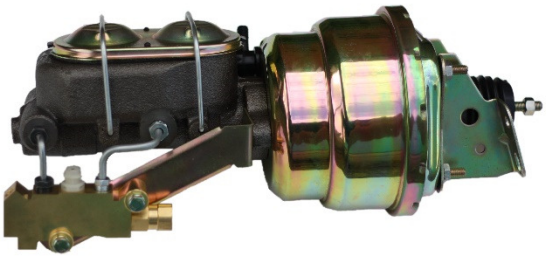
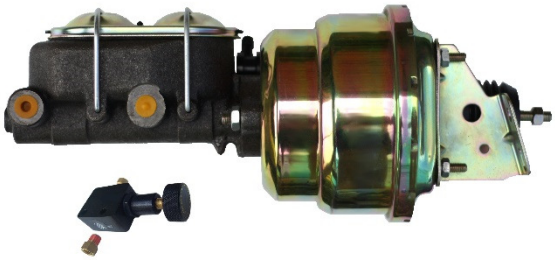
Installation Instructions

Power Brake Conversion Kits

Applications: 70-81 GM F Body





Thank you for choosing Leed Brakes for your automotive product needs. Before you begin your installation please inspect all parts and review the installation instructions. If you have any missing or damaged parts or if you have any questions regarding the fitment of this kit on your specific vehicle please contact our customer service team at (716) 852-2139 before beginning your installation.

Tools required for a safe and smooth installation:

Proper Jack & Jack Stands, Tube Wrenches, Standard Socket Set, Standard Wrench Set, Lug Wrench, Pliers, Mallet, Brake Fluid, Brake Cleaner.

Master Cylinder Removal:

1. Safely raise the vehicle off the ground until the wheels are clear and spin freely. Support the vehicle using the appropriate Jack Stands and remove the front wheels.
2. Before removing the master cylinder it's a good idea to cover painted surfaces with plastic sheeting and or cloths to catch any brake fluid. ***Be very careful not spill any brake fluid on any painted surfaces as it will damage your paint.***
3. From under the dash disconnect the pushrod from the pedal assembly.
4. Disconnect the brake line(s) from your master cylinder. Remove the retaining hardware and remove the master cylinder and or power booster from the firewall. This assembly will also include the pushrod that was previously disconnected from the pedal.

Brake Line And Proportioning Valve Installation

1. If you have ordered a kit with the combination valve you will need to remove your factory valve and master cylinder lines. The new valve can then be connected in the reverse manner. This may require re-bending of the original lines to connect to the new valve. Please refer to the diagram included in your instruction packet for proper connections. Be sure to connect your brake warning switch to the new valve using the supplied pigtail if needed.
2. If you ordered a kit with the adjustable style proportioning valve your factory combination valve can be retained. Install the supplied brass fittings into the ports of the adjustable proportioning valve.
3. Disconnect the line from the factory distribution block that goes out to the rear brakes. Connect that line to the **Out** port of the adjustable proportioning valve. You will then need to install a line between the factory distribution block and the adjustable proportioning valve. An alternate method would be to cut a section out of the rear brake line after the factory distribution block and flare new end onto the line to make room for the adjustable valve. This allows the valve to be mounted anywhere between the factory block and the rear flex line.

Power Booster Installation:

1. Install the **supplied** clevis onto the power booster, do not lock it into position yet as adjustments will need to be made later.
2. With the booster **check valve positioned** in the upper RH corner, install the power booster **mounting brackets** so that the longer leg of the bracket is against the booster and the short leg of the bracket is offset towards the bottom of the booster.
3. Secure power booster to firewall using the original mounting bolts. These bolts may be difficult to tighten with the limited space available. All 4 bolts can be accessed using a standard wrench.
4. From under the dash **adjust the pushrod** to meet the pedal in its original position. Note the pushrod must be connected to the lower hole in the pedal when installing power brakes. Once the pushrod has met the desired length, secure the **locking nut** to the pushrod. Make sure the pedal has at least a ½" of free play and is not jammed tight against the pedal stop as this can cause the brakes to drag.
5. Install original pushrod locking mechanism to secure the pushrod to the pedal.
6. Check the adjustment on the brake light switch to insure the tail lights cycle on and off correctly as the pedal is applied.
7. We recommend dry fitting the master cylinder prior to bench bleed so you can route all your brake lines. This will make the final installation much easier and minimize the risk of getting brake fluid onto a painted surface.

Master Cylinder Bench Bleeding

1. Before you install your master cylinder you must **bench bleed** it in a vice off of the vehicle using the **bench bleeder kit** provided.
2. To Bench Bleed
    a. Place your master cylinder in a **vice** by the mounting ears.
    b. Attach a clear plastic hose to the short end of each of the plastic nozzles provided.
    c. Clip the plastic bridge onto the partition wall of the master cylinder and insert each plastic tube into the holes insuring the end of the tube will be fully submerged in the brake fluid.
    d. Press the tapered end of the nozzles firmly into the master cylinder ports with a twisting motion.
    e. Fill the reservoir with new clean brake fluid (DOT 3 or DOT 4 Recommended).
    f. Using a large Phillips head screwdriver push the piston in, then release using full strokes. This MUST be done until ALL air has disappeared from the clear plastic hoses.

CAUTION- MASTER CYLINDER WILL NOT BLEED PROPERLY IF HOSES ARE NOT FULLY SUBMERGED IN BRAKE FLUID UNTIL THE BLEEDING PROCESS IS COMPLETE

Master Cylinder Install:

1. Remove the master cylinder from the vice and install on the power booster, secure with the supplied hardware. ***Be very careful not spill any brake fluid on any painted surfaces as it will damage your paint.***
2. Carefully remove the bleeder kit nozzles and install the brake lines in the appropriate ports.
3. If you ordered a kit with the combination valve the lines are already bent and oriented to easily connect to the master cylinder. If you ordered a kit with the adjustable style proportioning valve minor bending of the original lines may be required.
4. Secure all brake lines and check for leaks.

Bleeding the vehicles braking system:

We recommend that the brake system is bled using a gravity bleed method. While there are many ways to bleed a system this way is less likely to introduce air in the system causing a spongy pedal. Whenever bleeding your system you must keep an eye on your fluid level. If your master runs dry you will have to bench bleed the master again.

1. Remove the cap from the master cylinder.
2. Starting at the right rear wheel cylinder or caliper attach a clear hose to the bleeder with the other end in a clear container.
3. Open the bleeder and observe the fluid flow. It may take a couple of minutes for the fluid to flow with a new system. Once the fluid begins to flow let it drip until you do not see any air.
4. Move to the left rear wheel, repeat step 3.
5. Move to the right front wheel, repeat step 3.
6. Move to the left front wheel, repeat step 3.
7. Repeat steps 2 thru 6 once more.
8. Install the lid on the master cylinder.
9. Pump the brake pedal until you achieve a firm pedal.
10. Remove lid on master cylinder & check fluid level
11. Repeat steps 2 thru 6 to insure all air has been removed.

Adjustable Proportioning Valve Adjustment

1. If you ordered your kit with the factory style combination valve it is not adjustable and this step can be skipped.
2. The adjustable proportioning valve is meant to control rear brake lockup by limiting the pressure to the rear brakes. If the rear brakes lockup prematurely the car can be difficult to control during a hard stop.
3. The valve provides a maximum of a 55% reduction in rear brake pressure. Meaning that even when adjusted to the full decrease position it will not shut off the rear brakes. Count the turns from the full decrease position to the full increase position. Turn the knob back in the full

decrease direction half that number of turns. This will give you a good starting point for most vehicles.

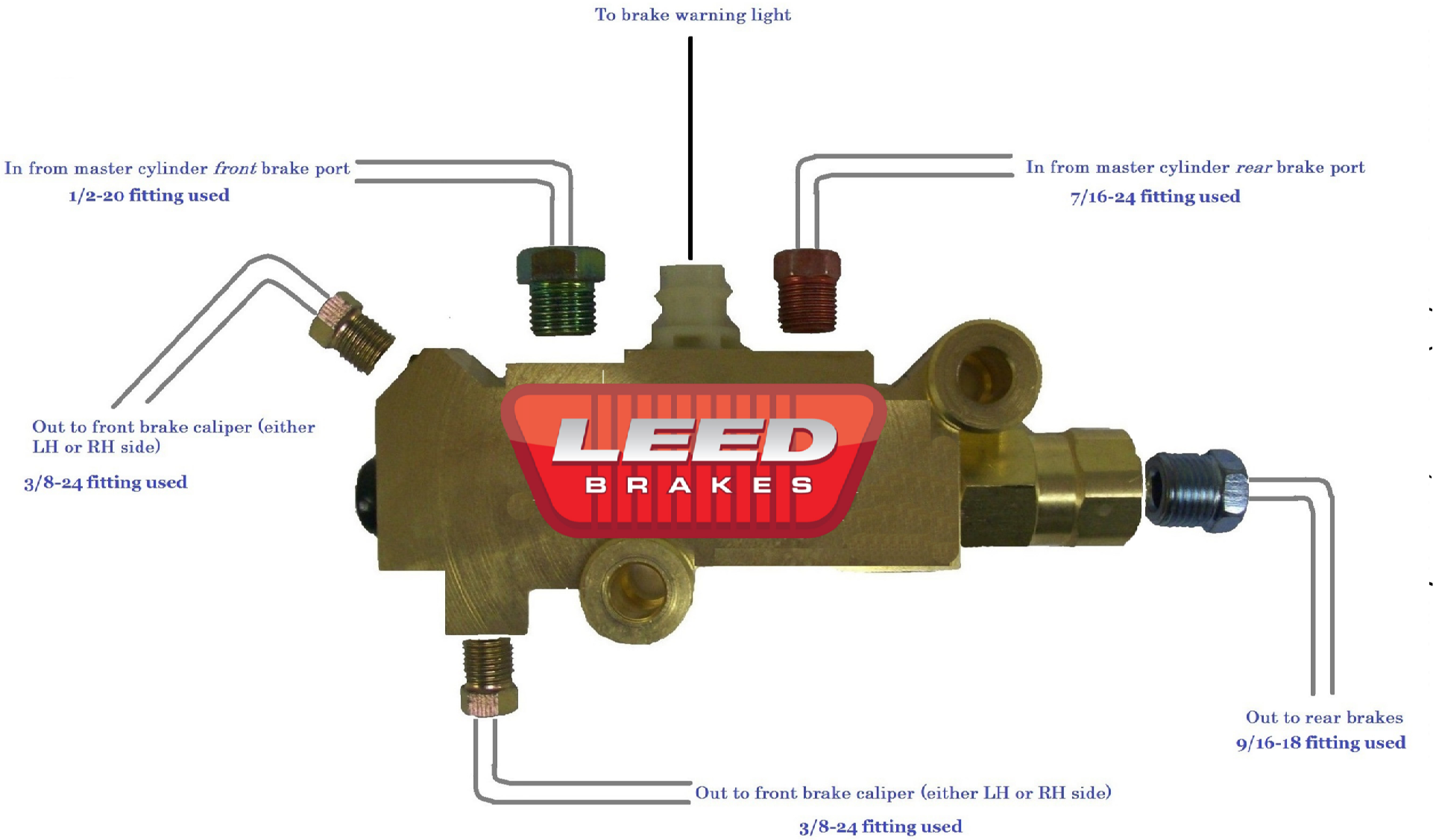
4. Once you are confident that the brakes are fully bleed, working properly and broken in you can make several stops in a safe open area to determine your ideal setting. The goal is to provide as much pressure as possible to the rear brakes without locking them up prior to the front brakes.

Once you feel you have successfully removed all air from your brake system check all fittings and lines for leaks and verify all fasteners are tight. Install your wheels, and spin them to insure they still spin freely making sure the caliper doesn't interfere with the wheel and your brakes are not dragging or locked up.

You may now take your vehicle for a test drive in a safe area. We recommend that you drive the vehicle with light to medium application of the brakes for the first 150-200 miles. This will allow your brake pads to properly seat to your rotors to insure optimal braking performance.

If you have any questions please call our tech line at (716) 852-2139

Thank you for purchasing from Leed Brakes we hope you have had an enjoyable experience.


To brake warning light
In from master cylinder *front* brake port
1/2-20 fitting used
In from master cylinder *rear* brake port
7/16-24 fitting used
Out to front brake caliper (either LH or RH side)
3/8-24 fitting used
LEED
BRAKES
Out to rear brakes
9/16-18 fitting used
Out to front brake caliper (either LH or RH side)
3/8-24 fitting used