

5. CYLINDER HEAD / CYLINDER / PISTON



HONDA
ATC 250R

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SERVICE INFORMATION

GENERAL INSTRUCTIONS

- All cylinder head maintenance and inspection can be accomplished with the engine installed.
- Before disassembling the engine, clean the engine thoroughly so not to allow dirt and dust to fall into the cylinder and crankcase.
- Remove all traces of gasket material from the mating surfaces of the cylinder head, cylinder and crankcase.
- Use caution when servicing the cylinder and piston to prevent damage to them.
- Before assembling, apply clean 2-stroke engine oil to all sliding surfaces of parts.

SPECIFICATIONS

ITEM	STANDARD mm (in)	SERVICE LIMIT mm (in)
Cylinder head warpage	0 - 0.10 (0 - 0.004)	0.20 (0.008)
Cylinder bore	70.000 - 70.015 (2.753 - 2.756)	70.050 (2.758)
Piston O.D. (10 mm (3/8 in) from piston skirt bottom)	69.920 - 69.940 (2.753 - 2.754)	69.870 (2.751)
Cylinder-to-piston clearance	0.060 - 0.095 (0.002 - 0.004)	0.150 (0.006)
Piston pin bore	18.007 - 18.013 (0.708 - 0.709)	18.027 (0.710)
Piston pin O.D.	17.994 - 18.000 (0.707 - 0.708)	17.980 (0.708)
Piston-to-piston pin clearance	0.007 - 0.019 (0.0003 - 0.0007)	0.050 (0.002)
Piston ring end gap (top/bottom)	0.20 - 0.40 (0.008 - 0.016)	0.50 (0.020)
Connecting rod small end I.D.	21.997 - 22.000 (0.8660 - 0.8661)	22.020 (0.867)

TROUBLESHOOTING

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

1. Blown cylinder head gasket
2. Loose spark plug
3. Worn, stuck or broken piston rings
4. Worn or damaged cylinder and piston
5. Faulty reed valve

Compression too high, overheating or knocking

1. Excessive carbon buildup in cylinder head or on piston top.

Abnormal noise—piston

1. Worn cylinder and piston
2. Worn piston pin or piston pin hole
3. Worn connecting rod small end bearing

Abnormal noise—piston rings

1. Worn, stuck or broken piston rings
2. Worn or damaged cylinder