



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

82-92 CAMARO, FIREBIRD

RACE/STREET 4-PISTON FRONT BRAKE KIT INSTRUCTIONS

YOU WILL NEED TO MODIFY YOUR SPINDLE.

NOTE: You will need to cut the factory caliper mounting ears off to install this brake kit. When removing the ears, cut off as little as possible. A Sawzall with Bi-metal blade or cut off wheel in a die grinder or angle grinder works well, WEAR safety glasses while doing this. PLEASE READ ALL INSTRUCTIONS BEFORE YOU START INSTALLATION.

STEP 1; spindle preparation

1. Using the caliper mounting bracket as a guide mark where the spindle will need to be cut for adequate caliper clearance. Make sure you only remove enough material to gain clearance.
2. Drill 5/16 and tap 3/8-16 the mounting holes where the caliper bracket will attach then clean the holes with acetone, carb cleaner or brake cleaner. The holes that will be used are the old dust shield holes.

STEP 2; pre-assembly of parts

1. Clean all fasteners with acetone
2. Install wheel studs on the correct pattern to be used and tighten to 50ft lbs.
3. Bolt rotor adapters to brake hubs using the 3/8-16 x 1 1/4 flat head GR 8 bolts being sure to install bolts using 3/8 ny-lock nuts.
4. Bolt rotors to the adapter plates using the 5/16-18 x 3/4 low head screws with red loctite. Make sure these bolts have no oil residue and have been cleaned with acetone.
5. Pack inner and outer bearing's and lube grease seal with a small amount of bearing grease placed on the lip of the seal.
6. Place lubed inner bearings into the hub and then grease seal with spring facing in towards the hub and tap seal flush to aluminum lip on back of the hub using caution not to damage the seal.

7. This completes the hub assembly
8. Bolt the caliper to the mounting bracket with the caliper bleeder screw pointing straight up, the curved end of the bracket at the same end of the caliper as the bleeder screw and the head of the stainless insert in the bracket facing upward. The bolts used are 3/8-24x 1 ¼ hex head grade 8 with 1 lock washer and 1 flat washer on them. The bolts should install from the inside of the caliper through the caliper mounting ear and into the inserts on the bracket.
9. This completes the caliper assembly.

STEP 3; final assembly of parts

1. Slide hub/rotor assembly over the spindle shaft and install outer bearing then the tanged washer then nut lightly snug the nut.
2. Adjust the bearings by spinning the hub assembly while tightening the nut, ideal is to have zero lash and slight drag felt when rotating the hub assembly.
3. Place the spindle nut locking ring over the spindle nut lining up notches in ring with cotter pin hole in spindle shaft if the hole does not line up just spin the lock ring only until you can achieve alignment then place cotter pin through hole and bend the legs to prevent the spindle nut from loosening.
4. Install brake caliper assembly to the spindles with the bleeder screw above the brake line port so the bleed screw is to the highest point and the arc in bracket pointed up. You will need to use the 3/8-16 x 1 1/4 hex head bolts. Be sure caliper is centered on rotor within .050 of an inch by using the supplied shims. Torque to 35 ft-lbs.
5. The inlet port of the brake caliper is 1/8-27 pipe thread. The stock hoses will not work. Aerospace Components sells line kits to fit most applications.
6. Drop the brake pads into the calipers and secure them with the pad retaining bolt and nylock nut. Be sure the bolt extends through the locking feature of the nut. This nut should be replaced every time you replace your brake pads.
7. Make sure the brake pads are the only thing touching the rotor and that the rotor spins freely. This is a fixed caliper system and the bracket and rotor will have minimal clearance, but should not touch.

STEP 4; Brake lines .

1. Install 1/8 pipe thread brake line fitting into caliper using a few wraps of Teflon tape. Only steel or brass fitting should be used, **never** use aluminum fittings on a brake system.
2. Attach brake hard-line adapter to hard line on the car.
3. Attach the flexible hose between the hard line adapter and the brake caliper fitting.

STEP 5; Check all fasteners and brake lines

1. Make sure all fasteners are tightly loctited in place.
2. Make sure all fittings are tight
3. Check for wheel clearance between brakes and wheels as well as brake lines and wheels/tires.



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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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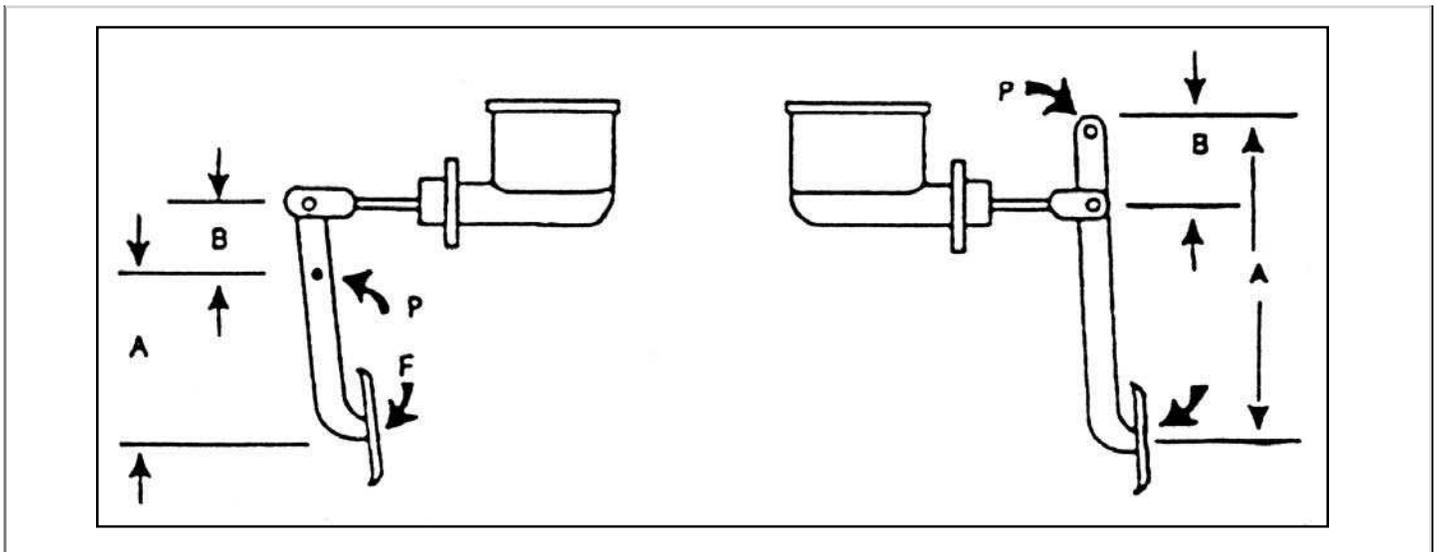
Bleeding the System: An initial gravity bleeding is recommended to remove most of the air in the system. This is accomplished by filling the master cylinder with fresh fluid and opening the bleed ports. Leave the top off the master cylinder. Fluid will flow into and fill the calipers. Be sure to keep 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 backing 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 $14/2=7$.





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, ROLL CAGE, 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!**