

## Camshaft

Item	Measurement	Qualification	Standard or New	Service Limit
Camshaft	End play		0.05-0.15 mm (0.002-0.006 in.)	0.5 mm (0.02 in.)
	Camshaft-to-holder oil clearance		0.050-0.089 mm (0.0020-0.0035 in.)	0.15 mm (0.006 in.)
	Total runout		0.03 mm (0.001 in.)	0.04 mm (0.002 in.)
	Cam lobe height	Intake, primary	36.332 mm (1.4304 in.)	---
		Intake, secondary	32.263 mm (1.2702 in.)	---
		Exhaust	36.246 mm (1.4270 in.)	---

## Compression

Item	Measurement	Qualification	Standard or New	Service Limit
Compression	Pressure	Minimum	880 kPa (9.0 kgf/cm <sup>2</sup> , 128 psi)	---
	Check the engine with the starter cranking	Maximum variation	200 kPa (2.0 kgf/cm <sup>2</sup> , 28 psi)	---

## Compressor belt

Item	Measurement	Qualification	Standard or New
Compressor belt  NOTE: Adjust a new belt to the <i>new</i> belt spec., run the engine for 5 minutes, then readjust it to the <i>used</i> belt spec.	Deflection with 98 N (10 kgf, 22 lbf) applied mid-way between pulleys	Used belt	7.5-10.5 mm (0.30-0.41 in.)
		New belt	4.0-6.0 mm (0.16-0.24 in.)
	Tension (measured with belt tension gauge)	Used belt	390-540 N (40-55 kgf, 88-121 lbf)
		New belt	930-1,125 N (95-115 kgf, 209-254 lbf)

## Connecting rod

Item	Measurement	Qualification	Standard or New	Service Limit
Connecting rod	Pin-to-rod clearance		0.016-0.033 mm (0.0006-0.0013 in.)	0.038 mm (0.0015 in.)
	Small-end bore diameter		16.981-16.994 mm (0.6685-0.6691 in.)	---
	Large-end diameter		39.0 mm (1.54 in.)	---
	End play installed on crankshaft		0.15-0.30 mm (0.006-0.012 in.)	0.40 mm (0.016 in.)

## Crankshaft bearing

Item	Measurement	Qualification	Standard or New	Service Limit
Crankshaft bearing	Main bearing-to-journal clearance	No. 1, 4 journal	0.014-0.032 mm (0.0006-0.0013 in.)	0.045 mm (0.0018 in.)
		No. 2, 3 journal	0.020-0.038 mm (0.0008-0.0015 in.)	0.050 mm (0.0020 in.)
	Rod bearing oil clearance		0.020-0.038 mm (0.0008-0.0015 in.)	0.050 mm (0.0020 in.)

## Crankshaft

Item	Measurement	Qualification	Standard or New	Service Limit
Crankshaft	Main journal diameter	No. 1, 4 journal	39.982-40.006 mm (1.5741-1.5750 in.)	---
		No. 2, 3 journal	39.976-40.000 mm (1.5739-1.5748 in.)	---
	Rod journal diameter		35.976-36.000 mm (1.4164-1.4173 in.)	---
	Rod/main journal taper		0.0025 mm (0.000098 in.) max.	0.006 mm (0.0002 in.)
	Rod/main journal out-of-round		0.0040 mm (0.00016 in.) max.	0.010 mm (0.0004 in.)
	End play		0.10-0.35 mm (0.004-0.014 in.)	0.45 mm (0.018 in.)
	Runout		0.03 mm (0.001 in.) max.	0.04 mm (0.002 in.)

## Engine idle

Item	Measurement	Qualification	Standard or New
Engine idle	Idle speed without load	CVT (in N or P position) M/T (in neutral)	900±50 rpm
	Idle speed with high electric load (A/C switch ON, temperature set to Max Cool, blower fan on High, rear window defogger ON, and headlights on high beam)	CVT (in N or P position) M/T (in neutral)	900±50 rpm

Engine oil

Item	Measurement	Qualification	Standard or New	Service Limit
Engine oil	Capacity	Engine overhaul	3.0 L (3.2 US qt)	
		Oil change, including filter	2.5 L (2.6 US qt)	
		Oil change, without filter	2.3 L (2.4 US qt)	



Fuel pressure regulator

Item	Measurement	Qualification	Standard or New
Fuel pressure regulator	Pressure with regulator vacuum hose disconnected		270-320 kPa (2.8-3.3 kgf/cm <sup>2</sup> , 40-47 psi)

Fuel tank

Item	Measurement	Qualification	Standard or New
Fuel tank	Capacity		40 L (10.4 US gal)

Head

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		---	0.05 mm (0.002 in.)
	Height		119.95-120.05 mm (4.722-4.726 in.)	---

## Ignition coil

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1-3-2	

Ignition timing

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition timing	At idle Check <i>red</i> mark	M/T (in neutral)	12±2 ° BTDC	
		CVT (in N or P position)	12±2 ° BTDC	

## Oil pump

Item	Measurement	Qualification	Standard or New	Service Limit
Oil pump	Inner-to-outer rotor clearance		0.02-0.14 mm (0.001-0.006 in.)	0.18 mm (0.007in.)
	Pump housing-to-outer rotor clearance		0.100-0.175 mm (0.0039-0.0069 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor axial clearance		0.02-0.07 mm (0.001-0.003 in.)	0.12 mm (0.005 in.)
	Oil pressure with oil temperature at 176 °F (80 °C)	At idle	70 kPa (0.7 kgf/cm <sup>2</sup> , 10 psi) min.	
		At 3,000 rpm	340 kPa (3.5 kgf/cm <sup>2</sup> , 50 psi) min.	

## Piston pin

Item	Measurement	Qualification	Standard or New	Service Limit
Piston pin	O.D.		16.961-16.965 mm (0.6678-0.6679 in.)	16.953 mm (0.6674 in.)
	Pin-to-piston clearance		-0.0050 to +0.0020 mm (-0.00020 to +0.000080 in.)	0.006 mm (0.0002 in.)

## Piston ring

Item	Measurement	Qualification	Standard or New	Service Limit
Piston ring	Ring-to-groove clearance	Top	0.055-0.080 mm (0.0022-0.0031 in.)	0.15 mm (0.006 in.)
		Second	0.030-0.055 mm (0.0012-0.0022 in.)	0.13 mm (0.005 in.)
	Ring end gap	Top	0.15-0.30 mm (0.006-0.012 in.)	0.50 mm (0.020 in.)
		Second	0.35-0.50 mm (0.014-0.020 in.)	0.70 mm (0.028 in.)
		Oil	0.20-0.70 mm (0.008-0.028 in.)	0.80 mm (0.031 in.)



## Piston

Item	Measurement	Qualification	Standard or New	Service Limit
Piston	Skirt O.D. at 11 mm (0.4 in.) from bottom of skirt		71.977-71.995 mm (2.8337-2.8344 in.)	71.97 mm (2.833 in.)
	Clearance in cylinder		0.005-0.043 mm (0.0002-0.0017 in.)	0.05 mm (0.002 in.)
	Ring groove width	Top	1.040-1.050 mm (0.0409-0.0413 in.)	1.07 mm (0.042 in.)
		Second	1.220-1.230 mm (0.0480-0.0484 in.)	1.25 mm (0.049 in.)
		Oil	2.005-2.020 mm (0.0789-0.0795 in.)	2.04 mm (0.080 in.)

## Radiator 2000-2003 models

Item	Measurement	Qualification	Standard or New
Radiator 2000-2003 models	Coolant capacities (including engine, heater, hoses, and reservoir)	Engine overhaul	4.0 L (1.06 US gal)
	Use Honda Long Life Antifreeze/Coolant Type 2	Coolant change	2.5 L (0.66 US gal)

**Radiator cap**

Item	Measurement	Qualification	Standard or New
Radiator cap	Opening pressure		93-123 kPa (0.95-1.25 kgf/cm <sup>2</sup> , 14-18 psi)

## Radiator fan

Item	Measurement	Qualification	Standard or New
Radiator fan	Thermoswitch "ON" temperature		201-208 °F (94-98 °C)
	Thermoswitch "OFF" temperature		Subtract 5-15 °F (3-8 °C) from actual "ON" temperature

**Reservoir**

Item	Measurement	Qualification	Standard or New
Reservoir	Coolant capacity		0.4 L (0.11 US gal)

**Rocker arm**

Item	Measurement	Qualification	Standard or New	Service Limit
Rocker arm	Arm-to-shaft clearance	Intake	0.026-0.067 mm (0.0010-0.0026 in.)	0.08 mm (0.003 in.)
		Exhaust	0.019-0.058 mm (0.0007-0.0023 in.)	0.08 mm (0.003 in.)

Spark plug

Item	Measurement	Qualification	Standard or New	Service Limit
Spark plug	Type		NGK: ILZFR5A11	
	Gap		1.0-1.1 mm (0.039-0.043 in.)	1.3 mm (0.051 in.)

## Starter

Item	Measurement	Qualification	Standard or New	Service Limit
Starter	Output		1.0 kW	
	Commutator mica depth		0.4-0.5 mm (0.016-0.020 in.)	0.15 mm (0.006 in.)
	Commutator runout		0.02 mm (0.001 in.)	0.05 mm (0.002 in.)
	Commutator O.D.		28.0-28.1 mm (1.102-1.106 in.)	27.5 mm (1.083 in.)
	Brush length		11.1-11.5 mm (0.44-0.45 in.)	4.3 mm (0.17 in.)
	Brush spring tension (new)		12.3-15.2 N (1.25-1.55 kgf, 2.76-3.42 lbf)	



**Thermostat**

Item	Measurement	Qualification	Standard or New
Thermostat	Opening temperature	Begins to open	187-194 °F (86-90 °C)
		Fully open	212 °F (100 °C)
	Valve lift at fully open		8.0 mm (0.31 in.) min.

## Valve guide

Item	Measurement	Qualification	Standard or New	Service Limit
Valve guide	I.D.	Intake/Exhaust	5.51-5.53 mm (0.217-0.218 in.)	5.55 mm (0.219 in.)
	Installed height	Intake/Exhaust	17.85-18.35 mm (0.703-0.722 in.)	---

## Valve seat

Item	Measurement	Qualification	Standard or New	Service Limit
Valve seat	Width	Intake	0.85-1.15 mm (0.033-0.045 in.)	1.60 mm (0.063 in.)
		Exhaust	1.25-1.55 mm (0.049-0.061 in.)	2.00 mm (0.079 in.)
	Stem installed height	Intake	53.00-53.80 mm (2.087-2.118 in.)	54.14 mm (2.131 in.)
		Exhaust	52.91-53.71 mm (2.083-2.115 in.)	54.05 mm (2.128 in.)

## Valve

Item	Measurement	Qualification	Standard or New	Service Limit
Valve	Clearance (cold)	Intake	0.18-0.22 mm (0.007-0.009 in.)	---
		Exhaust	0.21-0.25 mm (0.008-0.010 in.)	---
	Stem O.D.	Intake	5.480-5.490 mm (0.2157-0.2161 in.)	5.44 mm (0.214 in.)
		Exhaust	5.450-5.460 mm (0.2146-0.2150 in.)	5.41 mm (0.213 in.)
	Stem-to-guide clearance	Intake	0.02-0.05 mm (0.001-0.002 in.)	0.09 mm (0.004 in.)
		Exhaust	0.05-0.08 mm (0.002-0.003 in.)	0.13 mm (0.005 in.)

Valve spring

Item	Measurement	Qualification	Standard or New	Service Limit
Valve spring	Free length	Intake	68.29 mm (2.689 in.)	---
		Exhaust	71.11 mm (2.800 in.)	---

## Water pump belt

Item	Measurement	Qualification	Standard or New
Water pump belt  NOTE: Adjust a new belt to the <i>new</i> belt spec., run the engine for 5 minutes, then adjust it to the <i>used</i> belt spec.	Deflection with 98 N (10 kgf, 22 lbf) applied mid-way between pulleys	Without A/C (With A/C, see "compressor belt" in the A/C table)	Used belt: 8.5-11.0 mm (0.33-0.43 in.)
			New belt: 7.0-10.0 mm (0.28-0.39 in.)
	Tension (measured with belt tension gauge)	Without A/C (With A/C, see "compressor belt" in the A/C table)	Used belt: 340-490 N (35-50 kgf, 77-110 lbf)
			New belt: 440-640 N (45-65 kgf, 99-143 lbf)

2000 INSIGHT - Block Specifications

Block

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in.)	0.10 mm (0.004 in.)
	Bore diameter		72.000-72.020 mm (2.8346-2.8354 in.)	72.07 mm (2.837 in.)
	Bore taper		---	0.05 mm (0.002 in.)
	Reboring limit		---	0.25 mm (0.010 in.)