02

specs

Specifications

Standards and Service Limits

Engine Electrical

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1 - 3 - 4 - 2	
Spark plug	Type		NGK: ZFR6K-11 DENSO: KJ20DR-M11	
	Gap		1.0 - 1.1 mm (0.039 - 0.043 in.)	———
Ignition timing		At idle (check the ***red*** mark)	M/T (in neutral): 8 ± 2° BTDC at 650 ± 50 rpm (min^{-1})	
			A/T (in [**N**] or [**P**]): 8 ± 2° BTDC at 650 ± 50 rpm (min^{-1})	
Alternator	Output	At 13.5 V and normal engine temperature	90 A	
	Coil (rotor) resistance	at 20 C° (68 F°)	1.84 - 2.10 Ω	
	Slip ring O.D.		22.7 mm (0.89 in.)	21.7 mm (0.85 in.)
	Brush length		19.0 mm (0.75 in.)	5.0 mm (0.20 in.)
	Brush spring tension		3.3 - 4.1 N (0.34 - 0.42 kgf, 0.7 - 0.9 lbs)	
Starter (MITSUBA)	Output		1.2 kW, 1.6 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.) max.	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.)
Starter (DENSO)	Output		1.0 kW, 1.1 kW	
	Commutator mica depth		0.50 - 0.80 mm (0.020 - 0.031 in.)	0.2 mm (0.008 in.)
	Commutator runout		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)
	Commutator O.D.		28.0 mm (1.10 in.)	27.0 mm (1.06 in.)
	Brush length		14.0 - 14.5 mm (0.55 - 0.57 in.)	9.0 mm (0.35 in.)
	Brush spring tension		13.7 - 17.7 N (1.40 - 1.80 kgf, 3.09 - 3.98 lbs)	

Engine Assembly

Item	Measurement	Qualification	Standard or New	Service Limit
Compression	Pressure check at 250 (min^{-1}) rpm with wide open throttle. (See Design Specs for ratio)	Minimum	930 kPa (9.5 kgf/cm^2, 135 psi)	———
		Maximum variation	200 kPa (2.0 kgf/cm^2, 28 psi)	———

Cylinder Head

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		———	0.05 mm (0.002 in.)
	Height		103.95 - 104.05 mm (4.093 - 4.096 in.)	———
Camshaft	End play		0.05 - 0.20 mm (0.002 - 0.008 in.)	0.4 mm (0.02 in.)
	Camshaft-to-holder oil clearance	No.1 journal	0.030 - 0.069 mm (0.001 - 0.003 in.)	0.15 mm (0.006 in.)
		No.2, 3, 4, 5 journals	0.060 - 0.099 mm (0.002 - 0.004 in.)	0.15 mm (0.006 in.)
	Total runout		0.03 mm (0.001 in.) max.	0.04 mm (0.002 in.)
	Cam lobe height	Intake, primary	33.925 mm (1.3356 in.)	———
		Intake, secondary	29.638 mm (1.1668 in.)	———
		Exhaust	34.092 mm (1.3422 in.)	———
Valves	Clearance (cold)	Intake	0.21 - 0.25 mm (0.008 - 0.010 in.)	———
		Exhaust	0.28 - 0.32 mm (0.011 - 0.013 in.)	———
	Stem O.D.	Intake	5.475 - 5.485 mm (0.2156 - 0.2159 in.)	5.445 mm (0.214 in.)
		Exhaust	5.450 - 5.460 mm (0.2146 - 0.2150 in.)	5.42 mm (0.213 in.)
	Stem-to-guide clearance	Intake	0.030 - 0.055 mm (0.0012 - 0.0022 in.)	0.08 mm (0.003 in.)
		Exhaust	0.055 - 0.080 mm (0.0022 - 0.0031 in.)	0.11 mm (0.004 in.)
Valve seats	Width	Intake	1.25 - 1.55 mm (0.049 - 0.061 in.)	2.00 mm (0.079 in.)
		Exhaust	1.25 - 1.55 mm (0.049 - 0.061 in.)	2.00 mm (0.079 in.)
	Stem installed height	Intake	40.8 - 41.0 mm (1.606 - 1.614 in.)	———
		Exhaust	54.6 - 54.8 mm (2.150 - 2.157 in.)	———
Valve springs	Free length	Intake	47.61 mm (1.874 in.)	———
		Exhaust	49.64 mm (1.954 in.) 49.63 mm (1.954 in.)	———
Valve guides	I.D.	Intake	5.515 - 5.530 mm (0.2171 - 0.2177 in.)	5.55 mm (0.219 in.)
		Exhaust	5.515 - 5.530 mm (0.2171 - 0.2177 in.)	5.55 mm (0.219 in.)
	Installed height	Intake	15.2 - 16.2 mm (0.598 - 0.638 in.)	———
		Exhaust	15.5 - 16.5 mm (0.610 - 0.650 in.)	———
Rocker arms	Arm-to-shaft clearance	Intake	0.025 - 0.052 mm (0.0010 - 0.0020 in.)	0.08 mm (0.003 in.)
		Exhaust	0.018 - 0.056 mm (0.0007 - 0.0022 in.)	0.08 mm (0.003 in.)

Engine Block

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in.) max.	0.10 mm (0.004 in.)
	Bore diameter (K20A4, K20A5 engines)	A or I	86.010 - 86.020 mm (3.3862 - 3.3866 in.)	86.070 mm (3.3886 in.)
		B or II	86.000 - 86.010 mm (3.3858 - 3.3862 in.)	86.070 mm (3.3886 in.)
	Bore diameter (K24A1 engines)	A or I	87.010 - 87.020 mm (3.4256 - 3.4260 in.)	87.070 mm (3.4279 in.)
		B or II	87.000 - 87.010 mm (3.4252 - 3.4256 in.)	87.070 mm (3.4279 in.)
	Bore taper		———	0.05 mm (0.002 in.)
	Reboring limit		———	0.25 mm (0.01 in.)
Piston	Skirt O.D. at 11 mm (0.4 in.) from bottom of skirt (K20A4, K20A5 engines)	No letter or A	85.980 - 85.990 mm (3.3850 - 3.3854 in.)	85.930 mm (3.3831 in.)
		Letter B	85.970 - 85.980 mm (3.3846 - 3.3850 in.)	85.920 mm (3.3827 in.)
	Skirt O.D. at 13 mm (0.5 in.) from bottom of skirt (K24A1 engine)	No letter or A	86.980 - 86.990 mm (3.4244 - v3.4248 in.)	86.930 mm (3.4224 in.)
		Letter B	86.970 - 86.980 mm (3.4240 - 3.4244 in.)	86.920 mm (3.4220 in.)
	Clearance in cylinder		0.020 - 0.040 mm (0.0008 - 0.0016 in.)	0.05 mm (0.002 in.)
	Ring groove width	Top (K20A4, K20A5 engines)	1.220 - 1.230 mm (0.0481 - 0.0484 in.)	1.25 mm (0.049 in.)
		Top (K24A1 engine)	1.230 - 1.240 mm (0.0484 - 0.0488 in.)	1.26 mm (0.0450 in.)
		Second (K20A4, K20A5 engines)	1.220 - 1.230 mm (0.0481 - 0.0484 in.)	1.25 mm (0.049 in.)
		Second (K24A1 engine)	1.240 - 1.250 mm (0.0488 - 0.0492 in.)	1.270 mm (0.050 in.)
		Oil (K20A4, K24A1 engines)	2.005 - 2.025 mm (0.0789 - 0.0797 in.)	2.05 mm (0.081 in.)
		Oil (K20A5 engine)	2.805 - 2.825 mm (0.1104 - 0.1112 in.)	2.85 mm (0.112 in.)
Piston ring	Ring-to-groove clearance	Top (K20A4 engine)	0.035 - 0.060 mm (0.0014 - 0.0024 in.)	0.13 mm (0.005 in.)
		Top (K20A5 engine)	0.030 - 0.055 mm (0.0012 - 0.0022 in.)	0.13 mm (0.005 in.)
		Top (K24A1 engine)	0.045 - 0.070 mm (0.0018 - 0.0028 in.)	0.13 mm (0.005 in.)
		Second (K20A4, K20A5 engines)	0.030 - 0.055 mm (0.0012 - 0.0022 in.)	0.13 mm (0.005 in.)
		Second (K24A1 engine)	0.050 - 0.075 mm (0.0020 - 0.0030 in.)	0.13 mm (0.005 in.)
	Ring end gap	Top	0.20 - 0.35 mm (0.008 - 0.014 in.)	0.60 mm (0.024 in.)
		Second	0.40 - 0.55 mm (0.016 - 0.022 in.)	0.70 mm (0.028 in.)
		Oil (K20A4 (Except KY models) engine)	0.25 - 0.65 mm (0.010 - 0.026 in.)	0.75 mm (0.030 in.)
		Oil (K20A4 (KY model), K20A5, K24A1 engines)	0.20 - 0.70 mm (0.008 - 0.028 in.)	0.80 mm (0.031 in.)
Piston pin	O.D.		21.961 - 21.965 mm (0.8646 - 0.8648 in.)	21.953 mm (0.8643 in.)
	Pin-to-piston clearance		-0.005- +0.002 mm (-0.00020- + 0.00008 in.)	0.005 mm (0.0002 in.)
Connecting rod	Pin-to-rod clearance		0.005 - 0.015 mm (0.0002 - 0.0006 in.)	0.02 mm (0.0008 in.)
	Small-end bore diameter		21.970 - 21.976 mm (0.8650 - 0.8652 in.)	———
	Large-end bore diameter (Normal)	K20A4, K20A5 engines	48.0 mm (1.89 in.)	———
		K24A1 engine	51.0 mm (2.01 in.)	———
	End play installed on crankshaft		0.15 - 0.30 mm (0.006 - 0.012 in.)	0.40 mm (0.016 in.)

Item	Measurement	Qualification	Standard or New	Service Limit
Crankshaft	Main journal diameter	No. 1 journal No. 2 journal No. 4 journal No. 5 journal	54.984 - 55.008 mm (2.1648 - 2.1657 in.)	———
		No. 3 journal	54.976 - 55.000 mm (2.1644 - 2.1654 in.)	———
	Rod journal diameter	K20A4, K20A5 engines	44.976 - 45.000 mm (1.7707 - 1.7717 in.)	———
		K24A1 engine	47.976 - 48.000 mm (1.8888 - 1.8898 in.)	———
	Rod/main journal taper		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
	Rod/main journal out-of-round		0.005 mm (0.0002 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 (0.0012 in.) max.	0.04 mm (0.0016 in.)
Crankshaft bearings	Main bearing-to-journal oil clearance	No. 1 journal No. 2 journal No. 4 journal No. 5 journal	0.017 - 0.041 mm (0.0007 - 0.0016 in.)	0.050 mm (0.0020 in.)
		No. 3 journal	0.025 - 0.049 mm (0.0010 - 0.0019 in.)	0.055 mm (0.0022 in.)
	Rod bearing clearance		0.021 - 0.049 mm (0.0008 - 0.0019 in.)	0.060 mm (0.0024 in.)

Engine Lubrication

Item	Measurement	Qualification	Standard or New	Service Limit
Engine oil	Capacity		5.3 *l* (5.6 US qt, 4.7 lmp qt) for engine overhaul 4.2 *l* (4.4 US qt, 3.7 lmp qt) for oil change, including filter 4.0 *l* (4.2 US qt, 3.5 lmp qt) for oil change, without filter	
Oil pump	Inner-to-outer rotor clearance		0.02 - 0.16 mm (0.001 - 0.006 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor clearance		0.15 - 0.21 mm (0.006 - 0.008 in.)	0.23 mm (0.009 in.)
	Pump housing-to-rotor axial clearance		0.02 - 0.07 mm (0.001 - 0.003 in.)	0.12 mm (0.005 in.)
	Balancer shafts, journal diameter	No. 1 journal, front shaft	19.938 - 19.950 mm (0.7850 - 0.7854 in.)	19.92 mm (0.784 in.)
		No. 1 journal, rear shaft	23.938 - 23.950 mm (0.9424 - 0.9429 in.)	23.92 mm (0.942 in.)
		No. 2 journal, front and rear shaft	32.949 - 32.961 mm (1.2972 - 1.2977 in.)	32.93 mm (1.296 in.)
	Balancer shafts, journal taper		0.005 mm (0.0002 in.) max.	———
	Balancer shafts, end play	Front	0.070 - 0.135 mm (0.0028 - 0.0053 in.)	0.15 mm (0.006 in.)
		Rear	0.070 - 0.135 mm (0.0028 - 0.0053 in.)	0.15 mm (0.006 in.)
	Balancer shafts, shaft-to-bearing clearance	No. 1 journal, front shaft	0.050 - 0.082 mm (0.0020 - 0.0032 in.)	0.10 mm (0.004 in.)
		No. 1 journal, rear shaft	0.050 - 0.082 mm (0.0020 - 0.0032 in.)	0.10 mm (0.004 in.)
		No. 2 journal, front and rear shaft	0.060 - 0.120 mm (0.0024 - 0.0047 in.)	0.15 mm (0.006 in.)
	Balancer shaft bearings, I.D.	No. 1 journal, front shaft	20.000 - 20.020 mm (0.7874 - 0.7882 in.)	20.03 mm (0.789 in.)
		No. 1 journal, rear shaft	24.000 - 24.020 mm (0.9449 - 0.9457 in.)	24.03 mm (0.946 in.)
		No. 2 journal, front and rear shaft	33.021 - 33.069 mm (1.3000 - 1.3019 in.)	33.09 mm (1.303 in.)
	Relief valve, oil pressure with oil temperature at 80 °C (176 z°F)	At idle	70 kPa (0.7 kgf/cm^2, 10 psi) min.	
		at 3,000 rpm (min^{-1})	300 kPa (3.1 kgf/cm^2, 44 psi) min.	

Cooling

Item	Measurement	Qualification	Standard or New	Service Limit
Radiator	Coolant capacity for K20A4 and K20A5 engines (including engine, heater, hoses, and reservoir)	M/T: engine overhaul	7.1 L (7.5 US qt, 6.2 Imp qt)	
		M/T: coolant change	5.4 L (5.7 US qt, 4.8 Imp qt)	
		A/T: engine overhaul	7.0 *l* (7.4 US qt, 6.2 Imp qt)	
		A/T: coolant change	5.3 *l* (5.6 US qt, 4.7 Imp qt)	
	Coolant capacity for K24A1 engine (includes engine, heater, hoses, and reservoir)	M/T at engine overhaul	7.2 L (7.6 US qt, 6.3 Imp qt)	
		M/T at coolant change	5.5 L (5.8 US qt, 4.8 Imp qt)	
		A/T at engine overhaul	7.1 L (7.5 US qt, 6.2 Imp qt)	
		A/T at coolant change	5.4 L (5.7 US qt, 4.8 Imp qt)	
Reservoir	Coolant capacity		0.55 L (0.58 US qt, 0.48 Imp qt)	
Radiator cap	Opening pressure		93 - 123 kPa (0.95 - 1.25 kgf/cm^2, 14 - 18 psi)	
Thermostat	Opening temperature	Begins to open	76 - 80°C (169 - 176°F)	
		Fully open	90°C (194°F)	
	Valve lift at fully open		8.0 mm (0.31 in.) min.	
Radiator fan switch	Switching temperature	Turns ON	91 - 95°C (196 - 203°F)	
		Turns OFF	Subtract 3 - 8 °C (5 - 15 °F) from actual ON temperature	

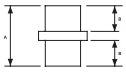
Fuel and Emissions

Item	Measurement	Qualification	Standard or New	Service Limit
Fuel pressure regulator	Pressure with fuel pressure gauge connected		338 - 348 kPa (3.45 - 3.55 kgf/cm^2, 49 - 50 psi)	
Fuel tank	Capacity		58 L (15 US gal, 13 Imp gal)	
Engine idle	Idle speed without a load	M/T in neutral	650 ± 50 rpm (min^{-1})	
		A/T in [**N**] or [**P**] position	650 ± 50 rpm (min^{-1})	
	Fast idle	M/T in neutral	1,600 ± 200 rpm (min^{-1})	
		A/T in [**N**] or [**P**] position	1,600 ± 200 rpm (min^{-1})	
	Idle CO %		0.1 max.	

Clutch

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch pedal	Height from floor		200 mm (7.87 in.)	———
	Stroke		125 - 135 mm (4.92 - 5.31 in.)	———
	Play		6 - 17 mm (0.24 - 0.67 in.)	———
	Disengagement height from floor		112 mm (4.41 in.) min.	———
Flywheel	Runout on clutch mating surface		0.05 mm (0.002 in.) max.	0.15 mm (0.006 in.)
Clutch disc	Rivet head depth		1.65 - 2.25 mm (0.065 - 0.089 in.)	0.7 mm (0.03 in.)
	Thickness		8.7 - 9.3 mm (0.34 - 0.37 in.)	6.0 mm (0.24 in.)
Pressure plate	Warpage		0.03 mm (0.001 in.) max.	0.15 mm (0.006 in.)
	Height of diaphragm spring fingers measured with special tool and feeler gauge		0.6 mm (0.02 in.) max.	0.8 mm (0.03 in.)

Manual Transmission and M/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Transmission fluid	Capacity	4WD at fluid change	1.9 L (2.0 US qt, 1.7 Imp qt)	
		4WD at overhaul	2.3 L (2.4 US qt, 2.0 Imp qt)	
		2WD at fluid change	1.9 L (2.0 US qt, 1.7 Imp qt)	
		2WD at overhaul	2.1 L (2.2 US qt, 1.8 Imp qt)	
Mainshaft	End play		0.11 - 0.17 mm (0.004 - 0.007 in.)	Adjust
	Diameter of bushing surface		20.80 - 20.85 mm (0.8189 - 0.8209 in.)	20.75 mm (0.817 in.)
	Diameter of distance collar		31.984 - 32.000 mm (1.2594 - 1.2598 in.)	31.93 mm (1.257 in.)
	Diameter of ball bearing contact area (clutch housing side)		27.977 - 27.990 mm (1.1015 - 1.1020 in.)	27.94 mm (1.100 in.)
	Diameter of needle bearing contact area		38.984 - 39.000 mm (1.5348 - 1.5354 in.)	38.93 mm (1.533 in.)
	Diameter of ball bearing contact area (transmission housing side)		27.987 - 28.000 mm (1.1019 - 1.1024 in.)	27.94 mm (1.100 in.)
	Runout		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)
Mainshaft 3rd, 4th and 5th gears	I.D.		44.009 - 44.025 mm (1.7326 - 1.7333 in.)	44.08 mm (1.735 in.)
	End play		0.06 - 0.16 mm (0.002 - 0.006 in.)	0.25 mm (0.010 in.)
	Thickness		23.92 - 23.97 mm (0.981 - 0.944 in.)	23.80 mm (0.937 in.)
Countershaft	Diameter of needle bearing contact area (clutch housing side) Diameter of distance collar contact area		35.000 - 35.015 mm (1.3780 - 1.3785 in.)	34.95 mm (1.376 in.)
			39.937 - 39.950 mm (1.5723 - 1.5728 in.)	39.88 mm (1.570 in.)
	Diameter of ball bearing contact area (transmission housing side)		30.020 - 30.033 mm (1.1819 - 1.1824 in.)	29.97 mm (1.180 in.)
	Run out		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)
	35 mm shim-to-bearing inner race clearance		0.04 - 0.10 mm (0.0016 - 0.0039 in.)	Adjust
Countershaft 1st gear	I.D.		52.010 - 52.029 mm (2.0476 - 2.0484 in.)	52.08 mm (2.050 in.)
	End play		0.06 - 0.16 mm (0.002 - 0.006 in.)	0.25 mm (0.010 in.)
	Thickness		22.92 - 22.97 mm (0.902 - 0.904 in.)	22.87 mm (0.900 in.)
Countershaft 2nd gear	I.D.		52.010 - 52.029 mm (2.0476 - 2.0484 in.)	52.08 mm (2.050 in.)
	End play		0.06 - 0.16 mm (0.002 - 0.006 in.)	0.25 mm (0.010 in.)
	Thickness		27.92 - 27.97 mm (1.099 - 1.101 in.)	27.87 mm (1.097 in.)
Countershaft 1st gear distance collar	I.D.		39.95 - 39.96 mm (1.5728 - 1.5732 in.)	39.97 mm (1.574 in.)
	O.D.		46.989 - 47.000 mm (1.8499 - 1.8504 in.)	46.94 mm (1.848 in.)
	Length		23.03 - 23.08 mm (0.907 - 0.909 in.)	———
Countershaft 2nd gear distance collar	I.D.		39.95 - 39.96 mm (1.5728 - 1.5732 in.)	39.97 mm (1.574 in.)
	O.D.		46.989 - 47.000 mm (1.8499 - 1.8504 in.)	46.94 mm (1.848 in.)
	Length		28.03 - 28.08 mm (1.104 - 1.106 in.)	———
Mainshaft 4th and 5th gears distance collar	I.D.		32.00 - 32.01 mm (1.2598 - 1.2602 in.)	32.02 mm (1.261 in.)
	O.D.		38.989 - 39.000 mm (1.5350 - 1.5354 in.)	38.94 mm (1.533 in.)
	Length	A	51.95 - 52.05 mm (2.045 - 2.049 in.)	———
		B	24.03 - 24.08 mm (0.946 - 0.947 in.)	———
MBS distance collar	I.D.		28.00 - 28.01 mm (1.102 - 1.103 in.)	28.02 mm (1.103 in.)
	Length		23.95 - 24.05 mm (0.943 - 0.947 in.)	———

(cont'd)

Manual Transmission and M/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Reverse idler gear	I.D.		20.016 - 20.043 mm (0.7880 - 0.7891 in.)	20.90 mm (0.832 in.)
	Gear-to-reverse gear shaft clearance		0.036 - 0.084 mm (0.0014 - 0.0033 in.)	0.16 mm (0.006 in.)
Synchro ring	Ring-to-gear clearance	Ring pushed against gear	0.70 - 1.49 mm (0.028 - 0.059 in.)	0.4 mm (0.016 in.)
Double cone synchro	Outer synchro ring-to-synchro cone clearance	Ring pushed against gear	0.70 - 1.19 mm (0.028 - 0.047 in.)	0.3 mm (0.012 in.)
	Synchro cone-to-gear clearance	Ring pushed against gear	0.50 - 1.04 mm (0.020 - 0.041 in.)	0.3 mm (0.012 in.)
	Outer synchro ring-to-gear cone clearance	Ring pushed against gear	0.95 - 1.68 mm (0.037 - 0.066 in.)	0.6 mm (0.024 in.)
Triple cone synchro	Outer synchro ring-to-synchro cone clearance	Ring pushed against gear	0.70 - 1.19 mm (0.028 - 0.047 in.)	0.3 mm (0.012 in.)
	Synchro cone-to-gear clearance	Ring pushed against gear	0.50 - 1.04 mm (0.020 - 0.041 in.)	0.3 mm (0.012 in.)
	Outer synchro ring-to-gear cone clearance	Ring pushed against gear	0.95 - 1.68 mm (0.037 - 0.066 in.)	0.6 mm (0.024 in.)
Shift fork	Finger thickness		7.4 - 7.6 mm (0.29 - 0.30 in.)	———
	Fork-to-synchro sleeve clearance		0.35 - 0.65 mm (0.014 - 0.026 in.)	1.0 mm (0.039 in.)
Reverse shift fork	Finger thinkness		13.4 - 13.7 mm (0.527 - 0.539 in.)	———
	Fork-to-reverse idler gear clearance		0.20 - 0.59 mm (0.007 - 0.024 in.)	1.2 mm (0.047 in.)
Shift arm	I.D.		13.973 - 14.000 mm (0.5501 - 0.5512 in.)	———
	Shift fork diameter at contact area		16.9 - 17.0 mm (0.665 - 0.669 in.)	———
	Shift arm-to-shift lever clearance		0.2 - 0.5 mm (0.008 - 0.020 in.)	0.60 mm (0.023 in.)
Select lever	Finger width		14.85 - 14.95 mm (0.585 - 0.589 in.)	———
Shift lever	Shaft-to-select lever clearance		0.05 - 0.25 mm (0.002 - 0.010 in.)	0.50 mm (0.020 in.)
	Groove (to select lever)		15.00 - 15.10 mm (0.591 - 0.594 in.)	———
	Shaft-to-shift arm clearance		0.013 - 0.07 mm (0.0005 - 0.003 in.)	0.1 mm (0.004 in.)
M/T differential carrier	Pinion shaft contact area I.D.		18.010 - 18.028 mm (0.7091 - 0.7098 in.)	———
	Carrier-to-pinion shaft clearance		0.027 - 0.057 mm (0.0011 - 0.0022 in.)	0.1 mm (0.004 in.)
	Driveshaft contact area I.D.		28.025 - 28.045 mm (1.1033 - 1.1041 in.)	———
M/T differential pinion gear	Backlash		0.05 - 0.15 mm (0.002 - 0.006 in.)	———
	I.D.		18.042 - 18.066 mm (0.7103 - 0.7113 in.)	———
	Pinion gear-to-pinion shaft clearance		0.059 - 0.095 mm (0.0023 - 0.0037 in.)	0.15 mm (0.006 in.)
80 mm shim	80 mm shim-to-bearing outer race clearance in transmission housing		0 - 0.10 mm (0 - 0.0039 in.)	Adjust
Transfer	Diameter of tapered roller bearing contact area (transfer shaft)		24.975 - 24.990 mm (0.9833 - 0.9838 in.)	24.92 mm (0.9811 in.)
	Diameter of tapered roller bearing contact area (transfer drive gear)		40.002 - 40.018 mm (1.5749 - 1.5755 in.)	38.95 mm (1.5335 in.)
	Diameter of tapered roller bearing contact area (driven gear side)		35.002 - 35.018 mm (1.3780 - 1.3786 in.)	34.95 mm (1.3760 in.)
	Diameter of tapered roller bearing contact area (splined side)		26.975 - 26.988 mm (1.0620 - 1.0625 in.)	26.92 mm (1.0598 in.)
	Transfer gear backlash		0.06 - 0.16 mm (0.0024 - 0.0063 in.)	Adjust
	Total starting torque		2.24 - 3.71 N·m (22.0 - 36.4 kgf·cm, 19.1 - 31.6 lbf·in)	Adjust

Automatic Transmission and A/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
ATF (Automatic Transmission Fluid)	Capacity Use Genuine Honda ATF-Z1	4WD at fluid change	3.1 L (3.3 US qt, 2.7 Imp qt)	
		2WD at fluid change	2.9 L (3.1 US qt, 2.6 Imp qt)	
		4WD at overhaul	7.2 L (7.6 US qt, 6.3 Imp qt)	
		2WD at overhaul	6.5 L (6.9 US qt, 5.7 Imp qt)	
ATF pressure	Line pressure	at 2,000 rpm (min^{-1}) in [**P**] or [**N**] position	900 - 960 kPa (9.2 - 9.8 kgf/cm^2, 130 - 140 psi)	850 kPa (8.7 kgf/cm^2, 120 psi)
	1st clutch pressure	at 2,000 rpm (min^{-1}) in 1st gear in [**1**] position	890 - 970 kPa (9.1 - 9.9 kgf/cm^2, 130 - 140 psi)	840 kPa (8.6 kgf/cm^2, 120 psi)
	2nd clutch pressure	at 2,000 rpm (min^{-1}) in 2nd gear in [**2**] position	890 - 970 kPa (9.1 - 9.9 kgf/cm^2, 130 - 140 psi)	840 kPa (8.6 kgf/cm^2, 120 psi)
	3rd clutch pressure	at 2,000 rpm (min^{-1}) in 3rd gear in [**D**] position	890 - 970 kPa (9.1 - 9.9 kgf/cm^2, 130 - 140 psi)	840 kPa (8.6 kgf/cm^2, 120 psi)
	4th clutch pressure	at 2,000 rpm (min^{-1}) in 4th gear in [**D**] position	890 - 970 kPa (9.1 - 9.9 kgf/cm^2, 130 - 140 psi)	840 kPa (8.6 kgf/cm^2, 120 psi)
Torque converter	Stall speed Check with vehicle on level ground		2,320 rpm (min^{-1})	2,170 - 2,470 rpm (min^{-1})
Clutch K20A4 and K20A5 engine models	Clutch end plate-to-top disc clearance	1st	———	1.23 - 1.43 mm (0.048 - 0.056 in.)
		2nd	———	0.75 - 0.95 mm (0.030 - 0.037 in.)
		3rd and 4th	———	0.73 - 0.93 mm (0.029 - 0.037 in.)
	Clutch return spring free length	1st and 2nd	50.8 mm (2.00 in.)	48.8 mm (1.92 in.)
		3rd and 4th	33.5 mm (1.32 in.)	31.5 mm (1.24 in.)
	Clutch disc thickness		1.94 mm (0.076 in.)	———
	Clutch plate thickness		2.00 mm (0.079 in.)	When discolored
	Clutch waved-plate phase difference		0.07 - 0.20 mm (0.003 - 0.008 in.)	0.05 mm (0.002 in)
	1st Clutch end plate thickness	Mark 1	2.3 mm (0.091 in.)	When discolored
		Mark 2	2.4 mm (0.094 in.)	When discolored
		Mark 3	2.5 mm (0.098 in.)	When discolored
		Mark 4	2.6 mm (0.102 in.)	When discolored
		Mark 5	2.7 mm (0.106 in.)	When discolored
		Mark 6	2.8 mm (0.110 in.)	When discolored
		Mark 7	2.9 mm (0.114 in.)	When discolored
		Mark 8	3.0 mm (0.118 in.)	When discolored
		Mark 9	3.1 mm (0.122 in.)	When discolored
		Mark 10	3.2 mm (0.126 in.)	When discolored
		Mark 11	3.3 mm (0.130 in.)	When discolored
		Mark 12	3.4 mm (0.134 in.)	When discolored
	2nd clutch end plate thickness	Mark 1	2.6 mm (0.102 in.)	When discolored
		Mark 2	2.7 mm (0.106 in.)	When discolored
		Mark 3	2.8 mm (0.110 in.)	When discolored
		Mark 4	2.9 mm (0.114 in.)	When discolored
		Mark 5	3.0 mm (0.118 in.)	When discolored
		Mark 6	3.1 mm (0.122 in.)	When discolored
		Mark 7	3.2 mm (0.126 in.)	When discolored
		Mark 8	3.3 mm (0.130 in.)	When discolored
		Mark 9	3.4 mm (0.134 in.)	When discolored

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Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch K20A4 and K20A5 engine models (cont'd)	3rd and 4th clutch end plate thickness	Mark 11	3.1 mm (0.122 in.)	When discolored
		Mark 12	3.2 mm (0.126 in.)	When discolored
		Mark 13	3.3 mm (0.130 in.)	When discolored
		Mark 14	3.4 mm (0.134 in.)	When discolored
		Mark 15	3.5 mm (0.138 in.)	When discolored
		Mark 16	3.6 mm (0.142 in.)	When discolored
		Mark 17	3.7 mm (0.146 in.)	When discolored
		Mark 18	3.8 mm (0.150 in.)	When discolored
		Mark 19	3.9 mm (0.154 in.)	When discolored
Clutch K24A1 engine model	Clutch end plate-to-top disc clearance	1st	———	1.28 - 1.48 mm (0.050 - 0.058 in.)
		2nd	———	0.85 - 1.05 mm (0.033 - 0.041 in.)
		3rd and 4th	———	0.73 - 0.93 mm (0.029 - 0.037 in.)
	Clutch return spring free length	1st and 2nd	50.8 mm (2.00 in.)	48.8 mm (1.92 in.)
		3rd and 4th	33.5 mm (1.32 in.)	31.5 mm (1.24 in.)
	Clutch disc thickness		1.94 mm (0.076 in.)	———
	Clutch plate thickness	1st	1.6 mm (0.063 in.)	When discolored
		2nd	2.0 mm (0.079 in.)	When discolored
		3rd and 4th	2.3 mm (0.091 in.)	When discolored
	Clutch waved-plate phase difference		0.07 - 0.20 mm (0.003 - 0.008 in.)	0.05 mm (0.002 in)
	1st Clutch end plate thickness	Mark 1	2.6 mm (0.102 in.)	When discolored
		Mark 2	2.7 mm (0.106 in.)	When discolored
		Mark 3	2.8 mm (0.110 in.)	When discolored
		Mark 4	2.9 mm (0.114 in.)	When discolored
		Mark 5	3.0 mm (0.118 in.)	When discolored
		Mark 6	3.1 mm (0.122 in.)	When discolored
		Mark 7	3.2 mm (0.126 in.)	When discolored
		Mark 8	3.3 mm (0.130 in.)	When discolored
		Mark 9	3.4 mm (0.134 in.)	When discolored
	2nd clutch end plate thickness	Mark 1	2.6 mm (0.102 in.)	When discolored
		Mark 2	2.7 mm (0.106 in.)	When discolored
		Mark 3	2.8 mm (0.110 in.)	When discolored
		Mark 4	2.9 mm (0.114 in.)	When discolored
		Mark 5	3.0 mm (0.118 in.)	When discolored
		Mark 6	3.1 mm (0.122 in.)	When discolored
		Mark 7	3.2 mm (0.126 in.)	When discolored
		Mark 8	3.3 mm (0.130 in.)	When discolored
		Mark 9	3.4 mm (0.134 in.)	When discolored
	3rd and 4th clutch end plate thickness	Mark 1	2.1 mm (0.083 in.)	When discolored
		Mark 2	2.2 mm (0.087 in.)	When discolored
		Mark 3	2.3 mm (0.091 in.)	When discolored
		Mark 4	2.4 mm (0.094 in.)	When discolored
		Mark 5	2.5 mm (0.098 in.)	When discolored
		Mark 6	2.6 mm (0.102 in.)	When discolored
		Mark 7	2.7 mm (0.106 in.)	When discolored
		Mark 8	2.8 mm (0.110 in.)	When discolored
		Mark 9	2.9 mm (0.114 in.)	When discolored

Item	Measurement	Qualification	Standard or New	Service Limit
Mainshaft	Diameter of needle bearing contact area	at stator shaft	22.984 - 23.000 mm (0.905 - 0.906 in.)	When worn or damaged
		at 3rd gear	51.975 - 51.991 mm (2.046 - 2.047 in.)	When worn or damaged
		at 4th gear collar	33.975 - 33.991 mm (1.3376 - 1.3382 in.)	When worn or damaged
	I.D. of gears	3rd gear	57.000 - 57.019 mm (2.2441 - 2.2448 in.)	When worn or damaged
		4th gear	40.000 - 40.016 mm (1.5748 - 1.5754 in.)	When worn or damaged
	End play of gears	3rd gear	0.03 - 0.31 mm (0.001 - 0.012 in.)	———
		4th gear	0.1 - 0.212 mm (0.004-0.008 in.)	———
	41 x 68 mm thrust washer thickness	No. 1	6.35 mm (0.250 in.)	When worn or damaged
		No. 2	6.40 mm (0.252 in.)	When worn or damaged
		No. 3	6.45 mm (0.254 in.)	When worn or damaged
		No. 4	6.50 mm (0.256 in.)	When worn or damaged
		No. 5	6.55 mm (0.258 in.)	When worn or damaged
		No. 6	6.60 mm (0.260 in.)	When worn or damaged
	4th gear collar length		66.3 - 66.4 mm (2.610 - 2.614 in.)	———
	Length of 4th gear collar flange from end		19.15 - 19.30 mm (0.754 - 0.760 in.)	When worn or damaged
	Sealing ring thickness		1.91 - 1.97 mm (0.0752 - 0.0776 in.)	1.86 (0.0732 in.)
	Width of sealing ring groove		2.025 - 2.060 mm (0.0797 - 0.0811 in.)	2.080 mm (0.0819 in.)
	Clutch feed pipe O.D.		7.97 - 7.98 mm (0.3138 - 0.3142 in.)	7.95 mm (0.313 in.)
	Clutch feed pipe bushing I.D.		8.000 - 8.015 mm (0.3150 - 0.3156 in.)	8.030 mm (0.3161 in.)
Countershaft	Diameter of needle bearing contact area	at torque converter housing	36.005-36.015 mm (1.4175 - 1.4179 in.)	When worn or damaged
		at 4th gear collar	37.982 - 37.996 mm (1.4954 - 1.4959 in.)	When worn or damaged
		at reverse gear collar	39.979 - 40.000 mm (1.5740 - 1.5748 in.)	When worn or damaged
	I.D. of gears	4th gear	43.000 - 43.016 mm (1.6929 - 1.6935 in.)	When worn or damaged
		Reverse gear	46.000 - 46.016 mm (1.8110 - 1.8116 in.)	When worn or damaged
	End play of gears	1st gear	0.10 - 0.42 mm (0.004 - 0.017 in.)	———
		2nd gear	0.10 - 0.42 mm (0.004 - 0.017 in.)	———
		3rd gear	0.10 - 0.42 mm (0.004 - 0.017 in.)	———
		4th gear	0.1 - 0.2 mm (0.004 - 0.008 in.)	———
		Reverse gear	0.10 - 0.25 mm (0.004 - 0.010 in.)	———
	4th gear collar length		24.00 - 24.05 mm (0.945 - 0.947 in.)	———
	Distance collar length		74.25 - 74.30 mm (2.923 - 2.925 in.)	———
	Reverse selector hub width		25.45 - 25.65 mm (1.002 - 1.010 in.)	———
	Reverse selector hub O.D.		55.87 - 55.90 mm (2.200 - 2.201 in.)	When worn or damaged

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Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft	Diameter of needle bearing contact area	at 1st gear	39.986 - 39.999 mm (1.5742 - 1.5748 in.)	When worn or damaged
		at 2nd gear	39.986 - 39.999 mm (1.5742 - 1.5748 in.)	When worn or damaged
	I.D. of gears	1st gear	47.000 - 47.016 mm (1.8504 - 1.8510 in.)	When worn or damaged
		2nd gear	46.000 - 46.016 mm (1.8110 - 1.8116 in.)	When worn or damaged
	End play of gears	1st gear	0.07 - 0.15 mm (0.003 - 0.006 in.)	———
		2nd gear	0.04 - 0.12 mm (0.002 - 0.005 in.)	———
	37 x 58 mm thrust washer thickness	No. 1	3.900 mm (0.154 in.)	When worn or damaged
		No. 2	3.925 mm (0.155 in.)	When worn or damaged
		No. 3	3.950 mm (0.156 in.)	When worn or damaged
		No. 4	3.975 mm (0.156 in.)	When worn or damaged
		No. 5	4.000 mm (0.157 in.)	When worn or damaged
		No. 6	4.025 mm (0.158 in.)	When worn or damaged
		No. 7	4.050 mm (0.159 in.)	When worn or damaged
		No. 8	4.075 mm (0.160 in.)	When worn or damaged
		No. 9	4.100 mm (0.161 in.)	When worn or damaged
		No. 10	4.125 mm (0.162 in.)	When worn or damaged
		No. 11	4.150 mm (0.163 in.)	When worn or damaged
		No. 12	4.175 mm (0.164 in.)	When worn or damaged
		No. 13	4.200 mm (0.165 in.)	When worn or damaged
		No. 14	4.225 mm (0.166 in.)	When worn or damaged
		No. 15	4.250 mm (0.167 in.)	When worn or damaged
		No. 16	4.275 mm (0.168 in.)	When worn or damaged
		No. 17	4.300 mm (0.169 in.)	When worn or damaged
		No. 18	4.325 mm (0.170 in.)	When worn or damaged
		No. 19	4.350 mm (0.171 in.)	When worn or damaged
		No. 20	4.375 mm (0.172 in.)	When worn or damaged
	40 x 51.5 mm thrust washer thickness	No. 1	4.80 mm (0.189 in.)	When worn or damaged
		No. 2	4.85 mm (0.191 in.)	When worn or damaged
		No. 3	4.90 mm (0.193 in.)	When worn or damaged
		No. 4	4.95 mm (0.195 in.)	When worn or damaged
		No. 5	5.00 mm (0.197 in.)	When worn or damaged
		No. 6	5.05 mm (0.199 in.)	When worn or damaged
	27 x 45 x 44 mm collar length		43.9 - 44.0 mm (1.728 - 1.732 in.)	———
	Sealing ring thickness		1.91 - 1.97 mm (0.0752 - 0.0776 in.)	1.86 (0.0732 in.)
	Width of sealing ring groove		2.025 - 2.060 mm (0.0797 - 0.0811 in.)	2.080 mm (0.0819 in.)
	Clutch feed pipe O.D.		7.97 - 7.98 mm (0.3138 - 0.3142 in.)	7.95 mm (0.3130 in.)
	Clutch feed pipe bushing O.D.		8.000 - 8.015 mm (0.3150 - 0.3156 in.)	8.030 mm (0.3161 in.)
	ATF guide of sealing ring contact I.D.		29.000 - 29.021 mm (1.1417 - 1.1426 in.)	29.05 mm (1.144 in.)

Item	Measurement	Qualification	Standard or New	Service Limit
Idler gear shaft	Diameter of needle bearing contact area	End cover side	32.003 - 32.013 mm (1.2600 - 1.2604 in.)	When worn or damaged
	Thickness of cotters		1.39 - 1.42 mm (0.0547 - 0.0559 in.)	———
Reverse idler gear	Reverse idler gear shaft diameter at needle bearing contact area		14.99 - 15.00 mm (0.5902 - 0.5906 in.)	When worn or damaged
	I.D.		20.007 - 20.020 mm (0.7877 - 0.7882 in.)	When worn or damaged
	I.D. of reverse idler gear shaft contact area on transmission housing		14.800 - 14.818 mm (0.5827 - 0.5834 in.)	———
	I.D. of reverse idler gear shaft holder		14.800 - 14.824 mm (0.5827 - 0.5836 in.)	When worn or damaged
ATF pump	ATF pump thrust clearance		0.03 - 0.05 mm (0.001 - 0.002 in.)	0.07 mm (0.003 in.)
	ATF pump gear-to-body clearance	Drive gear	0.210 - 0.265 mm (0.08 - 0.010 in.)	———
		Driven gear	0.070 - 0.125 mm (0.003 - 0.005 in.)	———
	ATF pump driven gear I.D.		14.016 - 14.034 mm (0.5518 - 0.5525 in.)	When worn or damaged
	ATF pump driven gear shaft O.D.		13.980 - 13.990 mm (0.5504 - 0.5508 in.)	When worn or damaged
Stator shaft	Needle bearing contact I.D.	Torque converter side	27.000 - 27.021 mm (1.063 - 1.064 in.)	When worn or damaged
		ATF pump side	29.000 - 29.021 mm (1.1417 - 1.1426 in.)	———
	Sealing ring contact area I.D.		29.000 - 29.021 mm (1.1417 - 1.1426 in.)	29.05 mm (1.144 in.)
Reverse shift fork	Fork finger thickness		5.90 - 6.00 mm (0.232 - 0.236 in.)	5.40 mm (0.213 in.)
Park gear and pawl			———	When worn or damaged
Servo body	Shift fork shaft bore I.D.		14.000 - 14.010 mm (0.5512 - 0.5516 in.)	———
	Shift fork shaft valve bore I.D.		37.000 - 37.039 mm (1.4567 - 1.4582 in.)	37.045 mm (1.4585 in.)
Regulator valve body	Sealing ring contact I.D.		29.000 - 29.021 mm (1.1417 - 1.1426 in.)	29.05 mm (1.144 in.)

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coil
Main valve body springs (see page 14-209)	Shift valve A spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	Shift valve B spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	Shift valve C spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9
	Relief valve spring		1.0 mm (0.039 in.)	9.6 mm (0.378 in.)	34.1 mm (1.343 in.)	10.2
	Lock-up control valve spring		0.65 mm (0.026 in.)	7.1 mm (0.280 in.)	23.1 mm (0.909 in.)	12.7
	Cooler check valve spring		0.9 mm (0.035 in.)	6.6 mm (0.260 in.)	26.5 mm (1.043 in.)	12.6
	Servo control valve spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	35.7 mm (1.406 in.)	17.2
	Shift valve E spring		0.8 mm (0.031 in.)	5.6 mm (0.220 in.)	28.1 mm (1.106 in.)	15.9

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Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coil
Regulator valve body springs (see page 14-211)	Stator reaction spring		4.5 mm (0.177 in.)	35.4 mm (1.394 in.)	30.3 mm (1.193 in.)	1.92
	Regulator valve spring A		1.9 mm (0.075 in.)	14.7 mm (0.579 in.)	80.6 mm (3.173 in.)	16.1
	Regulator valve spring B		1.6 mm (0.063 in.)	9.2 mm (0.362 in.)	44.0 mm (1.732 in.)	12.5
	Torque converter check valve spring		1.2 mm (0.047 in.)	8.6 mm (0.339 in.)	33.8 mm (1.331 in.)	12.2
	Lock-up shift valve spring		1.0 mm (0.039 in.)	6.6 mm (0.260 in.)	35.5 mm (1.398 in.)	18.2
	3rd accumulator spring		2.5 mm (0.098 in.)	14.6 mm (0.575 in.)	29.9 mm (1.177 in.)	4.9
	1st accumulator spring A		2.4 mm (0.094 in.)	18.6 mm (0.732 in.)	49.0 mm (1.929 in.)	7.1
	1st accumulator spring B		2.3 mm (0.091 in.)	12.2 mm (0.480 in.)	31.5 mm (1.240 in.)	6.6
Servo body springs (see page 14-212)	CPB valve spring		0.7 mm (0.028 in.)	9.1 mm (0.358 in.)	32.3 mm (1.272 in.)	8.6
	4th accumulator spring B		2.3 mm (0.091 in.)	12.2 mm (0.480 in.)	31.5 mm (1.240 in.)	6.6
	4th accumulator spring A		2.4 mm (0.094 in.)	18.6 mm (0.732 in.)	49.0 mm (1.929 in.)	7.1
	2nd accumulator spring B		2.0 mm (0.079 in.)	10.6 mm (0.417 in.)	34.0 mm (1.339 in.)	8.0
	2nd accumulator spring A		2.2 mm (0.087 in.)	16.6 mm (0.654 in.)	48.2 mm (1.898 in.)	8.5
	3th accumulator spring		2.5 mm (0.098 in.)	14.6 mm (0.575 in.)	29.9 mm (1.177 in.)	4.9

Item	Measurement	Qualification	Standard or New	Service Limit
A/T differential carrier	Pinion shaft contact area I.D.		18.000 - 18.025 mm (0.709 - 0.710 in.)	———
	Carrier-to-pinion shaft clearance		0.013 - 0.054 mm (0.001 - 0.002 in.)	0.1 mm (0.004 in.)
	Driveshaft contact area I.D.		28.015 - 28.045 mm (1.103 - 1.104 in.)	———
	Carrier-to-driveshaft clearance		0.035 - 0.086 mm (0.001 - 0.003 in.)	0.12 mm (0.005 in.)
	Intermediate shaft contact I.D.		28.015 - 28.045 mm (1.103 - 1.104 in.)	———
	Carrier-to-intermediate shaft clearance		0.065 - 0.111 mm (0.003 - 0.004 in.)	0.12 mm (0.005 in.)
	Carrier bearing starting torque (preload)	For new bearing	2.7 - 3.9 N·m (28 - 40 kgf·cm, 24 - 35 lbf·in)	Adjust
		For bearing reused	2.5 - 3.6 N·m (25 - 37 kgf·cm, 22 - 32 lbf·in)	Adjust
	Final driven gear backlash	(references)	0.087 - 0.146 mm (0.003 - 0.006 in.)	0.2 mm (0.008 in.)
A/T differential pinion gear	Backlash		0.05 - 0.15 mm (0.002 - 0.006 in.)	———
	I.D.		18.042 - 18.066 mm (0.7103 - 0.7113 in.)	———
	Pinion gear-to-pinion shaft clearance		0.055 - 0.095 mm (0.0022 - 0.0037 in.)	0.12 mm (0.005 in.)

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Transfer (4WD)	Diameter of transfer shaft on bearing contact area	at roller bearing	38.485 - 38.500 mm (1.5152 - 1.5157 in.)	38.43 mm (1.513 in.)
		at tapered roller bearing	24.975 - 24.990 mm (0.9833 - 0.9839 in.)	24.92 mm (0.9811 in.)
	Transfer drive gear diameter	at tapered roller bearing	40.002 - 40.018 mm (1.5749 - 1.5755 in.)	38.95 mm (1.533 in.)
	Diameter of transfer driven gear on tapered roller bearing contact area	at driven gear side	35.002 - 35.018 mm (1.3780 - 1.3787 in.)	34.95 mm (1.376 in.)
		at shaft splines side	26.975 - 26.988 mm (1.0620 - 1.0625 in.)	26.92 mm (1.060 in.)
	Transfer gear backlash		0.06 - 0.16 mm (0.002 - 0.006 in.)	Adjust
	Total starting torque (Preload)		2.16 - 3.57 N·m (22.0 - 36.4 kgf·cm, 19.2 - 31.6 lbf·in)	Adjust

Rear Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Differential fluid	Capacity Use genuine Honda DPSF	at fluid change	1.0 L (1.1 US qt, 0.9 Imp qt)	
		at overhaul	1.2 L (1.3 US qt, 1.1 Imp qt)	

Steering

Item	Measurement	Qualification	Standard or New	Service Limit
Steering wheel	Rotational play measured at outside edge with engine running		0 - 10 mm (0 - 0.39 in.)	
	Starting load measured at outside edge with engine running		29 N (3.0 kgf, 6.6 lbs)	
Gearbox	Angle of rack guide screw loosened from locked position		20° Max.	
Pump	Output pressure with shut-off valve closed		6,900 - 7,500 kPa (70 - 77 kgf/cm^2, 1,000 - 1,100 psi)	
Power steering fluid	Capacity Use genuine Honda power steering fluid	Fluid change	0.2 L (0.21 US qt, 0.18 Imp qt)	
		System overhaul	0.72 L (0.74 US qt, 0.63 Imp qt)	
Drive belt			Auto adjust	

Suspension

Item	Measurement	Qualification	Standard or New	Service Limit
Wheel alignment	Camber	Front	0°00' ± 45'	
		Rear	- 1°00' ± 45'	
	Caster	Front	1°45' ± 1°	
	Total Toe	Front	0±2 mm (0 ± 0.08 in.)	
		Rear	IN 2^{+2}_{-1} mm ($0.08^{+0.08}_{-0.04}$ in.)	
	Front wheel turning angle	Inside wheel	39°45' ± 2°	
		Outside wheel	32°30' ± 1° (Reference)	
Wheel	Aluminum wheel runout	Axial	0 - 0.7 mm (0 - 0.03 in.)	2.0 mm (0.08 in.)
		Radial	0 - 0.7 mm (0 - 0.03 in.)	1.5 mm (0.06 in.)
	Steel wheel runout	Axial	0 - 1.0 mm (0 - 0.04 in.)	2.0 mm (0.08 in.)
		Radial	0 - 1.0 mm (0 - 0.04 in.)	1.5 mm (0.06 in.)
Wheel bearing	End play	Front	0 - 0.05 mm (0 - 0.002 in.)	
		Rear	0 - 0.05 mm (0 - 0.002 in.)	

Brakes

Item	Measurement	Qualification	Standard or New	Service Limit
Parking brake lever	Distance travelled when lever pulled with 196 N (20 kgf, 44 lbs) of force		5 - 9 clicks	
Brake pedal	Pedal height (carpet removed)		173 mm (6 13/16 in.)	
	Free play		1 - 5 mm (0.04 - 0.2 in.)	
Master cylinder	Piston-to-pushrod clearance		0 - 0.4 mm (0 - 0.02 in.)	
Brake disc	Disc thickness	Front	23.0 mm (0.91 in.)	21.0 mm (0.83 in.)
		Rear	9.0 mm (0.35 in.)	7.0 mm (0.28 in.)
	Disc runout	Front and rear	———	0.10 mm (0.004 in.)
	Disc parallelism	Front and rear	———	0.015 mm (0.0006 in.)
	Pad thickness	Front	11.0 mm (0.43 in.)	1.6 mm (0.06 in.)
		Rear	9.0 mm (0.35 in.)	1.0 mm (0.04 in.)
Rear parking brake	Brake drum I.D.		170 mm (6.69 in.)	171 mm (6.73 in.)
	Brake shoe lining thickness		3.2 mm (0.13 in.)	1.0 mm (0.04 in.)
Brake booster	Master cylinder fluid pressure with pressing brake pedal with 98 N (10 kgf, 22 lbs)	at 0 kPa (0 mmHg, 0 in.Hg) of vacuum	1,040 kPa (10.8 kgf/cm^2, 151 psi)	
		at 40.0 kPa (300 mmHg, 11.8 in.Hg) of vacuum	7,129 kPa (72.7 kgf/cm^2, 1,030 psi)	
		at 66.7 kPa (500 mmHg, 19.7 in.Hg) of vacuum	11,248 kPa (114.7 kgf/cm^2, 1,631 psi)	

Air Conditioning

Item	Measurement	Qualification	Standard or New	Service Limit
Refrigerant	Type		HFC-134 a (R-134 a)	
	Capacity of system		650 - 700 g (22.9 - 24.7 oz)	
Refrigerant oil	Type		ND-OIL8	
	Capacity of components	Condenser	50 mL (1 2/3 fl oz, 1.3 Imp oz)	
		Evaporator	40 mL (1 1/3 fl oz, 1.4 Imp oz)	
		Each line and hose	10 mL (1/3 fl oz, 0.4 Imp oz)	
		Compressor	160 - 175 mL (5 2/5 - 6 fl oz, 5.6 - 6.2 Imp oz)	
Compressor	Starter coil resistance	at 60°C (20°F)	3.9 - 4.3 Ω	
	Pulley-to-pressure plate clearance		0.35 - 0.6 mm (0.014 - 0.024 in.)	

Design Specifications

Item	Measurement	Qualification	Specification
Dimensions	Overall length	European models	4,575 mm (180.1 in.)
		KQ (RVi)	4,535 mm (178.5 in.)
		KQ (RVSi)	4,565 mm (179.7 in.)
		KH (South America)	4,535 mm (178.5 in.)
		KH (China)	4,570 mm (179.9 in.)
		KK (LX)	4,535 mm (178.5 in.)
		KK (EX)	4,550 mm (179.1 in.)
		KM	4,550 mm (179.1 in.)
		KU	4,535 mm (178.5 in.)
		KY (RVi)	4,555 mm (179.3 in.)
		KY (RVSi)	4,570 mm (179.9 in.)
	Overall width		1,780 mm (70.1 in.)
	Overall height		1,710 mm (67.3 in.)
	Wheelbase		2,620 mm (103.1 in.)
	Track	Front	1,535 mm (60.4 in.)
		Rear	1,540 mm (60.6 in.)
	Seating capacity		five (5)
Weight	Curb Weight	European models	1,458 - 1,542 kg (3,214 - 3,399 lbs)
		KQ	1,475 - 1,515 kg (3,252 - 3,340 lbs)
		KH (China)	1,495 - 1,520 kg (3,296 - 3,351 lbs)
		KY	1,470 - 1,505 kg (3,241 - 3,318 lbs)
		KU	1,480 - 1,495 kg (3,263 - 3,296 lbs)
		KH (South America), KK, KM, KN,KP KT, KW	1,440 - 1,510 kg (3,175 - 3,329 lbs)
	Max. permissible Weight	M/T	1,930 kg (4,255 lbs)
		A/T	1,960 kg (4,321 lbs)
	Max. Loaded Vehicle Weight (ADR)	M/T	1,910 kg (4,211 lbs)
		A/T	1,940 kg (4,277 lbs)

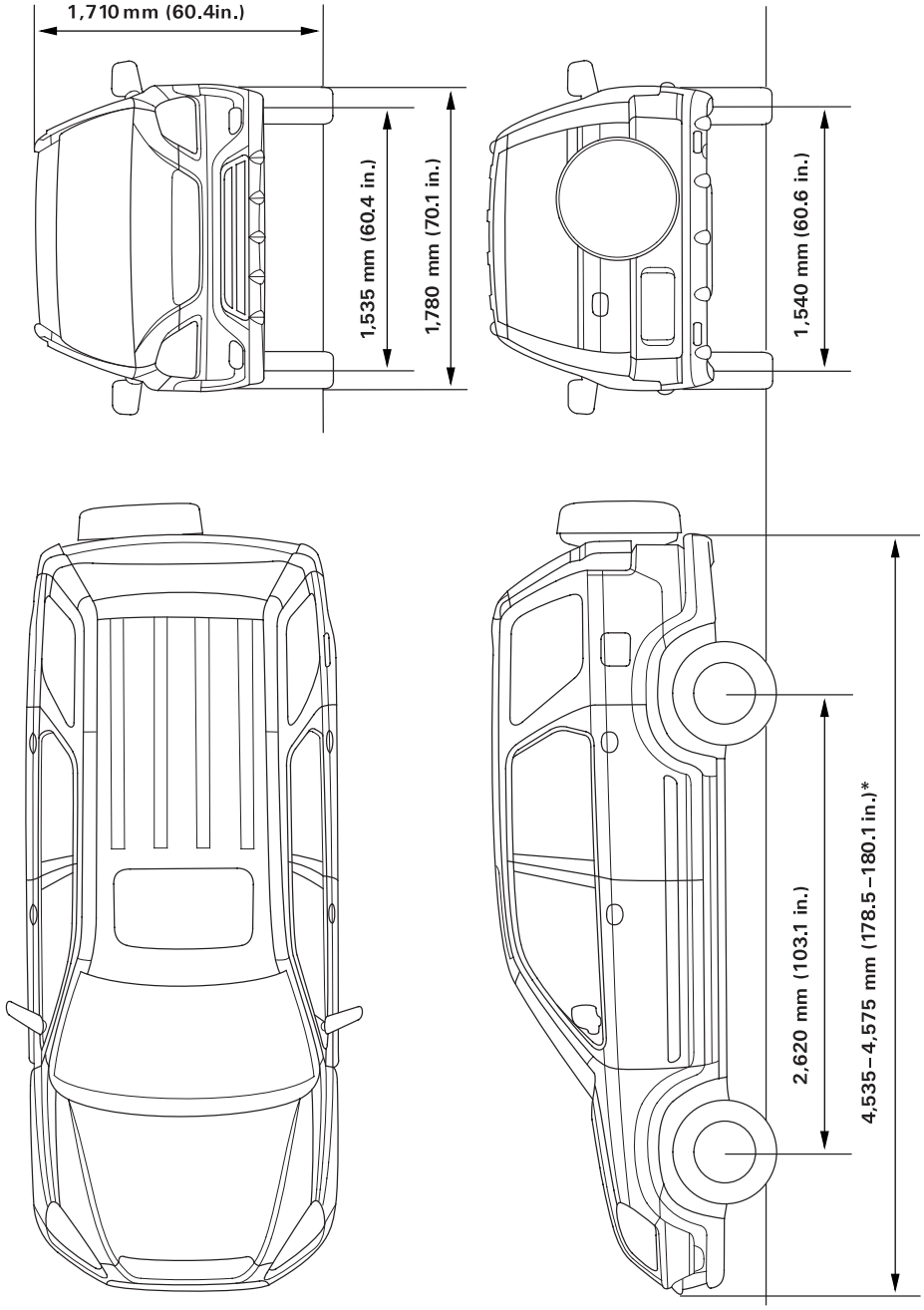
Item	Measurement	Qualification	Specification
Engine	Type		Water cooled, 4-stroke DOHC VTEC engine
	Cylinder arrangement		Inline 4-cylinder, transverse
	Bore and stroke	K20A4, K20A5 engines	86 X 86 mm (3.39 X 3.39 in.)
		K24A1 engine	87 X 99 mm (3.43 X 3.90 in.)
	Displacement	K20A4, K20A5 engines	1,998 cm^3 (122 cu in.)
		K24A1 engine	2,354 cm^3 (143 cu in.)
	Compression ratio	K20A4, K20A5 engines	9.8
		K24A1 engine	9.6
	Valve train		Chain drive, DOHC VTEC 4 valves per cylinder
	Lubrication system		Forced, wet sump, with trochoid pump
	Oil pump displacement	at 6,000 engine rpm (min^{-1})	54.3 / (57.4 US qt, 47.8 Imp qt)/minute
	Water pump displacement	at 6,000 engine rpm (min^{-1})	82 / (87 US qt, 72 Imp qt)/minute
	Fuel required	K20A4 engine European models	UNLEADED gasoline with 95 research octane number or higher
		K20A4 engine Except European models	UNLEADED gasoline with 91 research octane number or higher
		K20A5 engine KP, KT models	LEADED gasoline with 91 research octane number or higher
		K20A5 engine KW model	LEADED gasoline with 88 research octane number or higher
		K24A1 engine	UNLEADED gasoline with 91 research octane number or higher
Starter	Type		Gear reduction
	Normal output	K20A4 (KZ models) engine	1.0 kW
		K20A4 (KE, KG, KR, KS models) engine	1.1 kW
		K20A4 (Except KE, KG, KR, KS, KZ models), K20A5 engines	1.2 kW
		K24A1 engine	1.6 kW
	Nominal voltage		12 V
	Hour rating		30 seconds
	Direction of rotation		Clockwise as viewed from gear end
Clutch	Clutch type	M/T	Single plate dry, diaphragm spring
		A/T	3-element torque converter with lock-up clutch
	Clutch friction material surface area	M/T	174 cm^2 (26.97 sq in.)
Z2C1, Z2M1 Manual Transmission	Type		Synchronized, 5-speed forward, 1 reverse
	Primary reduction		Direct 1:1
	Gear ratio	1st	3.533
		2nd	1.769
		3rd	1.212
		4th	0.921
		5th	0.714
		Reverse	3.583
	Transfer gear	Type	Hypoid gear
		Gear ratio	0.904
	Differential final gear	Type	Single helical gear
		Gear ratio	5.062

Item	Measurement	Qualification	Specification
Z2M3 Manual Transmission	Type		Synchronized, 5-speed forward, 1 reverse
	Primary reduction		Direct 1:1
	Gear ratio	1st	3.533
		2nd	1.880
		3rd	1.212
		4th	0.921
		5th	0.738
		Reverse	3.583
	Transfer gear	Type	Hypoid gear
		Gear ratio	0.904
	Differential final gear	Type	Single helical gear
		Gear ratio	4.764
Automatic Transmission	Type		Electronically controlled automatic, 4-speed forward, 1 reverse
	Primary reduction		Direct 1:1
	Gear ratio K20A4, K20A5 engine models	1st	2.684
		2nd	1.534
		3rd	1.081
		4th	0.695
		Reverse	2.000
	Gear ratio K24A1 engine model	1st	2.684
		2nd	1.534
		3rd	1.974
		4th	0.638
		Reverse	2.000
	Transfer gear	Type	Hypoid gear
		Gear ratio	0.904
	Differential final gear	Type	Single helical gear
		Gear ratio K20A4, K20A5 engine models	4.562
		Gear ratio K24A1 engine model	4.437
Steering	Type		Power-assisted rack and pinion
	Overall ratio		15.06
	Turns, lock-to-lock		2.64
	Steering wheel diameter		360 mm (14.2 in)
Suspension	Type	Front	Independent strut with stabilizer, coil spring
		Rear	Double wishbone
	Shock absorber	Front	Telescopic, hydraulic, nitrogen gas-filled
		Rear	Telescopic, hydraulic, nitrogen gas-filled
Wheel Alignment	Camber	Front	0°
		Rear	-1°
	Caster	Front	1°45'
	Total toe	Front	0 mm (0 in.)
		Rear	In 2 mm (1/16 in.)
Brakes	Type of service brake	Front	Power-assisted self-adjusting ventilated disc
		Rear	Power-assisted self-adjusting solid disc
	Type of parking brake		Mechanical actuating, rear wheels
	Pad friction surface area	Front	42 cm^2 (6.5 sq in.) x 2
		Rear	21 cm^2 (3.3 sq in.) x 2
	Shoe friction surface area	Rear	49.0 cm^2 (7.60 sq in.) x 2

(cont'd)

Item	Measurement	Qualification	Specification
Tyres	Size of front and rear tires		205/70R15 95S
	Size of spare tire	Regular type	205/70R15 95S
		Compact type	T145/80 D16
Air Condition-ing	Compressor	Type	Scroll
		Number of cylinder	———
		Capacity	85.7 m/ (5.23 cu in.)/rev.
		Maximum speed	12,000 rpm (min^{-1})
		Lubricant capacity	130 m/ (4 1/3 fl oz)
		Lubricant type	ND-OIL8
	Condenser	Type	Corrugated fin
	Evaporator	Type	Corrugated fin
	Blower	Type	Sirocco fan
		Motor type	220 W/12 V
		Speed control	Infinite variable
		Maximum capacity	480 m^3 (16.900 cu ft)/h
	Temperature control		Air-mix type
	Compressor clutch	Type	Dry, single plate, poly-V belt drive
		Electrical power consumption at 20 °C (68 °F)	42 W maximum at 12 V
	Refrigerant	Type	HFC-134a (R-134a)
		Capacity	650 - 700 g (22.9 - 24.7 oz)
Electrical Ratings	Battery		12 V - 36 AH/5 HR, 12 V - 45 AH/20 HR
	Starter		12 V - 1.2 kW, 1.6 kW
	Alternator		12 V - 90A
	Fuses	Under-hood fuse relay box	100 A, 40 A, 30 A, 20 A, 15 A, 10 A
		Under-dash fuse relay box	30A, 20 A, 15 A, 10 A, 7.5 A
	Light bulbs	Headlight high beam	12 V - 60 W
		Headlight low beam	12 V - 55 W
		Front turn signal lights	12 V - 21 W
		Front side marker lights	12 V - 5 W
		Front parking lights	12 V - 5 W
		Rear turn signal lights	12 V - - 21 W
		Side turn signal lights	12 V - 5 W
		Brake/taillights	12 V - 21/5 W
		Taillights	12 V - 5 W (Except Taiwan model), 12 V - 3 CP (Taiwan model)
		Rear fog lights	12 V - 21 W
		Front fog lights	12 V - 51 W
		High mount brake light	12 V - 21 W
		Back-up lights	12 V - 21 W
		License plate light	12 V - 5 W
		Ceiling lights	12 V - 8 W
		Spotlights without roof console	12 V - 8 W
		Spotlights with roof console	12 V - 4 CP
		Gauge lights	12 V-1.4 W
		Indicator lights	LED, 12 V - 1.4 W

Body Specifications



*:Overall length: Refer to Design Spec. (see page 02-17).