



SILVER SPORT Transmissions



FTE Style Bearing



RAM Style Bearing

GM TRI-FIVE 1955-57

HYDRAULIC MOUNT and CLUTCH PEDAL INSTALLATION INSTRUCTIONS

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SYSTEM DESCRIPTION:

These instructions cover ONLY the installation of hydraulic master cylinder assembly and mount for the GM 1955-57 TRI-FIVE 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 system operation.

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
- rod end with extension, attachment hardware
- master cylinder

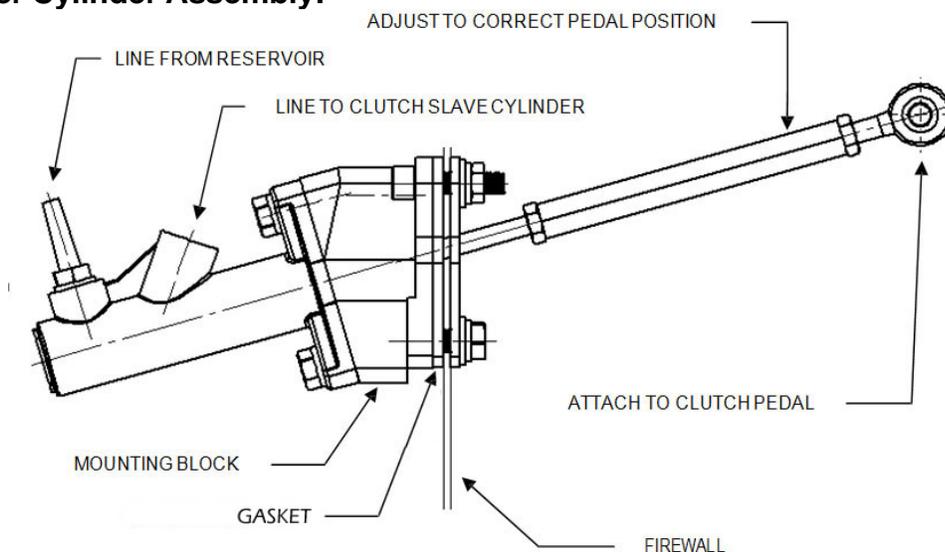
Not pictured:

- fluid reservoir, mount bracket, hose, and fittings
- braided steel pressure hose with bleeder
- bellhousing boot



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

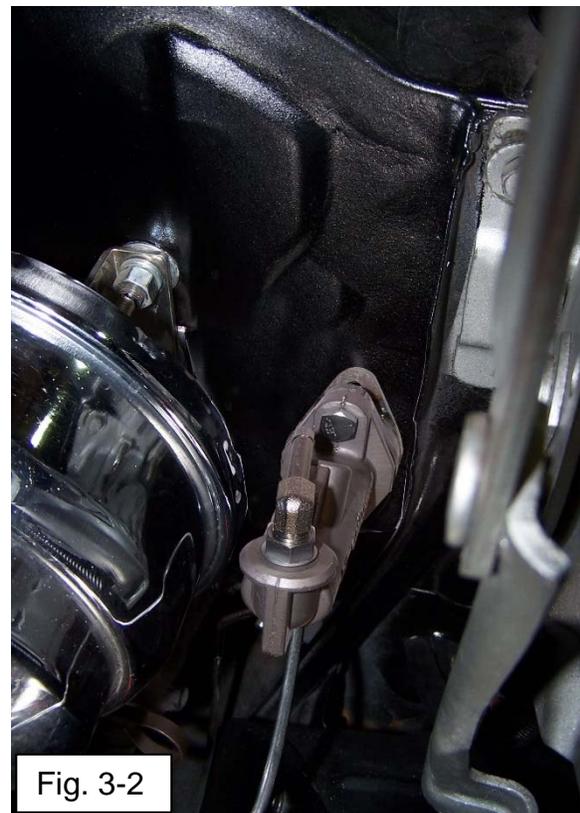
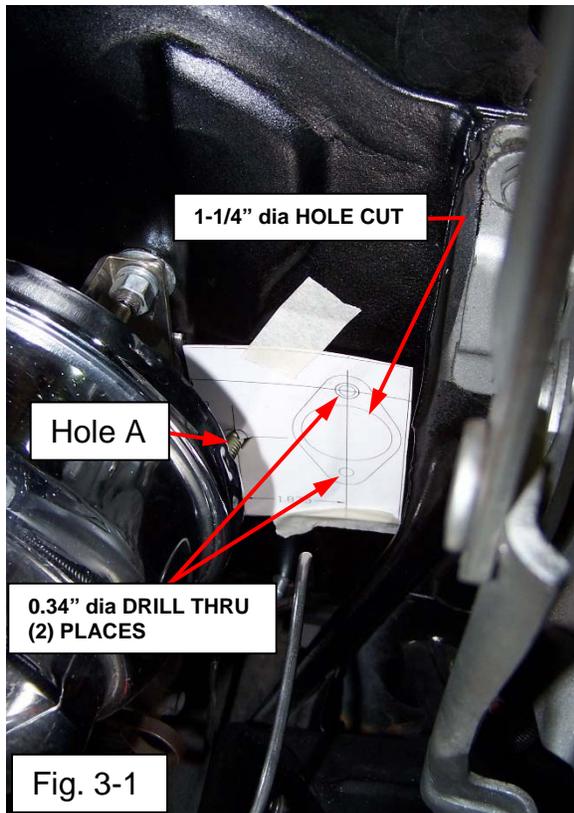
Remove original clutch linkage, transmission and bellhousing components:

- 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

1. The master cylinder mount block will be located using existing hole(s) in the firewall (See Fig. 3-1 and Fig. 4-1). Holes A and B are existing mounting holes for attaching the steering column carpet pad. Hole A is upper left and Hole B is the lower left. If present, remove clutch pedal and shaft assembly.
2. There are (2) options for locating the (2) mount block mounting holes shown on the cutting template TMG-01950.
 - a) The preferred method is to use the FRONT VIEW cutting template attached to the firewall. Cut the template and position over a 5/16 bolt inserted into Hole A as shown in Fig. 3-1. This should position the mount on the flat surface between the brake master cylinder mounting bracket and the turned-up lip on firewall.
Note: The cutting template REAR VIEW can also be used to double check that stiffener plate and hydraulic linkage will not interfere with any under dash components.
 - b) If using the REAR VIEW cutting template working from inside the cabin, cut the template and position over (2) 5/16 bolts inserted into Hole A and Hole B as shown in Fig.4-1.
3. For either method selected, mark location of the (2) mount block mounting holes and the center hole. Carefully drill (2) 0.34" dia holes thru the firewall. Cut 1-1/4" dia center hole thru firewall and deburr.
4. Assemble mount block gasket to mount block, then insert the master cylinder and mount block assembly to the firewall with the (2) studs protruding into the cabin area.
5. Install stiffener plate, flat washers, lock washers, and nuts. Align master cylinder, then tighten nuts to 15 ft.-lbs. See Fig 3-2 for installed master cylinder.
6. Assemble the 90° end of the braided steel line to master cylinder port closest to firewall.
7. The reservoir rubber hose barb fitting should already be installed in master cylinder at port located furthest from firewall.

Use caution not to over tighten and break fittings.



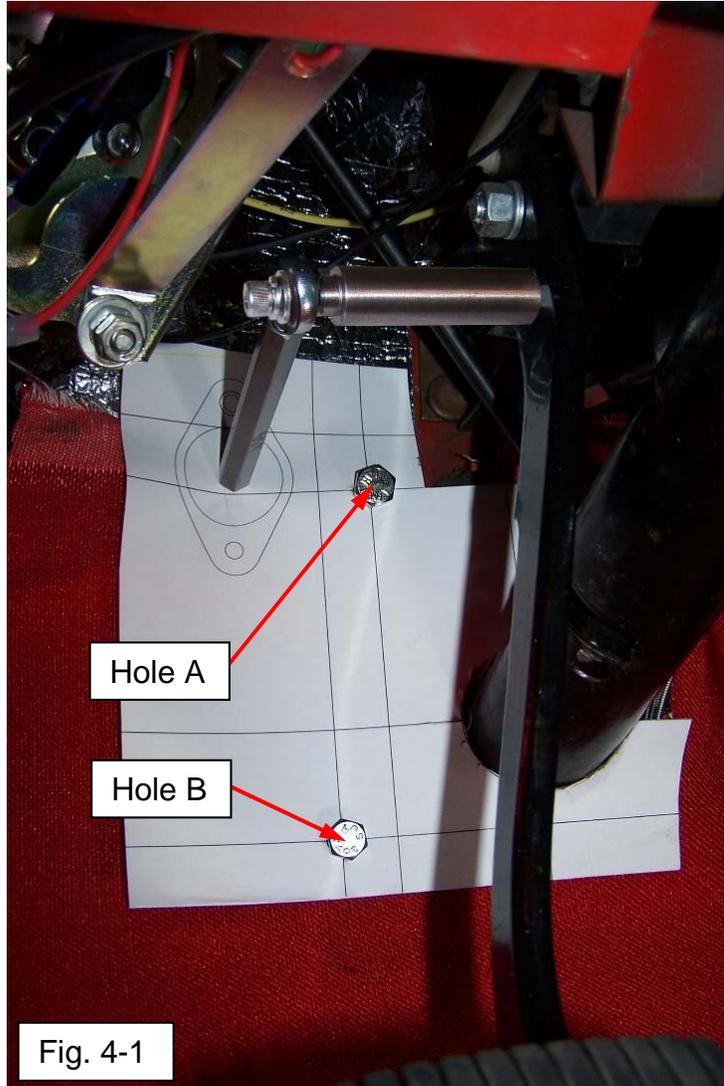


Fig. 4-1

PEDAL ATTACHMENT – NEW SST PEDAL ASSEMBLY

1. See page 6 for picture of new clutch pedal and shaft assembly.
2. Install clutch pedal and shaft assembly including use of splined clamp 4-spd linkage arm on end of shaft.
3. Assemble 5/16-18" x 1-1/4" bolt with (1) lock washer and (1) flat washer through rod end on master cylinder pushrod. Install finger tight to pedal mounting lug. See Figs. 4-1, 6-1.
4. 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 or mount block at any point during its travel. The master cylinder will not tolerate a side load and will wear out very quickly if the pushrod is going in at an angle greater than 6 degrees. **Make sure the pushrod is straight in line with the master cylinder!**
5. When the desired pedal height is achieved, tighten locknuts on pushrod.
6. Tighten clutch pedal rod end mounting bolt to 6 ft.-lbs.

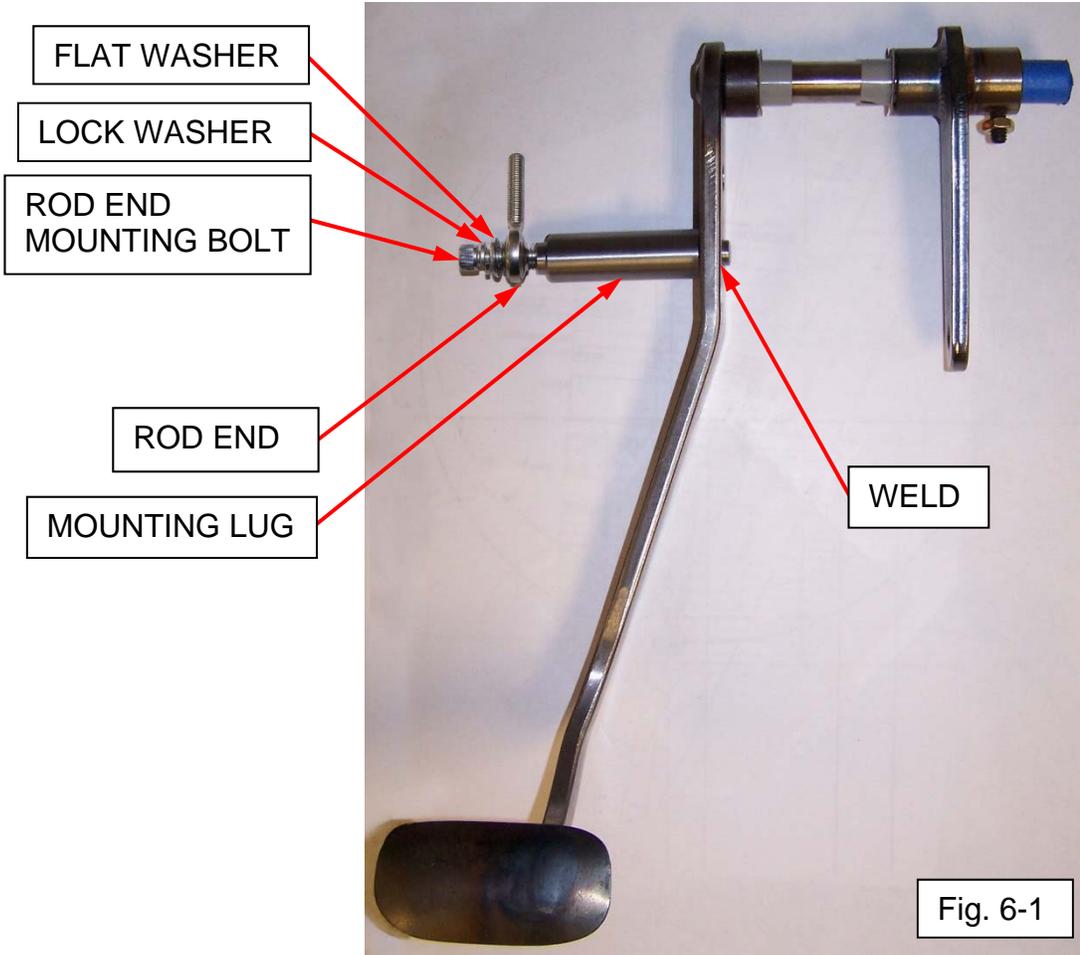
DO NOT depress the pedal any more than necessary before fluid is added to the system.

PEDAL ATTACHMENT – USING EXISTING PEDAL

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. The clutch pedal arm has (2) holes. The linkage mounting lug will be attached in the lower hole located at approx. 2.5" radius from center of the clutch pedal shaft. See page 6 for pictures of mounting lug kit components and pedal assembly.
2. Securely weld mounting lug to pedal as shown.
3. Re-install modified clutch pedal and shaft including use of splined clamp 4-spd linkage arm on end of shaft.
4. Assemble 5/16-18" x 1-1/4" bolt with (1) lock washer and (1) flat washer through rod end on master cylinder pushrod. Install to pedal mounting lug finger tight. See Figs. 4-1, 6-1.
5. 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 or mount block at any point during its travel. The master cylinder will not tolerate a side load and will wear out very quickly if the pushrod is going in at an angle greater than 6 degrees. **Make sure the pushrod is straight in line with the master cylinder!**
6. When the desired pedal height is achieved, tighten locknuts on pushrod.
7. Tighten clutch pedal rod end mounting 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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