TECHNICAL BULLETIN

TX750

M4-013

PRIMARY DRIVE/DRIVEN GEARS

All factory production TX750's were equipped with clutch assemblies with needle-type bearings in the Primary Driven Gear (clutch hub). A new type Primary Driven Gear has been designed with a bronze bushing to improve wear qualities and to help maintain gear lash.

Numbers are etched on gears to indicate backlash (freeplay). A clattering noise from right side of crankcase at idle or during deceleration indicates too much backlash. Whining noise indicates not enough backlash.

The numerical value of the backlash is the sum of the backlash numbers on the two meshing gears.

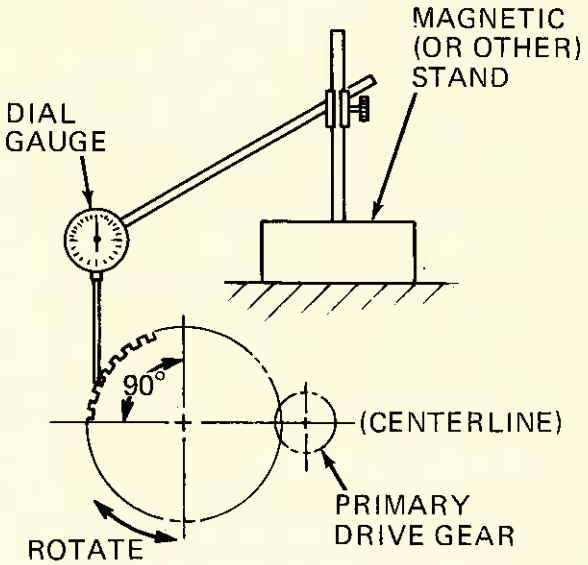
TX750 GEAR BACKLASH =
(drive gear number) + (driven gear number) = 139 or 140 (needle bearing type)
= 54 ± 1 (bushing type)

Backlash numbers scribed on primary gears are accurate most of the time. However, numbers can add up correctly, but gear whine or clatter may still occur. Manufacturing tolerances for shaft center lines may be off or slightly eccentric gear shape, a bent shaft, or gear wear can cause this occurrence. Gear backlash must then be measured so that corrective procedures can be performed.

MEASURING GEAR BACKLASH

Measure backlash by mounting dial gauge as shown in drawing (right). Using long dial gauge tip from snowmobile special tool kit is the best method.

1. Make sure the dial gauge is firmly mounted.
2. **Hold the primary drive gear stationary while checking lash.**
3. Set dial gauge shaft at a 90° angle to the primary drive and driven gear shaft center lines. Set dial gauge tip on a gear tooth side at, or very near, the shaft center line.
4. Turn driven gear back and forth against drive gear and read measurement on dial gauge.
5. Rotate driven gear through one revolution and measure backlash at (4) points. This procedure will aid in locating any out-of-roundness present in gears or shafts. Choose the tightest measurement as the backlash specification.



MAKE SURE GAUGE IS SECURELY MOUNTED AND PRIMARY DRIVE GEAR IS STATIONARY

KEEP DIAL GAUGE SHAFT VERTICAL AND CLOSE TO CENTERLINE.

TX750 Primary Gear Backlash: .03 ~ .05mm (.001 ~ .002 in.)

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