MD-910-0110 Chevy II 62-66
Hydraulic Clutch Master Cylinder Installation Instructions

Read These Instructions Completely Before Beginning

These instructions are for hydraulic master cylinder installations using an external slave cylinder or an internal hydraulic throw-out bearing. If your vehicle has been modified from a stock configuration, certain steps may not apply. Existing alterations to your vehicle are your responsibility.

1.0 Tools and Notes

1.1 Drill motor, #7, 9/32”, & 21/64” drill bit, Sharpie marker, tin snips, 7/16”, 1/2” & 9/16” wrenches, 7/16” & 1/2" socket/ratchet, 5/32” Allen wrench, silicone sealant, a second person.

1.2 This Hydraulic Master Cylinder Kit utilizes the stock clutch push-rod hole location in the firewall.

1.3 Safety Equipment – Always wear approved ANSI approved safety goggles/glasses when working with metal and fluids. Wear proper gloves when working with hot surfaces and corrosive fluids.

1.4 A ground strap from the engine to the body, and body to frame, must be used.
Failure to install a ground strap from the engine to the body and frame will result in braided line failure. The braided line cannot be used as a ground strap.

2.0 Disassembly - If your vehicle is already disassembled, verify all dis-assembly steps have been performed and skip to the Assembly Instructions. If you are converting an automatic vehicle, some disassembly steps do not apply.

2.1 Read all instruction steps before disassembly. Position parts prior to disassembly to confirm necessary steps apply, based on tool selection and accessibility.

2.2 Remove brake master cylinder and brake booster as required for access.

2.3 Remove all clutch linkage or automatic linkage from engine, transmission, frame and clutch pedal. DO NOT remove the clutch pedal. A clutch pedal must be installed to confirm system function.

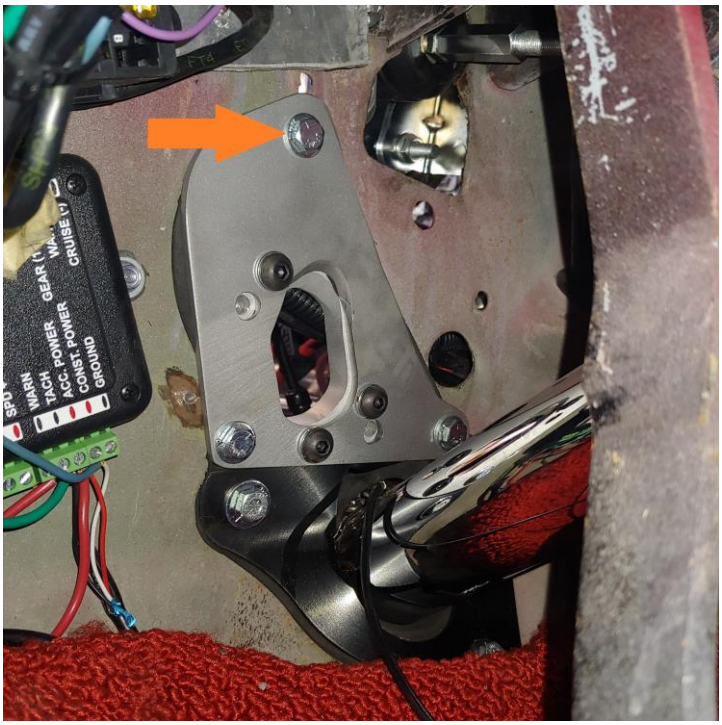
2.4 Disconnect the plate surrounding the steering column from the fire wall. This plate will be trimmed using tin snips or you may choose to remove the steering column from the vehicle for trimming off-vehicle.

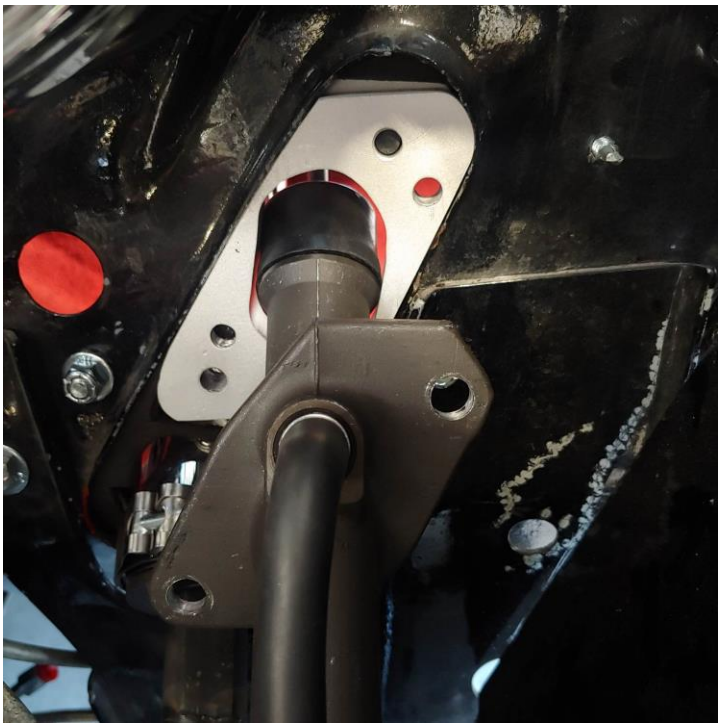
Shown is the original steering column plate compared to the new hydraulic clutch master cylinder block and plate.

2.5 Warning: If equipped, clutch pedal spring is under pressure. Use caution when removing spring. Remove the clutch pedal spring and all associated hardware. Do not remove the clutch pedal up-stop. **If your vehicle is equipped with a clutch pedal spring attached to the clutch pedal and you do not remove it the clutch pedal may stick to the floor when pressed.**

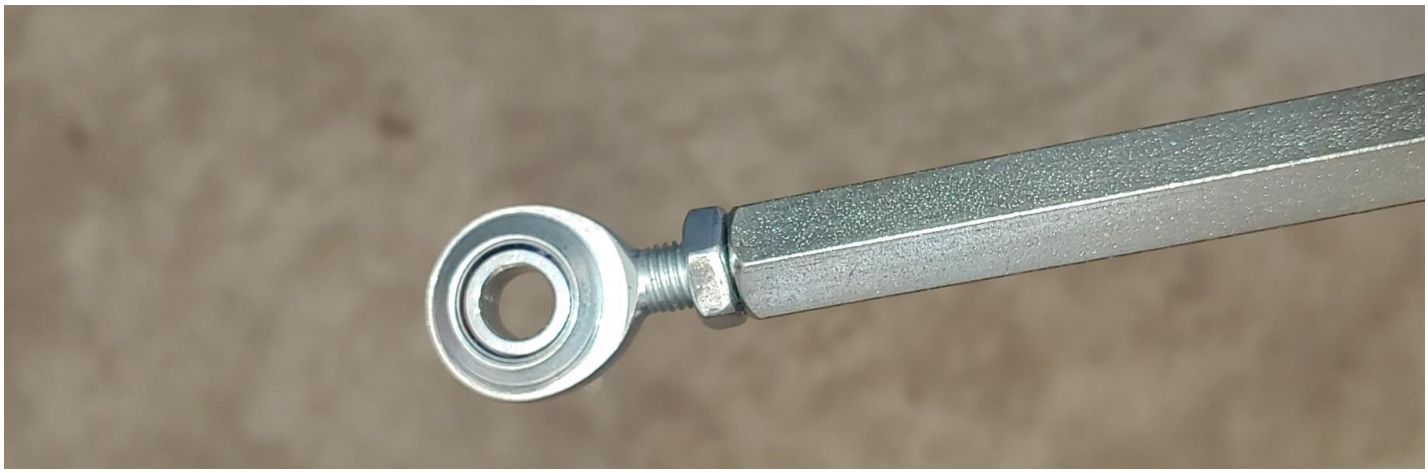
3.0 Assembly

3.1 Locate the new hydraulic plate in the elongation opening in the firewall. The upper hole (orange arrow) should align or nearly align with the existing sheet metal hole. Temporarily use existing fastener to secure plate to firewall. The block attached to the plate should be as high as possible in the factory opening. The bottom of the plate should be level. Drill two lower holes 9/32” thru the plate/firewall and temporarily secure with 1/4” bolt and washer on one side and nut and washer on the other side. Remove existing upper fastener and repeat drill and fastener installation operation.

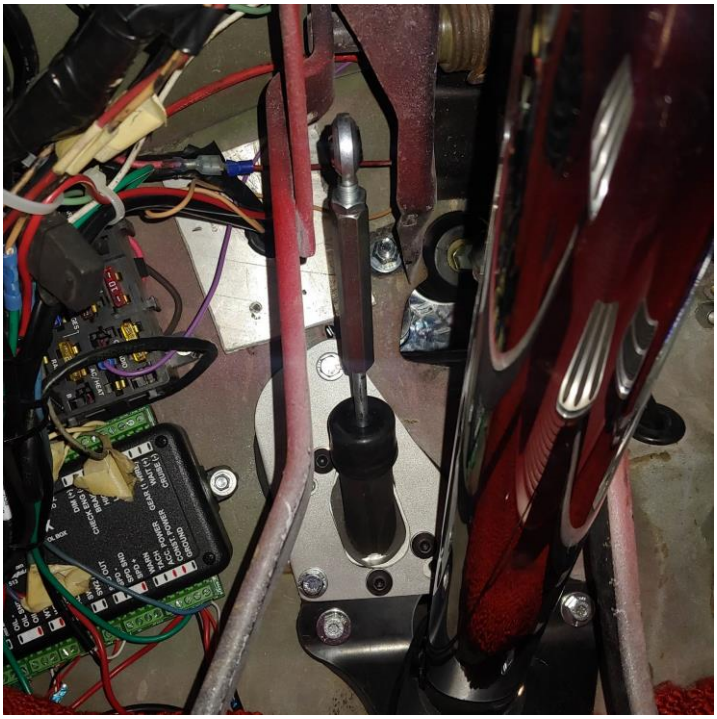


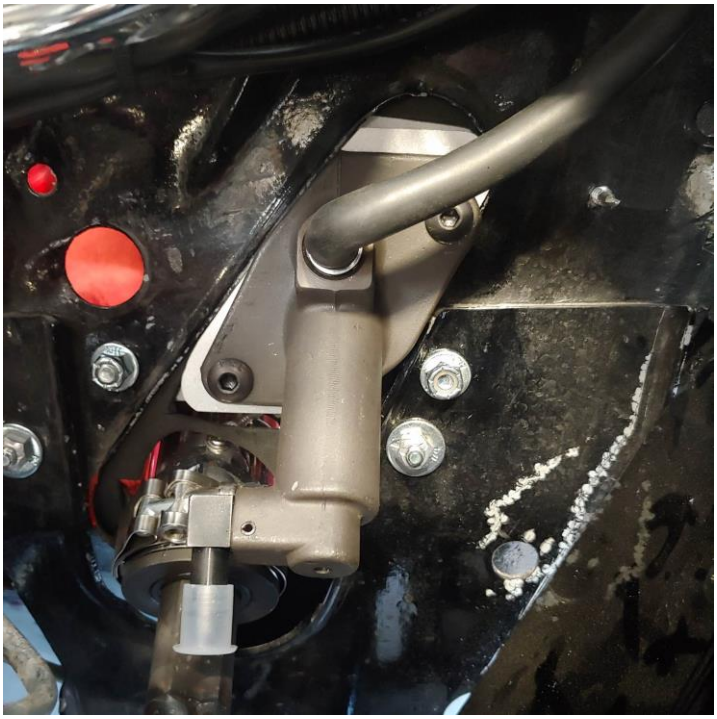


3.2 Thread the rod-end with jamb nut into the master cylinder hex-bar spacer.



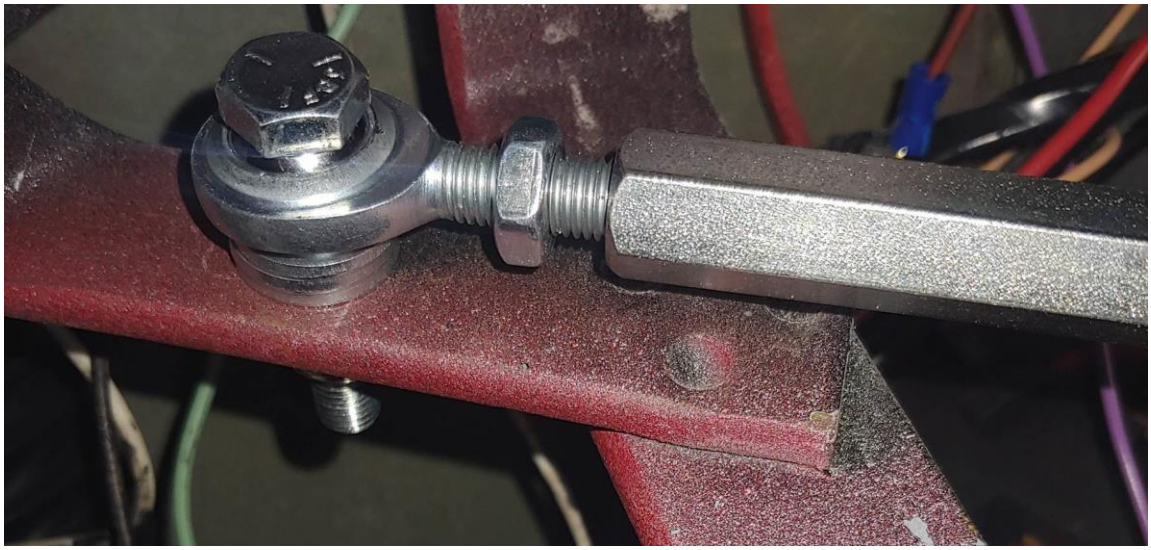
3.3 Position the master cylinder STRAIGHT thru the block from the engine compartment side and temporarily secure with (2) 5/16” Allen head fasteners. No washers are used at this location.





Note: Engine compartment picture shown is with a 90-degree connection fitting.
The kit will have a straight connection fitting.

3.4 Use washers to align the rod-end inboard/outboard so the master cylinder rod will push straight forward. Use remaining washers on the opposite side of the pedal to take up extra length as required and tighten fastener 12-15 ft/lbs. (wrist tight).



3.5 Thread the hex-bar spacer in/out so the clutch pedal will slightly touch the factory pedal up-stop. Note: The rod going into the master cylinder has a ball-end and is free to rotate. Maintain minimum 7-threads engagement. Do not preload the clutch master cylinder rod. **If you preload the actuation system, it will not bleed properly.** Tighten jamb-nut on rod-end 12-15 ft/lbs. (wrist tight).

3.6 Invert the boot on the master cylinder so you can see the washer under the boot. Stroke the clutch pedal from the up-stop down to the carpet. Make sure the clutch master cylinder rod does not touch the washer. The Master cylinder holes are large enough the master cylinder can be rotated slightly if necessary.

Actuation should be smooth. Verify the master cylinder rod travels the full stroke of 1.35” to 1.4” for proper clutch release. The clutch master cylinder rod will have a natural up/down arc motion.

3.7 Once all components have been inspected for clearance and function, trim the existing fire wall plate with tin snips so the two plates butt up against each other. The remaining part of the factory plate (or aftermarket plate) will use the existing fastener holes. See picture at step 3.1.

3.8 Remove all parts, clean surfaces, de-burr holes, then re-install with silicone and/or gasket on faying surfaces. Install all fasteners 12-15 ft/lbs. (wrist tight). Apply a bead of silicone between the edges of the two plates.

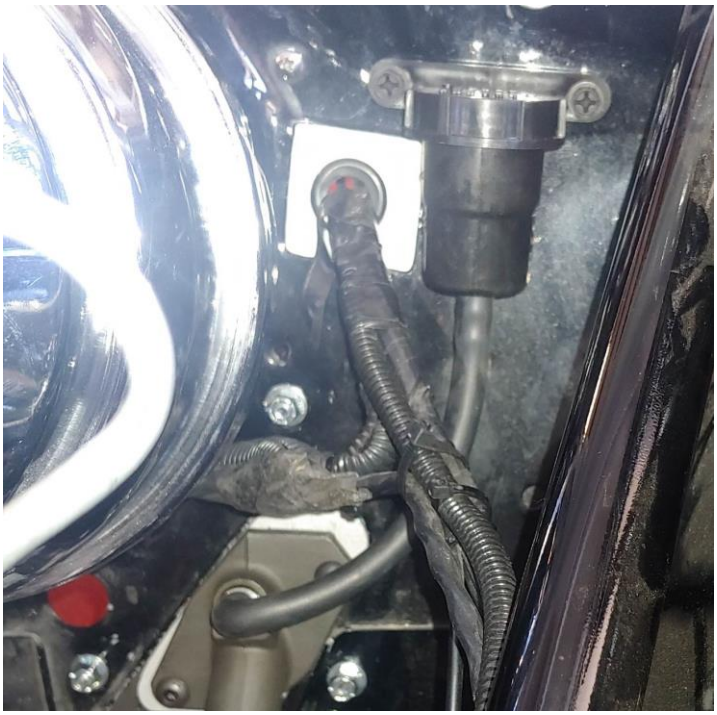
3.9 Re-attach rod-end to pedal as previously set-up. Install and torque fastener 12/15 ft/lbs. (wrist tight).

3.10 Verify function: Make sure the clutch master cylinder rod does not touch the washer during actuation. Re-position the rubber boot on the master cylinder.

3.11 Re-install brake master cylinder, booster, brake lines and distribution block as required following manufacturers recommended procedures and torque specifications. Re-install steering column as required.

3.12 Reset your insulation and carpeting, trimming to clear the new clutch master cylinder location as required.

3.13 With all vehicle parts re-installed, position the reservoir in a location that is easy to access for service and clears all moving parts such as hood hinges. Drill two #7 holes and secure with supplied tap screws.



3.14 Do not over tighten fittings – this will cause damage to the seat of the hose end and fittings. Attach the steel braided line to the straight fitting on the master cylinder and slave cylinder or hydraulic throw out bearing making sure line has clearance to exhaust system and will not interfere with any moving parts. Once the steel braided line is positioned for routing and clearance, tighten all braided line ends to their respective

fittings. Support must be provided for all fitting connections, Failure to do so may result in damage to components. Torque to 20-25 ft/lbs.

4.0 The Bleed Procedure

4.1 In the master cylinder kit is a Bleeder Kit. Follow the *bleeder kit* instructions. If you have lost the bleeder kit instructions, they can be found on our web site moderndriveline.com.

5.0 Driveway Test and Test Drive

5.1 Position rear wheels on jack stands (free to rotate). With transmission in neutral, start vehicle. Push in clutch pedal and apply brake pressure. Transmission should go into 1st gear easily. Slowly release clutch pedal. Pedal should start to engage the clutch at a comfortable level of the pedal travel (about 1.0”-1.5” from floor). It is okay if the clutch pedal releases close to the floor while on jack stands. It will release higher when the vehicle is on the ground. A new or rebuilt transmission should have all the gears run thru (in the driveway, partially releasing clutch) before road testing the new hydraulic clutch.

5.2 Remove jack stands and test drive. Upon return, verify steel braided line clearance and support. The hydraulic lines must be kept away from the exhaust and rotating clutch assembly.

5.3 If the clutch feels spongy or releases too close to the floor, repeat the bleed procedure. FYI – micro bubbles may be present in the system due to actuation, accumulation on rubber parts, and machining marks within the system.

5.4 Further assistance and tech support is available by calling Modern Driveline at 208-453-9800 M-F 8-5 Mountain time or E-mail Tech@moderndriveline.com. Set-up and bleeding videos may also be found on our web site moderndriveline.com.

5.5 Enjoy your new hydraulic system and Thank You for “Making it Modern” We appreciate your business.

Picture shown with elbow fitting. Kit will come with straight fitting.