Installation Instructions

Product: **SS4 11.25" Rear**
(with park brake, without park brake)

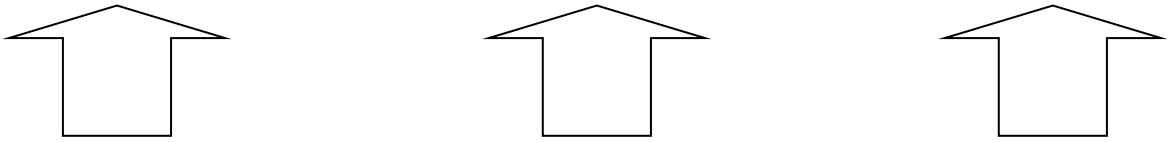
Instruction Part Number: **6000543**

Revision Date: **25 June 2019**

Vehicle

Make: **Ford**
Model: **9" Late Big Bearing (aka Torino)**
Year(s): **All**

ATTENTION: ***Read this before going any farther! Returns will not be accepted for ANY installed PART or ASSEMBLY. Use great care to prevent cosmetic damage when performing wheel fit check. In the event that a product must be returned, please contact Baer Customer Service for a RMA Number.***

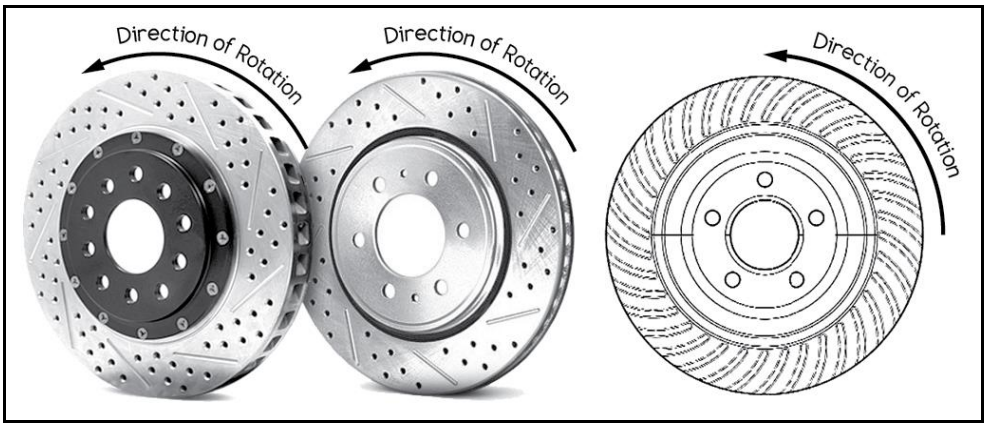


Notices – Read and Follow BEFORE ATTEMPTING INSTALLATION

- All installations require proper safety procedures and protective eyewear.
- All installations assume basic mechanical skill and a factory service manual for the vehicle on which the installation is to be performed.
- All references to the "left" side of the vehicle correlate to the driver's side of the vehicle.
- Any installation requiring you to remove a wheel or gain access under the vehicle requires use of jack stands appropriate to the weight of the vehicle. In all cases, jack stands rated for a minimum of 2-tons is recommended.
- A selection of hand tools sufficient to engage in the installation of these products is assumed, and is the responsibility of the installer to have in his/her possession prior to beginning this installation. All installations, which require removal of hydraulic hoses and/or bleeding of the brakes, require appropriate fitting/line wrenches, safety catch can, and protective eyewear. Other than these items, if unique or special tools are required they will be stated appropriately in the installation step.
- ALWAYS CONFIRM WHEEL FIT PRIOR TO BEGINNING INSTALLATION OF ANY BRAKE SYSTEM OR "UPSIZED" ROTOR UPGRADE! In addition to checking wheel fitment (available online at www.baer.com), always place the actual corner assembly or a combination of the caliper assembly onto the rotor, and into the actual wheel. This procedure will reconfirm proper clearance between the caliper and the wheel before proceeding with the actual installation.

- Returns will **not** be accepted for systems that have been partially or completely installed. Use extreme care when checking wheel fitment to prevent any cosmetic damage.

- When installing new Baer rotors, be sure to follow the direction of rotation indicated on the rotor hat area with either an arrow, or an “L” for left, or an “R” for right, or both. “L” or left always indicates the driver’s side of US spec vehicles. Images shown are “L” left rotors:



- A proper professional wheel alignment is required for any system requiring replacement of the front spindles, or tie rod ends. Follow factory prescribed procedures and specifications unless otherwise indicated.

- At any point, stop the installation if anything is unclear, or the parts require force to install. Consult directly with Baer Technical Staff in such instances to confirm details. Please have these instructions, as well as the part number of the component (part numbers are machined into the brackets) that is proving difficult to install, as well as the make, model, and year (date of vehicle production is preferred) of your vehicle available when you call. Baer’s Technical Staff is available from 8:30a.m. - 5:00p.m. Mountain Standard Time (Arizona does not observe Daylight Savings Time) by phone: (602)-233-1411 Monday through Friday.

Installation

Section 1: No Park Brake

NOTE: Follow the steps outlined in this section ONLY, for applications without park brake. For applications with park brake refer to section 2.

1. Install the Baer banksia plate using the existing bolts and nuts. The opening in the banksia plate must point upward. See Fig 1 for reference.

   ****IMPORTANT NOTE:** Though the Baer banksia plates may look symmetrical, they are not! The LEFT banksia plate, engraved "LEFT" must face ***inboard***, on the left, or driver's side of the vehicle. The RIGHT banksia plate, engraved "RIGHT" must face ***inboard***, on the right, or passenger side of the vehicle.

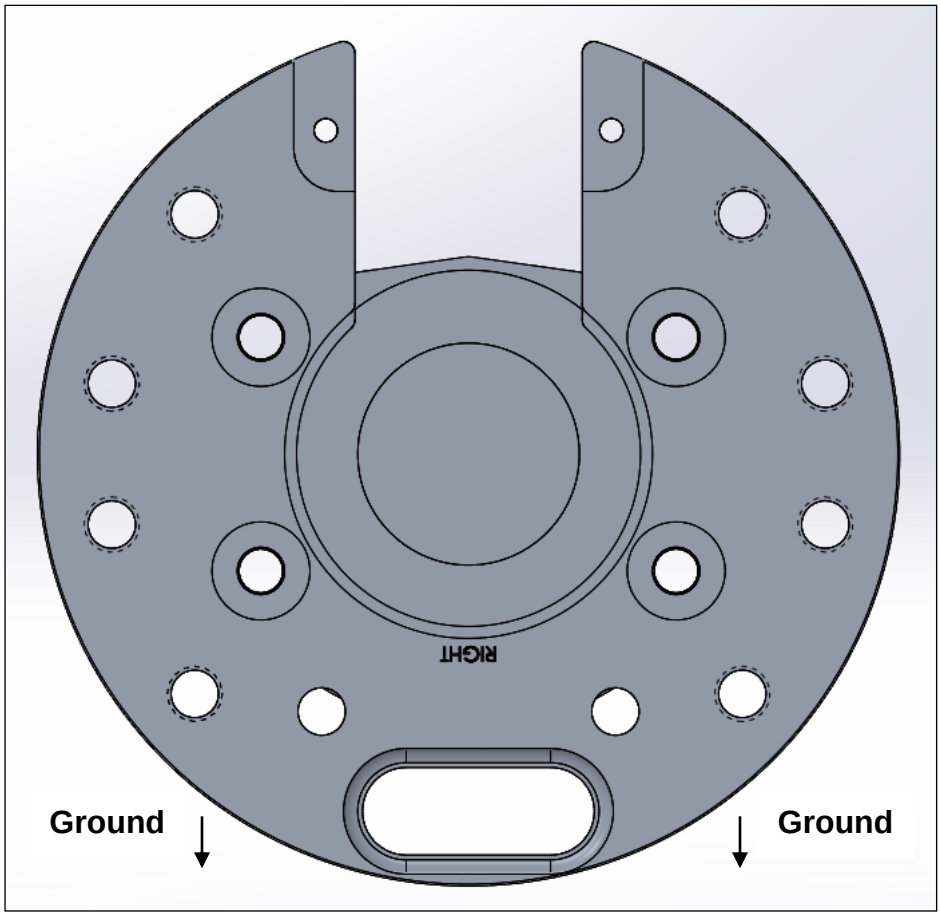


Fig 1

2. Attach the Baer intermediate bracket to the banksia plate using the supplied M12-1.75 x 60mm hex bolts and 7/16" washers. The large step in the bracket shall sit inboard, towards the vehicle. Just snug the bolts for now as shimming will be required later in the install. **See Figure 2 for reference.**

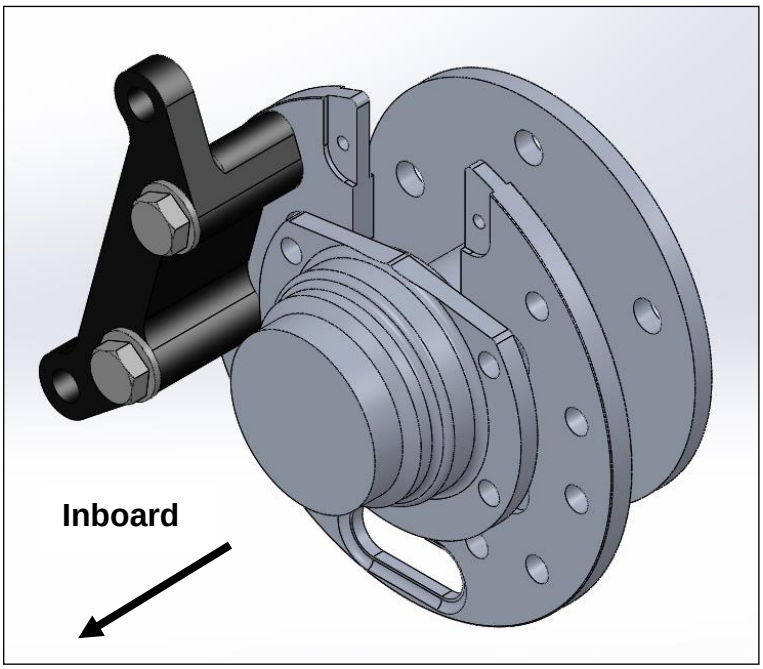


Figure 2: Intermediate Bracket Installation

3. Install the correct side rotor onto the axle and secure with three lug nuts and washers to hold it in place.
4. The S4 caliper comes pre-loaded with pads for shipping. Remove the 8-32 bolts and remove the pads for shimming. Once shimming is completed, re-install the pads and torque the 8-32 bolt to 11 inch lbs.
5. Next, with the pads removed, install the new Baer S4 Caliper onto the bracket and secure it in place using the supplied M12-1.75x30mm bolts and 7/16" washers. Hand tighten the bolts for now, as shimming will be required. Go to the shimming portion of these instructions (last page). **See Figure 3 for reference**.

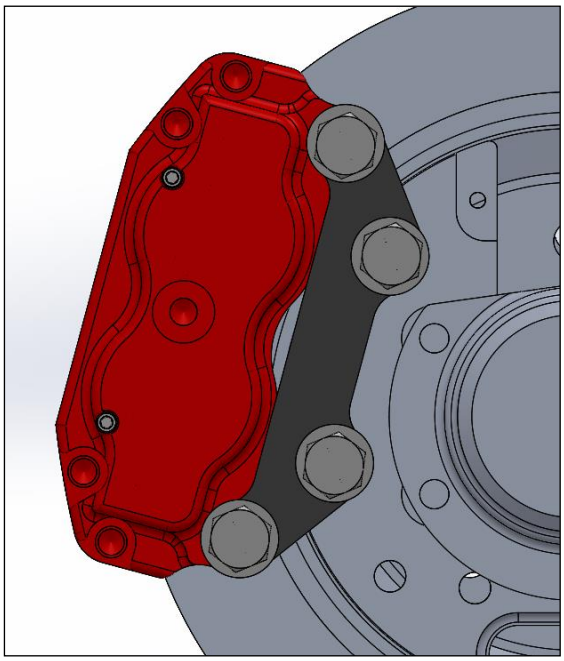


Figure 3: S4 Caliper installed onto Intermediate Bracket

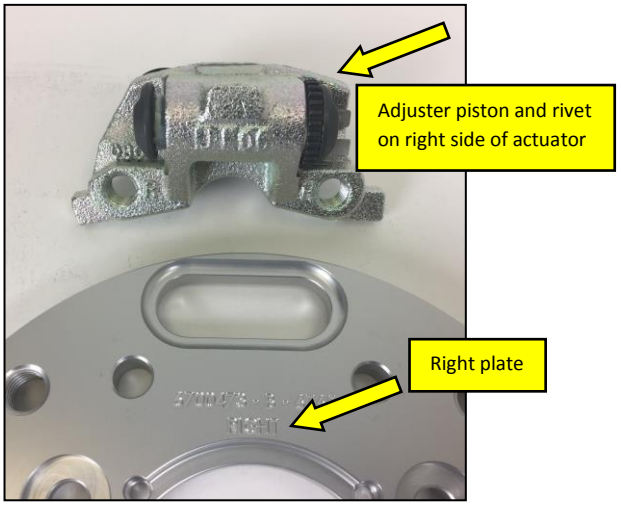
Section 2: With Park Brake

For installations with a park brake assembly

NOTE: Follow the first set of steps ONLY, for vehicles with park brake. See Section 1 for all non-park brake equipped vehicles.

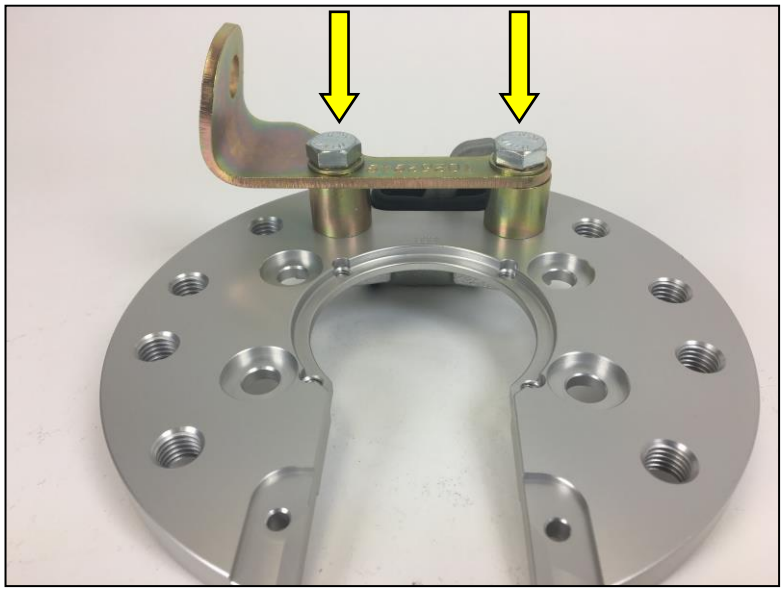
1. Bolt the correct side actuator to the correct side plate. The 'Right' actuator has the rivet and the adjusting piston on the RIGHT side of the actuator. The left is the opposite. See below for reference:

Parts layout for one side



Right plate with Right Actuator

2. From the back of the plate use the 10mm bolts to go through the park brake bracket, through the spacers, through the plate and into the actuator body. Torque bolts to 35ft lbs.



3. Install the Baer banksia plate using the existing bolts and nuts. The opening in the banksia plate must point upward and the actuator at the bottom.

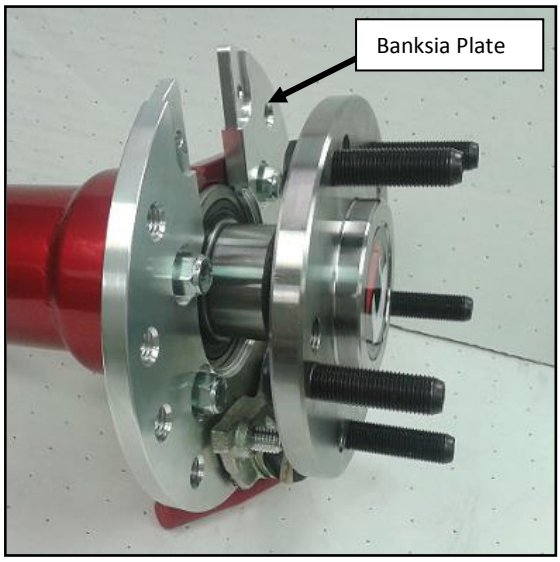


Figure 1: Banksia plate installed

4. Attach the Baer intermediate bracket to the banksia plate using the supplied M12-1.75 x 60mm hex bolts and 7/16" washers. Just snug the bolts for now as shimming will be required later in the install. See Figure 3 for reference.

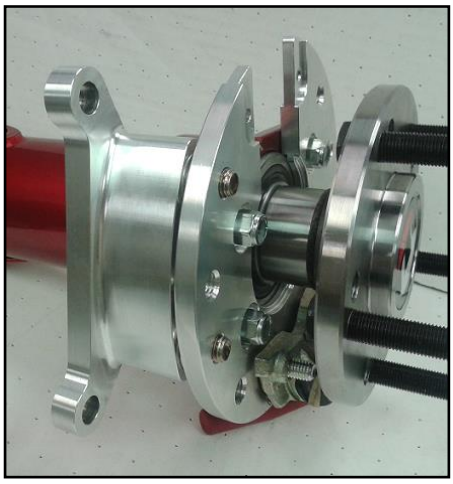


Figure 3: Intermediate bracket installed

5. Install the park brake shoe from the bottom. Position the shoe at an angle to clear the axle hub and slide the ends of the shoe into the slots in the brake shoe actuator. Rotate the shoe over the hub/studs (**Figure 4**). Attach the shoe clip to the shoe (**Figure 5**). Attach the shoe clip bracket to the banksia plate using the 2 small socket head bolts. ****NOTE:** Use Blue Loctite on the bolts. Tighten the bolts. **See Figures 6 and 7 for reference**.

****IMPORTANT NOTE:** Make sure when installing the shoe in the actuator that the ends of the actuator stay flush with the actuator body **(Figure 6**). Failure to do this will expand the brake shoe and not allow the rotor to be installed.

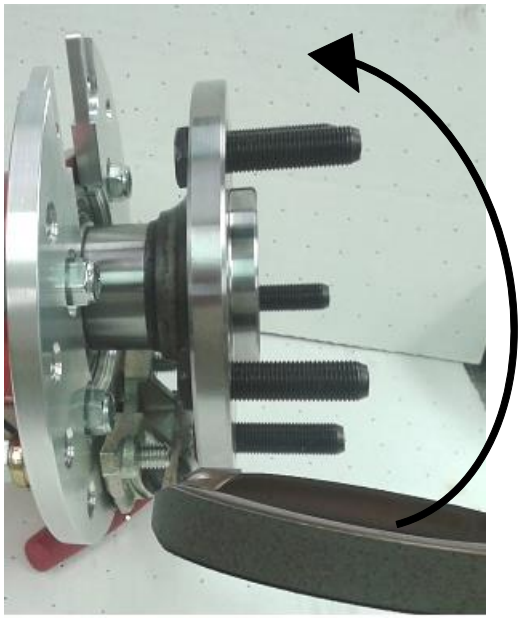


Figure 4: Install shoe into actuator from the bottom, rotate over hub

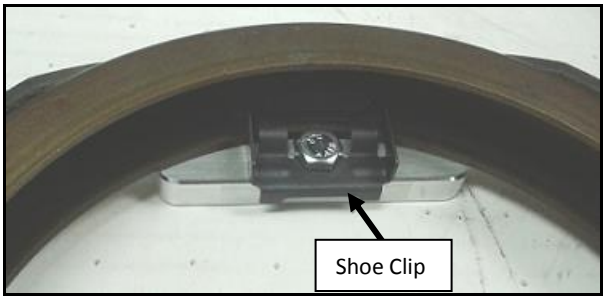


Figure 5: Brake shoe clip installed in shoe

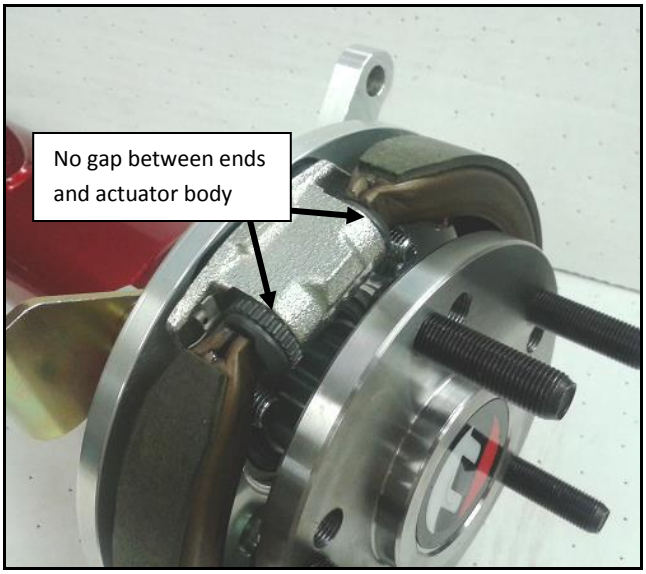


Figure 6: Brake shoe installed (bottom view)

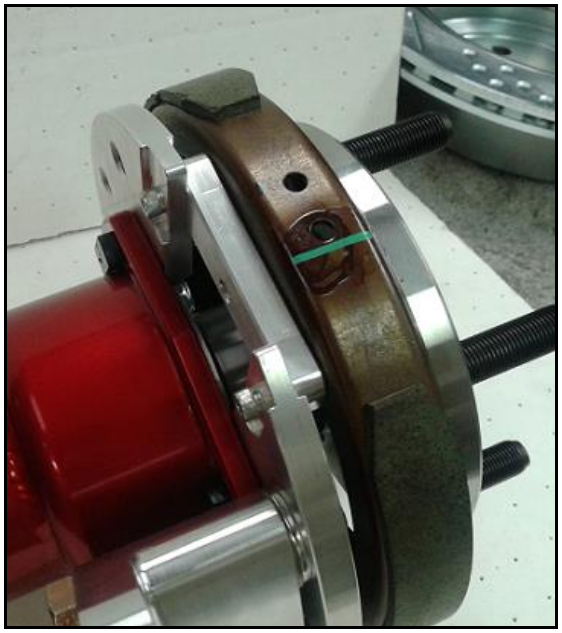


Figure 7: Brake shoe installed (top view)

.

6. Install the correct side rotor onto the axle and secure with three lug nuts and washers to hold it in place. With the pads removed install the caliper (bleed screw pointing upward) using the supplied M12-1.75 x 30mm hex head bolts and 7/16" washers. Snug the bolts for now as shimming will require removal. **See Figures 8 and 9 for reference**.

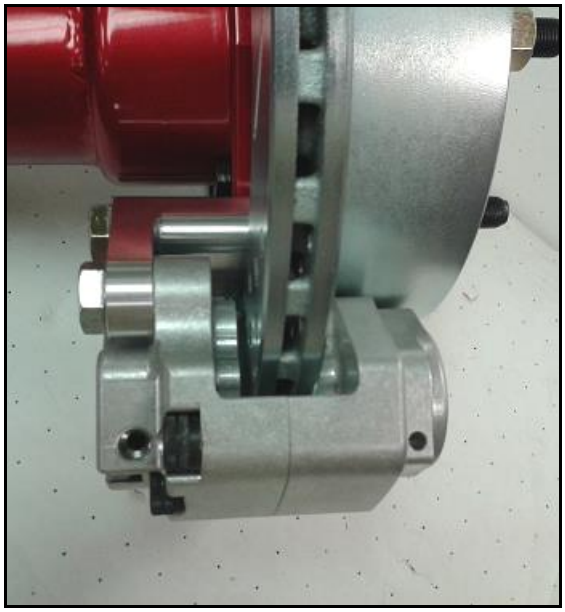


Figure 8: Caliper installed

Figure 9: Completed install

7. Perform the Shimming Procedure which is located on the last page. Once shimming is complete, torque the caliper and bracket bolts to 85ft lbs. Remove the lug nuts and washers and install the wheel/tire.

8. Connect the supplied brake hose to the caliper with the supplied banjo bolts and crush washers (one crush washer on either side of the banjo fitting). Finger tighten the banjo bolt. Install the supplied L-brackets on the side of the axle and connect the supplied adaptor. Carefully bend the factory hardline so that it's away from the backing plate and pointing down (approximately 90º). Feed the end of the hose clamp through the opening in the supplied L-clip. Tighten the hose clamp around the rear axle so that the clip is oriented away from anything that might cause chaffing. Insert the hardline/brake hose adaptor into the L-clip and insert the hardline into the adaptor and tighten. Install the hose lock to secure the adaptor to the L-clip. *****IMPORTANT NOTE: Position the hose to avoid interference with the wheel and suspension components through the entire range of motion.** Tighten the fitting and banjo bolts to 15-20 ft-lbs.

9. Repeat the procedure for the other side.

Refer to Bleeding and Pad Bedding & Rotor Seasoning Procedures contained on a separate sheet, or on www.baer.com.

For service components and replacement parts contact your Baer Brake Systems Tech Representative.

Shimming Procedure

With pads removed from the caliper, measure the gap from the rotor to caliper body at 4 points, top inside and outside, bottom inside and outside. Write down all measurements. Subtract the top inside measurement from top outside. This will require a shim at the top bracket bolt equal to half of this difference to center the caliper. For instance, inside measurement of .905", outside of .865" has a difference of .040 which would require a .020" shim installed to center. Do the same with the bottom measurements to center this also. Getting the caliper centered perfectly is not necessary, but having the gaps as close as possible will give the best defense against noise.

**Note: The purpose for shimming is due to the machining processes that were once performed in the past. Dimensioning tolerances weren't as necessary as today's standards, which caused variances in spindles.

Procedure

1. Select the required shims from the kit provided.
2. Remove the caliper.
3. Install the appropriate shims (between the banksia plate and intermediate bracket), removing one bolt at a time, and snug the same bolts for fit check. See Figure 10 for reference.
4. Re-shim if necessary. When proper shimming has been determined, remove the caliper then torque the intermediate to banksia plate bolts to 85 ft-lbs. Install pads, install the caliper then torque the caliper bolts to 85 ft·lbs.

If you do not have access to a dial caliper, these measurements can be made with pads installed using a feeler gauge between the rotor and pad. Take measurements from top inside and outside, then bottom inside and outside. Minimum clearance is .010" between pad and rotor, but gaps as close to equal as possible at all four locations is best.

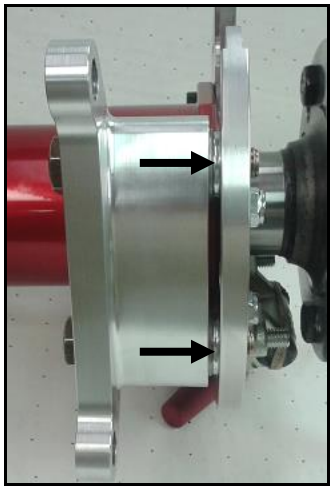


Figure 10: Shim locations

6. Perform the Shimming Procedure (see Page 8). When the procedure has been completed continue on with the installation, following the next step.

7. Connect the supplied brake hose to the caliper with the supplied banjo bolts and crush washers (one crush washer on either side of the banjo fitting). Finger tighten the banjo bolt. Install the supplied L-brackets on the side of the axle and connect the supplied adaptor. Carefully bend the factory hardline so that it's away from the backing plate and pointing down (approximately 90º). Feed the end of the hose clamp through the opening in the supplied L-clip. Tighten the hose clamp around the rear axle so that the clip is oriented away from anything that might cause chaffing. Insert the hardline/brake hose adaptor into the L-clip and insert the hardline into the adaptor and tighten. Install the hose lock to secure the adaptor to the L-clip. *****IMPORTANT NOTE: Position the hose to avoid interference with the wheel and suspension components through the entire range of motion.** Tighten the fitting and banjo bolts to 15-20 ft-lbs.

8. Repeat the procedure for the other side.

Refer to Bleeding and Pad Bedding & Rotor Seasoning Procedures contained on a separate sheet, or on www.baer.com.

For service components and replacement parts contact your Baer Brake Systems Tech Representative.