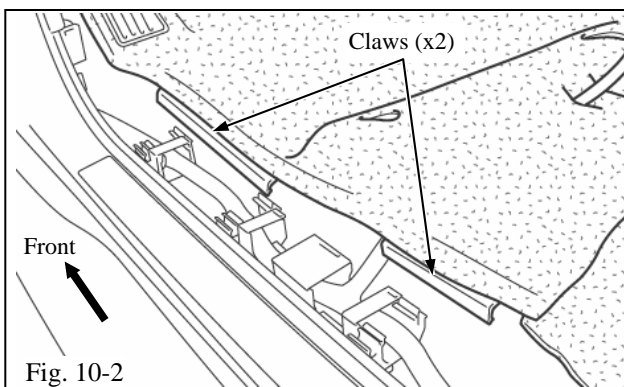
(4) Push the lock plate in. (Fig. 9-22)



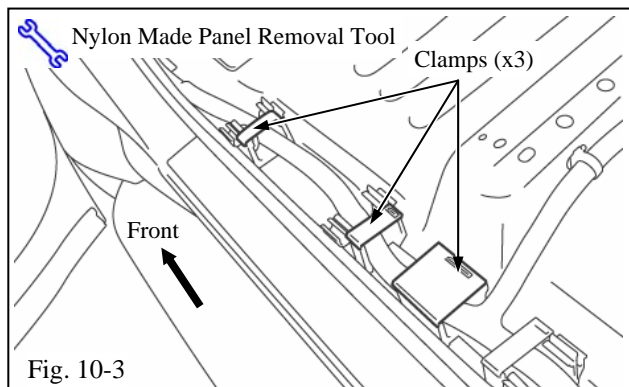
## 10. Route Tuner Cable, Antenna Cable and Tuner Ground Cable

(a) Secure the tuner cable, the antenna cable and the tuner ground cable all together with a lock tie A. (Fig. 10-1)

(b) Use the side cutter to cut off the excess lock tie length.



(c) Disengage the two (2) claws, and pull up the floor carpet on the left side. (Fig. 10-2)



(d) Disengage the three (3) clamps. (Fig. 10-3)

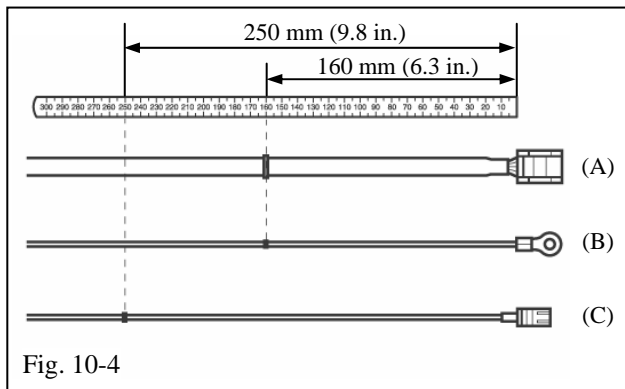


Fig. 10-4

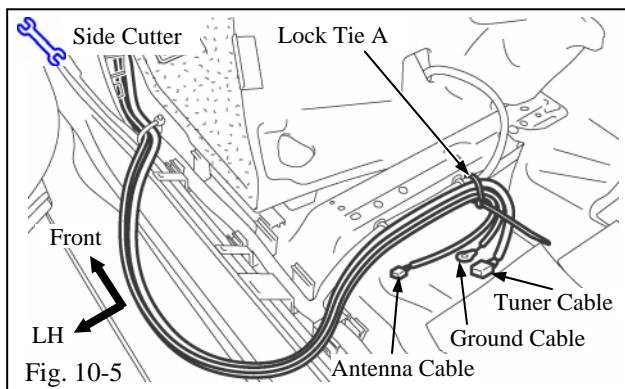


Fig. 10-5

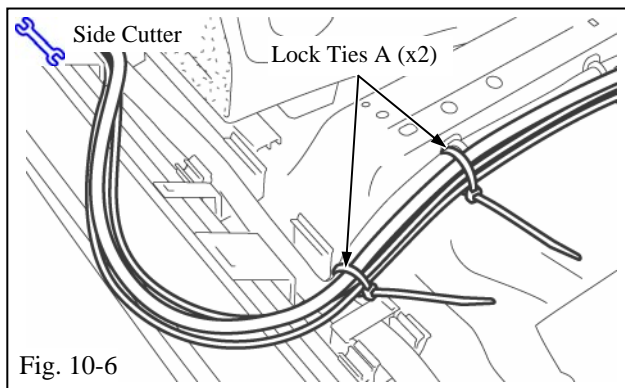


Fig. 10-6

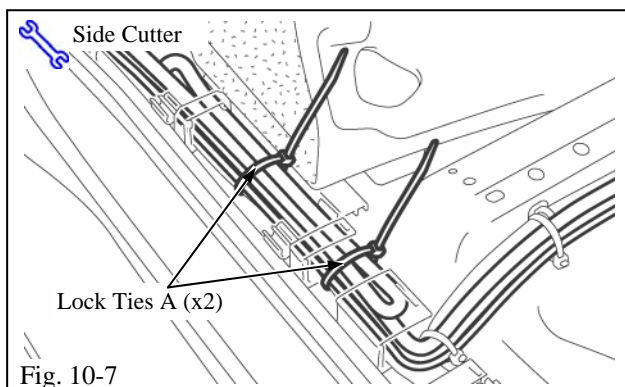


Fig. 10-7

(e) Mark each of the cables as shown in the figure. (Fig. 10-4)

(A) Tuner cable : 160 mm (6.3 in.)

(B) Ground cable : 160 mm (6.3 in.)

(C) Antenna cable : 250 mm (9.8 in.)

(f) Secure the marked areas of the tuner cable, antenna cable, ground cable to the wire harness with a lock tie A. (Fig. 10-5)

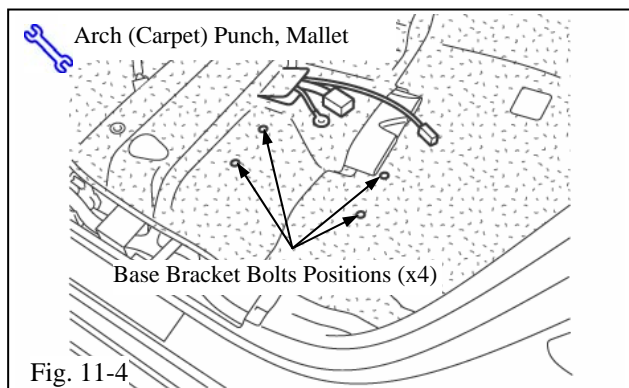
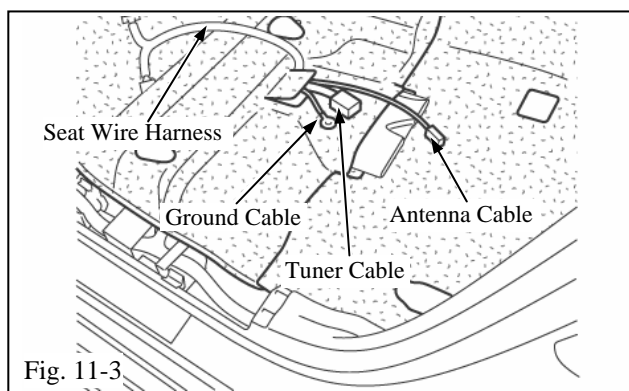
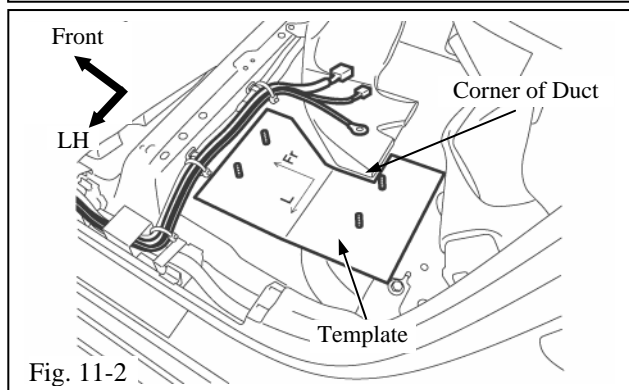
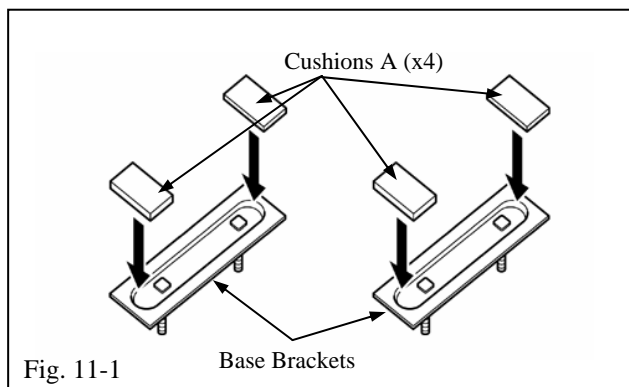
(g) Use the side cutter to cut off the excess lock tie length.

(h) Route the tuner cable, antenna cable, and ground cable as shown, and then secure them with the two (2) lock ties A. (Fig. 10-6)

(i) Use the side cutter to cut off the excess lock ties length.

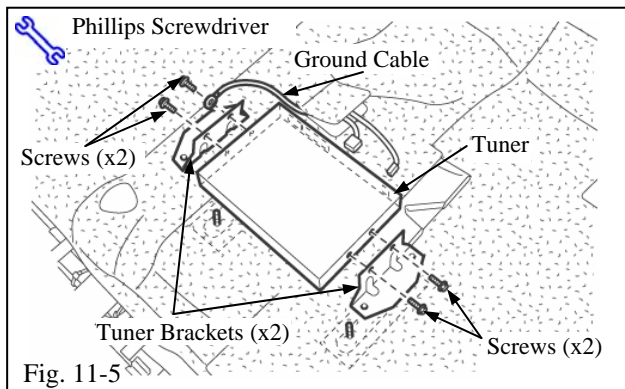
(j) Even out the length of the cables and secure the tuner cable, antenna cable, and ground cable with the two (2) lock ties A. (Fig. 10-7)

(k) Use the side cutter to cut off the excess lock ties length.

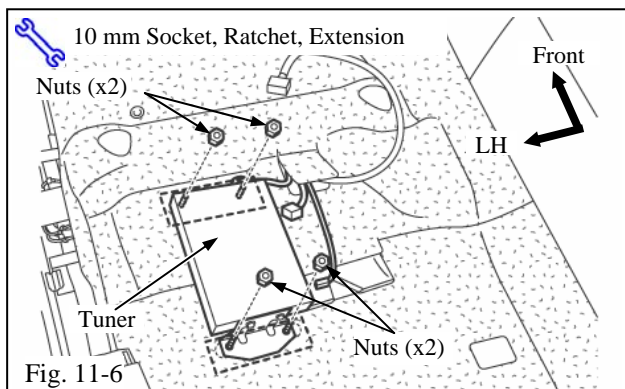


## 11. Install Tuner.

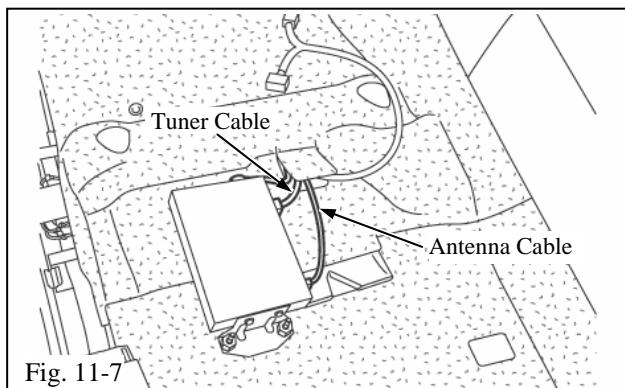
- (a) Install the four (4) cushions A (butyl) onto the bottom of the base brackets. (Fig. 11-1)
- (b) Clean the bracket mounting surface of the vehicle floor pan with 3M Prep Sol-70.
- (c) Run the part of the bolts on the bracket through from the backside of the template, and apply the template to the bracket.
- (d) Place the edge of the template attached to the bracket to the corner of the duct. (Fig. 11-2)
- (e) Apply pressure on the base brackets from above.
- (f) Detach the template from the bracket.
- (g) Route the tuner cable, antenna cable, ground cable, and seat wire harness through the floor carpet hole. (Fig. 11-3)
- (h) Reinstall the floor carpet to the original position
- (i) Verify the base bracket bolt positions. Transfer each bolt location onto the floor carpet using arch (carpet) punch and mallet to cut the four (4) holes in floor carpet. (Fig. 11-4)
- (j) Pass the base bracket bolts through the carpet.



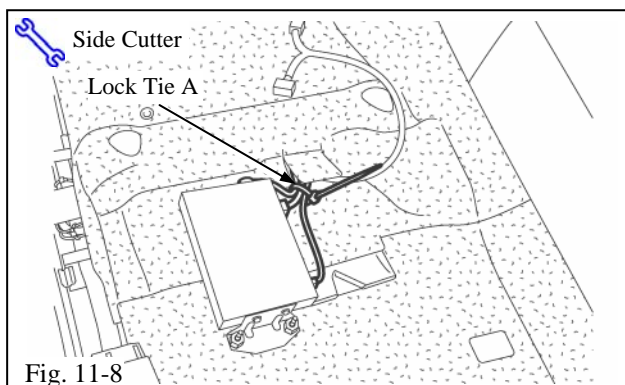
- (k) Install the tuner brackets and ground cable onto the tuner so the connectors face toward the right of the vehicle. (Fig. 11-5)



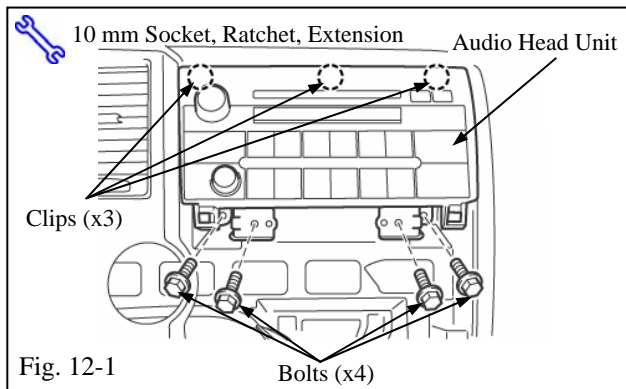
- (l) Secure the tuner onto the base brackets. (Fig. 11-6)



- (m) Plug the tuner cable and antenna cable into the tuner. (Fig. 11-7)
- (1) Connect the antenna cable connector to the tuner.
  - (2) Connect the tuner cable connector to the tuner.



- (n) Secure the tuner cable, antenna cable, and ground cable with the one (1) lock tie A. (Fig. 11-8)
- (o) Use the side cutter to cut off the excess lock tie length.



## 12. Reinstall Audio Head Unit.

- (a) Connect the tuner cable connector and the electrical connectors removed in Step 3 (d) (3) into the rear of the audio head unit.
- (b) Insert the audio head unit into opening and reinstall the four (4) bolts and three (3) clips.  
(Fig. 12-1)

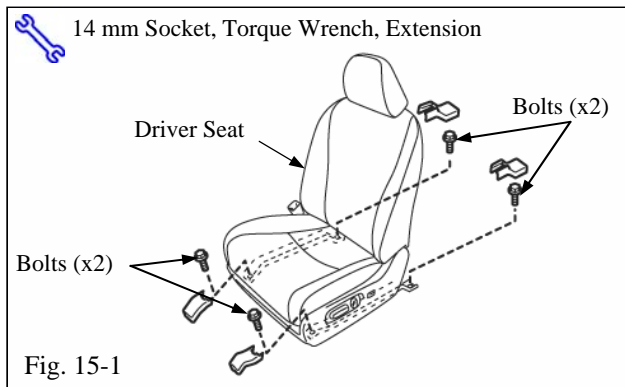
## 13. In Process Functional Test.

- (a) Temporarily reconnect the negative battery cable to the battery.
- (b) Turn the ignition key to ON (ACC).
- (c) Press the power button on the audio head unit. Verify the backlighting illuminates.
- (d) Press and release the “SAT” button on the audio head unit.
  - (1) Verify that a satellite channel is received, or a “NO SIGNAL” message appears on the display.

**NOTE:** If “ANTENNA” appears (flashing) on the display - then the antenna cable is disconnected from the tuner.

**NOTE:** If the audio head unit will not tune or go into satellite mode - then the tuner cable is disconnected from the tuner.

- (e) Turn the ignition key to OFF.
- (f) Disconnect the negative battery cable from the battery.



#### 14. Complete Reassembly of Vehicle.

- (a) Reinstall the front driver seat. (Fig. 15-1)

(1) Reinstall the four (4) bolts loosely, then tighten to specified torque.



(2) Tighten bolts to 37 N•m (27 lbf•ft)



- (b) Reconnect any disconnected electrical connectors.



- (c) Verify the panels fit together properly with no uneven gaps between them.

- (d) Clean up and remove any trash.

- (e) Place the owner “XM Satellite Radio” brochure in the glove box.

#### 15. Reconnect Negative Battery Cable.

- (a) Reconnect the vehicle’s negative battery cable. (Fig. 16-1)

(1) Position the negative terminal to the battery as shown (original factory position).

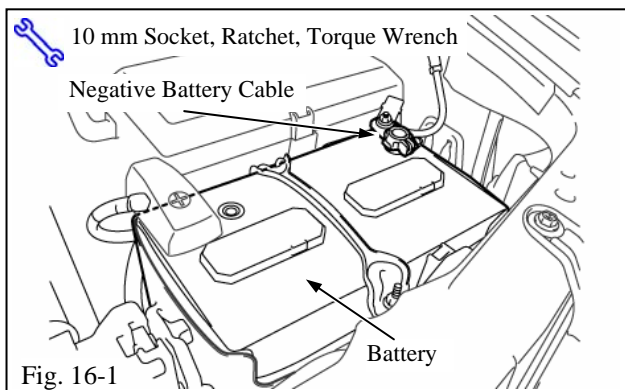


(2) Tighten the nut to 4.1 N•m (36 lbf•in.).



(3) Do not touch the positive terminal with any tool when installing the negative battery cable.

(4) Perform the XM RID registration process.



# TOYOTA SEQUOIA 2008 - XM SATELLITE RADIO

Checklist - these points **MUST** be checked to ensure a quality installation.

Check:	Look For:
<u>Accessory Function Checks</u>	
<input type="checkbox"/> Satellite radio	Verify the proper operation of the satellite radio.*
<input type="checkbox"/> Audio head unit	Verify the proper operation of the audio head unit.* *: Refer to the XM Satellite Radio Brochure and audio head unit owner's manuals.
<input type="checkbox"/> Navigation system	Execute DTC check, and confirm there is no error. (Refer to the SEQUOIA Repair Manual.)
<u>Vehicle Function Checks</u>	
<input type="checkbox"/> Driver's seat belt reminder light	Proper operation of the driver's seat belt reminder light.
<input type="checkbox"/> Removed seat	Verify the removed seat is securely fastened and proper operation of power seat operation.
<input type="checkbox"/> Seat lock mechanism	Verify the proper operation of the removed seat lock mechanism.
<input type="checkbox"/> SRS warning light	Verify the SRS warning light illuminates for approximately 6 seconds with the ignition switch ON, and then goes out.
<input type="checkbox"/> HVAC (heating ventilation and air conditioning) system	Proper operation of the air conditioning system.
<input type="checkbox"/> Hood lock release cable	Proper operation of the hood lock release cable.
<input type="checkbox"/> Instrument panel switches functions (Any electrical connectors removed in step 2. (f) and step 3. (b))	Verify the proper operation of the instrument panel finish panel switches functions.