

CYLINDER HEAD/VALVES

TORQUE VALUES

Cylinder head cap nut	35–40 N·m (3.5–4.0 kg-m, 25–32 ft-lb)
Cylinder head socket bolt	22–28 N·m (2.2–2.7 kg-m, 16–20 ft-lb)
Cam sprocket bolt	17–23 N·m (1.7–2.3 kg-m, 12–17 ft-lb)
Valve adjusting screw lock nut	15–18 N·m (1.5–1.8 kg-m, 11–13 ft-lb)
Oil pipe bolt	8–12 N·m (0.8–1.2 kg-m, 6–9 ft-lb)
Spark plug	15–20 N·m (1.5–2.0 kg-m, 11–15 ft-lb)
Cam chain tensioner lifter sealing bolt	8–12 N·m (0.8–1.2 kg-m, 6–9 ft-lb)

TOOLS

Special

Valve guide reamer, 5.5 mm 07984–2000000 or 07984–200000A (U.S.A. only)

Common

Valve guide remover, 5.5 mm	07742–0010100 or 07942–3290100
Valve spring compressor	07757–0010000 or 07957–3290001
Valve seat cutter, 29 mm (EX 45°)	07780–0010300
Valve seat cutter, 35 mm (IN 45°)	07780–0010400
Valve seat cutter, 30 mm (EX 32°)	07780–0012200
Valve seat cutter, 35 mm (IN 32°)	07780–0012300
Valve seat cutter, 30 mm (EX 60°)	07780–0014000
Valve seat cutter, 37.5 mm (IN 60°)	07780–0014100
Valve seat cutter holder	07781–0010101

Equivalent commercially available in U.S.A.

TROUBLESHOOTING

Engine top-end problems usually affect engine performance. These problems can be diagnosed by a compression test, or by tracing engine noise to the top-end with a sounding rod or stethoscope.

Low compression

- Valves:
 - Incorrect valve adjustment
 - Burned or bent valve
 - Incorrect valve timing
 - Weak valve spring
- Cylinder head:
 - Leaking or damaged head gasket
 - Warped or cracked cylinder head
- Cylinder and piston (Section 7)

Excessive noise

- Incorrect valve adjustment
- Sticking valve or broken valve spring
- Damaged or worn rocker arm or camshaft
- Worn or damaged cam chain
- Worn or damaged cam chain tensioner
- Worn cam sprocket teeth

Poor idling

- Compression too low

High compression

- Excessive carbon build-up on piston crown or on combustion chamber