

**Part Number: PTR09-35070**

**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 2 M12X30mm Allen Head Socket Bolts
4	1	Brake Caliper Assembly, RH Front with 2 M12X30mm Allen Head Socket Bolts

**Hardware Bag Contents**

Item #	Quantity Req'd.	Description
1	2	Stainless Steel Brake Hose
2	2	Banjo Bolt
3	2	Rubber End Cap
4	4	Copper Washer
5	1	Dust Shield Template
6	1	Installation Instructions
7	1	Mirror Hanging Tag
8	1	Owner's Document

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description
1		

**Conflicts**

None with OE 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 TRD.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.

**Recommended Tools**

<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
Safety Glasses	Safety Glasses /face shield
Vehicle Protection	Seat & Floor Covers
Fender Covers	
Work Gloves	
<b>Special Tools</b>	<b>Notes</b>
Chassis Lift or	(Hydraulic Jack & Jack Stands)
Fluid Drip Trays	One per side
Air Powered Vacuum	With chip collection bag
<b>Installation Tools</b>	<b>Notes</b>
21mm Deep Socket	½" Drive
Air Impact Gun	½" Drive
10mm Flare Nut Wrench	
Needle Nose Pliers	
17mm Deep Socket	½" Drive
Yellow or Silver Marker	

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

Air Powered Nibbler	
Torque Wrenches	3/8" & ½" Drive
9/16" Socket	3/8" Drive
Soft Mallet	
11mm Combination Wrench	
10mm Allen Socket	3/8" Drive
Breaker Bar	½" Drive
<b>Special Chemicals</b>	<b>Notes</b>
Toyota Brake Fluid	#00475-1BF03 or Fluid: SAE J1703 or FMVSS No. 116 DOT3
Toyota Brake Cleaner	#00289-2BC00-CA

**General Applicability**

Front Brake Upgrade can be installed on all FJ Cruiser Models

**Recommended Sequence of Application**


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


\*Mandatory


**Vehicle Service Parts** (may be required for reassembly)


Item #	Quantity Req'd.	Description

**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.

## Section II - Installation 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. Vehicle Preparation.



- (a) Before working on the vehicle, protect the seats and carpets with covers. Use Fender Covers to protect the vehicle paint.



- (b) 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 on a vehicle using only the jack.**

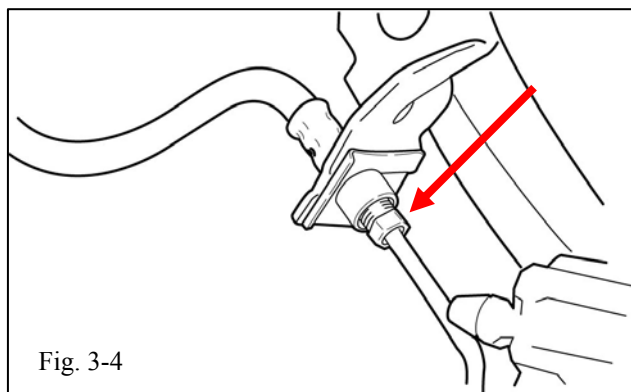
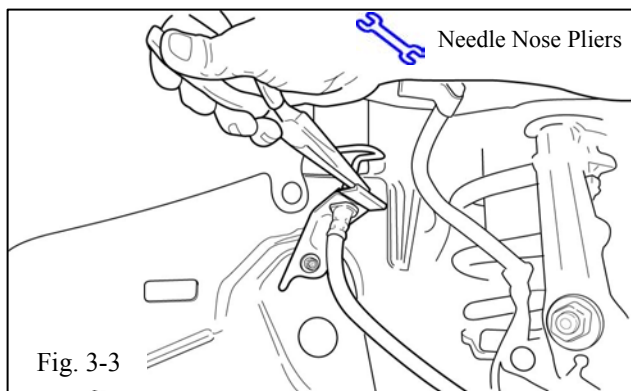
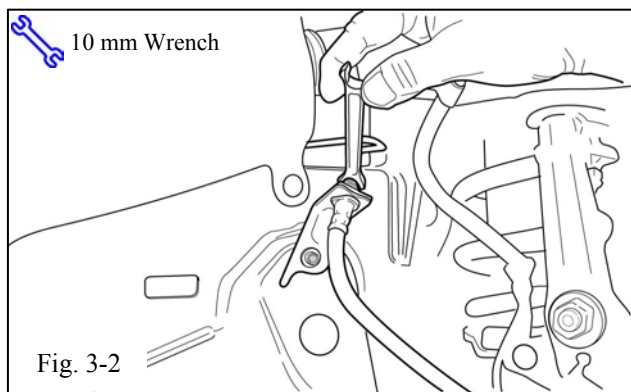
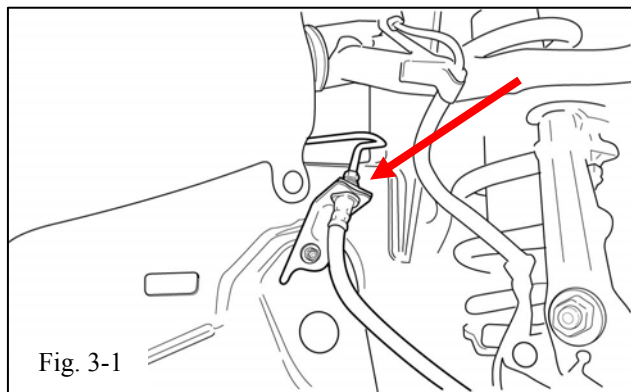
- (c) Use a 21mm deep socket and 1/2" air impact gun to remove all front wheel lug nuts.
- (d) Remove both front wheel/tire assemblies and save for reuse.

### 2. Check Kit Contents.

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

### 3. Disconnect & Remove the Front Brake Hose.

- (a) Turn the steering wheel to the right if you are working on the driver side; this allows easier access to the brake hose. Turn the wheel to the left if you are working 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 as shown in (Fig. 3-1).

**⚠ Caution: Brake fluid will damage most painted surfaces. Immediately clean any spilled brake fluid from all painted surfaces.**

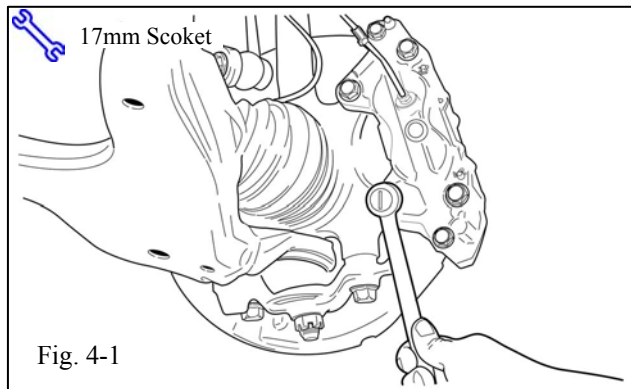
(c) Do not remove the master cylinder fluid reservoir cap yet. Leave it in place until the new brake components are installed.

(d) Use a 10mm flare nut wrench to loosen the steel line fitting where it attaches to the stock brake hose (Fig. 3-2).

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

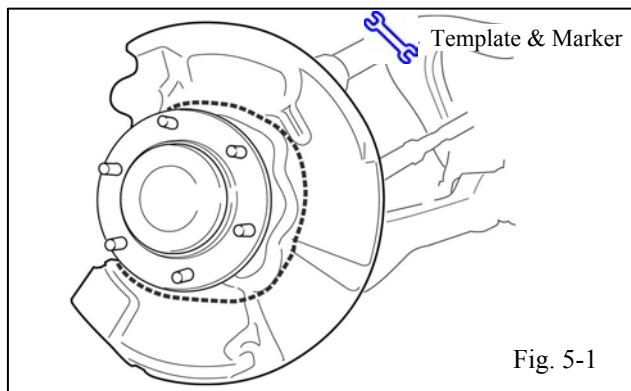
(f) Remove the rubber brake hose from the steel line and place one of the supplied rubber caps over the end of the steel line to stop fluid loss during the installation.

(g) Repeat steps 3(d) & 3(e) for the connection on the lower end of the rubber brake hose (Fig. 3-4). Remove and discard the rubber brake hose.



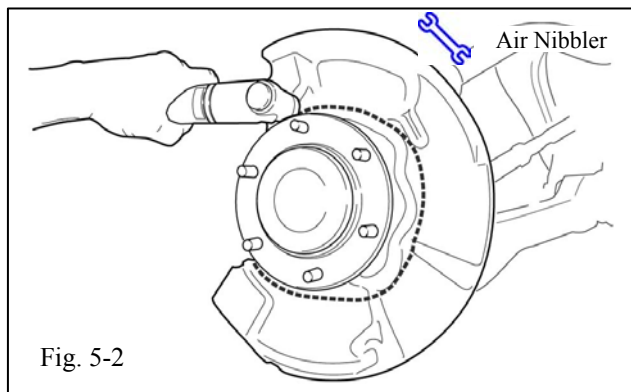
**4. Remove Factory Brake Caliper, & Rotor.**

- (a) Using a 17mm deep socket, loosen and remove the two bolts from the original equipment (OE) caliper (Fig. 4-1). Discard these bolts.
- (b) Remove the OE caliper along with the short steel brake line still attached.
- (c) Remove the OE rotor from the hub.



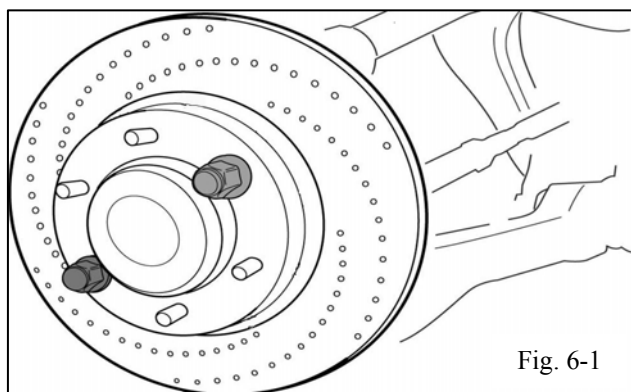
**5. Marking & Trimming the OE Rotor Dust Shield.**

- (a) Using the supplied dust shield template and a yellow or silver marker, mark the OE dust shield for trimming (Fig. 5-1).



- (b) Using an air powered nibbler, trim the OE dust shield (Fig. 5-2). Discard the trimmed portion of the OE dust shield.
- (c) Use a vacuum to clean up all chips generated by the air powered nibbler.

**+** **Caution: Use care around the trimmed edges of the dust shield as the edges are sharp.**

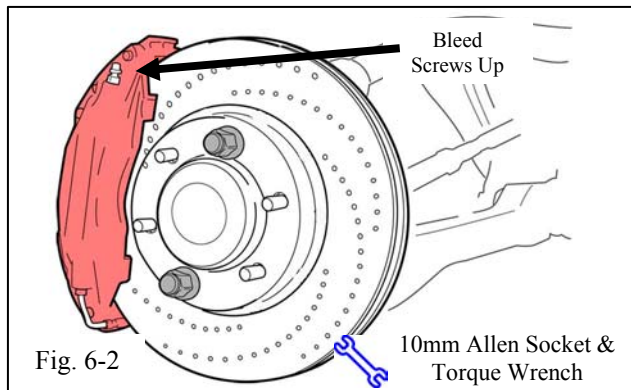


**6. Installing the new Rotor & Caliper.**

- (a) Install the 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 and to snug it in place (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) Once the rotor is snugged up to the hub, rotate it to make certain it is not dragging on the trimmed edges of the dust shield. If it is dragging, inspect to find the area of interference and re-trim this area with the air powered nibbler.
- (c) Once the rotor is in place, remove the “L” or “R” sticker and clean any adhesive residue.
- (d) Remove the foam insert from between the brake pads before installing the caliper.
- (e) Install the caliper/pad assembly onto the rotor with the bleed screws up and align the mounting bosses with the steering knuckle threaded bolt holes (Fig. 6-2). While holding the caliper in place, insert and start the new M12X30mm caliper mounting bolts. Torque the bolts to 91 lbf·ft (123 N·m).

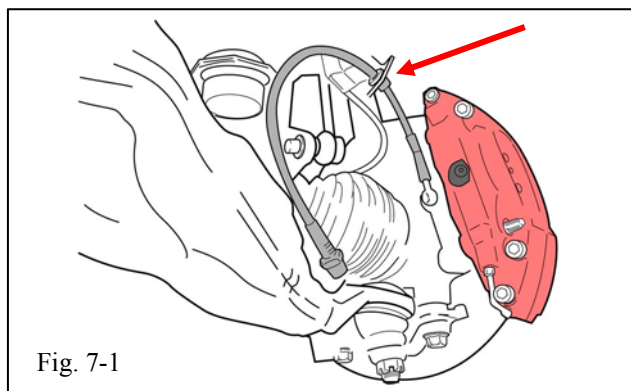


**⚠ Caution: The calipers have a small L (left) or R (right) sticker. Install “L” on the driver side and “R” on the passenger side.**

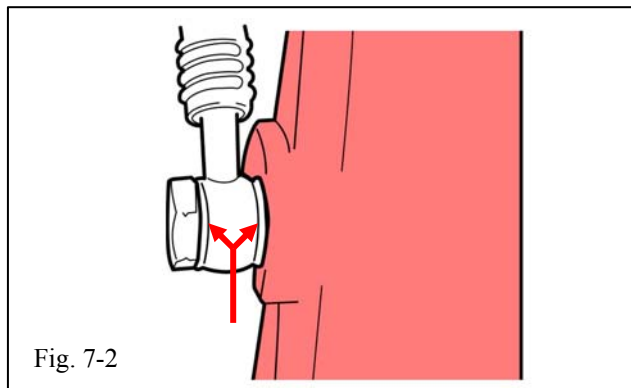
- (f) Once the caliper is in place, remove the “L” or “R” sticker and clean any adhesive residue.

#### 7. Install the Stainless Steel Brake Hose.

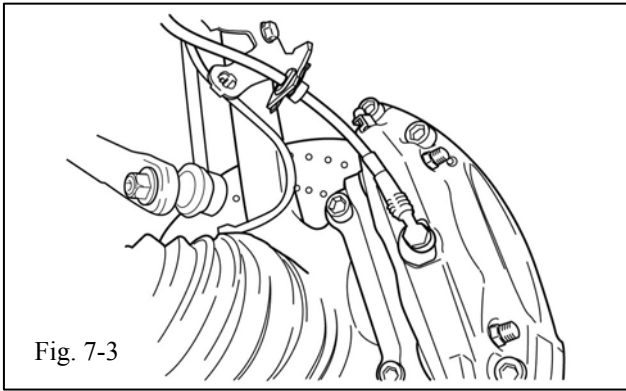
- (a) Thread a stainless steel brake hose through the bracket attached to the steering knuckle with the banjo fitting next to the caliper (Fig. 7-1).




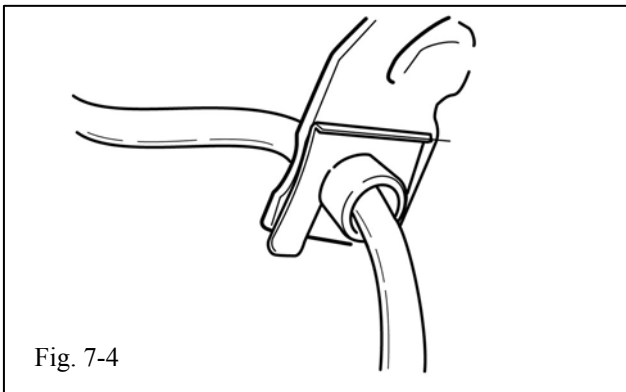
- ⚠** (b) Using two copper washers on either side of the banjo fitting, insert a banjo bolt through the banjo fitting and screw it into the caliper (Fig. 7-2). Hand-tighten the bolt at this time.




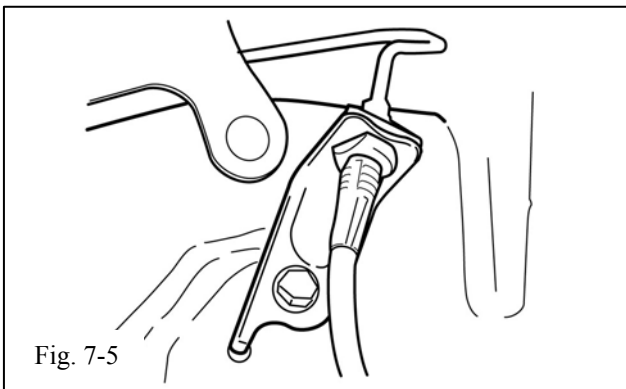






- (c)  The orientation of the banjo fitting should be such that the stainless steel brake hose is pointing as shown (Fig. 7-3).



- (d)  Using one of the OE brake hose fitting clips removed earlier, align the flats on the hose fitting and reattach it to the steering knuckle bracket (Fig. 7-4). If necessary, a soft mallet can be used to tap the clip in place.



- (e)  Thread the upper end of the stainless steel brake hose through the chassis bracket and attach the steel brake line after removing the rubber cap. Finger tighten the fitting. Install the other clip once the flats on the fitting are aligned with the chassis bracket (Fig. 7-5).
- (f)  Using a 9/16" socket, tighten the banjo bolt to 14 lbf·ft (19 N·m).


**Caution: Do not over tighten the banjo bolt. Doing so can strip the aluminum threads in the caliper causing irreparable damage to the caliper.**

- (g) With the steering centered, using a 10mm flare nut wrench tighten the steel brake line to stainless steel hose fitting to 11 lbf·ft (15 N·m) without inducing any twist in the stainless steel brake hose.

- (h) Have an assistant turn the steering wheel while observing the stainless steel brake hose for any binding. Also check for clearance to all suspension components.
- (i) If necessary, adjust the hose by loosening the joint and realigning the hose. After any adjustments, repeat steps 7(g) & 7(h).

**Repeat steps 3(a) through 7(i) for the opposite side of the vehicle.**

### 8. Bleed Brakes, Manual Procedure.

- (a) Fill reservoir with brake fluid. Fluid: SAE J1703 or FMVSS No. 116 DOT3 (Fig. 8-1). Do not overfill.
- (b) Turn the ignition switch to ON and wait until the pump motor has stopped.
- (c) Remove rubber cap and connect clear vinyl tubing to **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 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) If necessary, repeat Step 5 until a solid stream of fluid is coming out of the tubing.
-  (g) Check master cylinder reservoir and add fluid if needed.

**Caution: DO not allow master cylinder reservoir to run dry and draw in air.**

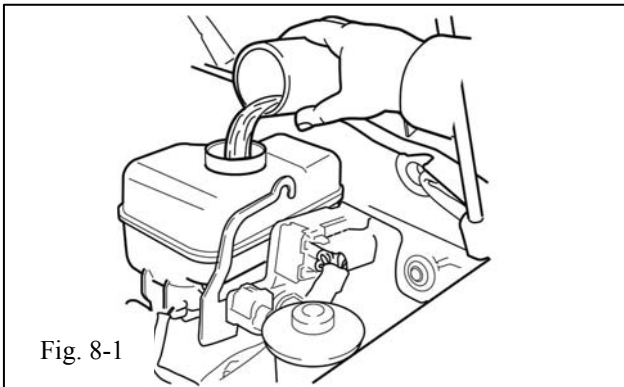


Fig. 8-1

- (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 and repeat Steps 8(d) through 8(g).
- (j) Finally, connect the clear tubing to the **driver** side **inboard** bleed screw, and 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.

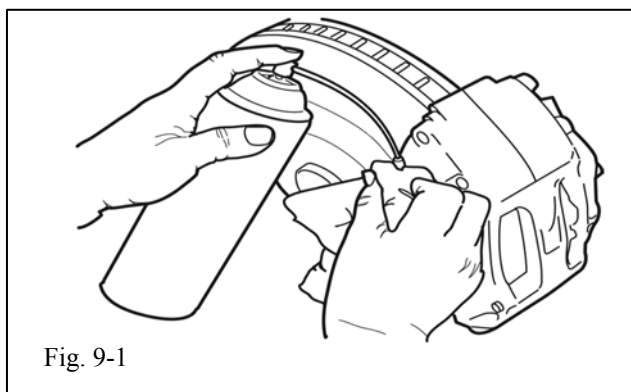



Fig. 9-1

### 9. Clean Calipers.

-  (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. 9-1).

### 10. Check for Leaks.

- (a) Have a second person depress 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 front brake hoses, and all bleed screws.
- (b) Cover all 4 bleed screws with the attached rubber caps.

### 11. Reinstall Wheels and Lower the Vehicle.

- (a) Reinstall the OE wheels.
- (b) Use an assistant to start vehicle engine, depress brake pedal and hold. Torque the lug nuts to 82 lbf·ft (112 N·m) using a 21mm socket and torque wrench.





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

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

## **12. Place Documents and Move Vehicle.**

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



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

**Warning: Do not drive vehicle and apply brakes aggressively until rotors have been properly bedded or broken-in.**

## **Care and Maintenance**

- Your 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 your new brakes. When bedding-in new parts, you are not only heat-cycling the pads, you are also depositing a layer of pad material onto the rotor face. If not bedded-in properly, an uneven layer of pad material will be deposited onto the rotor, causing vibration.

**TOYOTA FJ CRUISER 2007 - FRONT BRAKE UPGRADE**  
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> <p><input type="checkbox"/> Check for Leaks</p> <p><input type="checkbox"/> Document Check</p>	<p>There should be no brake fluid leaks at the hose ends and bleeder Screws.</p> <p>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.</p>
<p><u>Vehicle Function Checks</u></p> <p><input type="checkbox"/> Brake Fluid Level</p> <p><input type="checkbox"/> Brake Pedal Feel</p>	<p>The vehicle brake fluid level should be full.</p> <p>The vehicle brake pedal should be firm and solid when depressed and held while the engine is running.</p>