

# 1963-1966 Corvette Dual Master Cylinder Conversion

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## Zip # DB-503

The purpose of the 1963-1966 Corvette Dual Master Cylinder Conversion kit is to replace the factory single reservoir master cylinder with a master cylinder to include dual reservoirs. The master cylinder will add the safety feature of a multiple reservoirs in the case of a loss of fluid and the resulting loss of brake pedal. The kit replaces the factory components with components that were used on the 1967 Corvette. These instructions are for a non-power installation.

## Kit Includes:

DB-335	STD Master Cylinder
DB-509	Proportioning Valve
DB-497	Proportioning Valve Bracket
DB-566	Proportioning Valve Mount Bolt
Z-317	Proportioning Valve to Left Front Block
Z-324	Front to Rear Brake Line
Z-331	Master Cylinder to Proportioning Valve Lines
DB-316	Left Rear Brake Line Block
DB-302	Left Front Brake Line Block

## Notes Prior to Installation:

It is best to soak all fittings and bolts in a spray lubricant such as WD40 or CRC prior to work beginning. Also use the proper tools such as a flare nut wrench when both loosening and tightening line fittings. Brake fluid can damage your Corvette's paint – so take extra precaution when working on your brake system.

## Disassembly:

1. Remove the master cylinder by disconnecting the brake lines and removing the 2 nuts holding the master cylinder to the firewall.
2. Remove the brake line going to the left front block and disconnect the other brake lines going across the front cross member, left front caliper and front block to rear block brake line. Once these lines are disconnected the block can be removed from the frame.
3. The front to rear line can now also be removed, disconnect the line from the left rear block - it may be easier to cut the line in half and remove from opposite ends.
4. The rear brake block can now be removed. Disconnect the remaining brake lines. This block is held to the frame with a "U" clip that can be easily removed with a screwdriver and hammer. Gently tap the clip away from the block.

## Assembly:

1. Begin assembly with the new left rear brake block, attaching the existing cross-over line and rear brake hose. Finger tight only at this point.
2. The front to rear brake line installation can be handled in two ways:
  - a. Patiently install the included 1-piece line by twisting the line in place through the center frame cross member. Reuse the original frame line clips and tighten into the rear block. This line will now connect from the new proportioning valve to the rear brake line block.
  - b. Secondly – the 1-piece front to rear line could be cut in half and installed from opposite ends. A brake line coupler (not included – can be found at a local auto part store) can be installed joining the 2 lines together near the middle of the frame. Caution – measure twice, cut once.
3. Install the left front brake block with the original bolt. Hand tighten the original front cross-over line, left front brake line and the new brake line attaching from the block to proportioning valve.
4. Bench bleeding the new master cylinder is recommended:

There are numerous ways to do this, but the easiest is to purchase plastic master cylinder fittings and rubber hose from any auto parts store. Screw the fittings into place and put the hoses into their respective portion of the master cylinder. Securely mount the new master cylinder in a vise. Fill both sections of the master cylinder with fluid. Now use a punch or large Phillips screwdriver to push the plunger into the master cylinder. Make sure that the hoses stay submerged in the fluid while you push the cylinder in. Use short, even strokes. As you do this, you will see bubbles coming up into the fluid. What you are doing is removing the air from the master cylinder valve and ports. Continue to slowly work the master cylinder until the bubbles disappear. You will feel the plunger get harder to push as the air is expelled and replaced with fluid. When you are done, install the master cylinder.

5. Tighten the nuts holding the master cylinder to the firewall.
6. Install proportioning valve, valve bracket and brake lines from the master cylinder to proportioning valve. Also connect lines from left front block and front to rear brake line.
7. Tighten all brake line fittings.
8. Bleed brake system – recommend either a gravity bleed or vacuum bleeding system.
9. Test brake system for proper working order prior to enjoying your Corvette on the road.



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