Torque Converter & Transmission Installation Instructions

Checks…

STEP 1 – Inspect the mating surfaces of engine block and transmission case for nicks, dirt etc. If necessary, use a mill file to remove raised areas. Be careful not to remove metal from mating surfaces! Examine crank pilot hole and converter pilot for dirt, rust, paint etc. Clean as necessary with emery cloth. Also check the conditions of the dowel holes and pins. Replace the pins if loose or damaged.

IMPORTANT!!!!!!

STEP 2 – Coat the wiping surface of the converter hub with transmission fluid. Add one (1) quart of fluid to the converter. Install the converter on the transmission, support the weight of the converter as to not damage the front pump seal. Rotate the converter as you push it on. The splined couplings (input shaft and stator support) and the pump lugs must engage properly to allow the converter to slide all the way into the transmission. The easiest way to check that the converter is down fully is to lay a straight edge across the bell housing and make sure the converter is not sticking out. It should sit back slightly from the straight edge. If you fail to install the converter fully into the pump the transmission will fail, and It will not be covered by your warranty.

Failure to install properly will void your warranty.

Initial Installation Checks

1 – Check flex plate for cracks around crank and converter mounting holes.

2 – Make sure converter bolt pattern and bolt hole size matches the flexplate.

3 – Check driveshaft yoke for excessive wear and apply small film of transmission fluid to the yoke before installation.

Installation

STEP 1 – Install transmission on dowel pins. Converter MUST be free to rotate and move forward and backward (endplay) after the transmission is bolted to the engine. Transmission and converter should mate with the engine, crankshaft and flex plate with relative ease. Face of transmission flange must be flush with the engine all the way around before any bolts are tightened. NEVER use bolts to “draw up” the transmission to the engine. DO NOT allow the transmission to hang on the dowel pins. Transmission must be supported until at least two (2) bolts have been installed and completely tightened. Install bell bolts.

STEP 2 – Check freedom of movement (thrust) of converter as soon as transmission and engine are bolted together. Converter must rotate freely and must have end play. Converter must be free to move at minimum of 1/8”, but not more than 3/16”. If no end-play exist, converter is not properly installed. Remove transmission and correct. NOTE: If using a motor plate/mid-plate please refer to the instruction sheet with the spacer kit.

STEP 3 – When endplay is satisfactory, complete the transmission installation. Apply Loctite to the converter bolts before installing them. Tighten converter bolts to 30 ft/lbs. STEP 4 – Attach shifter linkage to shifter arm on transmission. If installing an aftermarket shifter, skip this step and follow that manufacturers instructions for shifter adjustment. Otherwise put the transmission and shifter in neutral and install cable/linkage to transmission and check for proper movement in each gear. There should be no tension on the shifter lever when in any gear and the cable should slide in and out of the lever with no resistance.

STEP 4 – Install transmission cross member, wiring, drive shafts, cooler lines etc. Inspect for leaks with engine running. Inspect all connections, especially cooler lines and radiator fittings.

SPE Recommends Mercon5 or equivalent for competition transmissions with short change intervals. For 800hp or less we recommend using a SP or LV equivalent full synthetic fluid.

If there are any questions call SPE before installing.