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AlumaSport



Installation Instructions

Product: SS4 12" & 13" Rear

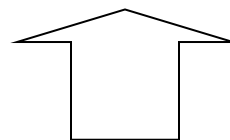
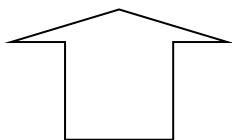
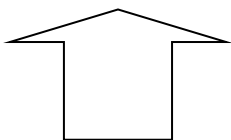
Instruction Part Number: 6000447

Revision Date: 24 February 2022

Vehicle

Make: Ford
Model: Mustang 8.8" with Bearings in Housing
Year(s): 96-04

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

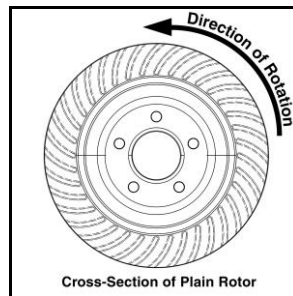
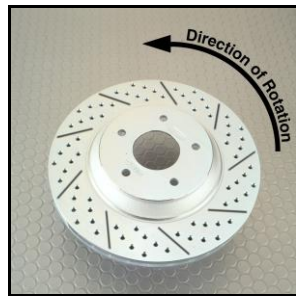
- All installations require proper safety procedures and protective eyewear.
- All installations assume basic mechanical skill and a factory service manual for the vehicle on which the installation is to be performed.
- All references to the "left" side of the vehicle correlate to the driver's side of 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 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:

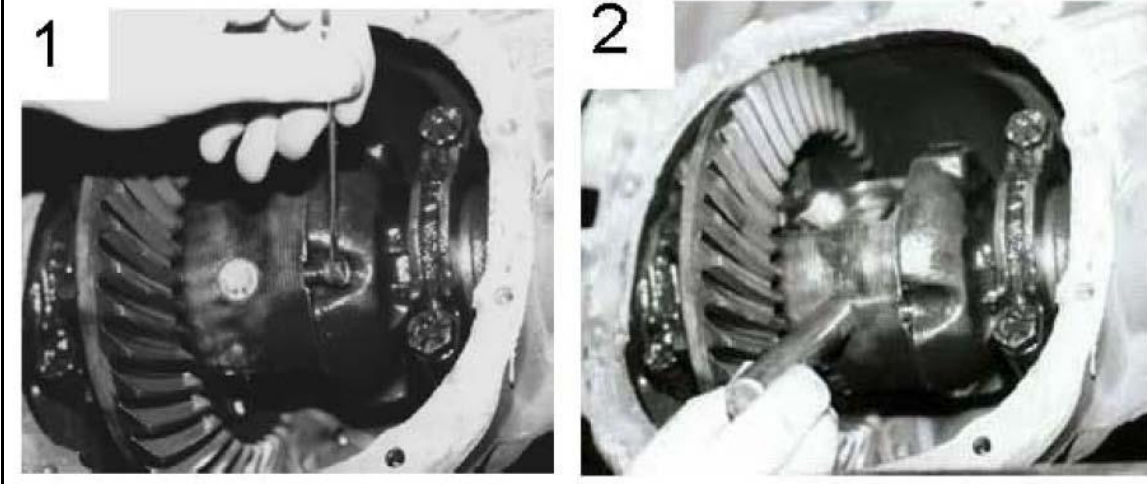


- A proper professional wheel alignment is required for any system requiring replacement of the front spindles, or tie rod ends. Follow factory prescribed procedures and specifications unless otherwise indicated.
- At all times stop the installation if anything is unclear, or the parts require force 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:

1. Support the vehicle with properly rated jack stands and remove the rear wheels. Place a drain pan under the differential and remove the cover.
2. Remove the brake hose from the caliper and discard the copper washers. New ones are supplied with your Baer System. Disengage the park cable from the caliper and the body mounts. New cables are supplied or are available for your new system. Remove the caliper and drum. Clean the axle flange to allow the new rotor to seat properly on the axle.
3. Remove the differential pin lock bolt from the carrier (photo 1). Ford uses 5/16" bolt. It is best to use a 6-point wrench on this as it may be very tight.

Remove the pin (photo 2) and slide axles inward to remove c-clips.



4. Remove the axles, taking care not to damage the seals. This is a good time to inspect the seals, axles and bearings, replacing as necessary. Also, measure the outside diameter of the axle flange. **To properly seat in the rotor, the flange diameter can not exceed 5.9"**. If yours is larger, a machine shop can turn these down for proper fit.
5. Unbolt the caliper bracket from the axle housing. Save the fasteners as these will be reused for the new park assembly bracket. Disengage the park cable from the frame and front primary cable. The Baer cable, if supplied, will attach to the frame and primary cable just as the OE unit did.
6. Install the new bracket/park brake assembly using the original T-bolts that secured your brake backing plate. These are left and right specific, the left (drivers' side) begins with a part number engraved 671, and the right side will begin with 672. The park shoe actuator will be at the bottom, the retainer at the top. Torque the fasteners to 45 ft-lbs. See Figures 3 and 4 for reference.



Figure 3: Park brake assembly correctly installed



Figure 4: Park assembly installed on driver's side

7. Repeat these procedures for the other side before installing rotors and calipers.
8. Install axles, c-clips, differential pin and retaining bolt. Install the cover and refill with proper gear lube.
9. Next, install the rotors on the correct sides and retain with three lug nuts and washers to avoid marking the hat surface.

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10. With the pads removed, install the caliper. The 12mm bolts insert through the stainless-steel slider pins and into the caliper. The slider pins seat into the relief machined into the caliper mounting tabs. Tighten snugly, these will be removed for adding shims to center the caliper. See Figure 5 for reference.



Figure 5: Caliper installed on intermediate bracket.

11. Perform the Shimming Procedure which is located on the last page. When the procedure has been completed continue with the Step 12. **NOTE:** The park assembly will be shipped with the caliper bracket attached and .125" spacers installed. These must remain in place, any shims needed to center caliper will be added to these.
12. A hose adaptor is included to allow the use of the original brake hoses. New banjo bolts and copper washers are provided. ALWAYS use the new copper washers. Check to be sure the hoses do not interfere with any suspension components or frame and wheel. Figure 6 shows the proper orientation of the adaptor. Install the factory hose to the hose adaptor using the original banjo bolt and new copper washers. Finger tighten the banjo bolt. Connect the hose to the hardline and install the hose lock. ****IMPORTANT: Position the hose to avoid interference with the wheel and suspension components through the entire range of motion.** Tighten both banjo bolts to 15-20 ft-lbs.
13. **Model years 94-95:** The hardline will need to be secured. Baer has provided a Hardline Retainer set. Instructions for installation are contained in the kit. Connect the supplied steel braided hose to the caliper with the OE banjo bolt using new copper crush washers on each side of the banjo fitting. ****IMPORTANT: Position the hose to avoid interference with the wheel and suspension components through the entire range of motion.** Tighten banjo bolts to 15-20 ft-lbs.

Model years 96-04: A hose adaptor is equipped with each new caliper to allow the use of the original brake hose. Included with this are new copper crush washers. Note: Copper crush washers are one-time use items. Install the original brake hose to the supplied hose adaptor using the new copper crush washers. ****IMPORTANT: Ensure to route the brake hose away**

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from suspension and wheels to avoid any interference through full articulation of suspension system. Torque both banjo bolts between 15-20 ft·lbs. See Figure 6 for reference.

14. If park cables were included in your system, install first into the bracket and actuator, then to the frame bracket. Finally, connect to the lever actuator in the driveshaft tunnel.
15. Recheck all attachment points and fluid connections

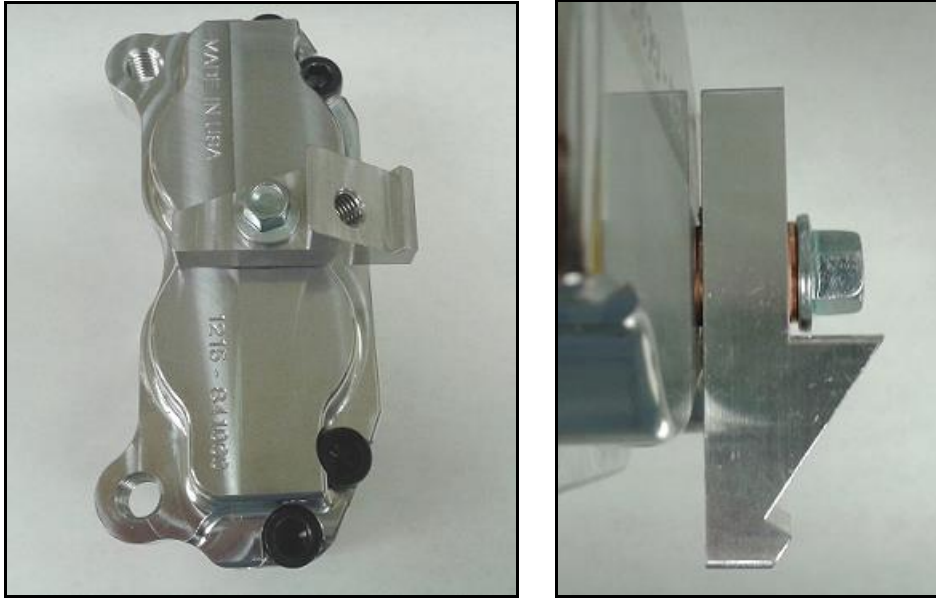


Figure 6: Hose adaptor installed to allow use of original hose

****Important:** Recheck all attachment points and fluid connections.

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

C-clip style rear axle designs allow the axle to move inboard and out board from .005" to .030". The design of the slide pins on the Baer caliper bracket allows the caliper to follow this movement but must be adjusted to prevent the caliper body from contacting the rotor surface.

Procedure:

1. Push the axle inboard until it stops (this may not move much) and slide the caliper and bracket outboard, against the stop.
2. Using a feeler gauge measure between the inboard side of the rotor and the caliper body. The minimum clearance must be at least .020". If this measurement is less, shims will be needed to bring this up to at least .020".

Before installing shims, check the clearance on the outboard side of the rotor: Pull the rotor outboard until it stops and slide the caliper inboard, against the stop. Measure the gap between the outboard side of the rotor and the caliper body. The minimum clearance must be at least .020". The shims install between the park assembly and the bracket.

If the difference in inboard to outboard measurements is very different (i.e.. .050" outboard with .010" inboard), shims can be used to equalize this. Using that example, a .020" shim between the slider pin and the park assembly, this would increase the inboard measurement to .030" and decrease the outboard measurement to .030". Again, the main goal is not less than .020" clearance between caliper body and rotor on both sides.

3. Remove the bolts from the caliper and remove the caliper. Loosen the bolts connecting the caliper bracket to the park brake assembly (M12-1.75x45 hex bolts)
4. Install the needed shims (between the bracket and park brake assembly), removing one bolt at a time. Be sure to keep the shims already installed in place, add the needed shims to the stack. Snug the same bolts for fit check. See Figure 7 for reference. Install the caliper again for clearance check.
5. Re-shim if necessary. When proper shimming has been achieved, install the pads and reinstall the caliper. Torque the caliper bracket bolts (M12-1.75x45 hex bolts) to 85 ft-lbs. Torque the caliper slider bolts to 85 ft-lbs.

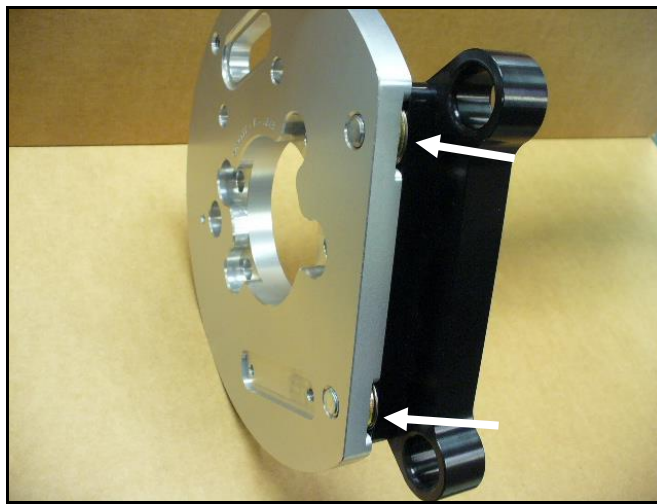


Figure 7: Shim placement for centering caliper