Installation Instructions

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

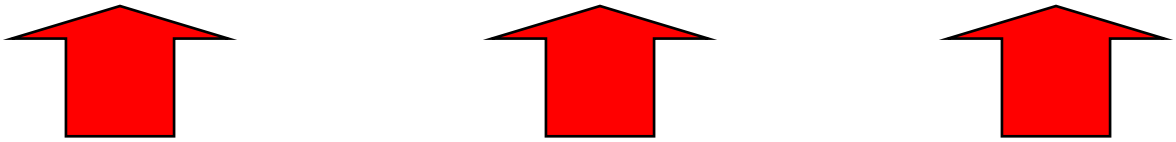
Instruction Part Number: 6000009

Revision Date: 1 August 2022

Vehicle

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

ATTENTION: ***Read this before going further! Returns will not be accepted for ANY installed PART or ASSEMBLY. Use great care to prevent cosmetic damage when performing wheel fit check. If a product must be returned, please contact Baer Customer Service for an RMA Number. Always read and follow the notices below before attempting installation***

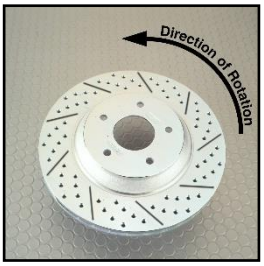


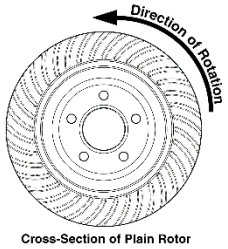
Notices – Read and Follow BEFORE ATTEMPTING INSTALLATION

- 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 BEFORE BEGINNING INSTALLATION OF ANY BRAKE SYSTEM OR "UPSIZED" ROTOR UPGRADE! In addition to checking wheel fitment of this system with the wheel fitment template (available online at www.Baer.com), always place the actual corner assembly or a combination of the caliper assembly on the rotor, and into the actual wheel with great care to prevent cosmetic damage. 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 of brake components.** Wheel fitment can also be checked before installation using a wheel fitment template supplied at www.Baer.com.

- 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:



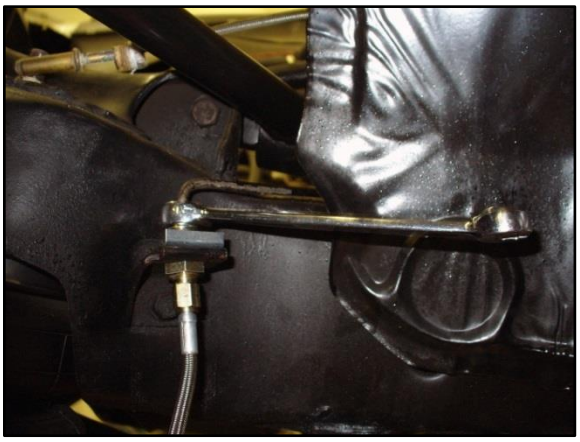


- A proper professional wheel alignment is required for any system requiring replacement of the front spindles, or tie rod ends. Follow factory prescribed procedures and specifications unless otherwise indicated.
- If anything is unclear or the parts require force to install at any point during the installation, stop immediately and consult directly with Baer Technical Staff. Please have these instructions, as well as the part number of the component (part numbers are machined into the brackets) that is/are 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.

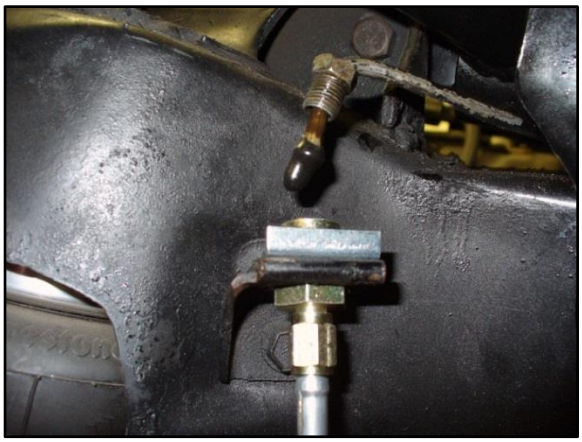
INSTALLATION

Removal of Factory Brake Components

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:

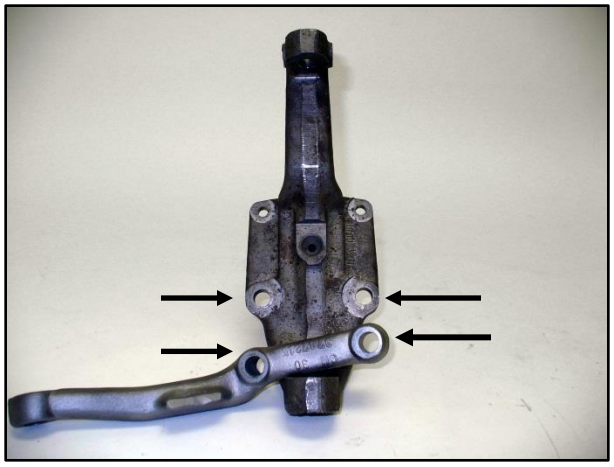


Line wrench on hardline



Hardline capped with supplied vinyl cap

2. Remove the tie rod end from the steering arm as the arm will require 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 on the backing plate.
4. The bolt holes in the steering arm and the corresponding spindle holes may need to be enlarged for the supplied ½" bolts. Drill to .500" for the new supplied bolts. See photos below for reference.



55-68 Chevrolet left (OE Spindle) with enlarged mounting holes

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

Base Bracket Installation

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 ½ x 2.75" bolt for forward hole, ½ 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 positioning:

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 ½ x 2.0" bolts, Nylock nuts, and 0.200" spacers. The spacers should be installed between the spindle and base bracket. Torque bolts to 90 ft-lbs. (CPP, Part # 30001)

IMPORTANT

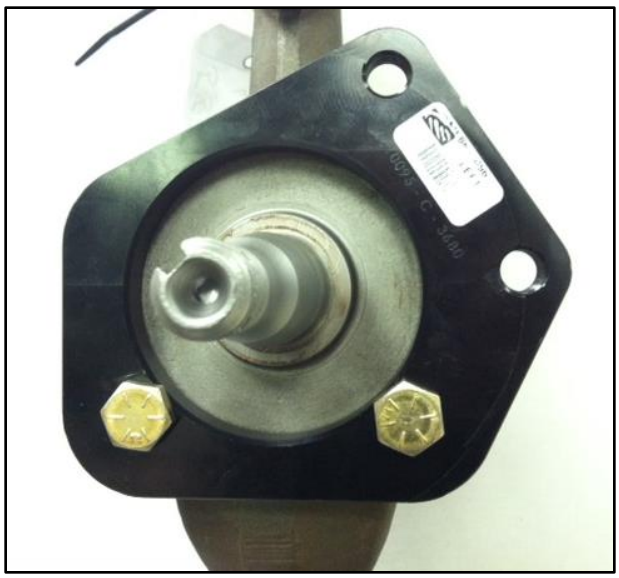
****Note:** In some instances, there may not be enough clearance between the spindle and base bracket, making it difficult to install the base bracket and intermediate bracket to the spindle. In this case, mark the interference location on the spindle, and grind/remove a small portion of material to allow for clearance of both the bracket bolt and washer.

The caliper mounts behind the spindle pin centerline, in the trailing position for all vehicle models.

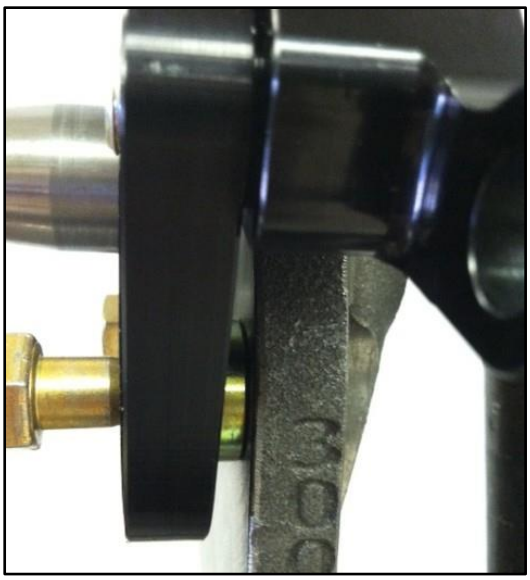
Steering style for each model:

- 55-57: Rear Steer (steering arm behind spindle center)
- 58-64: Front Steer (steering arm ahead of spindle center)
- 65-68: Rear Steer (steering arm behind spindle center)

Potential interference location



55-68 / Left side shown (OE)



Location of 0.200" spacer

(Only for CPP Drop Spindle)

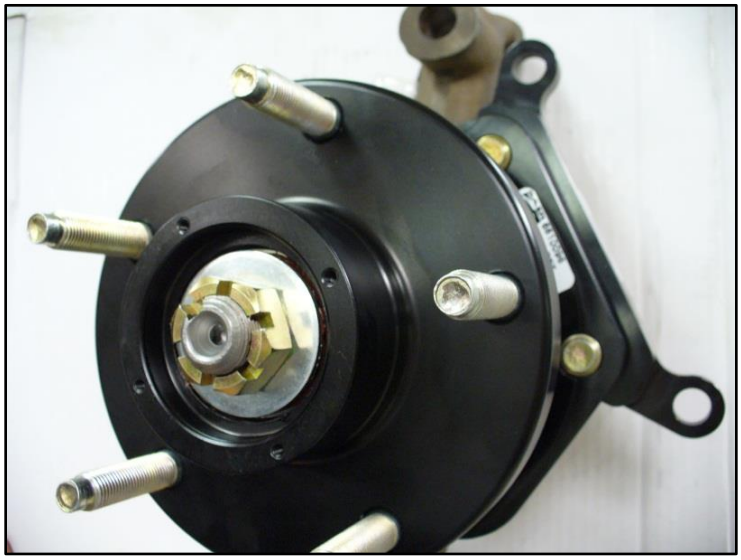
Intermediate Bracket Installation

6. Install the intermediate bracket to the base bracket using the supplied 9/16-12 hex head cap screws and washers. Simply tighten these for the time being as they will likely be removed during the shimming procedure. Following the shimming procedure, these fasteners will be torqued to 92 ft-lbs. Refer to the photo below for intermediate bracket installation.

Intermediate bracket installed

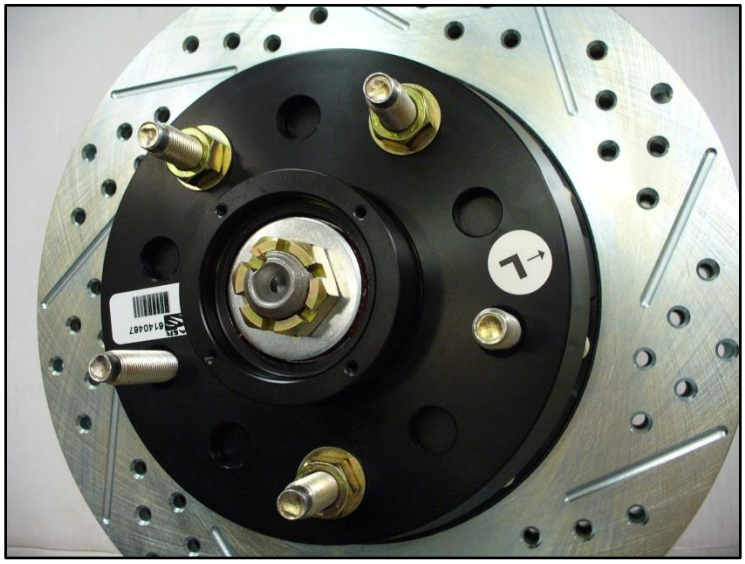
Aluminum Hub Installation

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 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 to give a small amount of pre-load. Install the supplied cotter pin to secure the spindle nut, bending the longer end over the spindle pin and clipping the short end. Install the dust cap to the aluminum hub, rotate the hub to ensure the cotter pin does not scratch the inside of the dust cap.



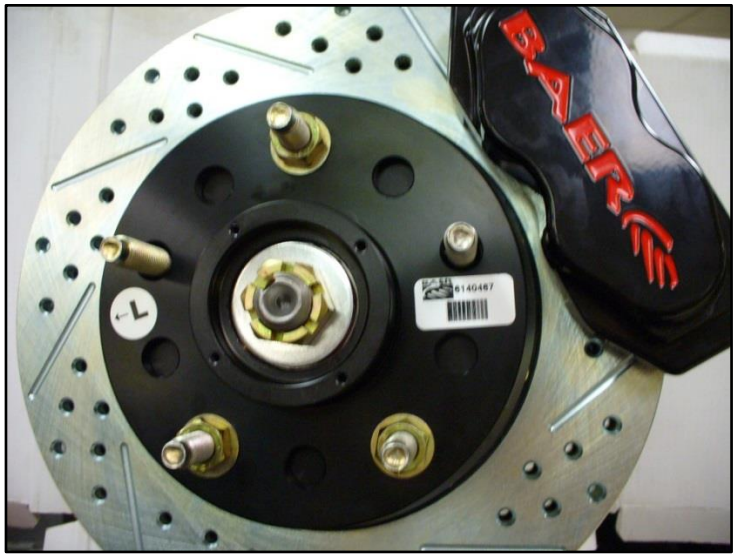
Brake Rotor Installation

8. Install the correct side rotor and temporarily secure using three lug nuts and washers to avoid scratching the hat.



Brake Caliper Installation

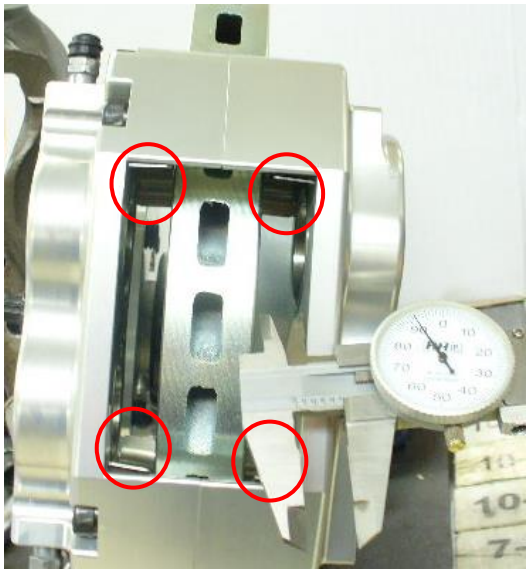
9. Install the caliper to the intermediate bracket using the supplied M12-1.75 hex head cap screws. Simply tighten the fasteners for now, as they may require removal for shimming in the following steps.



10. Perform the Shimming Procedure detailed on the following page.

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. Refer to the photo below. 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.



Measure the gap from the rotor to the caliper body at these 4 points

For instance, an inside measurement of .905", and outside measurement of .865" has a difference of .040 which would require a .020" shim installed to center. Do the same with the bottom measurements. Having the caliper centered perfectly is not necessary but having the gaps as close as possible will give the best defense against noise and uneven pad wear.

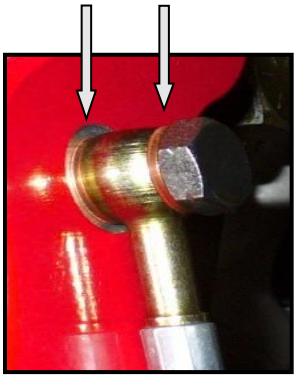
******Note: Shimming may be required due to the machining processes that were once performed in the past on older vehicles. Dimensioning tolerances weren't as necessary as today's standards, which caused variances in the spindles of older vehicles.

Procedure to install shims

- Select the required shims from the kit provided.
- Remove the caliper.
- Install the appropriate shims (between the intermediate bracket and the base bracket; removing one bolt at a time and snug the same bolts for fit check.
- Re-shim if necessary. When proper shimming has been determined, remove the caliper, and install the brake pads. Reinstall the intermediate bracket and torque the 9/16-12 fasteners to 92 ft-lbs. Reinstall the brake caliper and torque the M12-1.75 fasteners 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 gaps as close to equal as possible at all four locations is best

Brake Hose / Hardline Installation

11. Connect the new supplied stainless steel braided hose to the caliper with the supplied banjo bolt and new copper crush washers. Install one copper crush washer to each side of the banjo fitting on the caliper (2 per caliper), refer to the photo below. ***IMPORTANT:** **Position the hose to avoid interference with the wheel and suspension components through their entire range of motion.** Tighten banjo bolts to **15-20 ft·lbs. taking care not to strip the inlet threads on the caliper.** Uncap the hardline at the frame, connect the opposite end of the hose to the hardline (torque fitting to 15-20 ft-lbs.) and reinstall the hose lock to secure the hose to the vehicle frame.



Install the supplied copper crush washers here. Torque the banjo bolt to 15-20 ft-lbs. careful not to strip the inlet threads of the brake caliper.

Stainless steel braided brake hose installed to the caliper

12. Repeat steps 1-11 for the other side of the vehicle. Check all attachment points and fluid connections. **ENSURE ALL FASTENERS HAVE BEEN TORQUED TO THEIR SPECIFIED VALUES PRIOR TO OPERATING THE VEHICLE.**

Baer recommends using "**Baer Street/Race DOT4 Brake Fluid"** for all Baer brake systems. The link to order the recommended brake fluid is below.

Refer to Bleeding, Pad Bedding and 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 at 602-233-1411, or visit: https://baer.com/System-Parts-Tools/.