

Fig. 169 TIMING GEAR MARKS

- 1 - RIGHT CAMSHAFT GEAR ALIGNMENT MARK
- 2 - RIGHT CAMSHAFT GEAR
- 3 - CYLINDER HEAD TO INNER TIMING BELT COVER BOLTS - RIGHT
- 4 - TIMING BELT
- 5 - WATER PUMP PULLEY
- 6 - CYLINDER HEAD TO INNER TIMING BELT COVER BOLTS - LEFT

- 7 - LEFT CAMSHAFT GEAR
- 8 - LEFT CAMSHAFT GEAR ALIGNMENT MARK
- 9 - CRANKSHAFT GEAR ALIGNMENT MARK
- 10 - CRANKSHAFT GEAR
- 11 - TIMING BELT TENSIONER PULLEY
- 12 - TIMING BELT TENSIONER

(7) Remove the timing belt tensioner (Fig. 169) and remove timing belt.

(8) Inspect the tensioner for fluid leakage.

(9) Inspect the pivot and bolt for free movement, bearing grease leakage, and smooth rotation. If not rotating freely, replace the arm and pulley assembly.

(10) When tensioner is removed from the engine it is necessary to compress the plunger into the tensioner body.

CAUTION: Index the tensioner in the vise the same way it is installed on the engine. This ensures proper pin orientation when tensioner is installed on the engine.

(a) Place the tensioner into a vise and SLOWLY compress the plunger (Fig. 170). Total bleed down of tensioner should take about 5 minutes.

(b) When plunger is compressed into the tensioner body install a pin through the body and plunger to retain plunger in place until tensioner is installed.

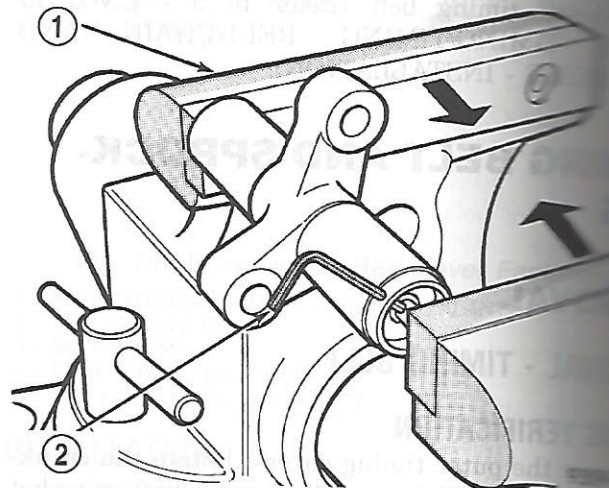


Fig. 170 Compressing Timing Belt Tensioner

- 1 - VISE
- 2 - LOCKING PIN

VALVE - CAMSHAFT SPROCKETS

The 3.5L engine is NOT a free-wheeling engine. Therefore, care should be taken not to move the camshafts or crankshaft with the timing belt moved.

The camshaft timing gears are keyed to the crankshaft.

Perform fuel pressure release procedure. (Refer to FUEL SYSTEM/FUEL DELIVERY - STANDARD PROCEDURE).

Remove front timing belt cover (Refer to 9 - VALVE TIMING/TIMING BELT / CHAIN COVER - REMOVAL).

Position crankshaft sprocket to the TDC mark on the pump housing by turning crankshaft in the clockwise direction.

Install a dial indicator in number 1 cylinder to measure TDC of the piston. Rotate the crankshaft until the piston is at exactly TDC.

Remove camshaft retainer/thrust plate from the right cylinder head (Fig. 171).

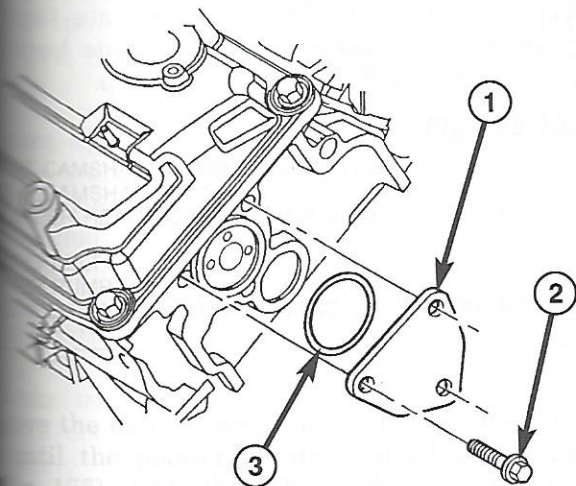


Fig. 171 CAMSHAFT THRUST PLATE

CAMSHAFT THRUST PLATE

REMOVAL

Remove the right cylinder head cover.
Remove the right rocker arm assembly.
Remove the timing belt tensioner and timing belt.

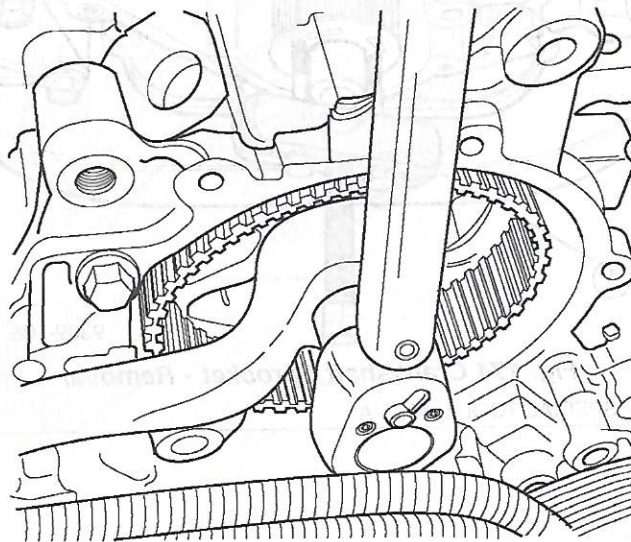
CAUTION: The right camshaft must be pushed rearward approximately 3 1/2 inches to remove the camshaft gear retaining bolt and gear. Care must be taken not to scratch or nick the camshaft or cylinder head journals when moving camshaft.

Hold camshaft sprockets with 36 mm (1 7/16 in.) end wrench.

(10) Loosen and remove the camshaft gear retaining bolt and washer. The right bolt is 213 mm (8 3/8 in.) long and the left bolt is 255 mm (10.0 in.) long.

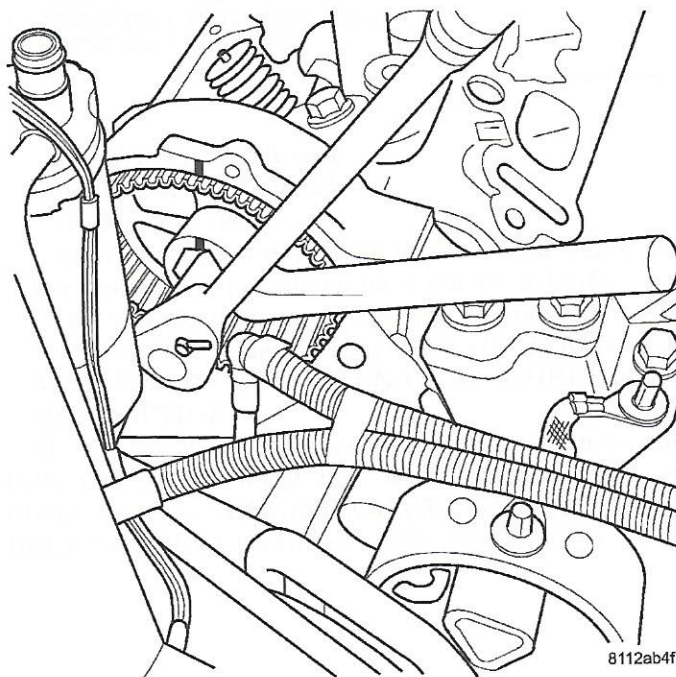
NOTE: The camshaft timing gears are keyed to the crankshaft.

(11) Remove the camshaft sprockets (Fig. 172), (Fig. 173).



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Fig. 172 LEFT CAMSHAFT SPROCKET



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Fig. 173 RIGHT CAMSHAFT SPROCKET