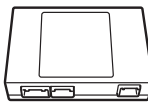











**Part #: PT233-47100**

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

**Conflicts:** Vehicles without Navigation

**Kit Contents:**

<b>USB ECU</b>  x1	<b>USB AUX Jack</b>  x1	<b>USB Harness</b>  x1	<b>AVC LAN Adapter Harness Connector</b>  x1	<b>Large Lock Tie 429.2mm</b>  x1	<b>Small Lock Tie 102mm</b>  x7
<b>Foam Tape 220mm x 80mm</b>  x2	<b>Double Faced Tape 120mm x 10mm</b>  x1	<b>Felt Tape 215mm x 27mm</b>  x1	<b>Owners Manual Supplement</b>  x1		

**Hardware Bag Contents**

Item #	Quantity Req'd.	Description
1	2	Foam Tape
2	1	Double Faced Tape
3	1	Felt Tape
4	1	Large Lock Tie
5	7	Small Lock Tie

**Additional Items**

(may be required)

Item #	Quantity Req'd.	Description
1	1	Installation template, PPO only. P/N PRI10-038. For DIO installations, see page 18.

**Recommended Sequence of Application**

Item #	Quantity Req'd.	Description

**Vehicle Service Parts**

**General Applicability**

Vehicle with Navigation only
------------------------------

**Recommended Tools**

Personal and Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
Special Tools	
Installation Tools	
Diagonal Cutters	
Nylon Pry Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Ratchet	
Ratchet Extension	8"
Scissors	
Socket	10mm, 12mm
Special Chemicals	VDC Approved Cleaner

---

**Table of Contents**

---

I. Preparation .....	1-4
1. Table of Contents .....	2
2. Vehicle Overview Description .....	3
3. Disassembly Overview .....	4
II. Procedure .....	5-18
1. Vehicle Protection .....	5-6
2. Vehicle Disassembly (Center Console) .....	7-8
3. Vehicle Disassembly (XM ECU) .....	8-9
4. Installation (USB AUX Jack and USB Harness Routing) .....	9-12
5. Installation (USB ECU) .....	13-14
6. Reconnect Battery Cable .....	15
7. Accessory Function Check .....	15
8. Vehicle Reassembly .....	15-17
Template for Mounting USB ECU to XM ECU .....	18
III. Checklist .....	19
1. Accessory Function Checks .....	19
2. Vehicle Function Checks .....	19

**Legend**

**STOP:** Damage to the vehicle may occur. Do not proceed until process has been complied with.



**CAUTION:** A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle.



**OPERATOR SAFETY:** Use caution to avoid risk of injury.



**TOOLS AND EQUIPMENT:** Used in Figures; calls out the specific tools and equipment recommended for the process.



**REVISION MARK:** This mark highlights a change in installation with respect to previous issue.



**SAFETY TORQUE:** This mark indicates that torque is related to safety.

**Accessory Installation Practice  
(read before installation)**

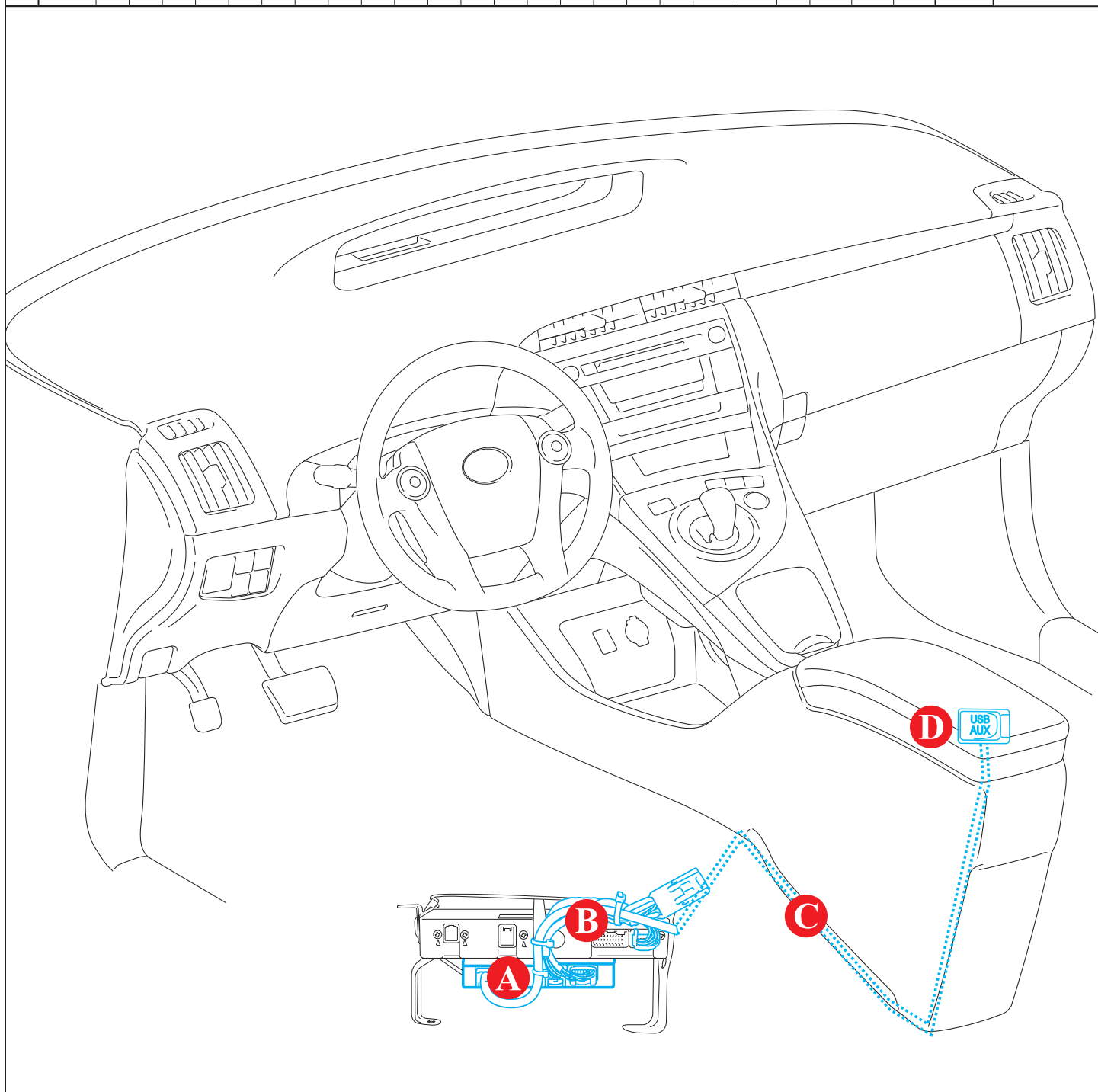
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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

This document covers such items as:

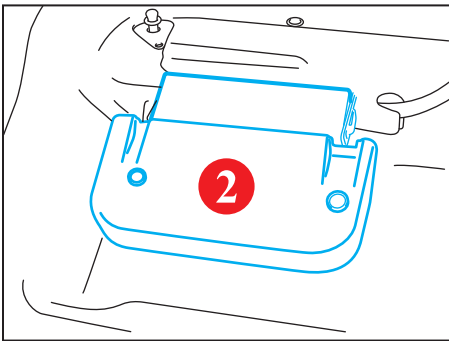
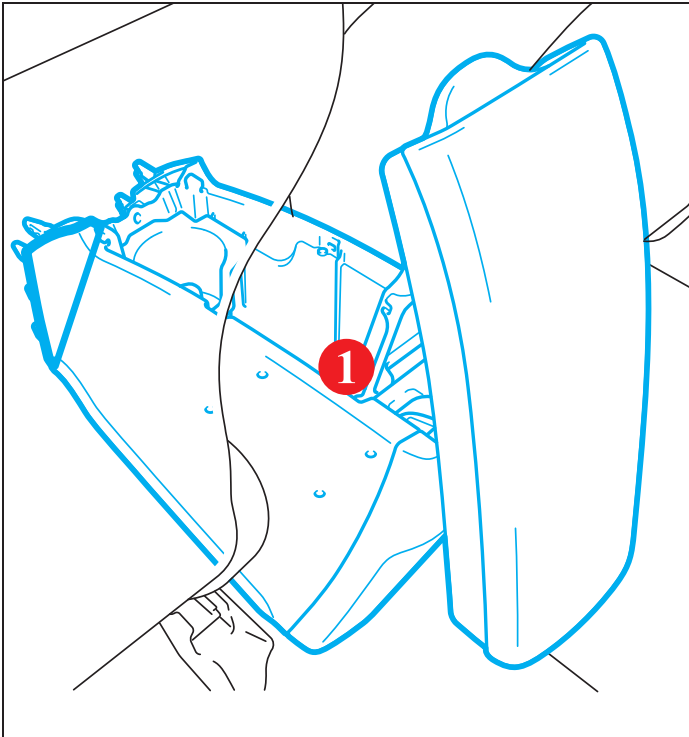
- Vehicle Protection (e.g., use of covers and blankets, cleaning chemicals)
- Safety (e.g., eye protection, checking torque procedure)
- Vehicle Disassembly/Reassembly (e.g., panel removal, part storage)
- Electrical Component Disassembly/Reassembly (e.g., battery disconnection, connector removal)

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

[illegible]

Disassembly Overview

1	Center Console
2	XM ECU



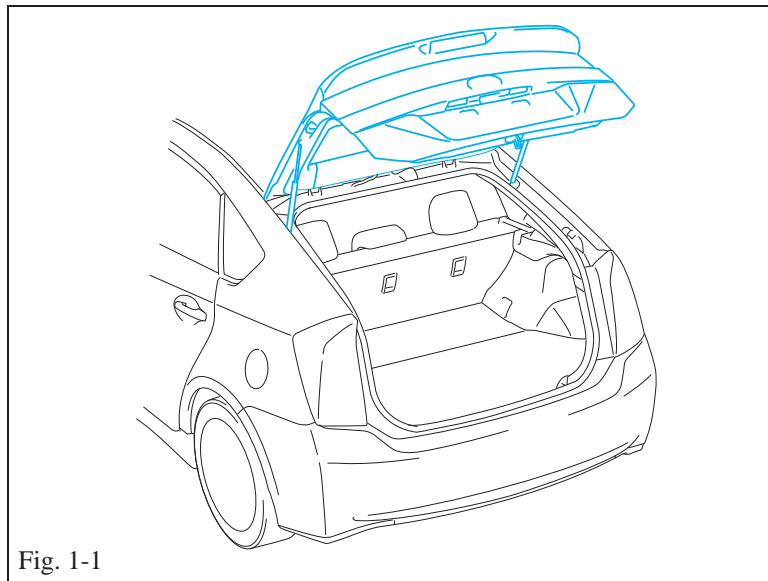


Fig. 1-1

## 1. Vehicle Protection

(a) Open the rear hatch. (Fig. 1-1)



(b) Set the parking brake prior to disconnecting the battery.



**NOTE:** Keep the rear hatch open during the entire process. The hatch is opened using a solenoid that cannot be activated when the battery is disconnected. If you accidentally close the hatch, use the manual hatch release as outlined in the Repair Manual.

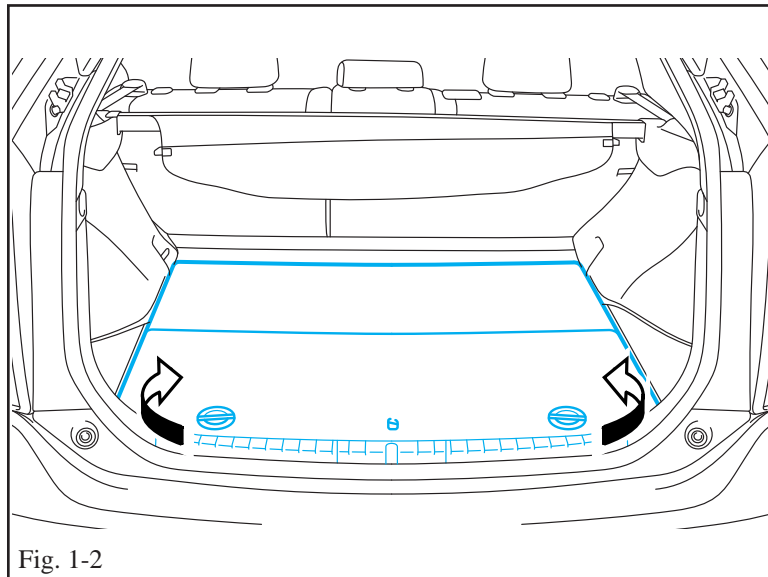


Fig. 1-2

(c) Remove the rear floor board cover.

(1) Release the lock knobs by placing them in the unlock position.

(2) Lift up and remove the rear floor board cover. (Fig. 1-2)

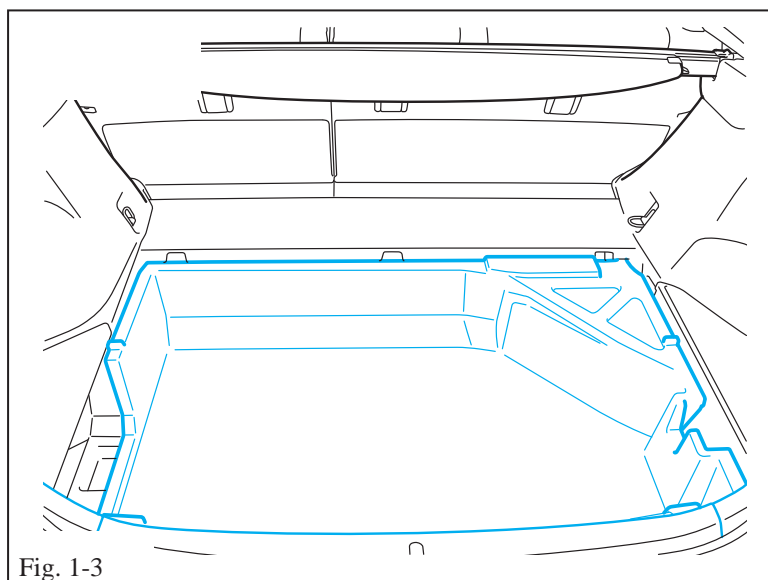
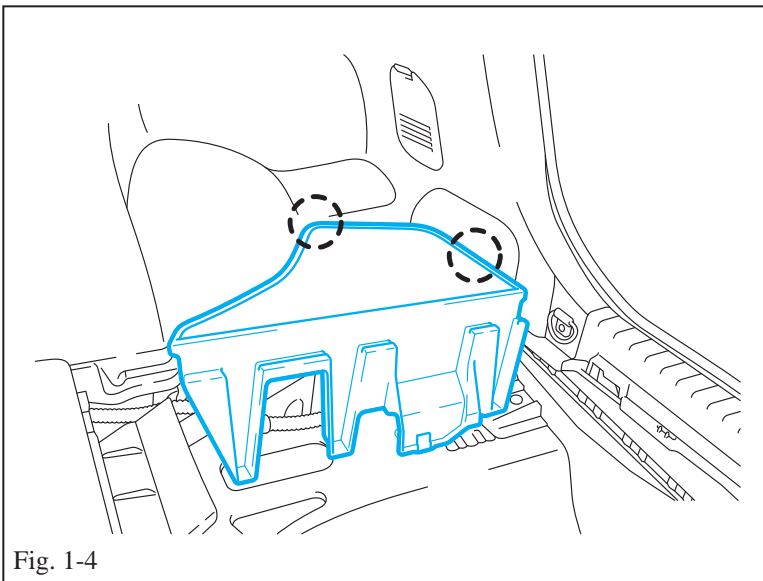


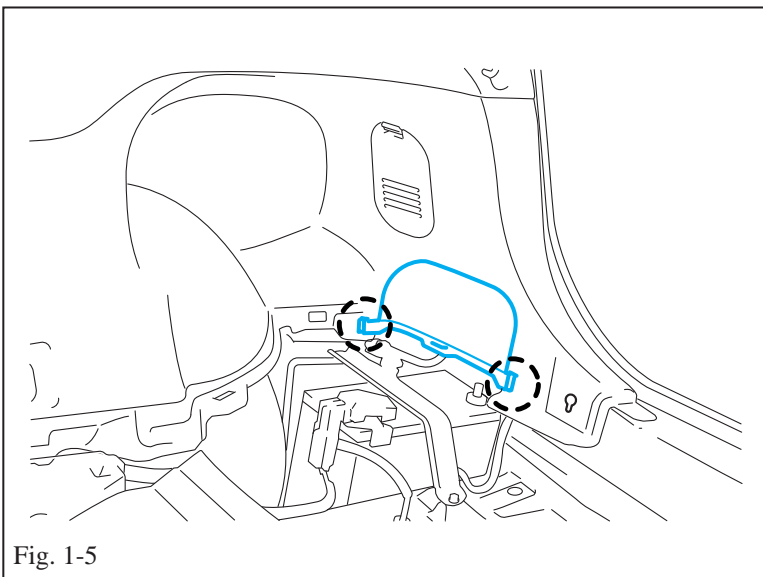
Fig. 1-3

(d) Lift and remove the rear deck floor box. (Fig. 1-3)

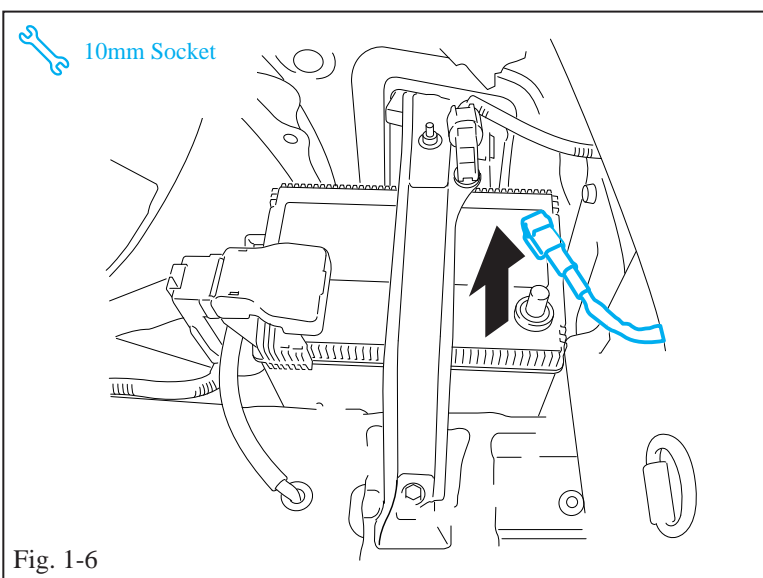
- (e) Disengage the two (2) guides and remove the battery cover. (Fig. 1-4)



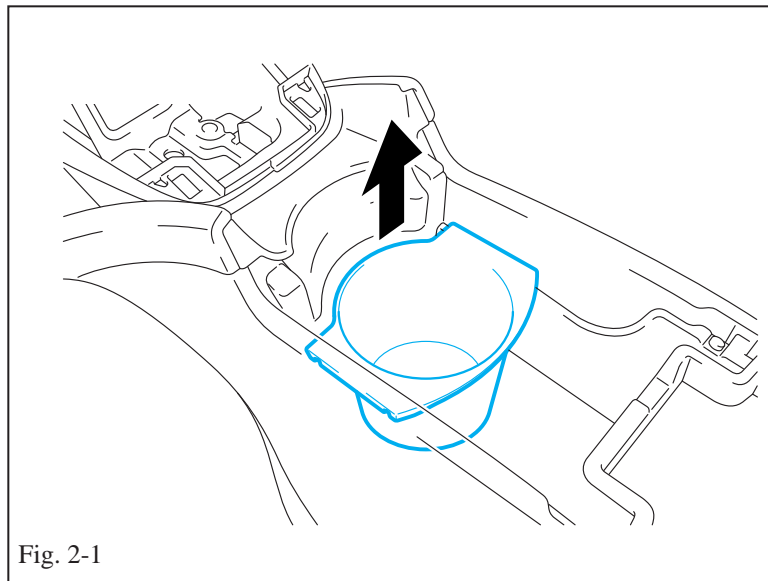
- (f) Disengage the two (2) claws and remove the trim piece. (Fig. 1-5)



- (g) Disconnect the battery negative cable using a 10mm socket. (Fig. 1-6)

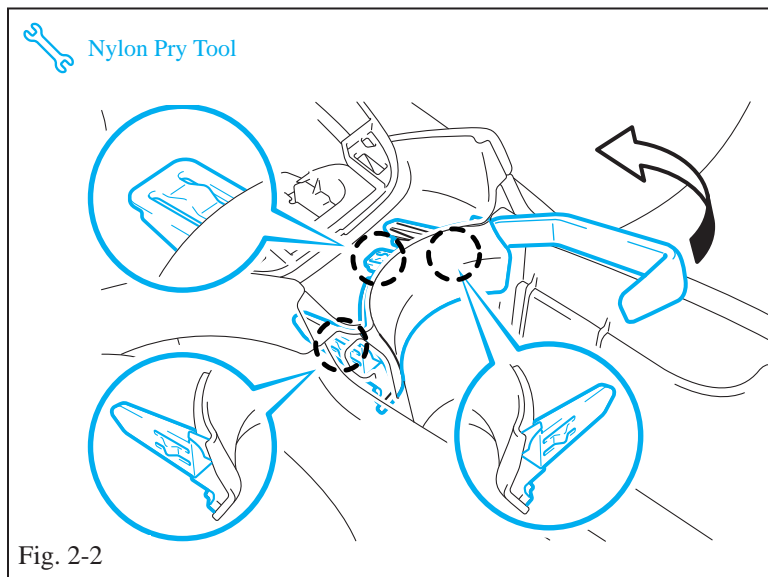


**+** **CAUTION:** Do not touch the positive battery terminal with any tool when removing the cable.

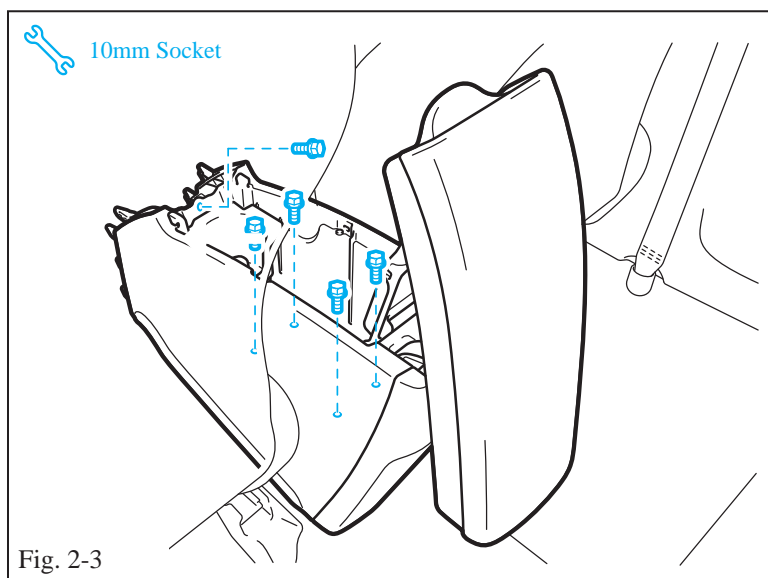


## 2. Vehicle Disassembly (Center Console)

- (a) Open the center console lid.
- (b) Remove the cup holder by pulling up.
- (c) Remove the carpet in the center console.  
(Fig. 2-1)



- (d) Remove the cover in front of the console by releasing the upper three (3) claws with a nylon pry tool. (Fig. 2-2)



- (e) Remove the five (5) console bolts using a 10mm socket. (Fig. 2-3)

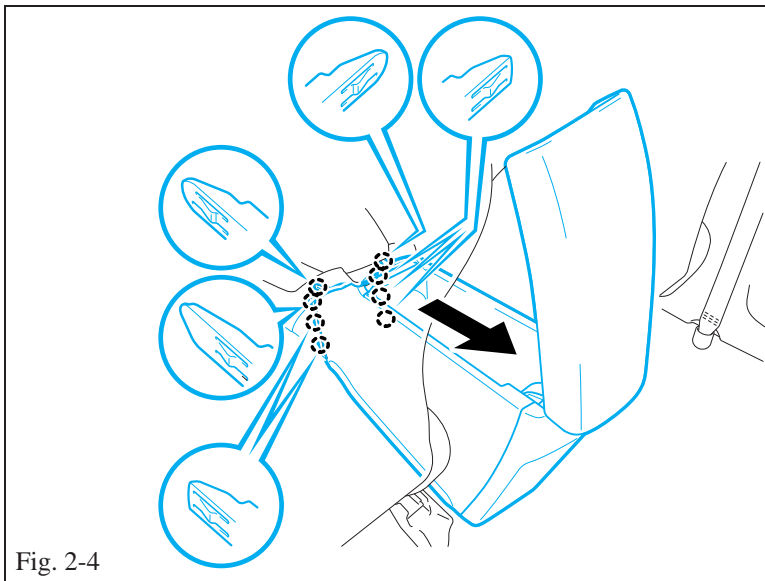


Fig. 2-4

- (f) Slide the console back to release the eight (8) claws. (Fig. 2-4)



**NOTE:** When pulling the console back, do not put stress on the electrical connector.

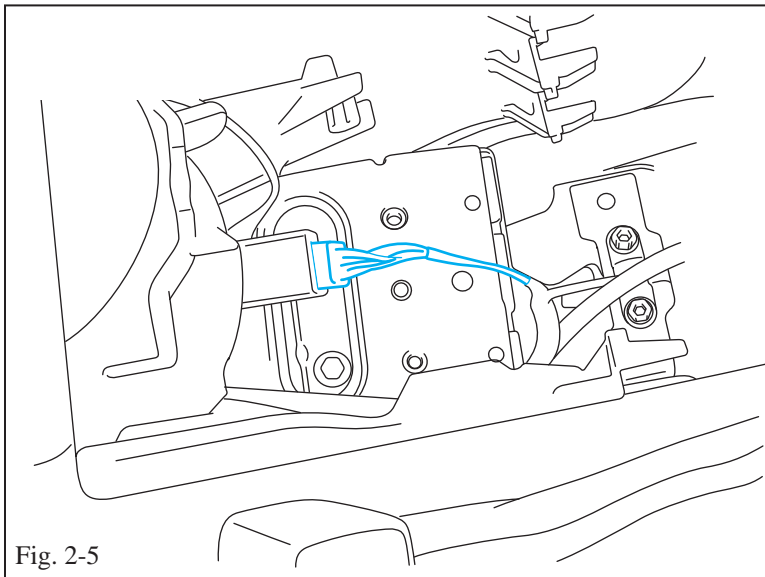


Fig. 2-5

- (g) Disconnect the center console electrical connector, and then remove the console. (Fig. 2-5)

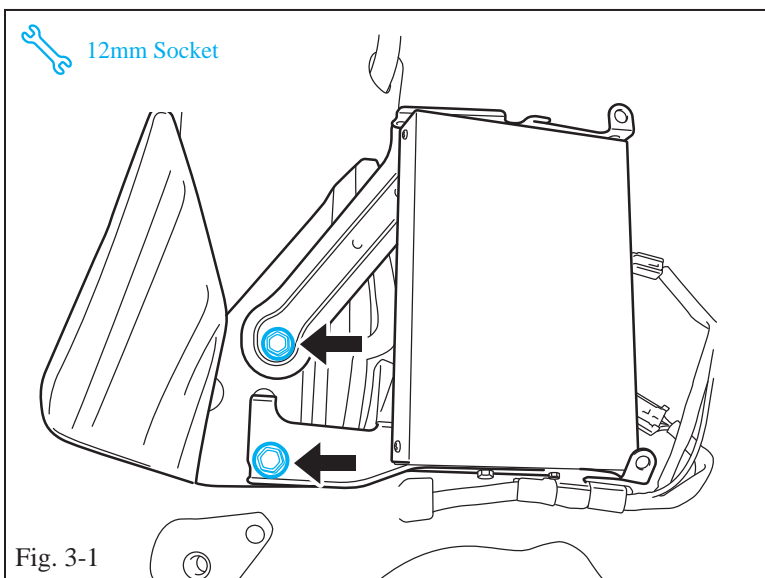
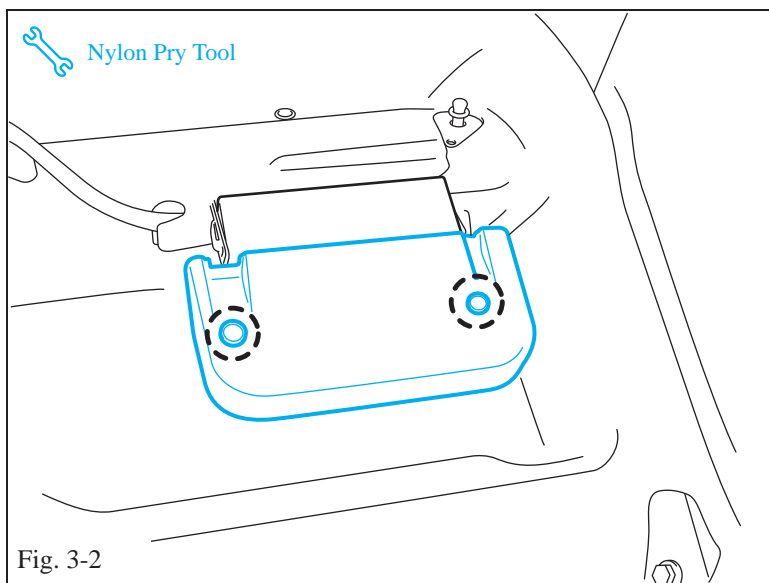


Fig. 3-1

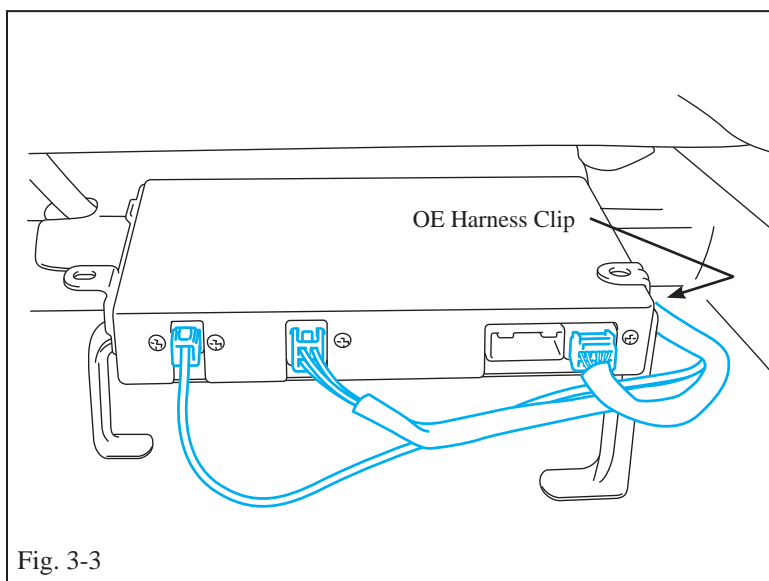
### 3. Vehicle Disassembly (XM ECU)

- (a) Remove the XM ECU.
- (1) Move the driver's seat all the way back.
  - (2) Remove the two (2) XM ECU bolts using a 12mm socket. (Fig. 3-1)

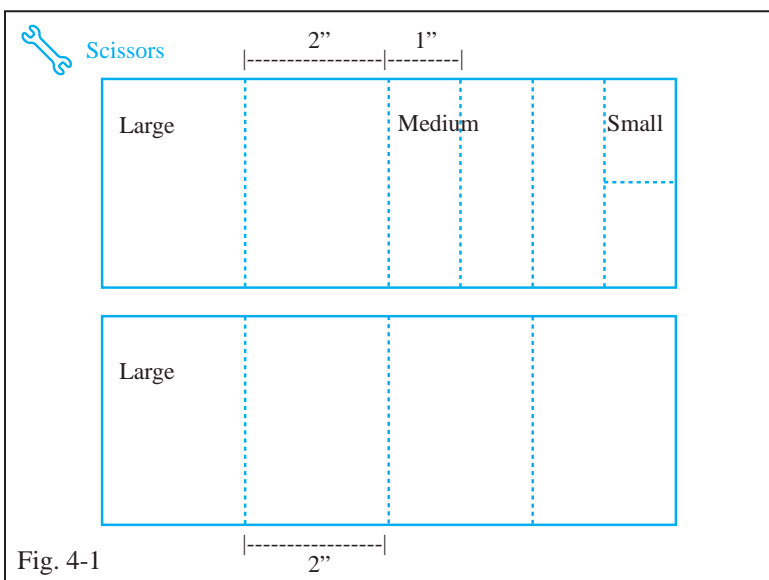




- (b) Slide the driver's seat all the way forward.
- (c) Remove the plastic cover from the XM ECU. (Fig. 3-2)
  - (1) Remove the two (2) plastic fasteners using a nylon pry tool.
  - (2) Remove the cover from the XM ECU.



- (d) Disconnect the three (3) XM ECU connectors. (Fig. 3-3)
- (e) Unclip the OE harness from the XM bracket and remove the XM ECU.



#### 4. Installation (USB AUX Jack and USB Harness Routing)

- (a) Cut the two (2) foam tape strips into several pieces as shown. (Fig. 4-1)

- (b) Disconnect the OE AUX jack connector located in the center console. (Fig. 4-2)

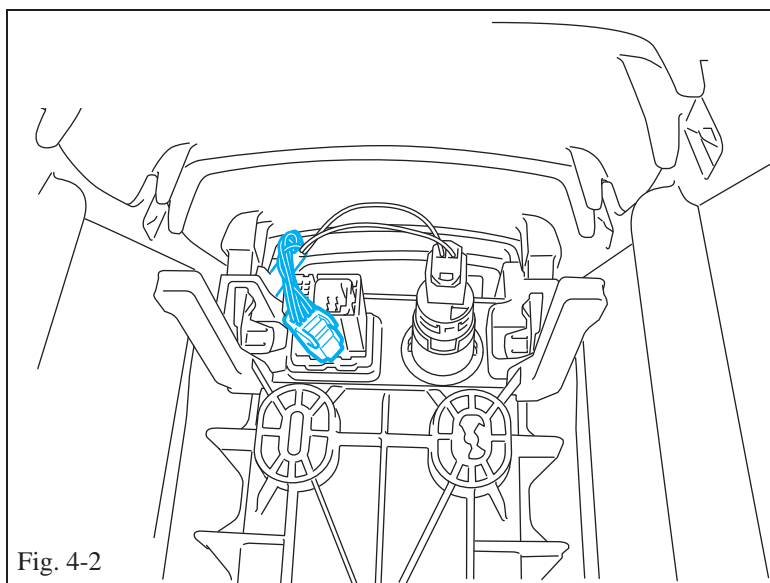


Fig. 4-2

- (c) Remove the AUX jack from the center console by pressing in the tabs, and install the new USB AUX jack supplied in the kit. (Fig. 4-3)

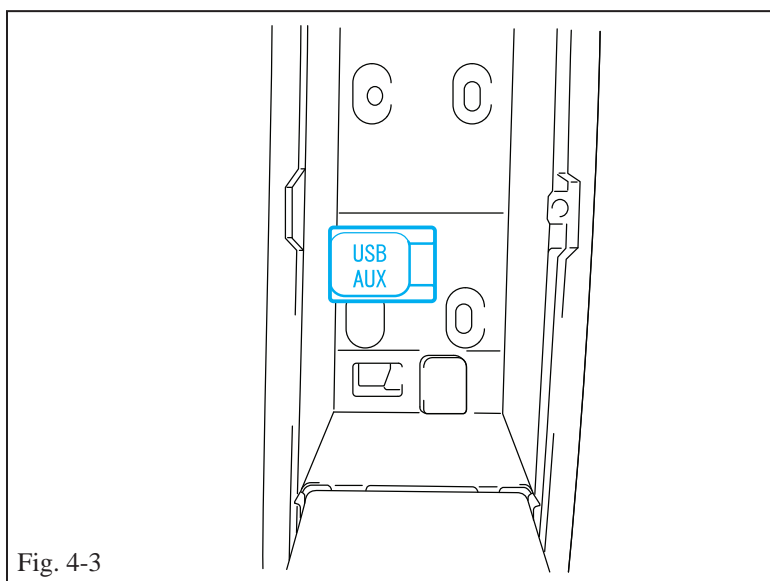


Fig. 4-3



**NOTE:** Make sure the USB AUX jack is installed so that the letters on the jack cover are in the same orientation as the letters on the power outlet cover.

- (d) Connect the USB harness and secure it to the center console. (Fig. 4-4)
- (1) Connect the OE AUX harness to the USB harness connector.
  - (2) Connect the USB harness to the USB AUX jack.
  - (3) Wrap the connectors using one (1) large foam tape piece.
  - (4) Apply two (2) medium foam tape pieces to the ridges on the inside of the center console.
  - (5) Secure the USB harness to the center console with one (1) medium foam tape piece.

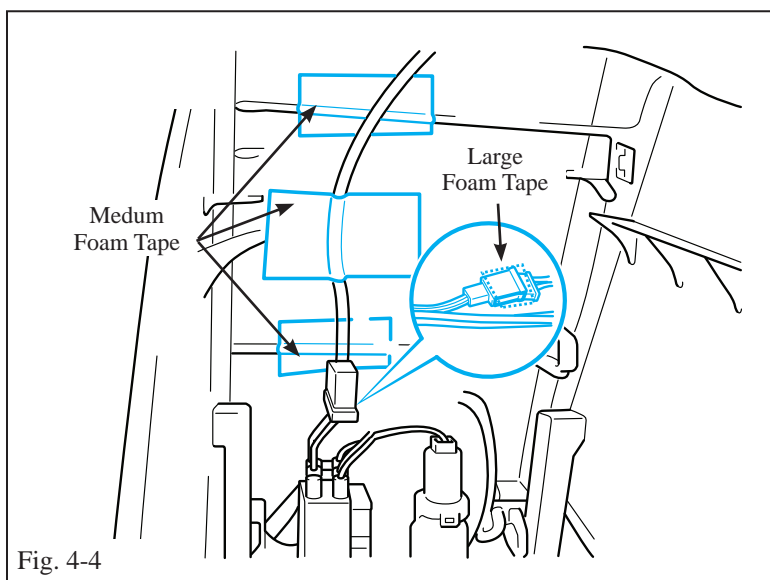
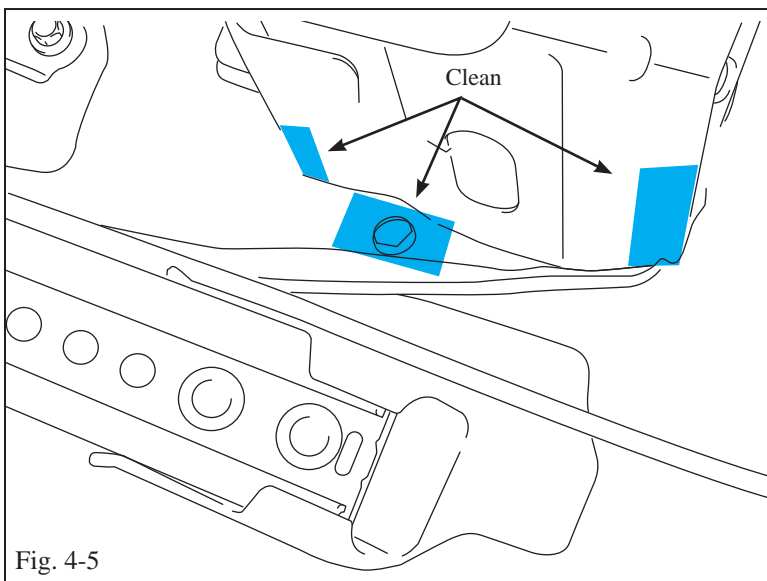
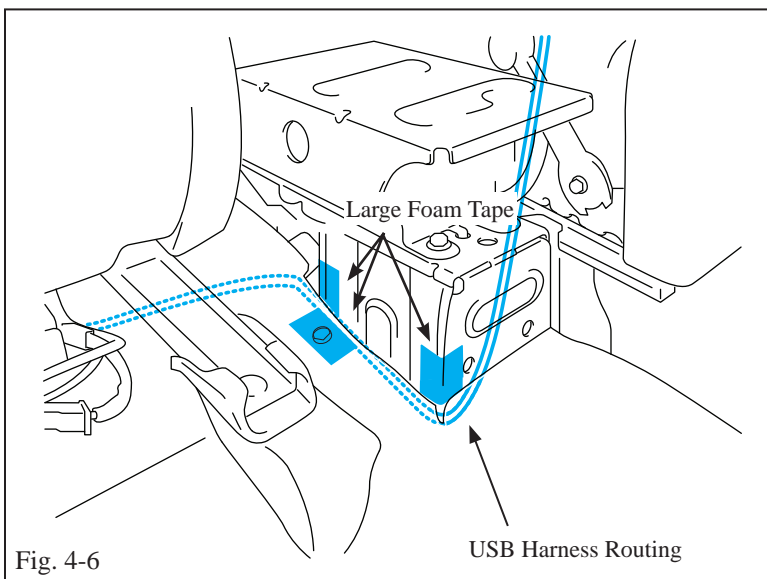


Fig. 4-4

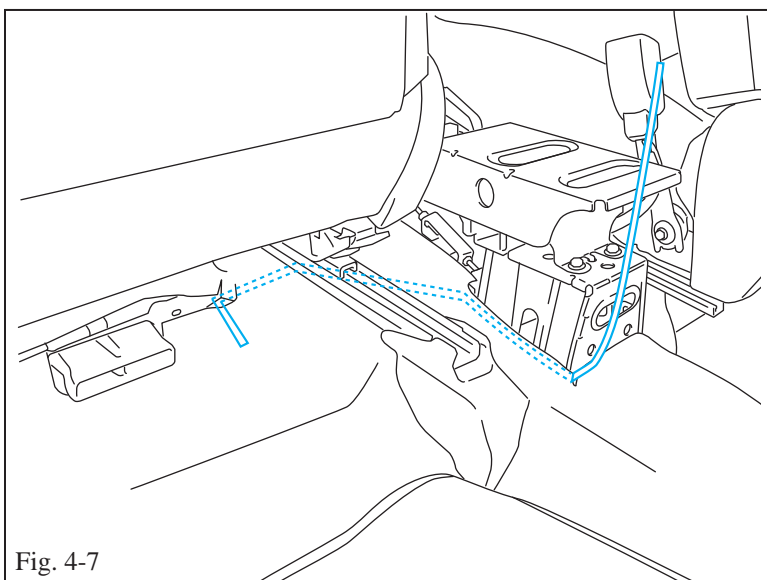


(e) Route the USB harness.

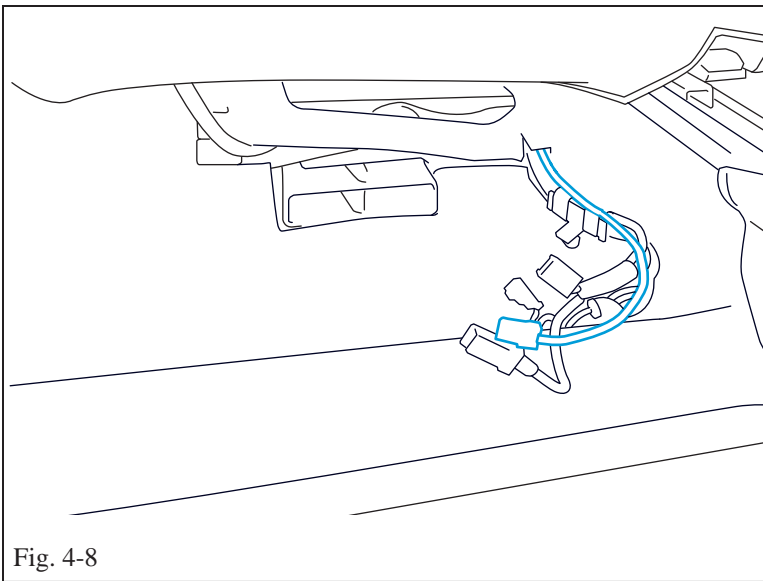
- (1) Clean the center console mounting bracket surfaces with a VDC approved all-purpose cleaner. (Fig. 4-5)



- (2) Apply two large pieces of foam tape to the front and rear edges of the center console mounting bracket. Apply one large piece of foam tape over the front center console bracket mounting bolt. (Fig. 4-6)



- (3) Route the USB harness to the left side of the console bracket, along the inside of the carpet. Route the harness away from any sharp objects. (Fig. 4-7)

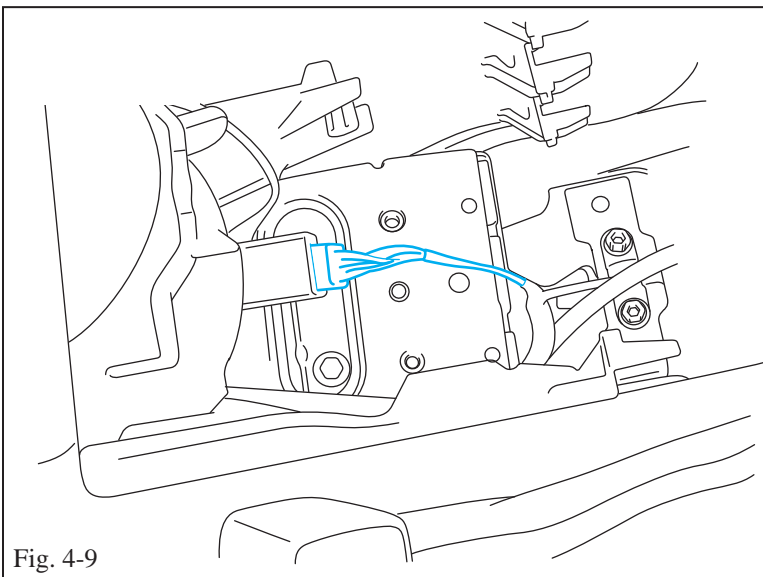


(4) Continue to route the USB harness toward the OE AVC LAN harness located under the driver's seat so that it comes out the same hole as the OE harness. Use a wire fish tool if necessary. (Fig. 4-8)

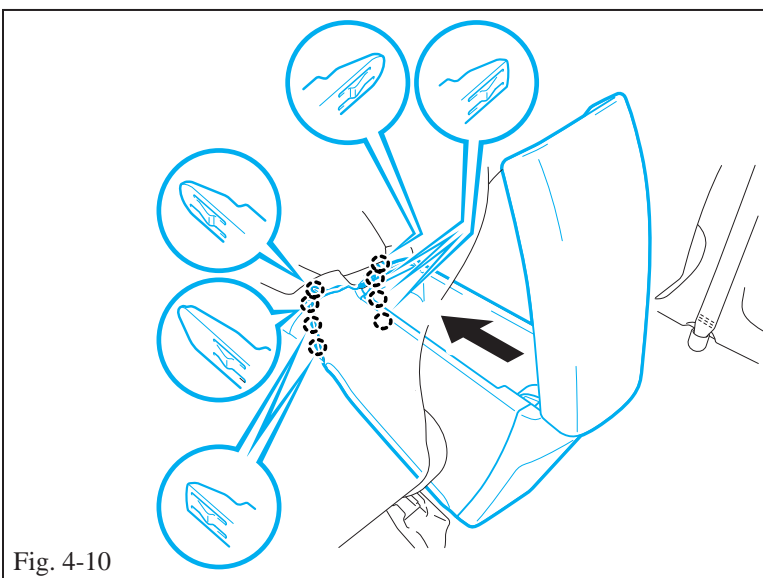
(5) Gently pull back some slack toward the XM ECU while feeding the wire under the carpet.



**NOTE:** Do not pull on harness with excessive force, or it will separate from the foam tape securing it to the center console.



(f) Reconnect the center console electrical connector. (Fig. 4-9)

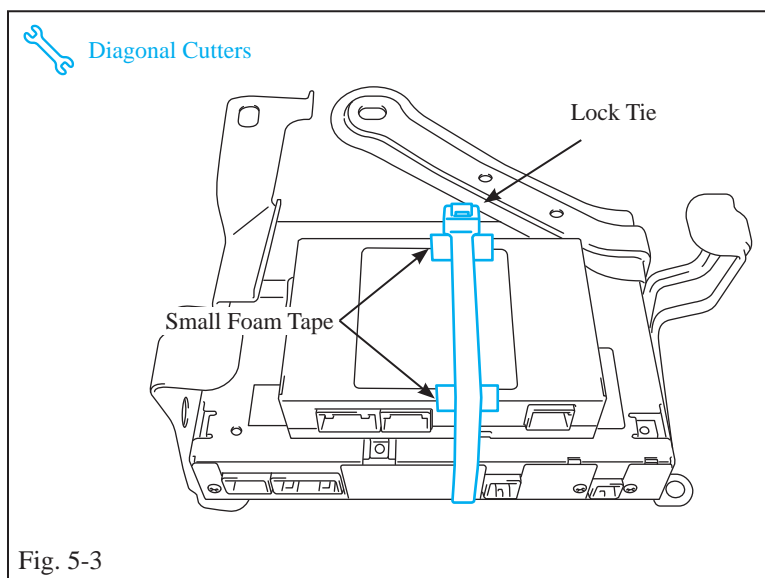
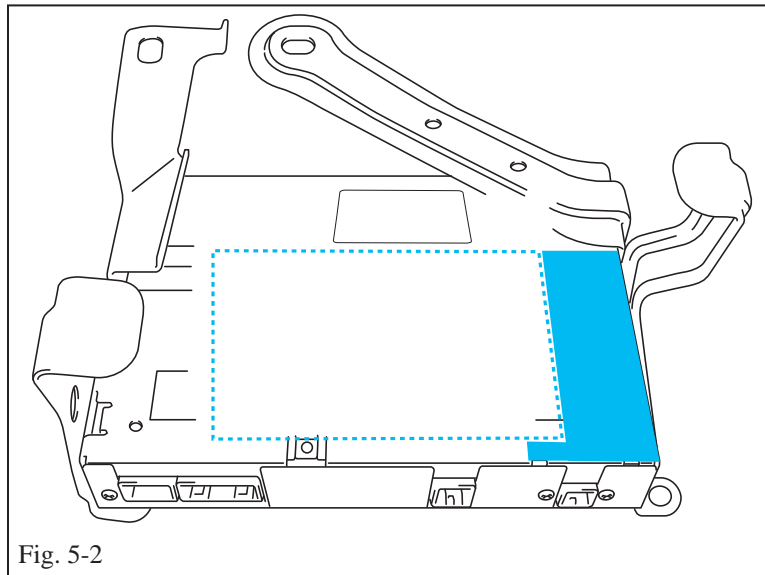
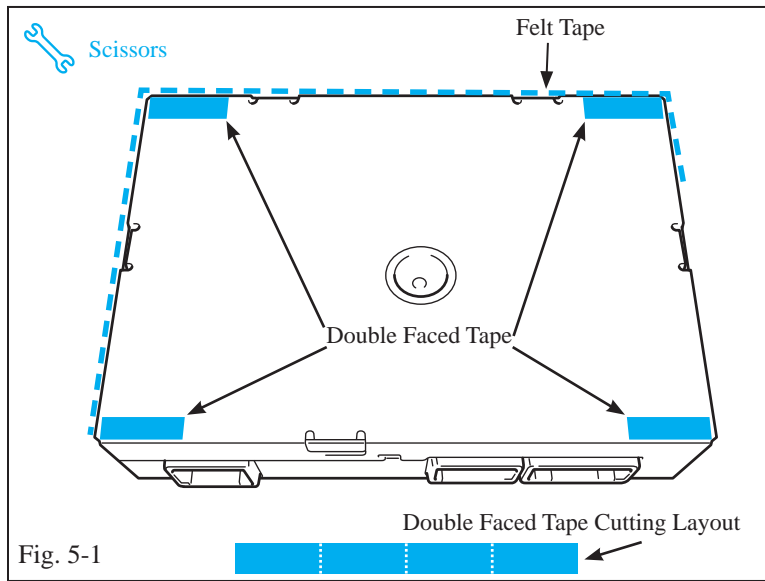


(g) Slide the console forward to engage the eight (8) claws. (Fig. 4-10)



**NOTE:** Make sure the console does not catch on the carpet.

Fig. 4-10



## 5. Installation (USB ECU)

- Cut the double faced tape into four (4) equal pieces.
- Clean the dimpled side of the USB ECU with a VDC approved all-purpose cleaner.
- Apply the four (4) pieces of double faced tape horizontally across the corners of the dimpled side of the USB ECU.
- Starting at the bottom left corner, wrap the felt tape around the sides of the USB ECU, and then work in a clockwise direction. (Fig. 5-1)
- Clean the bottom of the XM ECU with a VDC approved all-purpose cleaner.
- Mount the USB ECU to the XM ECU using the installation template to ensure a proper location. (Fig. 5-2)  
(For DIO installations, see page 18 for template.)



**NOTE:** When mounting the ECUs together, do not block the serial number label on the upper right of the XM ECU. The USB connectors should face the same direction as the XM connectors.

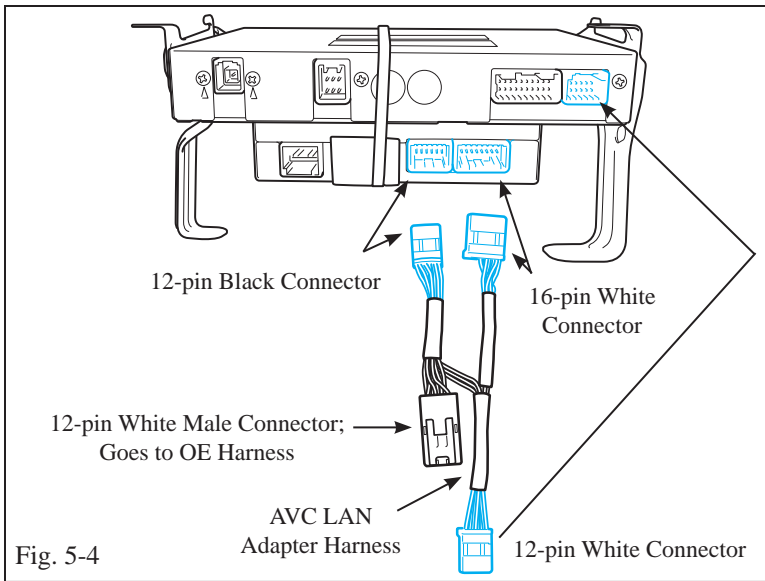
- Secure the USB ECU to the XM ECU. (Fig. 5-3)

- Apply two (2) small foam tape pieces to the front and back edges of the USB ECU as shown. Make sure not to block any ECU connector receptacles.
- Secure the USB ECU to the XM ECU using a large lock tie as shown.

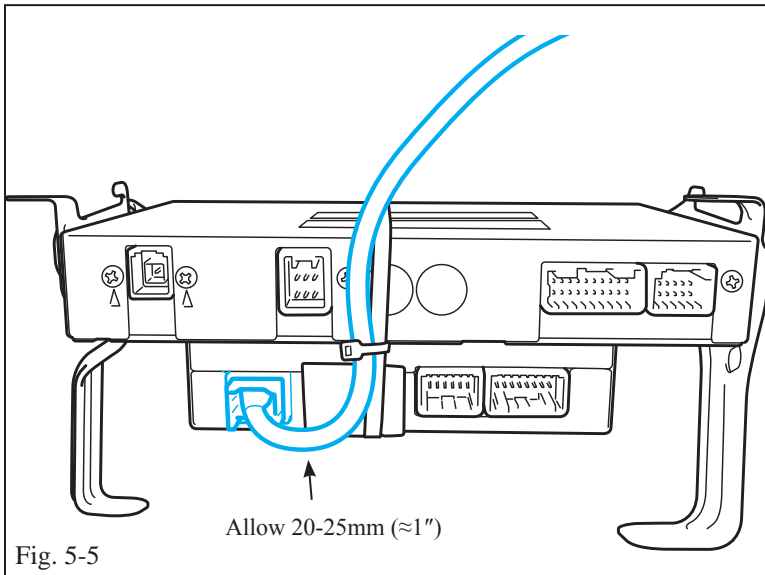


**NOTE:** Make sure the end of the lock tie sits behind the ECU as shown. (Fig. 5-3)

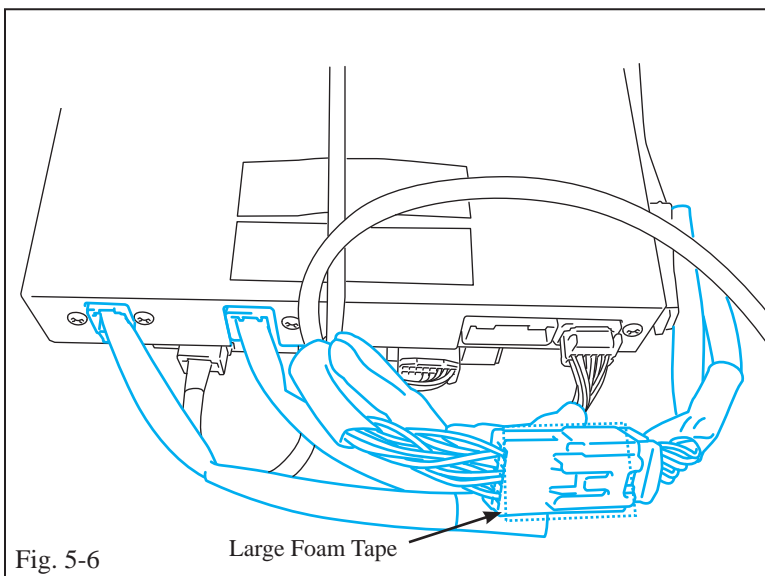
- Trim the lock tie to length using diagonal cutters.



- (h) Connect the AVc LAN adapter harness 12-pin (black) connector to the USB ECU, and then connect the 12-pin (white) connector to the XM ECU. (Fig. 5-4)
  - (i) Connect the 16-pin (white) connector to the USB ECU.
- NOTE:** Be sure to connect the 12-pin harness connectors correctly (the black connector to the white USB ECU receptacle, and the white connector to the white XM ECU receptacle).
- (j) Place the XM ECU and the mounted USB ECU under the driver's seat.

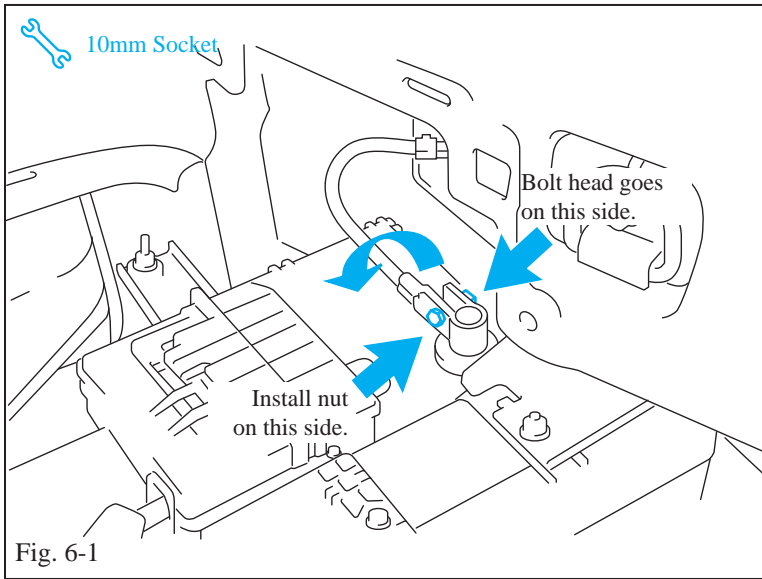


- (k) Connect the USB harness (brown) connector to the brown USB ECU receptacle. (Fig. 5-5)
- (1) Secure the USB harness to the large lock tie allowing a 20mm-25mm (≈1") cable length from the USB harness connector to the bend in the USB harness. (Fig. 5-5)



- (l) Reconnect the XM ECU connectors. (Fig. 5-6)
- (1) Reconnect the blue connector to the XM ECU.
  - (2) Reconnect the gray connector to the XM ECU.
  - (3) Connect the OE AVc LAN (white) connector to the adapter harness.
  - (4) Apply large foam tape piece to the white harness connector.





## 6. Reconnect Battery Cable

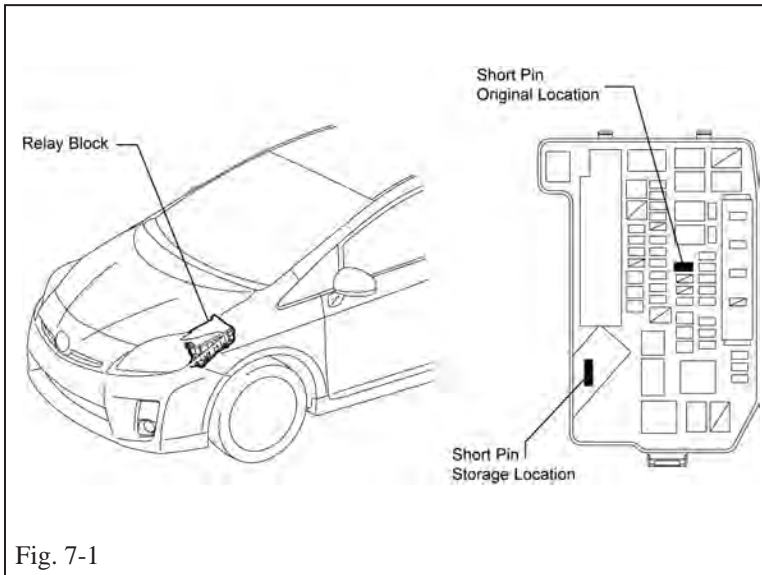
- Remove and reverse the direction of the bolt and the nut from the negative battery terminal so that the nut can be accessed with a torque wrench. (Fig. 6-1)
- Tighten the negative battery cable.
  - Position the negative battery cable at the original factory position.
  - Tighten the nut using a 10mm socket and torque to 5.4 N•m (48 lbf-in).

**CAUTION:** Do not touch the positive battery terminal with any tool when replacing the cable.

## 7. Accessory Function Check

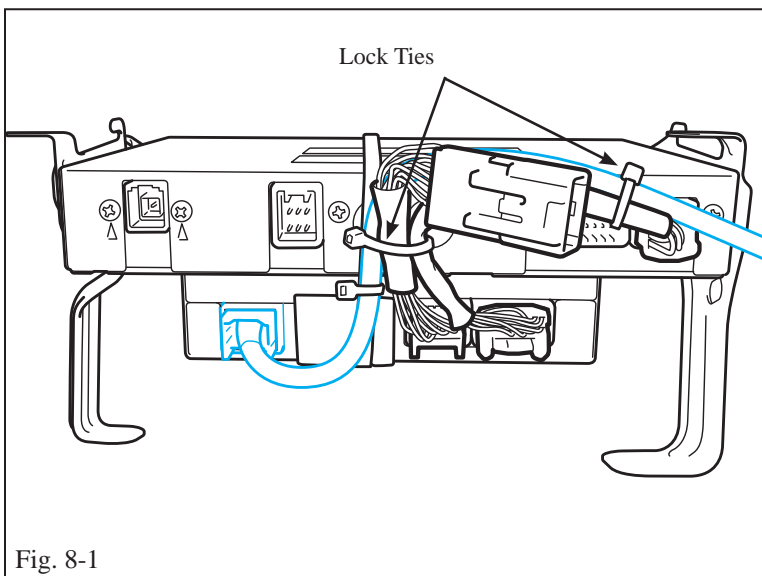
- If required, remove the short pin from the storage location of the relay block in the engine compartment and install it in its original location. (Fig. 7-1)
- Connect a compatible device to the USB jack, and check to see that the USB tab is highlighted on the screen.
- Connect a compatible device to the AUX jack, and check to see that the AUX tab is highlighted on the screen.
- Touch the XM tab on the screen, and see if the XM controls are available.

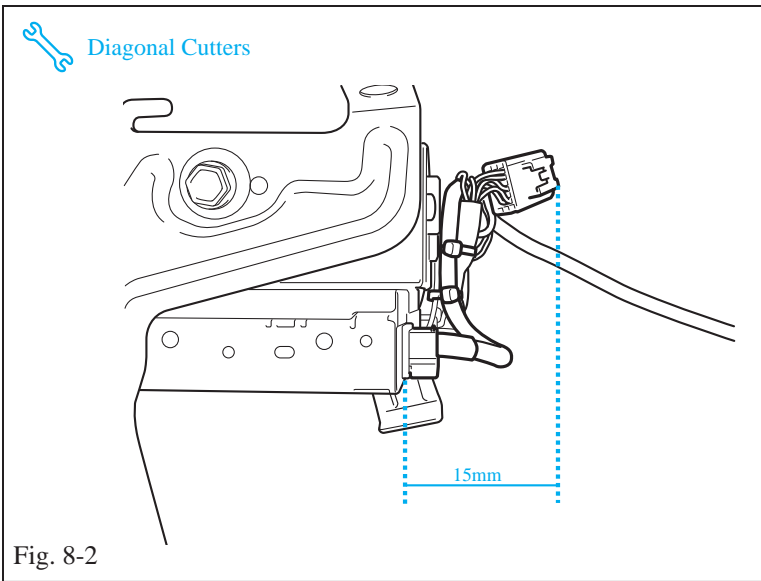
**NOTE:** Perform accessory function check with power switch in the accessory or on mode.



## 8. Vehicle Reassembly

- Secure the AVC LAN adapter harness using small lock ties.
  - Secure the AVC LAN adapter harness to the large lock tie.
  - Secure the USB and AVC LAN harnesses together. (Fig. 8-1)

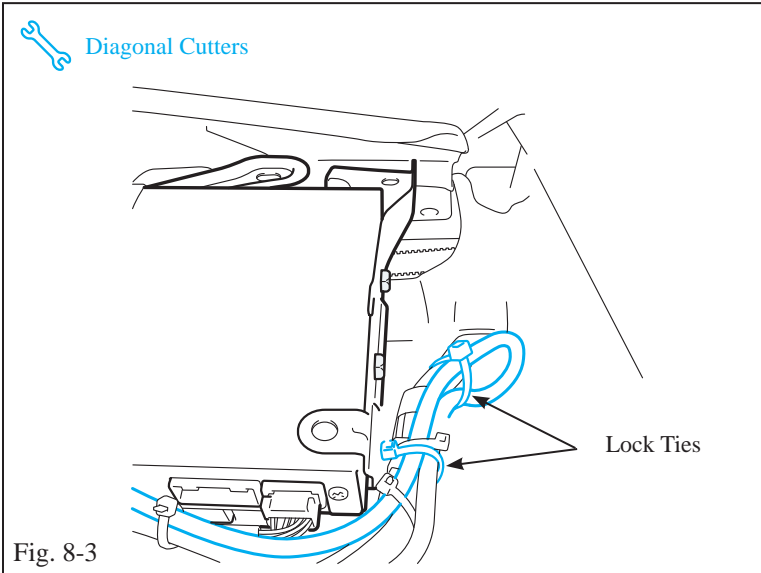




- (b) Trim the lock ties to length using diagonal cutters.

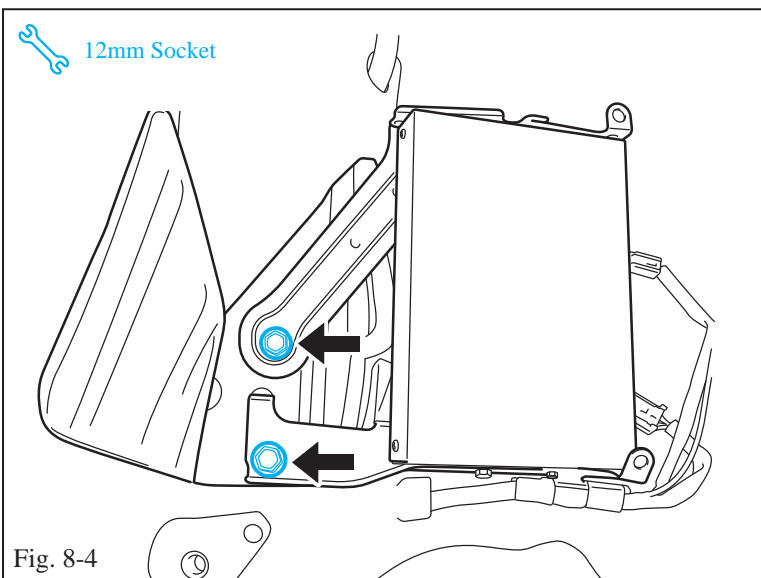


**NOTE:** To ensure proper clearance between the harnesses and the ECU cover, make sure the harnesses do not extend more than 15mm away from the XM ECU. (Fig. 8-2)



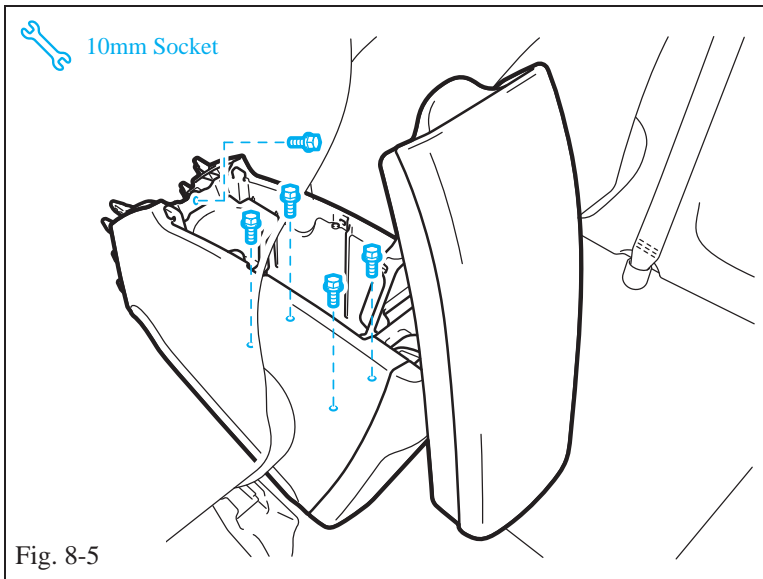
- (c) Secure the USB harness. (Fig. 8-3)

- (1) Reinstall the OE AVC LAN harness clip to the XM bracket.
- (2) Gather the extra slack in the USB harness, and pull it towards the XM ECU.
- (3) Loop the harness and secure it with two (2) lock ties to the AVC LAN harness as shown.
- (4) Trim the lock ties to length using diagonal cutters.



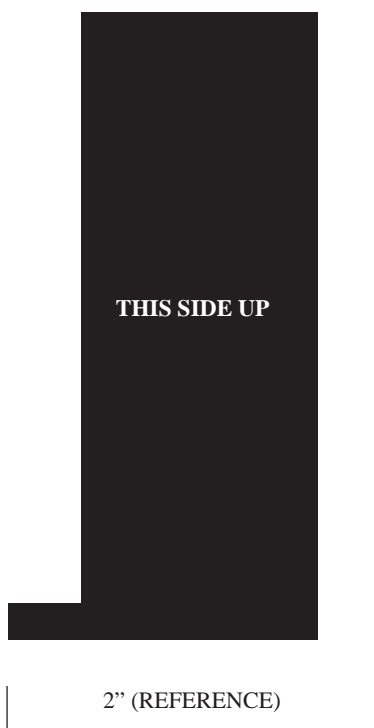
- (d) Reinstall the plastic cover for the XM ECU.
- (e) Reinstall the two (2) bolts for the XM ECU. (Fig. 8-4)





- (f) Reinstall the five (5) center console bolts. (Fig. 8-5)
  
- (g) If required, reinstall the short pin to its original storage location.
- (h) Reinstall all trim pieces and trunk components in reverse order.
- (i) Verify that the panels fit properly with no uneven gaps between them.
- (j) Clean up and remove any trash.
- (k) Place the Owner's Manual in the glove box.

**Template for Mounting USB ECU to XM ECU (Fig. 5-2, page 13)**



*Note: Scale to verify templates are correct size.*

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

### Accessory Function Checks

Major Action Item

1	Check USB playback.	Playback of USB device should function properly.
2	Check AUX playback.	Playback of AUX device should function properly.
3	Check XM functions.	XM should function properly.
4		
5		
6		
7		
8		
9		
10		

### Vehicle Function Checks

	Function		Function
<input type="checkbox"/>	XM Functionality	<input type="checkbox"/>	
<input type="checkbox"/>	Power Outlet	<input type="checkbox"/>	
<input type="checkbox"/>	Head Unit Functions	<input type="checkbox"/>	