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INSTALLATION INSTRUCTIONS FOR TH350 E-SHIFT BRAKE KIT (FORWARD PATTERN – PRN321) (#32026)

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 350 transmission.

Step 1: Remove direct drum from transmission, disassemble to remove piston. Drill a 1/16" angled hole in the bottom corner all the way through the drum (Figure: 1). Remove and discard lip seal from drum. (The inner & outer lip seals must stay on the piston.) *Skip this step if using a Coan Alum. Direct Drum.

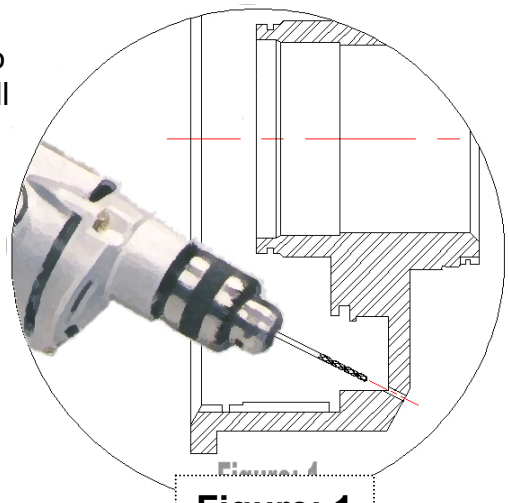

Figure: 1

Step 2: Reinstall the piston and replace the stock, return springs with the ones furnished. 5 clutches recommended in direct and reverse.

Step 3: Remove Kickdown Cable Assembly from case. Tap hole with Special ¼" Tap enclosed. (Figures 2 & 3)

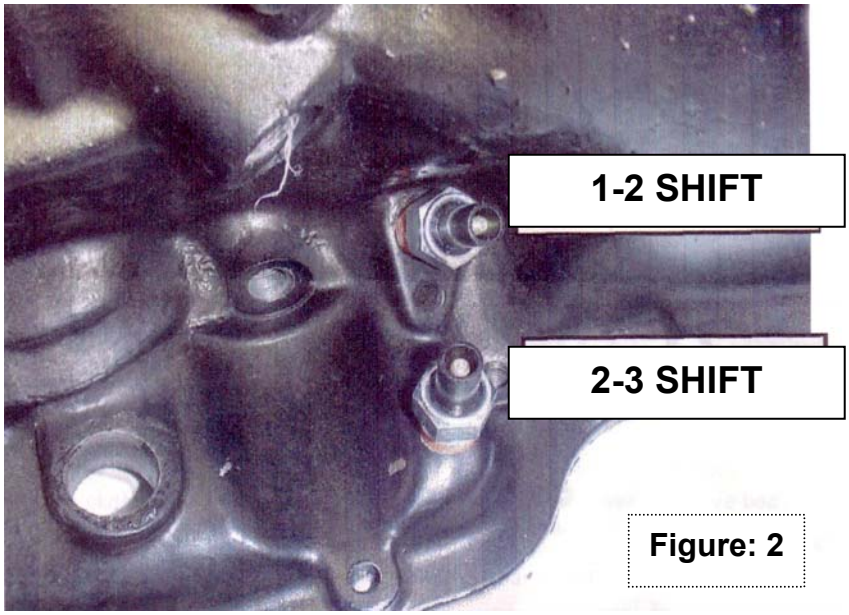

Figure: 2

Step 4: Drill hole just behind cable in flat area of case with 7/16" drill enclosed. (Figures 2 & 3)

Step 5: Tap Hole with ¼" tap.

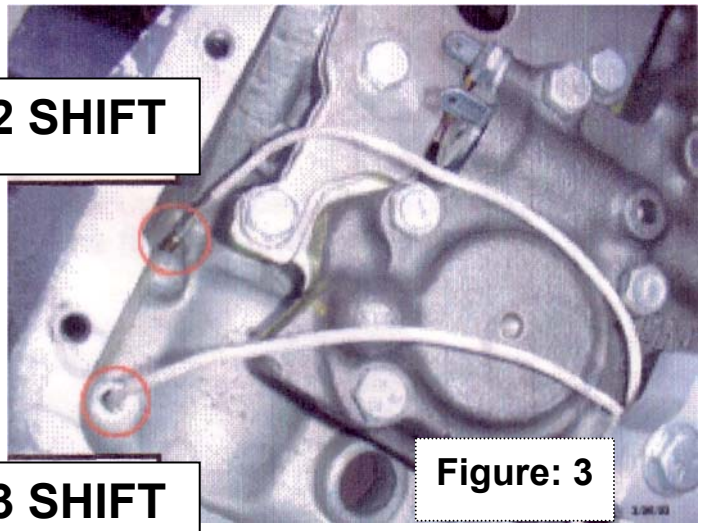

Figure: 3

Step 6: Install in case the two connectors. (Figures 2 & 3)

Step 7: Remove & discard the intermediate band
Remove and discard kickdown cable.

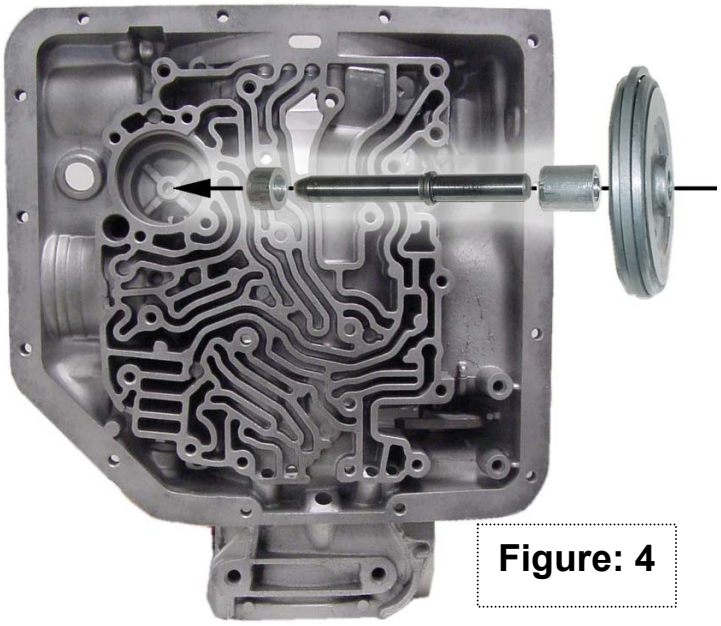

Figure: 4

Reassemble the transmission up to the valve body. Intermediate servo spring and spring seat may be discarded. The shorter of the two spacers must be slid on to the pointed end of the apply pin. The longer spacer needs to go on the opposite end of pin and the piston on top of that. Slide the apply pin assembly into its bore. The separator plate will hold it in place. Discard all check balls. (Figure 4)

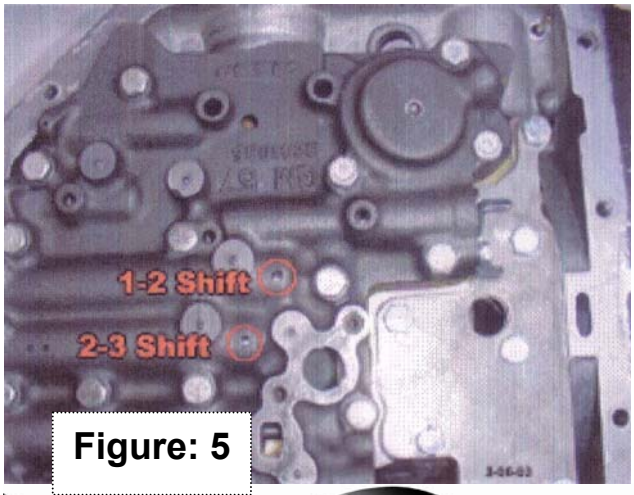

Figure: 5

Step 8: Using your existing manual valve, install the new valve body, use the new separator plate with supplied gaskets, install stock separator plate support.

Step 9: Note position of the 1-2 & 2-3 shift holes in valve body, (Figure 5).

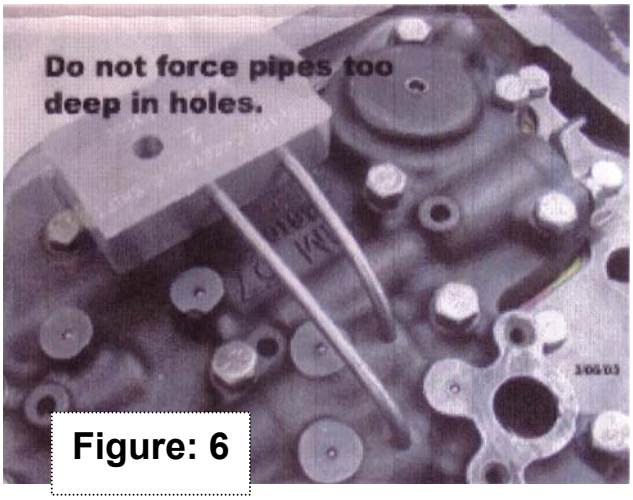

Figure: 6

Install tubes and manifold, ***but be sure that you do not push tubes into valve body too deep***, (Figure 6). If you do you will cause the shift valves to stick.

Step 10: install the two spacers and the two 3" bolts and tighten down.

Step 11: If you have any doubt about the tubes, you can remove solenoids and air check, but be careful to not cut o-rings during reinstallation, (Figures 7 & 8).

Figure: 7

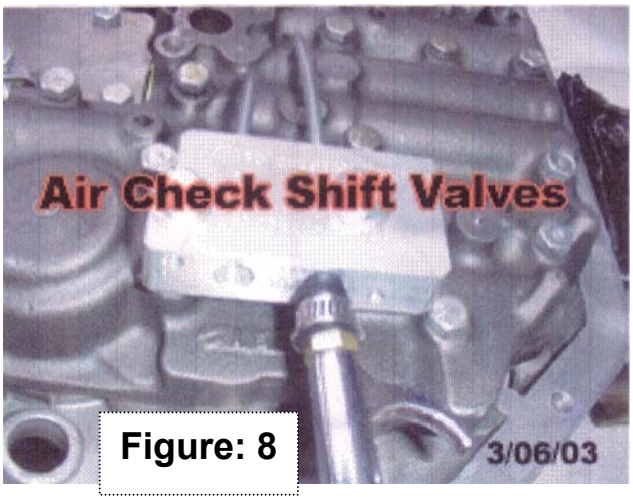

Figure: 8

Step 12: Connect wires to case connectors, (Figure 9). Note how wires are routed around the spacer to prevent interference with dip stick. The front solenoid wire (converter side of manifold), goes to the case connector which is in the old kickdown cable hole. This is your 1-2 shift wire connection.

Step 13: Connect the rear solenoid wire to the case connector which is in the newly drilled hole. This is your 2-3 shift wire connection.

YOU MUST DO THESE STEPS RIGHT OR YOUR TRANSMISSION WILL NOT WORK PROPERLY.

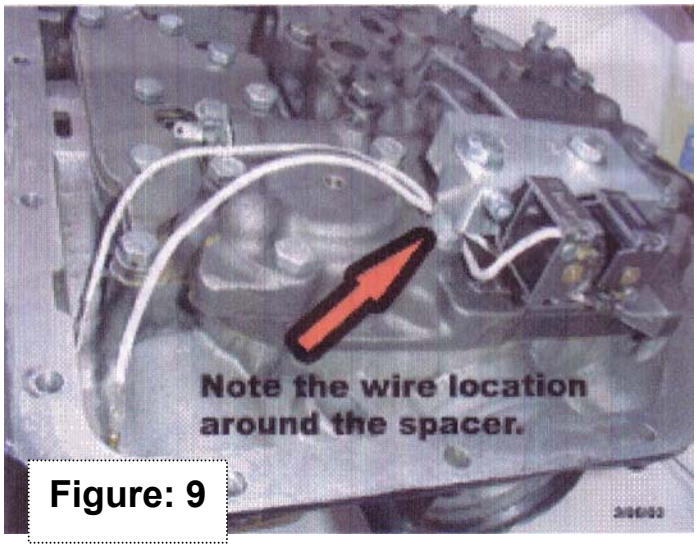

Figure: 9

Step 14: Remove and discard modulator valve. Install the brake valve spring over the outside of the valve and install into the case. Make sure it moves freely and spring is functional. Next, install the solenoid with 0-ring and tighten in place with modulator clip.

Step 15: After assembly of transmission is completed, necessary wiring for the solenoid can be done. Position the micro switch on shifter of wherever it is comfortable. Run a wire from one lead of the switch to a 12 volt source, the other lead is connected to the + wire on the solenoid. The - wire is grounded.

Step 16: This kit utilizes the second gear accumulator, the piston with rings and spring must be installed, and case bore must not be damaged from broken accumulator spring during prior use.

Caution: Do not neutral or downshift transmission during shutdown, leave in high gear only.

Electric Shifting

This valve body has been designed to work in conjunction w/ Turbo Action's "E-Shift" shift control. Each shift will occur by applying and holding 12V to the respective shift solenoid with the transmission in "D" or Third gear position. Once 12V is applied to the 1-2 solenoid, it must remain on through the duration of the run. The 2-3 solenoid must then be applied in addition to the 1-2 to complete both shifts. It is possible to shift the transmission by means other then the "E-Shift" controller if it were to fail. You may electrically shift the transmission by placing the transmission in "D" or Third gear position and energizing each solenoid separately with toggle switches. You may also shift the transmission with the shifter by energizing both solenoids simultaneously and placing the trans in first gear position. Then you may move the shifter to the second and then to third and it will shift. The transbrake will only work when the transmission is in first gear. Once it is shifted to second gear manually or electrically the transbrake becomes in active.

All burnouts must begin in second gear and quickly shift to third. Typically the programmed 1-2 shift RPM must be 300-400 lower then the desired shift RPM and 100-200 lower then the 2-3 lower then desired shift RPM and 100-200 lower for the 2 -3 shift.

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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