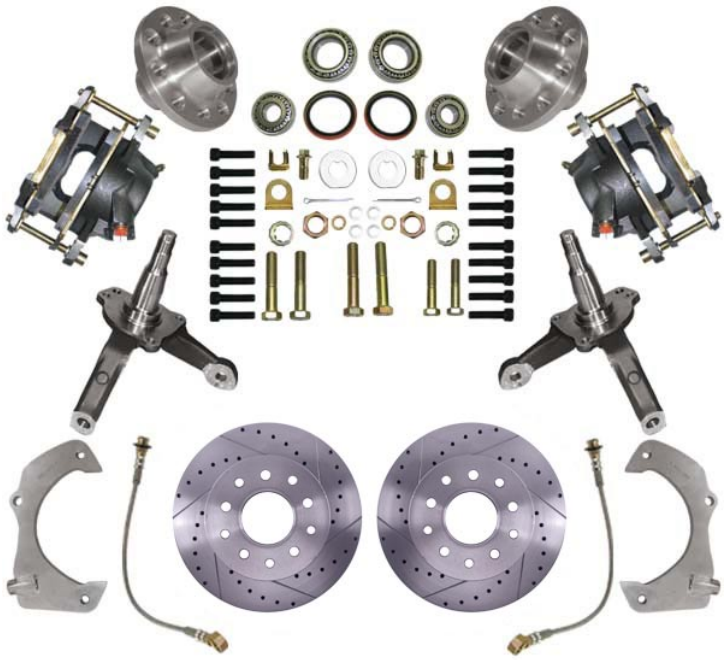
Mustang II Disc Brake Kit Instructions



* High performance kit shown. Regular kit has plain rotors & hoses.

WARNING

Proper operation of your brakes is essential for your safety and the safety of others. Any brake service should be performed ONLY by persons experienced in the installation and proper operation of brake systems. It is the responsibility of the person installing any brake component or kit to determine the suitability of the component or kit for the particular application. After installation and before operating your vehicle, be sure to test the function of the brakes under controlled conditions. DO NOT DRIVE WITH UNTESTED BRAKES!

IMPORTANT

Take time to read all the literature that came with this kit. Check the provided list of parts against what you received to ensure all parts are present. While this kit was designed to make the process of changing brake parts as simple as possible. NOTE: WITH SOME KITS IT MAY BE NECESSARY TO MAKE MINOR CHANGES TO YOUR CAR! READ ALL WARRANTY DISCLAIMERS AND RETURN POLICIES INCLUDED IN THIS KIT PRIOR TO INSTALLATION!

NOTE:

Before operating the vehicle after installation, test the function of the brakes under controlled conditions. Make several stops in a safe area from low speed and gradually work up to normal speeds. DO NOT DRIVE WITH UNTESTED BRAKES! Always utilize safely restraints when operating the vehicle. This kit is designed to be used on 74-78 Mustang II and 73-80 Pinto/Bobcat spindles. It will also fit most dropped spindles and tubular “A” arm combinations. Check the fit before painting or plating any parts. Painted, plated or modified parts are not accepted for return.

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Disc Brake Kit Identification Sheet

Part #:
CB7478L
CB7478R
Caliper
Brackets

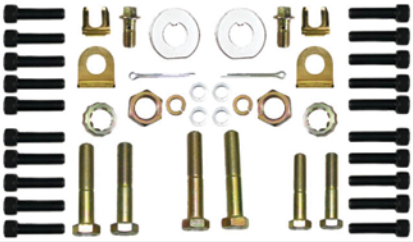
Part #: 155/156
Stock Height
Spindles

Part #: GM689
Multi-pattern Hubs

Part #: 2-155/156
2” Drop Spindles

Part #: A13
Inner Bearings

Part #: A12
Outer Bearings



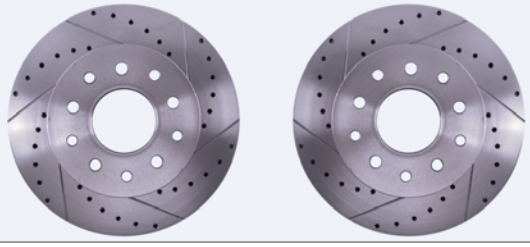
Part #: HWK7478
Hardware Kit

Part #:
20618103MBM
Dust Caps

Part #: 6815
Seals

Part #: 5560
Stock Rotor

Part #: 4039
7” Single Piston
Right Caliper
Uses D52 Pads



Part #: 5560LX
Left HP Rotor

Part #: 5560RX
Right HP Rotor

Part #: 4040
7” Single Piston
Left Caliper
Uses D52 Pads

Part #:
HSDBK-SS-7/16”
Stainless Hoses

Part #:
HSDBK-7/16”
Caliper Hoses

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Preparing your vehicle to install your brake system upgrade

1. Rack the vehicle.
2. If you don't have a rack, then you must take extra safety precautions.
3. Choose a firmly packed and level ground to jack up the vehicle.
4. Chock the rear wheels.
5. Jack the vehicle up and support it with jack stands and secure the pins.
6. Set the parking brake and put the transmission in park if automatic, reverse if manual transmission.
7. The front wheels should be allowed to free hang to relieve tension on the coil springs.

Remember: NEVER rely on jacks to support a vehicle! Always test the steadiness of your stands that are supporting the vehicle before attempting to work on a raised vehicle!

Preparing your parts

1. Locate the spindles and the inner wheel bearings. In order to install the inner bearings on new spindles, often you must remove .0004" from the inner bearing seating diameter. This can be accomplished with 240 grit emery paper and a rotary sanding motion on the spindle. Be sure to sand around the radius of the spindle which avoids flat spots. Continue this operation until the inner bearings can be slid onto the spindle without binding. Remember to use brake parts cleaner to keep all surfaces free of debris. Also use a lubricant such as bearing grease to ease them on. Do not grind or file on the spindle!
2. Pack all bearings with hi-temp wheel bearing grease. A bearing packing tool is ideal for the job.
3. Adhere the brake pads into place using disc brake quiet and bend outer brake tabs over calipers accordingly. Let them cure!
4. Mate up each threaded nut with its' designated bolt or threaded surface.
5. Group your kit parts to speed up the installation.
6. Check your quantity of components versus the items list.

FIGURE 1

Universal Bearing Packer
Jegs # 555-W1218

Components to inspect, replace or upgrade prior to and / or during installation of disc conversion kits

Tie rod ends and nuts	Adjustment sleeves	Control arm shafts, mounting bolts, & nuts
Control Arms	Idler arm and nut	Pitman Arm and nut
Upper Ball Joints and nuts	Lower Ball Joints and nuts	Shocks and hardware
Residual valves	Metering valves	Proportioning valves
Brake lines	Stainless steel brake lines	Stainless steel hardware

Suggestions:

- Take the time to identify any suspect parts that are not included in this kit.
- Consider making upgrades such as converting to polyurethane bushings, performance shocks, tubular a-arms, etc.
- Plan any Installation (s) of replacement parts during the various stages of the drum to disc conversion process.

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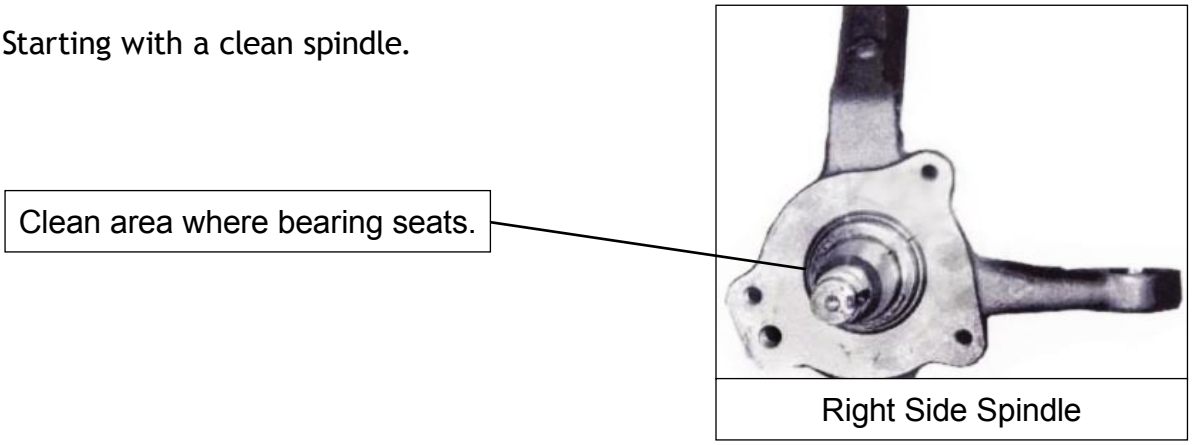
INSTALLATION OF THE DISC BRAKE KIT WILL REQUIRE THE USE OF THE FOLLOWING TOOLS & CHEMICALS:

Wheel bearing seal driver	Drum brake tool	Flare wrench set	Wheel chocks
3/8" ratchet drive set	3/8" Allen wrench or socket	Jack stands	Brake spring pliers
Box end wrench set	Ball joint fork	Tire iron	Brake bleeder wrench
Pliers	Screwdriver	Snips	Grease gun
Universal Bearing Packer	Line bending tool	Disc brake quiet	Wheel bearing grease
Ball pein hammer	Disc brake pad spreader tool	Brake Fluid	Brake cleaner
Caliper slide grease	Hand cleaner		

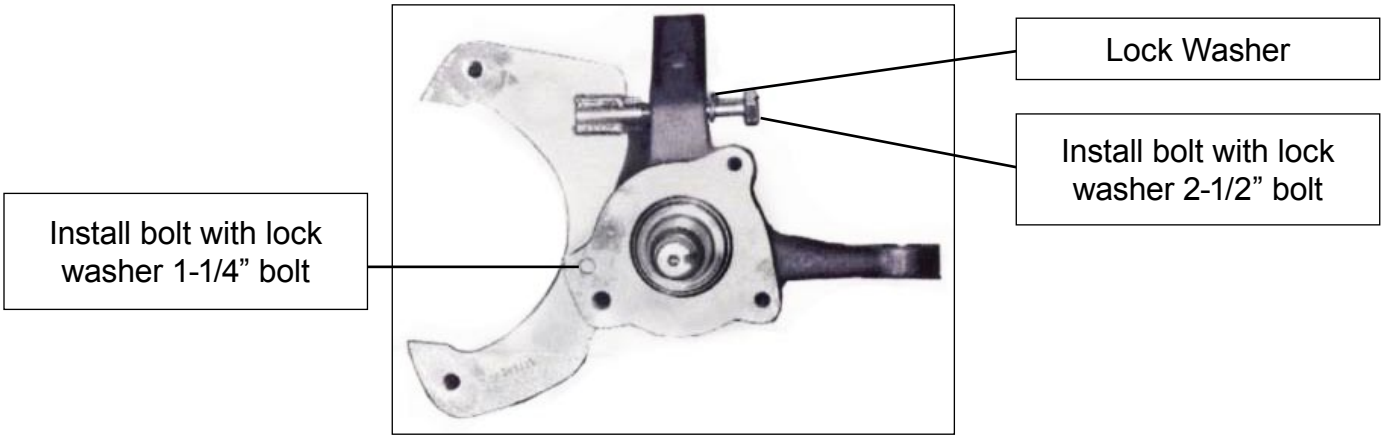
INSTRUCTIONS

1. Starting with a clean spindle.



Right Side Spindle

2. Mount the appropriate bracket to the spindle using the bolts supplied. Brackets stamped "R" are right- passenger side and "L" are left- drivers side.



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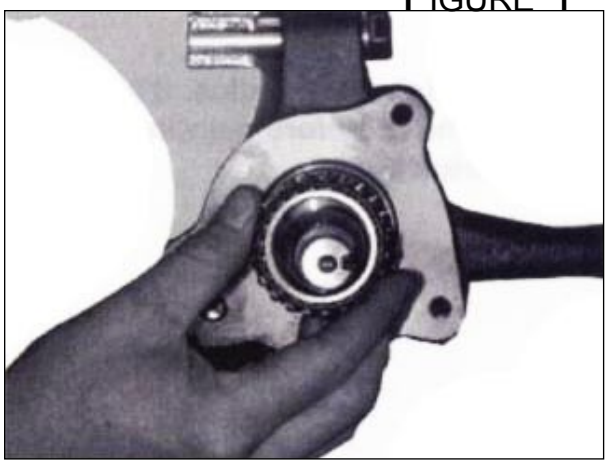
3. Install bearings with no grease at this time. Hold off on installing the seals at this time. Install inner bearing onto spindle (Figure 1). Turn bearing until it slides to the base of the spindle. If it doesn't go all the way down then keep turning it! If it still doesn't sit at the base then rub it with emery cloth until it sits at the base.

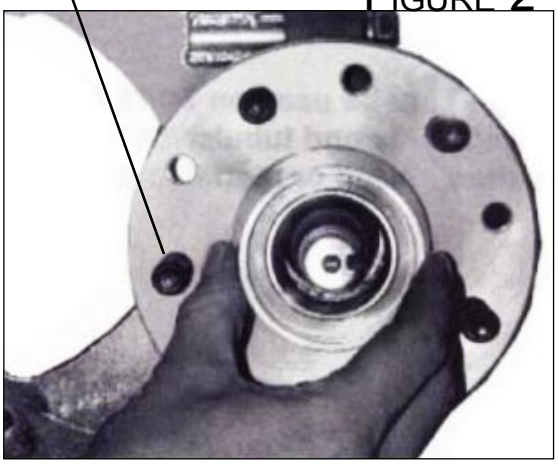
   Install rotor bolts into correct bolt circle desired on hub. The hub used is multi-pattern for a Ford or GM. The Small 7/16" bolts are for 5 x 4-3/4" GM and the large 1/2" bolts are for Ford 5 x 4-1/2". Determine your pattern and install correct lug nuts for your desired pattern. Slide hub into place. (Figure 2)

FIGURE 1



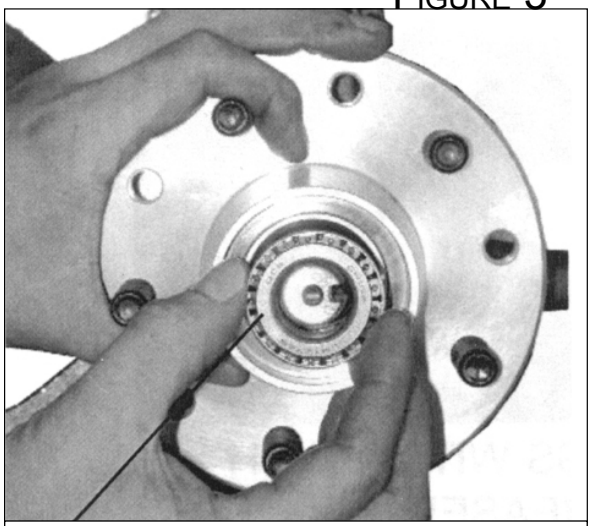
Rotor bolts installed from backside

FIGURE 2



4. Install the outer bearing. (Figure 3) Then install bearing washer and wheel nut. Make sure to finger tighten them only. Slide the rotor onto the hub and tighten lug nuts to secure rotor to hub. (Figure 4)

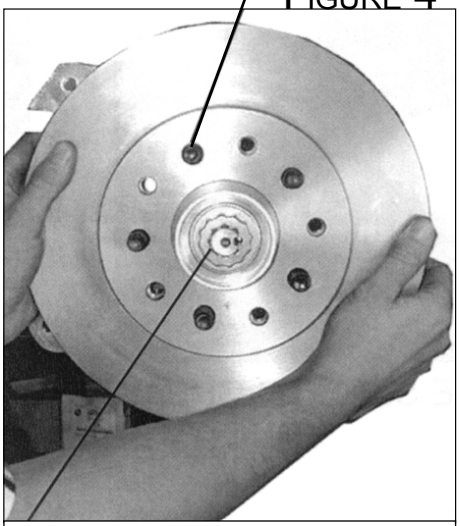
FIGURE 3



Installing the outer bearing.

Finger tighten lug nuts to secure rotor to hub.

FIGURE 4



Bearing washer, wheel nut, & cotter pin have already been installed.

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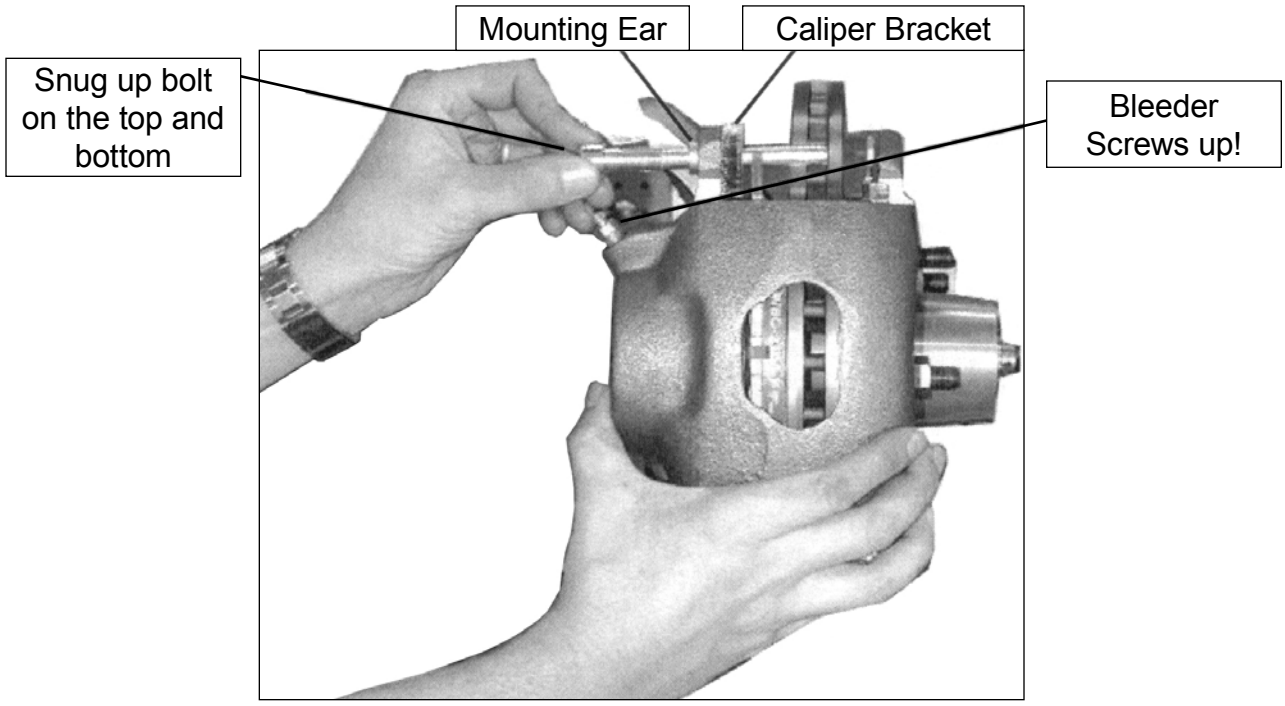
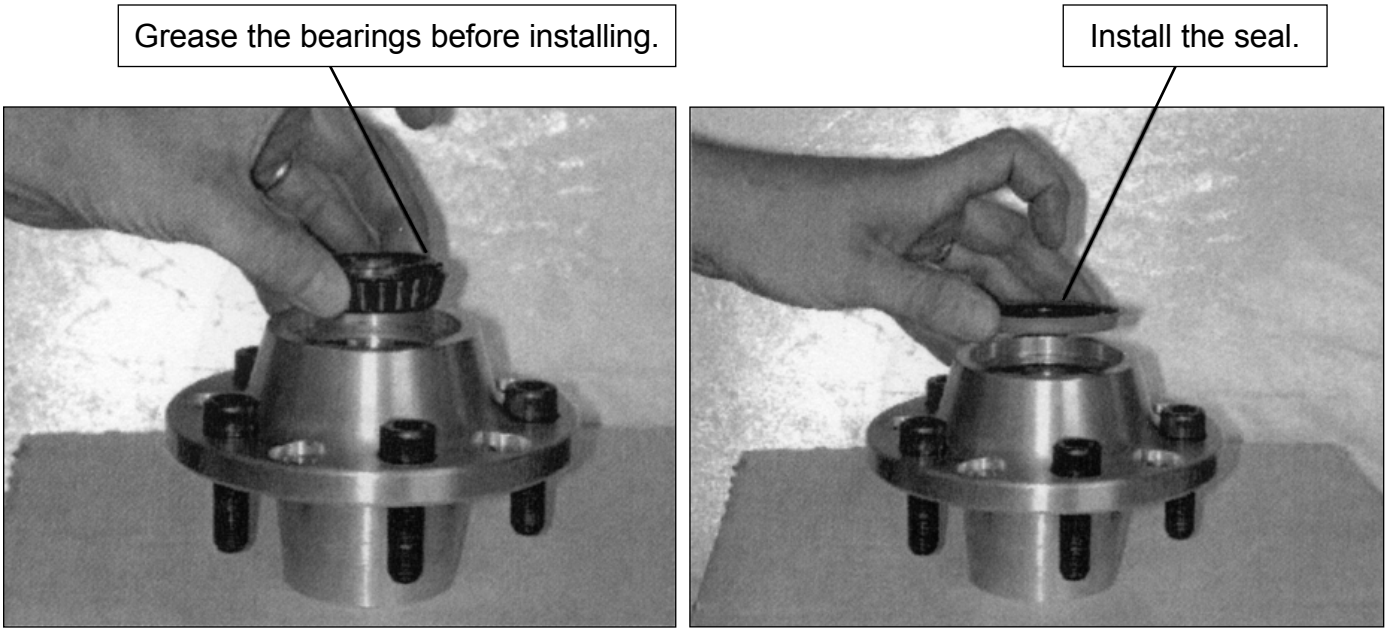
5. Install the calipers with pads using the supplied hardware. (Snug up bolts for now.) Remember the caliper bracket fits between the caliper and the mounting ears. (Bleeder screws up.) Once installed turn rotors to be sure everything runs true.



6. Now remove lug nuts, install tire and wheel. Check closely for adequate wheel clearance on the caliper before you turn the wheel. Also check wheel well clearance. If all is well turn the wheel very slowly to be sure there are no points of interference. If everything checks out OK, take apart. (Paint and plate parts at this time.) Now grease the wheel bearings and install the rotor seal. Then reassemble parts. Use new cotter pins for locking the wheel nuts. Now repeat process for other side!



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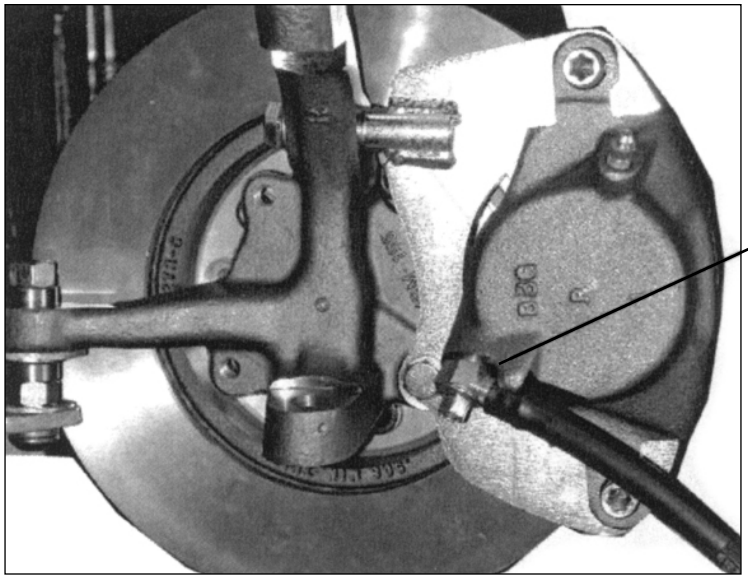
7. Now install the hoses after assembly and check for clearance at full left and right turns. Do this check with wheels on the ground. Bleed the entire system using new brake fluid. (DOT 4 is highly recommended.) CHECK THE BRAKE PEDAL FOR FIRMNESS BEFORE MOVING.



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TEN REASONS FOR A POOR BRAKE PEDAL

CAUSE	REASON
Bleeder screws on calipers not on top.	The bleeder screws on calipers must be at the 12:00 position on the caliper to allow all the air to escape during bleeding. A very common mistake installers will make is to reverse the side the caliper goes on giving you a situation where the caliper bleeder screw is facing down. It's also common to use the wrong caliper on a bolt on disc kit giving a situation where the bleeder hole is shifted from the 12:00 position producing a pocket of air at the top of the caliper bore which can not be dislodged. Check your bleeder hole orientation.
A defective master cylinder which does not hold pressure.	If brake fluid bypasses a pressure seal on a master cylinder you will get a pedal that fades. To test for this obtain two inverted flare plugs at an auto parts store and plug both master cylinder outlets. Try your pedal. If the pedal is high and firm the master is good. If the pedal fades the master is bad. Replace master as necessary.
No residual pressure valve to rear drums.	Drum brakes require the use of a 10 lb residual pressure valve in the line. This residual pressure counter balances the drum brake spring tension keeping the shoes close to the drums. This results in a higher firmer pedal. You can test this by clamping off the rear hose removing the rear drums from the system. Now test your pedal. If the pedal gets better you will need to splice a 10 lb residual pressure valve into the rear line.
Hard line that loops up.	Hard brake line that loops up and then back down will tend to trap air. It doesn't take much air to cause problems so check your lines carefully.
Incorrect master cylinder.	If the bore size of the master cylinder is too small for the fluid requirements of the system you will get a very poor pedal. This will happen most frequently with four piston calipers and with four wheel disc brakes. The only solution for this is to install a larger bore master cylinder or a true four wheel disc master.
Incorrectly bled or adjusted rear calipers.	Rear calipers that have an internal parking brake with a lever can be troublesome. These calipers must be adjusted so that the piston is moved out and the pads are close to the rotor. If this initial adjustment is not made the pistons will travel outward during activation but no squeezing of the rotor will occur. This can be checked by clamping off the rear hoses and checking if the pedal gets better. Adjust as necessary.
Incorrect booster pin length.	The booster pin that pushes on the master cylinder must almost be touching the master cylinder piston face. A gap larger than 1/32" will begin to introduce a spongy pedal. Adjust as necessary.
Silicone brake fluid.	While silicone fluid is great because it does not attack paint it also aerates very easily and can give a spongy pedal.
Rear wheel cylinders too large.	Rear drum wheel cylinders that are too large will give a poor pedal. Check as in step six above.
Loose front wheel bearings.	Loose front wheel bearings will cause rotor wobble. This will cause the caliper pistons to retract too far into the caliper giving a spongy pedal every time you hit the brakes. Check and adjust as necessary.

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UNIVERSAL FRONT DISC BRAKE CHECKLIST

[ ] 1. Spindle properly secured to ball joints and tie rods with castle nut and cotter pin.
[ ] 2. All mounting bolts properly tightened.
[ ] 3. Wheel bearings properly packed with grease.
[ ] 4. Inner bearing must be installed before grease seal.
[ ] 5. Rotor I bearings slide onto spindle with ease.
[ ] 6. Washer, castle nut properly torqued and cotter pin installed.
[ ] 7. Calipers installed and properly torqued.
[ ] 8. Spin rotor and check for any interference. (If any interference is found, resolve problem before driving vehicle.)
[ ] 9. Flex lines are properly installed with no interference.
[ ] 10. Power booster (if applicable) installed properly.
[ ] 11. Master cylinder bench bled according to the instructions.
[ ] 12. All brake lines are properly tightened and free of leaks.
[ ] 13. Turn wheels lock to lock and check for any interference.
[ ] 14. Place wheel onto vehicle and spin the wheel to make sure there is no interference between the brakes and wheel.

UNIVERSAL REAR DISC BRAKE CHECKLIST

[ ] 1. All bolts on base bracket properly tightened.
[ ] 2. All caliper mounting bolts properly tightened.
[ ] 3. Rotor slides onto axle with ease.
[ ] 4. No interference with rotor and any other parts (splash shield, brackets, etc.).
[ ] 5. Caliper is centered over the rotor (because of difference in axle lengths, you may have to shim caliper in or out).
[ ] 6. No interference with caliper and rotor.
[ ] 7. All brake lines are tight with no leaks.
[ ] 8. Parking brake is properly adjusted and not dragging, with vehicle on ground.
[ ] 9. Adjustable proportioning valve installed (if applicable).
[ ] 10. Distribution block modification made (if applicable).
[ ] 11. Brake system properly bled.

WITH EVERY NEW SET OF ROTORS AND PADS, YOU SHOULD GIVE YOUR VEHICLE 200 - 250 MILES OF EASY DRIVING TO PROPERLY SEAT THE PADS TO THE ROTORS. DO NOT TAKE THE VEHICLE UP TO 60 MPH AND JAM ON THE BRAKES BEFORE THE FIRST 200 - 250 MILE BREAK IN PERIOD IS OVER, OR YOU WILL GLAZE THE PADS AND ROTORS.

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