

ENGINE MECHANICAL

SERVICE DATA

03087-01

Intake valve		
Overall length	Standard	102.53 mm (4.0366in.)
	Minimum	102.10 mm (4.0197in.)
Valve stem diameter		5.970 – 5.985 mm (0.1957 – 0.1963 in.)
Margin thickness	Standard	0.9 (0.035 in.)
	Minimum	0.6 mm (0.0247 in.)
Exhaust valve		
Overall length	Standard	101.97 mm (4.0146in.)
	Minimum	101.55 mm (3.9980 in.)
Valve stem diameter		5.960 – 5.975 mm (0.2346 – 0.2352 in.)
Margin thickness	Standard	0.9 mm (0.035 in.)
	Minimum	0.6 mm (0.024 in.)
Inner compression spring		
Free length		40.45 mm (1.5925 in.)
Deviation	Maximum	2.0 mm (0.079 in.)
Intake Valve guide bush		
Bushing inside diameter		6.010 – 6.030 mm (0.2366 – 0.2374 in.)
Oil clearance	Standard	0.025 – 0.060 mm (0.0010 – 0.0024 in.)
	Maximum	0.08 mm (0.0031 in.)
Diameter		10.985 – 11.006 mm (0.4325 – 0.4333 in.)
Protrusion height		10.05 – 10.45 mm (0.3957 – 0.4114 in.)
Exhaust valve guide bush		
Bushing inside diameter		6.010 – 6.030 mm (0.2366 – 0.2374 in.)
Oil clearance	Standard	0.035 – 0.070 mm (0.0014 – 0.0028 in.)
	Maximum	0.10 mm (0.0039 in.)
Diameter		10.985 – 11.006 mm (0.4325 – 0.4333 in.)
Protrusion height		9.65 – 10.05 mm (0.3799 – 0.3957 in.)
Valve lifter		
Lifter diameter		27.975 – 27.985 mm (1.1014 – 1.1018 in.)
Lifter bore diameter		31.009 – 31.025 mm (1.2208 – 1.2215 in.)
Oil clearance	Standard	0.025 – 0.056 mm (0.0010 – 0.0022 in.)
	Maximum	0.08 mm (0.0031 in.)
Camshaft		
Circle runout	Maximum	0.06 mm (0.0024 in.)
Cam lobe height (No.1)	Standard	46.57 – 46.67 mm (1.8335 – 1.8374 in.)
	Minimum	0.06 mm (0.0024 in.)
Cam lobe height (No.2)	Standard	47.52 – 47.62 mm (1.8709 – 1.8748 in.)
	Minimum	47.05 mm (1.8524 in.)
Journal diameter		26.969 – 26.985 mm (1.0618 – 1.0624 in.)
Thrust clearance		0.035 – 0.11 mm (0.0014 – 0.0043 in.)
Oil clearance	Standard	0.025 – 0.062 mm (0.0010 – 0.0024 in.)
	Minimum	0.08 mm (0.0031 in.)
Gear backlash	Standard	0.014 – 0.070 mm (0.0006 – 0.0028 in.)
	Maximum	0.17 mm (0.0067 in.)
Connecting rod		
Thrust clearance	Standard	0.08 – 0.30 mm (0.0031 – 0.0118 in.)
	Maximum	0.40 mm (0.0157 in.)
Oil clearance	Standard	0.038 – 0.056 mm (0.0015 – 0.0022 in.)
	Maximum	0.10 mm (0.0039 in.)
Cylinder block		
Warpage	Maximum	0.05 mm (0.0020 in.)
Bore diameter	Standard	82.200 – 82.213 mm (3.2362 – 3.2367 in.)
	Maximum	82.400 mm (3.2441 in.)

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Piston		
Piston diameter		82.148 – 82.182 mm (3.2341 – 3.2355 in.)
Piston oil clearance	Standard	0.018 – 0.065 mm (0.0007 – 0.00226 in.)
	Maximum	0.14 mm (0.0055 in.)
Bushing inside diameter		31.015 – 31.027 mm (1.2211 – 1.2215 in.)
Piston pin		
Piston pin diameter		31.000 – 31.012 mm (1.2205 – 1.2209 in.)
Oil clearance	Standard	0.011 – 0.019 mm (0.0004 – 0.0007 in.)
	Maximum	0.025 mm (0.0010 in.)
Connecting rod bolt		
Diameter	Standard	8.2 – 8.3 mm (0.323 – 0.327 in.)
	Minimum	8.0 mm (0.315 in.)
Connecting rod		
Out-of-alignment	Maximum per 100 mm (3.94 in.)	0.05 mm (0.0020 in.)
Rod twist	Maximum per 100 mm (3.94 in.)	0.15 mm (0.0059 in.)
Crankshaft		
Thrust clearance	Standard	0.040 – 0.240 mm (0.0016 – 0.0094 in.)
	Maximum	0.30 mm (0.0118 in.)
Circle runout	Maximum	0.025 mm (0.0010 in.)
Crank pin taper and out-of-round	Maximum	0.01 mm (0.0004 in.)
Crank pin diameter		50.482 – 50.500 mm (1.9875 – 1.9882 in.)
Main journal diameter		56.992 – 57.010 mm (2.2438 – 2.2445 in.)
Oil clearance	Standard	0.032 – 0.050 mm (0.0013 – 0.0020 in.)
	Maximum	0.10 mm (0.0039 in.)