

Specifications

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Standards and Service Limits

Cylinder Head/Valve Train (D16Y5, D16Y7, D16Y8 engines) — Section 6

	MEASUREMENT			STANDARD (NEW)	SERVICE LIMIT
Compression	250 rpm and wide open throttle kPa (kgf/cm ² , psi)	Nominal Minimum Maximum variation		930 (9.5, 135) 200 (2.0, 28)	
Cylinder head	Warpage Height			92.95 – 93.05 (3.659 – 3.663)	0.05 (0.002)
Camshaft	End play			0.05 – 0.15 (0.002 – 0.006)	0.5 (0.02)
	Camshaft-to-holder oil clearance			0.050 – 0.089 (0.002 – 0.004)	0.15 (0.006)
	Total runout			0.03 (0.001) max.	0.04 (0.002)
	Cam lobe height	D16Y7	IN	35.299 (1.3897)	
			EX	37.281 (1.4678)	
		D16Y5	IN	38.427 (1.5129)	
			Primary	32.193 (1.2674)	
			Secondary	38.784 (1.5269)	
		D16Y8	EX	36.778 (1.4479)	
			IN	38.274 (1.5068)	
			Primary	37.065 (1.4592)	
			Mid	38.008 (1.4964)	
			Secondary		
			EX		
Valve	Valve clearance (Cold)	IN		0.18 – 0.22 (0.007 – 0.009)	
		EX		0.23 – 0.27 (0.009 – 0.011)	
	Valve stem O.D.	IN		5.48 – 5.49 (0.2157 – 0.2161)	5.45 (0.2146)
		EX		5.45 – 5.46 (0.2146 – 0.2150)	5.42 (0.2134)
	Stem-to-guide clearance	IN		0.02 – 0.05 (0.001 – 0.002)	0.08 (0.003)
Valve seat		EX		0.05 – 0.08 (0.002 – 0.003)	0.11 (0.004)
	Width	IN		0.85 – 1.15 (0.033 – 0.045)	1.6 (0.063)
		EX		1.25 – 1.55 (0.049 – 0.061)	2.0 (0.079)
	Stem installed height	IN		53.17 – 53.64 (2.093 – 2.112)	53.89 (2.122)
Valve spring		EX		53.17 – 53.64 (2.093 – 2.112)	53.89 (2.122)
	Free length	D16Y7		57.9 (2.28)	
		D16Y5	IN	56.5 (2.22)	
			EX	57.9 (2.28)	
		D16Y8	IN	58.0 (2.28)	
Valve guide			EX	58.7 (2.31)	
	I.D.	IN		5.51 – 5.53 (0.217 – 0.218)	5.55 (0.219)
		EX		5.51 – 5.53 (0.217 – 0.218)	5.55 (0.219)
	Installed height	IN		17.85 – 18.35 (0.703 – 0.722)	
Rocker arm		EX		18.65 – 19.15 (0.734 – 0.754)	
	Arm-to-shaft clearance	IN		0.017 – 0.050 (0.0007 – 0.0020)	0.08 (0.003)
		EX		0.018 – 0.054 (0.0007 – 0.0021)	0.08 (0.003)

Cylinder Head/Valve Train (B16A2 engine) — Section 6

	MEASUREMENT			STANDARD (NEW)	SERVICE LIMIT
Compression	250 rpm (min ⁻¹) and wide open throttle kPa (kgf/cm ² , psi)	Nominal Minimum Maximum variation		930 (9.5, 135) 200 (2.0, 28)	
Cylinder head	Warpage Height			141.95 – 142.05 (5.589 – 5.593)	0.05 (0.002)
Camshaft	End play			0.05 – 0.15 (0.002 – 0.006)	0.5 (0.02)
	Camshaft-to-holder oil clearance			0.050 – 0.089 (0.002 – 0.004)	0.15 (0.006)
	Total runout			0.03 (0.001) max.	0.04 (0.002)
	Cam lobe height	IN	Primary	33.088 (1.3027)	
			Mid	36.267 (1.4278)	
			Secondary	34.978 (1.3771)	
		EX	Primary	32.785 (1.2907)	
			Mid	35.720 (1.4063)	
			Secondary	34.691 (1.3658)	
Valve	Valve clearance	IN		0.15 – 0.19 (0.006 – 0.007)*	
		EX		0.17 – 0.21 (0.007 – 0.008)*	
	Valve stem O.D.	IN		5.475 – 5.485 (0.2156 – 0.2159)	5.445 (0.2144)
		EX		5.450 – 5.460 (0.2146 – 0.2150)	5.420 (0.2134)
	Stem-to-guide clearance	IN		0.025 – 0.055 (0.0010 – 0.0022)	0.08 (0.003)
		EX		0.050 – 0.080 (0.0020 – 0.0031)	0.11 (0.004)
Valve seat	Width	IN		1.25 – 1.55 (0.049 – 0.061)	2.0 (0.08)
		EX		1.25 – 1.55 (0.049 – 0.061)	2.0 (0.08)
	Stem installed height	IN		37.465 – 37.935 (1.4750 – 1.4935)	38.185 (1.5033)
		EX		37.165 – 37.635 (1.4632 – 1.4817)	37.885 (1.4915)
Valve spring	Free length	IN	OUTER	40.92 (1.611)* ¹	
				40.91 (1.611)* ²	
				36.71 (1.445)	
		EX	INNER	41.96 (1.652)* ¹	
				41.94 (1.651)* ²	
Valve guide	I.D.	IN		5.51 – 5.53 (0.217 – 0.218)	5.55 (0.219)
		EX		5.51 – 5.53 (0.217 – 0.218)	5.55 (0.219)
	Installed height	IN		12.55 – 13.05 (0.494 – 0.514)	
		EX		12.55 – 13.05 (0.494 – 0.514)	
Rocker arm	Arm-to-shaft clearance	IN		0.025 – 0.052 (0.0010 – 0.0020)	0.08 (0.003)
		EX		0.025 – 0.052 (0.0010 – 0.0020)	0.08 (0.003)

*: Measuring point between camshaft and rocker arm.

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

Standards and Service Limits

Engine Block (D16Y5, D16Y7, D16Y8 engines) — Section 7

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface	0.07 (0.003) max.	0.10 (0.004)
	Bore diameter	75.00 – 75.02 (2.953 – 2.954)	75.07 (2.956)
	Bore taper	—	0.05 (0.002)
	Reboring limit	—	0.5 (0.02)
Piston	Skirt O.D. at 5 mm (0.2 in) from bottom of skirt	74.980 – 74.990 (2.9520 – 2.9524)	74.970 (2.9516)
	Clearance in cylinder	0.010 – 0.040 (0.0004 – 0.0016)	0.05 (0.002)
	Groove width (for ring) Top	1.020 – 1.030 (0.0402 – 0.0406)	1.05 (0.041)
	Second	1.220 – 1.230 (0.0480 – 0.0484)	1.25 (0.049)
Piston ring	Ring-to-groove clearance	Oil	2.805 – 2.820 (0.1104 – 0.1110)
		Top	0.035 – 0.060 (0.0014 – 0.0024)
	Ring end gap	Second	0.030 – 0.055 (0.0012 – 0.0022)
		Oil	0.15 – 0.30 (0.006 – 0.012)
Piston pin	O.D.	Top	0.30 – 0.45 (0.012 – 0.018)
		Second	0.20 – 0.70 (0.008 – 0.028)
	Pin-to-piston clearance	Oil	0.80 (0.031)
		Top	18.994 – 19.000 (0.7478 – 0.7480)
Connecting rod	Pin-to-rod interference	Second	0.010 – 0.022 (0.0004 – 0.0009)
		Top	0.014 – 0.040 (0.0006 – 0.0016)
	Small end bore diameter	Second	18.96 – 18.98 (0.746 – 0.747)
		Top	48.0 (1.89)
Crankshaft	Large end bore diameter Nominal	Oil	0.15 – 0.30 (0.006 – 0.012)
		Top	0.40 (0.016)
	End play installed on crankshaft	Second	54.976 – 55.000 (2.1644 – 2.1654)
		Top	44.976 – 45.000 (1.7707 – 1.7717)
Bearings	Main journal diameter	Oil	0.0025 (0.0001) max.
		Top	0.0025 (0.0001) max.
	Rod journal diameter	Oil	0.10 – 0.35 (0.004 – 0.014)
		Top	0.03 (0.001) max.
Bearings	Out-of-round	Oil	0.05 (0.002)
		Top	0.05 (0.002)
	End play	Oil	0.05 (0.002)
		Top	0.05 (0.002)
Bearings	Total runout	Oil	0.05 (0.002)
		Top	0.05 (0.002)
	Main bearing-to-journal oil clearance	Oil	0.018 – 0.036 (0.0007 – 0.0014)
		Top	0.024 – 0.042 (0.0009 – 0.0017)
Bearings	Rod bearing-to-journal oil clearance	Oil	0.020 – 0.038 (0.0008 – 0.0015)
		Top	0.020 – 0.038 (0.0008 – 0.0015)
	No. 1 and 5 journals	Oil	0.05 (0.002)
		Top	0.05 (0.002)
Bearings	No. 2, 3 and 4 journals	Oil	0.05 (0.002)
		Top	0.05 (0.002)
	Rod bearing-to-journal oil clearance	Oil	0.05 (0.002)
		Top	0.05 (0.002)

Engine Block (B16A2 engine) — Section 7

Engine Block (B16A2 engine) — Section 7				
	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface		0.05 (0.002)	0.08 (0.03)
	Bore diameter		81.00 – 81.02 (3.189 – 3.190)	81.07 (3.192)
	Bore taper		—	0.05 (0.002)
	Reboring limit		—	0.25 (0.01)
Piston	Skirt O.D. At 15 mm (0.6 in) from bottom of skirt		80.980 – 80.990 (3.1882 – 3.1886)	80.970 (3.1878)
	Clearance in cylinder		0.010 – 0.040 (0.0004 – 0.0016)	0.05 (0.002)
	Groove width (for ring)	Top	1.030 – 1.040 (0.0406 – 0.0409)	1.060 (0.0417)
		Second	1.230 – 1.240 (0.0484 – 0.0488)	1.260 (0.0496)
Piston ring	Ring-to-groove clearance	Top	0.045 – 0.070 (0.0018 – 0.0028)	0.13 (0.005)
		Second	0.040 – 0.065 (0.0016 – 0.0026)* ¹	0.13 (0.005)
	Ring end gap		0.045 – 0.070 (0.0018 – 0.0028)* ²	0.13 (0.005)
		Top	0.20 – 0.35 (0.008 – 0.014)* ¹	0.60 (0.024)
			0.20 – 0.30 (0.008 – 0.012)* ²	0.60 (0.024)
		Second	0.40 – 0.55 (0.016 – 0.022)	0.70 (0.028)
		Oil	0.20 – 0.50 (0.008 – 0.020)* ¹	0.70 (0.028)
			0.20 – 0.45 (0.008 – 0.018)* ²	0.70 (0.028)
Piston pin	O.D.	20.994 – 21.000 (0.8265 – 0.8268)	—	
	Pin-to-piston clearance	0.010 – 0.022 (0.0004 – 0.0009)	—	
Connecting rod	Pin-to-rod interference		0.013 – 0.032 (0.0005 – 0.0013)	—
	Small end bore diameter		20.968 – 20.981 (0.8255 – 0.8260)	—
	Large end bore diameter		48.0 (1.89)	—
	End play installed on crankshaft		0.15 – 0.30 (0.006 – 0.012)	0.40 (0.016)
Crankshaft	Main journal diameter		54.976 – 55.000 (2.1644 – 2.1654)	—
	No. 1, 2, 4 and 5 journals		54.970 – 54.994 (2.1642 – 2.1651)	—
	No. 3 journal		44.976 – 45.000 (1.7707 – 1.7717)	—
	Rod journal diameter		0.005 (0.0002) max.	0.010 (0.0004)
	Taper		0.004 (0.0002) max.	0.006 (0.0002)
	Out of round		0.10 – 0.35 (0.004 – 0.014)	0.45 (0.018)
	End play		0.020 (0.0008) max.	0.030 (0.0012)
	Total runout		—	—
Bearing	Main bearing-to-journal oil clearance		0.024 – 0.042 (0.0009 – 0.0017)	0.06 (0.002)
	No. 1, 2, 4 and 5 journals		0.030 – 0.048 (0.0012 – 0.0019)	0.06 (0.002)
	No. 3 journal		0.032 – 0.050 (0.0013 – 0.0020)	0.06 (0.002)
	Rod bearing-to-journal oil clearance		—	—

*1: RIKEN manufactured piston ring.

*2: TEIKOKU PISTON RING manufactured piston ring.

Engine Lubrication (D16Y5, D16Y7, D16Y8 engines) — Section 8

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US qt, Imp qt) D16Y7	4.3 (4.5, 3.8) for engine overhaul 3.6 (3.8, 3.2) for oil change, including filter 3.3 (3.5, 2.9) for oil change, without filter	
	D16Y5, D16Y8	3.7 (3.9, 3.3) for engine overhaul 3.3 (3.5, 2.9) for oil change, including filter 3.0 (3.2, 2.6) for oil change, without filter	
Oil pump	Inner-to-outer rotor radial clearance	0.02 – 0.14 (0.001 – 0.006)	0.20 (0.008)
	Pump housing-to-outer rotor radial clearance	0.10 – 0.18 (0.004 – 0.007)	0.20 (0.008)
	Pump housing-to-rotor axial clearance	0.03 – 0.08 (0.001 – 0.003)	0.15 (0.006)
Relief valve	Pressure setting with oil temperature 176°F (80°C) kPa (kgf/cm ² , psi) at idle at 3,000 rpm	70 (0.7, 10) min. 340 (3.5, 50) min.	

(cont'd)

Standards and Service Limits

Engine Lubrication (B16A2 engine) (cont'd) — Section 8

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US qt, Imp qt)	4.8 (5.1, 4.2) for engine overhaul 4.0 (4.2, 3.5) for oil change, including oil filter 3.7 (3.9, 3.3) for oil change, without filter	
Oil pump	Inner-to-outer rotor radial clearance Pump body-to-outer rotor radial clearance Pump body-to-rotor axial clearance	0.04 – 0.16 (0.002 – 0.006) 0.10 – 0.19 (0.004 – 0.007) 0.02 – 0.07 (0.001 – 0.003)	0.20 (0.008) 0.20 (0.008) 0.15 (0.006)
Relief valve	Pressure setting 176°F (80°C) kPa (kgf/cm ² , psi) at idle at 3,000 rpm	70 (0.7, 10) min. 340 (3.5, 50) min.	

Cooling — Section 10

	MEASUREMENT	STANDARD (NEW)
Radiator	Coolant capacity ℓ (US qt, Imp qt) including engine, heater, cooling line and reservoir Reservoir capacity: 0.4 ℓ (0.42 US qt, 0.35 Imp qt)	B16A2 engine 5.0 (5.3, 4.4) for overhaul 4.5 (4.8, 4.0) for coolant change D16Y5, D16Y7, D16Y8 engines: M/T: 4.2 (4.4, 3.7) for overhaul 3.1 (3.3, 2.7) for coolant change A/T: D16Y7 4.1 (4.3, 3.6) for overhaul 3.0 (3.2, 2.6) for coolant change D16Y8 4.3 (4.5, 3.8) for overhaul 3.2 (3.3, 2.8) for coolant change CVT: 4.3 (4.5, 3.8) for overhaul 3.2 (3.3, 2.8) for coolant change
Radiator cap	Opening pressure kPa(kgf/cm ² , psi)	93 – 123 (0.95 – 1.25, 14 – 18)
Thermostat	Start to open °F (°C) Fully open °F (°C) Valve lift at fully open	169 – 176 (76 – 80) 194 (90) 8.0 (0.31) min.
Cooling fan	Thermoswitch "ON" temperature °F (°C) Thermoswitch "OFF" temperature °F (°C)	196 – 203 (91 – 95) Subtract 5 – 15 (3 – 8) from actual "ON" temperature

Fuel and Emission — Section 11

	MEASUREMENT	STANDARD (NEW)			
Fuel pressure regulator	Pressure with fuel pressure regulator vacuum hose disconnected kPa (kgf/cm ² , psi) D16Y5 D16Y7 D16Y8 B16A2	260 – 310 (2.7 – 3.2, 38 – 46) 260 – 310 (2.7 – 3.2, 38 – 46) 260 – 310 (2.7 – 3.2, 38 – 46) 270 – 320 (2.8 – 3.3, 40 – 47)			
Fuel tank	Capacity ℓ (US gal, Imp gal)	45 (11.9, 9.9)			
Engine	Idle speed rpm	M/T (neutral)		A/T or CVT (N or P position)	
		U.S.A.	Canada	U.S.A.	Canada
		D16Y5	670 ± 50	700 ± 50	700 ± 50
		D16Y7	670 ± 50	750 ± 50	700 ± 50
		D16Y8	670 ± 50	750 ± 50	700 ± 50
		B16A2	700 ± 50	750 ± 50	750 ± 50
	Idle CO %	0.1 max.			

Clutch — Section 12

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height to floor	165 (6 1/2)	—
	Stroke	130 – 140 (5 1/8 – 5 1/2)	—
	Pedal play	12 – 21 (1/2 – 13/16)	—
	Disengagement height to floor to carpet	83 (3 1/4) 44 (1 3/4) min. Reference	—
Flywheel	Clutch surface runout	0.05 (0.002) max.	0.15 (0.006)
Clutch disc	Rivet head depth	1.3 – 1.9 (0.05 – 0.07)	0.2 (0.01)
	Thickness	8.5 – 9.1 (0.33 – 0.36)	5.5 (0.22)
Pressure plate	Warpage	0.03 (0.001) max.	0.15 (0.006)
	Diaphragm spring fingers alignment	0.6 (0.02) max.	1.0 (0.04)

Standards and Service Limits

Manual Transmission S40 — Section 13

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity l (US qt, Imp qt)	1.9 (2.0, 1.7) for overhaul 1.8 (1.9, 1.6) for oil change	
Mainshaft	End play Diameter of ball bearing contact area A (Transmission housing side) Diameter of 4th, 5th gear contact area B Diameter of 3rd gear contact area C Diameter of ball bearing contact area D (Clutch housing side) Runout	0.11 – 0.18 (0.004 – 0.007) 21.987 – 22.000 (0.8656 – 0.8661) 26.980 – 26.993 (1.0622 – 1.0627) 33.984 – 34.000 (1.3380 – 1.3386) 25.977 – 25.990 (1.0227 – 1.0232) 0.02 (0.001) max.	Adjust 21.930 (0.8634) 26.930 (1.0602) 33.930 (1.3358) 25.920 (1.0205) 0.05 (0.002)
Mainshaft 3rd and 4th gears	I.D. End play Thickness 3rd 4th 3rd 4th	39.009 – 39.025 (1.5358 – 1.5364) 0.06 – 0.21 (0.002 – 0.008) 0.06 – 0.19 (0.002 – 0.007) 30.22 – 30.27 (1.190 – 1.192) 30.12 – 30.17 (1.186 – 1.188)	39.07 (1.538) 0.33 (0.013) 0.31 (0.012) 30.15 (1.187) 30.05 (1.183)
Mainshaft 5th gear	I.D. End play Thickness	37.009 – 37.025 (1.4570 – 1.4577) 0.06 – 0.19 (0.002 – 0.007) 28.42 – 28.47 (1.119 – 1.121)	37.07 (1.459) 0.31 (0.012) 28.35 (1.116)
Countershaft	Diameter of needle bearing contact area A Diameter of 1st gear contact area B Diameter of ball bearing contact area C Runout	30.000 – 30.015 (1.1811 – 1.1817) 35.984 – 36.000 (1.4167 – 1.4173) 24.980 – 24.993 (0.9835 – 0.9840) 0.02 (0.001) max.	29.950 (1.1791) 35.930 (1.4146) 24.930 (0.9815) 0.05 (0.002)
Countershaft 1st gear	I.D. End play (When tightened by the specified torque) Thickness	41.009 – 41.025 (1.6145 – 1.6152) 0.03 – 0.10 (0.001 – 0.004) 30.41 – 30.44 (1.197 – 1.198)	41.07 (1.617) 0.22 (0.009) 30.36 (1.195)
Countershaft 2nd gear	I.D. End play (When tightened by the specified torque) Thickness	44.009 – 44.025 (1.7326 – 1.7333) 0.04 – 0.12 (0.002 – 0.005) 31.91 – 31.96 (1.256 – 1.258)	44.07 (1.735) 0.24 (0.009) 31.85 (1.254)
Spacer collar (Countershaft 2nd gear)	I.D. O.D. Length	33.000 – 33.010 (1.2992 – 1.2996) 38.989 – 39.000 (1.5350 – 1.5354) 32.03 – 32.06 (1.261 – 1.262)	33.04 (1.301) 38.93 (1.533) 32.01 (1.260)
Spacer collar (Mainshaft 4th and 5th gear)	I.D. O.D. Length 4th 5th 4th 5th	27.002 – 27.012 (1.0631 – 1.0635) 33.989 – 34.000 (1.3381 – 1.3386) 31.989 – 32.000 (1.2594 – 1.2598) 22.83 – 22.86 (0.899 – 0.900) 23.53 – 23.56 (0.926 – 0.928)	27.06 (1.065) 33.93 (1.336) 31.93 (1.257) 22.81 (0.898) 23.51 (0.926)
Reverse idler gear	I.D. Gear-to-reverse gear shaft clearance	15.016 – 15.043 (0.5912 – 0.5922) 0.032 – 0.077 (0.0013 – 0.0030)	15.08 (0.594) 0.14 (0.006)
Synchro ring	Ring-to-gear clearance (Ring pushed against gear)	0.73 – 1.18 (0.029 – 0.046)	0.4 (0.016)
Shift fork	Fork finger thickness Fork-to-synchro sleeve clearance 1st/2nd/5th 3rd/4th	6.2 – 6.4 (0.244 – 0.252) 7.4 – 7.6 (0.291 – 0.299) 0.35 – 0.65 (0.014 – 0.026)	— — 1.0 (0.04)
Reverse shift fork	Fork pawl groove width Fork-to-reverse idler gear clearance L-groove width Fork-to-5th/reverse shift piece pin clearance	12.7 – 13.0 (0.50 – 0.51) 0.5 – 1.1 (0.020 – 0.043) 7.05 – 7.25 (0.278 – 0.285) 0.05 – 0.35 (0.002 – 0.014)	— 1.8 (0.07) — 0.5 (0.02)
Shift arm A	Inner diameter of shift arm C contact point Shift arm A-to-shift arm C clearance	13.05 – 13.13 (0.514 – 0.517) 0.05 – 0.23 (0.002 – 0.009)	— 0.35 (0.014)
Shift arm B	Inner diameter of shift arm B shaft contact point Shift arm B-to-shaft clearance Shift arm B-to-shift piece clearance Diameter of shift piece contact point	13.973 – 14.000 (0.5501 – 0.5512) 0.013 – 0.070 (0.0005 – 0.0028) 0.2 – 0.5 (0.008 – 0.020) 12.9 – 13.0 (0.508 – 0.512)	— 0.16 (0.006) 0.62 (0.0244) 12.78 (0.5031)
MBS Shift piece	Diameter of pin	6.9 – 7.1 (0.27 – 0.28)	6.8 (0.268)
Differential carrier	Pinion shaft bore diameter Carrier-to-pinion shaft clearance Driveshaft bore diameter Carrier-to-driveshaft clearance	18.010 – 18.028 (0.7091 – 0.7098) 0.023 – 0.057 (0.0009 – 0.0022) 26.025 – 26.045 (1.0246 – 1.0254) 0.045 – 0.086 (0.0018 – 0.0034)	— 0.095 (0.004) — 0.14 (0.006)
Differential pinion gear	Backlash Pinion gear bore diameter Pinion gear-to-pinion shaft clearance	0.05 – 0.15 (0.002 – 0.006) 18.042 – 18.066 (0.7103 – 0.7113) 0.055 – 0.095 (0.0021 – 0.0037)	— — 0.15 (0.006)
Set ring-to-bearing outer race		0 – 0.1 (0 – 0.004)	Adjust with shim

Manual Transmission S4C — Section 13

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity ℓ (US qt, Imp qt)	2.3 (2.4, 2.0) for overhaul 2.2 (2.3, 1.9) for oil change	
Mainshaft	End play Diameter of ball bearing contact area C (Clutch housing side) Diameter of 3rd gear contact area B Diameter of ball bearing contact area A (Transmission housing side) Runout	0.11 – 0.18 (0.004 – 0.007) 27.977 – 27.990 (1.1015 – 1.1020) 37.984 – 38.000 (1.4954 – 1.4960) 27.987 – 28.000 (1.1018 – 1.1024) 0.02 (0.001) max.	Adjust 27.930 (1.0996) 37.930 (1.4933) 27.940 (1.1000) 0.05 (0.002)
Mainshaft 3rd and 4th gears	I.D. End play Thickness	43.009 – 43.025 (1.6933 – 1.6939) 0.06 – 0.21 (0.002 – 0.008) 34.92 – 34.97 (1.375 – 1.377) 31.42 – 31.47 (1.237 – 1.239)	43.08 (1.696) 0.3 (0.01) 34.3 (1.350) 31.3 (1.232)
Mainshaft 5th gear	I.D. End play Thickness	43.009 – 43.025 (1.6933 – 1.6939) 0.06 – 0.21 (0.002 – 0.008) 31.42 – 31.47 (1.237 – 1.239)	43.08 (1.696) 0.3 (0.01) 31.3 (1.232)
Countershaft	Diameter of ball bearing contact area A Diameter of 1st gear contact area B Diameter of needle bearing contact area C Runout	24.980 – 24.993 (0.9835 – 0.9840) 36.984 – 37.000 (1.4561 – 1.4567) 33.000 – 33.015 (1.2992 – 1.2998) 0.02 (0.0008) max.	24.940 (0.9818) 36.930 (1.4539) 32.950 (1.2970) 0.05 (0.002)
Countershaft 1st gear	I.D. End play (When tightened by the specified torque)	41.009 – 41.025 (1.6145 – 1.6152) 0.045 – 0.205 (0.0018 – 0.0081)	41.07 (1.617) 0.25 (0.01)
Countershaft 2nd gear	I.D. End play (When tightened by the specified torque) Thickness	44.009 – 44.025 (1.7326 – 1.7333) 0.07 – 0.14 (0.003 – 0.006) 28.92 – 28.97 (1.1386 – 1.1405)	44.07 (1.735) 0.24 (0.009) 28.8 (1.134)
Spacer collar (Countershaft 2nd gear)	I.D. O.D. Length	36.521 – 36.531 (1.4378 – 1.4382) 41.989 – 42.000 (1.6531 – 1.6535) 29.07 – 29.09 (1.1444 – 1.1453)	36.54 (1.439) 41.93 (1.651) —
Spacer collar (Mainshaft 4th and 5th gear)	I.D. O.D. Length	31.002 – 31.012 (1.2205 – 1.2209) 36.989 – 37.000 (1.4563 – 1.4570) 56.45 – 56.55 (2.2224 – 2.2264) 26.03 – 26.08 (1.025 – 1.027)	31.06 (1.223) 36.94 (1.454) — —

4th/5th gear side

(cont'd)

Standards and Service Limits

Manual Transmission S4C (cont'd) — Section 13

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Reverse idler gear	I.D. Gear-to-reverse gear shaft clearance	20.016 – 20.043 (0.7880 – 0.7891) 0.036 – 0.084 (0.0014 – 0.0033)	20.09 (0.7909) 0.16 (0.006)
Synchro ring	Ring-to-gear clearance (Ring pushed against gear)	0.73 – 1.18 (0.029 – 0.046)	0.4 (0.016)
Double cone	Clearance (Ring pushed against gear) Outer synchro ring-to-gear Inner synchro ring-to-gear Outer synchro ring-to-synchro cone	0.95 – 1.68 (0.037 – 0.066) 0.5 – 1.0 (0.02 – 0.04) 0.5 – 1.0 (0.02 – 0.04)	0.6 (0.024) 0.3 (0.01) 0.3 (0.01)
Shift fork	Fork finger thickness Fork-to-synchro sleeve clearance	7.4 – 7.6 (0.291 – 0.299) 0.35 – 0.65 (0.015 – 0.026)	— 1.0 (0.04)
Reverse shift fork	Fork pawl groove width Fork-to-reverse idler gear clearance L-groove width At 5th gear side At reverse side Fork-to-5th/reverse shift piece pin clearance At 5th gear side At reverse side	13.0 – 13.3 (0.512 – 0.524) 0.5 – 1.0 (0.02 – 0.04) 7.4 – 7.7 (0.29 – 0.30) 7.05 – 7.25 (0.278 – 0.285) 0.4 – 0.9 (0.02 – 0.04) 0.05 – 0.45 (0.002 – 0.018)	— 1.8 (0.07) — — — —
Shift piece	Shift piece-to-shift arm clearance Groove width of shift arm contact area Shift-piece-to-shift fork shaft clearance Width of shift fork contact area	0.1 – 0.3 (0.004 – 0.012) 8.1 – 8.2 (0.319 – 0.323) 0.2 – 0.5 (0.008 – 0.020) 11.9 – 12.0 (0.469 – 0.472)	0.6 (0.02) — 0.8 (0.03) —
Select arm	Select arm-to-interlock clearance Select arm-to-shim clearance	0.05 – 0.20 (0.002 – 0.008) 0.01 – 0.2 (0.0004 – 0.008)	0.45 (0.018) —
Interlock	Width of select arm contact area	9.9 – 10.0 (0.390 – 0.394)	—
Change piece	Change piece-to-shift arm holder clearance Groove width of shift arm holder contact area Change piece-to-select arm clearance Groove width of select arm contact area	0.05 – 0.35 (0.002 – 0.014) 12.05 – 12.15 (0.474 – 0.478) 0.05 – 0.25 (0.002 – 0.010) 12.05 – 12.15 (0.474 – 0.478)	0.8 (0.03) — 0.5 (0.02) —
Final driven gear	Backlash	0.090 – 0.149 (0.0035 – 0.0059)	0.200 (0.008)
Differential carrier	Pinion shaft bore diameter Carrier-to-pinion shaft clearance Driveshaft bore diameter Carrier-to-driveshaft clearance Carrier-to-intermediate shaft clearance	18.000 – 18.016 (0.7087 – 0.7093) 0.013 – 0.045 (0.001 – 0.002) 28.000 – 28.021 (1.1024 – 1.1032) 0.020 – 0.062 (0.0008 – 0.0024) 0.05 – 0.087 (0.0020 – 0.0034)	— 0.10 (0.004) — 0.12 (0.005) 0.14 (0.006)
Differential pinion gear	Backlash Pinion gear bore diameter Pinion gear-to-pinion shaft clearance	0.05 – 0.15 (0.002 – 0.006) 18.042 – 18.066 (0.710 – 0.711) 0.055 – 0.095 (0.002 – 0.004)	— — 0.15 (0.006)
Set ring-to-bearing outer race		0 – 0.10 (0 – 0.004)	Adjust with shim

Automatic Transmission — Section 14

Automatic Transmission — Section 14					
	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT	
Transmission fluid	Capacity ℓ (US qt, Imp qt)		5.9 (6.2, 5.2) for overhaul 2.7 (2.9, 2.4) for fluid change		
Hydraulic pressure kPa (kgf/cm², psi)	Line pressure at 2,000 rpm in [N] or [P] position		830 – 880 (8.5 – 9.0, 120 – 130)	780 (8.0, 110)	
	1st clutch pressure at 2,000 rpm in [D₁] position				
	2nd clutch pressure at 2,000 rpm in [D₂] position		800 – 850 (8.2 – 8.7, 120 – 124)	760 (7.7, 110)	
	3rd and 4th clutch pressure at 2,000 rpm in [D₃] position		810 – 860 (8.3 – 8.8, 118 – 125)	760 (7.8, 111)	
Stall speed rpm (Check with vehicle on level ground)			2,700	2,550 – 2,850	
Clutch	Clutch initial clearance	1st, 2nd	0.65 – 0.85 (0.026 – 0.033)	—	
		3rd, 4th	0.40 – 0.60 (0.016 – 0.024)	—	
	Clutch return spring free length (A4RA, B4RA Transmission)	1st	32.0 (1.26)	30.0 (1.18)	
		2nd, 3rd, 4th	30.5 (1.20)	28.5 (1.12)	
		(M4RA Transmission)	1st	31.1 (1.22)	29.1 (1.15)
			2nd, 3rd, 4th	30.5 (1.20)	28.5 (1.12)
	Clutch disc thickness		1.88 – 2.00 (0.074 – 0.079)	Until grooves worn out	
	Clutch plate thickness	1st	1.55 – 1.65 (0.061 – 0.065)	Discoloration	
		2nd, 3rd, 4th	1.95 – 2.05 (0.077 – 0.081)		
	Clutch end plate thickness (A4RA, B4RA Transmission)	Mark 1	2.05 – 2.10 (0.081 – 0.083)	Discoloration ↑ ↓	
		Mark 2	2.15 – 2.20 (0.085 – 0.087)		
		Mark 3	2.25 – 2.30 (0.089 – 0.091)		
		Mark 4	2.35 – 2.40 (0.093 – 0.094)		
		Mark 5	2.45 – 2.50 (0.096 – 0.098)		
		Mark 6	2.55 – 2.60 (0.100 – 0.102)		
		Mark 7	2.65 – 2.70 (0.104 – 0.106)		
		Mark 8	2.75 – 2.80 (0.108 – 0.110)		
		Mark 9	2.85 – 2.90 (0.112 – 0.114)		
	Clutch end plate thickness (M4RA Transmission)	Mark 1	2.3 – 2.4 (0.091 – 0.094)	Discoloration ↑ ↓	
		Mark 2	2.4 – 2.5 (0.094 – 0.098)		
		Mark 3	2.5 – 2.6 (0.098 – 0.102)		
		Mark 4	2.6 – 2.7 (0.102 – 0.106)		
		Mark 5	2.7 – 2.8 (0.106 – 0.110)		
		Mark 6	2.8 – 2.9 (0.110 – 0.114)		
		Mark 7	2.9 – 3.0 (0.114 – 0.118)		
		Mark 8	3.0 – 3.1 (0.118 – 0.122)		
		Mark 9	3.1 – 3.2 (0.122 – 0.126)		
		Mark 10	3.2 – 3.3 (0.126 – 0.130)		
		Mark 11	2.0 – 2.1 (0.079 – 0.083)		
		Mark 12	2.1 – 2.2 (0.083 – 0.087)		
		Mark 13	2.2 – 2.3 (0.087 – 0.091)		
		Mark 14	3.3 – 3.4 (0.130 – 0.134)		
		Mark 15	3.4 – 3.5 (0.134 – 0.138)		
		Mark 16	3.5 – 3.6 (0.138 – 0.142)		
		Mark 17	3.6 – 3.7 (0.142 – 0.146)		
		Mark 18	3.7 – 3.8 (0.146 – 0.150)		Discoloration

(cont'd)

Standards and Service Limits

Automatic Transmission (cont'd) — Section 14

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission	Diameter of needle bearing contact area		
	On mainshaft stator shaft bearing	22.980 – 22.993 (0.9047 – 0.9052)	Wear or damage ↑
	On mainshaft 2nd gear	35.975 – 35.991 (1.4163 – 1.4169)	
	On mainshaft 4th gear collar	31.975 – 31.991 (1.2589 – 1.2595)	↓
	On mainshaft 1st gear collar	30.975 – 30.991 (1.2195 – 1.2201)	
	On countershaft (left side)	36.004 – 36.017 (1.4175 – 1.4180)	Wear or damage ↑
	On countershaft 3rd gear collar	35.980 – 35.996 (1.4165 – 1.4172)	
	On countershaft 4th gear	27.980 – 27.993 (1.1016 – 1.1021)	↓
	On countershaft reverse gear collar	31.975 – 31.991 (1.2589 – 1.2595)	
	On countershaft 1st gear collar	31.975 – 31.991 (1.2589 – 1.2595)	Wear or damage ↑
	On reverse idler gear shaft	13.990 – 14.000 (0.5508 – 0.5512)	
	Inside diameter of needle bearing contact area		
	On mainshaft 1st gear	35.000 – 35.016 (1.3780 – 1.3786)	Wear or damage ↑
	On mainshaft 2nd gear	41.000 – 41.016 (1.6142 – 1.6148)	
	On mainshaft 4th gear	38.000 – 38.016 (1.4961 – 1.4967)	↓
	On countershaft 1st gear	38.000 – 38.016 (1.4961 – 1.4967)	
	On countershaft 3rd gear	41.000 – 41.016 (1.6142 – 1.6148)	Wear or damage ↑
	On countershaft 4th gear	33.000 – 33.016 (1.2992 – 1.2998)	
	On countershaft reverse gear	38.000 – 38.016 (1.4961 – 1.4967)	↓
	On reverse idler gear	18.007 – 18.020 (0.7089 – 0.7094)	
	On stator shaft (ATF pump side)	29.000 – 29.013 (1.1417 – 1.1422)	Wear or damage ↑
	On stator shaft (stator side)	27.000 – 27.021 (1.0630 – 1.0638)	
	Reverse idler gear shaft holder I.D.	14.416 – 14.434 (0.5676 – 0.5683)	Wear or damage
	End play		
	Mainshaft 1st gear	0.08 – 0.19 (0.003 – 0.007)	—
	Mainshaft 2nd gear	0.05 – 0.13 (0.002 – 0.005)	—
	Mainshaft 4th gear	0.075 – 0.185 (0.003 – 0.007)	—
	Countershaft 1st gear	0.1 – 0.5 (0.004 – 0.020)	—
	Countershaft 3rd gear	0.05 – 0.17 (0.002 – 0.007)	—
	Countershaft 4th gear	0.10 – 0.18 (0.004 – 0.007)	—
	Reverse idler gear	0.05 – 0.18 (0.002 – 0.007)	—
	Countershaft reverse gear	0.10 – 0.25 (0.004 – 0.010)	—
	Selector hub O.D.	51.87 – 51.90 (2.042 – 2.043)	Wear or damage
	Mainshaft 4th gear collar length	45.00 – 45.03 (1.771 – 1.773)	—
	Mainshaft 4th gear collar flange thickness	4.435 – 4.525 (0.1746 – 0.1781)	Wear or damage
	Mainshaft 1st gear collar length	27.00 – 27.15 (1.063 – 1.069)	—
	Countershaft distance collar length	38.87 – 38.90 (1.530 – 1.531)	—
		38.92 – 38.95 (1.532 – 1.533)	—
		38.97 – 39.00 (1.534 – 1.535)	—
		39.02 – 39.05 (1.536 – 1.537)	—
		39.07 – 39.10 (1.538 – 1.539)	—
		39.12 – 39.15 (1.540 – 1.541)	—
		39.17 – 39.20 (1.542 – 1.543)	—
		39.22 – 39.25 (1.544 – 1.545)	—
		39.27 – 39.30 (1.546 – 1.547)	—
	Countershaft 3rd gear collar length	'96 – '97 models 21.15 – 21.20 (0.833 – 0.835)	—
		'98 – '00 models 20.65 – 20.70 (0.813 – 0.825)	—
	Countershaft reverse gear collar length	14.5 – 14.6 (0.571 – 0.575)	—
	Countershaft reverse gear collar flange thickness	2.4 – 2.6 (0.094 – 0.102)	Wear or damage
	Countershaft 1st gear collar length	14.5 – 14.6 (0.571 – 0.575)	—
	Countershaft 1st gear collar flange thickness	2.4 – 2.6 (0.094 – 0.102)	Wear or damage

Automatic Transmission — Section 14

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission	Mainshaft 2nd gear thrust washer thickness	3.97 – 4.00 (0.156 – 0.157) 4.02 – 4.05 (0.158 – 0.159) 4.07 – 4.10 (0.160 – 0.161) 4.12 – 4.15 (0.162 – 0.163) 4.17 – 4.20 (0.164 – 0.165) 4.22 – 4.25 (0.166 – 0.167) 4.27 – 4.30 (0.168 – 0.169) 4.32 – 4.35 (0.170 – 0.171) 4.37 – 4.40 (0.172 – 0.173) 4.42 – 4.45 (0.174 – 0.175)	Wear or damage ↑ ↓ Wear or damage
	Thrust washer thickness Mainshaft ball bearing left side Mainshaft 1st gear Countershaft 3rd gear splined washer '96 – 97 models '98 – 00 models	2.95 – 3.05 (0.116 – 0.120) 2.43 – 2.50 (0.096 – 0.098) 4.45 – 4.50 (0.175 – 0.177) 4.95 – 5.00 (0.195 – 0.197)	Wear or damage ↑ ↓ Wear or damage
	One-way clutch contact area Countershaft 1st gear I.D. Park gear O.D. Mainshaft feed pipe A, O.D. (at 15 mm (0.59 in) from end) Mainshaft feed pipe B, O.D. (at 30 mm (1.2 in) from end) Countershaft feed pipe O.D. (at 15 mm (0.59 in) from end) Mainshaft sealing ring thickness (29 mm (1.1 in) and 35 mm (1.4 in)) Mainshaft bushing I.D. Mainshaft bushing I.D. Countershaft bushing I.D. Mainshaft sealing ring groove width	83.339 – 83.365 (3.2810 – 3.2821) 66.685 – 66.698 (2.6254 – 2.6259) 8.97 – 8.98 (0.353 – 0.354) 5.97 – 5.98 (0.2350 – 0.2354) 7.97 – 7.98 (0.3138 – 0.3142) 1.87 – 1.97 (0.074 – 0.078) 6.018 – 6.030 (0.2369 – 0.2374) 9.000 – 9.015 (0.3543 – 0.3549) 8.000 – 8.022 (0.3150 – 0.3158) 2.025 – 2.075 (0.0797 – 0.0817)	Wear or damage Wear or damage 8.95 (0.352) 5.95 (0.234) 7.95 (0.313) 1.80 (0.071) 6.045 (0.2380) 9.03 (0.356) 8.03 (0.316) 2.08 (0.082)
Regulator valve body	Sealing ring contact area I.D.	35.000 – 35.025 (1.3780 – 1.3782)	35.050 (1.3799)
Shifting device and park brake control	Reverse shift fork finger thickness Park brake pawl Park gear	5.90 – 6.00 (0.232 – 0.236) _____ _____	5.40 (0.213) Wear or other defect
Servo body	Shift fork shaft bore I.D. Shift fork shaft valve bore I.D.	14.000 – 14.010 (0.5512 – 0.5516) 37.000 – 37.039 (1.4567 – 1.4582)	37.045 (1.4585)
ATF pump	ATF pump gear side clearance ATF pump gear-to-body clearance ATF pump driven gear I.D. ATF pump driven gear shaft O.D.	0.03 – 0.05 (0.001 – 0.002) 0.1050 – 0.1325 (0.0041 – 0.0052) 0.0350 – 0.0625 (0.0014 – 0.0025) 14.016 – 14.034 (0.5518 – 0.5525) 13.980 – 13.990 (0.5504 – 0.5508)	0.07 (0.003) _____ _____ Wear or damage Wear or damage
Differential carrier	Pinion shaft contact area I.D. Carrier-to-pinion clearance Driveshaft contact are I.D. Carrier-to-driveshaft clearance	18.010 – 18.028 (0.7091 – 0.7098) 0.023 – 0.057 (0.0009 – 0.0022) 26.025 – 26.045 (1.0246 – 1.0254) 0.045 – 0.086 (0.0018 – 0.0034)	0.1 (0.004) _____ 0.12 (0.005)
Differential pinion gear	Backlash I.D. Pinion gear-to-pinion shaft clearance	0.05 – 0.15 (0.002 – 0.006) 18.042 – 18.066 (0.71103 – 0.7113) 0.055 – 0.095 (0.0022 – 0.0037)	_____ _____ 0.15 (0.006)
Set ring-to-bearing outer race clearance		0 – 0.15 (0 – 0.006)	Adjust

(cont'd)

Standards and Service Limits

Automatic Transmission (cont'd) — Section 14

	MEASUREMENT	STANDARD (NEW)			
		Wire Dia.	O.D.	Free Length	No. of Coils
Springs	Regulator valve spring A	1.8 (0.071)	14.7 (0.584)	87.8 (3.457)	16.5
	Regulator valve spring B	1.8 (0.071)	9.6 (0.381)	44.0 (1.732)	11.0
	Stator reaction spring	4.5 (0.177)	35.4 (1.407)	30.3 (1.193)	1.9
	Modulator valve spring	1.4 (0.055)	9.4 (0.374)	35.0 (1.378)	10.9
	Torque converter check valve spring	1.0 (0.039)	8.4 (0.334)	33.8 (1.331)	8.2
	Cooler relief valve spring	1.0 (0.039)	8.4 (0.334)	33.8 (1.331)	8.2
	Relief valve spring	1.1 (0.043)	8.6 (0.342)	37.1 (1.461)	13.4
	2nd orifice control valve spring	0.7 (0.028)	6.6 (0.262)	34.8 (1.370)	22.0
	1-2 shift valve spring	0.9 (0.035)	7.6 (0.302)	41.3 (1.626)	16.3
	2-3 shift valve spring	0.9 (0.035)	7.6 (0.302)	57.0 (2.244)	26.8
	3-4 shift valve spring	0.9 (0.035)	7.6 (0.302)	57.0 (2.244)	26.8
	1st accumulator spring	2.1 (0.083)	16.0 (0.636)	89.1 (3.508)	16.2
	4th accumulator spring B	2.3 (0.091)	10.2 (0.402)	51.6 (2.031)	13.8
	4th accumulator spring A	2.6 (0.102)	17.0 (0.676)	87.0 (3.425)	14.2
	2nd accumulator spring A	2.4 (0.094)	29.0 (1.152)	39.0 (1.535)	2.9
	3rd accumulator spring A	2.8 (0.110)	17.5 (0.695)	89.3 (3.516)	15.6
	2nd accumulator spring B	1.6 (0.063)	9.0 (0.358)	20.7 (0.815)	6.1
	3rd accumulator spring B	2.2 (0.087)	31.0 (1.220)	35.1 (1.382)	2.4
	2nd accumulator spring C	2.2 (0.087)	14.5 (0.576)	68.0 (2.677)	13.9
	Lock-up shift valve spring	0.9 (0.035)	7.6 (0.302)	73.7 (2.902)	32.0
	Lock-up timing valve spring	0.9 (0.035)	8.1 (0.319)	80.7 (3.177)	45.8
	Lock-up control valve spring	0.7 (0.028)	6.6 (0.262)	38.0 (1.496)	14.1
	3-4 orifice control valve spring	0.7 (0.028)	6.6 (0.262)	37.5 (1.476)	24.6
	Servo control valve spring	1.0 (0.039)	8.1 (0.322)	52.1 (2.051)	20.8
	CPC valve spring	0.6 (0.024)	5.6 (0.223)	12.2 (0.480)	5.5
	CPB valve spring	0.9 (0.035)	8.1 (0.322)	47.2 (1.858)	18.3
	4th exhaust valve spring	0.9 (0.035)	6.1 (0.242)	36.4 (1.433)	19.5

CVT — Section 14

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission fluid	Capacity ℓ (US qt, Imp. qt)	6.4 (6.8, 5.6) for overhaul 3.9 (4.1, 3.4) for fluid change	
Hydraulic pressure MPa (kgf/cm ² , psi)	Forward clutch pressure at 1,500 rpm in D position	1.4 – 1.75 (14.3 – 17.8, 203 – 253)	
	Reverse brake pressure at 1,500 rpm in R position	1.4 – 1.75 (14.3 – 17.8, 203 – 253)	
	Drive pulley pressure at 1,500 rpm in N position	0.2 – 0.7 (2.0 – 7.1, 28 – 101)	
	Driven pulley pressure at 1,500 rpm in N position	1.5 – 2.3 (15.3 – 23.5, 218 – 334)	
	Lubrication pressure at 3,000 rpm in N position	Above 0.2 (2, 30)	
Stall speed rpm (Check with vehicle on level ground)			
	D position	2,500	2,350 – 2,650
	S , L , R positions	3,000	2,800 – 3,100
Clutch	Clutch initial clearance	Forward clutch	0.6 – 0.8 (0.024 – 0.031)
		Start clutch	0.5 – 0.7 (0.020 – 0.028)
		Reverse brake	0.45 – 0.75 (0.018 – 0.030)
	Clutch return spring free length	Forward clutch	30.5 (1.201)
		Start clutch	40.9 (1.610)
		Reverse brake	29.4 (1.157)
	Clutch disc thickness	Forward clutch	1.88 – 2.00 (0.074 – 0.079)
		Start clutch	1.88 – 2.00 (0.074 – 0.079)
		Reverse brake	1.94 – 2.06 (0.076 – 0.081)
	Clutch plate thickness	Forward clutch	1.95 – 2.05 (0.077 – 0.081)
		Start clutch	2.25 – 2.35 (0.089 – 0.093)
		Reverse brake	1.90 – 2.00 (0.075 – 0.079)

CVT — Section 14

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Clutch	Forward clutch end plate thickness	Mark 1 or 15 Mark 2 or 16 Mark 3 or 17 Mark 4 or 18 Mark 5 or 19 Mark 6 or 20 Mark 7 or 21 Mark 8 or 22 Mark 9 or 23 Mark 10 or 24 Mark 11 or 25 Mark 12 or 26 Mark 13 or 27	3.4 – 3.5 (0.134 – 0.138) 3.5 – 3.6 (0.138 – 0.142) 3.6 – 3.7 (0.142 – 0.146) 3.7 – 3.8 (0.146 – 0.150) 3.8 – 3.9 (0.150 – 0.154) 3.9 – 4.0 (0.154 – 0.157) 4.0 – 4.1 (0.157 – 0.161) 4.1 – 4.2 (0.161 – 0.165) 4.2 – 4.3 (0.165 – 0.169) 4.3 – 4.4 (0.169 – 0.173) 4.4 – 4.5 (0.173 – 0.177) 4.5 – 4.6 (0.177 – 0.181) 4.6 – 4.7 (0.181 – 0.185)	Discoloration ↑ ↓ Discoloration
	Reverse brake end plate thickness	Mark 1 Mark 2 Mark 3 Mark 4 Mark 5 Mark 6 Mark 7 Mark 8	3.55 – 3.65 (0.140 – 0.144) 3.75 – 3.85 (0.148 – 0.152) 3.95 – 4.05 (0.156 – 0.159) 4.15 – 4.25 (0.163 – 0.167) 4.35 – 4.45 (0.171 – 0.175) 4.55 – 4.65 (0.179 – 0.183) 4.75 – 4.85 (0.187 – 0.191) 4.95 – 5.05 (0.195 – 0.199)	Discoloration ↑ ↓ Discoloration
ATF pump	ATF pump drive gear shaft O.D. ATF pump driven gear shaft O.D. ATF pump body bushing I.D.	Drive gear shaft Driven gear shaft	9.98 – 9.99 (0.3929 – 0.3933) 9.98 – 9.99 (0.3929 – 0.3933) 10.000 – 10.015 (0.3937 – 0.3943) 10.000 – 10.015 (0.3937 – 0.3943)	Wear or damaged Wear or damaged Wear or damaged Wear or damaged
	ATF pump gear side clearance ATF pump gear-to-body clearance	Drive gear Driven gear	0.015 – 0.035 (0.0006 – 0.0014) 0.035 – 0.0505 (0.0014 – 0.0020) 0.035 – 0.0505 (0.0014 – 0.0020)	— — —
Transmission	Diameter of needle bearing contact area Input shaft – flywheel side Input shaft – forward clutch side Drive pulley shaft – start clutch side Drive pulley shaft – flywheel side Drive pulley shaft – forward clutch side		19.987 – 20.000 (0.7869 – 0.7874) 19.987 – 20.000 (0.7869 – 0.7874) 43.981 – 43.991 (1.7315 – 1.7319) 24.007 – 24.020 (0.945 – 0.946) 24.007 – 24.020 (0.945 – 0.946)	Wear or damaged Wear or damaged Wear or damaged Wear or damaged Wear or damaged
	Thrust clearance Carrier and ring gear Driven pulley shaft and start clutch hub Input shaft and ATF pump driven sprocket Secondary gear shaft and flywheel ball bearing		0.050 – 0.110 (0.0020 – 0.0043) 0.000 – 0.130 (0.000 – 0.005) 0.370 – 0.650 (0.015 – 0.026) 0.00 – 0.15 (0.00 – 0.006)	— — — —

(cont'd)

Standards and Service Limits

CVT (cont'd) — Section 14

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission (cont'd)	Thrust shim, 25 x 31 mm thickness	1.02 – 1.05 (0.040 – 0.041) 1.09 – 1.12 (0.043 – 0.044) 1.16 – 1.19 (0.046 – 0.047) 1.23 – 1.26 (0.048 – 0.050) 1.30 – 1.33 (0.051 – 0.052) 1.37 – 1.40 (0.054 – 0.055) 1.44 – 1.47 (0.057 – 0.058) 1.51 – 1.54 (0.059 – 0.061) 1.58 – 1.61 (0.062 – 0.063) 1.65 – 1.68 (0.065 – 0.066) 1.72 – 1.75 (0.068 – 0.069) 1.79 – 1.82 (0.070 – 0.072) 1.055 – 1.085 (0.0415 – 0.0427) 1.125 – 1.155 (0.0443 – 0.0454) 1.195 – 1.225 (0.0470 – 0.0482) 1.265 – 1.295 (0.0498 – 0.0510) 1.335 – 1.365 (0.0526 – 0.0537) 1.405 – 1.435 (0.0553 – 0.0565) 1.475 – 1.505 (0.0580 – 0.0593) 1.545 – 1.575 (0.0608 – 0.0620) 1.615 – 1.645 (0.0636 – 0.0648) 1.685 – 1.715 (0.0663 – 0.0675) 1.755 – 1.785 (0.0691 – 0.0703)	Wear or damaged ↑ ↓ Wear or damaged
	Cotters thickness	2.87 – 2.90 (0.113 – 0.114) 2.97 – 3.00 (0.117 – 0.118) 3.07 – 3.10 (0.121 – 0.122) 3.17 – 3.20 (0.125 – 0.126)	Wear or damaged ↑ ↓ Wear or damaged
	ATF pump drive sprocket thrust shim, 22 x 28 mm thickness	1.12 – 1.15 (0.044 – 0.045) 1.37 – 1.40 (0.054 – 0.055) 1.62 – 1.65 (0.064 – 0.065) 1.87 – 1.90 (0.074 – 0.075) 2.12 – 2.15 (0.083 – 0.085) 2.37 – 2.40 (0.093 – 0.094)	Wear or damaged ↑ ↓ Wear or damaged
	Secondary gear shaft thrust shim, 25 x 35 mm thickness	2.80 – 2.85 (0.110 – 0.112) 2.90 – 2.95 (0.114 – 0.116) 3.00 – 3.05 (0.118 – 0.120) 3.10 – 3.15 (0.122 – 0.124) 3.20 – 3.25 (0.126 – 0.128) 3.30 – 3.35 (0.130 – 0.132) 3.40 – 3.45 (0.134 – 0.136) 3.50 – 3.55 (0.138 – 0.140) 3.60 – 3.65 (0.142 – 0.144) 3.70 – 3.75 (0.146 – 0.148) 3.80 – 3.85 (0.150 – 0.152)	Wear or damaged ↑ ↓ Wear or damaged
	Input shaft feed pipe O.D. Drive pulley feed pipe Forward clutch feed pipe Input shaft bushing I.D. Drive pulley feed pipe bushing Forward clutch feed pipe bushing Driven shaft feed pipe O.D. Start clutch feed pipe (right side cover side) Driven pulley feed pipe Start clutch feed pipe (flywheel housing side) Driven pulley shaft bushing I.D. Start clutch feed pipe (right side cover side) Drive pulley feed pipe Start clutch feed pipe (flywheel housing side) Secondary driven gear sealing ring groove width Start clutch end plate I.D. Input shaft sealing ring groove width Drive pulley shaft I.D. at sealing ring	6.97 – 6.98 (0.274 – 0.275) 11.47 – 11.48 (0.4516 – 0.4520) 7.000 – 7.015 (0.2756 – 0.2762) 11.500 – 11.518 (0.4528 – 0.4535) 6.97 – 6.98 (0.274 – 0.275) 11.47 – 11.48 (0.4516 – 0.4520) 8.97 – 8.98 (0.353 – 0.354) 7.000 – 7.015 (0.2756 – 0.2762) 11.500 – 11.518 (0.4528 – 0.4535) 9.000 – 9.015 (0.354 – 0.355) 2.50 – 2.65 (0.098 – 0.104) 88.900 – 88.935 (3.500 – 3.501) 2.00 – 2.10 (0.079 – 0.083) 24.007 – 24.020 (0.945 – 0.946)	6.95 (0.274) 11.45 (0.451) 7.030 (0.277) 11.533 (0.454) 6.95 (0.274) 11.45 (0.451) 8.95 (0.352) 7.030 (0.277) 11.533 (0.454) 9.03 (0.356) 2.655 (0.105) Wear or damaged 2.105 (0.083) Wear or damaged
Shifting device and park brake control	Park brake cone Park brake pawl Park gear	— — —	Wear or other defect Wear or other defect Wear or other defect

CVT — Section 14

CVT — Section 14					
MEASUREMENT		STANDARD (NEW)		SERVICE LIMIT	
Differential carrier	Pinion shaft contact area I.D.	18.010 – 18.028 (0.7091 – 0.7098)		_____	
	Carrier-to-pinion clearance	0.023 – 0.057 (0.0009 – 0.0022)		0.1 (0.004)	
	Drive shaft contact area I.D.	26.025 – 26.045 (1.0246 – 1.0254)		_____	
	Carrier-to-driveshaft clearance	0.045 – 0.086 (0.0018 – 0.0034)		0.12 (0.005)	
Differential pinion gear	Backlash I.D.	0.05 – 0.15 (0.002 – 0.006)		_____	
		18.042 – 18.066 (0.7103 – 0.7113)		_____	
	Pinion gear-to-pinion shaft clearance	0.055 – 0.095 (0.0022 – 0.0037)		0.15 (0.006)	
Set ring-to-bearing outer race clearance		0 – 0.15 (0 – 0.006)		Adjust	
	MEASUREMENT	Wire Dia.	O.D.	Free Length	No. of Coils
Springs	PH regulator valve spring	1.2 (0.047)	9.0 (0.354)	26.7 (1.051)	10.0
	PH control valve spring	1.7 (0.067)	13.4 (0.528)	39.4 (1.551)	8.7
	PL regulator valve spring	0.9 (0.035)	7.2 (0.283)	14.6 (0.575)	7.2
	PH-PL control valve spring	1.0 (0.039)	10.0 (0.394)	31.4 (1.236)	8.6
	Clutch reducing valve spring	1.9 (0.075)	16.8 (0.661)	44.4 (1.748)	8.0
	Lubrication valve spring	1.6 (0.063)	13.4 (0.528)	51.6 (2.031)	11.6
	Shift valve spring	1.4 (0.055)	8.2 (0.323)	34.1 (1.343)	13.0
	Shift control valve spring	1.0 (0.039)	7.4 (0.291)	19.3 (0.760)	7.5
	Start clutch control valve spring	0.4 (0.016)	4.1 (0.161)	12.1 (0.476)	6.8
	Pilot regulator valve spring	0.6 (0.024)	5.7 (0.224)	9.5 (0.374)	5.0
	Start clutch valve accumulator spring	1.2 (0.047)	8.3 (0.327)	29.8 (1.173)	12.3
	Reverse control valve spring	1.2 (0.047)	9.4 (0.370)	31.4 (1.236)	11.0
	Shift inhibitor valve spring	1.3 (0.051)	13.2 (0.520)	48.3 (1.902)	10.6

Steering — Section 17

	MEASUREMENT	STANDARD (NEW)
Steering wheel	Play at steering wheel circumference	0 – 10 (0 – 0.4)
	Starting load at steering wheel circumference N (kgf, lbf)	
	Manual steering Power steering Engine running	15 (1.5, 3.3) 29 (3.0, 6.6)
Gearbox	Angle of rack guide screw loosened from locked position	M/S 20 ± 5° P/S 20° Max
	Preload at pinion gear shaft N·m (kgf·cm, lbf·in)	M/S 0.5 – 1.7 (5 – 17, 4.3 – 14.8) P/S 0.6 – 1.2 (6 – 12, 5.20 – 10.42)
Pump	Pump pressure with valve closed (oil temp./speed: 40°C (105°F) min./idle. Do not run for more than 5 seconds). kPa (kgf/cm², psi)	6,400 – 7,400 (65 – 75, 920 – 1,070)
Power steering fluid	Recommended power steering fluid	HONDA Power Steering Fluid
	Fluid capacity ℓ (US qt, Imp qt) Reservoir	0.85 (0.90, 0.75) at disassembly 0.4 (0.42, 0.35)
Power steering belt*	Deflection with 98 N (10 kgf, 22 lbf) between pulleys '99 model: B16A2 Engine Type only	7.5 – 11.0 (0.30 – 0.43) with used belt 5.0 – 7.0 (0.20 – 0.28) with new belt
	'96 – '99 models: Other Engine Types	10.5 – 14.0 (0.41 – 0.55) with used belt 7.5 – 10.0 (0.30 – 0.39) with new belt
	Tension measured with belt tension gauge N (kgf, lbf) '99 model: B16A2 Engine Type only '96 – '99 models: Other Engine Types '99 model: B16A2 Engine Type only '96 – '99 models: Other Engine Types	390 – 540 (40 – 55, 88 – 120) with used belt 340 – 490 (35 – 50, 77 – 110) with used belt 740 – 880 (75 – 90, 170 – 200) with new belt 640 – 780 (65 – 80, 143 – 176) with new belt

M/S: Manual steering, P/S: Power steering

*: When using a new belt, adjust deflection or tension to new values. Run the engine for 5 minutes then turn it off.

Readjust the deflection or tension to used belt values.

Standards and Service Limits

Suspension — Section 18

		MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Wheel alignment	Camber	Front		0°00' ± 1°	_____
		Rear		-1° ± 1°	_____
	Caster	Front		1°40' ± 1°	_____
		Total toe	Front	In 1.0 ± 2.0 (1/16 ± 1/16)	_____
		Rear	In 2.0 ^{+2.0} / _{-1.0} (1/16 ± 1/16)	_____	
	Front wheel turning angle	Inward wheel		39°50'	_____
Outward wheel			33°10' (Reference)	_____	
Wheel	Rim runout	Aluminum wheel	Axial	0 - 0.7 (0 - 0.03)	2.0 (0.08)
			Radial	0 - 0.7 (0 - 0.03)	1.5 (0.06)
		Steel wheel	Axial	0 - 1.0 (0 - 0.04)	2.0 (0.08)
			Radial	0 - 1.0 (0 - 0.04)	1.5 (0.06)
Wheel bearing	End play	Front		0 - 0.05 (0 - 0.002)	_____
		Rear		0 - 0.05 (0 - 0.002)	_____

Brakes — Section 19

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT	
Parking brake lever	Play in stroke at 196 N (20 kgf, 44 lbf) lever force	To be locked when pulled 6 – 9 notches	_____	
Foot brake pedal	Pedal height (with floor mat removed) M/T	156.5 (6.16)	_____	
	A/T, CVT	161 (6 5/16)	_____	
	Free play	1 – 5 (1/16 – 3/16)	_____	
Master cylinder	Piston-to-pushrod clearance	0 – 0.4 (0 – 0.02)	_____	
Disc brake	Disc thickness	Front	20.9 – 21.8 (0.82 – 0.86)	19.0 (0.75)
		Rear	8.9 – 9.1 (0.350 – 0.358)	8.0 (0.31)
	Disc runout	Front	_____	0.10 (0.004)
		Rear	_____	0.10 (0.004)
	Disc parallelism	Front and rear	_____	0.015 (0.0006)
	Pad thickness	Front	9.5 – 10.5* ¹	1.6 (0.06)
			8.5 – 9.5* ²	1.6 (0.06)
Rear		7.0 – 8.0 (0.28 – 0.31)	1.6 (0.06)	
Rear brake drum	I.D.	200 (7.87)	201 (7.91)	
	Lining thickness	4.0 (0.16)	2.0 (0.08)	

*1. 5410 Stamped on the caliper body.

*2. 2056 Stamped on the caliper body.

Air Conditioning — Section 22

	MEASUREMENT		STANDARD (NEW)
Air Conditioning system SANDEN	Lubricant type: SP-10 (P/N 38897 - P13 - A01AH or 38899 - P13 - A01) (For refrigerant: HFC-134a (R-134a))		
	Lubricant capacity ml (fl oz, Imp oz)	Condenser	20 (2/3 0.7)
		Evaporator	45 (1 2/3, 1.6)
		Line or hose	10 (1/3, 0.4)
		Receiver	10 (1/3, 0.4)
NIPPONDENSO	Lubricant type: ND-OIL8 (P/N 38899 - PR7 - 003) (For Refrigerant: HFC-134a (R-134a))		
	Lubricant capacity ml (fl oz, Imp oz)	Condenser	25 (5/6 0.9)
		Evaporator	60 (2, 2.1)
		Line or hose	10 (1/3, 0.4)
		Receiver	10 (1/3, 0.4)
Compressor SANDEN	Lubricant type: SP-10		
	Lubricant capacity ml (fl oz, Imp oz)		130 - 150 (4 1/3 - 4.6, 5.0 - 5.3)
	Field coil resistance at 68°F (20°C) Ω		3.05 - 3.35
	Pulley-to-pressure plate clearance		0.5 ± 0.15 (0.020 ± 0.006)
NIPPONDENSO	Lubricant type: ND-OIL8 (P/N 38899 - PR7 - 003 or P/N 38899 - PR7 - A01) (For Refrigerant: HFC-134a (R-134a))		
	Lubricant capacity ml (fl oz, Imp oz)		140 (4.7, 4.9) - 155 (5.2, 5.4)
	Stator coil resistance at 20°C (68°F) Ω		3.4 - 3.8
	Pulley-to-pressure plate clearance		0.5 ± 0.15 (0.02 ± 0.006)
Compressor belt*	Deflection with 98 N (10 kgf, 22 lbf) between pulleys		7.5 - 9.5 (0.30 - 0.37) with used belt 5.0 - 6.5 (0.20 - 0.26) with new belt
	Belt tension N (kgf, lbf)		340 - 490 (35 - 50, 77 - 110) with used belt 690 - 830 (70 - 85, 150 - 190) with new belt
	Measured with belt tension gauge		

*: When using a new belt, adjust deflection or tension to new values. Run the engine for 5 minutes then turn it off.

Readjust deflection or tension to used belt values.

Electrical — Section 23

	MEASUREMENT	STANDARD (NEW)	
Ignition coil	Rated voltage V	12	
	Primary winding resistance at 68°F (20°C) Ω	0.45 – 0.55	
	HITACHI	0.63 – 0.77	
	TEC		
	Secondary winding resistance at 68°F (20°C) kΩ	22.4 – 33.6	
	HITACHI	12.8 – 19.2	
	TEC		
Ignition wire	Resistance at 68°F (20°C) kΩ	25 max.	
	Firing order	1 – 3 – 4 – 2	
Spark plug	Type	See section 23	
	Gap	1.1 \pm 0.1 (0.043 \pm 0.004)	
Ignition timing	At idle ° BTDC (Red)	12 ± 2	
Alternator belt*	Deflection with 98 N (10 kgf, 22 lbf) between pulleys	8.0 – 10.5 (0.31 – 0.41) with used belt 6.0 – 8.5 (0.26 – 0.33) with new belt	
	Belt tension N (kgf, lbf)	340 – 490 (35 – 50, 77 – 110) with used belt 540 – 740 (55 – 75, 121 – 165) with new belt	
	Measured with belt tension gauge		
Alternator (MITSUBISHI)	Output 13.5 V at hot A	75	
	Coil resistance (rotor) at 68°F (20°C) kΩ	3.4 – 3.8	
	Slip ring O.D.	22.7 (0.89)	22.2 (0.87)
	Brush length	19.0 (0.75)	5.0 (0.20)
	Brush spring tension g (oz)	340 – 420 (12.0 – 14.8)	
Alternator (DENSO)	Output 13.5 V at hot A	80	
	Coil resistance (rotor) at 68°F (20°C) kΩ	2.2 – 3.0	
	Slip ring O.D.	14.4 (0.57)	14.0 (0.55)
	Brush length	10.5 (0.41)	1.5 (0.06)
	Brush spring tension g (oz)	330 (11.6)	
Starter motor (MITSUBA 1.0 kW 1.2 kW)	Type	Gear reduction	
	Commutator mica depth	0.4 – 0.5 (0.016 – 0.020)	0.15 (0.006)
	Commutator runout	0 – 0.02 (0 – 0.0008)	0.05 (0.002)
	Commutator O.D.	28.0 – 28.1 (1.102 – 1.106)	27.5 (1.083)
	Brush length	15.8 – 16.2 (0.62 – 0.64)	11.0 (0.43)
	Brush spring tension (new)	15.7 – 17.7	
	N (kgf, lbf)	(1.60 – 1.80, 3.5 – 4.0)	

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

Design Specifications

	ITEM	METRIC	ENGLISH	NOTE		
DIMENSIONS	Overall Length					
	2-door Coupe/4-door Sedan ('96 - '98)	4,445 mm	175.0 in			
	('99, '00)	4,450 mm	175.2 in			
	2-door Hatchback ('96, '97)	4,170 mm	164.2 in			
	('98 - '00)	4,180 mm	164.6 in			
	Overall width	1,705 mm	67.1 in			
	Overall height 2-door Coupe/2-door Hatchback	1,375 mm	54.1 in			
	4-door Sedan	1,390 mm	54.7 in			
	Wheelbase	2,620 mm	103.1 in			
	Track Front/Rear	1,475/1,475 mm	58.1/58.1 in			
Ground Clearance	150 mm	5.9 in				
Seating Capacity	Five					
WEIGHT (USA)	Gross Vehicle Weight Rating (GVWR)					
	2-door Coupe HX M/T, DX M/T	—	3,290 lbs			
	HX CVT ('96)	—	3,320 lbs			
	HX CVT ('97, '98)	—	3,330 lbs			
	HX CVT ('99)	—	3,360 lbs			
	DX A/T ('96 - '98)	—	3,290 lbs			
	DX A/T ('99, '00)	—	3,310 lbs			
	EX	—	3,440 lbs			
	Si	—	3,480 lbs			
	2-door Hatchback CX, DX ('96, '97)	—	3,285 lbs			
	CX, DX ('98)	—	3,290 lbs			
	CX ('99, '00)	—	3,290 lbs			
	DX M/T ('99, '00)	—	3,290 lbs			
	DX A/T ('99, '00)	—	3,330 lbs			
	4-door Sedan DX, LX, DX-V	—	3,330 lbs			
	EX	—	3,460 lbs			
WEIGHT (CANADA)	Gross Vehicle Weight Rating (GVWR)					
	2-door Coupe DX ('96)	1,500 kg	—			
	DX ('97 - '00)	1,510 kg	—			
	DX-G	1,510 kg	—			
	Si ('96)	1,560 kg	—			
	Si ('97 - '00)	1,570 kg	—			
	SiR	1,590 kg	—			
	2-door Hatchback CX, CX-G ('96)	1,495 kg	—			
	CX, CX-G ('97)	1,505 kg	—			
	CX-G ('98)	1,510 kg	—			
	CX ('98 - '00)	1,510 kg	—			
	DX M/T, SE M/T	1,510 kg	—			
	DX A/T, SE A/T	1,530 kg	—			
	4-door Sedan LX, LX-V	1,510 kg	—			
	EX M/T	1,510 kg	—			
	EX A/T	1,540 kg	—			
ENGINE	Type	Water-cooled, 4-stroke SOHC*1, SOHC VTEC*2, SOHC VTEC-E*3, DOHC VTEC*4 gasoline engine		*1: D16Y7 *2: D16Y8 *3: D16Y5 *4: B16A2		
	Cylinder Arrangement	Inline 4-cylinder, transverse				
	Bore and Stroke	D16Y5, D16Y7, D16Y8 B16A2	75.0 x 90.0 mm 81.0 x 77.4 mm		2.95 x 3.54 in 3.19 x 3.05 in	
	Displacement	D16Y5, D16Y7, D16Y8 B16A2	1,590 cm ³ 1,595 cm ³		97.0 cu-in 97.3 cu-in	
	Compression Ratio	D16Y5, D16Y7 D16Y8 B16A2	9.4 9.6 10.2			
	Valve Train	Belt driven, 4 valve per cylinder				
	Lubrication System	Forced and wet sump, trochoid pump				
	Oil Pump Displacement at 6,800 engine rpm	33.4 ℓ (35.3 US qt, 29.4 Imp qt)/minute				
	D16Y5, D16Y7, D16Y8 B16A2	43.8 ℓ (46.3 US qt, 38.6 Imp qt)/minute				
	Water Pump Displacement at 6,000 engine rpm	125 ℓ (132 US qt, 110 Imp qt)/minute				
	D16Y5, D16Y7, D16Y8 B16A2	140 ℓ (148 US qt, 123 Imp qt)/minute				
	Fuel Required	D16Y5, D16Y7, D16Y8 B16A2			UNLEADED gasoline with 86 Pump Octane Number or higher Premium UNLEADED gasoline 91 Pump Octane Number or higher	
	STARTER	Type/Make	Gear reduction/MITSUBA			
		Normal Output	1.0 kW, 1.2 kW			
		Nominal Voltage	12 V			
Hour Rating		30 seconds				
Direction of Rotation		Clockwise as viewed from gear end				

	ITEM		METRIC		ENGLISH		NOTES	
STARTER (cont'd)	Weight	MITSUBA 1.0, 1.2 kW	3.4 kg		7.5 lbf			
CLUTCH	Clutch Type	M/T A/T CVT	Single plate dry, diaphragm spring Torque converter					
	Clutch Facing Area	M/T	Multi plates wet sanp, hydraulic 160 cm ²		25 sq-in			
TRANSMISSION	Transmission Type	M/T A/T CVT	Synchronized 5-speed forward, 1 reverse 4-speed automatic, 1 reverse Non-stage speed forward, 1 reverse Direct 1 : 1					
	Primary Reduction		Direct 1 : 1					
	Manual transmission		Engine type					
			D16Y5	D16Y7	D16Y8	B16A2		
	Gear Ratio	1st	3.250	3.250	3.250	3.230	*1: 2-door Hatch back	
		2nd	1.782	1.782	1.909	2.105	*2: 2-door Coupe, and 4-door Sedan	
		3rd	1.172	1.172	1.250	1.458		
		4th	0.909	0.909	0.909	1.107		
		5th	0.702	0.702	0.702	0.875		
		Reverse	3.153	3.153	3.153	3.000		
	Final Reduction	Gear ratio	3.722	3.722*/4.058*	4.250	4.266		
		Gear type	Single helical gear					
	Automatic transmission		Engine type					
			D16Y7		D16Y8			
	Gear Ratio	1st	2.600		2.722			
		2nd	1.468		1.516			
		3rd	0.926		0.975			
		4th	0.638		0.638			
		Reverse	1.954		1.954			
		Final Reduction	Gear ratio	4.357		4.357		
			Single helical gear					
	CVT							
	Gear Ratio	Low – O.D.	2.466 – 0.449					
		Reverse	2.466					
	Secondary Reduction Gear Ratio		1.333					
	Final Reduction Gear Ratio		4.357					
AIR CONDITIONING	Cooling Capacity		3,530 Kcal/h		14,000 BTU/h			
	Compressor	Type/Make No. of Cylinders Capacity Max. Speed Lubricant Capacity	Scroll/SANDEN				SP-10	
			85.7 ml /rev 130 ml	5.22 cu-in/rev 10,000 rpm 4 1/3 fl oz, 4.6 Imp oz				
	Compressor	Type/Manufacturer No. of Cylinder Capacity Max. Speed Lubricant Capacity	Swash-plate/DENSO					
			155.3 ml /rev 140 ml	10 9.4 cu-in/rev 76,000 rpm 4 2/3 fl oz, 4.9 Imp oz				
	Lubricant Type		ND-OIL8					
	Condenser	Type	Corrugated fin					
	Evaporator	Type	Corrugated fin					
	Blower	Type Motor Input Speed Control Max. Capacity	Sirocco fan 200 W/12 V 4-speed variable 460 m ³ /h				16,200 cu-ft/h	
	Temperature Control		Air-mix type					
	Compressor Clutch	Type Power Consumption	Dry, single plate, poly-V-belt drive 40 W max./12 V at 68°F (20°C)					
	Refrigerant	Type Quantity	HFC-134a (R-134a) 650 ⁰ / ₋₅₀ g				22.9 ⁰ / _{-1.8} oz	

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Design Specifications

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	ITEM		METRIC	ENGLISH	NOTE
STEERING SYSTEM	Type	P/S	Power assisted, rack and pinion		
		M/S	Rack and pinion		
	Overall Ratio	P/S	17.7		
		M/S	20.3		
	Turns, Lock-to-Lock	P/S	3.6		
		M/S	4.1		
	Steering Wheel Dia.		380 mm	15.0 in	
SUSPENSION	Type	Front and Rear	Independent double wishbone, coil spring		
		Front and Rear	Telescopic, hydraulic nitrogen gas-filled		
WHEEL ALIGNMENT	Camber	Front	0°00'		
		Rear	- 1°		
	Caster	Front	1°40'		
	Total Toe	Front	In 1 mm	In 1/16	
		Rear	In 2 mm	In 1/16	
BRAKE SYSTEM	Type	Front	Power assisted self-adjusting ventilated disc		5410 stamped on the caliper body 2056 stamped on the caliper body Drum Disc
		Rear	Power assisted self-adjusting solid disc		
			Power assisted self-adjusting drum		
	Pad Surface Area	Front	37.5 cm ² x 4	5.8 sq-in x 4	
			44.1 cm ² x 4	6.84 sq-in x 4	
		Rear	67.2 cm ² x 4	10.4 sq-in x 4	
			21.2 cm ² x 4	3.3 sq-in x 4	
	Parking Brake	Type	Mechanical actuating, rear two wheel brakes		
TIRE	Size and Pressure		See tire information label		
WASHER	Capacity	2-door Coupe/4-door Sedan	2.5 ℓ (2.6 US qt, 2.2 Imp qt)		USA model Canada model DX Except DX
			4.5 ℓ (4.8 US qt, 4.0 Imp qt)		
		2-door Hatchback	2.5 ℓ (2.6 US qt, 2.2 Imp qt)		
			4.5 ℓ (4.8 US qt, 4.0 Imp qt)		
ELECTRICAL	Battery		12 V - 38 AH/5 HR		
	Starter		12 V - 1.0 kW, 1.2 kW		
	Alternator		12 V - 75 A, 80 A		
	Fuses	In Under-dash Fuse/Relay Box	7.5 A, 10 A, 15 A, 20 A		
		In Under-hood Fuse/Relay Box	7.5 A, 10 A, 15 A, 20 A, 30 A, 40 A, 80 A		
		In Under-hood ABS Fuse/Relay Box	7.5 A, 20 A, 40 A		
	Headlights		12 V - 60/55 W		
	Front Turn Signal/Parking Lights		12 V - 21/5 W		
	Rear Turn Signal Lights		12 V - 21 W		
	Brake/Taillights		12 V - 21/5 W		
	Inner Taillights*2		12 V - 5 W		
	High Mount Brake Light		12 V - 18 W*2, 21 W*1, *3		
	Back-up Lights		12 V - 21 W		
	License Plate Lights		12 V - 5 W		
	Ceiling Light		12 V - 8 W (With moonroof)		
			12 V - 5 W (Without moonroof)		
	Trunk Lights		12 V - 3.4 W*4, 5 W*5		
	Gauge Lights		12 V - 1.4 W, 3 W		
	Indicator Lights		12 V - 1.12 W, 1.4 W		
	Illumination and Pilot Lights		12 V - 0.84 W, 1.4 W		
	Heater Control Panel Lights		12 V - 1.4 W		

P/S: Power Steering M/S: Manual Steering

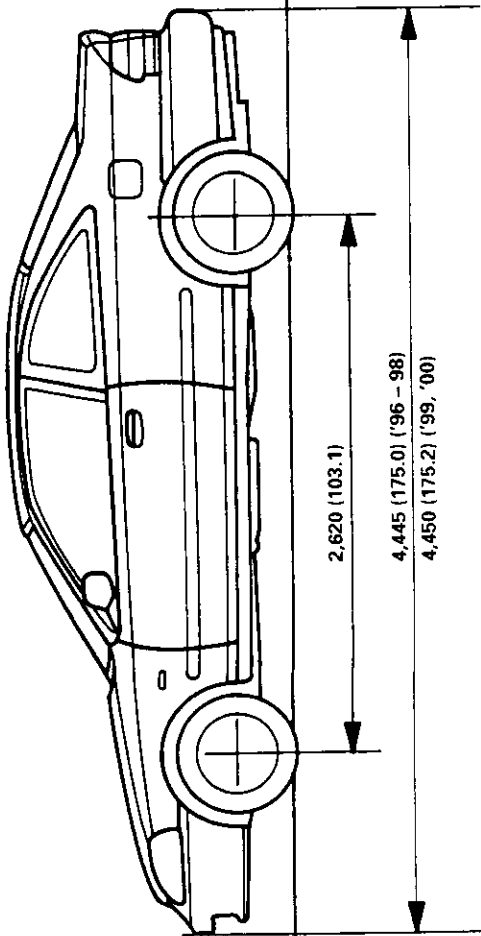
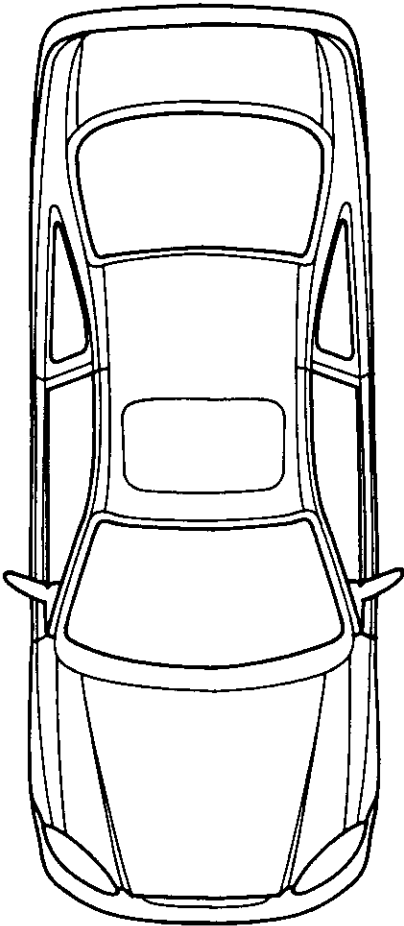
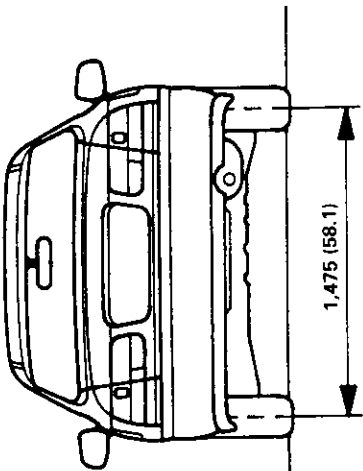
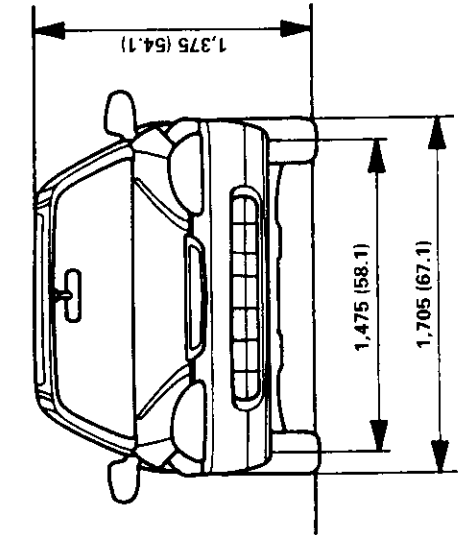
*1: 2-door Coupe *2: 2-door Hatchback *3: 4-door Sedan

*4: USA (HAM), Canada (HCM) produced *5: Japan produced

Body Specifications

2-door Coupe:

Unit: mm (in)

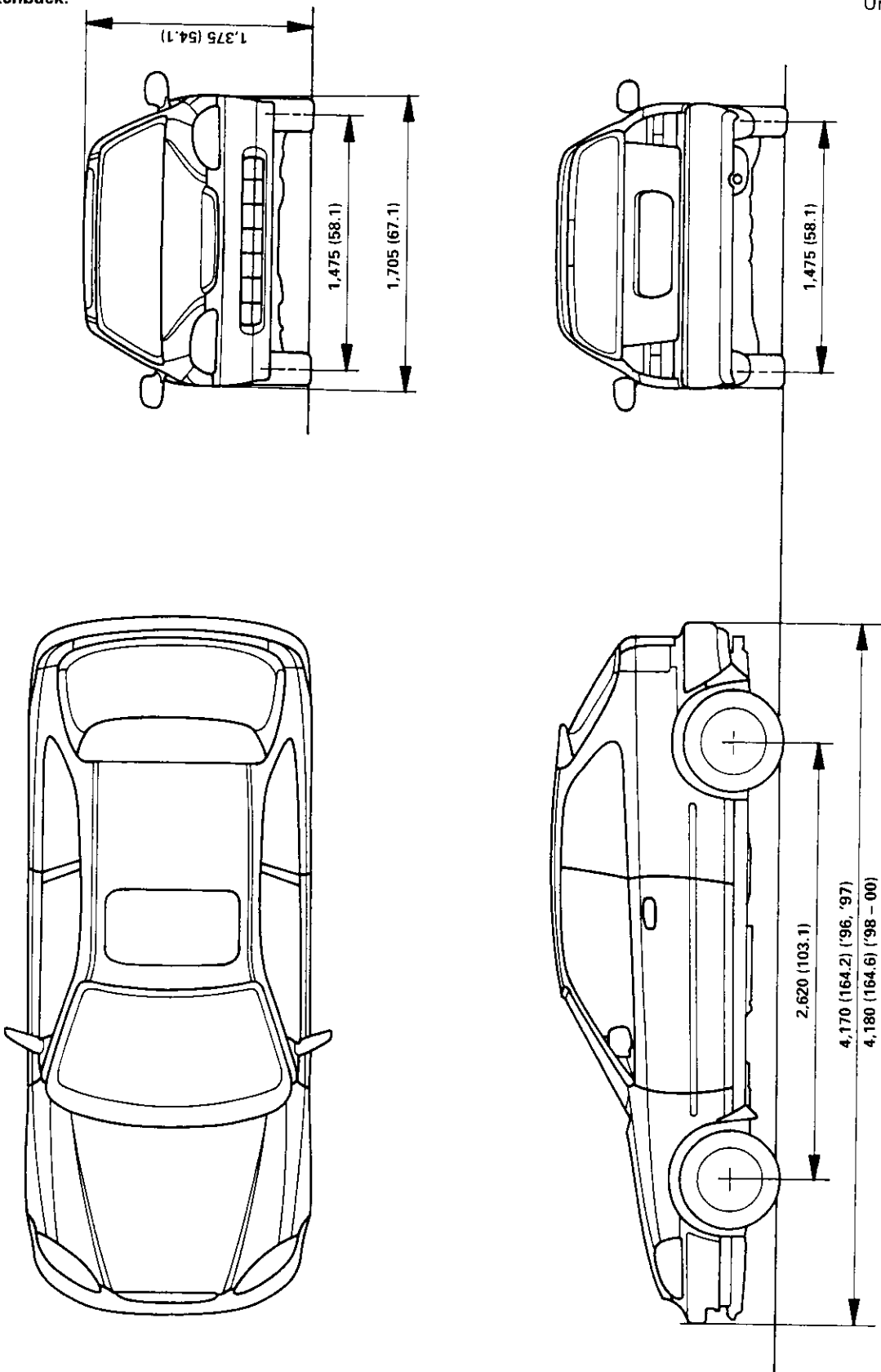


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Body Specifications (cont'd)

2-door Hatchback:

Unit: mm (in)



4-door Sedan:

Unit: mm (in)

