

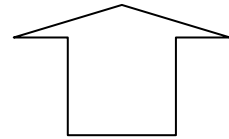
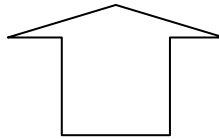
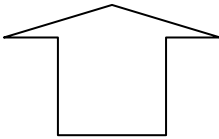
Installation Instructions

Product: SS4+ 11" Front, TCI Spindle

Instruction Part Number: 6000490

Revision Date: 14 October 2014

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.



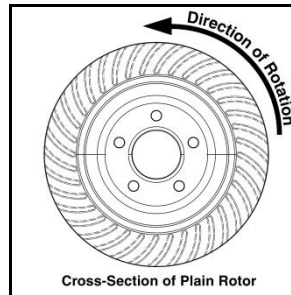
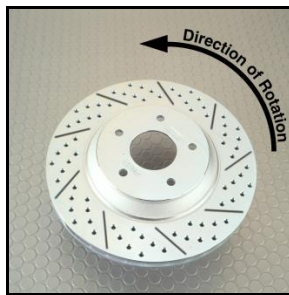
Notices – Read and Follow BEFORE ATTEMPTING INSTALLATION

- 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.

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- 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:

1. Thoroughly clean the spindle pin and bracket mounting surface to ensure proper fitment of the new components. Figure 1 shows the locations of both spindle pin and bracket mounting surface.

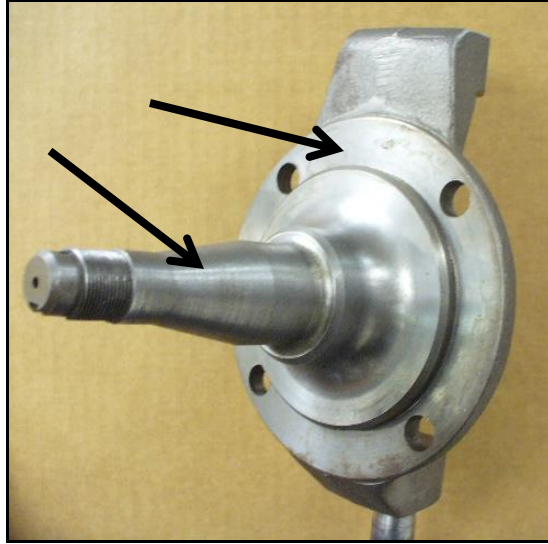


Figure 1: Location of spindle pin and mounting surface

2. Install the Baer caliper bracket (part number facing outboard) onto the TCI spindle in a position that will avoid interference with suspension and steering components. Baer supplies ½-20x1.5” bolts, washers, and Nylock nuts for the top mounts. Depending on front axle configuration, the bracket may be installed with the caliper position as leading (towards front of vehicle) or trailing (towards rear of vehicle). The top bolts will hold the bracket only, the lower bolts will also hold the steering arm and are supplied with the spindle. Torque each bolt to 95 ft-lbs. See Figure 2 for reference.

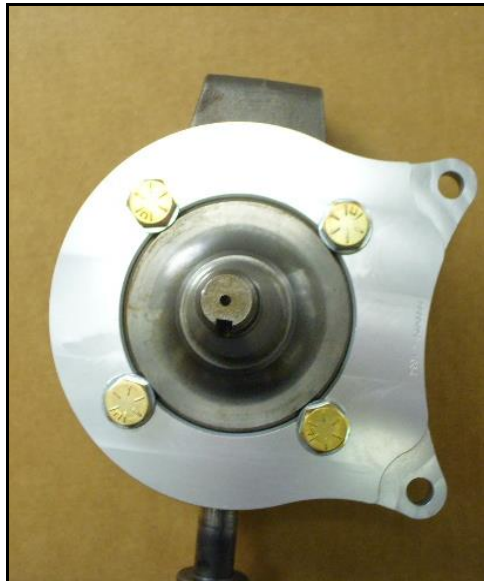


Figure 2: Caliper bracket installed on spindle

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3. Install the hub onto the spindle, making sure that the seal seats properly. The bearings are pre-packed with synthetic grease (**do not add more grease**). Apply a small amount of grease to the hub seal surface and install the hub. Place the bearing washer and castle nut, supplied with your system, on the pin. Tighten the nut to 5-10 ft-lbs and spin the hub to seat the bearings. Loosen and re-tighten the nut while spinning the hub several times. Loosen the nut, tighten to remove all play, tighten approximately 1/16th turn more to give a small amount of pre-load. Install cotter pin and dust cap. Figure 3 shows the hub installed onto the spindle.

****Note:** The cotter pin must enter through the spindle pin notch so that clearance issues can be avoided. Figure 4 shows the correct way to install the cotter pin.

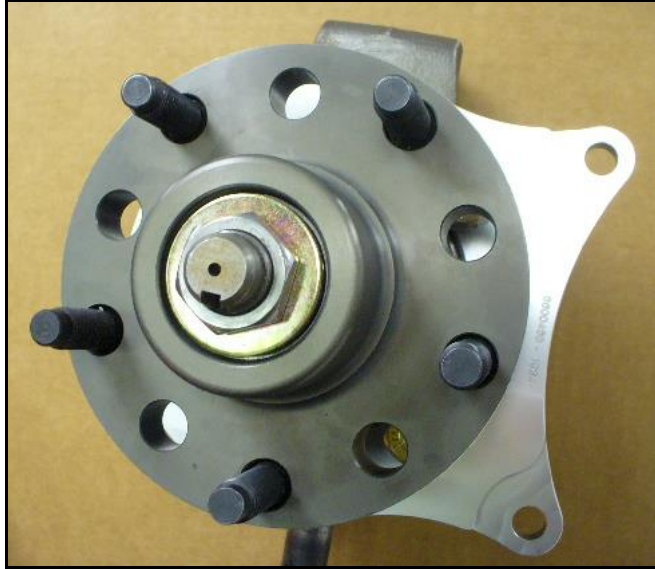


Figure 3: Hub installed onto spindle



Figure 4: Cotter pin installation

4. Install the Dust Cap supplied with your system.

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5. Install the correct side rotor onto the hub and secure with three lug nuts and washers to prevent scratching the rotor hat. See Figure 5 for reference.



Figure 5: Rotor installed onto hub

6. With the pads removed, using the supplied M12-1.75 x 30mm hex bolts and washers, install the caliper onto the bracket (left and right calipers are identical, can be used on either side). Simply snug the bolts for now as shimming will require removal. Shimming procedure is detailed on the next page of the instructions.



Figure 6: SS4 Caliper installed onto bracket

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. Loosen the bolts from the caliper
3. Install the appropriate shims (between the base bracket and caliper), removing one bolt at a time, and snug the same bolts for fit check
4. Re-shim if necessary. When proper shimming has been determined, remove the caliper, install pads and install the caliper with the shims in the correct locations. Torque the caliper bolts to 75 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.



Figures 7 & 8: Location of shims

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General fit systems are supplied without hoses due to many different vehicles on which this axle may be installed. ****IMPORTANT: Select the correct hose length and ensure the wheel can rotate and travel through complete articulation without binding or chafing the hose.**

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