

1972 Glassic Roadster (#539) Power Brakes upgrade

This info was shared by Fabian, the car owner, in June, 2018



The Annexmaster, after checking on-line, thinks that “adding power brakes” and “adding a brake booster” mean the same thing.

Required tools and parts:

- ☐ Cordless drill
- ☐ 2" hole saw
- ☐ Drills different sizes
- ☐ Round file
- ☐ Dremel tool
- ☐ Hacksaw
- ☐ Vise
- ☐ Marker
- ☐ Tape measure
- ☐ Brake lines
- ☐ Brake line bending tool
- ☐ Basic tools (ratchet, sockets, screwdriver, vise etc.)
- ☐ 3/8 - 24 x 3 or 4 inches long coupling nut
- ☐ Full threaded Rod, Zinc Plated, 3/8"-24
- ☐ Brake fluid / Loctite
- ☐ Cotter pin & washer

Note:

This guideline shows how I converted my 1972 Classic Roadster from manual to power brakes. **I don't take any responsibility for any defects or injuries. If you don't feel comfortable working on brakes, don't do it! Work on brakes should only be done by experienced and trained persons.**

The brake booster kit:

After a lot of measuring on the car and research on the internet, I decided to go with a power booster kit from GPS Automotive (now LEED brakes). It is designed as a direct replacement for a 1965 Mustang manual master cylinder. There are probably many other power boosters that would work but if you use this one, it is a pretty straight forward, almost a plug and play conversion

As of June, 2018, this kit was priced \$170 plus shipping.

<https://leedbrakes.com/i-19296455-7-inch-power-booster-1-inch-bore-master-drum-drum-zinc.html>

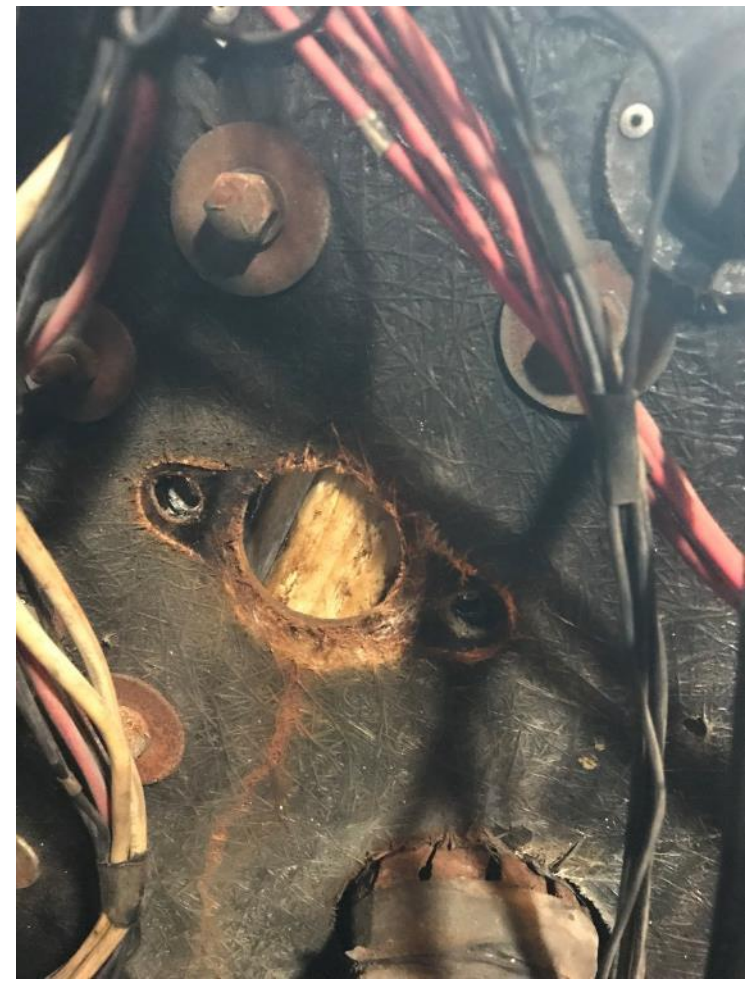
The kit includes:



Item	Description	
CVY5558	(5) Chevy bracket 55-58, Mustang 65-66 booster bracket (zinc)	Inv
28136	(4) 7" Single Booster	Inv
0488	(8) Drum / Drum Master cylinder	Inv
PRE111A-1	Pushrod assembly - Mustang Power - temp	A
Bleeder kit	Bleeder kit for M/C	Y
Bullet_01	Bore Plug .438 dia x 1.188" long - 6061 Aluminum	I
HS-00001	Vacuum Hose - 3/8 x 18" OAL	In
BOX007	18.25 x 10.5 x 10.5 Dbl Wall GPS Branded Box	Inv



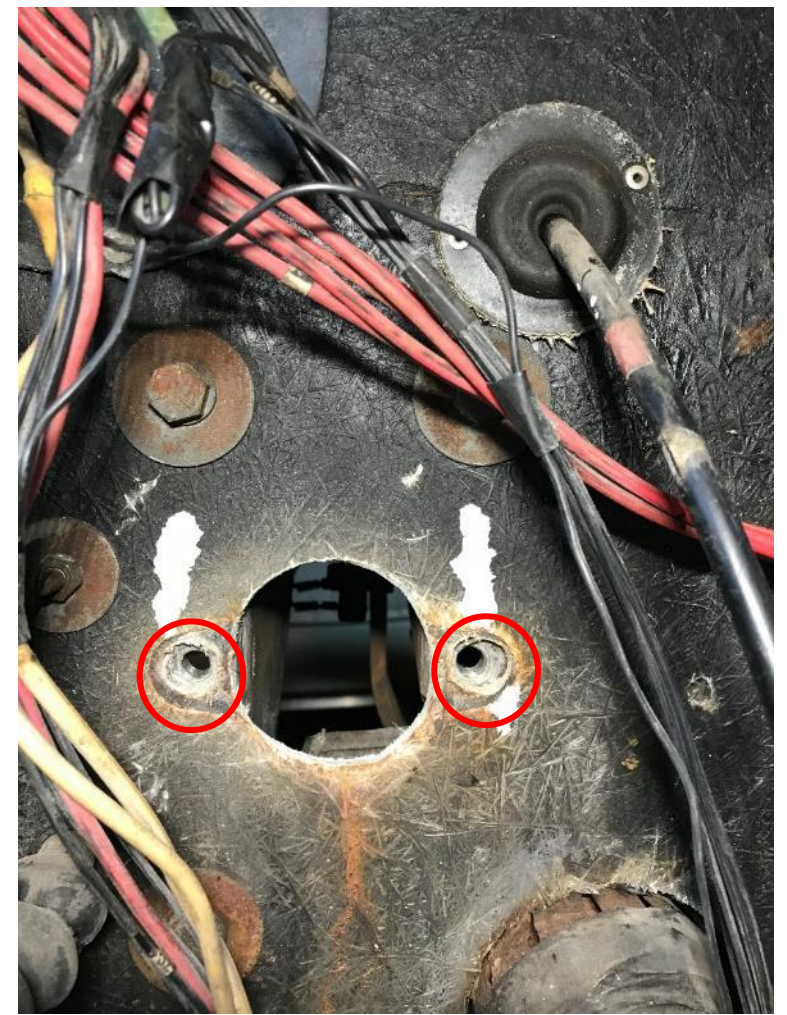
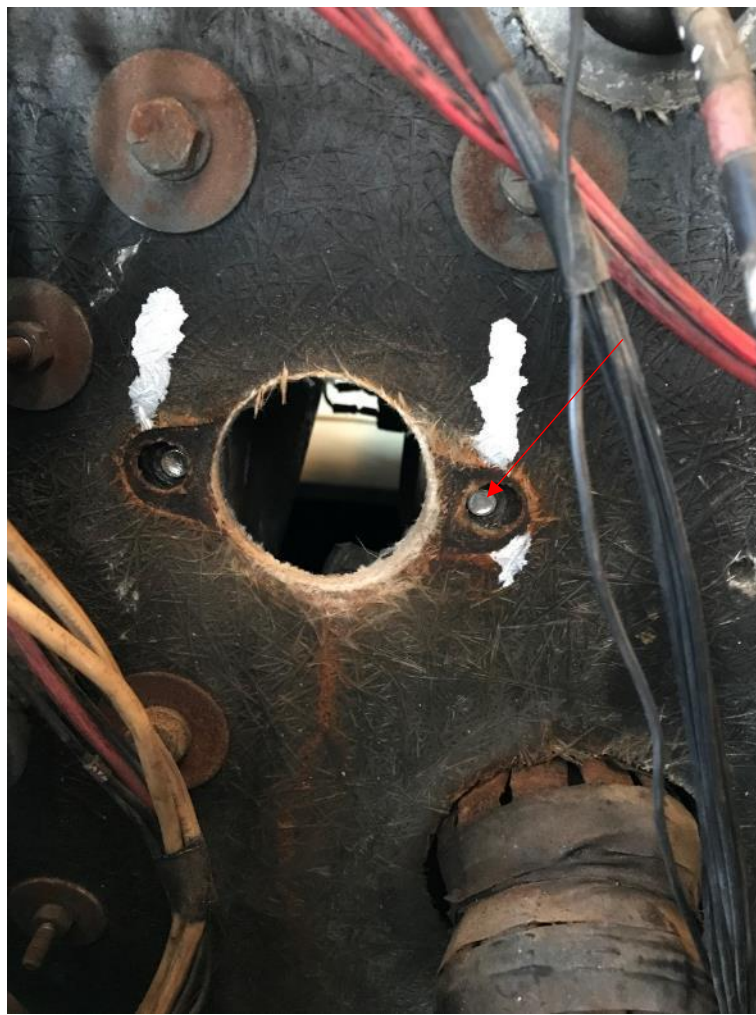
This is where we start (detailing of the engine compartment and engine will be another project.)
You probably have to remove the overflow tank (not sure about this). It's an overflow not an expansion tank so you don't need one necessary. You can either go without one at all or you use a nice stainless steel one or just a beer can if you want.



1. Remove brake fluid from the old master cylinder (MC). Remove the old brake lines from MC to distribution block. They are often rusted, but don't worry if you break them, we don't need them anymore.
2. Remove old MC (2 bolts from outside and the push rod needs to be detached from the brake pedal assembly inside).



3. Use a Hole Saw to widen the hole(s) in the firewall to fit the new MC. I used a 2" Hole Saw and a Dremel tool (see below)



4. I widened the center hole as much as I could. It is restricted by the brake pedal bracket at the inside.
5. If necessary, widen the two original holes for the bolts. Mine where a little bit off so it was hard to get the bolts in. Don't damage the threads. I used the Dremel again and put the bolt in from the inside so the threads were protected.



- 6: Use the MC bracket as a pattern to mark where you have to drill through the firewall and the bracket behind it to fit the 2 additional bolts the new MC requires.
- 7: If necessary use a round file on the 4 holes in the MC bracket to make sure all holes line up exactly with the holes in the firewall. It is not designed for a Classic so it needs little adjustment, but only very little.
- 8: Replace the 2 original bolts with full threaded ones (the new MC bracket is thinner than the flange of the old MC. Bolt size is 3/8-16 x 1-1/4). The 2 top bolts I used are 1 size smaller than the original ones. They are big enough for our purpose and it is easier to make everything fit together.
- 9: Shorten the 4 bolts that attach the MC to the bracket. Otherwise you will have problems getting the new top bolts in.

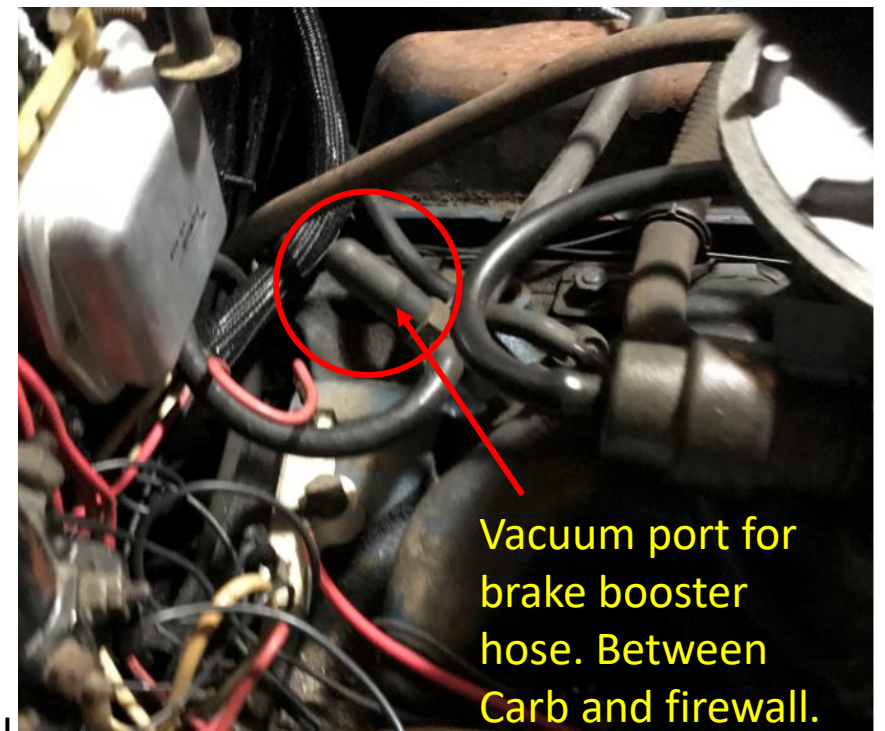


10. Bolt down the new MC (doesn't have to be tight yet, we have to remove it again later to bench bleed it).
11. Bend new brake lines from new MC to distribution block. I bought them at NAPPA (3/16 x 30") for a few bucks and they come already (single) flanged and with the proper fittings (just show them the old fittings). So all you have to do is bend them to make them fit. Use a proper bending tool otherwise you can easily kink them. If possible, use double flanged brake lines.



12. The pushrod the kit comes with is a little bit too short. Just extend it by using a 3/8 - 24 coupling nut and a threaded bolt. I bought a full threaded Rod, Zinc Plated, 3/8"-24 from Amazon and it worked just fine. (Fabian said that the rod he bought was 3 or 4 inches long. – a hardware store might be another source for the threaded rod – he suggested a test assembly and then you can determine how much to cut off the extra rod depending on where you want the pedal to rest before being pressed down.)

13. Remove brake line and MC again.



14. Bench bleed the new MC. Brake booster kit comes with all the parts you need and instructions.
15. Put everything back together again (MC, brake lines, pushrod). Tighten all bolts and nuts. Don't use thread sealer on brake lines. Don't overtighten the brake lines fittings
16. Hook up the vacuum hose from the MC to the vacuum port at the intake manifold.
17. Start the engine and check the brake pedal travel. If necessary, adjust the pushrod (don't forget the cotter pin when you attach the pushrod to the brake pedal and secure pushrod nuts with Loctite).
18. Check brake lines and MC for possible leaks.
19. Take you car for a test drive. **Be careful, the brakes are very touchy.** I had to adjust the brakes and it takes a while to get used to the power brakes. They are very sensitive. I got used to it very soon and the wheels don't lock up anymore every time I just look at the brake pedal. Mustangs use different brake pedals (manual /power) with different leverage to compensate that but our brake pedal bracket is different. Maybe reducing the vacuum would help as well but right now I'm fine with how it is.



This is how mine looks like now. The booster kit works with the original air cleaner as well. I added vintage Ansen valve covers, Hilborn style air cleaner, Firewall-Radiator shell support rods (so I can drive with or w/o hood), painted the firewall, exhaust manifold, wrapped all the cables, replaced the windshield washer reservoir with a stainless flask etc. Looks nice and clean now.



Car 539 – two views.



Another thorn in my eye were the connectors at the firewall.
The best way to resolve this would be to replace the whole harness, but since everything works fine, I don't want to do this at this point. So I just used an old Jack Daniels tin box and used it as a cover. It covers perfectly the ugly connectors and due to the hinged lid, you still have access to the cables and connectors if there is a problem. See below.

