

Part Number: PT228-48140

Kit Contents

Item #	Quantity Req'd.	Description
1	1	Trailer Hitch
2	1	LH mounting bracket
3	1	RH mounting bracket
4	1	LH lower fascia cover
4	1	RH lower fascia cover
5	1	Trailer Hitch plug

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	14	M12 x 1.25 x 45mm bolt
2	3	Plastic push pin
3		

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		
2		
3		

Conflicts

None

Recommended Tools

Personal & Vehicle Protection	Notes
Safety glasses	
Cloth / shop towel	
Special Tools	Notes
Installation Tools	Notes
Torque wrench – 3/8" & 1/2"	0-100 ft-lbf
1/2" socket wrench	
1/2" x 6" socket extension	
1/2" sockets	14, 17mm
3/8" socket wrench	
3/8" x 6" socket extension	
3/8" socket	10mm, 12 mm, 14 mm, 17mm
Small flat head screwdriver	
Phillips head screwdriver	
Deburring tool	File
Rotary cutting tool	
Marking pen	
Special Chemicals	Notes

General Applicability

All Highlander & Hybrid models

Recommended Sequence of Application

Item #	Accessory
1	Towing Hitch
2	Towing Hitch Wiring Harness
3	

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	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.).

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

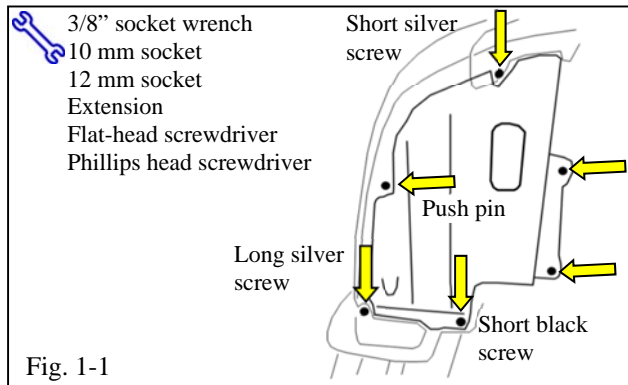
1. Prepare the Vehicle for Hitch Installation.

- (a) Verify the kit contents.
- (b) Cover the exhaust pipe with a clean shop towel.

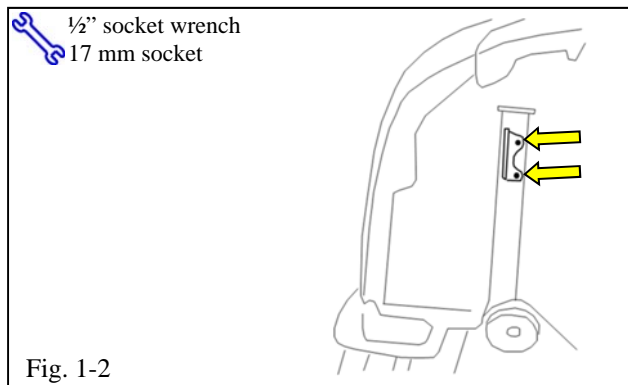
+ CAUTION: Muffler may be hot and/or sharp.

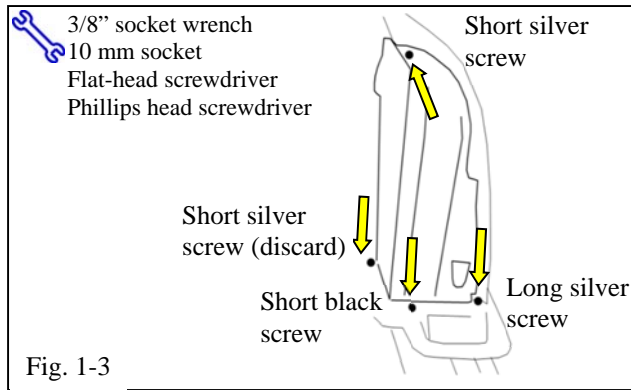
+ NOTE: Wear safety glasses.

- (c) Remove the lower LH side undercover by removing 6 fasteners. Set the cover and fastening hardware aside for later use (Fig. 1-1).

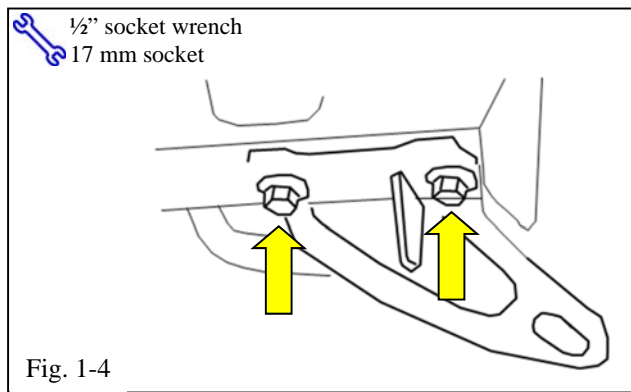


- (d) Remove the LH side tie-down hook by removing 2 bolts. Discard the tie-down hook (Fig. 1-2).

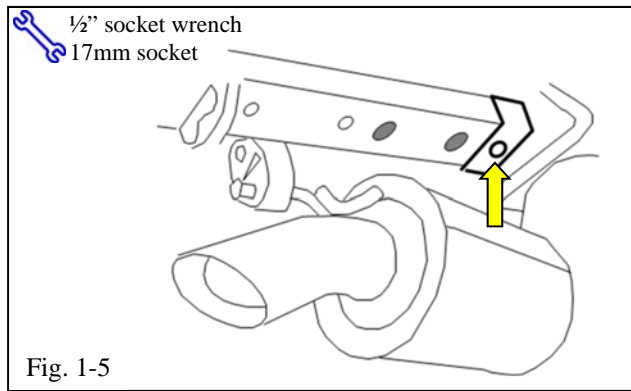




(e) Remove the lower RH side undercover by removing 4 fasteners. Set the cover and fastening hardware aside for later use (Fig. 1-3).

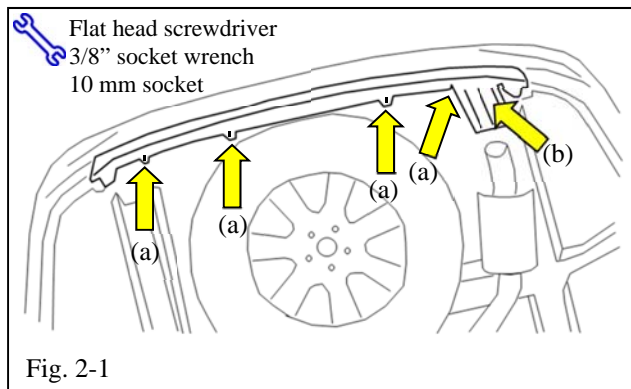


(f) Remove the RH side tie-down hook by removing 2 bolts. Discard the tie-down hook and bolts (Fig. 1-4).

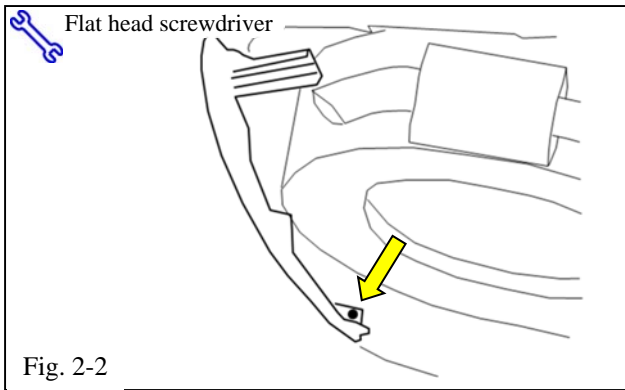


(g) Remove the strap bracket attached to the frame located above the front of the muffler by removing one bolt. Discard the bolt and bracket (Fig. 1-5).

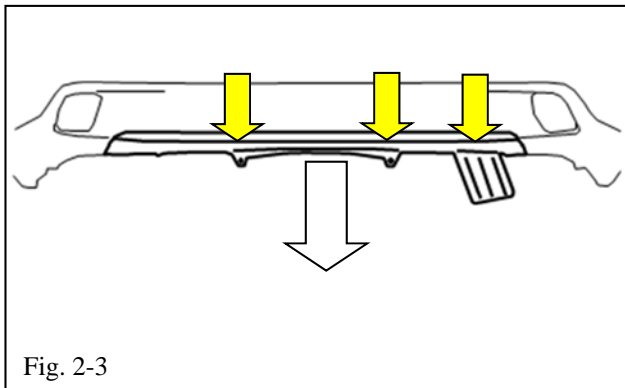
2. Remove the Factory Lower Fascia Cover.



(a) Remove and discard the 4 plastic push pins in the locations shown (Fig. 2-1).
 (b) Remove and discard the screw and push pin from the cover tab by the muffler (Fig. 2-1).

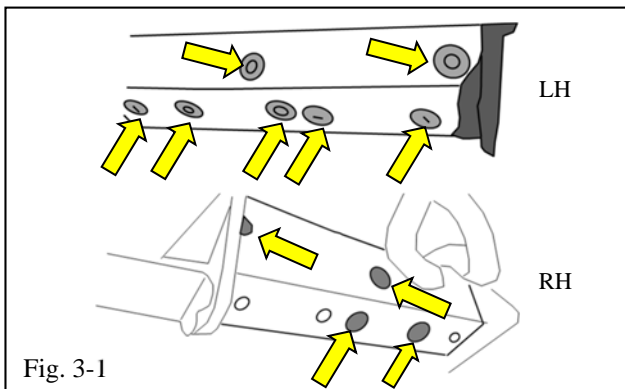


- (c) Remove the 2 outboard push-pins (1 per side) and save for later use (Fig. 2-2).



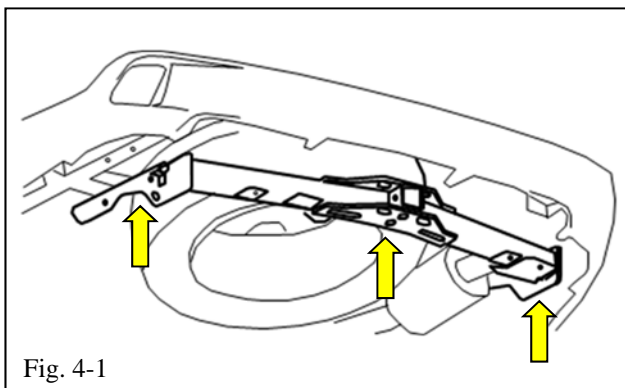
- (d) Fold the 3 hinged tabs away from the upper bumper cover and remove the lower cover by disengaging the latches. The cover can be discarded (Fig. 2-3).

3. Prepare the Frame Rails.



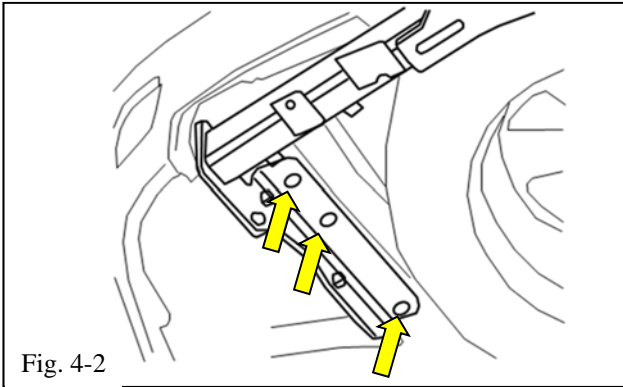
- (a) Remove the rubber drain plugs from the bottom and outside of both the LH and RH frame rails (Fig. 3-1).

4. Install the Hitch.



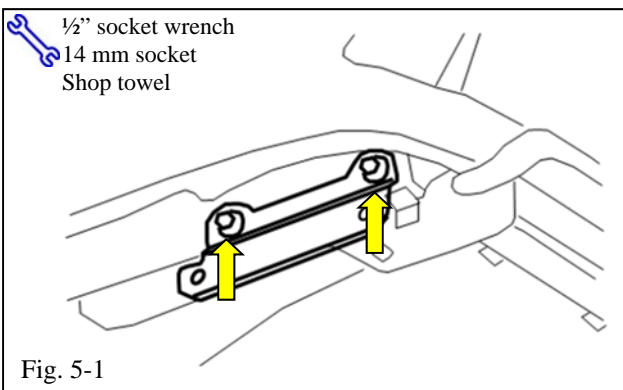
- (a) Lift the towing hitch into position under the vehicle frame. Line the slots in the brackets up with the holes in the frame (Fig. 4-1).

+NOTE: This step requires two people.

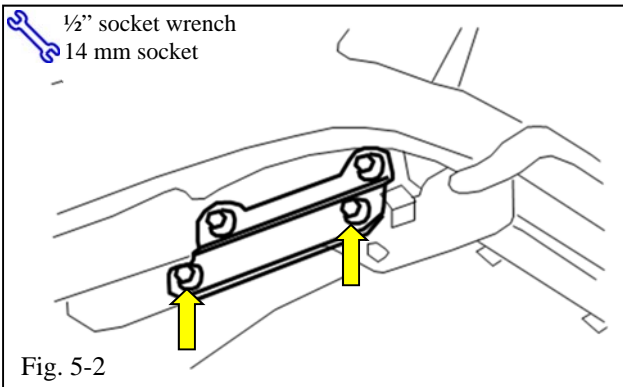


- (b) Install 3 M12 bolts into the bottom of the frame on both the LH and RH sides (Fig. 4-2). Hand tighten the bolts to allow for cross-car adjustments in later steps.

5. Install the LH Mounting Bracket.

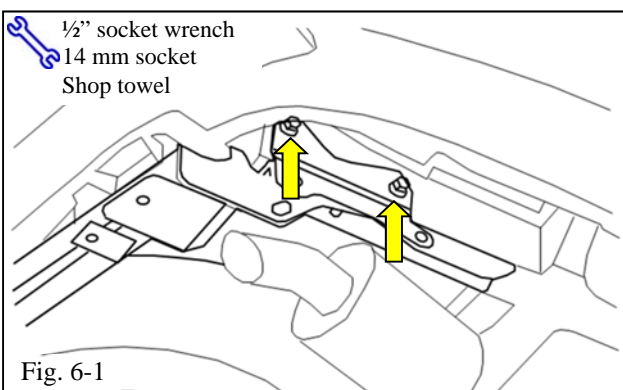


- ⚠ (a) If needed, remove excess sealant on the frame at the bracket location (Fig. 5-1).
- (b) Align the top two bracket holes with the holes in the frame rail.
- (c) Install 2 M12 bolts into the holes (Fig. 5-1).

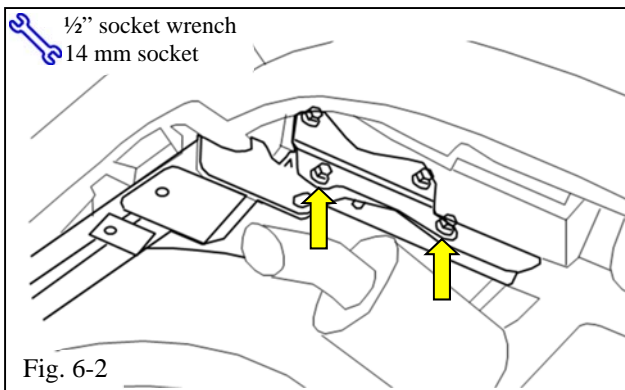


- (d) Push the hitch up flush to the frame rail and align the bottom two mounting bracket holes with the hitch bracket holes (Fig. 5-2).
- (e) Install 2 M12 bolts into the holes (Fig. 5-2).

6. Install the RH Mounting Bracket.

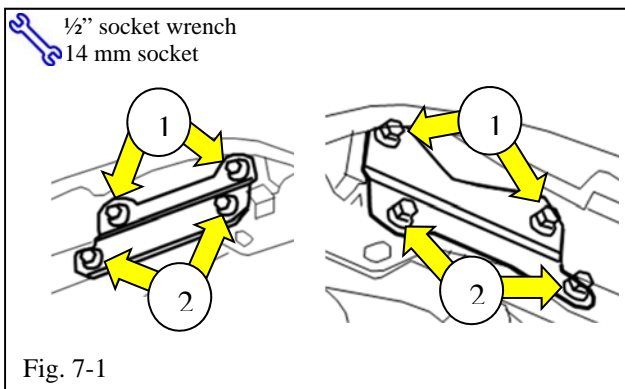


- ⚠ (a) If needed, remove excess sealant on the frame at the bracket location (Fig. 6-1).
- (b) Align the top two bracket holes with the holes in the frame rail.
- (c) Install 2 M12 bolts into the holes (Fig. 6-1).

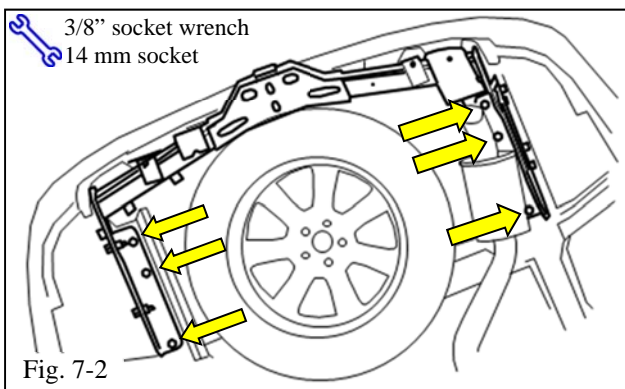


- (d) Push the hitch up flush to the frame rail and align the bottom two mounting bracket holes with the hitch bracket holes (Fig. 6-2).
- (e) Install 2 M12 bolts into the holes (Fig. 6-2).

7. Tighten the Bolts.



- (a) Tighten the 4 M12 bolts (2 per side) labeled "1" (Fig. 7-1).
- ⚠ (b) Center the hitch in the cross-car direction between the LH and RH mounting bracket by creating an equal gap on each side.



- ⚠ (c) Tighten the 6 M12 bolts (3 per side) to pull the hitch up flush to the frame (Fig. 7-2).
- ⚠ (d) Tighten the 4 M12 bolts (2 per side) labeled "2" to pull the mounting brackets flush to the hitch bracket (Fig. 7-1).

8. Torque the Bolts.

- (a) Tighten the 4 M12 bolts (2 per side) labeled "1" to 80 Nm (59 ft-lbf) (Fig. 7-1).

⚠ **Torque: 80 Nm (59 ft-lbf)**

- (b) Tighten the 6 M12 bolts (3 per side) to 80 Nm (59 ft-lbf) (Fig. 7-2).

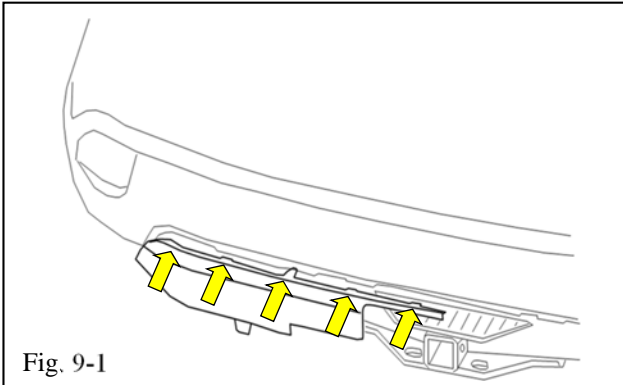
⚠ **Torque: 80 Nm (59 ft-lbf)**

- (c) Tighten the 4 M12 bolts (2 per side) labeled "2" to 80 Nm (59 ft-lbf) (Fig. 7-1).

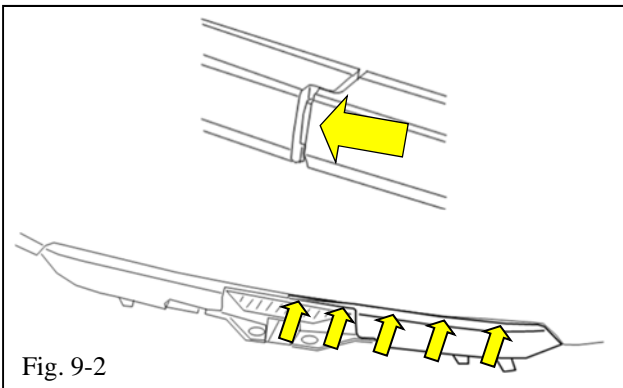
⚠ **Torque: 80 Nm (59 ft-lbf)**

9. Install the Lower Fascia Covers.

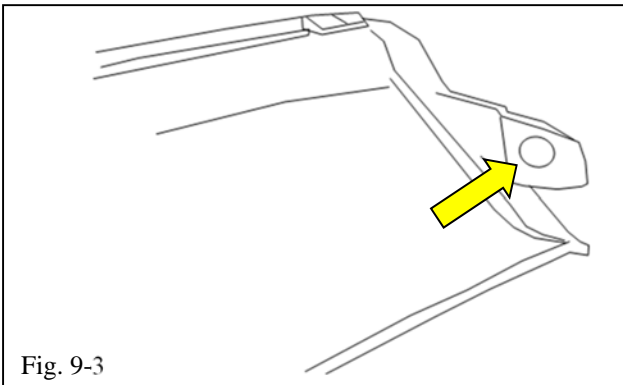
- (a) Install the LH lower fascia cover over the hitch by aligning the tabs along the top edge with the slots in the bumper fascia.
- (b) Snap in the center tab first and work outward until all the clips are snapped in (Fig. 9-1).

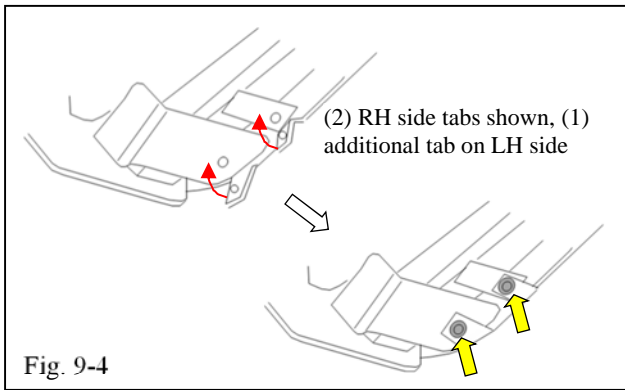


- (c) Align the center interlocking feature of the RH cover to the LH cover and continue to install the RH cover in the same manner as the LH (Fig. 9-2).



- (d) Reinstall the 2 outboard clips that were removed in Step 2(b) (Fig. 9-3). Install them from the inside out.





- (e) Bend the cover tabs at the hinged portion and attach to the hitch mounting plates using the 3 provided push-pins (Fig. 9-4).

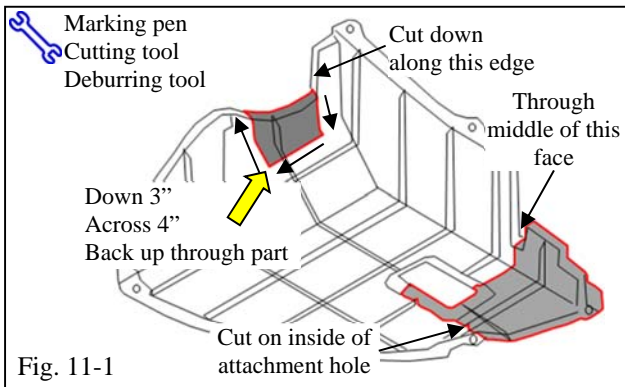
STOP (f) **Retighten all 14 M12 bolts (7 per side) to 80 Nm (59 ft-lbf) (Fig. 7-1 & Fig. 7-2).**

S **Torque: 80 Nm (59 ft-lbf)**

10. Install the Wire Harness.

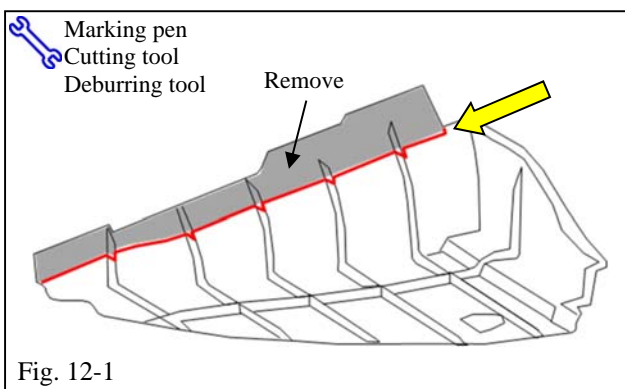
- (a) Connect, route, and secure the wiring harness per the applicable installation instructions.

11. Modify and Reinstall the LH Undercover.



- !** (a) Take the LH undercover removed in Step 1(e) and mark as shown in Fig. 11-1.
- (b) Cut along the marked lines and remove the cut-out sections (Fig. 11-1).
- (c) Deburr the undercover cutouts (if necessary).
- (d) Reinstall the modified cover onto the vehicle and secure it using the fasteners removed in Step 1(e).

12. Modify and Reinstall the RH Undercover.




- !** (a) Take the RH undercover removed in Step 1(g) and mark as shown in Fig. 12-1.
- (b) Cut along the marked lines and remove the cut-out sections (Fig. 12-1).
- (c) Deburr the undercover cutouts (if necessary).
- (d) Reinstall the modified cover onto the vehicle and secure it using the fasteners removed in Step 1(g).

13. Complete the Install.

- (a) Remove the shop towel from the exhaust pipe.
- (b) Place the hitch plug in the glove box.

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> <ul style="list-style-type: none"><input type="checkbox"/> Perform visual check of trailer hitch <input type="checkbox"/> Inspect torque (M12 bolts)<input type="checkbox"/> Hitch plug	<p>No visible gaps between mating parts or loose tubes</p> <p>14x M12 Bolts: 80 N·m (59 ft·lbf)</p> <p>Place in glove box</p>
<p><u>Vehicle Function Checks</u></p> <ul style="list-style-type: none"><input type="checkbox"/> N/A	
<p><u>Vehicle Appearance Check</u></p> <ul style="list-style-type: none"><input type="checkbox"/> After accessory installation and removal of protective cover(s), perform a visual inspection.	<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>