

TURBO ACTION

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CHEETAH PRO SERIES TRANZ BRAKE VALVE BODY (Not for Street Use) Part #24941

Reverse Shift Pattern (PRN123)

No Engine Braking in 1st & 2nd

Turbo Hydro "400"
1965 - Up

Installation Instructions

The Turbo Action *CHEETAH Pro Series Tranz Brake* gives you the same clean and positive shifts that you have come to expect from a *CHEETAH VALVE Body*. In addition, you now have a Tranz Brake which will allow you to compete in Pro Light Classes as well as full tree Brackets. Special features include: Tranz Brake works in first gear only; no extra horsepower loss due to high line pressures; exclusive "Power Lock" brake system circuitry; ultra quick release; high reliability; easy installation (no internal modifications required, but best results when done).

Options that should be considered:

1. Turbo Action Tranz Box (includes special intermediate sprag which fits 1965-70 direct clutch drum only).
2. Turbo Action Pro Series Converter

The following are the suggested clearances for your Turbo 400 with Tranz Brake:

Forward Clutches:	Five Clutch Clearance=	0.040 - 0.050
Intermediate Clutches:	Three Clutch Clearance=	0.080 - 0.105
Direct Clutches:	Five Clutch Clearance=	0.060 - 0.070

Special characteristics about your CHEETAH Valve Body:

1. First gear - No engine braking
2. Second gear - No engine braking
3. Third gear - Normal engine braking
4. Line Pressure: 165 - 190 PSI

CAUTION - CAUTION: Do Not Neutral transmission during shut down. Slow down in high gear only. Failure to do so may cause major internal damage to transmission, vehicle and yourself due to the transmission will possibly lock up!

Installation Instructions

FIRST, READ INSTRUCTIONS CAREFULLY, THEN PROCEED TO INSTALL VALVE BODY BY FOLLOWING EACH STEP INDIVIDUALLY.

Valve Body	1 - 24941	Valve Body
Kit Includes:	1 - 24047	Pressure Regulator Spring
	1 - 24112	Valve Body Plate
	1 - 24148C	Pan Gasket
	2 - 24157	Valve Body Gaskets
	1 - 24158	Solenoid O-Ring
	1 - 24280A	Solenoid (Two Wire)
	1 - 24282	Special Solenoid Valve
	1 - 24284	Special Solenoid Valve Spring
	1 - 24285	Rear Servo Spring
	16 - 24286	Direct Clutch Springs
	1 - 24287	Special Manual Valve
	2 - 00781A	Terminals (Female)
	2 - 00782A	Terminals (Male)
	2 - 50093	Contingency Decals

STEP #1: Remove transmission from vehicle.

STEP #2: Remove oil pan.

STEP #3: Remove transmission filter. If 1968-Up newer model, remove retaining bolt, hold pipe that filter is connected to and then pull filter off.

STEP #4: Before loosening valve body, note how the gear selector lever connects to the manual control valve in the valve body. Fig. #1

STEP #5: Remove bolts from valve body and then carefully remove governor tubes and valve body together. **AVOID** bending governor tubes. If 1970 or newer model, disconnect white wire from the valve body. Also, be **sure** the manual control valve **doesn't slide out**.

STEP #6: Remove the two bolts holding the downshift solenoid and valve body spacer plate. Make sure you support the spacer plate with your hand. Lower the plate with steel balls **carefully**. If unit has manual valve body, this solenoid may already be removed.

STEP #7: Remove intermediate front servo piston, washer, pin, retainer and spring from transmission case. See Fig. #2 for location of your servo parts. They will no longer be used.

NOTE: **Suggest using a factory manual with the following steps:**

STEP #8: Remove front pump assembly.

STEP #9: Remove forward clutch assembly.

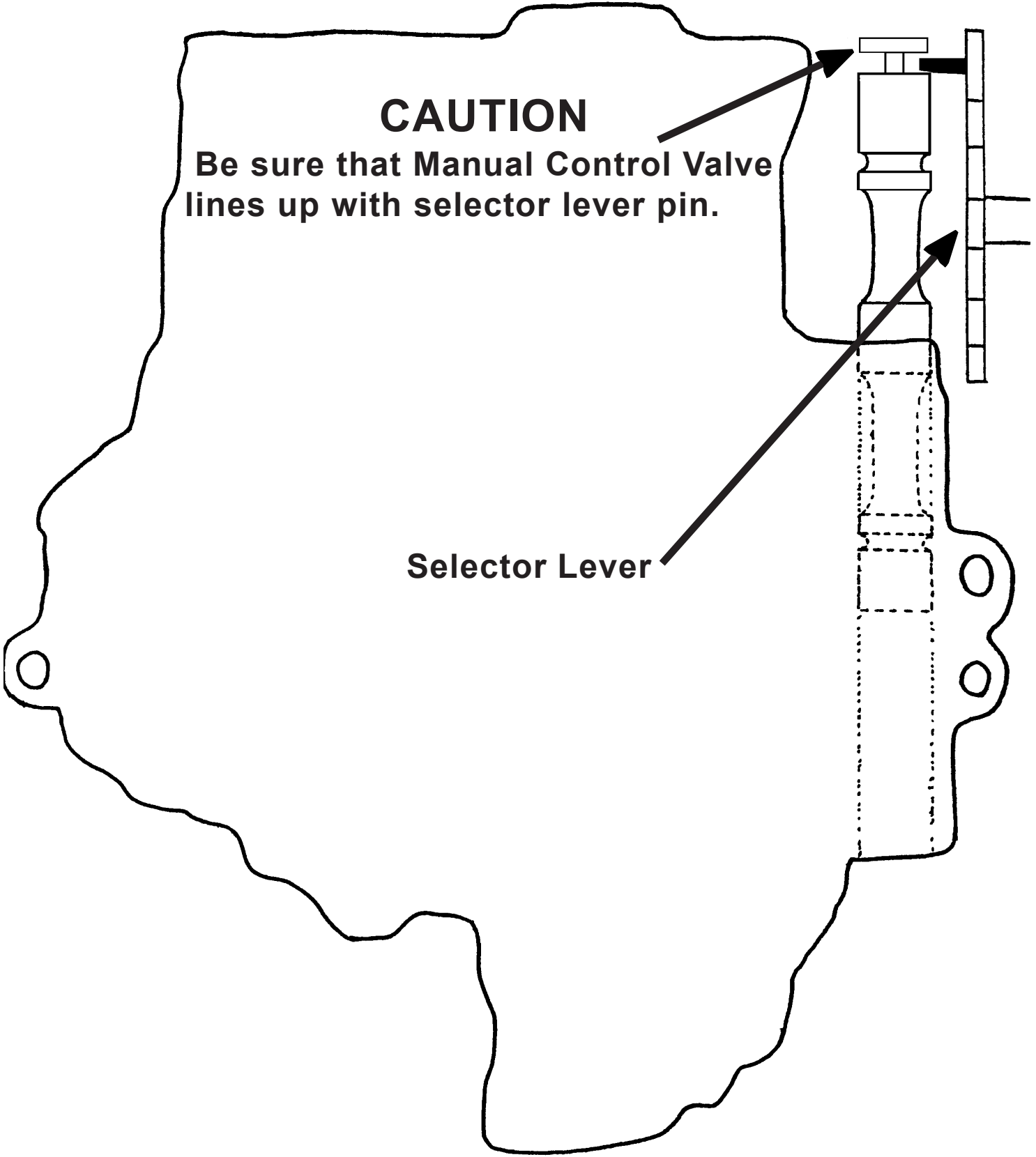
STEP #10: Remove direct clutch drum assembly.

STEP #11: Remove direct clutch drum piston (Fig. #3).

STEP #12: Drill 0.093 (3/32) hole in direct drum as shown (Fig. #4). Be sure to keep hole below area that the piston lip seal rides on.

STEP #13: Remove direct clutch drum center seal (Fig. #4). Do **not** remove seals from the direct clutch piston!

- STEP #14: Reinstall piston with 16 new springs and set clearance to 0.060 - 0.070.
- STEP #15: Be sure to install a special intermediate sprag with 34 cams Turbo Action #24109. This will prevent loss of second gear. Fig. #3. (Requires sprag type drum 1965-70).
- STEP #16: Suggest using Turbo Action #24038 teflon sealing rings on center support and front pump.
- STEP #17: Before reinstalling direct drum, remove front intermediate band.
- STEP #18: Reinstall forward clutch drum assembly.
- STEP #19: Install #24047 pressure regulator spring and one horseshoe spacer into front pump (Fig. #5).
CAUTION: When removing snap ring on pump, be careful as it is under tremendous pressure.
- STEP #20: Reinstall pump assembly.
- STEP #21: If unit had a Turbo Action Manual Valve Body or other brand aftermarket kit before, be sure to check Fig. #2 and remove any plugs, etc. from hole shown.
- STEP #22: Remove rear servo. Discard inner accumulator piston rings and also old large return spring. Fig #6.
Caution: Some late cores have a reducer plug in case and must be removed (Fig. 2).
- STEP #23: Reinstall rear servo with new Rear Servo Spring #24285.
- STEP #24: Remove modulator and modulator valve.
- STEP #25: Install Solenoid Valve Spring #24284 and special Solenoid Valve #24282 (Fig. #7).
- STEP #26: Install Solenoid #24280A.
- STEP #27: Install special Valve Body #24941, Plate #24112 and Gaskets #24157. NOTE: You must use the special Manual Valve #24287 that is supplied with this valve body. Be sure all bolts are started before tightening and also be sure manual valve is connected to selector lever (Fig. #1). No balls used with this valve body. Torque bolts 8-10 ft/lbs.
- STEP #28: Install oil filter being sure of good fit. **CAUTION:** If filter is not properly installed, a loss of oil pressure will occur. Recommend using our filter #24006 (1965-67) models and #24011 (1968-Up) models. If 1968 or newer models, reinstall retaining bolt.
- STEP #29: Replace old pan gasket with new one #24148C and bolt up oil pan.
- STEP #30: Remove four bolts from governor cover, which is located to the rear of the transmission on the passenger side.
- STEP #31: Remove governor assembly by pulling out slowly.
- STEP #32: Replace governor cover and bolts, leaving the governor assembly out of transmission.
- STEP #33: This valve body, #24941 has no automatic features. The transmission must be shifted manually. The valve body shift pattern is "PRN123." No engine braking in 1st or 2nd gear.
- STEP #34: Hook up trans brake wiring same as (Fig. #8). **NOTE:** A Turbo Action #00774 switch with stretch cord for steering wheel mount is ideal.
- STEP #35: Refill transmission with a good brand of Dexron Mercon or Type "F" transmission fluid. Warm transmission up and select all gears with foot on brake. If you do not do this, you will not feel the shifts if on the jackstands. Place gear selector in park. Then check to make sure transmission level is on the add mark. Take vehicle out and shift through the gears at no more than 4000 RPM, at least two (2) times. Then recheck oil level. Add oil if necessary to bring to the full mark. **DO NOT OVERFILL!**



CAUTION
Be sure that Manual Control Valve
lines up with selector lever pin.

Selector Lever

Fig. #1

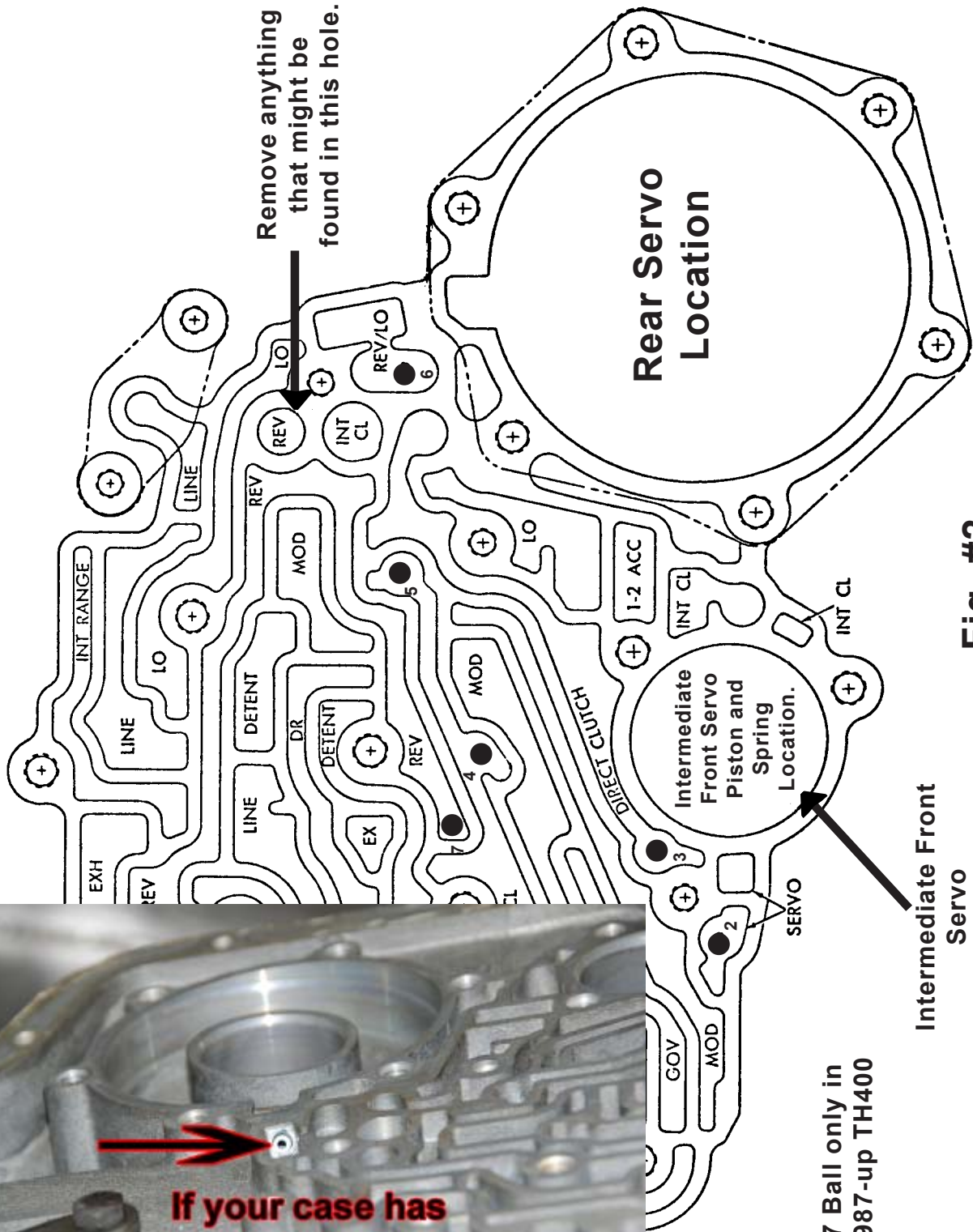


Fig. #2

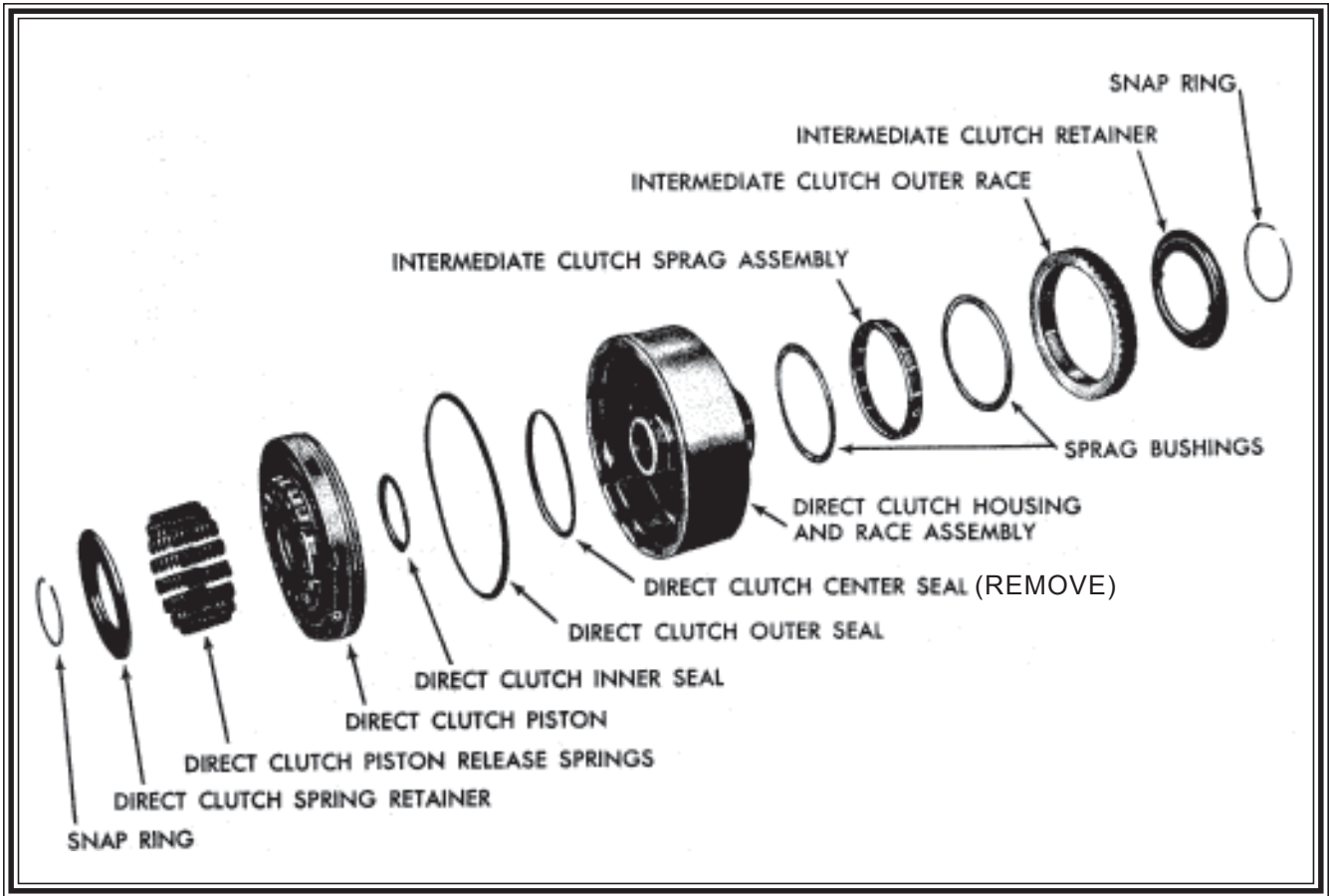
Case Oil Passages



If your case has Reducer Plug Remove or Drill it Out.

Direct Clutch Drum

Fig. #3

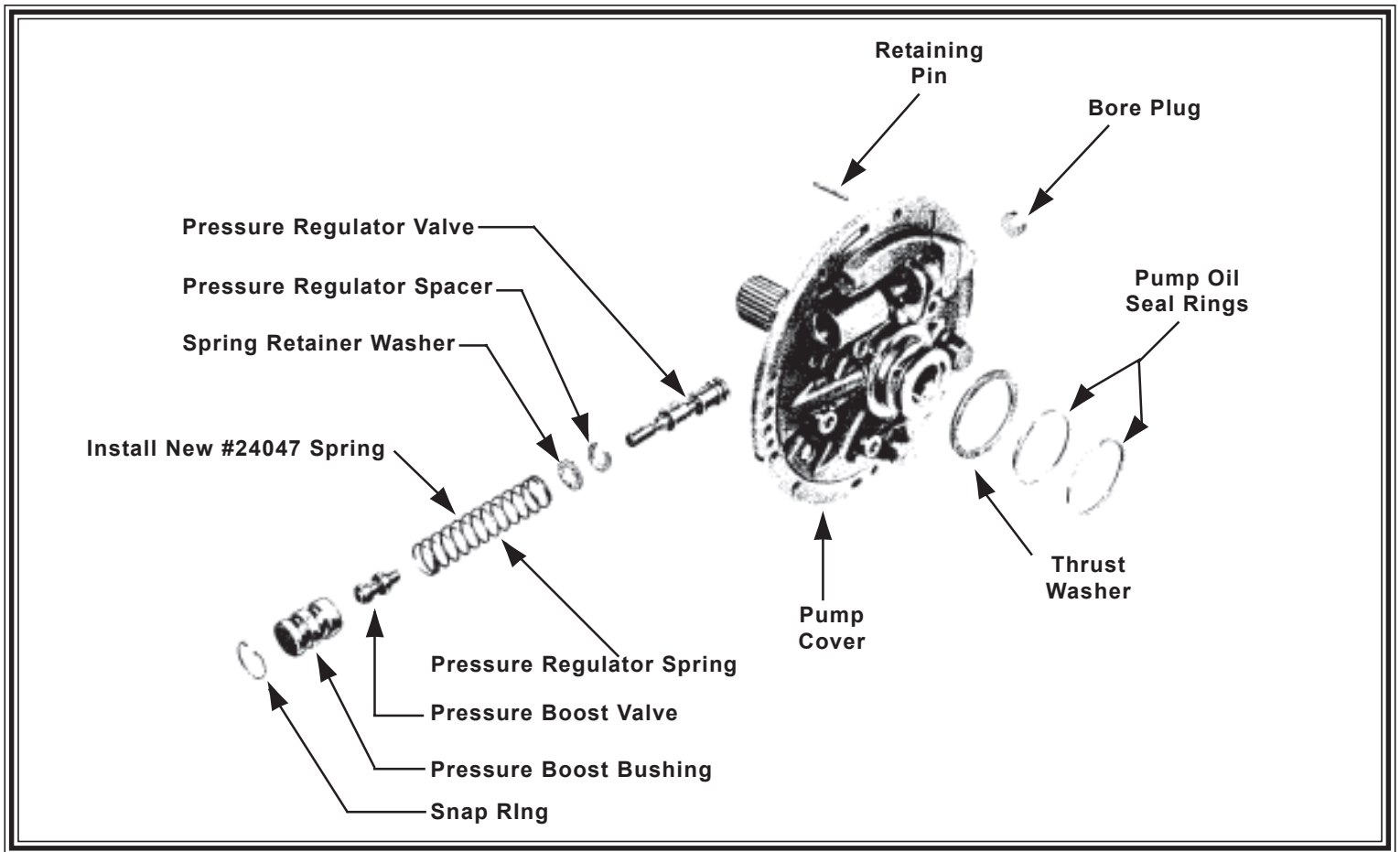


Remove Direct Clutch Drum Center Seal

Fig. #4

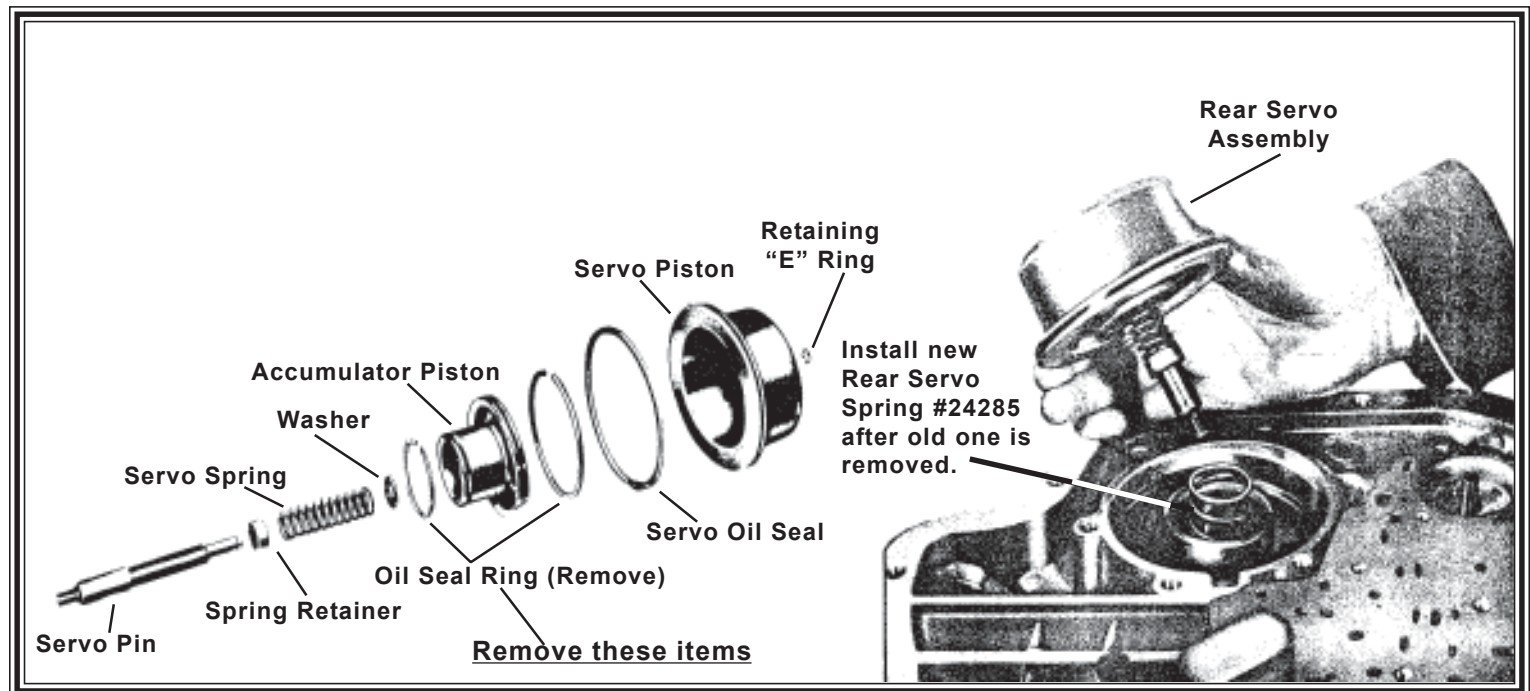
Front Pump

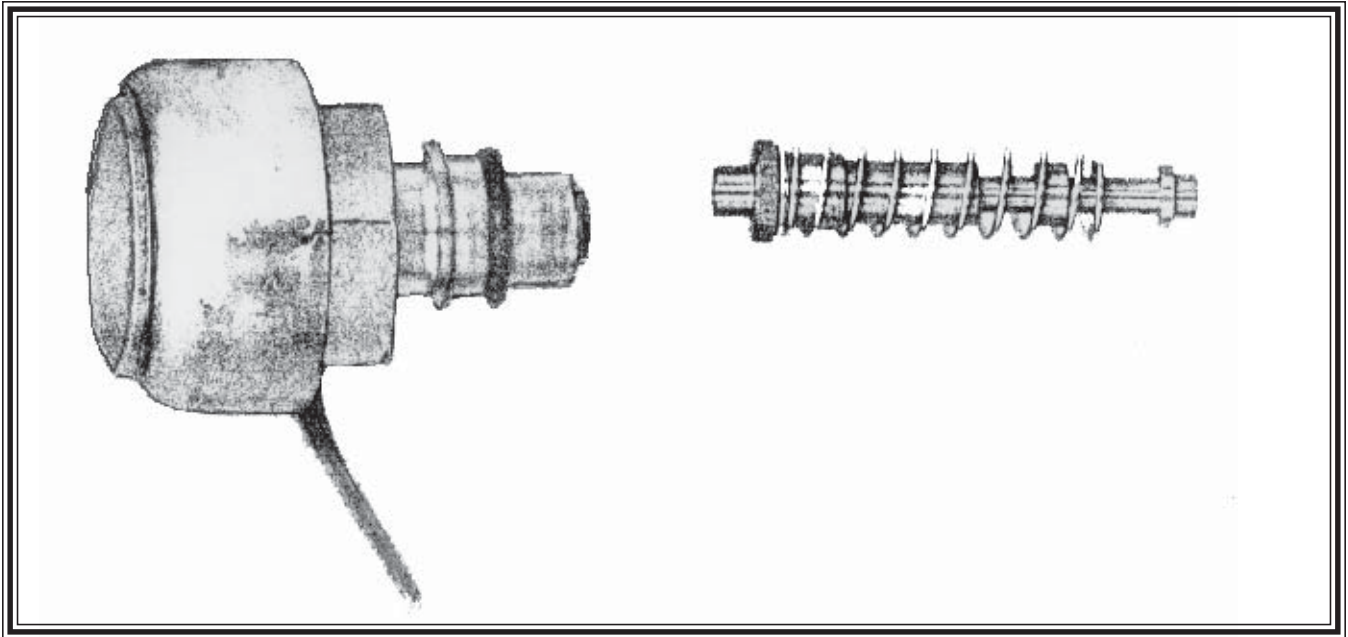
Fig. #5



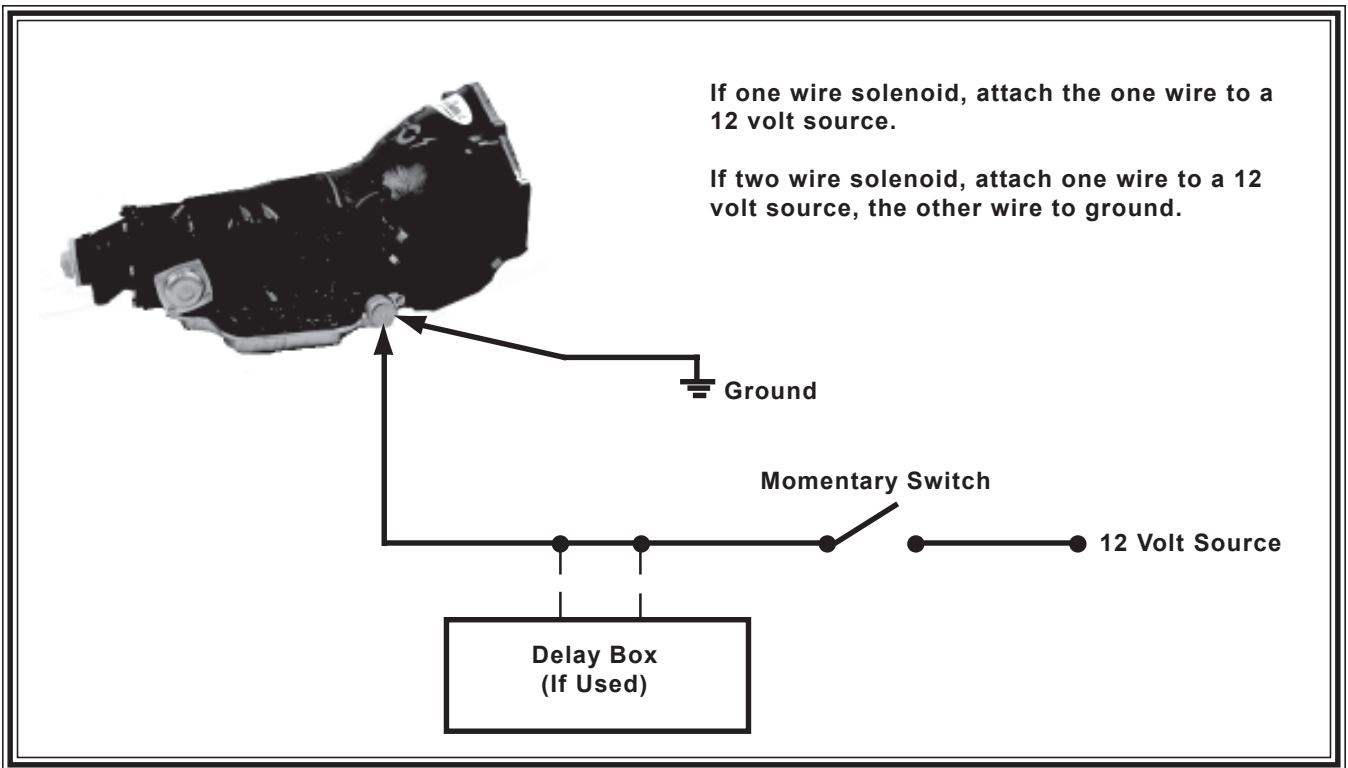
Rear Servo

Fig. #6





Special Solenoid and Valve Assembly
Fig. #7



Solenoid Wiring Diagram
Fig. #8