CAMSHAFT TIMING

PROBABLE CAUSES

Camshaft gear to crankshaft gear assembled out of time.

PROCEDURES

- Bar engine over by hand until pointer on camshaft position sensor (CMP) is aligned with the machined timing slot on the crankshaft damper. **Figure 4.1.**
- Remove CMP sensor and view timing disk through the CMP hole in the front cover.
- If the engine is on the compression stroke for #1 cylinder a narrow sync vane will be observed directly in the middle of the CMP sensor hole. **Figure 4.2.**
- If the camshaft timing is either one tooth advanced or retarded the narrow vane will appear approximately 1/8" from either the upper or lower edge of the hole.
- If no narrow vane is visible it is most likely that the engine is not on the compression stroke for #1 cylinder. **Figure 4.3.** Temporally install CMP sensor, bar the engine over 360° until the CMP sensor pointer and the line on the crankshaft damper are aligned and re–inspect for the narrow vane on the timing disk.

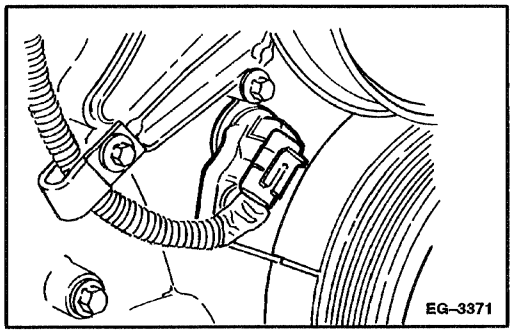

Figure 4.1. – Timing Pointer Aligned with Mark on Damper

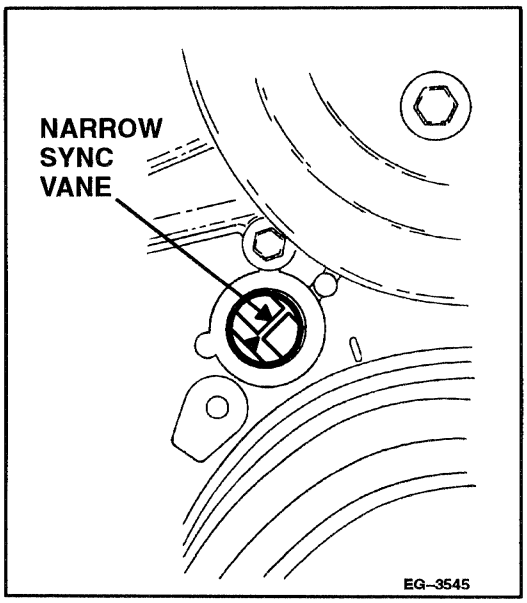

Figure 4.2. – View of Timing Disk (Camshaft Timing Correct)

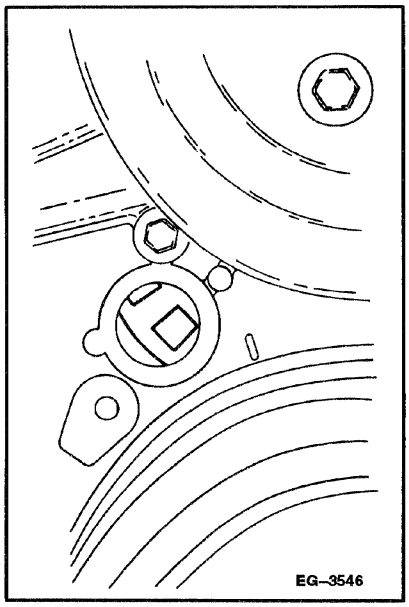

Figure 4.3. – View of Timing Disk (Not on Cyl. #1 Compression Stroke) Rotate Crankshaft 360°

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