



INSTALLATION MANUAL

Part Number: 6000152

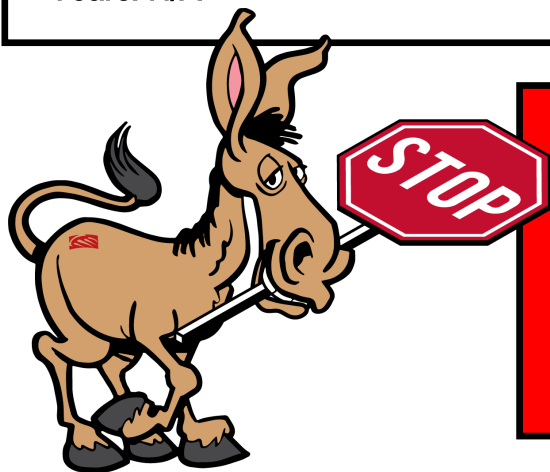
Product: SS4+ 11" Dana 60 Drag

Vehicle Make: Dodge / Chrysler

Model: All with Dana 60

Date: 7 September 2022

Years: N/A



READ THIS BEFORE STARTING

Returns will not be accepted for ANY installed PART or ASSEMBLY. Use great care in preventing cosmetic damage when performing wheel fit check.

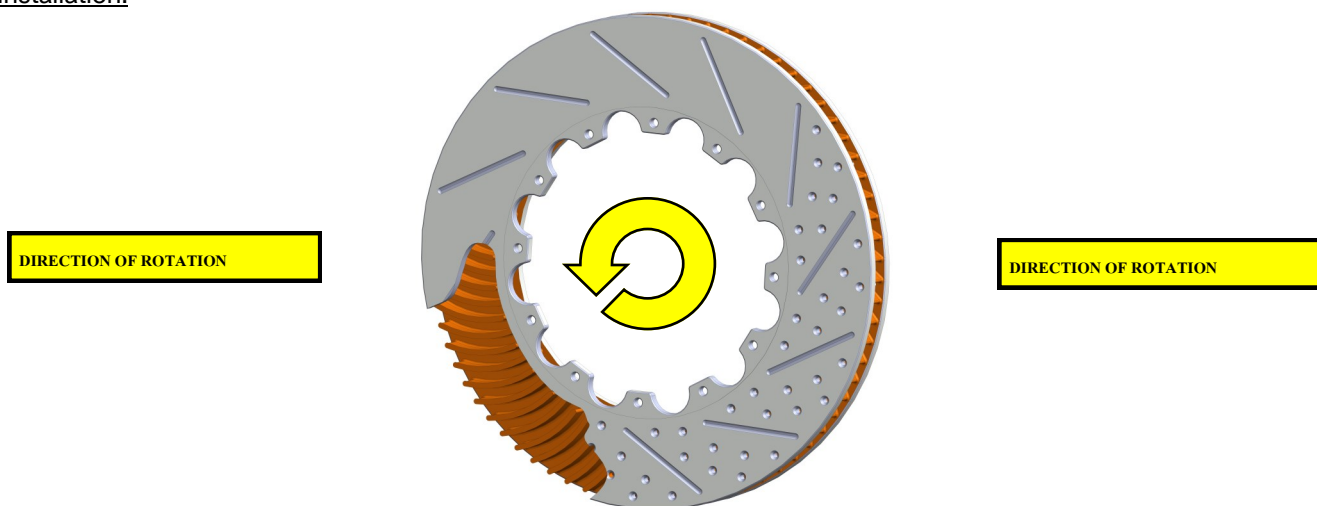
The recipient indemnifies Baer Inc. for all liabilities or losses incurred in connection with the recipient modifying or altering Baer Inc. product during installation.

Read and Follow BEFORE ATTEMPTING INSTALLATION

- All installations require proper safety procedures and protective eyewear.
- All installations should be performed by qualified personnel using a factory service manual for the vehicle on which the installation is to be performed.
- All references to LEFT side of vehicle always refer 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 recommended ratings for jack stands should be at least 2-tons.
- 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, as well as a safety catch can and protective eyewear. Other than these items, if unique or special tools are required they are listed in the section for that step.
- Returns will not be accepted for systems that have been partially or completely installed. Use extreme care when performing wheel fit check to prevent cosmetic damage.



- ◆ ALWAYS PERFORM A COMPATABILITY TEST PRIOR TO BEGINNING THE INSTALLATION OF ANY BRAKE SYSTEM OR “UPSIZED” ROTOR UPGRADE .
- ◆ In addition to already having checked fit using the Baer Brake Fit Templates available online at www.baer.com, ALWAYS place the actual corner assembly or a combination of the caliper assembly fit onto the rotor into the actual wheel to confirm proper clearance is available between the caliper and the wheel before proceeding with the actual installation.



- ◆ 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 U.S. spec vehicles. Image above is of a “L” left rotor. NOTE: Slots and drill patterns sweep forward and internal vanes sweep rearward.
- ◆ A professional wheel alignment is mandatory following the installation of any system requiring replacement of the front spindles, or tie rod ends. Return the vehicle to factory specifications unless otherwise indicated.
- ◆ Stop the installation if something seems 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.

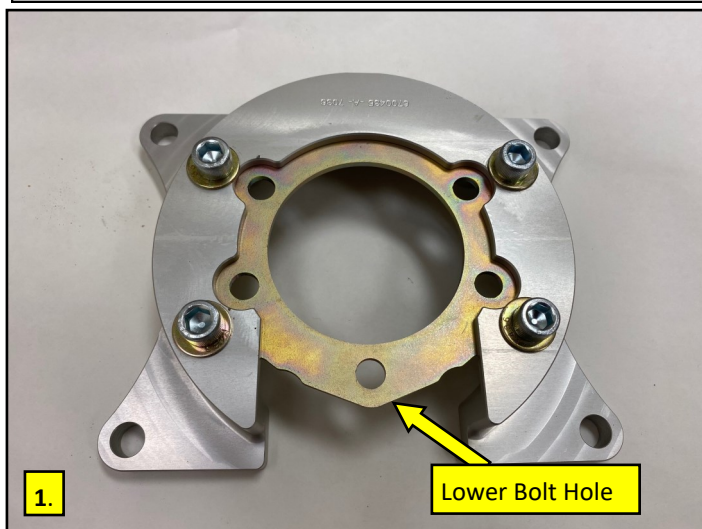
!THIS IS A DRAG RACE BRAKE SYSTEM!

These brake systems are designed for heavy, fast cars. Due to the application this brake system is built for, Baer supplies a more aggressive, high friction pad. This pad can be used on the street, but can be dusty and noisy compared to typical street pads. If these pads are changed out to a street version, it is highly recommended that the race pads be placed back in the system for race applications. Street pads in competition will fade, outgas, and taper badly which could lead to other braking issues. Always keep in mind there is not one pad that works well in all driving situations.

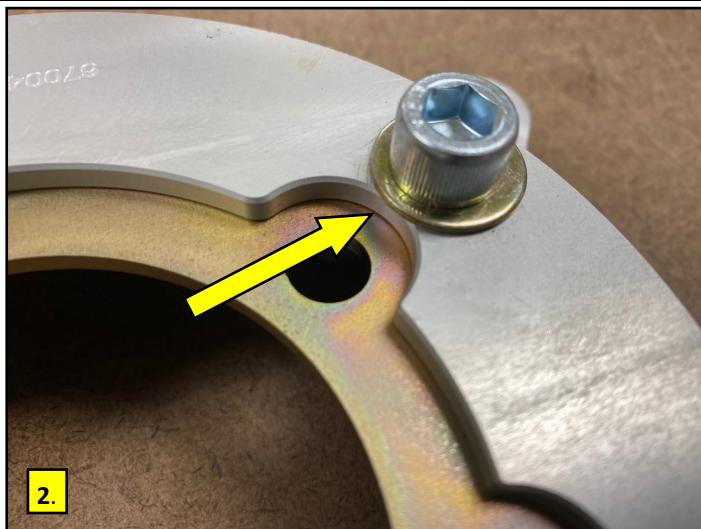
Installation

NOTE: Your axle flange diameter must be 5.75" or less

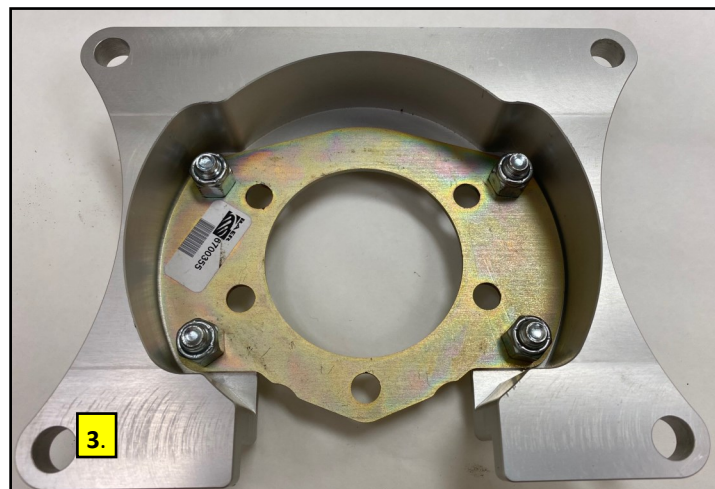
1. Using a line wrench, disconnect the hard line from the slave cylinder on the backing plate. Cap the hardline fitting with the supplied vinyl caps to prevent brake fluid from dripping during the installation.
2. Remove the brake drum, with the fluid hose still attached from the axle. If corrosion is present between the brake drum and axle flange, a solid hit with a 2-4 pound hammer on the inboard side of the drum will dislodge it. Remove the four bolts securing the axle to the housing and remove the axle from the axle housing.
3. Remove all existing OEM brake components from the axle housing flange and thoroughly clean the axle housing flange. This will allow the new components to seat properly.
4. Assemble the zinc-plated steel base bracket to the aluminum dual caliper bracket using the supplied 3/8-16x1.00 socket head bolts, Nylock nuts, and washers. Make sure the washers are pulled away from the center section as they could interfere with the rear end flange nuts later. Torque each of the four socket heads to 40 ft-lbs. Make sure that several threads engage the nylon material in the nuts. (Figures 1, 2 & 3)



1. Bolt the steel bracket to the inboard side of the aluminum bracket with the lower bolt facing down. The 3/8" socket head bolts should install from the outboard side, with the Nylock nuts on the inboard side.



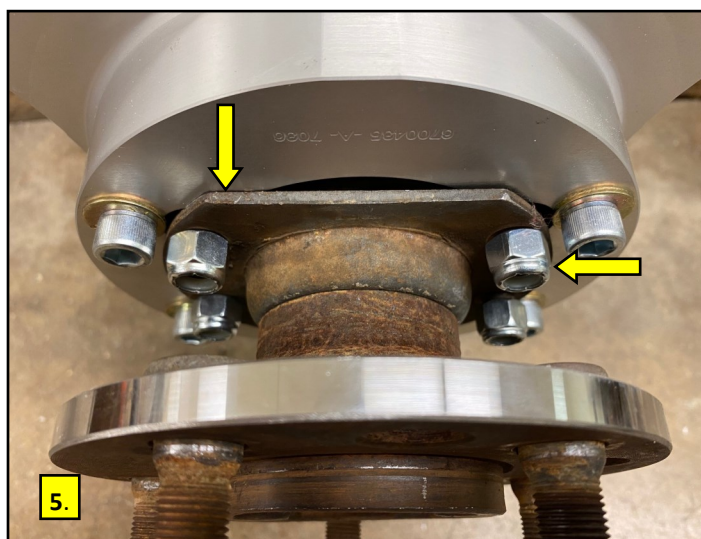
2. Make sure the washers are pulled away from the center of the aluminum bracket to provide clearance for the rear end flange nuts.



Inboard view of the steel bracket installed to the aluminum dual caliper bracket. Notice the lower bolt is facing down and the Nylock nuts are protruding inboard.



4. Clean off the rear end axle housing flange surface and make sure it is free of rust and debris. Install the bracket assembly to the axle housing flange as shown. (Driver side shown)



5. Slide the axle back into the housing and check for clearance on your bearing retainer. For early versions, you may need to trim the bearing retainer slightly to allow it to sit flush against the steel bracket. Once verified, secure in place using the original 3/8-24 nuts. Torque the nuts to OEM specification.

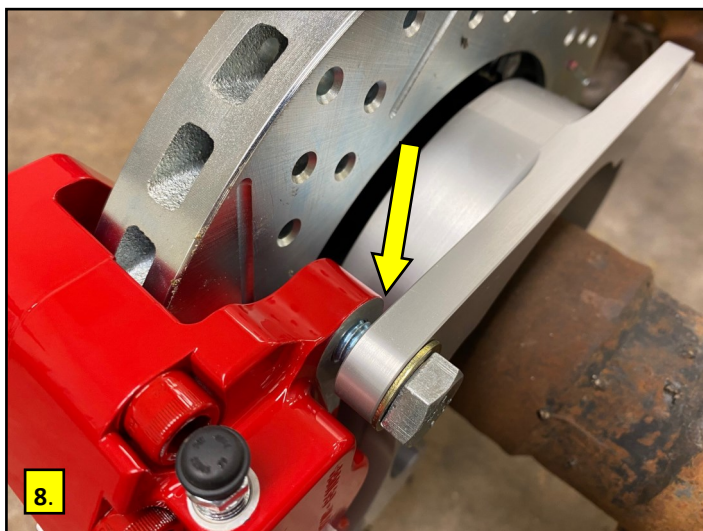


6. Next, install the correct side rotor. (Driver side shown). **Make sure your axle housing flange and axle flange are free from rust and other debris.** Your rotor locates on the axle flange and **MUST** sit flat against the mounting surface. Use washers and lug nuts to temporarily secure the rotor to the axle flange. The washers will protect the hat from getting scratched or damaged.



7. Next, install the correct side caliper (Driver side shown), using the supplied M12 hex bolts and washers. Hand-tighten these bolts for now. Check for any caliper clearance issues. The caliper should be centered over the rotor. If required, use the supplied 12mm shims between the caliper and the bracket to center.

Once verified and centered, torque the M12 hex bolts to 85ft lbs.



8. The arrow shows where you may need to shim your caliper to center it over the rotor. For further shimming instruction, see the next page.



9. Inboard view of the installed bracket, rotor, and caliper.



Shimming Procedure

10. 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. 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 .905", outside of .865" 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 the caliper centered perfectly is not necessary, but having the gaps as close as possible will give the best defense against noise.

****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

Select the required shims from the kit provided.

Remove the caliper.

Install the appropriate shims (between the S4 Caliper and caliper bracket; **top and bottom caliper mounting holes**), removing one bolt at a time, and snug the same bolts for fit check. See Figure 10 for reference.

Re-shim if necessary. When proper shimming has been determined, remove the caliper and install the brake pads. Install the caliper then torque the caliper bolts 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.

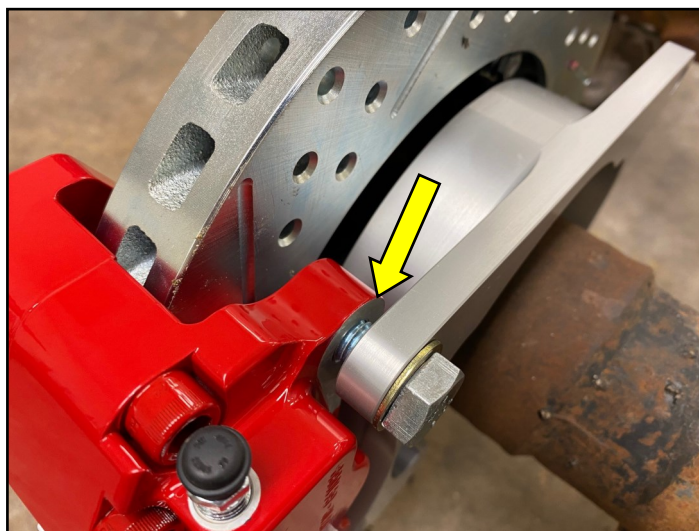
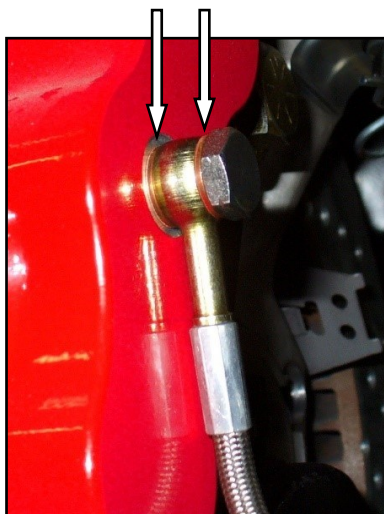


Figure 10: Location of shims

**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 Figure 11. ***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.



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.

Figure 11: Stainless-steel braided brake hose installed to the caliper

Hardline Retainer Installation

12. Install the hardline retainer provided with this system. Refer to the installation instructions packaged within the hardline retainer kit provided with this system.

13. Repeat steps 1-12 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 and / or replacement parts 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/>.