PACKING LIST

- Compu Flow Manual Valve Body
- Separator Plate
- Valve Body Gaskets (2)
- Transmission Pan Gasket
- Filter Seal Ring
- Heavy Duty Servo Kit
- Internal Wiring harness
- Wire Splice Connectors (2)
- Fourth Gear pressure Switch
- .500” Boost valve
- Purple Pressure Regulator Spring
- Pressure Regulator Retaining Ring

Packed by ________________________________

NOTE: On transmission components not being used, you can save and store the pieces to convert your transmission back to OEM specs if you so desire.

STEP 1: Drain the oil pan. You will need a pan to catch fluid. Remove transmission oil pan bolts. When removing bolts, remove so pan will not drop completely off but will be held into place so that one side will allow the fluid to be drained. After the fluid has drained, remove the rest of the bolts and pour out the remaining fluid. Remove gasket and discard. If gasket material sticks to transmission pan or case. Remove all material completely. A 700 R-4 transmission does not have a drain plug. You may want to install a universal drain plug kit into your pan now that you have the pan off.

STEP 2: Carefully remove the oil filter by pulling it straight down. Remove the pickup tube o-ring from the pump if it does not come out with the filter. Discard the o-ring. There is a small gasket that fits on the filter tube. Make sure it is still on the filter tube. If not, remove it from the case. Inspect the oil filter. Replace the filter if it is dirty or has not been changed in over 25,000 miles.

STEP 3: Remove internal wiring harness. Carefully disconnect the wire connectors from the switches. Remove the wires from the clips and unplug the wiring harness from the connector near the detent roller spring. Pry connector tab away from the plug and pull the plug down. Do not pull on the wires (Figure 1).

STEP 4: Remove the 2 valve body bolts holding the throttle pressure mechanism. Disengage the wire cable linkage while removing the mechanism. NOTE: This assembly will not be reused.

STEP 5: Remove the 1-2 accumulator by removing the three bolts holding the 1-2 accumulator piston housing. NOTE: Keep these bolts separated from the valve body bolts. Remove the 1-2 accumulator assembly. This assembly has four parts: the accumulator piston housing, accumulator piston ring, and accumulator spring. Some
earlier models will also have a thick support plate between the accumulator housing and the separator plate, If your transmission has this plate, remove it carefully. Be sure not to damage the gasket. This gasket must be reused. NOTE: located under the pressure plate is the 3-4 assembly. It will be removed after the valve body has been removed.

STEP 6: Remove the auxiliary valve body. Most 700R4 transmissions now have this auxiliary valve body (Figure 2). During the removal of the auxiliary valve body, the check ball located inside will drop out. When reinstalling valve body, this check ball must be used (Figure 3). Some 700R4 transmissions do not have this auxiliary valve body but came with a small support plate. If you have this type of 700R4, remove the four bolts holding the small support plate the case at the rear of the valve body. Remove the bolt holding the detent roller spring assembly.

STEP 7: Remove the remaining valve body bolts except for one near the center of the valve body. Holding the valve body securely, remove the last bolt and lower the valve body separator plate and gaskets. Remove the 3-4 accumulator spring, 3-4 piston seal, 3-4 accumulator piston and the 3-4 accumulator piston pin. Some of the accumulator assembly parts will drop out of the valve body as it is lowered. There are several check balls above the separator plate and in the valve body. Be careful not to lose them if you are intending to return the transmission to OEM specs at a later date. Before removing any check balls from the valve body, note their position for future reference.

STEP 8: Pressure Regulator modifications (Figure 4): Remove the pressure regulator assembly from the transmission pump. Push down on the TV boost valve sleeve while removing the retaining ring. Be careful as there is a heavy spring tension behind it. Slowly lower the sleeve to relieve tension. Remove the TV boost sleeve and valve, the reverse boost sleeve and valve and the pressure regulator spring. The pressure regulator may also drop out during disassembly. If so, coat with transmission gel or petroleum jelly and put back up inside the pump GENTLY. DO NOT FORCE. Replace the pressure regulator spring with the purple spring supplied and the TV boost valve with the supplied replacement. Reinstall the pressure regulator assembly with the new spring and TV boost valve (Figure 5). NOTE: The boost valves and reverse boost sleeve can easily be installed incorrectly. Incorrect assembly will cause the transmission to function improperly. BE SURE these parts are installed in the correct order, facing the right direction. Reinstall the new retaining ring supplied with kit.

STEP 9: Place the separator plate with gaskets against the transmission case. Install the small support plate (1982-1986) or auxiliary valve body (1987 and later) making sure that the check ball is in the proper location (Figure 3). Insert 2 valve body bolts into alignment holes in the separator plate. Tighten the support plate bolts and remove two valve body bolts from the alignment holes.
STEP 10: Install Valve Body. Be sure to engage manual valve with linkage properly. Do not force the valve or bend the linkage during assembly. Install one valve body bolt to hold the valve body into place. Do not tighten bolt.

STEP 11: 1-2 Accumulator Assembly: Reinstall accumulator housing assembly using the housing bolts that were kept separated. Tighten the bolts to 8 foot pounds. NOTE: If your transmission came with an accumulator plate, reinstall. It is not necessary to use the accumulator piston and spring when using a full manual valve body.

STEP 12: Install all the remaining valve body bolts, the detent roller spring and wire clips. The throttle pressure mechanism can be left out when using the full manual reverse shift valve body. Tighten the valve body bolts and small support plate bolts to 8 foot pounds. Tighten detent roller spring bolt to 10 foot pounds. Do not overtighten.

STEP 13: Installation of wiring harness: (Figure 6 and 7): Most applications will accept the OE solenoid. All 2 wire solenoids are acceptable. If you have a solenoid with only one wire, it cannot be used. (You may purchase the proper solenoid from a GM dealer, part # 8654126). Use your OE solenoid with 2 wires, cut both wires allowing about 2 1/2" for splicing to wiring harness.

To connect your solenoid with the wiring harness, use the splice connectors provided. Connect the positive wire from the solenoid to the positive position marked on the wiring harness. Then connect the negative wire to the negative position on the solenoid.

Install wiring harness and solenoid into the transmission. Torque the solenoid bolts to 8 foot pounds. Plug the two pressure connectors into the pressure switch on the valve body. Reinsert the black plastic transmission case connector to the transmission. You may need to transfer the plastic wiring retainer from your OE harness to protect the wires.

STEP 14: External Wiring - Using 18 gauge wire, run a 12 volt source to Terminal A. Terminal D will need to be grounded (use 18 gauge wire). The TCC is now set to engage automatically in 4th gear only. The converter clutch will release when the transmission is downshifted out of 4th gear. If you desire more control over the TCC, you have two options: Option 1 will allow you to lock up the torque converter in 2nd, 3rd and/or 4th by running wire B to a ground dash mounted toggle switch. Option 2 is for drivers that may want to shut down the TCC system completely. You will need to only run the 12 volt source through a second dash mounted toggle switch. Now you may manually turn the lock up system on and off. (See wiring diagram - Figure 6).

STEP 15: Install the filter seal ring supplied, onto the filter tube. Lubricate the seal ring with the transmission fluid and install the filter into the pump.
STEP 16: Clean all old gasket material from the oil pan and the case. Wash pan in solvent and install with the new pan gasket supplied. Do not use any gasket sealer. Make sure servo exhaust hole is not plugged or stopped up (Figure 8). When cleaning gasket material, some could have accidentally gotten into this opening. Install pan bolts and tighten to 10 foot pounds.

STEP 17: Corvette transmissions: Servo modifications are not necessary. All other transmissions: Locate servo and remove the servo cover ring. Pry the servo housing seal o-ring out and cut ring. Pull seal out and remove servo assembly from the case.

STEP 18: Disassemble servo assembly (Figure 9). Clean all parts thoroughly before reassembly.

STEP 19: Discard OEM parts and replace with parts supplied with the kit (Figure 9). Assemble and reinstall into transmission. NOTE: Make sure assembly is totally correct before reinstalling in case. Once the servo housing is in place, the servo housing seal o-ring will have to be cut for removal of assembly.

STEP 20: Pour 5 quarts of automatic transmission fluid into the transmission. Start the engine and check the transmission fluid. Add transmission fluid until fluid reaches full level. **CAUTION! DO NOT OVERFILL TRANSMISSION!**