

Standards and Service Limits

Engine Electrical — Section 4

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Ignition coil	Rated voltage V Primary winding resistance Ω at 77°F (25°C) Firing order	12 0.9 – 1.1 1 – 4 – 2 – 5 – 3 – 6	
Spark plug	Type Gap	See Section 4 in the '96 – 01 3.5RL service manual. 1.0 – 1.1 (0.039 – 0.043)	1.3 (0.051)* ²
Ignition timing	At idle °BTDC	15 ± 2 (Red)	
Alternator belt* ¹	Deflection with 98 N (10 kgf, 22 lbf) between pulleys	9.5 – 11.5 (0.37 – 0.45) with used belt 7.0 – 8.0 (0.28 – 0.31) with new belt	
	Belt tension N (kgf, lbf) Measured with belt tension gauge	390 – 590 (40 – 60, 88 – 130) with used belt 780 – 980 (80 – 100, 180 – 220) with new belt	
Alternator	Output A (at 13.5 V, hot and 6,000 alternator rpm) Brush length	110 10.5 (0.41)	1.5 (0.06)
Starting motor	Type/Output kW Mica depth Commutator runout Commutator O.D. Brush length Brush spring tension N (kgf, lbf)	Planetary gear reduction, permanent magnet/2.0 0.5 – 0.8 (0.020 – 0.031) 0 – 0.05 (0 – 0.002) 31.9 – 32.1 (1.256 – 1.264) 18 (0.71) 29.1 – 37.8 (2.97 – 3.85, 6.55 – 8.49)	0.20 (0.008) 0.1 (0.004) 31.5 (1.240) 10 (0.39)

*1 When using a new belt, adjust deflection or tension to new value. Run the engine for 5 minutes then turn it off. Readjust deflection or tension to used belt value.

*2 Do not adjust the gap, replace the spark plug if it is out of service limit.

Cylinder Head/Valve Train — Section 6

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Compression	200 rpm and wide open throttle kPa (kgf/cm ² , psi) Minimum Maximum variation	980 (10.0, 142) 200 (2.0, 28)	
Cylinder head	Warpage Height	99.95 – 100.05 (3.935 – 3.939)	0.05 (0.002)
Camshaft	End play Camshaft-to-holder oil clearance Total runout Cam lobe height	0.05 – 0.15 (0.002 – 0.006) 0.050 – 0.089 (0.0020 – 0.0035) 0.03 (0.001) max. 40.175 (1.5817) 37.878 (1.4913)	0.15 (0.006) 0.10 (0.004) 0.04 (0.002)
Valve	Valve clearance	IN 0 (Hydraulic tappets, Auto-adjuster type) EX 0 (Hydraulic tappets, Auto-adjuster type)	
	Valve stem O.D.	IN 5.48 – 5.49 (0.2157 – 0.2161) EX 5.45 – 5.46 (0.2146 – 0.2150)	5.45 (0.215) 5.42 (0.213)
	Stem-to-guide clearance	IN 0.02 – 0.05 (0.001 – 0.002) EX 0.05 – 0.08 (0.002 – 0.003)	0.08 (0.003) 0.11 (0.004)
	Valve seat	Width Stem installed height	1.5 (0.06) 2.0 (0.08)
	Valve spring	Free length	47.625 (1.8750) 48.575 (1.9124)
Valve guide	I.D.	IN 5.51 – 5.53 (0.217 – 0.218) EX 51.25 (2.018)* ¹ 51.35 (2.022)* ² 56.13 (2.210)* ¹ 56.09 (2.208)* ²	5.55 (0.219)
	Installed height	IN and EX 15.75 – 16.25 (0.620 – 0.640)	
Rocker arm	Arm-to-shaft clearance	0.018 – 0.054 (0.0007 – 0.0021)	0.08 (0.003)

*1: NIHON HATSUJO manufactured valve spring *2: CHUO HATSUJO manufactured valve spring