Part Number: RTOHI20

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Running Board Assembly LH
2	1	Running Board Assembly RH
3	1	Hardware Kit
4	1	Hardware Kit – Bolt Covers

Hardware Bags Contents

Hardware kit part number: PT938-48200-HK		
Item #	Quantity Reqd.	Description
1	16	M6 x 1 Rivnut
2	18	M6 x 1 SEMS Bolt
3	2	M6 x 1 Wakai Nut
4	4	M6 x 1 Flag Bolt
5	4	M6 x 1 Retainer
6	4	M6 x 1 SEMS Nut
7	8	Mylar Sticker
8	14	Bolt Cover

Additional Items Required For Installation

Item #	Quantity Reqd.	Description

Conflicts

None

Recommended Tools

Personal & Vehicle Protection	**Notes**
Safety Glasses	
Cut Resistance Gloves	
Special Tools	**Notes**
AVK 5500 Rivnut Tool *(PPO Recommended)*	M6 x 1 Mandrel
Bollhoff 4090 Rivet Nut Tool *(PPO Recommended)*	M6 x 1 Mandrel M6 x 1 Anvil
SSG-803 Rivet Nut Tool *(DIO Recommended)*	M6 x 1 Mandrel **Must regulate air to: 110 PSI +/-5 PSI**
Air Chisel	
Installation Tools	**Notes**
Torque Wrench (1/4”)	2 – 20 ft-lb Range (24-240 in-lb)
Driver/Ratchet	10 mm Deep Socket
	6” Extension
	#2 Phillips Bit
Panel Removal Tool	
Plastic Scraper Manual	ATH-8-XNGL
Plastic Scraper Air Chisel Air	AHS-8-XNGL or AHSQD-8-XNGL
Tape	Masking Tape
Special Chemicals	**Notes**
3M Body Sealer	PT#08302

General Applicability

MY20 and newer Highlander, Highlander HV models

Recommended Sequence of Application

Item #	Accessory

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Reqd.	Description

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.

REGULATORY MARK: This mark indicates the component is related to regulatory compliance

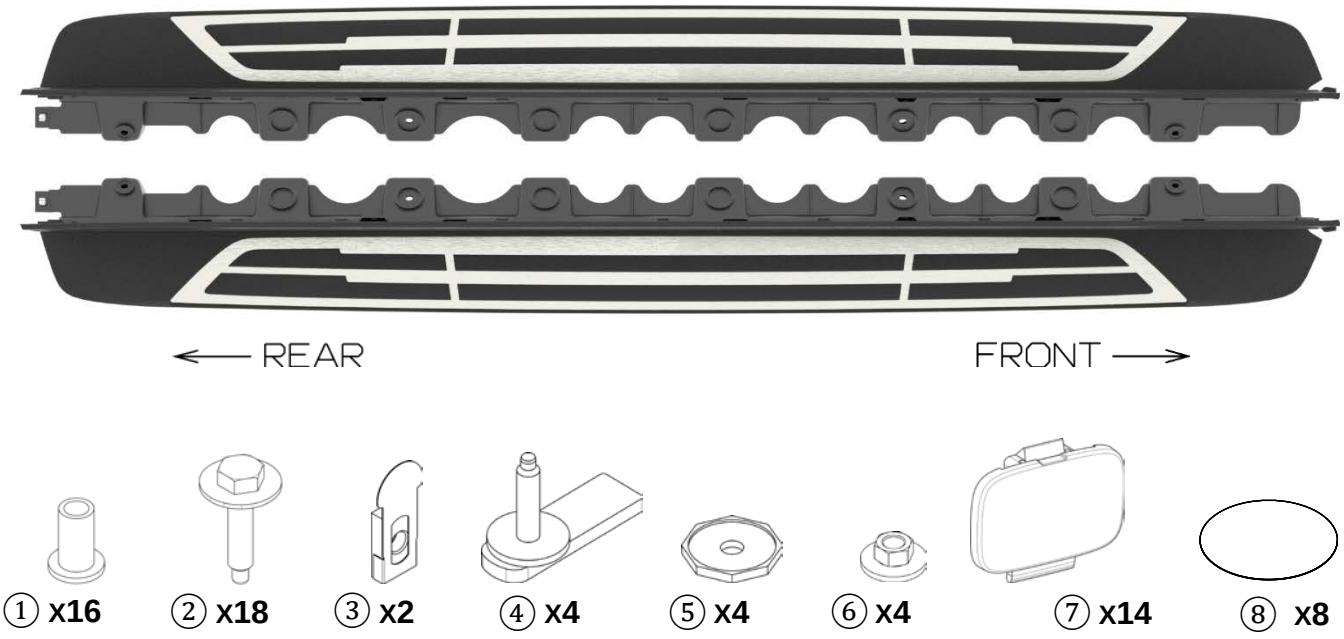
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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.).

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



1. **Prepare the vehicle.**

(a) Ensure vehicle is clean prior to the running board installation.

(b) Open all vehicle doors.

(c) Lift the vehicle, making sure to leave room for running board installation (Fig. 1-1).

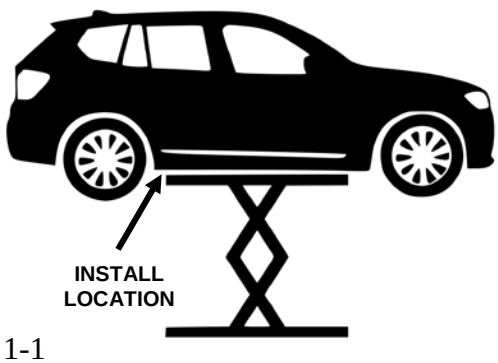
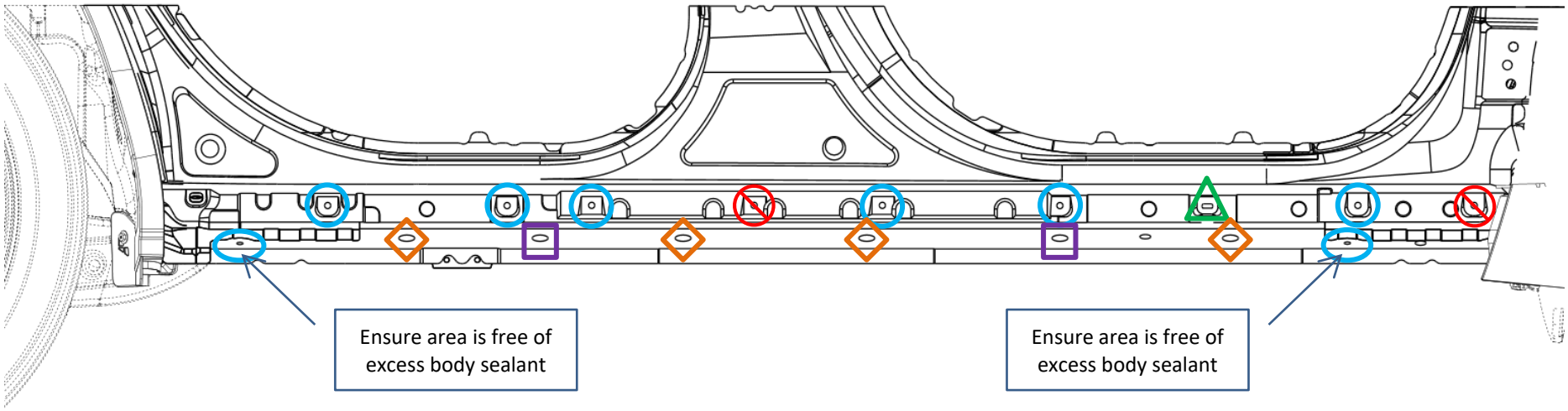


Fig. 1-1

FASTENER INSTALL OVERVIEW

PASSENGER SIDE (RH)

FRONT →



- Do NOT Touch
- ③ Wakai Nut
- ④ Flag Bolt
- ① M6 Rivnut
- ⑧ Mylar Plug Sticker

2. Remove OE Rocker Panel Molding

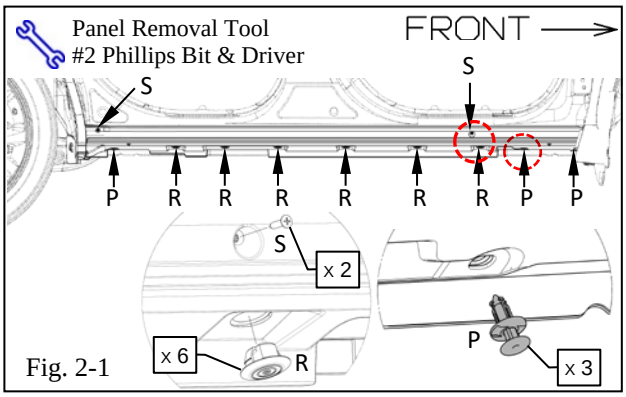


Fig. 2-1

(a) Using a #2 Phillips driver, unfasten two (2) screws (S). One (1) at the front and one (1) at the rear of the rocker panel molding (Fig. 2-1).

NOTE: Retain one (1) of the screws for reinstallation, discard the other.

(b) Using a panel removal tool, remove and discard the two (2) push-pins (P) at the front and one (1) at the rear (Fig. 2-1).

(c) Pull the cladding down and out along the bottom for each of the six (6) rocker panel molding retainers (R) – this will cause them to pop out of the rocker (Fig. 2-1, & Fig. 2-2). Discard the retainers.

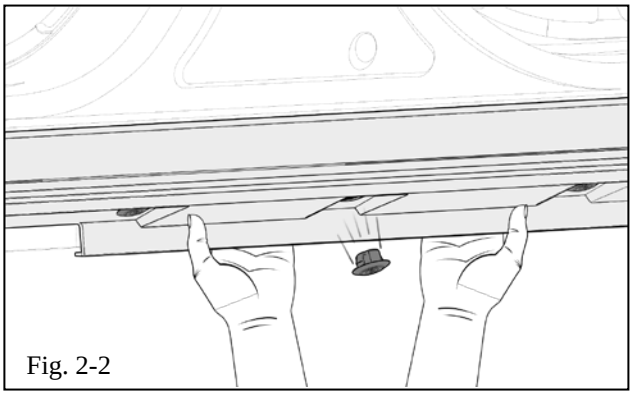


Fig. 2-2

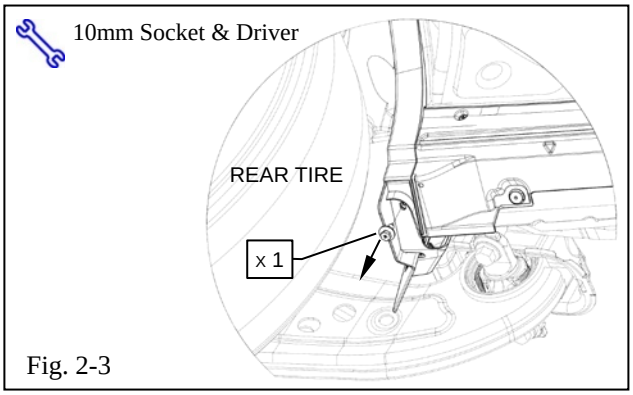


Fig. 2-3

(d) Using a 10mm socket, remove and save the screw at the rear fender molding (Fig. 2-3).

NOTE: Retain the screw for re-installation.

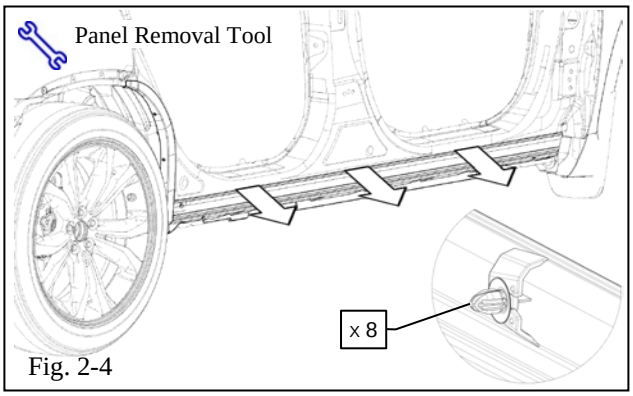


Fig. 2-4

(e) Pry the rocker panel molding along the top to disengage the clips fastening it to the rocker (Fig. 2-4).

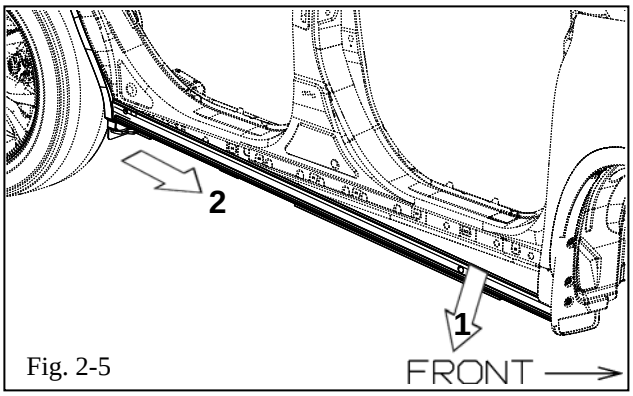


Fig. 2-5

(f) Pull the front of the rocker panel molding down and out, then pull forward releasing the rear from the fender molding (Fig. 2-5).

⚠ **NOTE:** Ensure all eight (8) clips from Step 2(e) are removed from the rocker sheet metal.

3. Install OE Clip into the Running Board

(a) Select and remove one (1) of the best plastic clips from the OE rocker panel molding for reuse.

(b) Discard the OE rocker panel molding and remaining clips.

⚠ **NOTE:** Ensure selected clip is not damaged.

(c) Insert the clip from Step 3(a) into the running board dog house at the front location (Fig. 3-1).

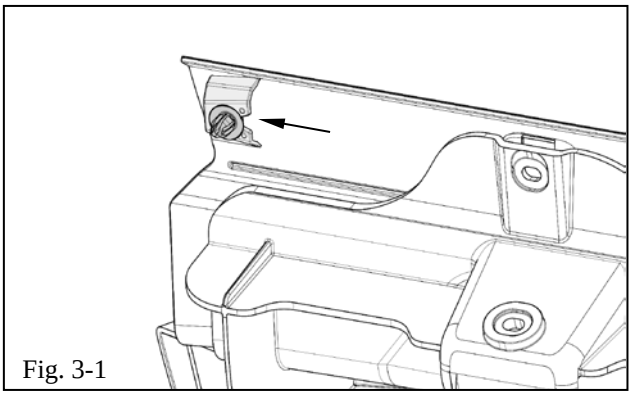


Fig. 3-1

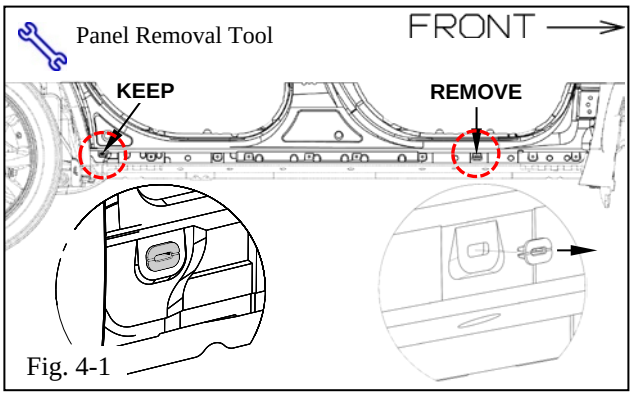


Fig. 4-1

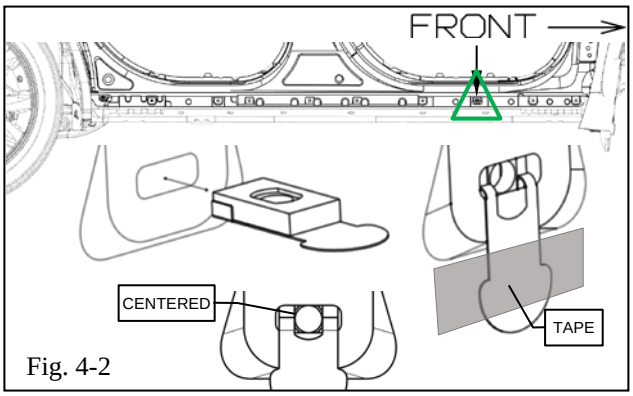


Fig. 4-2

4. Install Running Board Mounting Hardware

(a) Remove and discard the front plastic nut from the rocker panel (Fig. 4-1).

⚠ **NOTE:** Do not remove the rear nut.

(b) Insert the M6 Wakai nut ③ (with the tab facing down) at the front slot location (Fig. 4-2).

⚠ **NOTE:** Ensure the Wakai nut is inserted through all the sheet metal folds and that the hole is centered.

(c) Bend the tab flat against the vehicle rocker ensuring the hole is centered and apply a piece of masking tape to the tab to keep it in position during install (Fig. 4-2).

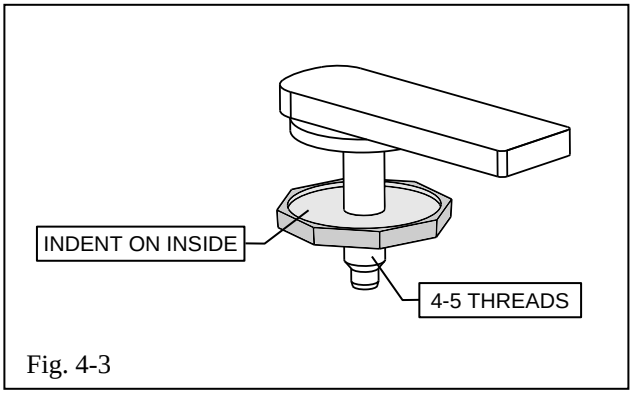


Fig. 4-3

(d) Install one (1) plastic retainer ⑤ with the indent on the inside onto each flag bolt ④ about 5 threads down, do this for all flag bolts (Fig. 4-3).

⚠ **NOTE:** Ensure the plastic retainer indent is facing towards the flag bolt.

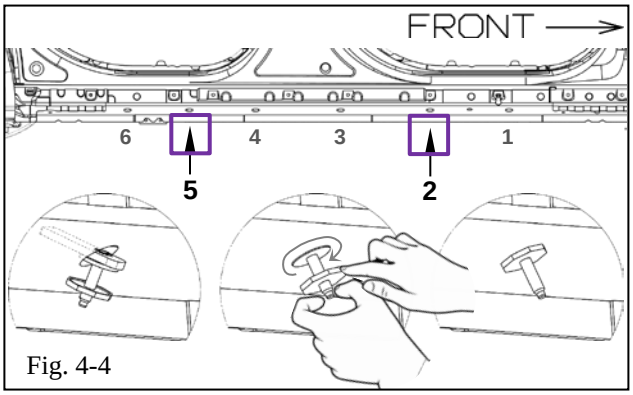


Fig. 4-4

(e) Insert a flag bolt & retainer into the bottom large rocker hole #2 – tail end first, rotating into position (Fig. 4-4).

(f) While holding the end of the flag bolt, hand tighten the retainer so that it's tight and flush with the vehicle rocker (Fig. 4-4).

(g) Install the second flag bolt at location #5 (Fig. 4-4).

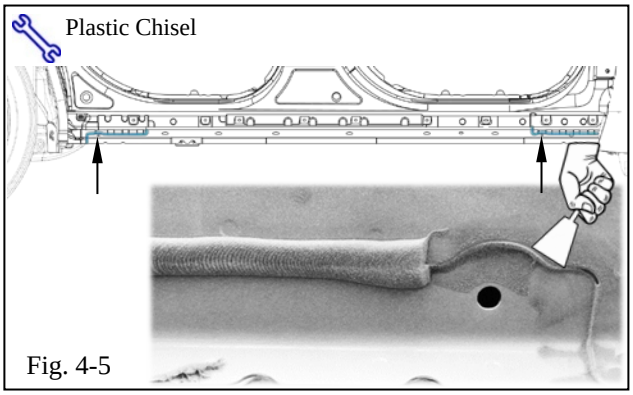


Fig. 4-5

(h) Check for weld sealant at the front and rear mounting locations. If there is sealant in proximity of the mounting holes, use a plastic chisel to scrape it off as shown in (Fig. 4-5).

⚠ **NOTE:** Score the sealant first and scrape from the outside working inwards. Ensure an area of roughly 50 mm [2 in] around the hole is clear. Apply 3M body sealant to the area after scraping.

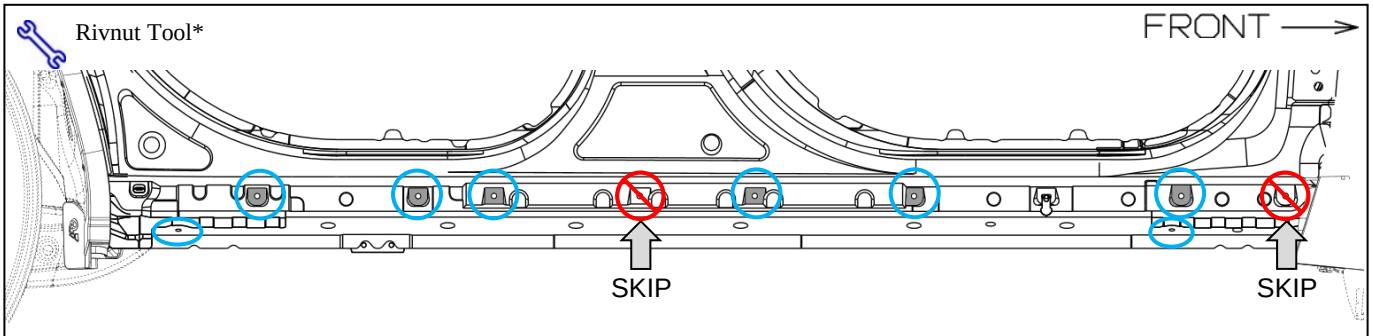


Fig. 4-6

(i) Using the rivnut tool*, install eight (8) M6 rivnuts ① (six at the side, two at the bottom) into the vehicle rocker holes, as indicated in Fig. 4-6.

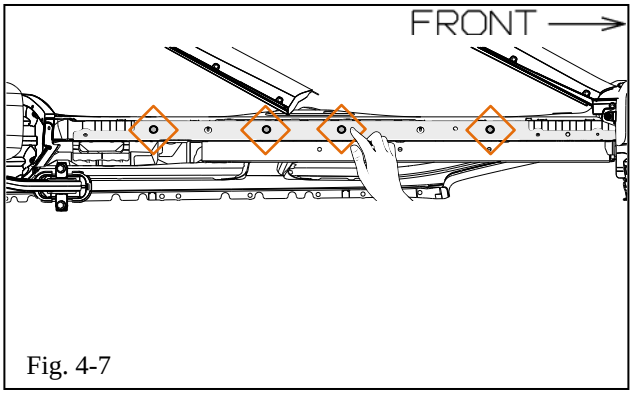


Fig. 4-7

(j) Apply four (4) mylar stickers ⑧ into the remaining open holes on the bottom of the rocker to seal them (Fig. 4-7).

***Refer to the IADS or manufacturer's instructions for proper rivnut tool set-up and operation. Take extra care when installing the M6 mandrel onto the tool**

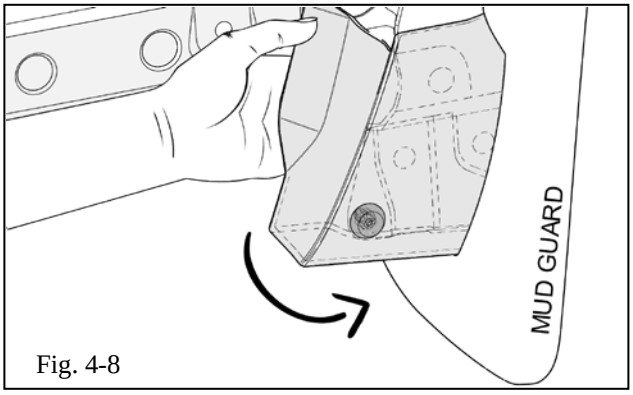


Fig. 4-8

(k) Disengage the front fender molding by pulling the molding from the inside (Fig. 4-8).

⚠ **NOTE:** Do not remove the fender molding. Pull just enough to disengage the clip. Make sure the clip remains in the fender molding.

5. Install the Running Board

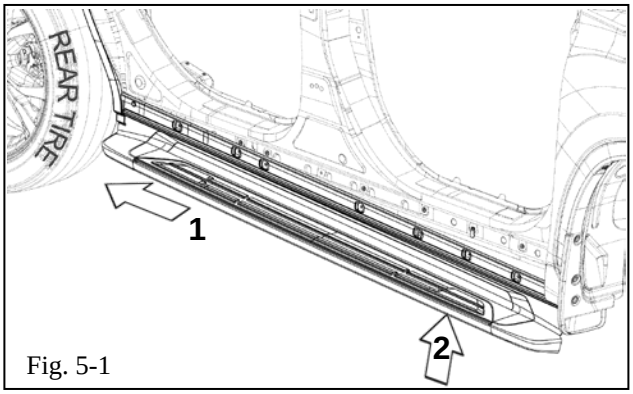


Fig. 5-1

(a) Insert the rear of the running board into the fender molding and rotate the front up and into position (Fig. 5-1).

⚠ **NOTE:** Make sure the clip from Step 3(c) is installed.

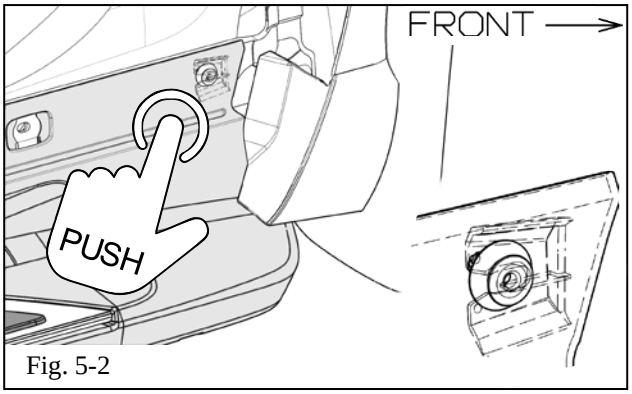


Fig. 5-2

(b) Press the front of the running board so that the plastic clip engages into the rocker panel (Fig. 5-2).

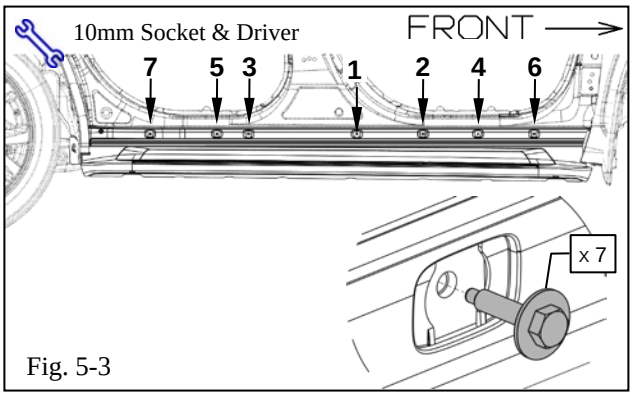


Fig. 5-3

(c) Insert and hand start one (1) M6 bolt ② at center hole #1 on the outer facing flange (Fig. 5-3).

(d) Insert and hand start six (6) M6 bolts ② at the remaining locations on the outer facing flange (Fig. 5-3).

NOTE: A total of seven (7) bolts are to be installed on the outer facing flange.

NOTE: Make sure center hole #1 is lined up with the rivnut before threading. Use gentle force to thread the bolt at location #4 where the Wakai nut ③ is.

(e) Tighten and torque the bolts to 7 N·m per the sequence indicated in Fig. 5-3.

Torque: 7 N·m (62 in·lbf)

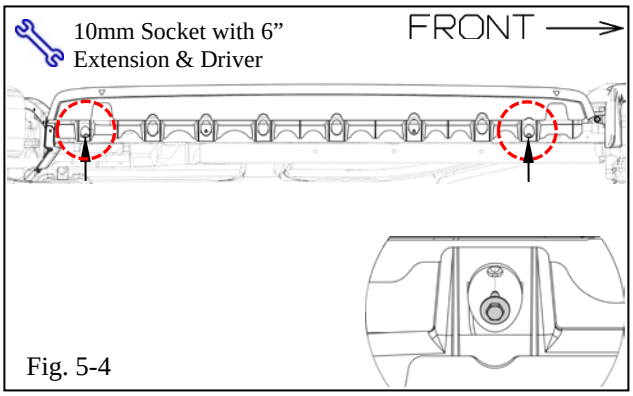


Fig. 5-4

(f) Insert and hand tighten two (2) M6 bolts ② on the bottom facing flange using a 6” extension (Fig. 5-4).

(g) Tighten and torque the bolts to 7 N·m (Fig. 5-4).

Torque: 7 N·m (62 in·lbf)

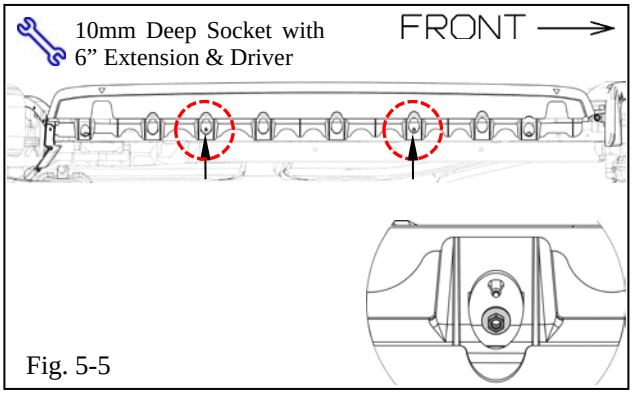


Fig. 5-5

(h) Insert and hand start two (2) M6 nuts ⑥ on the bottom facing flange (Fig. 5-5).

(i) Tighten and torque the nuts to 7 N·m (Fig. 5-5).

Torque: 7 N·m (62 in·lbf)

(j) Re-torque all the fasteners from Step 5(c) to (h) to **7 N·m (62 in·lbf)**.

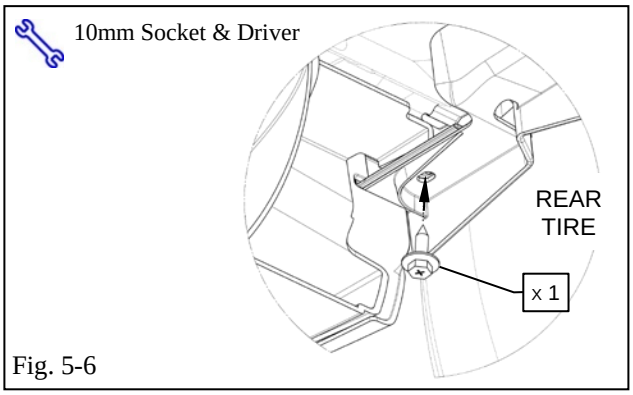


Fig. 5-6

(k) Re-install the screw at the rear fender molding (Fig. 5-6).

⚠ **NOTE:** This is the same screw retained from Step 2(d).

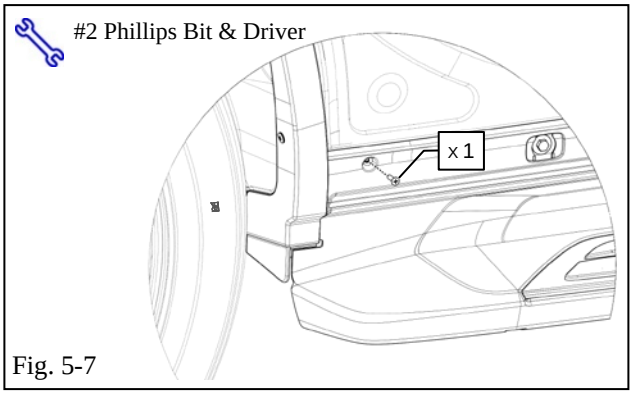


Fig. 5-7

(l) Re-install the screw at the rear outer facing flange of the running board (Fig. 5-7).

⚠ **NOTE:** This is the same screw retained from Step 2(a).

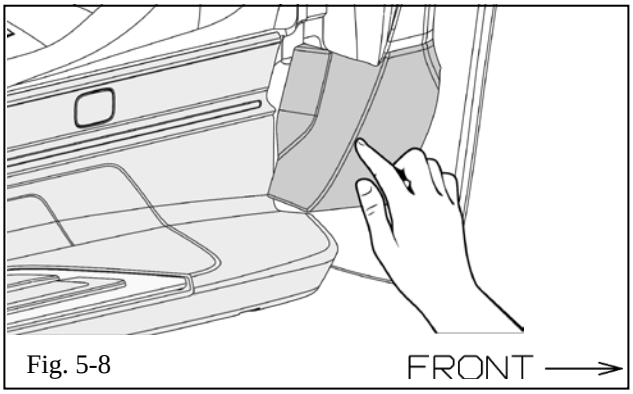


Fig. 5-8

(m) Press the front fender molding to re-engage the inner clip (Fig. 5-8).

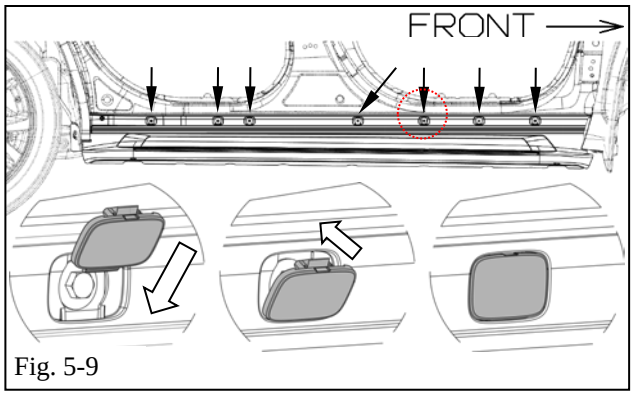


Fig. 5-9

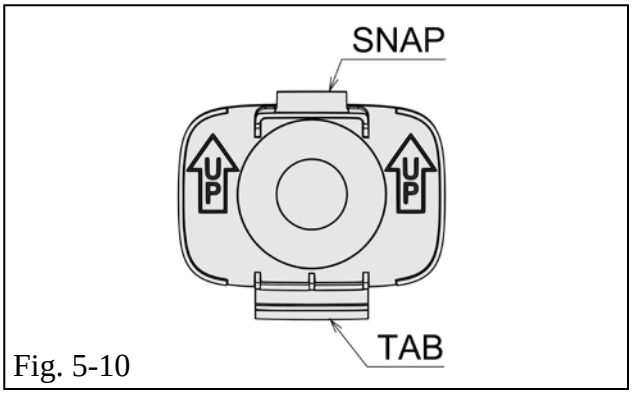


Fig. 5-10

(n) Install the seven (7) bolt covers ⑦, inserting the bottom tab first (snap facing up) into the running board (Fig. 5-9).

NOTE: Ensure the bolt cover is oriented with the arrow indicator on the back facing up (Fig. 5-10).

Check:	Look For:
Accessory Function Checks ☐ ☐ ☐ ☐	
Vehicle Function Checks ☐ ☐ ☐	
Vehicle Appearance Check ☐ After accessory installation and removal of protective cover(s), perform a visual inspection.	Ensure no damage (including scuffs and scratches) was caused during the installation process. Ensure proper alignment of board, no large gaps or miss-match surfaces. (For PPO installations, refer to TMNA Accessory Quality Shipping Standard.)