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Installation Instructions

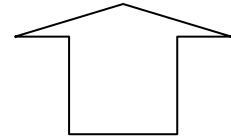
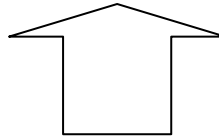
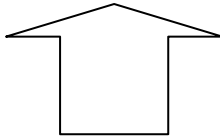
Product: SS4 / SS4+ / Pro+ / Ext+ Rear w/ park brake

Instruction Part Number: 6000264
Revision Date: 27 August 27, 2014

Vehicle

Make: General Fit 8" & 9" Ford Rear Axle AND GM Rears with Bearing On Axle
Model: All
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.



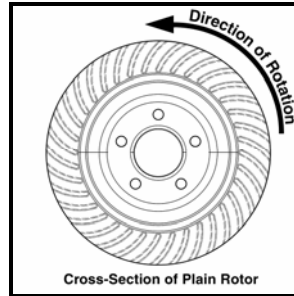
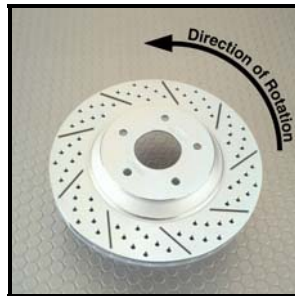
Notices – Read and Follow BEFORE ATTEMPTING INSTALLATION

- 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.

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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

**This system is designed for axles with standoff measurements of 2.375 to 2.50”
And axle flange diameter of 5.90” or less.**

1. Disconnect the hardline from the drum brake slave cylinder and cap the line with the vinyl caps provided to prevent brake fluid from dripping through the installation process.
2. Disconnect the park cable from attachment points on the frame and primary cable. There is no need to disengage from the backing plate.
3. Remove the bolts securing the drum brake backing plate to the housing. Retain the “T” bolts and nuts to use on the new Baer park brake assembly.
4. Remove the axle from the housing. Inspect the condition of the bearings and seals, replace if necessary. If your axles have the old style bearing retainers, these **MUST** be removed for proper installation of this system. If your axle flange diameter is larger than 5.90” it must be machined in a lathe to fit into the rotor hat.
5. Prior to installing the park brake brackets, it is important to know that each bracket is engraved with a specific part number. Part number beginning with 671 denotes the left side or driver’s side and 672, the right side. With the axle in place, install the first park brake bracket over the axle bearing. Install this using the original “T” bolts. 3/8” bolts torque to 45 ft-lbs. and 1/2” bolts torque to 85 ft-lbs. See, Figure 1 for reference.

Pro+, Ext+ Systems: The park brake bracket is designed with the actuator below the axle. The caliper can be mounted in front of the axle or behind. Mounting the park actuator above is possible. Contact your Baer Service Tech for assistance.

SS4 Systems: The park brake bracket is designed to mount the caliper behind the centerline of the axle. The park brake actuator will be located below the axle centerline, towards the ground.

Note: Whether you purchased an SS4, Pro+, or Ext+ System, each will install in the same manner described in this manual but will contain different brackets due to their design.



Figure 1A: Park brake bracket (Pro+, Ext+)

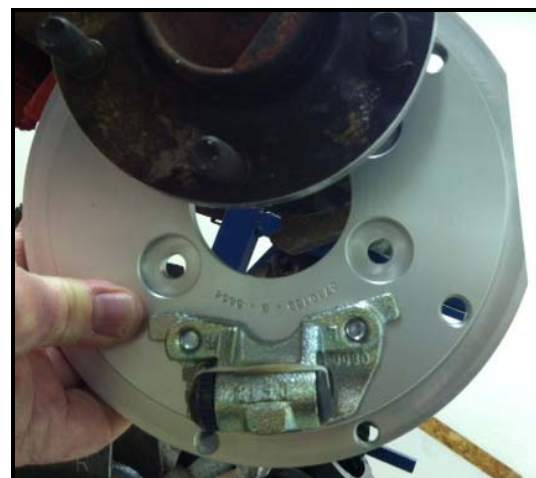


Figure 1B: Park brake bracket (SS4)-Driver's side shown

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6. Install the parking brake shoe over the axle flange. Once over the flange, slip the shoe onto the actuator from the bottom up. Figure 2 shows the installation of the parking brake shoe for the Pro+ and Ext+ Systems.
7. Slip the flats on the park shoe onto the actuator and slide them up into position. Place the retainer brace in the rim of the shoe and slip it onto the shoe. This procedure is similar for all SS4, Pro+, and Ext+ Systems. See, Figure 3, for reference.

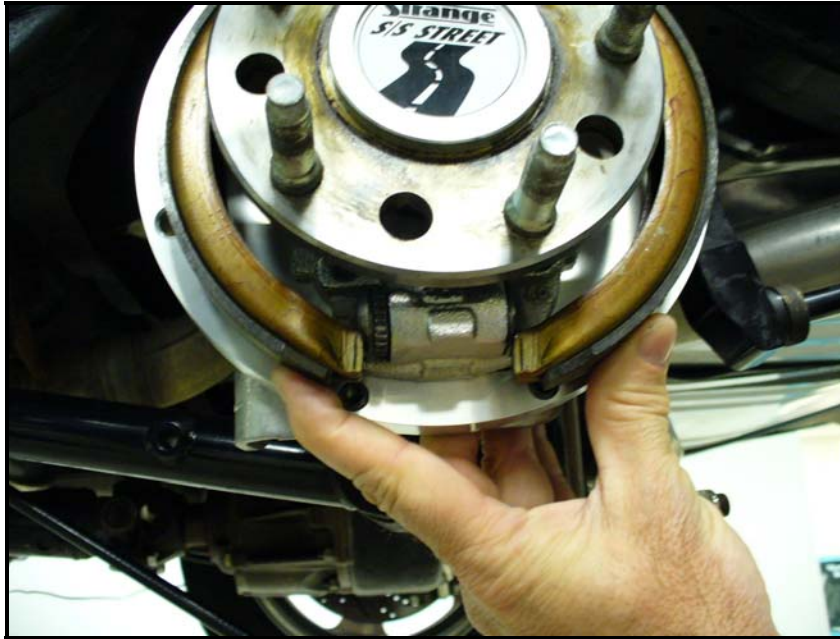


Figure 2: Slip the park brake shoe over the actuator.

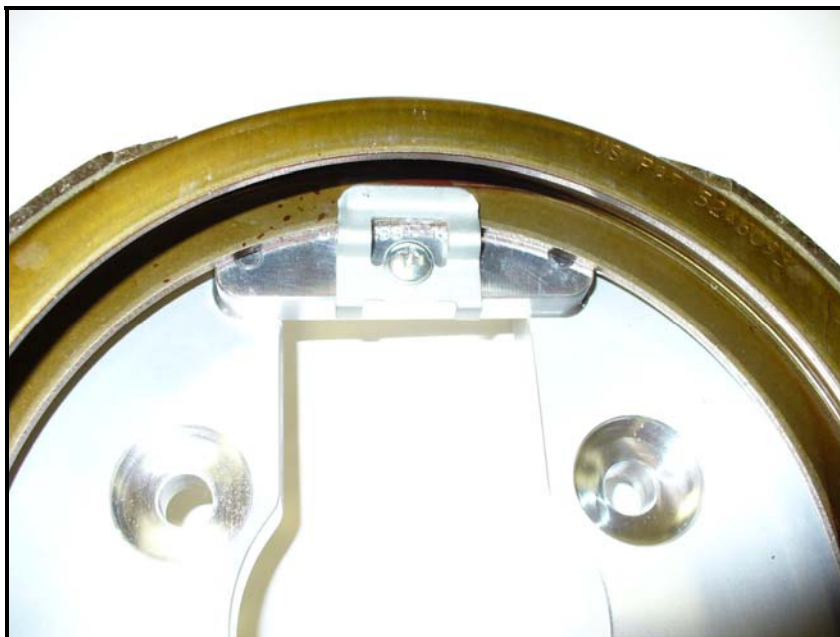


Figure 3: Retainer clip in place

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- Secure the park brake shoe with the provided allen screws. Torque each bolt to 10-12 ft-lbs. This procedure is similar for all SS4, Pro+, and Ext+ Systems. Figure 4 shows the installation.

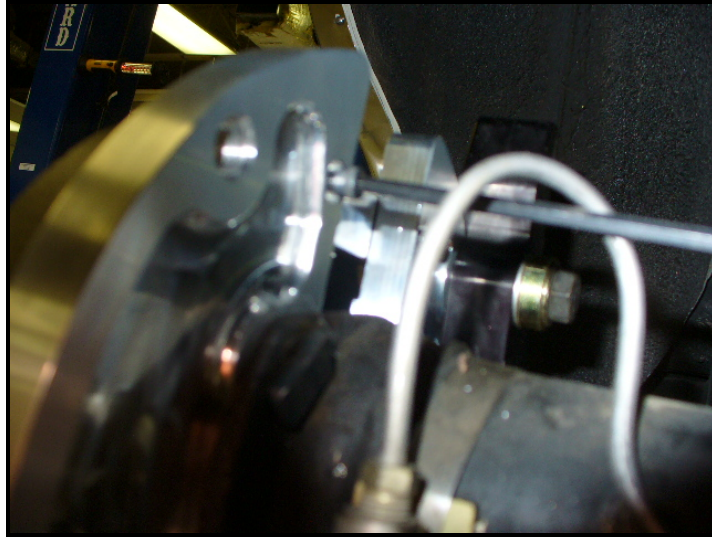


Figure 4: Insert allen bolts into retainer bracket

- Pro+, Ext+ Systems:** The caliper can be located in one position ahead of the axle, and three positions behind, the bracket is held on by two bolts with washers, the mounting positions are the threaded holes in the park bracket. Choose the best position for your vehicle.

SS4 Systems: The caliper will mount in only one position behind the axle centerline.

- Using the 12mm bolts, attach the radial mount bracket and tighten with a small wrench. Next, install the rotor, securing it with three lug nuts and washers to avoid marring the hat finish.



Figure 5: Various mounting positions for the caliper (Pro+, Ext+)

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Ext+ Systems only:

Place the appropriate spacer on each radial mount stud according to the table shown below:

| Rotor diameter (in.) | Spacer thickness (in.) |
|-----------------------------|-------------------------------|
| 13.5" | None required |
| 14" | 0.250" |
| 15" | 0.750" |

Pro+ and Ext+ Systems:

Pro+ Systems: With pads removed, install the correct side caliper (bleeder screw points up) using the supplied Socket Head bolts. Snug these bolts for measuring caliper alignment.

Ext+ Systems: With pads removed, install the correct side caliper (bleed screw points up) using the supplied washers and retaining nuts (12 point black 12mm). Snug the nuts for measuring caliper alignment.

SS4+ Systems:

With pads removed, install the correct side caliper onto the radial mount bracket using the supplied 12mm bolts and washers. Snug these bolts for measuring caliper alignment.

Shimming Procedure: This will be performed in a similar manner for all Baer brake systems

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 .865", outside of .905" 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 these gaps as close as possible within .005" will keep the possibility of excessive noise to a minimum. This may require different thickness shims top and bottom.

****Note:** The purpose of shimming is due to axle play or movement, along its centerline. This movement is minimal but requires the use of shims in order to properly center the caliper onto the rotor for proper braking.

Procedure

1. Select the required shims from the kit provided
2. Remove the caliper
3. Loosen the bolts from the radial mount bracket that is connected to the park bracket
4. Install the appropriate shims (between the radial mount bracket and park brake bracket), removing one bolt at a time, and snug the same bolts for fit check. See, Figures 6 and 7 for location of shims.
5. Reinstall the caliper and recheck gap measurements
6. **SS4, Pro+ Systems:** Re-shim if necessary. When proper shimming has been achieved, torque the radial mount bracket bolts to 85 ft-lbs. Finally, remove the caliper to install the brake pads. Re-install the caliper and torque the caliper bolts to 75 ft-lbs.

Ext+ Systems: Re-shim if necessary. When proper shimming has been achieved, torque the radial mount bracket bolts to 85 ft-lbs. Finally, remove the caliper to install the brake pads. Re-install the caliper and torque the 12-point nuts 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.

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Figure 6: Measurements taken in order to shim

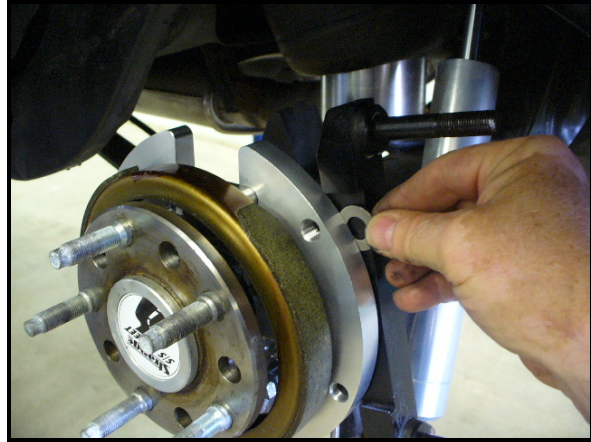


Figure 7: Location of shims

11. Place a copper washer on each side of the banjo fitting on the steel braided hose and insert the banjo bolt. Thread this into the inlet port on the caliper and tighten by hand only for later positioning.
12. Install hardline retainer following instructions provided in the kit. Tighten banjo bolts and tube nuts to 15-20 ft-lbs. ****IMPORTANT: Position the hose to avoid interference with the wheel and suspension components through the entire range of motion.**
13. If your system includes park cables, these can be installed now. Attach the housing to the bracket on the axle housing first and slip the loop over the actuator lever. Attach the opposite end of the cable to the vehicle **exactly** as the old cables were removed and adjust for proper function.
14. Repeat this procedure for opposite 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.