

Preparation

Part Number: PTR60-34190

Kit Contents

Item #	Quantity Req'd.	Description
1	1	Skid Plate (with captive hardware)
2	1	Hardware Bag
3		

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	2	M10 – Flange Nut
2	2	Angle Washer
3	3	Plastic Ratchet Fastener
4	1	Customer Care Card

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		
2		
3		

Conflicts

None

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	
Special Tools	Notes
Installation Tools	Notes
½" Ratchet	For 17mm Socket
3/8" Ratchet	
17mm Socket	
12mm Socket	
15mm Socket	
5mm Allen socket	
Torque wrench	Approx 10-90 ft/lb range
15mm Wrench	
Installation Fixture	PPO only
High Rise Jack Stand or similar support equipment	With wood block or padding.
Special Chemicals	Notes

General Applicability

All Tundra and Sequoia Models

Recommended Sequence of Application







Item #	Accessory
1	Suspension Kit
2	Wheel Alignment
3	Skid Plate

*Mandatory

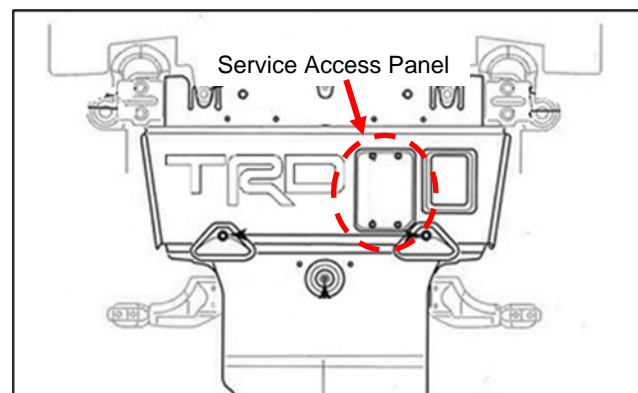
Vehicle Service Parts (may be required for reassembly)

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.

NOTE: The Skid Plate does not have to be removed to perform an oil and oil filter service. An oil filter access panel is provided.



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.).

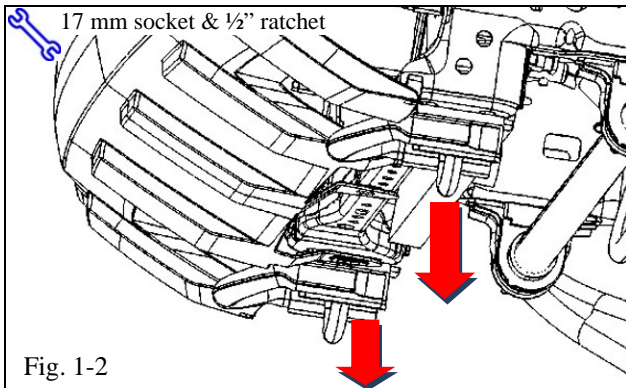
Please see your Toyota dealer for a copy of this document.

1. Prepare the Vehicle.

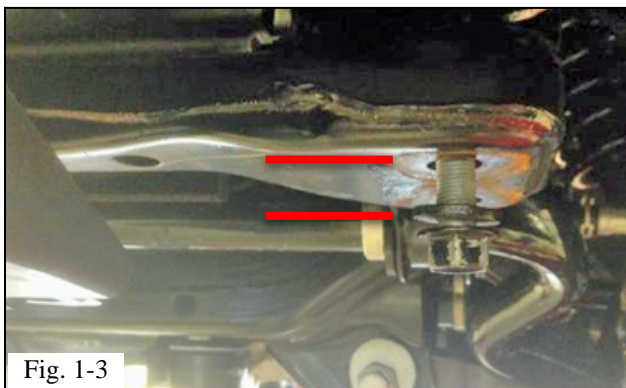
(a) Locate the front tow hooks (Fig. 1-1).

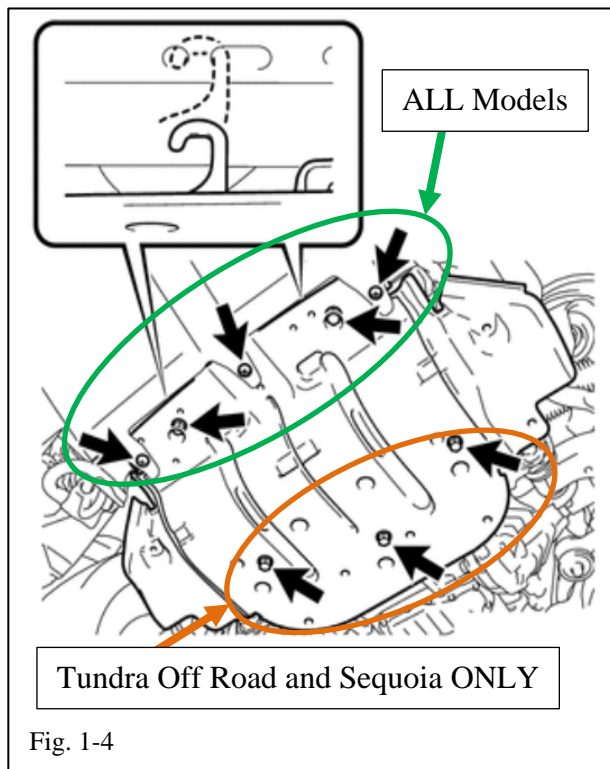


(b) Use a 1/2" ratchet and 17mm socket to remove the tow hooks. Save them for reinstallation (Fig.1-2).



(c) Temporarily install the front most tow hook bolts, leaving an approximately 1/2" gap between the bolt washer face and the underside of the frame (Fig. 1-3).





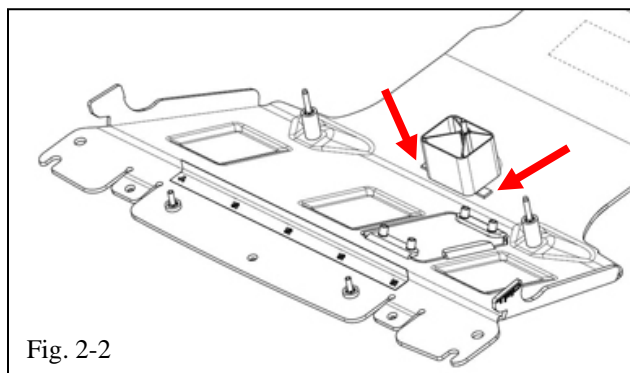
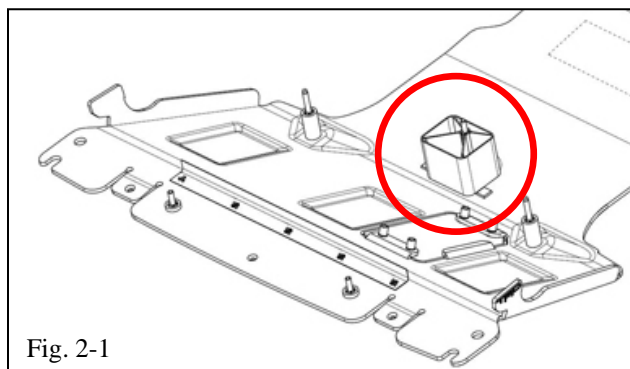
- (d) Remove the 3 screws and 5 bolts (Tundra Off Road and all Sequoia models) or the 3 screws and 2 bolts (other Tundra models) attaching the OE engine undercover. Unhook the cover as shown (Fig. 1-4). Discard the OE cover, bolts, and screws.

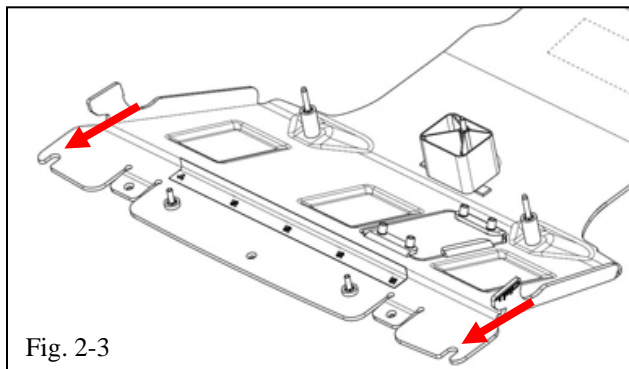
2. Install the Skid Plate.

- (a) Remove the skid plate from the packaging.
- (b) Review the center spacer position before raising the skid plate into place. The spacer should be in-between the two locators on the plate (Fig. 2-1).

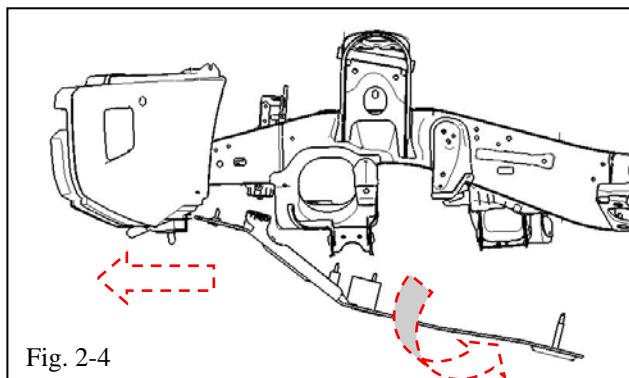
⚠ NOTE: The spacer must be positioned in-between the two locators on the plate (Fig 2-2).

⚠ NOTE: A high rise jack stand or other support aid during installation is recommended.



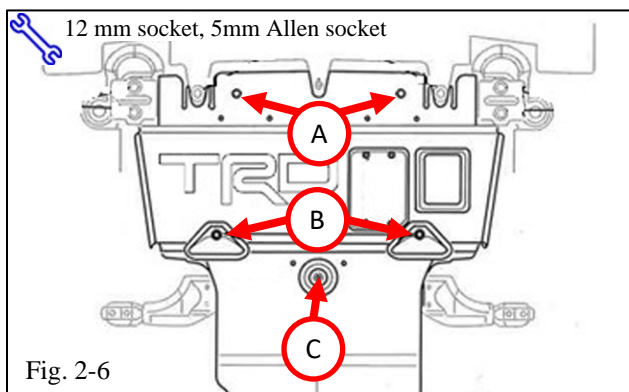


- (c) Align the forward edge slots of the skid plate (red arrows, Fig. 2-3) with the two tow hook fasteners that were partially threaded in Step 1(c).



- (d) Push the plate forward and rotate the rear section up, ensuring the rear fasteners go through the holes in the center member bottom and the top holes (Fig. 2-4).

CAUTION: Ensure the front bumper plastic tabs are on the outside of the skid plate (three places); do not secure them at this time (Fig. 2-5).



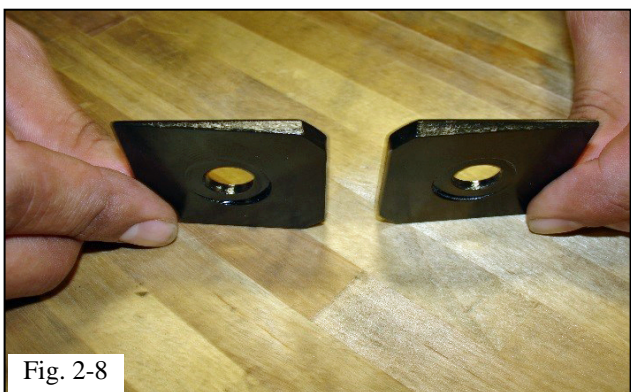
- (e) Push/hold the skid plate in position and start threading and hand tighten the bolts using the correct socket in the following order (Fig. 2-6).

- (1) Center bolt [C], 5mm Allen
- (2) Middle bolts [B], 12mm
- (3) Front bolts [A], 12mm

NOTE: Do not fully tighten the bolts at this time, but make sure the skid plate is supported and can move around slightly.



- (f) Locate the plastic ratchet fasteners and install them through the plastic bumper tabs into the holes on the skidplate (3 places) (Fig. 2-5 & Fig. 2-7).

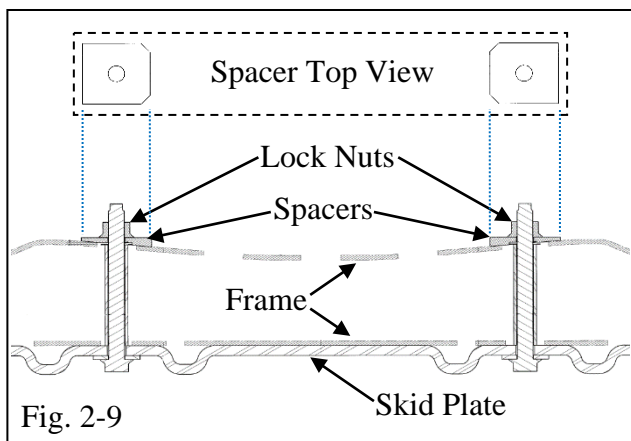


- (g) Locate the two angled wedge washers and 15mm hex nuts from the hardware bag (Fig. 2-8).

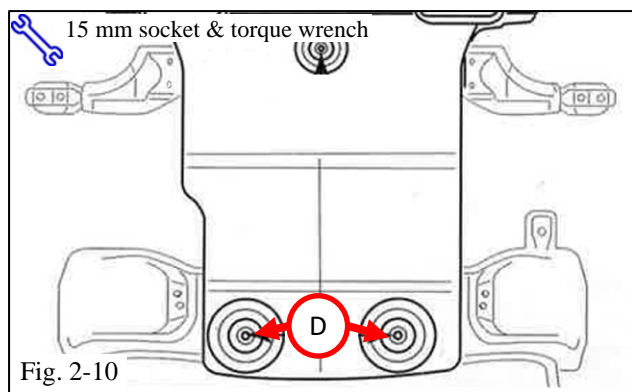
NOTE: The proper installation of the two rear fasteners requires an angled wedge washer in a specific orientation and a hex nut. See Fig. 2-9 for proper orientation and description.

- (h) Install one angled wedge washer over the right side (passenger side) and left side (driver side) rear most bolt protruding through the spacer and chassis cross member.
- (i) Orient the angled wedge washer as shown in Fig. 2-9, paying attention to the notes below.

NOTE: The diagram shows the angled wedge washers installed in vehicle position (looking from the rear of the vehicle forward).



- (1) The thick side of the angled wedge washers should face toward the center of the vehicle. The thin side of the angled wedge washers should face toward the outside of the vehicle.



- (2) The smooth face of the angled wedge washers should be contacting the nut. The counter-bored hole face of the angled wedge washers should be contacting the top surface of the frame crossmember.

- (j) Hand start the 15mm hex nuts onto the bolts.

NOTE: The rear fastener lock nuts are non-reusable. Always use new lock nuts when reinstalling the skid plate.

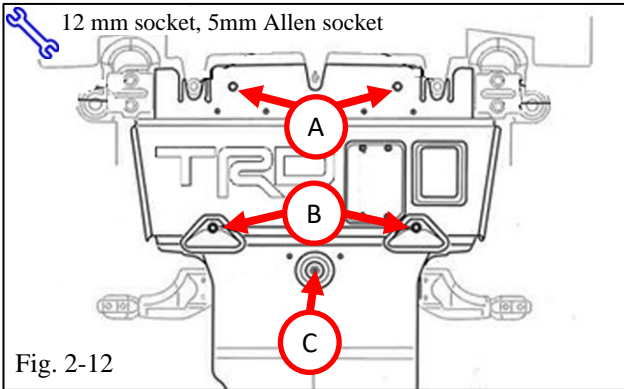
- (k) Hold the bolt heads [D] with a 15mm wrench and torque the M10 nuts (Fig. 2-10).

Torque: 38 ft-lbf (51 N-m)

NOTE: Deformed lock nuts require more pre-tightening torque than standard or nylon-lock nuts. In addition, the aluminum sleeve on the bolt may deform slightly under tightening. This may result in a feeling similar to a bolt that is stretching. These conditions are normal for this fastener. Continue tightening until torque is achieved, or abnormal noise may occur when driving.

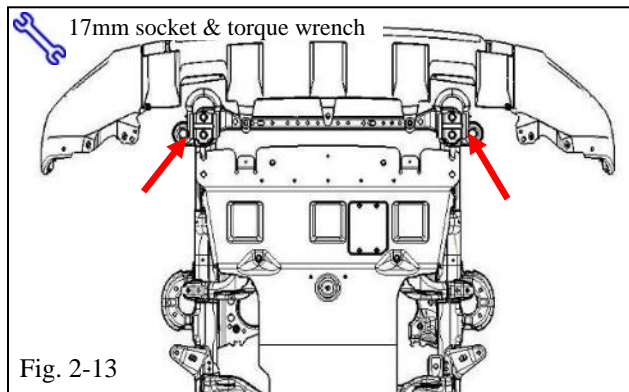


- (a) Check the angled washer orientation on the cross member to ensure the thickest side of the washer remains facing toward the center of the vehicle (Fig. 2-11).



- (b) Torque the other hardware to 21 ft-lbf (29 N-m) (Fig. 2-12):
- (1) Use a 5mm Allen socket for Item [C].
 - (2) Use a 12mm socket for Items [B] & [A].

S Torque: 21 ft-lbf (28 N-m)



- (c) Reinstall the tow hooks and torque the tow hook bolts (Fig. 2-13).

S Torque: 43 ft-lbf (58 N-m)

5. Place the Customer Care Card.

- (a) Insert the customer care card into the glove box with the vehicle owner's manual.

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

Check:	Look For:
<p><u>Accessory Function Checks</u></p> <p><input type="checkbox"/> Visual alignment</p> <p><input type="checkbox"/> Angled washer orientation</p> <p><input type="checkbox"/> Care card placed</p> <p><input type="checkbox"/></p>	<p>Ensure the plate is centered front & back and side-to-side.</p> <p>Ensure angled washers are oriented with the thick side toward vehicle center.</p> <p>Ensure care card is placed in glove box.</p>
<p><u>Vehicle Function Checks</u></p> <p><input type="checkbox"/></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 TMNA Accessory Quality Shipping Standard.)</p>