

Preparation

Part Number: PTR09-00150

Kit Contents

Item #	Quantity Req'd.	Description
1	1	Brake Rotor, LH Front
2	1	Brake Rotor, RH Front
3	1	Brake Caliper Assembly, LH Front, with Pads & Attachment Bolts
4	1	Brake Caliper Assembly, RH Front, with Pads & Attachment Bolts

Hardware Contents

Item #	Quantity Req'd.	Description
1	2	Stainless Steel Brake Hose
2	2	Rubber End Cap
3	1	Spare Tire Warning Label
4	1	Installation Instructions
5	1	Mirror Hanging Tag
6	1	Owner's Document

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1	Toyota Brake Fluid	#00475-1BF03 or Fluid: SAE J1703 or FMVSS No. 116 DOT3

Conflicts

Models equipped with 18" wheels.

CAUTION: If the OE wheels are not used, then see the brake caliper template available from your dealer via Toyota's TIS system or TRDUSA.com. The brake caliper template must be used to insure there is adequate clearance between new brake components and non-OE wheels and balancing weights.

General Applicability

All Tundra & Sequoia Models equipped with 20" or 22" Toyota wheels. For aftermarket wheels, the brake caliper template must be used to check for adequate caliper to wheel clearance.

Recommended Sequence of Application

Item #	Accessory
1	Accessory Wheels/Tires
2	Front Brake Upgrade

*Mandatory









Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	Description

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	Safety Glasses /face shield
Vehicle Protection	Seat & Floor Covers, Fender Covers
Work Gloves	
Special Tools	Notes
Chassis Lift	(or Hydraulic Jack & Jack Stands)
Fluid Drip Trays	One per side
Flare Crow Foot 10mm	SPX 09023-00101
TRD Brake Bleeding Machine	
Installation Tools	Notes
22mm Deep Socket	½" Drive
Air Impact Gun	½" For parts removal only
10mm Flare Nut Wrench	
Needle Nose Pliers	
17mm Deep Socket	½" Drive
Torque Wrenches	½" Drive & 3/8" Drive
Soft Mallet	
11mm Combination Wrench	
Channel Lock Pliers	
12mm Socket	3/8" Drive
Gap Gauge	5mm or ¼"
Special Chemicals	Notes
Toyota Brake Cleaner	#00289-2BC00-CA

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 for the Install.

(a) Open the hood.



(b) Place a fender cover over the driver’s side fender to protect the vehicle paint.

(c) Check the Front Brake Upgrade kit for contents and damage.

2. Remove the Front Wheels.



(a) Use a vehicle hoist to lift the vehicle using the vehicle jacking points. If a vehicle hoist is not available, use a hydraulic jack to lift the front of the vehicle and set it on jack stands. Use the owner’s manual to locate the proper vehicle jacking points.



CAUTION: Always use jack stands to support the vehicle; never work under a vehicle using only the jack.



(b) Use a 22mm deep socket and ½” air impact gun to remove all front wheel lug nuts.

(c) Remove both front wheel/tire assemblies and save for reuse.

3. Disconnect & Remove the Front Brake Hose.

(a) Turn the steering wheel to the right to work on the driver side; this allows easier access to the brake hose. Turn the wheel to the left to work on the passenger side.

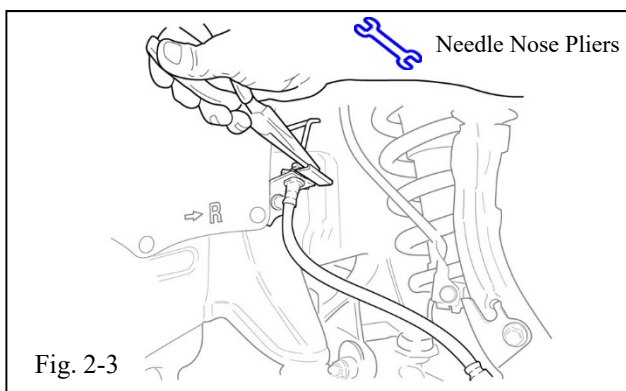
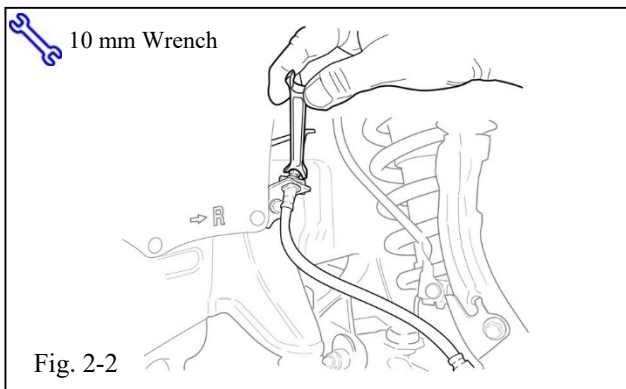
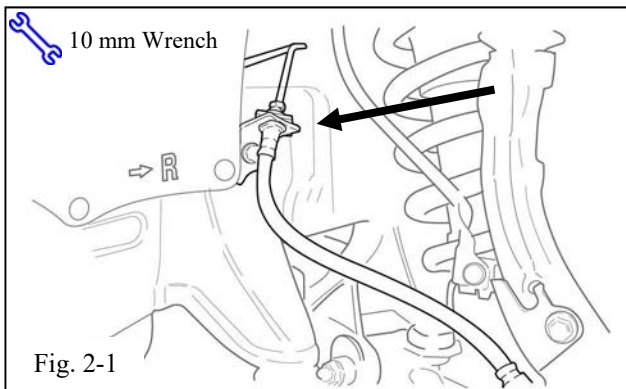
(b) Place a drip tray directly below the inboard brake line connection. This connection is where the rubber hose attaches to the steel brake line (Fig. 4-1).

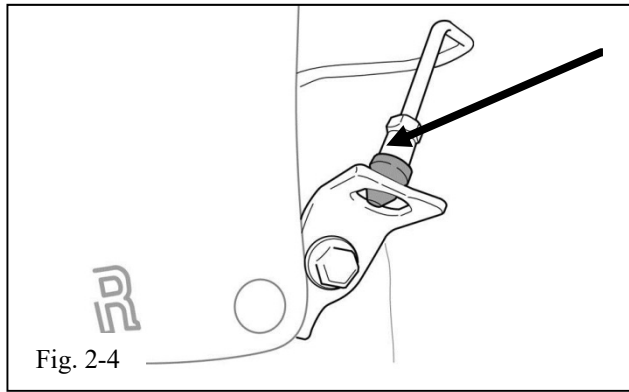
! CAUTION: Brake fluid will damage most painted surfaces. Immediately clean any spilled brake fluid from all painted surfaces.

(c) Do not remove the master cylinder fluid reservoir cap yet. Leave it in place until the new brake components are installed.

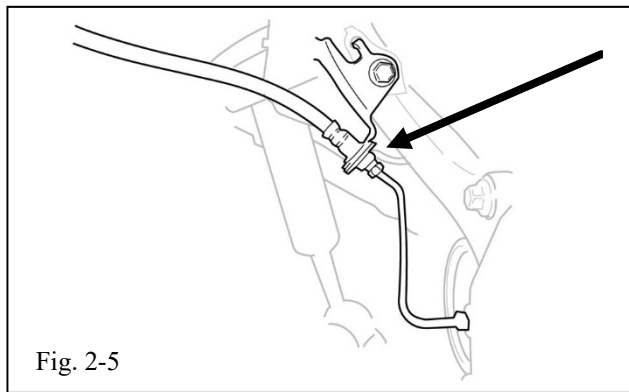
(d) Use a 10mm flare nut wrench to loosen the steel line fitting where it attaches to the rubber brake hose (Fig. 2-2).

(e) Use a pair of needle-nose pliers to remove the brake line retaining clip (Fig. 2-3). Retain this clip for re-use.



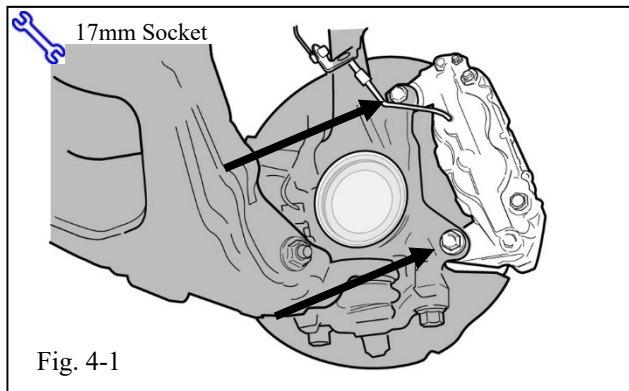


- (f) Remove the rubber brake hose from the steel line and place one of the supplied rubber caps over the end of the steel line to stop fluid loss (Fig. 2-4).



- (g) Repeat Steps 2(d) through 2(f) for the connection on the lower end of the rubber brake hose (Fig. 2-5). Remove and discard the rubber brake hose but retain the clip.

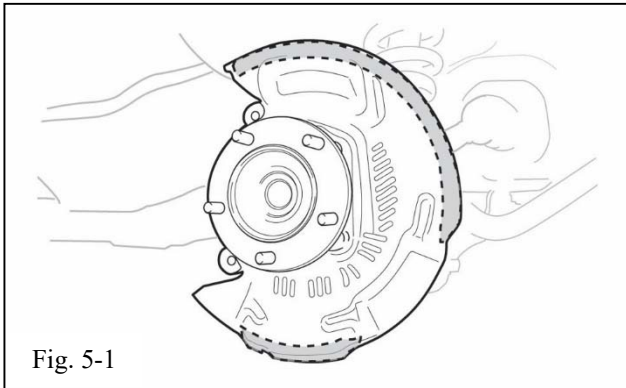
4. Remove the Factory Brake Caliper & Rotor.



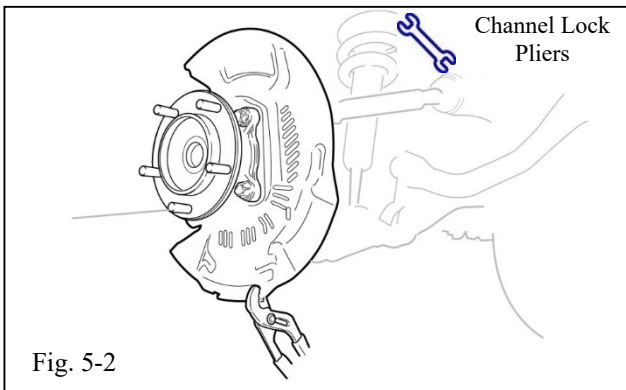
- (a) Use a 17mm socket to loosen and remove the two bolts from the original equipment (OE) caliper (Fig. 4-1). Discard these bolts as they will be replaced by longer bolts.
- (b) Remove the OE caliper along with the short steel brake line still attached.
- (c) Remove and retain the steel brake line from the OE caliper. Discard the OE caliper.
- (d) Remove the OE rotor from the hub and discard it.

5. Modify the Rotor Dust Shield.

- (a) The shaded areas of the flange on the dust shield need to be bent back to allow for the new larger TRD rotors (Fig. 5-1).

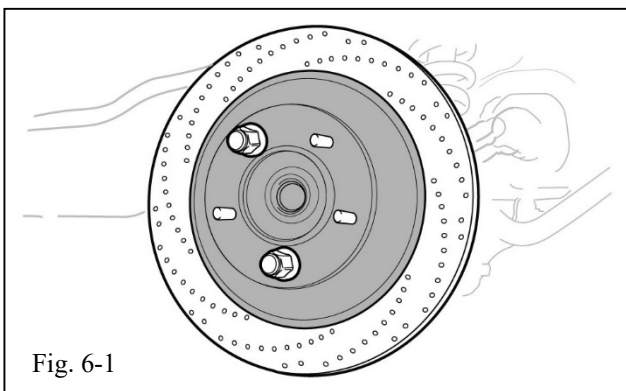


- (b) Use a pair of channel lock pliers to carefully bend the flange back on the OE dust shield (Fig. 5-2).

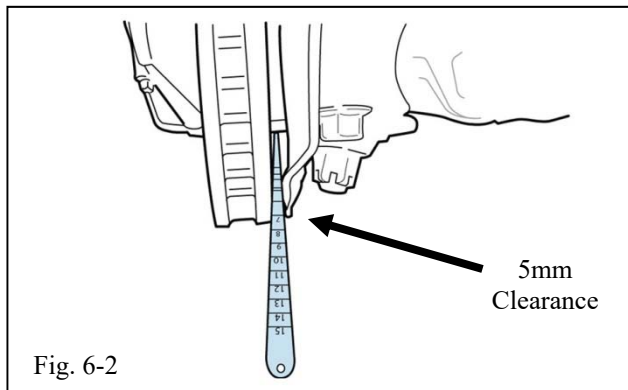


6. Install the New Rotor.

- (a) Install the appropriate rotor assembly, seating it squarely on the hub face. Place two wheel nuts on opposite studs (finger tight) to prevent the rotor from falling off the hub (Fig. 6-1).



⚠ CAUTION: The rotor hats have a small L (left) or R (right) sticker. Install “L” on the driver side and “R” on the passenger side.



(b) Inspect the air gap to the dust shield; re-bend this area of the dust shield if necessary. The rotor and the dust shield need 5mm of clearance (Fig. 6-2). Also, confirm the dust shield does not contact the ball joint rubber seals.

(c) Once the rotor is in place, remove the “L” or “R” sticker and clean any adhesive residue.

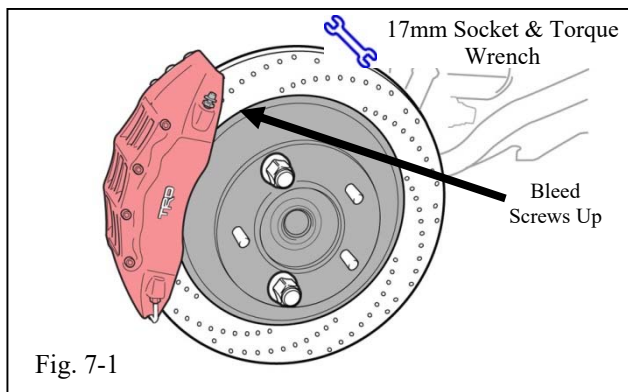


NOTE: Air tool use is NOT allowed for re-installation of any components.

7. Install the New Caliper.

(a) Remove the foam insert from between the brake pads before installing the caliper.

(b) Install the appropriate caliper/pad assembly onto the rotor with the bleed screws up and fasten using the supplied M12x40mm bolts (Fig. 7-1). Torque the bolts to 99 Nm (73 ft-lbf) using a 17mm socket.



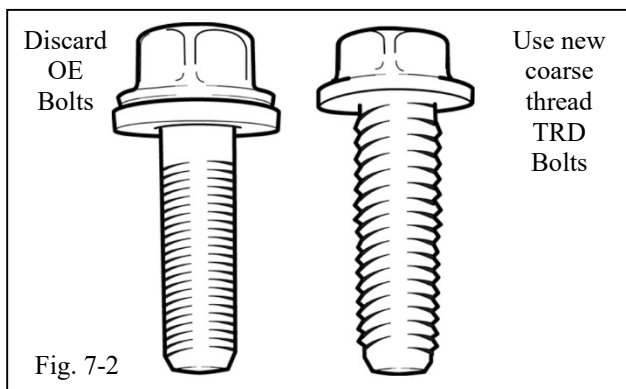
Torque: 99 Nm (73 ft-lbf)



CAUTION: The calipers have a small L (left) or R (right) sticker. Install “L” on the driver side and “R” on the passenger side.



CAUTION: As shown in Fig. 7-2, the new bolts are longer than the OE bolts and have a coarser thread pitch. DO NOT attempt to reuse the OE bolts as they will destroy the calipers.



(c) Once the caliper is in place, remove the “L” or “R” sticker and clean any adhesive residue.

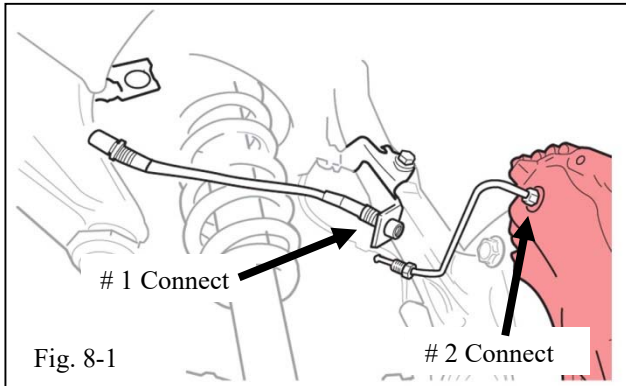


Fig. 8-1

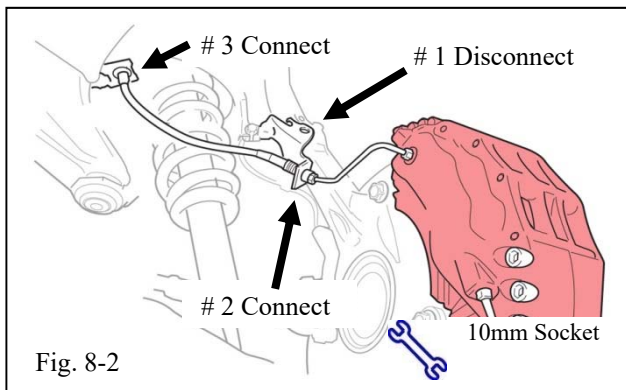


Fig. 8-2

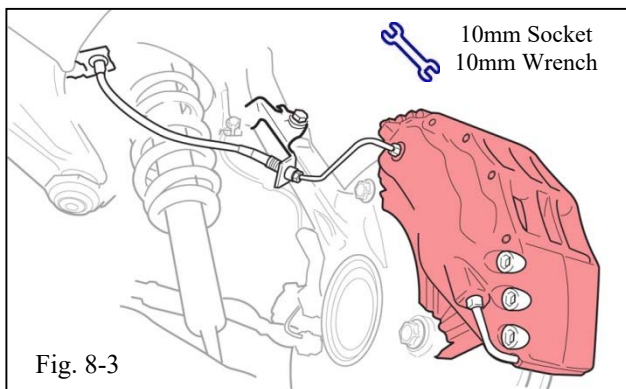


Fig. 8-3

8. Install the Stainless Steel Brake Hose.

- (a) Obtain one of the OE brake hose fitting clips removed earlier. Align the flats on the clip to those on the stainless hose fitting and attach it to the steering knuckle bracket (Fig. 8-1). If necessary, a soft mallet can be used to tap the clip in place.
- (b) Attach the hard steel brake line removed from the OE caliper to the new TRD caliper finger tight (Fig. 8-1).
- (c) Disconnect the steering arm bracket that holds the lower end of the stainless brake hose from the steering knuckle (Fig. 8-2).
- (d) Attach the open end of the hard steel brake line to the lower end of the stainless hose **finger tight** (Fig. 8-2).
- (e) Thread the upper end of the stainless steel brake hose through the chassis bracket and attach it to the steel brake line after removing the rubber cap. **Finger tighten** the fitting (Fig. 8-2).
- (f) Install the other clip once the flats on the fitting are aligned with the chassis bracket (Fig. 8-2).
- (g) Carefully push the bracket back onto the knuckle. The hard brake line will bend slightly to allow the bracket to sit in its proper location. Torque the bolt to 29 Nm (21 ft-lbf) (Fig. 8-3).

Torque: 29 Nm (21 ft-lbf)

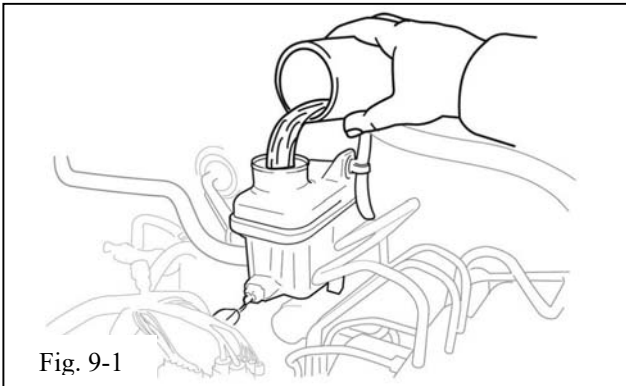
- (h) After centering the steering wheel, use a 10mm flare nut crow- foot socket and tighten all three brake hose fittings to 15 Nm (11 ft-lbf).

|| S Torque: 15 Nm (11 ft-lbf)

Repeat Steps 3(a) through 8(h) for the opposite side of the vehicle.

- (i) Turn the steering knuckle while observing the stainless steel brake hose for any binding. Also confirm clearance to all suspension components.

9. Bleed the Brakes.



- (a) Fill the reservoir with brake fluid, SAE J1703 or FMVSS No. 116 DOT3 (Fig. 8-1). Do not overfill it.
- (b) Turn the ignition switch to ON and wait until the pump motor has stopped.
- (c) Remove the rubber cap and connect clear vinyl tubing to the **passenger side outboard** bleed screw. Use a small container on the opposite end of the tubing to catch any drained brake fluid.
- (d) Use an assistant to slowly depress the brake pedal several times. With the pedal held down, use an 11mm box wrench to loosen the bleed screw.
- (e) When the fluid stops coming out through the tubing or the brake pedal is to the vehicle floor, tighten the bleed screw, then release the brake pedal.
- (f) Repeat Step 8(d) and 8(e) until a solid stream of fluid is coming out of the tubing.

- ⚠ (g) Check the master cylinder reservoir and add fluid if needed.

CAUTION: DO NOT allow the master cylinder reservoir to run dry and draw in air.

- (h) Connect the clear tubing to the **passenger** side **inboard** bleed screw and repeat Steps 8(d) through 8(g).
- (i) Connect the clear tubing to the **driver** side **outboard** bleed screw and repeat Steps 8(d) through 8(g).
- (j) Lastly, connect the clear tubing to the **driver** side **inboard** bleed screw and repeat Steps 8(d) through 8(g).
- (k) After bleeding the front brake system, gently tap the caliper body with a plastic mallet to dislodge any small air bubbles and then perform Steps 8(c) through 8(j) again.
- (l) Tighten the bleeder screws to 11 Nm (8 ft-lbf).

⚠ **Torque: 11 Nm (8 ft-lbf)**

10. Clean the Calipers and Check for Leaks.

- ⚠ (a) Remove any traces of brake fluid which may remain in the bleed screw nipples by spraying brake cleaner into each one and using a cloth to wipe away any excess (Fig. 10-1).



- (b) Have an assistant depress the brake pedal slowly 3-4 times and hold brake pedal down. Check for fluid leaks while the brake pedal is depressed. Check all connections at both ends of the front brake hoses and all bleed screws.




Fig. 10-1

- (c) Cover all 4 bleed screws with the attached rubber caps.

11. Install the Wheels.


- (a) Install the wheels. Hand start and snug the lug nuts during installation.


 **CAUTION: Do not allow the wheel to bump against the caliper or rotor, as this can chip the paint.**

- (b) Rotate each front wheel a few complete revolutions to confirm no interference exists between the wheel and the caliper.


- (c) Start the vehicle engine and have an assistant depress and hold the brake pedal.


- (d) Torque the lug nuts to 97 ft-lbf (131 Nm) with a 22mm socket and torque wrench in the order shown (Fig. 11-1).

 **Torque: 97 ft-lbf (131 Nm)**

 **NOTE: The wheels should not rotate when the lug nuts are being torqued. If the wheels rotate, then re-check for fluid leaks. If no leaks are found, remove the wheels and repeat the brake bleeding procedure.**

- (e) Re-torque all lug nuts in same 1-5 sequence (Fig. 11-1).

 **Torque: 97 ft-lbf (131 Nm)**

 **CAUTION: DO NOT USE IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.**

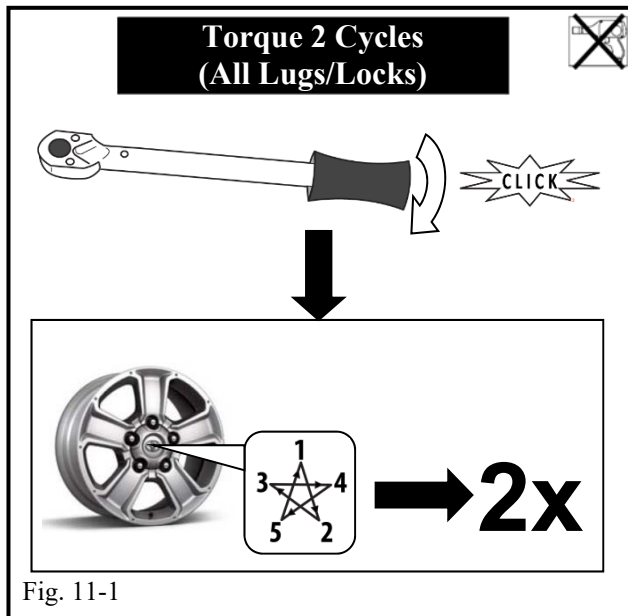


Fig. 11-1

- (f) Lower the vehicle from the lift or jack stands and apply the brakes to ensure they are functioning properly before driving the vehicle.

12. Place the Warning Label and Documents in the Vehicle.

- (a) Place the break-in procedure tag on the inside mirror and the owner's document in the glove box.

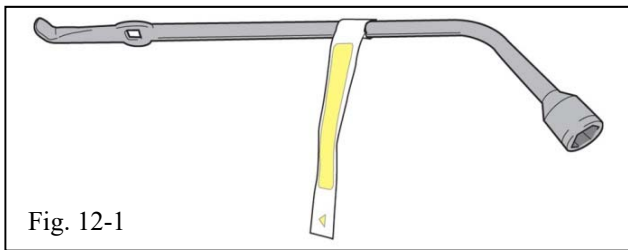


Fig. 12-1

- (b) Attach the spare tire warning label to the vehicle lug wrench as shown (Fig. 12-1). Replace the lug wrench in its storage bag and replace the storage bag in its proper location.



- (c) Carefully move vehicle at low speed and apply brakes gently several times to ensure that all components are working correctly.



WARNING: Do not apply the brakes aggressively while driving until the rotors



have been properly bedded or broken-in.

Care and Maintenance

- The brake calipers have a painted finish. Immediately clean off any spilled brake fluid, wiping it off with a soft, clean terry-cloth towel.
- Bedding-in rotors and pads is critical to the optimum performance of new brakes. When bedding-in new parts, not only are the pads heat-cycled, they are also depositing a layer of pad material onto the rotor face. If they are not bedded-in properly, an uneven layer of pad material will be deposited onto the rotor, causing vibration.

Accessory Function Checks

Check for Leaks

Document Check

There should be no brake fluid leaks at the hose ends and or bleeder screws.

The TRD Big Brake Kit Mirror Tag should be hanging from the vehicle mirror and the TRD Big Brake Kit Owners Manual should be in the vehicle glove box. The spare tire warning label should be on the vehicle lug wrench.

Vehicle Function Checks

Brake Fluid Level

Brake Pedal Feel

The vehicle brake fluid level should be full.

The vehicle brake pedal should be firm and solid when depressed and held.

Vehicle Appearance Check

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.)