FULL SIZE FORD DISC BRAKE KIT & POWER BRAKE UNIT

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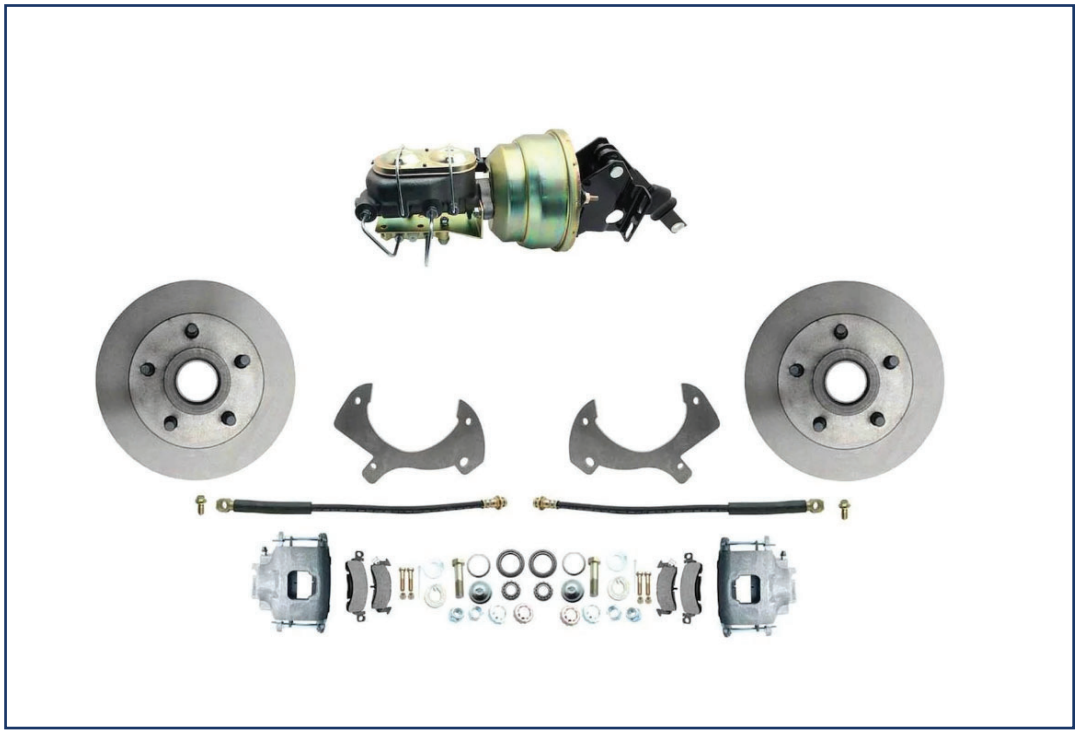


INSTALLATION INSTRUCTIONS

JEGS Performance Products
1-800-345-4545 jegs.com

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. Before beginning installation check the provided list of parts against what you received to ensure that 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 Always utilize safely restraints when operating the vehicle. The installation of disc brakes will require the use of 15” wheels. Any attempt to install disc brake with a 14” wheel will be the customer’s responsibility.

PARTS INCLUDED WITH THIS KIT:		
PART #	**DESCRIPTION**	**QUANTITY**
FSFD	Caliper Bracket	2
5405	Rotors	2
HWK5772	Hardware Kit	1
A12	Inner Bearings	2
A13	Outer Bearings	2
A2	Outer Bearing	2
A6	Inner Bearings	2
6815	Seals	2
20618101MBM	Dust Caps	2
4045-4046	Calipers	2
PERFORMANCE UPGRADE PARTS:		
5405	Standard Rotors	2
HSDBKSS-10mm	Stainless steel braided hoses	2
OPTIONAL PARTS (NOT INCLUDED WITH KIT, AVAILABLE FOR SEPERATE PURCHASE):		
	Power Booster	
	Master Cylinder	
	Proportioning Valve Kit	
	Vacuum Hose & Fittings	
	Firewall Bracket	

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.

IMPORTANT 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!

DISSEMBLE THE FRONT ROTORS:

1. Remove wheels and retain the lugs nuts for later use. Replace any that are damaged.
2. Remove the dust caps, the cotter pins, the nut cages, washers and spindle nuts, and attempt to remove the brake drum.
3. If the drum will not come off, remove the rubber cover from the backing plate and insert a narrow screwdriver or adjusting tool to relax the self-adjuster mechanisms. You may need to disengage the adjusting lever from the adjusting screw to be able to pull the brake drums over the shoes.
4. With the tool, retract the brake shoes so you can remove the brake drums, wheels bearings and grease seals.
5. Drain the brake fluid from the front circuit by loosening the wheel cylinder bleeder screws. Protect any painted surfaces with rags from brake fluid.
6. Carefully remove the metal brake lines from the rubber flex hoses and remove the hoses from their anchor mounts. Cover the ends of the brake lines with rags to protect painted surfaces.
7. Remove the brake shoes and the drum backing plates so all that remains are the factory drum spindles. For this kit, the factory spindles will be used so proceed to spindle preparation.

COMPONENTS TO INSPECT, REPLACE OR UPGRADE 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.

INSTALLATION OF THE DISC BRAKE KIT REQUIRES 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		

SPINDLE PREPERATION

1. Use brake cleaner to clean the spindles thoroughly.
2. Inspect the spindles for any signs of stress cracks or damage that would make them unfit for continued service. Inspect the outer tie rod ends and the steering arm through holes. Inspect the ball joints and their mounting holes in the spindles for excessive play. Replace tie rods, ball joints or spindles if necessary.
3. There are several key areas that require special attention. Perform each of the following steps:
   A. Inspect the bearing landings on the arbors of the spindles. The shafts should be free of nicks and burrs
   B. Inspect and clean out the threads of the hole on the top of the spindle that secured the drum backing plate. These thread will be re-used and must be good. Re-tap them if necessary.
   C. Light grinding will be necessary to mount the lower mounting tab of the caliper bracket on the rear of the spindle. The caliper bracket mounts on the spindle in the position that has the caliper directly over the steering arms. So on the side with the integrated steering arm lightly grind the contact area. (FIG 1)

MOUNT THE CALIPER BRACKET

1. Test fit the caliper bracket on the spindle. The caliper bracket mounts on opposite faces of the spindle (figure 2). The top of the bracket mounts on the shaft side of the spindle and the squared tab mounts to the rear side over the through hole next to the steering arm. Again, the bracket should rest flush against both mounting surfaces on the spindle. If it does not mount flush, grind the rear mounting tab section adjacent to the steering arm until it mounts flush. You may need to do a little chamfering on the bracket first. Then if necessary, you might have to do a little bit of grinding in that same area on the back of the stub. It's not hard, but just needs to be trial fitted a couple of times. Just remove some metal along the length of this straight bit. (FIG 2)
2. Proceed to mounting the rotor. Once bracket install is complete. (FIG 3)

FIG 1.

FIG 2.

FIG 3.

MOUNT THE ROTOR

1. In the various Ford vehicles there were two different spindle shaft sizes used and we provide both bearing sizes and spindle washers in this kit. You will be discarding one of the two sets and their spindle washers.
2. To determine which bearing set to use, (1965 & Up requires larger bearing) measure the diameter of the inner bearing location on the spindle arbor to see if it is 1.250" or 1.375" (FIG 4). **If it measures 1.250", you will be using the A2 (LM 11949) and A6 (LM 67048) bearings. If it measures 1.375", you will be using the A12 (LM 12749) and A13 (L68149) bearings.**
3. The rotors provided in this kit already have races inserted in them. But if you determined you will be using the A2 and A6 bearings, you will need to remove the races in the 5405 rotor. In other words, the larger diameter spindle shafts require you to changes the races in the rotor provided. **To do this, use a punch to tap out the old races and use a bearing and race driver to install the races from A2 and A6. The race number for A2 is LM11910, and the race number for A6 is L67010.**
4. Inspect the rollers of the bearings and verify they spin freely.
   Test fit the bearings on both spindles to make sure the install with ease before final assembly.

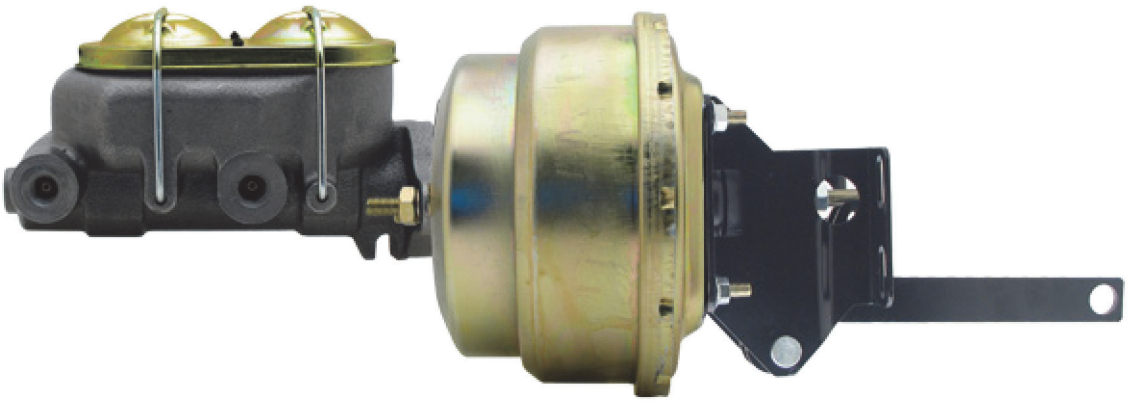
FIG 4.

5. Use a bearing packing tool to thoroughly grease each bearing prior to installation with high temp, high quality wheel bearing grease.
6. With the correct races installed in the rotor, insert the greased inner bearing into the rotor.
7. Next tap the grease seal in flush using the bearing driver tool or a wooden block. The lip must face inward towards the hub.
8. With inner bearing and seal installed, put the rotor on to the spindle shaft.
9. Pack more wheel bearing grease the inside hub of the rotor by hand until the hub is completely filled.
10. Install the greased outer bearing, the appropriate sized keyed washer, the spindle nut, and the spindle nut cage.
11. With the wheel rotating, torque the spindle nut to 17 to 25 Ft. lbs.
12. Back off ½ turn. Spin rotor again and torque again to 10 to 15 in lbs.
13. Install the cotter pin and bend the tips to secure it.
14. Verify the rotors spin freely.
15. Proceed to mounting the calipers.

MOUNTING THE CALIPER

1. Remove the caliper mounting bolts from their sleeves and coat them with caliper slide grease.
2. Remove the brake pads from the calipers and put disc brake quiet on the back side of the pads. Next test fit your inner wheel bearing onto the spindle. (See preparing your parts)
3. As the disc brake quiet becomes tacky, mount the pads back into the caliper. Be sure to secure the pad clip to the interior pad. Pack the bearings and the rotors with grease if this has yet to be done.
4. Use pliers or a hammer to bend the mounting ears of the outer pads so they "grip" the caliper body and are secure and don't rattle.
5. Adjust the caliper bolt slide sleeves, and insert the caliper slide bolts back into position.
6. Install the calipers into the caliper bracket with the bleeder screws pointed up.

POWER BRAKE UNIT
& MASTER CYLINDER KIT



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UNBOXING YOUR KIT:

1. Remove new booster, bracket assembly and master cylinder from their boxes and inspect the parts.
2. New boosters come with a protective plastic or rubber boot over the front pin area for shipping purposes. Remove this before the installation.
3. This kit features a universal booster that has the short pin in the front of the booster. The new cylinder may have a **piston adapter** to convert it from deep to shallow hole. Install the piston adapter. Use a shallow pocket master cylinder on a power brake booster with the short pin.

Piston Adapter

REMOVING AN OLD MASTER CYLINDER:

4. Perform brake work on a level surface. Chock the wheels, set the emergency brake and put the transmission in Park.
5. Protect painted surfaces from brake fluid and place absorbent materials such as rags under the master cylinder. Since brake fluid is caustic to paint, use a fender cover mat.
6. Spray the master cylinder nuts and fittings with penetrating spray.
7. Mark which lines connect to which port on the master cylinder and which supplies fluid to the front and rear wheels respectively. (If you have the ability to take a digital picture for reference before disassembling the lines from the valve this would be a good time to do so.)
8. Make a note of the brake pedal ride height inside the cab of the vehicle. Use a wooden block to rest the pedal on so you will have a reference when you set it back up. (If you have the ability to take a digital picture for reference before disassembling the lines from the valve this would be a good time to do so.)
9. Use flare nut wrenches to loosen the master cylinder nuts. On stubborn fittings, sometimes attempting to tighten them before loosening them helps break them free. Be careful with the tube nut hex heads and tubes themselves if you are re-using them.
10. Again, to protect important painted surfaces you might cover the master cylinder with a plastic trash bag and or wrap it with shop rags or towels. Consider removing all of the old brake fluid from master cylinder first.
11. Inside the car, disconnect the master cylinder rod's clevis from the brake pedal swing arm and note which hole it was connected to.

PREP & INSTALL PEDAL

12. Clean the firewall where the master cylinder was mounted, and grind down any welded areas, repaint if necessary. The bracket has to mount flush to the firewall.
13. Place the new bracket assembly on to the firewall and guide its' pedal rod arm through the hole. Re-use the master cylinder mounting studs and fasten the nuts and cinch the bracket up to the firewall. Hand tighten these for now.
14. With the bracket secured to the firewall, mark the location on the wall for the two upper support holes. You may need to drill two new upper holes or your car may already have bolt holes in these locations. You do not need to tighten the upper two bolts at this time.
15. Inside the cabin area of the car, locate the brake pedal swing arm and connect it to the bracket's pedal rod arm from step 13.
16. Using a wooden block or similar object, position the foot pad at the desired ride height versus the floor pan.
17. Next position the brake booster on to the pedal bracket assembly. You will then see that the all threaded rod from the rear of the booster may need to be shortened to mount it. In your kit are 4 black spacers if you need to space the booster away from the bracket. (Shown Below Fig 1, 2, 3)
18. Mark the threaded rod where you intend to cut it. **TIP Screw the jam nut all the way to the felt. If, necessary, you may remove the black rubber dust boot to do so. Cut the rod with either a hack saw or cut off wheel. File the cut surfaces smooth so a nut can start on the threads. Replace the rubber dust boot. Remove nut from threaded rod to verify you made a smooth cut. Jam nut will be replaced with clevis.

Fig. 1.

Fig. 2.

Fig. 3.

19. Remove the pedal bracket unit from the swing arm and firewall and place on the work bench.
20. Using pliers, relax the cotton pin and remove the yellow zinc clevis from the bracket. Place the washers and cotter pins aside.
21. Screw the yellow zinc clevis onto the newly cut all thread rod on the rear of the booster (Again, you may need to file the edges of the rod where you cut it so the clevis can thread on).

NOTE**Clevis will need to be removed off swing pedal arm assembly. Be sure not to loose any of the washers or pins as you will need them later to re-assemble.

Fig. 4.

Fig. 5.

Fig. 6.

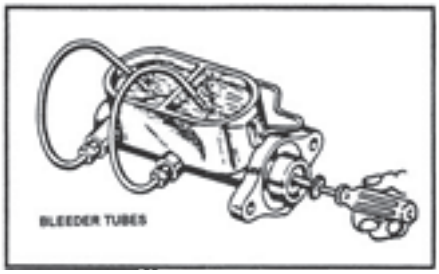
22. With the clevis on the booster rod, bring the pedal assembly close to the booster so you can insert the dowel through the clevis and place the washers and secure the cotter pin. At this point, the booster and clevis should be attached to the swivel section of the pedal bracket. (Fig 5.)
23. Now swing one half of the pedal's mounting brackets on to the rear face of the booster. (Fig 6.)
    Attach the nuts. Swing the second half of the pedal's mounting brackets on to the rear face of the booster. Attach the nuts. At this point the booster is attached to the pedal assembly. (Fig 7.)
24. Place the thin metal dust plate and rubber boot on the pedal bracket's connecting arm where it contacts the firewall. Another adjustment can be made with the additional flat rod included in the kit

Fig. 7.

Fig. 8.

25. Mount the pedal and booster assembly on to the firewall and hand tighten the mounting nuts.
26. Connect the brake pedal to the pedal swing arm inside the cabin area of the car. Secure the pedal attachment using its' original nut and bolt remove the wooden block and test the range of travel of the pedal. Adjust the clevis from Fig. 4. as necessary to your preferred pedal ride height.
27. Perform a final tightening of all four nuts that hold the bracket to the firewall.
28. Proceed to bench bleeding and installing the master cylinder onto the brake booster.

BLEEDING MASTER CYLINDER



- Use the plastic clip to secure the hoses that return into the reservoir so that the hose ends are below the fluid line.
  ****The hose tips must be submerged under the fluid level.**
- Using a blunt tool or punch, push the pistons ¾”-1” in with a series of steady strokes to expel air bubbles. This may take several cycles to expel all of the bubbles. Do this until it cannot be compressed more than 1/8”, & no air bubbles are visible.
- Remove the bleeder kit. Install the lid.
- Wipe off any excess brake fluid
- Position & place clean shop rags or towels in the engine compartment of the car to protect painted surfaces. Torque the hex nuts to 20-25ft. lbs.

INSTALL THE PROPORTIONING VALVE AND BRACKET

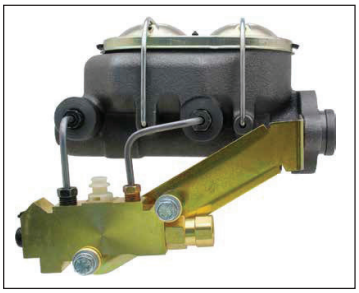


FIG. 1

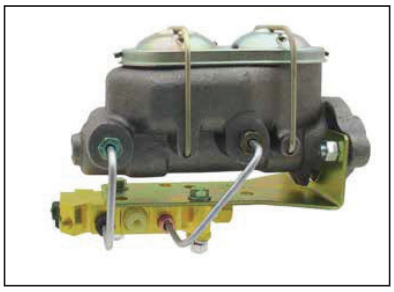


FIG. 2

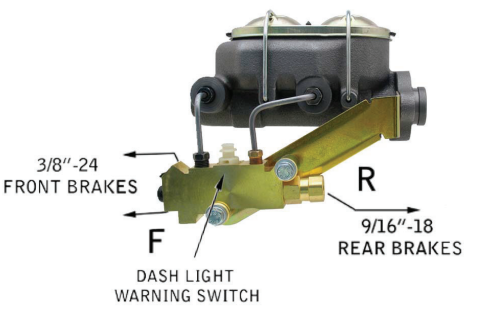
INSTALLING PROPORTIONING VALVE KIT (LEFT MOUNT AS SHOWN FIG.1)

- Verify that you have the following: 1 valve, 2 lines, 1 bracket, 1 harness connector, 1 bag that contains 2 bolts, 4 washers and 2 nuts (bottom mount only)
- Place the valve on your work bench and position the valve as shown with the large hex nut end towards your right.
- Position the bracket behind the valve and line up the bolt holes.
- Next locate the small bag with the bolts and washers.
- Pick up both bolts and place a lock washer and then a flat washer onto each.
- Insert the bolt through the valve into the bracket. Hand tighten it.
- Install and hand tighten the second bolt with its' washers into the valve and bracket.
- Next hand tighten the brake lines as shown.
- The next step can be done with the master cylinder either on or off of the brake booster or firewall.
- As a unit position the valve and bracket assembly up to the ports of the master cylinder.
- Hand tighten each line (Do Not Use Teflon tape) as you place the brackets on to their mount-ing studs which are in front of the master cylinder mounting ears.
- Use a flare nut or box end wrench to tighten the tube nuts on the brake lines.
- Place the mounting nut onto the studs which the proportioning valve mounts. Tighten it down.
- Connect the dash warning light connector to the factory harness.

TECH TIP

Several MBM master cylinders are equipped with a piston adapter making them more versatile. This allows MBM masters to be used for power brake and manual brake applications. When installing a MBM master on power brakes, insert the piston adapter with the concave pocket facing the booster pin. On manual brake applications remove the piston adapter. (If the booster being used has a long front pin, remove the piston adapter.)

PROPORTIONING VALVE LINE ROUTING

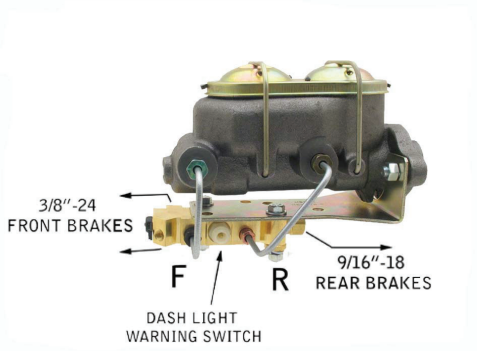


INSTALLING PROPORTIONING VALVE KIT (BOTTOM MOUNT AS SHOWN BELOW

Verify that you have the following: 1 valve, 2 lines, 1 bracket, 1 harness connector, 1 bag that contains 2 bolts, 4 washers and 2 nuts (bottom mount only)

- Place the valve on its' edge with the white switch facing you on your work bench and position the valve as shown with the large hex nut end towards your right.
- Place the bracket and valve in the position shown.
- Position the bracket on top of the valve and line up the bolt holes.
- Next locate the small bag with the bolts and washers, and empty the parts onto the work bench.
- Pick up both bolts and place a lock washer and then a flat washer onto each.
- Be sure to have the bracket and valve in a position that allows you to insert the bolts through the valve and through the bracket.
- Push each bolt through the valve and bracket and secure the hex nuts. Hand tighten.
- Locate the brake lines.
- Identify which line will connect to which port on your master cylinder.
- If you have a dual bail wire master cylinder, the lines will mount side by side.
- Next hand tighten the brake lines as shown onto the valve.
- The next step can be done with the master cylinder either on or off of the brake booster or firewall.
- As a unit position the valve and bracket assembly up to the ports of the master cylinder.
- Hand tighten each line (Do Not Use Teflon tape) as you place the brackets on to their mounting studs which are in front of the master cylinder mounting ears.
- Use a flare nut or box end wrench to tighten the tube nuts on the brake lines.
- Once satisfied with the brake line positions, finish tightening the valve's brackets bolts and nuts.
- Place the mounting nuts onto the studs which the proportioning valve bracket mounts & tighten it down.
- Connect the dash warning light connector to the factory harness.

TECH TIP

Several MBM master cylinders are equipped with a piston adapter making them more versatile. This allows MBM masters to be used for power brake and manual brake applications. When installing a MBM master on power brakes, insert the piston adapter with the concave pocket facing the booster pin. On manual brake applications remove the piston adapter. (If the booster being used has a long front pin, remove the piston adapter.)

PROPORTIONING VALVE LINE ROUTING