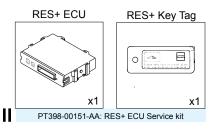
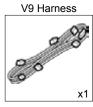
## Part #: PT398-60151

### **Conflicts:**

### **Kit Contents**

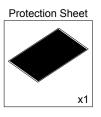


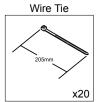






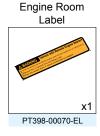
Foam Attachment

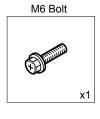


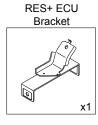




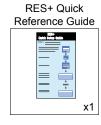




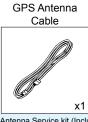




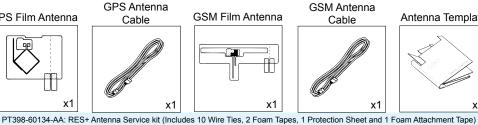














Service Part #'s

## **Additional Items**

(may be required)

Item#	Description

# Recommended Sequence of Application

Item#	Description			
1	V2 Glass Breakage Sensor			
2	V9 Remote Engine Starter Plus			

## **Recommended Tools**

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
Special Tools	
Techstream	Use latest Version on TIS
Squeegee	4" 3M Orange Applicator #71607
Installation Tools	
Screwdriver	#2 Phillips
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 SST# 00002-06001-01
Side Cutters	
Utility Knife	
Ruler	
Torque Wrench	Battery: 48 in•lbf (5.4 N•m), Airbag: 88.5 in•lbf (10 N•m)
Таре	Clear, Electrical
Socket	10mm, extension
Pliers	Needle Nose
Wrench	10mm
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

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	3. Vehicle Function Checks	

### 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.



Wire Tie location and number.



Foam Attachment Tape location and number.

## Accessory Installation Practice (read before installation)

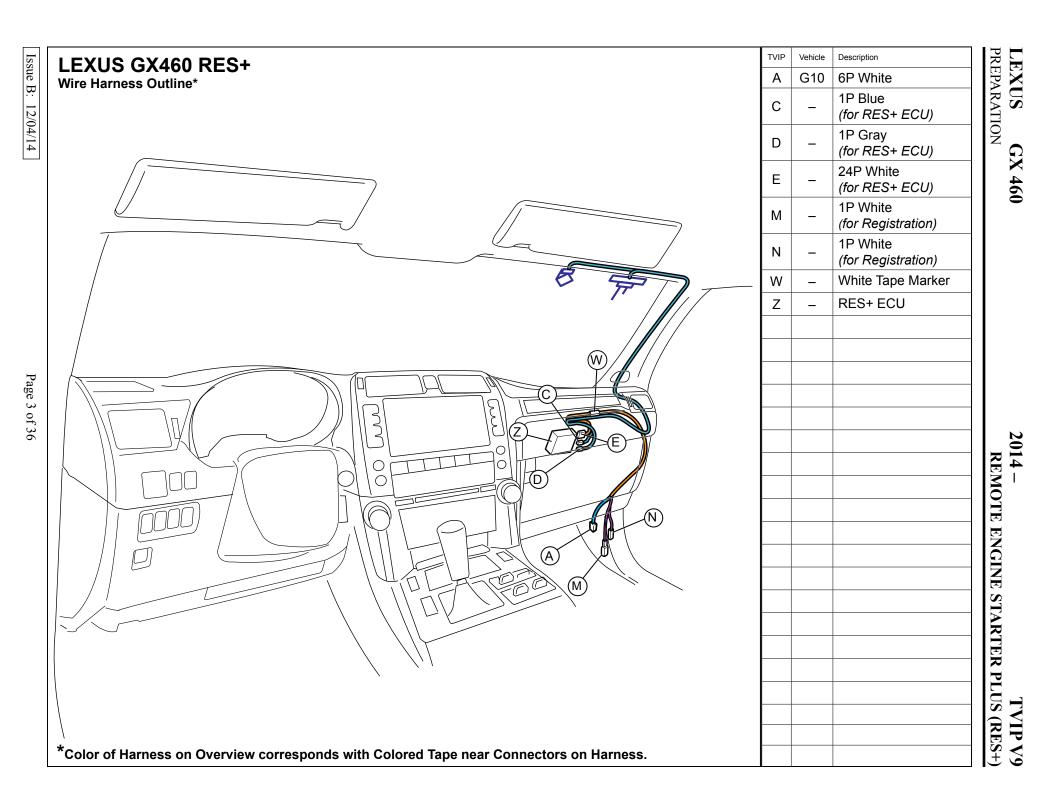
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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 LEXUS dealer for a copy of this document.



1	PS Step Cover			
2	Glovebox Under Cover			
3	PS Cowl Cover  Console Box Panel  Instrument Lower Panel  Airbag Side Cover			
4				
5				
6				
7	PS Knee Airbag			
8	Screw Cover			
9	Glovebox  PS A-Pillar Assist Grip Plug  PS A-Pillar Assist Grip			
10				
11				
12	PS A-Pillar Trim			
Disconnect all Corresponding Connectors.				

## 1. Vehicle Disassembly

- a. Place the Vehicle in Park with the Parking Brake set.
- b. 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.



 Use the Protective Tape to protect the vehicle panels while performing the following procedures.



**CAUTION:** Do not pry from the outside edge of the Step Cover as this may damage the Metal Plate.



**CAUTION:** Avoid damaging the connector.

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



**NOTE:** The Metal Clip may be difficult to remove. Re-secure it to the Vehicle if it comes off.

f. Remove the Passenger's Side Console Box Panel.

g. Remove the Passenger's Side Instrument Lower Panel.

h. Remove the Passenger's Side Knee Airbag Side Cover.

- i. Dislodge the Passenger's Side Knee Airbag.
  - · Remove 3 Bolts.



**CAUTION:** Do not disconnect the Vehicle's Connector.

- j. Wrap the Airbag.
- k. Temporarily place the Knee Airbag on any object that will prevent stress on the Airbag Wire.

I. Remove 2 Bolts from the bottom of the Glove box.

- m. Remove 3 Screws from the Glove box.
  - · Open the Glove box.
  - Remove 3 Screw Covers.

n. Dislodge the Glove box.

- Remove the Glove box Lamp and Harness from backside of the Glove box.
  - Remove 2 Harness Clamps.



**CAUTION:** Do not break the Glove box Lamp.

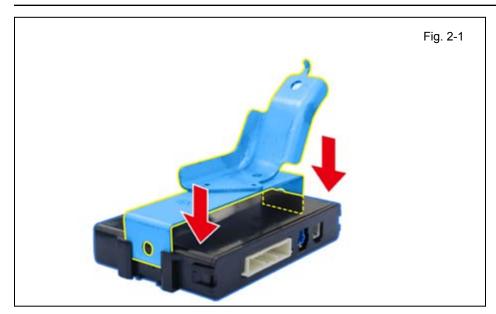
p. Temporarily install the Passenger's side Knee Airbag.

q. Remove the Passenger's side A-Pillar Assist Grip Plugs.

- r. Remove the Passenger's side A-Pillar Assist Grip.
  - Remove 2 Bolts.

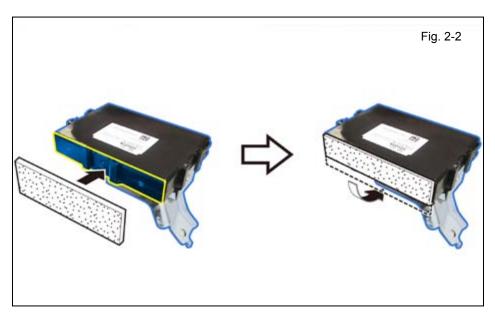
- s. Dislodge the Passenger's side A-Pillar Trim.
  - Apply Protection tape on top of dash and don't remove until the Trim is re-installed.

t. Remove the Passenger's side A-Pillar Trim.



## 2. RES+ ECU Installation

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



b. Apply the Small Foam Tape to the RES+ ECU as shown.

c. Apply the Foam Tape to the Vehicle ECU as shown.



**NOTE:** Make sure not to cover the part number on the label.

- d. Put a Bolt in the hole of the RES+ ECU Bracket.
- e. Position the RES+ ECU Bracket and Bolt with one hand.
- f. Pass the Screwdriver through the hole in the Brace, and temporarily install the RES+ ECU.



**CAUTION:** Sharp Metal Edges.

g. Tighten the Bolt to secure the RES+ ECU.

### 3. V9 Harness Installation

a. Connect the V9 Harness 24P Connector to the RES+ ECU.

- Secure the V9 Harness's
   White Tape marker next to
   the Vehicle Harness Clamp
   with 1 Wire Tie.
- c. Secure the V9 Harness slack to the Vehicle Harness as shown using 1 Wire Tie.
- d. Secure the V9 Harness to the Vehicle Harness with 1 Wire Tie.
- e. Rotate the ratchet end of the 3 Wire Ties toward front of the vehicle.
- f. Route the V9 Harness as shown.

g. Secure the V9 Harness to the Vehicle Brace with 2 Wire Ties.

- h. Secure the V9 Harness to the Vehicle Brace with 1 Wire Tie.
- Secure the V9 Harness to the Vehicle Harness with 2 Wire Ties.

- j. Locate the Vehicle 6P White Pre-Connector behind the Passenger's Side Connector Block area.
- k. Connect the V9 Harness's White 6P Connector to the Vehicle 6P Pre-Connector.

 Secure the 6P Connectors to the Vehicle Harness with 1 Wire Tie.

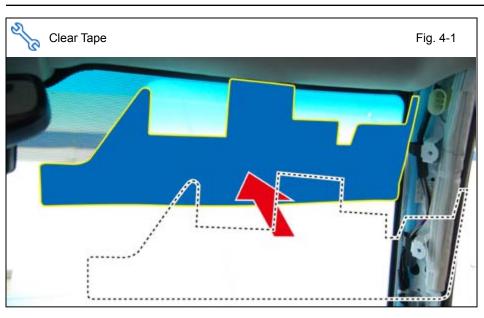


• Position the 6P Connectors in reference to the illustration.



**CAUTION:** Route the Wire Tie in between the Vehicle Harness and the Windshield Fluid Hose.

- m. Secure the V9 Harness to the Vehicle Harness with 1 Wire Tie.
  - Rotate the ratchet end of the Wire Ties toward front of the vehicle.



# 4. GPS and GSM Antenna Installation.

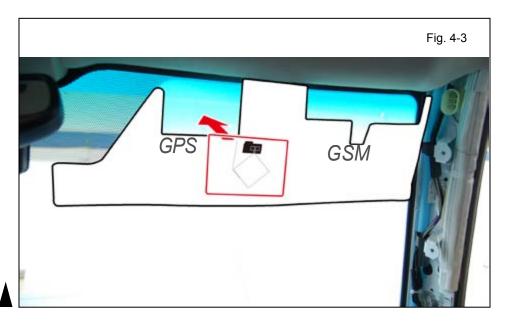
- Use Household Glass
   Cleaner to clean the inside
   of the Passenger's side
   Windshield.
- b. Line up the Antenna Template to the edges of the Headliner and A-Pillar on the Passenger's side Windshield.
  - Use clear tape to attach Template to the Windshield.



**NOTE:** Make sure not to apply tape over areas where the Film Antennas will be placed.



c. Use the Blue Tab to remove the partial protective backing from GPS Film Antenna.

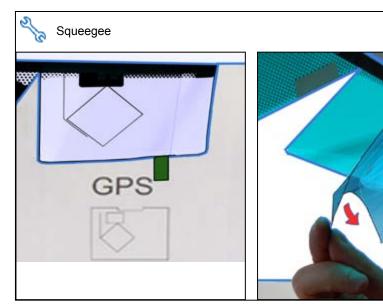


d. Attach the GPS Film Antenna on the specified Template location on the Windshield.



• Line up the Film Antenna to the Headliner edge.

Fig. 4-4



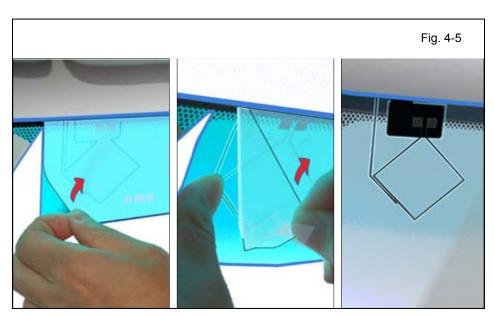
e. Use the Green Tab to peel off remaining protective backing to attach the whole GPS Film Antenna on the Windshield.



Slowly peel off the protective backing.



NOTE: Make sure to use a squeegee when attaching Film Antenna on the Windshield to eliminate any Air Bubbles.



- Carefully and Slowly peel off the top protective sticker leaving only the GPS Film Antenna on the Windshield.
- g. Use a soft cloth to press on the Film Antenna for it to fully adhere to the Windshield and to eliminate any Air Bubbles.



**CAUTION:** Do not use hard tools like spatulas, squeegee, etc., once the top protective film has been removed.



**CAUTION:** Do not touch the GPS Film Antenna Terminal.



h. Use no. 1 Tab to remove the partial protective backing from the GSM Film Antenna.

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Attach the GSM Film Antenna on the specified Template location on the Windshield.



Line up the Film Antenna to the Headliner edge.



NOTE: Make sure to use a squeegee when attaching Film Antenna on the Windshield to eliminate any Air Bubbles.



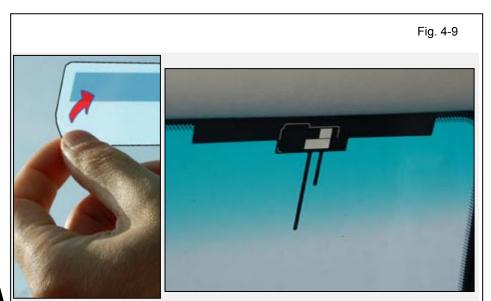
Use the no. 2 Tab to peel off remaining protective backing to attach the remaining part of the GSM Film Antenna on the Windshield.



Slowly peel off the protective backing.



NOTE: Make sure to use a squeegee when attaching Film Antenna on the Windshield to eliminate any Air Bubbles.



- k. Carefully and Slowly peel off the top protective sticker leaving only the GSM Film Antenna on the Windshield.
- Use a soft cloth to press on the Film Antenna for it to fully adhere to the Windshield and to eliminate any Air Bubbles.

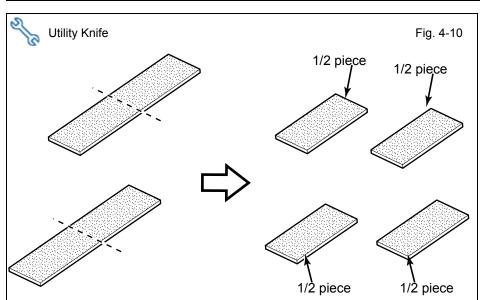


**CAUTION:** Do not use hard tools like spatulas, squeegee, etc., once the top protective film has been removed

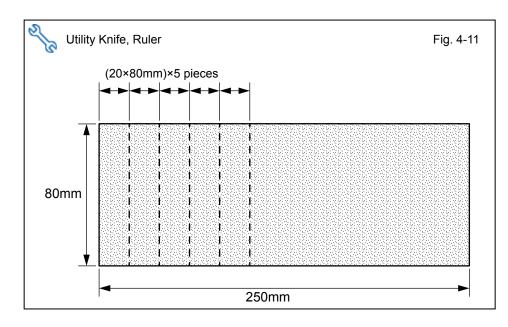


CAUTION: Do not touch the GSM Film Antenna Terminal.

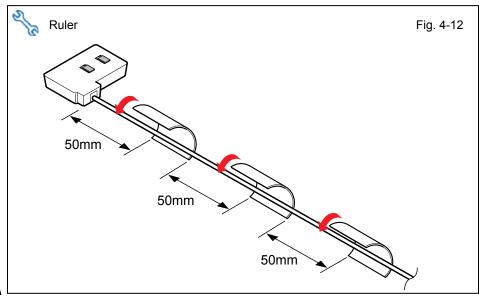
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m. Cut 2 Small Foam Tapes into 1/2 pieces as shown.



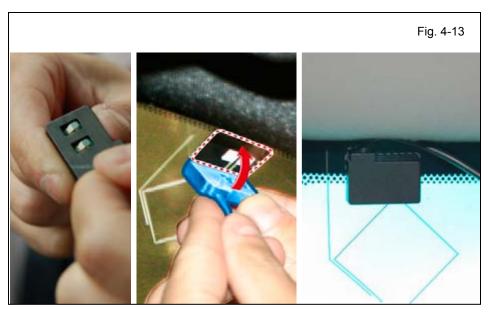
n. Cut out 5 pieces of 20×80mm size from the Foam Attachment Tape as shown.



- Wrap the GPS Antenna Wire with 1/2 piece of Small Foam tape 50mm away from the GPS Antenna.
- Wrap 2 more 1/2 pieces of Small Foam tape 50mm away from each other.

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- q. Peel off the protective backing from the GPS Antenna.
- Attach the GPS Antenna to the GPS Film Antenna on the Windshield.



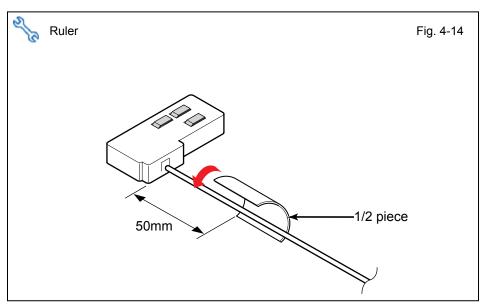
**NOTE:** Make sure to align the GPS Antenna to the broken line guide on the GPS Film Antenna.



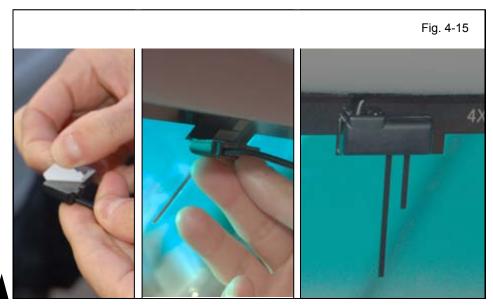
**CAUTION:** Do not touch the Terminal and adhesive face of the GPS Antenna.



**CAUTION:** Do not re-attach the GPS Antenna.



s. Wrap the GSM Antenna Wire with the remaining 1/2 piece of Small Foam tape 50mm away from the GSM Antenna.



- t. Peel the protective backing off the GSM Antenna.
- u. Attach the GSM Antenna to the GSM Film Antenna on the Windshield.



**NOTE:** Make sure to align the GSM Antenna to Line guide on the Film Antenna.



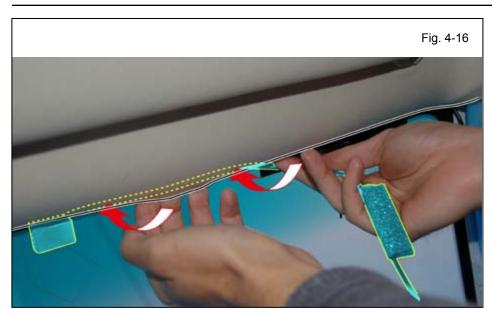
**CAUTION:** Do not touch the Terminal and adhesive face of the GSM Antenna.



**CAUTION:** Do not re-attach the GSM Antenna.

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## REMOTE ENGINE STARTER PLUS (RES+)



v. Tuck both Antenna Wires in between the Headliner and the Windshield routing them toward the Passenger side A-Pillar area.

w. Continue routing Antenna Wires toward the Passenger side A-Pillar area.

x. Route both Antenna Wires along the Vehicle Harness and secure them using the Vehicle Harness Clamp.



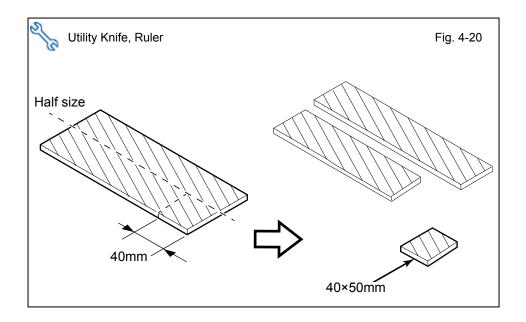
**NOTE:** Do not secure Antenna Wires to Vehicle's Drain Hose or Airbag.

y. Secure the Antenna Wires to the Vehicle Harness using 2 (20x80mm) pieces of Foam Attachment tapes.



**NOTE:** Place Foam Attachment Tape #2 in the Airbag Bolt area.

z. Secure the Antenna Wires to the Vehicle Harness Clamp.



- aa. Cut the Protection sheet into 1/2 pieces.
- ab. Cut out a 40×50mm size of Protection sheet.

- ac. Wrap both Antenna Wires using the 40×50mm size piece of Protection Sheet in the Vehicle Bracket area.
- ad. Secure the Protection Sheet wrapped Antenna Wires to the Vehicle Harness using 1 (20x80mm) piece of Foam Attachment tape.



**NOTE:** Do not secure Antenna Wires to Vehicle's Drain Hose.

ae. Secure the Antenna Wires to the Vehicle's Harness using 1 (20x80mm) piece of Foam Attachment tape.

- af. Wrap both Antenna Wires starting from the bottom of the A-Pillar using the remaining pieces of Protection Sheet.
- ag. Secure the Protection Sheets with Electrical tape as shown.

- ah. Secure the Antenna Wires to the Vehicle Harness using 1 (20x80mm) piece of Foam Attachment tape.
- ai. Continue routing the Antenna Wires down towards the Glove box Area.
- aj. Secure the Protection Sheet wrapped Antenna Wires to the Vehicle Harness using 1 Wire Tie.

ak. Secure the Antenna Wires to the Vehicle Brace using 1 Wire Tie.

al. Continue routing the Antenna Wires and secure to Vehicle Harness with 1 Wire Tie.

am. Secure the Antenna Wires to the Vehicle Harness with 1 Wire Tie.

• Rotate the ratchet end of the Wire Tie toward the front of the vehicle.

an. Connect both the GPS and GSM Antenna Connectors to the RES+ ECU.

- ao. Bundle up the excess Antenna Wires and use electrical tape to secure them together.
- ap. Secure the bundle with the V9 Harness to the Vehicle Harness using 2 Wire Ties.

## 5. Registration Preparation

a. Reassemble the Vehicle.



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

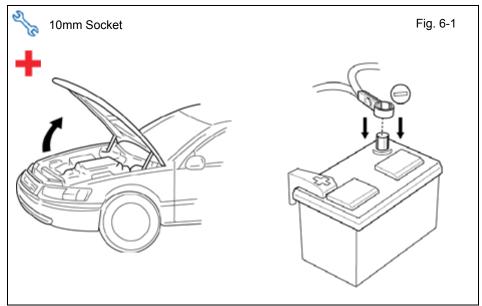


**VERIFY:** That panels fit together properly, with no uneven gaps.



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

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

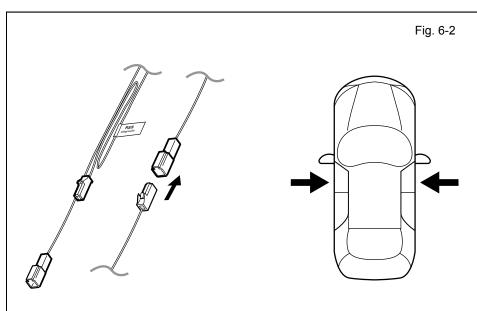


## 6. Registration

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



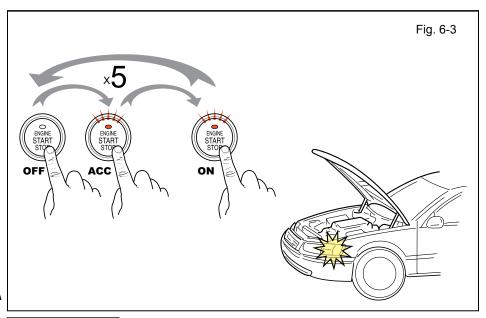
CAUTION: Do not touch the Positive Terminal.



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

NOTE: Once connected you will have 10 minutes to complete this section, steps d-x.

d. Close all doors.



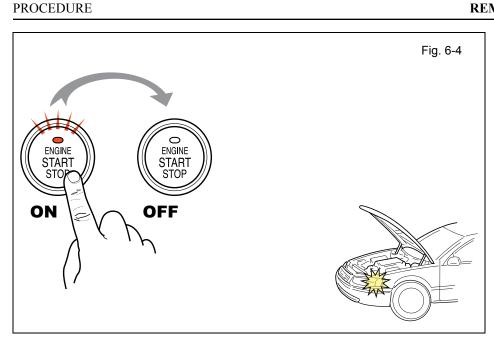
- Place the Vehicle in Park (P) position.
- f. With the Smart Key in your possession, cycle the "Engine Start Stop" button from OFF to ON 5 times.

**NOTE:** One cycle consists of: OFF  $\rightarrow$  Accessory  $\rightarrow$  ON. This is equivalent to pressing the "Engine Start Stop" button 14 times.

LOOK: For the Hazard Lights to Flash Once.

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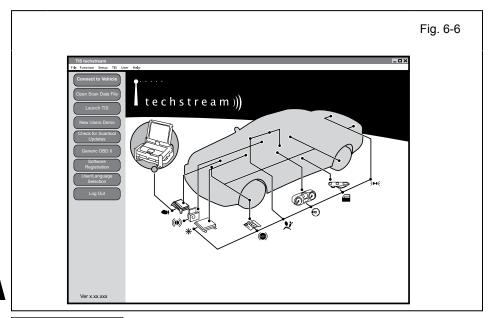
- g. Start the Engine.
- h. After 10 seconds stop the Engine.

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

### IF THIS PROCEDURE FAILED

The Hazard Lights flash Three Times.

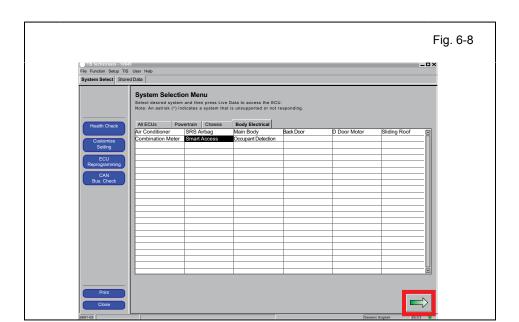
- Disconnect the V9 Harness's 1P RES Diagnostic Connectors.
- Start again from step c.
- Connect the Techstream Notebook to the Vehicle's Diagnostic Port.
- . With the Smart Key in your possession, press the "Engine Start Stop" button twice to select the Ignition "ON" position.



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

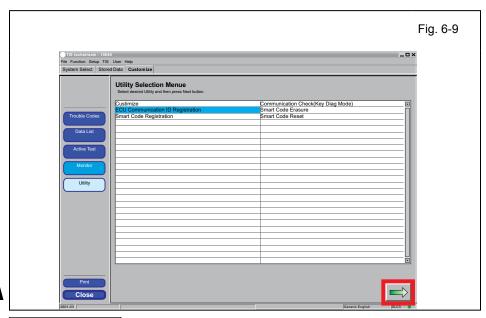
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- m. Confirm that the information displayed on the Vehicle Connection Wizard is correct for the vehicle. If not verify that the Techstream is properly connected.
- n. Select w/Smart Key.
- o. Select w/ KDSS.
- p. Click Next>



q. Select "Smart Access."

. Click 📥 .



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

v. Click "Next>."

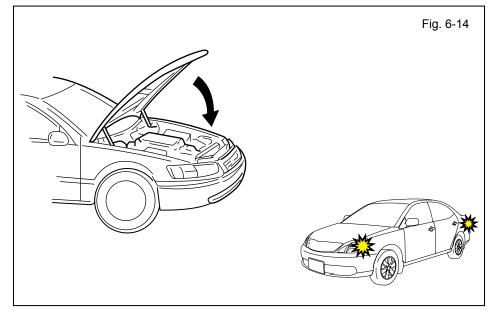
- w. Select "Remote Engine Starter."
- x. Click "Next>."

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

y. Click "Exit."

z. Click





aa. Exit the vehicle, then Close the Hood.



**LOOK:** For the number of times the Hazard Lights flash.

ab. The Hazard Lights flash twice, registration completed.

## IF THIS PROCEDURE FAILED

#### If the Hazard Lights flash 3 Times.

• Disconnect the 1P RES Diagnostic connector and start again from step c.

#### If the Hazard Lights flash 4 Times.

- Check connection between GPS Antenna and RES+ ECU.
- Disconnect the 1P RES Diagnostic connector and start again from step c.

#### If the Hazard Lights flash 5 Times.

- Move vehicle to an area with good cellular reception.
- Disconnect the 1P RES Diagnostic connector and start again from step c.

## If the Hazard Lights flash 6 Times.

- Check connection between GSM Antenna and RES+ ECU.
- Disconnect the 1P RES Diagnostic connector and start again from step c.

- ac. After a successful Registration, disconnect the 1P RES Diagnostic Connectors.
- ad. Use Electrical Tape to secure the bundle up the 1P RES Diagnostic Wires.

- ae. Use Electrical Tape to secure the 1P Connectors to the Vehicle Harness.
- af. Secure the Diagnostic Wires to the Vehicle Harness with 1 Wire Tie.

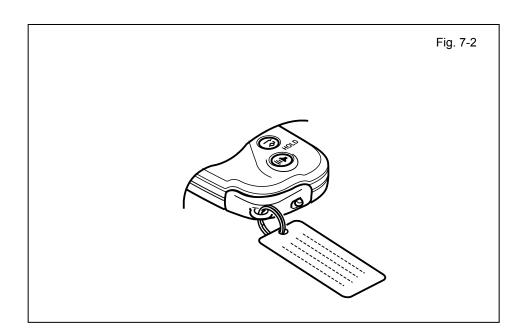
**PROCEDURE** 

## 7. Tags and Labels

- 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. Attach the Key Tag.

**REPEAT:** step c with the other Smart Key.

 d. Attach the RES+ Key Tag with serial number to the Large Key Ring.

- e. Use Household Glass Cleaner to clean the inside of the Front Door Window.
- f. Use a piece of Clear Tape to lift the Label from the protective backing.



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

g. Attach the Label as shown.



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

**REPEAT:** steps e–g with the other Front Door Window.

## 8. Complete the Installation

a. Finish reassembling the Vehicle.



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



VERIFY: That all Connectors are plugged in.

- b. Clean up and remove trash.
- c. Sealed in its protective bag, place the Owner's Guide in the Glove box.

d. Position the Negative Battery Cable at the original factory position and torque the nut.



Torque: 48 in•lbf (5.4 N•m)



CAUTION: Do not touch the positive terminal.

## **Accessory Function Checks**

**GX 460** 

**LEXUS** 

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: Wait 30 seconds before pulling the hood release handle for the Security Alarm to trigger.	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		
	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.)		

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TVIP V9

## **Vehicle Function Checks**

	Function			Function
En	Enter the Vehicle			
		Dome/Courtesy Lights		Horn
Sta	art the V	/ehicle		
		Starter		Gauges
		Check Engine Light  If the warning light remains on, it may indicate a system malfunction.		ABS Light (if equipped)  If the warning light remains on, it may indicate a system malfunction.
		Lamp Failure Sensor  If the warning light remains on, it may indicate a system malfunction.		Track/Skid Control Light (if equipped)  If the warning light remains on, it may indicate a system malfunction.
		Seat Belt Warning Light If the warning light remains on, it may indicate a system malfunction.		Tire Pressure Monitoring System (TPMS)
		Air Bag Warning Light If the warning light remains on, it may indicate a system malfunction.		Prior to TPMS activation and Pre-delivery Service (PDS) of the Vehicle the TPMS light will blink when IG is turned on.  After TPMS activation and PDS of the Ve-
,		Cruise Control Light (if equipped)		hicle the TPMS light will illuminate for a few seconds and go off when IG is turned on.
		Mayday ECU (if equipped)		
Us	sing a N	lirror or Assistant check the following.		
		Trunk/Tailgate/Bed Lights (if equipped)		Tail Lights
		Brake Lights		Daytime Running Lights (if equipped)
		☐ Backup Lights		Marker Lights
Clearance Sonar (if equipped)		Clearance Sonar (if equipped)		
Stop the Engine, Place the Vehicle's IG in the ON position.				
		Hazard Lights		Turn Signal Lights
		Head Light		Fog Lights (if equipped)
		High Beams		Accessory Controls/Illumination (if equipped)
		Power Side Mirrors (if equipped)		Convenience Memory Settings (if equipped)

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CHECKLIST – these points **MUST** be checked to ensure a quality installation.

REMOTE ENGINE STARTER PLUS (RES+)

Function		Function	
	Front Wiper/Washer		Rear Wiper/Washer (if equipped)
	Power Sun/Moon Roof (if equipped)		Rollover Side Curtain Air Bag Switch (RSCA) (if equipped)
	Clock (if equipped)		Navigation System (if equipped)
	Audio/Video (if equipped)		USB Connections (if Equipped)
	Steering Wheel Audio Control (if equipped)		HVAC
	Front Windshield Defogger (if equipped)		Rear Window Defogger (if equipped)
	Side Mirror Defogger (if equipped)		Accessory Power Socket (if equipped)
	Massage Seats (if equipped)		Heated/Vented Seats (if equipped)
	Glove box Light (if equipped)		Trunk Cancel Switch (if equipped)
	Power Locks (if equipped)		Power Windows (if equipped)
	Power Seats (if equipped)		Key Sensor Buzzer

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