

Part Number: 08586-3D870**Kit Contents**

Item #	Quantity Req'd.	Description
1	1	Wire Harness
2	1	V5 Security ECU
3	1	ECU Mounting Bracket
4	1	GBS ECU
5	1	GBS ECU Mounting Bracket
6	1	Microphone

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	15	Medium Wire Ties
2	5	Large Wire Ties
3	2	Small Foam Tape Strip
4	2	Large Foam Tape Strip
5	2	Splicing Connector
6	1	Bolt
7	1	Nut
8	1	Butyl Tape
9	2	Warning Label
10	1	Owner's Guide
11	1	Warranty Card

Additional Items Required For Installation

Item #	Quantity Req'd.	Description

Conflicts

Note: Must not be installed in vehicles with factory TDS.

Recommended Tools

Safety Tools	
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Part Boxes
Special Tools	
None	
Installation Tools	
Screwdriver	Phillips Head , #2
Screwdriver	Small, Flat Blade
Wrench	10mm
Extension	3"
Socket	8mm, 10mm
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01
Side Cutter Tool	
Torque Wrench	36 lbf $\cdot$ in
Pliers	Slip-joint
Pliers	Needle Nose

Special Chemicals

Cleaner	3M™ Prep Solvent-70
Glass Cleaner	Household Windex

General Applicability

2003  4Runner with factory keyless entry, only.

Recommended Sequence of Application

Item #	Accessory	
1	V5	
2	Audio	

 *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 Disassembly**

NOTE: Place all removed parts on a protected surface.

1. Remove the negative battery cable. (Fig. A1)



- i. Protect the fender before starting.
- ii. For automatic equipped vehicles, place the shifter in low gear and set the parking brake prior to disconnecting the battery.



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

2. Remove the passenger side step cover. (Fig. A2)



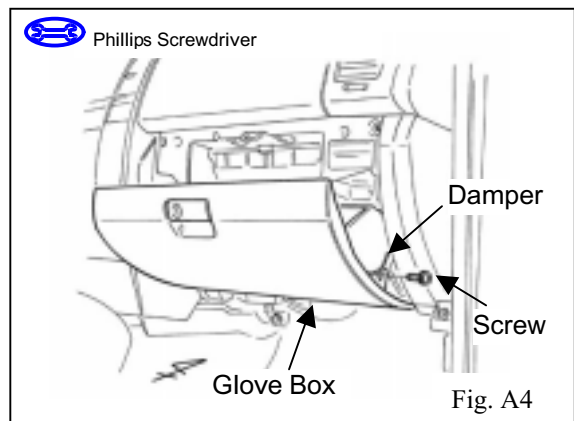
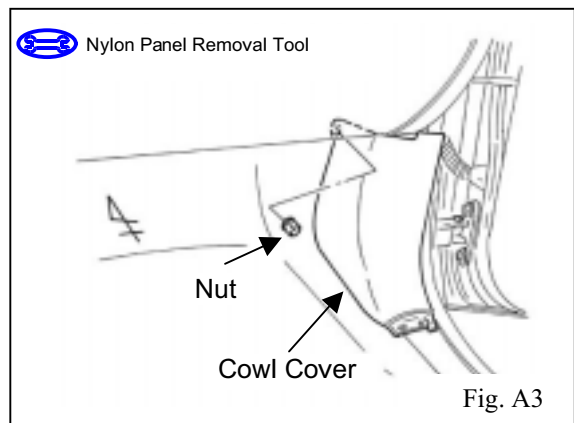
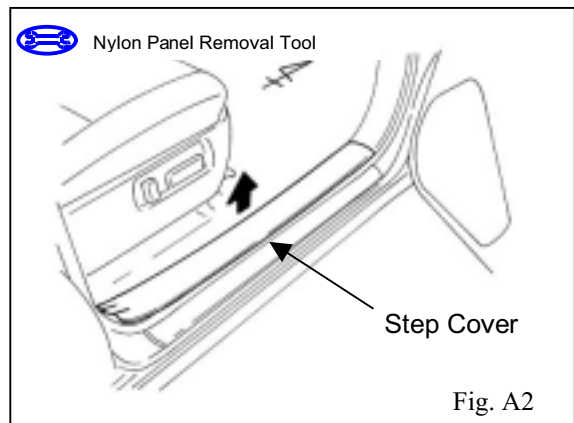
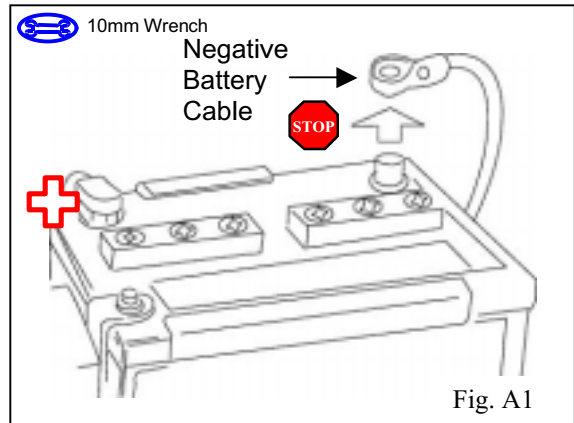
- i. Cover the floor and seats before starting.

3. Remove the passenger side cowl cover. (Fig. A3)

- i. Remove the nut securing the cover.

4. Remove the glove box assembly. (Fig. A4)

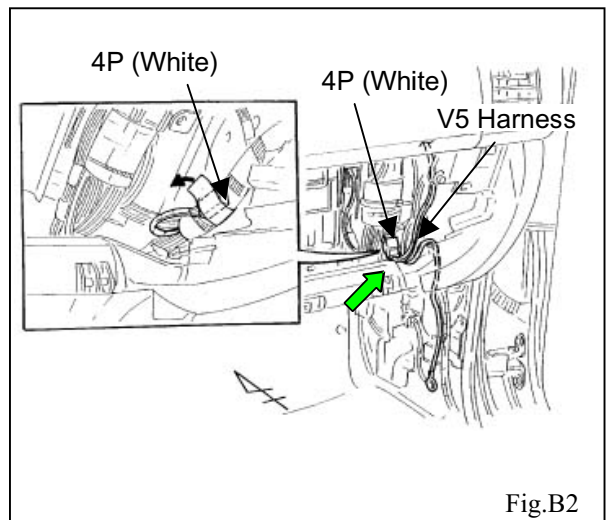
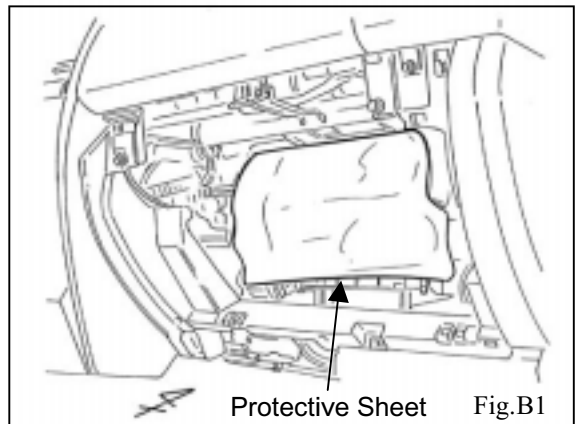
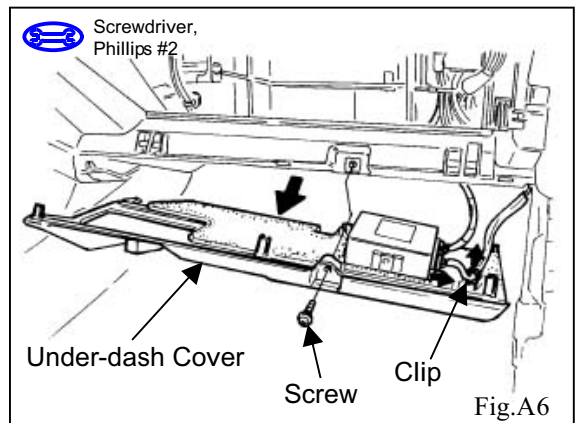
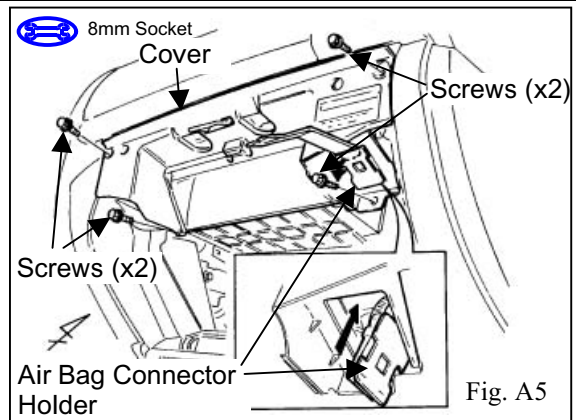
- i. Remove the screw securing the glove box assembly.
- ii. Remove the glove box damper.



5. Remove the cover from the upper glove box area. (Fig. A5)
 - i. Remove the four screws securing the cover.
 - ii. Remove the air bag connector holder from the cover.
6. Remove the under-dash cover below the glove box area. (Fig. A6)
 - i. Remove the one screw.
 - ii. Disconnect the two connectors of 4WD control ECU if equipped, and remove the one vehicle wire harness clip.

B. V5 Wire Harness Installation

1. Prepare a protective sheet (blanket), and cover the blower assembly in the glove box area with the sheet as shown. (Fig. B1)
2. Locate the vehicle harness ☐ white 4P connector from the glove box area. (Fig. B2)
3. Plug in the V5 harness ☐ white 4P connector to the vehicle harness ☐ white 4P connector. (Fig. B2)
 - i. Verify the connectors are plugged in securely.



4. Locate and disconnect the white 13P connector from the connector block in the glove box area. Plug in the V5 harness  white 13P connectors between the vehicle harness  white 13P connector and the connector block. (Fig. B3)



- i. Do not pull on the wires; pull on the connector.



- ii. Verify the connectors are plugged in securely.



5. Wrap the white 4P connectors with one large strip of foam tape. (Fig. B4)



6. Wrap the white 13P connectors, V5 harness and vehicle harness with one large strip of foam tape. (Fig. B4)



7. Wrap the V5 harness relay with one large strip of foam tape. (Fig. B4)



8. Secure the V5 harness relay to the vehicle harness with one large wire tie. (Fig. B4)



9. Secure the 4P connectors to the vehicle harness with one large wire tie. (Fig. B4)



10. Secure the V5 harness to the vehicle harness with two (2) medium wire ties. (Fig. B4)

11. Locate and remove the existing bolt from the ground point in the passenger side cowl area. (Fig. B5)



12. Secure the V5 harness ground wire terminal, along with the vehicle harness ground wire terminal, using the existing bolt. (Fig. B6)

- i. Use the vehicle's ground bdt to secure the V5 harness ground wire.



- ii. Verify the bolt is tight.



13. Secure the V5 harness with two medium wire ties. (Fig. B6)

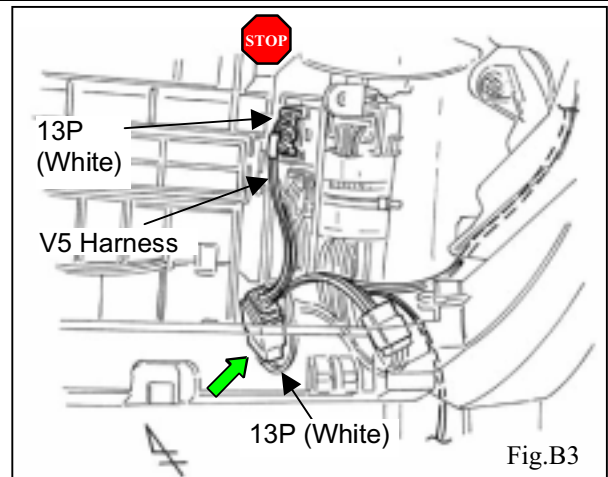


Fig.B3

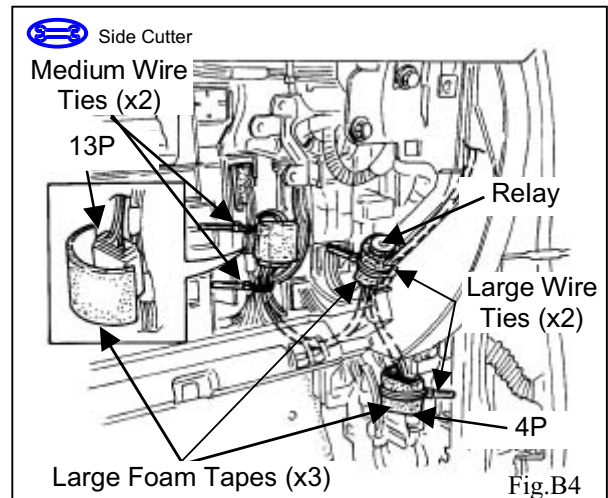


Fig.B4

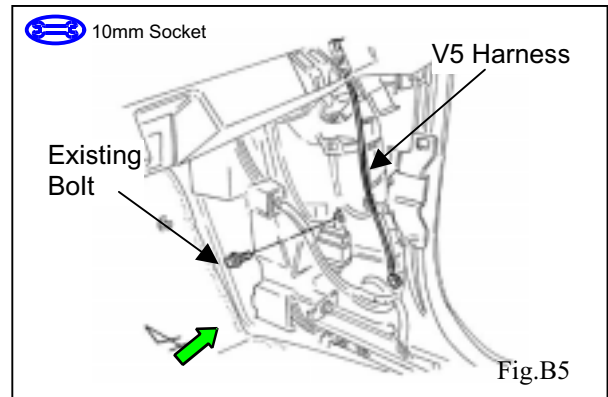


Fig.B5

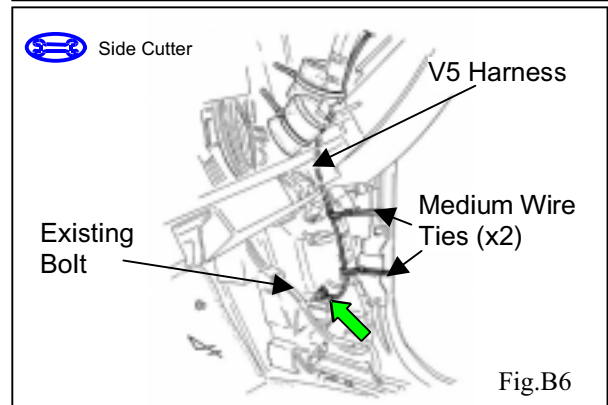
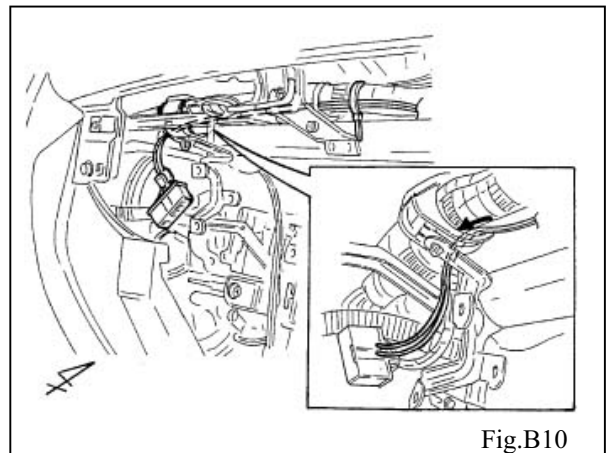
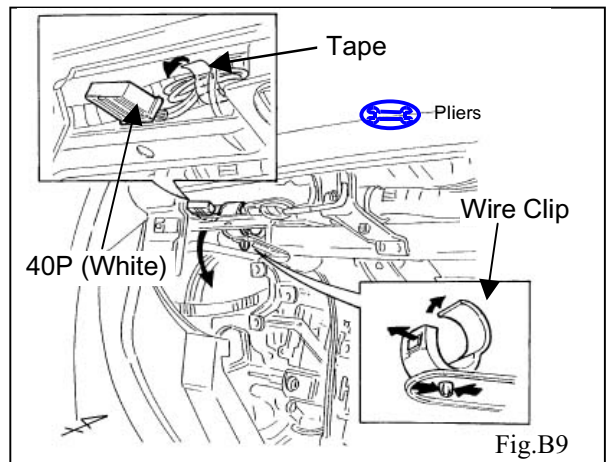
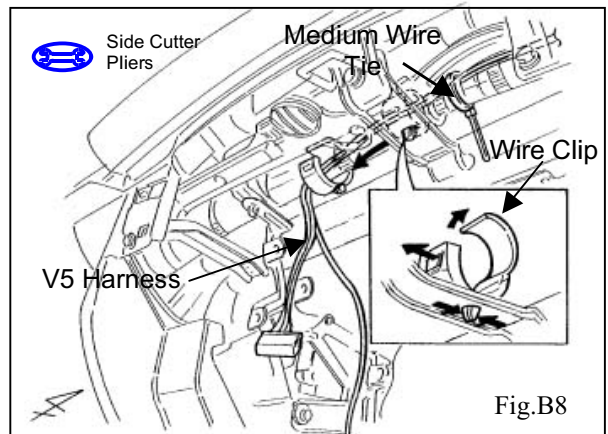
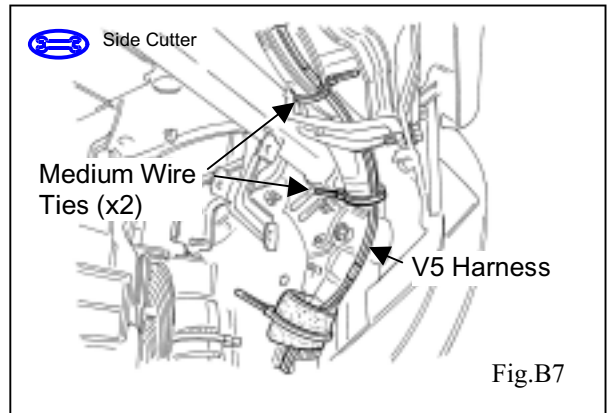


Fig.B6

- ➡ 14. Route the V5 harness toward the upper glove box area, and secure it to the vehicle harness with two medium wire ties. (Fig. B7)
- ➡ 15. Route the V5 harness toward the left side of the glove box area, and secure it to the vehicle harness with one medium wire tie and the existing vehicle wire clip. (Fig. B8)
 - i. Remove the vehicle wire clip on the center brace and open the vehicle wire clip.
 - ii. Route the V5 wire harness through the open vehicle wire clip.
 - iii. Close and reinstall the vehicle wire clip to the brace.
16. Locate the vehicle harness ☐ white 40P connector in the upper left side of the glove box area. (Fig. B9)
 - i. Remove the adjacent vehicle wire clip and the tape to loosen the 40P connector.
 - ii. Reinstall vehicle wire clip without the 40P connector.
17. Route the V5 harness ☐ GREEN/RED and GRAY/GREEN wires inside the vehicle wire clip. (Fig. B10)



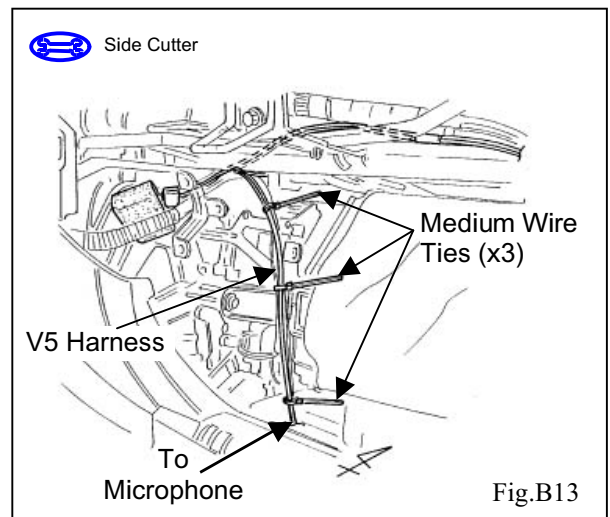
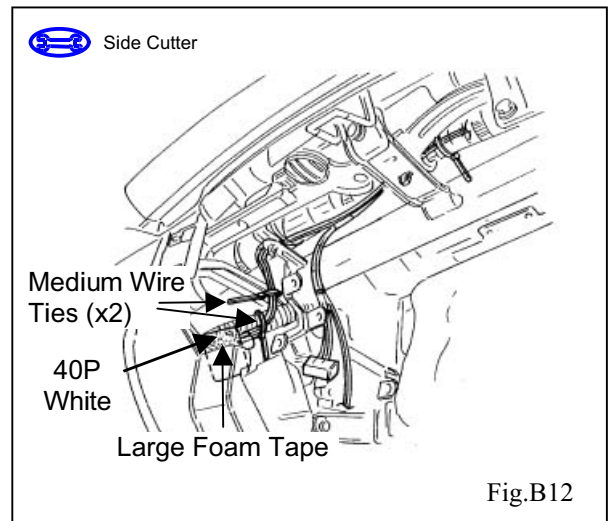
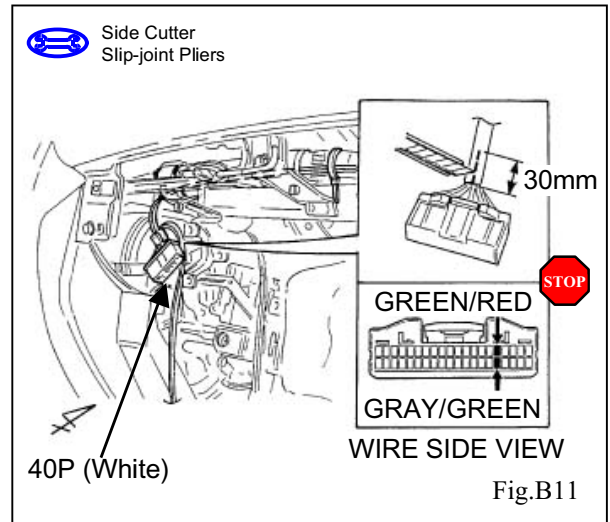
18. Locate the wire in the top row, sixteenth space from the left of the white 40P connector, and attach the V5 harness  GREEN/RED wire with a splicing connector. Then, locate the wire in the bottom row, sixteenth space from the left and attach the V5 harness  GRAY/GREEN wire with a splicing connector. (Fig. B11)

- i. Using a side cutter, cut the 30mm of tape from the 40P connector wire harness to expose the wires for splicing.
- ii.  Verify the correct wire and connector openings are chosen for splicing.

 19. Wrap the white 40P connector of the V5 harness with one large piece of foam tape. (Fig. B12)

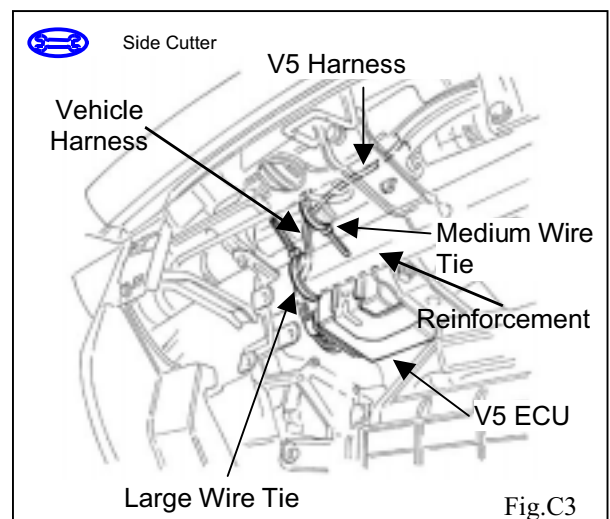
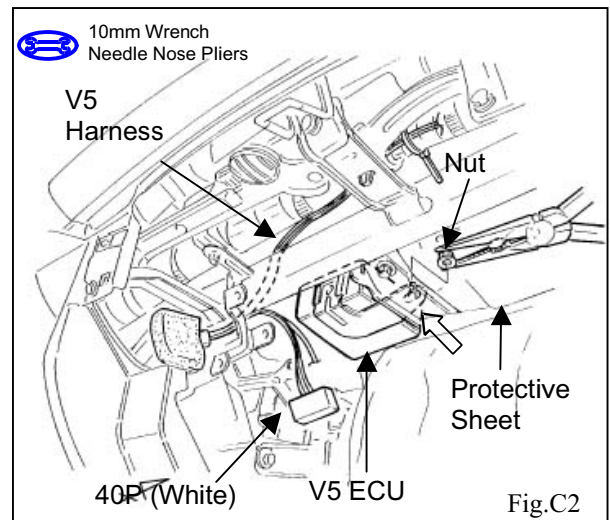
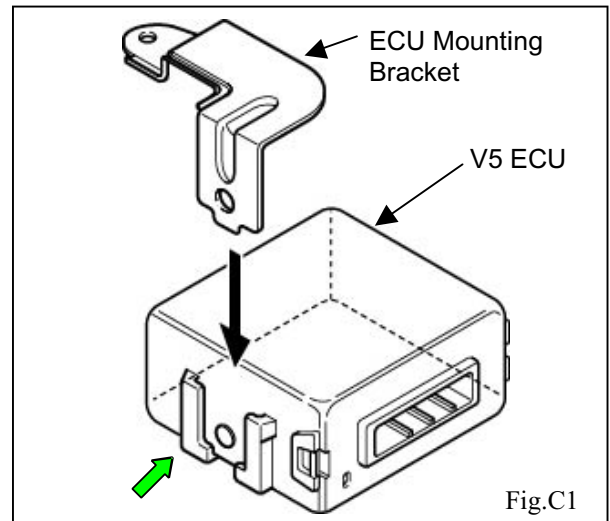
 20. Secure the V5 harness  GREEN/RED and GRAY/GREEN wires to the vehicle harness with two medium wire ties. (Fig. B12)

 21. Secure the V5 harness  microphone wire to the vehicle harness with three medium wire ties. (Fig. B13)



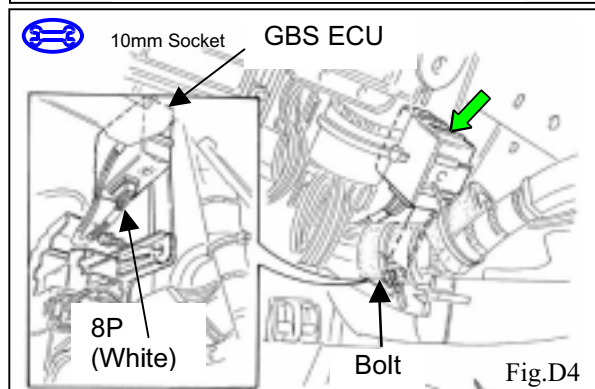
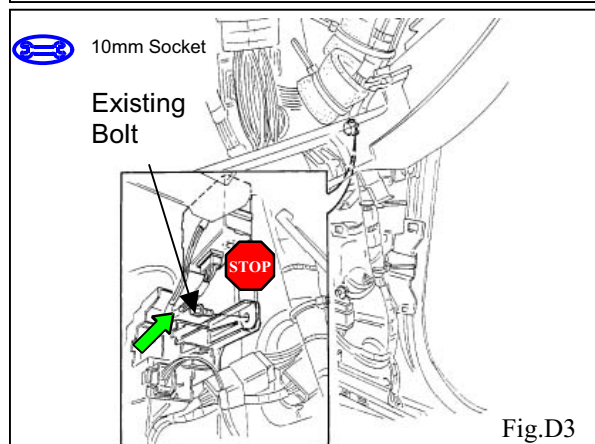
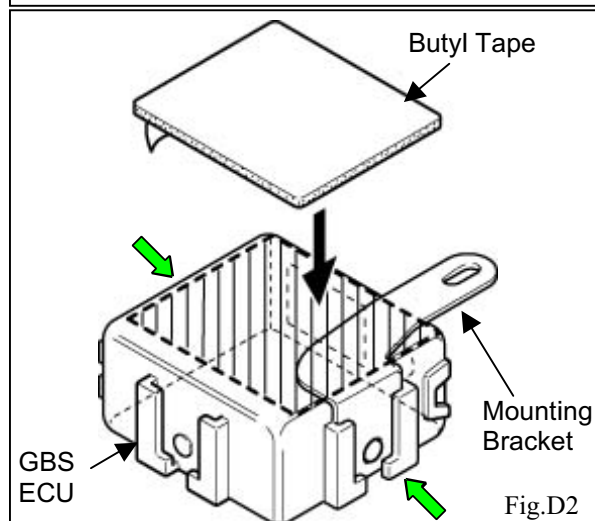
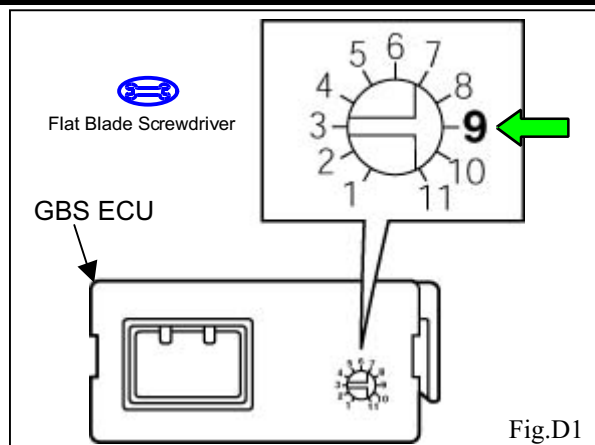
C. V5 ECU Preparation and Installation

- ➡ 1. Insert the ECU mounting bracket into the indicated bracket slot on the V5 ECU. (Fig. C1)
 - i. Before beginning this section, verify the protective sheet covering the blower assembly is still fully in place.
2. Plug in the V5 harness ☐ white 40P connector into the V5 ECU. (Fig. C2)
 - ➡ i. Verify the connectors are plugged in securely.
- ➡ 3. Install the V5 ECU on the metal substructure of the reinforcement tube with the nut supplied in the kit. (Fig. C2)
 - i. Locate the existing stud bolt on top of the metal substructure.
 - ii. Use needle nose pliers to place the nut over the stud bolt. Start the nut by hand, and finish tightening with a 10mm wrench.
 - ⛔ iii. Be careful not to drop and loose the nut.
- ➡ 4. Secure the V5 harness to the vehicle harness with one medium wire tie and secure the V5 harness to the reinforcement tube with one large wire tie. (Fig. C3)



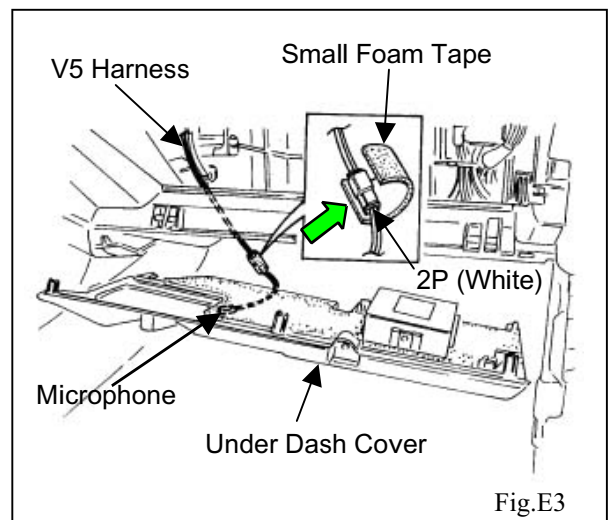
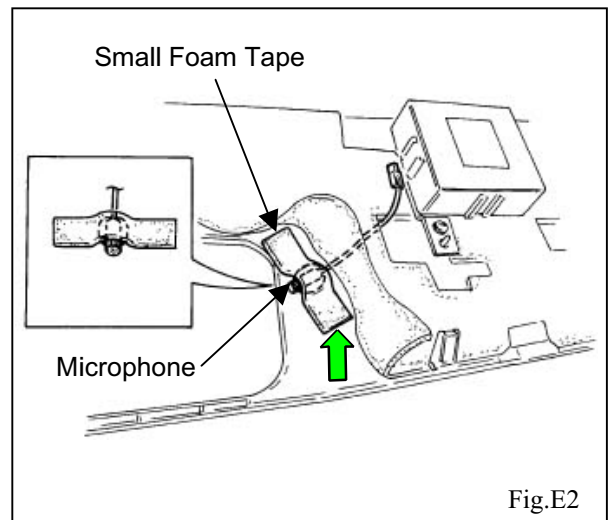
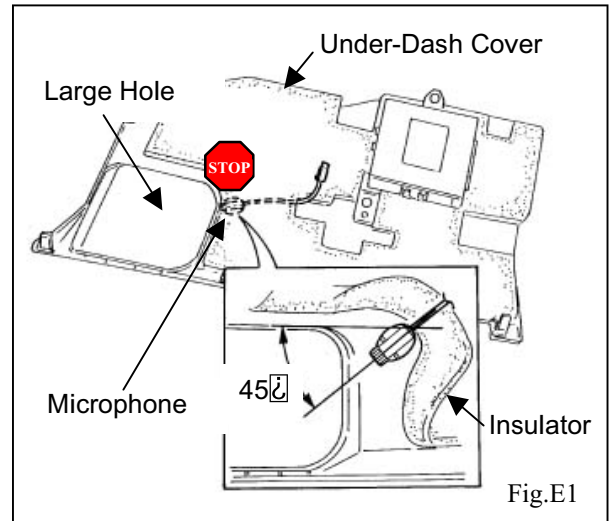
D. GBS ECU Preparation and Installation

-  1. Turn the adjustment screw on the GBS ECU to the  position. (Fig. D1)
2. Insert the GBS ECU mounting bracket into the indicated bracket slot on the GBS ECU. (Fig. D2)
-  i. Attach the bracket as shown.
-  ii. Make sure the bracket is firmly attached to the ECU.
-  3. Apply the butyl tape to the GBS ECU as shown. (Fig. D2)
-  4. Locate and remove the existing bolt from the connector block in the passenger side cowl area. (Fig. D3)
 - i. Discard the existing bolt.
-  5. Mount the GBS ECU on the right side of the connector block with the bolt supplied in the kit. (Fig. D4)
6. Plug in the V5 harness  white 8P connector into the GBS ECU. (Fig. D4)
 -  i. Verify the connectors are plugged in securely.



E. Microphone Installation

-  1. Using 3M™ Prep Solvent-70 clean the area indicated on the back side of the under-dash cover. (Fig. E1)
-  i. When cleaning with 3M™ Prep Solvent-70 follow the manufacturer's directions. Do not allow cleaner to air dry.
-  2. Remove the backing sheet and secure the microphone to the back side of the under-dash cover. (Fig. E1)
-  i. Secure the microphone under the insulator at a 45° angle with the back of the microphone lined up with the front edge of the large hole as shown. (Fig. E1)
-  ii. Do not touch the adhesive surface of the microphone.
-  iii. Press the microphone to the under-dash cover firmly.
3. Secure the microphone with a small strip of foam tape. (Fig. E2)
-  i. Do not cover the opening of the microphone with the foam tape.
4. Plug in the microphone's 2P connector to the V5 harness's 2P connector. (Fig. E3)
-  i. Verify the connectors are plugged in securely.
-  5. Wrap the 2P connectors with a small strip of foam tape. (Fig. E3)
6. Reinstall the under-dash cover. (Fig. E3)

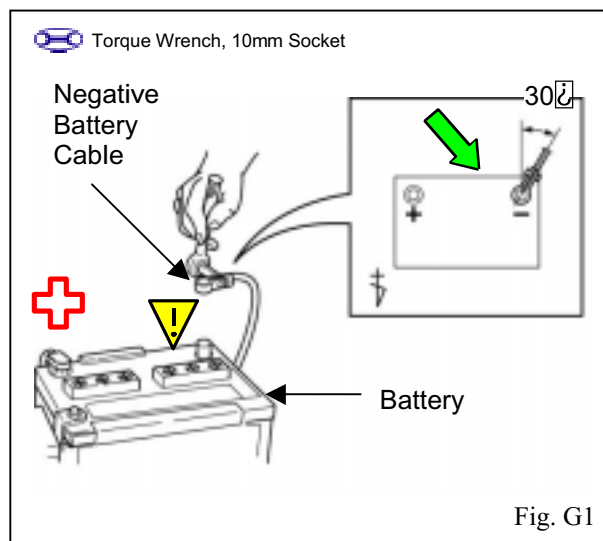
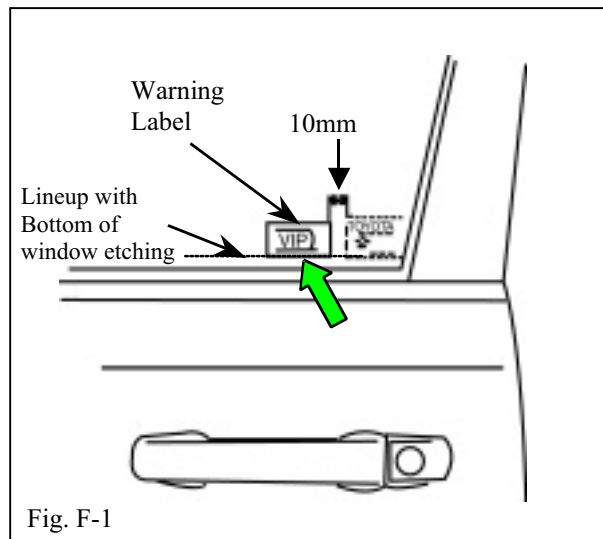


F. Warning Label Installation

- ➡ 1. Using 3M™ Prep Solvent ☐ 70 or Household Windex, clean the inside surface of the front door's windows. (Fig. F-1)
2. Place the warning label on the inside surface of the front door's window as shown. (Fig. F-1)
 - ➡ i. Use a piece of clear adhesive tape to lift the labels off their protective backing sheet.
 - ➡ ii. Do not touch the adhesive surface of the warning labels.
 - ⛔ iii. Line up the labels properly and place them on the glass once; do not use a label that was pulled off of the glass.

G. Completing the Installation

1. Complete the reassembly of the vehicle.
 - ➡ i. Reconnect any disconnected connectors.
 - ➡ ii. Verify the panels fit together properly with no uneven gaps between them.
2. Clean up and remove any trash.
3. Reconnect the vehicle's negative battery cable. (Fig. G1)
 - ➡ i. Position the negative terminal at an angle of 30° to the battery as shown.
 - ⚠ ii. Tighten the nut to 4.1 N·m (36 lbf·in).
 - ⛔ iii. Do not touch the positive terminal with any tool when replacing the cable.
- ⚠ 4. Place the owner's manual and warranty card, left in their protective bags, in the glove box.





Section III Functional Verifications

Check:

Accessory Function Checks

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



Section III Functional Verifications

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.
- ☐ Insert the key into the ignition switch and turn it to START to stop the alarm.

Turn the key back to LOCK, remove it, then exit the vehicle.

- ☐ With the door open, press the lock switch on the door to lock the doors, then close the door to start 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 starter cranks and the engine starts.
- 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.



Section III Functional Verifications

Check:

- ☐ Press and release the remote control  unlock button to stop the alarm.
- ☐ Press and release the remote control  lock button to start the system  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 steps with the other rear passenger door and back door (if equipped).

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

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

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

- ☐ With moderate force, tap the center of the driver s doorwindow with the tip of a key 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 step #1 and #2.
- 16. Refer to step #13.
- 17. Refer to step #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 the 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.*



Section III Functional Verifications

Check:

- ☐ Insert the key into the driver's door key cylinder and turn it toward the back of the vehicle to stop the alarm.

Look For:

21. The horn stops sounding.
All the lights stop flashing and/ or turn off.
The Security LED turns off.

Vehicle Function Checks

- ☐ Perform standard electrical system function checks.

Confirm electrical system is functioning correctly.