MOTORCYCLE SERVICE NEWS

NUMBER 327

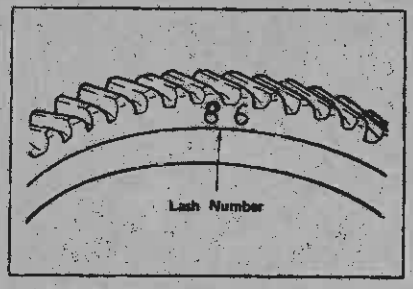
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YAMAHA INTERNATIONAL CORPORATION
BUENA PARK, CALIFORNIA 90620

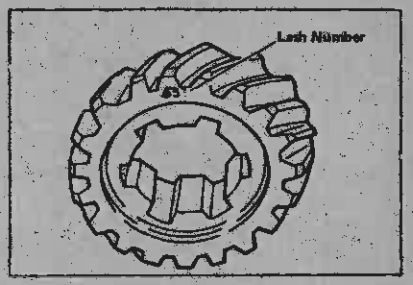
DATE 7/30/73

TX750 — PRIMARY GEAR NOISE

A clattering noise from right side of crankcase at idle or during deceleration indicates too much gear backlash (freeplay). Whining noise indicates not enough gear backlash. Numbers etched on gears are used to determine backlash. **LOWER NUMBER=MORE BACKLASH; HIGHER NUMBER=LESS BACKLASH.**



PRIMARY DRIVEN GEAR



PRIMARY DRIVE GEAR

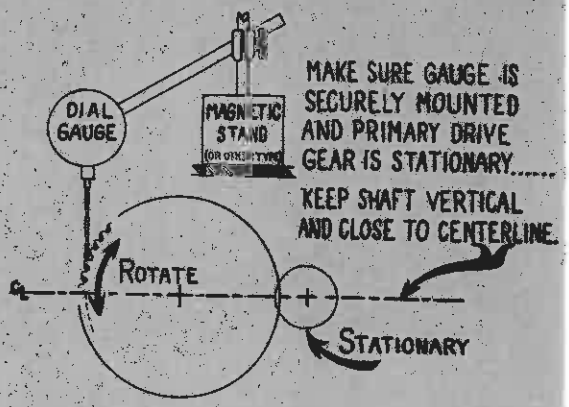
TX750 Gear Backlash: (driven gear number) + (Drive gear number) = 139 or 140

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. 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 at all times.**
3. Set dial gauge shaft at a right 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.



TX750 Primary Gear Backlash: .03~.07mm (.001~.003 in.)

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TX750 — PRIMARY GEAR NOISE (cont.)

GEAR BACKLASH ADJUSTMENT

1. If there is too much backlash, install drive gear with higher number.
2. If there is not enough backlash, install drive gear with lower number.
3. Recheck backlash with new gear installed. CAUTION: Check at (4) points and use the tightest measurement. Change primary drive gear until backlash is correct.

PARTS ORDERING

PAGE	REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REMARKS
12	4-11	341-16111-00-54	GEAR, Primary Drive	U.R. 1	Gears must be ordered by backlash number. Lower no.=more backlash. Higher no.=less backlash.
		-56			
		-58			
		-60			
		-62			

NOTE: *Most TX750's are fitted with a number 52 or 53 drive gear. To correct machines with too much backlash, order number 58 and 60.*

WARRANTY

Parts and labor will be covered by warranty only if installation of new primary drive gear is necessary to reduce noise level. Yamaha International has granted a speical, limited warranty extension of three months (total of nine months from date of sale) on this particular repair procedure. There will be no mileage limitation for this special situation.

PROBLEM CODE: 90G JOB CODE: 2600 FLAT RATE: .9 hours

LOOK FOR ADDITIONAL INFORMATION ON TX750 ENGINE NOISE TROUBLESHOOTING IN SERVICE NEWS BULLETIN NUMBERS 332, 335 and 336.

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