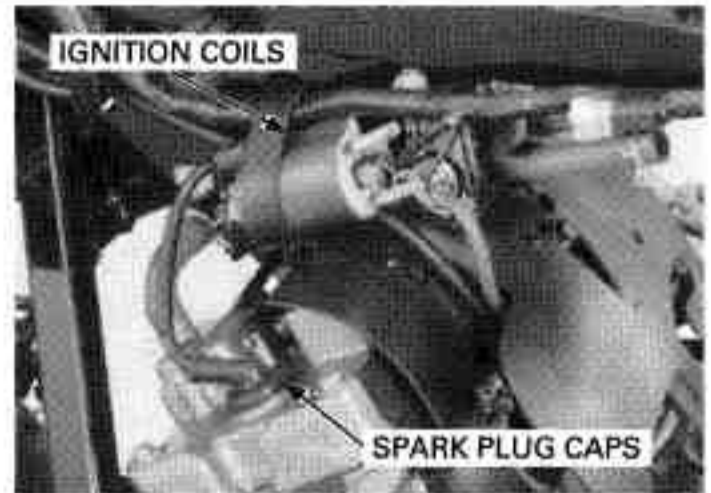


Install the ignition coil assembly (page 18-10).
Connect the spark plug caps securely (page 4-7).

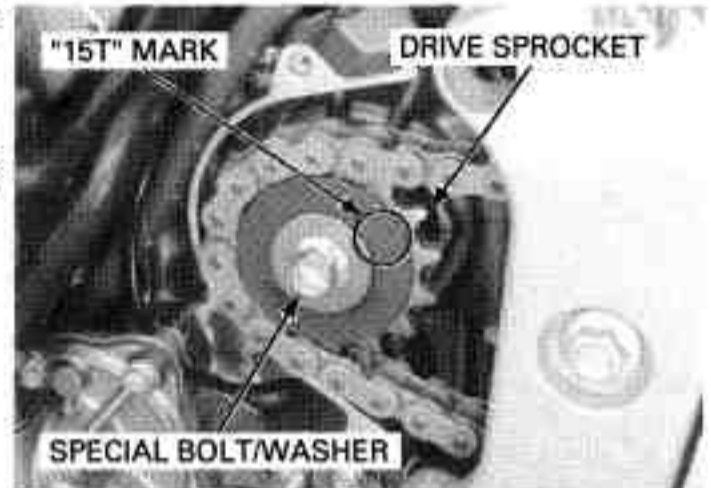


Install the drive sprocket with its "15T" mark facing outward.

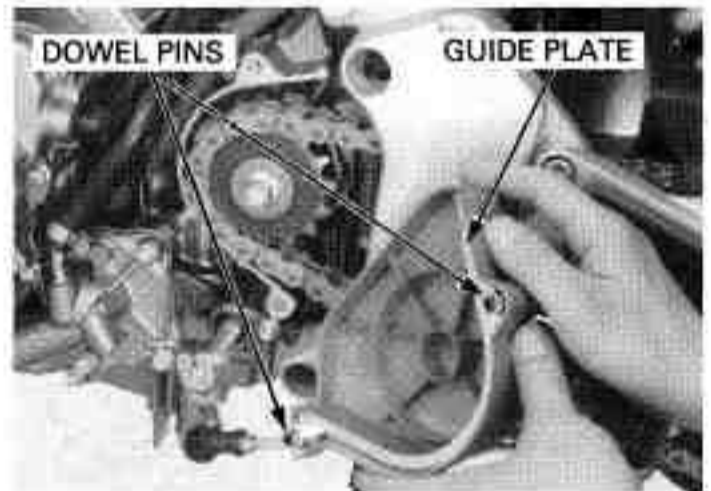
Install the washer and drive sprocket special bolt.

Tighten the drive sprocket special bolt to the specified torque while applying the rear brake with the rear wheel on the ground.

TORQUE: 54 N·m (5.5 kgf·m, 40 lbf·ft)



Install the dowel pins and drive chain guide plate.



Install the drive sprocket cover and tighten the bolts securely.

Install the following:

- Side cover (page 3-4)
- Fuel tank (page 3-6)
- Exhaust pipe (page 3-9)
- Carburetor (page 6-34)
- Radiator (page 7-10)

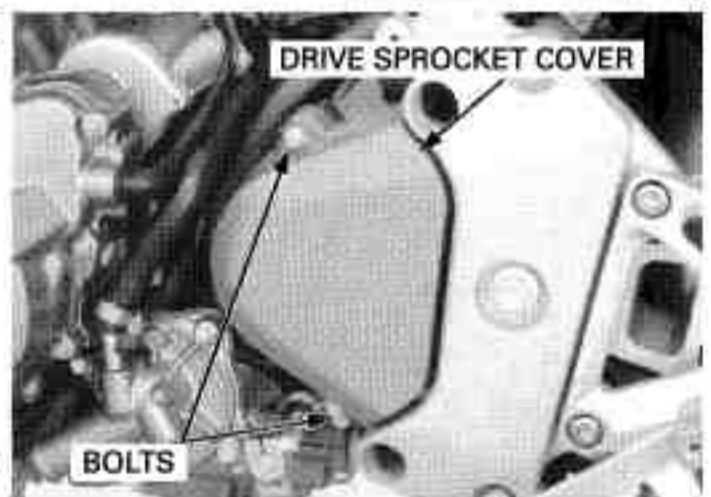
Install the following (California type only):

- EVAP purge control valve (page 6-39)
- EVAP canister (page 6-39)

Fill the cooling system with recommended coolant and bleed the air (page 7-7).

Pour recommended engine oil up to the proper level (page 4-14).

Connect the battery negative cable.

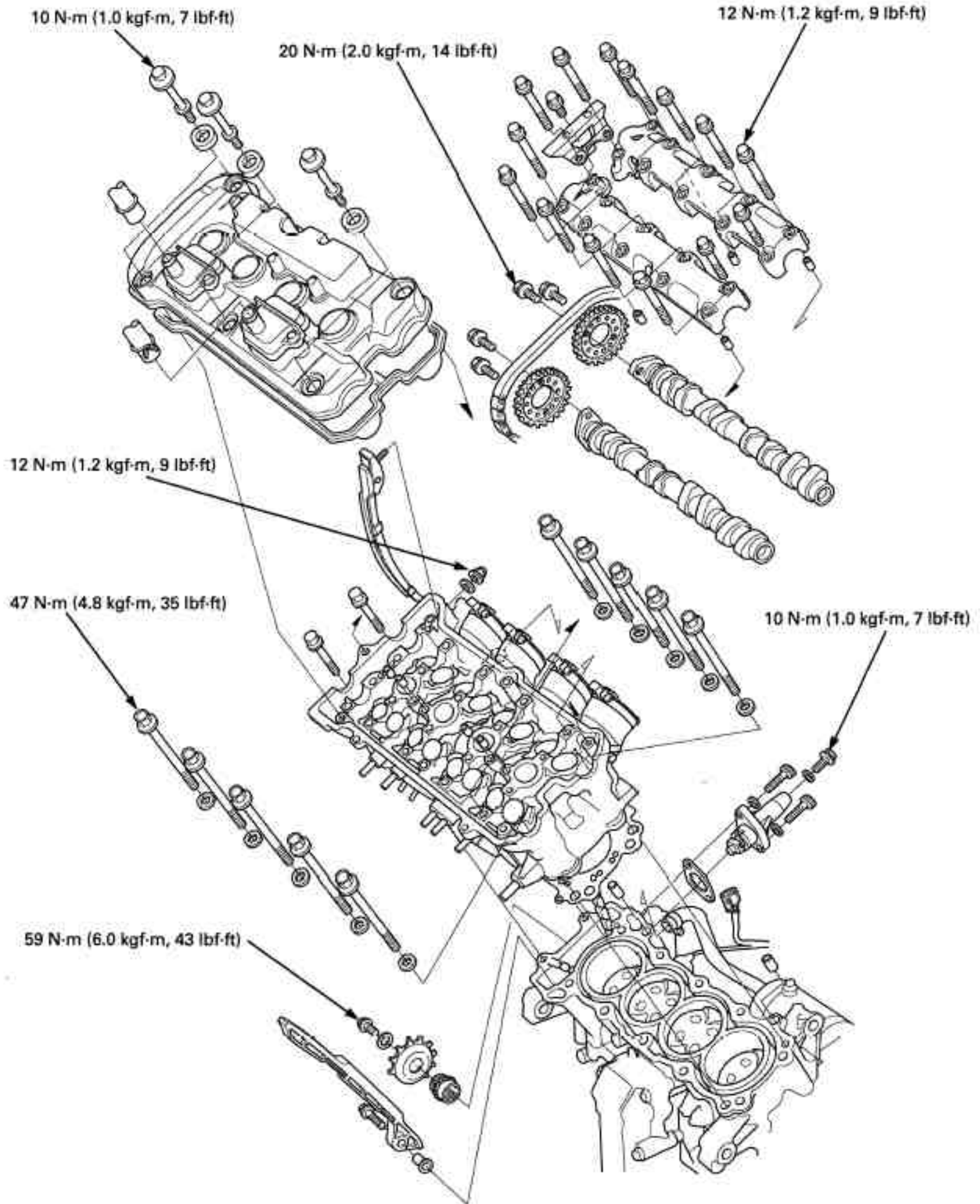


9. CYLINDER HEAD/VALVES

COMPONENT LOCATION.....	9-2	VALVE GUIDE REPLACEMENT.....	9-18
SERVICE INFORMATION.....	9-3	VALVE SEAT INSPECTION/REFACING.....	9-19
TROUBLESHOOTING.....	9-5	CYLINDER HEAD ASSEMBLY.....	9-22
CYLINDER COMPRESSION TEST.....	9-6	CYLINDER HEAD INSTALLATION.....	9-24
CYLINDER HEAD COVER REMOVAL.....	9-6	CAMSHAFT INSTALLATION.....	9-27
CYLINDER HEAD COVER DISASSEMBLY.....	9-7	CYLINDER HEAD COVER ASSEMBLY.....	9-30
CAMSHAFT REMOVAL.....	9-7	CYLINDER HEAD COVER INSTALLATION.....	9-31
CYLINDER HEAD REMOVAL.....	9-12	CAM CHAIN TENSIONER LIFTER.....	9-32
CYLINDER HEAD DISASSEMBLY.....	9-15	PAIR REED VALVE.....	9-34
CYLINDER HEAD INSPECTION.....	9-16		

CYLINDER HEAD/VALVES

COMPONENT LOCATION



SERVICE INFORMATION

GENERAL

- This section covers service of the cylinder head, valves and camshaft.
- The camshaft services can be done with the engine installed in the frame.
- The cylinder head services can be done with the engine installed in the frame.
- When disassembling, mark and store the disassembled parts to ensure that they are reinstalled in their original locations.
- Clean all disassembled parts with cleaning solvent and dry them by blowing them off with compressed air before inspection.
- Camshaft lubricating oil is fed through oil passages in the cylinder head. Clean the oil passages before assembling cylinder head.
- Be careful not to damage the mating surfaces when removing the cylinder head cover and cylinder head.

SPECIFICATIONS


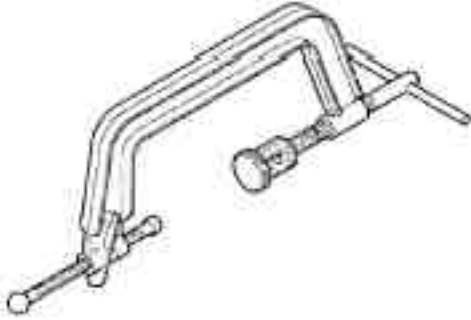










ITEM		STANDARD		SERVICE LIMIT
Cylinder compression		1,294 kPa (13.2 kgf/cm ² , 188 psi) at 350 rpm		
Valve clearance		IN	0.16 ± 0.03 (0.006 ± 0.001)	-
		EX	0.22 ± 0.03 (0.009 ± 0.001)	-
Camshaft	Cam lobe height	IN	36.220 – 36.300 (1.4260 – 1.4291)	36.03 (1.419)
		EX	35.380 – 35.460 (1.3929 – 1.3960)	35.19 (1.385)
	Journal O.D.	23.959 – 23.980 (0.9433 – 0.9411)		24.955 (0.9825)
	Runout	-		0.05 (0.002)
Oil clearance		0.020 – 0.062 (0.0008 – 0.0024)		0.10 (0.004)
Valve lifter	Valve lifter O.D.	25.978 – 25.993 (1.0228 – 1.0233)		25.97 (1.022)
	Valve lifter bore I.D.	26.010 – 26.026 (1.0240 – 1.0246)		26.04 (1.025)
Valve, valve guide	Valve stem O.D.	IN	3.975 – 3.990 (0.1565 – 0.1571)	3.965 (0.1561)
		EX	3.965 – 3.980 (0.1561 – 0.1567)	3.955 (0.1557)
	Valve guide I.D.	IN/EX	4.000 – 4.012 (0.1575 – 0.1580)	4.04 (0.159)
	Stem-to-guide clearance	IN	0.010 – 0.037 (0.0004 – 0.0015)	0.075 (0.0030)
		EX	0.020 – 0.047 (0.0008 – 0.0019)	0.085 (0.0033)
	Valve guide projection above cylinder head	IN	13.10 – 13.30 (0.516 – 0.524)	-
		EX	11.30 – 11.50 (0.445 – 0.453)	-
Valve seat width	IN/EX	0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)	
Valve spring free length		IN/EX	38.25 (1.506)	37.05 (1.46)
Cylinder head warpage		-		0.10 (0.004)

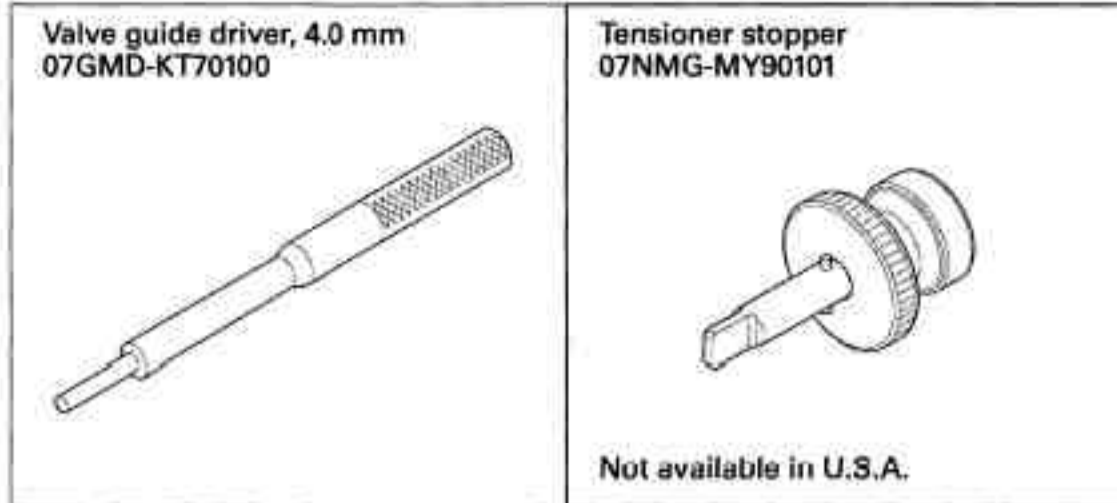
TORQUE VALUES

Cylinder head sealing bolt	32 N·m (3.3 kgf·m, 24 lbf·ft)	Apply a locking agent to the threads
Cylinder head bolt	47 N·m (4.8 kgf·m, 35 lbf·ft)	Apply oil to the threads and flange surface
No.1 intake vacuum port plug	3.0 N·m (0.30 kgf·m, 2.2 lbf·ft)	'04 model
Cylinder head cover bolt	10 N·m (1.0 kgf·m, 7 lbf·ft)	
Camshaft holder flange bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)	Apply oil to the threads and flange surface
Cam sprocket bolt	20 N·m (2.0 kgf·m, 14 lbf·ft)	Apply a locking agent to the threads
Cam chain tensioner cap nut	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Cam chain lifter sealing bolt	10 N·m (1.0 kgf·m, 7 lbf·ft)	
Reed valve cover bolt	13 N·m (1.3 kgf·m, 9 lbf·ft)	CT bolt

CYLINDER HEAD/VALVES

TOOLS

<p>Compression gauge attachment 07RMJ-MY50100</p>  <p>or equivalent commercially available in U.S.A.</p>	<p>Valve spring compressor 07757-0010000</p> 	<p>Valve spring compressor attachment 07959-KM30101</p> 
<p>Tappet hole protector 07HMG-MR70002</p>  <p>Not available in U.S.A.</p>	<p>Valve guide reamer, 4.0 mm 07MMH-MV90100</p>  <p>or 07MMH-MV9010A (U.S.A. only)</p>	<p>Seat cutter, 27.5 mm (45° IN) 07780-0010200</p>  <p>or equivalent commercially available in U.S.A.</p>
<p>Seat cutter, 24.5 mm (45° EX) 07780-0010100</p>  <p>or equivalent commercially available in U.S.A.</p>	<p>Flat cutter, 27 mm (32° IN) 07780-0013300</p>  <p>or equivalent commercially available in U.S.A.</p>	<p>Flat cutter, 24 mm (32° EX) 07780-0012500</p>  <p>or equivalent commercially available in U.S.A.</p>
<p>Interior cutter, 26 mm (60° IN) 07780-0014500</p>  <p>or equivalent commercially available in U.S.A.</p>	<p>Interior cutter, (60° EX) 07780-0014202</p>  <p>or equivalent commercially available in U.S.A.</p>	<p>Cutter holder, 4.0 mm 07781-0010500</p>  <p>or equivalent commercially available in U.S.A.</p>



TROUBLESHOOTING

- Engine top-end problems usually affect engine performance. These problem can be diagnosed by a compression test or by tracing engine noises to the top-end with a sounding rod stethoscope.
- If the performance is poor at low speeds, check for white smoke in the crankcase breather hose. If the hose is smoky, check for a seized piston ring (page 13-12).

Compression too low, hard starting or poor performance at low speed

- Valves:
 - Incorrect valve adjustment
 - Burned or bent valve
 - Incorrect valve timing
 - Broken valve spring
 - Uneven valve seating
- Cylinder head:
 - Leaking or damaged head gasket
 - Warped or cracked cylinder head
- Worn cylinder, piston or piston rings (page 13-12)

Compression too high, overheating or knocking

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

Excessive smoke

- Cylinder head:
 - Worn valve stem or valve guide
 - Damaged stem seal
- Worn cylinder, piston or piston rings (page 13-12)

Excessive noise

- Cylinder head:
 - Incorrect valve adjustment
 - Sticking valve or broken valve spring
 - Damaged or worn camshaft
 - Loose or worn cam chain
 - Worn or damaged cam chain
 - Worn or damaged cam chain tensioner
 - Worn cam sprocket teeth
- Worn cylinder, piston or piston rings (page 13-12)

Rough idle

- Low cylinder compression