

T4/PRO/PRO+ 13" & 14" 79-93 MUSTANG NO SPINDLE SYSTEM

Part Number: 6000747

Vehicle Make: FORD

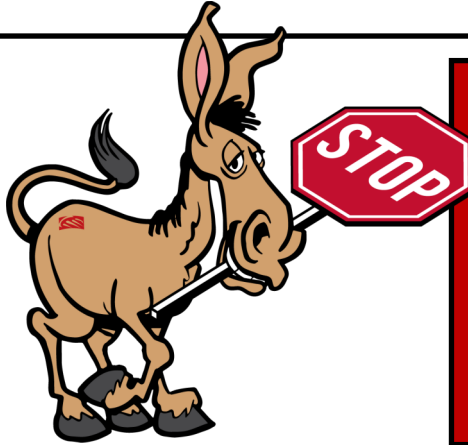
Model: MUSTANG

Years: 79-93 WITH STOCK SPINDLES

Product: T4/PRO/PRO+ 13" & 14"

Revision: REVISION B

Revision Date: 22 MAY, 2023

**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.

Items included in this brake kit:

- (x6) 1/2-13 x 1.25 bolts
- (x4) 1/2-13 x 1.75 socket head cap screws
 - (x6) 1/2" washers
- (x2) -3AN to 3/8-24 adapter fittings
- (x2) 16" hoses with -3AN end and 10mm banjo end
 - (x2) Baer 6P or T4 calipers
 - (x2) Steel base brackets
- (x2) Aluminum intermediate brackets
 - (x2) Wheel hub assemblies
 - (x4) Copper crush washers
 - (x2) M10-1.0 banjo bolts
 - (x2) Vinyl Caps
 - (x2) Hose locks
- (x2) Directional, slotted, drilled, and zinc plated rotors

Tools required for install/Spindle Modification

- 27/64 Drill bit
 - 1/2-13 UNC hand tap
 - 3/4" Wrench or socket & ratchet
 - 10MM Hex drive bit
 - Properly calibrated torque wrench
 - Appropriately sized tap wrench
 - Appropriate corded or cordless drill
 - Appropriate cutting fluid for drill bit/hand tap
- OR**
- Corded or cordless reciprocating saw with a metal blade
 - Corded or cordless angle grinder with metal cutoff blade

Notices - Read and Follow BEFORE ATTEMPTING INSTALLATION

- This brake system requires the customer to perform modification of their stock 79-93 Mustang spindles.
- 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.
- **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).

BRAKE DISASSEMBLY INSTRUCTIONS

1. Engage the vehicle park brake (if applicable). If not applicable, place wheel chocks behind the rear wheels before continuing.
2. Lift the front end of the vehicle with a properly rated floor jack.
3. Place properly rated jack stands under the front end of the vehicle to support the vehicle weight during installation.
4. Remove the left front (driver's side) wheel from the vehicle.
5. Disconnect the stock rubber flex hose from the steel hardline at the inner fender and cap the hardline with the supplied vinyl caps to prevent brake fluid from leaking during installation.
6. Unbolt and remove the existing brake caliper.
7. Remove the factory dust cap from the brake rotor.
8. Pull the cotter pin and spindle nut retainer from the spindle pin.
9. Unbolt the castellated nut and remove the stock, unicast rotor/hub unit from the spindle.
10. Unbolt and remove the factory dust shield.
11. Clear all grease and loose dirt from the vehicle spindle.

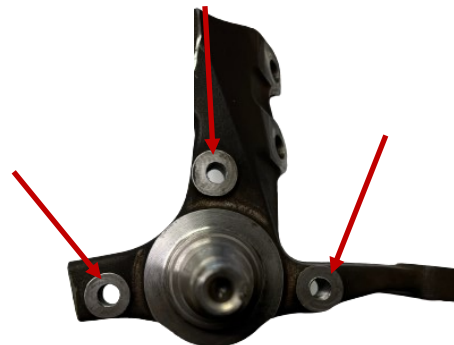
SPINDLE MODIFICATION: Factory spindles **must** follow the modification steps detailed below. A modification kit (P/N 6801349), containing components to streamline this process is available. This modification kit is available to order at www.baer.com or by contacting a Baer sales representative.

SPINDLE CLEARANCE

1. Mark the areas to be removed for clearance of the new Baer brake system. Refer to the photos below for the areas to be removed.
2. Carefully remove the marked areas with a Corded or cordless angle grinder with a metal cutoff blade. Take care not to damage any areas surrounding the vehicle spindle.
3. Grind any sharp corners left from step 2 to prevent damaging the brake lines upon installation.



MODIFYING THE SPINDLE DUST SHIELD MOUNTING HOLES
Carefully drill and tap the dust shield mounting holes for 1/2-13 fasteners. These holes will be used to mount the base bracket to the spindle. (RIGHT [PASSENGER] SIDE SPINDLE SHOWN IN PHOTO)



BASE BRACKET INSTALLATION

NOTE: The base brackets supplied with this system are left and right specific and are designed to mount the brake caliper **behind** the centerline of the spindle pin in the trailing position. The base bracket installs directly to the spindle via the modified dust shield mounting holes. Refer to the steps and photos below to install the base brackets for your application.

1. Install the base bracket to the spindle via the modified dust shield mounting holes with three (3) of the supplied 1/2-13 x 1.25 bolts and 1/2" washers. The base bracket mounts with the 1/2-13 pem nuts facing away from the center of the vehicle (right/passenger side spindle shown below).
2. Torque the three 1/2-13 x 1.25 bolts to 80 ft-lbs. to secure the base bracket to the spindle.



THE BASE BRACKETS SUPPLIED WITH THIS SYSTEM ARE LEFT AND RIGHT SPECIFIC AND ARE DESIGNED TO MOUNT THE BRAKE CALIPER BEHIND THE CENTERLINE OF THE SPINDLE PIN IN THE TRAILING POSITION. THE RAISED PORTION OF THE 1/2-13 PEM NUTS SHOULD FACE OUTBOARD, IN THE DIRECTION OF THE SPINDLE PIN. INSTALL THE CORRECT BASE BRACKET TO THE SPINDLE VIA THE MODIFIED DUST SHIELD MOUNTING HOLES WITH THE SUPPLIED 1/2-13 X 1.25 HEX HEAD CAP SCREWS AND 1/2" WASHERS. TORQUE THE 1/2-13 HEX HEAD CAP SCREWS TO 80 FT-LBS. TO SECURE THE BASE BRACKET TO THE SPINDLE.

HUB INSTALLATION

The hubs supplied with this system are shipped pre-assembled with bearings packed with synthetic Redline high temperature grease.

1. Align the key of the spindle washer with the key slot on the spindle pin and slide the hub onto the spindle pin. Ensure the hub is fully seated on the spindle pin and cannot be pushed down further. (4-lug system hub shown below, Baer offers a 4-lug and 5-lug option for this system).



ALIGN THE KEY OF THE SPINDLE WASHER WITH THE KEY SLOT ON THE SPINDLE PIN AND SLIDE THE HUB ONTO THE SPINDLE PIN. ENSURE THE HUB IS FULLY SEATED AND CANNOT BE PUSHED DOWN FURTHER.

2. Install the spindle nut supplied with this system to secure the hub to the spindle. Rotate the hub counter-clockwise while finger-tightening the nut to ensure it is fully seated on the spindle pin. Use a wrench to snug the bearing into place and then back the nut off 1/6 to 1/4 turn per TIMKEN BEARING instruction.



ROTATE THE HUB COUNTER-CLOCKWISE WHILE FINGER-TIGHTENING THE SPINDLE NUT TO ENSURE THE HUB IS FULLY SEATED ON THE SPINDLE PIN. USE A WRENCH TO SNUG THE BEARING INTO PLACE AND THEN BACK THE NUT OFF 1/6 TO 1/4 TURN PER TIMKEN BEARING INSTRUCTION.

HUB INSTALLATION CONTINUED

3. Install the spindle nut retainer over the spindle nut, aligning the castle cutout in the retainer with the through hole in the spindle pin. A cotter pin will be installed in the through hole to secure the retainer in place.



INSTALL THE SPINDLE NUT RETAINER OVER THE SPINDLE NUT, ALIGNING THE CASTLE CUTOUT IN THE RETAINER WITH THE THROUGH HOLE IN THE SPINDLE PIN.

4. Install the cotter pin through the hole in the spindle pin. Ensure the cotter pin holds the spindle nut retainer in place.



ENSURE THE COTTER PIN HOLDS THE SPINDLE NUT RETAINER IN PLACE.

5. Bend the cotter pin around the spindle pin to secure it within the through hole of the spindle pin.



BEND THE ENDS OF THE COTTER PIN AROUND THE SPINDLE PIN TO SECURE IT IN PLACE.

DUST CAP INSTALLATION

1. Install the O-ring inside the groove of the dust cap. It is recommended to apply an assembly lubricant to the O-ring before installation. Ensure the O-ring is fully seated within the groove of the dust cap.



INSTALL THE O-RING INSIDE THE GROOVE OF THE DUST CAP, APPLY AN ASSEMBLY LUBRICANT TO THE O-RING BEFORE INSTALLATION. ENSURE THE O-RING IS FULLY SEATED WITHIN THE GROOVE OF THE DUST CAP.

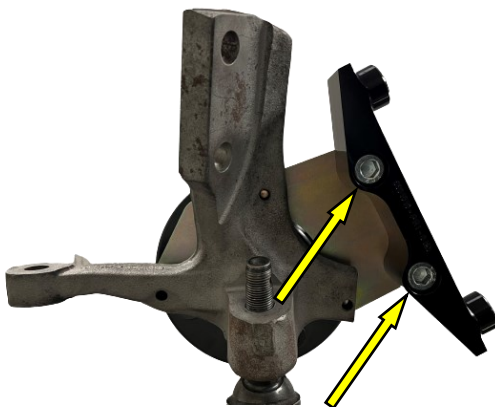
2. Install the dust cap to the hub. Rotate the hub and listen closely to make sure the cotter pin does not scratch the inside of the dust cap.



INSTALL THE DUST CAP TO THE HUB. ROTATE THE HUB AND LISTEN CLOSELY TO MAKE SURE THE COTTER PIN DOES NOT SCRATCH THE INSIDE OF THE DUST CAP.

INTERMEDIATE BRACKET INSTALLATION

1. Install the intermediate bracket to the steel base bracket with the provided 1/2-13 socket head cap screws as shown. The flat portion of the intermediate bracket mounts to the flat portion of the steel base bracket. Snug the socket heads for now, the bracket may require shimming later on **refer to the torque spec for the 1/2-13 socket head cap screws on step 14 of the shimming procedure.**



INSTALL THE INTERMEDIATE BRACKET TO THE INBOARD SIDE OF THE STEEL BASE BRACKET WITH THE SUPPLIED 1/2-13 SOCKET HEAD CAP SCREWS. SNUG THE SOCKET HEADS FOR NOW, THE BRACKET MAY REQUIRE SHIMMING LATER ON. REFER TO THE TORQUE SPEC FOR THE 1/2-13 SOCKET HEAD CAP SCREWS ON STEP 14 OF THE SHIMMING PROCEDURE, PAGE 9.



ROTOR INSTALLATION

1. Install the correct side rotor, referring to the "Rotor Direction and Installation" instruction [P/N 6000029] within the Promo Pack [P/N 6020502]. Temporarily secure the rotor to the spindle with two lug nuts and washers to prevent scratching the rotor hat.

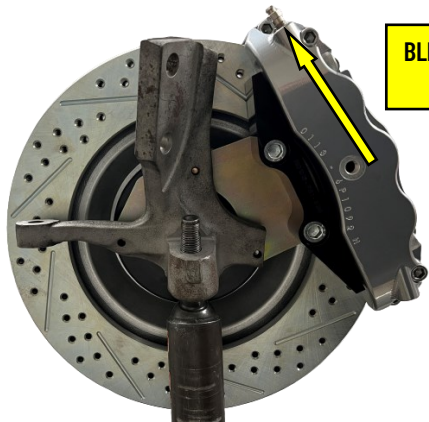


INSTALL THE CORRECT SIDE ROTOR AND TEMPORARILY SECURE IT TO THE SPINDLE WITH TWO LUG NUTS AND WASHERS TO PREVENT SCRATCHING THE ROTOR HAT.

CALIPER INSTALLATION

NOTE: Customers with T4 systems, refer to next page before installing the caliper.

1. Remove the brake pads from the caliper (pre-installed for ease of shipping) if you have access to a dial caliper, these will be re-installed following the shimming procedure later on. If you do not have access to a dial caliper, DO NOT remove the brake pads from the brake caliper as measurements during the shimming procedure can be made with the pads installed using a feeler gauge. Install the correct side caliper (bleeder screw pointing up) to the intermediate bracket with the supplied M12-1.75 socket head cap screws as shown. Snug the socket head cap screws for now, they may have to be removed if the intermediate bracket requires shimming to center the caliper over the rotor refer to the torque spec for the M12-1.75 socket head cap screws on step 15 of the shimming procedure, page 9.



BLEEDER SCREW POINTING UP

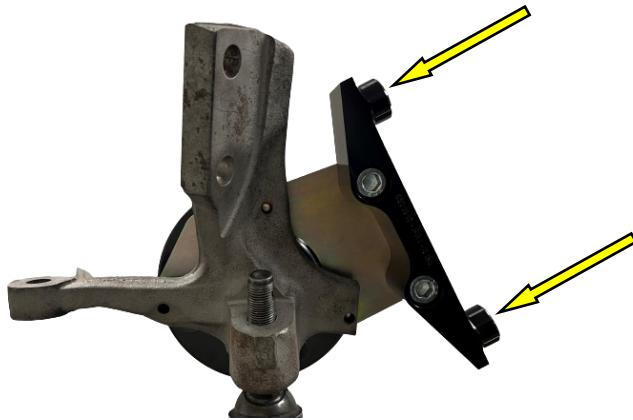
****CUSTOMERS WITH T4 SYSTEMS, REFER TO THE NEXT PAGE BEFORE BEGINNING CALIPER INSTALLATION.****

INSTALL THE CORRECT SIDE CALIPER (BLEEDER SCREW POINTING UP) TO THE INTERMEDIATE BRACKET WITH THE SUPPLIED M12-1.75 SOCKET HEAD CAP SCREWS. SNUG THE SOCKET HEAD CAP SCREWS FOR NOW, THEY MAY HAVE TO BE REMOVED IF THE INTERMEDIATE BRACKET REQUIRES SHIMMING TO CENTER THE CALIPER OVER THE ROTOR. REFER TO THE TORQUE SPEC FOR THE M12-1.75 SOCKET HEAD CAP SCREWS ON STEP 15 OF THE SHIMMING PROCEDURE, PAGE 9.



CALIPER INSTALLATION FOR T4 SYSTEMS ONLY

T4 systems require the installation of one (x1) .015" radial shim for each mounting hole to prevent the edge of the rotor from scraping the caliper body. Refer to the photo below for the installation location of the radial shim **FOR T4 SYSTEMS ONLY**.

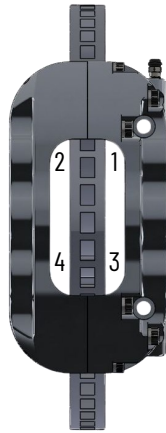
**FOR T4 SYSTEMS ONLY**

PLACE ONE (X1) .015" RADIAL SHIM FROM THE PROVIDED SHIM KIT ON EACH OF THE CALIPER MOUNTING FACES BEFORE MOUNTING THE CALIPER TO THE INTERMEDIATE BRACKET. (ROTOR NOT SHOWN IN PHOTO BELOW)

SHIMMING PROCEDURE

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

**MEASUREMENT LOCATIONS FOR STEP 1**

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 mounting hole 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 the life of the brake pads.
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 of required shims 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. Remove the rotor from the hub. Retain the fasteners and washers to temporarily secure the rotor to the hub for caliper fitment verification following completion of the shimming procedure.
7. Loosen the socket heads securing the intermediate bracket to the base bracket.
8. 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.

**SHIM INSTALL LOCATION FOR STEP 8,
BETWEEN INTERMEDIATE BRACKET AND
BASE BRACKET**

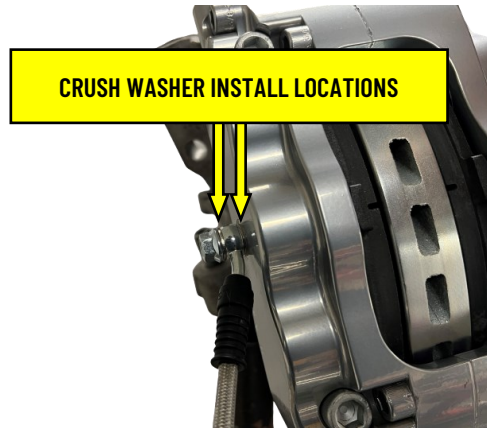
9. Reinstall the rotor and temporarily secure with lug nuts and washers.
10. Reinstall the caliper, **DO NOT** torque the fasteners until a fitment check has been completed.
11. Repeat step 1 with the appropriate shims installed between the intermediate bracket and the base bracket to perform a fitment check.
12. Re-shim as necessary until all gaps between the caliper body and the rotor are within .005".
13. Remove the caliper from the intermediate bracket once proper fitment is achieved to re-install the brake pads, if applicable.

****IMPORTANT, READ STEPS BELOW****

14. **Torque the 1/2-13 socket head cap screws to 85 ft-lbs. to secure the intermediate bracket to the base bracket.**
15. **Re-install the caliper, if applicable. Torque the M12-1.75 socket head cap screws to 85 ft-lbs. to secure the caliper to the intermediate bracket.**

BRAKE HOSE INSTALLATION

1. The hardline must be re-secured with the stainless-steel brake hoses supplied with this system.
2. Connect the new supplied stainless-steel braided brake hose to the caliper inlet 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. Finger-tighten the banjo bolt into the inlet of the caliper.



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 installed** to the hardline and install the hose lock to secure the hose.
5. Tighten the both adapter fitting at the hardline and the banjo bolt connected to the caliper to 15-20 ft-lbs. **careful not to strip the caliper inlet threads.**
6. Repeat all of the steps highlighted in this instruction for the other side of the vehicle and re-check all attachment points and fittings.

ENSURE ALL FASTENERS HAVE BEEN TORQUED TO THE 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 we 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.