



INSTALLATION INSTRUCTIONS

PART NUMBER: 6000821

VEHICLE MAKE: GM

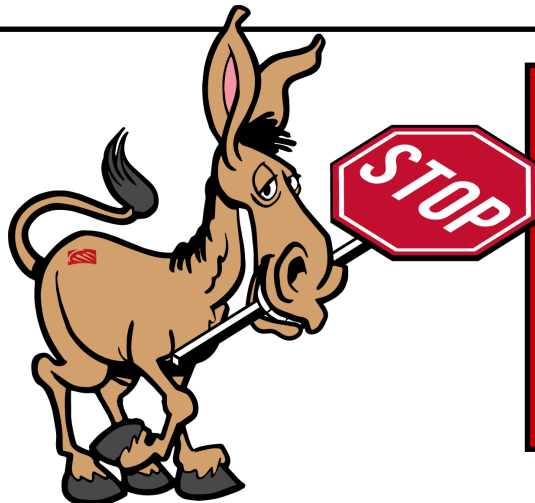
MODEL: A-BODY / F-BODY / X-BODY

YEARS: 1964-1972 A-BODY / 1967-1969 F-BODY / 1964-1974 X-BODY

PRODUCT: SS4 11" INTEGRAL HUB FRONT SYSTEM

REVISION: REVISION A

REVISION DATE: 15 APRIL, 2025



READ BEFORE CONTINUING!

Returns will not be accepted for ANY installed PART or ASSEMBLY. Use great care in preventing cosmetic damage when performing wheel fit check. If a product must be returned, please contact Baer customer service for an RMA number.

The recipient of this product indemnifies Baer Inc. for all liabilities or losses incurred in connection with the recipient modifying or altering Baer Inc. product during 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 should be verified before installation using a wheel fitment template supplied at www.Baer.com
- When installing new Baer rotor, be sure to follow the direction of rotation indicated on the rotor hat area with either an arrow, an "L" for left, or an "R" for right, or both. "L" always indicates the rotor for the driver side of US spec vehicles. Follow the rotor installation and rotation instructions included in the promo pack (P/N 6020502) included with your system when installing rotors. Failure to properly install rotors will not allow for proper function of the brake system and will cause heat related fatigue and failure.
- A professional wheel alignment is required for any system requiring the replacement of the front spindles or tie rod ends. Follow factory prescribed procedures and specifications unless otherwise indicated.



- Contact Baer technical support at 602.233.1411 if you are unsure that the brake system you ordered will work for your application based on the axle standoff you measured.
- Note: Baer recommends taking photos of the brake system before disassembly and during each step of the disassembly process. Photos may allow technical support to better assist given any necessary troubleshooting.**
- If anything becomes unclear or any parts require force to install at any point during the installation, stop immediately and consult directly with Baer technical staff. Please have these instructions and the part number of the components that is/are proving difficult to install. Please provide technical staff with the make, model, and year (date of vehicle production is preferred) of your vehicle. Baer's technical staff is available by phone (602.233.1411) or email (ContactUs@Baer.com) from 8:30 AM - 5:00 PM MST (Mountain Standard Time) Monday - Friday (Arizona does not observe Daylight Savings Time).

**SYSTEM INSTALLATION INSTRUCTIONS**

1. Carefully lift and support the front end of the vehicle. It is recommended to place chocks behind the rear wheels to prevent the vehicle from rolling during installation.
2. Remove the front wheels from the vehicle.
3. Disconnect the brake hose from the hardline at the frame using a line wrench. Cap the hardline with the supplied vinyl caps to avoid brake fluid from leaking down during installation. See the figure below for reference.

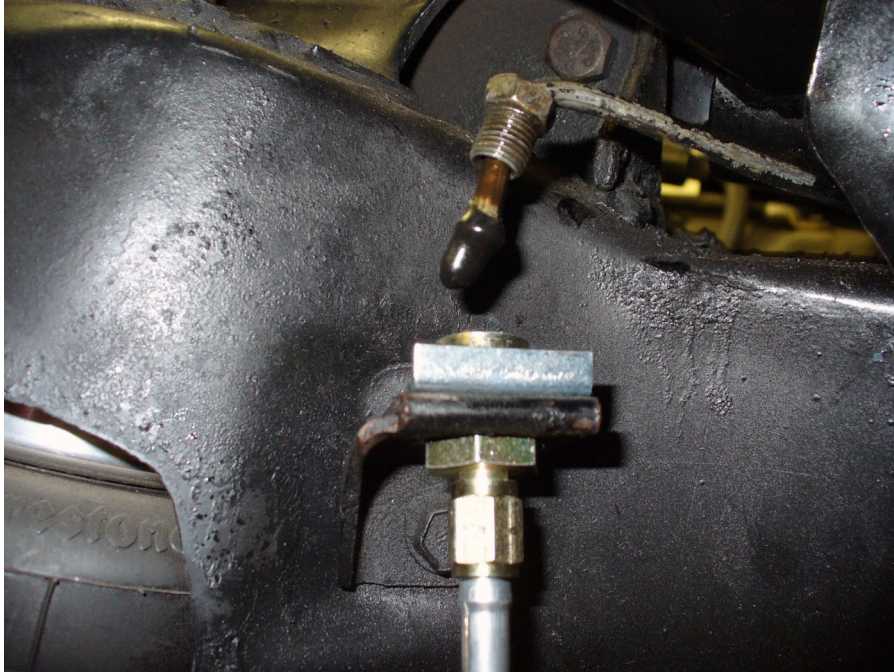


Figure 1. Hose lock location and vinyl cap installation

4. Remove the hose lock and disengage the hose from the bracket.

Disc Brake Removal:

1. Remove the Allen bolts retaining the caliper and remove the caliper from the rotor.
2. Remove the dust cap, cotter pin, and retainer nut from the rotor.
3. Unbolt and remove the caliper bracket from the spindle.
4. Remove the rotor from the spindle.
5. Remove the remaining bolt securing the steering arm to the spindle.

Drum Brake Removal:

1. Remove the dust cap, cotter pin, and retaining nut from the drum.
2. Remove the drum from the spindle.
3. Unbolt and remove the entire drum brake assembly from the spindle. It is not necessary to disassemble the drum brake assembly.

**SYSTEM INSTALLATION INSTRUCTIONS CONTINUED**

5. Thoroughly clean all attachment points and the spindle pin to ensure proper installation of the new system components.
6. The caliper position will be behind the spindle pin centerline. Install the base brackets to the spindle using the supplied 1/2-20 x 3" and 1/2-20 x 2.75" bolts and locking nuts. The longer (3") bolt will be inserted in the steering arm hole closest to the tie rod attaching point. Torque both bolts to 110 ft-lbs. to secure the base bracket to the spindle. See Figure 2 below for reference.

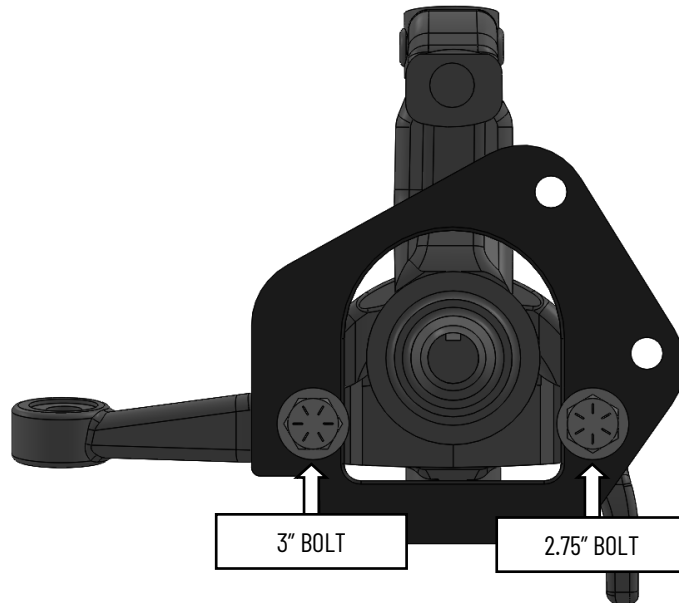


Figure 2. Base bracket installed on left (driver's side) spindle

7. Install the intermediate bracket to the inboard side of the base bracket using the supplied 9/16-12 bolts and washers. Simply tighten the bolts for now as they will likely require removal to shim the intermediate bracket during the shimming procedure. See Figures 3 and 4 below for reference. The intermediate bracket part numbers begin with either 661 for the left (driver side) or 662 for the right (passenger side) bracket.

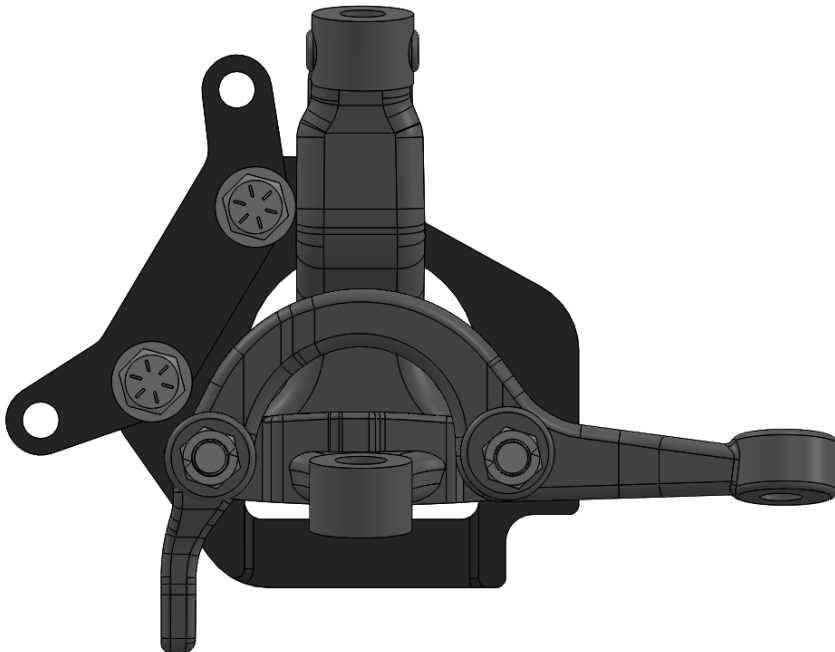


Figure 3. Intermediate bracket installed inboard view

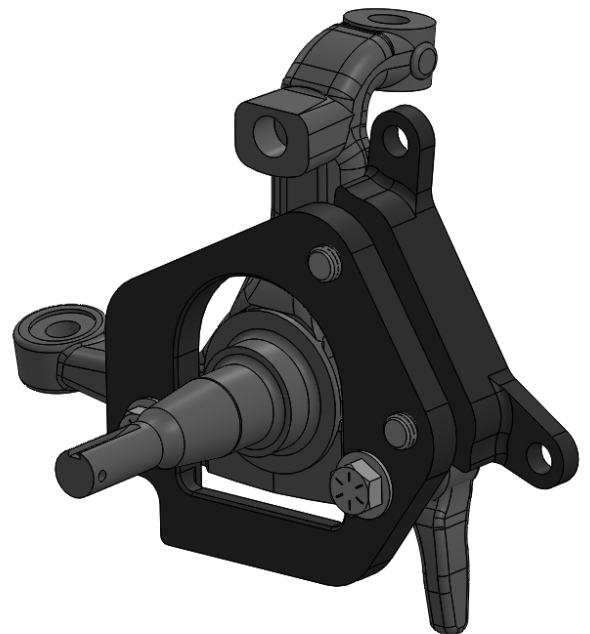


Figure 4. Intermediate bracket installed isometric view

**SYSTEM INSTALLATION INSTRUCTIONS CONTINUED**

8. Install the correct side rotor assembly, referring to the "Rotor Installation and Rotation Instructions" within the promo packet provided with this system. The rotor assemblies for this system come with pre-packed bearings installed, there is no need for additional grease on the bearings. Install the provided spindle nut and tighten for now.



Figure 5. Rotor installed (right passenger side shown)

9. Rotate the rotor to seat the bearings. Loosen and re-tighten the nut while spinning the rotor several times. Tighten the nut again to remove any play, approximately 1/16th turn to give a small amount of pre-load. Install the cotter pin as shown in the figure below.



Figure 6. Cotter pin installed

10. Install the provided dust cap to the rotor as shown, taking care not to dent the domed portion of the dust cap.

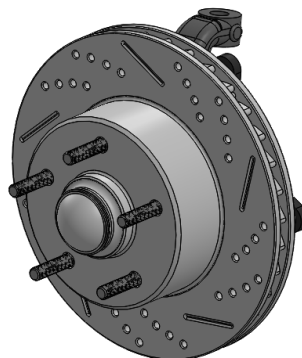


Figure 7. Dust cap installed

**SYSTEM INSTALLATION INSTRUCTIONS CONTINUED**

10. The caliper assemblies for this system are shipped with pads installed, remove the brake pads from the S4 caliper assemblies.
11. Install the S4 caliper to the intermediate bracket with the supplied M12-1.75 bolts and washers. Simply tighten the hardware for now as the caliper will likely be removed during the shimming procedure.
12. Continue with the shimming procedure outlined below.

SHIMMING PROCEDURE**All Systems:**

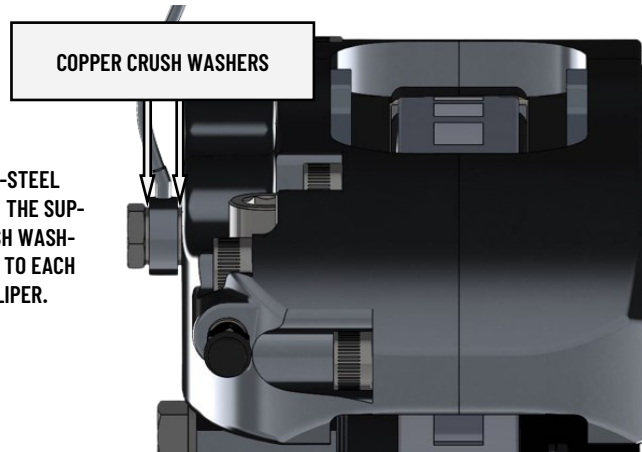
1. Measure the gap between the rotor and the caliper body at the 4 points listed below using a dial caliper and write down each measurement (measurements can be taken using a feeler gauge between the rotor and brake pad if you do not have access to a dial caliper).
 - TOP INSIDE
 - TOP OUTSIDE
 - BOTTOM INSIDE
 - BOTTOM OUTSIDE
2. Subtract the top inside measurement from the top outside measurement. Split the difference in half to determine the amount of shimming required to center the top of the caliper. Write down the required amount of shimming. For instance, a top inside measurement of .865" and a top outside measurement of .905" has a difference of .040" and would require a .020" shim at the top of the intermediate bracket to center the top of the caliper.
3. Repeat step 2 for the bottom measurements to center the bottom of the caliper. Aiming for gaps between the caliper body and rotor as close to equal within .005" will keep excessive noise to a minimum and prolong brake pad duration.
4. Select the required shims from the kit provided. The shim kit provided with this system contains 12 shims, each measuring .015". Create a stack of shims equal to the measurement obtained in step 2.
5. Remove the caliper from the intermediate bracket. Retain the fasteners to secure the caliper to the intermediate bracket following completion of the shimming procedure.
6. Loosen the 9/16-12 bolts connecting the intermediate bracket to the base bracket.
7. Install the appropriate shims **between the intermediate bracket and the base bracket**, removing one bolt at a time. Snug the bolts for a fitment check.
8. Reinstall the caliper, **DO NOT** torque the fasteners until a fitment check has been completed.
9. Repeat step 1 with the appropriate shims installed between the intermediate bracket and base bracket to perform a fitment check.
10. Re-shim as necessary until all gaps between the caliper body and the rotor are within .005".
11. Verify there is full thread engagement of the intermediate bracket bolts into the base bracket. If there is not full thread engagement, longer bolts must be used to prevent stripping the threads inside the base bracket.
12. Remove the caliper from the intermediate bracket one last time to install the brake pads, if applicable.
13. **Torque the 9/16-12 intermediate bracket bolts to 95 ft-lbs. to secure the intermediate bracket to the base bracket.**
14. **Re-install the caliper, if applicable, and torque the fasteners to 75 ft-lbs. to secure the caliper to the intermediate bracket.**

**SS4/SS4+ SYSTEMS:
MEASUREMENT LOCATIONS FOR STEP 1.**

**BRAKE HOSE / HARDLINE RETAINER INSTALLATION**

1. **FOR VEHICLES NOT EQUIPPED WITH LIFT KITS/AFTERMARKET SUSPENSION COMPONENTS:** Connect the new supplied stainless-steel braided brake 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 hose (2 per caliper). Attach the hose to the inlet on the back of the caliper and finger-tighten the banjo bolt.

CONNECT THE NEW SUPPLIED STAINLESS-STEEL BRAIDED BRAKE 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. Position and route the new brake hose to avoid interference with the wheel and suspension components through their entire range of motion.
3. Remove the vinyl caps from the end of the hardline and connect the opposite end of the new hose with the adapter fitting (if supplied) to the hardline and install the hose lock.
4. Tighten the adapter fitting (if supplied) at the hardline and the banjo bolt 10-15 ft-lbs. or until brake fluid no longer leaks, taking care not to strip any threads.
5. Repeat steps 1-4 for the other side of the vehicle and re-check all attachment points and fittings.

ENSURE ALL FASTENERS HAVE BEEN TORQUED TO THEIR SPECIFIED VALUES BEFORE 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 within the promo pack (P/N 6020502) provided with this system. For service components and replacement parts, contact a Baer Brake Systems Technical Representative or visit the link below.

<https://baer.com/System-Parts-Tools/>.

*****NOTE***: IF THE VEHICLE WAS PLACED IN BRAKE MAINTENANCE MODE BEFORE BEGINNING INSTALLATION, IT MUST BE TAKEN OUT OF BRAKE MAINTENANCE MODE PER VEHICLE MANUFACTURER’S INSTRUCTIONS BEFORE OPERATING THE VEHICLE.**

We at Baer understand there are many options when it comes to performance brake suppliers and appreciate your business. Great pride and care were taken in designing, assembling, and packaging all components of this brake system.

Thank you for your purchase.