

"FIVE/SIX SPEED CONVERSION SPECIALISTS"

## Ford Fulcrum Kit Installation on T-5 & TKO Aluminum bell housings

These instructions are for using original Z-bar "push style" clutch linkage found in early model vehicles that have been retrofitted with a T-5(z) or TKO series transmission using aluminum bell housings. Locating the fulcrum adapter requires removal of the transmission from the bell housing and the bell housing from the engine block.

Location of the fulcrum matters so the clutch fork will sit centered under the bearing and not side-load the bearing on the bearing retainer guide tube, causing premature wear of the retainer which will lead to a heavy clutch pedal.

Prior to installation of the fulcrum adapter, inspect your components.

Checking components now while they are out of the vehicle will save you from a lot of hassle later.

Check the clutch fork for wear on the pivot points where the bearing touches the fork and where the plunger rod pushes on the fork. The fork should be *solid* with no wear-thru.

Check the bell housing for cracks. Look at the entire bell housing and specifically at all the mounting locations and where the new fulcrum adapter will be installed. Check the guide tube for wear. The shaft the bearing rides on (guide tube) should be smooth with no steps, humps or deep scoring. Aluminum guide tube bearing retainers should be replaced with hardened steel guide tube bearing retainers (T-5 only - p/n MD-1352-527-004).

Tap the end of the input shaft with a hammer. This will push the main shaft bearing aft. Check the play (side to side movement) on the input shaft of the transmission. A little play is okay. Too much play will cause the input shaft and counter shaft to wear prematurely resulting in transmission failure. If in doubt, seek the advice of a reputable transmission shop in your area. Shim kits are available from *Modern Driveline* – p/n MD-1351-410-002 for T-5 and p/n 2670741 for TKO. If your transmission is used or has been sitting for a while it would be a good idea to also replace the front seal (input shaft/bearing retainer seal). If you do this, be

sure to check shimming on the input shaft and use silicone sealant on the interfaces & bolt threads when re-assembling. Refer to our on-line T-5 repair manual at <u>www.moderndriveline.com</u> (Note: the TKO transmission shims the same way).

Prior to beginning your fulcrum kit installation, establish you have a matching fork. The fork & fulcrum on the left uses a separate spring clip and has a retainer detent. The fork on the right has a built-in spring clip and the fulcrum has a channel for the spring. Be sure these parts match prior to installing your fulcrum kit.



The hole diameter in the bell housing for the TKO retainer is 4.840 The hole diameter in the bell housing for the T-5 it is 4.900.

Find the centerline of the clutch rod hole and make a mark.

Using a straight edge, draw a line from the center of the ball pivot mounting hole to the mark in the center of the clutch rod hole.



Measuring from the far side of the retainer hole along the centerline, mark a perpendicular line 6.545" for the TKO and 6.575" for the T-5. Position the fulcrum block centered over this line and mark holes.



To verify location, you may sit the bell housing on a piece of paper and make a round template of the bearing retainer opening. Cut-out and fold into quarters, edges aligned. Un-fold and set back into retainer opening. Measure 4.125" from the center of the folds and verify the centerline of your perpendicular line you drew to locate the fulcrum block.

You may also assemble and install the clutch fork and throw-out bearing on the retainer and attach the fulcrum adapter, set in place on the block and scribe or mark around the block and verify position.

Drill two 5/16" holes.



Countersink both holes from the back side. The countersink only needs to be deep enough to allow the fasteners to be even or lower than the transmission mounting surface.



Install all hardware; lock washers go between nuts and fulcrum.



For technical assistance you may e-mail us via web-site at <u>www.moderndriveline.com</u> or by calling 208-453-9800 9-5 M-F Mountain time. Tech articles for various installations and conversions are also available on-line.