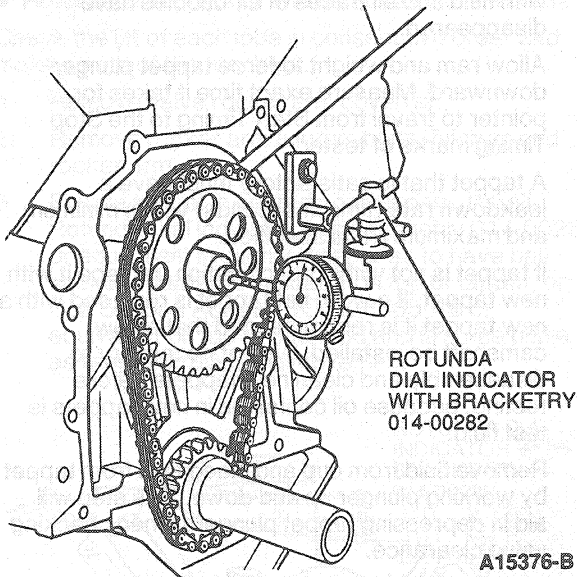


DIAGNOSIS AND TESTING (Continued)

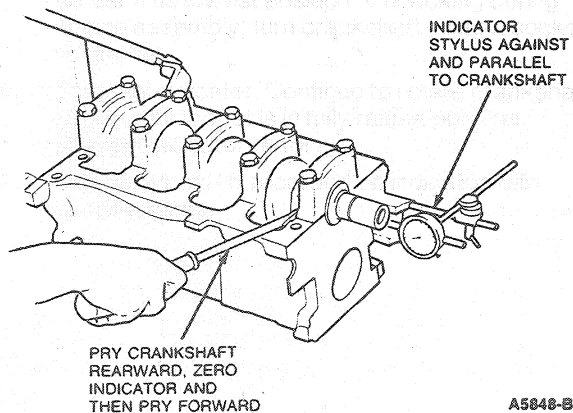
1. Push camshaft toward rear of engine. Install Rotunda Dial Indicator with Bracketry 014-00282 or equivalent so indicator point is on camshaft sprocket retaining screw.



2. Zero dial indicator. Pull camshaft forward and release it. Compare dial indicator reading with specifications. If end play is excessive, replace camshaft thrust plate.
3. Remove dial indicator.
4. After replacing thrust plate, check end play again. If it is still out of specified range, inspect camshaft and cylinder head/cylinder block for excessive wear.

Crankshaft End Play**Tools Required:**

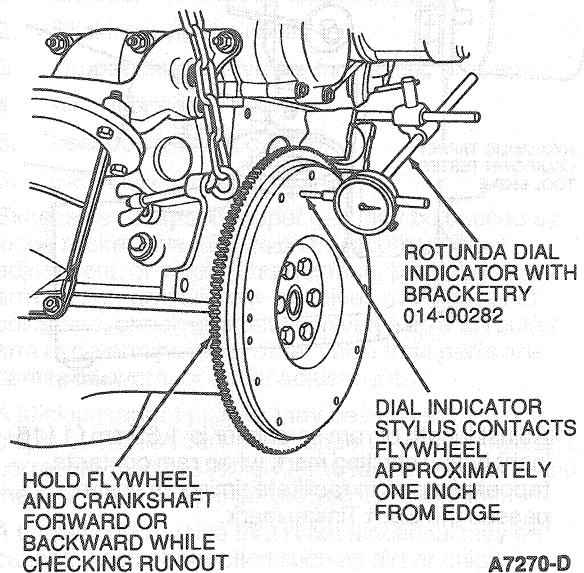
- Rotunda Dial Indicator with Bracketry 014-00282
1. Force crankshaft toward rear of engine.
 2. Install Rotunda Dial Indicator with Bracketry 014-00282 or equivalent so contact point rests against crankshaft flange and indicator axis is parallel to crankshaft axis.



3. Zero dial indicator. Push crankshaft forward and note reading on dial.
4. If the end play exceeds the wear limit listed in the specific engine Section, replace the thrust bearing. Inspect the crankshaft for damage to the thrust face before installing the new bearing. If the end play is less than the minimum limit, inspect the thrust bearing faces for scratches, burrs, nicks or dirt. If thrust faces are not damaged or dirty, they probably were not aligned properly. Lubricate and install the thrust bearing and align the faces, following Main Bearing Replacement procedure recommended in the appropriate engine Section. Check the crankshaft end play.

3.0L/3.2L SHO Engine**Flywheel Runout (Manual Transaxle)****Tools Required:**

- Rotunda Dial Indicator with Bracketry 014-00282
1. Remove spark plugs.
 2. Install Rotunda Dial Indicator with Bracketry 014-00282 or equivalent so indicator points rest on face of the flywheel.



3. Hold flywheel and crankshaft forward or backward as far as possible to prevent crankshaft end play from being indicated as flywheel runout.
4. Set indicator dial on zero mark. Turn flywheel one complete revolution while observing total indicator runout reading (TIR). If TIR exceeds specification, flywheel and ring gear assembly must be replaced.