

SERVICE INFORMATION

GENERAL

- For crankshaft and transmission repair, the crankcase must be separated (Section 12).
- All bearing inserts are select fitted and are identified by color code. Select replacement bearings from the code tables. After installing new bearings, recheck them with plastigauge to verify clearance.
- Apply molybdenum disulfide grease to the main journals and crankpins during assembly.
- When replacing the following output gear components, a new adjustment shim must be selected.
 - Output gear case.
 - Output gear assembly.
 - Output gear bearing.
 - Output gear bearing holder.
- Replace the final drive and output drive shafts as a set.
- When using the lock nut wrench, use a deflecting beam type torque wrench 14-20 inches long. The lock nut wrench increases, the torque wrench's leverage, so the torque wrench reading will be less than the torque actually applied to the lock nut. The specification given is the actual torque applied to the lock nut, not the reading on the torque wrench when used with the lock nut wrench. The torque scale reading is given with the actual torque specifications.

SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD		SERVICE LIMIT
Crankshaft/ connecting rod	Connecting rod big end side clearance		0.10–0.25 (0.0039–0.010)	0.40 (0.0157)
	Connecting rod small end I.D.		20.020–20.041 (0.7882–0.7890)	20.09 (0.7909)
	Crankpin oil clearance		0.028–0.052 (0.0011–0.0020)	0.07 (0.0028)
	Main journal oil clearance		0.025–0.041 (0.0010–0.0016)	0.06 (0.0024)
	Crankshaft runout		—	0.05 (0.0020)
Countershaft	Backlash	Low	0.089–0.170 (0.0035–0.0067)	0.24 (0.0094)
		2nd, 3rd, 4th, 5th and 6th gears	0.068–0.136 (0.0027–0.0054)	0.18 (0.0071)
	Gear I.D.	M5, M6	28.000–28.021 (1.1023–1.1034)	28.04 (1.1039)
		C1, C2, C3	28.000–28.021 (1.1023–1.1034)	28.04 (1.1039)
		C4	29.000–29.021 (1.1417–1.1426)	29.04 (1.1433)
	Gear bushing O.D.	M5, M6	27.959–27.980 (1.1007–1.1016)	27.94 (1.1000)
		C1, C2, C3	23.959–23.980 (0.9433–0.9441)	23.94 (0.9425)
		C4	28.959–28.980 (1.1401–1.1410)	28.94 (1.1394)
	Gear bushing I.D.	M5	24.985–25.006 (0.9837–0.9845)	25.04 (0.9858)
		C4	24.985–25.006 (0.9837–0.9845)	25.04 (0.9858)
	Mainshaft O.D.	M5	24.959–24.980 (0.9826–0.9835)	24.90 (0.9803)
	Countershaft O.D.	C4	24.959–24.980 (0.9824–0.9835)	24.90 (0.9803)
	Gear-to-bushing or shaft clearance	M5, 6 gear to bushing	0.020–0.060 (0.0008–0.0024)	0.10 (0.0039)
		M5 bushing to shaft	0.005–0.047 (0.0002–0.0019)	0.06 (0.0024)
		C1, 2, 3, 4 gear to bushing	0.020–0.062 (0.0008–0.0025)	0.10 (0.0039)
C4 gear to bushing		0.005–0.047 (0.0002–0.0019)	0.06 (0.0024)	