

INSTALLATION INSTRUCTION FOR TURBO 400 “PRO TREE” BRAKE KIT (#22023)

Thank you for purchasing a Coan Racing performance product. Since 1976, Coan Engineering has been the leader in hi-performance race transmissions and converters. Our ongoing research and development assures that you have purchased the best products available.

*** COMMITMENT * PERFORMANCE * RELIABILITY * A WINNING COMBINATION ***

The scope of these instructions will be aimed at the installation of this kit and it is assumed that the transmission will be rebuilt properly to work with this valve body. If necessary refer to a transmission manual for detailed instructions on disassembly and reassembly of the Turbo Hydramatic 400 transmission.

Note: Valve body is full manual with reversed shift pattern. (PRN123) As a safety feature, the Trans brake is only functional in first gear. Pro Brake has reverse lockout feature, to activate reverse, depress trans brake switch with shifter in neutral position. Reverse WILL NOT function in reverse position with or with out button depressed.

TH400 Pro Brake Components:

- | | |
|----------------------------|-------------------------------|
| 1. Valve body/machined | 5. Solenoid and o-ring |
| 2. Separator plate | 6. (16) Direct Clutch Springs |
| 3. Manual valve | 7. Brake valve |
| 4. Rear accumulator spring | 8. Brake valve spring |

Caution: DO NOT neutral or downshift transmission during shutdown,
LEAVE IN HIGH GEAR ONLY!

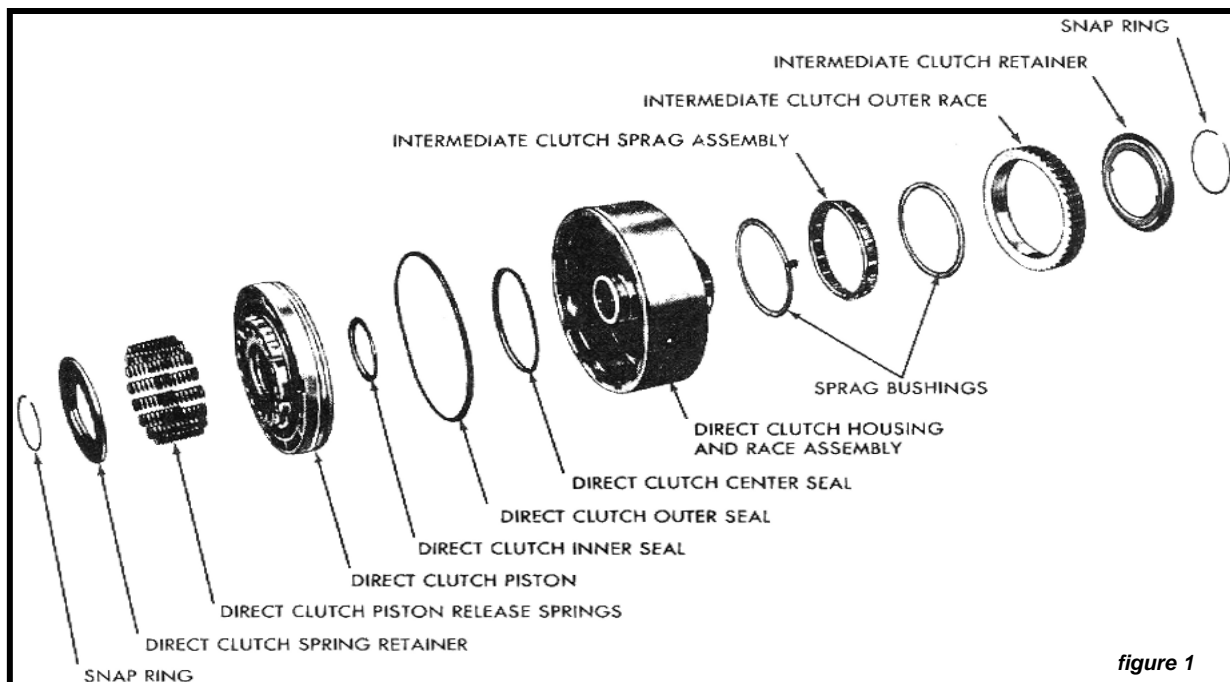
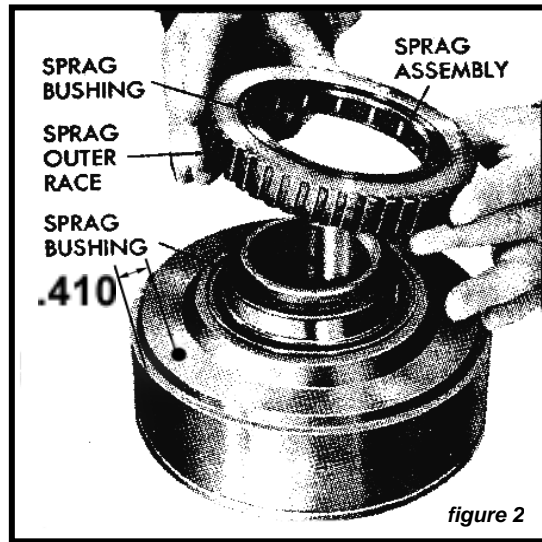


figure 1

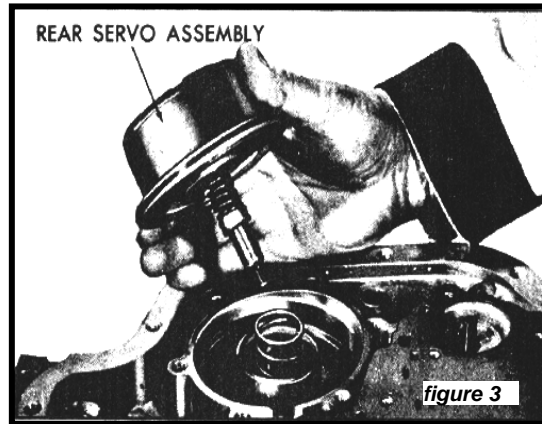
Disassembly of Direct Drum

1. Remove direct clutch drum from transmission. Pry out snap ring to remove pressure plate and clutch pack. Compress spring retainer to remove release springs and piston. (If proper tool is not available, you may need the assistance of your local transmission shop.)
2. It is necessary to drill a constant bleed orifice in the drum, using a 1/16" drill. A drill press should be used for this operation. At any place on the outer circumference of the drum, measure in from the edge .410" and place a center punch mark. *figure 2*
3. (Sprag side) Drill through the drum, being careful not to let the drill score the machined surface for the outer lip seal, as it breaks through.
4. It is recommended to replace the std. sprag with part #22800 for any high performance application.

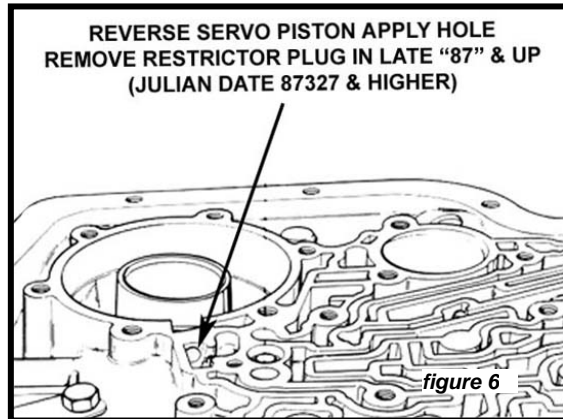
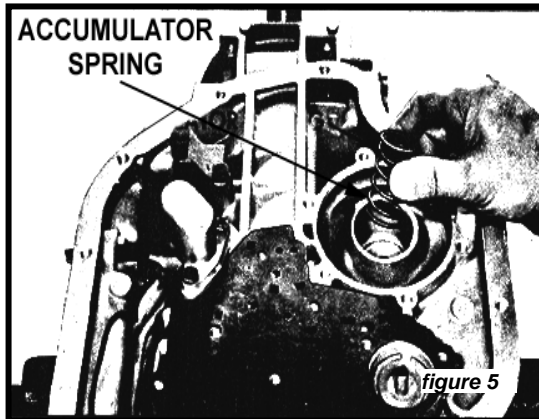
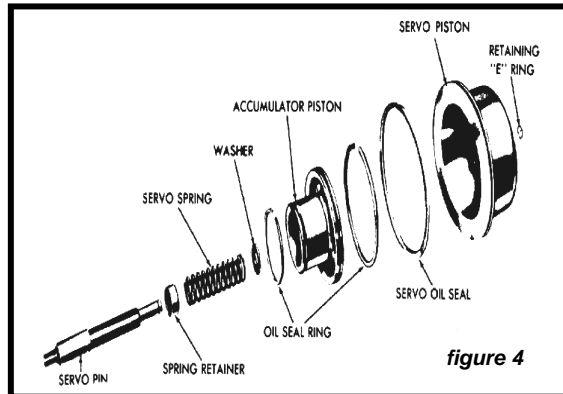


Assembly of Direct Drum

1. After orifice has been drilled, drum is ready for reassembly. Before installing piston remove and discard center lip seal in drum. Install piston. *figure 3* Discard 16 stock release springs and replace with 16 new springs furnished. Replace retainer and snap ring. Assemble clutches and steels. A .050 - .060 *figure 4* clutch pack clearance is recommended. Install drum, discard front band, and reassemble transmission.



2. Remove valve body, separator plate, and gaskets. Discard **all** check balls. Remove rear servo assembly. *figure 3* Remove and discard oil-sealing rings from accumulator piston and discard stock accumulator spring *figure 4*. Install new accumulator spring furnished in kit and replace servo assembly and cover. *figure 5* For installations in late model cases that are equipped with a factory installed restriction in the Reverse Servo Piston apply hole, remove and discard the restrictor. The restrictor resembles a freeze plug installed in the apply hole. *figure 6*



3. Install new valve body. Governor tubes can be omitted, unless using old style long filter, in which case one tube can be replaced as a filter support.
4. Use new separator plate with no gaskets and manual control valve furnished.
5. Remove and discard modulator and modulator valve. Place spring furnished over new valve and install in case making sure the new valve moves freely and the spring is functional. Next install the solenoid with "O" ring in the modulator position and tighten in place with the stock modulator clip.

***NOTE:** Cooler fittings should never be plugged. If a cooler is not used, connect the lines together with a loop.

After assembly of transmission is completed, necessary wiring for the solenoid can be done. Position the momentary switch on the shifter or wherever it is comfortable. Run a wire from lead of switch to a twelve volt source, the other lead is connected to the red (+) wire on the solenoid. The black (-) wire on the solenoid should be connected to a good clean chassis ground. Be sure to use good wiring connections.

If you have any questions regarding the proper installation and/or operation of a Coan Racing product, please call (765) 456-3957. You may also fax us at (765) 456-3960, or e-mail at coan@coanracing.com.

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