10. CRANKCASE/CRANKSHAFT/ TRANSMISSION

SERVICE INFORMATION

GENERAL

- For crankshaft and transmission repair, the crankcase must be separated.
- Remove the following parts before separating the crankcase.
  - Cyinder head (Section 6)
  - Clutch oil pump and kick starter (Section 8)
  - Alternator and gear shift linkage (Section 9)
  - Cylinder and piston (Section 7)
  - Starter motor (Section 16)
- Use soft jaws to prevent damage to the output gear case when placing the case in a vise.
- When replacing the following output gear components, a new adjustment shim must be selected.
  - Output gear case
  - Output gear bearing
  - Output gear assembly
  - Output gear bearing holder
- Replace the output drive and driven gear as a set.
- When using the lock nut wrench, use a deflecting beam type torque wrench 20 inches long. The lock nut wrench increase the torque wrenche'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

ITEM			STANDARD	SERVICE LIMIT
Crankshaft	Connecting rod small end I.D.		19.020–19.041 mm (0.7488–0.7496 in)	19.07 mm (0.751 in)
	Connecting rod big end axial clearance		0.05–0.65 mm (0.0020–0.0256 in)	0.80 mm (0.031 in)
	Connecting rod big end radial clearance		0.006–0.018 mm (0.0002–0.0007 in)	0.05 mm (0.002 in)
	Runout		—	0.05 mm (0.002 in)
Shift fork, shaft	Fork	I.D.	13.000–13.021 mm (0.5118–0.5126 in)	13.04 mm (0.513 in)
		Claw thickness	4.93–5.00 mm (0.1941–0.1969 in)	4.50 mm (0.177 in)
		Shaft O.D.	12.966–12.984 mm (0.5105–0.5112 in)	12.96 mm (0.510 in)
Transmission	Gear I.D.	M4	25.000–25.021 mm (0.9843–0.9851 in)	25.05 mm (0.986 in)
		M5	20,020–20.041 mm (0.7882–0.7890 in)	20.07 mm (0.790 in)
		C1,C2,C3,CR	28.020–28.041 mm (1.1031–1.1040 in)	28.07 mm (1.105 in)
		R idler	18.000–18.021 mm (0.7087–0.7095 in)	18.05 mm (0.711 in)
	Shaft O.D.	M4	21.959–21.980 mm (0.8645–0.8654 in)	21.93 mm (0.863 in)
		M5	16.983–16.994 mm (0.6680–0.6691 in)	16.95 mm (0.667 in)
		R idler	13.966–13.984 mm (0.5498–0.5506 in)	13.93 mm (0.548 in)
	Gear bushing	C1 O.D.	27.984–28.005 mm (1.1017–1.1026 in)	27.93 mm (1.100 in)
		C2, CR, O.D.	27.979–28.000 mm (1.1015–1.1024 in)	27.93 mm (1.100 in)
		C3, O.D.	27.959–27.980 mm (1.1007–1.1016 in)	27.93 mm (1.100 in)
		M4 O.D.	24.959–24.980 mm (0.9826–0.9835 in)	24.93 mm (0.981 in)
		M4 I.D.	22.000–22.021 mm (0.8661–0.8670 in)	22.05 mm (0.868 in)
		M5 O.D.	19.959–19.980 mm (0.7858–0.7866 in)	19.93 mm (0.785 in)
		M5 I.D.	17.016–17.034 mm (0.6699–0.6706 in)	17.06 mm (0.672 in)
		R. O.D.	17.966–17.984 mm (0.7073–0.7080 in)	17.93 mm (0.706 in)
		R. I.D.	14.000–14.025 mm (0.5512–0.5522 in)	14.05 mm (0.553 in)