

CAMSHAFT(S) (Continued)

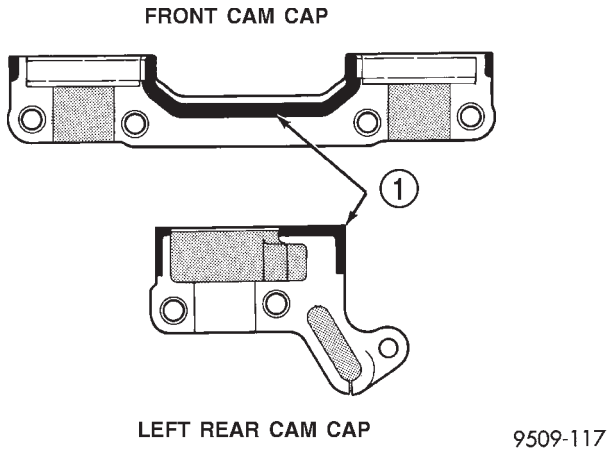


Fig. 29 Camshaft Bearing Cap Sealing

1 - 1.5 mm (.060 in.) DIAMETER BEAD OF MOPAR GASKET MAKER

NOTE: Bearing end caps must be installed before seals can be installed.

- (5) Install camshaft oil seals. (Refer to 9 - ENGINE/CYLINDER HEAD/CAMSHAFT OIL SEAL(S) - INSTALLATION)
- (6) Install camshaft target magnet and camshaft position sensor.
- (7) Install cylinder head cover. (Refer to 9 - ENGINE/CYLINDER HEAD/CYLINDER HEAD COVER(S) - INSTALLATION)
- (8) Install timing belt rear cover and camshaft sprocket. (Refer to 9 - ENGINE/VALVE TIMING/TIMING BELT / CHAIN COVER(S) - INSTALLATION)
- (9) Install timing belt. (Refer to 9 - ENGINE/VALVE TIMING/TIMING BELT/CHAIN AND SPROCKETS - INSTALLATION)

CYLINDER HEAD COVER

REMOVAL

- (1) Remove upper intake manifold. (Refer to 9 - ENGINE/MANIFOLDS/INTAKE MANIFOLD - REMOVAL)
- (2) Remove upper manifold support bracket.
- (3) Remove ignition coil and spark plug wires.
- (4) Disconnect PCV and make-up air hoses from cylinder head cover.
- (5) Remove cylinder head cover bolts.
- (6) Remove cylinder head cover from cylinder head.

CLEANING

Clean cylinder head and cover mating surfaces using a suitable solvent.

INSPECTION

Inspect cover rails for flatness.

INSTALLATION

NOTE: Replace spark plug well seals and bolt assemblies when installing a new cylinder head cover gasket.

(1) Install new cylinder head cover gaskets and spark plug well seals (Fig. 30).

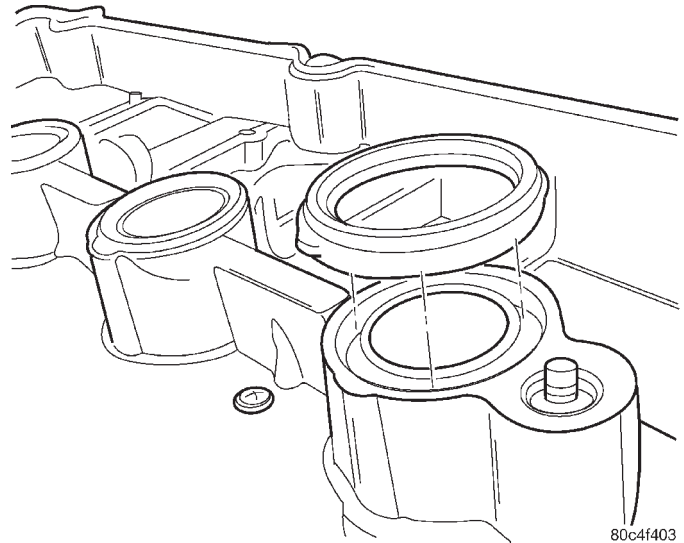


Fig. 30 Spark Plug Well Seals

(2) Replace cylinder head cover bolt assemblies (Fig. 31).

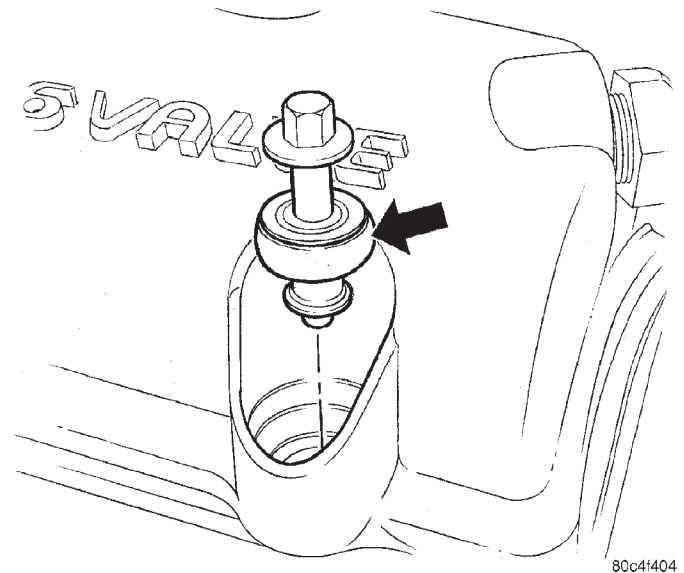


Fig. 31 Cylinder Head Cover Bolt Assembly

CAUTION: Do not allow oil or solvents to contact the timing belt as they can deteriorate the rubber and cause tooth skipping.

CYLINDER HEAD COVER (Continued)

(3) Apply Mopar® Engine RTV GEN II at the camshaft cap corners and at the top edges of the 1/2 round seal (Fig. 32).

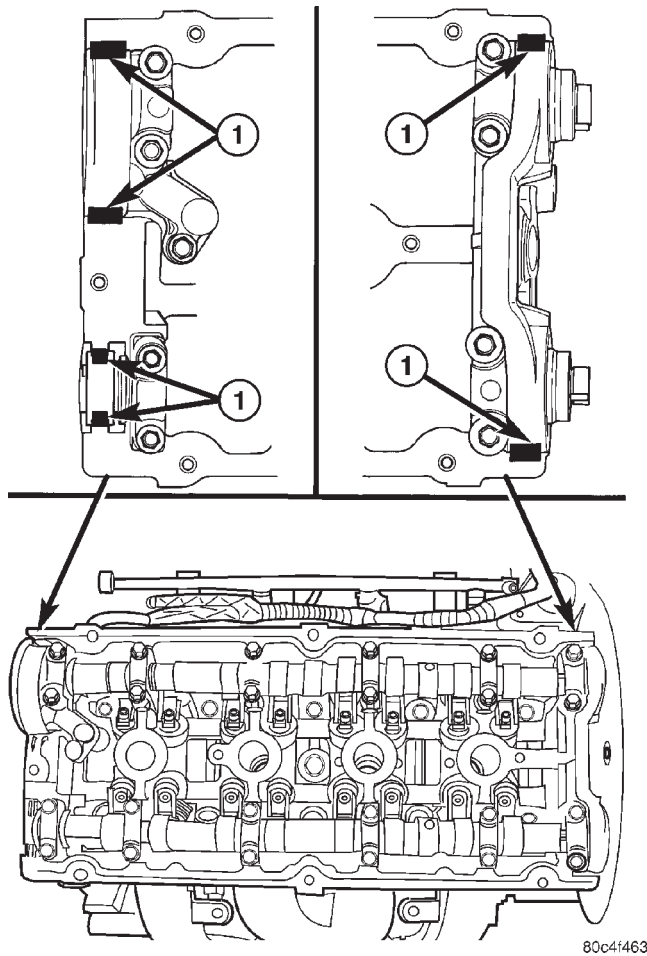


Fig. 32 Sealer Locations

1 - SEALER LOCATION

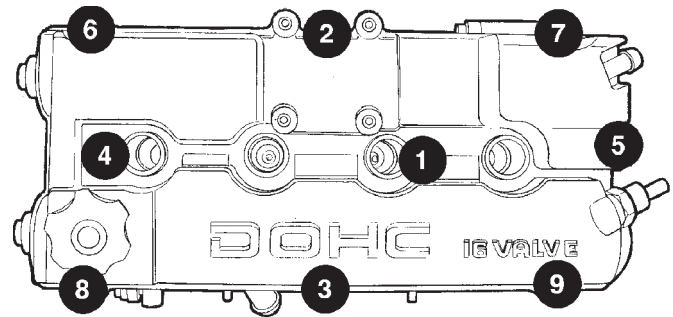
(4) Install cylinder head cover assembly to cylinder head. Install all bolts, ensuring the two (2) bolts containing the sealing washer are located in the center locations of cover. Tighten bolts in sequence shown in (Fig. 33). Using a 3 step torque method as follows:

- (a) Tighten all bolts to 4.5 N·m (40 in. lbs.).
- (b) Tighten all bolts to 9.0 N·m (80 in. lbs.).
- (c) Tighten all bolts to 12 N·m (105 in. lbs.).

(5) Install ignition coil and spark plug wires. Tighten fasteners to 12 N·m (105 in. lbs.).

(6) If the PCV valve was removed, apply Mopar® Thread Sealant with Teflon to threads and install valve to cylinder head cover. Tighten PCV valve to 8 N·m (70 in. lbs.).

(7) Connect PCV and make-up air hoses to cylinder head cover.



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Fig. 33 Cylinder Head Cover Tightening Sequence (Typical Cover Shown)

(8) Install upper intake manifold. (Refer to 9 - ENGINE/MANIFOLDS/INTAKE MANIFOLD - INSTALLATION)

INTAKE/EXHAUST VALVES & SEATS

DESCRIPTION

The valves are made of heat resistant steel. They have chrome plated stems to prevent scuffing. Viton rubber valve stem seals are integral with the spring seats. The valves have three-bead lock keepers to retain springs and to promote valve rotation.

CLEANING

(1) Clean all valves thoroughly and discard burned, warped and cracked valves.

VALVE SPRINGS

REMOVAL - CYLINDER HEAD ON

- (1) Remove camshafts.
- (2) Rotate crankshaft until piston is at TDC on compression.
- (3) With air hose attached to adapter tool installed in spark plug hole, apply 90-120 psi air pressure.
- (4) Using Special Tool MD-998772-A with adapter 6779 (Fig. 34), compress valve springs and remove valve locks.
- (5) Remove valve spring(s).
- (6) Remove valve stem seal(s) by using valve stem seal tool (Fig. 36).

REMOVAL - CYLINDER HEAD OFF

- (1) With cylinder head removed, compress valve springs using a universal valve spring compressor.
- (2) Remove valve retaining locks, valve spring retainers, valve stem seals and valve springs.
- (3) Before removing valves, **remove any burrs from valve stem lock grooves to prevent dam-**