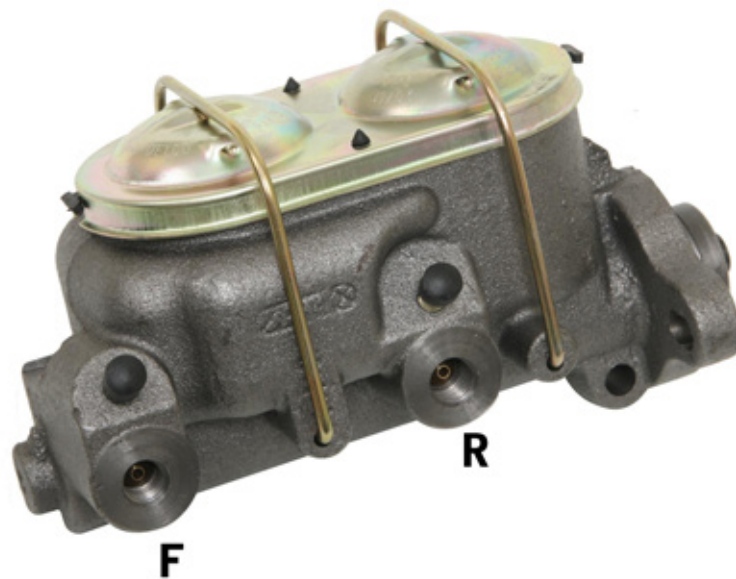


# MC-309

## 1966-1977 GM RESTORATION MASTER CYLINDER



**SPECS:**

**GM RESTORATION PART WITH CASTING NUMBERS 5468309**

Bore Size: 1.125"

9/16"-18 (Rear Port) Rear Brakes

1/2"-20 (Front Port) Front Brakes

## UNBOXING YOUR KIT:

1. 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

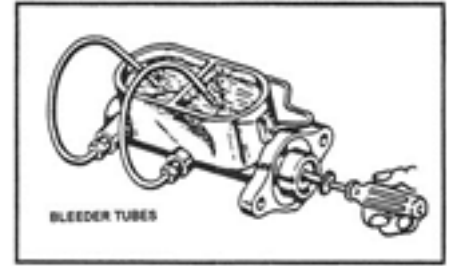


## REMOVING AN OLD MASTER CYLINDER:

2. Perform brake work on a level surface. Chock the wheels, set the emergency brake and put the transmission in Park.
3. 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.
4. Spray the master cylinder nuts and fittings with penetrating spray.
5. 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.)
6. 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)
7. 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.
8. 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.
9. Inside the car, disconnect the master cylinder rod's clevis from the brake pedal swing arm and note which hole it was connected to.

## BLEEDING MASTER CYLINDER

10. Mount the master cylinder in a vice and fill with DOT 3 or DOT4 brake fluid. 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.**
11. Using a blunt tool or punch, push the pistons  $\frac{3}{4}$ "-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  $\frac{1}{8}$ ", & no air bubbles are visible.
12. Remove the bleeder kit. Install the lid.
13. Wipe off any excess brake fluid
14. Position & place clean shop rags or towels in the engine compartment of the car to protect painted surfaces.
15. If mounting the master on a power brake unit with a short pin, install the piston adapter to make the shallow hole. If using a long pin, no adapter.
16. If you have yet to do so, remove the protective cover from the front of the booster to expose the front pin.
17. Mount the master cylinder on to the booster. Don't drop the adapter.
18. Torque the hex nuts to 20-25ft. lbs.



### INSTALL THE PROPORTIONING VALVE AND BRACKET (PROPORTIONING VALVE KITS SOLD SEPARATELY)

19. Be sure to install the correct brake valve for your application. Due to a wide range of applications, a brake proportioning valve is not included in the booster conversion kit.
20. If you already have the kit, attach brake line tube nuts to the master cylinder. Don't use Teflon tape.

### BLEEDING ON THE VEHICLE.... NEVER USE OLD BRAKE FLUID!

21. Use a brake screw bleeder wrench to open and close the bleeder screws.
22. Bleed the wheels in this order. Right rear, left rear, right front, left front. (Bleed from farthest from the master cylinder to the closest).
23. Have an assistant pump the pedal 3-5 times and hold the pedal.
24. As you open the bleeder screw, the assistant follows/pushes the brake pedal all the way to the floor. When they reach the floor, you tighten the bleeder screw and the cycle repeats.
25. Bleed each wheel until no air comes out and there is only fluid. Wipe fluid.
26. Be sure to check the fluid level in the master cylinder frequently. Keep the reservoir full of fluid and the lid installed in the process. Remember to protect painted surfaces with rags.
27. You should notice the pedal requiring more effort to depress it as you progress towards the front left wheel.
28. Repeat the bleeding process until the brake pedal is firm and holds.
29. When done, remove the wheel chocks and release the emergency brake.
30. Test brakes slowly in a safe area away from other cars or objects by making a series of stops. Try a 5 mph stop, a 15mph stop, a 30mph stop & a 50 mph stop. Drive safely and responsibly.
31. Stop the car & check brake fluid level.
- 32. Drive safely to get a "feel" for the braking action of your car.**