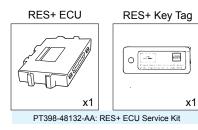
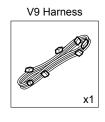
Part #: PT398-48132

Conflicts:

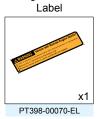
Will not Program with Techstream Lite.

Kit Contents







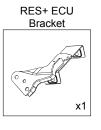


Engine Room





RES+ Owner's





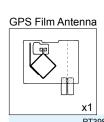


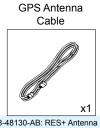




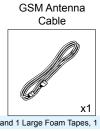


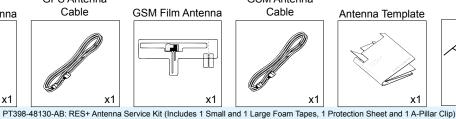


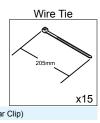












Service Part #'s

Recommended Tools

Additional Items

(may be required)

Item#	Description

Recommended Sequence of Application

Item#	Description		

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)
Squeegee	4" 3M™ Orange Applicator #71607
Installation Tools	
Screwdriver	#2 Phillips
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Side Cutters	
Torque Wrench	48 in•lbf (5.4 N•m), 88.5 in•lbf (10 N•m)
Ruler	
Utility Knife	
Needle Nose Pliers	
Tape	Clear, Electrical
Socket	8mm, 10mm, extension
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

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2010 – TVIP V9 REMOTE ENGINE STARTER PLUS (RES+)

PREPARATION

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Legend



Do not proceed until process has been completed.

3. Vehicle Function Checks.....



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.

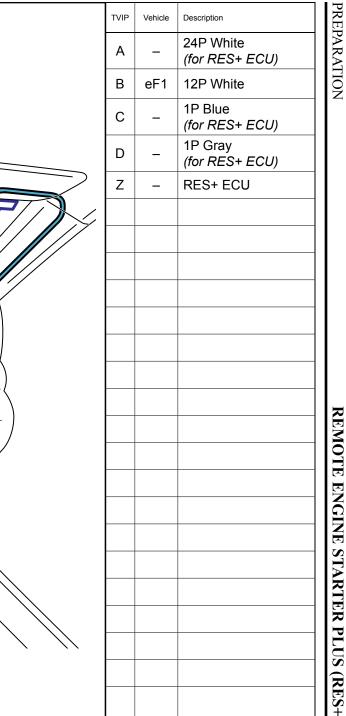
These guidelines can be found in the "Accessory Installation Practices" document.

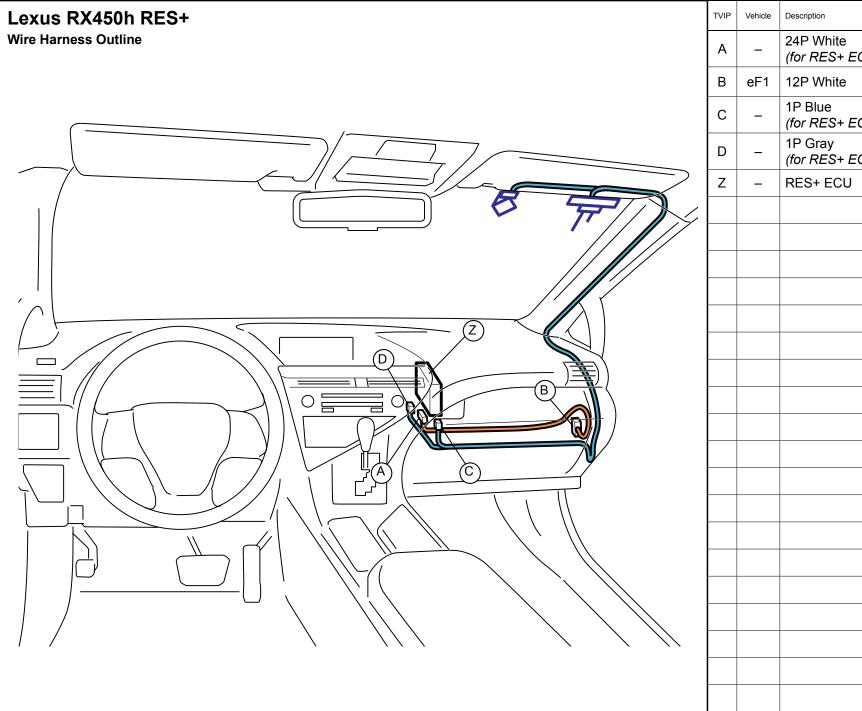
This document covers such items as:

- 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 Lexus dealer for a copy of this document.

LEXUS





1	Spare Tire Cover	7	Seat Temperature Control Unit	13	PS Dash Trim
2	Battery Cover	8	Shift Knob		A-Pillar Trim
3	PS Step Cover	9	Center Console	15	Engine Cover
4	PS Cowl Cover	10	Center Console Side Trim	16	Fuse Box Cover
5	Glove box Under Cover	11	PS Knee Airbag	Dis	connect all Corresponding
6	Glove box Side Trim	12	Glove box	Co	nnectors.

Disassembly Overview







Nylon Panel Removal Tool

Fig. 2-1 2. Disassembly. (Passenger's Side)

a. Remove the Passenger's Side Step Cover.



Nylon Panel Removal Tool

Fig. 2-2

b. Remove the Passenger's Side Cowl Cover.

Fig. 2-3

c. Remove the Glove Box Under Cover.



Fig. 2-4

d. Remove the Glove Box Side Trim.

Fig. 2-5

e. Open Center Console Compartment.

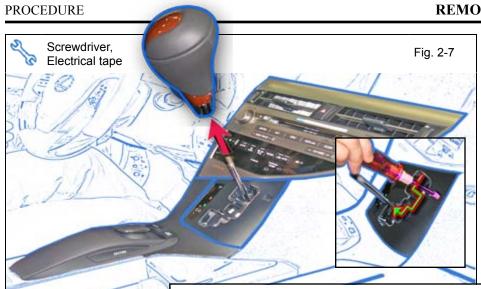


- f. Remove Seat Temperature Control Unit.
 - Disconnect Vehicle's Connector.

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LEXUS RX 450h 2010 – TVIP V9
PROCEDURE REMOTE ENGINE STARTER PLUS (RES+)



- g. Remove the Shift knob by turning counter-clockwise.
- h. Push on the Shift Release with taped screwdriver and Shift to Neutral.

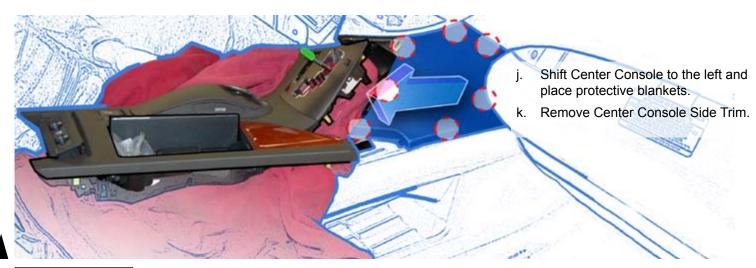
Fig. 2-8

 Pull on the Left side Shifter Cover, then pull the Center Console up and pull on the Right side Shifter Cover.

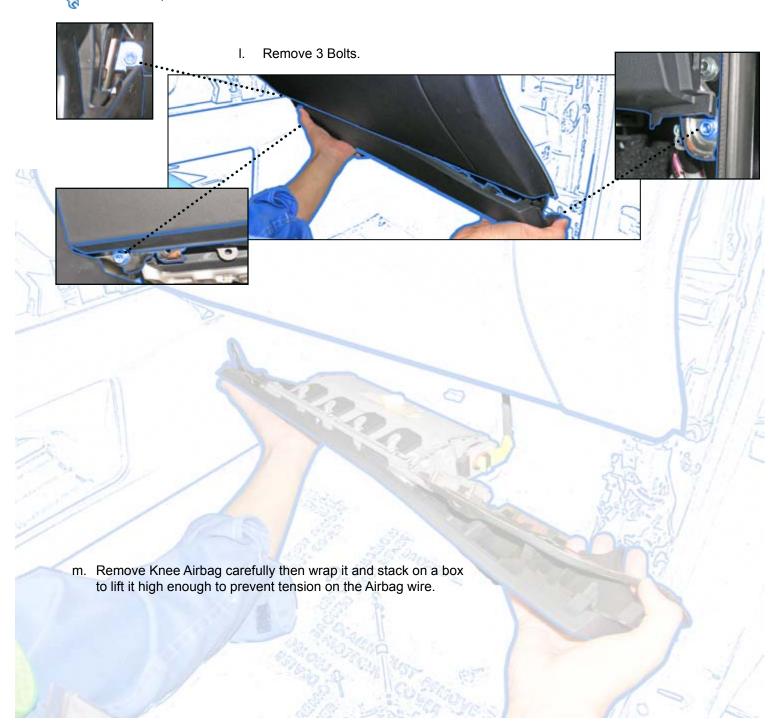


 Add Protection Tape on the Shifter and part of the Center Console Compartment area.

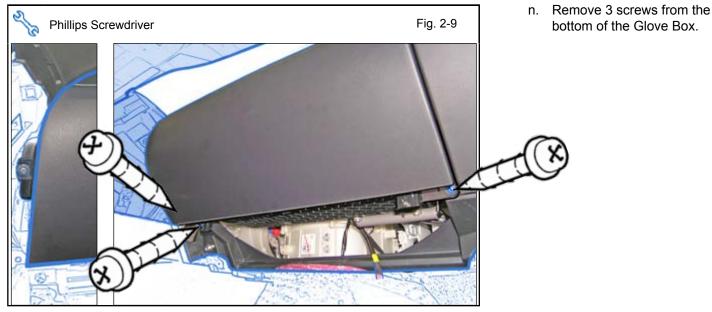




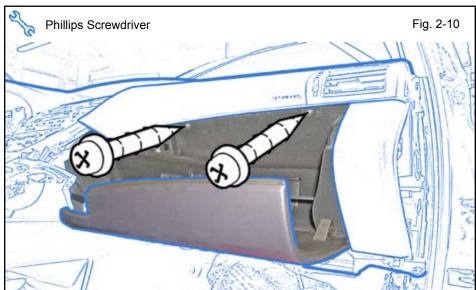
10mm Socket, Extension



bottom of the Glove Box.

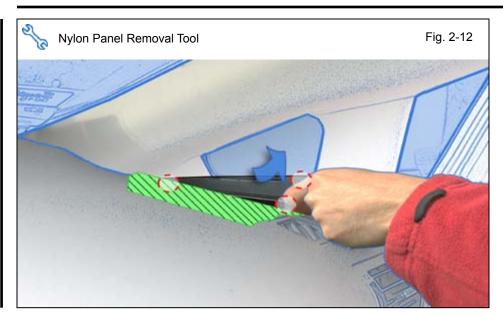


o. Open the Glove Box and remove 2 Screws.

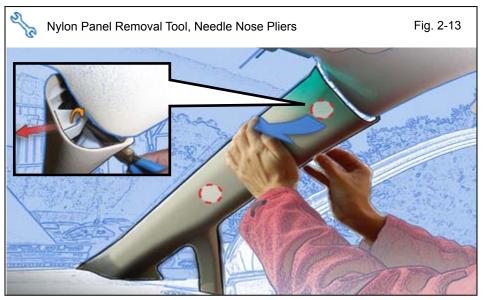


- p. Remove the Glove Box by pulling it towards the left side.
 - Disconnect Vehicle Connectors and remove the Connector Clamp from upper left side of Glove box.





- q. Remove the Passenger's side Dash Trim at the base of the A-Pillar.
 - · Add Protective Tape to Pry area.



r. Dislodge the Passenger's side A-Pillar Trim.



CAUTION: The trim will only loosen as shown. Trying to remove it without dislodging the internal clip will cause it to break.

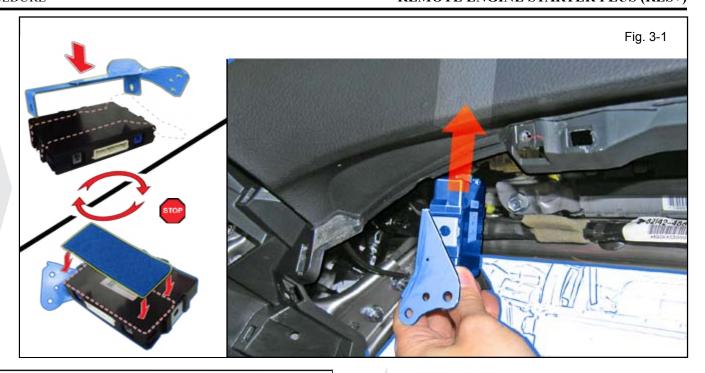
s. Rotate the end of the Clip 90° and then pull the Trim out to disengage the Clip.

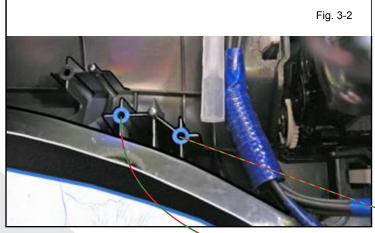


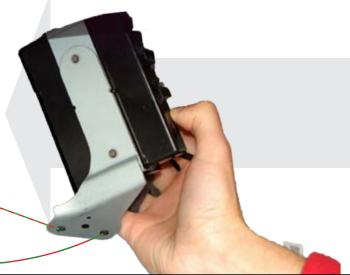
CAUTION: If the Clip dislodges from the vehicle or is damaged, replace it with Clip from the kit.



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







3. RES+ ECU Installation.

- a. Attach the ECU bracket to RES+ ECU.
- b. Apply 1 Small Foam tape on the edge of the RES+ ECU.



NOTE: Make sure not to cover the RES+ ECU Serial no. label with the Foam Tape.

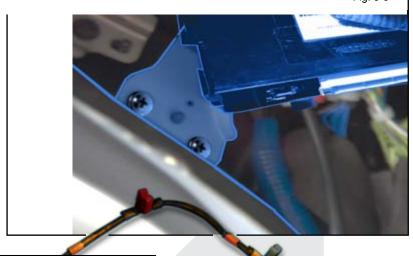
c. Position the RES+ ECU on the vehicle location shown.



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d. Install the RES+ ECU to the vehicle using 2 Bolts.







4. V9 Harness Installation.

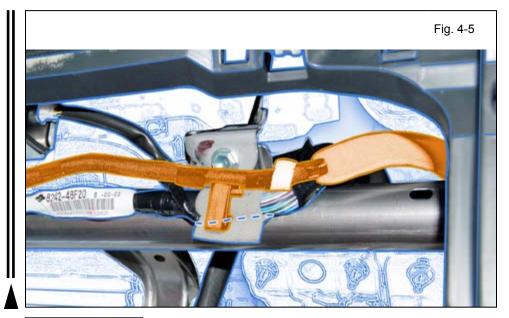
- a. Connect V9 24P Connector to the RES+ ECU.
- b. Use V9 Harness Clamp to attach over the Vehicle Harness's Foam tape.

Fig. 4-2

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 Route the V9 Harness along the Vehicle's Harness, then route behind the Vehicle's I/P Reinforcement.

d. Plug in the V9 Harness's 12P
 Connector to the Vehicle's
 12P Pre-Connector in the location shown.



e. Use the V9 Harness Clamp to attach over the Vehicle Harness's Foam tape.



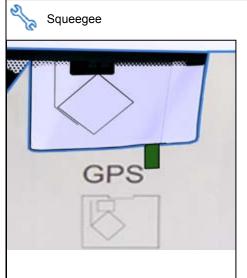
5. GPS and GSM Antenna Installation.

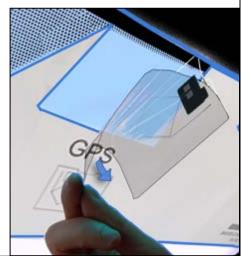
- Use Household Glass Cleaner to clean the inside of the Passenger's side Windshield.
- Line up the Antenna Template to the edges of the Headliner and A-Pillar on the Passenger's side Windshield.
 - Use clear tape to attach Template to the Windshield.



Fig. 5-2

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





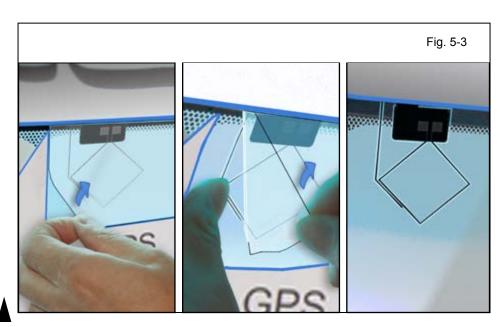
 Use the Blue Tab to remove the partial protective backing and attach the GPS Film Antenna on the specified Template location on the Windshield.



- Line up the Film Antenna to the Headliner edge.
- d. Use the Green Tab to peel off remaining protective backing to attach the whole GPS Film Antenna on the Windshield.



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



- e. Carefully and slowly peel off the top protective sticker leaving only the GPS Film Antenna on the Windshield.
- f. 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.

PROCEDURE



- g. Use no. 1 Tab to remove the partial protective backing from the GSM Film Antenna.
- h. Attach the GSM Film Antenna on the specified Template location on the Windshield.



• Line up the Film Antenna to the Headliner edge.



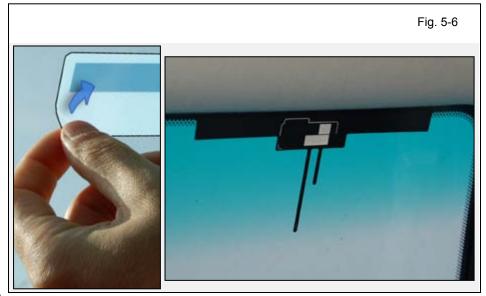
NOTE: Make sure to use a Squeegee when attaching Film Antenna onto the Windshield to eliminate any Air Bubbles.



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



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





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



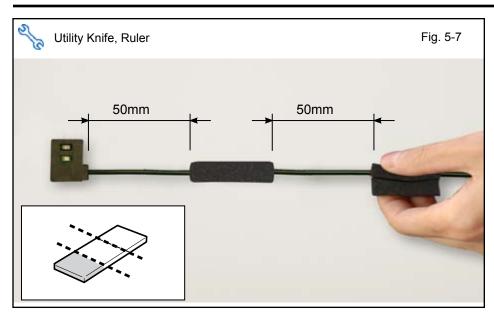
CAUTION: Do not use hard tools like spatulas, squeegee, etc., once the top protective film has been removed.



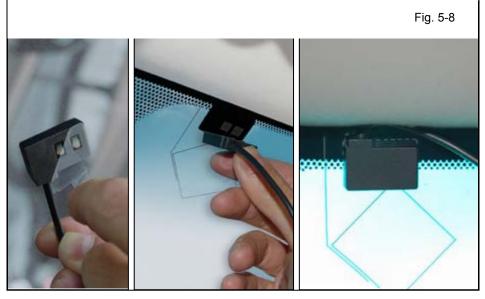
CAUTION: Do not touch the GSM Film Antenna Terminal.

PROCEDURE

REMOTE ENGINE STARTER PLUS (RES+)



- I. Cut the Small Foam tape into 1/3 pieces as shown.
- m. Wrap the GPS Antenna Wire with 1/3 piece of Small Foam tape 50mm away from the GPS Antenna.
- n. Wrap another 1/3 piece of Small Foam tape 50mm away from the first Foam tape.



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



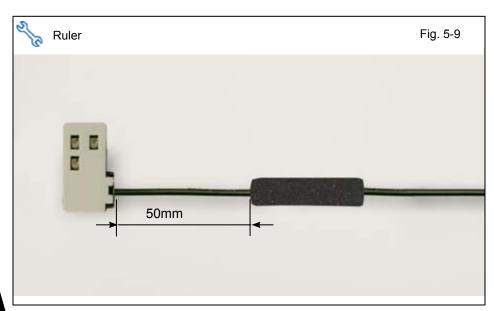
NOTE: Make sure to align the GPS Antenna to the broken line guide on the GPS Film Antenna.



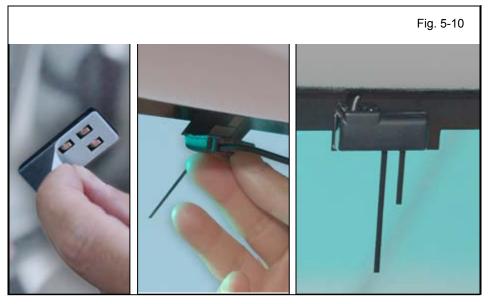
CAUTION: Do not touch the Terminal and adhesive face of the GPS Antenna.



CAUTION: Do not re-attach the GPS Antenna.



q. Wrap the GSM Antenna Wire with the remaining 1/3 piece of Small Foam tape 50mm away from the GSM Antenna.



- Peel the protective backing off the GSM Antenna.
- s. 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.



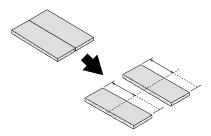
CAUTION: Do not touch the Terminal and adhesive face of the GSM Antenna.



CAUTION: Do not re-attach the GSM Antenna.



- Tuck both Antenna Wires in between the Headliner and the Windshield routing them toward the Passenger's side A-Pillar area.
- u. Cut the Large Foam tapes into 1/2 pieces.

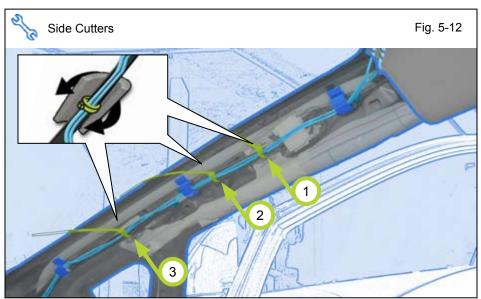


- Route both Antenna Wires along the Vehicle Harness and secure them using the 3 Vehicle Harness Clips.
- w. Secure the Antenna Wires to the Vehicle's Harness using 3 Wire Ties.

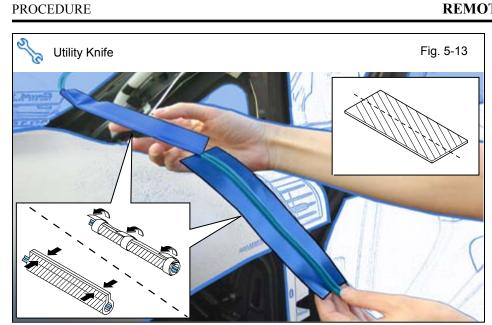


NOTE: Do not secure Antenna Wires to Vehicle's Drain Hose or Airbag.

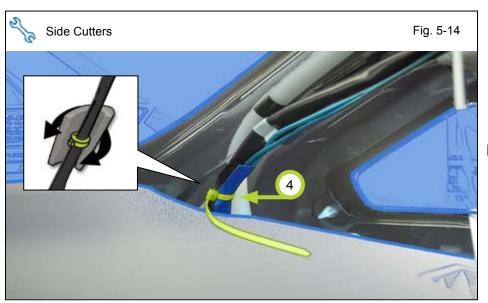
 Wrap a 1/2 piece of Large Foam tape to each one of the Clipped Wire Ties.



REMOTE ENGINE STARTER PLUS (RES+)



- y. Cut Protection Sheet in Half as shown.
- z. Wrap both Antenna Wires starting from the bottom of the A-Pillar using the 2 Half pieces of Protection Sheet.
- aa. Secure the Protection Sheet with Electrical tape as shown.

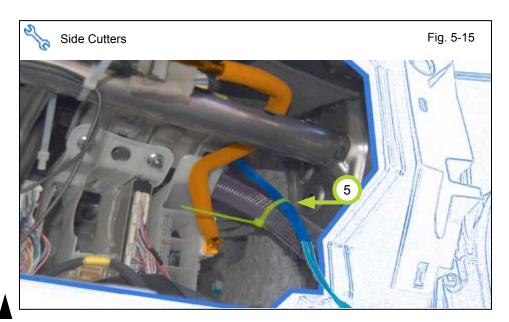


- ab. Continue routing Antenna Wires down towards the Glove box Area.
- ac. Secure the Protection Sheet wrapped Antenna Wires to the Vehicle's Harness using 1 Wire Tie.

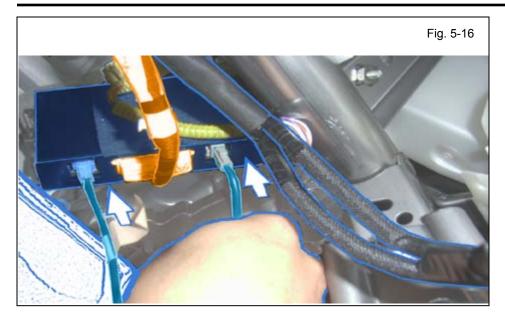


NOTE: Do not secure Antenna Wires to Vehicle's Drain Hose

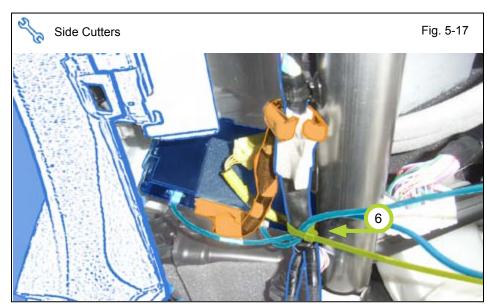
ad. Clip the Wire Tie and wrap with a 1/2 piece of Large Foam tape.



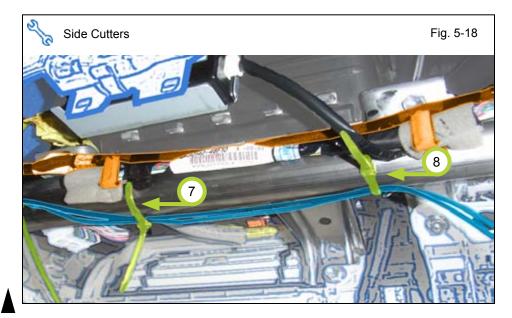
ae. Route the Antenna Wires underneath the Vehicle's I/P Reinforcement and secure to the Vehicle's Wire Harness.



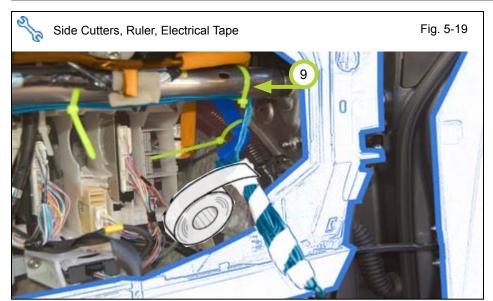
af. Connect both the GPS and GSM Antenna Connectors to the RES+ ECU.



ag. Secure both Antenna Wiresto the Vehicle's Harness with1 Wire Tie.



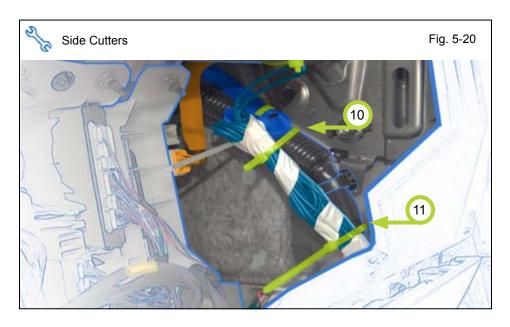
ah. Secure both Antenna Wires to the Vehicle's I/P Reinforcement with 2 Wire Ties.



- ai. Secure both Antenna Wires to the Vehicle's I/P Reinforcement with 1 Wire tie.
- aj. Bundle up the excess Antenna Wires and use electrical tape to secure them together.

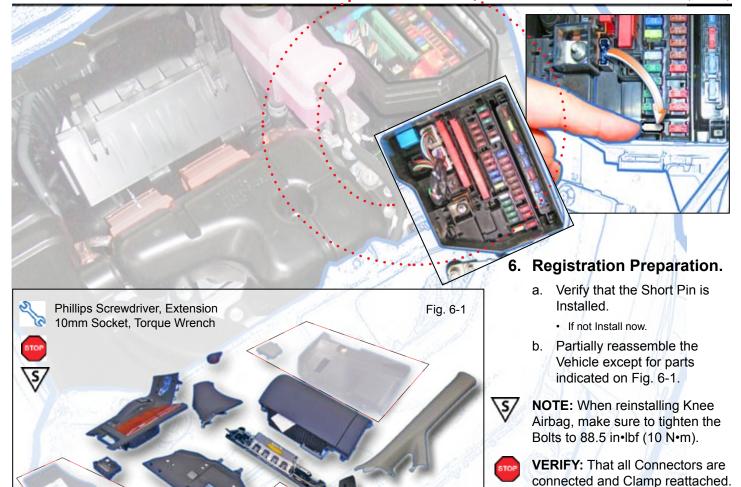


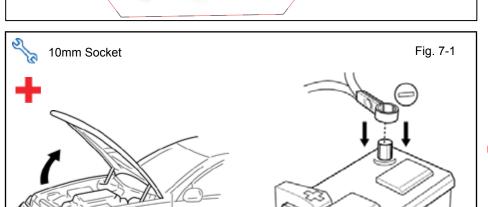
NOTE: Make sure the Bundle is less than 200mm in length.



ak. Secure the Bundled Antenna Wires to the Vehicle Harness using 2 Wire Ties.

REMOTE ENGINE STARTER PLUS (RES+)





Do Not Install

7. Registration

- a. Open the Hood.
- b. Temporarily reconnect the Negative Battery Terminal located in the Luggage area.

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

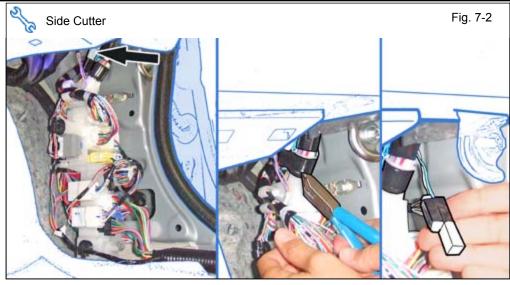


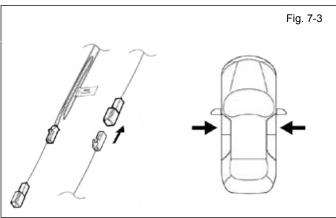
c. Place the Vehicle in Park(P) position.

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REMOTE ENGINE STARTER PLUS (RES+) **PROCEDURE**

d. Locate the 1P RES Diagnostic Connectors in the PS Cowl Area, and remove the tape securing it.





e. Connect the 2 RES Diagnostic Connectors.

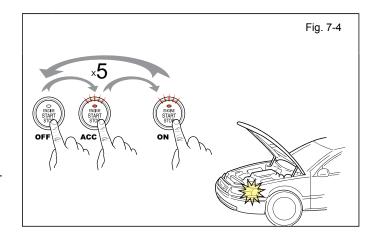
NOTE: Once connected you will have 10 minutes to complete this section, steps f-z.

Close all doors.

With the Remote Control Key in your possession, cycle the Start Button from OFF to ON 5 times.

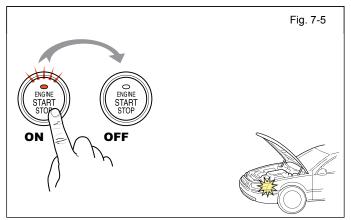
NOTE: One cycle consists of: OFF \rightarrow Accessory \rightarrow ON. This is equivalent to pressing the Start Button 14 Times.

LOOK: For the Hazard Lights to flash Once.



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

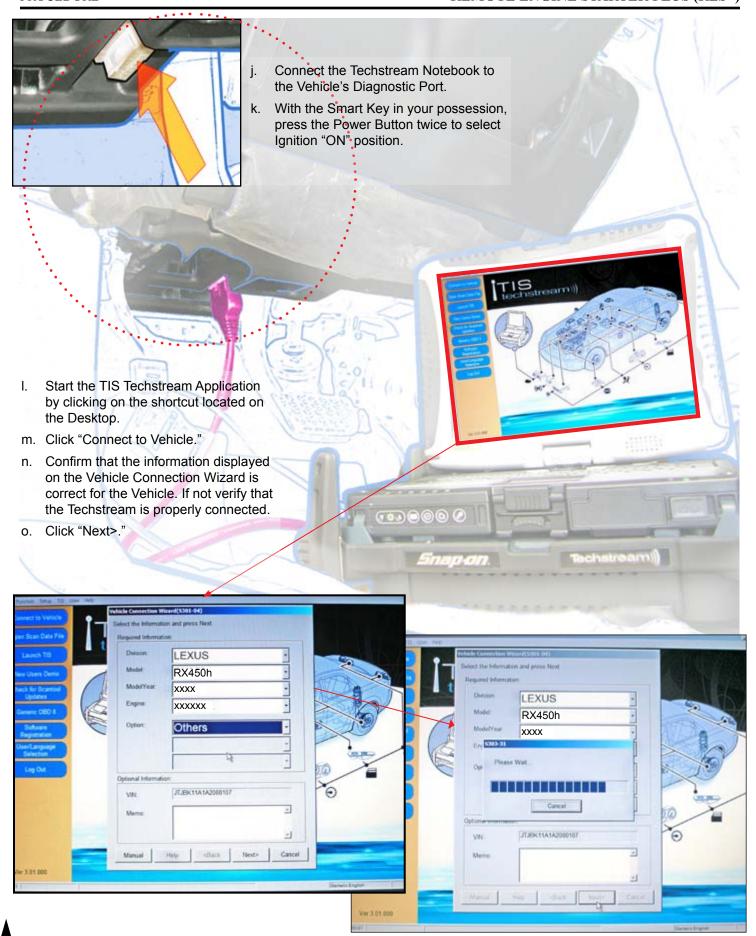
LOOK: For the Hazard Lights to flash Once.



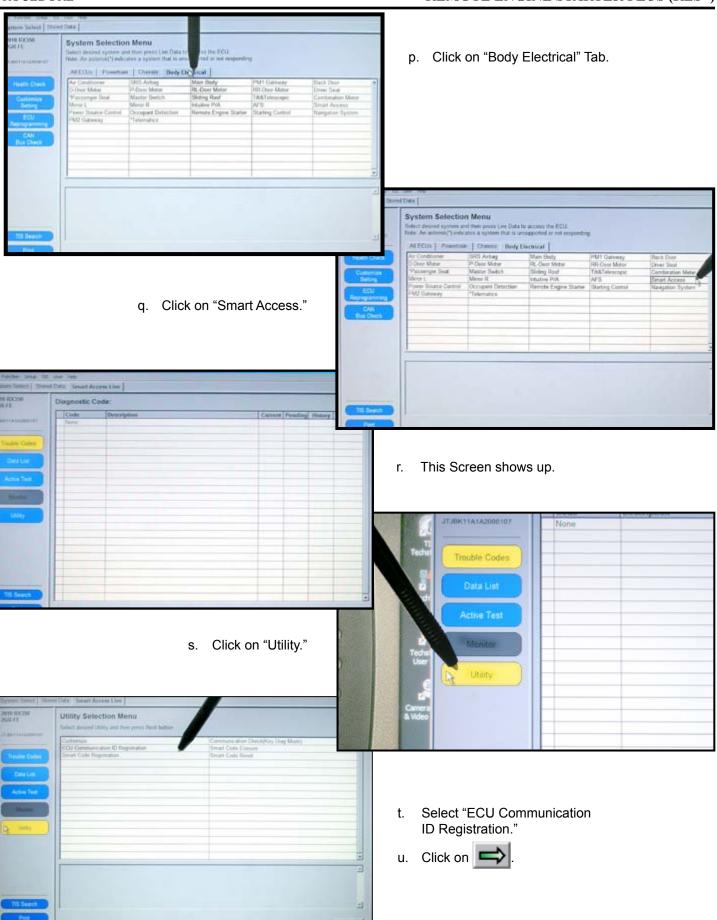
IF THIS PROCEDURE FAILED

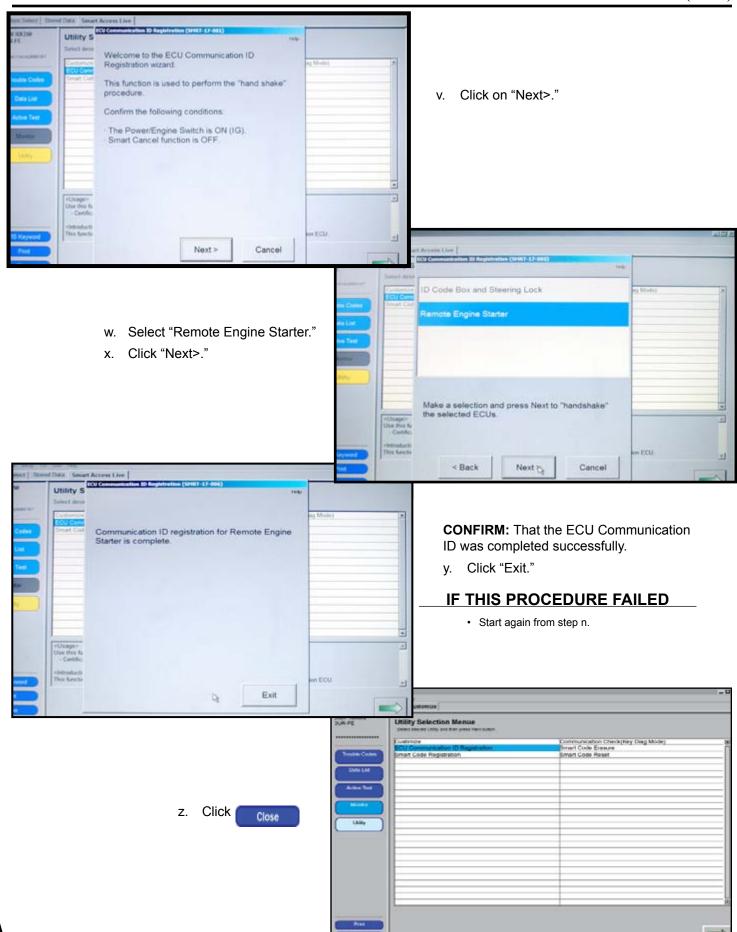
The Hazard Lights won't flash or flashes Twice.

- · Disconnect the 1P RES Diagnostic Connectors.
- · Start again from step e.

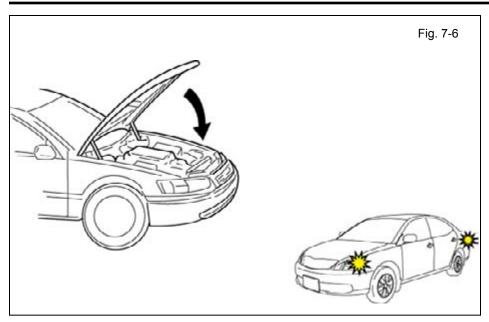








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aa. Exit the vehicle, then Close the Hood.



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 e.

If the Hazard Lights flash 4 Times.

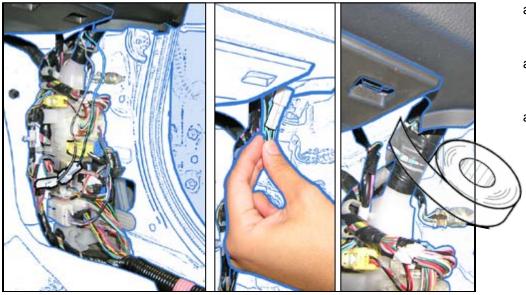
- Check connection between GPS Antenna and RES+ ECU.
- Disconnect the 1P RES Diagnostic connector and start again from step e.

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 e.

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 e.



- ac. After a successful registration, disconnect the 1P RES Diagnostic Connectors.
- ad. Using Electrical Tape secure the 1P RES Connectors to the Vehicle Harness.
- ae. Reinstall the Passenger's side Cowl and Step Covers.

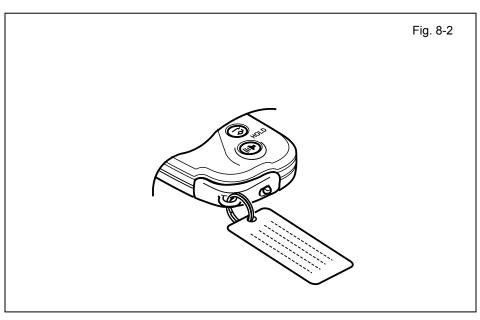


8. Tags and Labels

- 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.



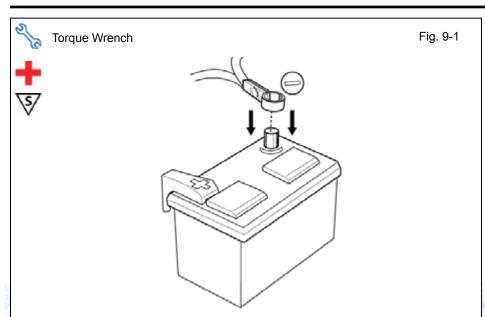
CAUTION: Do not touch the adhesive surface.

g. Attach the Label as shown.



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

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



9. Complete the Installation.

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



Torque: 5.4 N•m (48 in•lbf)



CAUTION: Do not touch the Positive Battery Terminal.

- b. Clean up and Remove trash.
- c. Reinstall the Battery cover and Spare tire cover.
- d. Sealed in its protective bag, place the Owner's Guide and Quick Reference Guide in the Glove box.

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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: 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)		

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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Vehicle Function Checks

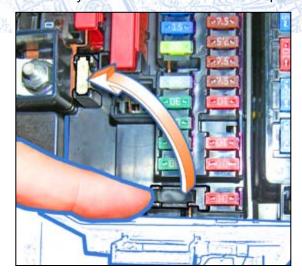
LEXUS

		Function		Function
En	ter the	Vehicle		
		Dome/Courtesy Lights		Steering Wheel Column Adjusts Without Interference
		Horn		
Sta	art the \	/ehicle		
		Gauges		Panel / Switch Illumination
		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 Vehicle the
		Cruise Control Light (if equipped)		TPMS light will illuminate for a few seconds and go off when IG is turned on.
Us	sing a N	firror 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)		
St	op the	Engine, Place the Vehicle's IG in the ON posit	ion.	
		Hazard Lights		Turn Signal Lights
		Head Lights		Fog Lights (if equipped)
		High Beams		Accessory Controls/Illumination (if equipped)
		Power Side Mirrors (if equipped)		Convenience Memory Settings (if equipped)
		Power Sliding Door (if equipped)		Rear Sunshade (if equipped)

The state of the s	Function	Function
No. of the	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)	HVAC
	Steering Wheel Audio Control (if equipped)	Rear Window Defogger (if equipped)
المراضل	Front Windshield Defogger (if equipped)	Accessory Power Socket (if equipped)
	Side Mirror Defogger (if equipped)	Heated/Vented Seats (if equipped)
	Massage Seats (if equipped)	Passenger Air Bag Switch (if equipped)
	Glove Box Light (if equipped)	Passenger Foot Lamp
	Power Locks (if equipped)	Power Windows (if equipped)
	Power Seats (if equipped)	Key Sensor Buzzer

Remove the short pin after Function check.

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



Finish reassembling the Vehicle.

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

