



SILVER SPORT

Transmissions



FTE Style Bearing

X-BODY COLLAPSIBLE COLUMN 1967

HYDRAULIC MOUNT INSTALLATION INSTRUCTIONS

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SYSTEM DESCRIPTION:

These instructions cover ONLY the installation of hydraulic master cylinder assembly and mount for the 1967 X-BODY for both the factory manual and factory automatic applications.

**Refer to MAG-00402 (FTE style) or MAG-00403 (RAM style) HYDRAULIC KIT
INSTRUCTIONS FOR GM TKO, T56, MAGNUM, AND LGT700 for complete instructions
on installation of the hydraulic concentric slave cylinder (CSC) and hydraulic release**

KIT CONTENTS

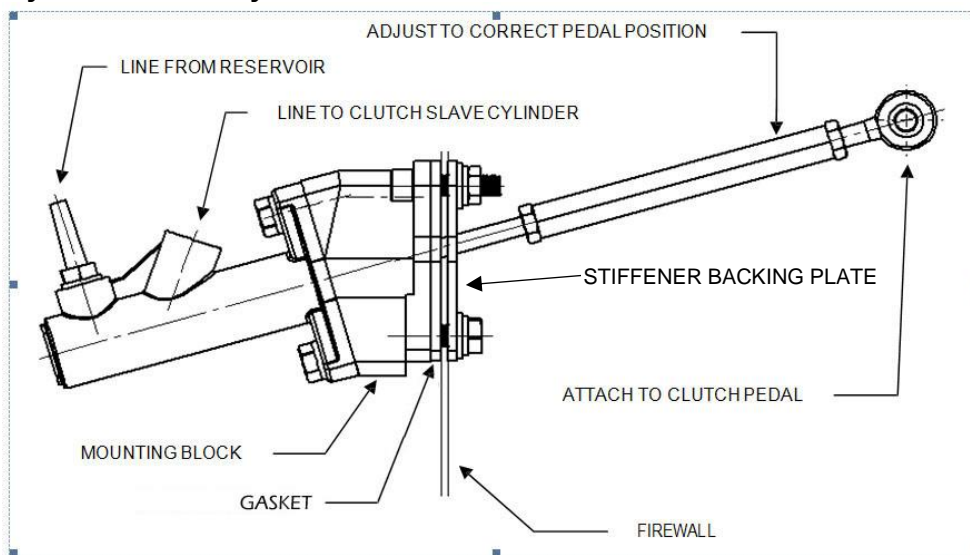
Please confirm that all parts have been received. The parts contained in your Master Cylinder kit will include:

- hydraulic mount, gasket, and hardware
- fluid reservoir, mount bracket, hose, and fittings
- rod end, attachment hardware
- master cylinder
- braided steel hose with bleeder
- bellhousing boot, 4 spd clutch linkage hole cover

If the hydraulic kit was ordered at the same time as the transmission, then your CSC will already be mounted on the front of the transmission.



Typical Master Cylinder Assembly:



DISASSEMBLY

Remove original clutch linkages, transmission and bellhousing components:

- Fork push rod, clutch pedal push rod assembly
- Z-bar retaining clip, Z-bar, ball stud and bracket assembly
- Fork boot
- Transmission and bellhousing
- Throw-out bearing, clutch fork and fork pivot
- Clutch pedal (must be modified for SST hydraulic system)

Master Cylinder Mounting

Fig. 3-1

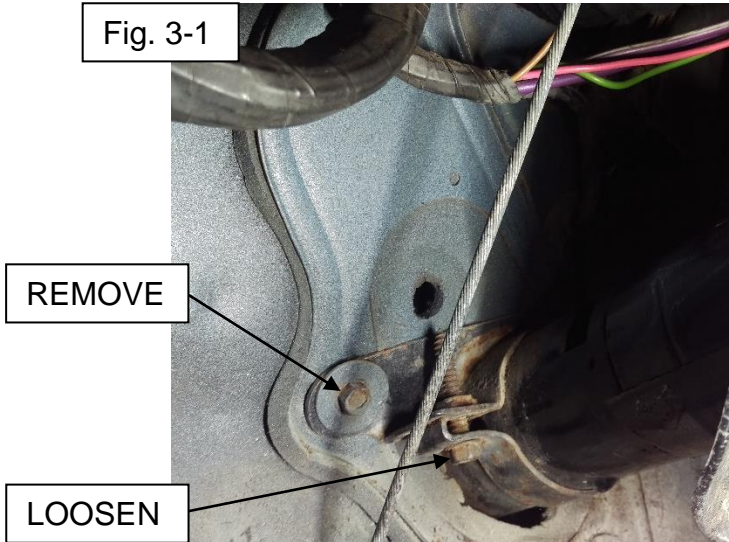


Fig. 3-2



1. Remove screw and loosen collar noted in Figure 3-1.
2. Turn and slide collar up the steering column.
3. Drill out this hole to 3/8"
4. From the engine compartment, insert the master cylinder pushrod through the firewall and center the master cylinder pushrod in the hole, keeping the mount block against the firewall. Confirm that the pushrod points toward and reaches the clutch pedal attachment point (see "PEDAL ATTACHMENT" section). Carefully mark the firewall for the other mounting bolt holes using a transfer punch, center punch or marker. Alternately, you can use the master cylinder backing plate to mark the inside of the firewall (make sure the backing plate is facing the right direction!)
5. Mark the location for the (3) bolt holes and the center hole. Drill and deburr the holes. (See Fig. 3-3). (3rd hole is through the firewall seal)



Fig. 3-3

6. Assemble mount block gasket to mount block, then insert the master cylinder and mount block assembly to the firewall.
7. From the engine compartment, assemble (2) 5/16"-18 bolts through the assembly, the firewall and thru the stiffener plate mounted on interior side. Install 3 flat washers, lock washers, and nuts. Align master cylinder, then tighten nuts to 15 ft.-lbs.
8. Assemble the 90° end of the braided steel line to master cylinder port closest to firewall.
9. Assemble barb fitting to master cylinder at port located furthest from firewall.
(See Fig.4-1).



Use caution not to over tighten and break fittings.

PEDAL ATTACHMENT

NOTE: If you are changing from a three (3) finger style pressure plate to a diaphragm style pressure plate you should also remove the clutch pedal over center spring, if so equipped. Failure to remove the over center spring could result in the spring holding the clutch pedal down during normal operation. The over center spring will also tend to hold the pedal down while performing the bleeding operation, until the system is bled enough to return the pedal. An over center spring is not recommended for use with a diaphragm-style pressure plate, and the hydraulic system is not compatible with some three-finger style clutches. We strongly recommend a diaphragm-style pressure plate.

1. If there is more than one hole in your clutch pedal arm, in most cases you will use the hole that the factory original pushrod would have used. If you are not sure which hole this is, please consult a factory service manual. On some applications, the pushrod actually connects to a bracket that is welded or bolted onto the pedal. Again, consult a factory service manual if needed..

2. Adjust rod end position to achieve proper pedal height with master cylinder pushrod **EXTENDED ALL THE WAY OUT**. If the master cylinder is not fully extended when the pedal is at rest, the master cylinder can be difficult to bleed **and can overextend the CSC and cause it to fail**. Make sure the pushrod travels in and out of the master cylinder in a straight line and does not contact the firewall, mount block, or backing plate at any point during its travel. When desired pedal height is achieved, tighten locknuts on pushrod and rod end.
3. Assemble shoulder bolt through rod end on master cylinder pushrod.
4. Assemble aluminum spacer sleeve to shoulder bolt. It goes in between the rod end and clutch pedal. Attach with washer and lock nut. Tighten to 6 ft.-lbs.
5. Note: You may have to loosen the brake light switch bracket to insert the bolt. In some applications, a small adjustment of the switch position may be required to clear the bolt head.
6. **DO NOT** depress the pedal any more than necessary before fluid is added to the system. **DOT 4 BRAKE FLUID STRONGLY RECOMMENDED.**
7. The master cylinder will not tolerate a side load, and will wear out very quickly if the pushrod is going in at an angle. **Make sure the pushrod is straight in line with the master cylinder!** When desired pedal height is achieved, tighten locknuts on pushrod. Tighten nut on clutch pedal arm rod end bolt to 6 ft.-lbs.

DO NOT depress the pedal any more than necessary before fluid is added to the system.



FLUID RESERVOIR MOUNTING

1. Remove the studs or nuts on the left hand (driver) side of the brake master cylinder.
2. Place reservoir bracket over the two holes or studs in the brake master cylinder, replace the original studs or nuts and tighten completely. Alternatively, the reservoir may be attached directly to firewall or cabin sidewall.
3. Assemble reservoir to the bracket using hardware supplied (part # CAA-PACK A).

HYDRAULIC LOW PRESSURE HOSE MOUNTING

1. Run the rubber supply hose from the bottom of the reservoir nipple to the barb fitting in the clutch master cylinder, and determine the exact length for the supply hose. The hose should be neither tight nor excessively loose, and should clear all moving steering gear and exhaust components. Take care to prevent foreign debris from entering hose.
2. Cut the line to desired length, ensure that no foreign matter is in the hose. Then, loosely assemble hose clamps.
3. Install hose to the master cylinder, then to the reservoir. When installing hose to the reservoir, hold the top of the reservoir to prevent overloading and damaging the mounting ears.

HYDRAULIC HIGH PRESSURE HOSE MOUNTING

1. After bolting the transmission/bellhousing unit to the engine, attach the remaining end of the braided steel line to the clutch master cylinder and tighten. Use caution not to over tighten and break the fitting.
2. Final tighten all transmission mounting bolts (4 pcs).
3. Inspect the supply line inside bellhousing and confirm the hoses have ample clearance to the rotating clutch plate. It is extremely important that the hydraulic clutch hose **DOES NOT** come into contact with the clutch plate, as serious damage could result.

SYSTEM SPECIFICATIONS

Master cylinder: Bore = 0.750"
Stroke = 1.400"

CSC: Stroke = 0.910" total
available travel

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