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## Installation Instructions

Product: Ext+ / Pro+ / S4 Rear w/ park brake

Instruction Part Number: 6000392

Vehicle

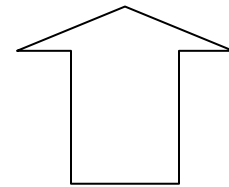
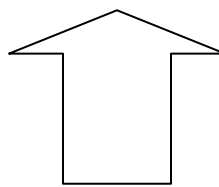
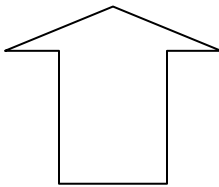
Revision Date: 07 August 2013

Make: General Fit Dana / 8.75" Rear 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.***



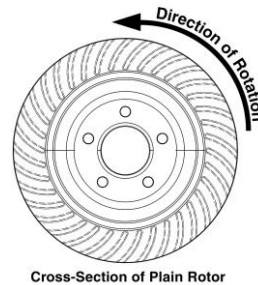
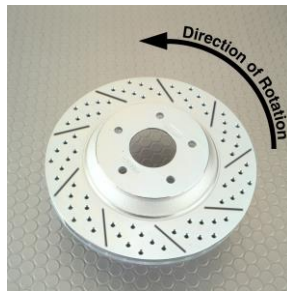
### Notices – Read and Follow BEFORE ATTEMPTING INSTALLATION

- 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 LEFT side of vehicle always refer 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 Baer recommends jack stands rated for at least 2-tons.
- 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, as well as a safety catch can and protective eyewear. Other than these items, if unique or special tools are required they are listed in the section for that step.
- ALWAYS CONFIRM WHEEL FIT PRIOR TO BEGINNING INSTALLATION OF ANY BRAKE SYSTEM OR "UPSIZED" ROTOR UPGRADE! In addition to already having checked fit using the Baer Brake Fit Templates available online at [www.baer.com](http://www.baer.com), always place the actual corner assembly or a combination of the caliper assembly fit onto the rotor into the actual wheel to reconfirm that proper clearance is available 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 performing wheel fit check to prevent cosmetic damage.**

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- When installing rotors on any Baer Products 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:

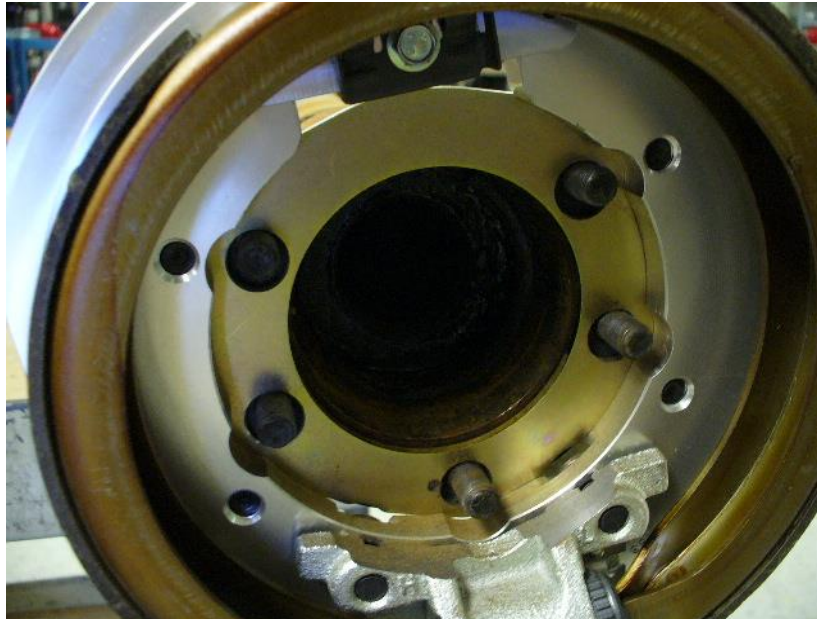


- A proper professional wheel alignment is required for any system requiring replacement of the front spindles, or tie rod ends. Follow factory prescribed procedures and specifications unless otherwise indicated.
- At all times stop the installation if anything is unclear, or the parts require force to install. Consult directly with Baer Technical Staff in such instances to confirm details. Please have these instructions, as well as the part number machined on the component 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 Tech Staff is available from 8:30-am to 5-pm Mountain Standard Time (Arizona does not observe Daylight Savings Time) at 602 233-1411 Monday through Friday.

# INSTALLATION

**\*\*NOTE:** This system is designed for axle flange diameter of 5.9” or less. Be sure to take note of the park cable route if your vehicle is equipped.

1. Remove the 5 bolts retaining the axle and remove the axle from the housing. A slide hammer may be needed. This is a good time to check bearing and seal condition. Replace as necessary.
2. Disconnect the fluid line from the slave cylinder and move it away from the backing plate (This will be used with the Baer Brake System, be careful not to kink the hard line). Remove the backing plate and disconnect the park cable from the frame mount, and remove cable and backing plate from vehicle.
3. Replace the gasket between the housing, and backing plate if necessary. Install the park brake assembly over the 5 studs on the housing. See the photo below for reference:



**Intermediate plate installed on housing**

4. Install the axle now, sliding the retainer over the studs on the housing. **\*\*Note:** Original equipment axles have an access hole for installing bearing retaining nuts. Some aftermarket axles do not have this access hole.

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**Access hole for removal and installation of bearing retaining nuts**



**Installing axle retaining nuts**

5. If the access hole is present, install the retaining nuts and torque to 45 ft-lbs. If your axle has no access hole, this may be added by a machine shop, or the park shoe may be removed to tighten the nuts with a small socket or end wrench.

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### **Park Shoe removal:**

Remove the allen head screws at from the shoe retainer. The photo below shows the location:



**Shoe retainer allen screws**

Slide the retainer off of the shoe. Disengage the shoe from the actuator. Slip the shoe over the axle flange and set the shoe aside. If the outside diameter of the axle flange is greater than 5.9", removal of the shoe will be very difficult. This will also interfere with seating the rotor when the axle installation is complete.

Remove the 4 allen bolts that go from the steel plate to the aluminum park assembly. See photo below for reference:



**Remove allen head bolts that retain park brake assembly to intermediate plate.**

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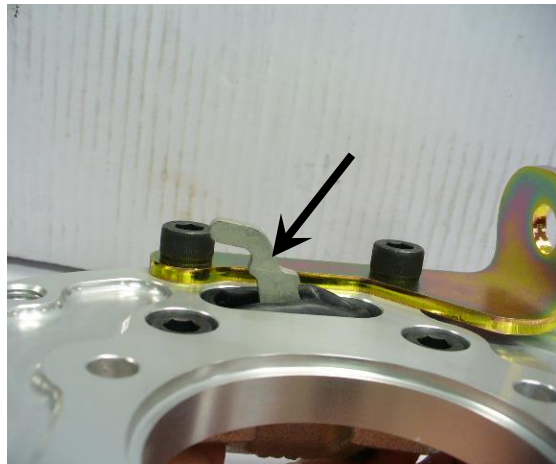
The park assembly plate can be moved outward to gain access to the axle retaining nuts. Torque these to 45 ft-lbs.

Move the park plate back into position and install the allen bolts. Torque to 35 ft-lbs.

Place the shoe back over the axle flange and onto the actuator. Be sure to check that the cable lever is engaged with the actuator buttons when installing the shoe. The photo below shows the lever in the proper position. If the lever is not engaged properly it will appear further away from the plate.



**Cable lever properly engaged**



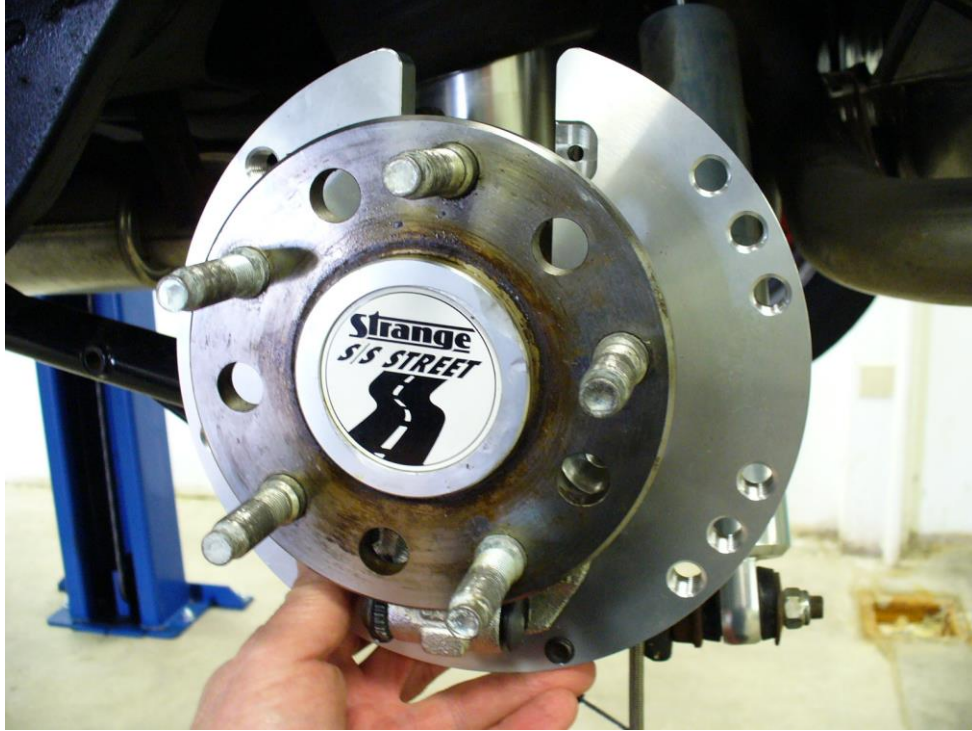
**Cable lever out of position**

Slide the retainer plate back into position, insert the allen screws and tighten to 10-12 ft-lbs.

### **Caliper and bracket installation:**

The **S4** caliper will locate behind the axle centerline, the **Ext** and **Pro** caliper can be located in one position ahead of the axle, and 2 positions behind, the bracket is held on by two bolts, the mounting positions are the threaded holes in the park bracket. Choose the best position for your vehicle.

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**Various mounting positions for the caliper**

Using the 12mm non-Vibra-Tite bolts, attach the radial mount bracket and tighten snugly with a small wrench. Install the rotor, using three lug nuts with washers to avoid marring the hat finish.

**Extreme Plus only:**

Place proper spacer on the radial mount stud:

14" rotor-0.250" spacer  
15" rotor-0.750" spacer

**S4, Pro Plus and Extreme Plus:**

With pads removed, install correct caliper (bleeder screw points up, except S4), washers, and retaining nuts (12 point black 12mm) or allen bolts. Snug these bolts for measuring caliper alignment.

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### **Shimming Procedure:**



**Measuring caliper clearance for centering**

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.

Select the desired shims from the kit provided. Remove the caliper. Loosen the bolts from the radial mount bracket. Install the appropriate shims, removing one bolt at a time, and snug the same bolts for fit check. See photo on the next page for proper placement of shims.



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### **Shimming Procedure cont'd:**



**Shims placed between park bracket and radial mount bracket**

Reinstall the caliper and recheck gap measurements. Re-shim if necessary. When proper shimming has been achieved, remove caliper. Take the bolts from the intermediate bracket one at a time keeping the shims in place and replace with the 12mm bolts with red Vibra-tite coating. Torque 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 equal gaps at all four locations is best.

Install pads in caliper and re-install over rotor. Replace washer and caliper retaining nuts and torque to (75 ft-lbs. for Ext), (85 ft-lbs for Pro). Tab mount bolts for S4 torque to 85 ft-lbs.

6. Install the steel braid hose to the caliper using the supplied banjo bolts and copper washers. One washer on each side of the banjo fitting. Connect the hose to the hardline at the frame, and install the hose lock. **\*\*\*IMPORTANT: Position the hose to avoid interference with the wheel, and suspension components through the entire range of motion.** Torque between 15-20 ft-lbs. Attach the hardline to the steel braid hose and also torque between 15-20 ft-lbs.
7. 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.
8. Repeat this for the other side. Recheck all fittings and bolts.

Refer to Bleeding and Rotor Seasoning procedures contained on a separate sheet, or on [www.baer.com](http://www.baer.com)

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