



888.776.9824

TCI[®] 221500

Turbo 400 Trans Brake

Shift Pattern: Park-Reverse-Neutral-1st-2nd-3rd

This Kit Contains:

- (1) Turbo 400 Trans-Brake[™] Valve Body
- (1) TCI[®] 221300 Solenoid
- (1) Separator Plate
- (16) Direct High Gear Springs
- (1) Solenoid Brake Valve and Return Valve Spring
- (1) Pressure Regulator Spring
- (2) Valve Body Gaskets

STEP 1 Drain and remove transmission.

STEP 2 Disassemble transmission.

STEP 3 Remove high clutch drum from transmission.

STEP 4 Remove piston assembly from high clutch drum.

STEP 5 A bleed-off hole must be drilled into the high clutch drum. **(See Photo A.)**

STEP 6 It is best to drill from the inside-out behind the piston area. The drill may be held at a slight angle for more drilling room. The bleed-off hole should be 1/16" or 0.0625".

STEP 7 Deburr and wash high clutch drum.

STEP 8 (See Photo B.) Using a 1/8" round rat-tail file or Dremel Tool open passage area as shown in photo. At least half of the casting wall should be removed. Care should be taken not to scratch or nick the bore area where the brake valve enters. This passage area is the brake and high gear apply. This modification is necessary for the Trans Brake release.

STEP 9 Wash transmission carefully. Any metal shavings left in transmission can cause the transmission to not operate properly.

STEP 10 You are now ready to reassemble high clutch drum. Using new seals, replace the inner and outer seal on the high clutch pack. Do not use center (cushion seal) on the high clutch drum. Discard this seal. Re-install piston into high clutch drum.

STEP 11 Discard the 16 OEM Direct High Gear Springs. Replace with the special TCI[®] Direct High Gear Springs included in this kit.

NOTE: Set clutch pack clearance: .050" -.090".

STEP 12 Remove and discard Intermediate band and piston assembly. **(See Photo C.)**

STEP 13 Remove rear servo piston. Remove and discard the two rings from the reverse accumulator. **(See Photo D.)** Tap 1/4" checkball into accumulator drain. **(See Photo E.)**

STEP 14 Before installing rear servo, check surface of rear servo cover. Surface should be flat and smooth. Take sand paper, and attach to a flat surface. With even pressure, sand

Attention

This 221500 Valve Body has been engineered with a special reverse circuit. In order to apply Reverse, please follow these steps:

- 1. Put shifter in Reverse or Neutral**
- 2. Push Trans-brake button to back up.**

servo cover. Cover surface should sand evenly all around mating surface. (if warped, replace.) Wash cover and re-install rear servo assembly. Re-install all springs.

STEP 15 Replace modulator with TCI[®] solenoid. A. Remove modulator and OEM valve. B. Slide return spring over the TCI[®] brake valve. C. Insert brake valve and spring into the modulator valve bore. This should slide in and out freely. D. Insert TCI[®] solenoid into modulator valve bore using modulator retainer and bolt to hold in place.

STEP 16 Center Support Modifications. (See Photo F.) You will not have to remove center support, we have removed only to show location of sealing ring. Remove and discard second sealing ring from top.

STEP 17 Remove pressure regulator from front pump. **(See Photo G.)** Push down on the boost sleeve and remove snap ring. Slowly remove booster sleeve assembly. **NOTE: UNIT HAS SPRING TENSION—DO NOT LET SPRING ASSEMBLY FLY OUT OF BORE.** If sleeve is stuck, tap on it lightly to free from bore. Remove the booster sleeve and valve pressure regulator spring, spring retainer, **discard** shim (some models have one) and the pressure regulator valve. Disassembly and assembly **(See Photo H.)** Replace OEM pressure regulator spring with TCI[®] spring supplied in kit. To install the assembly, slip the retainer in place with the tangs toward the spring. Slip the spring over the small end so it comes in contact with the retainer. Push the entire assembly into the pump. Push on the booster sleeve and install the snap ring. Make sure it seats completely into its groove.

STEP 18 Valve Body: This Trans-Brake Valve Body has been modified along with the component pieces. **DO NOT MIX PARTS!** Use **ONLY** the TCI[®] Modified Brake Valve and manual valve that comes with this valve body. Use no check balls in valve body or case. Governor delivery tubes are not necessary, but one may be used to support early design filter and should be used if you have this type of transmission case. Governor may be omitted.

NOTE: Start all valve body bolts before tightening valve body to assure proper alignment. Torque bolts to 120 in. lbs.

STEP 19 Complete transmission assembly and install into vehicle.

STEP 20 Wiring Solenoid/Micro Switch: Use #12 gauge wire and female wire end connectors. From the micro switch run a hot wire to the battery and the other wire is run directly to the red wire on the solenoid. Be sure to use strapping to connect any loose wires to the frame of the vehicle. The black wire should be grounded to a solid ground. **NOTE: DO NOT** let wires come in contact with any moving parts.

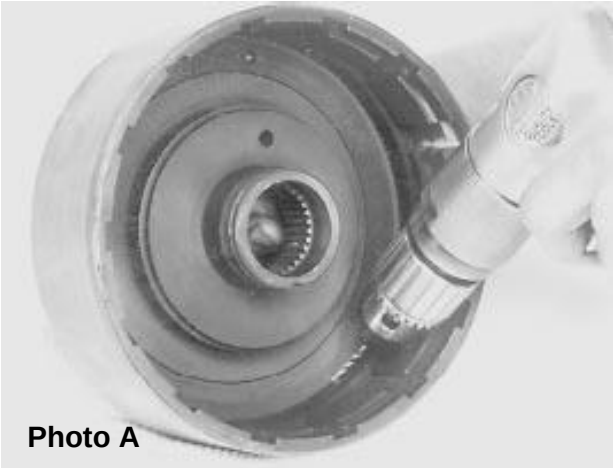


Photo A

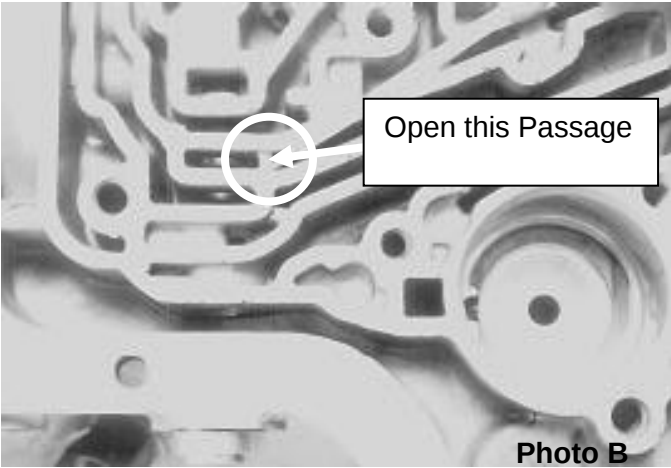


Photo B



Photo C

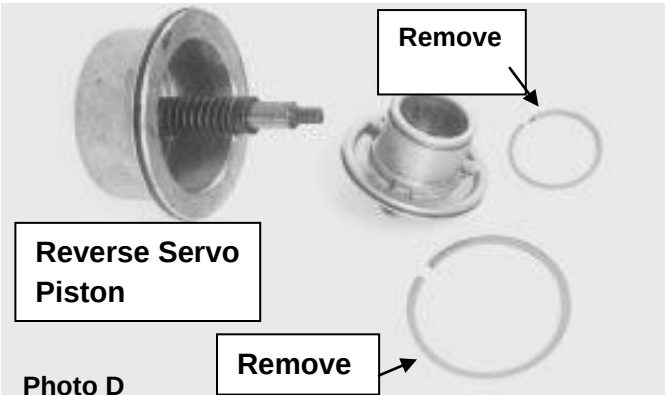


Photo D

IMPORTANT NOTICE CONCERNING TCI® 221500

Do not shut down motor while in second gear with engine rpm above 6000 rpm. Repeatedly doing this may cause severe damage to transmission and bodily harm. A TCI® 980000 Aluminum Trans-Shield™ is highly recommended for this application.

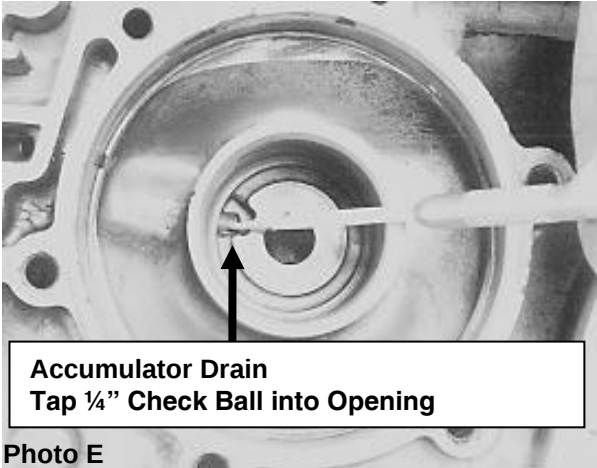


Photo E



Photo F

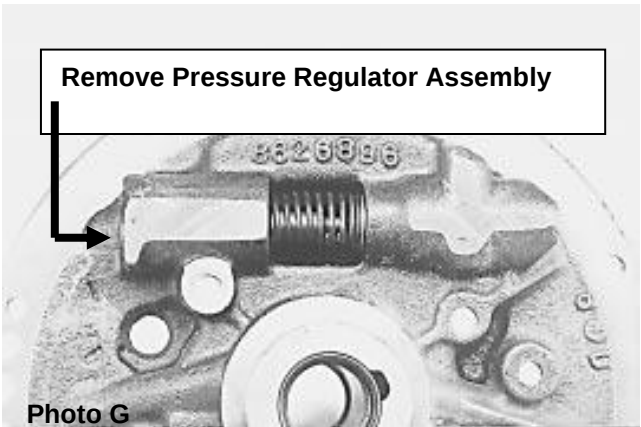


Photo G

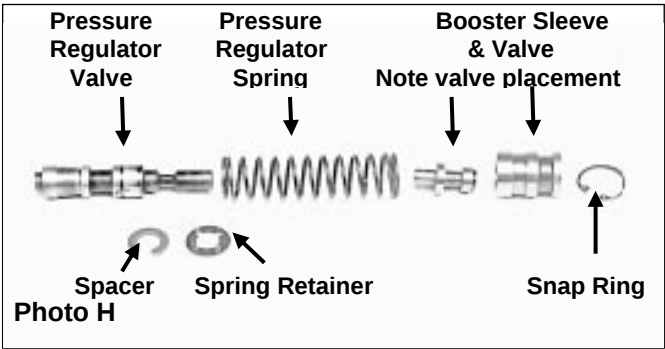


Photo H

HOW TO CORRECTLY DO A BURNOUT!

To extend the life of the transmission, you must start out in **2nd GEAR** when doing a burnout with a TH-400!

Then as you begin to come out of the water box, shift to hi-gear. If you are unsure on how to do this, call our tech line at 888.776.9824.

TRANS
HELP
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