

# 13. CRANKSHAFT/BALANCER

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## SERVICE INFORMATION

### GENERAL

- This section covers service of the crankshaft and balancer.
- The crankcase halves must be separated to service the crankshaft and balancer. For crankcase separation and assembly, refer to section 12.
- Be careful not to damage the crankcase mating surfaces when servicing.

### SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Connecting rod	Big end side clearance	—	0.6 (0.02)
	Big end radial clearance	—	0.05 (0.002)
Crankshaft runout		—	0.03 (0.001)

### TOOLS

Driver	07749 – 0010000
Attachment, 32 x 35 mm	07746 – 0010100
Attachment, 37 x 40 mm	07746 – 0010200
Attachment, 72 x 75 mm	07746 – 0010600
Pilot, 12 mm	07746 – 0040200
Pilot, 35 mm	07746 – 0040800
Crankcase assembly tool	
— assembly collar	07965 – VM00100
— assembly shaft	07965 – VM00200
Universal bearing puller	07631 – 0010000

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## TROUBLESHOOTING

### Excessive noise

- Worn crankshaft main journal bearings
- Worn or damaged connecting rod bearings
- Worn connecting rod small end
- Worn balancer bearings
- Improper balancer installation

### Abnormal vibration

- Improper balancer timing