

**BAER**® *Your Complete Performance Brake Supplier!*



## Installation Instructions

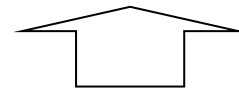
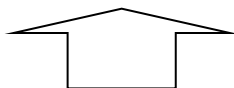
Product: SS4+ 11", Front OE & Drop Spindle

Instruction Part Number: 6000009

### Vehicle

Make: GM  
Model: Full Size (BelAir, Impala, Biscayne, etc.)  
Year(s): 55-68

***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.***



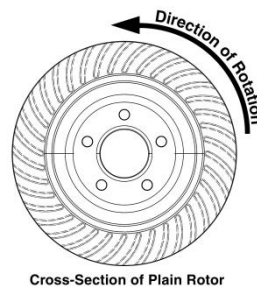
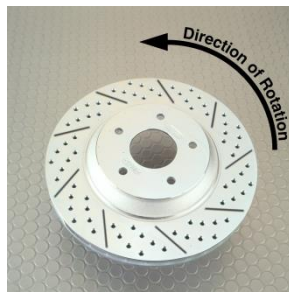
### Notices – Read and Follow BEFORE ATTEMPTING INSTALLATION

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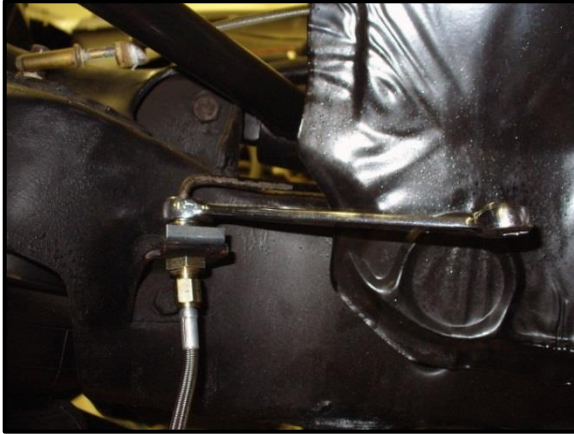
- When installing rotors be sure to follow the direction of rotation indicated on the rotor hat area with either an arrow, or an "L" for left, or an "R" for right, or both. "L" or left always indicates the driver's side of US spec vehicles. Images shown are "L" left rotors.



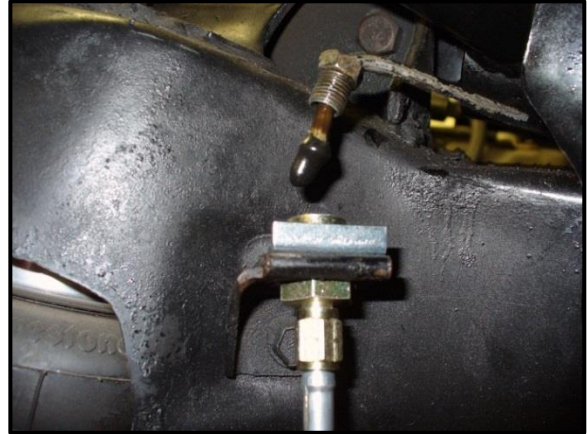
- A proper professional wheel alignment is required for any system requiring replacement of the front spindles, or tie rod ends. Follow factory prescribed procedures and specifications unless otherwise indicated.
- At all times stop the installation if anything is unclear, or the parts require force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

## INSTALLATION

1. Disconnect the fluid hose at the frame and cap with the supplied vinyl caps. Using pliers or channel locks, remove the hose lock and slip the hose end out of the frame bracket. See photos below:

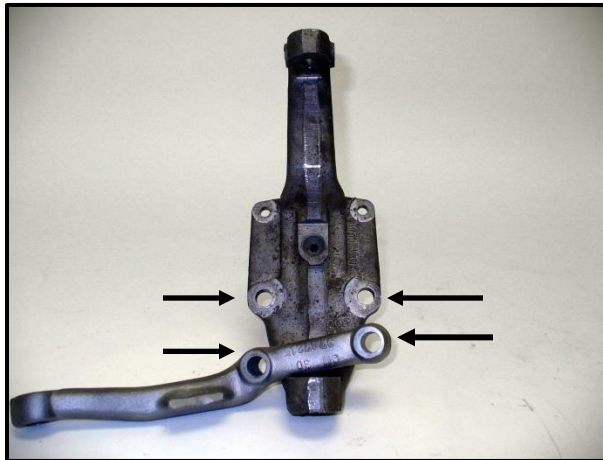


**Line wrench on hardline**



**Vinyl cap**

2. Remove the tie rod end from the steering arm as the arm will need modification.
3. Remove the brake drum from the spindle. Unbolt and remove the brake backing plate. The shoes and other items can be left in place.
4. The bolt holes in the steering arm and the corresponding spindle holes may need to be enlarged for the supplied  $\frac{1}{2}$ " bolts. Drill to .500" for these new bolts. See photos below for reference.



**55-68 Chevrolet left (OE Spindle)**

5. Thoroughly clean the spindle pin and mounting surfaces to allow the new components to seat properly.

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### **55-68 models:**

*OE Spindle:* Install the new base bracket (part number beginning with 661 is left or drivers side, part number beginning with 662 is right side which always face outboard) using the supplied  $\frac{1}{2}$  x 2.75" bolt for forward hole,  $\frac{1}{2}$  x 3.00" for rear location. Use the supplied locking nuts contained in the bag with these bolts. Torque to 90 ft-lbs. See photos below for proper position:

*Drop Spindle:* Install the new base bracket (part number beginning with 661 is left or drivers side, part number beginning with 662 is right side which always face outboard) using the supplied  $\frac{1}{2}$  x 2.0" bolts, Nylock nuts, and 0.200" spacers. The spacers will lie between the spindle and base bracket which will raise the bracket to its proper height, and allow for shimming to be performed correctly. Torque bolts to 90 ft-lbs. (CPP, Part # 30001)

### **IMPORTANT**

**\*\*Note:** It may be difficult to install the base bracket and intermediate bracket onto the spindle. If this is the case, mark where the interference occurs on the spindle, and remove the small portion of material to allow for clearance of both the bracket bolt and washer.

**The caliper position for all vehicle models is behind the spindle pin centerline**

Steering style for each model: 55-57 = Rear Steer (steering arm behind spindle center)  
58-64 = Front Steer (steering arm ahead of spindle center).  
65-68 = Rear Steer

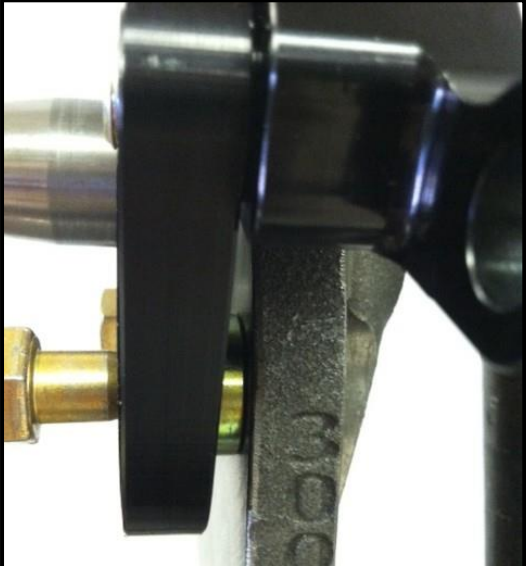


**Location of interference**

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55-68 / Left side shown (OE)



Location of 0.200" spacer  
(CPP Drop Spindle)

- 6. Install the intermediate bracket to the base bracket using the supplied 9/16" bolts and washers. These need to be tightened, not torqued due to the shimming procedure in the latter portion of installation. See photo below for reference:

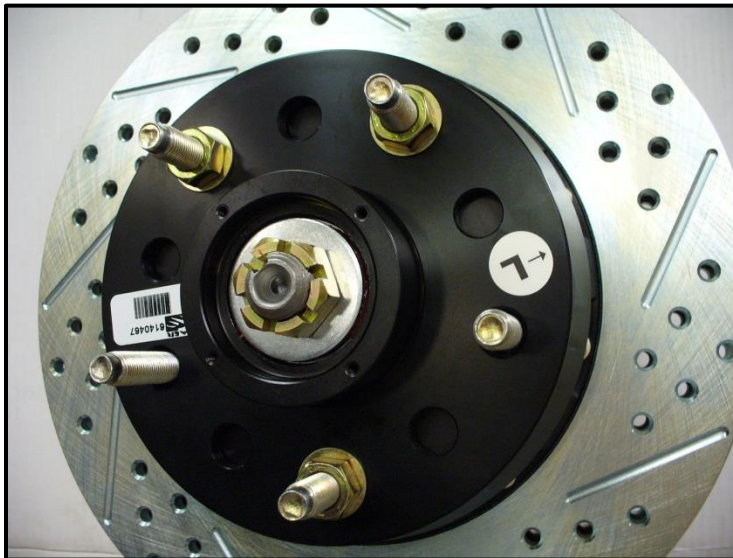


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7. Install the new billet aluminum hub or hub-hat-rotor assembly. The bearings are pre-packed with Red Line synthetic grease. Do not add more grease. Apply a small amount of grease to the hub seal surface and install the hub. Place the bearing washer 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 1/16<sup>th</sup> turn to give a small amount of pre-load. Install cotter pin and dust cap.

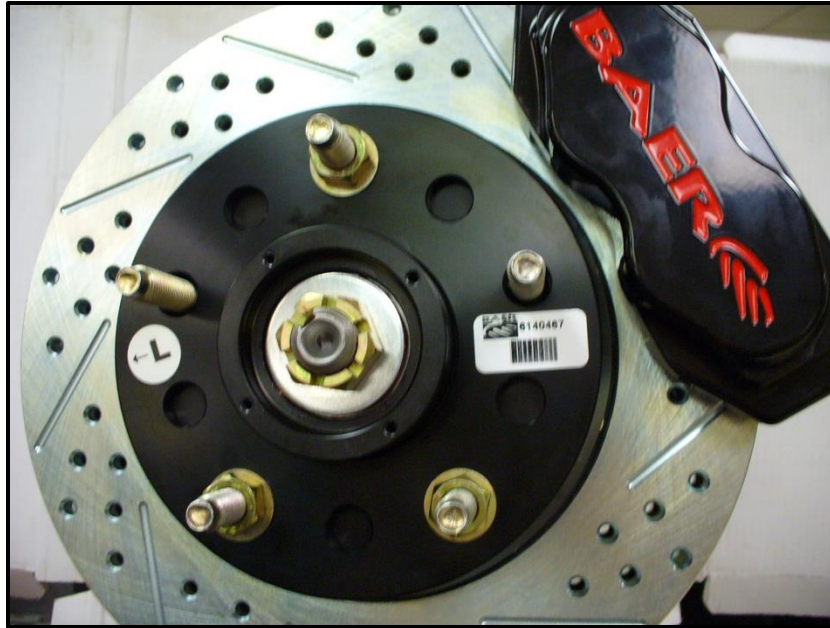


8. Install the correct side rotor using three lug nuts and washers. This will seat the rotor properly onto the hub and will prevent scratching of the rotor hat.

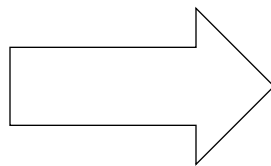


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9. Install the correct side caliper (bleeder screw pointing up) to the intermediate bracket using the supplied M12 x 30 bolts. Tighten the bolts for now, as shimming will be performed in the next section of installation.



## Shimming Procedure



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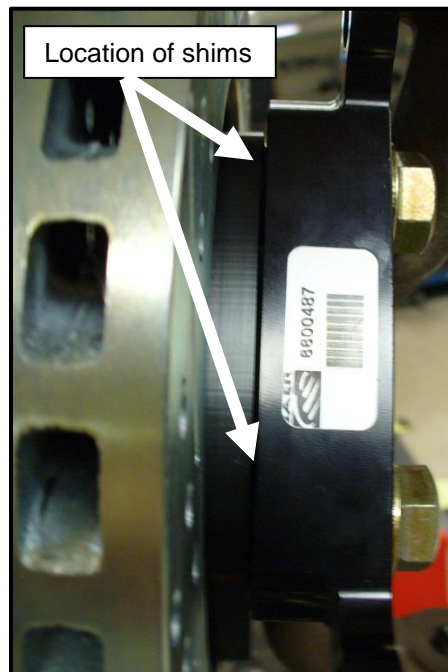
### **Measure gap from rotor to caliper body**

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 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. Loosen the bolts from the intermediate bracket that is connected to the base bracket
4. Install the appropriate shims, removing one bolt at a time, and snug the same bolts for fit check
5. Reinstall the caliper and recheck gap measurements
6. Re-shim if necessary. When proper shimming has been achieved, torque the 9/16"-12 x 1 3/4" bolts to 150 ft-lbs. Finally, reinstall the caliper and torque the last two bolts to 75 ft-lbs.

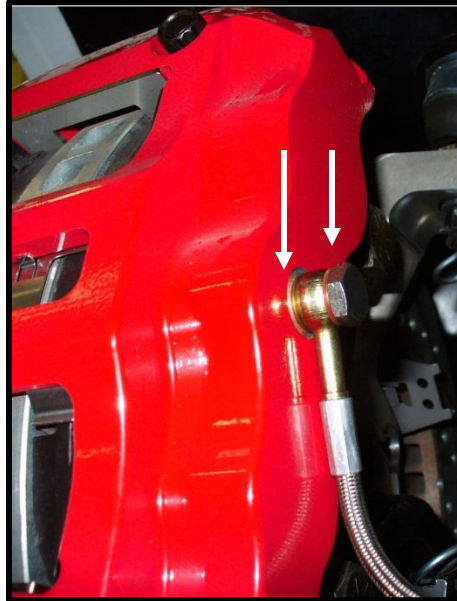
If you do not have access to a dial caliper, these measurements can be made with pads installed using a feeler gauge between the rotor and pad. Take measurements from top inside and outside, then bottom inside and outside. Minimum clearance is .010" between pad and rotor, but gaps as close to equal as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





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10. Install the steel braid hose with one copper washer on each side of the banjo fitting. 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 fitting and banjo bolt to 15-20 ft-lbs.
11. Repeat these steps for the other side and recheck all attachment points and fittings.



**Photo shown for placement of copper washer only**

Refer to Bleeding, and Pad Bedding & Rotor Seasoning Procedures contained on a separate sheet.  
For service components and replacement parts contact your Baer Brake Systems Tech Representative