

Preparation

Part Number: PT212-89060

NOTE: Part number of this accessory may not be the same as the part number shown.

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Skid Plate

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	1	LH Bracket
2	1	RH Bracket
3	4	M12 x 1.75 x 20 Course thread SEMS Head Bolts
4	1	DIO Instruction Sheet
5	2	M8 Rivnuts
6	2	M8 x 25mm Flange Head Bolts
7	1	M10 Nut (Discard after Rivnut install)
8	1	M8 x 45mm SEMS Head Bolt (Discard after Rivnut install)
9	2	M12 x 1.25 x 25 Fine Thread Bolts - Serrated Flange Head

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1		

Conflicts

Note:

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	
Special Tools	Notes
None	

Installation Tools	Notes
Torque Wrench	½” & 3/8” Drive
Socket	17 mm, 12 mm, 13 mm (M8 bolt)
Extension	3”
Measuring Rule	Metric (mm)
Combination Wrench	15 mm
Ratchet	
Special Chemicals	Notes
None	

General Applicability

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Recommended Sequence of Application


Item #	Accessory
1	


*Mandatory


Vehicle Service Parts (may be required for reassembly)


Item #	Quantity Reqd.	Description
1		
2		

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.

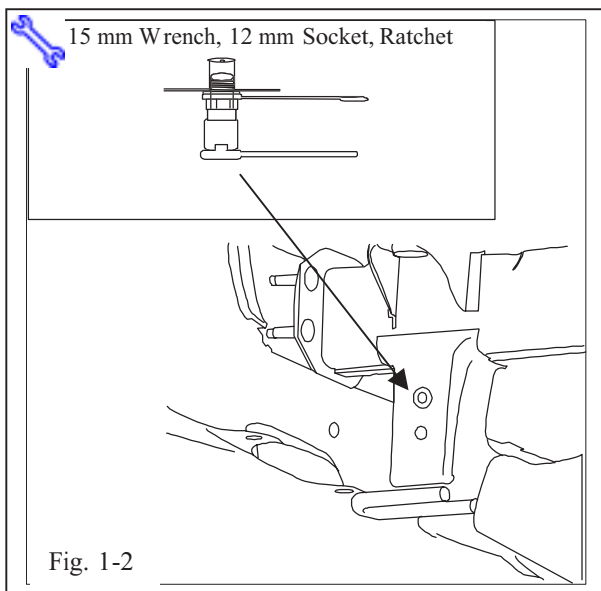
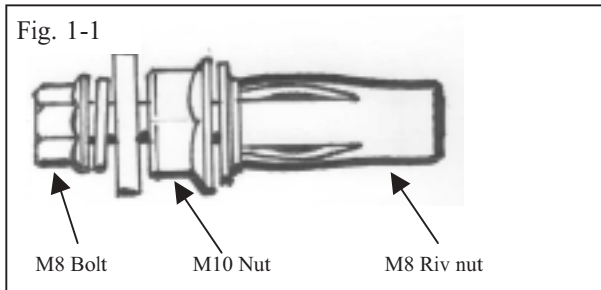
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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

This document covers such items as:-

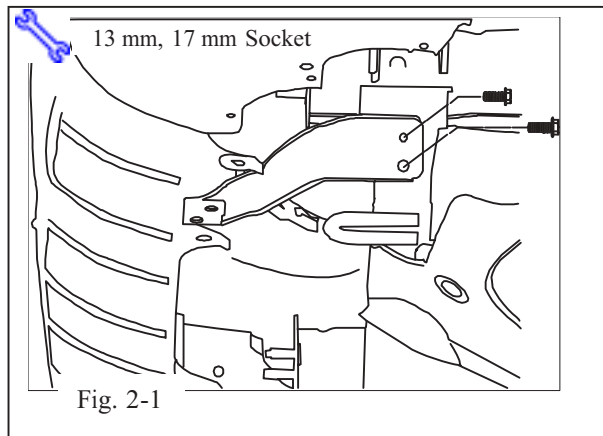
- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

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



1. Install Riv Nut

- +** (a) Working under a vehicle requires installer to wear safety glasses.
- (b) Remove hardware bag from carton, and verify content by referring to the instruction sheet.
- (c) Assemble Rivnut, oversize nut (M10), and M8 x 45 mm bolt together as shown in Fig. 1-1. Hand tighten the M8 bolt into the Rivnut and the M10 nut against the Rivnut.
- (d) Place the assembly into the non-threaded upper hole located on the connection brace between the lower radiator support cross-member and the vehicle's frame above the tow loop. Ensure that the flange of the Rivnut is flush against the surface of the hole as shown in Fig. 1-2.
- (e) Hold the assembly in place using a 15 mm combination wrench on oversize nut as shown in inset detail (Fig. 1-2).
- (f) Use a hand or air ratchet to drive the M8 Flange Head Bolt into the Rivnut. (Fig. 1-2 - inset) This will cause the cylinder of the Rivnut to mushroom against the inner wall of the frame. You will feel a change in resistance when the Rivnut is compressed at which time you can stop. Final torquing after bracket installation will ensure proper compression of Rivnut.

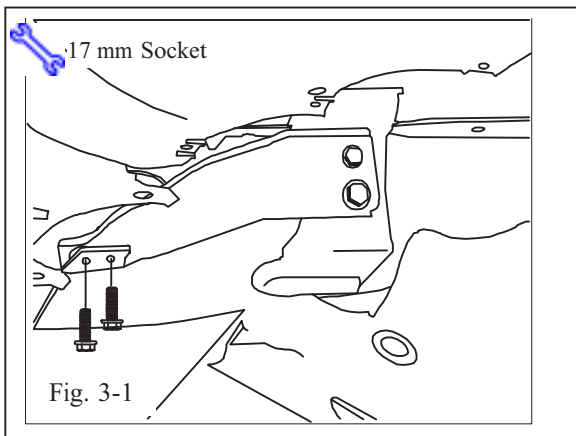


- (g) Remove M8 bolt and oversize nut.
- (h) Repeat on other side.
- (i) Discard oversize nut and M8 x 45 mm bolt.

2. Installation of Brackets.

- (a) Install (hand tight) LH bracket using supplied M8 and M12 x 1.25 x 25 mm fine thread bolt as shown in Fig. 2-1.
- (b) Repeat for RH bracket.

NOTE: Be sure to use M12 fine thread bolts in these positions only.



3. Installation of Skid Plate.

- (a) Remove skid plate from packaging and place on a protected worktable to avoid damage.
- (b) Hold the skid plate up to the brackets and place M12 course thread SEMS head flange bolts through skid plate. Thread (hand tight) the bolts into the weld nuts on the brackets as shown in Fig. 3-1.

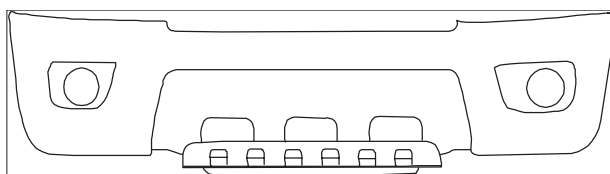





Fig. 3-2

-  (c) Move skid plate to create a 16 mm min. and 20 mm max. gap between the middle of the front edge of the skid plate and the bumper. Fig. 3-2.
-  (d) Tighten vehicle mounting bolts, torque M8 hardware to 20 lbf-ft (27 N-m) and M12 fine thread hardware to 60 lbf-ft (81 N-m).
-  (e) Tighten skid plate mounting M12 flange bolts to 20 lbf-ft (27 N-m).

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

Check:

Accessory Function Checks

Visual check of skid plate



Check all bracket bolts for proper torque with torque wrench.

(Note: Do not perform check of M12 flange bolts on Skid Plate).

Look For:

Gap to vehicle bumper (16 mm min./20 mm max.).

Symmetric gap between bumper fascia and skid plate on right and left sides.

Tightening torques have a range of $\pm 25\%$.