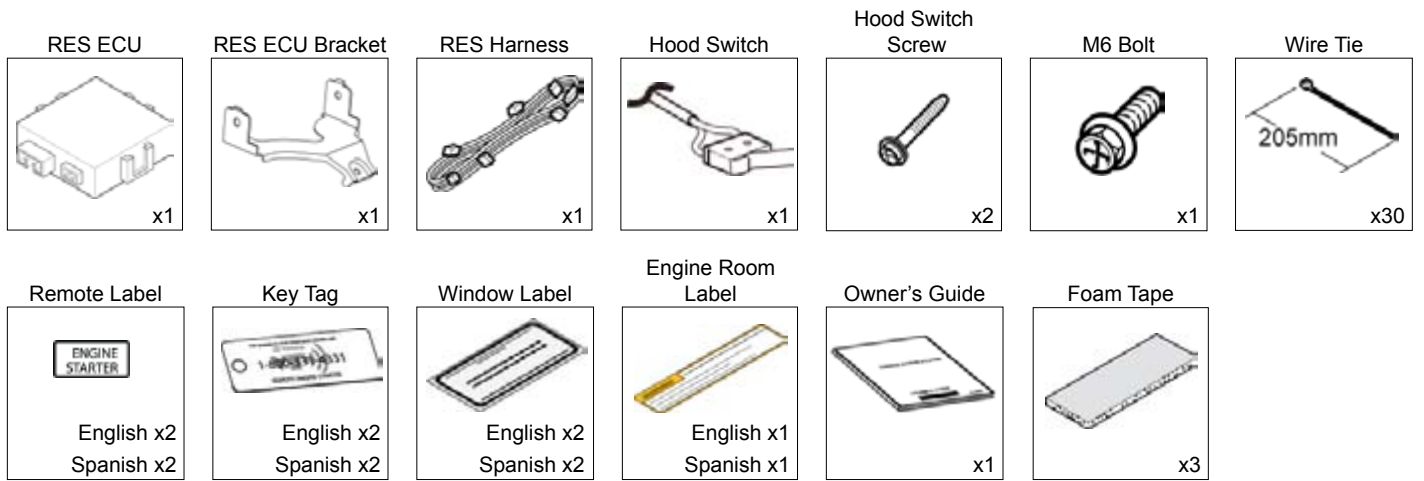


**Part #: PT398-89100**

**Conflicts:**

**Kit Contents**



**Additional Items**

(may be required)

Item#	Description

**Recommended Sequence of Application**

Item#	Description








**Recommended Tools**

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
<b>Special Tools</b>	
Techstream	Use latest version on TIS
<b>Installation Tools</b>	
Screwdriver	#2 Phillips, Phillips Jeweler's, Flat Blade 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 Lock Assy : 66.4 in•lbf (7.5 N•m); Passenger's Knee Airbag : 88.5 in•lbf (10 N•m)
Utility Knife	
Tape	Clear, Electrical
Socket	10mm, extension
Pliers	Needle Nose
<b>Special Chemicals</b>	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

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**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.

**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.

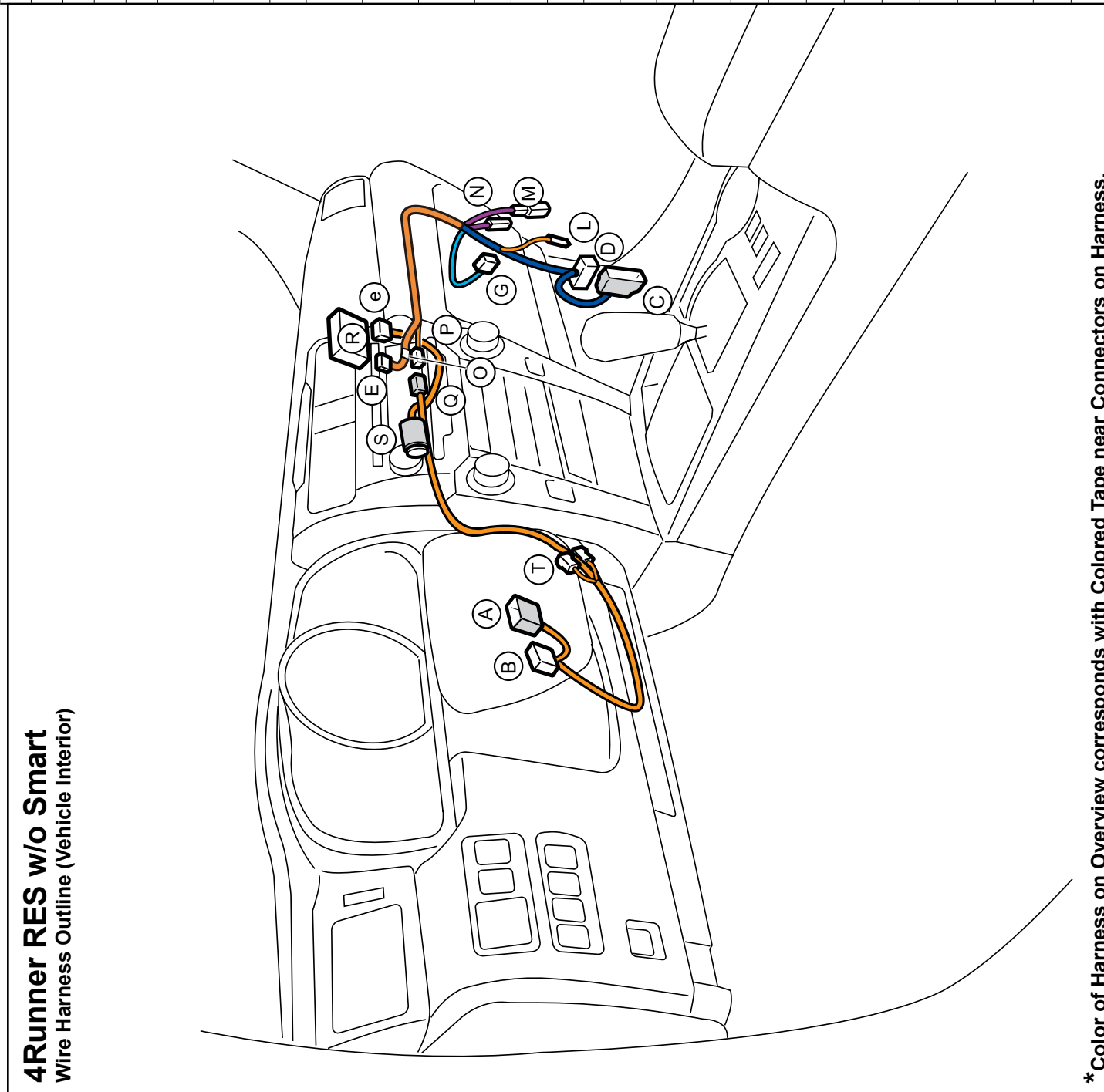
These guidelines can be found in the “Accessory Installation Practices” document.

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.

TVIP	Vehicle	Description
A	F15	8P White
B	F15	8P White
C	FN1	64P White
D	FN1	64P White
e	—	8P White (for RES ECU)
E	—	24P White (for RES ECU)
G	E53	7P White
L	—	Wire Terminal (White/Black Wire)
M	—	1P White (for Registration)
N	—	1P White (for Registration)
O	—	White Tape Marker
P	—	2P White
Q	—	2P White
R	—	RES ECU
S	—	Relay
T	—	Fuse

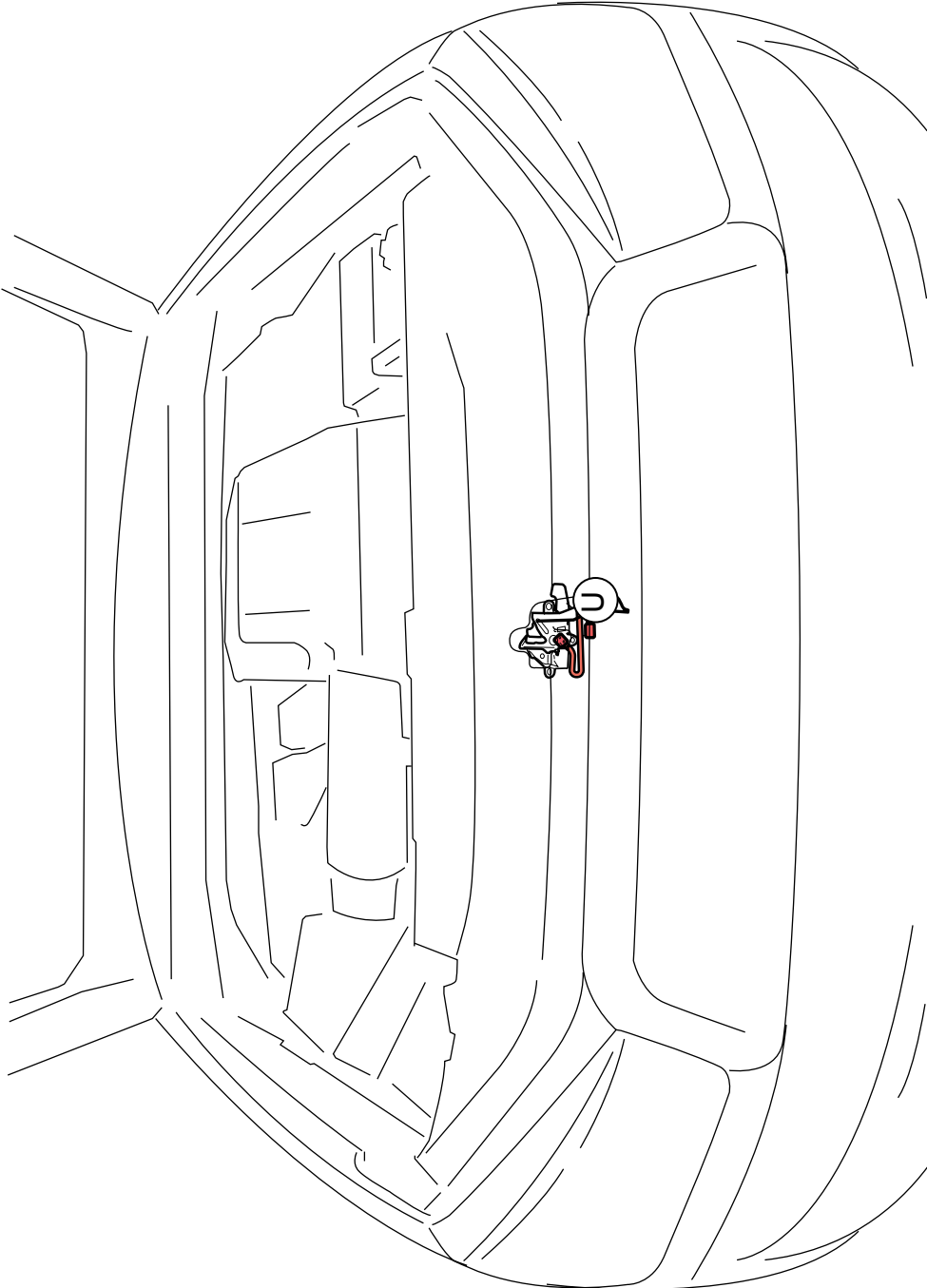


**4Runner RES w/o Smart**  
Wire Harness Outline (Vehicle Interior)

\*Color of Harness on Overview corresponds with Colored Tape near Connectors on Harness.

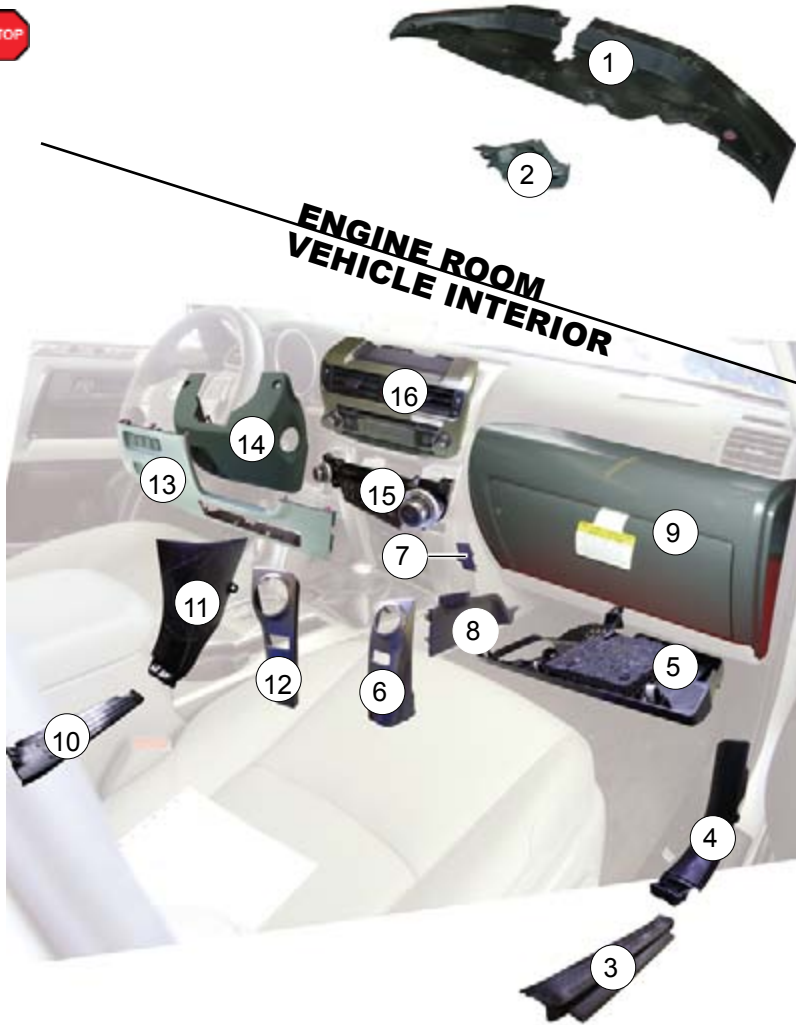
TVIP	Vehicle	Description
U	A19	Hood Switch

**4Runner RES w/o Smart**  
**Wire Harness Outline (Engine Compartment)**



\*Color of Harness on Overview corresponds with Colored Tape near Connectors on Harness.

**Disassembly Overview**



1	Engine Cover
2	Hood Latch Cover
3	PS Step Cover
4	PS Cowl Cover
5	Glove box Under Cover
6	PS IP Trim
7	Lower Glove box Trim
8	PS Center Console Trim
9	Glove box
10	DS Step Cover
11	DS Cowl Cover
12	DS IP Trim
13	DS Lower Dash
14	Column Cover
15	A/C Panel
16	Audio Unit



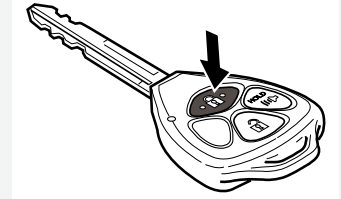
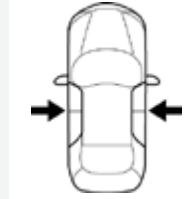
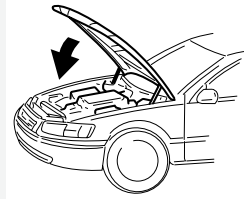
Disconnect all Corresponding Connectors.

**1. Hood Switch Installation**

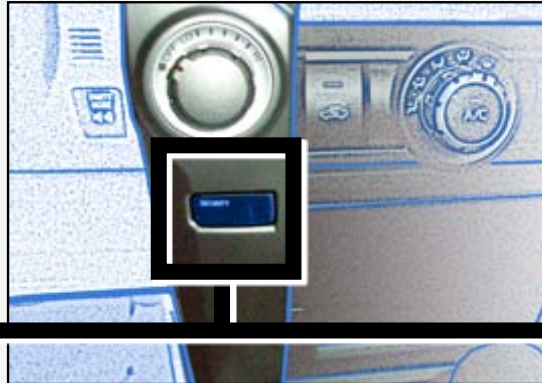
- a. Verify that the Short Pin is Installed.
  - If not Install now.

## Confirm the following:

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



Observe the Security LED on the console



Security LED Turns ON solid for 30 Seconds then starts blinking

**WITH ALARM**  
(Vehicle has Hood Switch)

Security LED starts blinking immediately



**Blinking**

**WITHOUT ALARM**  
(Vehicle does not have Hood Switch)

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

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

**Vehicles Without Hood  
Switch ONLY**

- d. Remove the Engine Cover.
- Remove 12 clips.

- e. Remove the 3 Bolts on the Hood Latch Cover.

- f. Remove the Hood Latch Cover.



g. Dislodge the Hood Latch Assembly.


- Remove 3 Bolts.


h. Remove the Hood Release Cable from the Hood Latch Assembly.


i. Dislodge the Spring on the Hood Latch Assembly.

- Do not discard the Spring.




 Make sure to hold 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.

 **CAUTION:** Make sure the Hood Switch Lever is under the Latch Lever.

- k. Tighten 2 Screws.



- I. Using 1 Wire Tie secure the V4 Hood Switch Harness to the Hood Latch Assembly.



- Rotate the Wire Tie Lock to the inside of Hood Latch Assembly.

- m. Disconnect and discard the Connector Cover from the Hood Switch Pre-Connector.

- n. Reattach the Hood Latch Spring.
- o. Reattach the Hood Release Cable.

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

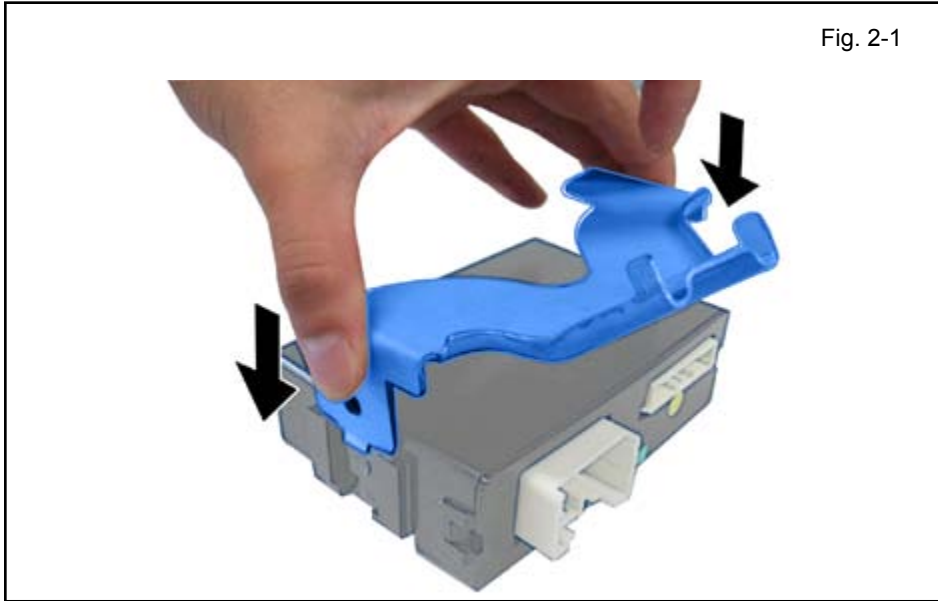
q. Affix the Hood Switch Connector to the Vehicle as shown.

r. Reinstall the Hood Lock Assembly.



NOTE: Make sure to Torque the Bolts in the correct sequence.

① ② ③ 66.4 in•lbf (7.5 N•m)



## 2. RES ECU Preparation

- a. Attach the RES Bracket to RES ECU.

## 3. Disassembly (Passenger's Area)

- a. Remove the PS Step Cover.

- b. Remove the PS Cowl Cover.
  - Remove 1 Nut.

- c. Remove the Glove Box Under Cover.
  - Disconnect the LED if present.

- d. Remove the PS IP Trim.





- h. Wrap the Airbag in a blanket and place on the TVIP Box.

- i. Remove the 2 Bolts from the bottom of the Glove box.

- j. Remove the 3 Screws from the Glove box.
  - Open the Glove box.
  - Remove the 3 Covers.



k. Dislodge the Glove box.

- l. Open the Harness Clamp.
- m. Dislodge the Harness Clamp.
- n. Remove the 2 Connectors.





- o. Temporarily Re-install the Passenger's Knee Airbag.
  - Tighten 3 Bolts.

#### **4. Disassembly (Driver's Area)**

- a. Remove the DS Step Cover.

- b. Remove the DS Cowl Cover.
  - Remove 1 Nut.



c. Remove the DS IP Trim.

d. Remove the 2 Bolts on the DS Lower Dash.

- Open the cover using Flat Blade Jeweler's Screwdriver.

e. Remove the DS Lower Dash.

- Dislodge the Hood Release Cable.



- f. Remove the 2 Screws on the Steering Column Cover.

- g. Dislodge the Center Clip on the Steering Column.



**CAUTION:** Do not force this clip as it is very easy to break.

- h. Remove the Steering Column Cover.

i. Remove the A/C Panel.

j. Remove the Audio Unit.  
• Remove 4 Bolts.

**Vehicles with Mayday ECU  
ONLY**

---

k. Dislodge the Connector as shown.



- b. Disconnect the V4's 2P Connectors.



c. Route the V4 Harness through the Center Console as shown.

d. Connect the V4's 2P Male and Female Connectors together.



- e. Secure the V4's White Tape Marker and the 2P Connector to the Vehicle Harness with 1 Wire Tie.
- f. Secure the V4 Harness's Relay to the Vehicle Harness with 1 Wire Tie.

**Vehicles with Mayday ECU  
ONLY**

---

- g. Reconnect the Mayday ECU Connector.

- h. Connect the V4's 24P and 8P Connectors to the RES ECU.

- i. Secure the V4 Harnesses together to the Vehicle Harness with 2 Wire Ties.



**VERIFY:** That the V4 Harness is positioned to avoid potential interference with Glovebox screw.

- j. Route the V4 Harness toward the Passenger's Cowl Area as shown.
- k. Secure the V4 Harness to the Vehicle Harness with 4 Wire Ties.

**Vehicles with USB ECU ONLY**

- l. Remove the USB ECU.
  - Remove 2 nuts.



- m. Dislodge the Passenger's Side Junction Box (J/B).
  - Release 1 Clip.

- n. Locate the 7P Pre-connector on the backside of the Passenger's J/B.
- o. Disconnect the Vehicle's 7P Pre-connector.



**CAUTION:** Do not discard the pre-connector.

- p. Plug the V4 7P Connector into the Vehicle's 7P Connector.
- q. Reinstall the J/B.
- r. Reinstall the USB ECU (if Equipped)

- s. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.

- t. Using Electrical Tape secure the Vehicle's 7P Pre-connector to the Vehicle Harness.



**NOTE:** If the RES system is removed this Pre-connector must be re-installed.

- u. Disconnect the 64P Vehicle Connector from the Passenger's Cowl area.

**NOTE:** Some Vehicles may have two 64P Connectors present. Make sure you disconnect the correct one.

- v. Connect the V4's 64P Connectors in between the Vehicle's 64P Connectors.

- w. Disconnect the 8P Vehicle Connector from the Passenger's Cowl area.

- x. Lift up the Terminal Retainer Clip.
  - Do not pull out the Retainer.
- y. Insert the V4 White/Black Wire Terminal into the indicated location on the 8P Vehicle Connector.
- z. Close the Terminal Retainer.
  - Make sure that the Terminal does not come out when pulled from the back.



aa. Reconnect the Vehicle's 8P Connector.

ab. Connect 2 Wire Ties together to make 1 long Wire Tie.

ac. Use the Double Wire Tie to secure the V4 64P Connector to the Vehicle Harness.

- Route the Wire Tie created around the V4 64P Connector and Vehicle Harness as shown.

ad. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.



**NOTE:** Do not secure the RES Diagnostic Connectors.

**6. V4 Wire Harness  
Installation (Driver's Area)**

- a. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.
- b. Using 1 Wire Tie secure the V4 Harness to the Vehicle Brace.
  
- c. Using 2 Wire Ties secure the V4 Fuse to the Vehicle Harness near the Harness Clamp.
- d. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.
  
- e. Remove the Vehicle's 8P Connector from the steering area.
- f. Remove the Vehicle's 2P Connector from the steering area.



- g. Connect the V4 8P Connectors in between the Vehicle's 8P Connectors.
- h. Re-Connect the Vehicle's 2P Connector.

- i. Using 1 Wire Tie secure the V4 8P Connector to the Vehicle Harness.
- j. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.



**NOTE:** Make sure the V4 Harness is routed along the Vehicle Harness as shown.

## 7. Registration Preparation

- a. Partially reassemble the Vehicle.



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



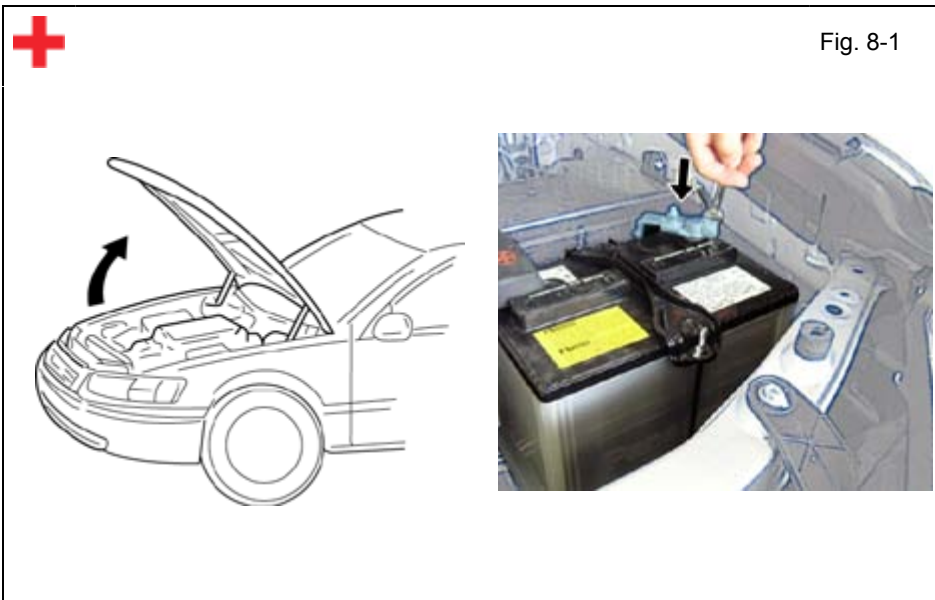
**VERIFY:** That all Connectors are plugged in.



**CAUTION:** Make sure to Torque the 3 Bolts of the PS Knee Airbag to 88.5 in•lbf (10 N•m).

- b. Verify that the Short Pin is Installed.
  - If not Install now.

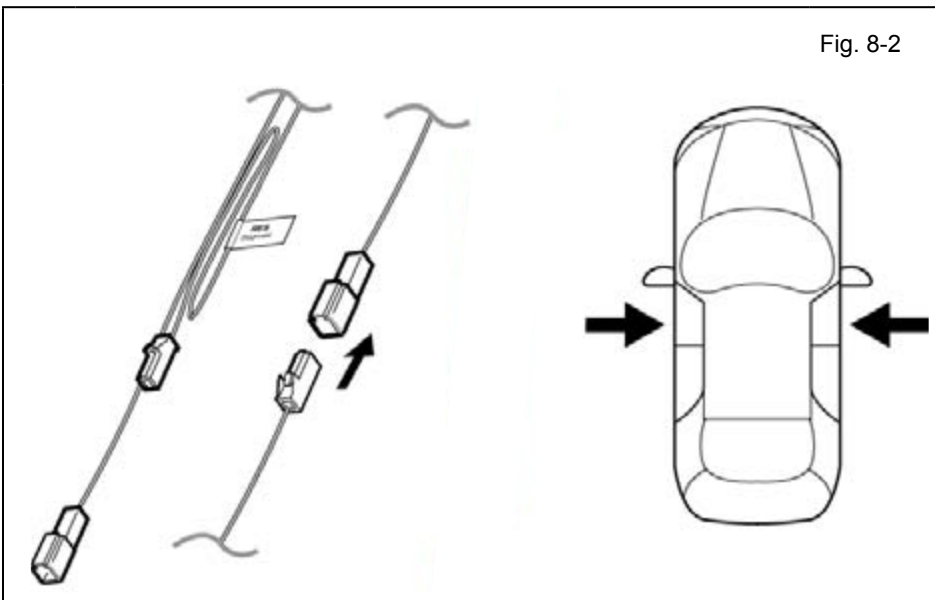




## 8. Registration

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

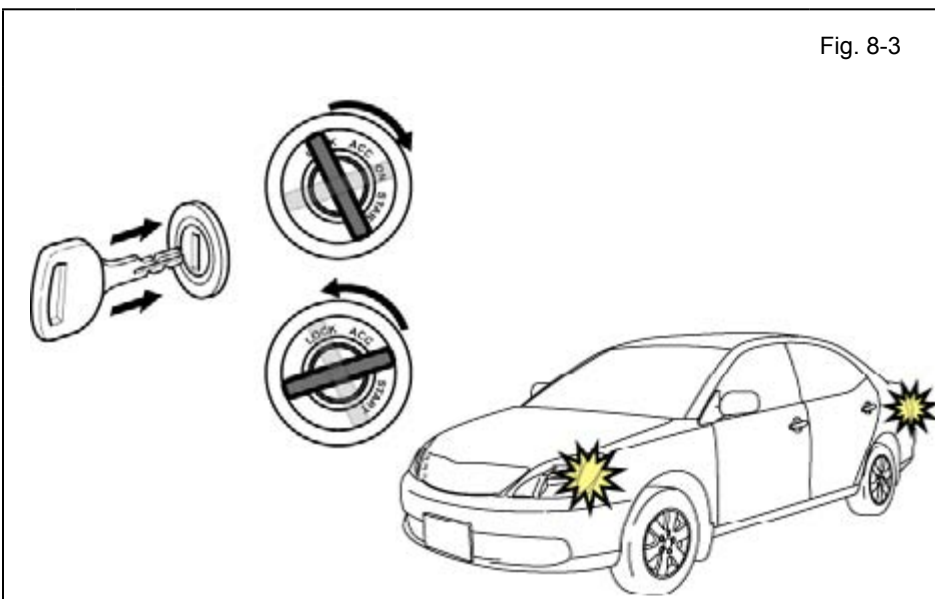
**+ CAUTION:** Do not touch the Positive Terminal.



- c. Locate the 1P RES Diagnostic Connectors in the Passenger's Side Cowl Area and connect them.

**NOTE:** Once connected you will have 10 minutes to complete this section, steps d–ac.

- d. Close all doors.

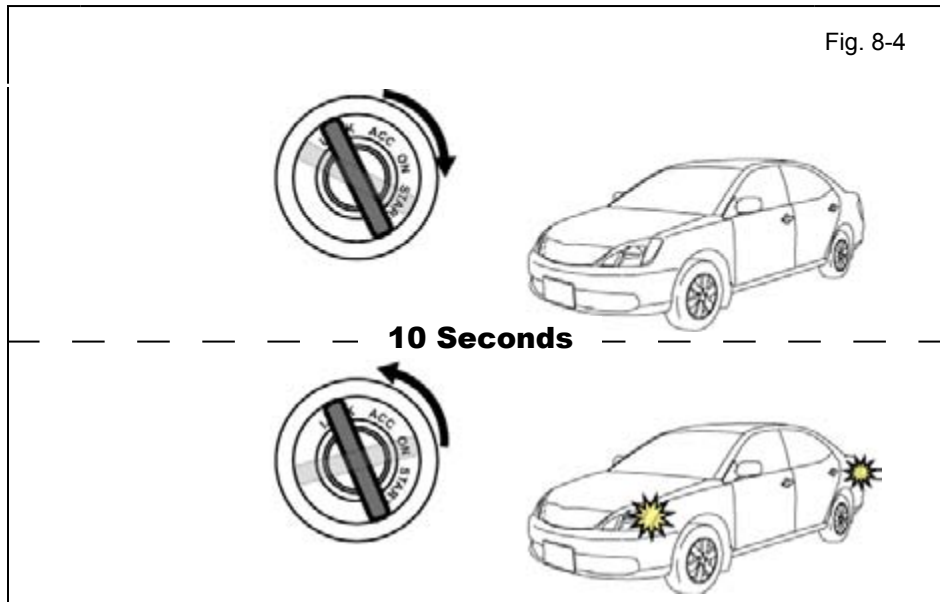


- e. Insert the key into the Ignition.
- f. Turn it from "OFF" to "ON" 5 times.

**LOOK:** For the Hazard Lights to flash Once.

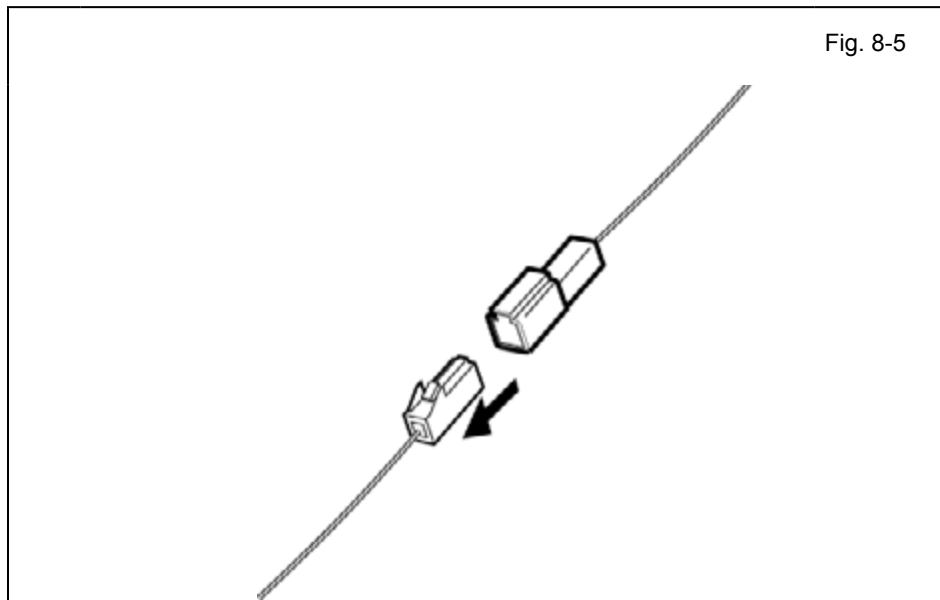
- g. Turn the key to the "OFF" position.





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

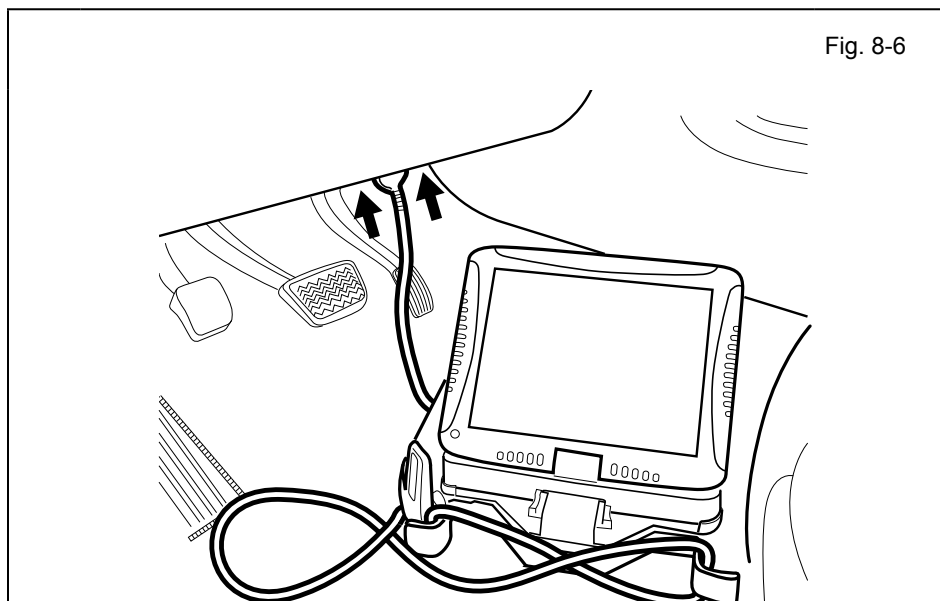
**LOOK:** For the Hazard Lights to flash Once.



**IF THIS PROCEDURE FAILED**

The Hazard Lights don't flash or flashes Twice.

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



- j. Connect the Techstream Notebook to the Vehicle's Diagnostic Port.
- k. Turn the Key in the Ignition to the "ON" position.

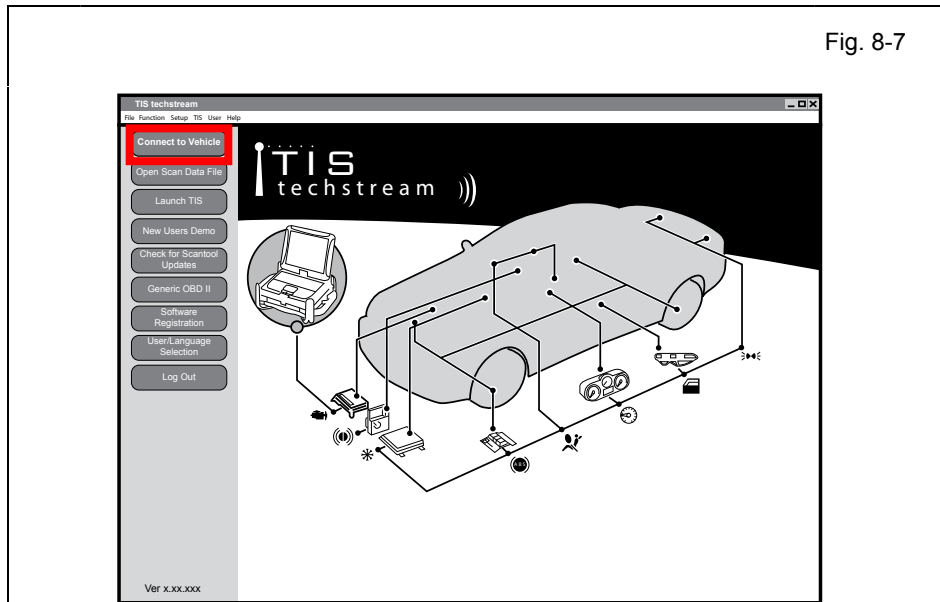


Fig. 8-7

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

- 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/o Smart Key.
- p. Select w/ KDSS or w/o KDSS depending on the Vehicles Specification.
- q. Click "Next>."

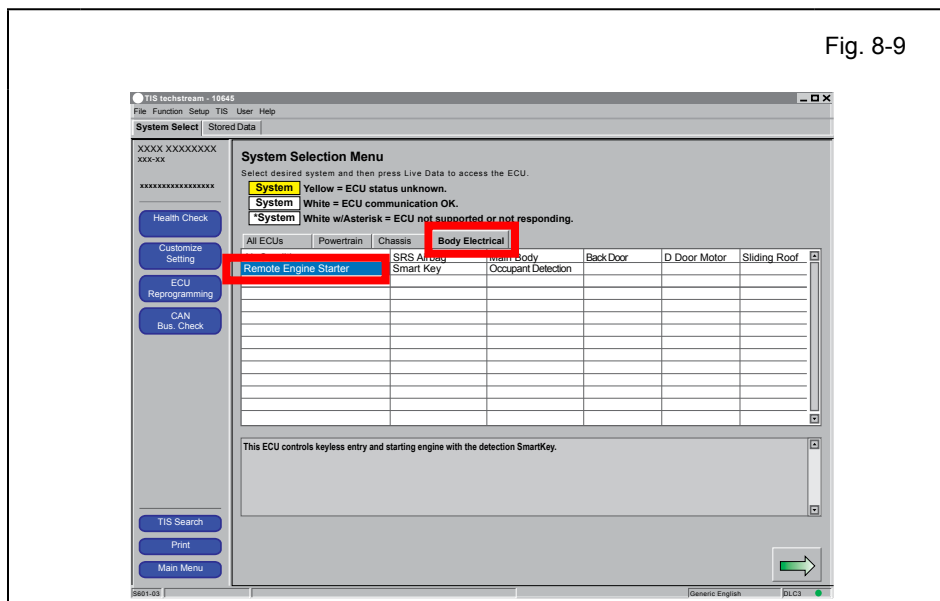



Fig. 8-9

- r. Select "Body Electrical" tab.
- s. Select "Remote Engine Starter."
- t. Click .

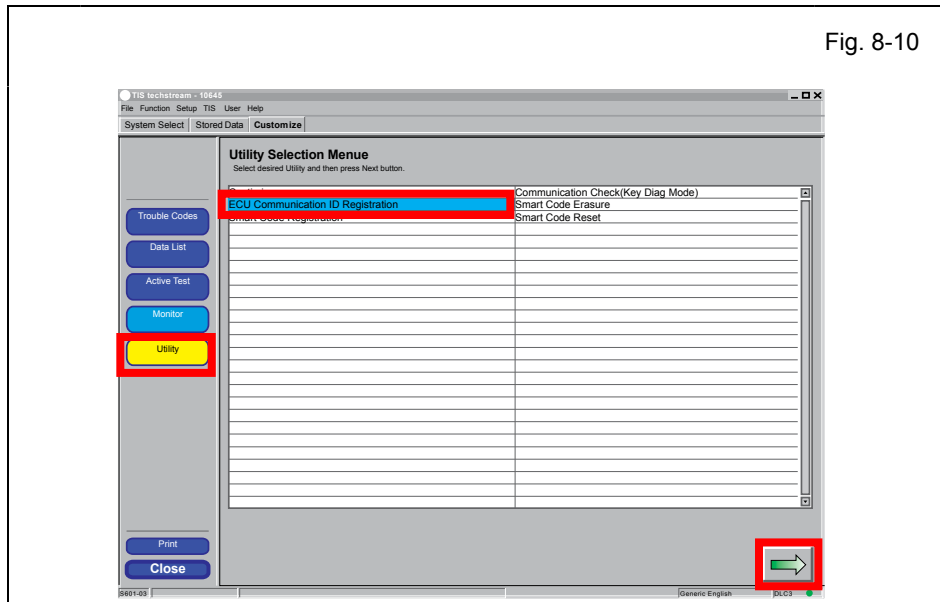



Fig. 8-10

- u. Select "Utility."
- v. Select "ECU Communication ID Registration."
- w. Click .

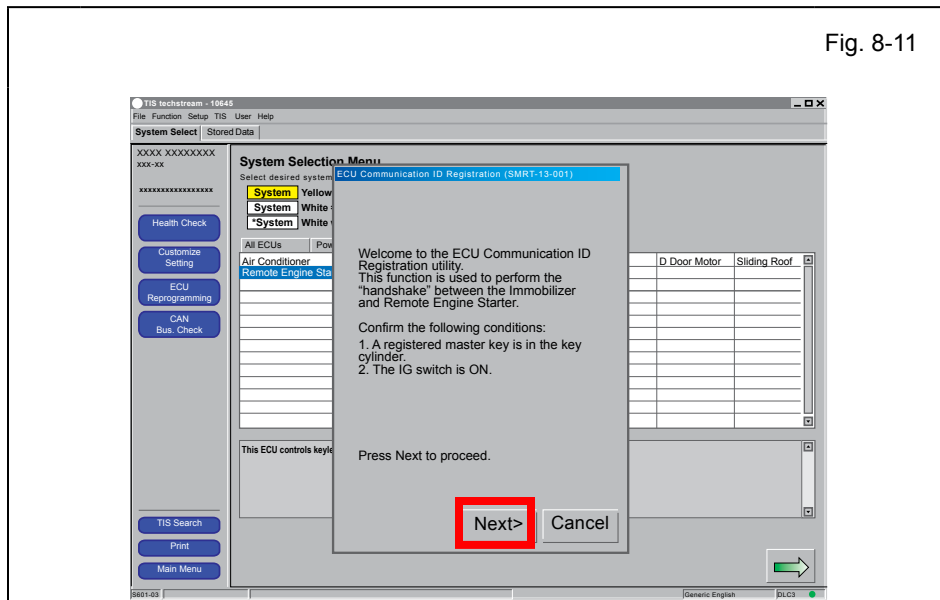


Fig. 8-11

- x. Click "Next>."

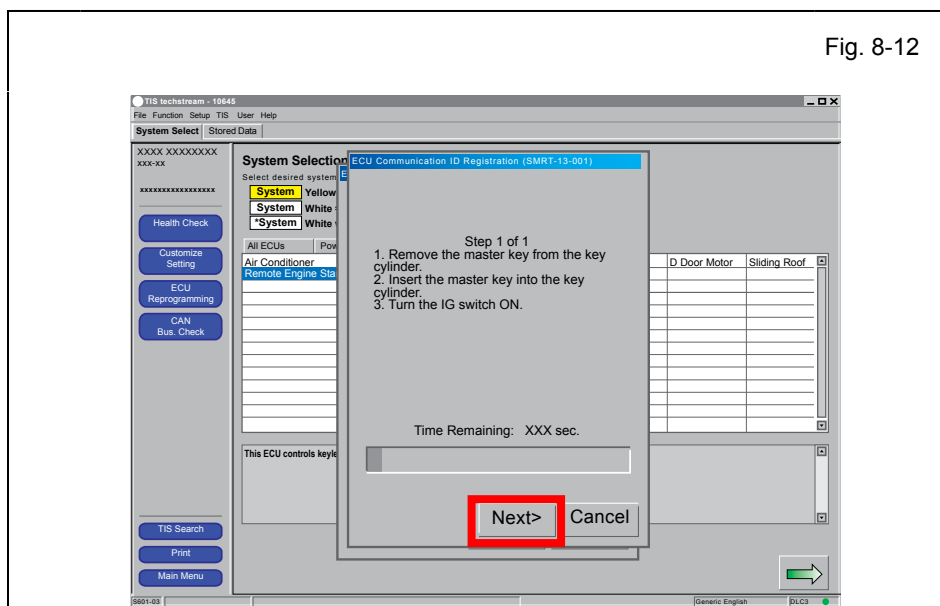
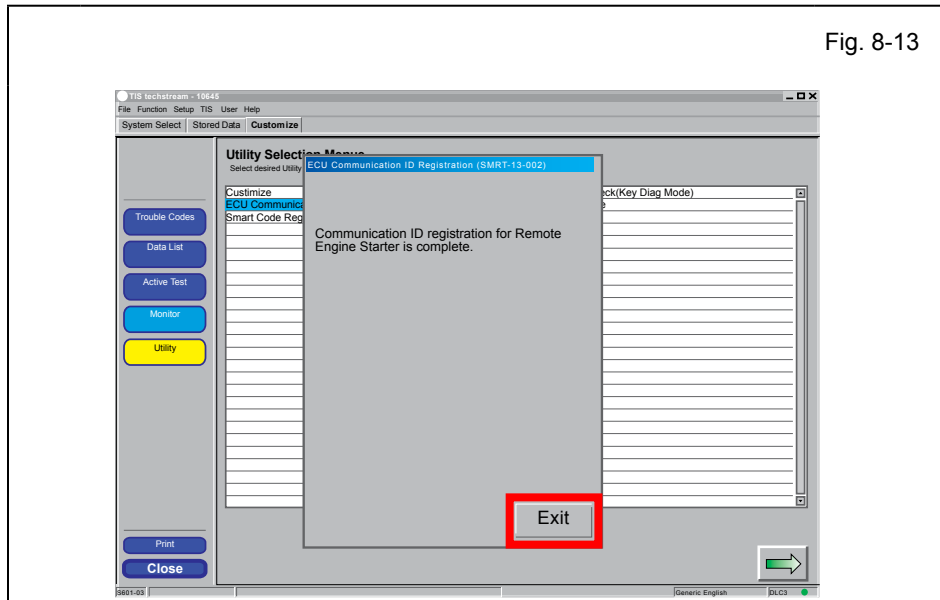


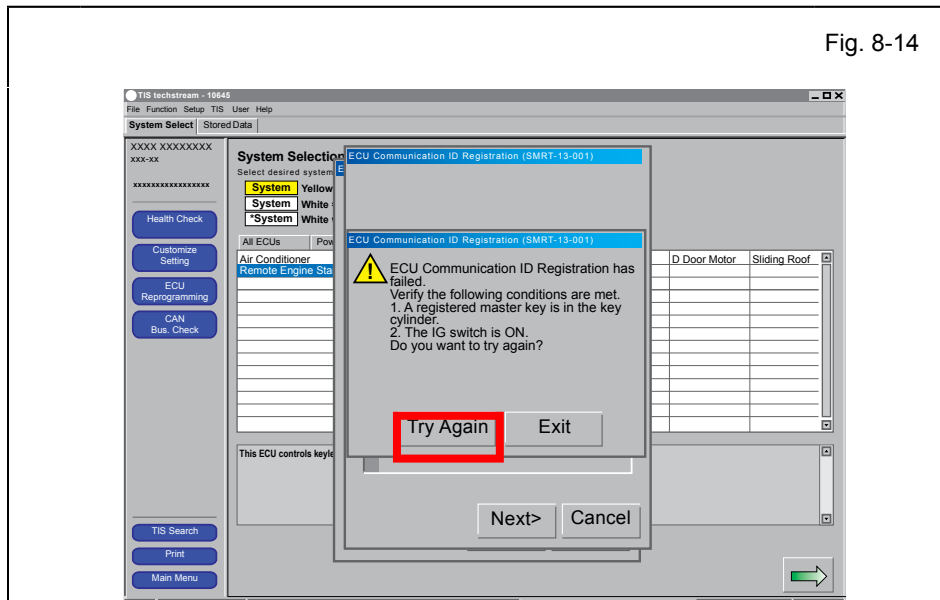
Fig. 8-12

- y. Follow the steps on the Techstream.
- z. Click "Next>."



**CONFIRM:** That the ECU Communication ID was completed successfully.

aa. Click “Exit.”



**IF THIS PROCEDURE FAILED**

- Click “Try Again”
- Start again from step u.

- ab. Exit the vehicle.
- ac. Close the Hood.
- ad. Look for the Hazards to flash Twice.

**IF THIS PROCEDURE FAILED**

The Hazard Lights flash Three Times.

- Disconnect the V4 Harness’s 1P RES Diagnostic Connectors.
- Start again from step c.

- ae. After a successful Registration, disconnect the 1P RES Diagnostic Connectors.
- af. Using Electrical Tape secure the Female Connector and Harness to the Vehicle Harness.

## 9. 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.
  - a. Using VDC approved cleaner and cleaning method, clean the area indicated on the Underside of the Hood.
  - b. Attach the Engine Room Warning Label as shown.



**CAUTION:** Do not touch the adhesive surface.

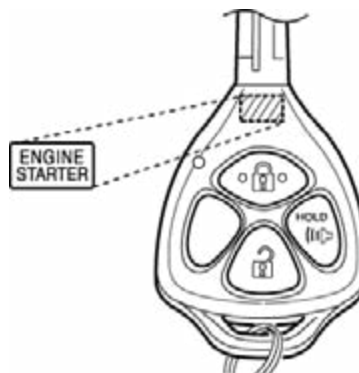
- c. Using VDC approved cleaner and cleaning method, clean the indicated area on the key.
- d. Use a piece of Clear Tape to lift the label off its protective backing.



**CAUTION:** Do not touch the adhesive surface.

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

**REPEAT:** steps c–f with the other Key.



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



**CAUTION:** Do not touch the adhesive surface.

- i. Attach the Label as shown.



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

**REPEAT:** steps g–i with the other Window.

## 10. Complete the Installation

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



**Torque: 5.4 N•m (48 in•lbf)** ||



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

- b. Finish reassembling the Vehicle.



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



**VERIFY:** That all Connectors are plugged in.

- c. Clean up and Remove trash.
- d. Sealed in its protective bag, place the Owner's Manual in the Glove box.

**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. <b>NOTE:</b> <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 Appearance Check**

Perform		Look For
<input type="checkbox"/>	After accessory installation and removal of protective cover(s), perform a visual inspection of the vehicle.	Ensure no damage (including scuffs and scratches) was caused during the installation process.  (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)









**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	<input type="checkbox"/> Hood Latch Release

**Start the Vehicle**

<input type="checkbox"/> Starter	<input type="checkbox"/> Gauges
<input type="checkbox"/> Check Engine Light <i>If the warning light remains on, it may indicate a system malfunction.</i> 	<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) 	
<input type="checkbox"/> Mayday ECU (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 Light	<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)



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 checks.**

Check with your Port/Dealer to see if this step is necessary.

