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**DO NOT USE WATER-BASED
TRANSMISSION FLUSHING
FLUID – THE LINING IN THE
CONVERTOR CLUTCHES WILL
DISINTEGRATE, RENDERING
THE CONVERTOR USELESS
AND WARRANTY WILL BE
VOIDED.**



DODGE TORQUE ~~X~~-CONVERTOR **Installation Instructions**

BD Part #	Trans. Application	Truck Year
1060210X	518/618 Non-L/U	1988-1993
*1070215X	47RH/RE	1994-2002
†1071215X	47RH/RE	1994-2002
*1070217X	48RE	2003-2007
†1071217X	48RE	2003-2007

REPLACE "X" WITH "LX" TO THE PART NUMBER FOR A LOW STALL TORQUE CONVERTOR.

* Features double lock-up clutches and X-Stator technology

† Features triple lock-up clutches and X-Stator technology

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLING THIS PRODUCT.

BD Engine Brake Inc.

Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2

U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295

Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

Important Tips Before You Start

Always service the transmission when installing a torque converter. Failure to do so may result in your shop being responsible for the condition of the transmission.

Transmission mainline pressures must be tested to prevent the lock-up clutch from slipping. Above-stock horsepower engine settings will result in less pressure being applied to prevent the clutches from slipping due to less degree of pedal movement required to attain the speed and horsepower prior to modifications.

Preparing the Crankshaft and Converter for Installation

- Always check the crankshaft pilot for burrs and out-of-round.
- Remove any rust with emery paper and lightly grease pocket receiving torque converter pilot hub.
- Remove paint from the torque converter's crank pilot hub with emery paper.
- Before installation, pre-fit the torque converter to the flex plate and into the back of the crankshaft. It should be a snug, even fit (not loose or binding).
- Slowly pour two quarts of automatic transmission fluid into the converter.
- Check the flex plate for cracks or worn teeth.
- Replace the transmission front seal.
- Install the torque converter on the front of the transmission.
- When installing the torque converter into the transmission, you will feel it seat 3 times for the input shaft, shaft to stator, and oil pump notches.

Checking Converter-to-Flex Plate Alignment

- Install two transmission-to-bell housing bolts (hand tight) and check the converter for free movement.
- After the bell housing bolts are tightened, check the movement of the converter. It should have 1/16"-1/8" of clearance between the pads on the converter and the flex plate. If you have more clearance than specified, install equal thickness washers to reduce the clearance down to the specifications. If there is not enough clearance, remove the transmission and check to see if the converter is seated in front of the pump properly.
- Add Loctite® to the torque converter nuts and/or bolts before installation.
- Draw the converter bolts up evenly so as not to bind the converter, which would cause vibration and pump bushing failure.
- If there are vibrations after installation, mark the converter to flex plate and rotate one bolt at a time.

NOTE: The #1 cause of vibration is the failure to prepare the crankshaft for installation. Each time the converter is installed without sanding off the crankshaft rust, removing the paint from the converter pilot and adding a little grease, the converter may be drawn up crooked with the first bolt. This condition may cause the converter to run-out and will usually ruin the pump bushing. The second most common complaint on converters is a whine after installation. This usually means that there is too much clearance between the converter pads and the flex plate. This draws the converter hub too far out of the pump drive gear, causing the gear to "rock".

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Converter Installation

Make sure that the converter is all the way into the pump gear – don't assume that it is in place when you receive the transmission. Rotate the converter back and forth to ensure that it is fully seated in the pump gears. After you are sure it is in place, always keep the tail end of the transmission low so that it cannot slip out. This is the #1 cause of failure at time of installation, or soon thereafter.

Check the converter seating with a steel ruler and a straight edge (see Figure 1 below).

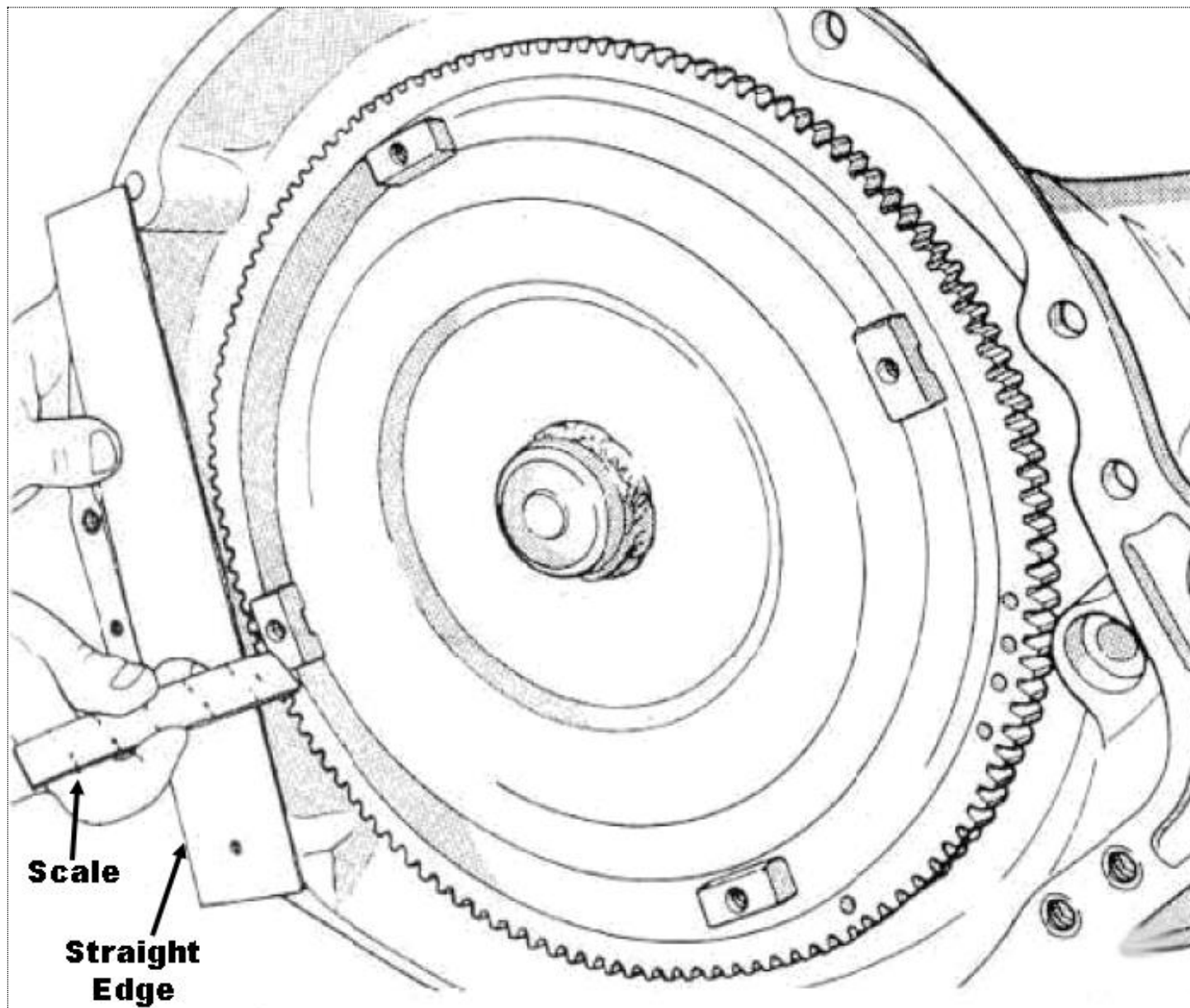


Figure 1 – Typical Method of Converter Seating

For 47RE transmissions, the surface of the torque converter lugs will protrude approximately 19mm (0.75") from the transmission bell housing.

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Re-Using Converter When Replacing The Transmission

We strongly recommend replacing the converter with every rebuilt transmission because of the difficulty of thoroughly cleaning it on the inside. If you choose not to replace it, the converter must be removed and thoroughly flushed. Make the following inspections: internal thrust washers and bearings for misalignment, condition of the inner sprag, inner turbine hub spines, inner lockup seal (on lockup converters), hub condition for wear/scoring, the drain plug, pilot and mounting devices to ensure proper alignment and overall good condition.

Cooler & Cooler Lines

The cooler and cooler lines ***MUST*** be flushed to remove all metal particles and oil. ***DO NOT BLOW THEM OUT WITH AIR.*** Use a solvent that will flush out old oil and metal particles. This is particularly important if the transmission you have removed has metal in the fluid. ***DO NOT USE WATER BASED TRANSMISSION FLUSHING FLUID!***

Flex Plate Inspection

Inspect for cracks where the plate bolts to the engine and out of round holes where the converter bolts to the flex plate. Check for warping. If the flex plate has a ring gear, inspect the teeth for excessive wear or missing teeth.

Manual Control Linkage

The manual control linkage must be re-adjusted to assure proper setting for the unit being installed. Adjust the linkage with the vehicle in actual road operation.

Shifter Linkage

Excessive wear of the shifter linkage in the shifter tube (in the steering column) may cause malfunction in shifting. Too much wear at these points can cause improper throw or movement of the desired gear at the proper time. Possible linkage troubles include sloppy shifter at the steering column, dragging effect in or out of gears, or jumping out of gear.

Motor & Transmission Mounts

The condition of the motor mounts & transmission mounts can affect linkage adjustments. This can create in-vehicle noises and can cause excessive wear to internal transmission parts if they are worn. Broken or oil-soaked mounts must be replaced.

U-Joints and Driveshaft Yoke

Rough and worn U-Joints may cause vibration in the driveline and failure of bushings and seals in the tail casting. A rough/worn (tapered) front yoke will quickly damage the rear seal and bushings, causing loss of lubricant, which can lead to transmission failure or a slow leak.

Important Engine Notes

Most transmissions depend on the engine vacuum supply for proper shift patterns. Good engine performance is a must to ensure proper vacuum. If the engine vacuum supply is too low, it may shorten the life of the transmission. The TPS and MAP sensor also have a critical role in electronic transmission performance. Faulty units should be replaced. The foot brake disengages the converter clutch in electronic transmissions. This brake switch should be checked to ensure it functions properly. Temperature sensors also have a critical role in the operation of electronic transmissions. The torque converter clutch will not operate until the transmission reaches a certain temperature. Be sure these sensors are working properly.

***DO NOT:** Check the operation of the transmission with the drive wheels off the ground.

***DO NOT:** Re-use old oil. Dirty oil causes valves to stick and may clog the lines if contaminated. Both may lead to premature failure of the transmission or torque converter!

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