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**TECHNICAL INSTRUCTIONS**

**727.347.9915**

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

**67-69 CAMARO, FIREBIRD  
63-74 CHEVY II, NOVA  
64-72 CHEVELLE, GTO  
CUTLESS, SKYLARK**

**RACE/STREET FRONT  
BRAKE KIT  
INSTRUCTIONS**

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## **67-69 CAMARO, FIREBIRD, 63-74 CHEVY II, NOVA 64-72 CHEVELLE, GTO, CUTLESS, SKYLARK**

### **Before getting started:**

A wide range of spindles use this kit, therefore, not all bolts and washers will be used for your particular application. You may be required to utilize the large lock washer as a spacer depending on caliper bracket alignment. The caliper bracket should be mounted on the opposite side of the steering arm.

### **Preparing the spindle:**

Remove all stock braking components from spindle. A bare spindle is necessary.

### **Attaching the caliper bracket:**

1. Find the bolts in the kit that will thread into your spindle.
2. Utilize the spacers given to mount the caliper bracket so it is perpendicular to the spindle snout. The bolt kit will fit a wide range of GM cars. If your spindle uses the 5/8" bolt for the top caliper bracket bolt, use the large lock washer as a spacer at the bottom (between the caliper bracket and the spindle).
3. Once the bracket is perpendicular to the spindle snout, torque to 50 ft-lbs with Red Loctite®.

### **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 Red Loctite® 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 install the outer bearing, retaining washer, and spindle nut.
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 pin 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.**

**Note:**

On rear kits if using factory hard line, a 1/8 pipe to a 3/16 inverted flare adapter is needed. If you have A 3/16 hard line, a 1/8 pipe to 1/4 inverted flare adapter is needed if you have 1/4 hard line.

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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.

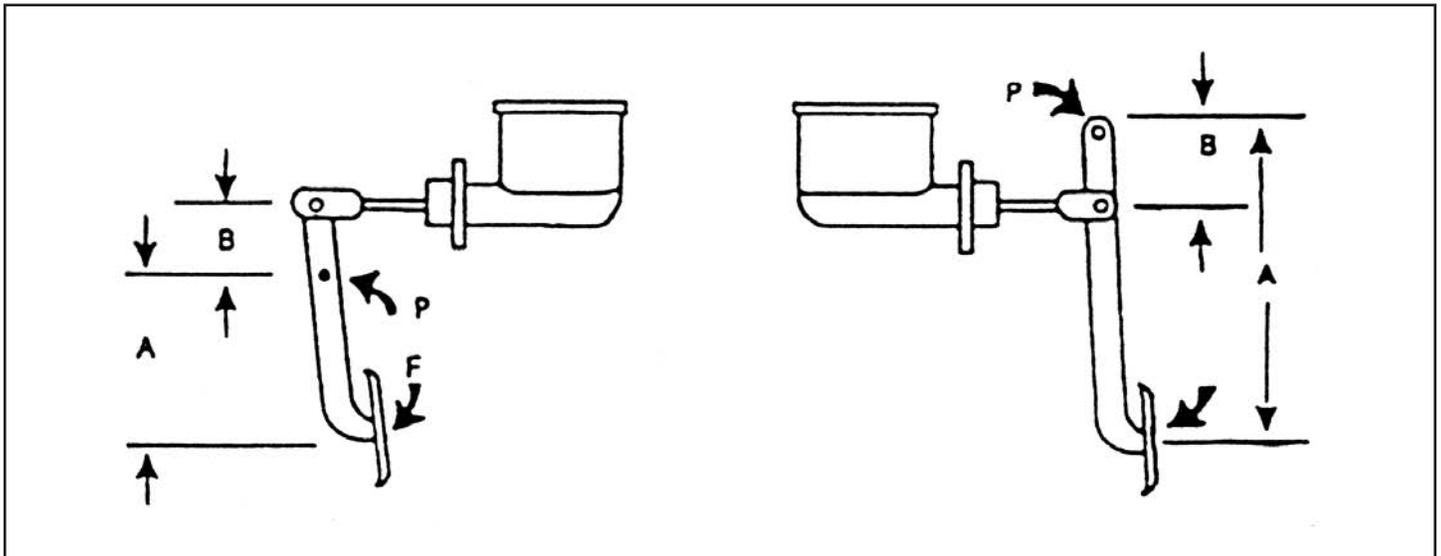
### Brake pad bedding:

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

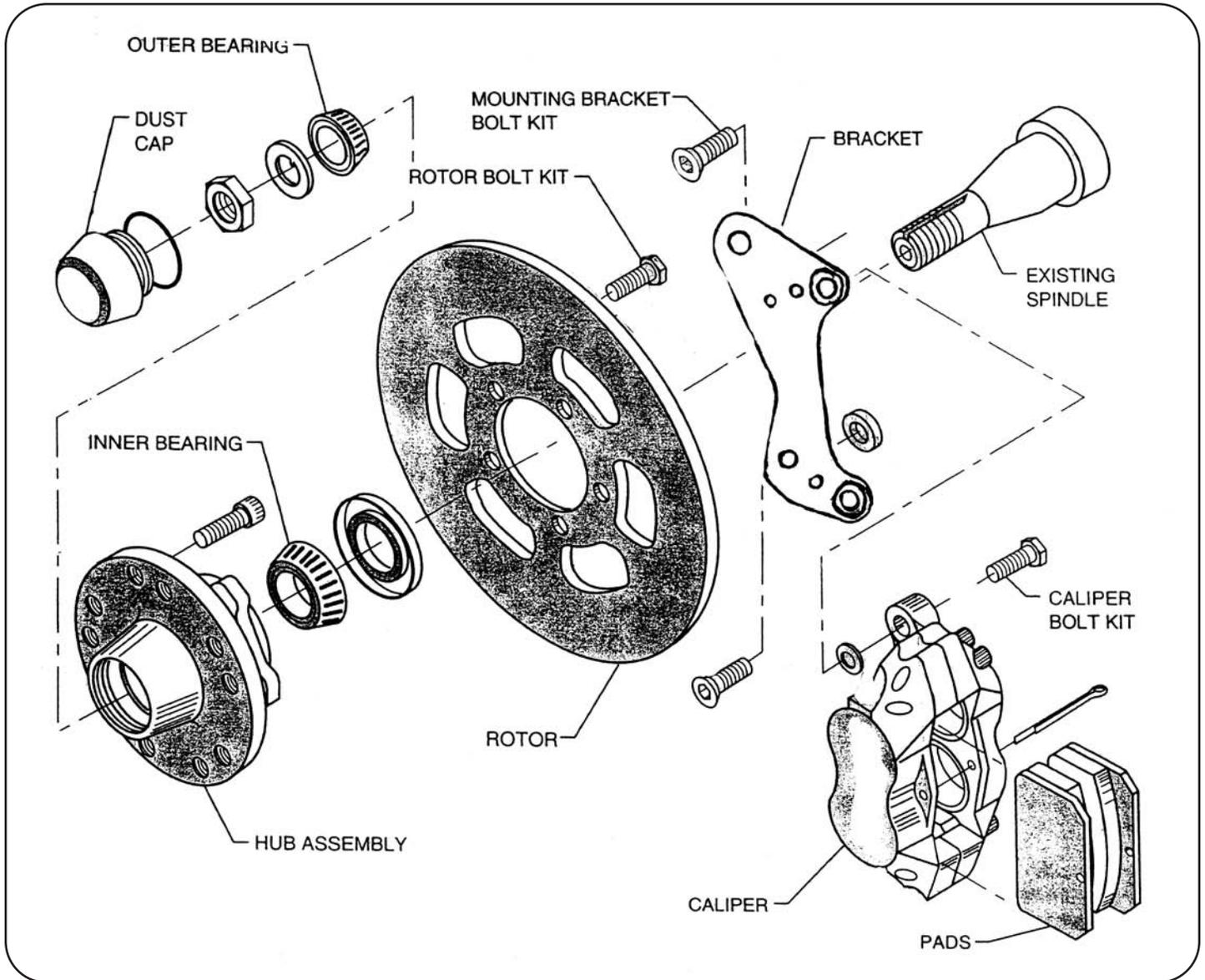
### Getting the right ratio:

In order to get the correct ratio 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 ratio should be 7:1. For example, if length "A" was 14 " and length "B" was 2", then  $14/2=7$ .

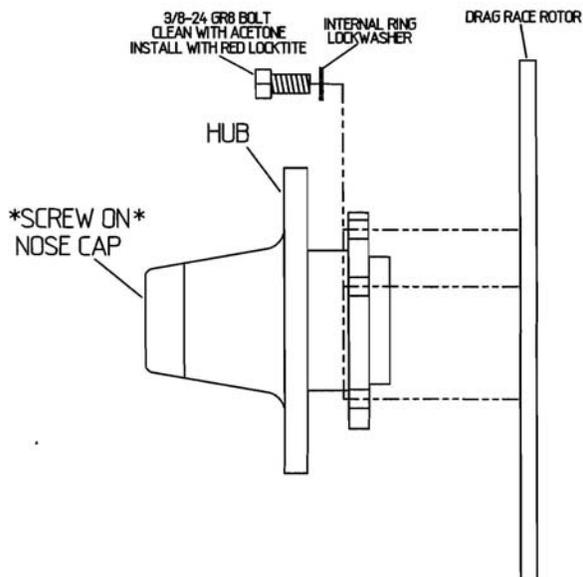
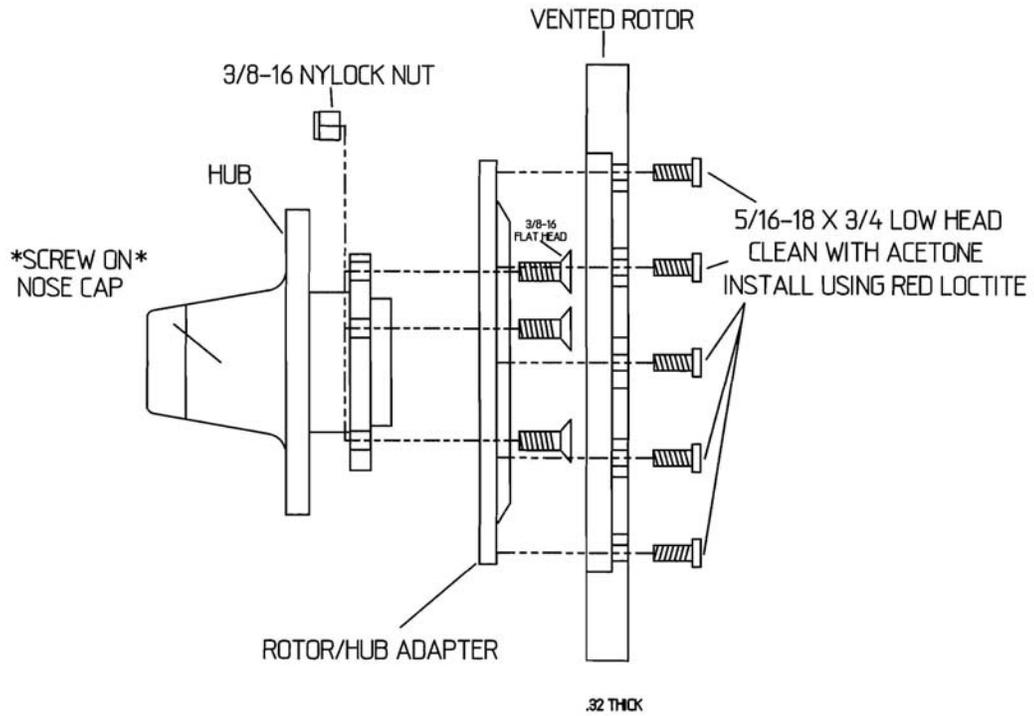


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The illustration is of a race kit. The street kit is the same except the rotor uses an adapter to bolt to the hub.





# 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!**