

**Part Number: PTS31-48080**

**Kit Contents**

Item #	Quantity Req'd.	Description
1	1	Interior Antenna
2	1	Wire Harness
3	1	Bracket, Floor
4	3	Hardware Bag
5	1	Template
6	1	Sirius Satellite Radio Brochure

**Hardware Bag Contents – 1**

Item #	Quantity Req'd.	Description
1	6	Foam Pads
2	7	Lock Ties
3	1	Screw, Self-Tapping <b>DO NOT USE</b>
4	4	Double Sided Tape

**Hardware Bag Contents – 2**

Item #	Quantity Req'd.	Description
1	8	Screw (6-32x5/16)
2	3	Nut (Hex 6-32) <b>DO NOT USE</b>

**Hardware Bag Contents – 3**

Item #	Quantity Req'd.	Description
1	10	Lock Ties

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description
1	1	Sirius Satellite Receiver P/N: PTS31-53060

**Conflicts**

XM Satellite Radio
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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>
<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
Nylon Removal Tool	e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01
Masking Tape	(2" wide)
Needle-nose Pliers	
Carpet Cutter	
Side Cutter	
<b>Special Chemicals</b>	<b>Notes</b>
Cleaner	VDC Approved Cleaner

**General Applicability**

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**Recommended Sequence of Application**

Item #	Accessory

\*Mandatory

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

Item #	Quantity Req'd.	Description
1	1	Clip P/N 90950-08005

**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.
	<b>SAFETY TORQUE:</b> This mark indicates that torque is related to safety.

**Procedure**

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**

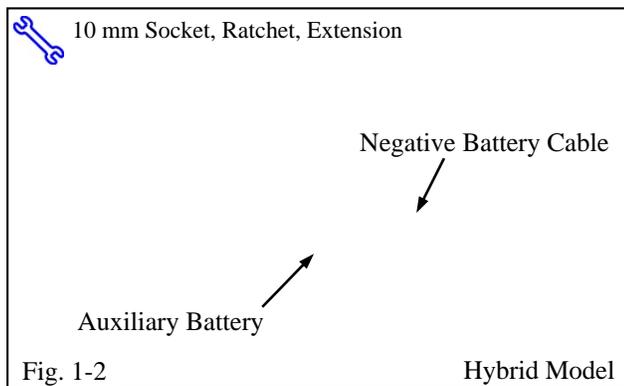
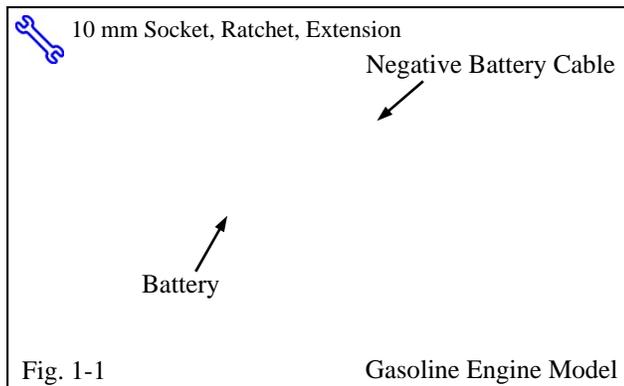
-  **Removed Parts:** -  
Place all removed parts on a protected surface.
-  **Connectors:** -  
When disconnecting electrical connectors, do not pull on the wires; pull on the connectors.
-  **Lock Ties:** -  
When using lock ties to secure harness, clip the lock ties after securing them.
-  **Machine Screws:** -  
Start all machine screws by hand.

**1. Vehicle Protection.**

- (a) Set parking brake.
- (b) On the gasoline engine model, disconnect the negative battery cable of the battery installed on the left side of the engine compartment. (Fig. 1-1)

**NOTE:** On the hybrid model, disconnect the negative battery cable of the auxiliary battery installed on the right side of the engine compartment. (Fig. 1-2)

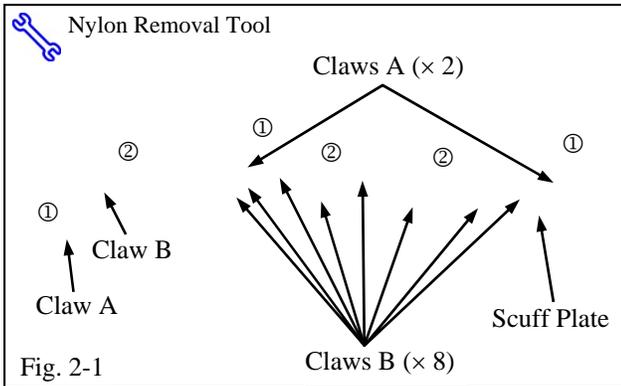
-  (1) Protect the fender before starting.
-  (2) Do not touch the positive terminal with any tool when disconnecting negative battery cable.



-  (c) Cover front seat, rear No. 1 seat, interior of vehicle, and center console.
-  (d) Wait 90 seconds before proceeding to disassemble vehicle.

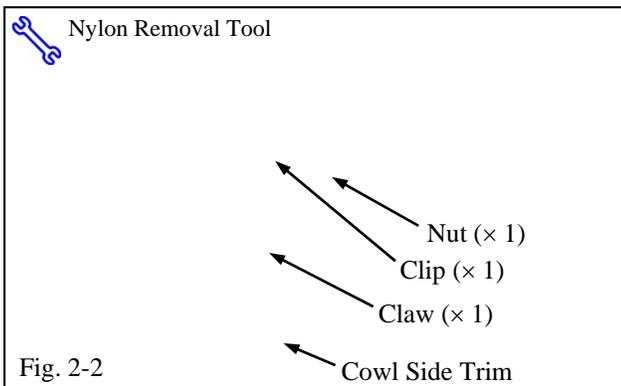
**2. Disassembly of Vehicle.**

- (a) Pull the front driver side scuff plate in the direction of the arrow, and disengage two (2) claws A and eight (8) claws B. (Fig. 2-1)

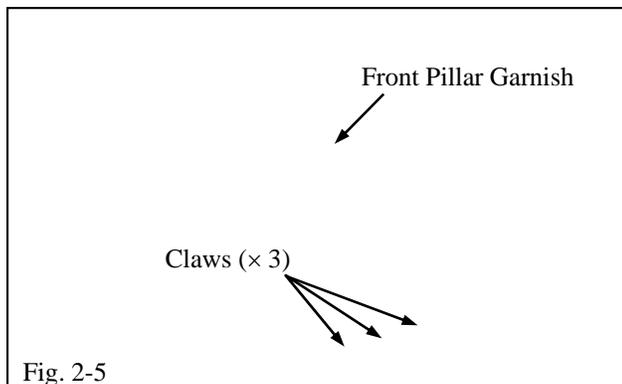
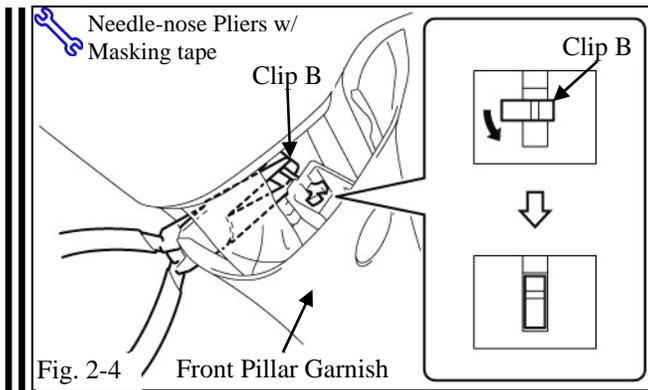
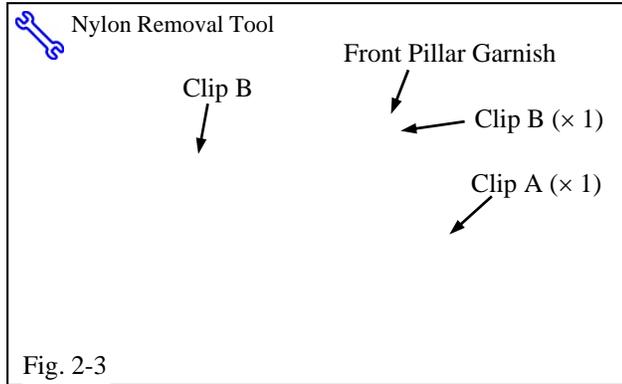


- (b) Remove the front driver side cowl side trim in the following steps.

- (1) Remove one (1) plastic nut. (Fig. 2-2)
- (2) Pull the front driver side cowl side trim in the direction of the arrow, and disengage one (1) clip and one (1) claw. (Fig. 2-2)



- (c) On the power seat model, temporarily connect the negative battery cable.
- (d) Slide the driver seat forward.
- (e) On the power seat model, disconnect the negative battery cable.
- (f) Remove the front door opening trim weatherstrip from the vehicle.



(g) Remove the driver side front pillar garnish in the following steps.

(1) Disengage one (1) clip A from the vehicle. (Fig. 2-3)

(2) Pull the front pillar garnish so that the tip of clip B locks in the front pillar garnish hole. (Fig. 2-3)

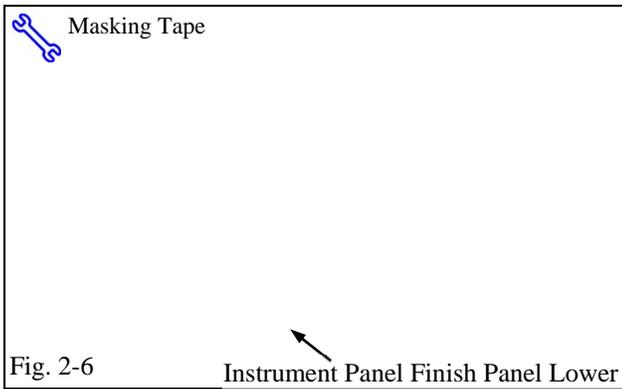
(3) Using tape-wrapped (to prevent damage) needle-nose pliers, rotate clip B 90°. (Fig. 2-4)

(4) Pull the front pillar garnish in the direction of the arrow, and disengage three (3) claws. (Fig. 2-5)

(5) If there is damage to clip B (i.e. scarred) or it is removed from the body, follow Steps 2(6) and 2(7), otherwise proceed to Step 2(h).

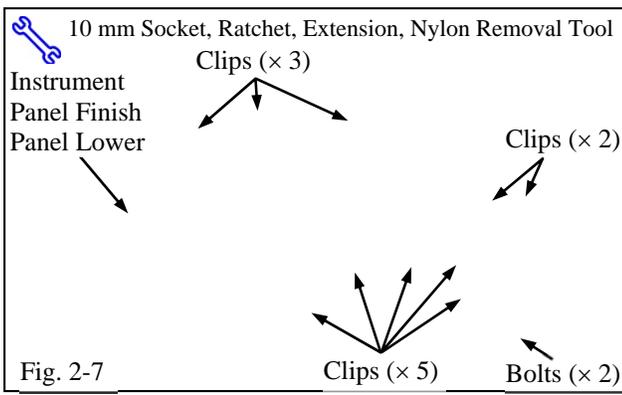
(6) Remove clip B from vehicle. *Perform this step only if there is damage to Clip B.*

(7) Install a new clip B on the front pillar garnish. Confirm the latest clip part number via the electronic parts catalog.



**STOP** (h) In order to prevent scratches, apply masking tape around the instrument panel finish panel lower (shaded areas in the figure) before performing the next step. (Fig. 2-6)

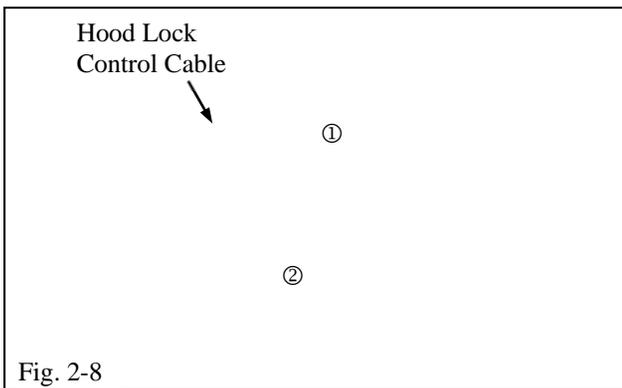
(i) Remove the instrument panel finish panel lower in the following steps.



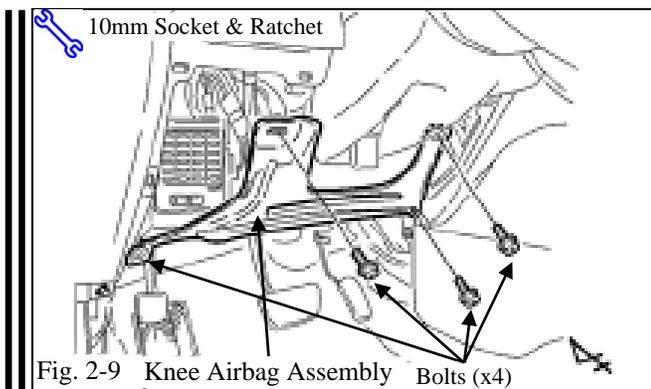
(1) Remove two (2) bolts. (Fig. 2-7)

(2) Pull the instrument panel finish panel lower in the direction of the arrow, and disengage ten (10) clips. (Fig. 2-7)

(3) Disconnect electrical connectors.

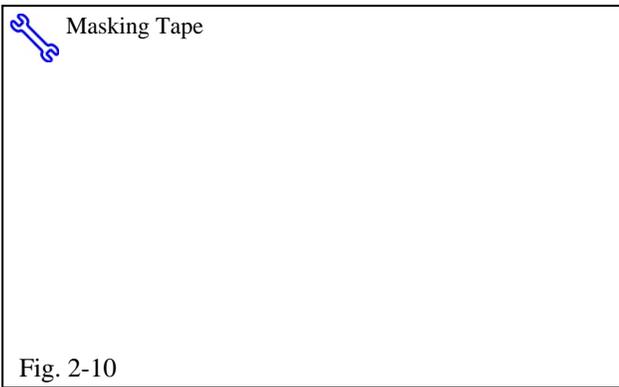


(4) Disengage the hood lock control cable. (Fig. 2-8)

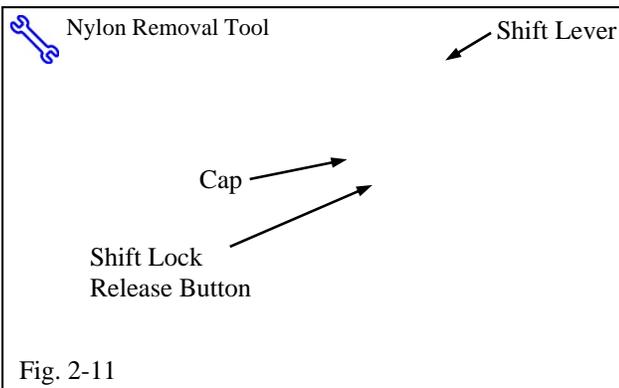


(5) Remove the knee air bag assembly. (Fig. 2-9)

**STOP CAUTION:** Support the knee air bag assembly with a cardboard box to prevent stress on the wires.



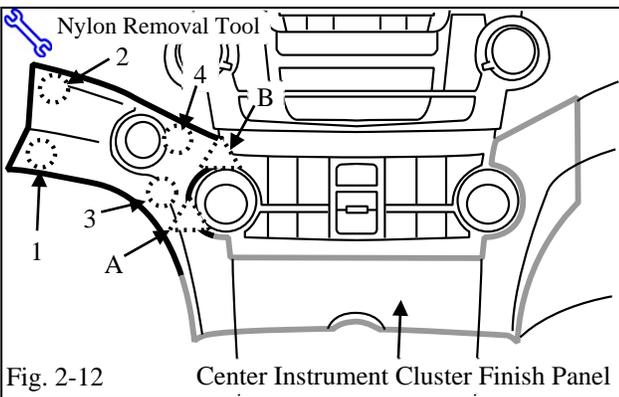
**STOP** (j) In order to prevent scratches, apply masking tape around the center cluster (shaded areas in the figure) before performing the next step. (Fig. 2-10)



(k) Remove the cap of the shift lock release button. (Fig. 2-11)

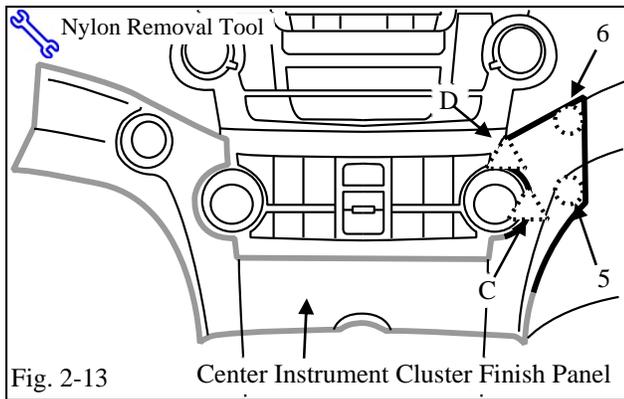
(l) Press the shift lock release button and move the shift lever to position D. (Fig. 2-11)

**!** (m) Remove the Center Instrument Cluster Finish Panel (w/ Smart Key System) in the following steps.

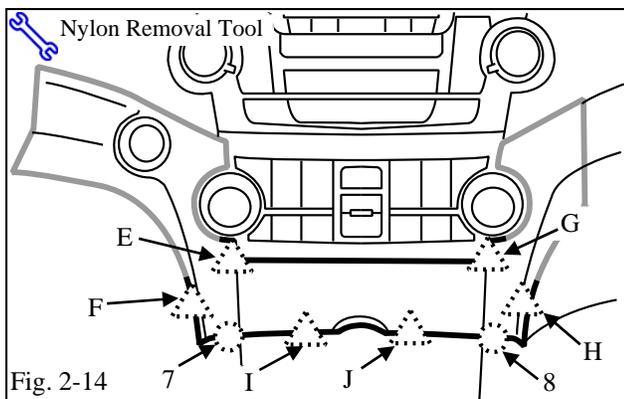


(1) Using a Nylon Removal Tool, disengage Clip 1 and 2. (Fig. 2-12)

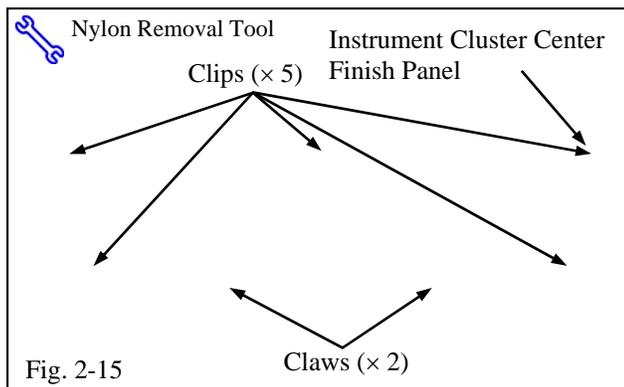
(2) Using a Nylon Removal Tool, disengage Clip 3 and 4, and Claw A and B. In case of Smart Key System, prevent the surface from bending damage. (Fig. 2-12)



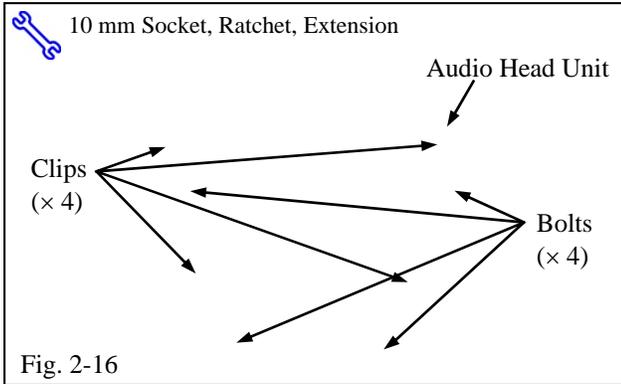
(3) Using a Nylon Removal Tool, disengage Clip 5 and 6, and Claw C and D. (Fig. 2-13)



- (4) Disengage Claw E and F and Clip 7. (Fig. 2-14)
- (5) Disengage Claw G and H and Clip 8. (Fig. 2-14)
- (6) Disengage Claw I and J. (Fig. 2-14)
- (7) Disconnect electrical connectors.



(n) Pull the instrument cluster center finish panel in the direction of the arrow, and disengage five (5) clips and two (2) claws. (Fig. 2-15)



(o) Remove the audio head unit in the following steps.

- (1) Remove four (4) bolts. (Fig. 2-16)
- (2) Pull the audio head unit in the direction of the arrow, and disengage four (4) clips. (Fig. 2-16)
- (3) Disconnect electrical connectors.

(p) Disassemble the driver seat as follows:

**STOP** (1) Protect the center console, floor, and rear No. 1 seat area.

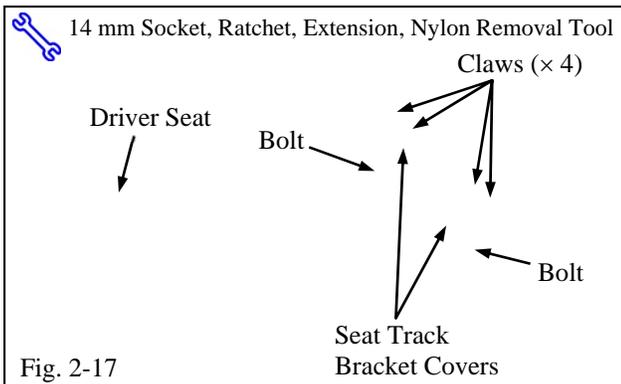
(2) On the power seat model, connect the negative battery cable.

(3) Slide the driver seat forward.

(4) Pull the seat track bracket covers on the rear side, and disengage four (4) claws. (Fig. 2-17)

(5) Remove two (2) bolts on the rear side. (Fig. 2-17)

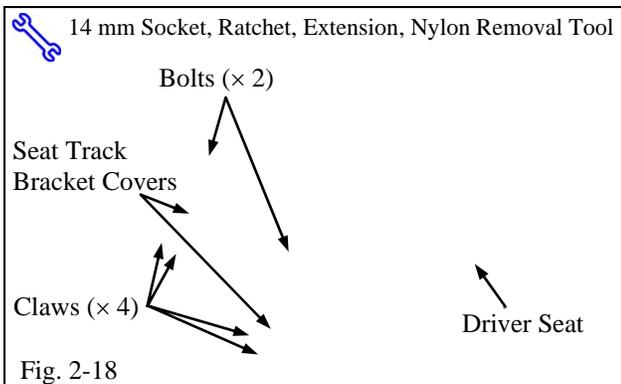
(6) Slide the driver seat rearward.

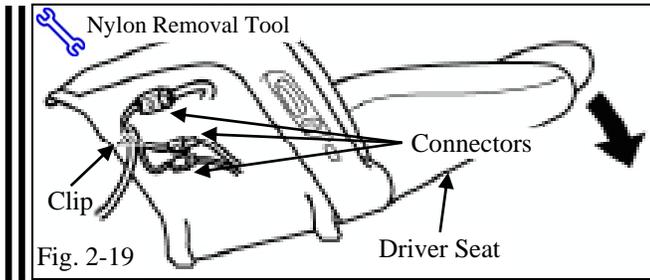


(7) Pull the seat track bracket covers on the front side, and disengage four (4) claws. (Fig. 2-18)

(8) Remove two (2) bolts on the front side. (Fig. 2-18)

(9) On the power seat model, disconnect the negative battery cable.

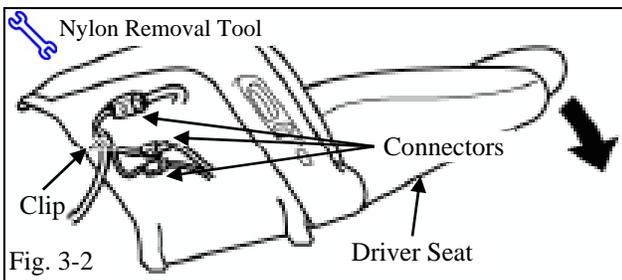
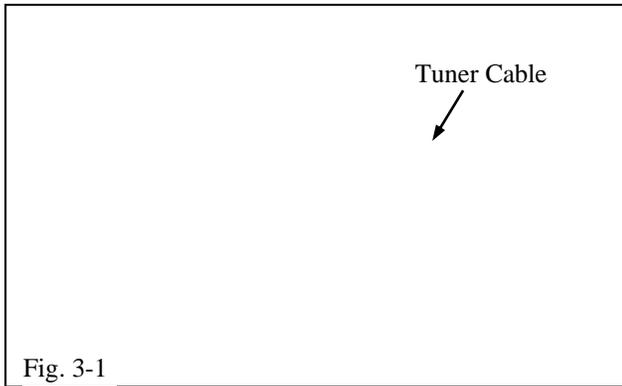




(10) Tilt the driver's seat back and remove the clip under the seat. (Fig. 2-19)

### 3. Route the Tuner Cable.

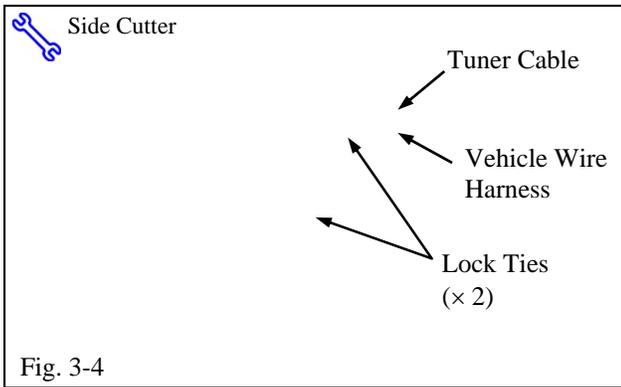
- (a) Tilt up the steering wheel to the highest position.
- (b) Route the tuner cable from the instrument panel through the center cluster in the following steps. (Fig. 3-1)



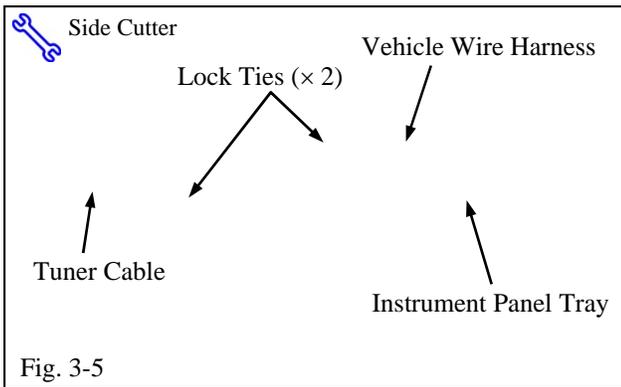
- (c) **Connect** the vehicle wire harness connector (12-pin) that was connected to the audio head unit to the tuner cable connector. (Fig. 3-3)

**NOTE:** Some models don't have the 12-pin connector for the vehicle wire harness.

- (d) Secure the tuner cable with one (1) lock tie. (Fig. 3-3)



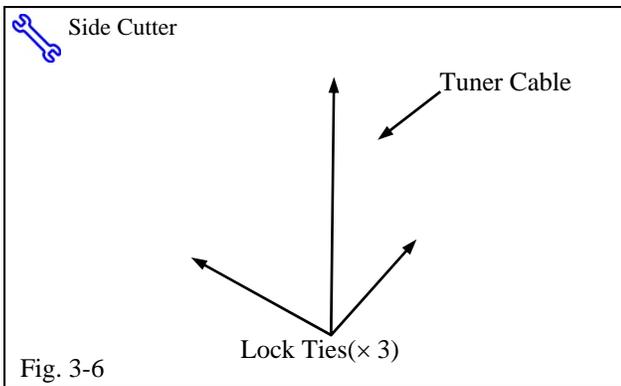
- (e) Secure the tuner cable with two (2) lock ties. (Fig. 3-4)
- (f) Use a side cutter to cut off the excess lock ties length.



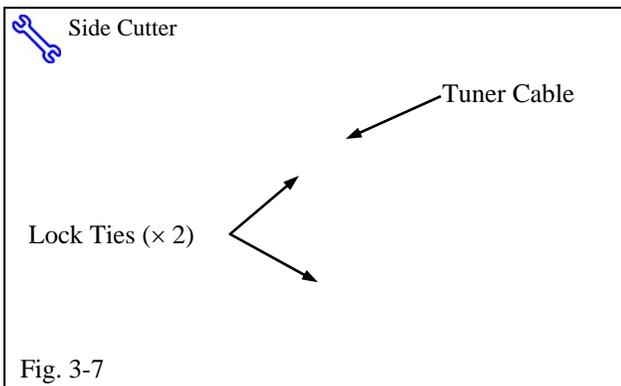
- (g) Secure the tuner cable with two (2) lock ties. (Fig. 3-5)

**⚠ NOTE:** Secure the tuner cable behind the vehicle wire harness to avoid interference by the edge of the instrument panel reinforcement tray.

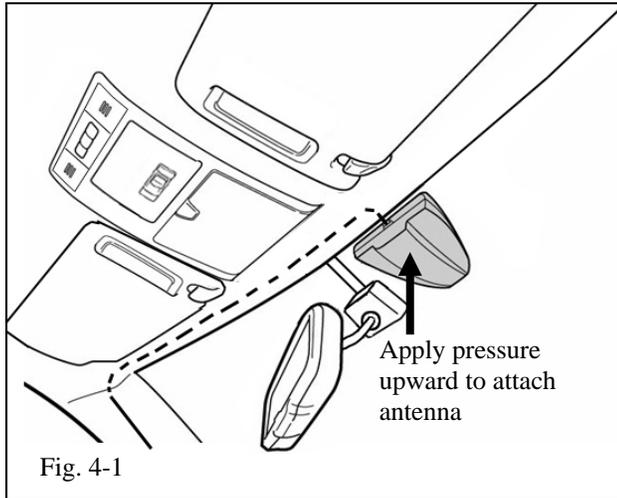
- (h) Use a side cutter to cut off the excess lock ties length.



- (i) Secure the tuner cable with three (3) lock ties. (Fig. 3-6)
- (j) Use a side cutter to cut off the excess lock ties length.



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



#### 4. Install the Antenna.

- (a) Clean the antenna mounting location behind the rear view mirror with approved cleaner. (Fig 4-1)

**⚠ NOTE:** Mounting location must be completely dry & installation temperature must be between 60° - 100° F before mounting the antenna.

- (b) Remove the 2 release tabs from the back of the antenna, and place the antenna in the proper position.

- (1) Position antenna flush to headliner and 1 to 4 mm right of the mirror wiring cover. (Fig. 4-1)

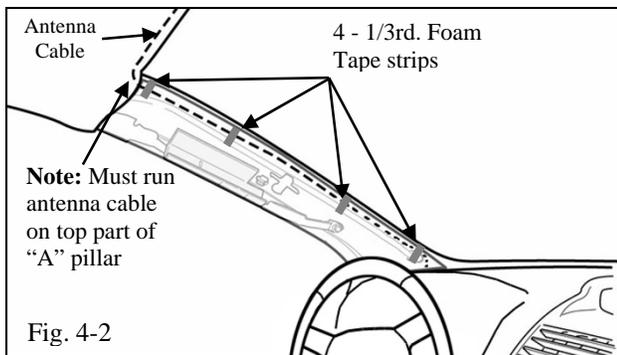
**⚠** (2) Firmly apply pressure upward on the antenna to assure complete wet-out of the tape pads. (Fig. 4-1)

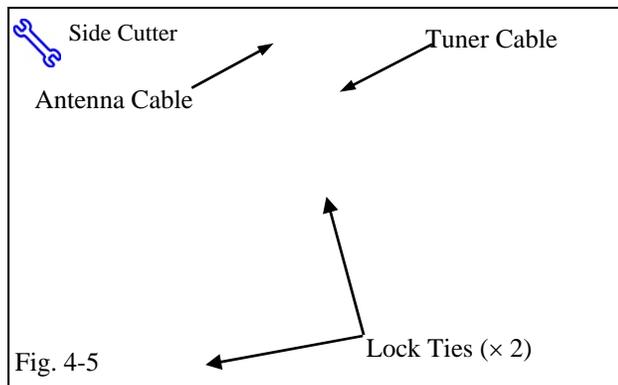
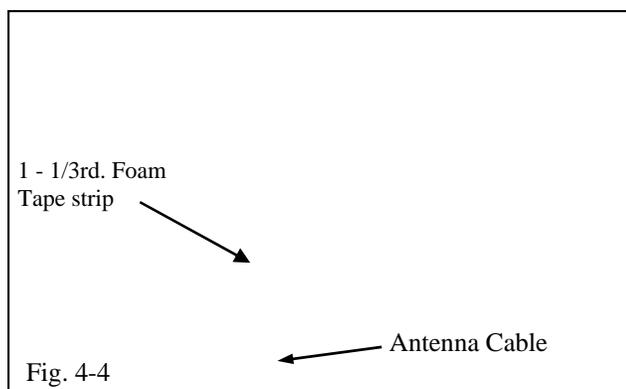
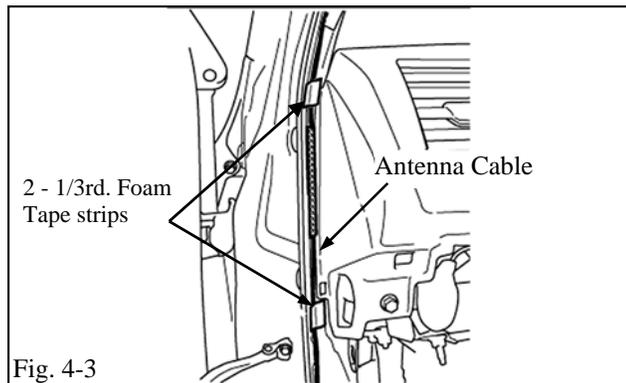
- (c) Route the antenna cable up underneath the front edge of the headliner as shown. (Fig. 4-1 & 4-2)

- (1) Carefully pull the front edge of the headliner downward and position the antenna cable up underneath as shown. (Fig. 4-1)

**STOP** (2) Make sure the cable is routed to the top outer edge (toward windshield) of the "A" pillar so it does not interfere with the air bag system. (Fig. 4-2)

**STOP** (3) Apply four (4) - 1/3rd. strips of foam tape as shown. Make sure the cable passes through the garnish at the bottom part of the "A" pillar so it does not interfere with the airbag system. (Fig. 4-2)





(d) Remove the front door opening weather strip.

 (e) Route the antenna cable along the weather strip edge. Use two (2) - 1/3rd. strips of foam tape to secure the antenna cable. (Fig. 4-3)

(f) Route the antenna cable, and then use one (1) 1/3rd. strip of foam tape to install the antenna cable. (Fig. 4-4)

(g) Route the tuner cable and antenna cable, and then secure them with two (2) lock ties. (Fig. 4-5)

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

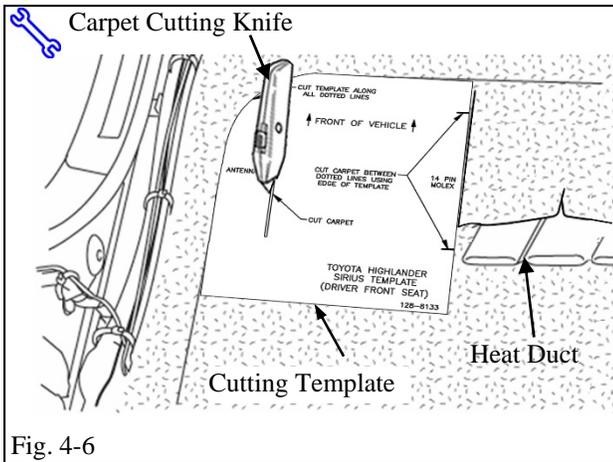


Fig. 4-6

- (i) Following directions on the cutting template place the template onto the carpet between the heat duct and the outside edge of the floor carpet as shown. (Fig. 4-6)
- (j) Hold the template down and cut the carpet on as indicated on the cutting template using a carpet cutting knife. (Fig. 4-6)



- (1) Make sure there are no wires under the carpet where the cuts will be made.
- (2) Make sure the carpet is cut all the way through to the floor the full length of the cut lines.

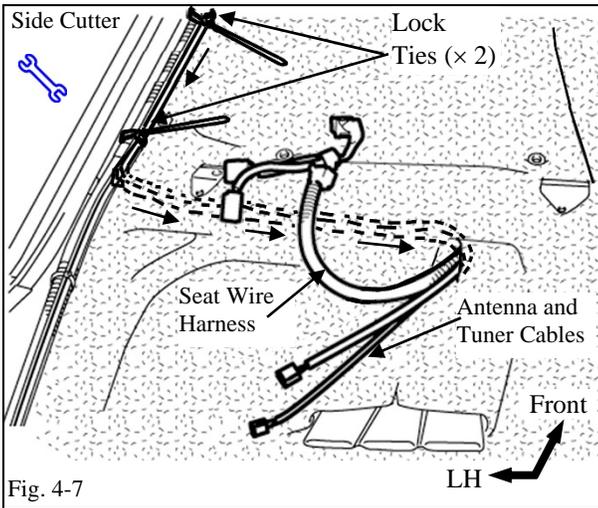


Fig. 4-7

- (k) Route the tuner cable and antenna cable, and then secure them with two (2) lock ties. (Fig. 4-7)
- (l) Route the tuner cable and antenna cable under the floor carpet and through the seat wire harness access hole. (Fig. 4-7)
- (m) Use a side cutter to cut off the excess lock ties length.

**5. Install the Receiver.**

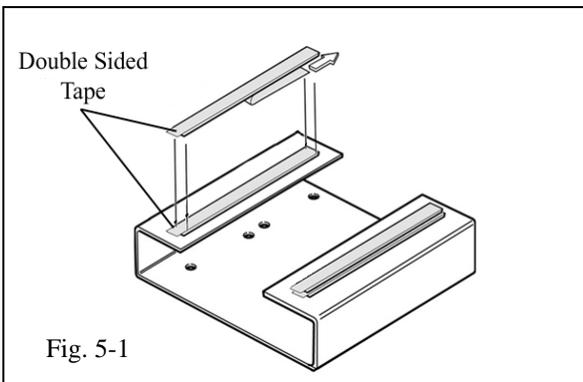
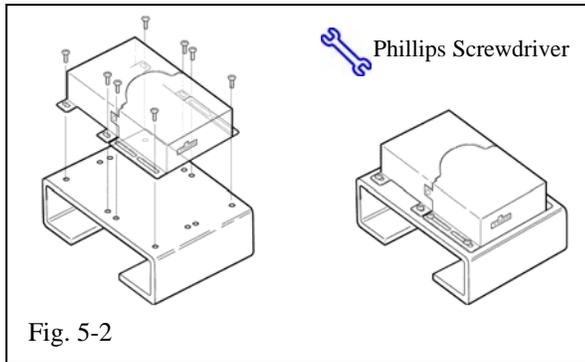
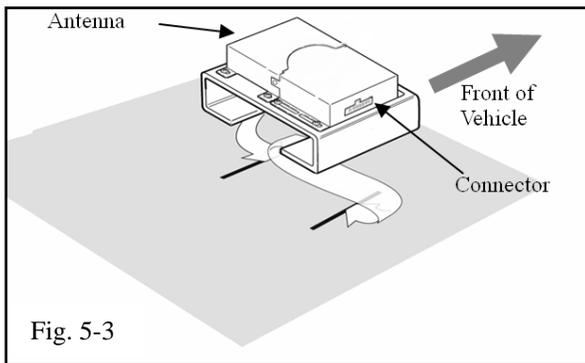


Fig. 5-1

- (a) Apply four (4) strips of double sided tape onto the receiver/bracket assembly legs (two on either side one on top of the other) as shown. (Fig. 5-1)

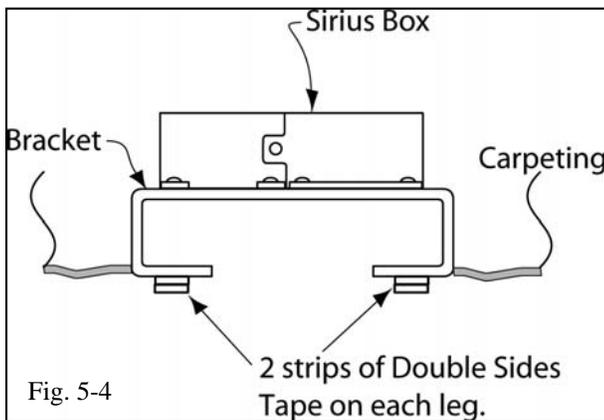


(b) Install the receiver onto the bracket using the eight (8) screws supplied in the kit. (Fig. 5-2)



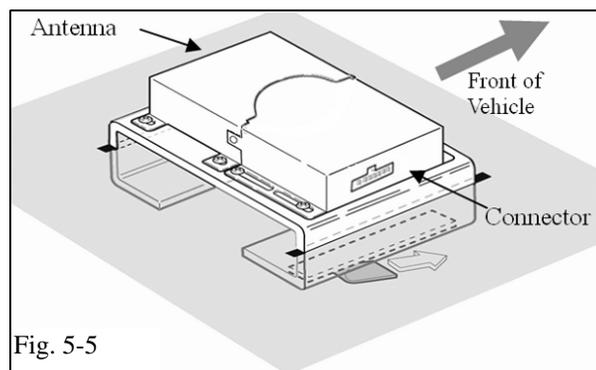
(c) Position the receiver/bracket assembly on the floor under the passenger seat up against the Heat Duct and through the carpet slits as shown. (Fig. 5-3)

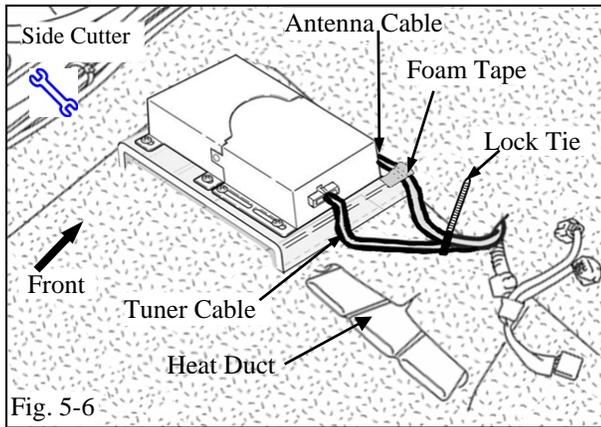
(1) Make sure the bracket goes all the way through the carpet so that the feet can be mounted to the floor pan.



(d) Remove the 2 release tabs from the bottom of the bracket and mount the bracket to the floor pan. (Fig. 5-4 & 5-5)

(1) Make sure the bracket is firmly attached to the floor pan by firmly applying pressure down on the receiver/bracket assembly.

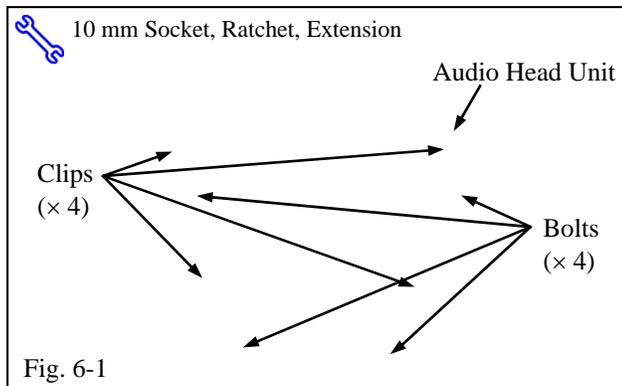




- (e) Plug the connector and antenna into the receiver module. (Fig. 5-6)
- (f) Tape the antenna cable down to the bracket with a piece of foam tape and lock tie the harness and antenna together. (Fig. 5-6)
- (g) Use a side cutter to cut off the excess lock tie length.

**6. Reinstall the Audio Head Unit.**

- (a) Connect the tuner cable connector and the electrical connectors removed in Step 2 (k) (3) into the rear of the audio head unit.
- (b) Insert audio head unit into opening and reinstall the four (4) bolts. (Fig. 6-1)



**7. In Process Functional Test.**

- (a) On the gasoline engine model, temporarily reconnect the negative battery cable of the battery installed on the left side of the engine compartment.

**⚠ NOTE:** On the hybrid model, temporarily reconnect the negative battery cable of the auxiliary battery installed on the right side of the engine compartment.

- (b) Turn the engine/power switch 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 engine/power switch to OFF.

(f) On the gasoline engine model, disconnect the negative battery cable of the battery installed on the left side of the engine compartment.

 **NOTE:** On the hybrid model, disconnect the negative battery cable of the auxiliary battery installed on the right side of the engine compartment.

## 8. Complete the Reassembly of Vehicle.

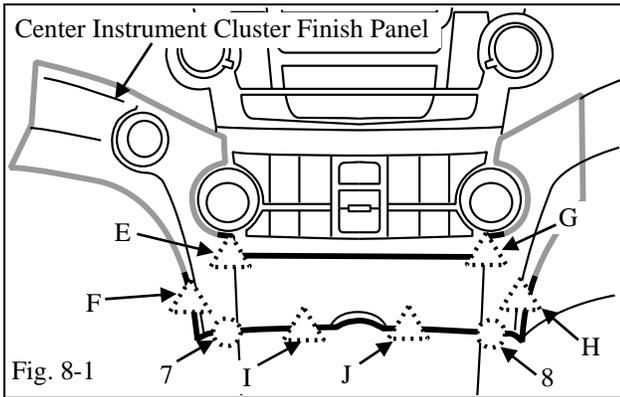
 (a) Reconnect any disconnected electrical connectors.

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

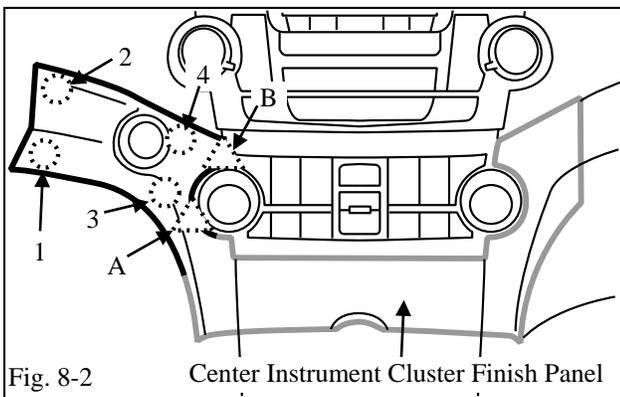
(c) Assemble Center Instrument Cluster Finish Panel (w/ Smart Key System)

(1) Set the panel tentatively by aligning with the heat control dials.

(2) Confirm that the top of Clips 1 through 6 align with the mating holes, Assemble Clip 7 → Claw F → Claw E → Claw I → Claw J → Clip 8 → Claw H → Claw G in order. (Fig. 8-1)



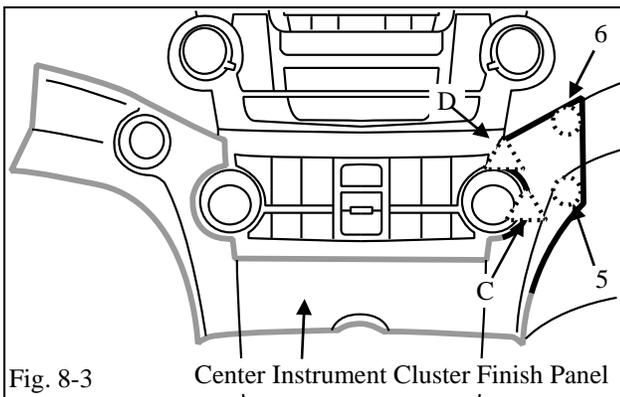
(3) Pushing the left side of the panel, assemble Clip 2 → Clip 1 → Clip 4 → Clip 3 → Claw A → Claw B in order. (Fig. 8-2)

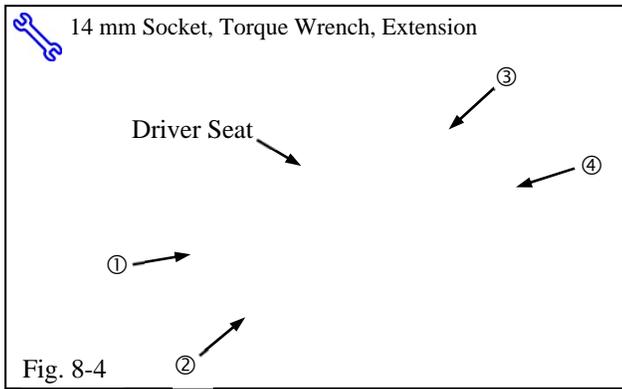


(4) Pushing the right side of the panel, assemble Clip 6 → Clip 5 → Claw C → Claw D in order. (Fig. 8-3)

(5) Check the gap around all the edges and ensure all edges are snapped down and fitted up in the frame.

(6) Check for dirt, scratches, damage (whitening), etc. on the surface of the panel.





(d) Reinstall the front seat. (Fig. 8-4)

(1) Reinstall the four (4) bolts loosely, then tighten them in the following order:

- Front inner side bolt
- Front outer side bolt
- Rear inner side bolt
- Rear outer side bolt

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

 **Torque: 37 N•m (27 lbf•ft)**

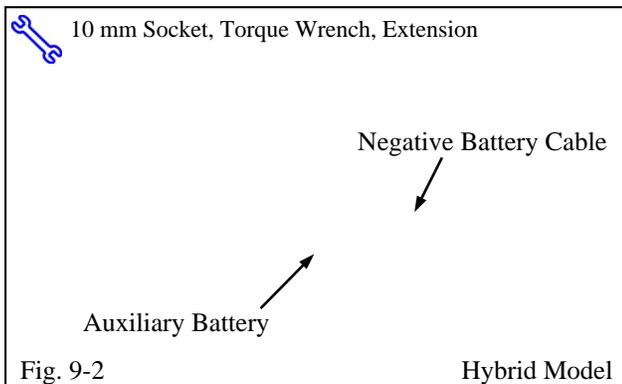
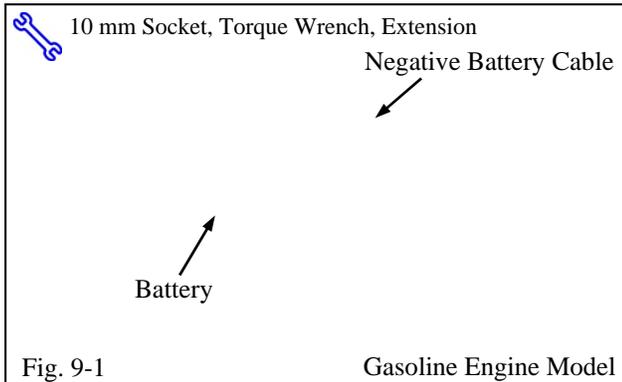
(e) Clean up and remove any trash.

(f) Place the owner “SIRIUS Satellite Radio” brochure in the glove box.

### 9. Reconnect Negative Battery Cable.

(a) On the gasoline engine model, reconnect the negative battery cable of the battery installed on the left side of the engine compartment. (Fig. 9-1)

 **NOTE:** On the hybrid model, reconnect the negative battery cable of the auxiliary battery installed on the right side of the engine compartment. (Fig. 9-2)



(1) Tighten the nut to 5.4 N•m (48 lbf•in).

 **Torque: 5.4 N•m (48 lbf•in)**

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

**TOYOTA HIGHLANDER/HV 2008 - 2010 SIRIUS SATELLITE RADIO**  
 Checklist - these points **MUST** be checked to ensure a quality installation.

<u>Check:</u>	<u>Look For:</u>
<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 SIRIUS Satellite Radio Brochure and audio head unit owner's manuals.
<input type="checkbox"/> Navigation system	Check for GPS icon on the display.
<u>Vehicle Function Checks</u>	
<input type="checkbox"/> Hazard switch	Proper operation of the hazard switch.
<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.
<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 engine/power 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"/> SSP function	Verify the radio SSP function is set to "HIGHLANDER" by pressing the "SSP" button on the audio head unit for 5 seconds. (If not, press the volume control and set to "HIGHLANDER".)
<input type="checkbox"/> Hood lock control cable	Proper operation of the hood lock control cable.
<input type="checkbox"/> Instrument panel finish panel lower functions (Any electrical connector removed in Step 2(i) (1 – 3)) (Fig. 2-7)	Verify the proper operation of the instrument panel finish panel lower functions.