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TCI® 321000/321001

Turbo 350 Manual Valve Body - Regular Shift Pattern (P-R-N-3-2-1) (321000 Engine braking in Second, 321001 Engine braking in First & Second)

First, read instructions carefully, then proceed to install valve body by following each step individually.

TCI® 321000 Kit Contains:

One (1) Valve Body
One (1) Special Valve Body Spacer Plate
One (1) Spacer to Valve Body Gasket (Small)
One (1) Spacer to Valve Body Gasket (Large)
One (1) Special Plug
One (1) 2-3 Performance Plate
One (1) Modulator Plug

STEP 1 Transmission should be cool before installing. Also, place gear shift selector in neutral. If vehicle is on the ground, secure so it will not roll.

STEP 2 Remove drain plug in pan and drain oil. Oldsmobile, Buick and Pontiac do not have drain plug, and therefore, must be drained by dropping pan on transmission. Recommend leaving a couple of bolts attached until most of the oil has drained.

STEP 3 Remove transmission oil filter by removing two (2) screws. **Be careful not to lose gasket.**

STEP 4 Remove kickdown valve wire by pulling pin out of kickdown lever in valve body. **NOTE: These pieces can be discarded as they are no longer used.**

STEP 5 Before removing valve body, **note** position of the gear shift linkage hooked to the valve body. Remove seventeen (17) bolts from valve body. **CAREFULLY** lower valve body and at the same time slide angled shift pin lever fro gear shift selector. **DO NOT** drop valve body or manual valve with angled shift pin.

STEP 6 Holding spacer plate with your hand, remove spacer support plate bolts. **CAREFULLY** lower plate as there are four (4) small teflon® balls sitting on plate. (**NOTE: These balls can be discarded**). Also, watch that the governor screen and oil pump screen do not fall out. These screens are located in case underneath the valve body spacer plate. **See Illustration 1.** Oldsmobile, Buick and Pontiac have two (2) governor screens in rear case, one (1) in each passage. Chevy has only one (1) governor screen.

STEP 7 Remove the governor screen or screens from transmission case and discard (**Illustration 1**). Hole Letter "A" in Illustration 1 must be drilled to 9/64" (Note in some models this hole is already 5/16"). **DO NOT DRILL HOLE OVER 3/4" DEEP.**

STEP 8 Take Special Plug and very **carefully** with a broad, blunt-pointed punch tap into hole Letter "A". **If you tap too hard, the punch will go straight through the bottom of the plug, therefore, be extremely careful.**

STEP 9 Sometimes the front servo will fall out when lowering the spacer plate in **Step 6**. If so, be sure to reinstall per **Illustration 2**.

STEP 10 Using vasoline, place oil pump screen into Hole "C" (**Illustration 1**).

STEP 11 Install Special Valve Body Spacer Plate with Spacer to Case Gasket (large gasket) Carefully raise Special Valve Body Spacer Plate with gasket up into transmission with one hand and with the other hand, raise 2-3 Performance Plate and Spacer Support Plate into position. **See Illustration 3. NOTE:** 2-3 Performance Plate must go between Special Valve Body Spacer Plate and Spacer Support Plate. Start all seven (7) bolts in place, but do not tighten as these bolts must be loose in order to line up valve body bolts. **CAUTION:** Be sure that the Spacer Support Plate has no rough edges. If it does, file smooth.

STEP 12 Before lifting new Valve Body into transmission, place manual valve into it using the manual valve from your old valve body.

STEP 13 Lift Valve Body and Spacer to Valve Body Gasket (small gasket) up into place being sure to line up gear shift selector pin. Start all bolts making sure valve body is in its proper location. Tighten valve body bolts and **spacer support plate bolts from the middle out**. Tighten to 8-10 ft./lbs.

STEP 14 Replace transmission oil filter with a TCI® 328500 Filter Kit making sure that the holes in the filter line up with the valve body holes. **DON'T FORGET PAPER GASKET BETWEEN FILTER AND VALVE BODY.** Filter installed properly will have the word "Front" stamped on it (towards motor).

STEP 15 Reinstall modulator valve. Bolt up the oil pan. Refill transmission with a good brand of Type "F" transmission fluid. Warm transmission up and place in all gears. Then check to make sure transmission level is on the add mark. Take vehicle out and drive 2-3 miles. Then recheck oil level. Add if necessary. **BUT NEVER FILL OVER THE FULL MARK.**

STEP 16 These options can be made if transmission is being overhauled and using this valve body:

1. Remove the center seal, medium-sized, located in the direct clutch drum (will make the 2-3 shift far better).
2. Remove governor assembly.
3. Remove vacuum line and plug manifold.
4. Remove kickdown cable, but plug hole in case.

WATER BURNOUTS (SMOKEY BURNOUTS)

Recent tire developments has brought about the need to get tires extremely hot in order to get maximum traction. This brought about the use of water to get tire speed up quickly. Now tires are getting hot, **but automatic transmissions are subject to destruction if not careful!** PLEASE READ CAREFULLY THE FOLLOWING SUGGESTIONS FOR YOUR TYPE OF TRANSMISSION. **CHRYSLER "727" & "904" TRANSMISSIONS** All water burnouts should be started in 2nd gear and shift to third if necessary. If you should start burnout in first, shift immediately to second before tires come out of water. No matter what gear you are in, as you come out of the water, you should decelerate engine. **NOTE – Rear End Breakage & Driveshaft Breakage:** If rear end of driveshaft breaks while in first gear acceleration or burnout, remove transmission and check rear roller clutch for damage. **FORD "C-4" & "C-6" TRANSMISSIONS** Same as Chrysler "727" & "904" Transmissions. **G.M. TURBO HYDRO "350" & "400" TRANSMISSIONS** All water burnouts suggest starting in first or second, but get into high gear before coming out of the water. Normally, Turbo Hydros do not have roller clutch trouble, except occasionally in the Turbo "350", but for durability reasons it will pay to follow the suggestion as stated for preventative maintenance. Also decelerate as you come out of water. **G.M. POWERGLIDE TRANSMISSIONS** Water burnouts will not hurt units, except if you are shifting from low to high as you are coming out of the water. Shifting under conditions stated will cause premature clutch wear. Suggest decelerate as you come out of the water.

SPECIAL NOTE: All of the above suggestions will also extend the life of the roller (sprag) clutch in your converter.

**TRANS
HELP**
662-224-8972

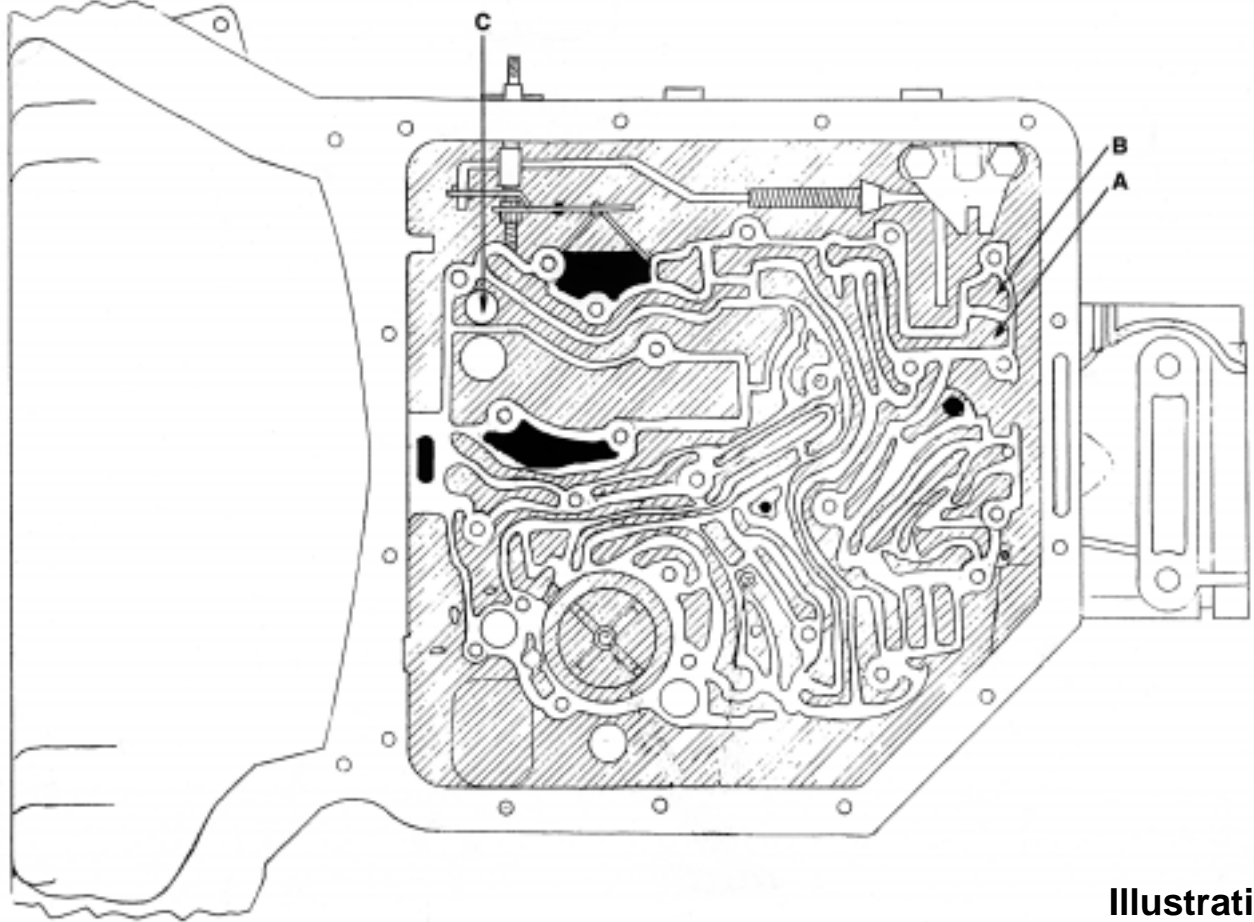
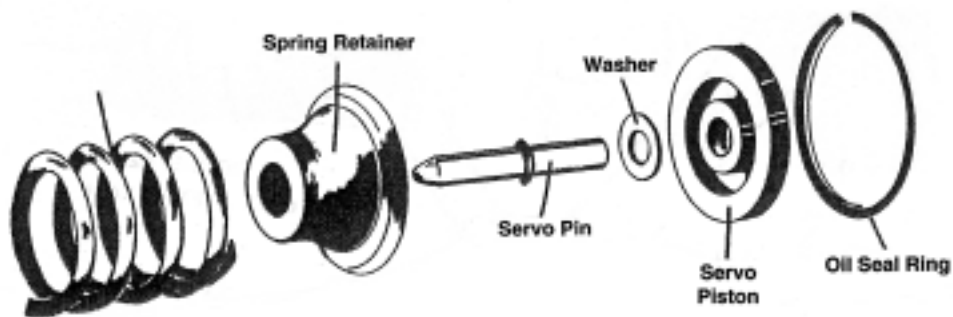


Illustration 1



Sometimes the front servo will fall out when lowering the spacer plate in Step 6.
If so, be sure to reinstall per above.

Illustration 2

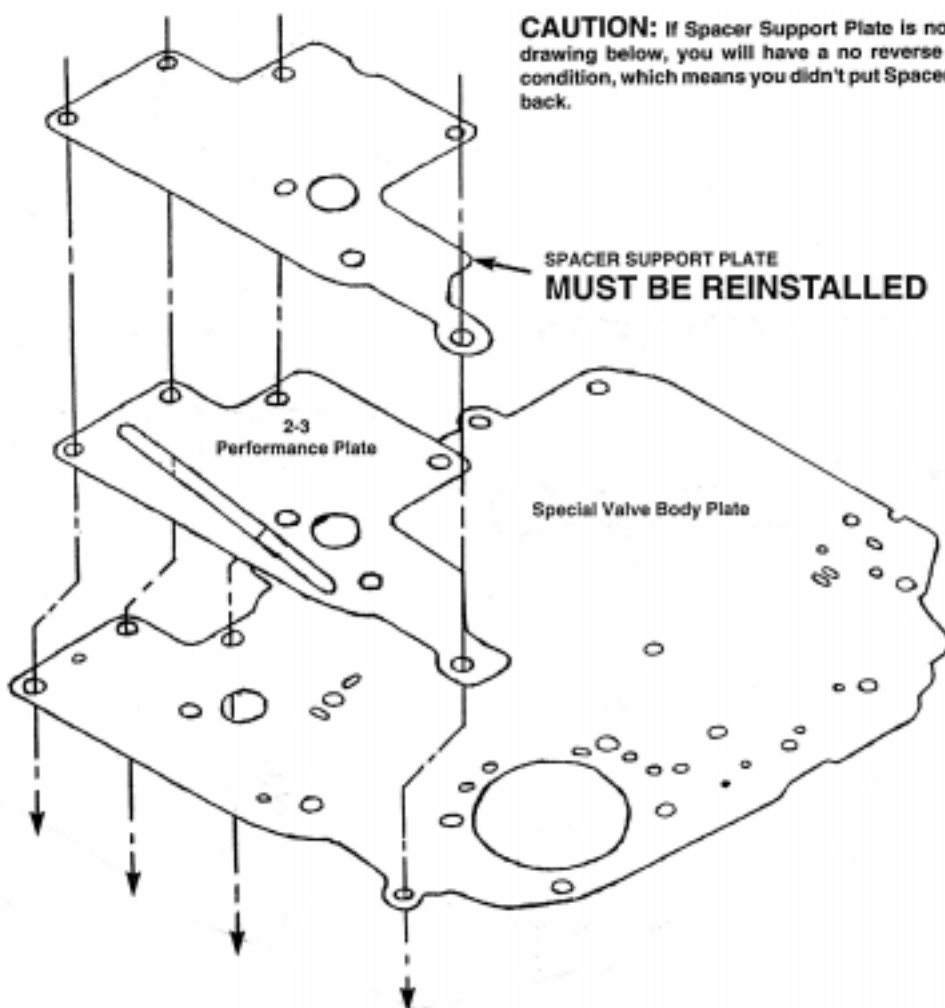


Illustration 3