Part Number: PT398-48170 (TVIP V2 & TVIP V5 (RS3200 PLUS))

NOTE

The following two (2) sets of instructions have been consolidated into one document for ASG visibility. Please refer to AMS for individual documents as needed.

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MY17 Highlander, Highlander HV (GBS) (TVIP V5, RS3200 PLUS)..... 24-52

Issue: A 06/05/2019

Part #: PT398-48170

Conflict

Do not install into Vehicles without Factory Alarm.

Recommended Sequence of Application

Item#	Quantity	Description
1	1	V4 RES
2	1	V2 GBS

Kit Contents

Item#	Quantity	Description
1	1	V2 Wire Harness
2	1	GBS ECU Mounting Bracket

Hardware Bag Contents

Item#	Quantity	Description
1	1	GBS ECU 08190-0C820
2	1	GBS ECU Bracket
3	15	Wire Tie
4	1	Foam Tape
5	1	GBS Microphone 08192-6C810
6	2	V2 Window Label English 08192-009A0
7	2	V2 Window Label Spanish PT398-42091
8	1	V2 Owner's Guide

Additional Items Required For Installation

Item#	Quantity	Description

Recommended Tools

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Blankets, Parts Boxes	Blankets, Parts Boxes
Special Tools	
Striker Tool	CAD-E IADS P/N ALL 02-016-01
Installation Tools	
Screwdriver	#2 Phillips
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Side Cutters	
Socket	10mm, extension
Torque Wrench	Battery: 48 in•lbf (5.4 N•m), ECU: 71 in•lbf (8 N•m)
Tape	Clear
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

Legend

STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.

OPERATOR SAFETY: Use caution to avoid risk of injury.

CAUTION: : A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.

TOOLS AND EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.

REVISION MARK: This mark highlights a change in installation with respect to previous issue.

SAFETY TORQUE: This mark indicates that torque is related to safety.

WIRE TIE LOCATION: Wire Tie location number.

PREVIOUS WIRE TIE LOCATION: This mark indicates a previously installed Wire Tie.

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.)

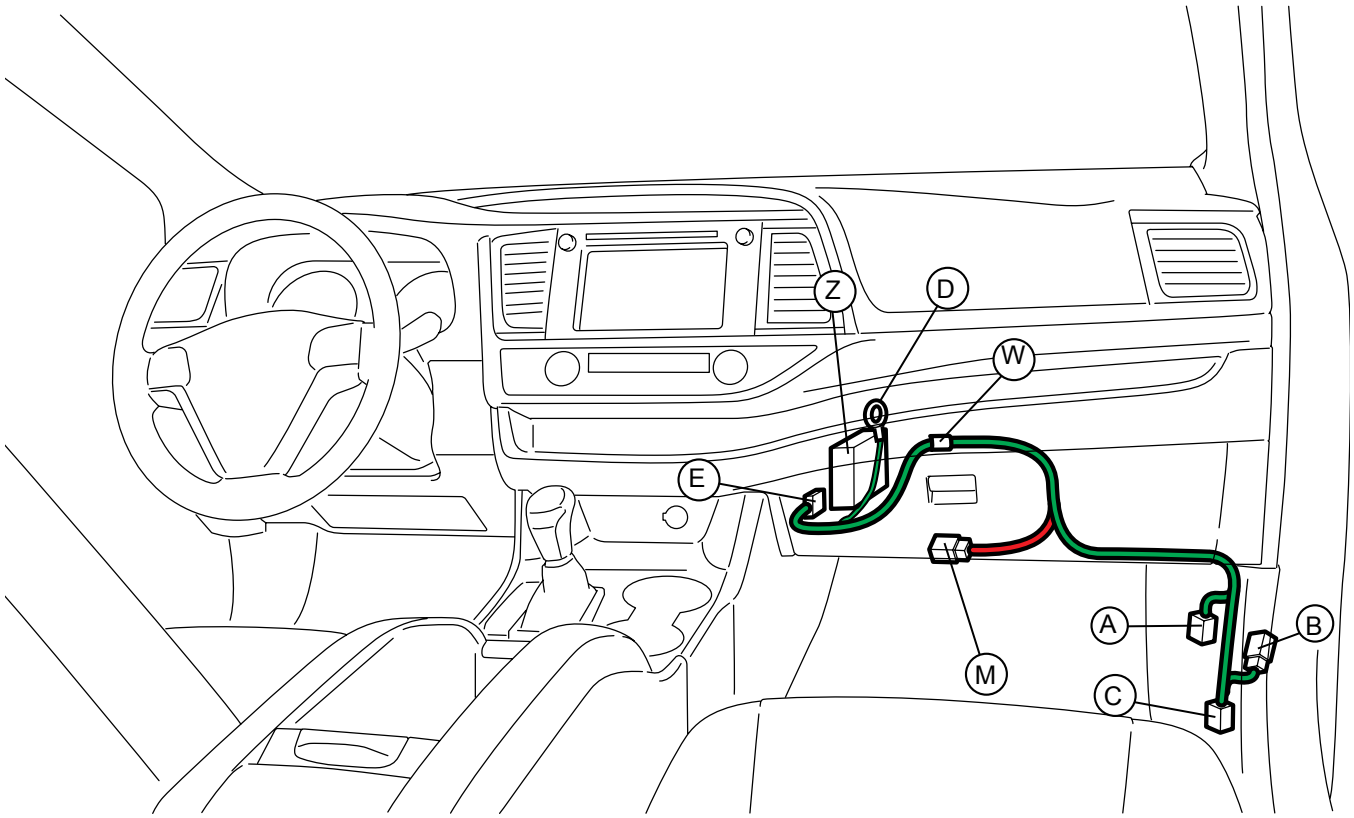
Please see your Toyota dealer for a copy of this document.

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TOYOTA Highlander GBS

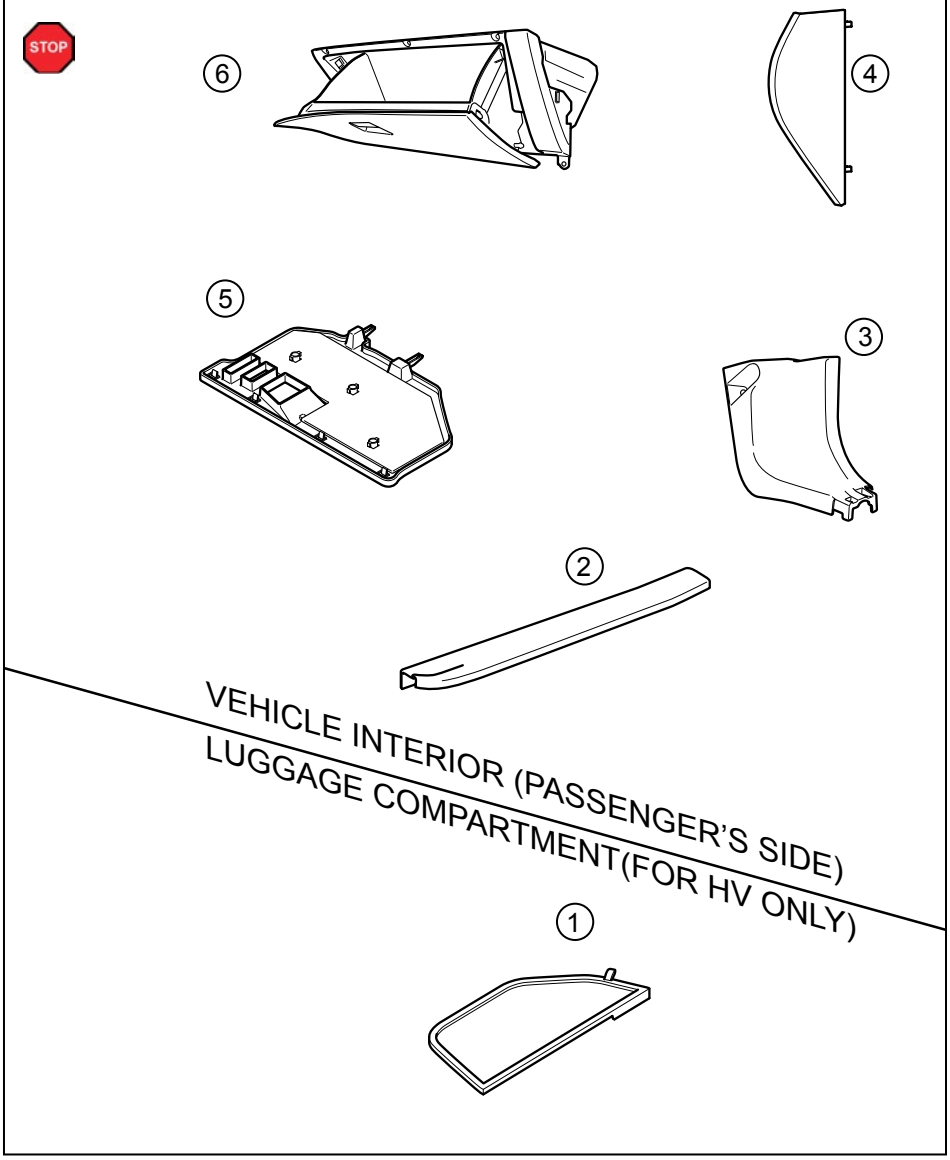
Wire Harness Outline*



TVIP	Vehicle	Description
A		8P White
B		18P Gray
C		18P Gray
D	–	Ground Terminal
E	–	8P White *(for GBS ECU)*
M	–	2P White *(for GBS Mic)*
W	–	White Tape Marker
Z	–	GBS ECU

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

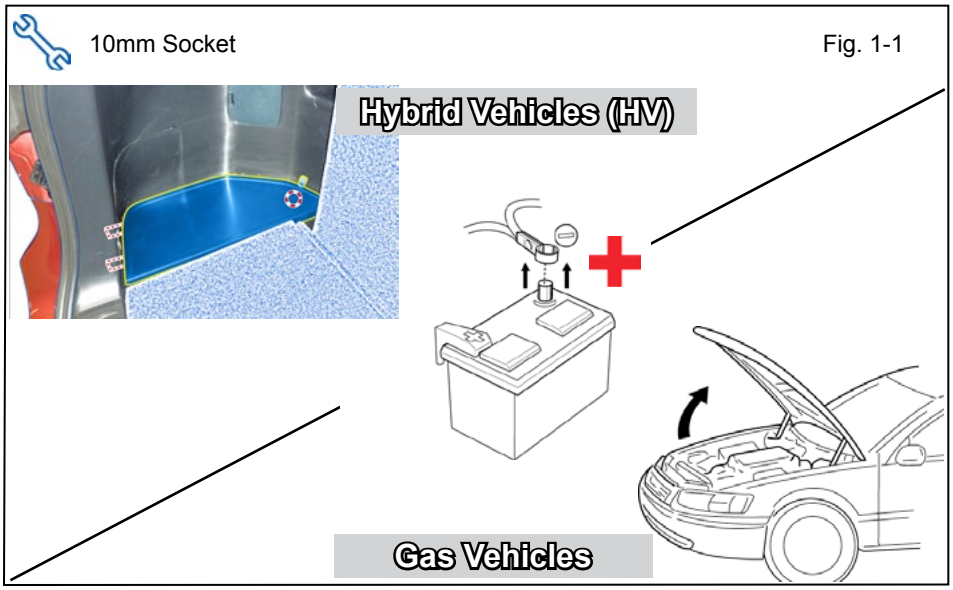
Disassembly Overview



1	DS Luggage Side Cover *(for HV ONLY)*
2	PS Step Cover
3	PS Cowl Cover
4	PS Dash Side Cover
5	Glove Box Under Cover
6	Glove Box

STOP Disconnect all Corresponding Connectors.

10mm Socket Fig. 1-1



1. Vehicle Disassembly.

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

- **For Hybrid Vehicles the battery is in the Luggage Compartment.**

b. Remove the DS Luggage Side Cover (for HV only).

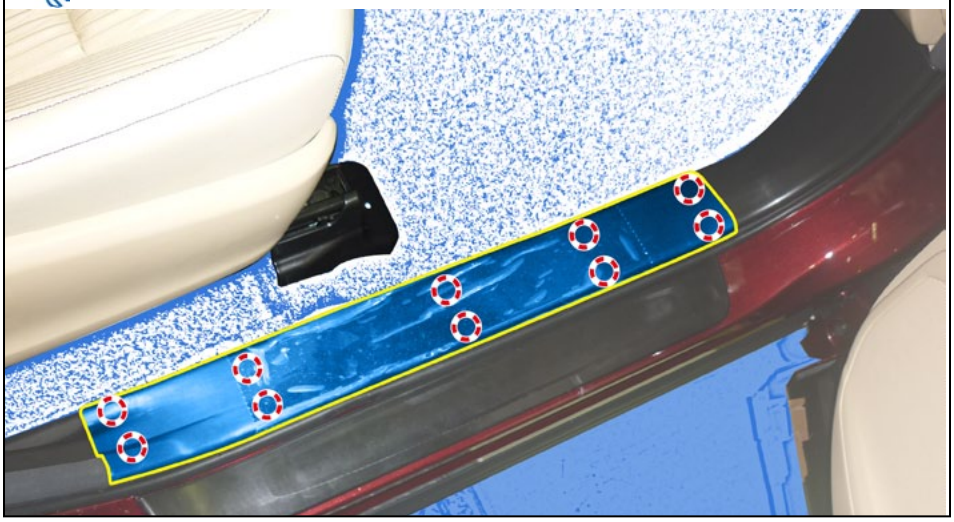
- **For Gas Vehicles the battery is in the Engine Compartment.**

c. Disconnect the Negative Battery Terminal.

- Note the Battery Cable Position as it will be re-installed in the same position.

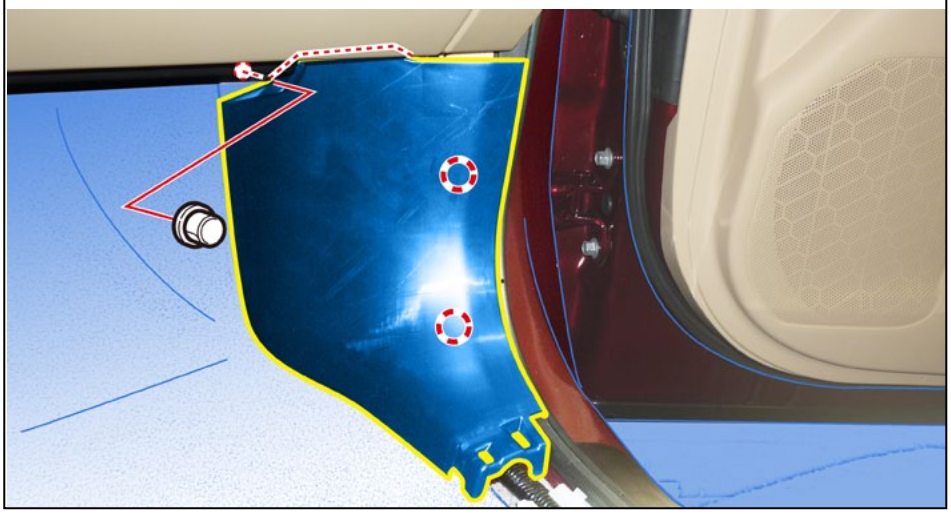
CAUTION: Do not touch the Positive Terminal.

Nylon Panel Removal Tool Fig. 1-2



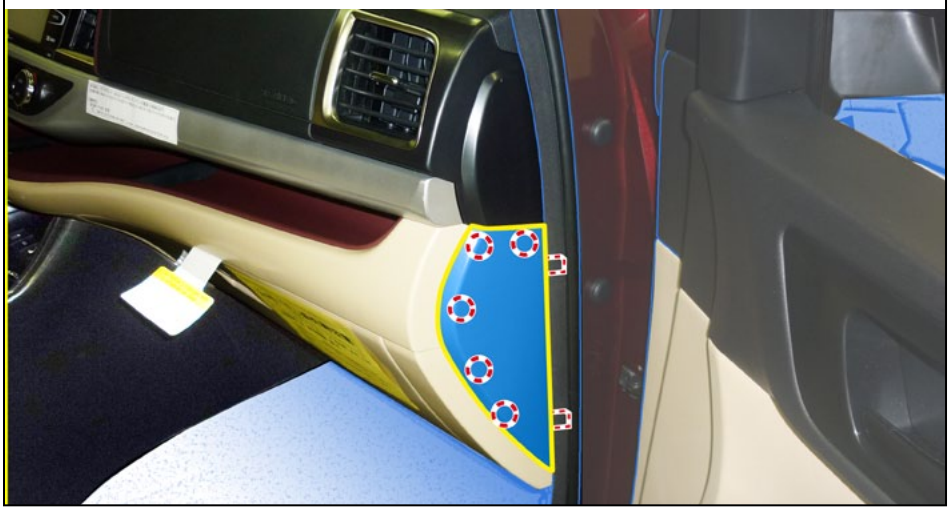
d. Remove the Passenger's Side Step Cover.

Nylon Panel Removal Tool Fig. 1-3



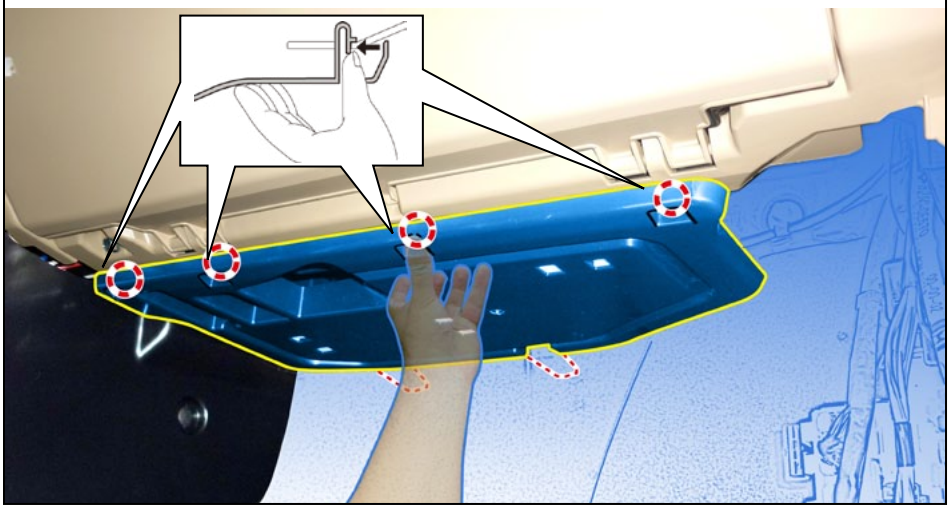
e. Remove the Passenger's Cowl Cover.
   - Remove 1 Nut.

Nylon Panel Removal Tool Fig. 1-4



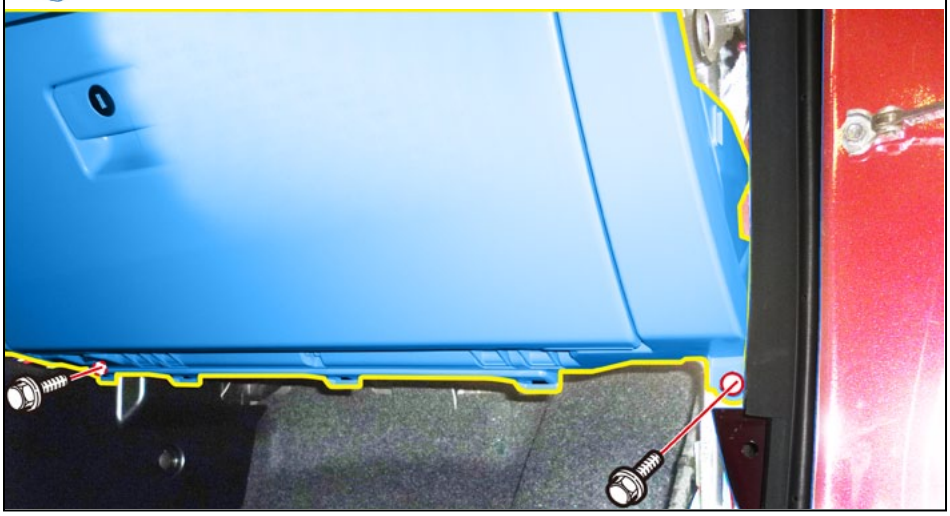
f. Remove the Passenger's Side Dash Cover.

Nylon Panel Removal Tool Fig. 1-5



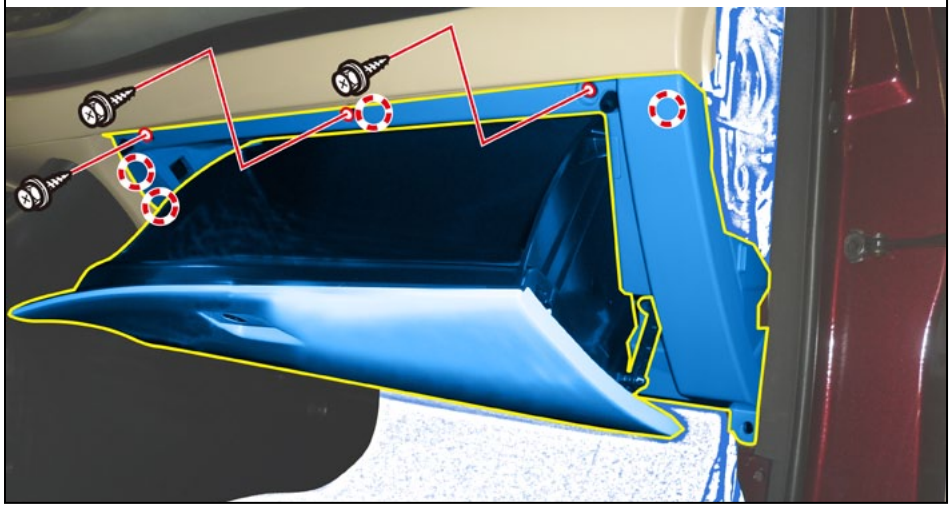
g. Remove the Glove Box Under Cover.

10mm Socket, Extension Fig. 1-6



h. Remove 2 Bolts from the bottom of the Glove Box.

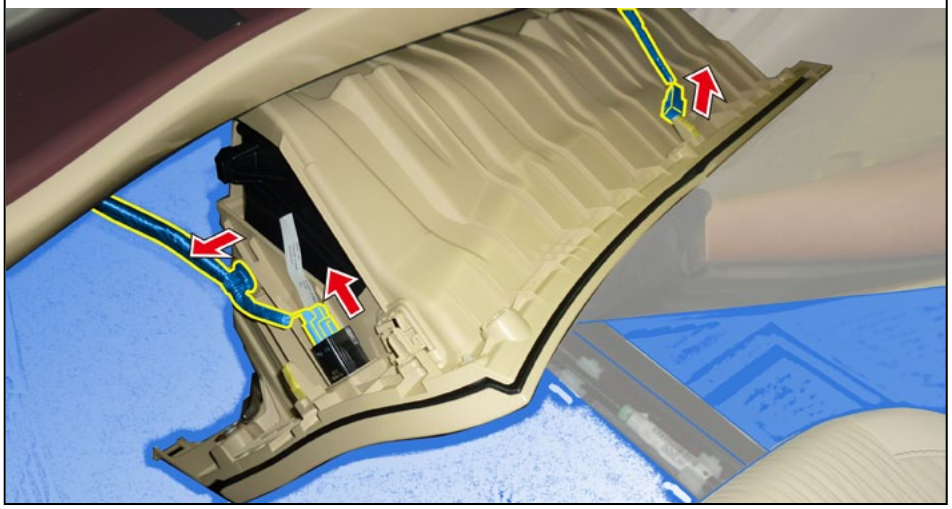
Phillips Screwdriver Fig. 1-7



i. Open the Glove Box.

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

Needle Nose Pliers Fig. 1-8

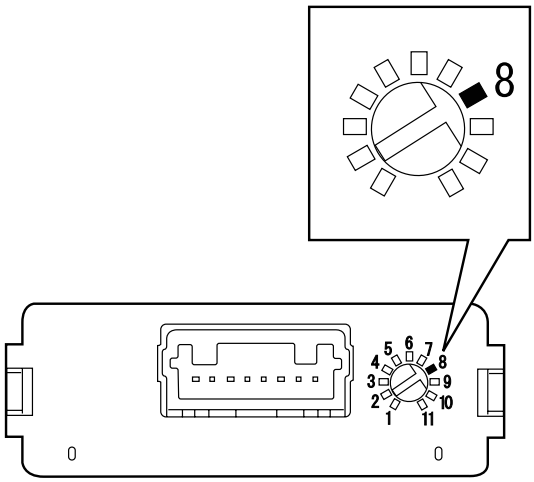


k. Disconnect the Vehicle's Connector.

l. Remove the Vehicle clamp from the Glove Box

m. Remove the Glove Box.

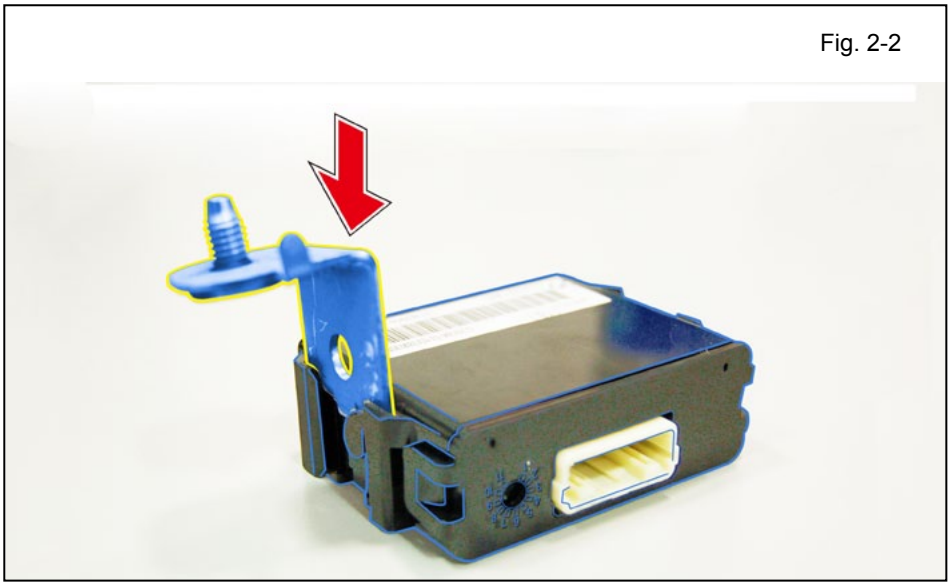
Flat blade Jeweler's Screwdriver Fig. 2-1



2. V2 ECU Preparation.

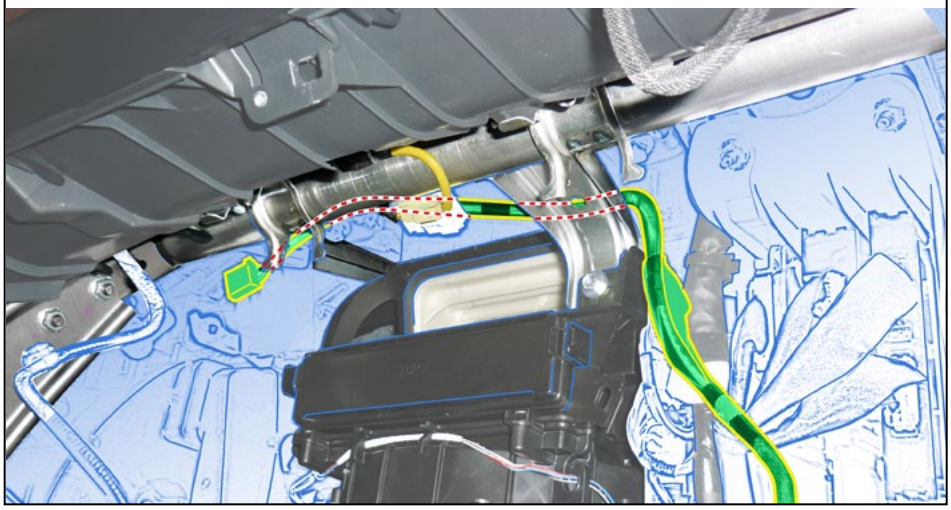
a. Set the GBS Sensitivity Value to "8."

Fig. 2-2



b. Attach the GBS ECU Bracket to the GBS ECU.

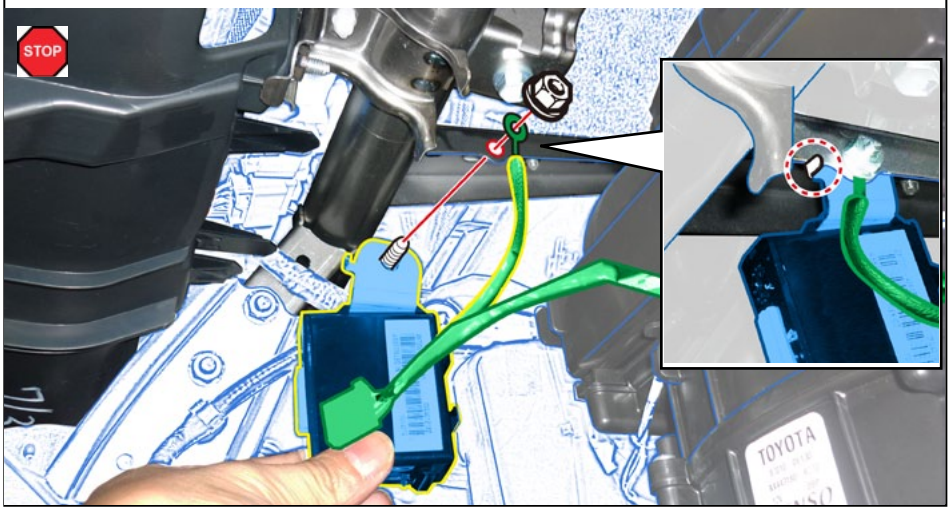
Fig. 3-1



3. V2 Harness and GBS ECU Installation.

a. Route the V2 Harness 8P Connector behind the Vehicle Brace.

10mm Socket, Torque Wrench Fig. 3-2

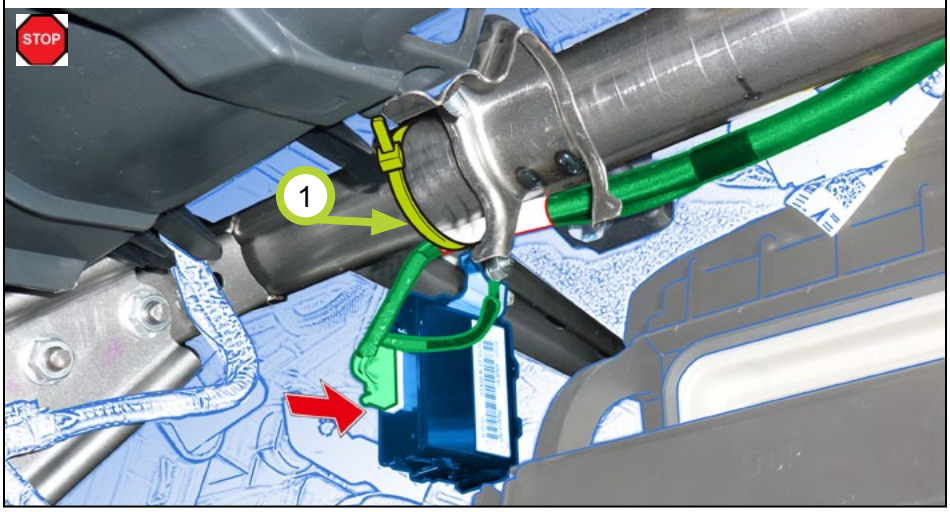


b. Install the GBS ECU and the V2 Ground Wire Terminal using the supplied Nut.

Torque: Tighten the Nut to 8 N•m (71 in•lbf).

NOTE: Make sure the Guide Pin is seated correctly.

Side Cutters Fig. 3-3

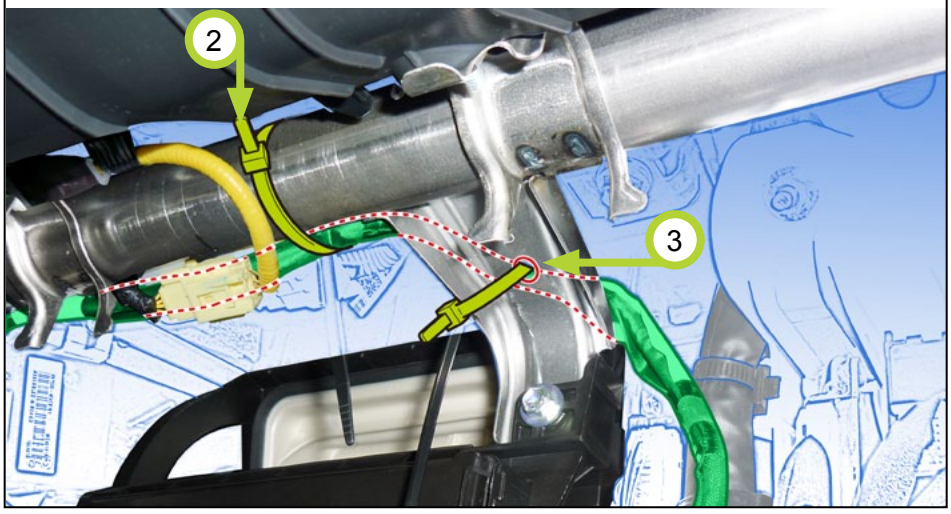


c. Plug in the V2 White 8P Connector to the GBS ECU.

d. Secure the V2 Harness White Tape Marker to the Vehicle IP Reinforcement using 1 Wire Tie (#1). (Fig. 3-3)

NOTE: Make sure that the V2 Harness is routed behind the Vehicle Brace.

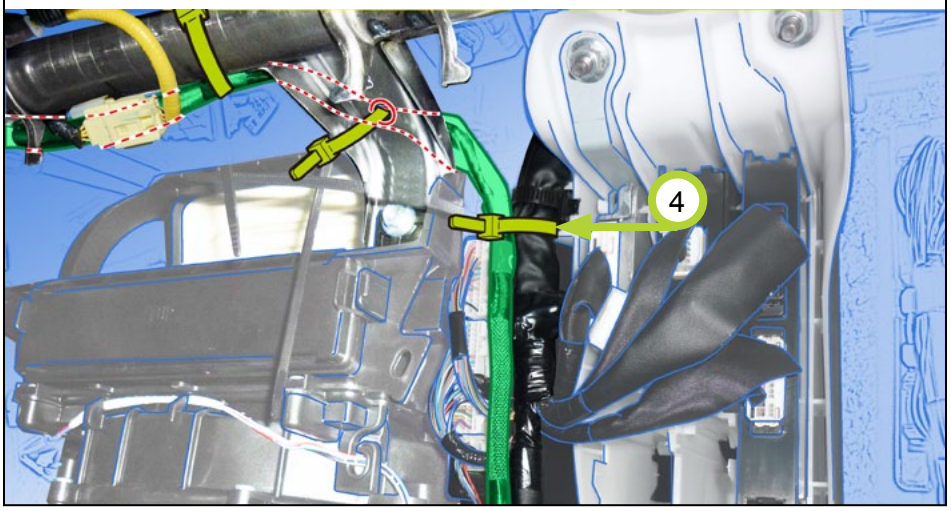
Side Cutters Fig. 3-4



e. Secure the V2 Harness to the Vehicle IP Reinforcement with 1 Wire Tie (#2). (Fig. 3-4)

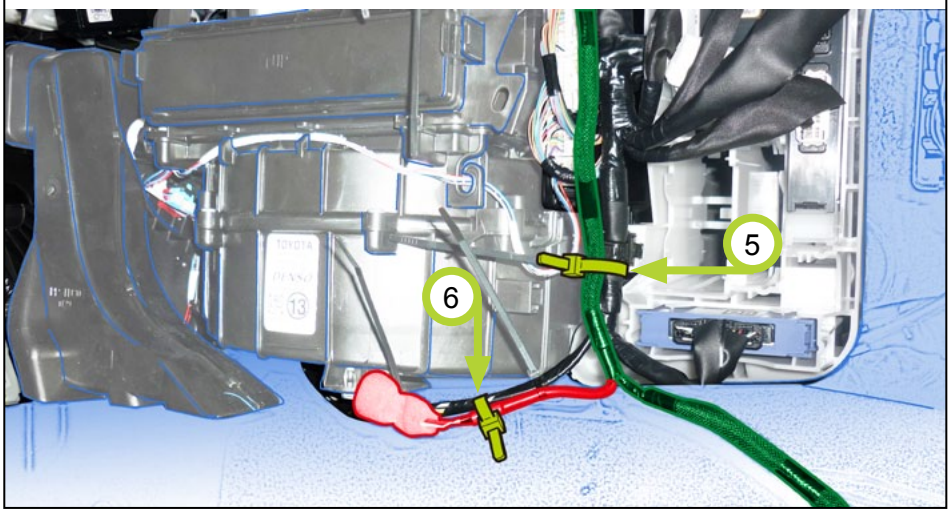
f. Secure the V2 Harness to the Vehicle Brace with 1 Wire Tie (#3). (Fig. 3-4)

Side Cutters Fig. 3-5



g. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie (#4). (Fig. 3-5)

Side Cutters Fig. 3-6



h. Secure the V2 Harness to the Vehicle Harness using 2 Wire Ties (#5, #6). (Fig. 3-6)

Side Cutters

Fig. 3-7

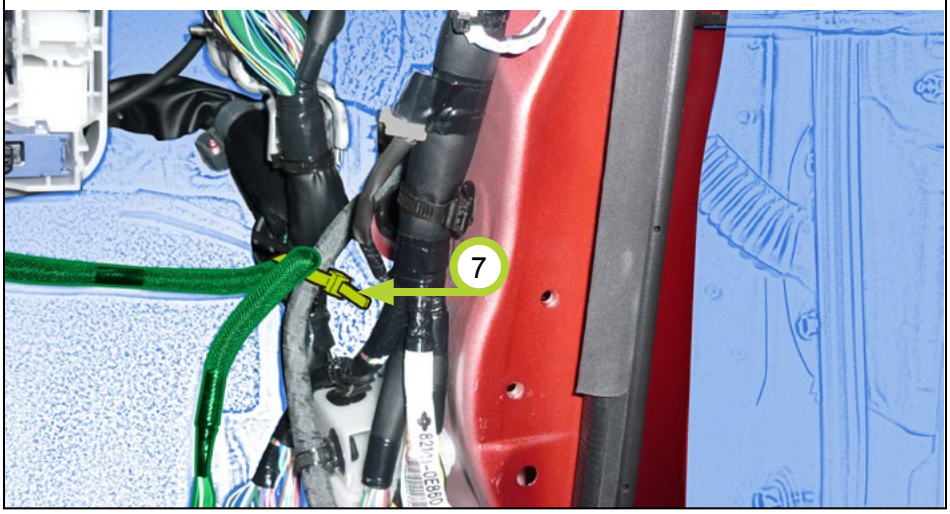
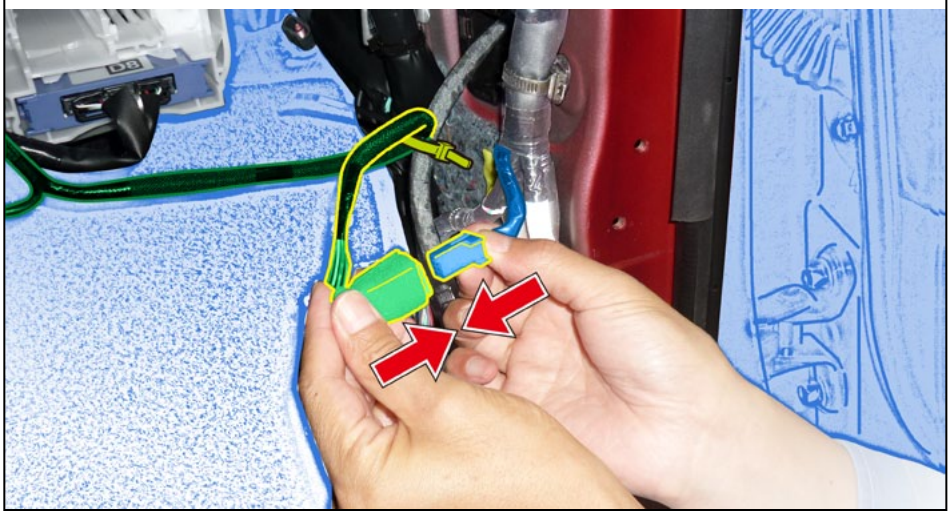


Fig. 3-8



Fig. 3-9



V2 ONLY

NOTE: If V4 (RES) is installed in the vehicle, skip to page 12 for V2/V4 Add-On (steps t-ag).

i. Route the V2 Harness toward the Passenger side Cowl area.

j. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie (#7). (Fig. 3-7)

k. Remove the Tape securing the Vehicle 8P Pre-Connector.

l. Connect the Vehicle White 8P Pre-Connector to the V2 White 8P Connector.

Side Cutters

Fig. 3-10

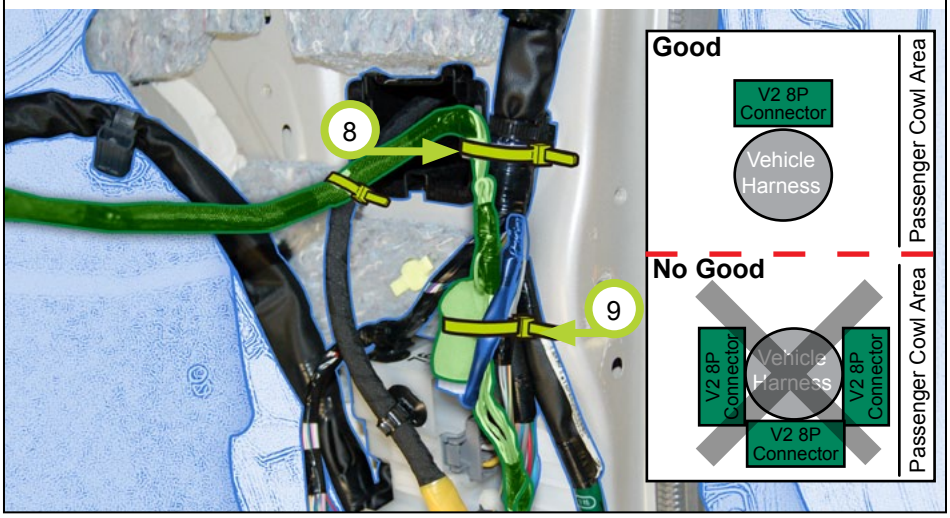


Fig. 3-11

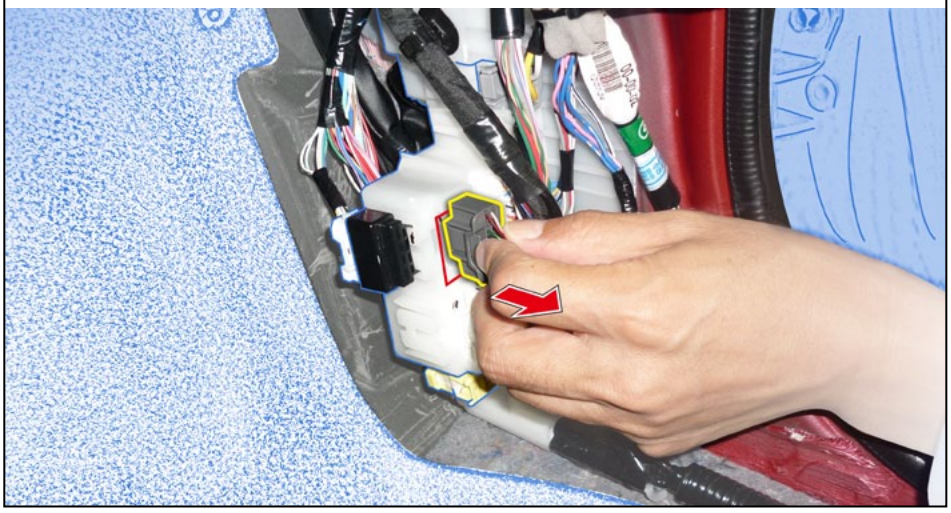
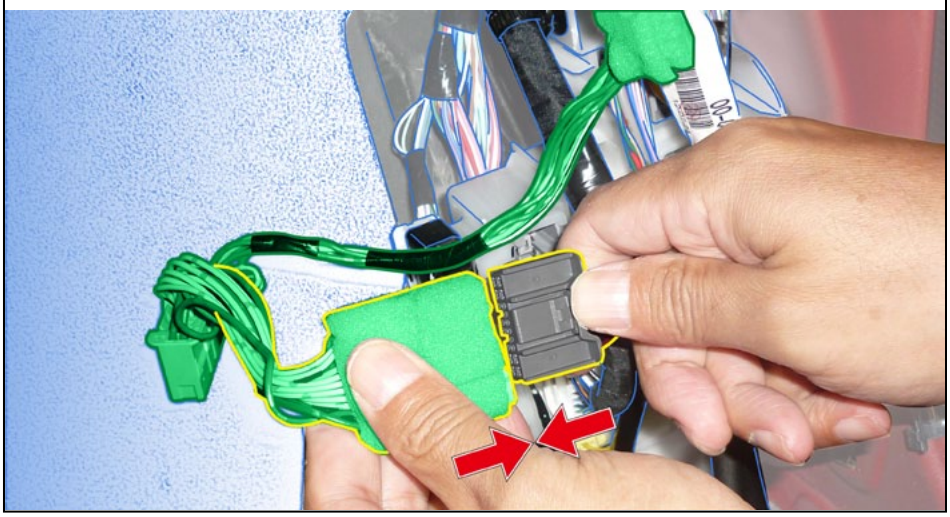


Fig. 3-12



V2 ONLY

m. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie (#8). (Fig. 3-10)

n. Secure the V2 8P Connector to the Vehicle Harness using 1 Wire Tie (#9). (Fig. 3-10)

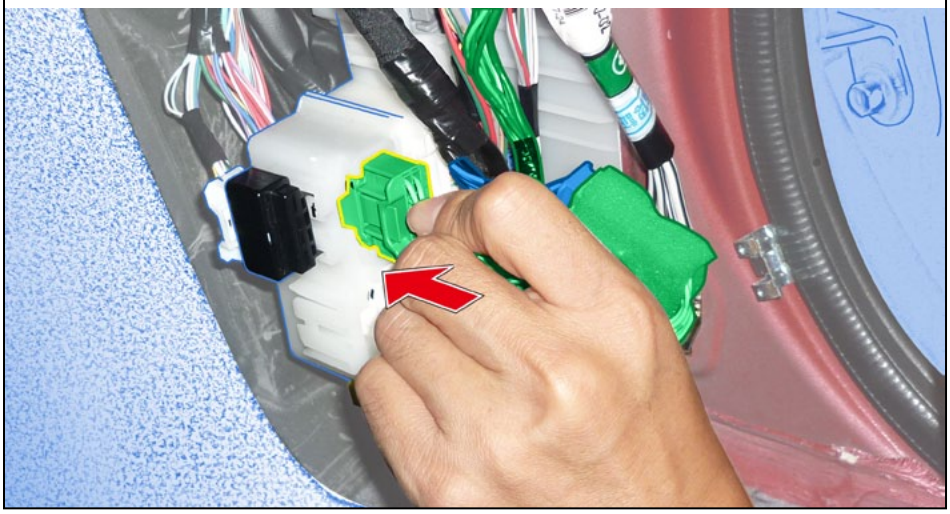
NOTE: Rotate the ratchet end on Wire Ties (#8, #9) toward the rear of the Vehicle.

NOTE: Place the 8P Connectors in reference to the illustration.

o. Disconnect the Vehicle's Gray 18P Connector from the Connector Block.

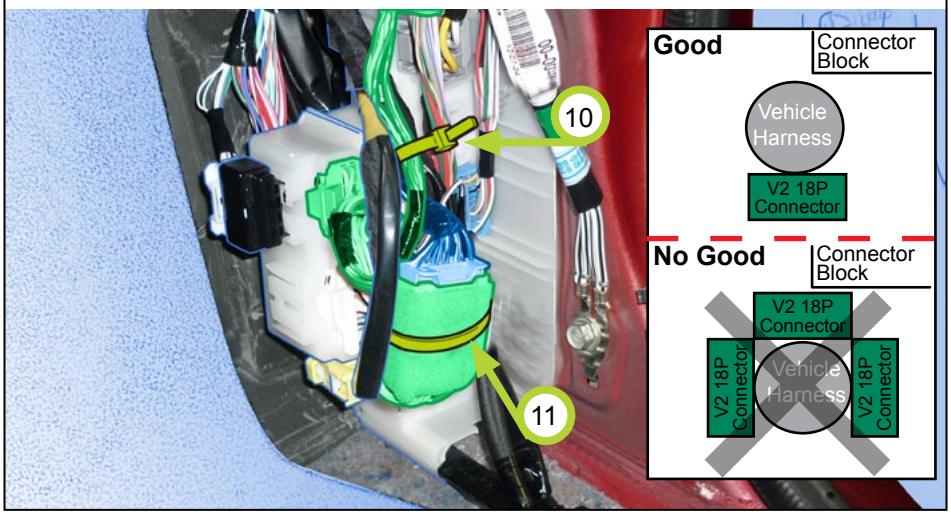
p. Connect the Vehicle's Gray 18P Connector to the V2 18P Connector.

Fig. 3-13



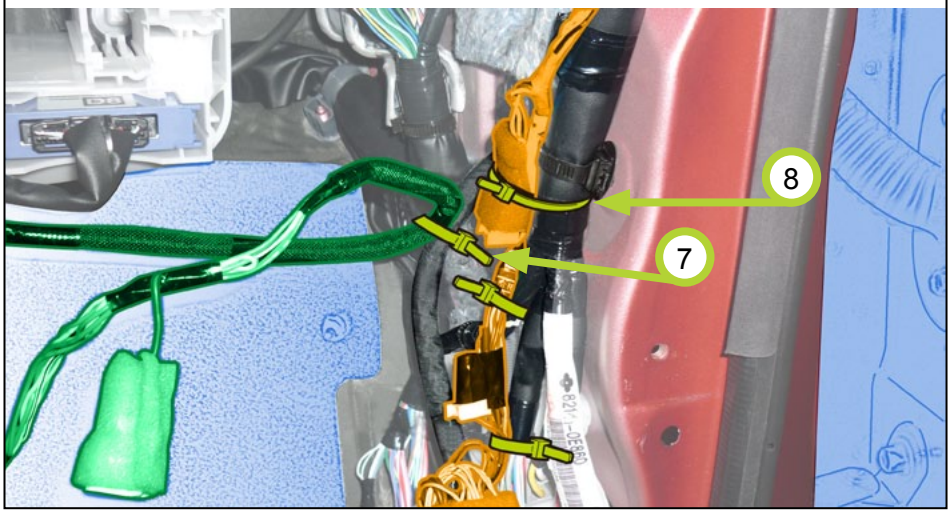
Side Cutters

Fig. 3-14



Side Cutters

Fig. 3-15



V2 ONLY

q. Plug in the V2 Gray 18P Connector to the Vehicle Connector Block.

r. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie (#10). (Fig. 3-14)

s. Secure the 18P Connectors to the Vehicle Harness with 1 Wire Tie (#11). (Fig. 3-14)

NOTE: Rotate the ratchet end on Wire Ties (#10, #11) toward the rear of the Vehicle.

CAUTION: Do not secure to the AirBag Harness.

NOTE: Place the 18P Connector in reference to the illustration.

NOTE: Skip to Section 4 (p. 16) for Microphone Installation.

V2/V4 Add-on ONLY

t. Route the V2 Harness toward the Passenger side Cowl area.

u. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie (#7). (Fig. 3-15)

v. Secure the V4 8P Connector to the Vehicle Harness with 1 Wire Tie (#8). (Fig. 3-15)

NOTE: Rotate the ratchet end on Wire Ties (#7, #8) toward the rear of the Vehicle.

Fig. 3-16

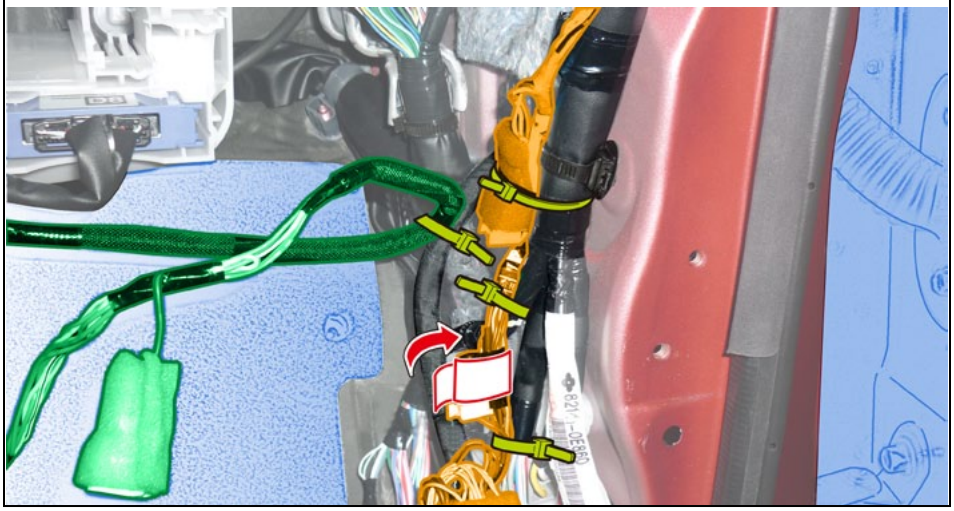
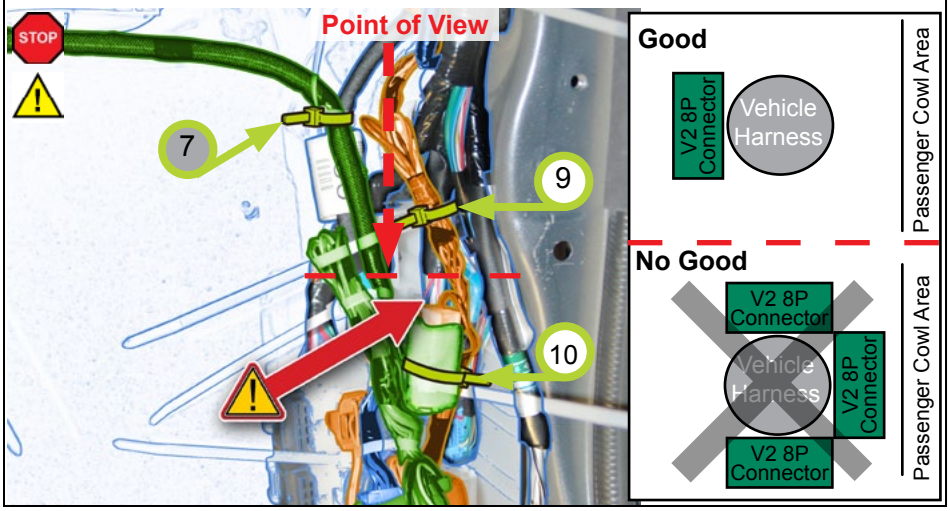


Fig. 3-17



Side Cutters

Fig. 3-18



V2/V4 Add-on ONLY

w. Remove the Tape securing the V4 Harness 8P Connector.

x. Connect the V4 Harness 8P Connector to the V2 White 8P Connector.

y. Secure the V4 Harness to the Vehicle Harness using 1 Wire Tie (#9). (Fig. 3-18)

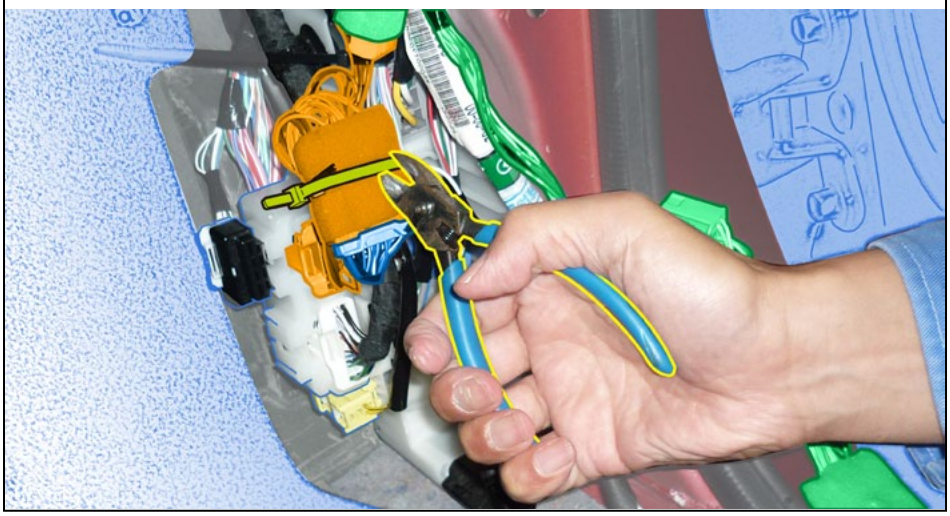
z. Secure the V2 8P Connector to the Vehicle Harness using 1 Wire Tie (#10). (Fig. 3-18)

CAUTION: Reduce stress on Wire Tie (#10) and the 8P Connector's wire as shown.

NOTE: Rotate the ratchet end on Wire Ties (#9, #10) toward the rear of the Vehicle.

NOTE: Place the 8P Connectors in reference to the illustration.

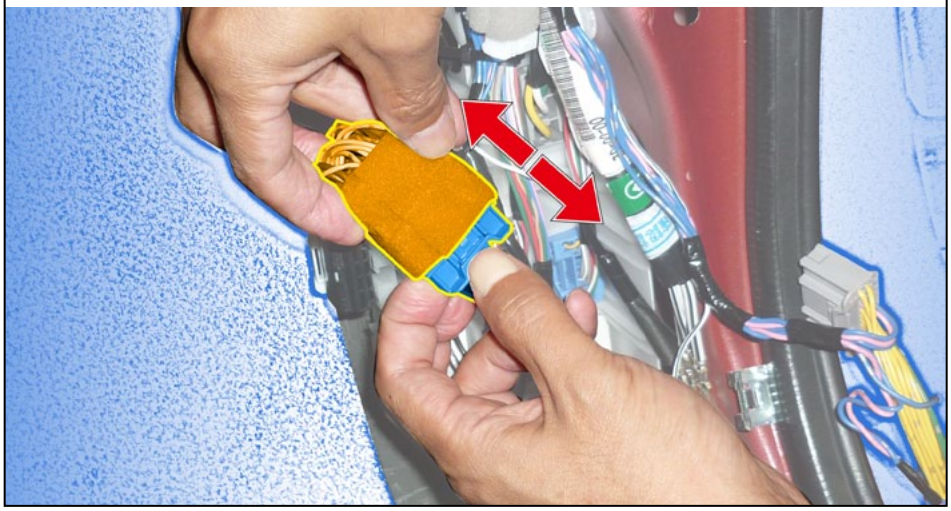
Side Cutters Fig. 3-19



V2/V4 Add-on ONLY

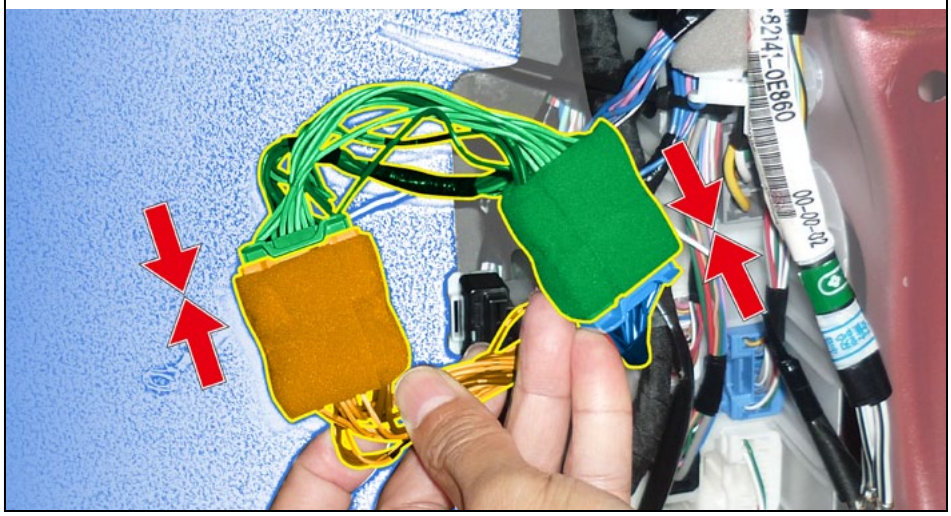
aa. Cut the Wire Tie securing the V4 18P Connector.

Fig. 3-20



ab. Disconnect the Vehicle's 18P Gray Connector from the V4 18P Connector.

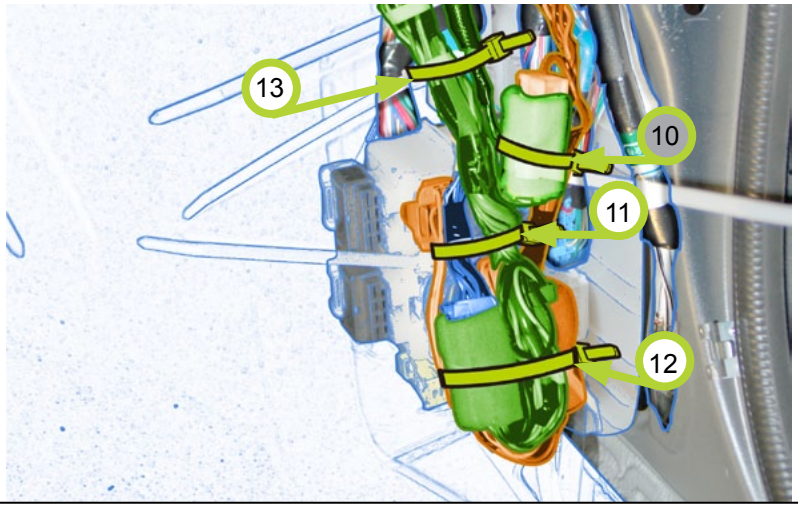
Fig. 3-21



ac. Connect the V2 Gray 18P Connector to the V4 Gray 18P Connector.

ad. Connect the Vehicle's Gray 18P Connector to the V2 Gray 18P Connector.

Side Cutters Fig. 3-22



ae. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie (#11). (Fig. 3-22)

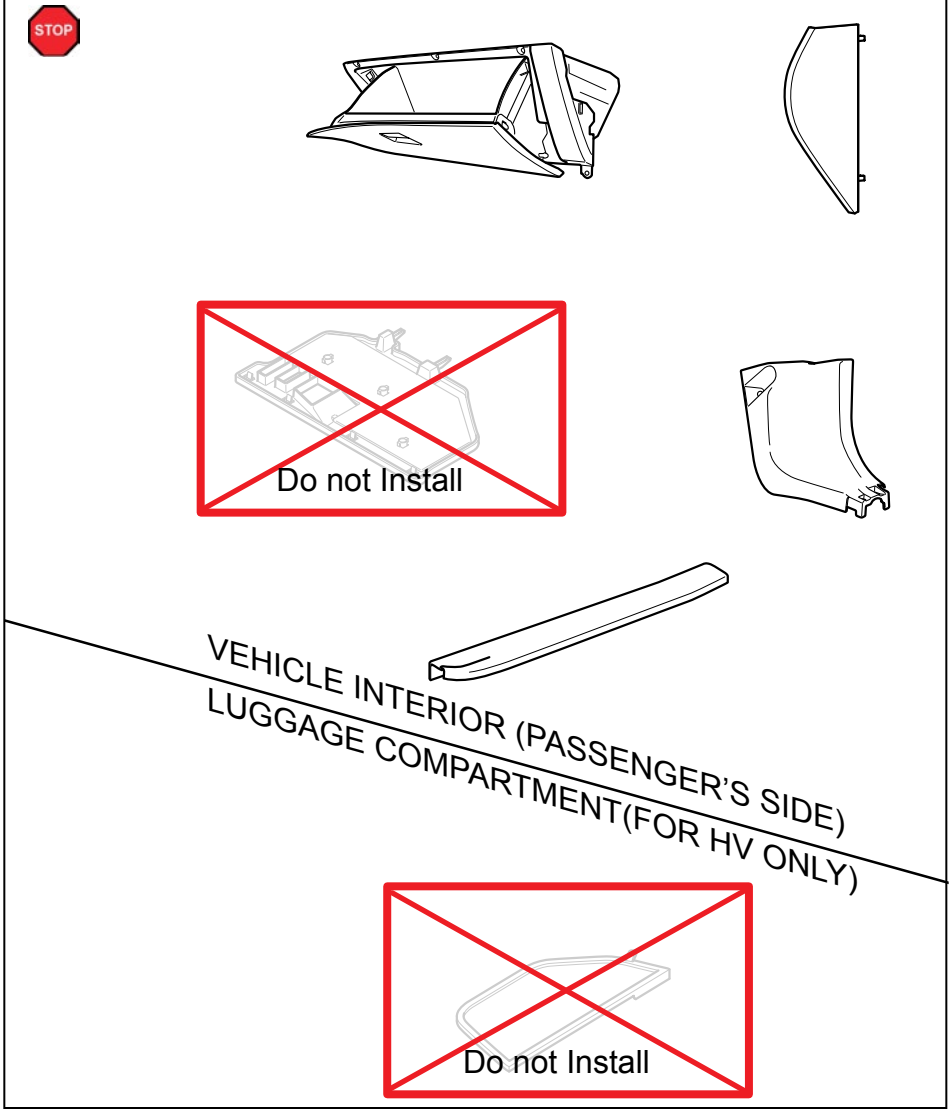
af. Secure the V4 & V2 Harness to the Vehicle Harness using 1 Wire Tie (#12). (Fig. 3-22)

CAUTION: Do not secure to the Airbag Harness.

ag. Secure the V4 18P Connector to the V2 18P Connector and Vehicle Harness using 1 Wire Tie (#13). (Fig. 3-22)

NOTE: Rotate the ratchet end on Wire Ties (#11, #12, #13) away from the surrounding Vehicle Harness and toward the rear of the Vehicle.

10mm Socket, Extension, Phillips Screwdriver Fig. 4-1



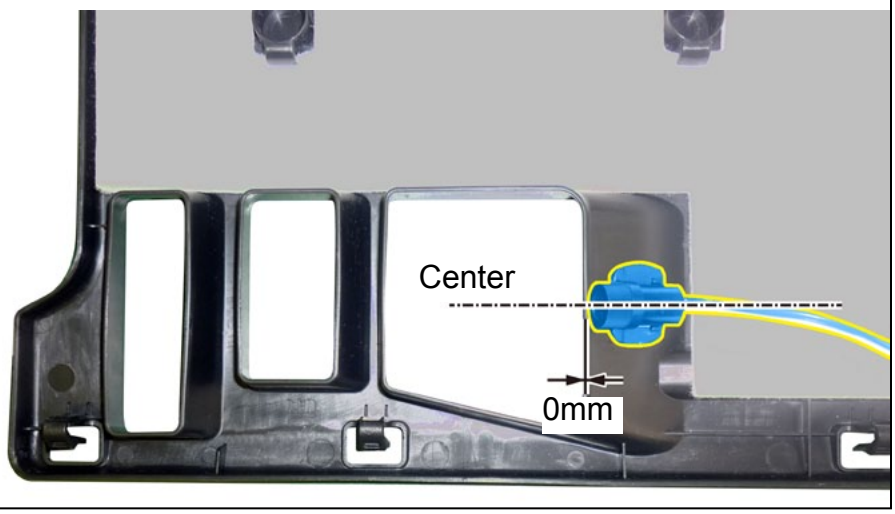
4. Microphone Installation.

a. Partially reassemble the Vehicle.

VERIFY: That all Connectors are plugged in.

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

Fig. 4-2

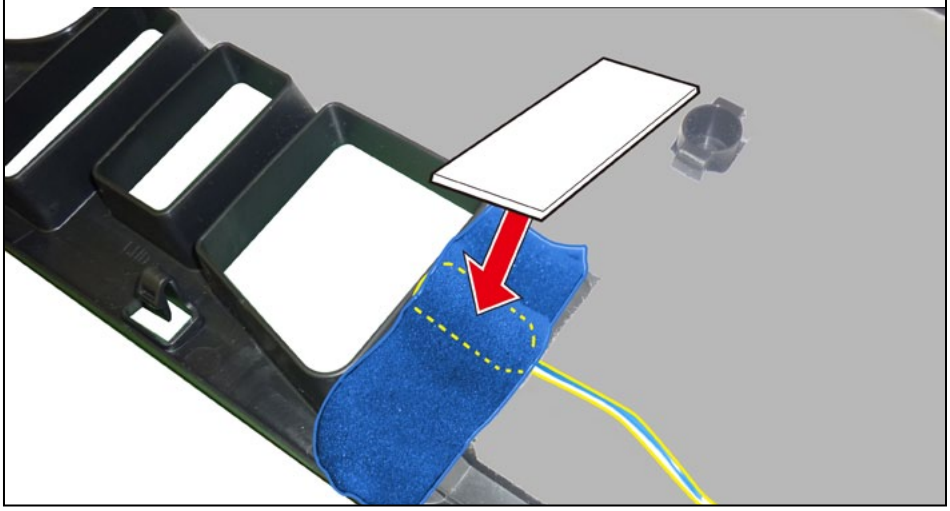


b. Using the VDC approved cleaner and Cleaning Method, clean the area indicated on the backside of the Glove Box Under Cover.

c. Attach the GBS Microphone to the backside of the Glove Box Under Cover as shown.

NOTE: Make sure to align GBS Microphone to the edge of the Glove Box Under Cover opening.

Fig. 4-3



d. Apply 1 Foam Tape to the GBS Microphone as shown.

NOTE: Make sure not to cover the Microphone's opening with the Foam Tape.

Fig. 4-4



e. Connect the V2 White 2P Connector to the GBS Microphone's Connector.

Fig. 4-5



f. Reinstall the Glove Box Under Cover.

5. Complete the Installation.

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

a. Use Household Glass Cleaner to clean the inside of the Front Door Window.

b. Use Clear Tape to lift the Label off its protective backing.

CAUTION: Do not touch the adhesive surface.

c. Attach the Label as shown.

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

REPEAT: Steps 5a-5c on the other Front Door Window.

Fig. 5-1

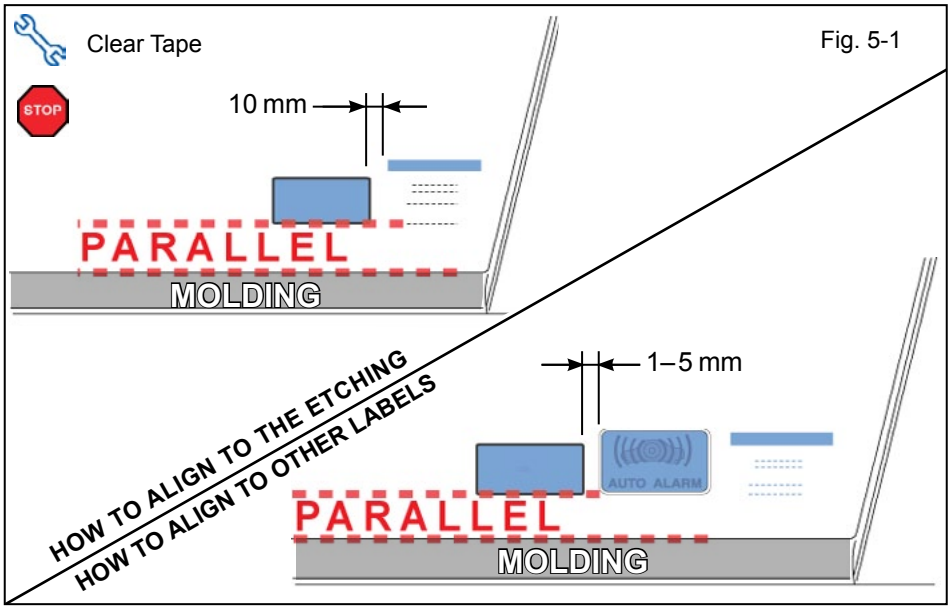


Fig. 5-2



d. Verify that the Short Pin is Installed.

- If not, install now.

- **For Hybrid Vehicles the battery is in the Luggage Compartment.**
- **For Gas Vehicles the battery is in the Engine Compartment.**

e. Position the Negative Battery Cable at the original factory position.

Torque: Tighten the Nut to 48 in•lbf (5.4 N•m).

CAUTION: Do not touch the Positive Terminal.

f. Clean up and Remove trash.

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

Torque Wrench

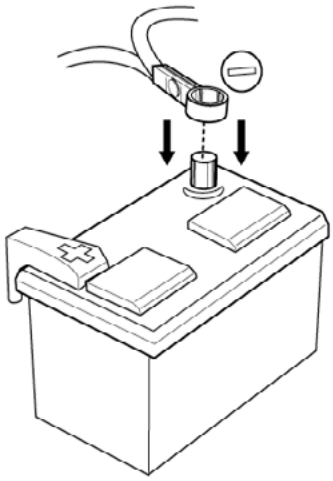


Fig. 5-3

Accessory Function Checks

Roll up all windows, and exit the vehicle with the remote.

Vehicles w/Smart Key: Take out the Smart Key from the Vehicle. Place them 15 ft. (4.5 meters) or more away from the Vehicle.

	Perform	Look For
1	Lock the doors to start the system's arming process.	The turn signal lights flash once. All doors lock. The Security LED lights up.
2	Wait 30 seconds.	Security LED starts flashing; the system is now armed.

Perform the following check in a temperature controlled environment (50°- 90°F)

3	With the tip of a key, or Striker Tool pulled all the way out (PPO only), tap the center of the driver's door windows to trigger the alarm.	The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up.
4	Insert the key into the driver's door key cylinder and turn it toward the back of the vehicle to stop the alarm.	The horn stops sounding. All the lights stop flashing and/ or turn off. The Security LED lights up.

Vehicles w/Smart Key: If the alarm does not trigger during functional verifications the Smart Key might be too close. Move them farther from the vehicle and test the system again.

NOTE: If the alarm still does not trigger during the section test, increase the GBS sensitivity to the next setting and test again.

NOTE: If you do not disarm the system, the alarm will last 20 seconds. It is not necessary to check the alarm duration.

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.)

Vehicle Function Checks

	Function		Function
Enter the Vehicle			
☐	Dome/Courtesy Lights	☐	Horn
Start the Vehicle			
☐	Panel/Switch Illumination	☐	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). *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 TPMS light will illuminate for a few seconds and go off when IG is turned on.*
☐	Air Bag Warning Light *If the warning light remains on, it may indicate a system malfunction.*		
☐	Cruise Control Light (if equipped)		
Using a Mirror 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)	☐	Power Back Door/Hatch (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)
☐	Power Sliding Door (if equipped)	☐	Rear Sunshade (if equipped)

	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)	☐	HVAC
☐	Steering Wheel Audio Control (if equipped)	☐	Rear Window Defogger (if equipped)
☐	Front Windshield Defogger (if equipped)	☐	Accessory Power Socket (if equipped)
☐	Side Mirror Defogger (if equipped)	☐	Heated/Vented Seats (if equipped)
☐	Massage Seats (if equipped)		

☐	Glove Box Light (if equipped)	☐	Trunk or Back Door/Hatch Cancel Switch (if equipped)

☐	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.



NOTE

The following set of instructions is for RS3200 Plus.

Part #: PT398-48170

Conflict

Do not install into Vehicles with Factory Alarm.

Recommended Sequence of Application

Item#	Quantity	Description
1	1	V4 RES
2	1	V5 RS3200 Plus

Kit Contents

Item#	Quantity	Description
1	1	V5 Wire Harness
2	1	GBS ECU Mounting Bracket

Hardware Bag Contents

Item#	Quantity	Description
1	1	GBS ECU 08190-0C8t20
2	1	GBS ECU Bracket
4	1	M6 Nut
5	1	Jumper Connector
6	15	Wire Tie
7	1	Foam Tape
8	2	GBS Microphone 08192-6C810
9	2	V5 Window Label English 00107-VIPWS
10	2	Window Label Spanish PT398-48142-AA
11	1	V5 Owner's Guide

Additional Items Required For Installation

Item#	Quantity	Description

Recommended Tools

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Blankets, Parts Boxes	Blankets, Parts Boxes
Special Tools	
Striker Tool	CAD-E IADS P/N ALL 02-016-01
Techstream	Use latest version on TIS (Do not use Techstream Lite)
Installation Tools	
Screwdriver	#2 Phillips
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Side Cutters	
Socket	10mm, extension
Torque Wrench	Battery: 48 in•lbf (5.4 N•m), ECU: 71 in•lbf (8 N•m)
Tape	Clear
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

Legend

STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.

OPERATOR SAFETY: Use caution to avoid risk of injury.

CAUTION: : A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.

TOOLS AND EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.

REVISION MARK: This mark highlights a change in installation with respect to previous issue.

SAFETY TORQUE: This mark indicates that torque is related to safety.

WIRE TIE LOCATION: Wire Tie location number.

PREVIOUS WIRE TIE LOCATION: This mark indicates a previously installed Wire Tie.

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.)

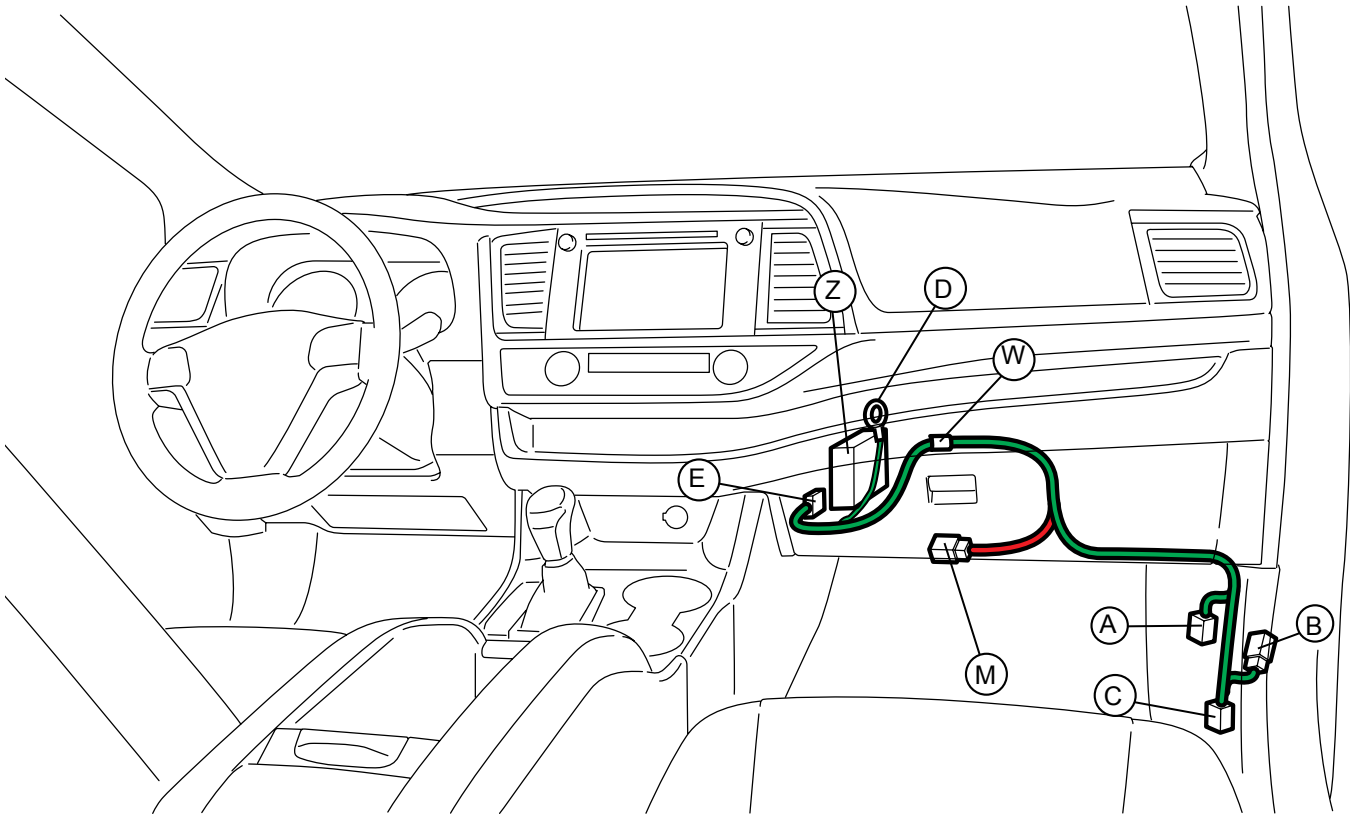
Please see your Toyota dealer for a copy of this document.

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TOYOTA Highlander RS3200+

Wire Harness Outline*

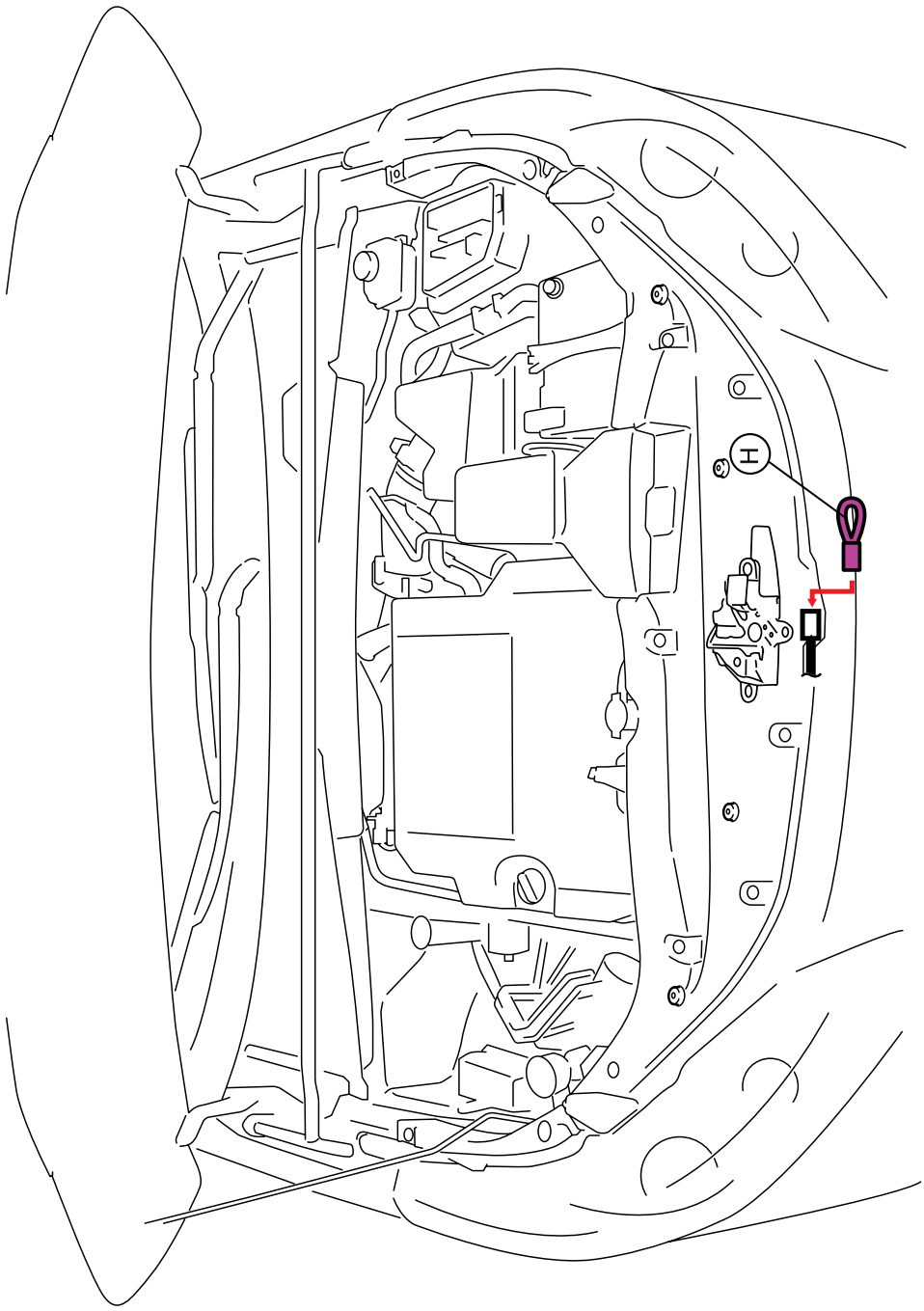


TVIP	Vehicle	Description
A		8P White
B		18P Gray
C		18P Gray
D	—	Ground Terminal
E	—	8P White *(for GBS ECU)*
M	—	2P White *(for GBS MIC)*
W	—	White Tape Marker
Z	—	GBS ECU

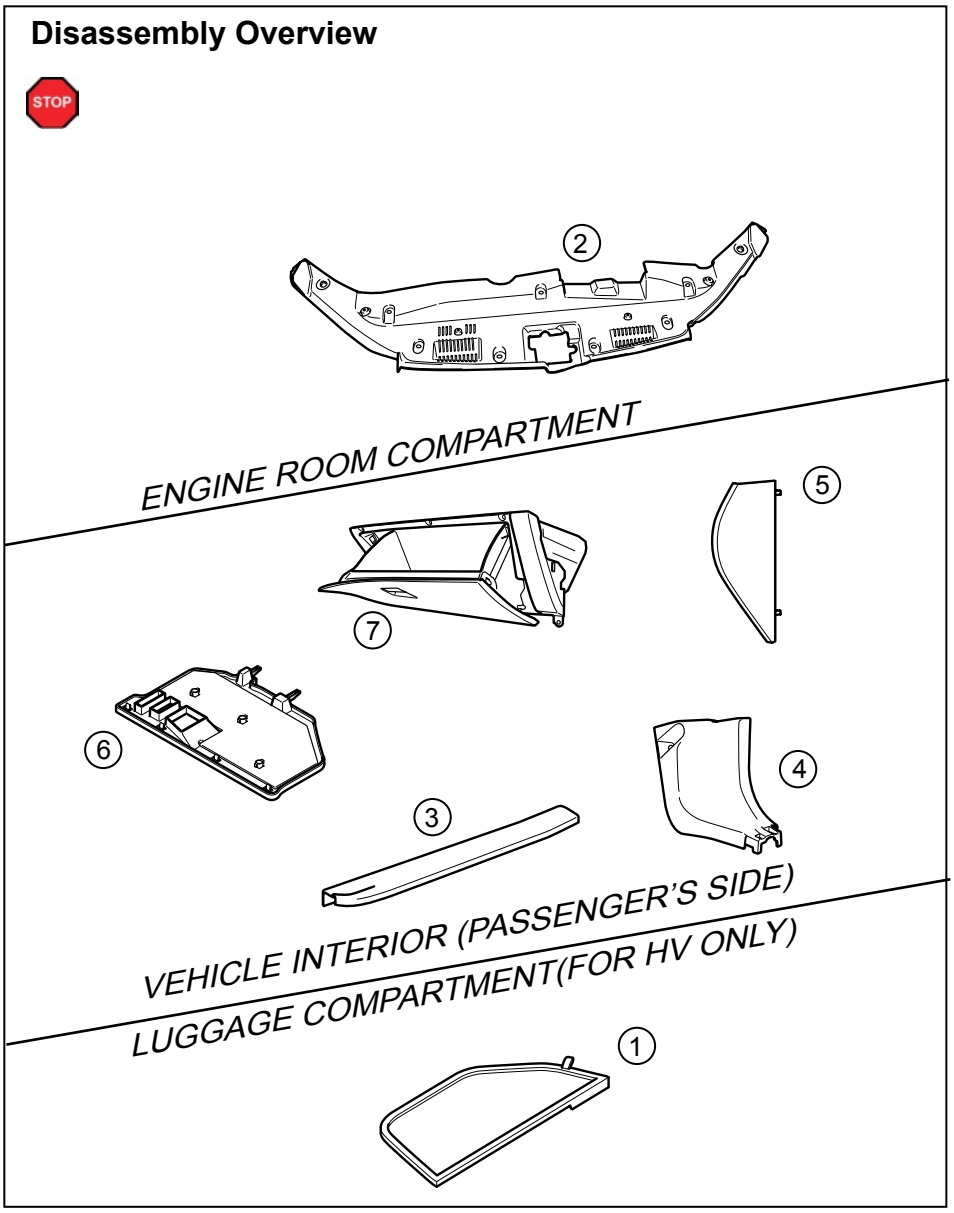
***Color of Harness on Overview corresponds with Colored Tape near Connectors on Harness.**

Jumper Connector																						
H																						

TOYOTA Highlander without Hood Switch



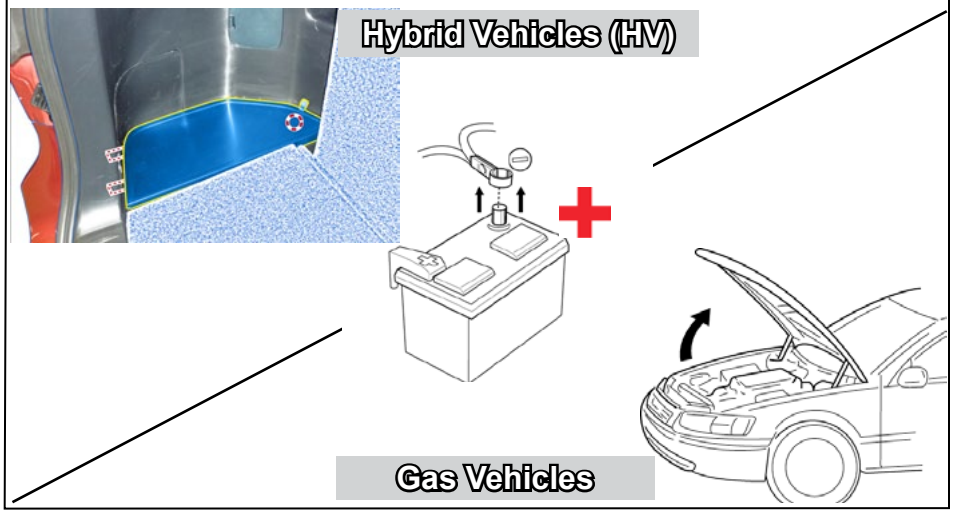
Disassembly Overview



1	DS Luggage Side Cover *(for HV ONLY)*
2	Engine Cover
3	PS Step Cover
4	PS Cowl Cover
5	PS Dash Side Cover
6	Glove Box Under Cover
7	Glove Box

STOP Disconnect all Corresponding Connectors.

10mm Socket Fig. 1-1



1. Hood Switch Confirmation

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

- **For Hybrid Vehicles the battery is in the Luggage Compartment.**

b. Remove the DS Luggage Side Cover. (for Hybrid Vehicles only)

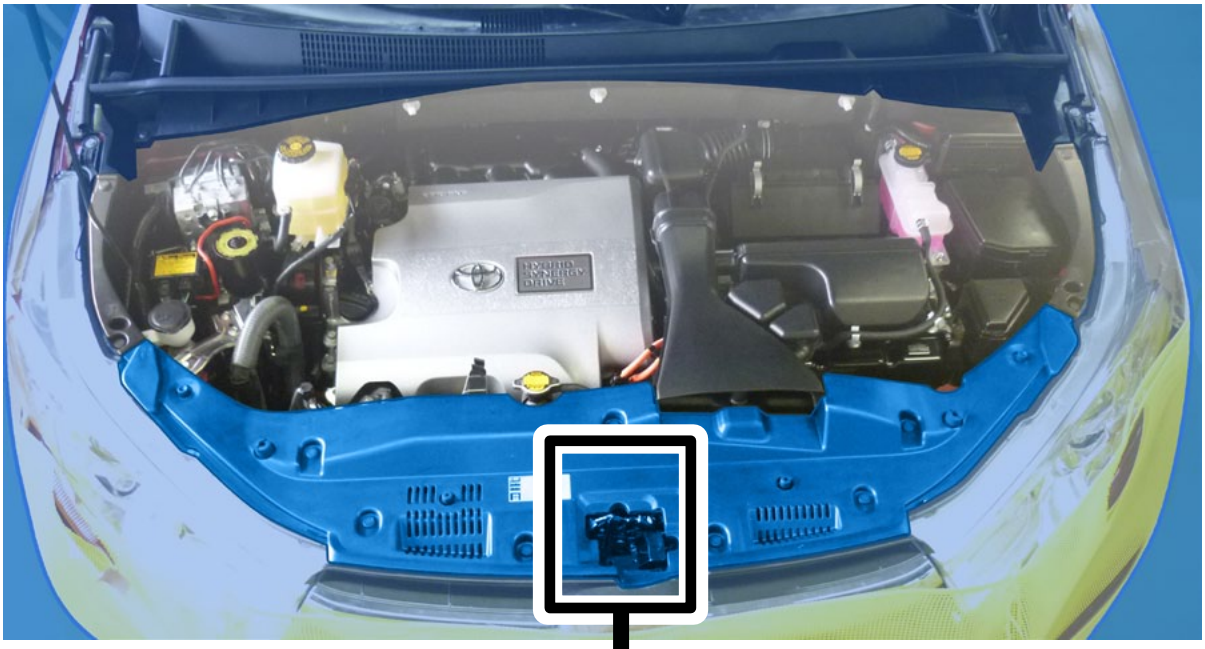
- **For Gas Vehicles the battery is in the Engine Compartment.**

c. Disconnect the Negative Battery Terminal.

- Note the Battery Cable Position as it will be re-installed in the same position.

CAUTION: Do not touch the Positive Terminal.

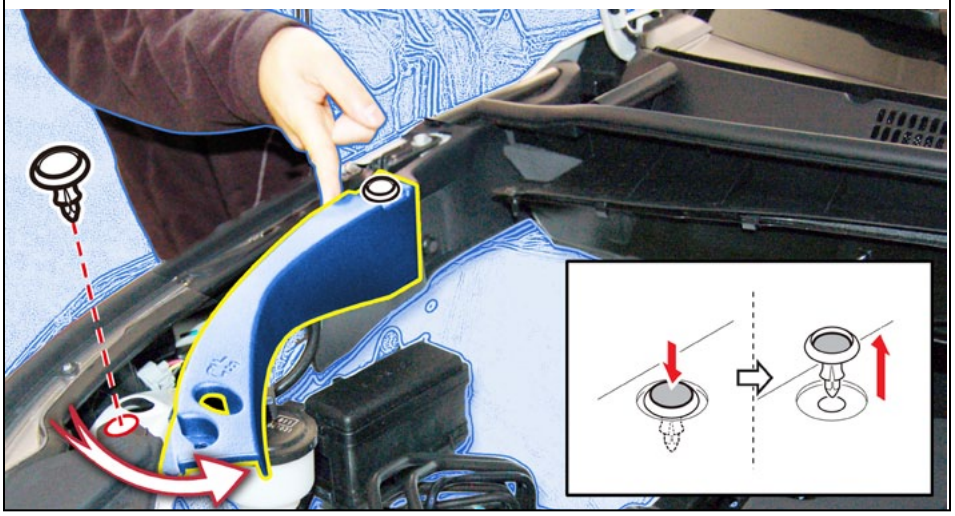
Check if Hood Switch is installed.



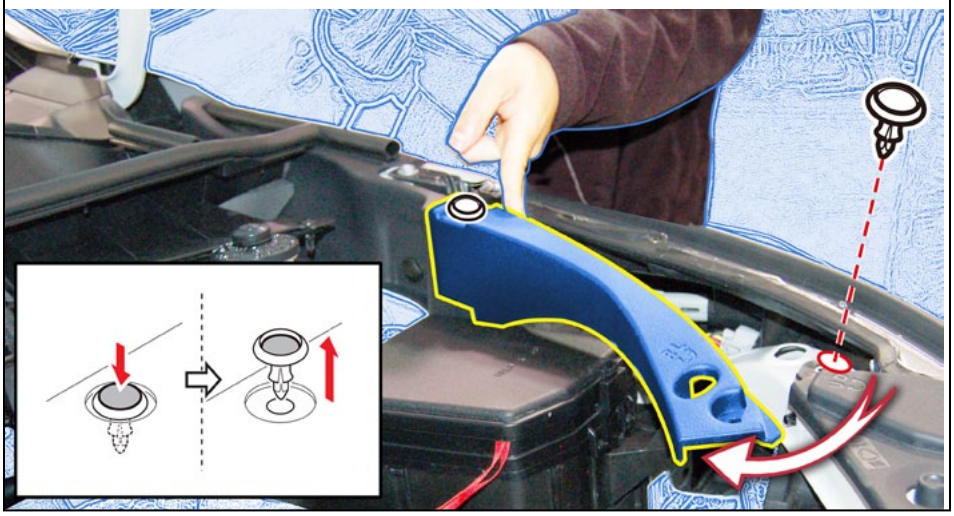
WITH Hood Switch
(Go to Section 3 on page 8)

WITHOUT Hood Switch
(Go to Section 2 next page)

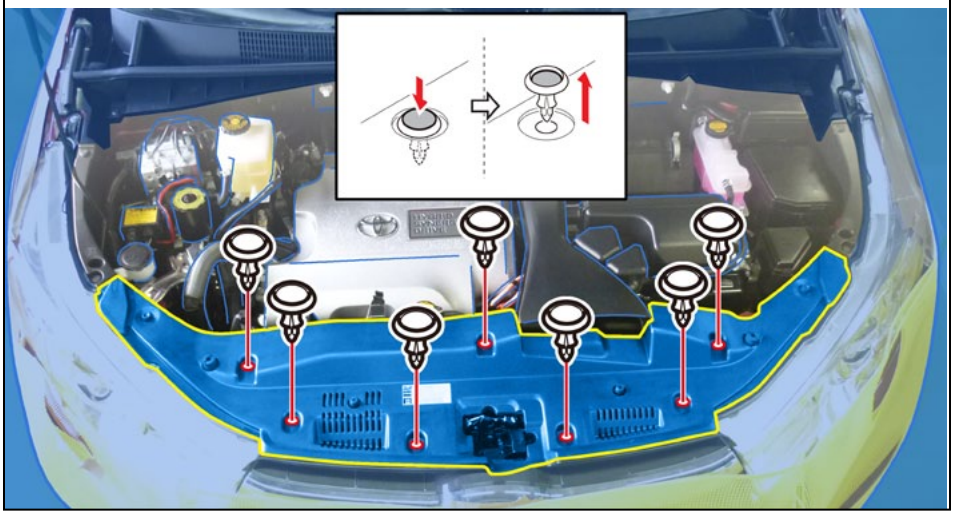
Nylon Panel Removal Tool Fig. 2-1



Nylon Panel Removal Tool Fig. 2-2



Nylon Panel Removal Tool Fig. 2-3



Vehicles Without Hood Switch ONLY

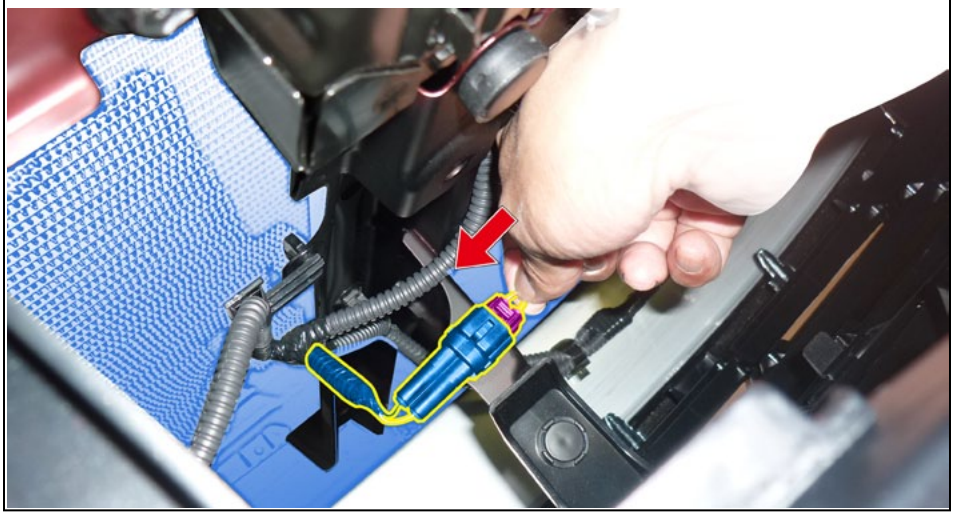
2. Jumper Connector Installation.

a. Remove 1 Clip and rotate the passenger side Engine Cover.

b. Remove 1 Clip and rotate the driver side Engine Cover.

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

Fig. 2-4

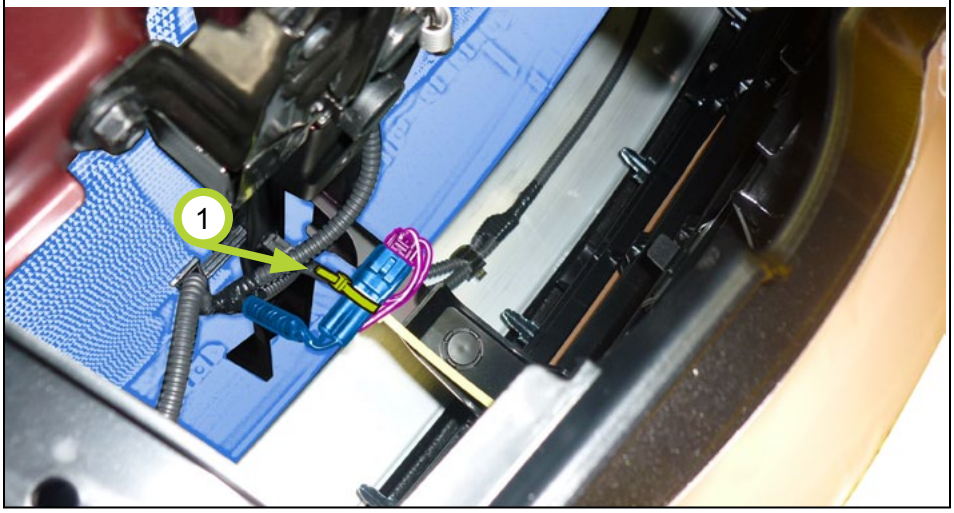


Vehicles Without Hood Switch ONLY

d. Disconnect and discard the Dummy Connector from the Vehicle's Hood Switch Pre-Connector.

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

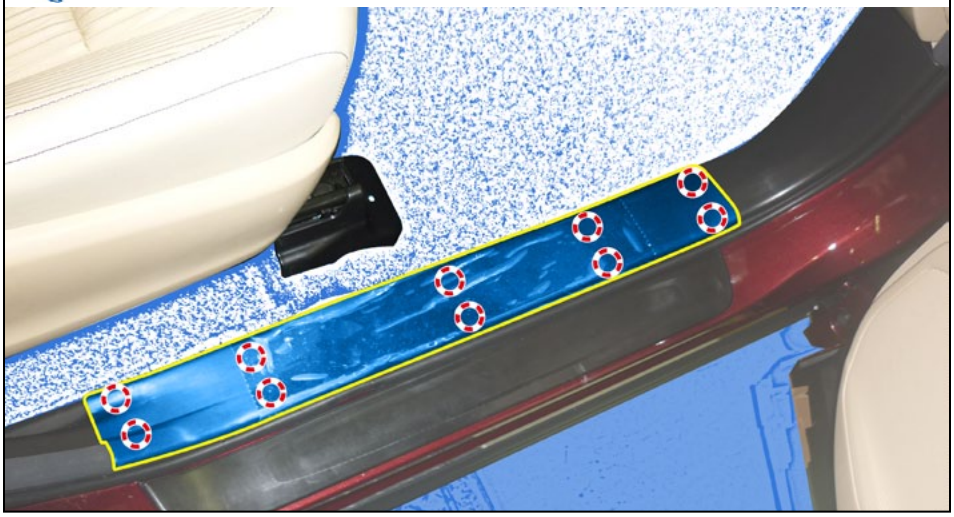
Side Cutters Fig. 2-5



f. Secure the Jumper Connector Harness to the Hood Switch Connector using 1 Wire Tie (#1). (Fig. 2-5)
   - Ensure the Wire Tie is inserted through the Wire Loop of the Jumper Connector.

g. Reinstall Engine Covers.

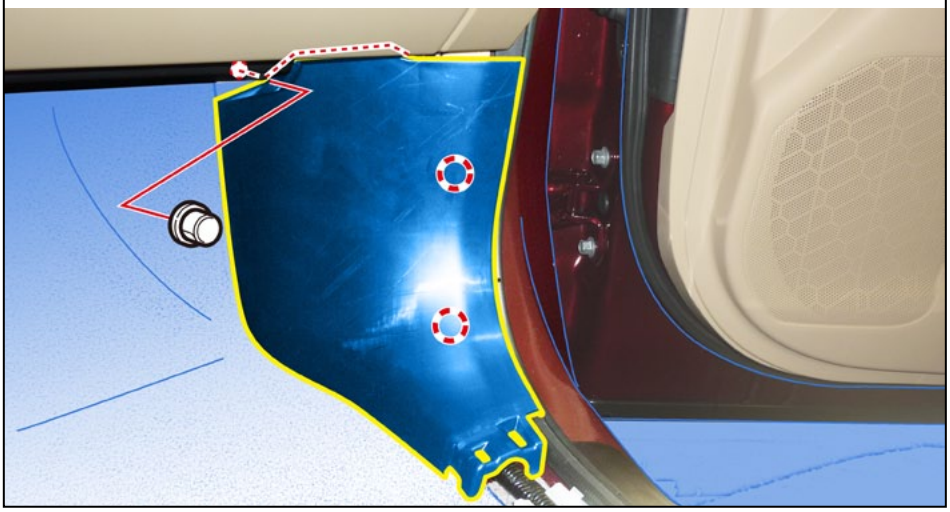
Nylon Panel Removal Tool Fig. 3-1



3. Vehicle Disassembly.

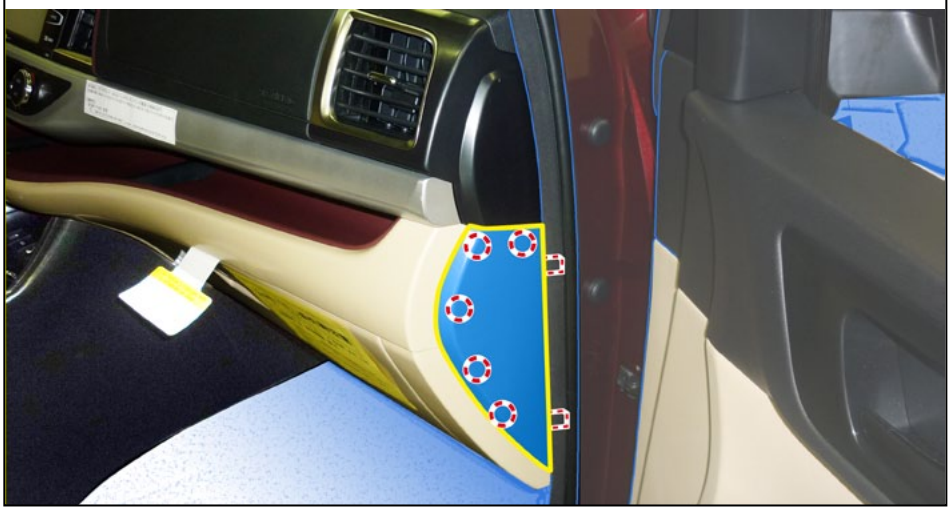
a. Remove the Passenger's Side Step Cover.

Nylon Panel Removal Tool Fig. 3-2



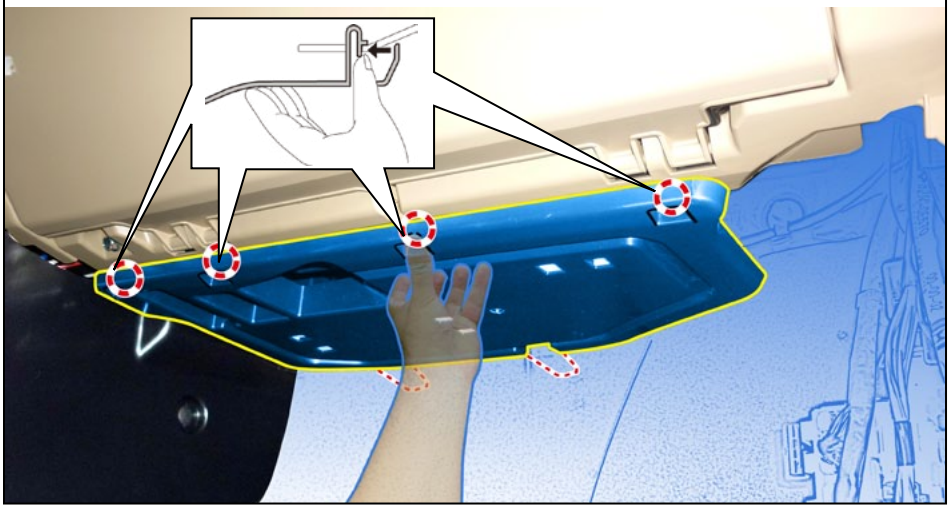
b. Remove the Passenger's Cowl Cover.
   - Remove 1 Nut.

Nylon Panel Removal Tool Fig. 3-3



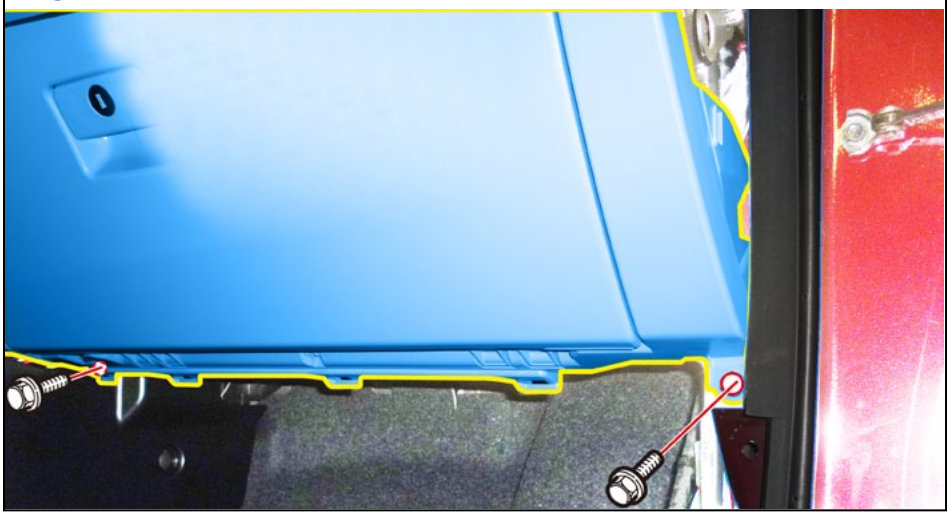
c. Remove the Passenger's Side Dash Cover.

Nylon Panel Removal Tool Fig. 3-4



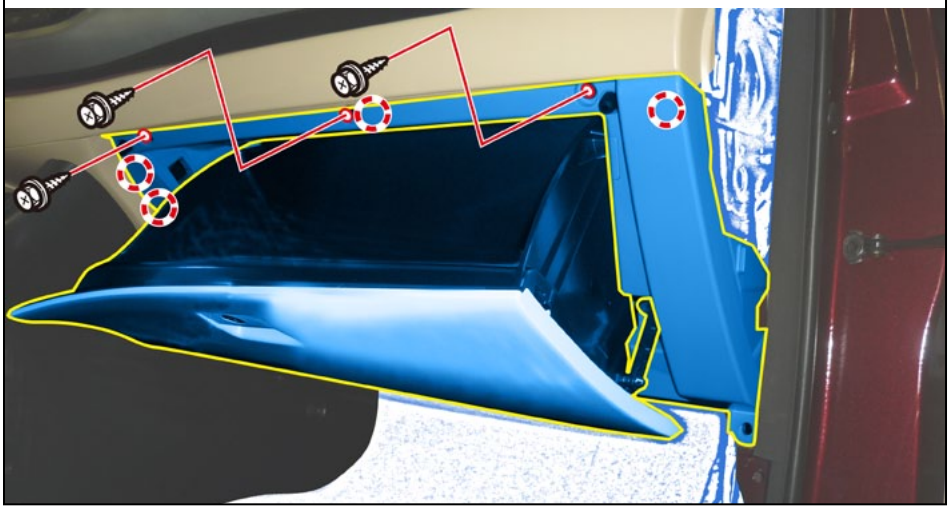
d. Remove the Glove Box Under Cover.

10mm Socket, Extension Fig. 3-5



e. Remove 2 Bolts from the bottom of the Glove Box.

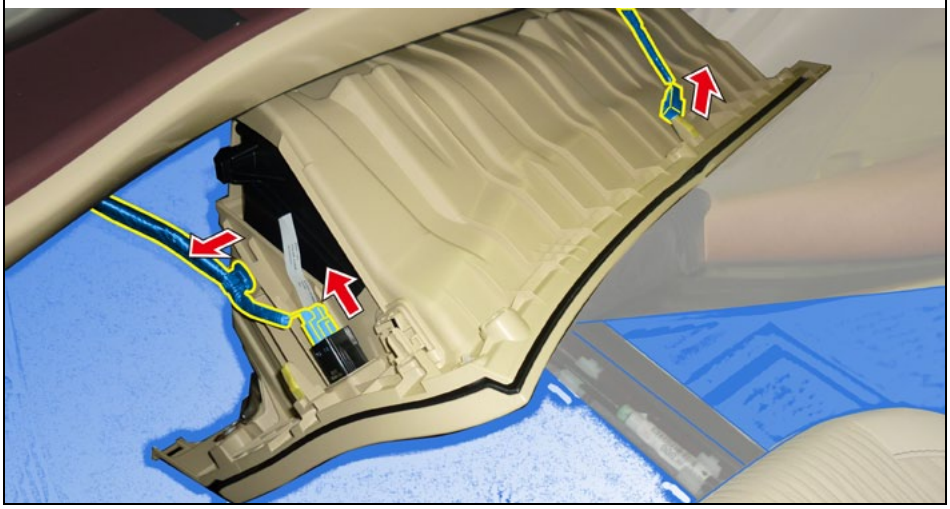
Phillips Screwdriver Fig. 3-6



f. Open the Glove Box.

g. Dislodge the Glove Box.
   - Remove 3 Screws.

Needle Nose Pliers Fig. 3-7



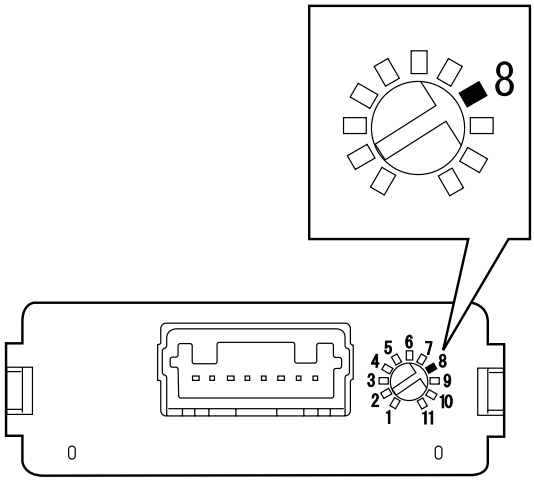
h. Disconnect the Vehicle's Connector.

i. Remove the Vehicle clamp from the Glove Box.

j. Remove the Glove Box.

Flat blade Jeweler's Screwdriver

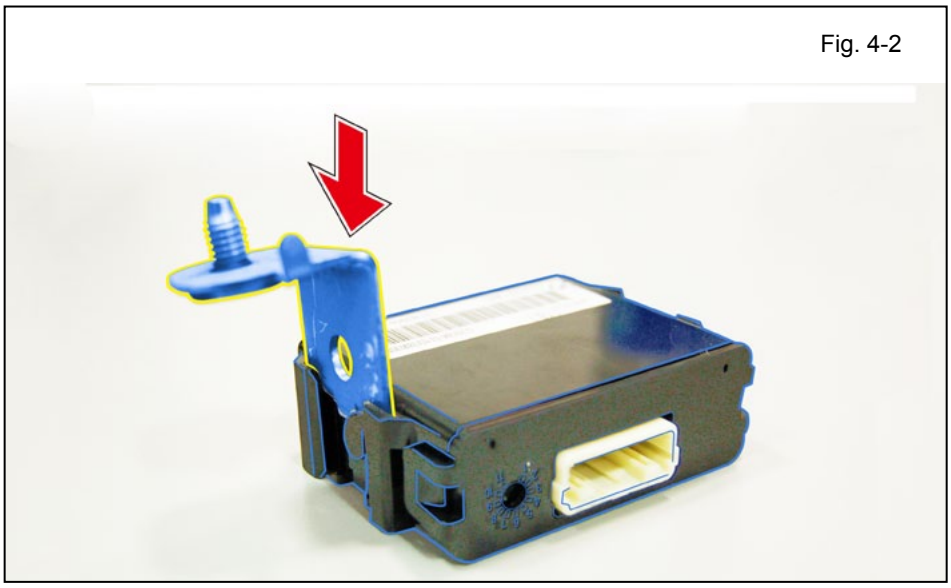
Fig. 4-1



4. GBS ECU Preparation.

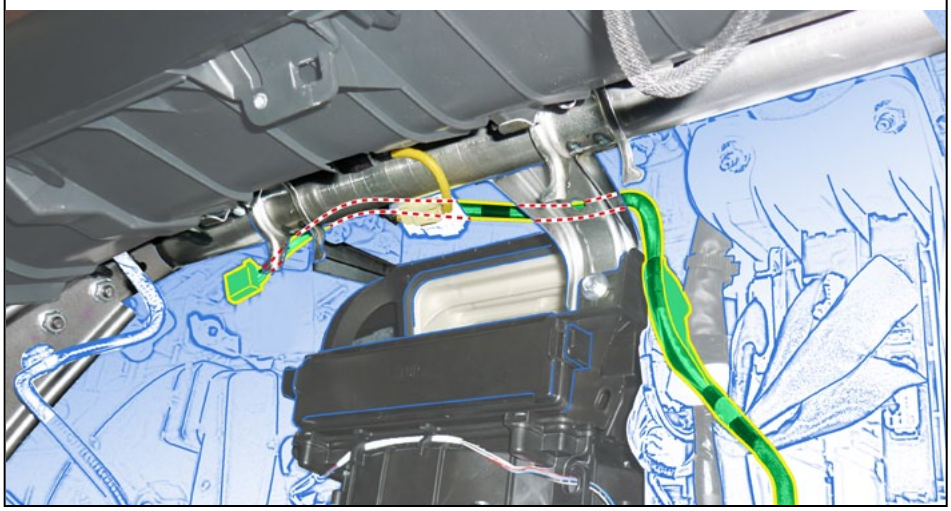
a. Set the GBS Sensitivity Value to "8."

Fig. 4-2



b. Attach the GBS ECU Bracket to the GBS ECU.

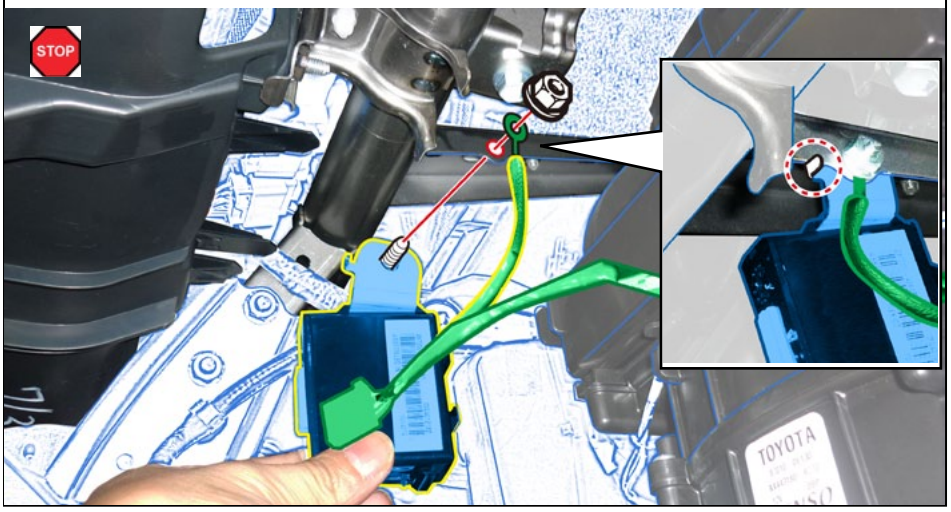
Fig. 5-1



5. V5 Harness and GBS ECU Installation.

a. Route the V5 Harness 8P Connector behind the Vehicle Brace.

10mm Socket, Torque Wrench Fig. 5-2

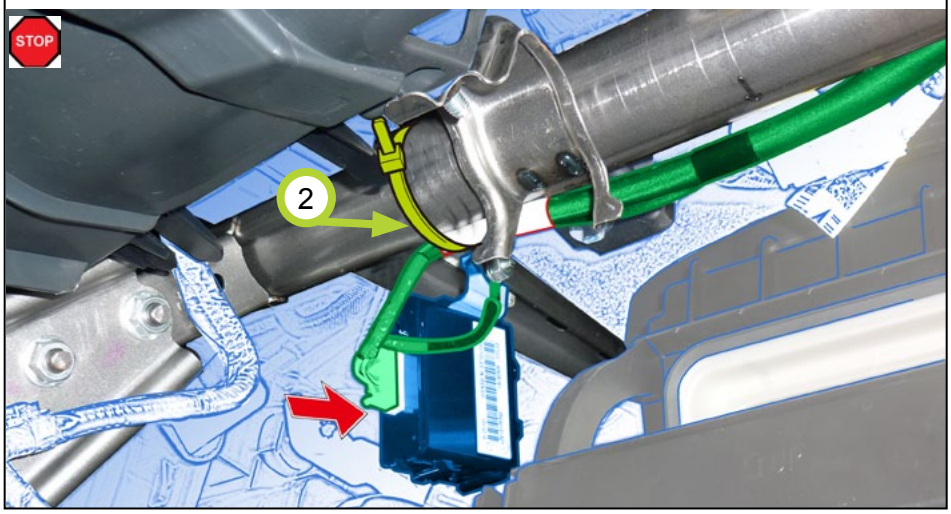


b. Install the GBS ECU and the V5 Ground Wire Terminal using the supplied Nut.

Torque: Tighten the Nut to 8 N•m (71 in•lbf).

NOTE: Make sure the Guide Pin is seated correctly.

Side Cutters Fig. 5-3

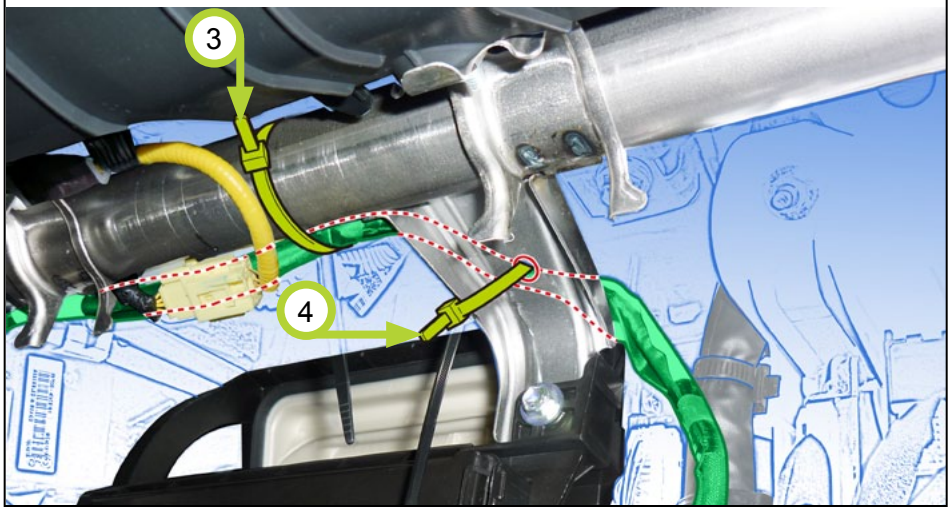


c. Plug in the V5 White 8P Connector to the GBS ECU.

d. Secure the V5 Harness White Tape Marker to the Vehicle IP Reinforcement using 1 Wire Tie (#2). (Fig. 5-3)

NOTE: Make sure that the V5 Harness is routed behind the Vehicle Brace.

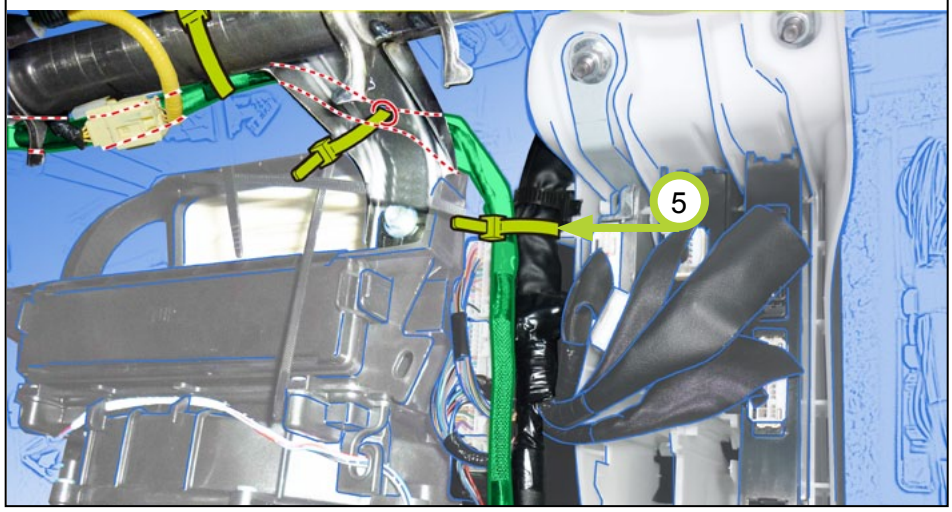
Side Cutters Fig. 5-4



e. Secure the V5 Harness to the Vehicle IP Reinforcement with 1 Wire Tie (#3). (Fig. 5-4)

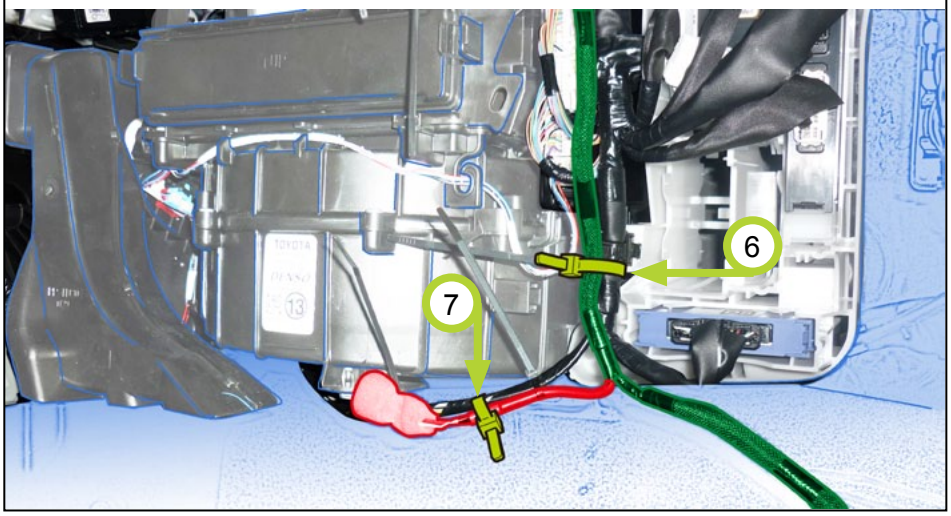
f. Secure the V5 Harness to the Vehicle Brace with 1 Wire Tie (#4). (Fig. 5-4)

Side Cutters Fig. 5-5



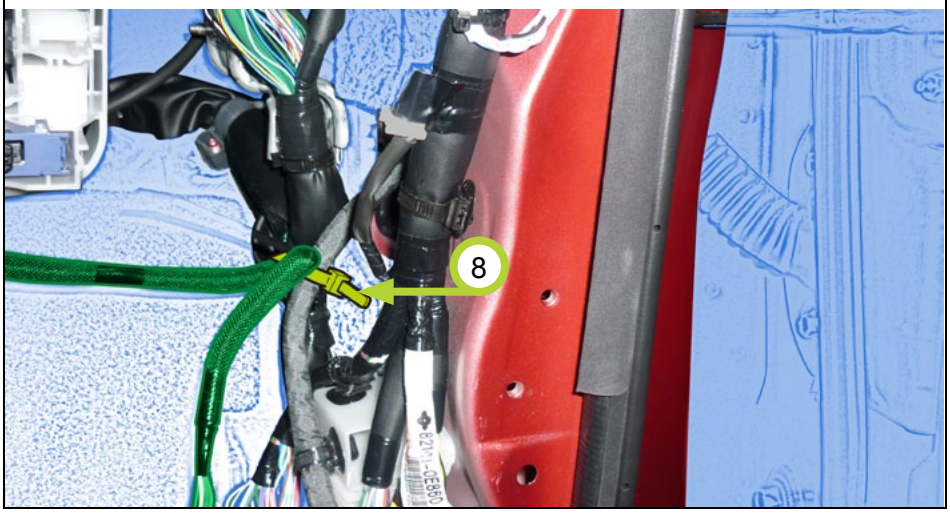
g. Secure the V5 Harness to the Vehicle Harness using 1 Wire Tie (#5). (Fig. 5-5)

Side Cutters Fig. 5-6



h. Secure the V5 Harness to the Vehicle Harness using 2 Wire Ties (#6,7). (Fig. 5-6)

Side Cutters Fig. 5-7



V5 ONLY

NOTE: If V4 (RES) is installed in the vehicle, skip to page 16 for V5/V4 Add-on (steps t-ag).

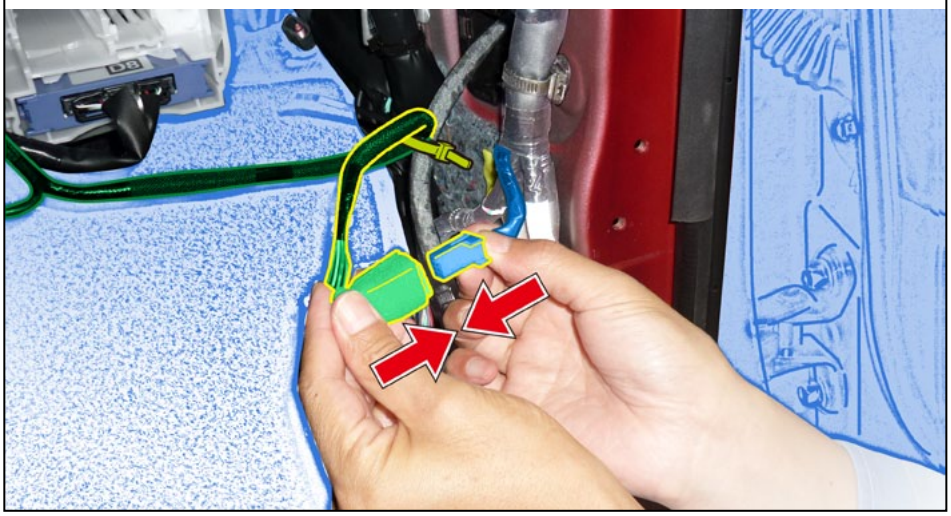
i. Route the V5 Harness toward the Passenger side Cowl area.

j. Secure the V5 Harness to the Vehicle Harness using 1 Wire Tie (#8). (Fig. 5-7)

Fig. 5-8

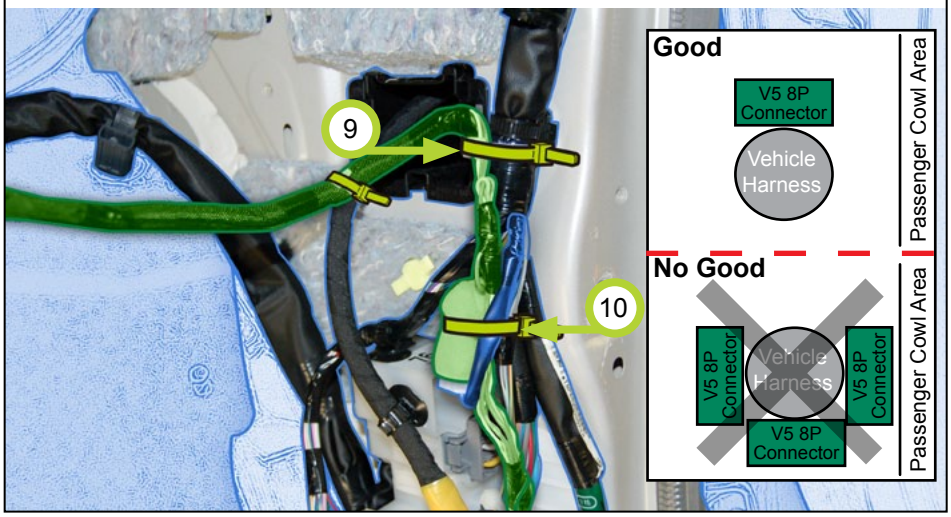


Fig. 5-9



Side Cutters

Fig. 5-10



V5 ONLY

k. Remove the Tape securing the Vehicle 8P Pre-Connector.

l. Connect the Vehicle White 8P Pre-Connector to the V5 White 8P Connector.

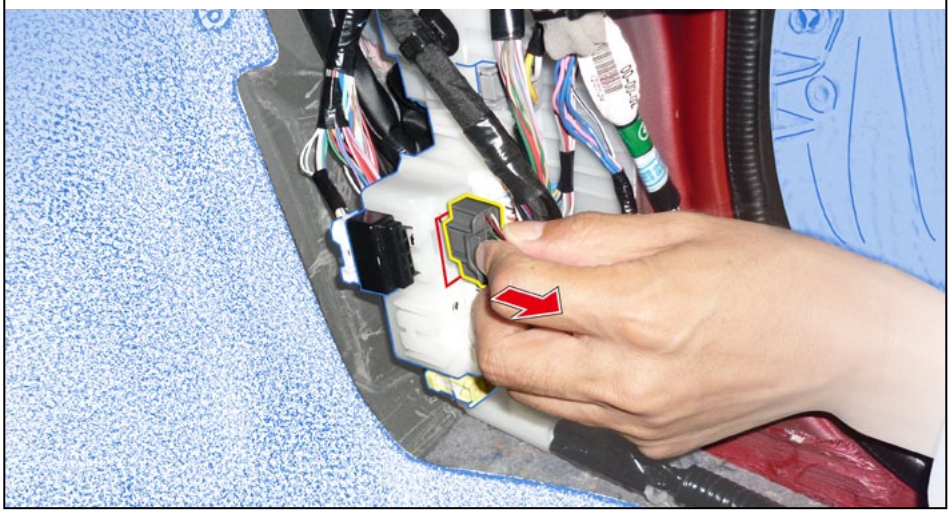
m. Secure the V5 Harness to the Vehicle Harness using 1 Wire Tie (#9). (Fig. 5-10)

n. Secure the V5 8P Connector to the Vehicle Harness using 1 Wire Tie (#10). (Fig. 5-10)

STOP **NOTE:** Rotate the ratchet end on Wire Ties (#9, #10) toward the rear of the Vehicle.

STOP **NOTE:** Place the 8P Connectors in reference to the illustration.

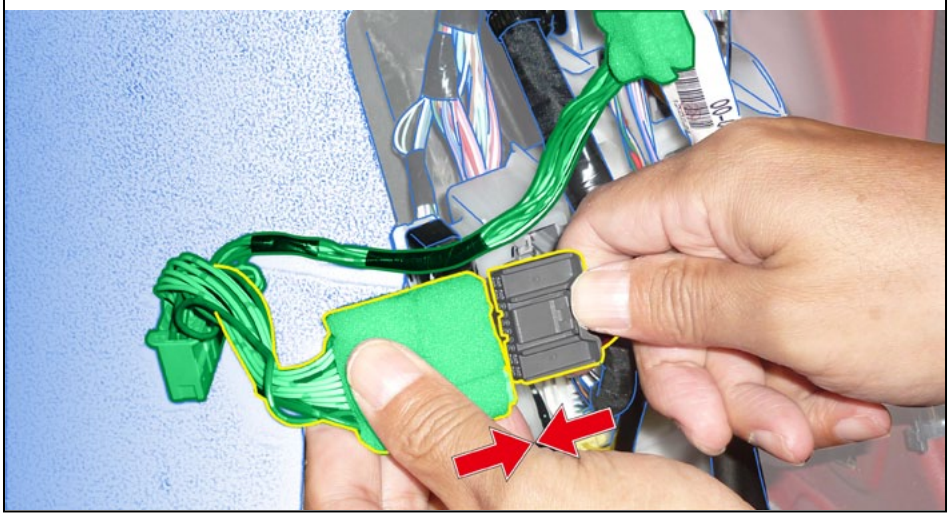
Fig. 5-11



V5 ONLY

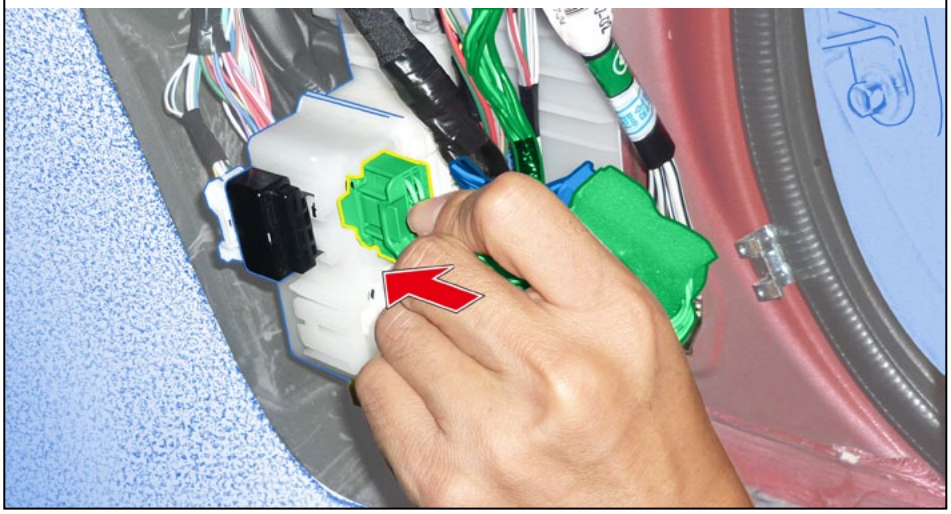
o. Disconnect the Vehicle's Gray 18P Connector from the Connector Block.

Fig. 5-12



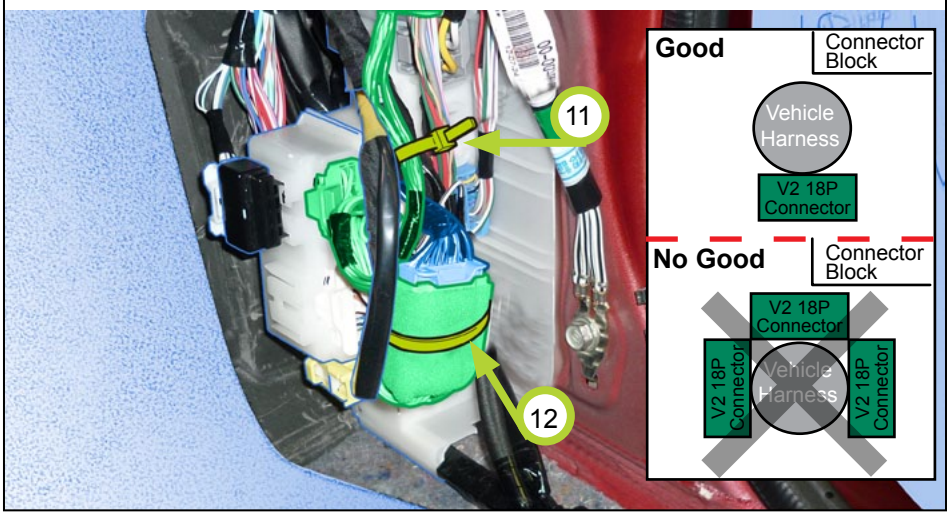
p. Connect the Vehicle's Gray 18P Connector to the V5 18P Connector.

Fig. 5-13



q. Plug in the V5 Gray 18P Connector to the Vehicle Connector Block.

Side Cutters Fig. 5-14



r. Secure the V5 Harness to the Vehicle Harness using 1 Wire Tie (#11). (Fig. 5-14)

s. Secure the V5 18P Connector to the Vehicle Harness using 1 Wire Tie (#12). (Fig. 5-14)

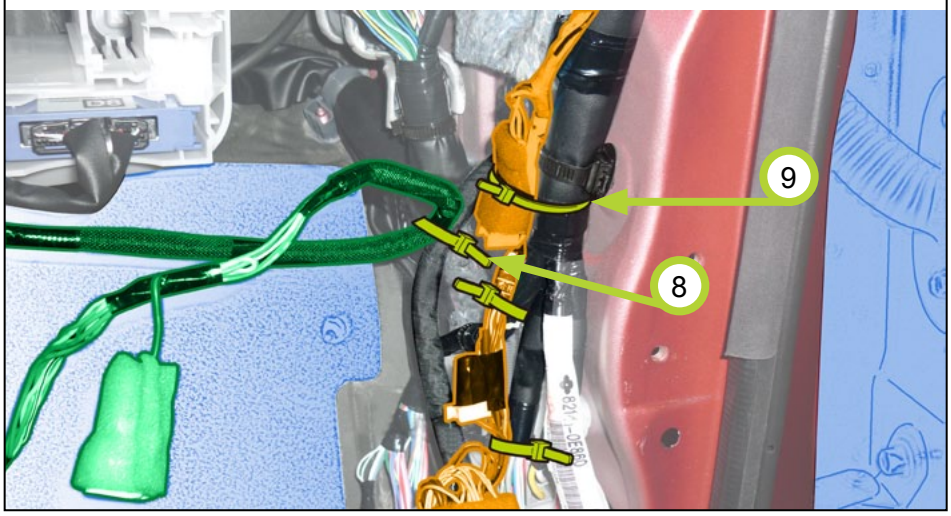
NOTE: Rotate the ratchet end on the Wire Ties (#11, #12) toward the rear of the Vehicle.

CAUTION: Do not secure to the AirBag Harness.

NOTE: Place the 18P Connector in reference to the illustration.

NOTE: Skip to Section 6 (p. 19) for Microphone Installation.

Side Cutters Fig. 5-15



V5/V4 Add-on ONLY

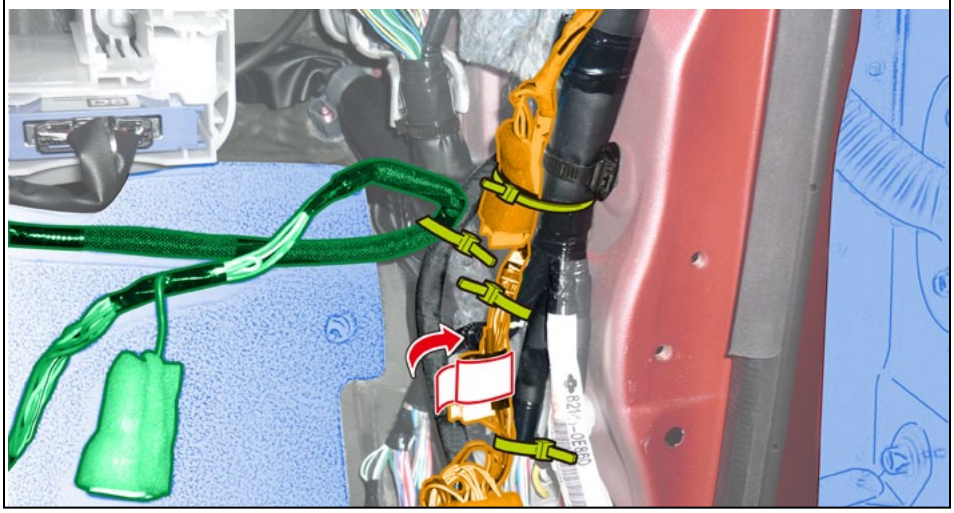
t. Route the V5 Harness toward the Passenger side Cowl area.

u. Secure the V5 Harness to the Vehicle Harness using 1 Wire Tie (#8). (Fig. 5-15)

v. Secure the V4 8P Connector to the Vehicle Harness with 1 Wire Tie (#9). (Fig. 5-15)

NOTE: Rotate the ratchet end on Wire Ties (#8, #9) toward the rear of the Vehicle.

Fig. 5-16



w. Remove the Tape securing the V4 Harness 8P Connector.

Fig. 5-17

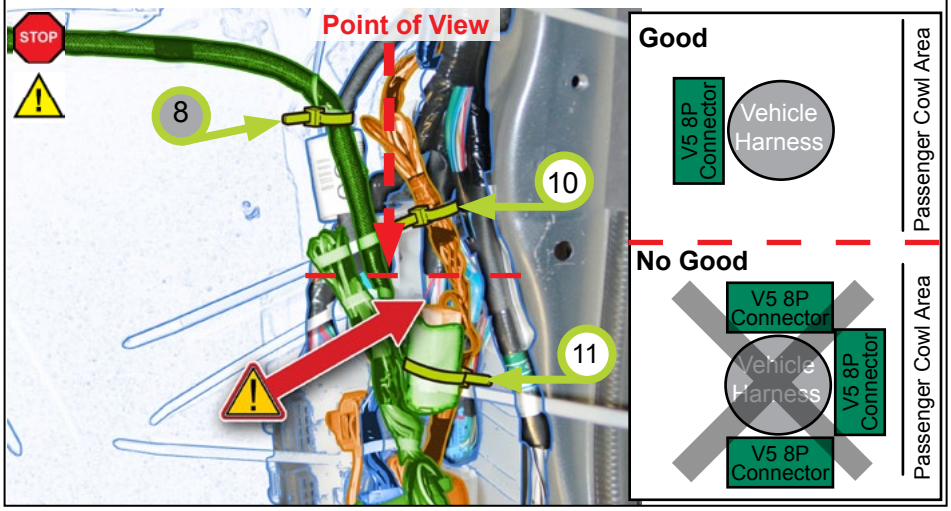


V5/V4 Add-on ONLY

x. Connect the V4 8P Connector to the V5 White 8P Connector.

Side Cutters

Fig. 5-18



y. Secure the V4 Harness to the Vehicle Harness using 1 Wire Tie (#10). (Fig. 5-18)

z. Secure the V5 8P Connector to the Vehicle Harness using 1 Wire Tie (#11). (Fig. 5-18)

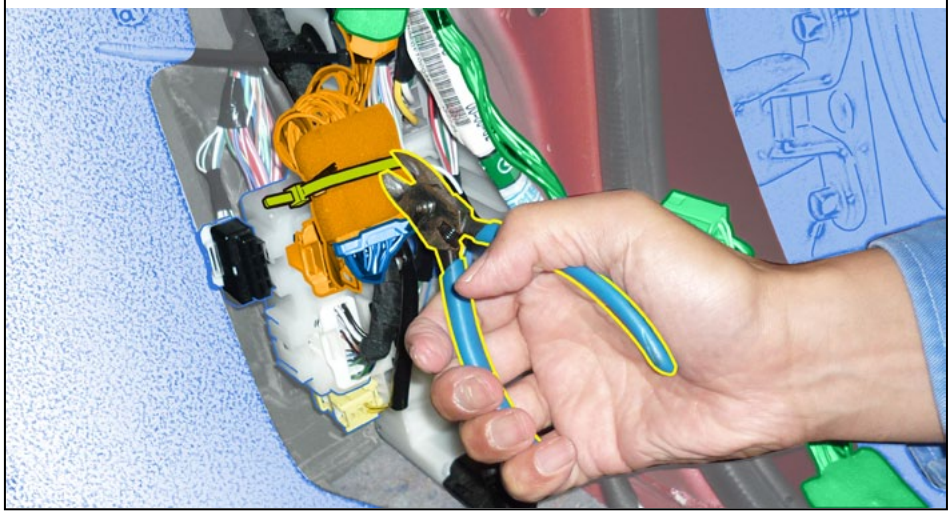
CAUTION: Reduce stress on Wire Tie (#4) and the 8P Connector's wire as shown.

NOTE: Rotate the ratchet end on the Wire Ties (#10, #11) toward the rear of the Vehicle.

NOTE: Place the 8P Connectors in reference to the illustration.

Side Cutters

Fig. 5-19



aa. Cut the Wire Tie securing the V4 18P Connector.

Fig. 5-20

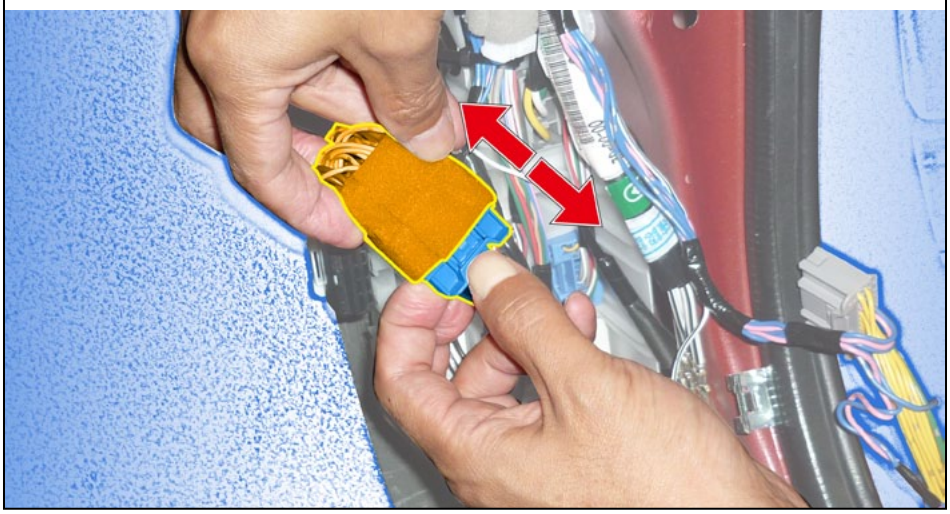
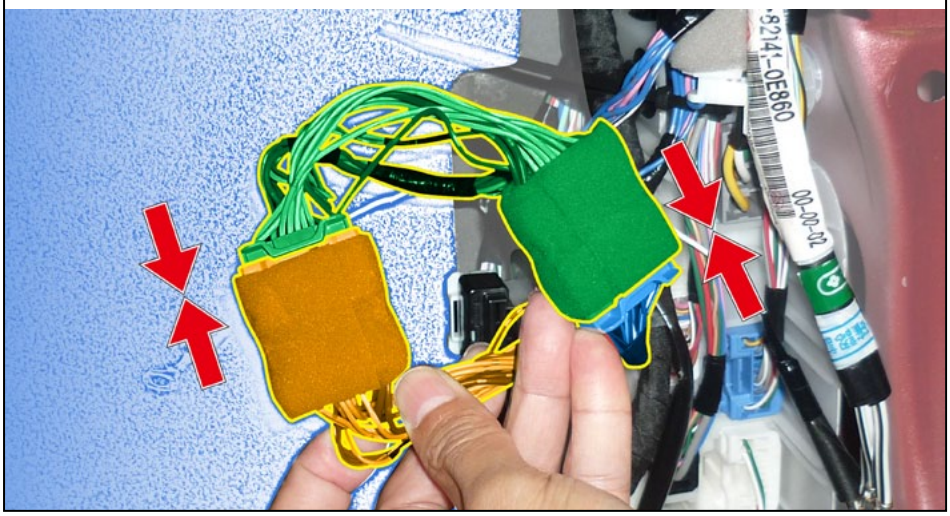
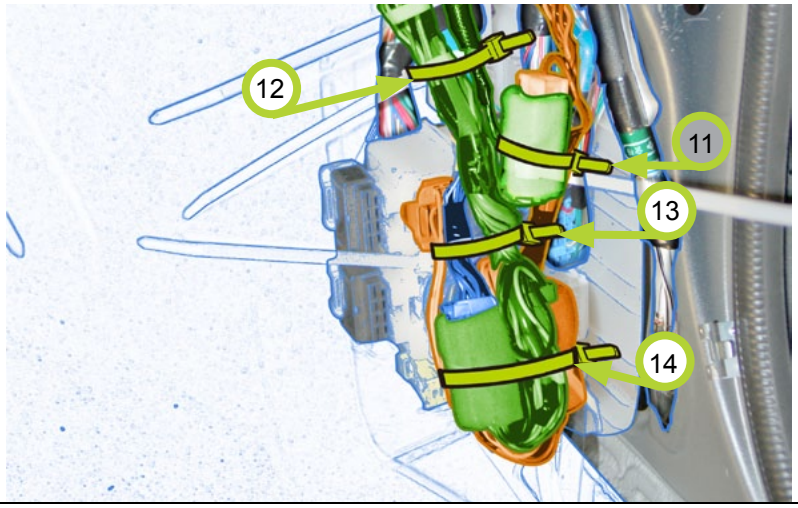


Fig. 5-21



Side Cutters

Fig. 5-22



V5/V4 Add-on ONLY

ab. Disconnect the Vehicle's 18P Gray Connector from the V4 18P Connector.

ac. Connect the V5 Gray 18P Connector to the V4 Gray 18P Connector.

ad. Connect the Vehicle's Gray 18P Connector to the V5 Gray 18P Connector.

ae. Secure the V5 Harness to the Vehicle Harness using 1 Wire Tie (#12). (Fig. 5-22)

af. Secure the V4 & V5 Harness to the Vehicle Harness using 1 Wire Tie (#13). (Fig. 5-22)

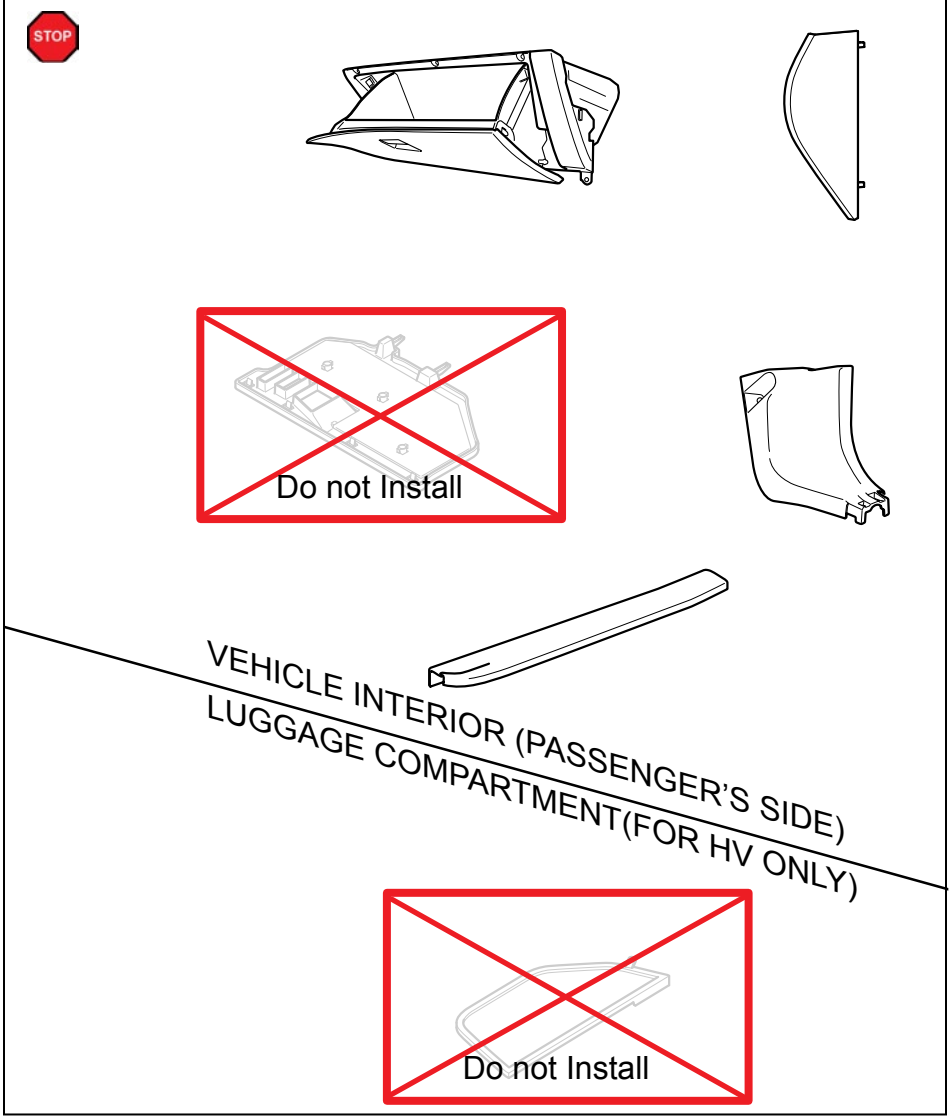
CAUTION: Do not secure to the Airbag Harness.

ag. Secure the V4 18P Connector to the V5 18P Connector and Vehicle Harness using 1 Wire Tie (#14). (Fig. 5-22)

NOTE: Rotate the ratchet end on the Wire Ties (#12, #13, #14) away from the surrounding Vehicle Harness and toward the rear of the Vehicle.

10mm Socket, Extension, Phillips Screwdriver

Fig. 6-1



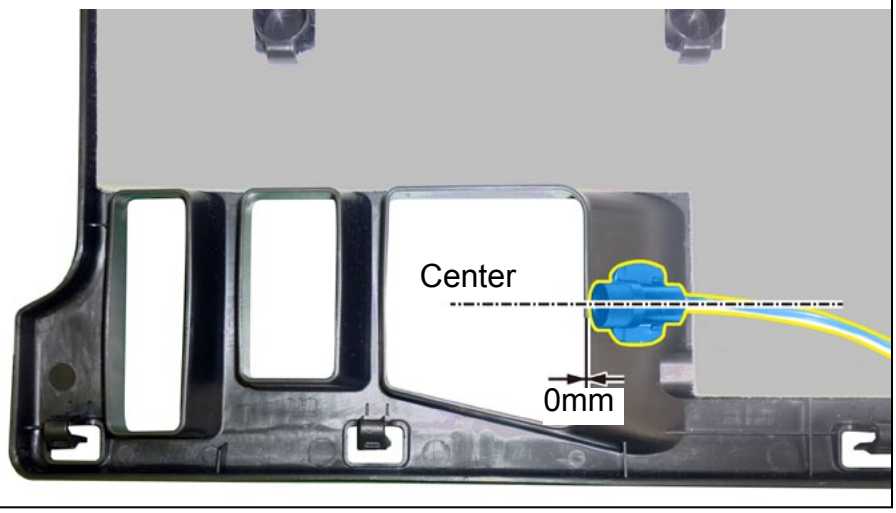
6. Microphone Installation.

a. Partially reassemble the Vehicle.

VERIFY: That all Connectors are plugged in.

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

Fig. 6-2

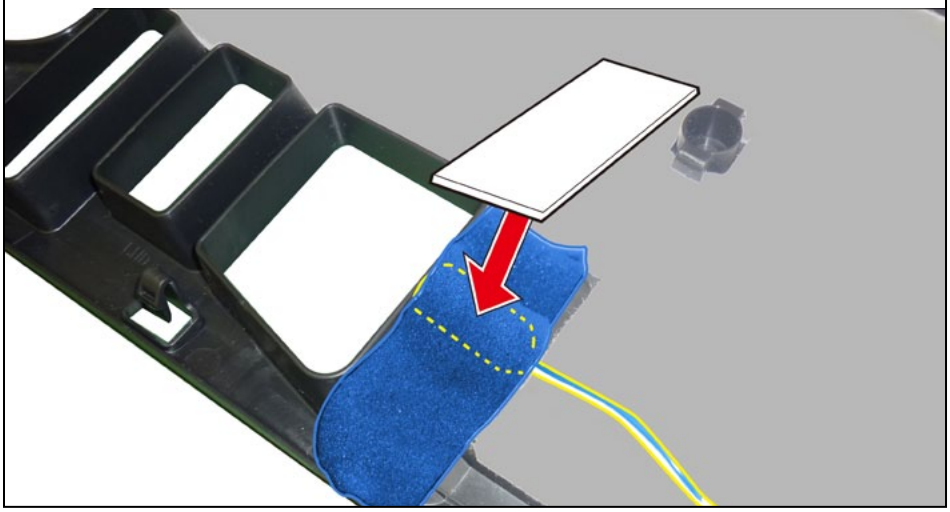


b. Using the VDC approved cleaner and Cleaning Method, clean the area indicated on the backside of the Glove Box Under Cover.

c. Attach the GBS Microphone to the backside of the Glove Box Under Cover as shown.

NOTE: Make sure to align GBS Microphone to the edge of the Glove Box Under Cover opening.

Fig. 6-3



d. Apply 1 Foam Tape to the GBS Microphone.

NOTE: Make sure not to cover the Microphone's opening with the Foam Tape.

Fig. 6-4



e. Connect the V5 White 2P Connector to the GBS Microphone's Connector.

Fig. 6-5



f. Reinstall the Glove Box Under Cover.

Fig. 7-1



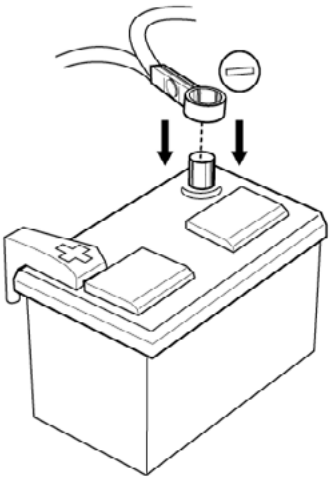
7. Registration.

a. Verify that the Short Pin is Installed.

- If not Instal now.

10mm Socket

Fig. 7-2

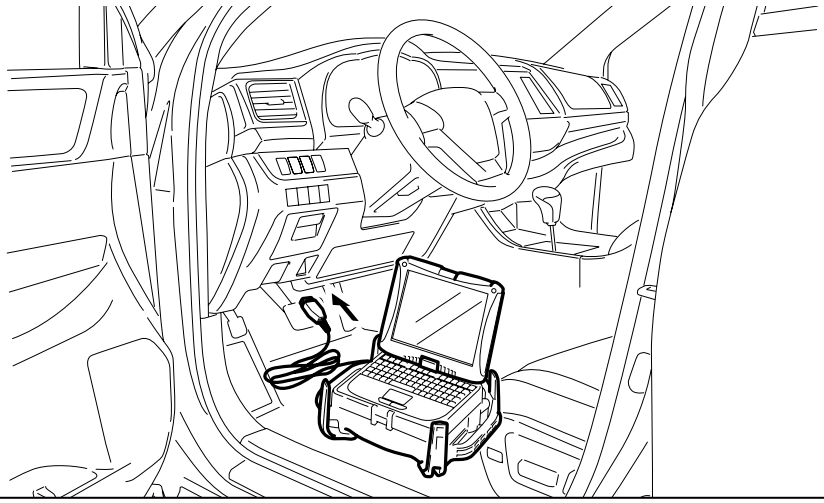


b. Temporarily reconnect the Negative Battery Cable.

CAUTION: Do not touch the Positive Terminal.

Techstream

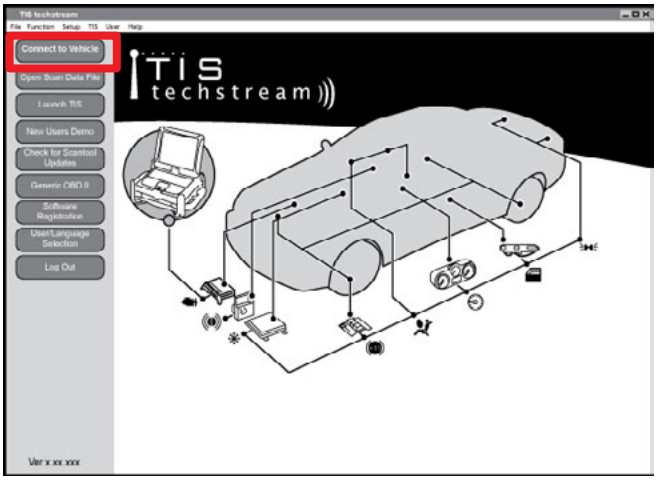
Fig. 7-3



c. Connect the Techstream Notebook to the Vehicle's Diagnostic Port.

d. Turn the Ignition Switch to "ON" position.

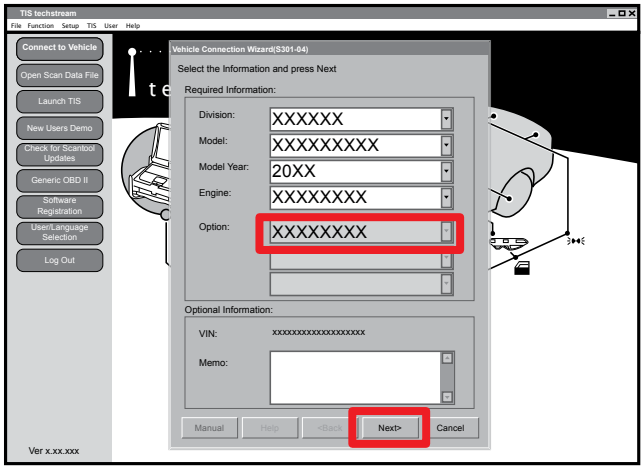
Fig. 7-4



e. Start the TIS Techstream Application by clicking on the shortcut located on the Desktop.

f. Click “Connect to Vehicle.”

Fig. 7-5

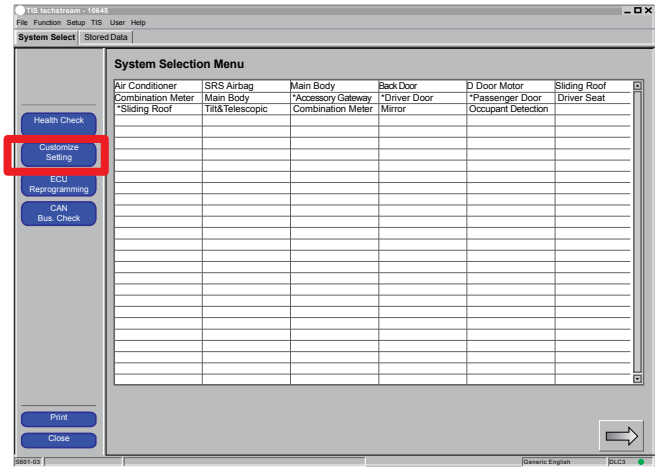


g. Confirm that the information displayed on the Vehicle Connection Wizard is correct for the vehicle. If not, verify that the Techstream is properly connected.

h. Select any additional “Option” items that are applicable to the vehicle.

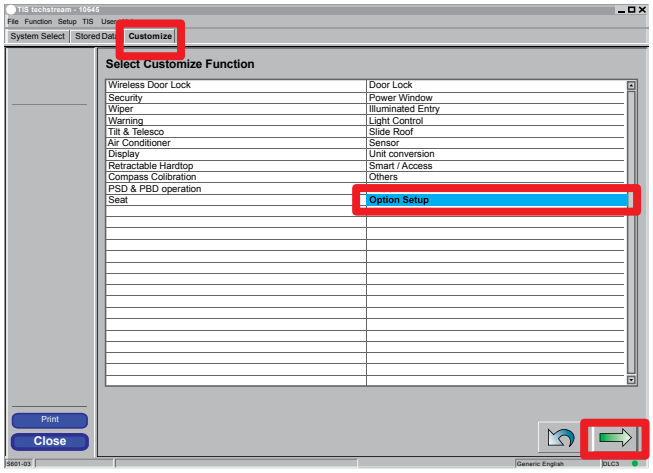
i. Click “Next>.”

Fig. 7-6



j. Click “Customize Setting.”

Fig. 7-7



k. Make sure that the “Customize” tab is selected.

l. Select “Option Setup.”

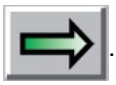
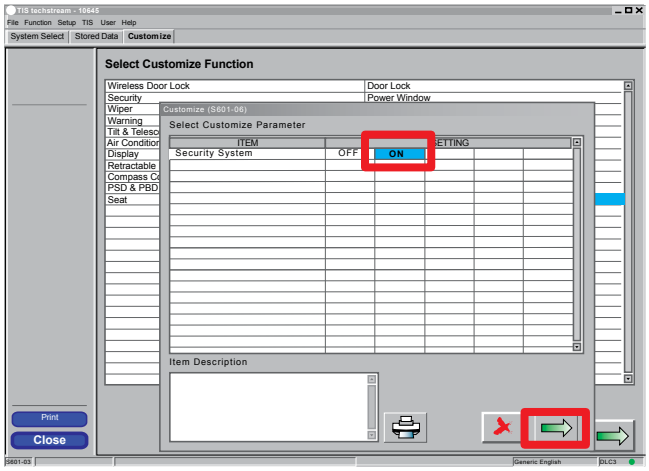
m. Click .

Fig. 7-8



n. Select “ON.”

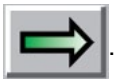
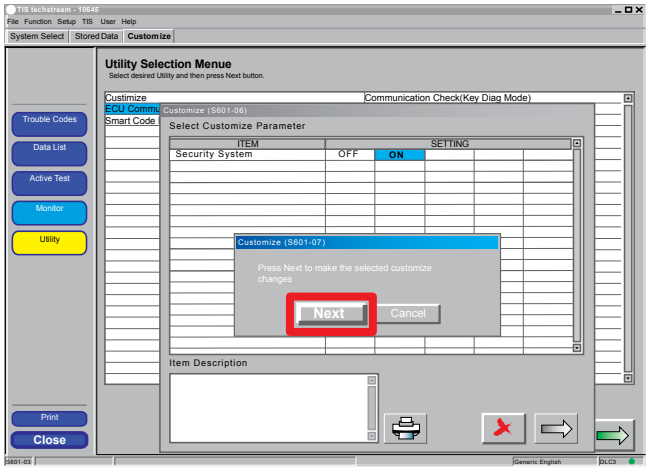
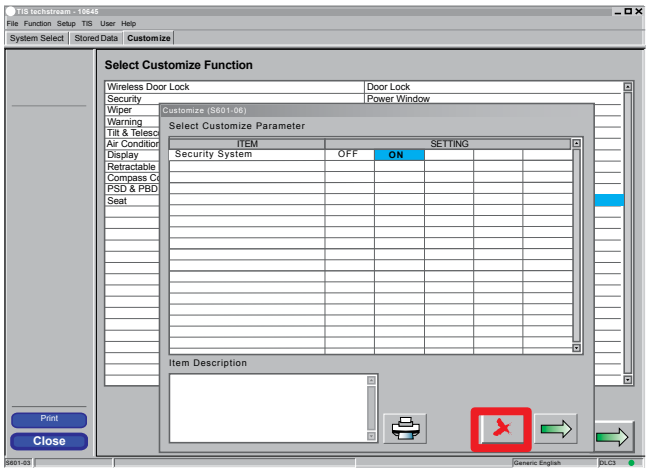
o. Click .

Fig. 7-9



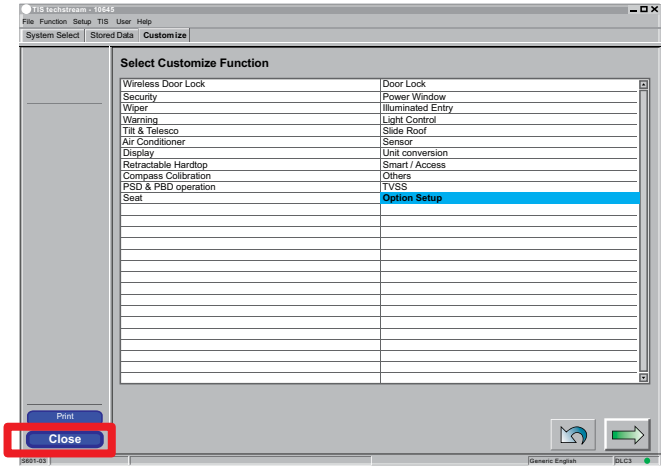
p. Click “Next” to accept the changes to the Vehicle.

Fig. 7-10



q. Click  .

Fig. 7-11



r. Click “Close.”

8. Complete the Installation.

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

a. Use Household Glass Cleaner to clean the inside of the Front Door Window.

b. Use a piece of Clear Tape to lift the Label off its protective backing.

CAUTION: Do not touch the adhesive surface.

c. Attach the Label as shown.

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

REPEAT: Steps 8a-8c on the other Window.

Clear Tape

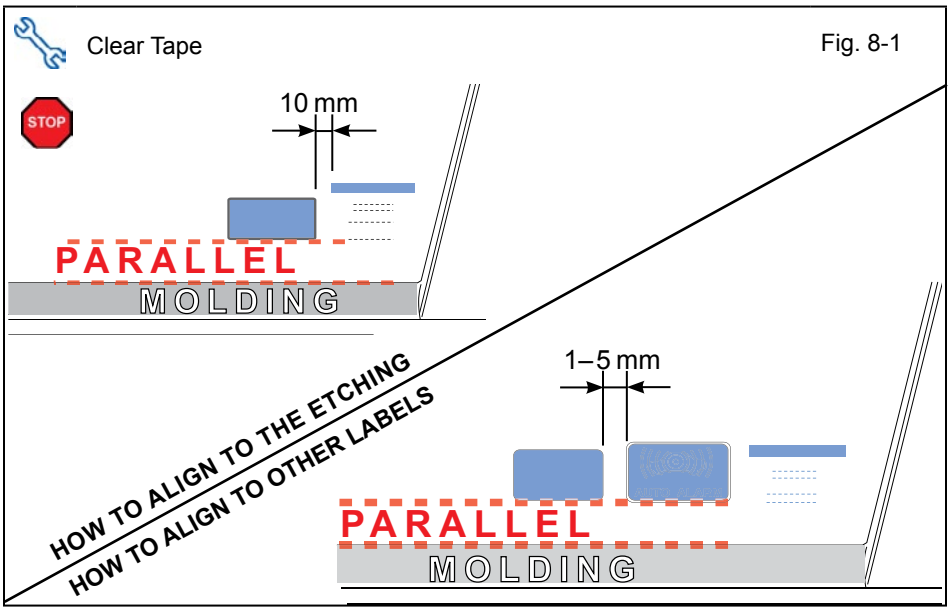


Fig. 8-1

- **For Hybrid Vehicles the battery is in the Luggage Compartment.**
- **For Gas Vehicles the battery is in the Engine Compartment.**

d. Position the Negative Battery Cable at the original factory position.

Torque: Tighten the Nut to 48 in•lbf (5.4 N•m).

CAUTION: Do not touch the Positive Terminal.

Torque Wrench

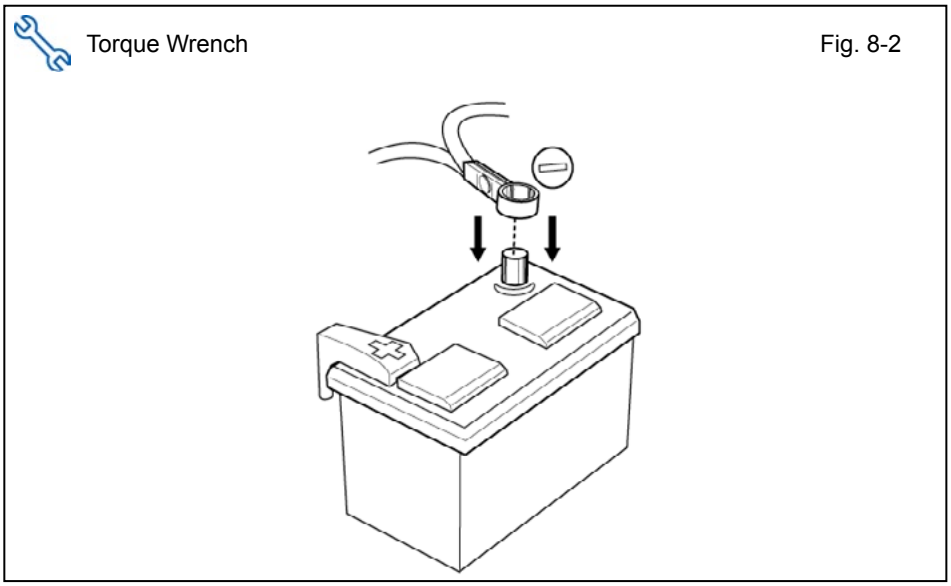


Fig. 8-2

Accessory Function Checks

Roll up all windows, and exit the vehicle with the remote.

	Perform	Look For
1	Press and release the remote control lock button to start the system's arming process.	The turn signal lights flash once. All doors lock. The security LED lights up*
2	Wait 30 seconds.	Security LED starts flashing; the system is now armed.
3	Press and release the remote control's unlock button to disarm the system.	The turn signal lights flash twice. The driver's door unlocks. The Security LED flashing.

Open the driver's door, insert the key into the ignition switch and turn it to "ON". For Smart vehicles, press the START button twice to "ON". Roll down all the windows, remove the key and exit the vehicle.

4	Arm and disarm the system with the remote again, then wait 30 seconds.	The doors automatically re-locks. The system automatically starts the arming process.
5	Press and release the remote control's unlock button again to stop the arming process.	Refer to step 3
6	Insert the key into the driver's door key cylinder and turn it toward the front of the vehicle to start the arming process.	All doors lock. The Security LED lights up*
7	Wait 30 seconds.	Security LED starts flashing; the system is now armed.
8	Reach inside and manually unlock the driver's door to trigger an alarm.	The driver's door automatically re-locks. The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. (For some vehicles the LED will continue to flash)
9	Manually unlock the driver's door again and hold it unlocked, open the door, then sit in the driver's seat.	The driver's door lock attempts to lock repeatedly. The horn continues to sound repeatedly. The headlights and turn signal lights continue flashing. The Security LED remains on. (For some vehicles the LED will continue to flash)
10	Insert the key into the ignition switch and turn it to "ON" to stop the alarm. For Smart vehicles, press START button twice to "ON".	The horn stops sounding. All the lights stop flashing and/or turn off. The Security LED turns off.

Turn the vehicle off, and then exit the vehicle with the remote.

11	With the door open, press the lock switch on the door to lock the doors, then close the door to start the system's arming process.	All doors lock. The Security LED lights up*
12	Wait 30 seconds.	Security LED starts flashing; the system is now armed.

13	Reach inside and manually unlock the front passenger's door to trigger an alarm.	The front passenger's door automatically re-locks. The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. (For some vehicles the LED will continue to flash)
14	Press and release the remote control's unlock button to stop the alarm.	The horn stops sounding. All the lights stop flashing. The Security LED flashing.
15	Press and release the remote control's lock button to start the system's arming process, then wait 30 seconds until the system is armed.	Refer to steps 1 and 2*
16	Unlock and open one of the rear passenger doors to trigger an alarm. (if available).	Refer to step 13.
17	Press and release the remote control's unlock button to stop the alarm.	Refer to Step 14
18	Repeat the above steps with the other rear passenger door. (if available).	Refer to steps 1, 2, and 13.

Roll up all windows, remove the key and exit the vehicle.
For Smart Vehicles: Take out the Smart Key from the Vehicle, place them 15 ft. (4.5 meters) or more away from the Vehicle.

19	Press and release the remote control's lock button to start the arming process.	Refer to step 1*
20	Wait 30 seconds.	Security LED starts flashing; the system is now armed.

Perform the following check in a temperature-controlled environment. (50°-90° F)

21	With the tip of a key, or Striker Tool pulled all the way out (PPO only), tap the center of the driver's door window to trigger the alarm.	The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. (For some vehicles the LED will continue to flash)
22	Insert the key into the driver's door key cylinder and turn it toward the back of the vehicle to stop the alarm.	Refer to Step 14

For Smart Vehicles: If the alarm does not trigger during functional verifications the Smart Key might be too close. Move them farther from the vehicle and test the system again.

NOTE: If the alarm does not trigger during the Glass Breakage Test, increase the GBS sensitivity to the next setting and test again.

NOTE: If you do not disarm the system, the alarm will last 20 seconds. It is not necessary to check the alarm duration.

***NOTE:** For some Vehicles, the LED will continue to flash during the 30 seconds (pre-arming).

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.)

Vehicle Function Checks

	Function		Function
Enter the Vehicle			
☐	Dome/Courtesy Lights	☐	Horn
Start the Vehicle			
☐	Panel/Switch Illumination	☐	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). *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 TPMS light will illuminate for a few seconds and go off when IG is turned on.*
☐	Air Bag Warning Light *If the warning light remains on, it may indicate a system malfunction.*		
☐	Cruise Control Light (if equipped)		

Using a Mirror 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)	☐	Power Back Door/Hatch (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)
☐	Power Sliding Door (if equipped)	☐	Rear Sunshade (if equipped)

	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)	☐	HVAC
☐	Steering Wheel Audio Control (if equipped)	☐	Rear Window Defogger (if equipped)
☐	Front Windshield Defogger (if equipped)	☐	Accessory Power Socket (if equipped)
☐	Side Mirror Defogger (if equipped)	☐	Heated/Vented Seats (if equipped)
☐	Massage Seats (if equipped)		

☐	Glove Box Light (if equipped)	☐	Trunk or Back Door/Hatch Cancel Switch (if equipped)

☐	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.

