FOR ANY QUESTIONS, PLEASE CALL US @ 727.347.9915 M-F 8:00a.m.-8:00p.m. EST.

79-93 MUSTANG

RACE/STREET 4-PISTON FRONT BRAKE KIT INSTRUCTIONS

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FORD OWNERS
ATTENTION!
WHEEL OFFSET

Due to the design characteristics of the front suspension of a fox bodied car, certain wheel back spacing measurements must be followed. In order to use a 15 x 3.5" wheel, a back spacing of 2.250" is necessary for the wheel to be inside of the fender well. Similarly, when using a 15x4"wheel, a back spacing of 2.875" is required. Many of today's wheel manufacturers accommodate these sizes and here are a few to choose from:

Bogart Wheels Phone: 619-596-7605
(15 x 3.5" back spacing: 2.250", 2.875", and 3")

Holshot Engineering Phone: 1-800-372-4533
(15X4" back spacing: 2.875")

Weld Racing Phone: 1-800-788-WELD
(Series 788 v2.0, series 786 v 2.0)
(15X3.5" back spacing: 2.250")

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YOU WILL NEED TO MODIFY YOUR SPINDLE.

Preparing the spindle:
Note: Some models of disc brake spindles have "ears" where the OEM calipers were mounted and these "ears" will interfere with your Aerospace Components brake kit. When removing these "ears", remove as little as possible. The original dust cover boltholes will be used to mount your new brake kit.

1. Remove all stock braking components from spindle. A bare spindle is required.
2. Drill and tap your existing dust cover bolt holes. Do this by using a 5//16 drill and a 3/8 x 16 tap.

Attaching the caliper mounting bracket:
Use the 3/8x 16 flat bolts to attach the bracket to the spindle. The caliper bracket should be mounted on the opposite side of the steering arm. Using red loc-tite, torque bolts to 50-ft-lbs.

Test fitting before final installation:
Without using grease.
1. Install inner bearing, hub, and rotor assembly, outer bearing, washer, and spindle nut. ***Do not install grease seal.***
2. Tighten the spindle nut until zero bearing clearance is achieved.
3. Fit the caliper over the rotor making sure that the bleed screw is above the intake port.
4. Tighten the bolts and observe the caliper positioning in relation to the rotor (the parting line of the calipers should match the center line of the rotor.) If the caliper does make contact with the rotor, or if it is not properly aligned, shims must be added.
5. If the assembly appears aligned, install the pads. If they do not slide in easily, you are not properly aligned and further caliper shimming is required.

The caliper must be parallel to the rotor. A different number of shims may be required to achieve this for one caliper.

Final Installation:
1. Once you have determined the proper bracket and caliper positioning, use loc-tite on all bracket bolts and torque to 50-ft lbs.
2. Pack the bearings with a moly-type grease and install the inner bearing and grease seal.
3. Mount the hub/rotor assembly and tighten the spindle nut until the bearings are seated and zero clearance is obtained. The hub should be able to spin freely.
4. Rotate the hub assembly and tighten the spindle nut until the bearings are seated and zero clearance is obtained. The hub should be able to spin freely.
5. Back off the spindle nut to the first cotter pin opening and install the cotter in and dust cap.
6. Install the caliper making sure that the bleed screw is above the intake port on the caliper. Tighten the bolts securely to 35-ft lbs.
7. Drop the pads in and slide the pad-retaining bolt through the caliper and pads. Secure the bolt with the locking nut.
8. Make sure the rotor turns freely and only the brake pads are touching the rotor. This is a fixed system; therefore, the bracket and rotor will have a minimal clearance, but should not be touching.

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For best results when installing your *Aerospace Components* brake kit use the following:

- At least two 12 oz. bottles of brake fluid with a minimum wet boiling point of 298 degrees and a minimum dry boiling point of 450 degrees. Do not use silicone based brake fluids.

- Teflon tape for brake line fittings.

- Red Loctite®

Please consider the following for safe operation of your *Aerospace Components* brakes:

- If the master cylinder is mounted level with or lower than the calipers, a 2lbs. residual valve is required.

- Check all brake lines. Worn lines are not recommended.

- A 1 1/8" master cylinder diameter bore is recommended for your *Aerospace Components* brake kit. Check for proper wheel clearance by fitting the kit up inside the wheel.

Pre-assembly of parts:

- Make sure that all caliper brackets line up properly to the spindle or rear end housing.

- All bolts that will be used need to be cleaned with acetone to insure no grease will contaminate the Red Loctite®.

- Make sure the bearings fit the spindle snout and make sure the grease seal is the proper size. Do this before packing the bearings.

- This is a good time to install the wheel studs in the front hubs, making sure to Red Loctite® them in. Torque the wheel studs to 50ft/lbs.

- If the front kit is a veined rotor street kit, install the rotor adapter to the hub. Do this by placing the hub on a flat surface so the nose cap is facing downward. Take the rotor adapter and place it over the hub with the five counter sunk holes facing upward. Fasten the adapter with the flat head 3/8-16 bolts using the nylock nuts to the hub. Next place the rotor over the adapter so that the tabs on the rotor are facing upwards. Finally fasten the rotor to the adapter with the 5/16-18 low head bolts using Red Loctite®. Torque to 30ft/lbs.

Brake Lines:
The inlet port of the caliper is 1/8" x 27-pipe thread. If you choose to use the factory stock flex hose, an adapter for a 1/8" male pipe thread will be needed. Wrapping the threads with Teflon tape will allow a tighter seal at a lower torque.

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Bleeding the System:

An initial gravity bleeding is recommended to remove most of the air in the system. This is accomplished by filling the master cylinder with fresh fluid and opening the bleed ports. Leave the top off the master cylinder. Fluid will flow into and fill the calipers. Be sure to keep fluid in the reservoir to keep air out of the system. This process will take some time.

A final bleeding is accomplished by firmly pressing the brake pedal and having someone open the bleed port until the pedal goes to the floor, closing the bleed port before the pedal is lifted. Do not pump the pedal while bleeding. This only foams the fluid and prevents proper bleeding. Repeat this process for all brakes until pedal is high and firm. Be sure no air bubbles come from the calipers.

Brake pad bedding:

New brake pads require a bedding process. This bedding procedure starts by pumping your brakes at a very low speed to ensure proper brake operation. Make a series of hard stops at progressively higher speeds. Continue this process until brake fade is felt. Park the car and give the pads a chance to cool completely. Improper pad bedding results in glazed pads diminishing stopping ability.

Brake pads should be check regularly. If pads are wearing evenly, they can be used almost down to the packing plate.

Getting the right ratio:

In order to get the correct ration for your Aerospace Components braking system, a few measurements must be taken. First, remove the old master cylinder. Measure from the center line of the pivot point "P" of the brake arm to the pivot point of the master cylinder rod to get length "B". Next, measure from the pivot point of the master cylinder rod to the center of the footpad to get length "A". Finally, divide length "A" by length "B". This will give you your pedal ratio. The recommended ration should be 7:1. For example, if length "A" was 14 " and length "B" was 2", then 14/2=7.
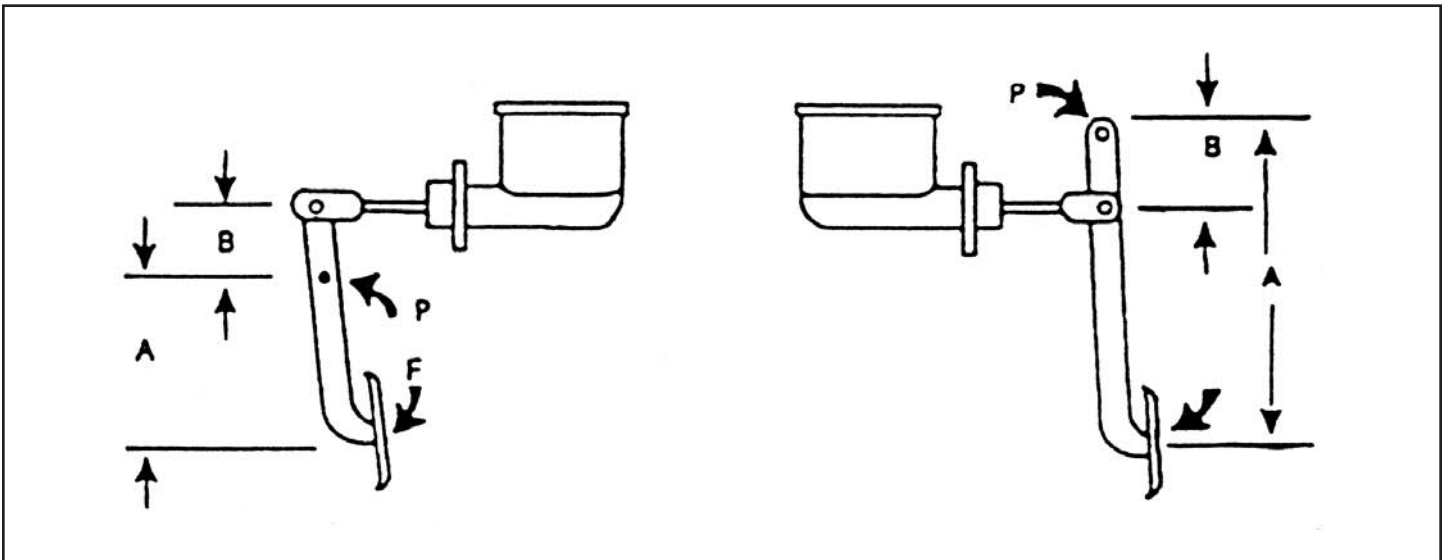
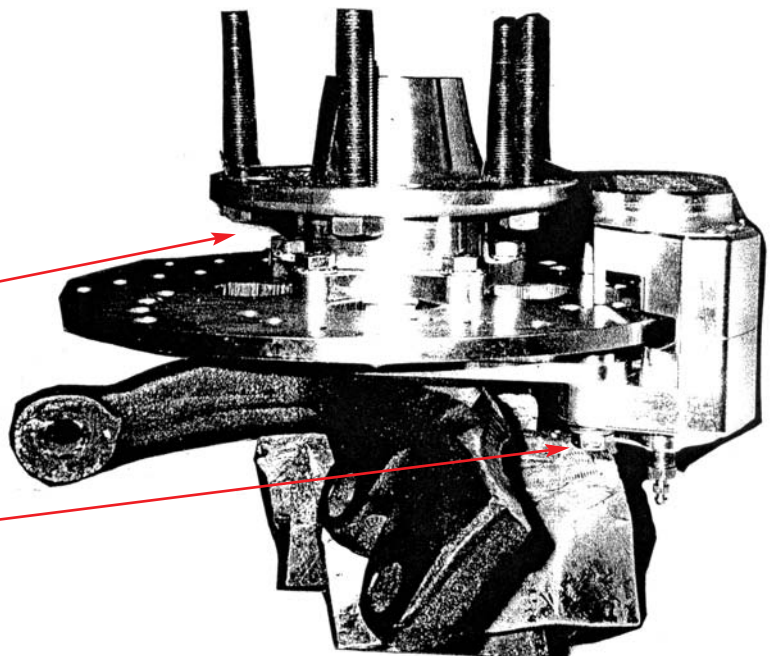**FOR ANY QUESTIONS, PLEASE CALL US @ 727.347.9915 M-F 8:00a.m.-8:00p.m. EST.**

DRILL 5/16
TAP 3/8-16

CUT LINE
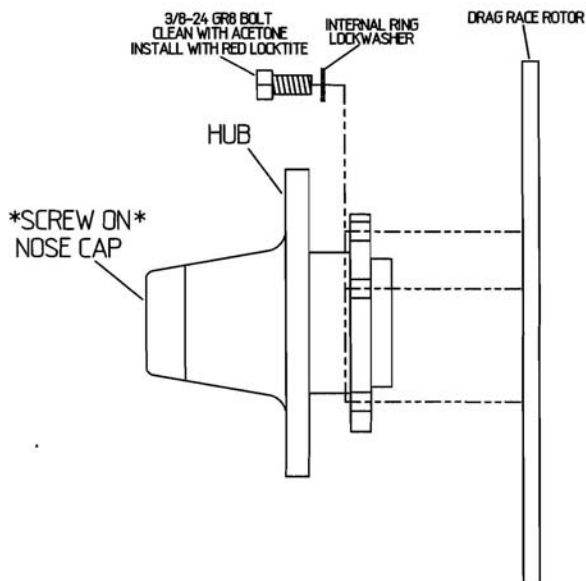
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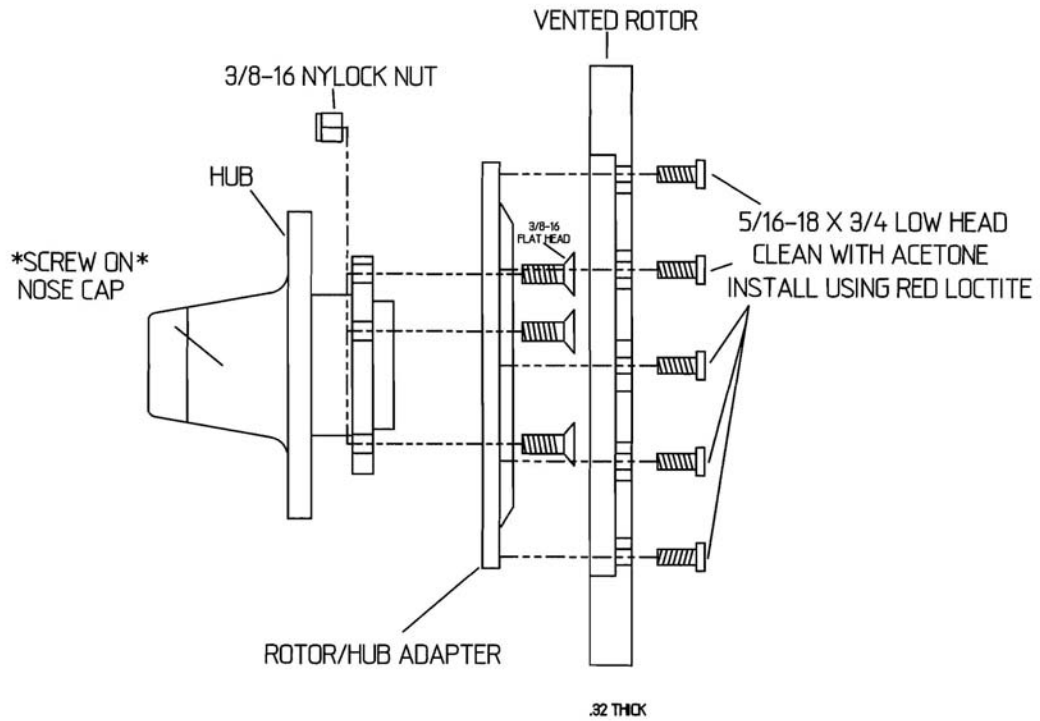
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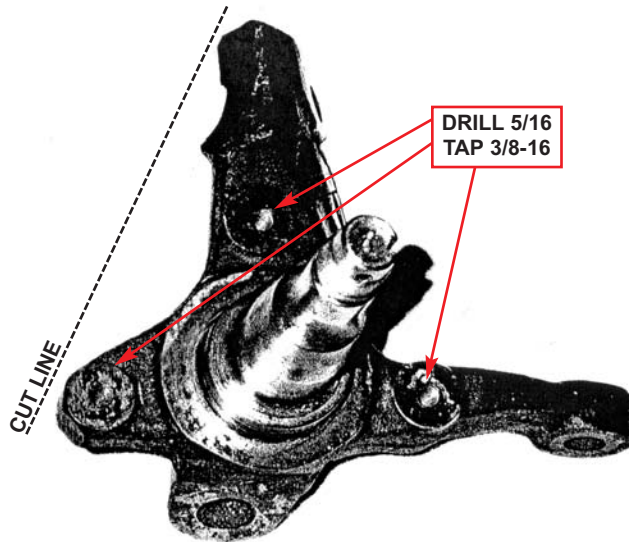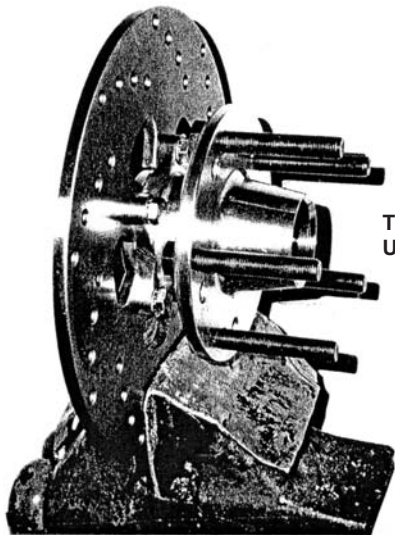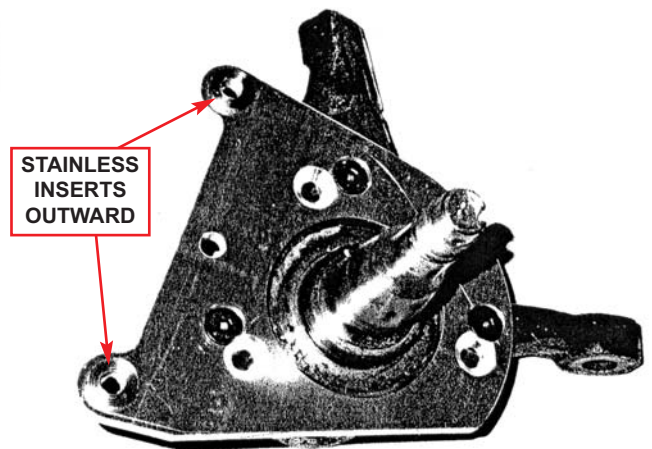
TORQUE TO 40 FT. LBS.
USING RED LOCTITE®

NOTE* HELD IN BENCH VISE

1. **GREASE BEARINGS**
2. INSTALL SEAL
3. PLACE ON SPINDLE AND
   ADJUST BEARINGS
4. INSTALL COTTER PIN
5. SLIDE CALIPER AND BRACKET
   ASSEMBLY OVER ROTOR
6. TIGHTEN 2 BOLTS TO 40 FT. LBS.
   USING RED LOCTITE® ON TOP
   BOLT AND JAM NUT ON BACK
   SIDE OF BOTTOM BOLT

AEROSPACE COMPONENTS

VENTED ROTOR

3/8-16 NYLOCK NUT

HUB

SCREW ON NOSE CAP

3/8-16 FLAT HEAD

5/16-18 X 3/4 LOW HEAD
CLEAN WITH ACETONE
INSTALL USING RED LOCTITE

ROTOR/HUB ADAPTER

.32 THICK

3/8-24 GR8 BOLT
CLEAN WITH ACETONE
INSTALL WITH RED LOCKTITE

INTERNAL RING LOCKWASHER

DRAG RACE ROTOR

HUB

SCREW ON NOSE CAP

WARNING:

ALL AEROSPACE PRODUCTS ARE FOR OFFROAD USE ONLY AND ARE NOT INTENDED FOR STREET USE!

SAFETY IS A REQUIREMENT!! TO ENSURE SAFETY A PARACHUTE, ROLLCAGE, 5 POINT HARNESS, D.O.T. OR SNELL APPROVED HELMET, FIRESUIT AND ALL OTHER NHRA OR IHRA REQUIRED SAFETY DEVICES SHOULD BE UTILIZED AND KEPT UP TO DATE. ALL RACERS SHOULD HOLD A VALID LICENSE FOR THE CLASS IN WHICH THE VEHICLE IS DESIGNED TO RUN. PROPER INSTALLATION OF COMPONENTS IS OF THE UPMOST IMPORTANCE. MAKE SURE THE PERSON INSTALLING ANY COMPONENT ON YOUR RACE CAR IS FAMILIAR WITH THE PROPER INSTALLATION OF THAT COMPONENT. Aerospace Components is not liable for any damages or injuries that may occur due to incorrect installation of parts or components!

Please remember, racing pushes all components that make up a vehicle to their max stress levels. When any part or component is pushed to the max its chances of failure rise dramatically. This is why race parts and components carry no warranty. This is also the same reason why safety gear should be used at all times and why fastener and part inspections should be performed regularly. By installing any Aerospace Components parts you agree that Aerospace components can not be held liable for any damages or injuries resulting from part or component failure. Remember this is racing…. parts break, systems may fail so be prepared mentally before a race. Know where the chute handle is, know where the kill switch is, make sure your safety restraints are tight and have a plan in mind for when things go wrong. Never place the transmission into park, reverse or use the transmission brake to stop a moving race car; if you try YOU WILL CRASH! The best way to stop a runaway race car is to release the parachute and kill the ignition. Please be safe at all times and hope for the best but plan for the worst.

*MOTORSPORTS ARE EXTREMELY DANGEROUS
AND MAY RESULT IN SEVERE INJURY OR EVEN DEATH.
RACE AT YOUR OWN RISK!*