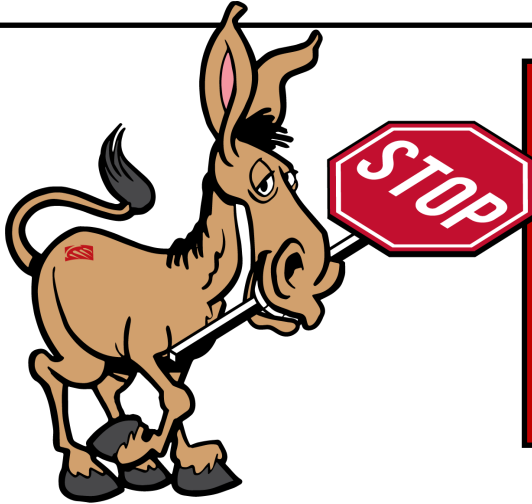




## INSTALLATION INSTRUCTIONS

PART NUMBER: 6000749  
VEHICLE MAKE: FORD AND GM  
MODEL: ALL 9" REAR END BOA APPLICATIONS  
YEARS: ALL

PRODUCT: SS4 11" W/ PB  
REVISION: REVISION A  
REVISION DATE: 18 MARCH, 2025



### **READ BEFORE CONTINUING!**

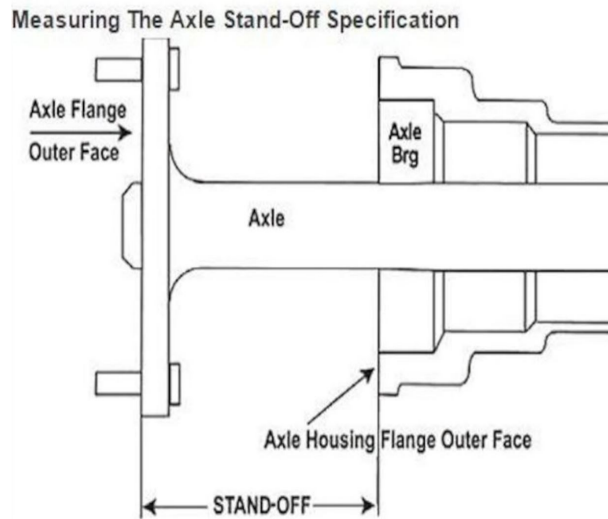
Returns will not be accepted for ANY installed PART or ASSEMBLY. Use great care in preventing cosmetic damage when performing wheel fit check. If a product must be returned, please contact Baer customer service for an RMA number.

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](http://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](http://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.

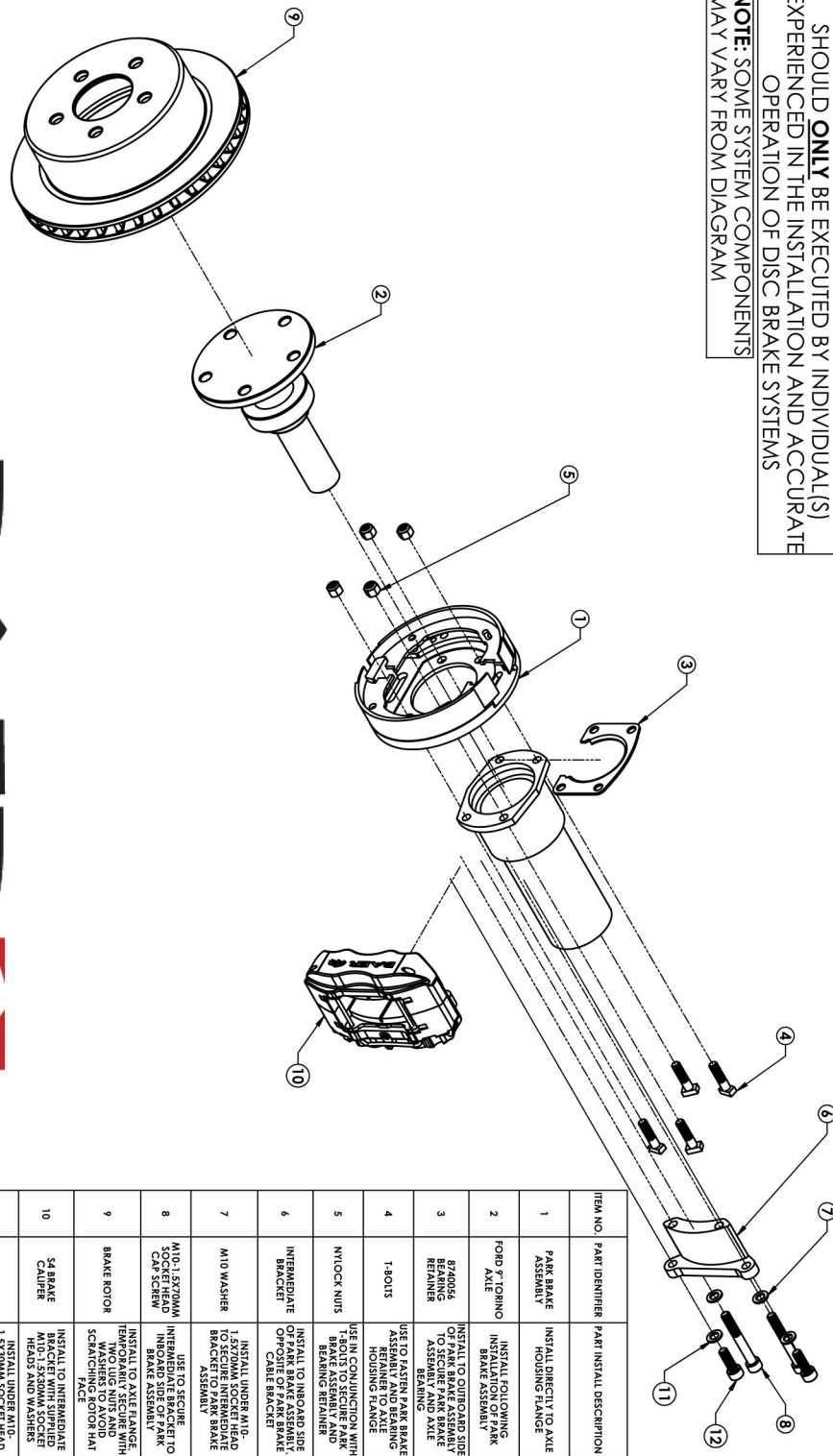
- All rear Baer brake systems are designed for vehicles with a factory axle standoff. Axle standoff determines how the caliper lines up over the rotor once installed. Axle standoff **MUST** be measured and confirmed to match the axle standoff required for the brake system before installing any rear brake components to ensure a proper fit.



- Visit the following link on the official Baer YouTube channel for a video demonstrating how to measure axle standoff: <https://www.youtube.com/watch?v=l7Za0Ys-ZU>
- 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).

### Exploded Assembly Diagram (ROTATE PACKET TO VIEW)

**WARNING**  
 INSTALLATION OF THIS BRAKE SYSTEM SHOULD **ONLY** BE EXECUTED BY INDIVIDUAL(S) EXPERIENCED IN THE INSTALLATION AND ACCURATE OPERATION OF DISC BRAKE SYSTEMS  
**NOTE:** SOME SYSTEM COMPONENTS MAY VARY FROM DIAGRAM



ITEM NO.	PART IDENTIFIER	PART INSTALL DESCRIPTION	QTY. OF PARTS PER SIDE OF VEHICLE
1	PARK BRAKE ASSEMBLY	INSTALL DIRECTLY TO AXLE HOUSING FLANGE	1
2	FORD 9" TORINO AXLE	INSTALL FOLLOWING INTERMEDIATE PARK BRAKE ASSEMBLY	1
3	874005 BEARING RETAINER	INSTALL TO OUTBOARD SIDE OF PARK BRAKE ASSEMBLY TO SECURE PARK BRAKE BEARING	1
4	1-80115	USE TO FASTEN PARK BRAKE ASSEMBLY AND BEARING RETAINER TO AXLE HOUSING FLANGE	1
5	NYLOCK NUTS	USE TO CONJOIN PARK BRAKE ASSEMBLY AND BEARING RETAINER	1
6	INTERMEDIATE BRACKET	INSTALL TO INBOARD SIDE OF PARK BRAKE ASSEMBLY TO SECURE INTERMEDIATE BRACKET TO PARK BRAKE ASSEMBLY	1
7	M10 WASHER	INSTALL UNDER M10-1.5X30MM SOCKET HEAD TO SECURE INTERMEDIATE BRACKET TO PARK BRAKE ASSEMBLY	4
8	M10-1.5X70MM SOCKET HEAD CAP SCREW	USE TO SECURE INTERMEDIATE BRACKET TO PARK BRAKE ASSEMBLY	4
9	BRAKE MOTOR	INSTALL TO AXLE FLANGE. TEMPORARILY SECURE WITH WASHERS TO AVOID SCRAMBLING P/ON HAT	1
10	S4 BRAKE CALIPER	INSTALL TO INTERMEDIATE BRACKET. INTERMEDIATE BRACKET MUST BE SECURED TO CALIPER TO SECURE S4 BRAKE CALIPER TO INTERMEDIATE BRACKET	4
11	M10 WASHER	INSTALL UNDER M10-1.5X30MM SOCKET HEAD TO SECURE S4 BRAKE CALIPER TO INTERMEDIATE BRACKET	2
12	M10-1.5X30MM SOCKET HEAD CAP SCREW	USE TO SECURE S4 BRAKE CALIPER TO INTERMEDIATE BRACKET	2





## **INSTALLATION:**

**IMPORTANT, READ BEFORE ATTEMPTING INSTALLATION:** These instructions detail the installation of a rear Baer brake system for different GM and Ford 9" bearing on axle (BOA) rear end applications. Refer to the information below for factory axle standoff requirements and select the axle standoff specific to your application. **ALWAYS** measure the axle standoff of your vehicle **BEFORE** attempting to install any rear Baer brake system to ensure a proper fit. If your axle standoff does not match the requirements listed below, contact Baer technical support at 602.233.1411 before beginning installation. **RETURNS WILL NOT BE ACCEPTED FOR SYSTEMS THAT HAVE BEEN PARTIALLY OR COMPLETELY INSTALLED.**

**Axle Standoff Requirement:** This system is designed to fit Ford applications with an axle standoff measuring 2.500".

**ALWAYS MEASURE YOUR AXLE STANDOFF AND COMPARE IT TO THE STANDOFF FOR WHICH THE SYSTEM WAS DESIGNED BEFORE BEGINNING INSTALLATION.**

**Baer cannot be held liable to make exceedingly drastic modifications to system components to ensure a proper fit.**

**If your axle standoff measurement does not match the requirements listed above, contact Baer technical support before attempting installation.**

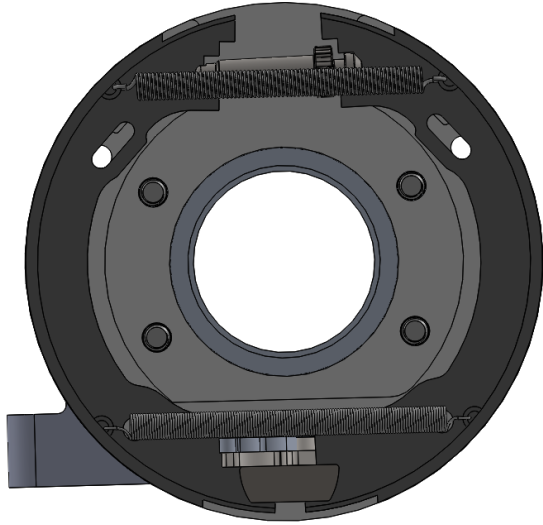
**The rotor hat provided in this kit is drilled for 1/2" diameter wheel studs. Some OEM axles have 7/16" wheel studs. Baer recommends upgrading to 1/2" studs. The modification is dependent on the type of axle and can require a simple stud swap or may require the assistance of a machine shop to complete.**

### **BRAKE DISASSEMBLY INSTRUCTIONS**

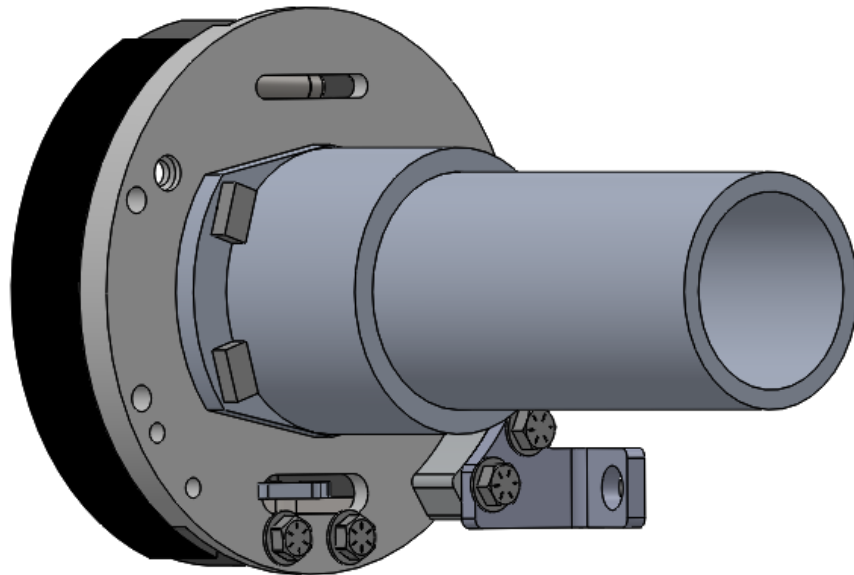
1. Place wheel chocks behind the front wheels to prevent the vehicle from rolling during installation. This step is only necessary if the front of the vehicle is not being lifted at the same time as the rear during the installation.
2. Disconnect the hardline from the drum brake slave cylinder and cap the end of the hardline with the vinyl caps provided with the system.
3. Disconnect the park brake cable from the attachment points on the frame and primary cable. It is not necessary to disengage the park brake cable from the factory backing plate.
4. Remove the brake drums from the vehicle. Thoroughly clean and inspect the axle flange to allow the new rotor to seat properly on the axle. Ensure there is no visible damage on the axle flange.
5. Measure the outside diameter of your axle flange, **it must be 6.250" in diameter or less.** If your axle flange is larger, it must be turned down to size (a machine shop can do this).
6. Remove the T-bolts securing the drum brake backing plate to the axle housing flange. Retain the T-bolts and nuts to secure the new park brake assembly.
7. Remove the factory drum brake assembly from the axle housing flange.
8. Remove the rear axles from the housing, taking care not to damage any seals.
9. Inspect the seals, axles, and bearings, replacing any damaged components as necessary.
10. **Remove the stock bearing retainers from the axles.** The new park brake supplied with this system is equipped with a replacement bearing retainer.

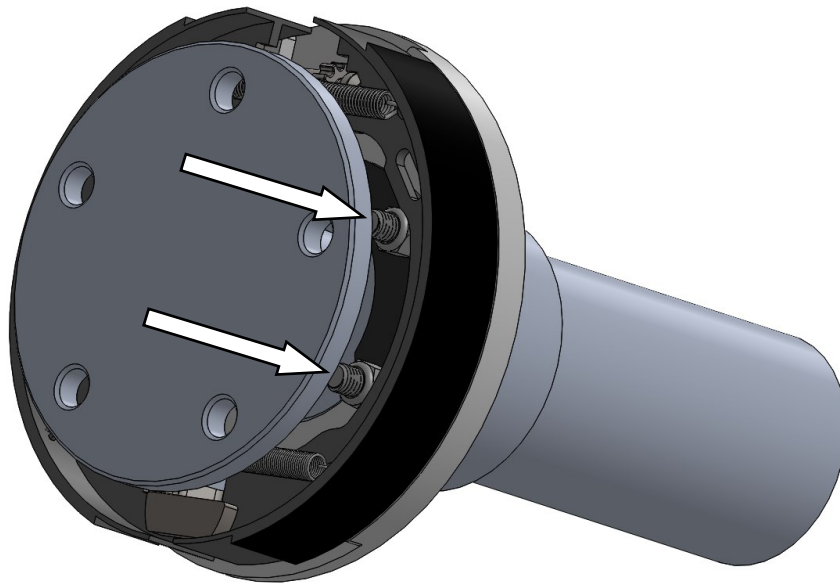
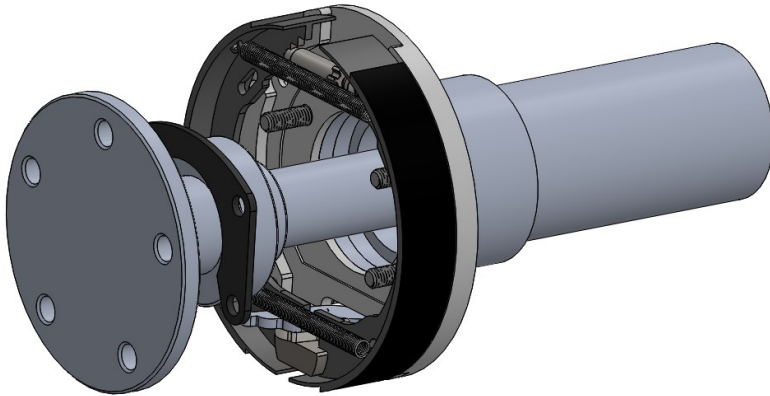
**PARK BRAKE ASSEMBLY INSTALLATION**

NOTE: Baer park brake assemblies are left and right specific. Note the orientation of the parking brake actuator in line with the existing cable routing on the vehicle to determine which assembly mounts on either side of the vehicle. Typically, the parking brake assembly is mounted with the parking brake actuator oriented toward the bottom, in the six o'clock position.

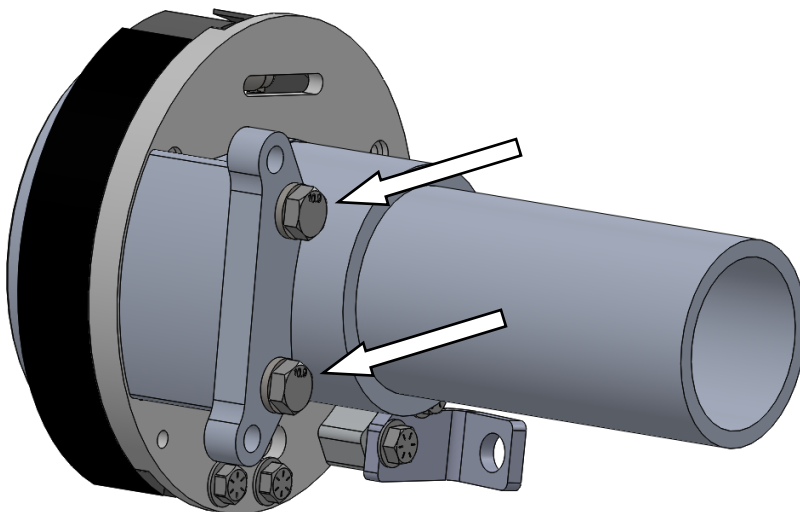


1. Install the correct side parking brake assembly to the axle housing flange and hold in place with the factory hardware (t-bolts).

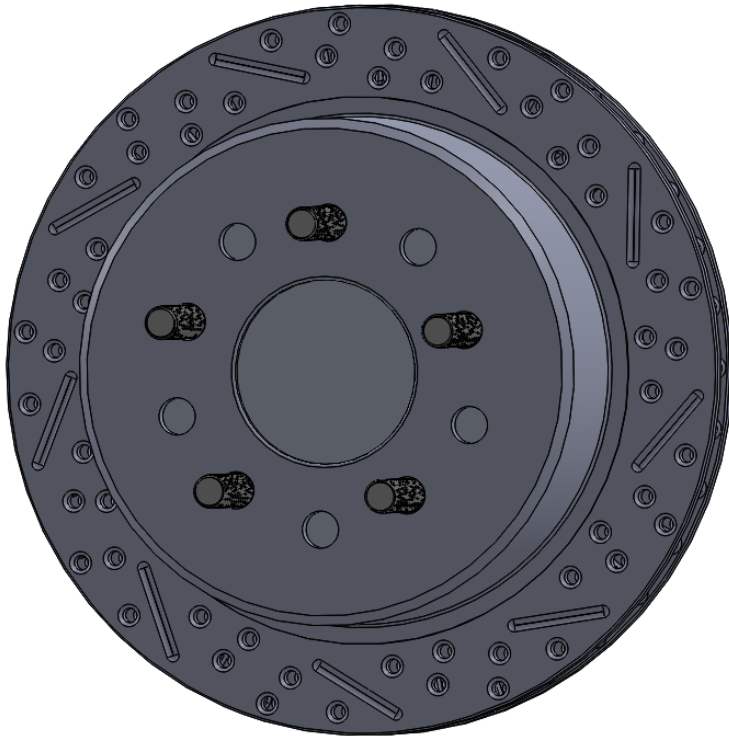




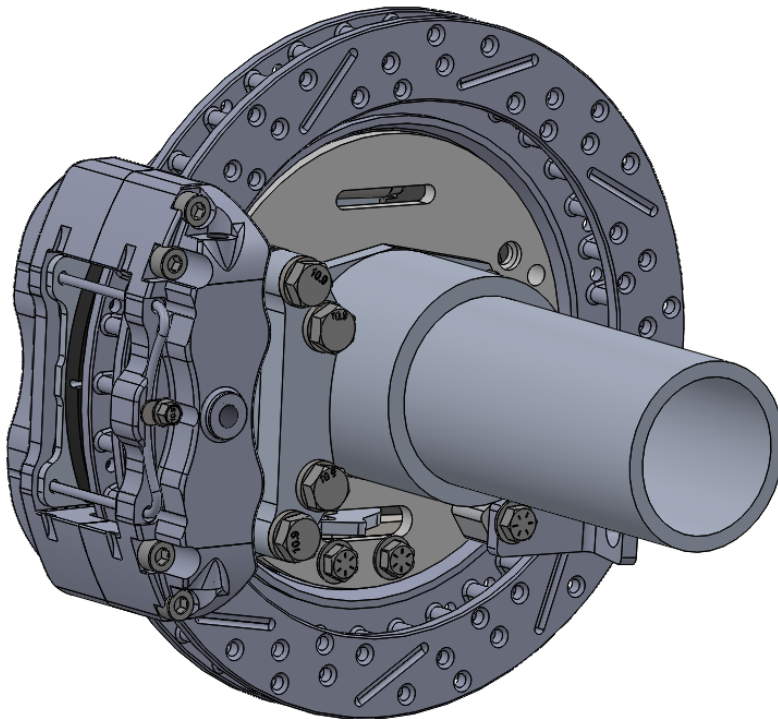
2. Reinstall the axle, securing it to the housing flange and parking brake assembly with the provided bearing retainer. Torque the existing hardware (T-bolts and locking nuts) to OEM specifications to secure the park brake assembly and axle bearing to the axle housing.



3. Install the intermediate bracket to the inboard side of the parking brake backing plate with the supplied M10-1.5 x 80mm bolts and washers. Simply tighten the hardware for now as it may require removal at a later step.



4. Install the correct side rotor, referring to the supplied "Rotor Installation and Rotation Instructions" within the promo packet provided with this system. The left side (driver's side) rotor is shown in the photo.



5. Install the caliper to the intermediate bracket with the supplied M10-1.5 x 35 hardware. Simply tighten the hardware for now as it will likely require removal during the next step, shimming procedure.

**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).
2. Subtract the top inside measurement from the top outside measurement. Split the difference in half to determine the amount of shim-

- TOP INSIDE
- TOP OUTSIDE
- BOTTOM INSIDE
- BOTTOM OUTSIDE

ming 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 bolts connecting the intermediate bracket to the backing plate.
7. Install the appropriate shims **between the intermediate bracket and the backing plate**, 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 backing plate 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 backing plate. If there is not full thread engagement, longer bolts must be used to prevent stripping the threads inside the backing plate.
12. Remove the caliper from the intermediate bracket one last time to install the brake pads, if applicable.
13. **Torque the intermediate bracket bolts to 70 ft-lbs. to secure the intermediate bracket to the backing plate.**
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.  
(SYSTEM COMPONENTS NOT INCLUDED FOR  
PHOTO CLARITY)

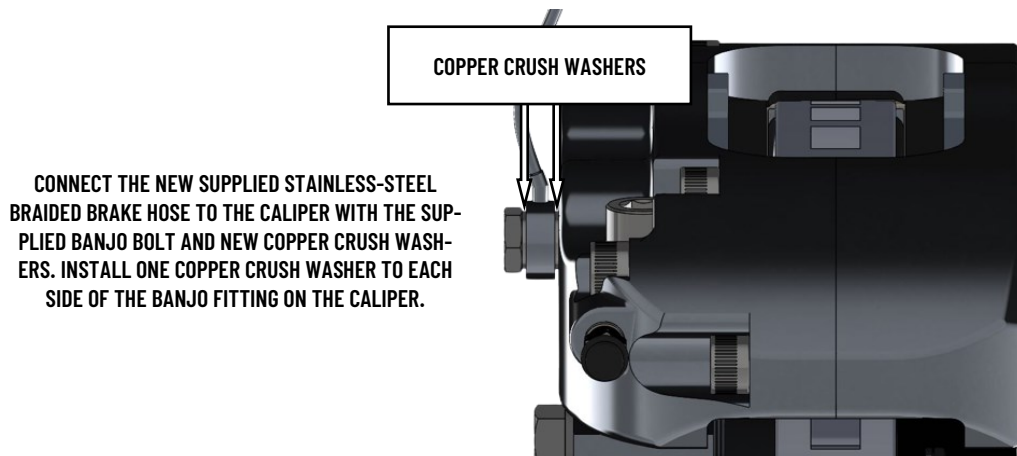




## BRAKE HOSE / HARDLINE RETAINER INSTALLATION

### All Systems:

1. The hardline must be re-secured with the stainless-steel brake hoses supplied with this system. Depending on the system ordered, a Hardline Retainer set has been provided. Installation instructions for the Hardline Retainer set are contained within its packaging. Complete the installation of the Hardline Retainer set before continuing.
2. 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). Finger-tighten the banjo bolt.
3. Position the brake hose to avoid interference with the wheel and suspension components through their entire range of motion.
4. Connect the opposite end of the hose with the adapter fitting (if supplied) to the hardline and install the hose lock.
5. Tighten the adapter fitting (if supplied) at the hardline and the banjo bolt connected to the caliper to 10-15 ft-lbs.
6. Repeat steps 1-5 for the other side of the vehicle and re-check all attachment points and fittings.



## PARK BRAKE CABLE INSTALLATION AND INFORMATION

1. If park brake cables were ordered with this system, install first into the bracket and actuator on the park brake assembly, then to the frame bracket. Finally, connect to the lever actuator in the driveshaft tunnel.
- Custom park brake cables and lengths may be required, depending on the application. If custom cables are required for your application, contact Baer technical support for park brake cable sources.
  - Park brake cables **MUST** be routed as straight as possible, bends in the cable dramatically reduce park brake efficiency. Tight bends should be avoided. Baer recommends cable bends to have a minimum radius of 6" to 8".
  - Cables must be properly restrained with cable clamps at various points (especially bends) on the vehicle chassis / body to prevent the straightening of any bends in the cable under tension. It is important to restrain the cable sheath tightly without crushing or causing interference of the inner cable.
  - Pre-stretch the park brake cable through multiple applications of the park brake (while the vehicle is not moving) and readjust accordingly to provide adequate tension to the park brake.

## **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 Systems Technical Representative or visit the link below.  
<https://baer.com/System-Parts-Tools/>.

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.