

Part Number: PT278-35120 (DIO)

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Rail Assembly RH
2	1	Rail Assembly LH
3	4	Cross Bar Assembly
4	1	Joint Assembly
5	1	Hardware Bag

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	12	Screw, M8x43mm, Wafer Head
2	12	Fiber Washers
3	12	Foam Washers
4	1	Operator Caution Card
5	8	Thumb Wheel Assembly
6	4	Clamp Assembly RH
7	4	Clamp Assembly LH
8	4	Screw M5x1.81x16, T25

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1		

Conflicts

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Recommended Tools

Personal & Vehicle Protection	Notes
Safety Goggles	
Vehicle Protection	
Wrist & Belt Buckle Protectors	
Special Tools	Notes
Installation Tools	Notes
T40 Torx Driver (Hardened)	
T25 Torx Driver (Hardened)	
Torque Wrench	0-160 lbf-in
10mm Socket	
Ratchet	
3" Extension	
Nylon Panel Removal Tool	i.e.: Panel Pry Tool #1 Toyota SST#00002-06001-01
Special Chemicals	Notes

General Applicability

All

Recommended Sequence of Application


Item #	Accessory
1	Roof Rack – Can be installed in any sequence with other accessories.


*Mandatory


Vehicle Service Parts (may be required for reassembly)


Item #	Quantity Reqd.	Description
1		
2		
3		
4		
5		
6		


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

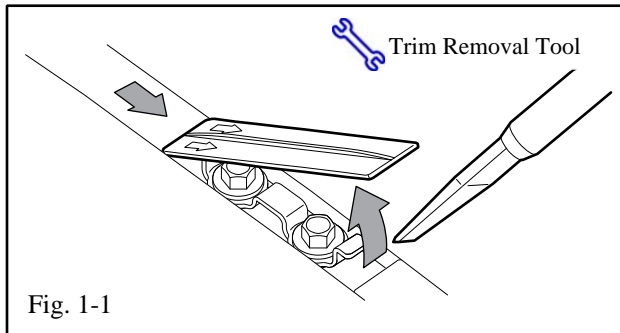
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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

This document covers such items as:-

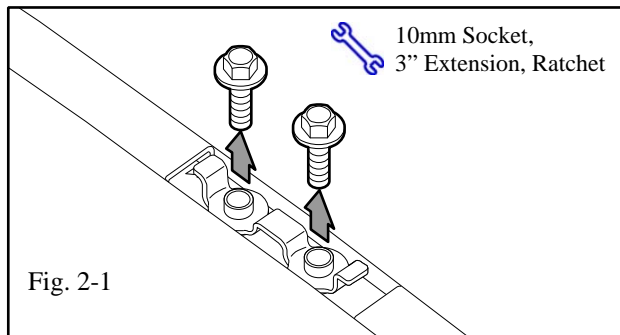
- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

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



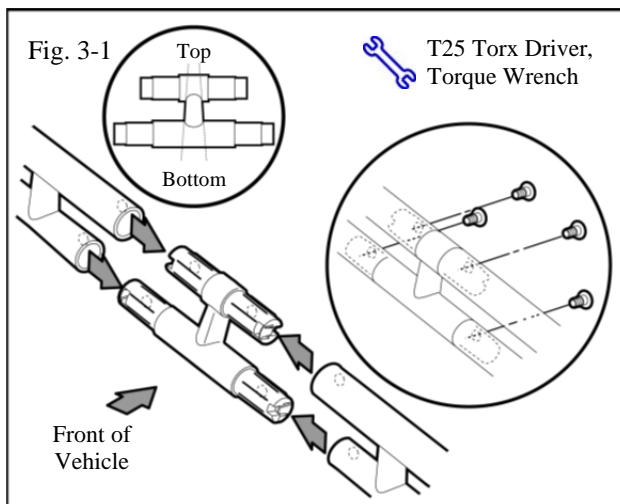
1. Remove Access Covers. (6 locations)

- ⚠ (a) Push on end with the arrows in the direction of the arrows.
- (b) Lift up on the opposite end while pushing the arrow end. (Fig. 1-1) Use trim removal tool as needed to pry cover up.



2. Remove Bolts.

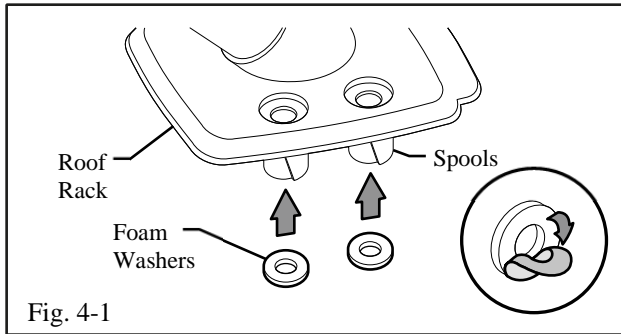
- ⚠ (a) Remove 12 Bolts. (6 each side) (Fig. 2-1)



3. Assembly Roof Rack.

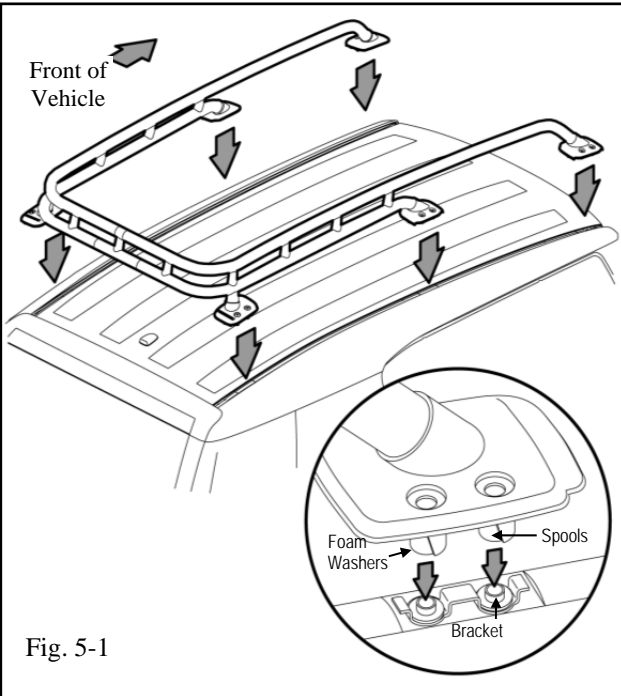
- ⚠ (a) Join the LH Rail Assembly and RH Rail Assembly together using the Joint Assembly ("I" shaped connector) and 4 M5x1.18x16 screws. (Figure 3-1)
- ⚠ (1) Note: Orient tapered Joint Assembly ("I" shaped connector) thin at top and wider at bottom. (Figure 3-1)
- (b) Torque 4 screws to 4.0 N·m (35.4 in·lbf)

Torque: 4.0 N·m (35.4 in·lbf)



4. Install Foam Washers.

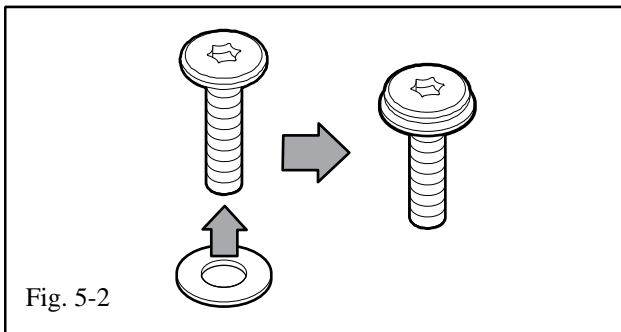
- (a) Remove adhesive backing and place foam washers onto the bottom surface of mounting posts (spools) prior to installing to roof. (12 required) (Fig. 4-1)



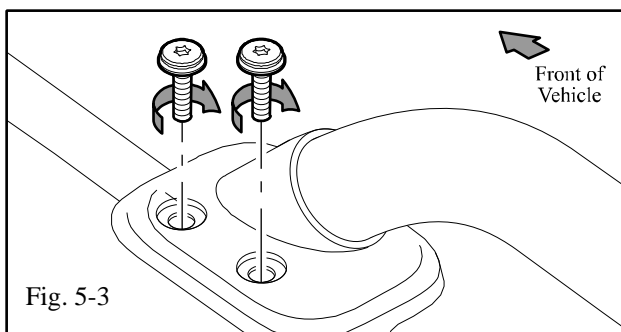
5. Install Roof Rack.



- (a) Using two people, carefully place the roof rack in position on the vehicle as shown. (Fig. 5-1)



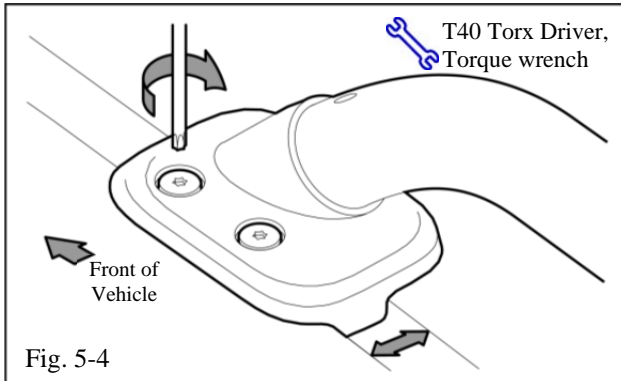
- (b) Insert M8 wafer head screws into fiber washers. (12 required) (Fig. 5-2)



- (c) Hand start M8 wafer head screws at all 12 locations. (Fig. 5-3)

- (d) Adjust end support so that it is seated in the roof ditch mold.
- (e) Starting with the rear supports, tighten and torque M8 wafer head screws to 18.0 N.m (160 Lbf-in). Next, tighten and torque the center supports. Finally, tighten and torque the front supports, **starting with the forward most screw first.** (12 required) (Fig. 5-4)

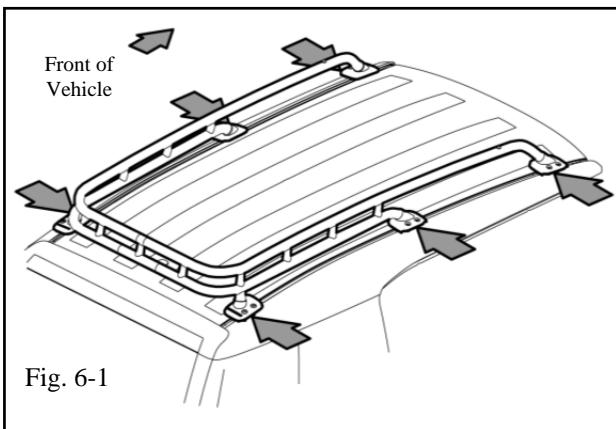
 **Follow Torque Sequence.**



Torque Sequence:



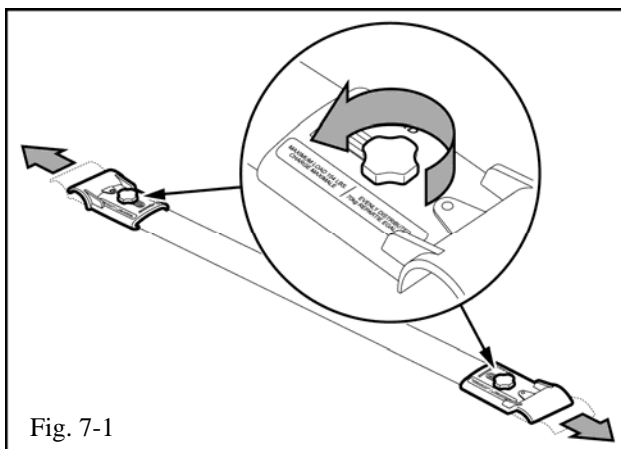
1. Rear: **Torque: 18.0 N·m (160 in·lbf)**
2. Center: **Torque: 18.0 N·m (160 in·lbf)**
3. Front: **Torque: 18.0 N·m (160 in·lbf)**



6. Verify Support Installation.



- (a) Verify all supports are snug and properly fitted to roof ditch mold. (Fig. 6-1)



7. Install Cross Bars.



- (a) Loosen knob in adjustment slot and evenly extend to length of side rails. (Fig. 7-1)

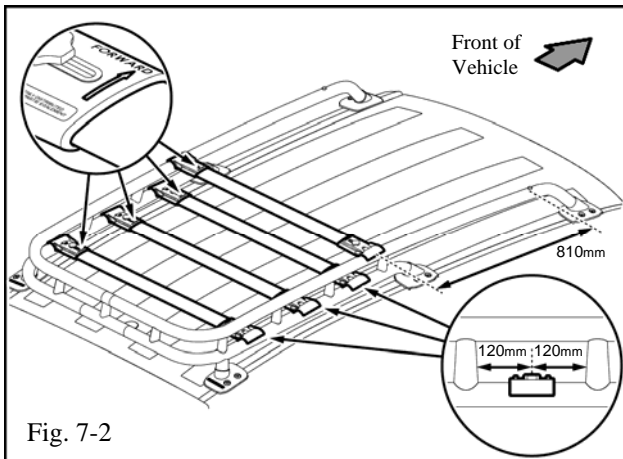


Fig. 7-2

- ⚠ (b) Place crossbars as shown in Fig. 7-2 between rails with arrow to front of vehicle.
 - (1) Note “Forward” arrow for front of vehicle orientation. (Fig 7-2)
 - (2) Top crossbar should be located rearward of front siderail stanchion. (Fig 7-2)
 - (3) Lower crossbars should be centered between support posts. (Fig 7-2)

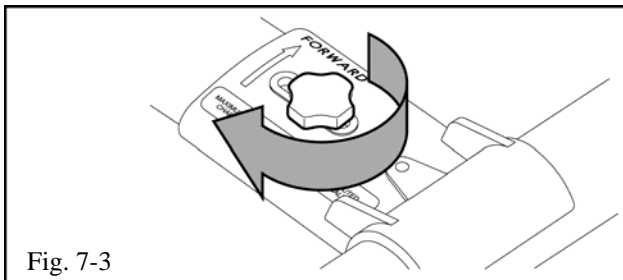


Fig. 7-3

- ⚠ (c) Re-tighten knobs in adjustment slots. (Fig. 7-3)

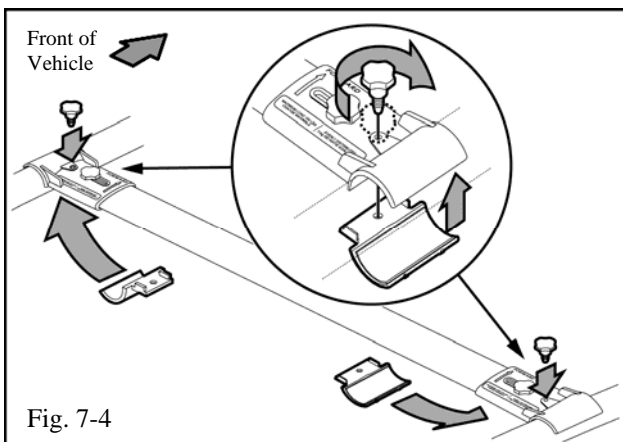


Fig. 7-4

- (d) Place lower clamp under cross bars then tighten knobs. (Fig 7-4)
- ⚠ **NOTE:** Make sure lower clamp is on correct side (LH or RH). They will not fit properly if on wrong side of vehicle.

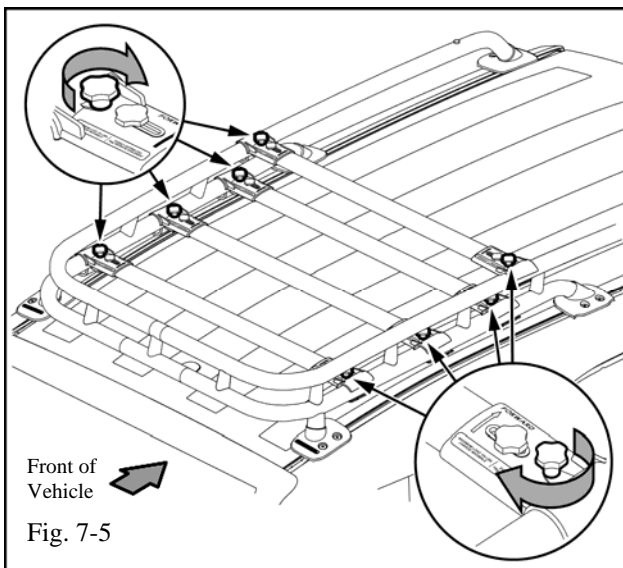


Fig. 7-5

- ⚠ (e) Ensure crossbars are parallel to vehicle then securely tighten all clamp knobs. (Fig 7-5)

8. Operator Caution Card Placement.

- ⊘ (1) Place the operator caution card with the owner’s manual in the vehicle 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"/> Crossbar should be securely locked into rails for shipment.<input type="checkbox"/> Gap between roof rack side rail pads and vehicle roof surface.	<p>Ensure crossbars are secure. Tighten if necessary.</p> <p>Not greater than 1.5mm</p>
<p><u>Vehicle Function Checks</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Caution Card Placement with owner's manual.	<p>Ensure Caution Card is placed with the owner's manual in the vehicle glove box.</p>
<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.</p> <p>(For PPO installations, refer to TMS Accessory Quality Shipping Standard.)</p>