

Unit: mm (in)

CYLINDER HEAD/V VALVES			STANDARD	SERVICE LIMIT
ITEM				
Cylinder compression			1,370 kpa (13.9 kgf/cm <sup>2</sup> , 197.7 psi) at 680 min <sup>-1</sup> (rpm)	—
Cylinder head warpage			—	0.05 (0.002)
Valve, valve guide	Valve clearance	IN	0.16 ± 0.03 (0.006 ± 0.001)	—
		EX	0.25 ± 0.03 (0.010 ± 0.001)	—
	Valve stem O.D.	IN	3.775 – 3.790 (0.1486 – 0.1492)	3.7 (0.15)
		EX	3.765 – 3.780 (0.1482 – 0.1488)	3.7 (0.15)
	Valve guide I.D.	IN/EX	3.800 – 3.812 (0.1496 – 0.1501)	3.89 (0.153)
	Stem-to-guide clearance	IN	0.010 – 0.037 (0.0004 – 0.0015)	0.075 (0.0029)
		EX	0.020 – 0.047 (0.0008 – 0.0019)	0.085 (0.0033)
	Valve guide projection above cylinder head	IN	15.5 (0.61)	—
EX		13.1 (0.52)	—	
Valve seat width	IN/EX	1.2 – 1.6 (0.05 – 0.06)	1.9 (0.07)	
Valve spring free length			39.7 (1.56)	38.5 (1.52)
Valve lifter	O.D.		22.478 – 22.493 (0.8850 – 0.8855)	22.47 (0.885)
	Bore I.D.		22.510 – 22.526 (0.8862 – 0.8869)	22.5 (0.89)
Camshaft	Cam lobe height	IN	35.12 – 35.20 (1.383 – 1.386)	35.073 (1.3808)
		EX	34.71 – 34.79 (1.367 – 1.370)	34.662 (1.3646)
	Runout		—	0.02 (0.001)
	Camshaft holder I.D.	IN/EX	17.000 – 17.018 (0.6693 – 0.6700)	17.02 (0.6703)
	Camshaft O.D.	IN/EX	16.966 – 16.984 (0.6680 – 0.6687)	16.960 (0.6677)
	Camshaft-to-camshaft holder clearance (right side)	IN/EX	0.016 – 0.052 (0.0006 – 0.0020)	0.067 (0.0026)

Unit: mm (in)

CYLINDER/PISTON			STANDARD	SERVICE LIMIT
ITEM				
Cylinder	I.D.		63.50 – 63.51 (2.5000 – 2.5004)	63.55 (2.502)
	Out of round		—	0.10 (0.004)
	Taper		—	0.10 (0.004)
	Warpage		—	0.05 (0.002)
Piston, piston rings	Piston mark direction		"IN" mark facing toward the intake side	—
	Piston O.D.		63.47 – 63.49 (2.4988 – 2.4996)	63.40 (2.496)
	Piston O.D. measurement point		6.5 (0.36) from bottom of skirt	—
	Piston pin bore I.D.		15.002 – 15.008 (0.5960 – 0.5909)	15.055 (0.5927)
	Piston pin O.D.		14.994 – 15.000 (0.5903 – 0.5906)	14.98 (0.590)
	Piston-to-piston pin clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.04 (0.0016)
	Piston ring-to-ring groove clearance	Top	0.045 – 0.075 (0.0018 – 0.0030)	0.10 (0.004)
		Second	0.015 – 0.050 (0.0006 – 0.0020)	0.08 (0.003)
	Piston ring end gap	Top	0.05 – 0.20 (0.002 – 0.008)	0.3 (0.01)
Second		0.15 – 0.30 (0.004 – 0.010)	0.7 (0.030)	
Oil (side rail)		0.20 – 0.70 (0.008 – 0.028)	1.1 (0.04)	
Cylinder-to-piston clearance			0.01 – 0.04 (0.0004 – 0.0016)	0.90 (0.035)
Connecting rod small end I.D.			15.010 – 15.028 (0.5909 – 0.5917)	15.09 (0.594)
Connecting rod small end-to-piston pin clearance			0.010 – 0.034 (0.0004 – 0.0013)	0.075 (0.0030)