

**Part Number: PT938-48140**

**Kit Contents**

Item #	Quantity Reqd.	Description
1	2	Running board assembly RHS & LHS
2	1	Bracket Kit
3	1	Bolt pack
4	1	Installation templates

**Hardware Bag Contents**

Item #	Quantity Reqd.	Description
1	6	M5 NUT
2	6	M5 BOLT
3	2	M10 BOLT
4	2	M12 CARRIAGE BOLT
5	2	BOLT LEADER
6	2	SPACER PLATE
7	2	M12 NUT
8	2	SELF DRILL FASTENER
9	12	M6 NUT
10	2	TIE DOWN BRACKET

**Additional Items Required For Installation**

Item #	Quantity Reqd.	Description
1		

**Conflicts**

**Recommended Tools**

<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
SAFETY GLASSES	
CUT RESISTANT GLOVES	
<b>Special Tools</b>	<b>Notes</b>
Tin Snips	
Deburring Tool	
<b>Installation Tools</b>	<b>Notes</b>
DRILL MOTOR	5.5mm, 5/32", 9/64" Bits, Stop
TORQUE WRENCH	Open ended 8mm
IMPACT DRIVER	
CENTER PUNCH	
RATCHETS AND SOCKETS	8mm,10mm, 12mm, 14mm, 18mm, 3/8", 6mm ALLEN, Extension
Slot Screwdriver	
<b>Special Chemicals</b>	<b>Notes</b>
3M BODY SEALER	FOR DRILLED HOLES PT # 08302

**General Applicability**

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**Recommended Sequence of Application**


Item #	Accessory


\*Mandatory


**Vehicle Service Parts** (may be required for reassembly)


Item #	Quantity Reqd.	Description
1		
2		
3		


**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 & 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.

Procedure

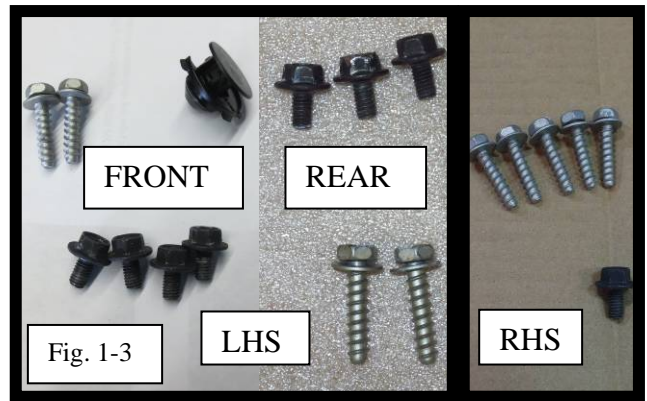
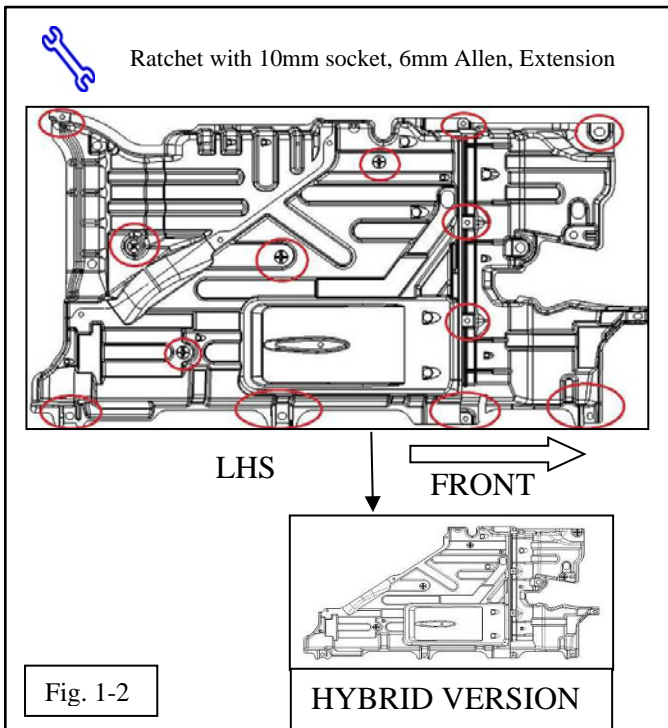
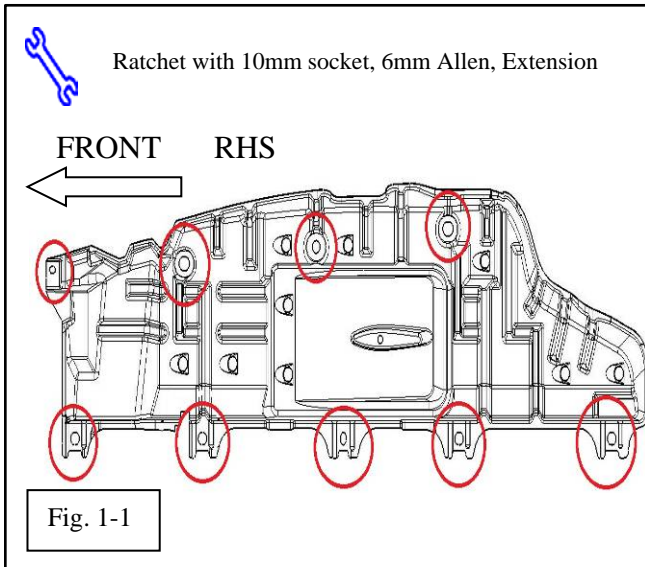
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document. This document covers such items as:-

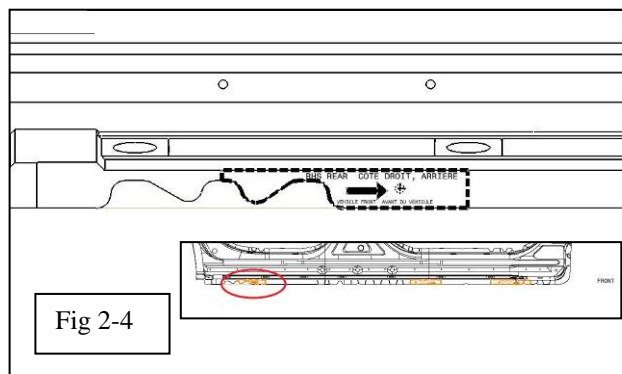
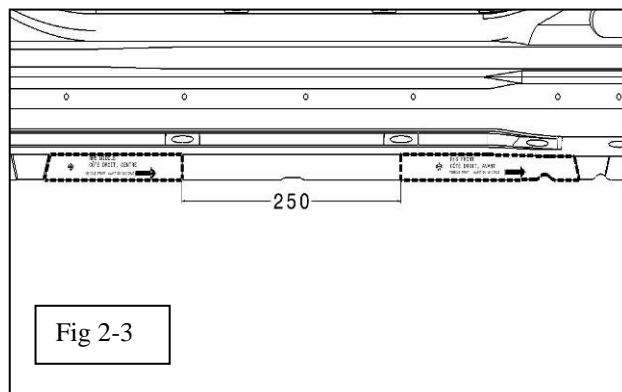
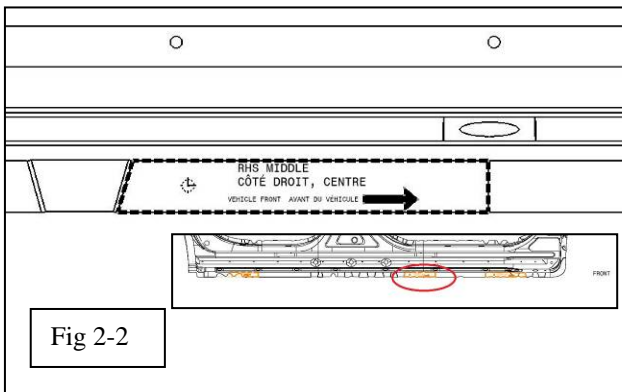
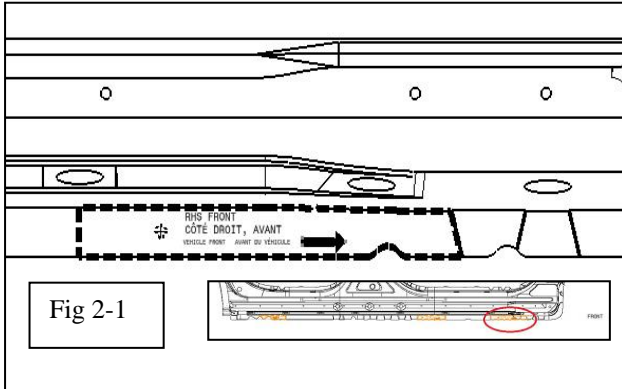
- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

1. Under Cover Removal.

- Locate and remove hardware that holds the full RHS undercover and front and rear portion of the LHS undercover to vehicle. Save hardware for later installation. Put under covers to the side for later cut operation and re-installation (Figs. 1-1, 1-2, 1-3).



**NOTE:** The Hybrid Version LHS Undercover is slightly different than the gas version but uses the same fasteners and fastening points.



2. Template Attachment.



(a) Ensure vehicle is clean and properly prepped for running board installation.



**NOTE:** Safety Glasses Required for this installation.

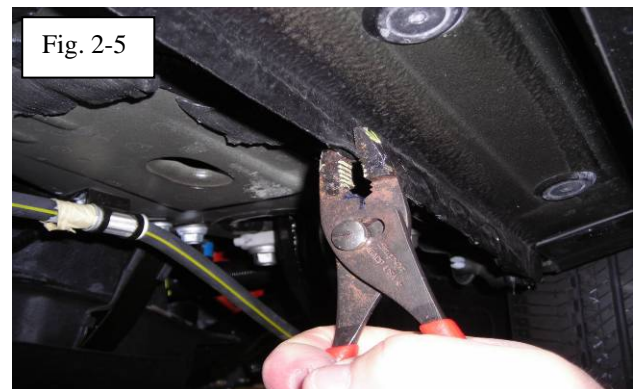
(b) Use of a Drive on Hoist recommended.

(c) Open all vehicle doors

(d) Place the templates onto the outboard edge of the pinch weld, aligning the bottom profile of the template to the bottom profile of the pinch weld. Locate the RHS front drill template by aligning it to the first arc (Fig. 2-1). Locate the middle template as shown in Fig. 2-2 (note front end of template in relation to pinch weld hole) and by measuring 250mm from the back of the front template (Fig. 2-3). Locate the rear drill template as shown in Fig. 2-4. Repeat for LHS.



**NOTE:** Sometimes the pinch weld may come bent. Use a pair of pliers and straighten as necessary (Fig. 2-5).



### 3. Drilling Pinch Weld.

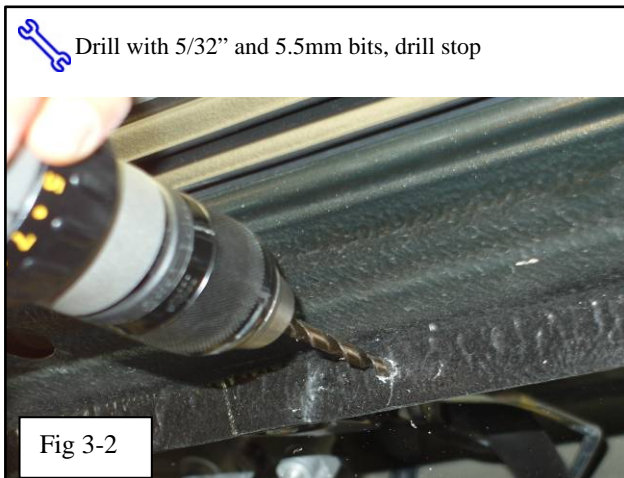
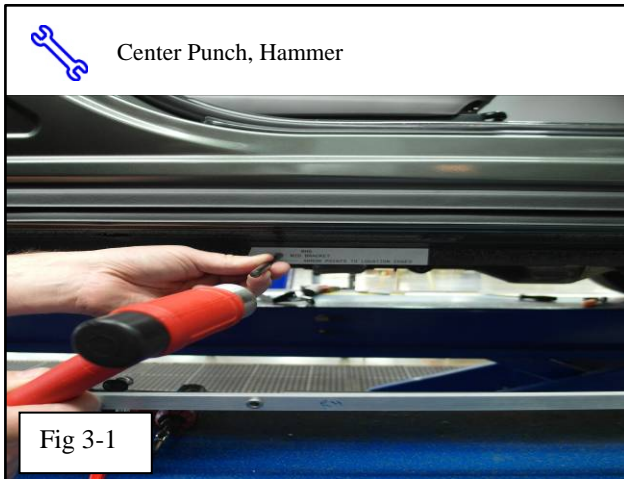
- (a) Using a center punch and hammer, punch indents at the crosshairs in all templates, 6 Places – 3 LHS, 3RHS (Fig. 3-1).



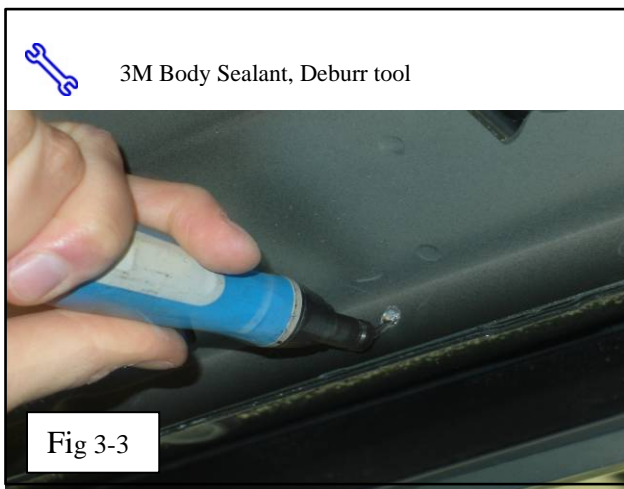
**It is very important to drill correctly. Improper drilling will result in a substandard installation.**



**NOTE:** Drill bit may catch on hard material and break.




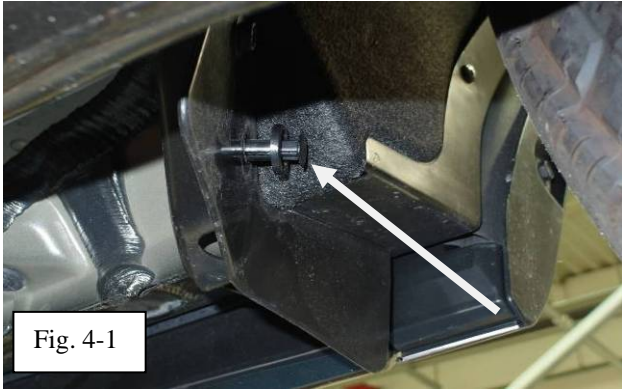
- (b) Pilot drill all holes using a 5/32" diameter drill bit, then enlarge the pilot holes using a 5.5mm drill bit (Fig. 3-2).
- (c) Remove the templates




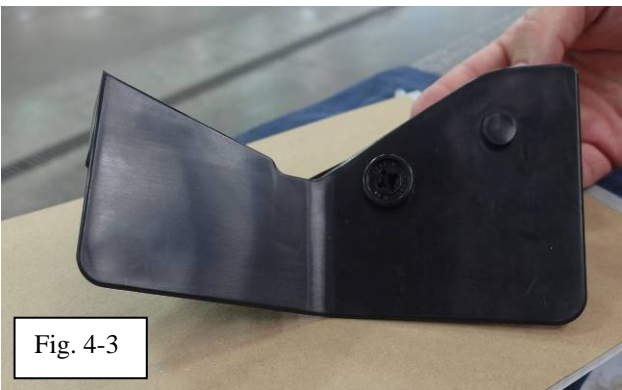
- (d) Deburr the holes and apply corrosion prevention sealer 3M 08302 (Fig. 3-3).



 Slot Screwdriver

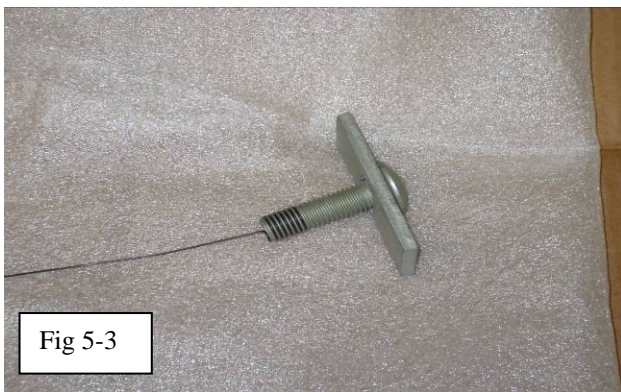
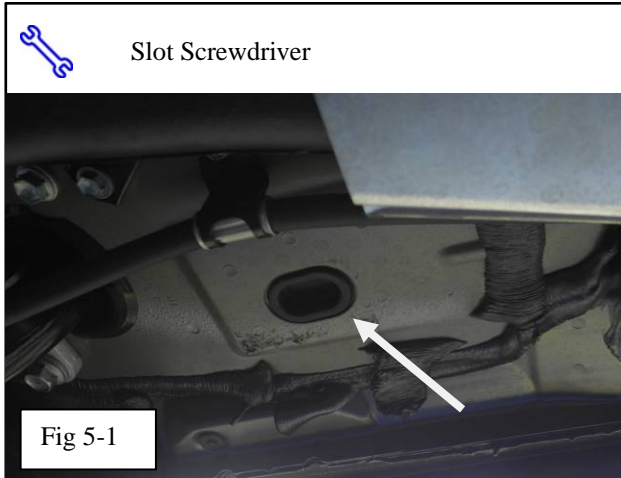


 Ratchet and 10mm Socket



#### 4. Rear air diffuser removal.

- (a) Locate and remove the LH and RH rear air diffusers. These are not required when a running board is installed and will interfere with installation.
- (b) Using a slot screwdriver, pry out the fastener plunger and remove the push fastener from the rear air diffuser (Fig. 4-1).
- (c) Use a 10mm socket and ratchet to remove the two bolts securing the rear air diffuser to the vehicle (Fig. 4-2).
- (d) Remove and discard the rear air diffuser and related hardware (Fig. 4-3).
- (e) Repeat for the opposite side.



### 5. Rear Bracket Installation.

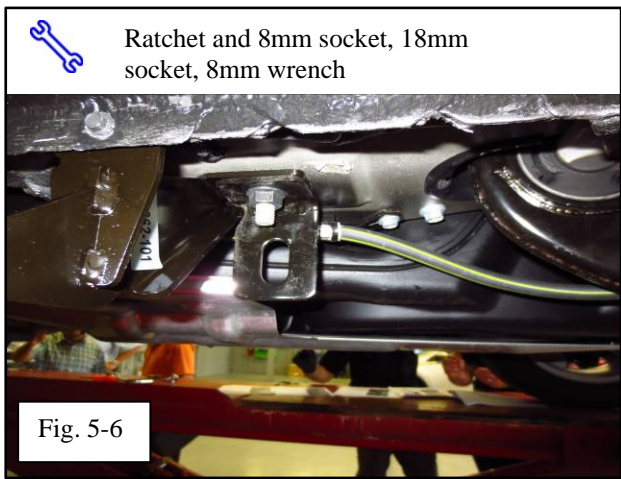
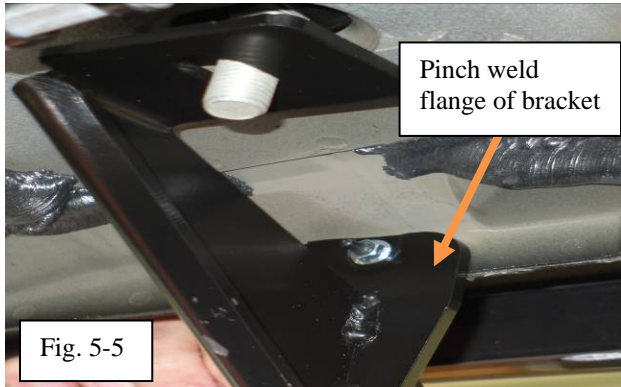
- (a) Locate, remove, and discard the plugs from the rear bracket mounting area (Figs. 5-1, 5-2).

- (b) Locate the rear bracket hardware and assemble a carriage bolt, spacer plate and bolt leader (Items 4, 5, & 6; Fig. 5-3).



**Caution:** It is recommended to fold over the tail end of the bolt leader to avoid eye injuries when installing.

- (c) Tilt the bolt assembly on an angle to feed the bolt through the hole first, followed by the plate, all while using the leader to keep them together. Once the bolt and spacer are in the hole, gently use the leader to fish the bolt through the spacer hole and then through the vehicle opening. Remove the bolt leader once complete. Repeat for opposite side (Fig. 5-4).



- (d) Obtain the rear LHS bracket and install it over the M12 bolt assembly (Fig. 5-5).

**NOTE:** The pinch weld flange of the bracket goes on the inboard side of the pinch weld (Fig. 5-5).

- (e) Install an M5 bolt (Item 2) through the pinch weld and bracket flange, then install an M5 Nut (Item 2) finger tight on the assembly (Fig. 5-6).
- (f) Install the tie-down bracket (Item 10) then an M12 nut (Item 7) on the carriage bolt end and finger tighten (Fig. 5-6).
- (g) In the following order, torque the M5 fastener (Item 1) to 7 Nm (62 in-lbf) and the M12 fastener (Item 7) to 80 Nm (59 ft-lbf).

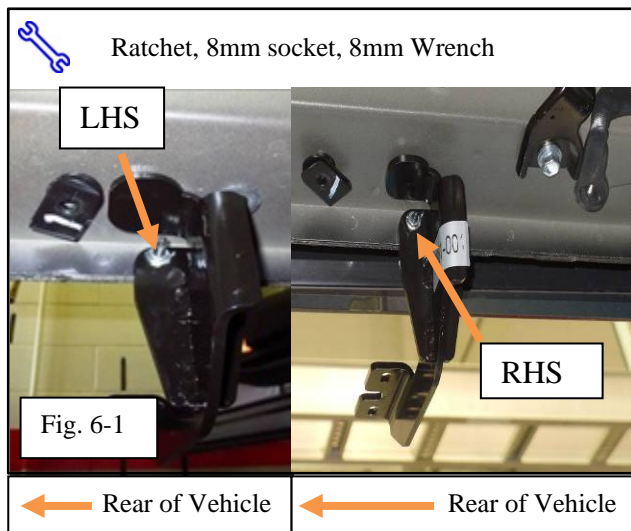
**S** Torque M5 fastener: 7 Nm (62 in-lbf)  
Torque M12 fastener: 80 Nm (59 ft-lbf)

- (h) Repeat for opposite side.

**6. Middle Bracket Installation.**

- (a) Install a middle bracket to the pinch weld by placing an M5 bolt (Item 2) through the rearmost hole. Fit an M5 Nut (Item 1) and leave finger tight (Fig. 6-1).

**NOTE:** The pinch weld flange of the bracket goes on the inboard side of the pinch weld (Fig. 6-1).







(b) Using the bracket as a template, pre-drill a hole through the two layers of inner rocker steel using a 9/64" drill bit. Clean out all shavings (Fig. 6-2).

(c) Obtain a self-drilling fastener (Item 8) and drive into the drilled pilot hole in Step 6(b) with an impact driver (Fig. 6-3).

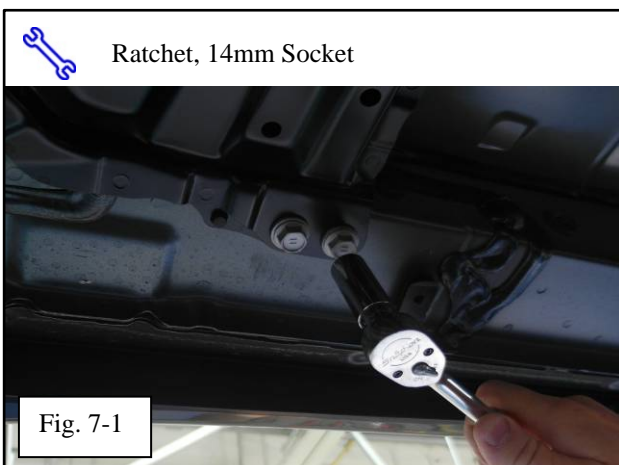
 **Do not over tighten with the drill!**

(d) In the following order, torque the M5 nut and bolt (Items 1 and 2) to 7 Nm (62 in-lbf), then the self-drilling fastener (Item 8) to 6 Nm (53 in-lbf). If the bracket does not align with the running board underside, a shim may need to be used between the upper bracket face and the inner sill.

 **Torque M5 fastener: 7 Nm (62 in-lbf)**

**Torque self-drilling fastener: 6 Nm (53 in-lbf)**

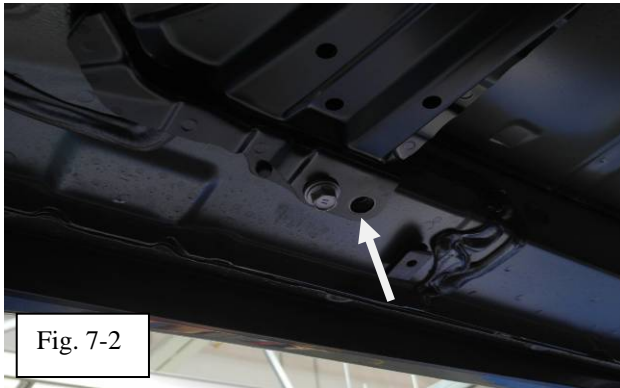
(e) Repeat for opposite side.



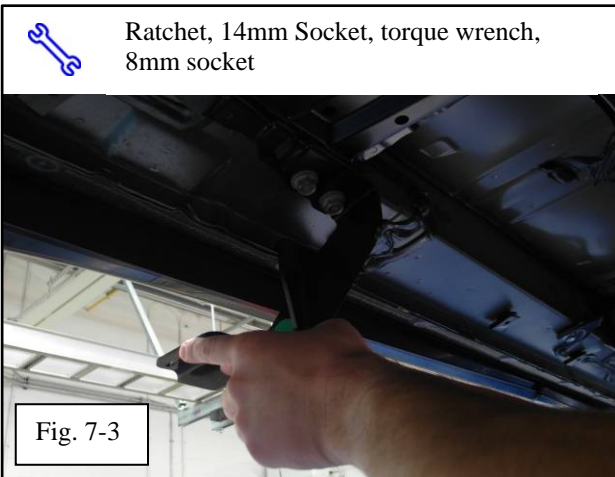
## 7. Front Bracket Installation.

(a) Locate the area under LHS front of vehicle sill containing two installed M10 Bolts (Fig. 7-1).





- (b) Remove and discard the rearmost M10 bolt (Fig. 7-2).
- (c) Locate the Front LHS bracket from kit.



- (d) Install the front bracket to the vehicle using a replacement M10 bolt (Item 3) from the hardware pack and an M5 nut and bolt (Items 1 & 2) combination through the mount flange and pinch weld (Fig. 7-3).

**NOTE:** The pinch weld flange of the bracket goes on the inboard side of the pinch weld (Fig. 7-3).

- (e) In the following order, torque the M5nut and bolt (Items 1 & 2) to 7Nm, then the M10 bolt (Item 3) to 51 Nm.

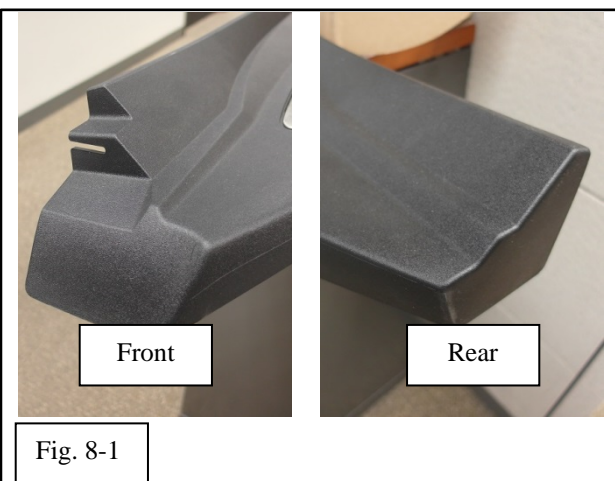
**S** Torque M5 fastener: 7 Nm (62 in-lbf)

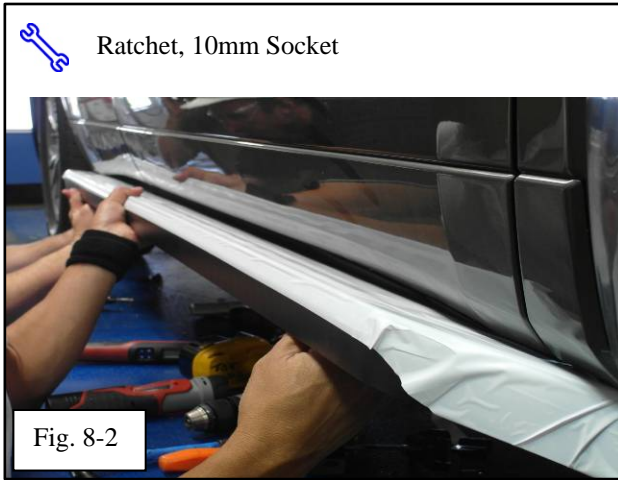
Torque M10 fastener: 51 Nm (37 ft-lbf)

- (f) Repeat on the opposite side.

### 8. Installation of running board step to brackets.

- (a) Obtain the LHS step from the packaging. The front has the notch and the rear is blunt (Fig. 8-1).



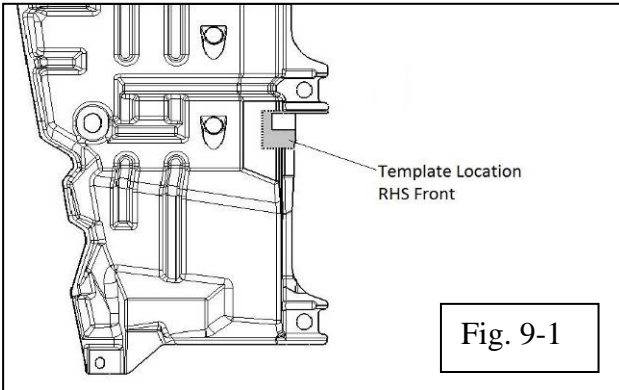


- (b) Close all doors. Tilt the rear of the running board on an upward angle while moving the board toward the brackets. Ensure the bolts sticking out of the bottom of the running board are engaging with the holes in the brackets (3 pairs of fasteners should be located in the areas of front, middle and rear brackets; Fig. 8-2).
- (c) Once the fasteners are engaged with the brackets, lower the tilt from the board so that the board sits on the brackets.
- (d) Ensure the slot in the plastic at front top end of the running board is engaged with the front wheel well liner.
- (e) Obtain six M6 nuts (Item 9) and install them on the fasteners finger tight (6 places).
- (f) Push the running board inboard until it cannot go inboard any further.
- (g) Adjust the running board forward – aft so that it is aligned with rear wheel well (Fig. 8-3).
- (h) Torque all six nuts (Item 9) to 11 Nm (97 in-lbf)



**S Torque: 11 Nm (97 in-lbf)**

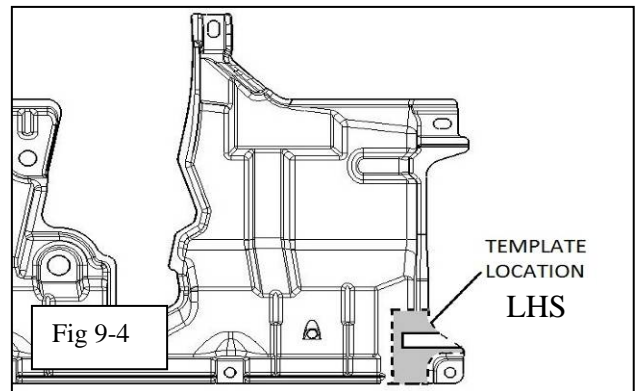
- (i) Remove the protective plastic sheet from the running board.
- (j) Repeat on the opposite side.



9. Undercover cut and re installation.

Cut resistant gloves recommended.

- (a) Obtain the undercover cut templates.
- (b) Apply undercover aligning template features to part features (Figs. 9-1 through 9-6).
- (c) Use a pair of tin snips to cut the undercover following the cut lines on the template.
- (d) Remove the templates and discard them and the cut pieces.





- (e) Prior to re-installing the covers, re-torque all M5 hardware using an open-ended torque wrench (Fig. 9-7).

**S** Torque: 7 Nm (62 in-lbf)

- (f) Re-install the modified under covers removed in Step 1(a). Reuse the factory hardware and torque to **5.5 Nm (48 in-lbf)**.
- (g) Clean the surface of the step pad when the install is complete.



Checklist - these points **MUST** be checked to ensure a quality installation.

<u>Check:</u>	<u>Look For:</u>
<p><u>Accessory Function Checks</u></p> <p><input type="checkbox"/> Properly Aligned with vehicle</p> <p><input type="checkbox"/> Bolt Torque</p>	<p>Ensure Gaps are visually acceptable.</p> <p>M5 hardware            <b>7 Nm (62 in-lbf)</b></p> <p>M10 hardware           <b>51 Nm (37 ft-lbf)</b></p> <p>M12 hardware           <b>80 Nm (59 ft-lbf)</b></p> <p>M6 nuts                    <b>11 Nm (97 in-lbf)</b></p>
<p><u>Vehicle Function Checks</u></p> <p><input type="checkbox"/></p>	
<p><u>Vehicle Appearance Check</u></p> <p><input type="checkbox"/> After accessory installation and removal of protective cover(s), perform a visual inspection.</p>	<p>Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)</p>