



Installation Instructions

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C-6 COMPU-FLOW TRANSBRAKE

Part #603080

FOR PUSH-IN MODULATOR CASE ONLY

PACKING LIST

Compu-Flow Transbrake

ATI Compu-Flow Valve Body Decals (2)
 Instruction Sheet

Packed by: _____

IMPORTANT! YOU MUST USE AN EARLY C-6 ALUMINUM BAND APPLY SERVO PISTON WITH ITS SMALLER DIAMETER O-RING REMOVED. FAILURE TO DO SO WILL RESULT IN A 2-3 SHIFT FLARE.

Remove the transmission from the vehicle to properly prepare it for transbrake operation.

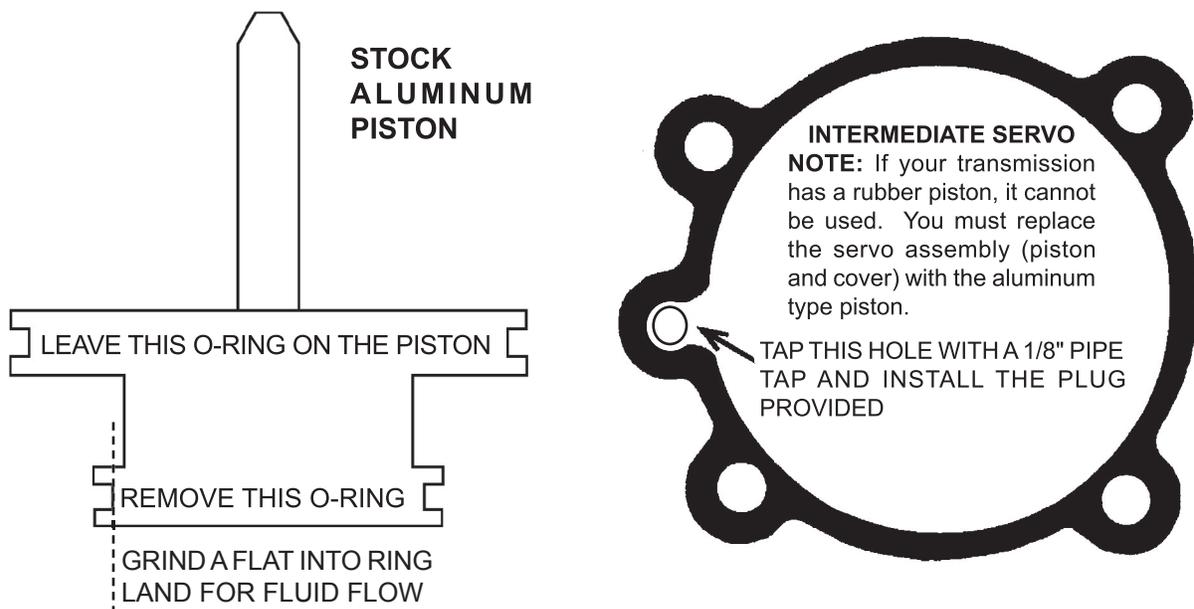
TRANSMISSION REMOVAL:

1. Raise the vehicle and support with jack stands or raise on an automotive lift. Make sure that the vehicle is properly supported! Place a drain pan under the transmission.
2. If your transmission is equipped with a drain plug, remove the plug and allow the fluid to drain. If your unit does not have a drain plug, remove all pan bolts except the 2 at the front of the transmission. Remove bolts one at a time, working back to front. Exercise caution as transmission fluid will splatter erratically during oil pan removal. You might need to reposition the transmission crossmember in order to remove the rear oil pan bolts. If this becomes necessary, support the rear of the transmission to prevent the transmission / engine assembly from moving down and causing damage to the distributor cap and /or engine mounts. As you remove the bolts along the sides of the oil pan, the weight of the fluid will usually cause the oil pan to separate from the transmission case, allowing the fluid to drain from the rear of the oil pan. However, if the pan does not readily separate from the transmission case, insert a screwdriver between the oil pan and the case and pry gently to begin the draining process. Remove the two rear oil bolts slowly (about one turn at a time) and fluid will drain at a steady rate from the rear of the oil pan. Drain the oil pan completely and keep it to hold bolts and small bolts and small parts. make a note of where and how all levers engage before removing the valve body.
3. Note the position of the detent guide plate, detent roller assembly, detent spring and all linkage.
4. Remove the transmission from the vehicle.

MODIFICATION INSTRUCTIONS

1. Tap the servo drain back hole in the case next to the piston bore and install a 1/8" allen head pipe plug. (See illustration below).
2. Select a C-6 band apply lever of suitable ratio (leverage) adequate for the horsepower level with which the transmission will be used. The closer the band strut slots are to the lever's pivot point (shaft) the higher, and better, the ratio.
3. If the reverse apply piston has a check ball, install it toward the top of the transmission case. Use at least four friction clutches in the reverse clutch pack and set the clutch pack clearance at .060 to .080. The pressure plate may have to be machined to set clearance. If the clutch pack has a waved cushion plate, remove it and add **flat** steel plates next to the piston. Make sure the lugs on the first steel plate do not hit the case and keep the plate from sitting flat on the piston. If necessary, grind the lugs off any steel plates used as shims. Any steel plate next to a friction clutch **must have lugs**.
4. Install 18 release springs in the direct (high) piston. Use at least four friction clutches in the direct (high) clutch pack. Use only **flat** steel plates and friction clutches. Set clutch pack clearance at .060 to .080.
5. Set band adjustment at one turn. A looser setting may result in a 2-3 shift flare.
6. Install the valve with its release assist spring into the modulator valve bore then place a dip stick tube o-ring on the solenoid and install the solenoid in place of the modulator. Check for free movement of the solenoid and valve before installing the valve body. The valve must close the last chamber and open into the second chamber by approximately .035 when pushed in by the solenoid.

SERVO ILLUSTRATION



VALVE BODY INSTALLATION

1. Double check the transmission case and make sure that there are no pieces of old valve body gasket remaining on the valve body mating surface of the case. Use a single edge razor blade or a gasket scraper to remove any remaining debris.
2. Install the ATI transbrake and torque the bolts to 100 in. lbs.
3. After installing the valve body, check the manual shift control valve for proper alignment to the passageways in the valve body. With the shift lever in the reverse position, the end of the manual shift valve should be flush with the small machined recess of its bore at the rear of the valve body. To adjust its position, carefully bend the inner lever which positions the manual shift valve.
4. Install the fluid filter that matches the depth of the pan used. Eight of the filter screws are approximately 1 3/8" long and one is approximately 1 5/8" long and goes in the rear corner of the filter closest to the transbrake valve. Do not use the early (1966 - 1974) shallow pan!
5. Remove any pieces of old pan gasket from the transmission case and oil pan. Clean oil pan and install using a new pan gasket. Secure all pan bolts evenly and then torque them to 150 in. lbs. or 12 ft. lbs. If you have removed a drain plug, install it now and tighten securely.
3. Always check shifter adjustment after installation. Never adjust the shifter linkage or cable in "PARK" position. Always start adjustment / alignment with the shifter and the transmission in high gear. After setting the cable or linkage in high gear, make sure that your linkage or cable aligns perfectly with the transmission lever in all other gear positions. Proper shifter adjustment is vital and critical to proper operation of the transmission. Do not operate without verifying proper shifter adjustment! Secure your linkage or cable appropriately when finished.
4. Lower the vehicle. Keep the rear wheels off the ground if possible. Pour in four (4) quarts of automatic transmission fluid. ATI recommends using a quality brand of Type F fluid. Start the engine with the transmission in NEUTRAL. Check the fluid level with the dipstick and continue adding until it has reached the ADD mark on the dipstick. With the brakes on, select each gear position for several seconds each in order to fill all oil circuits. Select the neutral position again and recheck the fluid level. If the level is at the ADD mark when the fluid is cold, it will probably reach the FULL mark after the transmission has reached operating temperature. DO NOT OVERFILL!

NOTE!

- A. When this valve body is installed, the governor assembly and the three sealing rings on the governor support are no longer needed and may be removed and discarded.
- B. Be sure the dip stick and tube are compatible and will read the correct fluid level in the transmission which is approximately 1/4" above the pan rail.
- C. When a clamp on the shift lever is used, it must be positioned on the shift linkage shaft so the sweep of its arc allows full and proper movement of the transmission's internal shift linkage, from park to the high gear position. Check shifter adjustment in all selector positions.
- D. Use 12 gauge wire to connect the transbrake button to a 12 volt power source and solenoid. The battery must be fully charged for the transbrake solenoid to work properly.

- E. Clean the transmission pan on a regular basis to remove any contaminants which may cause a malfunction to the transbrake valve or valve body.
- F. The transbrake valve body has a reverse shift pattern (PRN 123) and **must** be used with a shifter **built for a reverse shift pattern**. Reverse is engaged by shifting into reverse and pressing the transbrake button. The transbrake will apply only in low gear.



NOTE: Do not operate without verifying proper shift adjustment. Never try to neutral the transmission during a shutdown. Keep the transmission in high gear while slowing the car. For your own protection, never operate without an approved transmission shield. Transmission shields available from ATI, order part #606610.



Accidental transbrake engagement poses a serious safety risk! You must have Safety Electronics in place to safeguard against accidental engagement of the transbrake solenoid when not intended.