Part Number: PT296-6002D-03/16 (LC)
PT296-6002L-03/16 (LX)

Section I - Installation Preparation

Kit Contents

Item #	Quantity Reqd.	Description
1	1	FPD Assembly w/Backbone
2	1	Shroud w/Dome Light
3	1	Dome Light Lens
4	1	DVD Assembly w/Bracket
5	1	Main Wiring Harness
6	1	Power Harness w/Radio Adapter Connector
7	1	Hardware & Fastener Kit
8	1	Remote Control
9	1	Remote Control Holder
10	1	Owner's Manual
11	1	Quick Start Card
12	2	IR (Wireless) Headphones (Lexus only)

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	7	M4 Torx Screw
2	20	Nylon Tie-wrap
3	7	M4 Rivet Nut
4	20	Adhesive backed Foam Pad
5	7	M5 Torx Screw

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1	1	Installation Kit P/N: PT296-60021
2	2	IR (Wireless) Headphones (Toyota only) P/N: PT900-00031

Conflicts

Note: None

Recommended Tools

Safety Tools	
Safety Glasses	
Vehicle Protection	Blankets, Seat Covers, Clean Cloths, Part Boxes
Special Tools	
Radio Support Platform	DVD Packaging Box
Installation Tools	
Side Cutters	
Rivet Nut Gun Tool	Pneumatic, 4mm Mandrel
Panel Clip Removal Tool	e.g. Toyota SST P/N:- 00002-06002-01
Torx Driver	# T20
Socket	10 mm, 14 mm
Drive Ratchet	$^{3}/_{8}$"
Utility Knife	
Screwdriver	Phillips, # 2
Wrench	Open End, 10 mm
Torque Wrench (x3)	32 lbf-ft (seat belt) 36 lbf-in (battery cable) 12 lbf-in (FPD assembly)
Shop Vacuum	
Wired Headphones	
Test DVD Disc	
Special Chemicals	
None	

General Applicability

Note:-

Recommended Sequence of Application

Item #	Accessory	
1		
2		
3		

*Mandatory

Legend

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

OPERATOR SAFETY: Use caution to avoid risk of injury.

CRITICAL PROCESS: Proceed with caution to ensure a quality installation.

GENERAL PROCESS: This highlights specific processes to ensure a quality installation.

TOOLS & EQUIPMENT: Calls out the specific tools and equipment recommended for this process.

Section II - Installation Procedure

A. Vehicle Protection

1. Place front passenger seat in mid position.
2. Set emergency hand brake.
3. Remove the negative battery cable. (Fig. A1)

STOP i. Protect the fender before starting.

ii. Do not touch the positive terminal with any tool when removing cable.

STOP 4. Cover front and middle seats, interior of vehicle, and center console forward of shifter.

STOP 5. Wait 90 seconds before proceeding to disassemble vehicle.

B. Disassembly of Vehicle

STOP **NOTE:** Place all removed parts on a protected surface.

STOP **NOTE:** When disconnecting wiring connectors do NOT pull on the wiring, pull on the connector only.

1. **Lexus LX470** - remove radio bezel and air vents.

STOP i. 'Using a panel removal tool carefully remove bezel by inserting tool at locations indicated by arrows. (Fig. B1)

ii. Disconnect the connector on **each** side of the lower radio trim. (Fig. B2)

STOP iii. Carefully insert panel removal tool at top of air vent and with fingers pull on lower portion. (Fig. B3)

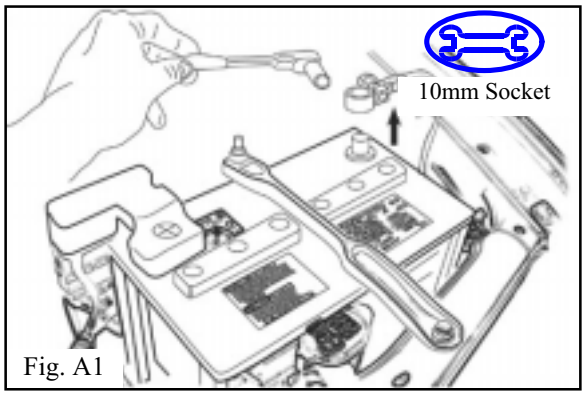


Fig. A1

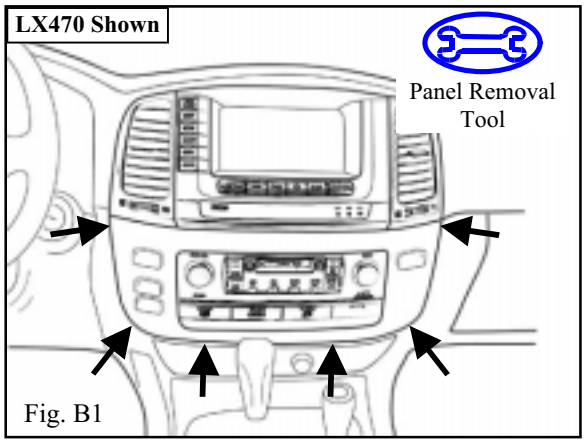


Fig. B1

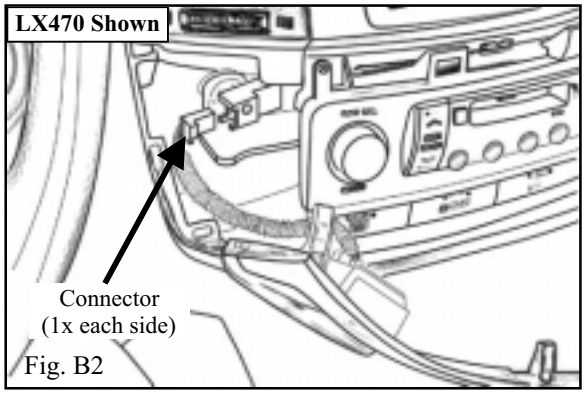


Fig. B2

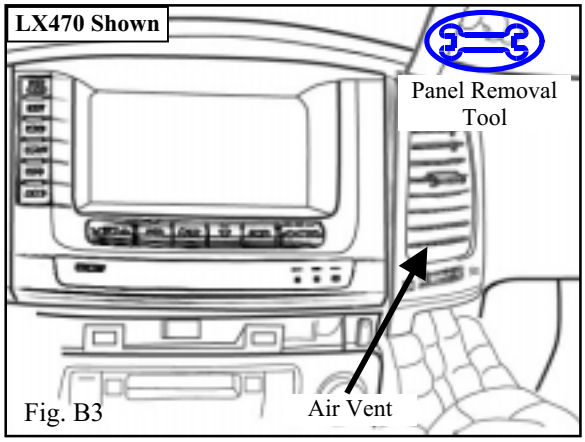


Fig. B3

iv. Slowly pull air vent out.

v. Repeat removal of air vent on opposite side. (Fig. B4)

2. **Toyota Land Cruiser** - remove air vents.

STOP i. Carefully insert panel removal tool at top of air vent and with fingers pull on side portion.

ii. Slowly pull air vent out.

STOP iii. Disconnect the connector on **each** side of the lower radio trim. (Fig. B2)

iv. Repeat removal of air vent on opposite side.

3. Remove radio

STOP i. 'If installed use the panel removal tool to carefully remove the shifter release cover. (Fig. B5)

ii. Depress shifter release and place shifter into the L position.

➡ iii. Reinstall shift release cover if removed in Step B. 3. i..

iv. Remove four (4) 10mm bolts from radio. (Fig. B6)

STOP v. Carefully slide radio partially out of location and install the radio support platform. (Fig. B7)

(1) The Radio Support Platform is the cardboard box that contains the DVD player.

STOP (2) Place a clean cloth on console under the support platform to prevent damaging console surface.

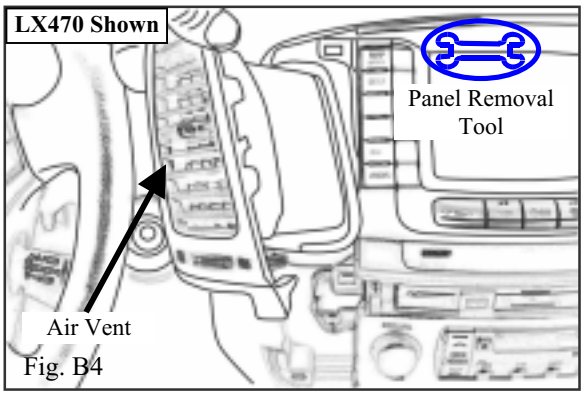
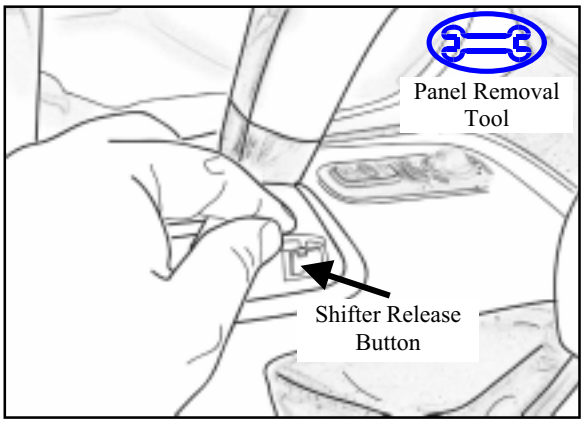


Fig. B4



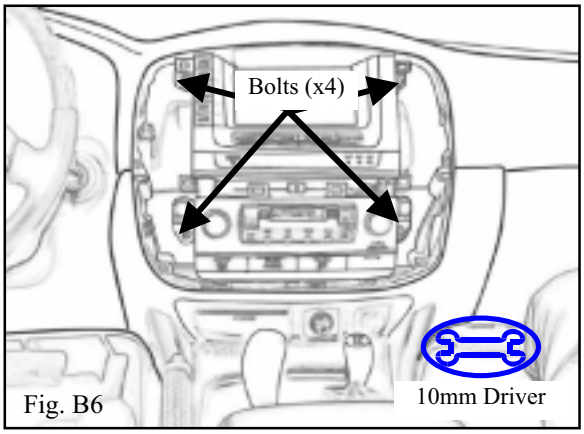


Fig. B6

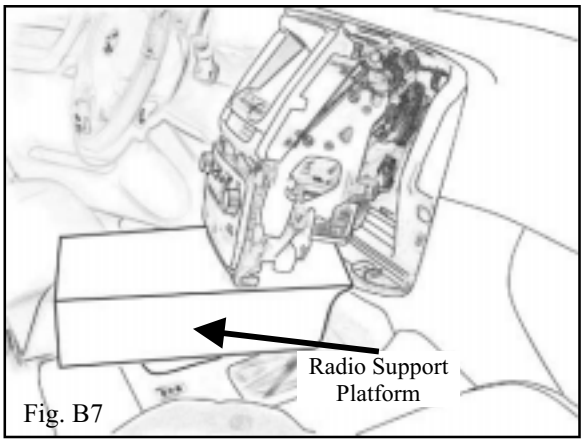


Fig. B7

(3) Completely slide radio onto the radio support platform. (Fig. B7)

STOP (4) Take care not to pull the radio out too far and stress the wire harness.

STOP vi. Place a clean cloth on dash to protect radio clips from damaging dash surface.

vii. Disconnect the 20-pin R1 harness connector. (Fig. B8)

viii. Reposition the radio on the support platform so that it is stable.

4. Remove the two (2) screws at bottom of glove box door. (Fig. B9)

STOP i. Open glove box and move side to side to release stops from dash

STOP ii. Release damper spring by sliding plastic keeper located on the glove box toward the rear of the vehicle. (Fig. B10)

5. Remove air bag harness connector access panel cover.

i. Disengage air bag harness connector access panel by prying with panel removal tool. (Fig. B11)

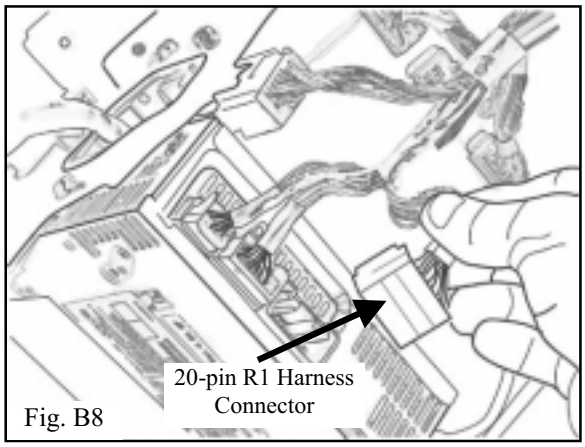


Fig. B8

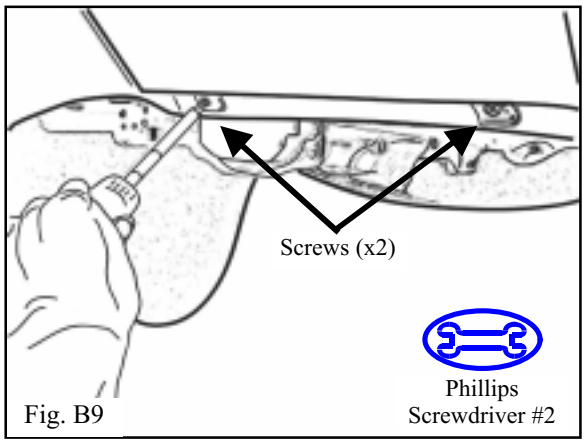


Fig. B9

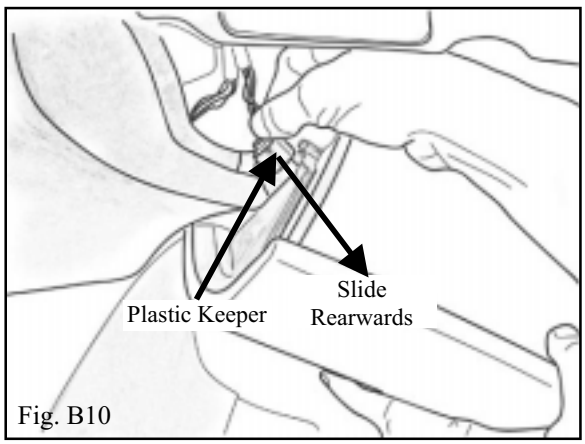


Fig. B10

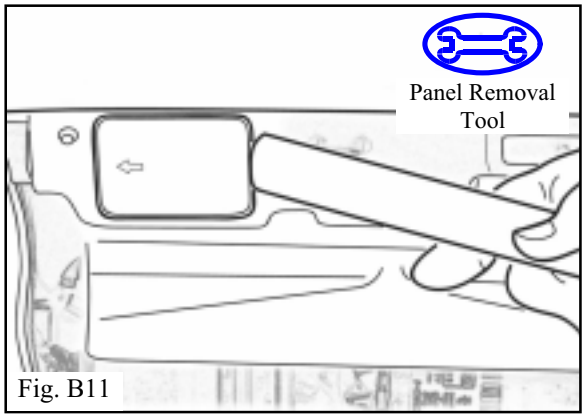


Fig. B11

ii. Slide access panel back through the opening with harness still attached. (Fig. B12)

iii. Remove three (3) screws from airbag cover. (Fig. B13)

iv. Disconnect glove box light connector. (Fig. B14)

6. "A" pillar removal.

i. Using panel removal tool, remove screw covers on the passenger side "A" pillar grab handle. Fig. B15)

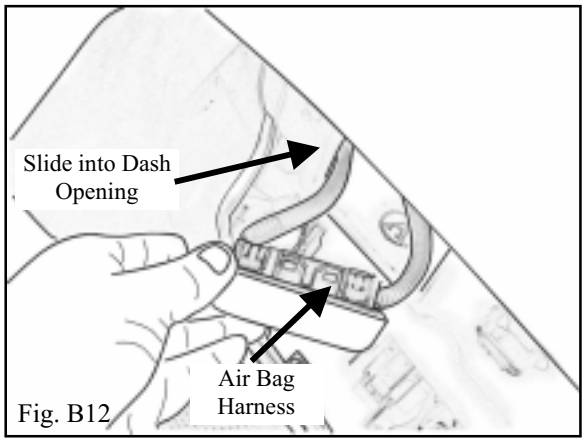


Fig. B12

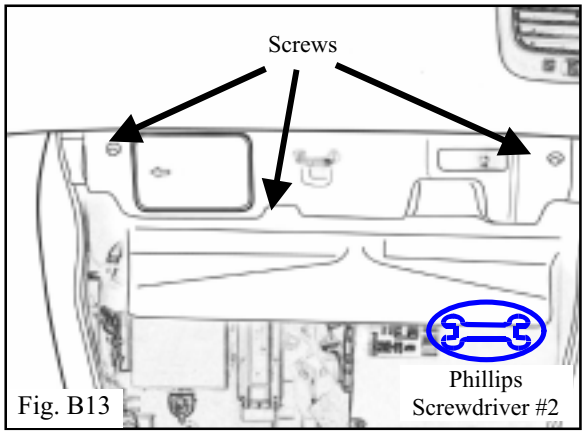


Fig. B13

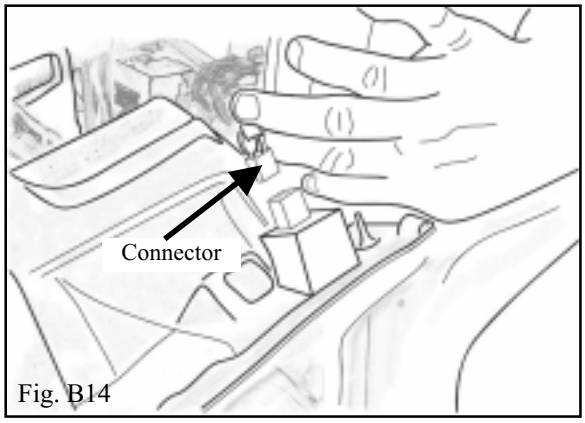


Fig. B14

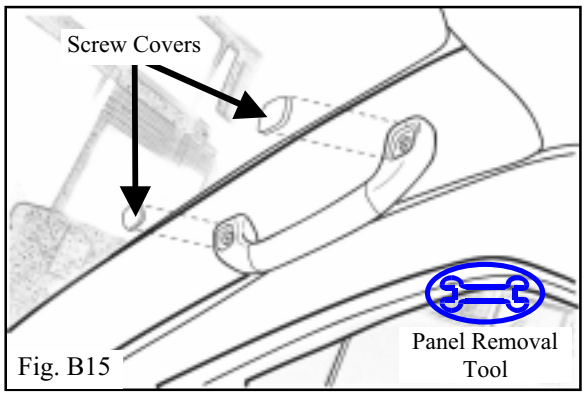


Fig. B15

ii. Remove the two (2) screws in "A" pillar grab handle. (Fig. B16)

iii. Slide top of "A" pillar toward the center of the interior of vehicle and rock back toward passenger's seat. (Fig. B17)

iv. Remove from vehicle.

7. Front scuff plate removal.

   i. Release front passenger scuff plate by prying up on the three (3) trim clips. (Fig. B18)

8. Cowl cover removal.

   i. Remove plastic nut on cowl cover by unscrewing it with fingers. (Fig. B19)

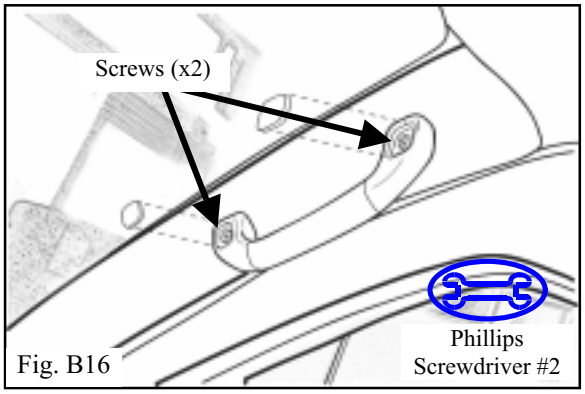


Fig. B16

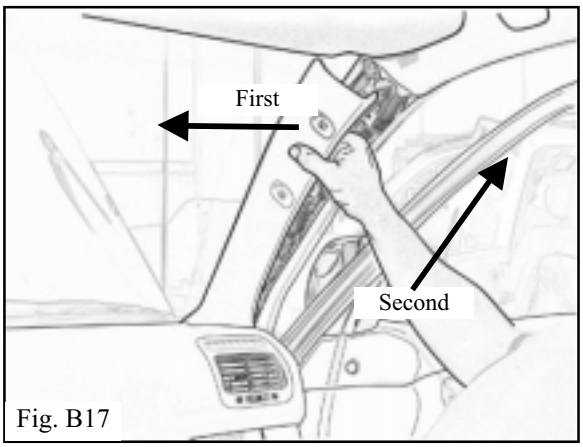


Fig. B17

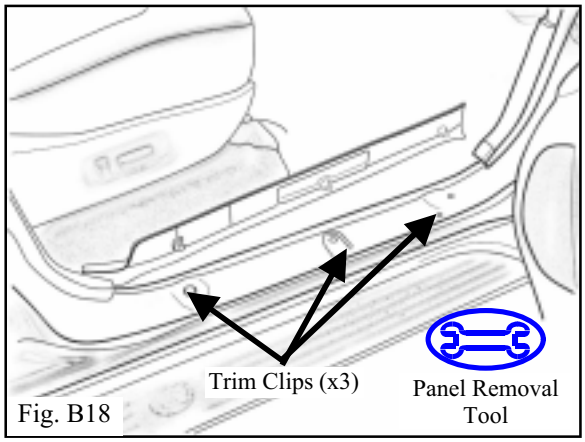


Fig. B18

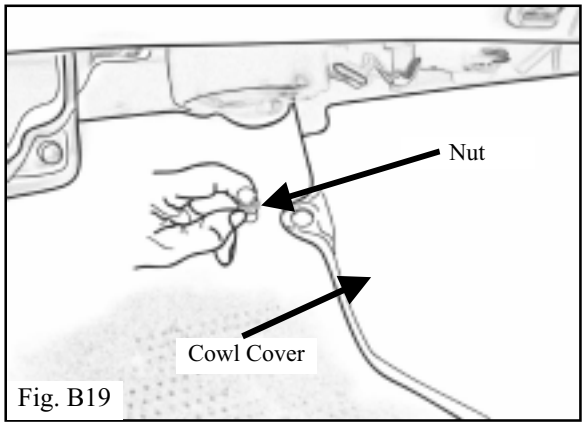


Fig. B19

9. Rear scuff plate removal.
   i. Release rear passenger scuff plate by prying up on the (2) clips. (Fig. B20)
   ii. Do not remove weather striping. Doing so may result in vehicle damage.
10. Lower passenger side "B" pillar trim removal. (Fig. B21)
    i. Remove lower seat belt bolt cover by depressing the vehicle front edge of plastic cover.
    ii. Carefully release four (4) "B" pillar Christmas tree clips (Fig. B22) and remove lower "B" seat belt cover.
11. Dome light removal.
    i. Release lens, remove, and discard. (Fig. B23)

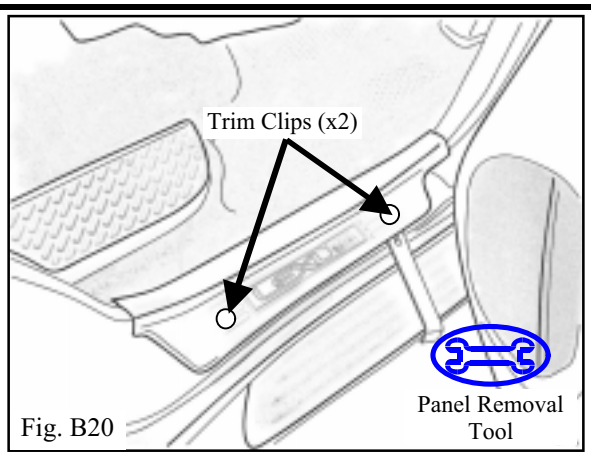


Fig. B20

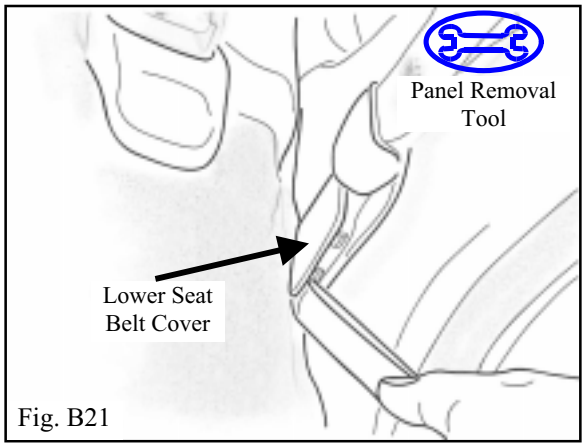


Fig. B21

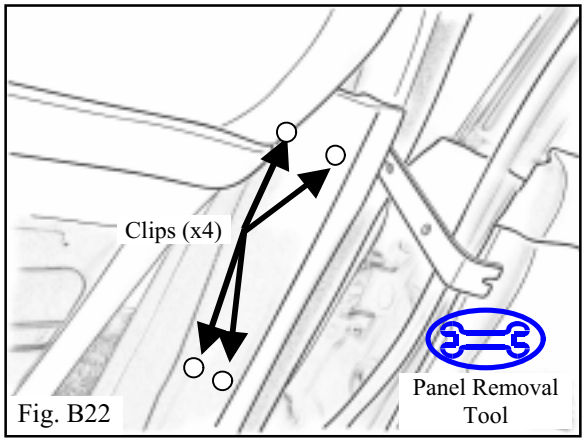


Fig. B22

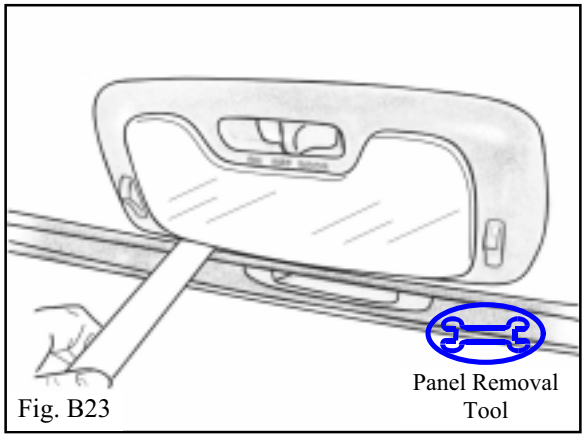


Fig. B23

ii. Remove the four (4) screws and save. (Fig. B24)

iii. Remove dome light assembly.

iv. Disconnect dome light harness and set aside. (Fig. B25)

v. Save the dome light assembly for later use in Step C. 4. i..

12. Passenger side third row seat removal. (Fig. B26)

NOTE: Stow the third center seat belt to avoid pinching it during seat removal.

i. Lower the head restraint to the lowest position. Pull the reclining lever up and fold down the seat back.

ii. While turning the lever, lift and slide the whole seat backward.

iii. Remove the lever cover and pull the lock release lever. Lift up the rear side of the seat and pull the whole seat backward.

iv. Remove the seat hook covers from the back of the seat cushion and install them onto the seat anchor brackets.

13. Tailgate cover removal.

i. Remove five (5) screws and save. (Fig. B27)

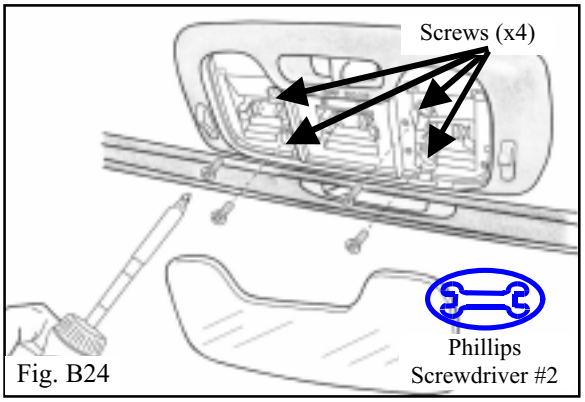


Fig. B24

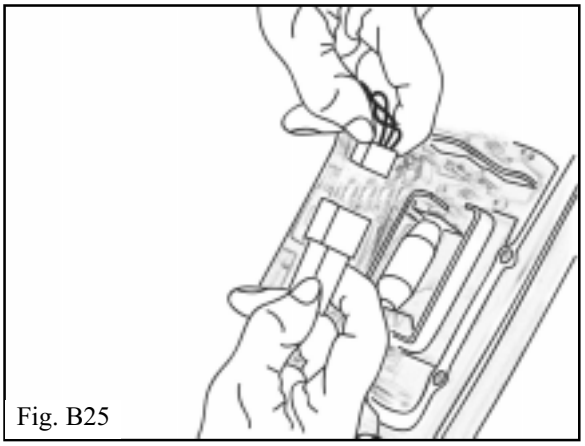


Fig. B25

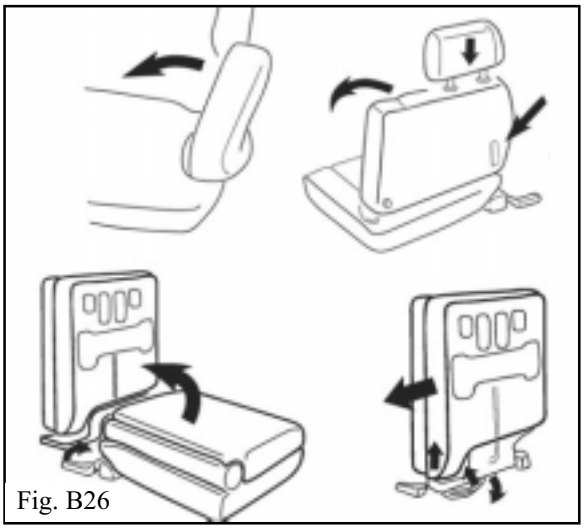


Fig. B26

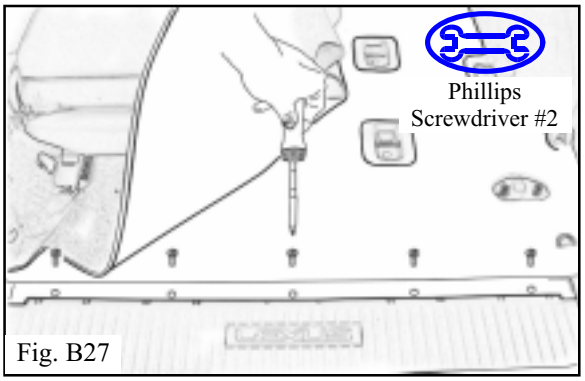


Fig. B27

ii. Starting at the center of the cover, pry up on the five (5) screw locations. (Fig B28)

iii. Remove cover by carefully pulling up.

14. Passenger side rear quarter trim removal.

i. Fold right middle row seat down to the cargo position.

ii. Lift seat belt bolt cover to expose center seat belt bolt.

iii. Remove lower middle passenger side row seat belt bolt ("C" pillar). (Fig B29)

iv. Carefully remove seat anchor trim by prying up from the front. (Fig. B30)

v. Remove and save T20 Torx screw from third row seat. (Fig. B31)

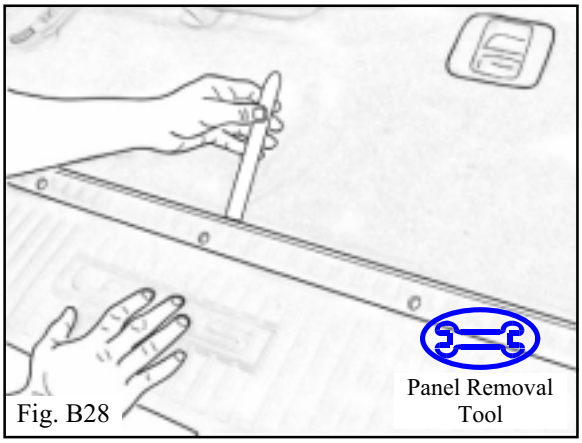


Fig. B28

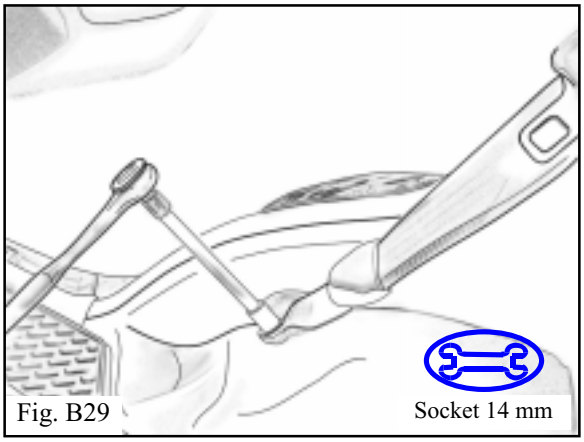


Fig. B29

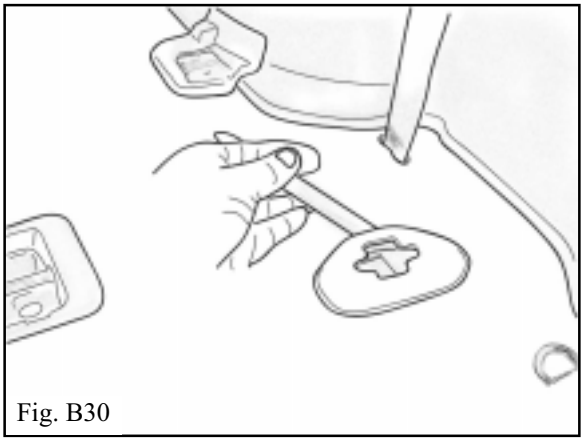


Fig. B30

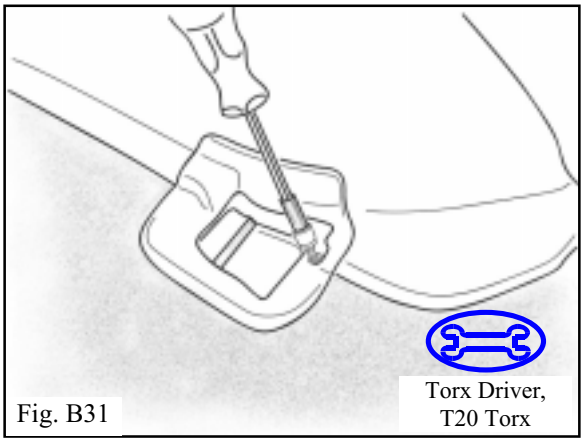


Fig. B31

vi. Carefully lift cover at center portion while sliding to disengage the retainer tabs. (Fig. B32)

vii. Remove and save the lower right rear storage door. (Fig. B33)

viii. Pull carpet toward the middle of the cargo area to expose bottom of panel. (Fig. B34)

ix. 'Remove clip at lower rear portion of trim panel. (Fig. B34)

x. Using fingers, disengage nine (9) clips located at the rear, center, and front of the panel starting at the rear of panel. (Fig. B35)

xi. To avoid damaging quarter panel, disengage clips by pulling firmly from the location of the clip, not between clips.

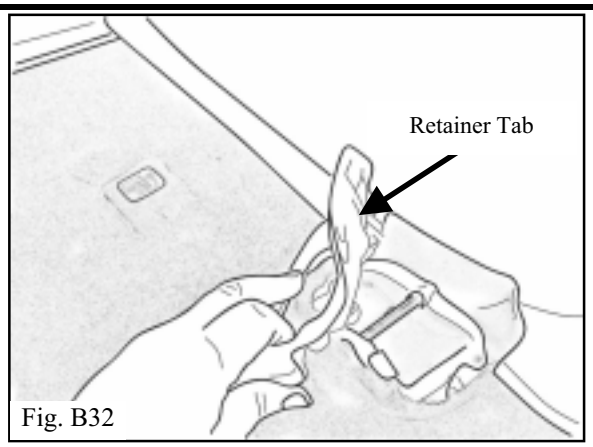


Fig. B32

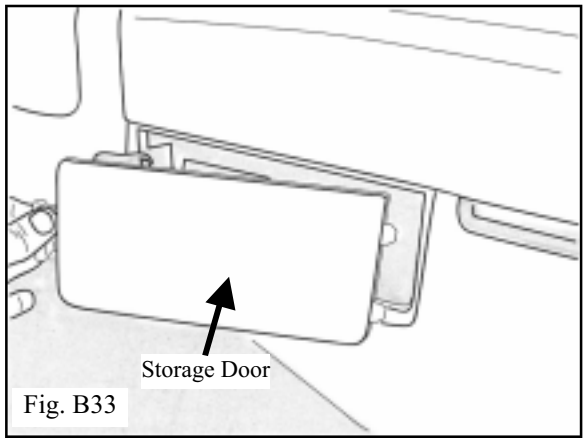


Fig. B33

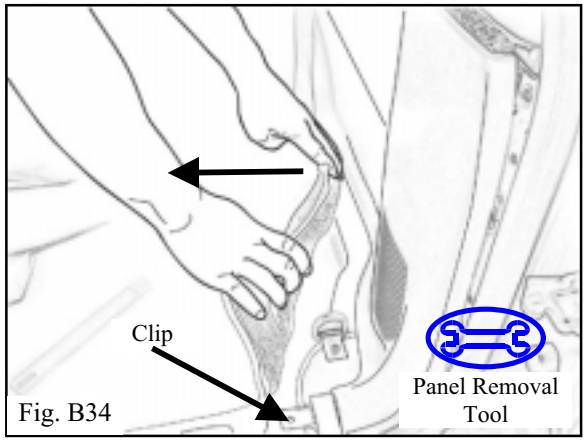


Fig. B34

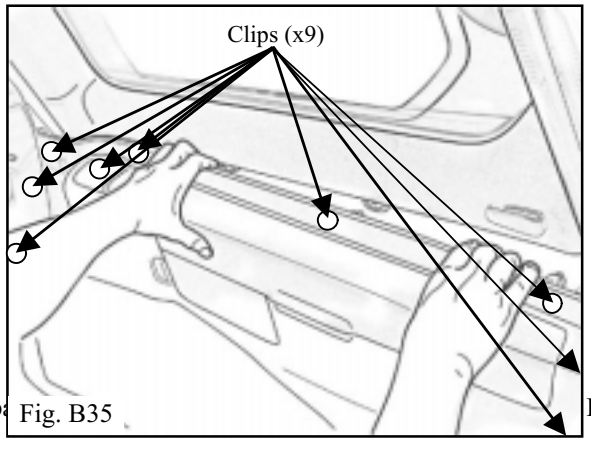


Fig. B35

xii. Lift out the panel by pulling out from the bottom, then tilting out the top. (Fig. B36)

C. Bench Preparation

1. Place blankets or other protection on the work surface to protect the interior trim pieces.
2. Storage box removal.
   i. Remove the six (6) factory screws holding the storage box. (Fig. C1)
   ii. Retain the six (6) screws for later use.
   iii. Discard the storage box.
3. DVD player bracket assembly installation.
   i. Align the DVD player bracket assembly at the location of the alignment pins for the removed kit storage box. Attach it to the rear quarter panel trim using the six (6) factory screws removed in Step C. 2. i. (Fig. C2)
   ii. Take care not to over tighten mounting screws.
4. Monitor assembly installation preparation.
   i. Remove two (2) factory dome lights bulbs from the disassembled dome light assembly.
   ii. Insert the lights into the backbone assembly. (Fig. C3)
   iii. Discard the factory dome light assembly.
5. Remote Control assembly preparation.
   i. Install AAA batteries in remote control unit.
6. Wireless Headphone assembly preparation.
   i. Install AAA batteries in each wireless headphone unit.

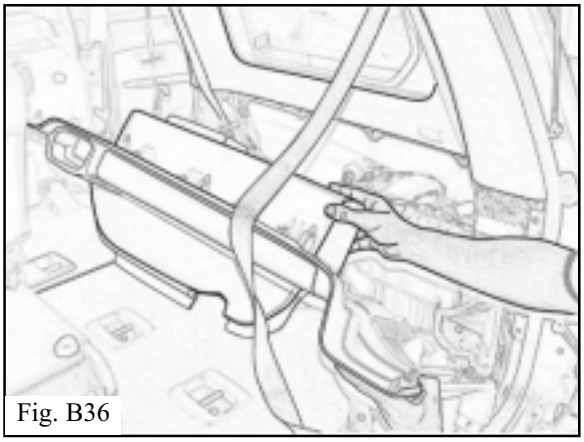


Fig. B36

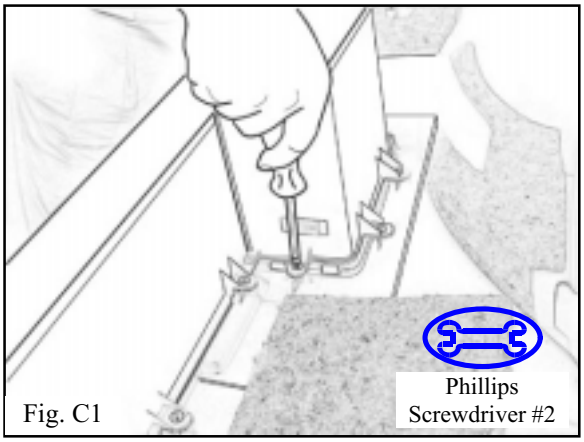


Fig. C1

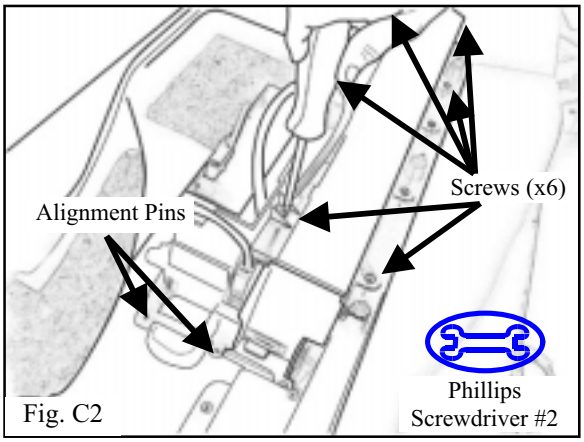


Fig. C2

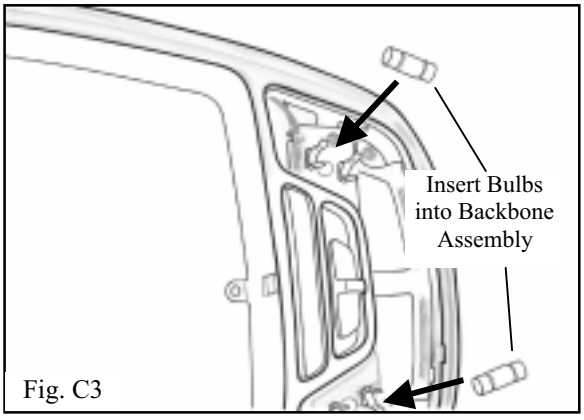


Fig. C3

D. Vehicle Modifications

1. Headliner modification.

STOP i. Position the dome light connector into the sunroof beam channel. Be sure the wire harness is positioned correctly to avoid it being cut.

STOP ii. Attach the special tool template to the two (2) factory dome light screws holes using the factory dome light screws. (Fig. D1)

STOP iii. Close sunshade to avoid damage.

STOP iv. Keep cutout protector swing-arm in closed position as shown in Fig. D1.

v. Carefully cut out center area of headliner. Remove cut piece and discard (Fig. D2)

vi. Continue cutting along trace in template. (Fig. D3)

STOP vii. To protect the dome light wire harness during headliner cutting lift tape that holds harness to the headliner and slide the protective shield between dome light harness and headliner. (Fig. D4)

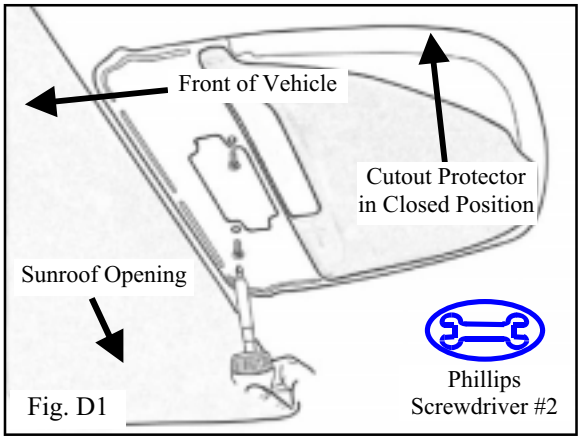


Fig. D1

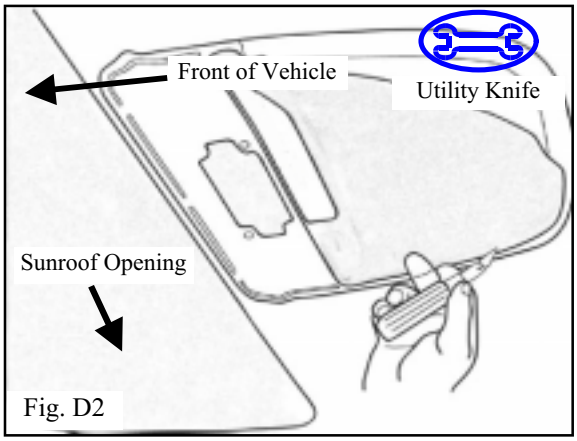


Fig. D2

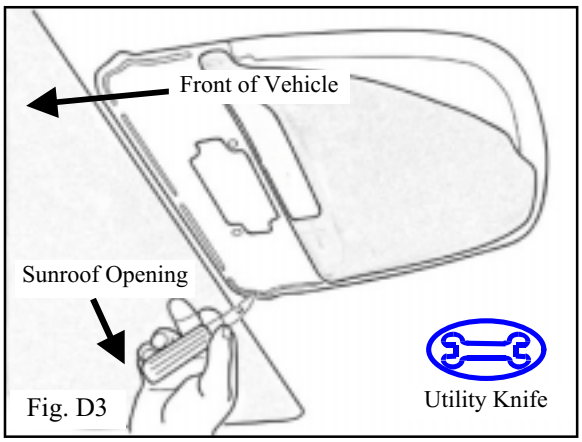


Fig. D3

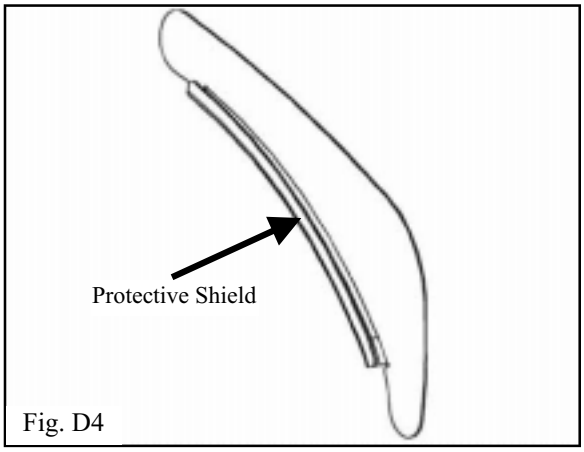


Fig. D4

viii. Swing the cutout protector to expose cutting trace in template. (Fig. D5)

ix. Cut along second half of template, using care that the protective shield is in place to avoid cutting dome light harness. (Fig. D5)

x. Remove the two (2) screws holding the template and discard.

xi. Remove headliner cutout template.

xii. Secure dome light wire harness to headliner with foam tape so that the sunroof sun shade does not contact it when shade is open.

2. Riv nut installation.

i. Install four (4) riv nuts on the sunroof bow beam in the designated locations. (Figs. D6 & D7)

ii. Install two (2) riv nuts on the front sunroof bow rear beam in designated locations. (Figs. D6 & D7) using caution not to damage the dome light harness.

(1) Take care not to install the riv nuts into the two inside holes. (Fig. D6)

E. Main Harness Routing

1. Radio adapter Y-harness installation.

i. Disconnect the short (radio) adapter Y-harness from the power harness.

ii. Starting at radio, connect the factory 20-pin female radio harness (R1) to the radio adapter harness. (Fig. E1)

iii. Connect the male radio adapter harness plug R1 into the factory radio. (Fig. E1)

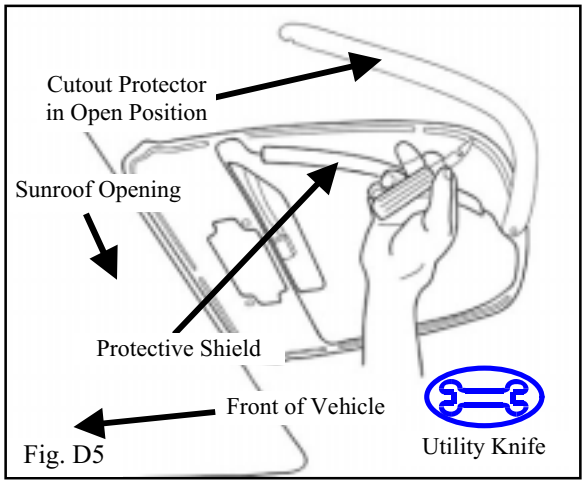


Fig. D5

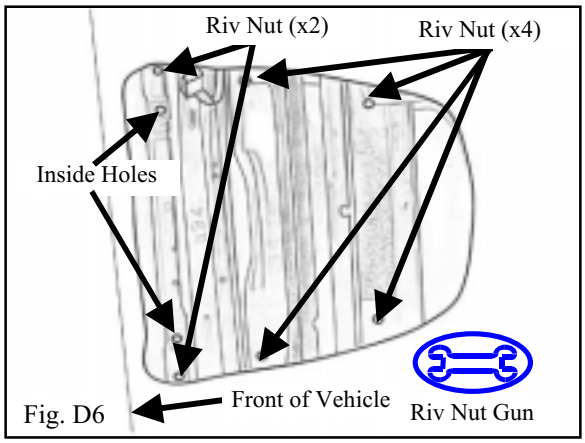


Fig. D6

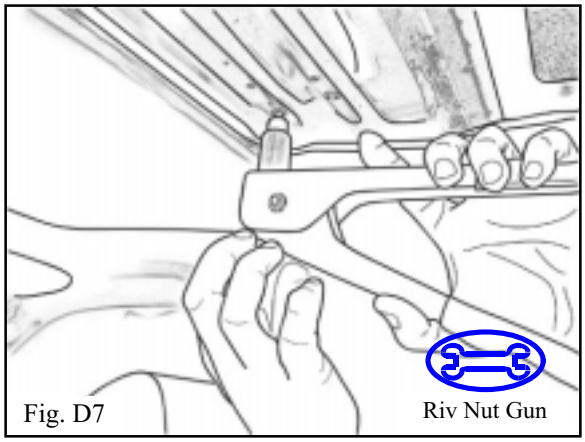


Fig. D7

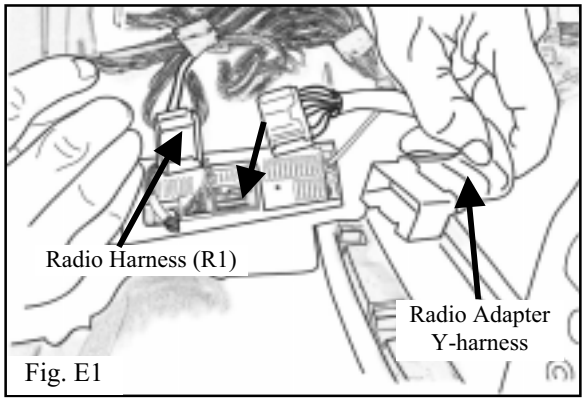


Fig. E1

iv. Route the opposite end of the harness under the passengers side air duct to the glove box location. (Fig. E2)

v. Position the radio adapter so it does not bunch up behind the radio and prevent the radio from being re-installed.

vi. Carefully replace radio assembly in factory dash location. (Fig. E3)

STOP

(1) Make sure antennas are still connected to radio.

(2) The radio support platform must be removed first.

2. Main power harness installation.

i. From scuff plate location route male power harness connector up along lower glove box bracket and connect with power adapter harness. (Fig. E4)

ii. Continue routing wire harness as shown and secure in two (2) places with foam tape. (Fig. E4)

iii. Tie wrap in two (2) designated (white) tape locations. (Fig. E5)

(1) Cut excess from tie wraps as they are installed using side cutters.

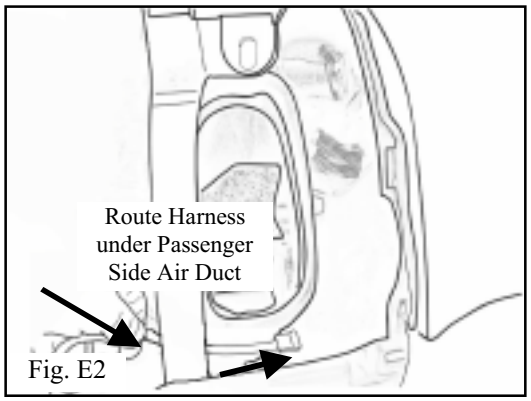


Fig. E2

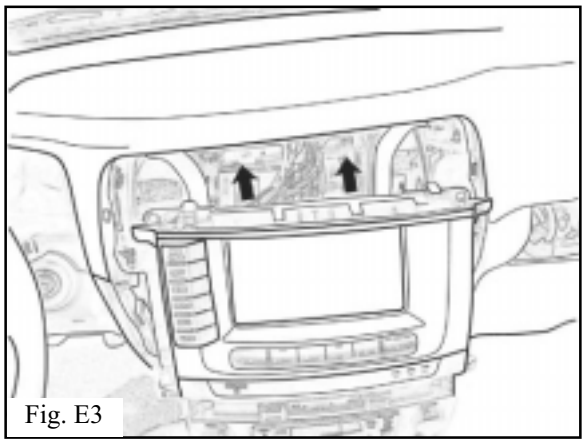


Fig. E3

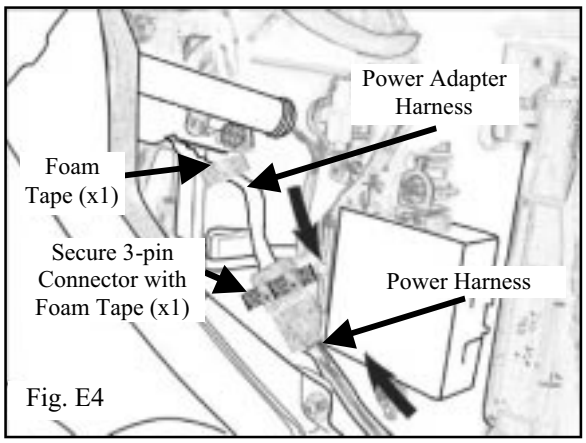


Fig. E4

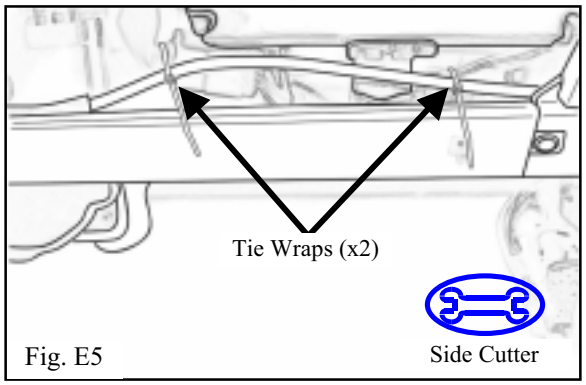


Fig. E5

(2) Make sure the fuses are accessible from under glove box. (Fig. E6)

iv. Route the power and video signal harness down from the IP along the side panel behind cowl cover. (Fig. E6)

v. Apply tie wrap and foam tape to secure.

(1) Cut excess from tie wraps as they are installed using side cutters.

3. Video signal harness installation.

i. Plug main harness into factory installed mating connector at the top of the "A" pillar. (Fig. E7)

ii. Route the main video signal harness down from the base of the right "A" pillar behind the relay and harness bracket to the kick panel. Pull harness completely through until no excess is at the "A"' pillar.

iii. Using foam tape, wrap connector assembly at top of "A" pillar. (Fig. E8)

iv. While taking out slack, foam tape the harness, at the designated green tape locations, under the sunroof drain tube ensuring **NO** contact with the SRS side curtain air bag. (Fig. E9)

(1) Do **NOT** place foam tape over any side curtain air bag components.

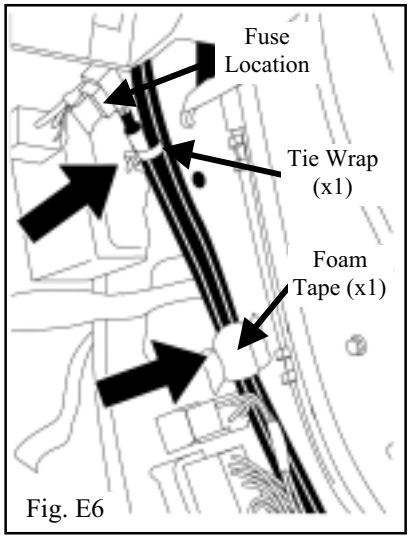


Fig. E6

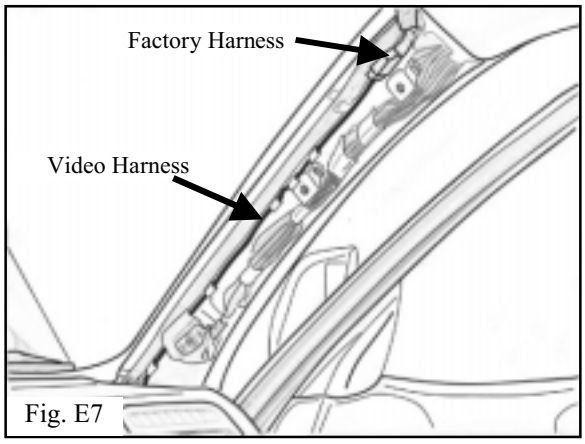


Fig. E7

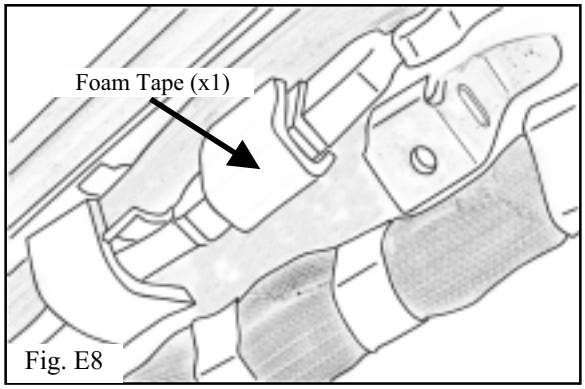


Fig. E8

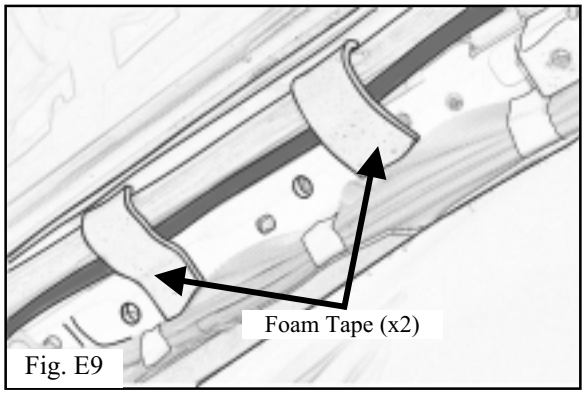


Fig. E9

v. 'Tie wrap video signal harness to vehicle harness at the location of the white tape marks on the harnesses. (Fig. E10)

vi. Cut excess from tie wrap as it is installed using side cutters.

vii. Route the power and video signal harnesses under carpet along factory installed harness in the right front and rear door scuff plate location to the rear wheel house. Tie wrap at white tape locations. (Fig. E11)

(1) Cut excess from tie wraps as they are installed using side cutters.

viii. Lift up harness protector channel to ease the routing installation process.

ix. Continue routing harness up wheel house, along factory harness.

x. Tie wrap all harnesses at the four (4) designated (white) locations to factory harness. (Fig. E12)

(1) Cut excess from tie wraps as they are installed using side cutters.

xi. Re-install the harness protector channel.

F. Component Installation – Overhead Console

1. Overhead console installation.

i. Use care not to bend or damage the headliner and use clean (white) gloves or clean hands to handle the headliner.

ii. Carefully disengage the six (6) dual lock fasteners from the back edge of the sunroof opening. (Fig. F1)

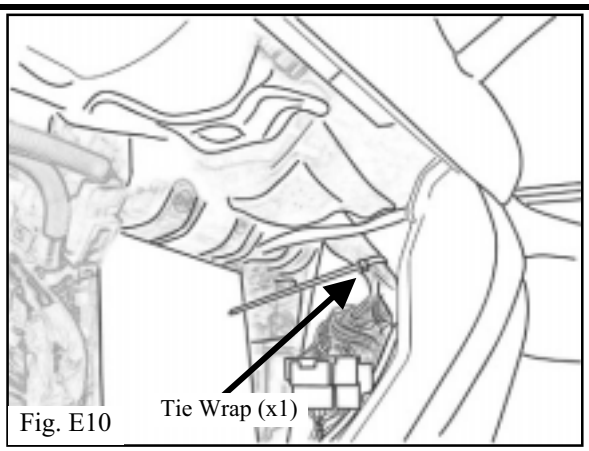


Fig. E10

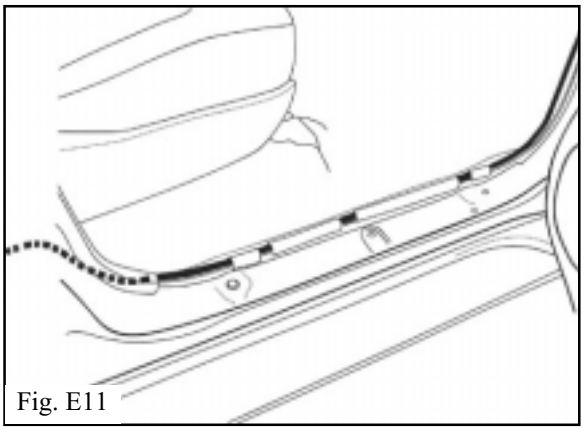


Fig. E11

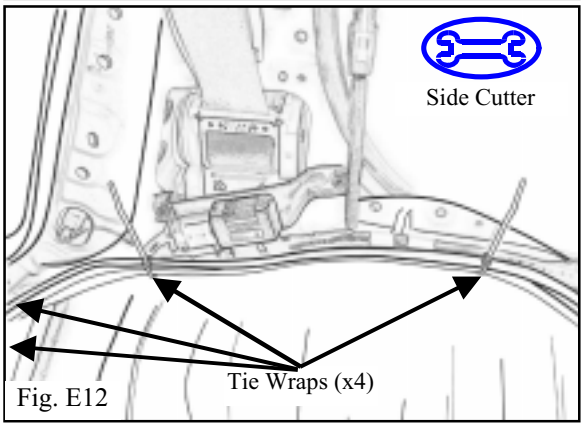


Fig. E12

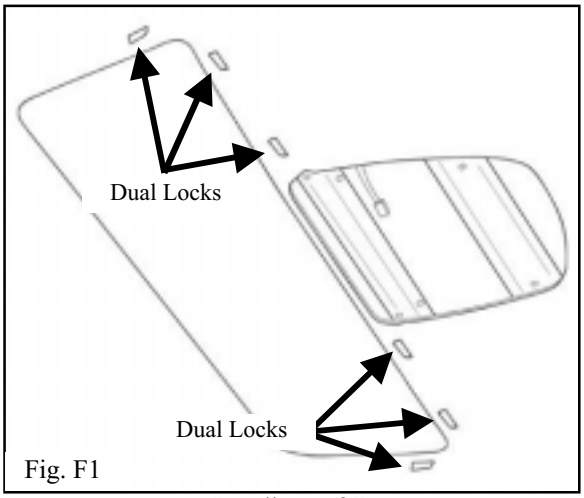


Fig. F1

iii. Place your fingers at the dual lock area to be pulled down and carefully pull down at the lip of the sunroof opening. (Fig. F2)

iv. Insert (on passenger side) a clean shop towel between the dual lock fasteners to maintain separation while connecting console pigtail connector to the factory installed harness. (Fig. F3)

v. Wrap the factory dome light connector with foam tape.

vi. Plug in the overhead backbone assembly console pigtail to the factory installed harness located on the right side front sunroof bow. (Fig. F4)

(1) Use an open-ended slotted panel removal tool to hold pigtail connector.

vii. Connect the factory dome light connector to the backbone assembly. Push the connector inside the sunroof bow channel and secure with foam tape. (Fig. F5)

(1) Check to make certain connector is in channel and does not interfere with the backbone.

viii. Remove the clean shop towel between the dual lock fasteners.

ix. Re-engage the six (6) dual lock fasteners.

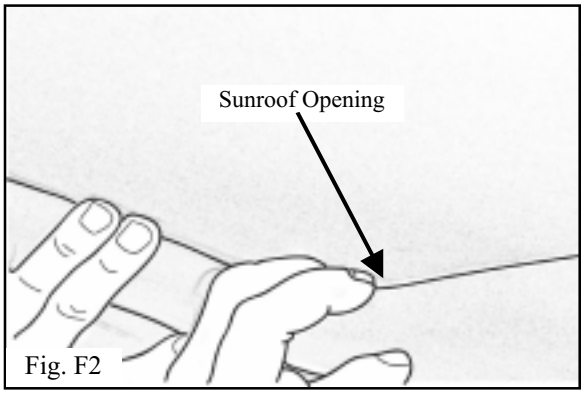


Fig. F2

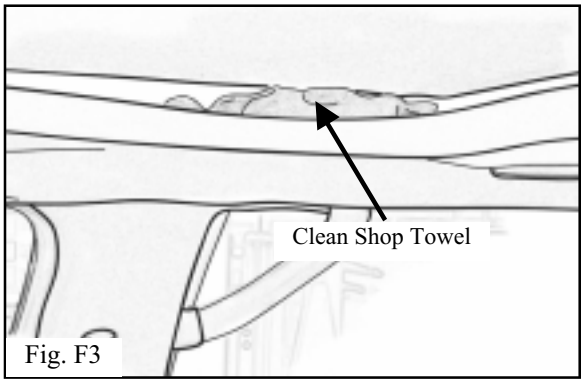


Fig. F3

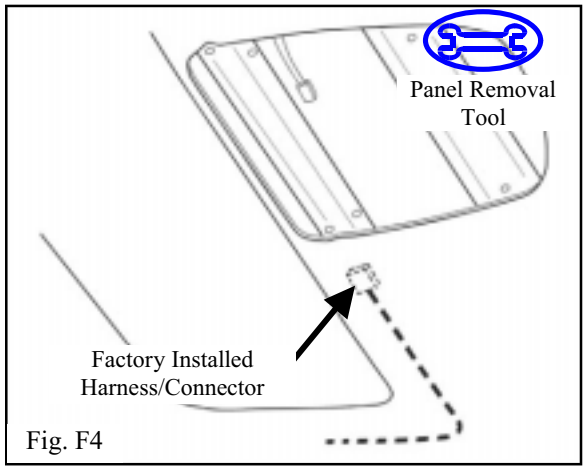


Fig. F4

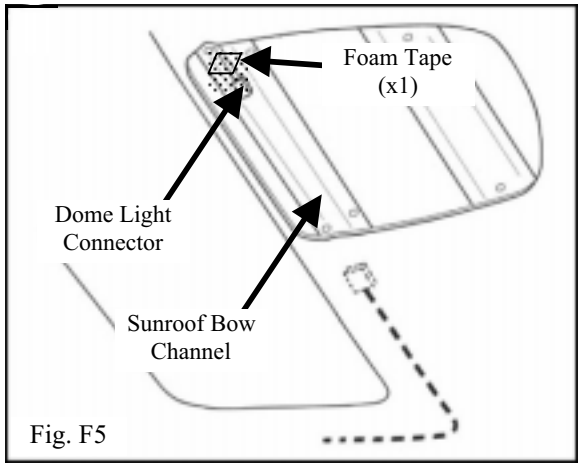


Fig. F5

x. Using the six (6) supplied M4 screws, mount the overhead console to the installed riv nuts. (Fig. F6)

(1) Tighten the screws to 1.35 N-m (12 lbf-in.)

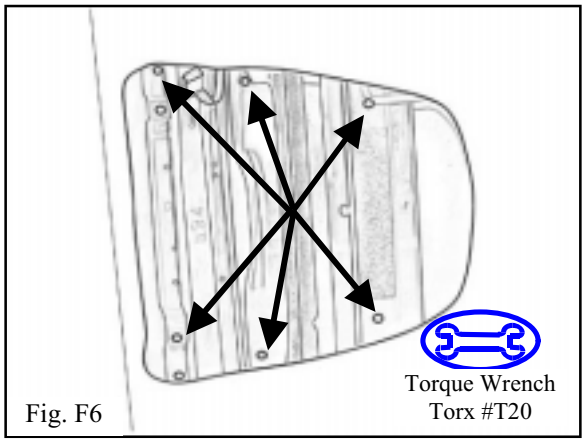


Fig. F6

G. In Process Functional Test

1. In-vehicle functional tests.
   i. Temporarily connect negative battery cable. (Do not torque at this time)
   ii. Place vehicle into Park.
   iii. Turn on ignition key to "ACC" position.
   iv. Turn on radio and set FM station to 88.1 MHz, or to another frequency that has no broadcast (note frequency.)
   v. Open DVD door by pressing "eject" button and insert test DVD.
   vi. Open overhead screen.
2. With remote control perform the following.
   i. Push the "setup" button and select FM modulation. Confirm frequency is OK.
   ii. Push "play" button and confirm DVD plays video and audio through vehicle speakers.
   iii. Check wired and wireless headphones.
3. Remove DVD test disc.
4. Disconnect negative battery cable.

H. Component Installation – Overhead Console and DVD Assembly

1. Shroud installation.

   i. Open and move screen to down position.

   ii. Slide the locating guides on the shroud onto the front edge of backbone assembly. (Fig. H1)

STOP iii. Before securing the shroud to the backbone assembly, confirm that the locating guides on the shroud have fully engaged the backbone assembly by opening and closing the FPD (screen).

   (1) There should be no interference.

➡ iv. Secure shroud to the backbone assembly by attaching the five (5) 6mm long thread-forming screws.

   (1) Hand tighten screws, taking care not to strip thread in plastic.

➡ v. Use D-shaped rubber caps to cover three (3) screw holes exposed on the backbone assembly when the flat panel display is deployed.

➡ vi. Install the dome light lens.

   vii. Install the dome light switch making sure button matches slot.

2. Rear quarter trim panel and DVD assembly installation.

   i. Slide rear quarter trim panel and DVD assembly into its pre-installed position. (Fig. H2)

STOP (1) Take care not to damage trim panel.

➡ ii. Plug the 20-pin connector (video signal harness) into interconnect box. (Fig. H3)

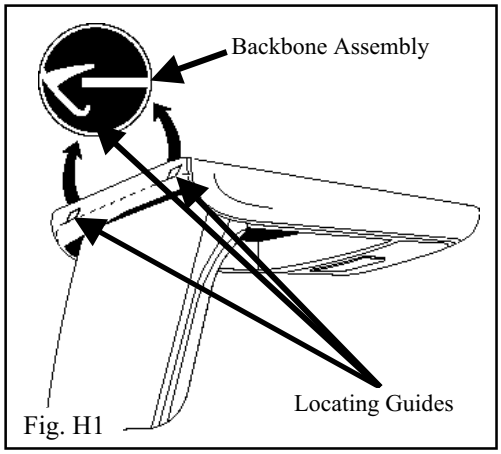


Fig. H1

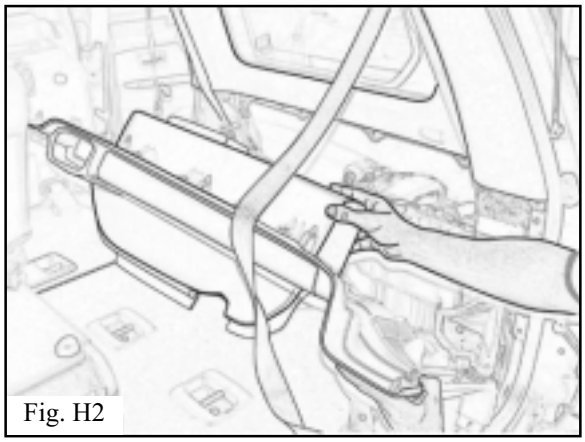


Fig. H2

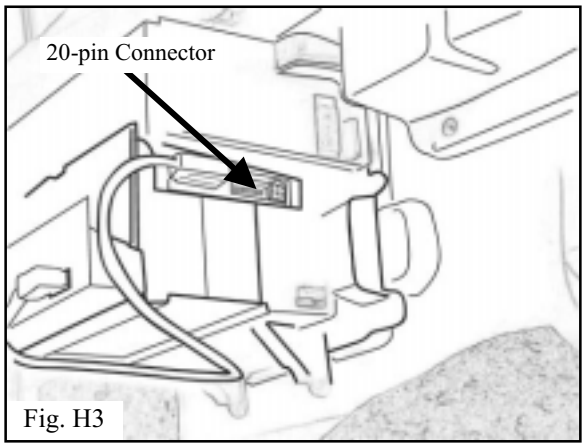


Fig. H3

iii. Plug the 4-pin connector (power harness) into the interconnect box. (Fig. H4)

iv. Position the trim panel in upright position to proceed with the in-vehicle testing.

I. Reassembly

1. Reinstall the rear quarter trim panel. (Fig. I1)
   i. Ensure all clips are in the panel and aligned to receiver holes before attempting to reinstall panel.
   ii. Pull carpet back and slide in bottom of quarter trim panel.
   iii. Align clips to holes firmly press at each clip location until clips engage.
2. Confirm no twists in seat belt and reinstall lower seat belt anchor bolt. Tighten to 3.6 N-m (32 lbf-ft.). (Fig. I2)
   i. Slide plastic cover over bolt mount.
3. Carpet installation. (Fig. I3)
   i. Lay carpet back into position and press edges into quarter trim panel recesses.
   ii. Cargo hooks through carpet.
4. Tailgate cover panel.
5. Third row seat
   i. Seat anchor trim.
   ii. T20 Torx screw and cover.
      (1) Tighten the screws to 1.35 N-m (12 lbf-in.)
6. Lower "B" pillar trim.
7. Rear passenger side scuff plate.
8. Cowl cover.
9. Front passenger side scuff plate.

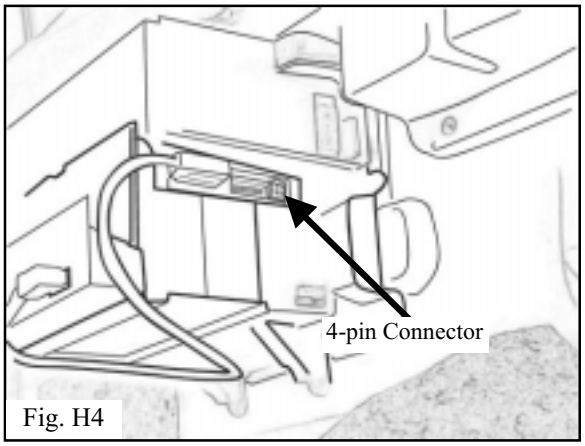


Fig. H4

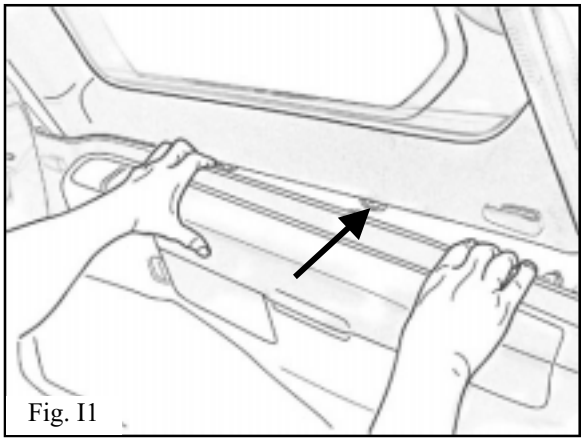


Fig. I1

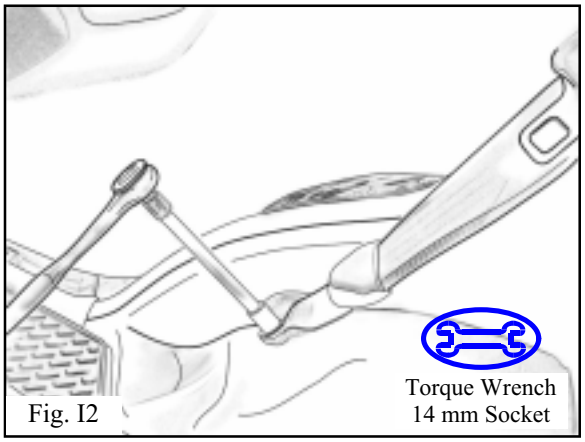


Fig. I2

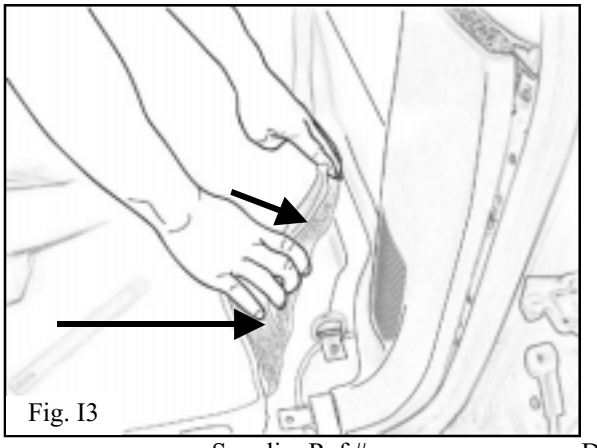


Fig. I3

10. "A" pillar trim and grab handle.
11. Install Air Bag cover.
12. Glove box.
    i. Damper spring.
    ii. Glove box door.
    iii. Glove box light connector.
13. Air bag service panel.
14. Radio.
15. Air vents.
16. Radio bezel (Lexus LX470 only).
17. Reconnect the vehicle's negative battery cable. (Fig. I4)
    i. Position the negative terminal at an angle of 90° to the battery as shown in inset.
    ii. Tighten the nut to 4.1N-m (36 lbf-in).
    iii. Do not touch the positive terminal with any tool when replacing the cable.

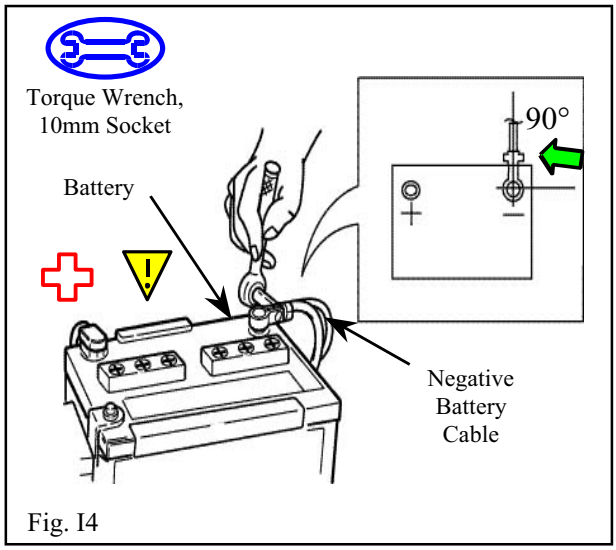


Fig. I4

J. Final Preparation

1. Install remote control holder on back of passenger side seat map pocket.
2. Store remote control in remote control holder.
3. Align and fix headphone label to door in location defined by template. (Fig. J1)
4. Store wireless headphones with plastic covers in rear door side pockets. (Fig. J2)
5. Replace the storage door.
6. Install the "Quick Start Card" to storage door.
    i. Quick Start Card should be displayed on outside.
7. Place Owners Manual in glove box.

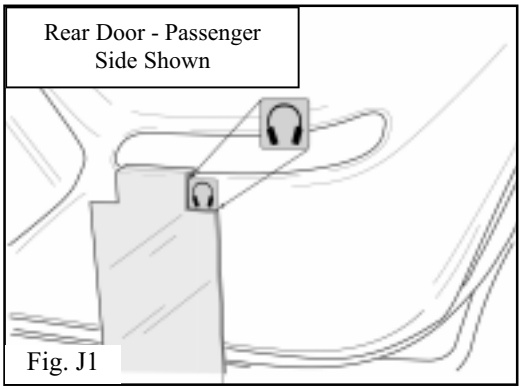


Fig. J1

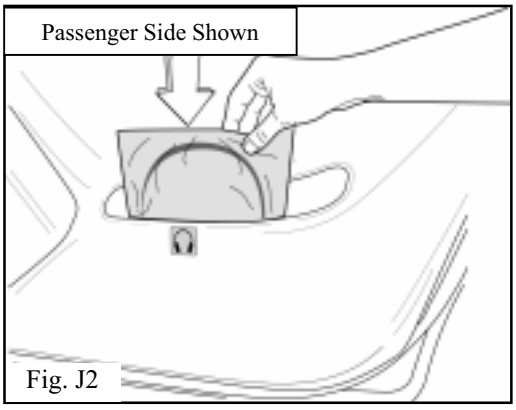


Fig. J2

Section III ¿Functional Verifications

Check:	Look For:
Accessory Function Checks	
☐ Turn on radio, set FM station to 88.1 MHz, or to another frequency that has no broadcast.	Confirm that radio is operating.
☐ Open DVD door by pressing "eject" button and insert test DVD.	Confirm DVD is inserted.
☐ Open overhead screen.	Confirm screen turns on.
☐ Push the "setup" button on remote control and select FM modulation.	Confirm frequency is 88.1 MHz, or the other frequency set above.
☐ Push "play" button on remote control	Confirm DVD plays video and audio through vehicle speakers.
☐ Check wired and wireless headphones.	Confirm DVD plays audio through the headphones.
☐ Check start up screen is correct.	Toyota or Lexus start up screen.
Vehicle Function Checks	
☐ Dome/Courtesy/Map Lights	Functioning Dome/Courtesy/Map Lights
☐ Glove Box Light	Functioning Glove Box Light
☐ Air Bag Warning Light	Functioning Air Bag Warning Light. If the warning light remains "ON", it may indicate a system malfunction.
☐ Power Sunroof	Functioning Sunroof
☐ Third row rear seat operation.	Functioning third row rear seat.
☐ Navigation System (if equipped)	Functioning Navigation System