



TCI® 521000

Ford C-4 Full Manual Reverse Shift Valve Body

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

This TCI® 521000 Kit Contains:

Qty	Description
One (1)	TCI® Full Manual Valve Body
One (1)	Intermediate Servo Gasket
One (1)	1/8" x 27 Pipe Plug
One (1)	3/8" Freeze Plug
One (1)	Freeze Plug for Modulator

Note: This kit is not intended for installation in a transmission in poor general condition. It will not correct a malfunctioning or slipping transmission.

Before you begin installation allow transmission to cool to avoid burns from hot fluid or parts. Select a well lighted work area and it is very important to keep all parts clean. Use a box or pan to keep transmission parts from getting misplaced. Wash parts thoroughly with a good solvent.

You will need a drain pan, some boxes/containers to hold and separate transmission parts, and clean shop rags. Transmission parts are designed to fit with precision. They should not be FORCED, PRIED or BEAT into place.

Step 1 Removing Oil Pan: Before you remove the oil pan, it will be necessary to drain the oil first. To do so, remove the back oil pan bolts and work toward the front. Let the back of the pan drop so the fluid will drain. (**NOTE:** Some vehicles may require removal of the crossmember to remove the transmission pan). Remember; dispose of used oil in a proper and environment safe way. If the pan sticks to the gasket, use a screwdriver to loosen the pan from the case. After the fluid has drained, remove the rest of the bolts. Be careful when removing the pan because there will be fluid retained in the pan and the transmission. Once the pan has been removed, wash and clean gasket material from pan. Since the pan does not have a drain plug, you may want to install a TCI® 805800 Drain Plug Kit into the pan. This will save you time in servicing your transmission in the future.

Step 2 Removing Valve Body: Remove the eight (8) valve body attaching bolts and pull the valve body straight down.

(See Photo 1 and Photo 2) Remove the eight (8) filter retaining bolts. (See Photo 1 and Photo 2) Remove filter.

Step 3 Kickdown Lever: TCI® Full Manual Valve body does not use this "automatic" function. To remove kickdown lever use a 7/8" wrench and loosen jam nut located on inside of transmission case. Slide shift linkage out. Remove kickdown linkage. Remove small O-ring. Reinstall shift linkage. Tighten jam nut securely. Take 3/8" freeze plug and place in center of opening where kickdown lever was located. Using a punch, tap it into opening.

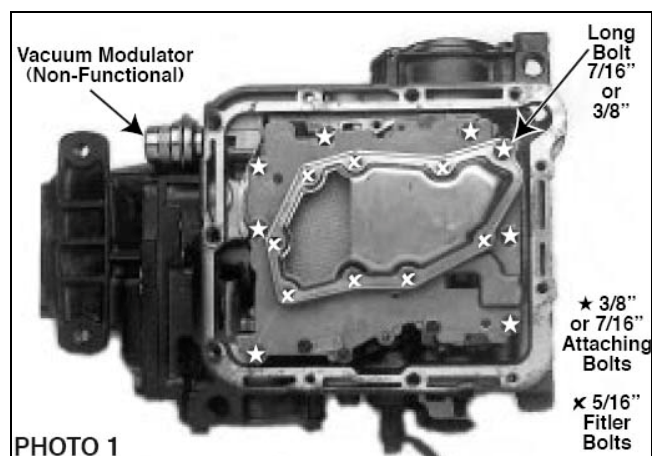


PHOTO 1

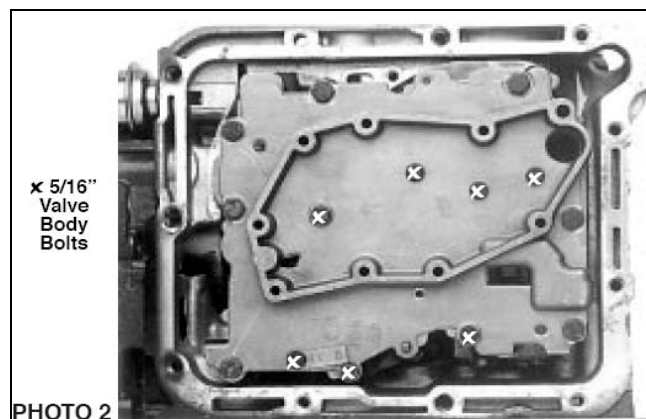


PHOTO 2

Recap of Valve Body Bolts:

Socket Size	Qty	Description
3/8" or 7/16"	Eight (8)	Attaching Bolts
3/8"	Two (2)	Upper Bolts
5/16"	Eight (8)	Filter Retaining Bolts
5/16"	Seven (7)	Valve Body Bolts

Step 4 Intermediate Servo Modifications: (See Illustration 1)

Step A: Remove and discard small O-ring.

Step B: Grind down lip on three sides. (See Illustration 2)

NOTE: Do not Grind this area on aftermarket servo!

Step 5 Tap neutral hole in transmission case with 1/8" National Pipe Thread Tap. Plug hole with plug that is provided with TCI® 521000. **(See Illustration 3)** Use servo gasket to locate area to be tapped.

Step 6 Reinstall Intermediate Servo:

Clean before installation.

Step 7 Adjustment of Front Transmission Band: When marking the intermediate band adjustment, the lock nut may need to be replaced. The lock nut has a molded seal element that prevents fluid leakage past the adjusting screw thread. Adjustment and readjustment can cause the sealing material to not seal positively. Loosen the lock nut using a 3/4" wrench. Torque the screw to 120 inch/pounds. Back the screw off exactly 1-3/4" turns. Hold the adjustment and torque the lock nut to 35-45 foot/pounds.

Step 8 Install Valve Body into Transmission:

When reinstalling the valve body, it is very important that the internal linkage engages the valve body properly. Engage selector lever (control rod) into manual selector valve of valve body. Position valve body into case. Work valve body until the valve body lays flat against transmission case. Reinstall OEM detent. Install valve body bolts. Long bolt goes through the filter. **(See Photo 1)** Ensure bolt heads bottom out on valve body. Recheck shifter linkage for easy, free operation. Tighten and torque valve body bolts to 80-120 inch/pounds. Failure of proper installation can cause damage to the valve body, transmission and/or linkage. Until you are confident that this part is working correctly - **DO NOT PROCEED** - redo this step or get help from someone that has transmission experience. Reinstall all modulator valve parts and tap freeze plug into modulator hole until it bottoms out on the valve inside the case.

Step 9 Shifter Adjustment: Make sure that the transmission selector lever and manual lever detent positions match. Place transmission selector lever in Drive (D) position. Place transmission manual lever in Drive (D) position. Loosen lock rod retaining nut located on shift rod and align shifter and transmission in Drive position and torque bolts to 10-12 foot/pounds.

Step 10 Install clean transmission pan and new pan gasket. Tighten and torque bolts to 12-16 inch/pounds. Install dipstick tube into pan if your model was equipped. Tighten securely.

Warning: You must support your vehicle properly when testing transmission. **DO NOT** support vehicle with a hydraulic or mechanical jack only. Always use safety approved jack stands.

Step 11 Adding Transmission Fluid and Fluid Check:

Lower vehicle. Rear wheels should not touch the ground. Add three (3) quarts of TCI® MaxShift or a good grade of Type "F" Automatic Transmission Fluid. Place shifter in Neutral (N) position and start engine. Let engine run a few minutes and then check fluid level with transmission dipstick. Now add fluid until the level will touch the "Add" mark on your dipstick. Now shift the transmission through all drive and reverse positions. Your rear wheels will be turning. After you have allowed the transmission to shift and run through all the gears, recheck the fluid level. Do not add more fluid unless level is below "Add" mark.

Step 12 Road Test: Drive your vehicle moderately, shifting through all the gears for one or two miles to warm fluid properly.

After you have driven your vehicle, recheck the fluid level and add the necessary amount of fluid to reach the "Full" mark on your dipstick. **DO NOT OVERFILL!** This can cause foaming, overheating and blow by. Transmission fluid capacity will vary with application. Final check is made using dipstick.

