

DIAGNOSIS AND TESTING

Procedures for diagnosis and testing of the EI system can be found in the Powertrain Control/Emissions Diagnosis Manual³.

REMOVAL AND INSTALLATION

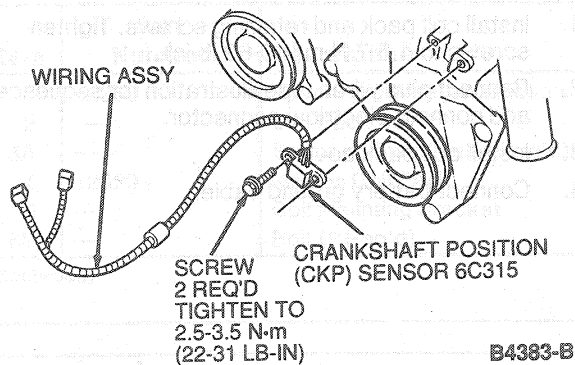
Crankshaft Position (CKP) Sensor Assembly

Tools Required:

- Universal Puller T67L-3600-A
- Crank Gear and Damper Replacer T83T-6316-B2

Removal

1. Disconnect battery ground cable.
2. Loosen tensioner pulleys for A/C compressor and power steering pump belts.
3. Remove belts from crankshaft pulley.
4. Disconnect ICM and remove intake manifold crossover tube.
5. Remove upper timing belt cover.
6. Disconnect sensor wiring harness at connector and route wiring harness through belt cover.
7. Raise vehicle and suitably support. Refer to Section 00-02.
8. Remove RH front wheel and tire assembly. Refer to Section 04-04.
9. Remove crankshaft pulley using Universal Puller T67L-3600-A.
10. Remove center and lower timing belt covers.
11. Rotate crankshaft by **HAND** to position the metal vane of shutter outside of sensor air gap.
12. Remove crankshaft sensor retaining screws and remove sensor.



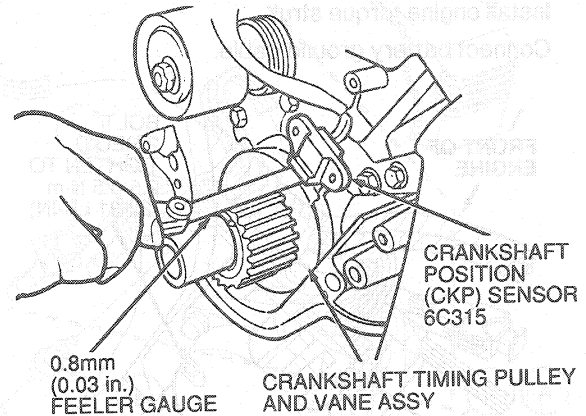
Installation

1. Route sensor wiring harness through belt cover. Install sensor assembly on mounting pad and install retaining screws loosely. Do not tighten screws at this time.

CAUTION: This is a critical torque. Overtightening can cause damage to timing sensor.

³ Can be purchased as a separate item.

2. Set clearance between crankshaft position sensor assembly and one vane on crankshaft timing pulley and vane assembly using a 0.8mm (0.03 inch) feeler gauge. Tighten screws to 2.5-3.5 N-m (22-31 lb-in).



3. Install lower timing belt cover. Take care not to damage sensor wiring harness. Install crankshaft pulley using Crank Gear and Damper Replacer T83T-6316-B2. Tighten pulley bolt to 152-172 N-m (112-127 lb-ft).
4. Install center timing belt cover.
5. Install RH front wheel and tire assembly. Tighten wheel lug nuts to 115-142 N-m (85-105 lb-ft).
6. Lower vehicle.
7. Route and connect sensor wiring harness.
8. Install upper timing belt cover.
9. Install intake manifold crossover tube and connect ICM. Refer to Section 03-01C.
10. Install A/C and power steering belts and adjust to proper tension.
11. Connect battery ground cable.

Camshaft Position (CKP) Sensor Assembly

Removal

1. Disconnect negative battery cable.
2. Remove engine torque strut.
3. Remove power steering belt.
4. Remove power steering pump pulley.
5. Disconnect camshaft position sensor wiring connector.
6. Remove camshaft position sensor retaining bolts and remove sensor.

Installation

1. Install camshaft position sensor and retaining bolts. Tighten bolts to 2.5-3.5 N-m (22-31 lb-in).