

# CRANKSHAFT/TRANSMISSION/BALANCER

## TORQUE VALUES

Connecting rod nut	41 N·m (4.2 kgf·m , 30 lbf·ft)	Apply oil to the threads and seating surface
Mainshaft bearing set plate bolt	12 N·m (1.2 kgf·m , 9 lbf·ft)	Apply a locking agent to the threads
Balancer shaft holder flange bolt	27 N·m (2.8 kgf·m , 20 lbf·ft)	
Balancer shaft pinch bolt	12 N·m (1.2 kgf·m , 9 lbf·ft)	

## TOOLS

Driver, 40 mm I.D.	07746-0030100
Attachment, 30 mm	07746-0030300
Driver shaft	07964-MB00200
Driver	07749-0010000
Attachment, 32 × 35 mm	07746-0010100
Pilot, 15 mm	07746-0040300

## TROUBLESHOOTING

### Excessive noise

- Worn connecting rod big end bearing
- Bent connecting rod
- Worn crankshaft main journal bearing
- Worn transmission bearing
- Worn balancer bearing
- Incorrect balancer backlash adjustment

### Transmission jumps out of gear

- Worn gear dogs and slots
- Bent fork shaft
- Broken shift drum stopper
- Worn or bent shift forks
- Broken shift linkage return spring

### Hard to shift

- Improper clutch operation
- Incorrect transmission oil weight
- Incorrect clutch adjustment
- Bent shift fork
- Bent fork shaft
- Bent fork claw
- Damaged shift drum cam groove
- Bent shift spindle

### Engine vibration

- Excessive crankshaft runout
- Incorrect balancer timing

ITEM	STANDARD	MIN.	MAX.
Crankshaft Runout	0.08 - 0.20 (0.002 - 0.008)	0.05	0.25
	0.017 - 0.035 (0.0007 - 0.0014)	0.01	0.04
Transmission Gear I.D.	31.000 - 31.025 (1.2208 - 1.2244)	31.000	31.025
	38.000 - 38.021 (1.0238 - 1.0244)	38.000	38.021
Main journal oil clearance	0.030 - 0.040 (0.0012 - 0.0016)	0.020	0.050
	0.020 - 0.030 (0.0008 - 0.0012)	0.010	0.040
Gear-to-bearing clearance	0.020 - 0.030 (0.0008 - 0.0012)	0.010	0.040
	0.025 - 0.035 (0.0010 - 0.0014)	0.015	0.045
Mainshaft O.D.	27.957 - 27.980 (1.1011 - 1.1018)	27.957	27.980
	27.980 - 27.993 (1.1018 - 1.1021)	27.980	27.993
Balancer O.D.	29.987 - 29.990 (1.1798 - 1.1803)	29.987	29.990
	0.005 - 0.008 (0.0002 - 0.0003)	0.002	0.010
Clutch outer guide	0.005 - 0.008 (0.0002 - 0.0003)	0.002	0.010
	0.005 - 0.008 (0.0002 - 0.0003)	0.002	0.010