

**Crankshaft Deflection in Center of Crankshaft**

ENGINE TYPE	MAXIMUM IN CENTER OF CRANKSHAFT mm (in)
All	0.08 (.0031)

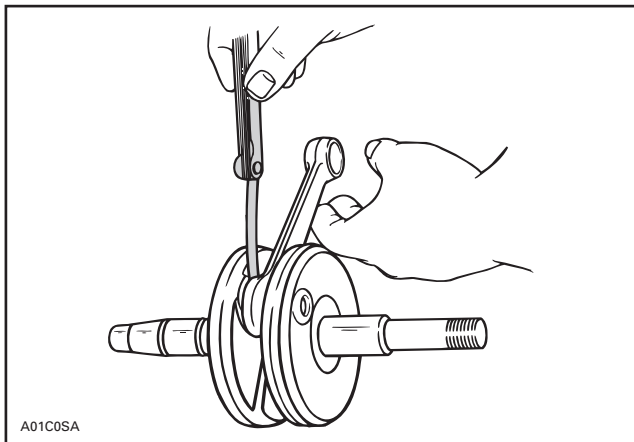
**NOTE:** Crankshaft deflection cannot be correctly measured between centers of a lathe.

If the deflection exceeds the specified tolerance, crankshaft should be repaired or replaced.

**CONNECTING ROD BIG END AXIAL PLAY**

ENGINE TYPE	NEW PARTS MIN. - MAX.	WEAR LIMIT
All	0.39 - 0.74 mm (.015 - .029 in)	1.20 mm (.047 in)

Using a feeler gauge, measure distance between thrust washer and crankshaft counterweight. If the distance exceeds specified tolerance, repair or replace the crankshaft.



TYPICAL

**CRANKSHAFT END-PLAY**

**All Engine Types**

End-play is not adjustable but it should be between 0.10 - 0.30 mm (.004 - .012 in).

**CHECKING CRANKSHAFT ALIGNMENT**

Install a degree wheel (P/N 529 035 607) on crankshaft end.

Remove both spark plugs.

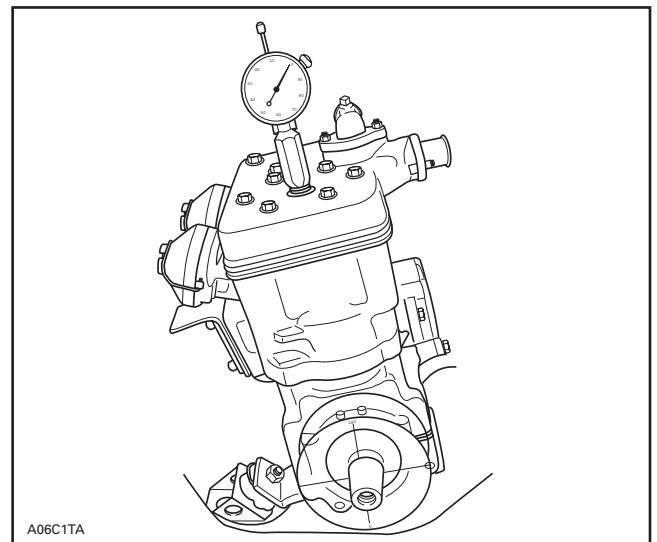
Install a TDC gauge (P/N 414 104 700) in spark plug hole on MAG side.

Bring MAG piston at top dead center.

Rotate degree wheel (not crankshaft) so that 360° mark aligns with center of crankcase. Scribe a mark on crankcase.

Remove TDC gauge and install it on center cylinder.

Bring PTO piston to top dead center. Degree wheel must rotate with crankshaft.



TYPICAL

Interval between cylinders must be 180° ± 0.5.

Any other reading indicates a misaligned (twisted) crankshaft.