

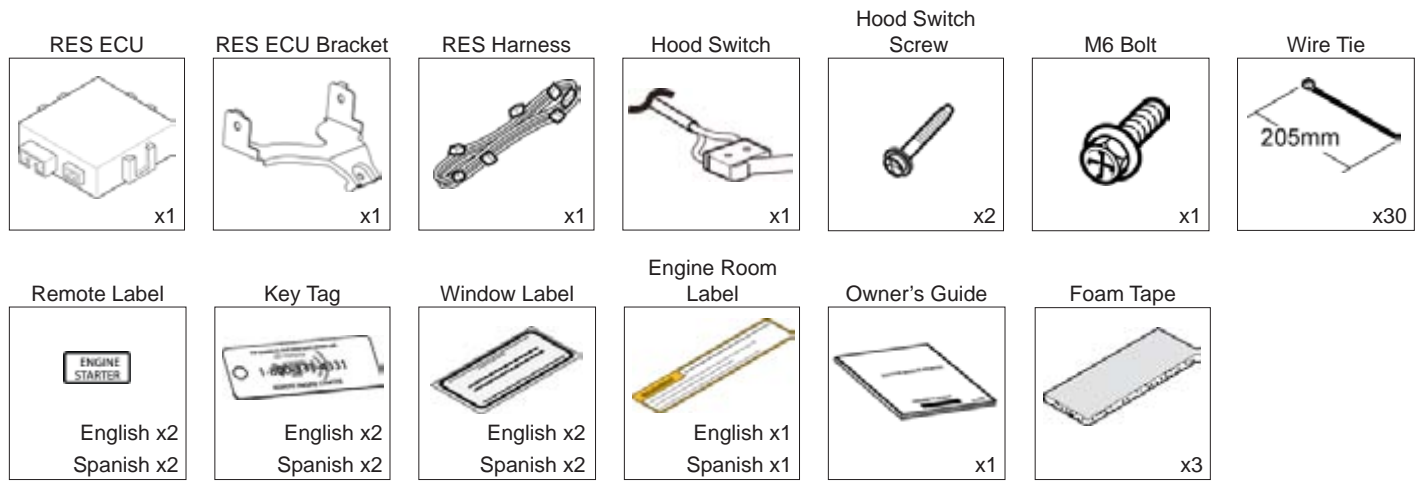
Part #: PT398-89100

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

Conflicts:

Do not install into Manual Transmission Vehicles or Vehicles without RKE system.

Kit Contents



Additional Items

(may be required)

Item#	Description

Recommended Sequence of Application

Item#	Description
1	TVIP V4 Remote Engine Starter








Recommended Tools

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
Special Tools	
Techstream	
Installation Tools	
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 : 36 in•lbf (4.07 N•m); Hood Lock Assy : 66.4 in•lbf (7.5 N•m); Passenger's Knee Airbag : 88.5 in•lbf (10.0 N•m)
Utility Knife	
Tape	Clear, Electrical
Socket	10mm, extension
Pliers	Needle Nose
Special Chemicals	
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.

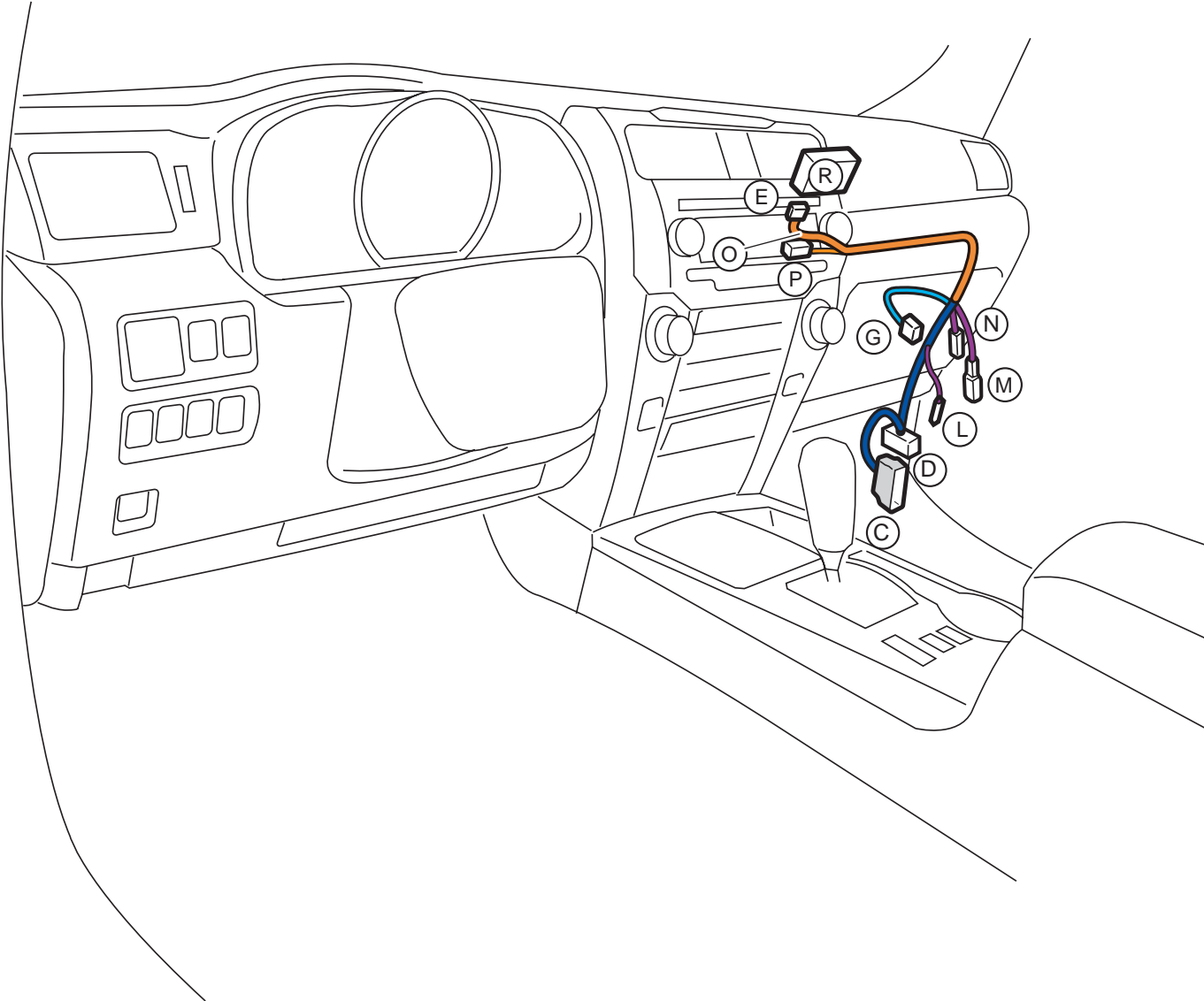
This document covers such items as:

- 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
C	FN1	64P White
D	FN1	64P White
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
R	-	RES ECU

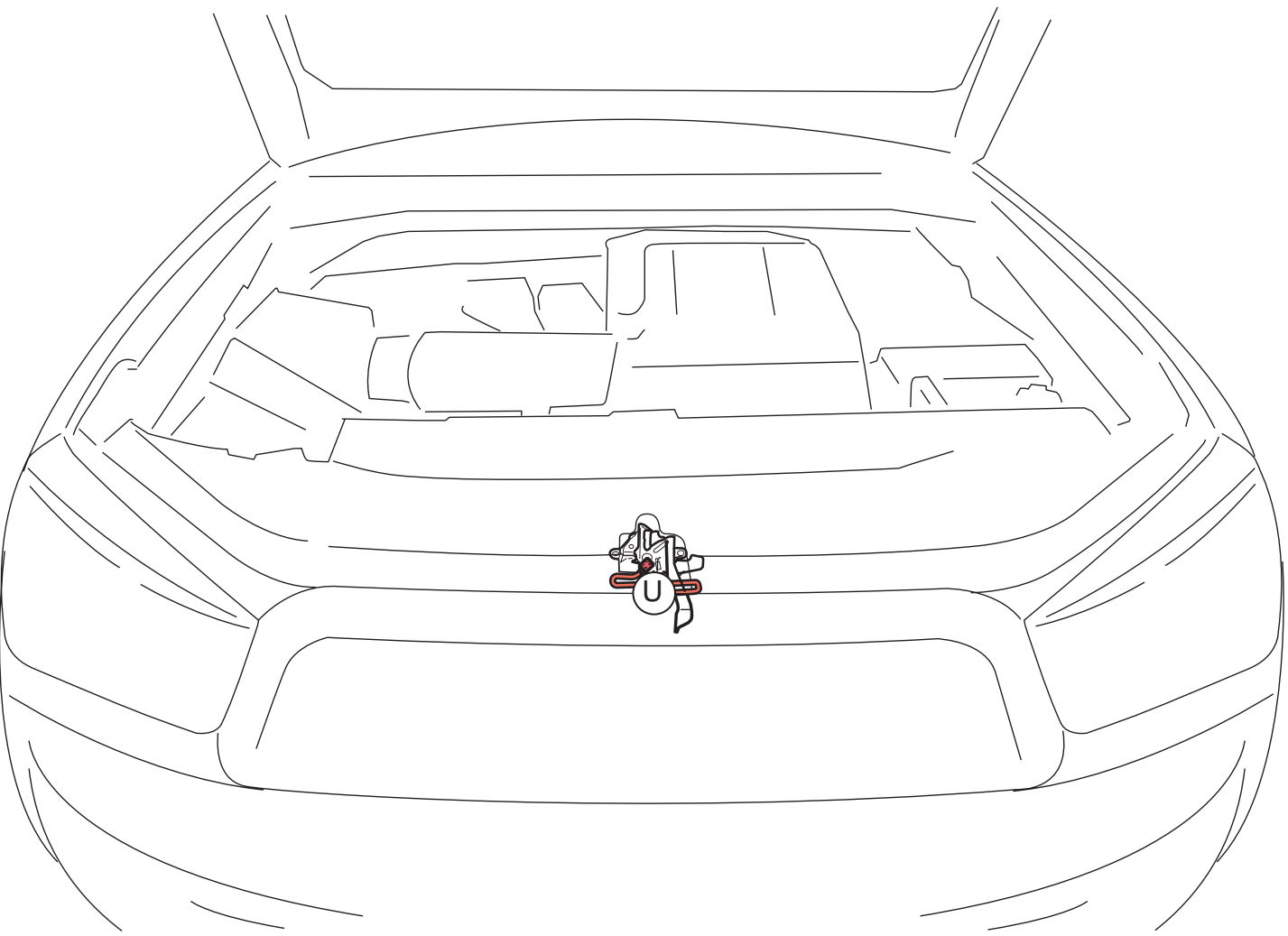
4Runner RES w/ Smart
Wire Harness Outline (Passenger's Compartment)*



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

TVIP	Vehicle	Description
U	A19	Hood Switch

4Runner RES w/ 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 Lock Cover
3	PS Step Cover
4	PS Cowl Cover
5	Glove box Under Cover
6	PS IP Trim
7	Lower Glove box Trim
8	Center Console Trim
9	PS Glove box



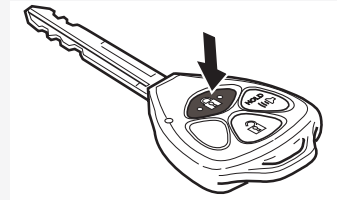
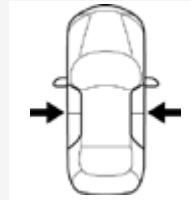
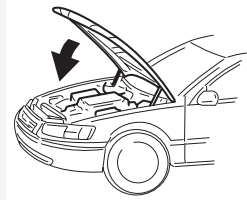
Disconnect all Corresponding Connectors.

1. Hood Switch Installation

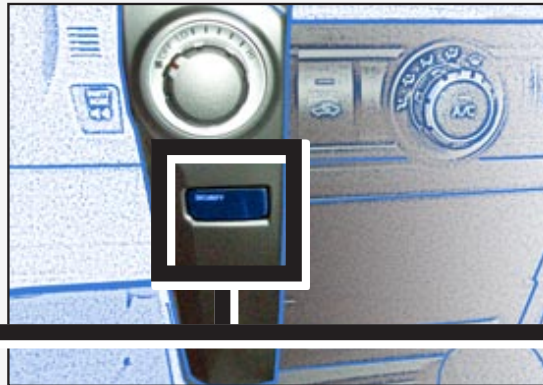
- a. Verify that the Short Pin is Installed.
 - If not Install now.

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 the Hood Switch by the 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.

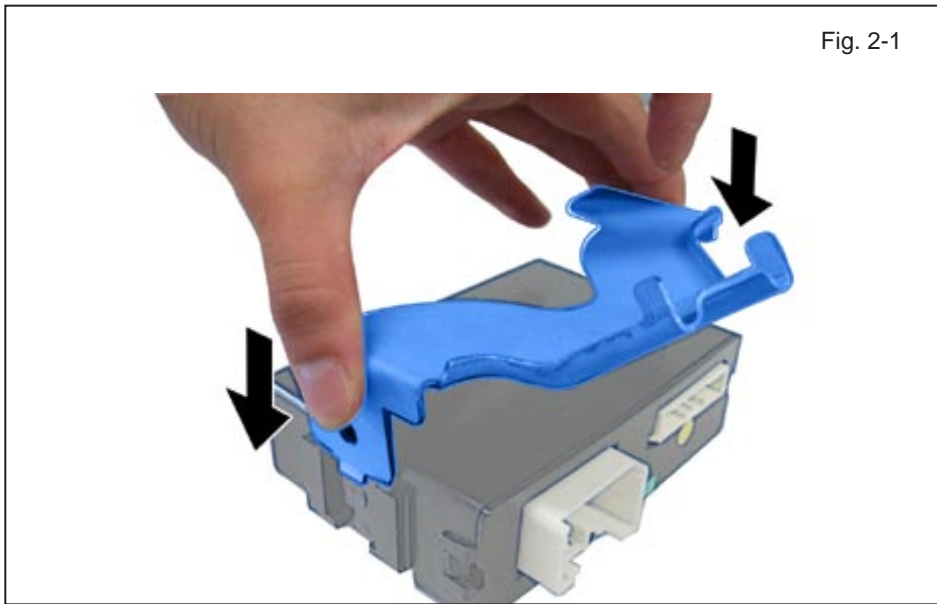
r. Reinstall the Hood Lock Assembly.



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



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.



e. Remove the Lower Glove
Box Trim.

f. Remove the Center Console
Trim.

g. Dislodge the PS Knee Airbag.
• Remove 3 Bolts.

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 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.



- b. Disconnect the V4's 2P Connectors.
 - Discard the portion of the Harness with the 8P Connectors and the Fuses.
- c. Using 1/2 Piece of Foam Tape wrap up the 2P Connector on the V4 Harness.

- d. Route the V4 Harness through the Vehicle Brace.

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

f. Connect the V4's 24P Connector to the RES ECU.

g. Route the V4 Harness toward the Passenger's Cowl Area as shown.

h. Secure the V4 Harness to the Vehicle Harness with 4 Wire Ties.

Vehicles with USB ECU ONLY

i. Remove the USB ECU.

- Remove 2 nuts.



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

- k. Locate the 7P Pre-connector on the backside of the Passenger's J/B.
- l. Plug the V4 7P Connector into the Vehicle's 7P Connector.
- m. Reinstall the J/B.
- n. Reinstall the USB ECU. (if equipped)

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

- p. 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.

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

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

- s. Lift up the Terminal Retainer Clip.

- Do not pull out the Retainer.

- t. Insert the V4 White/Black Wire Terminal into the indicated location on the 8P Vehicle Connector.

- u. Close the Terminal Retainer.



- Make sure that the Terminal does not come out when pulled from the back.

- v. Reconnect the Vehicle's 8P Connector.

- w. Connect 2 Wire Ties together to make 1 long Wire Tie.

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



NOTE: Do not secure the RES Diagnostic Connectors.

5. 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).

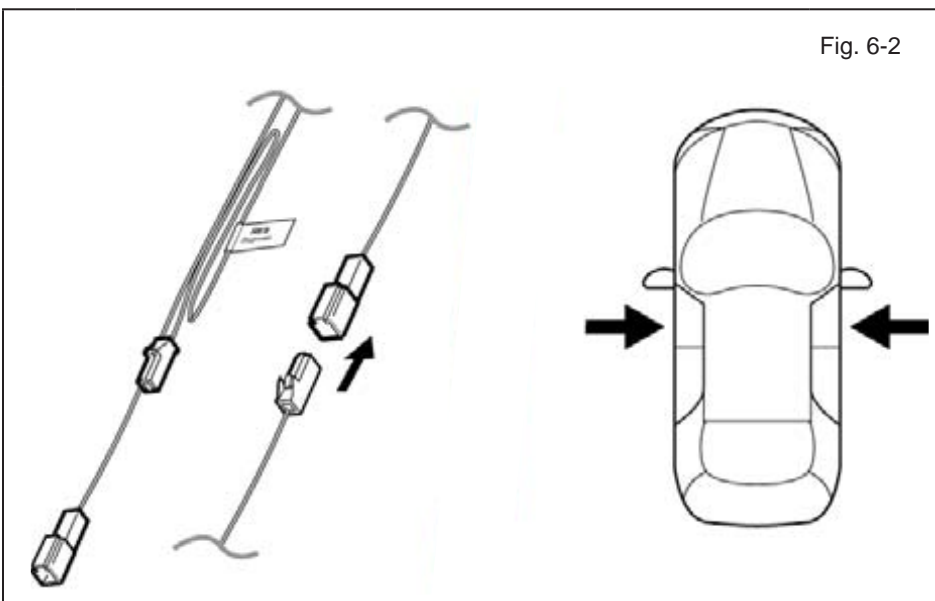
- b. Verify that the Short Pin is Installed.
 - If not Install now.



6. Registration

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

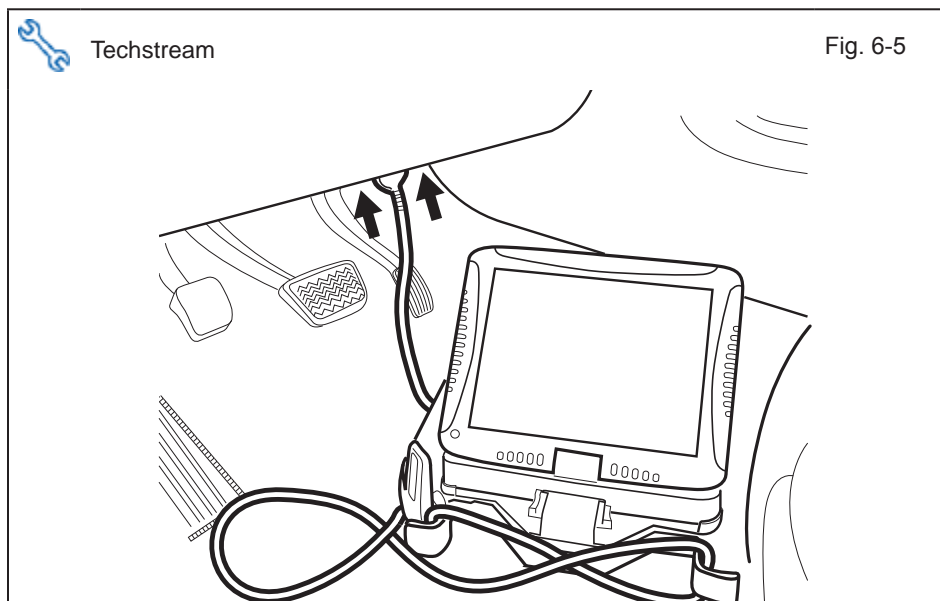
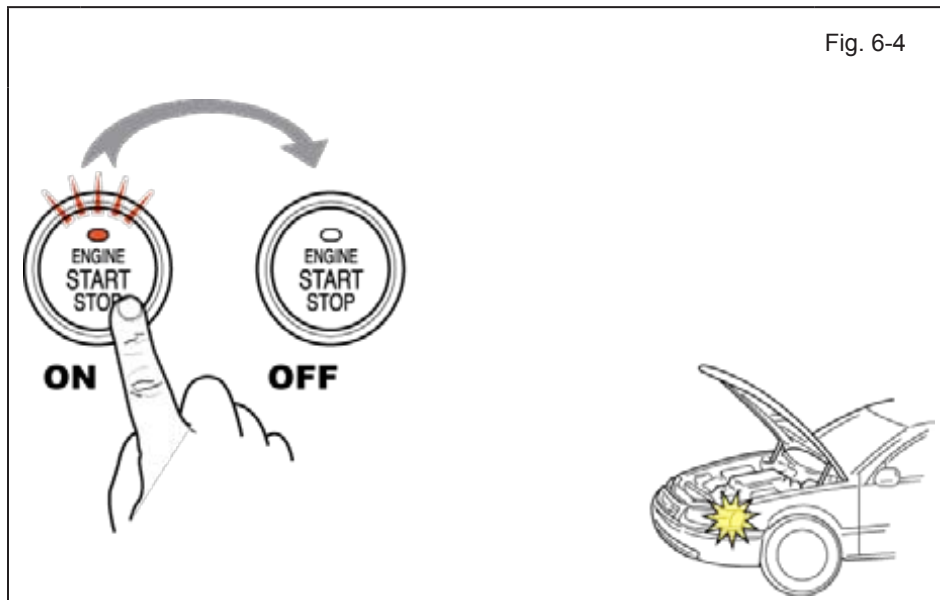
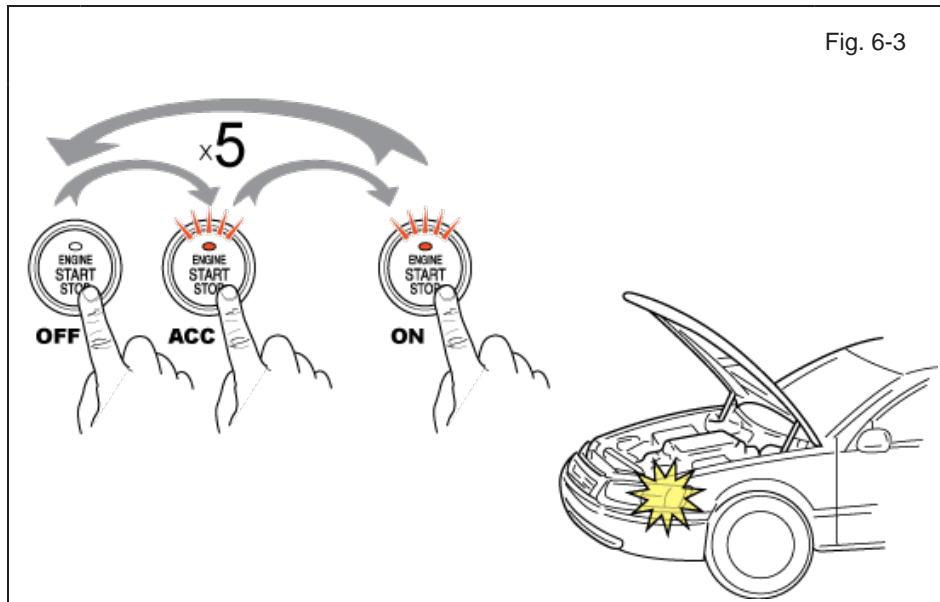
+ **CAUTION:** Do not touch the Positive Terminal.



- 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. Place the Vehicle in Park (P) or Neutral (N) position.
- f. 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.

LOOK: for the Hazard Lights to flash Once.

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

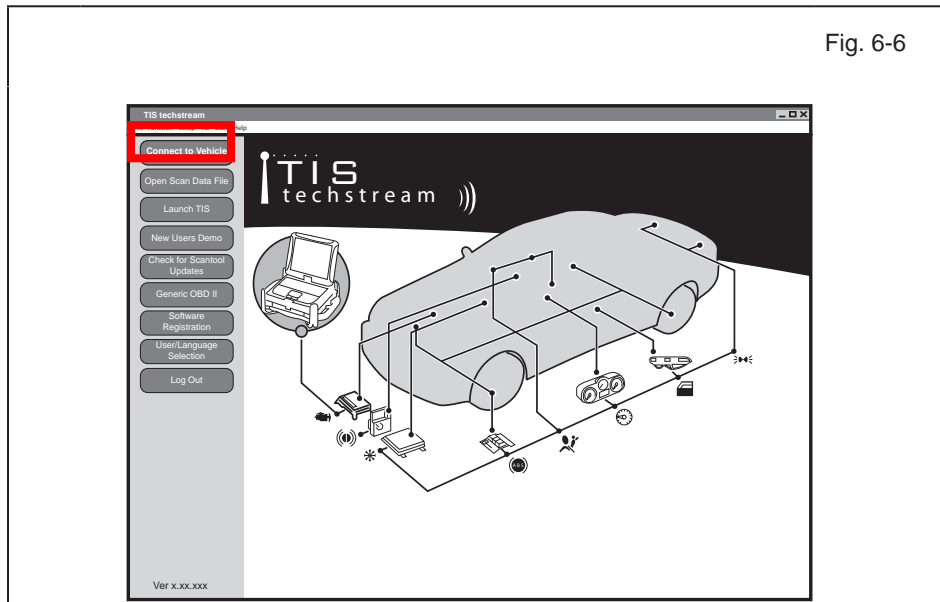
LOOK: For the Hazard Lights to flash Once.

IF THIS PROCEDURE FAILED

The Hazard Lights won't flash or flashes Three Times.

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

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



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


- m. Confirm that the information displayed on the Vehicle Connection Wizard is correct for the vehicle. If not verify that the Techstream is properly connected.

||

- n. Select w/ Smart Key.
- o. Select w/ KDSS or w/o KDSS depending on the Vehicle's Specification.
- p. Click "Next>."

- 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>.”

CONFIRM: That the ECU Communication ID was completed successfully.

y. Click “Exit.”

IF THIS PROCEDURE FAILED

- Start again from step m.

z. Click 

aa. Exit the vehicle.

ab. Close the Hood.

ac. Look for the Hazard Lights to flash Twice.

IF THIS PROCEDURE FAILED

The Hazard Lights flash 3 Times.

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

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

7. 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 in the Engine Compartment.
 - 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.

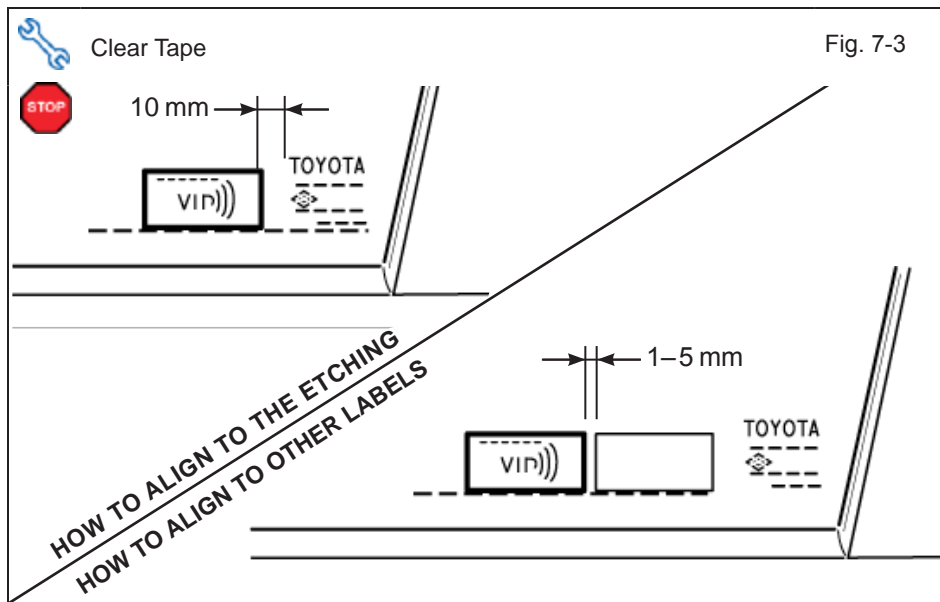


CAUTION: Do not touch the adhesive surface.

- 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.

8. Complete the Installation

- a. Position the Negative Battery Cable at the original factory position.
 - Tighten the Nut to 36 in•lbf (4.07 N•m)



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.
- e. 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.
- f. Reset the Sun / 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.

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.	The engine stops. The hazard lights flash once. The security alarm triggers. (if equipped)
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
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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) 	
<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)

<input type="checkbox"/>	Power Sliding Door (if equipped)	<input type="checkbox"/>	Rear Sunshade (if equipped)
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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)
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<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.

