

Specifications

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Standards and Service Limits

Engine Electrical — Section 4

	MEASUREMENT	STANDARD (NEW)	
Ignition coil	Rated voltage V	12	
	Primary winding resistance at 68°F (20°C) Ω	0.63 – 0.77	
	Secondary winding resistance at 68°F (20°C) kΩ	12.8 – 19.2	
Ignition wire	Resistance at 68°F (20°C) kΩ	25 max.	
Spark plug	Type	See section 4	
	Gap	1.0 – 1.1 (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 (0.24 – 0.33) with new belt	
	Belt tension N (kgf, lbf)	340 – 490 (35 – 50, 77 – 110) with used belt	
	Measured with belt tension gauge	540 – 740 (55 – 75, 121 – 165) with new belt	
Alternator (MITSUBISHI)	Output 12 V at hot A Coil resistance (rotor) at 68°F (20°C) kΩ Slip ring O.D. Brush length Brush spring tension g (oz)	STANDARD (NEW)	SERVICE LIMIT
		75	—
		3.4 – 3.8	—
		22.7 (0.89)	22.2 (0.87)
		19.0 (0.75)	5.0 (0.20)
Starter motor (MITSUBA 1.0 kW 1.2 kW)	Type	Gear reduction	
	Commutator mica depth	0.4 – 0.5 (0.016 – 0.020)	
	Commutator runout	0 – 0.02 (0 – 0.0008)	
	Commutator O.D.	28.0 – 28.1 (1.102 – 1.106)	
	Brush length	15.8 – 16.2 (0.62 – 0.64)	
	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.

Cylinder Head/Valve Train — Section 6

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Compression	250 rpm and wide open throttle kPa (kgf/cm², psi)	Nominal	1,270 (13.0, 184)	
		Minimum	930 (9.5, 135)	
		Maximum variation	200 (2.0, 28)	
Cylinder head	Warpage		—	0.05 (0.002)
	Height		92.95 – 93.05 (3.659 – 3.663)	—
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	37.065 (1.4592)	—
		Primary	38.274 (1.5068)	—
		Mid	36.778 (1.4479)	—
		Secondary	38.008 (1.4964)	—
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)
		EX	0.05 – 0.08 (0.002 – 0.003)	0.11 (0.004)
Valve seat	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)
		EX	53.17 – 53.64 (2.093 – 2.112)	53.89 (2.122)
Valve spring	Free length	IN	58.0 (2.28)	—
		EX	58.7 (2.31)	—
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	17.85 – 18.35 (0.703 – 0.722)	—
		EX	18.65 – 19.15 (0.734 – 0.754)	—
Rocker arm	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)

Engine Block — Section 7

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface Bore diameter Bore taper Reboring limit	0.07 (0.003) max. 75.00 – 75.02 (2.953 – 2.954) _____ _____	0.10 (0.004) 75.07 (2.956) 0.05 (0.002) 0.5 (0.02)
Piston	Skirt O.D. at 5 mm (0.2 in) from bottom of skirt Clearance in cylinder Groove width (for ring) Top Second Oil	74.980 – 74.990 (2.9520 – 2.9524) 0.010 – 0.040 (0.0004 – 0.0016) 1.020 – 1.030 (0.0402 – 0.0406) 1.220 – 1.230 (0.0480 – 0.0484) 2.805 – 2.820 (0.1104 – 0.1110)	74.970 (2.9516) 0.05 (0.002) 1.05 (0.041) 1.25 (0.049) 2.85 (0.112)
Piston ring	Ring-to-groove clearance Top Second Ring end gap Top Second Oil	0.035 – 0.060 (0.0014 – 0.0024) 0.030 – 0.055 (0.0012 – 0.0022) 0.15 – 0.30 (0.006 – 0.012) 0.30 – 0.45 (0.012 – 0.018) 0.20 – 0.70 (0.008 – 0.028)	0.13 (0.005) 0.13 (0.005) 0.60 (0.024) 0.70 (0.028) 0.80 (0.031)
Piston pin	O.D. Pin-to-piston clearance	18.994 – 19.000 (0.7478 – 0.7480) 0.010 – 0.022 (0.0004 – 0.0009)	_____ _____
Connecting rod	Pin-to-rod interference Small end bore diameter Large end bore diameter Nominal End play installed on crankshaft	0.014 – 0.040 (0.0006 – 0.0016) 18.96 – 18.98 (0.746 – 0.747) 48.0 (1.89) 0.15 – 0.30 (0.006 – 0.012)	_____ _____ _____ 0.40 (0.016)
Crankshaft	Main journal diameter Rod journal diameter Taper Out-of-round End play Total runout	54.976 – 55.000 (2.1644 – 2.1654) 44.976 – 45.000 (1.7707 – 1.7717) 0.0025 (0.0001) max. 0.0025 (0.0001) max. 0.10 – 0.35 (0.004 – 0.014) 0.03 (0.001) max.	_____ _____ 0.005 (0.0002) 0.005 (0.0002) 0.45 (0.018) 0.04 (0.002)
Bearings	Main bearing-to-journal oil clearance No. 1 and 5 journals No. 2, 3 and 4 journals Rod bearing-to-journal oil clearance	0.018 – 0.036 (0.0007 – 0.0014) 0.024 – 0.042 (0.0009 – 0.0017) 0.020 – 0.038 (0.0008 – 0.0015)	0.05 (0.002) 0.05 (0.002) 0.05 (0.002)

Engine Lubrication — Section 8

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US qt, Imp qt)	4.0 (4.2, 3.5) 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	
Oil pump	Inner-to-outer rotor radial clearance Pump housing-to-outer rotor radial clearance Pump housing-to rotor axial clearance	0.02 – 0.14 (0.001 – 0.006) 0.10 – 0.18 (0.004 – 0.007) 0.03 – 0.08 (0.001 – 0.003)	0.20 (0.008) 0.20 (0.008) 0.15 (0.006)
Relief valve	Pressure setting with oil temperature 176°F (80°C) kPa (kgf/cm², psi) at idle at 3,000 rpm	70 (0.7, 10) min. 340 (3.5, 50) min.	

Standards and Service Limits

Cooling — Section 10

	MEASUREMENT	STANDARD (NEW)
Radiator	Engine 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)	M/T 4.2 (4.4, 3.7) for overhaul 3.8 (4.0, 3.3) for coolant change A/T 4.3 (4.5, 3.8) for overhaul 3.9 (4.1, 3.4) for coolant change
Radiator cap	Opening pressure kPa (kgf/cm ² , psi)	93 – 123 (0.95 – 1.25, 13.5 – 17.8)
Thermostat	Start to opening °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)	260 – 310 (2.7 – 3.2, 38 – 46)
Fuel tank	Capacity ℓ (US gal, Imp gal)	45 (11.9, 9.9)
Engine	Idle speed rpm	M/T (neutral) A/T (N) or (P) position
		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 (5.12 – 5.51)	_____
	Pedal play	12 – 21 (0.47 – 0.83)	_____
	Disengagement height to floor to carpet	83 (3.27) 44 (1.73) 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)

Manual Transmission — 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		0.11 – 0.18 (0.004 – 0.007)	Adjust
	Diameter of ball bearing contact area A (Transmission housing side)		21.987 – 22.000 (0.8656 – 0.8661)	21.930 (0.8634)
	Diameter of 4th, 5th gear contact area B		26.980 – 26.993 (1.0622 – 1.0627)	26.930 (1.0602)
	Diameter of 3rd gear contact area C		33.984 – 34.000 (1.3380 – 1.3386)	33.930 (1.3358)
	Diameter of ball bearing contact area D (Clutch housing side)		25.977 – 25.990 (1.0227 – 1.0232)	25.920 (1.0205)
	Runout		0.02 (0.001) max.	0.05 (0.002)
Mainshaft 3rd and 4th gears	I.D.		39.009 – 39.025 (1.5358 – 1.5364)	39.07 (1.538)
	End play	3rd	0.06 – 0.21 (0.002 – 0.008)	0.33 (0.013)
		4th	0.06 – 0.19 (0.002 – 0.007)	0.31 (0.012)
	Thickness	3rd	30.22 – 30.27 (1.190 – 1.192)	30.15 (1.187)
		4th	30.12 – 30.17 (1.186 – 1.188)	30.05 (1.183)
Mainshaft 5th gear	I.D.		37.009 – 37.025 (1.4570 – 1.4577)	37.07 (1.459)
	End play		0.06 – 0.19 (0.002 – 0.007)	0.31 (0.012)
	Thickness		28.42 – 28.47 (1.119 – 1.121)	28.35 (1.116)
Countershaft	Diameter of needle bearing contact area A		30.000 – 30.015 (1.1811 – 1.1817)	29.950 (1.1791)
	Diameter of 1st gear contact area B		35.984 – 36.000 (1.4167 – 1.4173)	35.930 (1.4146)
	Diameter of ball bearing contact area C		24.980 – 24.993 (0.9835 – 0.9840)	24.930 (0.9815)
	Runout		0.02 (0.001) max.	0.05 (0.002)
Countershaft 1st gear	I.D.		41.009 – 41.025 (1.6145 – 1.6152)	41.07 (1.617)
	End play (When tightened by the specified torque)		0.03 – 0.10 (0.001 – 0.004)	0.22 (0.009)
	Thickness		30.41 – 30.44 (1.197 – 1.198)	30.36 (1.195)
Countershaft 2nd gear	I.D.		44.009 – 44.025 (1.7326 – 1.7333)	44.07 (1.735)
	End play (When tightened by the specified torque)		0.04 – 0.12 (0.002 – 0.005)	0.24 (0.009)
	Thickness		31.92 – 31.97 (1.257 – 1.259)	31.85 (1.254)
Spacer collar (Countershaft 2nd gear)	I.D.		32.988 – 32.998 (1.2987 – 1.2991)	33.04 (1.301)
	O.D.		38.989 – 39.000 (1.5350 – 1.5354)	38.93 (1.533)
	Length		32.03 – 32.06 (1.261 – 1.262)	32.01 (1.260)
Spacer collar (Mainshaft 4th and 5th gear)	I.D.		27.002 – 27.012 (1.0631 – 1.0635)	27.06 (1.065)
	O.D.	4th	33.989 – 34.000 (1.3381 – 1.3386)	33.93 (1.336)
		5th	31.989 – 32.000 (1.2594 – 1.2598)	31.93 (1.257)
	Length	4th	22.83 – 22.86 (0.899 – 0.900)	22.81 (0.898)
		5th	23.53 – 23.56 (0.926 – 0.928)	23.51 (0.926)
Reverse idler gear	I.D.		15.016 – 15.043 (0.5912 – 0.5922)	15.08 (0.594)
	Gear-to-reverse gear shaft clearance		0.032 – 0.077 (0.0013 – 0.0030)	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	1st/2nd	6.2 – 6.4 (0.244 – 0.252)	—
		3rd/4th	7.4 – 7.6 (0.291 – 0.299)	—
	Fork-to-synchro sleeve clearance		0.35 – 0.65 (0.014 – 0.026)	1.0 (0.04)
Reverse shift fork	Fork pawl groove width		12.7 – 13.0 (0.50 – 0.51)	—
	Fork-to-reverse idler gear clearance		0.5 – 1.1 (0.020 – 0.043)	1.8 (0.07)
	L-groove width		7.05 – 7.25 (0.278 – 0.285)	—
	Fork-to-5th/reverse shift piece pin clearance		0.05 – 0.35 (0.002 – 0.014)	0.5 (0.02)
Shift arm A	Inner diameter of shift arm C contact point		13.005 – 13.130 (0.5120 – 0.5169)	—
	Shift arm A-to-shift arm C clearance		0.005 – 0.230 (0.0002 – 0.0091)	0.35 (0.014)
Shift arm B	Inner diameter of shift arm B shaft contact point		13.973 – 14.000 (0.5501 – 0.5512)	—
	Shift arm B-to-shaft clearance		0.013 – 0.070 (0.0005 – 0.0028)	0.16 (0.006)
	Shift arm B-to-shift piece clearance		0.2 – 0.5 (0.008 – 0.020)	0.62 (0.0244)
	Diameter of shift piece contact point		12.9 – 13.0 (0.508 – 0.512)	12.78 (0.5031)
Final driven gear	Backlash		0.07 – 0.130 (0.0028 – 0.0051)	0.180 (0.0071)
Differential carrier	Pinion shaft bore diameter		18.010 – 18.028 (0.7091 – 0.7098)	—
	Carrier-to-pinion shaft clearance		0.023 – 0.057 (0.0009 – 0.0022)	0.095 (0.004)
	Driveshaft bore diameter		26.025 – 26.045 (1.0246 – 1.0254)	—
	Carrier-to-driveshaft clearance		0.045 – 0.086 (0.0018 – 0.0034)	0.14 (0.006)
Differential pinion gear	Backlash		0.05 – 0.15 (0.002 – 0.006)	—
	Pinion gear bore diameter		18.042 – 18.066 (0.7103 – 0.7113)	—
	Pinion gear-to-pinion shaft clearance		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

Standards and Service Limits

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 D₄ position		800 – 850 (8.2 – 8.7, 120 – 124) with linear solenoid connector disconnected 0 – 150 (0 – 1.5, 0 – 21) with linear solenoid connected to battery voltage	760 (7.7, 110) with linear solenoid connector disconnected 150 (1.5, 21) with linear solenoid connected to battery voltage
	2nd clutch pressure at 2,000 rpm in D₄ position			
	3rd and 4th clutch pressure at 2,000 rpm in D₄ position		810 – 860 (8.3 – 8.8, 118 – 125) with linear solenoid connector disconnected 0 – 150 (0 – 1.5, 0 – 21) with linear solenoid connected to battery voltage	760 (7.8, 110) with linear solenoid connector disconnected 150 (1.5, 21) with linear solenoid connected to battery voltage
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	1st	32.0 (1.26)	30.0 (1.18)
		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	Mark 1	2.05 – 2.10 (0.081 – 0.083)	Discoloration ↑ ↓ 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)	

Automatic Transmission — Section 14

Unit of length: mm (in)

	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)	↓ Wear or damage
	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)	↓ Wear or damage
	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)	↓ Wear or damage
	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)	↓ Wear or damage
	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	21.15 – 21.20 (0.8327 – 0.8346)	_____
	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

(cont'd)

Standards and Service Limits

Automatic Transmission (cont'd) — 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	2.95 – 3.05 (0.116 – 0.120)	Wear or damage
	Mainshaft 1st gear	2.43 – 2.50 (0.096 – 0.098)	↑ Wear or damage
	Countershaft 3rd gear splined washer	4.45 – 4.50 (0.175 – 0.177)	Wear or damage
Transmission	One-way clutch contact area I.D.		Wear or damage
	Countershaft 1st gear	83.339 – 83.365 (3.2810 – 3.2821)	Wear or damage
	Parking gear	66.685 – 66.698 (2.6254 – 2.6259)	Wear or damage
	Mainshaft feed pipe A, O.D. (at 15 mm from end)	8.97 – 8.98 (0.353 – 0.354)	8.95 (0.352)
	Mainshaft feed pipe B, O.D. (at 30 mm from end)	5.97 – 5.98 (0.2350 – 0.2354)	5.95 (0.234)
	Countershaft feed pipe O.D. (at 15 mm from end)	7.97 – 7.98 (0.3138 – 0.3142)	7.95 (0.313)
	Mainshaft sealing ring thickness (29 mm and 35 mm)	1.87 – 1.97 (0.074 – 0.078)	1.80 (0.071)
	Mainshaft bushing I.D.	6.018 – 6.030 (0.2369 – 0.2374)	6.045 (0.2380)
	Mainshaft bushing I.D.	9.000 – 9.015 (0.3543 – 0.3549)	9.03 (0.356)
	Countershaft bushing I.D.	8.000 – 8.015 (0.3150 – 0.3156)	8.03 (0.316)
Transmission	Mainshaft sealing ring groove width	2.025 – 2.075 (0.0797 – 0.0817)	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 parking brake control	Reverse shift fork finger thickness	5.90 – 6.00 (0.232 – 0.236)	5.40 (0.213)
	Parking brake pawl Parking gear	— —	Wear or other defect
Servo body	Shift fork shaft bore I.D.	14.000 – 14.010 (0.5512 – 0.5516)	—
	Shift fork shaft valve bore I.D.	37.000 – 37.039 (1.4567 – 1.4582)	37.045 (1.4585)
ATF pump	ATF pump gear side clearance	0.03 – 0.05 (0.001 – 0.002)	0.07 (0.003)
	ATF pump gear-to-body clearance	0.1050 – 0.1325 (0.0041 – 0.0052)	—
	ATF pump driven gear I.D.	0.0350 – 0.0625 (0.0014 – 0.0025)	—
	ATF pump driven gear shaft O.D.	14.016 – 14.034 (0.5518 – 0.5525) 13.980 – 13.990 (0.5504 – 0.5508)	Wear or damage Wear or damage
Differential carrier	Pinion shaft contact area I.D.	18.000 – 18.018 (0.7087 – 0.7094)	—
	Carrier-to-pinion clearance	0.016 – 0.052 (0.0006 – 0.0020)	0.1 (0.004)
	Driveshaft contact area I.D.	26.005 – 26.025 (1.0238 – 1.0246)	—
	Carrier-to-driveshaft clearance	0.025 – 0.066 (0.0010 – 0.0026)	0.12 (0.005)
Differential pinion gear	Backlash	0.05 – 0.15 (0.002 – 0.006)	—
	I.D.	18.042 – 18.066 (0.7103 – 0.7113)	—
	Pinion gear-to-pinion shaft clearance	0.059 – 0.095 (0.0023 – 0.0037)	0.15 (0.006)
Set ring-to-bearing outer race clearance		0 – 0.15 (0 – 0.006)	Adjust

Automatic Transmission — Section 14

Unit of length: mm (in)

	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

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	15 (1.5, 3.3)
	Power steering Engine running	29 (3.0, 6.6)
Gearbox	Angle of rack guide screw loosened from locked position	20° Max
	Preload at pinion gear shaft N·m (kgf·cm, lbf·in)	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/cm ² , psi)	6,400 – 7,400 (65 – 75, 920 – 1,070)
Power steering fluid	Recommended power steering fluid	HONDA Power Steering Fluid (V or S)
	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	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)	340 – 490 (35 – 50, 77 – 110) with used 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

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 2 ± 2 (0.08 ± 0.08)	_____	
		Rear	In 2 ± 2 (0.08 ± 0.08)	_____	
	Front wheel turning angle	Inward wheel	35°50'	_____	
	Outward wheel	35°50' (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)	_____
	Free play	A/T	161 (6.5/16) 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)
	Disc runout	Front	_____	0.10 (0.004)
	Disc parallelism	Front	_____	0.015 (0.0006)
	Pad thickness	Front	9.5 – 10.5	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)

Air Conditioning — Section 22

	MEASUREMENT		STANDARD (NEW)
Air Conditioning system	Lubricant type: SP-10 (P/N 38899 – P13 – A01 or 38897 – P13 – A01AH) (For refrigerant: HFC-134a (R-134a))		
	Lubricant capacity mℓ (fl oz, Imp oz)	Condenser	20 (2/3 0.7)
		Evaporator	45 (1 1/2, 1.6)
		Line or hose	10 (1/3, 0.4)
		Receiver	10 (1/3, 0.4)
Compressor	Lubricant type: SP-10 (P/N 38899 – P13 – A01 or 38897 – P13 – A01AH) (For refrigerant: HFC-134a (R-134a))		
	Lubricant capacity mℓ (fl oz, Imp oz)		130 – 150 (4 1/3 – 5, 4.6 – 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)
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
	Measured with belt tension gauge		690 – 830 (70 – 85, 154 – 187) with new belt

*: 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	NOTES
DIMENSIONS	Overall Length	4,478 mm	176.3 in	
	Overall Width	1,705 mm	67.1 in	
	Overall Height	1,395 mm	54.9 in	
	Wheelbase	2,620 mm	103.1 in	
	Track	1,475/1,475 mm	58.1/58.1 in	
	Ground Clearance			
	Seating Capacity	150 mm	5.9 in	
		Five		
WEIGHT	Gross Vehicle Weight Rating (GVWR)	1,600 kg	—	
ENGINE	Type	Water-cooled, 4-stroke SOHC VTEC gasoline engine		
	Cylinder Arrangement	Inline 4-cylinder, transverse		
	Bore and Stroke	75.0 x 90.0 mm	2.95 x 3.54 in	
	Displacement	1,590 cm³ (mℓ)	97.0 cu-in	
	Compression Ratio	9.6		
	Valve Train	Belt driven, SOHC 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		
	Water Pump Displacement at 6,000 engine rpm	125 ℓ (132 US qt, 110 Imp qt)/minute		
	Fuel Required	UNLEADED gasoline with 86 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		

(cont'd)

Design Specifications

(cont'd)

	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	Single plate dry, diaphragm spring		
	Clutch Facing Area	A/T M/T	Torque converter 160 cm ² 25 sq-in		
TRANSMISSION	Transmission Type	M/T	Synchronized 5-speed forward, 1 reverse		
	Primary Reduction	A/T	4-speed automatic, 1 reverse Direct 1 : 1		
TRANSMISSION	Manual transmission				
	Gear Ratio	1st	3.250		
		2nd	1.909		
		3rd	1.250		
		4th	0.909		
		5th	0.702		
		Reverse	3.153		
	Final Reduction	Gear ratio	4.250		
		Gear type	Single helical gear		
	Automatic transmission				
	Gear Ratio	1st	2.722		
		2nd	1.516		
		3rd	0.975		
		4th	0.638		
		Reverse	1.954		
	Final Reduction	Gear ratio	4.357		
		Gear type	Single helical gear		
AIR CONDITIONING	Cooling Capacity		3,530 Kcal/h	14,000 BTU/h	
	Compressor	Type/Make	Scroll/Sanden		
		No. of Cylinder			
		Capacity	85.7 ml/rev	5.22 cu-in/rev	
		Max. Speed	10,000 rpm		
		Lubricant Capacity	130 ml	4 1/3 fl oz, 4.6 Imp oz	SP-10
	Condenser	Type	Corrugated fin		
	Evaporator	Type	Corrugated fin		
	Blower	Type	Sirocco fan		
		Motor Input	200 W/12 V		
		Speed Control	4-speed variable		
		Max. Capacity	460 m ³ /h	16,200 cu-ft/h	
	Temperature Control		Air-mix type		
	Compressor Clutch	Type	Dry, single plate, poly-V-belt drive		
		Power Consumption	40 W max./12 V at 68°F (20°C)		
	Refrigerant	Type	HFC-134a (R-134a)		
		Quantity	650 ⁰ / ₋₅₀ g	22.9 ⁰ / _{-1.8} oz	

	ITEM		METRIC	ENGLISH	NOTES
STEERING SYSTEM	Type		Power assisted, rack and pinion		
	Overall Ratio		17.7		
	Turns, Lock-to-Lock		3.6		
	Steering Wheel Dia.		380 mm	15 in	
SUSPENSION	Type	Front and Rear	Independent double wishbone, coil spring		
	Shock Absorber	Front and Rear	Telescopic, hydraulic nitrogen gas-filled		
WHEEL ALIGNMENT	Camber	Front	0°00'		
		Rear	-1°		
	Caster	Front	1°40'		
	Total Toe	Front	In 2 mm	0.08 in	
		Rear	In 2 mm	In 0.08 in	
BRAKE SYSTEM	Type	Front	Power-assisted self-adjusting ventilated disc		
		Rear	Power-assisted self-adjusting solid disc		
	Pad Surface Area	Front	37.5 cm² x 2	5.8 sq-in x 2	
	Parking Brake	Type	Mechanical actuating, rear two wheel brakes		
TIRE	Size	Front and Rear	P195/55R15 84V		
	Spare Tire		T125/70D14		
ELECTRICAL	Battery		12 V - 38AH/5HR		
	Starter		12 V - 1.0 kW, 1.2 kW		
	Alternator		12 V - 75 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	High/Low	12 V - 60/55 W		
	Front Turn Signal		12 V - 50 CP		
	Rear Turn Signal Lights		12 V - 21 W		
	Brake/Taillights		12 V - 21/5 W		
	Taillights		12 V - 5 W		
	High Mount Brake Light		12 V - 21 W		
	Back-up Lights		12 V - 21 W		
	License Plate Lights		12 V - 8 W		
	Ceiling Light		12 V - 8 W (With moonroof)		
			12 V - 5 W (Without moonroof)		
	Trunk Lights		12 V - 3.4 W		
	Gauge Lights		12 V - 1.4 W, 3 W, 3.4 W		
	Indicator Lights		12 V - 1.12 W, 1.4 W, 3 W		
	Illumination and Pilot Lights		12 V - 0.84 W, 1.4 W		

Body Specifications

Unit: mm (in)

