

**Part Number: PT938-34140****Kit Contents**

Item #	Quantity Req'd.	Description
1	1	Skid Plate (Pre-Assembled with Hardware)
2	1	Hardware Bag
3		

**Hardware Bag Contents**

Item #	Quantity Req'd.	Description
1	2	15mm Hex M10 – Flange Nut
2	2	Angled Washer
3	3	Plastic Ratchet Fastener

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description
1		
2		
3		

**Conflicts**

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**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	
High Rise Jack Stand or similar support equipment	With wood block or padding.
Special Chemicals	Notes

**General Applicability**

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**Recommended Sequence of Application**

Item #	Accessory
1	Suspension Kit
2	Skid Plate
3	

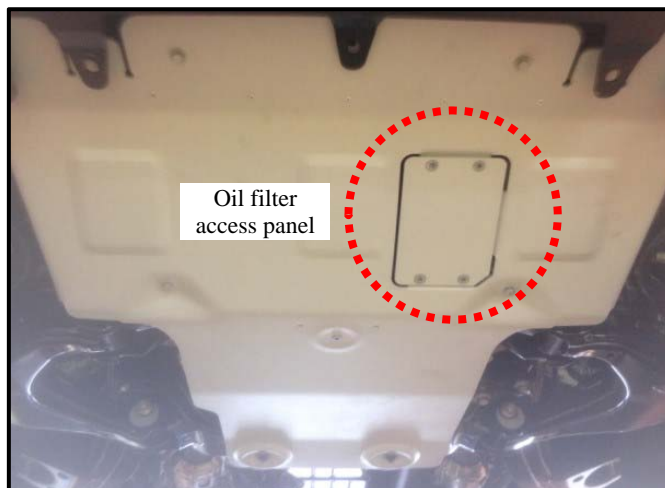
\*Mandatory

**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.

**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.



## 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.

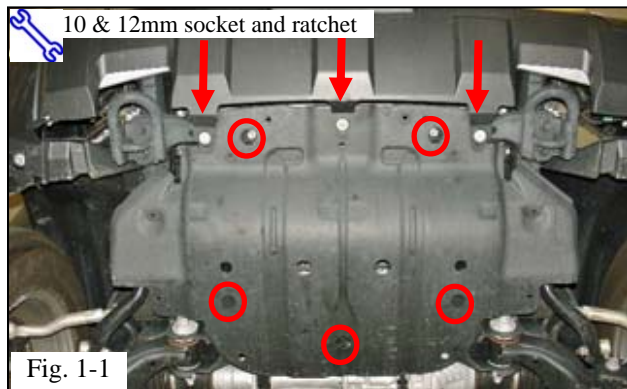
This document covers such items as:-

- 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.).

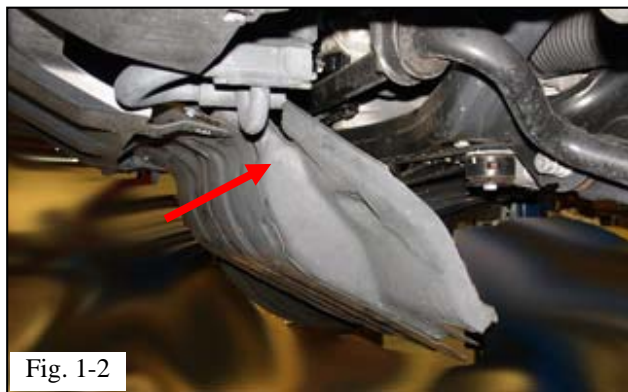
Please see your Toyota dealer for a copy of this document.

**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.**

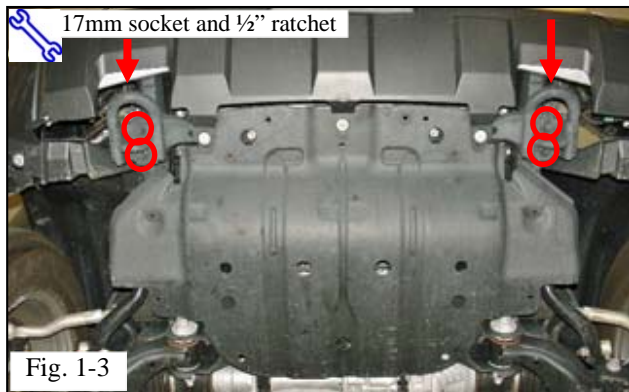
### 1. Prepare the Vehicle.



- (a) Locate the three black plastic bumper tabs (red arrows) and use a 10mm socket to remove the three OE securing bolts (Fig. 1-1). Save the hardware to return it to the customer.
- (b) Locate the 5 engine under cover attachment points (red circles) and use a 12mm socket to remove the securing bolts (Fig. 1-1). Save the hardware to return it to the customer.
- (c) Remove the engine under cover.



- (1) When the engine under cover hardware is removed, the engine under cover will rotate and hang down (Fig. 1-2).
- (2) Slightly lift up the front edge and unload it from the retention hooks.
- (3) While lifting up the front edge, slide the engine under cover to the vehicle left (driver side) and detach it from the retention hooks.
- (4) Save the engine under cover to return it to the customer.



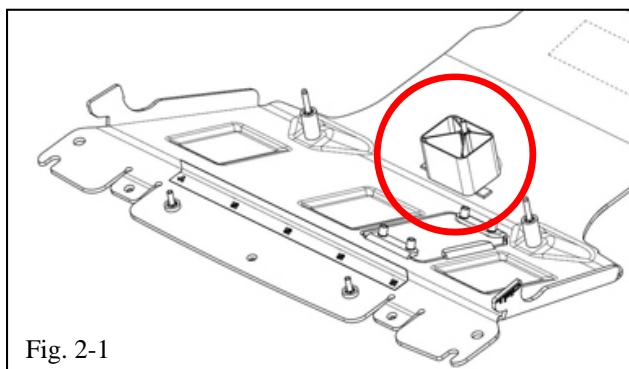
- (d) Locate the two front tow hooks (red arrows, Fig. 1-3).
- (e) Remove the two bolts (red circles) securing each of the two tow hooks to the chassis. Save the bolts and tow hooks for reinstallation (Fig. 1-3).



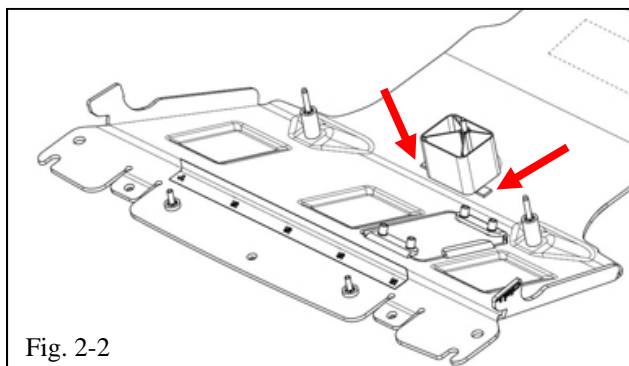
- (f) Temporarily install the front most tow hook bolt for the left and right sides, leaving an approximately 1/2" gap between the bolt washer face and the underside of the frame (Fig. 1-4).

## 2. Prepare the TRD Skid Plate.

- (a) Remove the TRD skid plate from the packaging and verify the contents of the hardware bag are correct (see the Hardware Bag Contents chart on Page 1).
- (b) Review the rectangular shaped aluminum center spacer orientation (red circle) and correct if needed before raising the skid plate into place (Fig. 2-1).



**NOTE:** The spacer must be positioned in-between the two locator tabs (red arrows) on the skid plate (Fig 2-2).



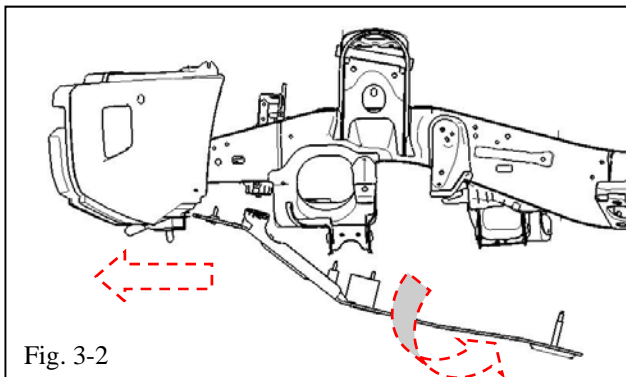
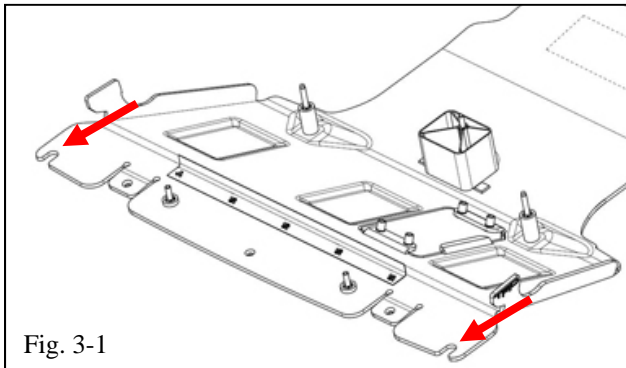
### 3. Install the TRD Skid Plate.

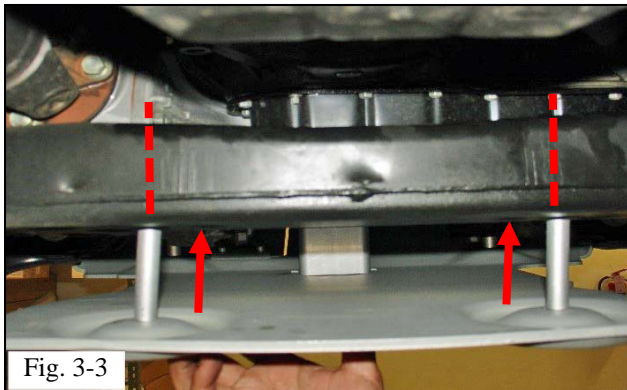
**⚠ NOTE:** It is recommended to use a high rise jack stand, other support aid or an assistant during installation.

- (a) While raising the TRD skid plate into position, align the two forward edge slots (red arrows, Fig. 3-1) of the skid plate with the two tow hook bolts that were partially threaded in Step 1(f).

- (b) Place the skid plate.

- (1) Align the forward skid plate slots (see Fig. 3-1, red arrows) with the front tow hook bolts (see Fig. 1-4)
- (2) Slide the skid plate forward so the bolts slide into the skid plate slots (Fig. 3-2).

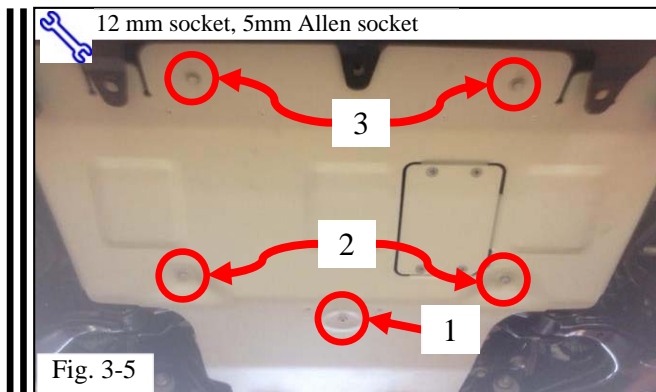




(3) Push the rear section up, ensuring all the center and rear fasteners/spacers pass through the holes in the chassis member bottom faces and top holes (Fig. 3-3).

**CAUTION:** Ensure the two rear most bolts and spacers have been properly installed through the chassis cross member and upper holes with a small portion of bolt thread protruding through.

**CAUTION:** Ensure the front bumper plastic tabs are on the outside of the skid plate (three places) but do not secure them at this time (Fig. 3-4).



(c) Push/hold the skid plate in position and start threading and hand tighten the bolts using the correct socket in the following order (Fig. 3-5).

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

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





- (d) Obtain the two angled wedge washers and 15mm hex nuts from the hardware bag (Fig. 3-6).

**NOTE:** The proper installation of the two rear bolts/spacers through the chassis cross member (see Fig. 3-3) requires an angled wedge washer in a specific orientation and a hex nut. See Fig. 3-7 for proper orientation and description.

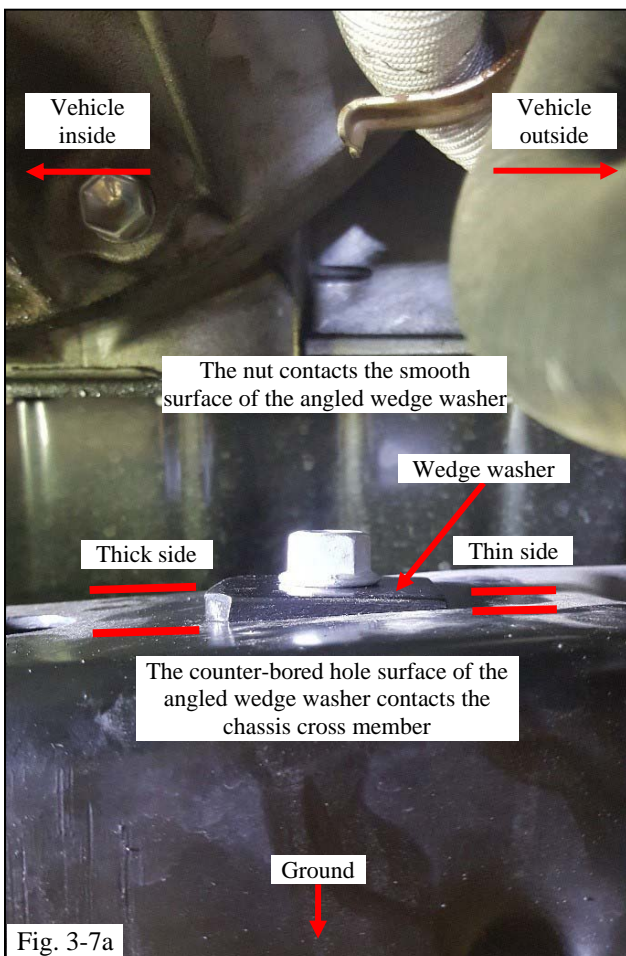
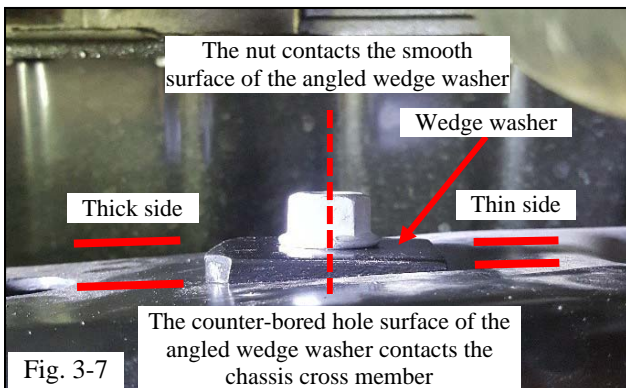
- (e) Install the wedge washers (Fig. 3-7).

- (1) 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.

- (2) Orient the angled wedge washer as shown in Fig. 3-7, paying attention to the notes in the picture.

**NOTE:** The picture shows the right side angled wedge washer installed in vehicle position (looking from the rear of the vehicle forward). The left side will be opposite.

- (3) The thick side of the angled wedge washer should be facing towards the inside of the vehicle. The thin side of the angled wedge washer should be facing towards the outside of the vehicle.

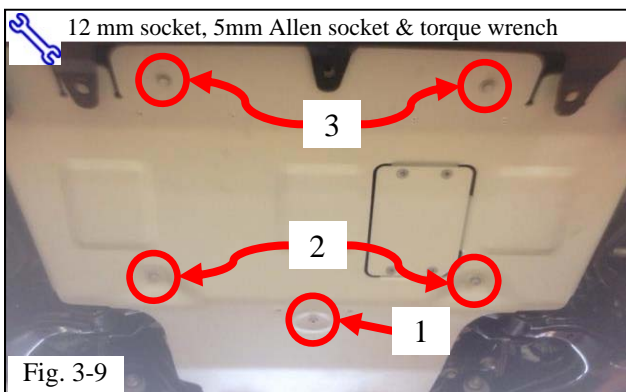
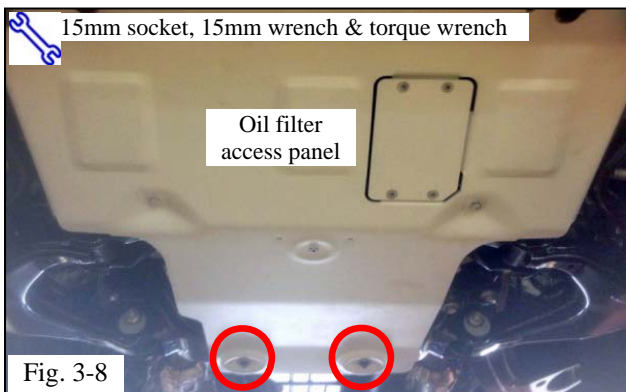


- (4) The smooth surface of the angled wedge washer should be contacting the nut and the counter-bored hole surface of the angled wedge washer should be contacting the chassis cross member.
- (5) Begin to thread the hex nuts onto the bolts.

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

- (f) Hold the bolt heads (red circles) and nuts with a 15mm socket & wrench and torque the M10 nuts to 38 ft-lbf (51 N-m) (Fig. 3-8).

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



- (g) Torque the other hardware to 21 ft-lbf (29 N-m):
- (1) Use a 5mm Allen socket for Item 1 (Fig. 3-9).
- (2) Use a 12mm socket for Items 2 & 3 (Fig. 3-9).

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

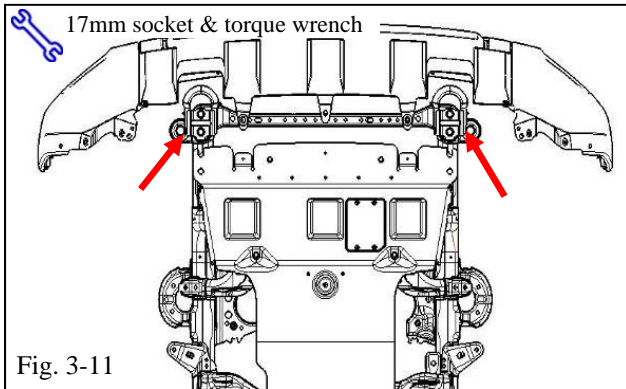


- (h) Obtain the three black plastic ratchet fasteners from the hardware bag. Install/push them through the plastic bumper tabs into the holes on the skidplate (3 places) (Fig. 3-10).

(i) Reinstall the tow hooks.

- (1) Obtain the two OE front vehicle tow hooks and tow hook bolts removed in Step 1(e).
- (2) Remove the two front tow hook bolts that were temporarily installed in Step 1(f) (see Fig. 1-4).
- (3) Reinstall the two OE front vehicle tow hooks and the four bolts. Torque the four tow hook bolts to 43 ft-lbf (59 N-m) (Fig. 3-11).

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





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

<u>Check:</u>	<u>Look For:</u>
<u>Accessory Function Checks</u>  <input type="checkbox"/> Visual alignment  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	Ensure the plate is centered front & back and side-to-side
<u>Vehicle Function Checks</u>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	
<u>Vehicle Appearance Check</u>  <input type="checkbox"/> 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. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)