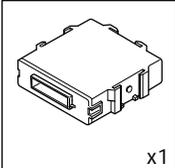
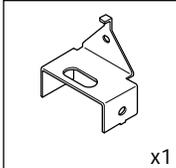
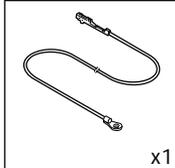
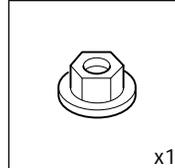
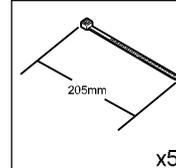
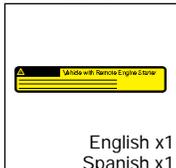
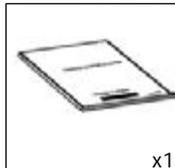


Part #: PT398-03120

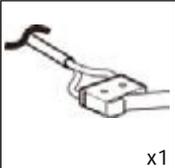
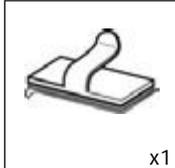
Conflicts: Do not install into Manual Transmission Vehicles or Vehicles without Smart Key systems.

Will not program with Techstream Lite.

Kit Contents

<p>RES ECU</p>  <p>x1</p> <p>PT398-89100-SS</p>	<p>RES ECU Bracket</p>  <p>x1</p>	<p>V4 Harness</p>  <p>x1</p>	<p>M6 Nut</p>  <p>x1</p>	<p>Wire Tie</p>  <p>205mm</p> <p>x5</p>	<p>Remote Label</p>  <p>English x2 Spanish x2</p> <p>(E) 08192-07820 (S) PT398-00070-CL</p>	<p>Key Tag</p>  <p>English x2 Spanish x2</p> <p>(E) PT398-4209E (S) PT398-4209S</p>
<p>Window Label</p>  <p>English x2 Spanish x2</p> <p>(E) 08192-07810 (S) PT398-00071-SL</p>	<p>Engine Room Label</p>  <p>English x1 Spanish x1</p> <p>(E) PT398-00070-EL (S) PT398-00070-SL</p>	<p>Owner's Guide</p>  <p>x1</p>				

Hood Switch Kit: PT398-03121 for Vehicles without Factory Alarm

<p>Hood Switch</p>  <p>x1</p>	<p>Screw</p>  <p>x1</p> <p>90167-20001</p>	<p>Harness Clamp</p>  <p>x1</p>	Service Part #'s
---	--	---	------------------

Additional Items

(may be required)

Item#	Description
1	Hood Switch Kit (PT398-03121) NOTE: Req'd for all Vehicles without Factory Alarm (see page 6)

Recommended Sequence of Application

Item#	Description

Recommended Tools

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
Special Tools	
Techstream	Use latest version on TIS (Do not use Techstream Lite)
1/4" Drive Torque Screwdriver (Req'd for Hood Switch Kit)	Included in the TPMS Tool Kit# 00002-TTPWS Toyota SST# 00002-TTPWS-03, #0 Phillips Hood Switch: 3.1 in•lbf (0.35 N•m)
Installation Tools	
Screwdriver	#2 Phillips, Flat Blade Jeweler's, Phillips Jeweler's
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Side Cutters	
Torque Wrench	Battery: 48 in•lbf (5.4 N•m), Hood Latch: 70.8 in•lbf (8.0 N•m), Passenger's Knee Airbag: 88.5 in•lbf (10 N•m)
Tape	Clear, Electrical
Socket	10mm, Extension
Pliers	Needle Nose
Pick Tool	
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

Table of Contents

I. Preparation 1 – 4

 1. Table of Contents 2

 2. Wire Routing Overview 3-4

II. Procedure 5 – 26

 1. Hood Switch Installation. 5

 2. Vehicle Disassembly 11

 3. RES ECU Preparation and Installation. 15

 4. V4 Harness Installation..... 16

 5. Registration Preparation. 18

 6. Registration. 19

 7. Complete the Installation. 25

 8. Tags and Labels..... 26

III. Checklist 27 – 29

 1. Accessory Function Checks..... 27

 2. Vehicle Function Checks..... 28

Legend

-  Do not proceed until process has been completed.
-  Follow steps carefully to avoid damaging the Vehicle or Accessory
-  Use caution to avoid injury.
-  Used in Figures to call attention to specific tools recommended for the process.
-  Highlights a change in installation with respect to previous issue.
-  Indicates that torque is related to safety.
-  Video available; click to play.
-  Wire Tie location and number.

Accessory Installation Practice (read before installation)

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

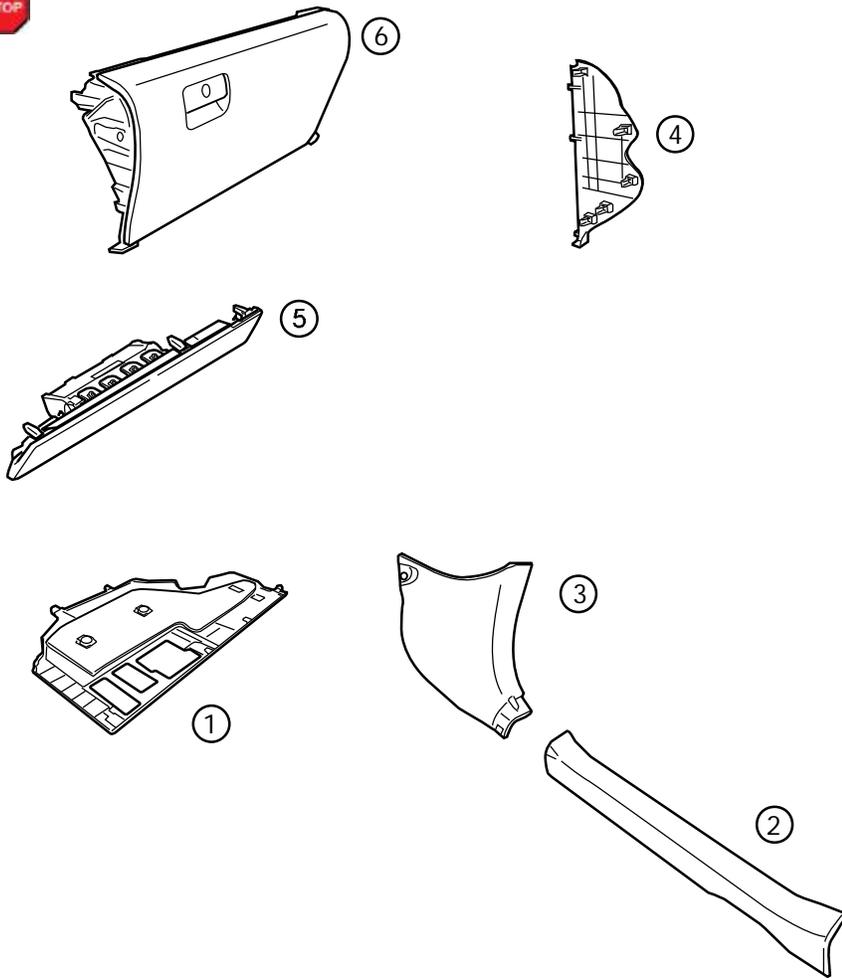
These guidelines can be found in the “Accessory Installation Practices” document.

This document covers such items as:

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.)
- Safety (eye protection, checking 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.

Disassembly Overview

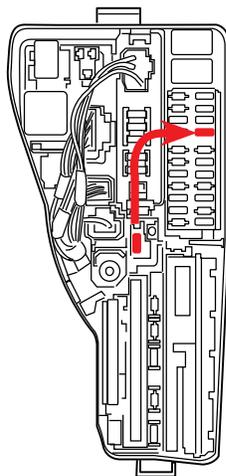


Disconnect all Corresponding Connectors.

1. Hood Switch Installation.

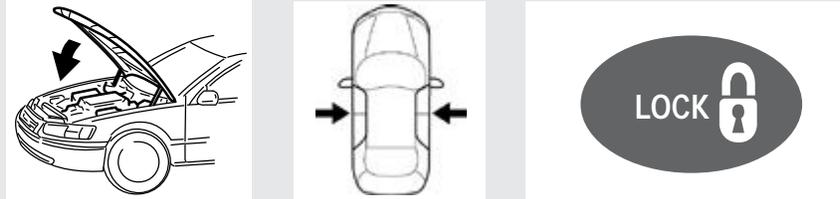
- a. Verify that the Short Pin is installed.
 - If not install now.

Fig. 1-1



Confirm the following:

Before beginning, close the Hood and the Doors. Press the remote control's lock button.

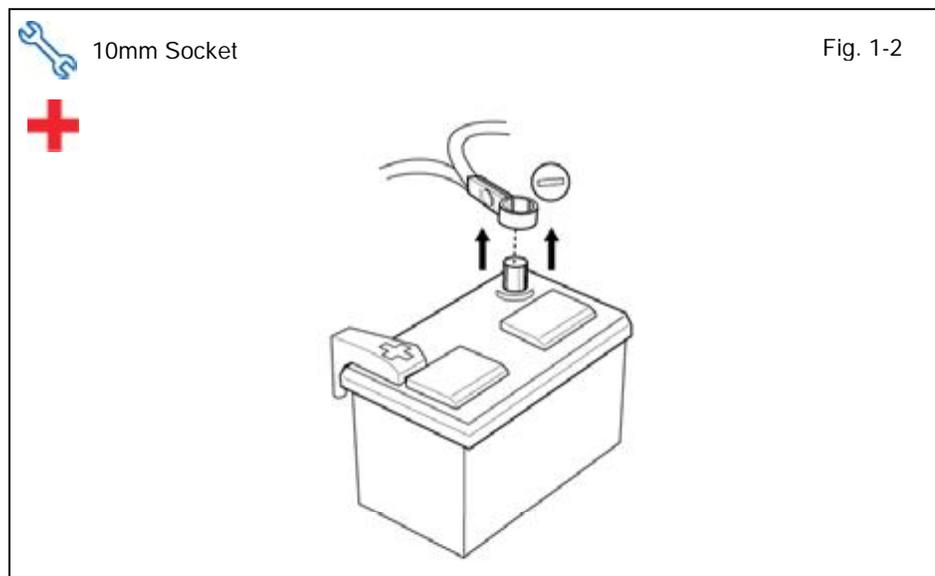


Observe the Security LED on the center console



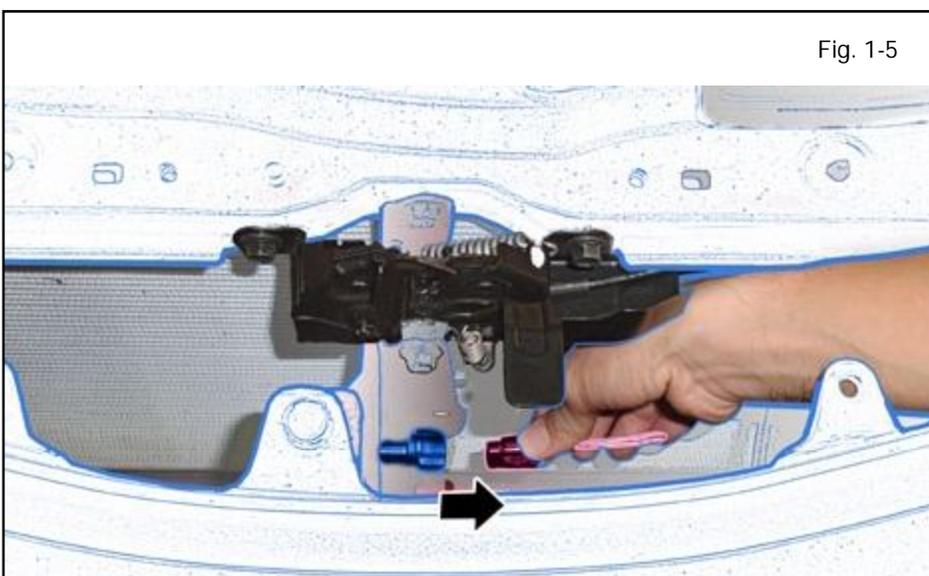
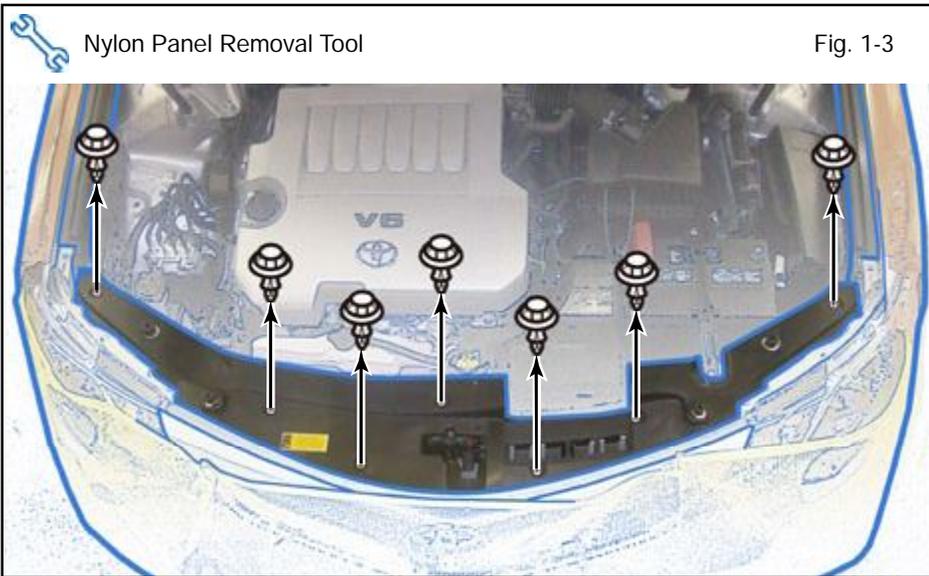
Security LED Turns ON solid for 30 Seconds then starts blinking
WITH Factory Alarm
(Vehicle has Hood Switch)

Security LED starts blinking Immediately
WITHOUT Factory Alarm
(Vehicle does not have Hood Switch)



- b. Place the Vehicle in Park with the Parking Brake set.
- c. Disconnect the Negative Battery Terminal.
 - Note the Battery Cable Position as it will be re-installed in the same position.

+ **CAUTION:** Do not touch the Positive Terminal.



Vehicles Without Factory Alarm ONLY

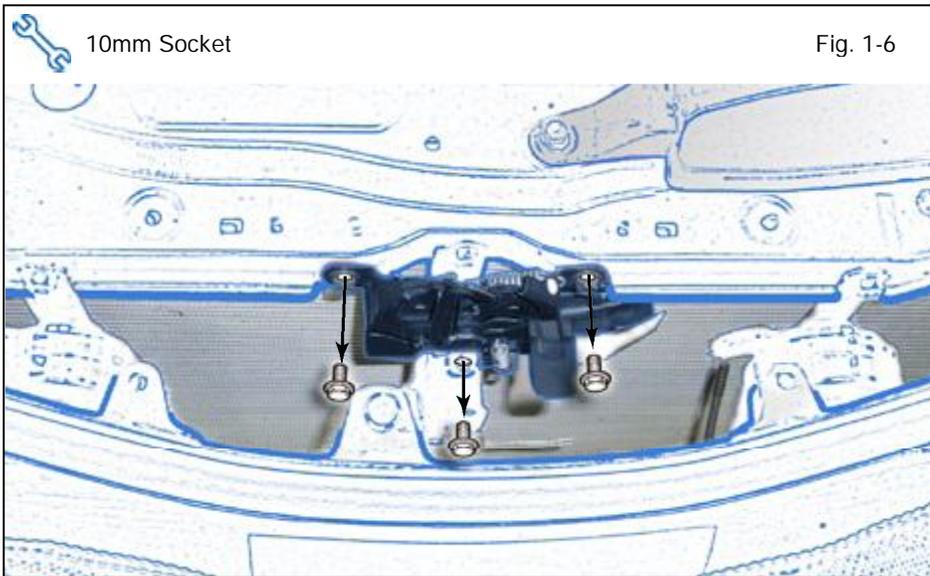
- d. Remove the Engine Cover.
 - Remove 7 Clips.

V4/V5 Add-on ONLY

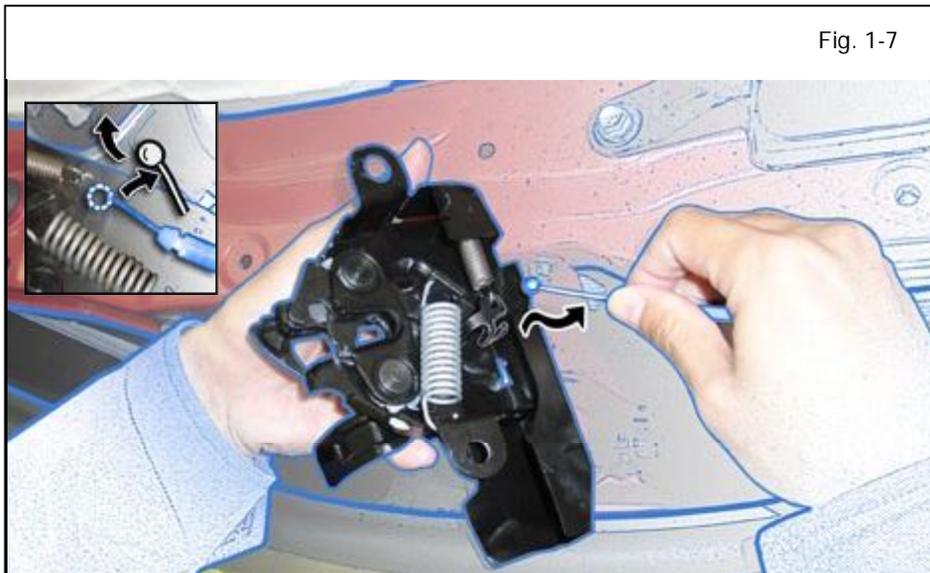
- e. Cut the Wire Tie securing the V5 Jumper Connector.

- f. Disconnect the V5 Jumper Connector from the Vehicle's 2P Pre-Connector.
 - Discard the V5 Jumper Connector.

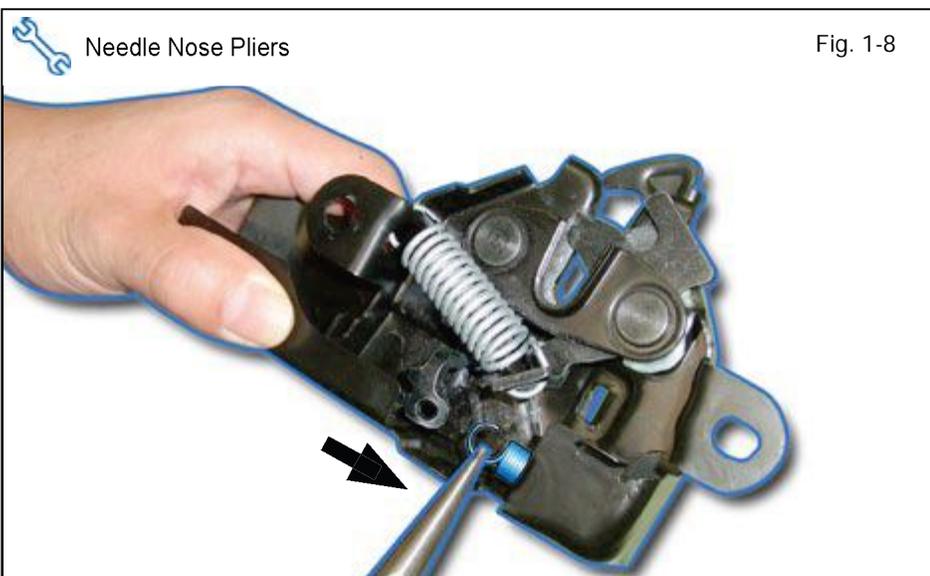
**Vehicles Without Factory
Alarm ONLY**



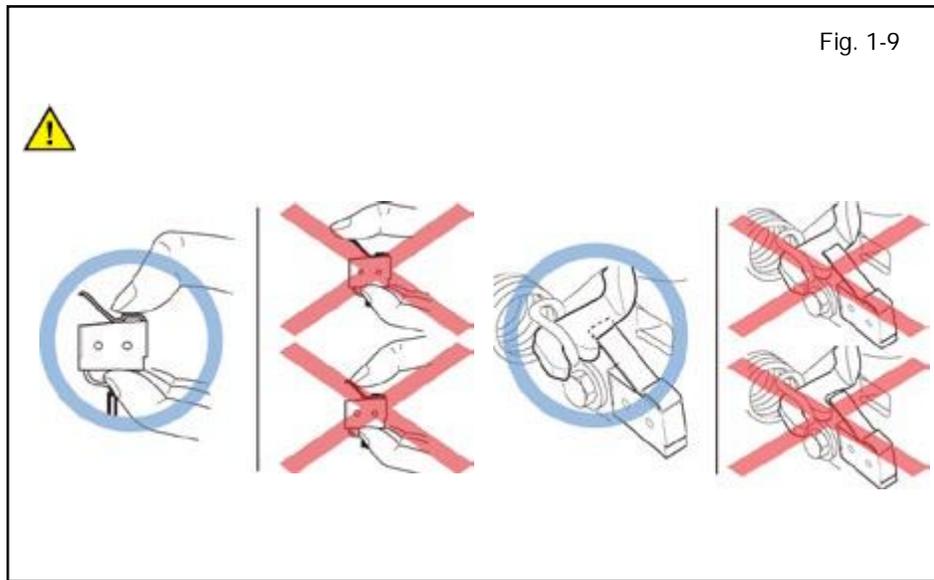
- g. Dislodge the Hood Lock Assembly.
 - Remove 3 Bolts.



- h. Remove the Hood Lock Cable from the Hood Lock.



- i. Release the Spring from the Hood Lock.



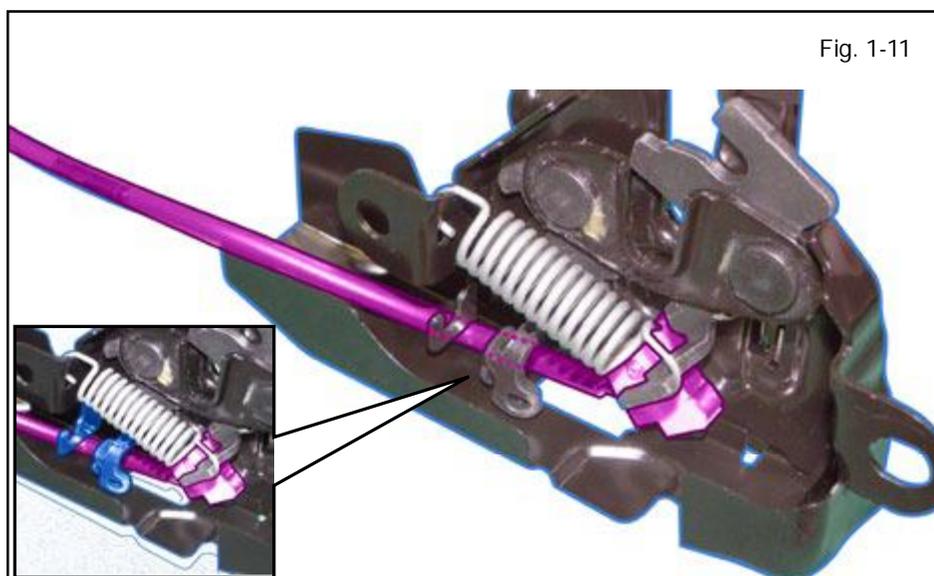
-  Make sure to hold the Hood Switch by its sides.
-  Make sure the Hood Switch Lever is positioned properly.
-  If the Hood Switch is Broken RES will not function.



- j. Install the Hood Switch with the Switch Lever underneath the Hood Lock Trigger Lever.

 **NOTE:** Torque the Screw to 3.1 in•lbf (0.35 N•m).

 **NOTE:** Do not reuse the Screw once it is already installed. The effect of the adhesive becomes weak if used again.



- k. Route the Hood Switch Harness underneath the Hood Lock Cable Lever.

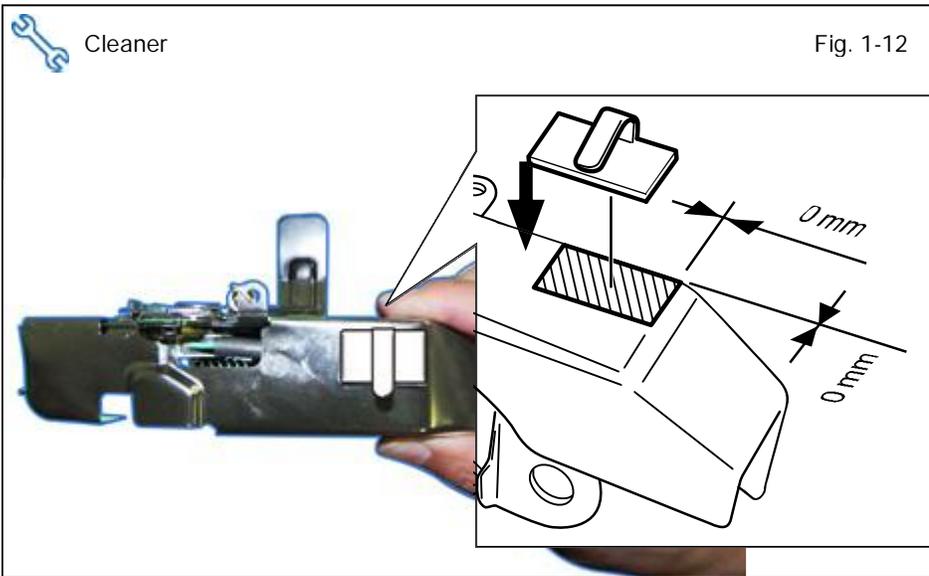


Fig. 1-12

- l. Using VDC approved cleaner and cleaning method, clean the indicated area underneath the Hood Lock Assembly.
- m. Attach the Clamp underneath the Hood Lock Assembly as shown.

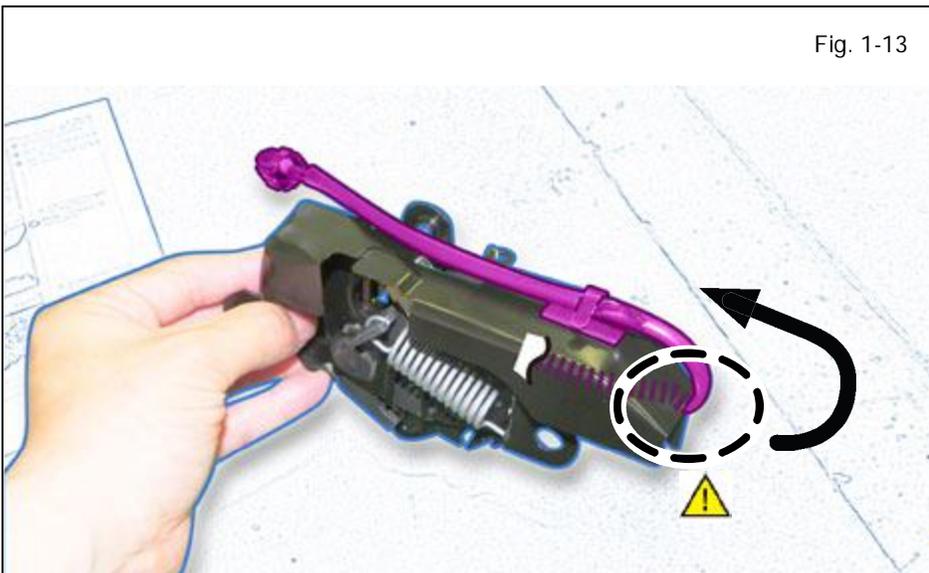


Fig. 1-13



- n. Secure the Hood Switch Harness using the Clamp.

CAUTION: Do not overstress the Hood Switch Harness.

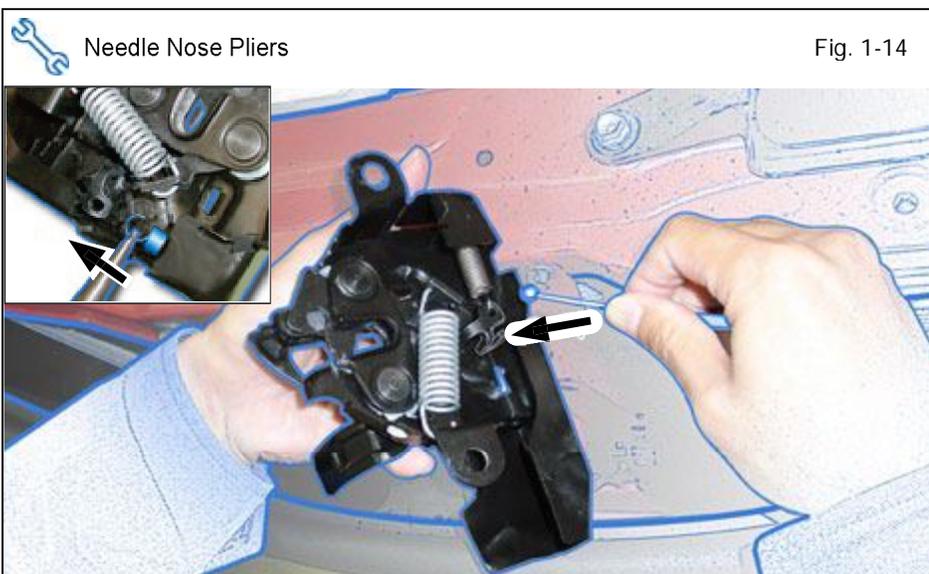
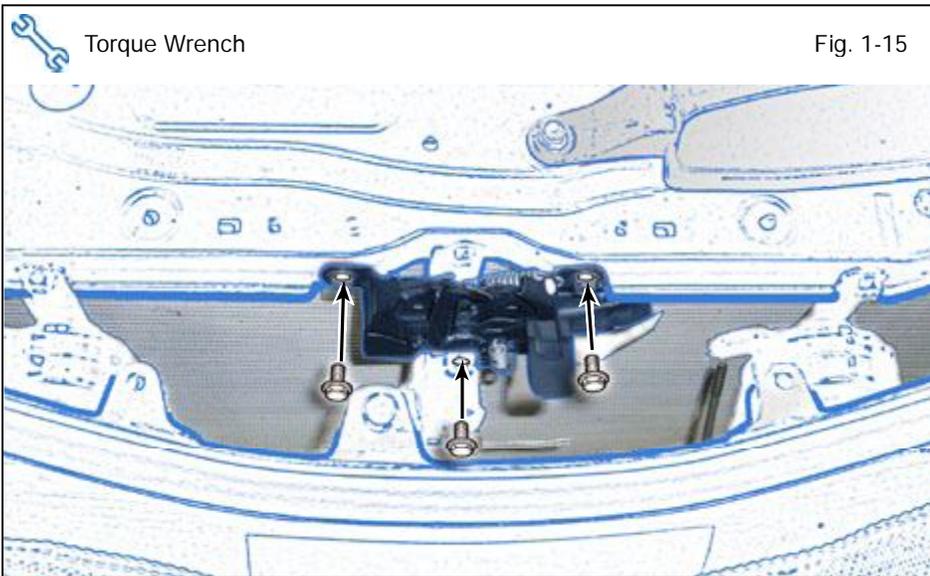


Fig. 1-14

- o. Reinstall the Spring to the Hood Lock.
- p. Reinstall the Hood Switch Cable to the Hood Lock Assembly.



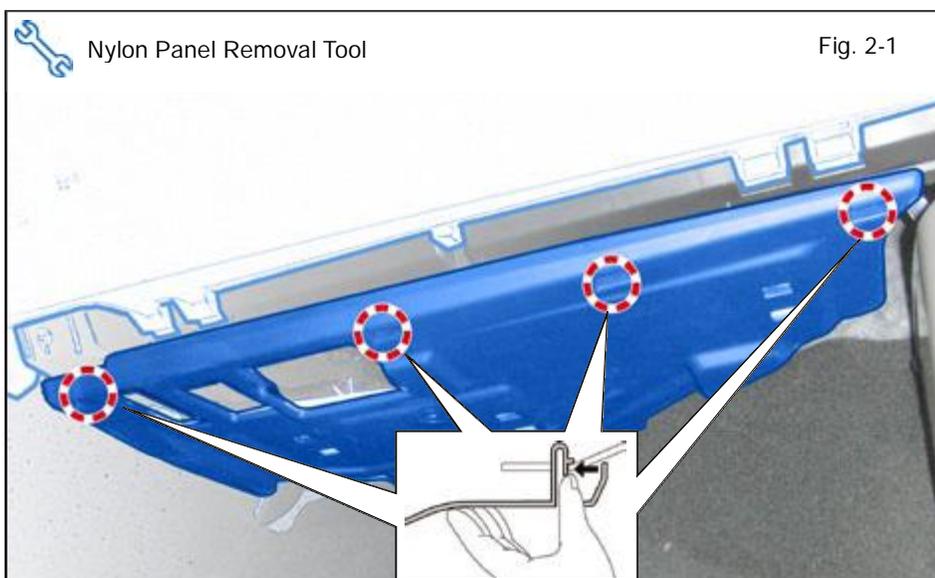
- q. Reinstall the Hood Lock Assembly.



NOTE: Torque the Bolts to 70.8 in•lbf (8.0 N•m).



- r. Connect the Hood Switch Harness Connector to the Vehicle's Pre-Connector.

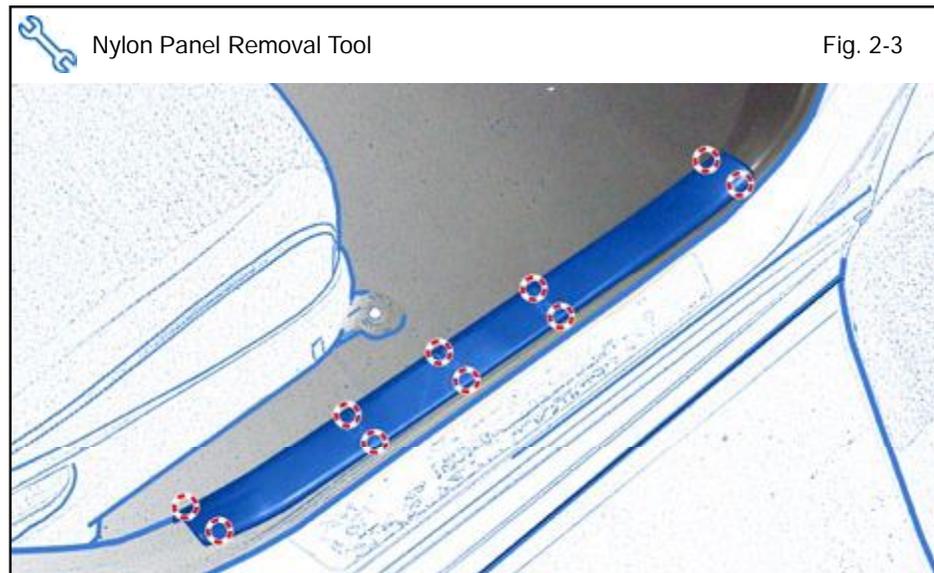


2. Vehicle Disassembly.

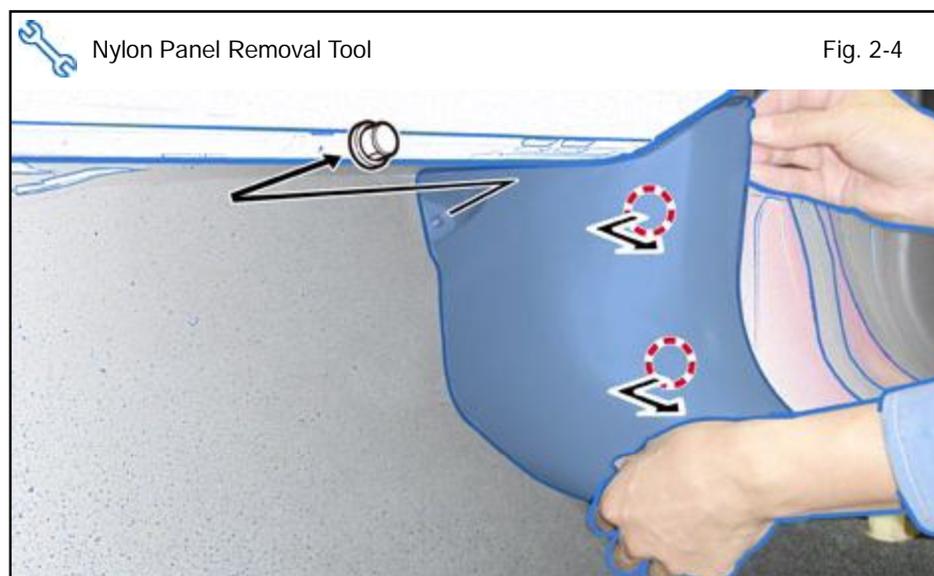
- a. Dislodge the Glove Box Under Cover.



- b. Disconnect the Vehicle's Connector from the Glove Box Under Cover.



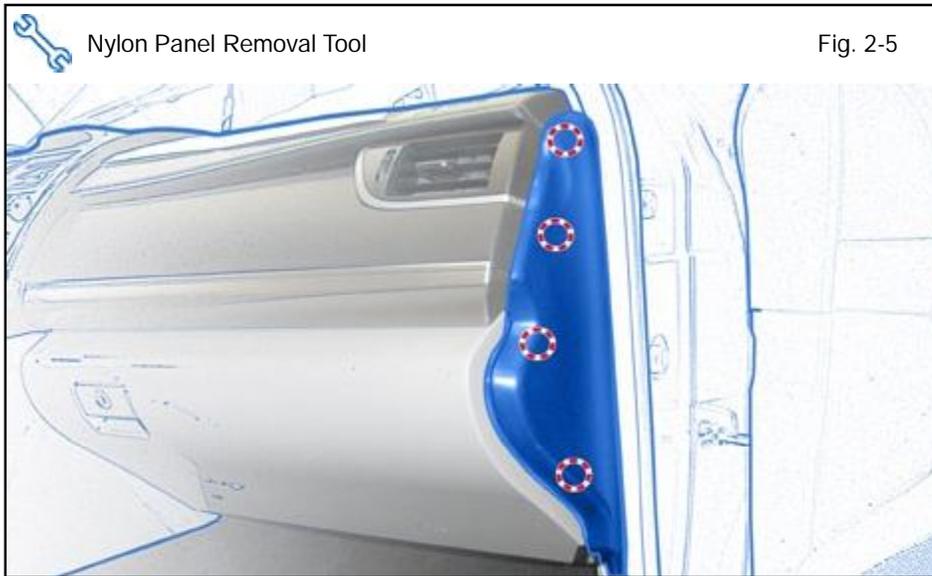
- c. Remove the Passenger's Side Step Cover.



- d. Remove the Passenger's Side Cowl Cover.
 - Remove 1 Nut.



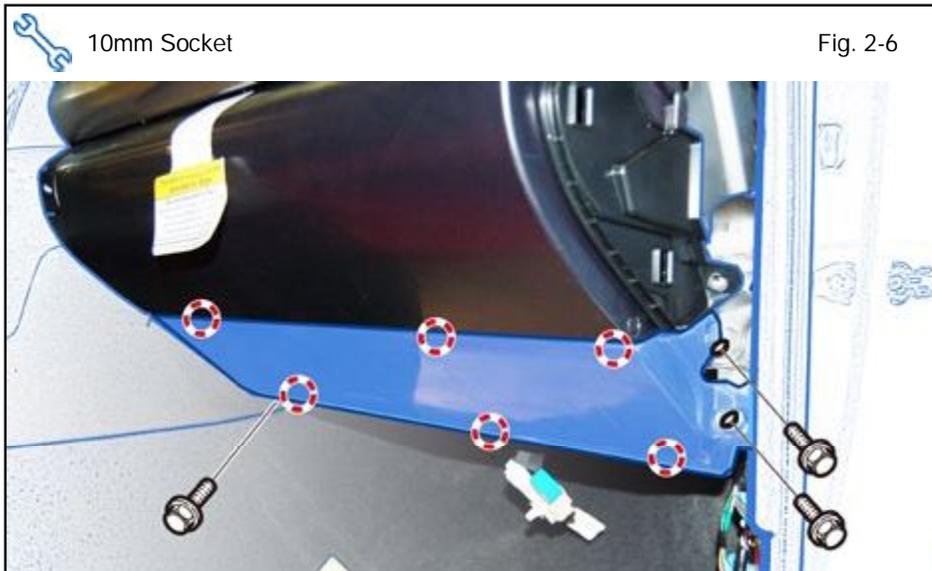
NOTE: If the clips stays in the vehicle, make sure to remove and re-attach to the Cowl Cover.



Nylon Panel Removal Tool

Fig. 2-5

- e. Remove the Passenger's Side Dash Cover.



10mm Socket

Fig. 2-6

- f. Dislodge the Passenger's Knee Airbag carefully.

- Remove 3 Bolts



CAUTION: Do not disconnect the Vehicle's Connector.

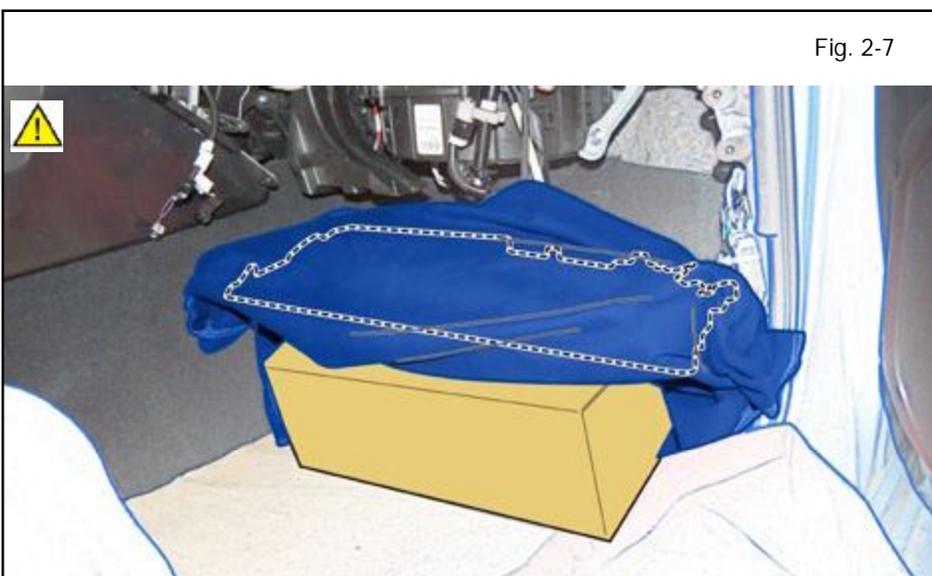


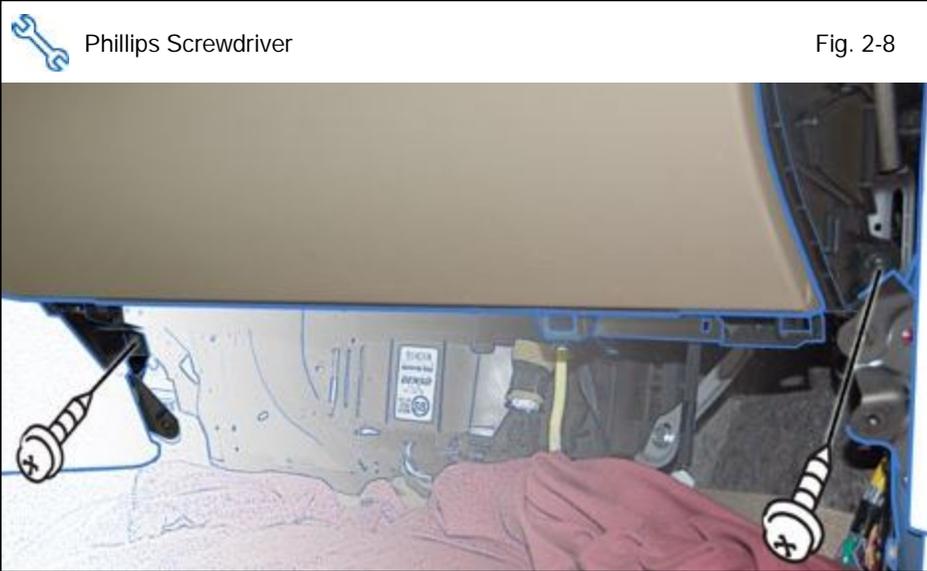
Fig. 2-7

- g. Wrap the Airbag in a Blanket or the like as shown.
- h. Place the Airbag on top of the TVIP box.



CAUTION: Prevent stress on the Airbag Wire.

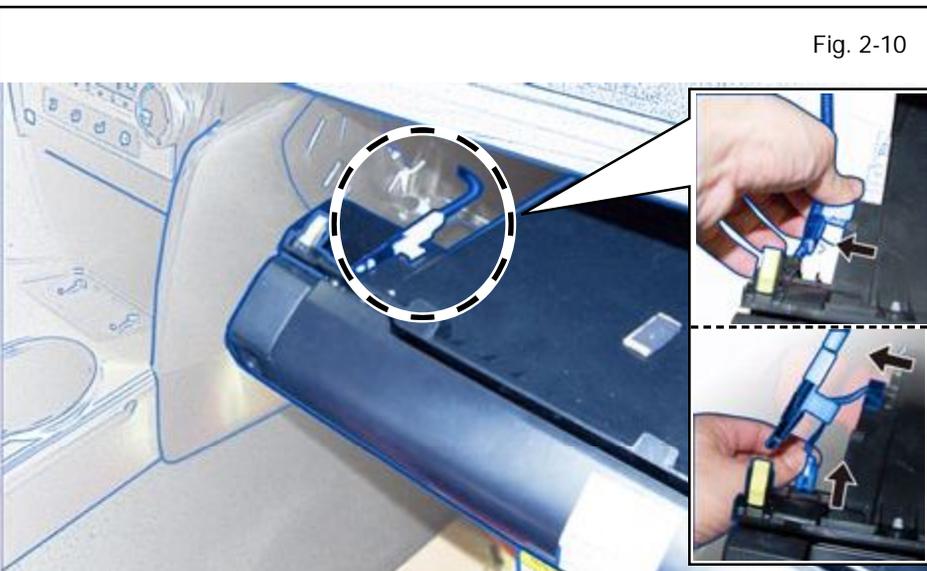
- i. Remove 2 Screws from the bottom of the Glove Box.



- j. Open the Glove Box.
- k. Dislodge the Glove Box.
 - Remove 3 Screws.



- l. Remove the Vehicle's clamp on the top left side of the Glove Box.
- m. Disconnect the Vehicle's Connector.
- n. Remove the Glove Box Light.



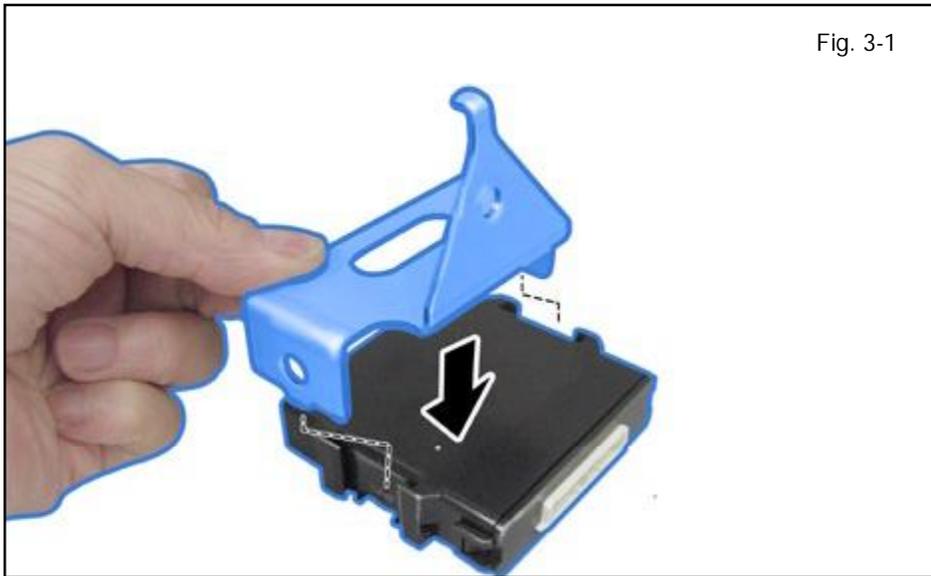


Fig. 3-1

3. RES ECU Preparation and Installation.

- a. Attach the RES ECU Bracket to the RES ECU.

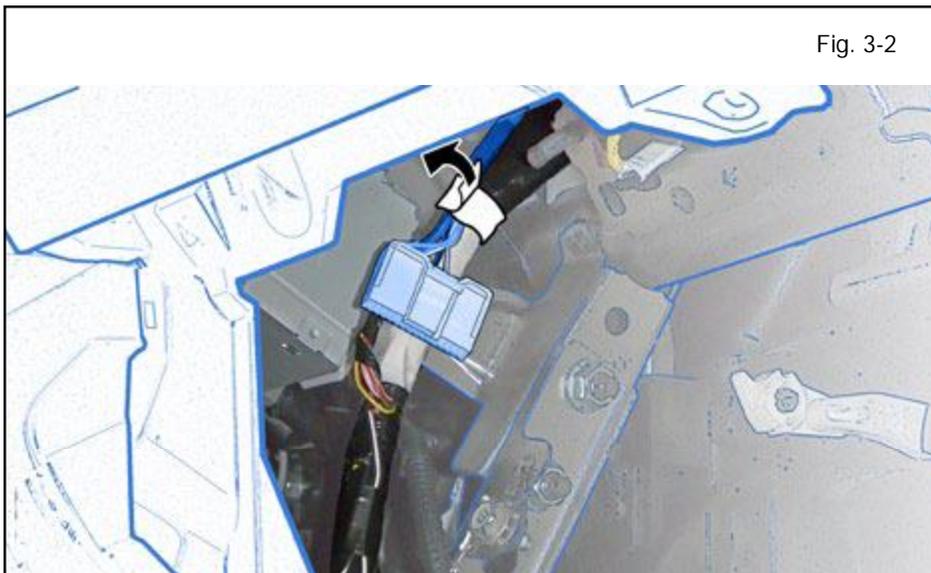


Fig. 3-2

- b. Locate the Vehicle's White 24P Pre-Connector and remove the Tape securing it.

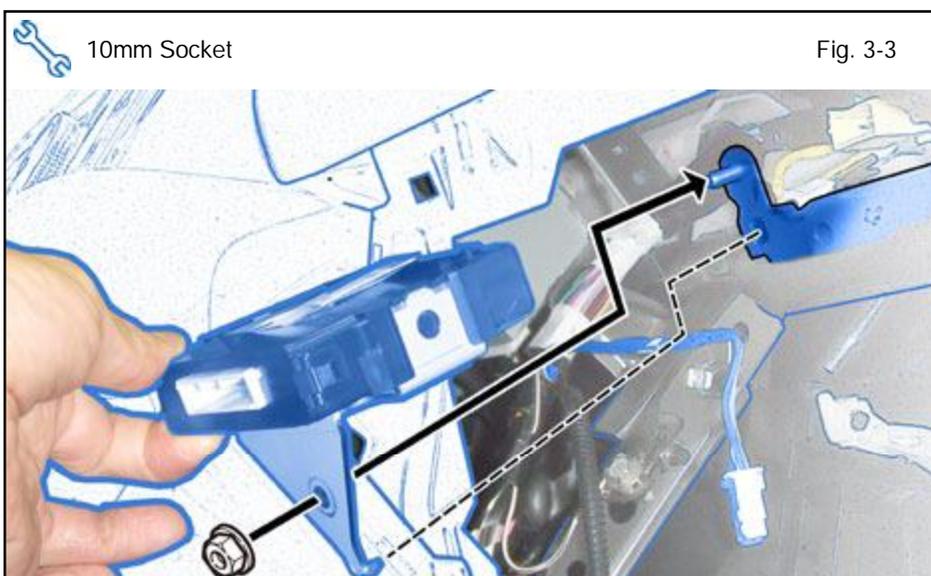
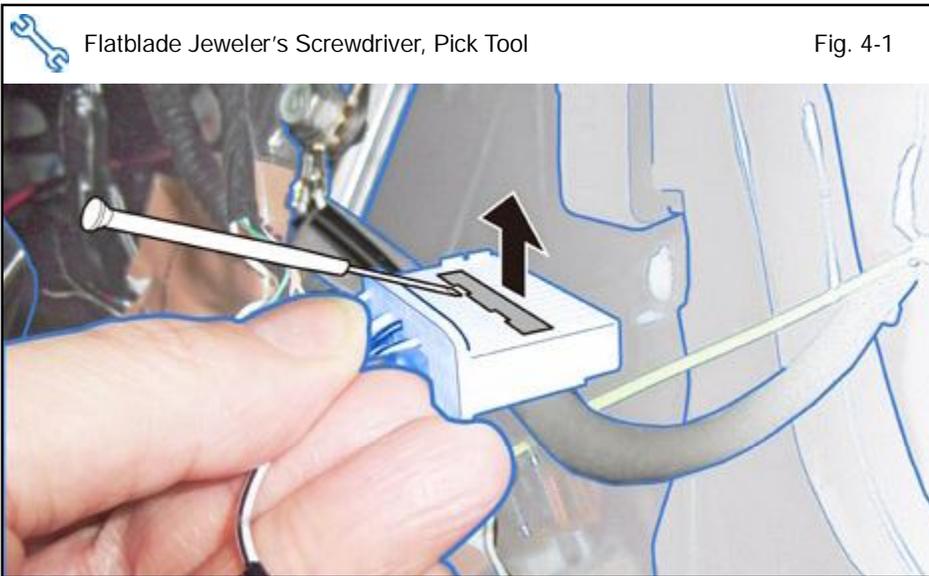


Fig. 3-3

- c. Install the RES ECU using the supplied Nut.

NOTE: Make sure the Guide Pin is seated correctly and Verify that the Nut is tightened securely.

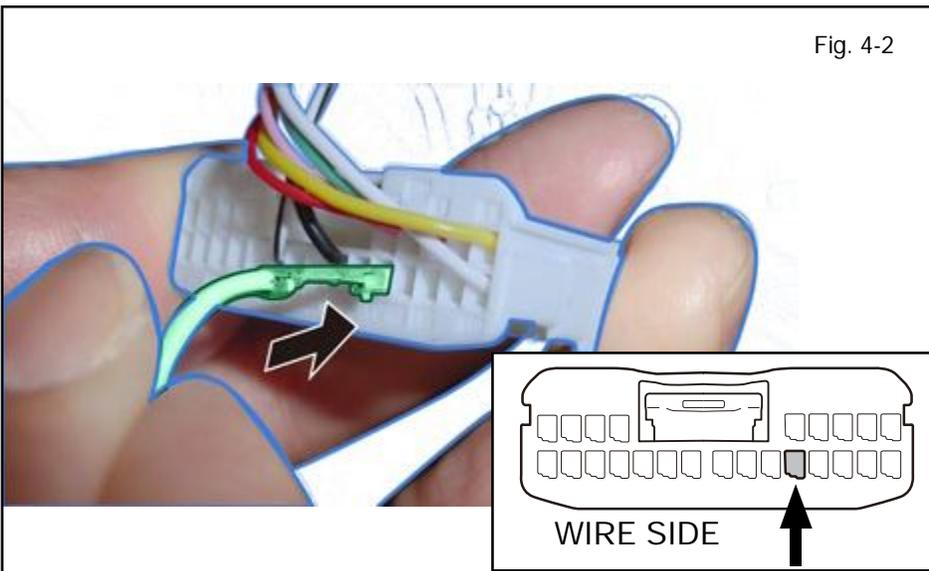


4. V4 Harness Installation.

- a. Lift up the Terminal Retainer Clip on the Vehicle's White 24P Pre-Connector.



CAUTION: Do not pull out the Retainer Clip.



- b. Insert the V4 White/Black Wire Terminal into Pin# 14 location of the Vehicle's 24P Pre-Connector.

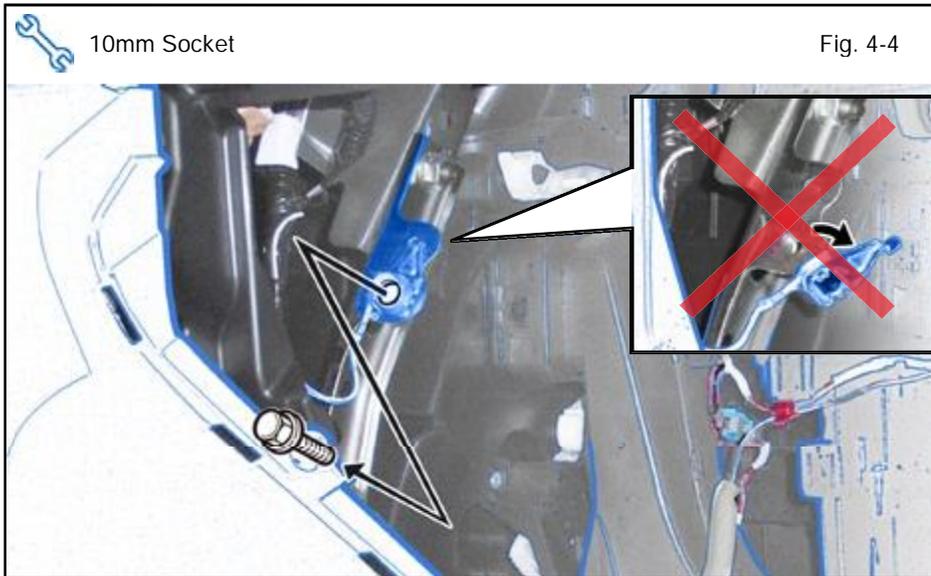
- Close the Terminal Retainer Clip.



VERIFY: That the Terminal Pins are properly inserted and do not come out.



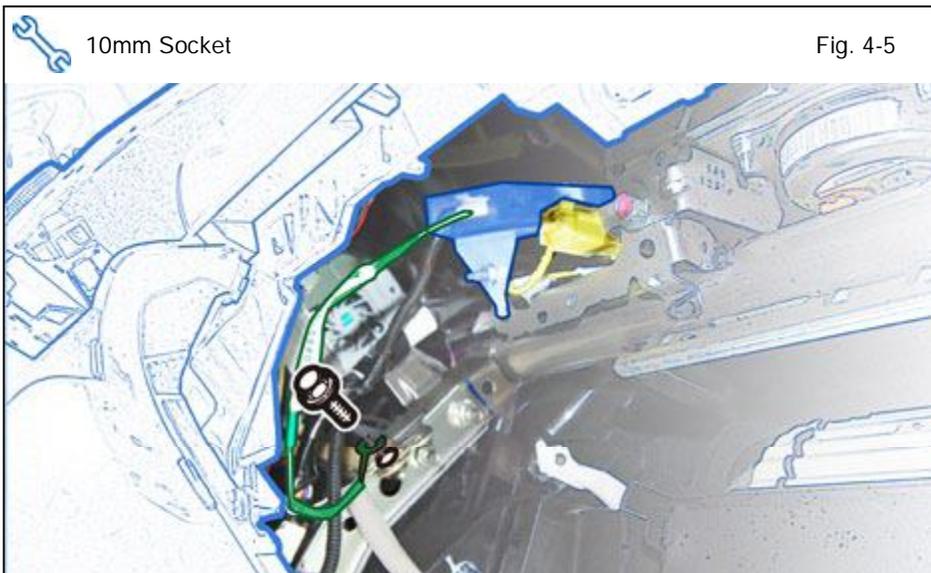
- c. Plug in the Vehicle's White 24P Pre-Connector to the RES ECU.



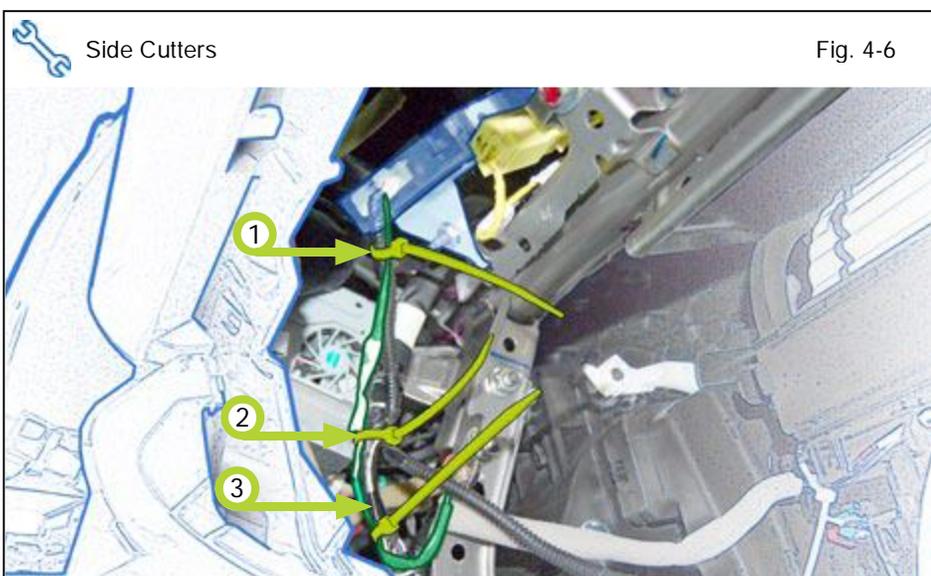
- d. Remove the Bolt from the Vehicle's Ground Terminal.



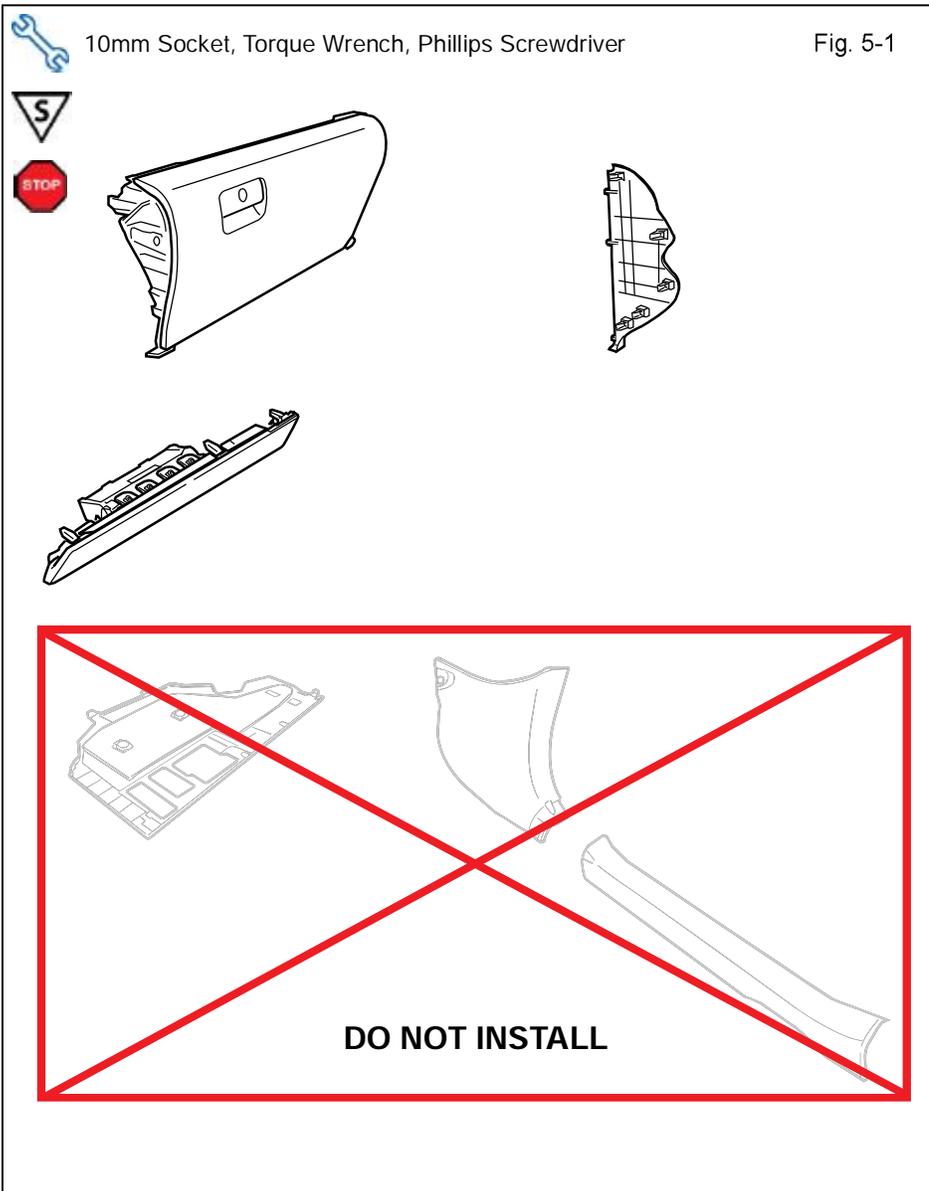
NOTE: Do not remove the Vehicle's Ground Terminal.



- e. Secure the V4 Ground Terminal to the Vehicle's Ground Terminal using the same Bolt.



- f. Secure the V4 Harness to the Vehicle Harness using 3 Wire Ties.



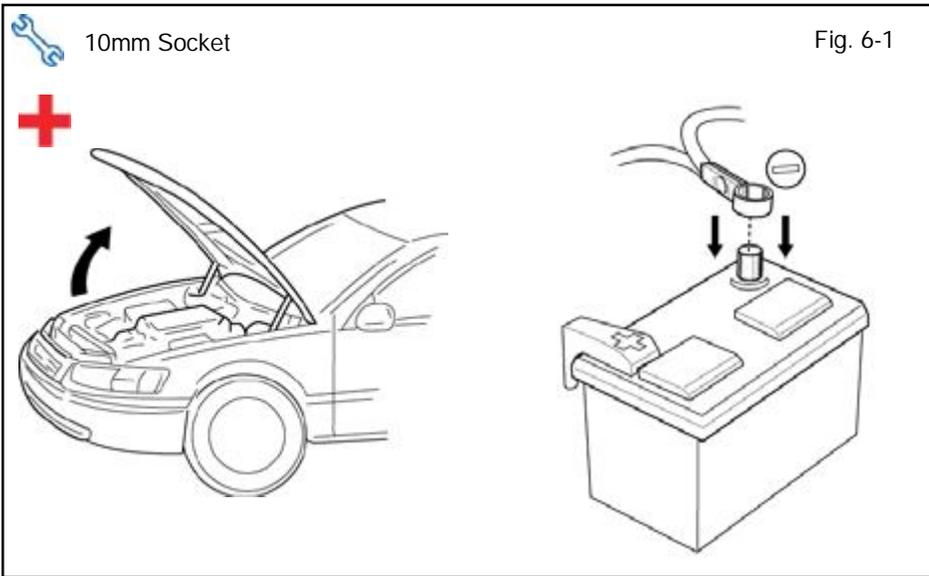
5. Registration Preparation.

- a. Reassemble the Vehicle except for the Glove Box Under Cover; Passenger's Cowl and Step Covers.

NOTE: When reinstalling Knee Airbag, make sure to tighten the Bolts to 88.5 in•lbf (10 N•m).

VERIFY: That all Connectors are plugged in.

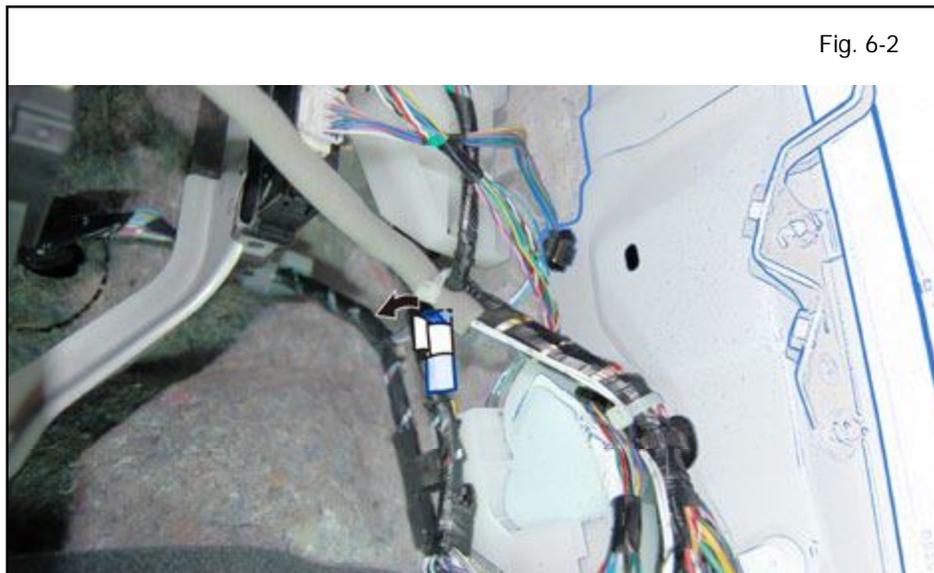
VERIFY: That panels fit together properly, with no uneven gaps.



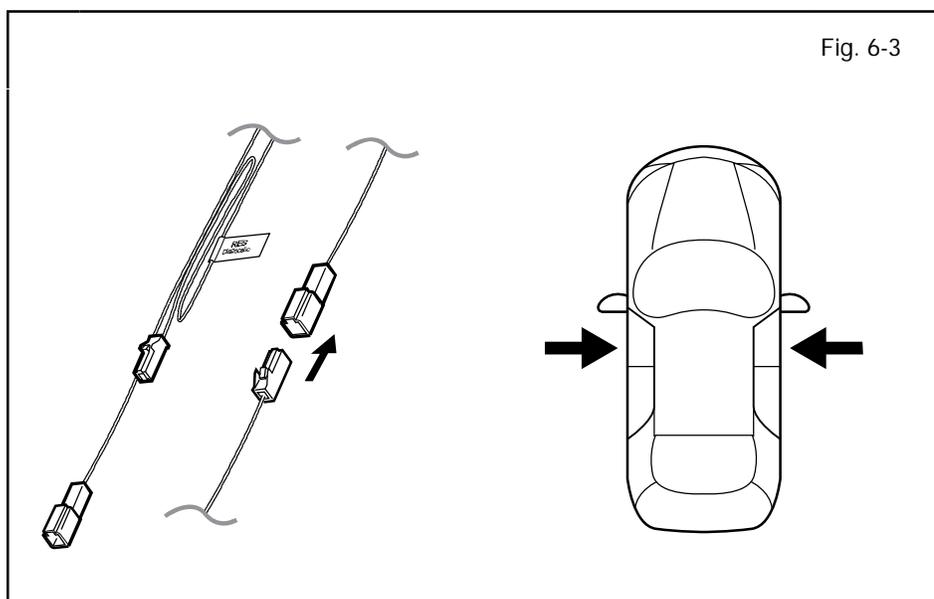
6. Registration.

- Open the Hood.
- Temporarily reconnect the Negative Battery Cable.

+ **CAUTION:** Do not touch the Positive Terminal.



- Locate the Vehicle's 1P RES Diagnostic Connectors in the Passenger's Side Cowl Area and remove the Tape securing it.



- Connect the Vehicle's 1P RES Diagnostic Connectors.
- NOTE:** Once connected you will have 10 minutes to complete this section, steps e-ac.
- Close all doors.

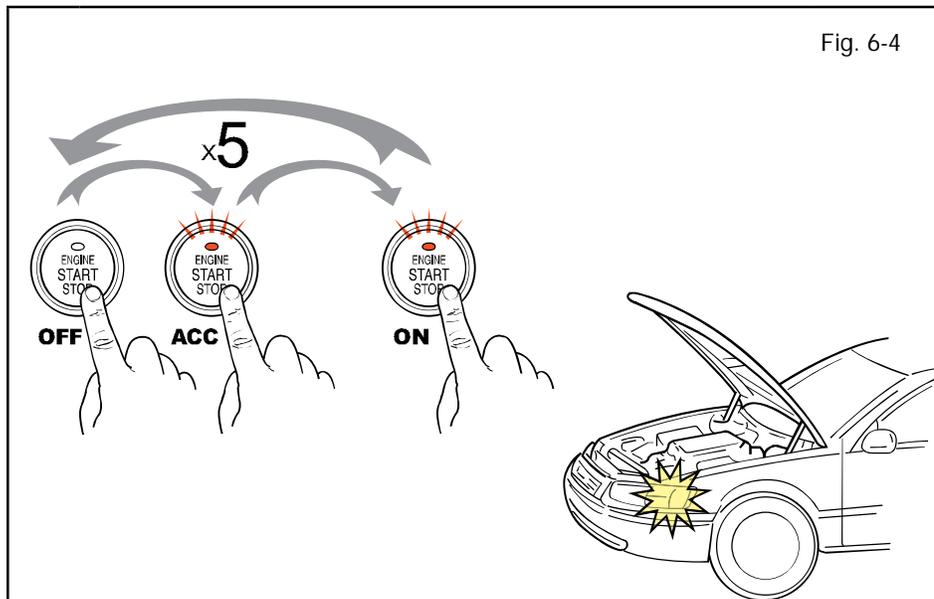


Fig. 6-4

- f. Place the Vehicle in Park (P) or Neutral (N) position.
- g. Cycle the “Engine Start Stop” Button from OFF to ON 5 times.

NOTE: One cycle consists of: OFF → Accessory → ON. This is equivalent to pressing the “Engine Start Stop” Button 14 times.



Note: Do not apply Brake pedal.

LOOK: For the Hazard Lights to Flash Once.

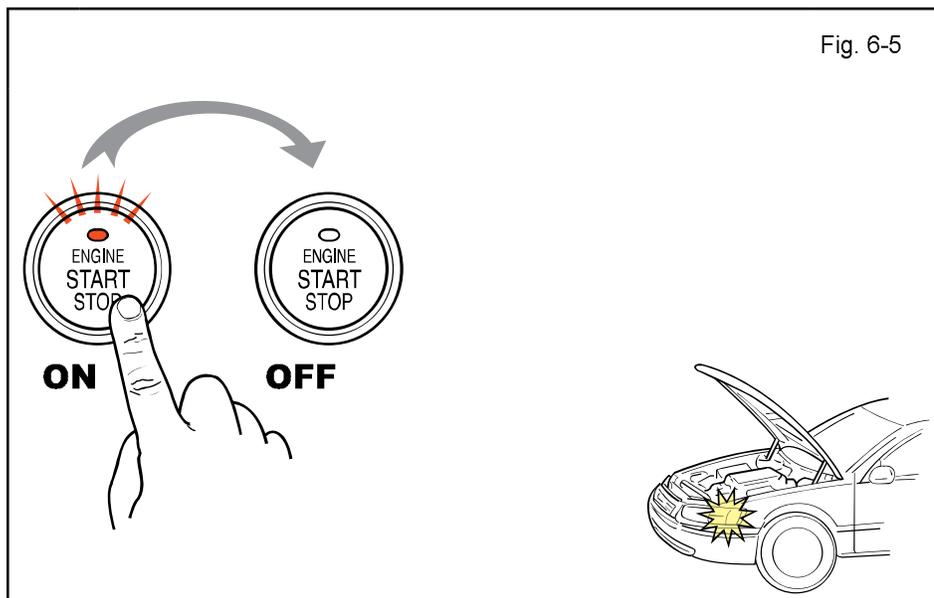


Fig. 6-5

- h. Start the Engine.
- i. After 10 seconds stop the Engine.

LOOK: For the Hazard Lights to Flash Once.

IF THIS PROCEDURE FAILED

The Hazard Lights flash Three Times.

- Disconnect the Vehicle's 1P RES Diagnostic Connectors.
- Start again from step d.

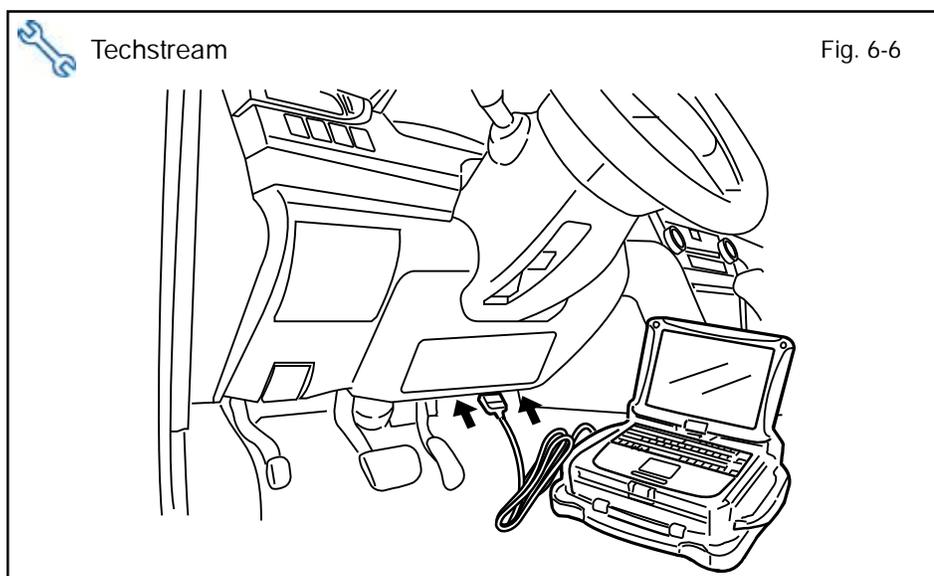


Fig. 6-6



CAUTION: Techstream Lite will not work for this section, use the Techstream Notebook ONLY.

- j. Connect the Techstream Notebook to the Vehicle's Diagnostic Port.
- k. With the Smart Key in your possession, press the “Engine Start Stop” Button twice to select the Ignition “ON” position.



Note: Do not apply Brake pedal.

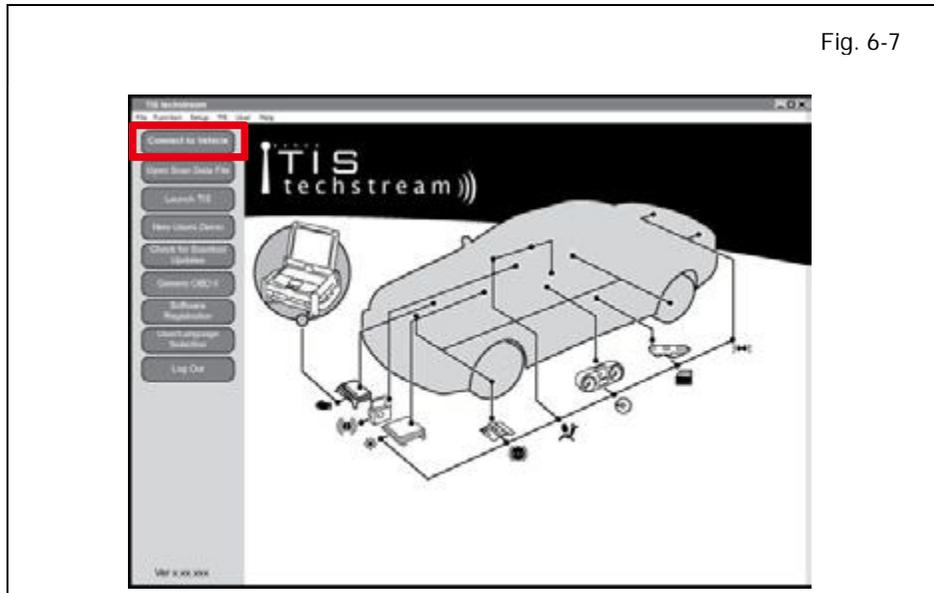


Fig. 6-7

- l. Start the TIS Techstream Application by clicking on the shortcut located on the Desktop.
- m. Click "Connect to Vehicle."

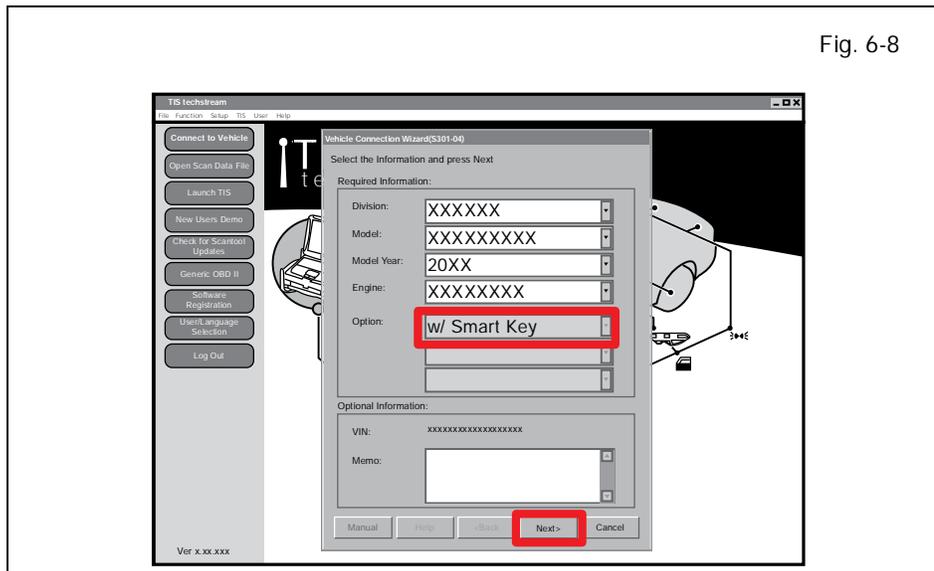


Fig. 6-8

- n. Confirm that the information displayed on the Vehicle Connection Wizard is correct for the vehicle. If not verify that the Techstream is properly connected.
- o. Select "w/ Smart Key."
- p. Click "Next>."

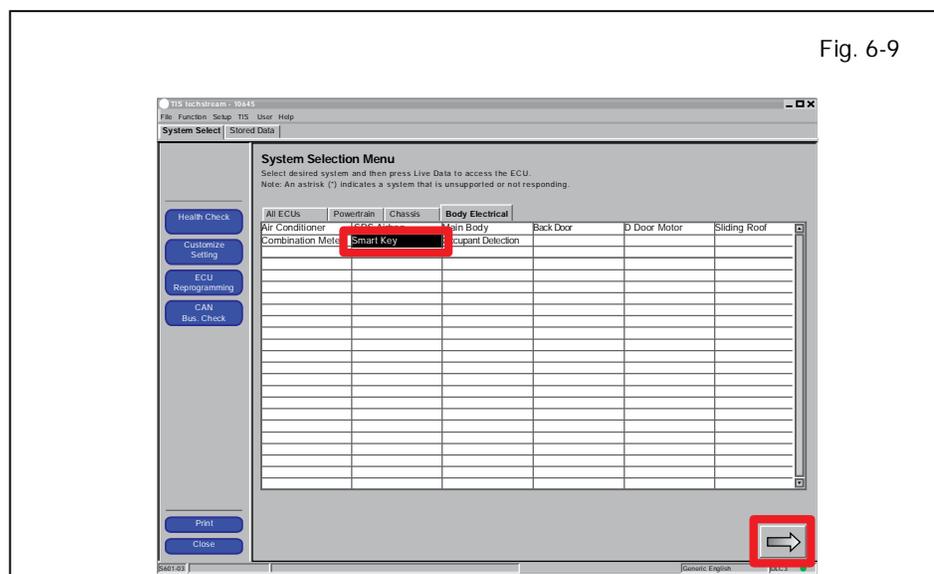
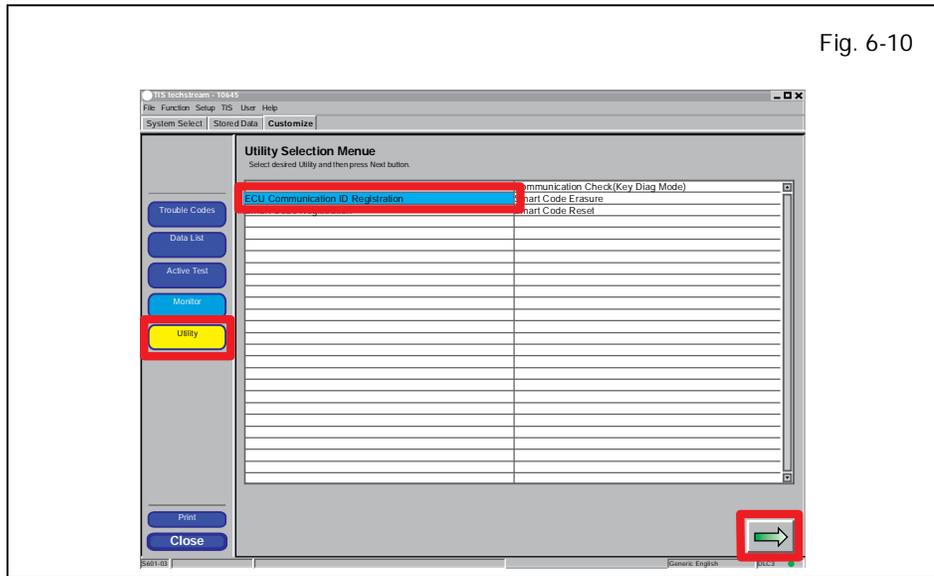
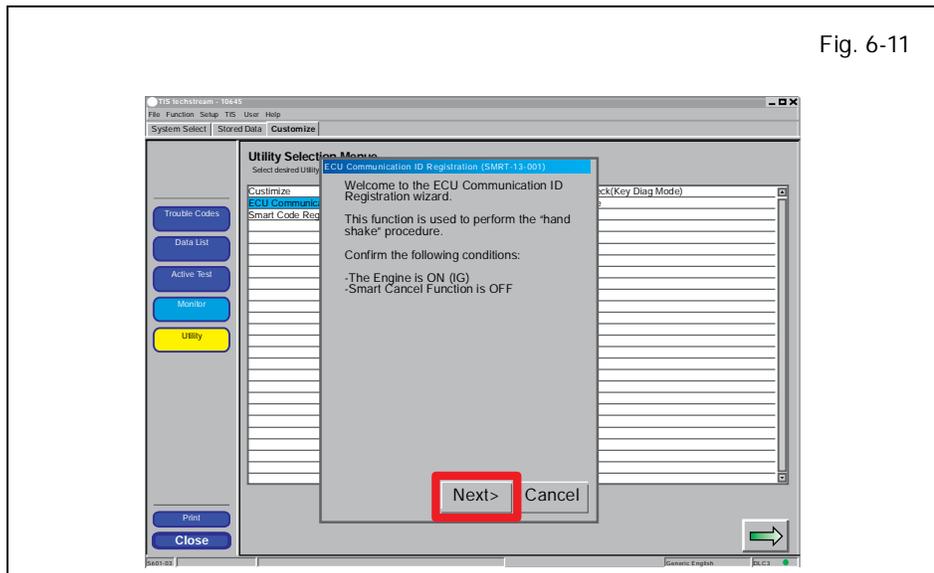


Fig. 6-9

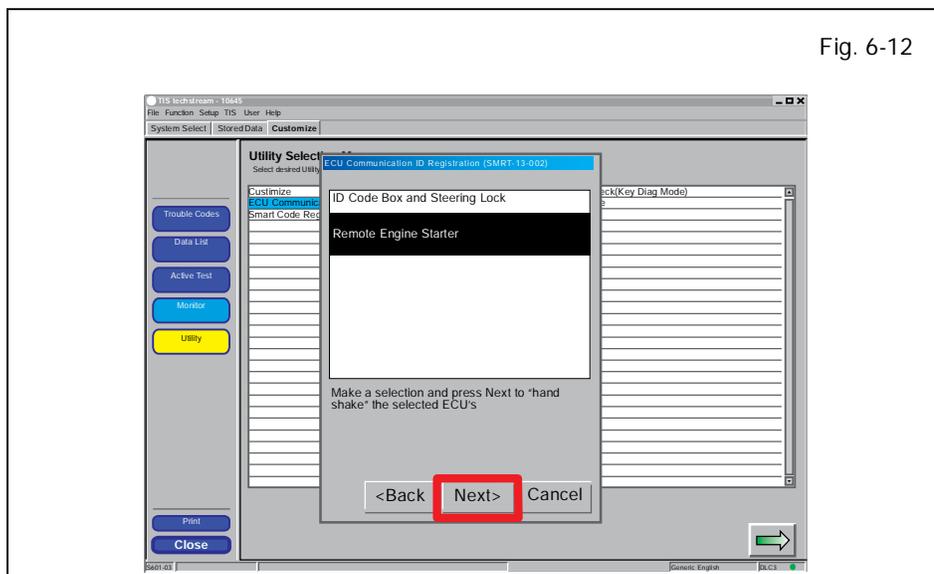
- q. Select "Smart Key."
- r. Click .



- s. Click on "Utility."
- t. Select "ECU Communication ID Registration."
- u. Click .



- v. Click "Next>."



- w. Select "Remote Engine Starter."
- x. Click "Next>."

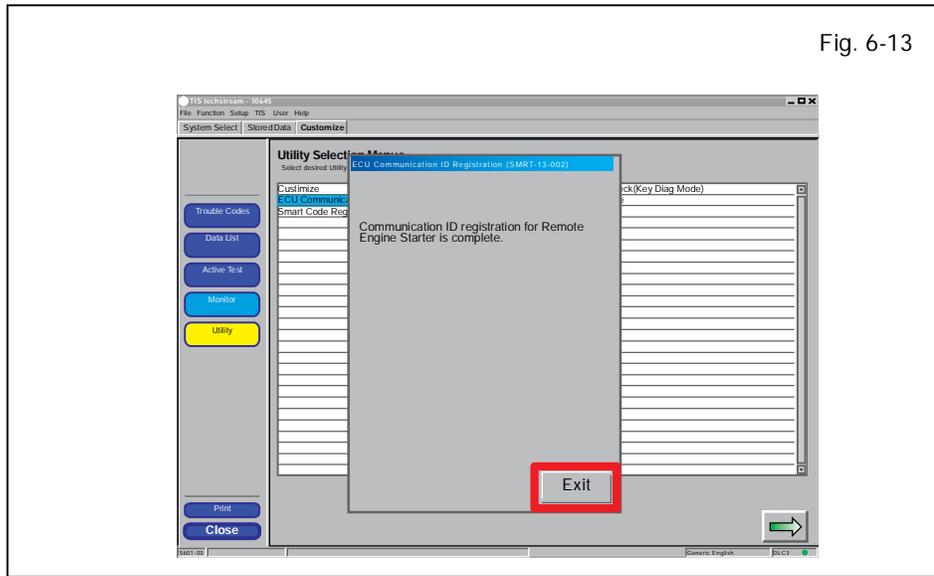


Fig. 6-13

CONFIRM: That the ECU Communication ID was completed successfully.

y. Click "Exit."

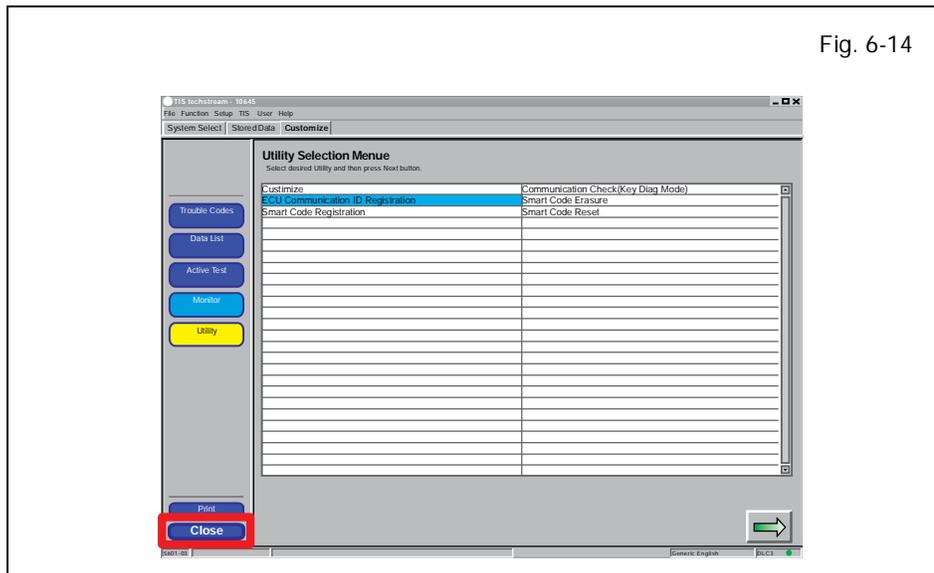


Fig. 6-14

z. Click 

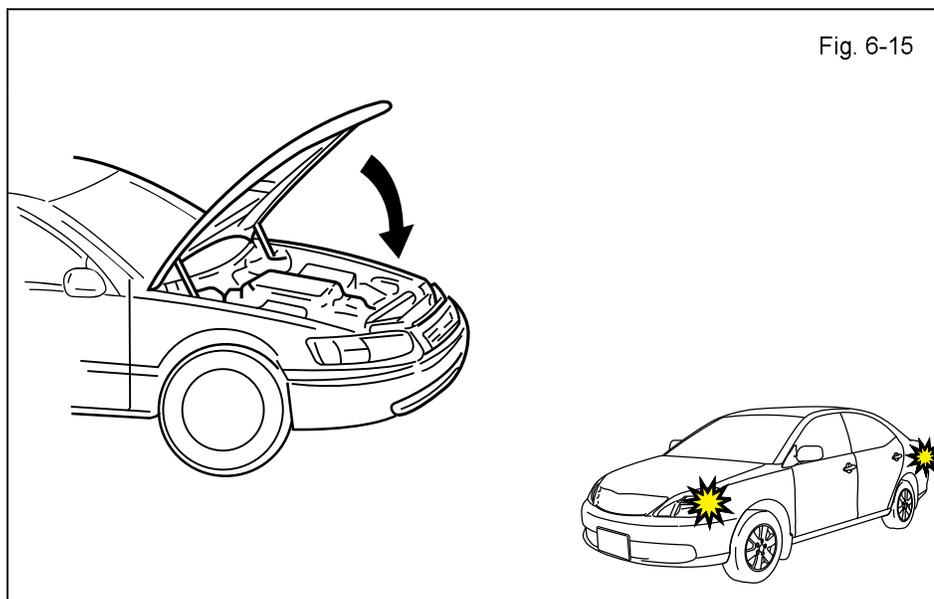


Fig. 6-15

aa. Exit the vehicle.

ab. Close the Hood.

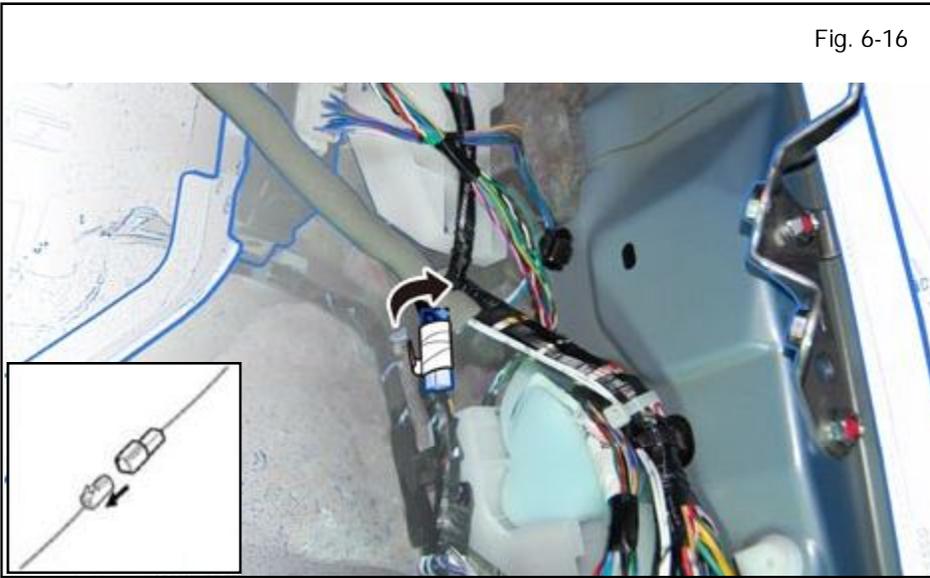
ac. Look for the Hazards to flash Twice.

IF THIS PROCEDURE FAILED

The Hazard Lights flash Three Times.

- Disconnect the V4 vehicle's 1P RES Diagnostic Connectors.
- Start again from step d.

Fig. 6-16



- ad. After a successful Registration, disconnect the Vehicle's 1P RES Diagnostic Connectors.
- ae. Secure the 1P RES Diagnostic Connectors to the Vehicle Harness using Electrical Tape.



7. Complete the Installation.

- a. Finish reassembling the Vehicle.



VERIFY: That all Connectors are plugged in.



VERIFY: That panels fit together properly, with no uneven gaps.

- b. Clean up and Remove trash.

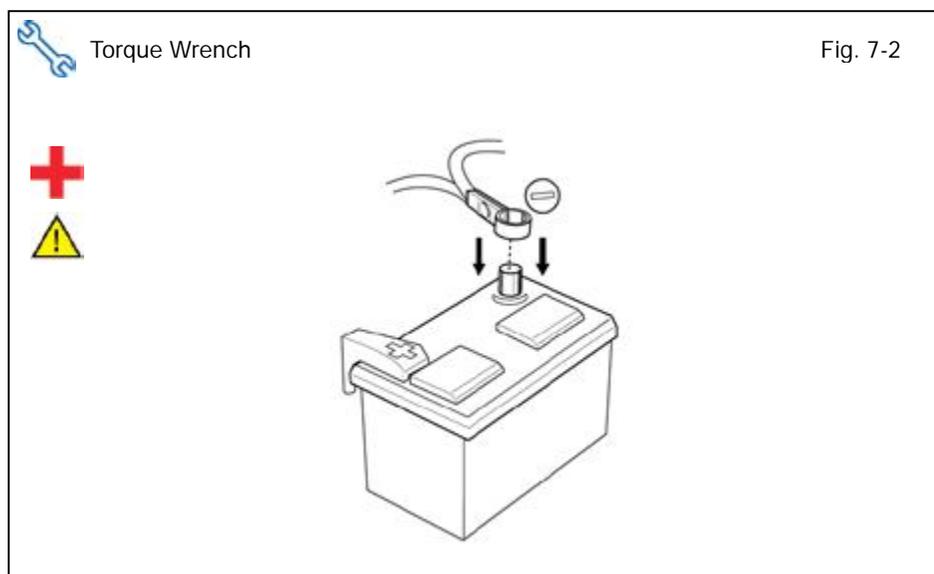
c. Sealed in its protective bag, place the Owner's Manual in the Glove Box.

- d. Reset the Power Windows.

- Turn the ignition "ON."
- Lower the Windows halfway.
- Pull up on the Power Window Switches until the windows close.
- Continue to hold up on the switches for a minimum of 1 Second.

- e. Reset the Moon Roof. (if equipped)

- Turn the ignition "ON."
- Open the Moon Roof halfway.
- Push and hold the Moon Roof Switch to close until the Moon Roof closes.
- Continue to hold the switch for a minimum of 1 Second.



- f. Position the Negative Battery Cable at the original factory position.



- Tighten the Nut to 48 in•lbf (5.4 N•m)



CAUTION: Do not touch the Positive Terminal.

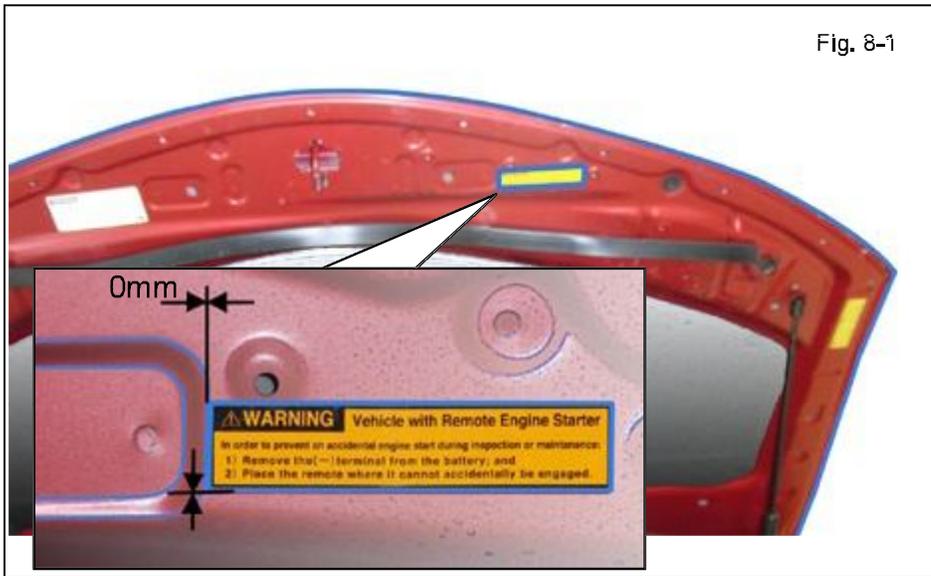


Fig. 8-1

8. Tags and Labels.

- For US Vehicles use the English Tags and Labels, and discard the Spanish Tags and Labels.
- For Mexico Vehicles use the Spanish Tags and Labels, and discard the English Tags and Labels.

- Using VDC approved cleaner and cleaning method, clean the area indicated in the Engine Compartment Cover.
- Attach the Engine Room Warning Label as shown.



CAUTION: Do not touch the adhesive surface.

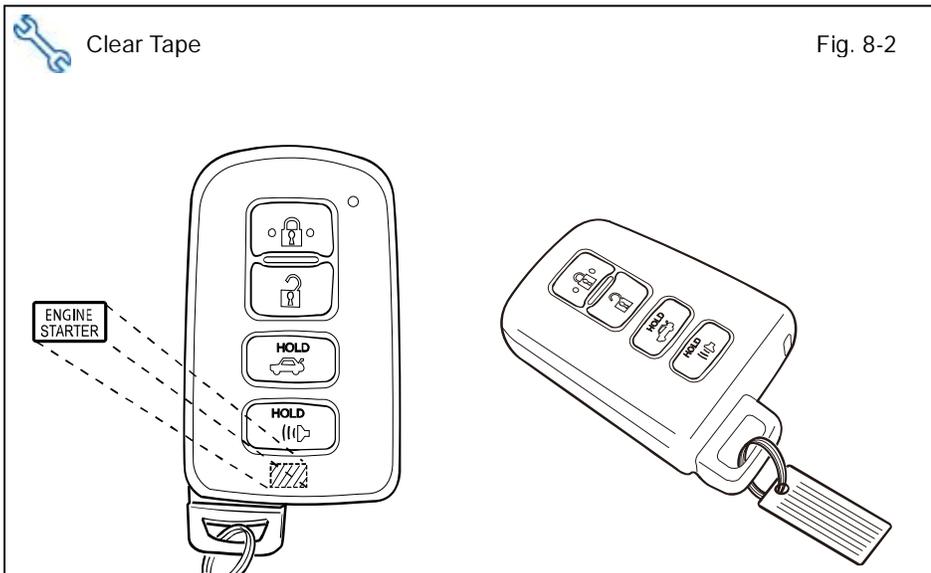


Fig. 8-2

- Using VDC approved cleaner and cleaning method, clean the indicated area on the key.
- Use a piece of Clear Tape to lift the label off its protective backing.



CAUTION: Do not touch the adhesive surface.

- Attach the Key Label as shown.
- Attach the Key Tag.

REPEAT: steps c-f with the other Key.

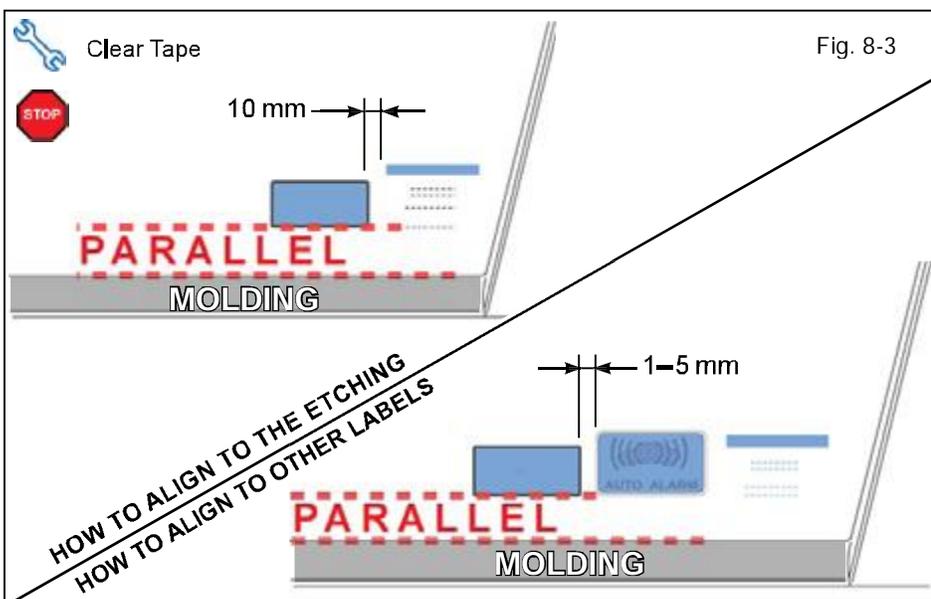


Fig. 8-3

- Use Household Glass Cleaner to clean the inside of the Front Door Windows.
- Use a piece of Clear Tape to lift the Label off its protective backing.



CAUTION: Do not touch the adhesive surface.

- Attach the Label as shown.



NOTE: Make sure to Align according to Etching or Other Label.

REPEAT: steps g-i with the other Window.

Accessory Function Checks

Close the hood, enter the vehicle and close all doors. Place the shift lever in the "P" (Park) position, set the parking brake and make sure the Vehicle is off.

Perform		Look For
1	Press the remote control's lock button twice within 2 seconds, then press and hold the lock button for 3 seconds.	The hazard lights flash after 3 seconds. The engine starts. The hazard lights flash repeatedly for 10 seconds.
2	With the engine running, pull the hood release handle. NOTE: <i>Some Vehicles may require you to exit the Vehicle and pull up on the Hood.</i>	The engine stops. The hazard lights flash once. The security alarm triggers. (Only if equipped with OE Factory Alarm, not Genuine Accessory alarm, and only if armed)
3	Move the shift lever out of "P" (Park). Attempt to start the Vehicle using the remote.	The engine does not start.

Vehicle Function Checks

Function	Function
----------	----------

Enter the Vehicle

<input type="checkbox"/> Dome/Courtesy Lights	<input type="checkbox"/> Steering Wheel Column Adjusts Without Interference
<input type="checkbox"/> Horn	

Start the Vehicle

<input type="checkbox"/> Starter	<input type="checkbox"/> Gauges
<input type="checkbox"/> Panel/Switch Illumination	<input type="checkbox"/> ABS Light (if equipped) <i>If the warning light remains on, it may indicate a system malfunction.</i> 
<input type="checkbox"/> Lamp Failure Sensor <i>If the warning light remains on, it may indicate a system malfunction.</i> 	<input type="checkbox"/> Track/Skid Control Light (if equipped) <i>If the warning light remains on, it may indicate a system malfunction.</i> 
<input type="checkbox"/> Seat Belt Warning Light <i>If the warning light remains on, it may indicate a system malfunction.</i> 	<input type="checkbox"/> Tire Pressure Monitoring System (TPMS) <i>Prior to TPMS activation and Pre-delivery Service (PDS) of the Vehicle the TPMS light will blink when IG is turned on.</i> <i>After TPMS activation and PDS of the Vehicle the TPMS light will illuminate for a few seconds and go off when IG is turned on.</i> 
<input type="checkbox"/> Air Bag Warning Light <i>If the warning light remains on, it may indicate a system malfunction.</i> 	
<input type="checkbox"/> Cruise Control Light (if equipped) 	

Using a Mirror or Assistant check the following.

<input type="checkbox"/> Trunk/Tailgate/Bed Lights (if equipped)	<input type="checkbox"/> Tail Lights
<input type="checkbox"/> Brake Lights	<input type="checkbox"/> Daytime Running Lights (if equipped)
<input type="checkbox"/> Backup Lights	<input type="checkbox"/> Marker Lights
<input type="checkbox"/> Clearance Sonar (if equipped)	

Stop the Engine, Place the Vehicle's IG in the ON position.

<input type="checkbox"/> Hazard Lights	<input type="checkbox"/> Turn Signal Lights
<input type="checkbox"/> Head Lights	<input type="checkbox"/> Fog Lights (if equipped)
<input type="checkbox"/> High Beams	<input type="checkbox"/> Accessory Controls/Illumination (if equipped)
<input type="checkbox"/> Power Side Mirrors (if equipped)	<input type="checkbox"/> Convenience Memory Settings (if equipped)
<input type="checkbox"/> Power Sliding Door (if equipped)	<input type="checkbox"/> Rear Sunshade (if equipped)

Function		Function	
<input type="checkbox"/>	Front Wiper/Washer	<input type="checkbox"/>	Rear Wiper/Washer (if equipped)
<input type="checkbox"/>	Power Sun/Moon Roof (if equipped)	<input type="checkbox"/>	Rollover Side Curtain Air Bag Switch (RSCA) (if equipped)
<input type="checkbox"/>	Clock (if equipped)	<input type="checkbox"/>	Navigation System (if equipped)
<input type="checkbox"/>	Audio/Video (if equipped)	<input type="checkbox"/>	USB Connections (if equipped)
<input type="checkbox"/>	Steering Wheel Audio Control (if equipped)	<input type="checkbox"/>	HVAC
<input type="checkbox"/>	Front Windshield Defogger (if equipped)	<input type="checkbox"/>	Rear Window Defogger (if equipped)
<input type="checkbox"/>	Side Mirror Defogger (if equipped)	<input type="checkbox"/>	Accessory Power Socket (if equipped)
<input type="checkbox"/>	Massage Seats (if equipped)	<input type="checkbox"/>	Heated/Vented Seats (if equipped)
<input type="checkbox"/>	Glove Box Light (if equipped)	<input type="checkbox"/>	Passenger Air Bag Switch (if equipped)
<input type="checkbox"/>	Power Locks (if equipped)	<input type="checkbox"/>	Power Windows (if equipped)
<input type="checkbox"/>	Power Seats (if equipped)	<input type="checkbox"/>	Key Sensor Buzzer

Remove the short pin after Function check.
Check with your Port/Dealer to see if this step is necessary.

