

Part Number: 08586-42810

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

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Wire Harness
2	1	GBS ECU
3	1	Security ECU Mounting Bracket
4	1	GBS ECU Mounting Bracket
5	1	Status Monitor
6	1	Security ECU

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	1	Small Foam Tape Strip
2	20	Wire Ties
3	1	Large Foam Tape (2 per.)
4	1	Clip
5	2	Butyl Tape
6	2	Warning Labels (English)
7	2	Warning Labels (Spanish)
8	1	Owner's Manual
9	1	Warranty Card

Additional Items Required For Installation

Item #	Quantity Reqd.	Description

Conflicts

Note: Must not be installed in vehicles with factory Anti-theft alarm.

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Part Boxes
Special Tools	Notes
Striker Tool (PPO only)	CAD-E IADS P/N: ALL 02-016-01
Installation Tools	Notes
Phillips Head Screwdriver	#2, screwdriver or tip
Flat Blade Screwdriver	Small
Socket	10 mm, 12 mm
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01
Pneumatic/Electric Wrench	
Wrench	10 mm
Torque Wrench	2.9 ~ 4.9N·m (26.0 ~ 43.4 lbf ft)
Side Cutters	

Special Chemicals	Notes
Glass Cleaner	Household Windex
Cleaner	3M™ Prep Sol-70

General Applicability

Note: Rav4 with factory keyless entry system only.

Recommended Sequence of Application


Item #	Accessory	


*Mandatory


Vehicle Service Parts (may be required for reassembly)


Item #	Quantity Reqd.	Description
1	1	#45286-42915-BO Lower Steering Column Cover


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.

 **CAUTION:** 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.

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

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

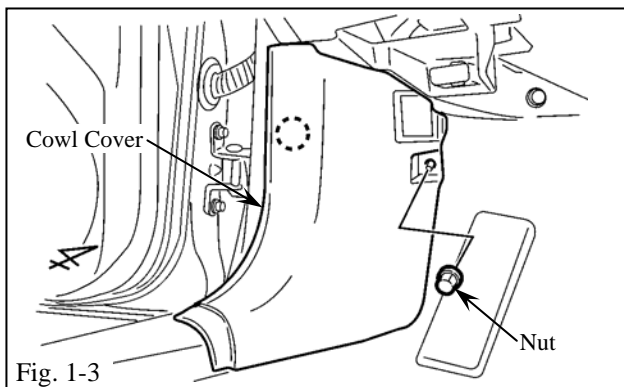
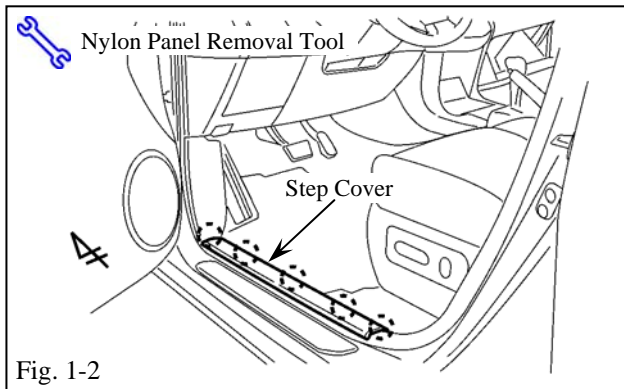
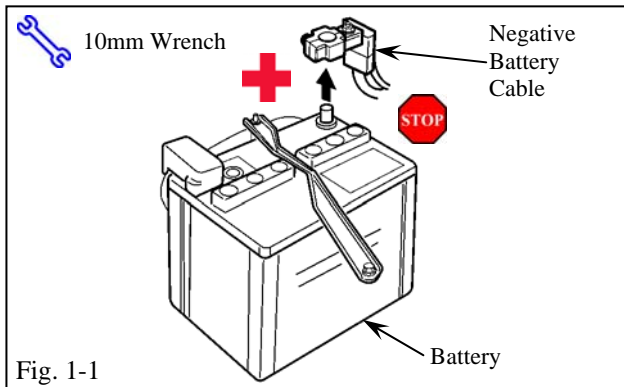
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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.



NOTE: This installation instructions covers both V5 harness and V4 harness installation.

The differences are highlighted in the procedure as follows:-

- Plain text used for V5 system installation (no text box).
- Shaded text box used for both V5 harness and V4 harness installation.

1. Vehicle Disassembly.

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



(1) Protect the fender before starting.

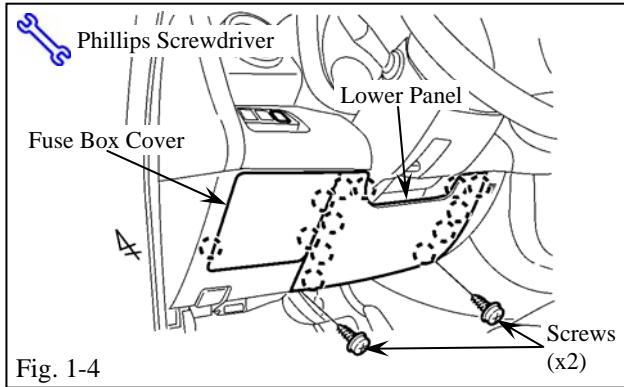


(2) Do not touch the positive terminal with any tool removing the cable.

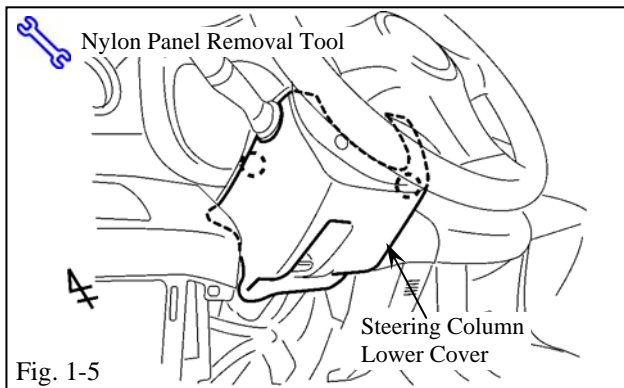
(b) Remove the driver's step cover. (Fig. 1-2)

(c) Remove the driver's cowl cover. (Fig. 1-3)

(1) Remove one nut securing the cowl cover.

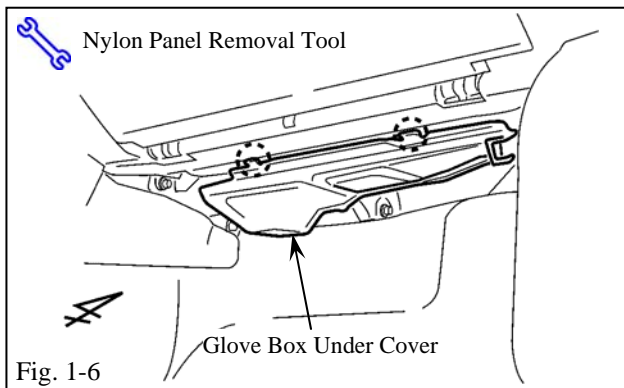


- (d) Remove the fuse box cover. (Fig. 1-4)
- (e) Remove the instrument lower panel. (Fig. 1-4)
 - (1) Remove two screws securing the panel.

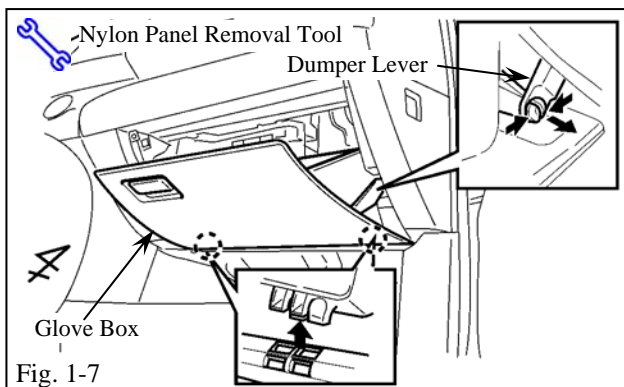


- (f) Remove the steering column lower cover. (Fig. 1-5)

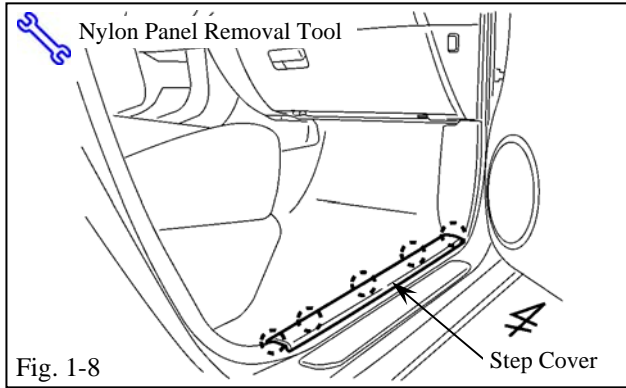
Note: Should damage occur please see TSB ST006-06 for additional information.



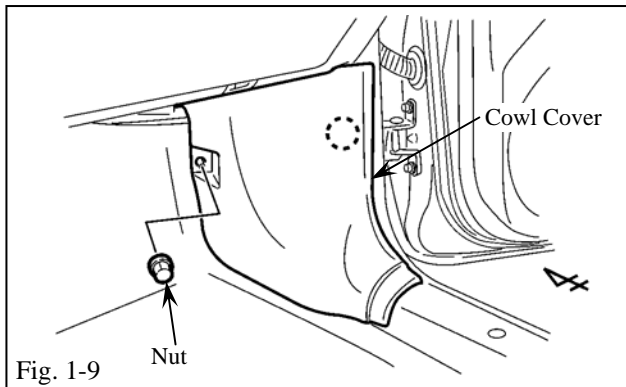
- (g) Remove the glove box under cover. (Fig. 1-6)



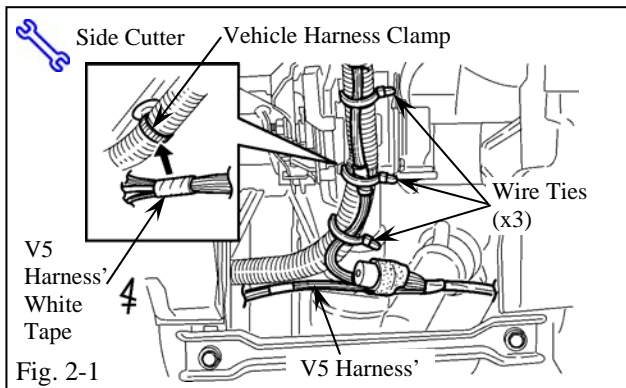
- (h) Remove the glove box assembly. (Fig. 1-7)
 - (1) Open the glove box door and release the dumper lever from the glove box assembly.



- (i) Remove the passenger's step cover.
(Fig. 1-8)

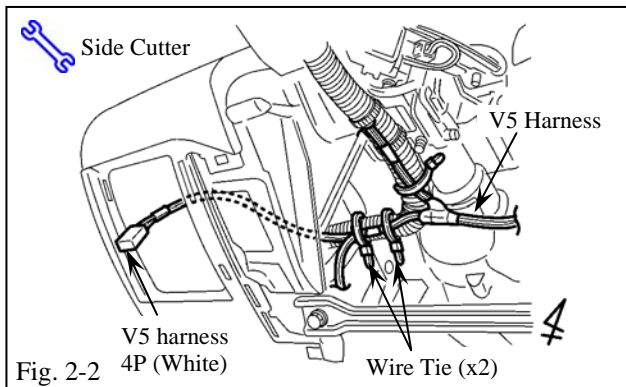


- (j) Remove the passenger's cowl cover.
(Fig. 1-9)
- (1) Remove one nut securing the cowl cover.

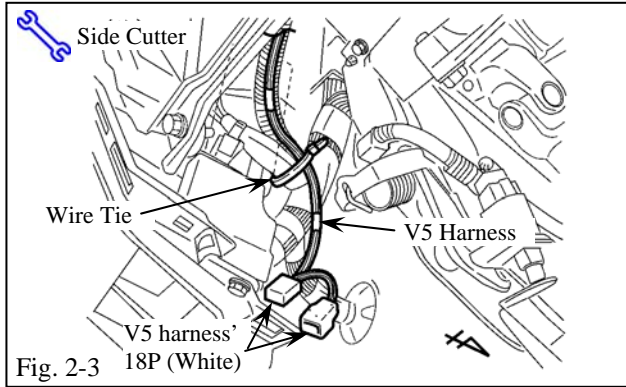


2. V5 Harness Installation.

- (a) Locate the vehicle harness clamp on the steering shaft area. Secure the white taped marker of the V5 harness next to the vehicle harness clamp with one wire tie. (Fig. 2-1)
- (1) Line up the V5 harness' white tape marker to the vehicle harness clamp.



- (b) Secure the V5 harness to the vehicle harness white two wire ties. (Fig. 2-1)
- (c) Route the V5 harness toward the driver side J/B area, the secure it to the vehicle harness with two wire ties. (Fig. 2-2)

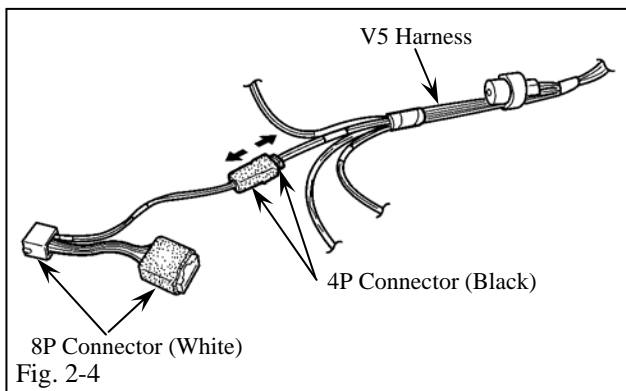


- (d) Route the V5 harness' white 18P connectors toward the driver side J/B area, then secure it to the vehicle harness with one wire tie.
(Fig. 2-3)

Go to Step 1.

FOR V5 HARNESS and V4 HARNESS
SIMULTANEOUS INSTALLATION ONLY.

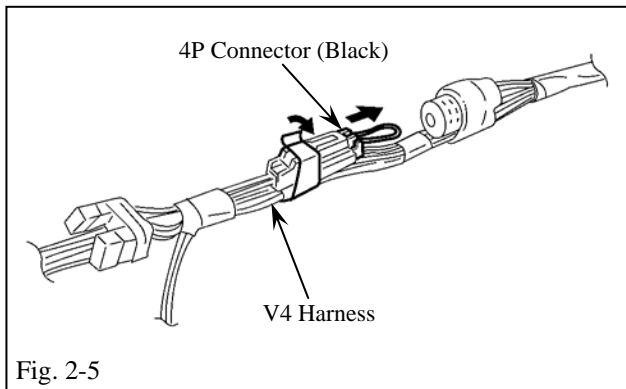
(Steps e-g)



NOTE: Only perform this installation step on the V5 harness and V4 harness installed simultaneously.

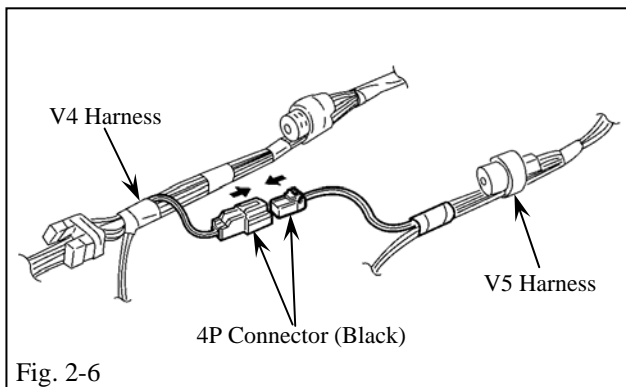
- (e) Locate and disconnect the black 4P connector on the V5 harness to separate the harness portions. (Fig. 2-4)

(1) Discard the separated harness (4P male connector and 8P connectors).



- (f) Locate and disconnect the black 4P female connector plugged into the V4 harness' black 4P male connector. (Fig. 2-5)

(1) Discard the black 4P female connector.



- (g) Connect the V5 harness' black 4P female connector and the V4 harness' black 4P male connector. (Fig. 2-6)

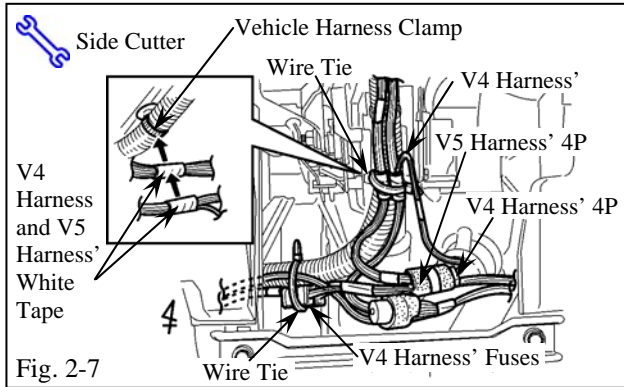


Fig. 2-7

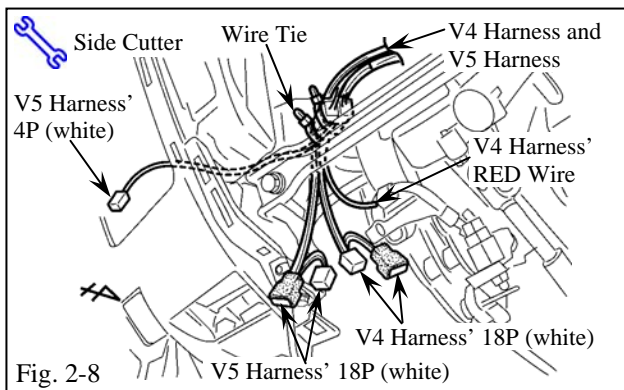


Fig. 2-8

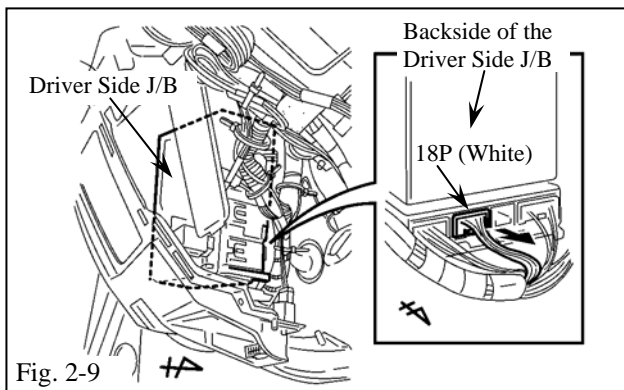


Fig. 2-9

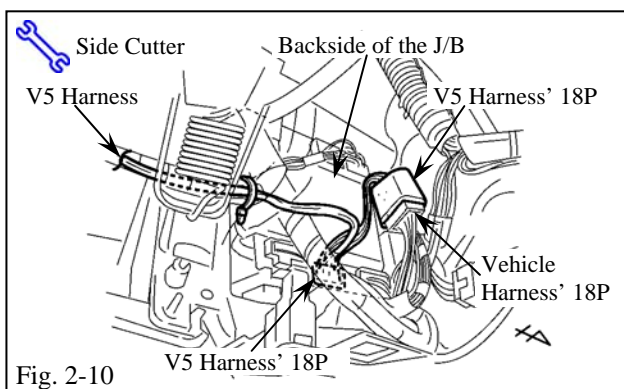


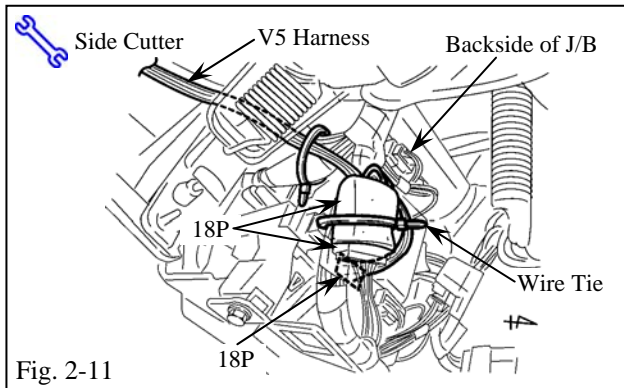
Fig. 2-10

FOR V5 HARNESS and V4 HARNESS
SIMULTANEOUS INSTALLATION ONLY.
(Steps h-k)



NOTE: Only perform this installation step on the V5 harness and V4 harness installed simultaneously.

- (h) Locate the vehicle's harness clamp on the steering column area. Secure the V5 harness and V4 harness' white tape to the vehicle harness clamp with one wire tie. (Fig. 2-7)
- (i) Secure the V5 harness and V4 harness' two fuses to the vehicle harness with one wire tie. (Fig. 2-7)
- (j) Route the V5 harness and V4 harness toward the driver side J/B area, then secure it to the vehicle harness with one wire tie. (Fig. 2-8)
- (k) Route the V5 harness' white 4P connector toward the driver side J/B area as shown. (Fig. 2-8)
- (l) Locate and disconnect the white 18P connector from the backside of the driver side J/B in the bottom of the second space from the left. (Fig. 2-9)
- (m) Route the V5 harness toward the backside of the driver side J/B. (Fig. 2-10)
- (n) Plug in the V5 harness' white 18P connectors between the vehicle's harness 18P connector and the backside of the driver side J/B. (Fig. 2-10)
- (1) Verify the connectors are plugged in securely.



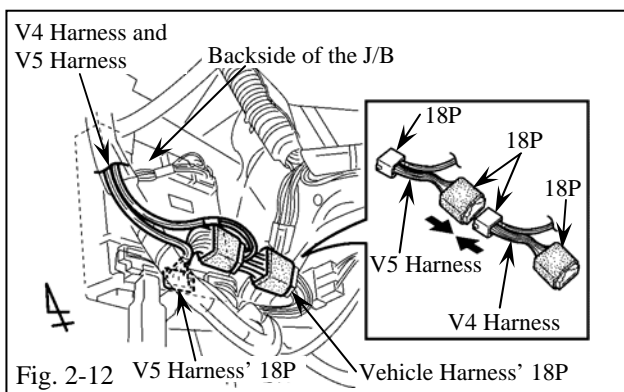
- (o) Secure the 18P connectors to the vehicle harness with one wire tie. (Fig. 2-11)

Go to Step s.

FOR V5 HARNESS and V4 HARNESS
SIMULTANEOUS INSTALLATION ONLY.
(Steps p-r)

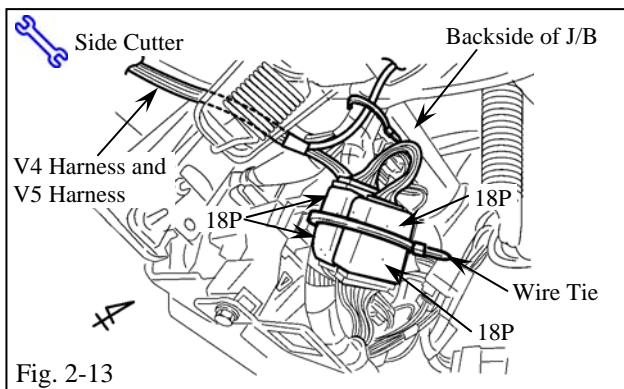


NOTE: Only perform this installation step on the V5 harness and V4 harness installed simultaneously.

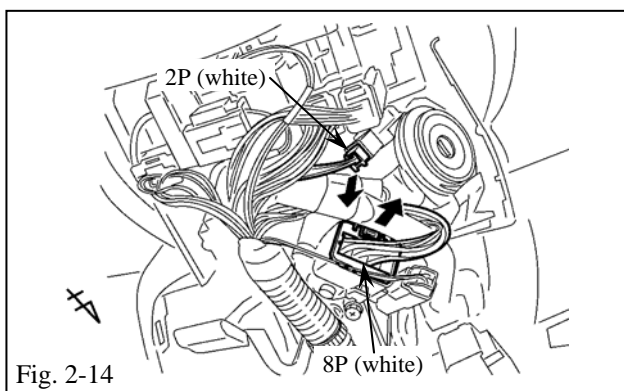


- (p) Connect the V4 harness' white 18P male connector to the V5 harness' white 18P female connector. (Fig. 2-12)
- (q) Plug in the V5 harness' white 18P connector into the driver side J/B. Then connect the V4 harness' white 18P connector to the vehicle harness' white 18P connector. (Fig. 2-12)

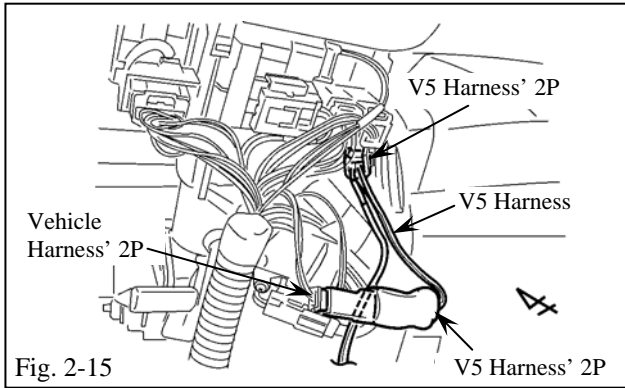
- (1) Verify the connectors are plugged in securely.



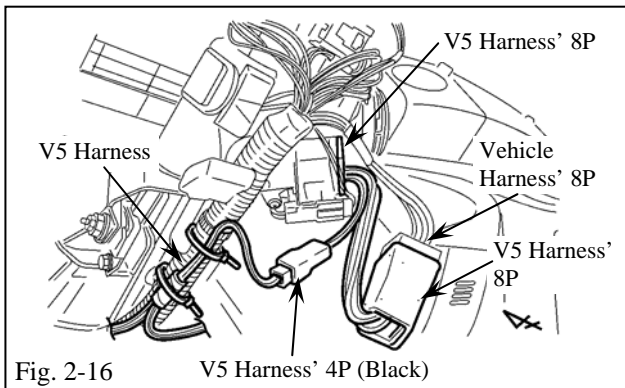
- (r) Secure the two 18P connectors to the vehicle harness with one wire tie. (Fig. 2-13)



- (s) Locate and disconnect the white 2P and white 8P connector from the ignition switch area. (Fig. 2-14)



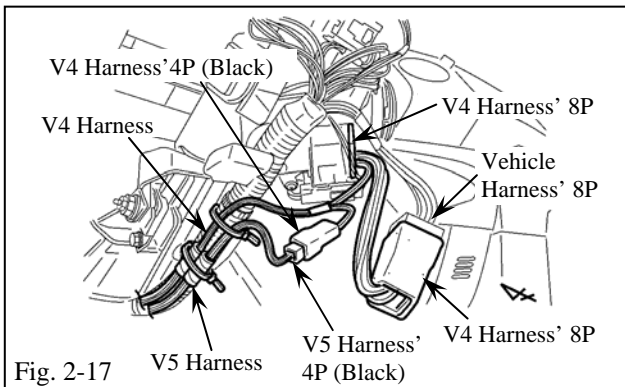
- (t) Plug in the V5 harness' white 2P connectors between the vehicle harness' 2P connector and the ignition switch. (Fig. 2-15)



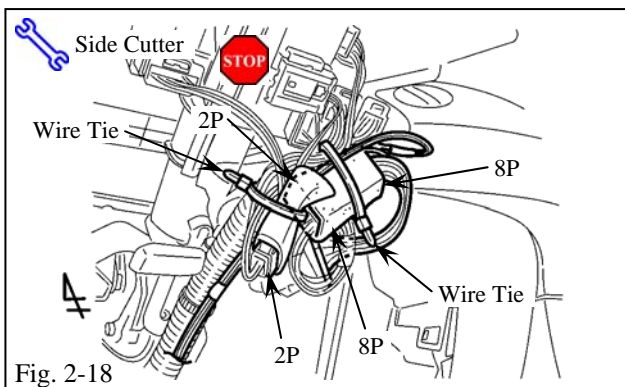
- (u) Plug in the V5 harness' white 8P connectors between the vehicle harness' 8P connector and the ignition switch. (Fig. 2-16)

Go to Step w.

FOR V5 HARNESS and V4 HARNESS
SIMULTANEOUS INSTALLATION ONLY.
(Step v)



- STOP** **NOTE:** Only perform this installation step on the V5 harness and V4 harness installed simultaneously.
- (v) Plug in the V4 harness' white 8P connectors between the vehicle harness' white 8P connector and the ignition switch. (Fig. 2-17)



- (w) Secure the 2P connectors and 8P connectors to the vehicle harness with two wire ties. (Fig. 2-18)
- STOP** (1) Do not secure the air bag yellow wires.

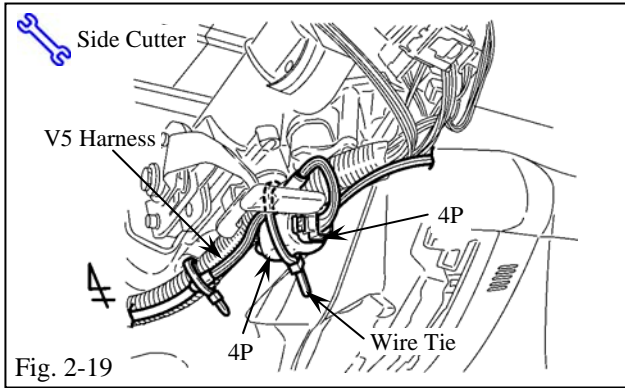


Fig. 2-19

- (x) Secure the V5 harness' black 4P connectors to the vehicle harness with one wire tie. (Fig. 2-19)

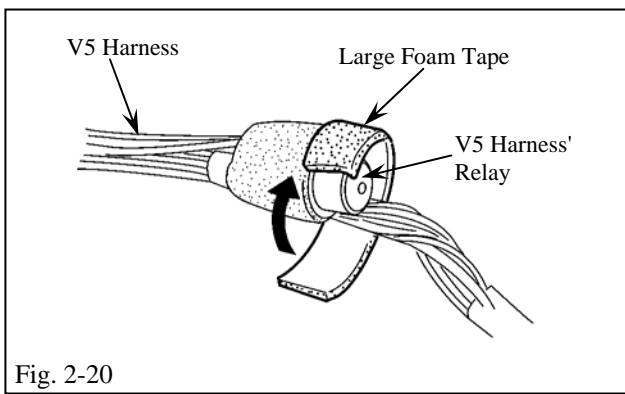


Fig. 2-20

- (y) Locate the V5 harness' relay from the steering shaft area, then wrap the relay's metal part with large foam tape. (Fig. 2-20)

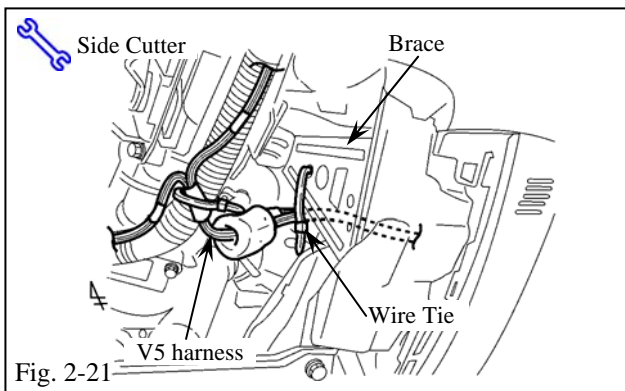


Fig. 2-21

- (z) Route the V5 harness toward the center cluster area, then secure it to the driver side metal brace with one wire tie. (Fig. 2-21)

Go to Step dd.

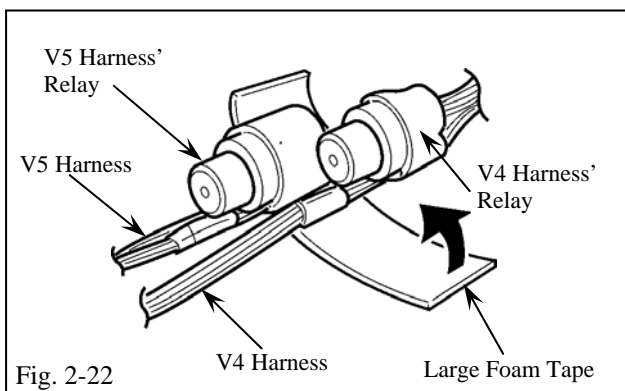


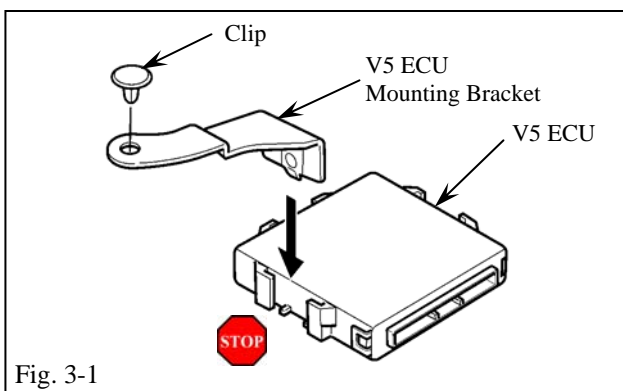
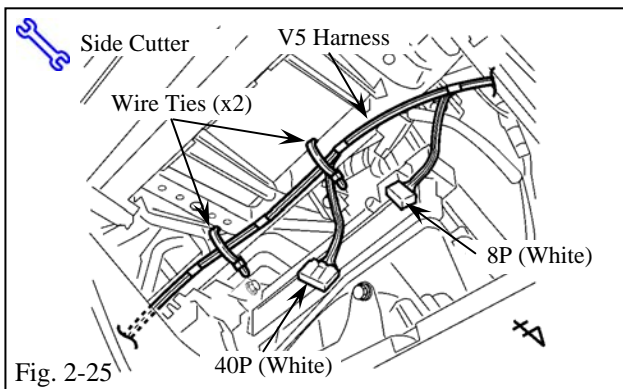
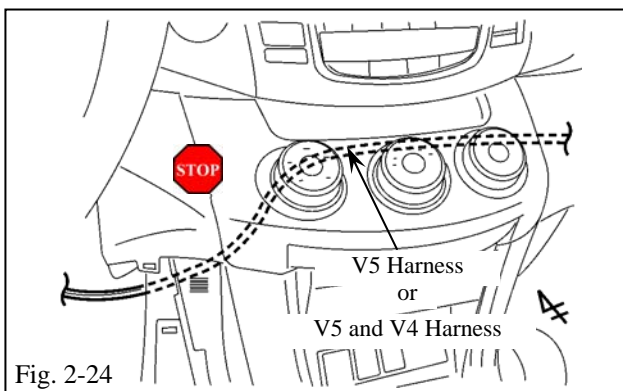
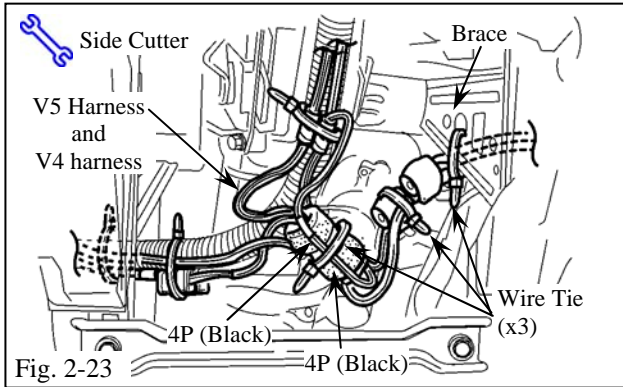
Fig. 2-22

- (aa) Locate the V4 harness' relay and V5 harness' relay from the steering column area, then secure the two relays with one large foam tape. (Fig. 2-22)



NOTE: Only perform this installation step on the V5 harness and V4 harness installed simultaneously.

- (aa) Locate the V4 harness' relay and V5 harness' relay from the steering column area, then secure the two relays with one large foam tape. (Fig. 2-22)



FOR V5 HARNESS and V4 HARNESS
SIMULTANEOUS INSTALLATION ONLY.
(Steps bb-cc)



NOTE: Only perform this installation step on the V5 harness and V4 harness installed simultaneously.

(bb) Route the V4 harness and V5 harness toward the center cluster area. (Fig. 2-23)

(cc) Secure the black 4P connectors and relay to the V4 and V5 harness with two wire ties. Secure the V4 harness and V5 harness to the driver side metal brace with one wire tie. (Fig. 2-23)

(dd) Route the V5 harness (or V5 and V4 harness) toward the glove box area. (Fig. 2-24)

(1) Route the harness away from any moving parts such as levers, etc..

(ee) Route the V5 harness to the glove box area, then secure it to the reinforcement with two wire ties. (Fig. 2-25)

3. V5 ECU and GBS ECU Preparation and Installation.

(a) Insert the V5 ECU mounting bracket into the indicated bracket slot on the V5 ECU. (Fig. 3-1)

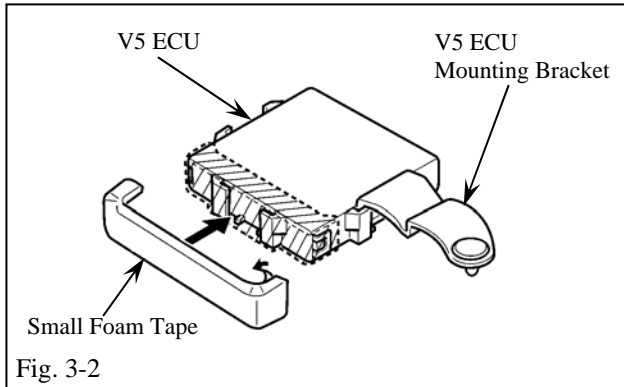
(1) Insert the mounting bracket into the correct ECU's slot.

(2) The bracket is permanently attached once installed.

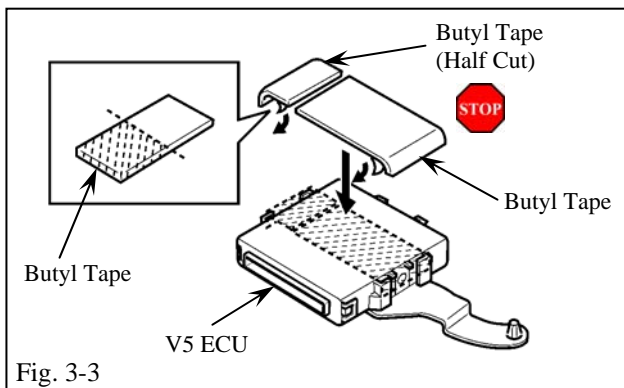
(3) Ensure the bracket is firmly attached to the ECU.



(b) Fit the clip on the hole of the V5 ECU mounting bracket. (Fig. 3-1)



(c) Apply one small foam tape to the edge of the V5 ECU as shown. (Fig. 3-2)

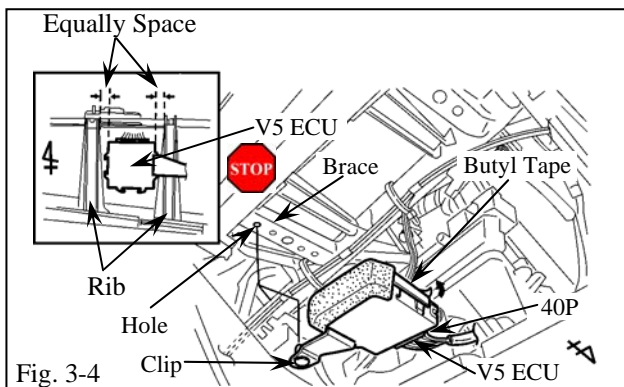


(d) Cut the butyl tape in half. (Fig. 3-3)

(e) Using 3M™ Prep Sol-70 and cleaning method, clean the area indicated on the V5 ECU. (Fig. 3-3)

(f) Apply one and ½ piece of butyl tape to the V5 ECU as shown. (Fig. 3-3)

(1) Do not remove the upside of the butyl tape protective sheet.



(g) Using the 3M™ Prep Solvent -70, clean the V5 ECU installation area in upper of the glove box area.

(h) Connect the V5 harness' white 40P connector to the V5 ECU. (Fig. 3-4)

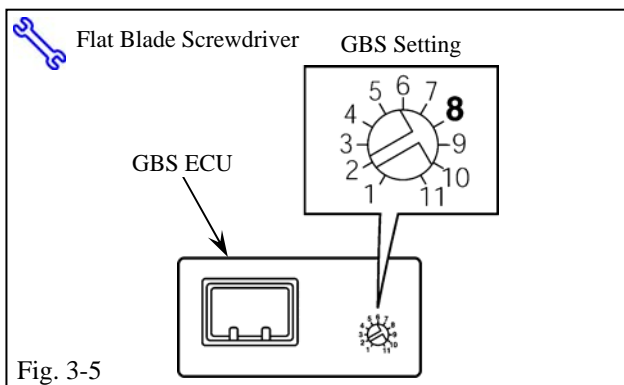
(i) Remove the butyl tape protective sheet, then mount the V5 ECU to the hole in the metal brace in the upper of the glove box area. (Fig. 3-4)

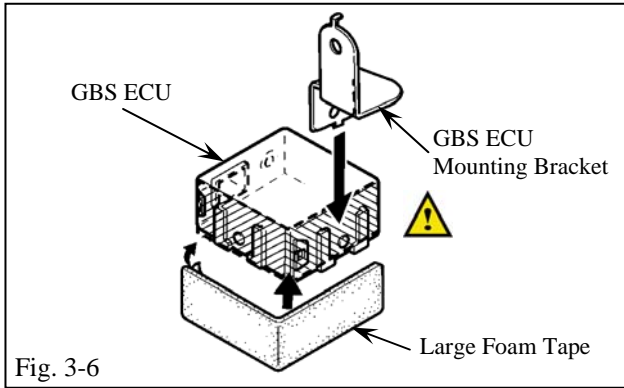
(1) Install the space between the rib and V5 ECU at equal space.

(2) Press the V5 ECU to the upper of the glove box firmly.

(3) After all vehicle parts re-assembly, confirm whether the glove box opens and shuts smoothly.

(j) Turn the GBS adjustment screw on the GBS ECU to the "8" position. (Fig. 3-5)



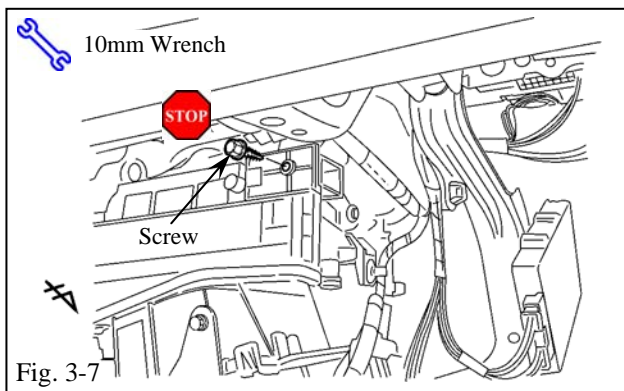


(k) Insert the GBS ECU mounting bracket into the indicated bracket slot on the GBS ECU. (Fig. 3-6)

(1) Insert the mounting bracket into the correct ECU's slot.

CAUTION: The bracket is permanently attached once installed.

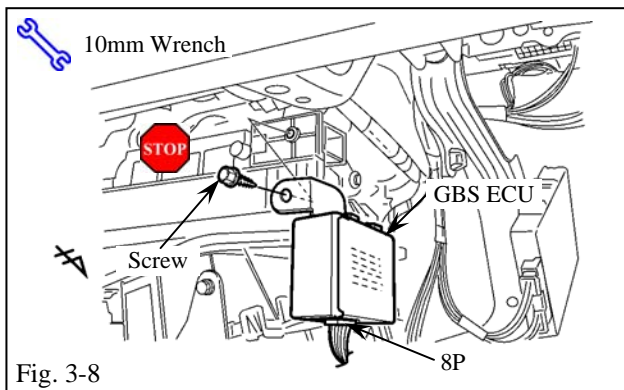
(2) Ensure the bracket is firmly attached to each ECU.



(l) Attach one large foam tape to the GBS ECU as shown. (Fig. 3-6)

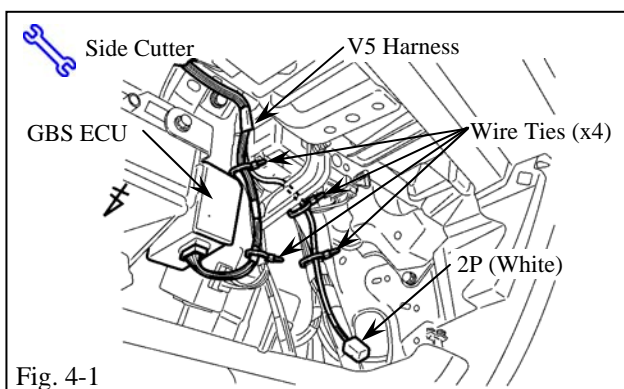
(m) Locate and remove the screw from the air conditioner unit in the glove box area. (Fig. 3-7)

(1) Do not discard the screw.



(n) Using the existing screw, secure the ECU to the air conditioner unit. (Fig. 3-8)

(1) Verify the screw is tightened securely.



4. V5 Harness Installation (continued).

(a) Secure the V5 harness' GBS wires to the vehicle harness with two wire ties. (Fig. 4-1)

(b) Route the V5 harness' white 2P male connector toward the right side of the glove box area.

Secure the V5 harness to the vehicle harness with two wire ties. (Fig. 4-1)

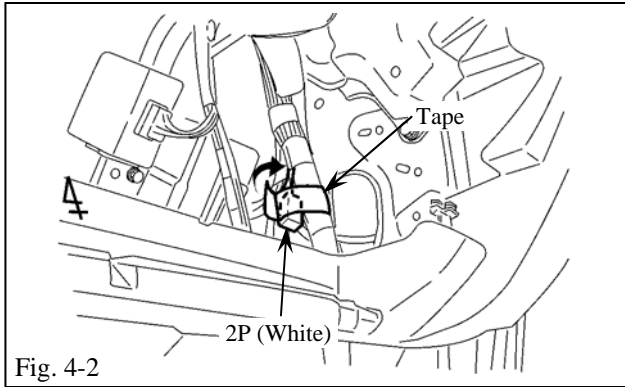


Fig. 4-2

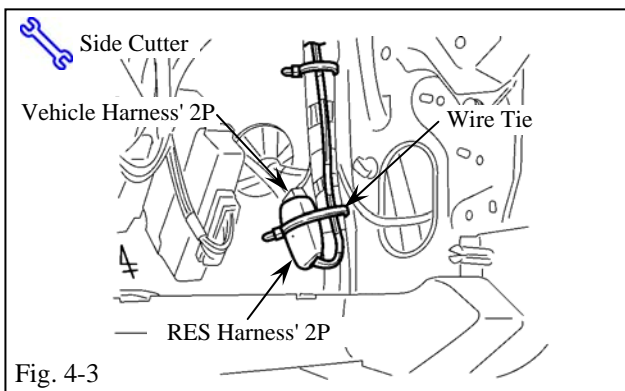


Fig. 4-3

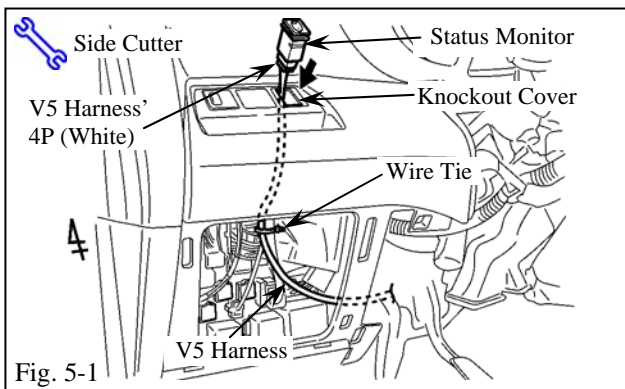


Fig. 5-1

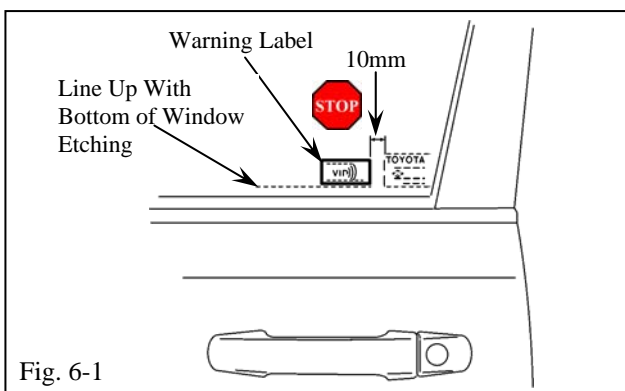


Fig. 6-1

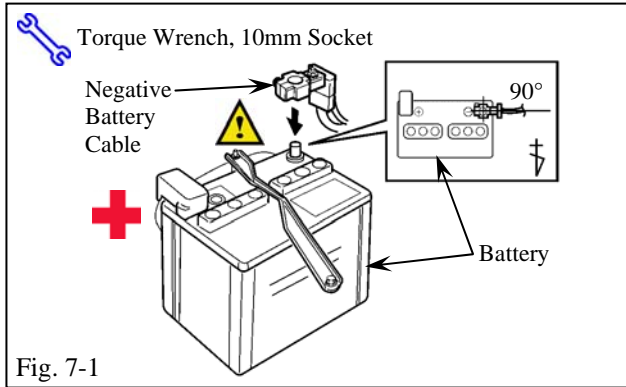
- (c) Locate and remove the tape securing the vehicle harness' white 2P connector from the right side of the glove box area. (Fig. 4-2)
- (d) Plug in the V5 harness' white 2P connector to the vehicle harness' white 2P connector. Secure the V5 harness to the vehicle harness with one wire tie. (Fig. 4-3)

5. Status Monitor Installation.

- (a) Remove the knockout cover in the cluster panel, first space from the right, then connect the V5 harness' white 4P connector to the status monitor. (Fig. 5-1)
- (b) Insert the status monitor into the knockout opening of the cluster panel. Secure the V5 harness to the vehicle harness with one wire tie. (Fig. 5-1)

6. Warning Label Installation.

- (a) Using household Windex, clean the inside surface of the front door windows. (Fig. 6-1)
 - (1) For U.S vehicles, discard the Spanish label.
 - For Mexico vehicles, discard the English label.
- (b) Place the warning label on the inside surface of the front door's windows as shown. (Fig. 6-1)
 - (1) Use a piece of clean adhesive tape to lift the labels off their protective backing sheet.
 - (2) Do not touch the adhesive surface of the warning labels.
- (c) Line up the labels properly and place on the glass once; do not use a label that was pulled off of the glass.



7. Completing the Installation.

- (a) Complete the vehicle reassembly.
 - (1) Reconnect any disconnected connectors.
 - (2) Verify the panels fit together properly with no uneven gaps between them.
- (b) Clean up and remove any trash.
- (c) Reconnect the vehicle's negative battery cable. (Fig. 7-1)
 - (1) Position the negative terminal at an angle to the battery as shown.
 - (2) ⚠ Tighten the nut to 2.9 ~ 4.9 N·m (26.0 ~ 43.4 lbf·in).
 - (3) ⚠ Do not touch the positive terminal with any tool when replacing the cable.
- (d) Reset the power windows.
 - (1) Turn the ignition key to "ON."
 - (2) Push down the power window switches of each door, and lower the windows halfway.
 - (3) Pull the switch until the windows close. Then, further hold for a minimum of one (1) second.
- (e) Reset the power moon roof.
 - (1) Push and hold moon roof switch to close side until moon roof closes. Hold for a further two (2) seconds.
- (f) Reset the tailgate door.
 - (1) Push door lock control switch to the "unlock" side.
 - (2) Pull up tailgate door handle.
- (g) ⚠ Place the owner's manual, and warranty card, left in their protective bags, in the glove box.

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

Check:

Accessory Function Checks

Fit the appropriate fuse before beginning.

- Press and release the remote control's lock button to start the system's arming process.
- Wait 30 seconds.
- Press and release the remote control's unlock button to disarm the system.

Open the driver's door, insert the key into the ignition switch and turn it to "ON". Roll down all the windows, remove the key and exit the vehicle.

- Arm and disarm the system with the remote again, then wait 30 seconds.
- Press and release the remote control's unlock button again to stop the arming process.
- Insert the key into the driver's door key cylinder and turn it toward the front of the vehicle to start the arming process.
- Wait 30 seconds.

Look For:

1. The turn signal lights flash once.
All doors lock.
The security LED lights up.
2. After 30 seconds, the LED starts flashing; the system is now armed.
3. The turn signal lights flash twice.
The driver's door unlocks.
The LED stops flashing.
4. The doors automatically relock.
The system automatically starts the arming process.
5. Refer to step 3.
6. All doors lock.
The LED lights up.
7. After 30 seconds, the LED starts flashing; the system is now armed.

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

Check:

- Reach inside and manually unlock the driver's door to trigger an alarm.

- Manually unlock the driver's door again and hold it unlocked, open the door, then sit in the driver's seat.

- Press and release the remote control's unlock button to disarm the system.

- With the door open, press the lock switch on the door to lock the doors, then close the door to start the system's arming process.

- Wait 30 seconds.

- Reach inside and manually unlock the front passenger's door to trigger an alarm.

Look For:

8. The driver's door automatically relocks.
The horn sounds repeatedly.
The headlights flash repeatedly.
The turn signal lights flash repeatedly.
The LED lights up.

9. The driver's door lock attempts to lock repeatedly.
The horn continues to sound repeatedly.
The headlights and turn signal lights continue flashing.
The LED remains on.

10. The horn stops sounding.
All the lights stop flashing and/or turn off.
The LED turns off.
The turn signal lights flash twice.
The driver's door unlocks.

11. All doors lock.
The LED lights up.

12. After 30 seconds, the LED starts flashing; the system is now armed.

13. The front passenger's door automatically relocks.
The horn sounds repeatedly.
The headlights flash repeatedly.
The turn signal lights flash repeatedly.
The LED lights up.

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

Check:

- Press and release the remote control's unlock button to stop the alarm.
- Press and release the remote control's lock button to start the system's arming process, then wait 30 seconds until the system is armed.
- Unlock and open one of the rear passenger doors to trigger an alarm.
- Repeat the above steps with the other rear passenger door and back door.

Roll up all windows, remove the key and exit the vehicle.

- Press and release the remote control's lock button to start the arming process.
- Wait 30 seconds.

Perform the following check in a temperature-controlled environment. (50°-90° F)



- With the tip of key (or Striker Tool pulled all the way out (PPO only)), tap the center of the driver's door window to trigger the "warn away" alarm.

Look For:

- 14. The horn stops sounding.
All the lights stop flashing.
The LED turns off.
- 15. Refer to steps 1 and 2.
- 16. Refer to step 13.
- 17. Refer to steps 15 and 16.
- 18. Refer to step 1.
- 19. After 30 seconds, the LED starts flashing; the system is now armed.
- 20. The horn sounds repeatedly.
The headlights flash repeatedly.
The turn signal lights flash repeatedly.
The LED lights up.

NOTE: Adjust as necessary by increasing the GBS setting to the next level if the alarm does not trigger during functional verifications.

NOTE: If you do not disarm the system, the alarm will last 20 seconds. *It is not necessary to check the alarm duration.*

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

<u>Check:</u>	<u>Look For:</u>
<input type="checkbox"/> Insert the key into the driver's door key cylinder and turn it toward the back of the vehicle to stop the alarm.	21. The horn stops sounding. All the lights stop flashing and/ or turn off. The security LED turns off.
<p><u>Vehicle Function Checks</u></p> <input type="checkbox"/> Head Lights <input type="checkbox"/> High Beams <input type="checkbox"/> Turn Signal Lights <input type="checkbox"/> Tail Lights <input type="checkbox"/> Stop Lights <input type="checkbox"/> Backup Lights <input type="checkbox"/> Hazard Lights <input type="checkbox"/> Marker Lights <input type="checkbox"/> Dome/Courtesy Lights <input type="checkbox"/> Panel/Switch Illumination <input type="checkbox"/> Accessory Controls/Illumination (if equipped) <input type="checkbox"/> Key Sensor Buzzer <input type="checkbox"/> Fog Lights (if equipped) <input type="checkbox"/> Daytime Running Lights (if equipped) <input type="checkbox"/> Trunk/Tailgate/Bed Lights (if equipped) <input type="checkbox"/> Glove Box Light (if equipped) <input type="checkbox"/> Cruise Control Light (if equipped)	Functioning Head Lights Functioning High Beams Functioning Turn Signal Lights Functioning Tail Lights Functioning Stop Lights Functioning Backup Lights Functioning Hazard Lights Functioning Marker Lights Functioning Dome/Courtesy Lights Functioning Controls/Illumination Functioning Accessory Functioning Key Sensor Functioning Fog Lights Functioning DR Lights Functioning Lights Functioning Glove Box Light Functioning Cruise Control Light

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

Check:

- Seat Belt Warning Light

- Air Bag Warning Light

- ABS Light (if equipped)

- Lamp Failure Sensor (if equipped)

- Track/Skid Control Light (if equipped)

- HVAC
- Power Locks (if equipped)
- Power Windows (if equipped)
- Power Seats (if equipped)
- Power Sunroof (if equipped)
- Horn
- Gauges
- Front Wiper/Washer
- Rear Wiper/Washer (if equipped)
- Clock (if equipped)

Look For:

- Functioning Seatbelt Warning Light. If the warning light remains "ON", it may indicate a system malfunction.

- Functioning Air Bag Warning Light. If the warning light remains "ON", it may indicate a system malfunction.

- Functioning ABS Light. If the warning light remains "ON," it may indicate a system malfunction.

- Functioning Lamp Failure Light. If the warning light remains "ON," it may indicate a system malfunction.

- Functional Track/VSC Light. If the warning light remains "ON," it may indicate a system malfunction.

- All HVAC Controls Function
- Functioning Power Locks
- Functioning Power Windows
- Functioning Power Seats
- Functioning Sunroof
- Functioning Horn
- Functioning Gauges
- Functioning Front Wiper/Washer
- Functioning Rear Wiper/Washer
- Functioning Clock

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

Check:

- Accessory Power Socket (if equipped)
- Starter
- Audio/Video (if equipped)
- Power Sliding Door (if equipped)
- Convenience Memory Settings (if equipped)
- Heated Seats (if equipped)
- Massage Seats (if equipped)
- Rear Window Defogger (if equipped)
- Power Side Mirrors (if equipped)
- Side Mirror Defogger (if equipped)
- Front Windshield Defogger (if equipped)
- Navigation System (if equipped)
- Power Back Door (if equipped)

Remove the appropriate fuse after checks are completed.

Look For:

- Functioning Power Socket
- Functioning Starter
- Functioning Audio/Video
- Functioning Power Sliding Door
- Functioning Memory Settings
- Functioning Heated Seats
- Functioning Massage Seats
- Functioning Rear Window Defogger
- Functioning Power Side Mirrors
- Functioning Side Mirror Defogger
- Functioning Front Windshield Defogger
- Functioning Navigation System
- Functioning Power Back Door