

Standards and Service Limits

5. Engine/Cylinder Head, Valve Train

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Compression	250 min ⁻¹ (rpm) and wide-open throttle	Nominal Minimum Maximum variation	1226 kPa (12.5 kg/cm ² , 178 psi) 931 kPa (9.5 kg/cm ² , 135 psi) 196 kPa (2 kg/cm ² , 28 psi)
Cylinder head	Warpage Height	— 99.95–100.05 (3.935–3.938)	0.05 (0.002) —
Camshaft	End play Oil clearance Runout Cam lobe height	0.05–0.15 (0.002–0.006) 0.05–0.089 (0.002–0.0035) 0.015 (0.0006) 38.526 (1.5167) 38.972 (1.5343)	0.50 (0.020) 0.150 (0.006) 0.030 (0.001) — —
Valve	Valve clearance Valve stem O.D. Stem-to-guide clearance	IN EX IN EX IN EX 0.24–0.28 (0.0094–0.0110) 0.28–0.32 (0.0110–0.1259) 5.480–5.490 (0.2157–0.2161) 5.450–5.460 (0.2145–0.2149) 0.025–0.050 (0.0009–0.0019) 0.055–0.080 (0.0021–0.0031)	— — 5.450 (0.2145) 5.420 (0.2133) 0.08 (0.0031) 0.12 (0.0047)
Valve seat	Width Valve stem installed height	IN and EX IN EX 1.25–1.55 (0.049–0.061) 48.245–48.715 (1.8994–1.9179) 50.315–50.785 (1.9809–1.994)	2.00 (0.0787) — —
Valve spring	Free length	IN (NH) (CH) EX (NH) (CH) 53.15 (2.0925) 53.16 (2.0929) 55.78 (2.196) 55.80 (2.1968)	— — — —
Valve guide	I.D. Valve guide installed height	IN and EX IN EX 5.515–5.530 (0.2171–0.2177) 23.75–24.25 (0.9148–0.9547) 15.05–15.55 (0.5925–0.6122)	5.53 (0.2177) — —
Rocker arm	Arm-to-shaft clearance	IN EX 0.017–0.050 (0.0007–0.0020) 0.018–0.054 (0.0007–0.0021)	0.080 (0.0031) 0.080 (0.0031)

NH: NIHON HATSUJO
CH: CHUO HATSUJO

5. Engine/Engine Block

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface Bore diameter Bore taper Reboring limit	0.07 (0.003) max. 85.00–85.02 (3.3464–3.3472) — —	0.10 (0.004) 85.07 (3.3492) 0.05 (0.002) 0.5 (0.02)
Piston	Skirt O.D. (At 21 mm (0.83 in) from bottom of skirt) Clearance in cylinder	A B 84.98–84.99 (3.3456–3.4605) 84.97–84.98 (3.3452–3.3456) 0.02–0.04 (0.0008–0.0016)	84.97 (3.3452) 84.96 (3.3448) 0.05 (0.0020)
Piston ring	Piston-to-ring clearance Ring end gap	Top Second Top Second Oil 0.035–0.060 (0.0014–0.0024) 0.030–0.055 (0.0011–0.0022) 0.20–0.35 (0.0079–0.0138) 0.40–0.55 (0.0157–0.0217) 0.20–0.70 (0.0079–0.0276)	0.130 (0.0051) 0.130 (0.0051) 0.60 (0.0236) 0.70 (0.0276) 0.80 (0.0315)
Connecting rod	Pin-to rod interference Small end bore diameter Large end bore diameter End play installed on crankshaft	0.013–0.032 (0.0005–0.0013) 21.968–21.981 (0.8649–0.8654) Nominal 51 (2.008) 0.15–0.30 (0.006–0.012)	— — — 0.40 (0.016)
Crankshaft	Main journal diameter Rod journal diameter Taper/out-of-round, main journal Taper/out-of-round, rod journal End play Runout	No. 1, 2 Journals No. 3 Journal No. 4, 5 Journals 0.005 (0.0002) max. 47.976–48.000 (1.8888–1.8898) 0.005 (0.0002) max. 0.10–0.35 (0.004–0.014) 0.015 max (0.0006)	— — — 0.010 (0.0004) — 0.010 (0.0004) 0.45 (0.018) 0.020 (0.0008)
Bearings	Main bearing-to journal oil clearance Rod bearing-to journal oil clearance	No. 1, 2 Journals No. 3 Journal No. 4, 5 Journals 0.021–0.045 (0.0009–0.0018) 0.025–0.049 (0.0001–0.0019) 0.013–0.037 (0.0005–0.0015) 0.021–0.049 (0.0008–0.0019)	0.05 (0.002) 0.054 (0.0021) 0.05 (0.002) 0.05 (0.002)

Unit of length: mm (in.)

5. Engine/Engine Block (cont'd)

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Balancer Shaft	Journal diameter	No. 1 journal (Front)	42.722–42.734 (1.6820–1.6824)	—
		(Rear)	20.938–20.950 (0.8243–0.8248)	—
		No. 2 journal	38.712–38.724 (1.5241–1.5246)	—
	Journal taper	No. 3 journal	34.722–34.734 (1.3670–1.3674)	—
			0.005 (0.0002)	—
	End play	(Front)	0.100–0.350 (0.0040–0.0138)	—
		(Rear)	0.060–0.180 (0.0024–0.0070)	—
	Runout		0.020 (0.0008)	—
Balancer Shaft Bearing	I.D.	No. 1 journal (Rear)	0.050–0.075 (0.0020–0.0030)	—
		No. 1(Front), 3 journal	0.066–0.118 (0.0026–0.0046)	—
		No. 2, journal	0.076–0.128 (0.0030–0.0050)	—
			42.800–42.820 (1.6850–1.6858)	—
			21.000–21.013 (0.8268–0.8273)	—
			38.800–38.820 (1.5276–1.5283)	—
			34.800–34.820 (1.3701–1.3710)	—

5. Engine/Engine Lubrication

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity (US. qt., Imp. qt.)		4.9 (5.2, 4.3) After engine disassembly 3.8 (4.0, 3.3) After oil change, including oil filter 3.5 (3.7, 3.1) After oil change, without oil filter	
Oil pump	Displacement		43.9 ℓ (11.6 US. gal., 9.7 Imp. gal.)/6,000 min ⁻¹ (rpm)	
	Inner-to-outer rotor radial clearance		0.02–0.16 (0.0008–0.0063)	0.2 (0.008)
	Pump body-to-rotor radial clearance		0.10–0.19 (0.0040–0.0075)	0.21 (0.0083)
	Pump body-to-rotor side clearance		0.02–0.07 (0.001–0.003)	0.12 (0.005)
Relief valve	Pressure setting 80°C (176°F)	Idle	69 kPa (0.7 kg/cm ² , 10 psi) min.	
		3,000 min ⁻¹ (rpm)	3431 kPa (3.5 kg/cm ² , 50 psi)	

5. Engine/Cooling

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Thermostat	Starts to open Full open Valve lift at full open		78°C ± 2 (172°F ± 3) 90°C (194°F) 8 (0.31) max.	86–90°C (187–194°F)
Water pump	Displacement		160 ℓ (42.2 US gal, 35.2 Imp gal)/6,000 min ⁻¹ (rpm)	
Radiator	Capacity (incl. heater) ℓ (US. qt., Imp. qt.) (Includes reservoir tank 0.6 (0.63, 0.53) after overhaul at change pressure cap opening pressure		MT: 6.6 (6.97, 5.81) AT: 7.1 (7.50, 6.23) MT: 3.0 (3.17, 2.64) AT: 3.5 (3.70, 3.08) 93–123 kpa (0.95–1.25 kg/cm ² , 13.5–17.8 psi)	
Cooling fan	"ON" temperature "OFF" temperature "ON" temperature (Fan timer) "OF" temperature (Fan timer)		87°–93°C (189°–199°F) 80°–91°C (176°–196°F) 105°–111°C (221°–231°F) 98°–109°C (208°–228°F)	

Standards and Service Limits

6. Fuel and Emissions

	MEASUREMENT	STANDARD (NEW)
Fuel Pump (PGM-FI)	Delivery pressure	240–279 Pa (2.45–2.85 kg/cm ² , 35–41 lb-ft)
	Displacement (minimum in 10 seconds)	230 cc (7.8 US oz., 8.1 Imp oz.)
	Relief valve opening pressure	441–588 kPa (4.5–6.0 kg/cm ² , 64–85 psi)
Fuel Pump (CARB)	Delivery pressure	9–14 kPa (0.09–0.14 kg/cm ² , 1.3–2.0 psi)
	Displacement (minimum in minute at 12V)	760 cc (25.7 US oz., 26.8 Imp oz.)
Pressure Regulator (PGM-FI)	Pressure with regulator vacuum hose disconnected	240–279 kPa (2.45–2.85 kg/cm ² , 35–41 psi)
Fuel Tank	Capacity	65 ℓ (17.2 US gal., 14.3 Imp gal.)
Engine	Fast idle	1,400 ± 200 min ⁻¹ (rpm)
	Idle speed (with headlights and cooling fan OFF)	770 ± 50 min ⁻¹ (rpm)
		770 ± 50 min ⁻¹ (rpm) in P or N positions
	Idle CO	0.1% maximum

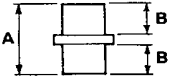
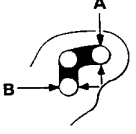
7. Clutch

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height	210 (8.3) to floor	—
	Stroke	142.0 (5.6)	—
	Pedal play	9–15 (0.4–0.6)	—
	Disengagement height	90 (3.5) min. to floor 80 (3.1) min. to carpet	—
Flywheel	Clutch surface runout	0.05 (0.002) max.	0.15 (0.006)
Clutch disc	Rivet head depth	1.3 (0.05) min.	0.2 (0.008)
	Surface runout	0.8 (0.03) max.	1.0 (0.04)
	Thickness	8.5–9.2 (0.33–0.36)	6.1 (0.24)
Clutch cover	Unevenness of diaphragm spring	0.6 (0.02) max.	0.8 (0.03)

8. Manual Transmission

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity ℓ (U.S. qt., Imp. qt.)	1.9 (2.0, 1.7) at assembly 2.0 (2.1, 1.8) at oil change	
Mainshaft	End play	0.10–0.16 (0.0039–0.0063)	Adjust with a shim.
	Diameter of ball bearing contact area	27.977–27.990 (1.1015–1.1020)	29.93 (1.1783)
	Diameter of third gear contact area	37.984–38.000 (1.4954–1.4961)	37.930 (1.4933)
	Diameter of ball bearing contact area	27.987–28.000 (1.1018–1.1024)	27.940 (1.1000)
	Runout	0.02 (0.008) max.	0.05 (0.002)
Mainshaft third and fourth gears	I.D.	43.009–43.025 (1.6933–1.6939)	43.080 (1.6961)
	End play	0.06–0.21 (0.0024–0.0083)	0.30 (0.012)
	Thickness 3rd gear	32.42–32.47 (1.276–1.278)	32.3 (1.27)
	4th gear	30.92–30.97 (1.217–1.219)	30.8 (1.21)
Mainshaft fifth gear	I.D.	43.009–43.025 (1.6933–1.6939)	43.080 (1.6961)
	End play	0.06–0.21 (0.0024–0.0083)	0.30 (0.012)
	Thickness	30.42–30.47 (1.198–1.200)	30.3 (1.193)
Countershaft	End play	0.05–0.21 (0.0019–0.0083)	0.50 (0.02)
	Diameter of needle bearing contact area	33.000–33.015 (1.2992–1.2998)	32.95 (1.297)
	Diameter of ball bearing needle bearing contact area	24.987–25.000 (0.9837–0.9845)	24.94 (0.982)
	Diameter of low gear contact area	39.984–40.000 (1.5742–1.5748)	39.93 (1.572)
	Runout	0.02 (0.0008) max.	0.05 (0.002)

8. Manual Transmission (cont'd)

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Countershaft low gear	I.D. End play	46.009–46.025 (1.8114–1.8120) 0.04–0.10 (0.002–0.004)	46.08 (1.814) Adjust with a washer.
Countershaft second gear	I.D. End play Thickness	50.009–50.025 (1.9689–1.9695) 0.04–0.10 (0.002–0.004) 33.92–33.97 (1.335–1.337)	50.08 (1.972) Adjust with a collar. 32.8 (1.2913)
Spacer collar (Countershaft second gear)	I.D. O.D. Length	36.48–36.49 (1.4362–1.4366) 43.989–44.000 (1.7318–1.7323) 29.03–29.05 (1.1429–1.1437) 28.98–29.00 (1.1409–1.1417)	36.50 (1.437) 43.94 (1.730) — —
Spacer collar (Mainshaft fourth and fifth gears)	I.D. O.D. Length	31.002–31.012 (1.2205–1.2209) 37.989–38.000 (1.4956–1.4961) 56.45–56.55 (2.222–2.226) 26.03–26.08 (1.0248–1.0268)	31.06 (1.223) 37.94 (1.494) — 26.01 (1.024)
		A B	
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) 0.160 (0.006)
Synchronizer ring	Ring-to-gear clearance (ring pushed against gear)	0.85–1.10 (0.0335–0.0433)	0.40 (0.016)
Shift fork	Synchronizer sleeve groove width Fork-to-synchronizer sleeve clearance	6.75–6.85 (0.266–0.270) 0.35–0.65 (0.014–0.026)	— 1.0 (0.039)
Reverse shift fork	Pawl groove width Fork-to-reverse idle gear clearance Groove width Fork-to fifth/reverse shift Shaft clearance	13.0–13.3 (0.51–0.52) 0.5–1.1 (0.02–0.43) 7.05–7.25 (0.278–0.2854) 7.4–7.7 (0.29–0.30) 0.05–0.35 (0.002–0.014) 0.4–0.8 (0.02–0.03)	1.8 (0.07) — — 0.5 (0.02) 1.0 (0.04)
		at A at B at A at B	
Shift arm	I.D. Shift arm-to-shaft clearance Shift fork diameter at contact area Shift-arm-to-shift fork shaft clearance	15.973–16.000 (0.6289–0.6299) 0.005–0.059 (0.0002–0.0023) 12.9–13.0 (0.508–0.512) 0.2–0.5 (0.01–0.02)	— — — 0.6 (0.02)
Select lever	Pin size of contact area Shaft outer diameter Shift arm cover clearance	7.9–8.0 (0.311–0.315) 15.41–15.68 (0.607–0.617) 0.032–0.102 (0.0013–0.0040)	— — —
Shift arm lever	O.D. Transmission housing clearance	15.941–15.968 (0.6276–0.6287) 0.027–0.139 (0.0011–0.0055)	— —
Inter lock	Bore diameter Shift arm lever clearance	16.00–16.05 (0.630–0.632) 0.032–0.109 (0.0013–0.0043)	— —
Ring gear	Backlash	0.085–0.142 (0.0033–0.0056)	0.200 (0.0079)
Differential carrier	Pinion shaft bore diameter Carrier-to-pinion shaft clearance Driveshaft bore diameter Carrier-to-driveshaft clearance	18.000–18.018 (0.7087–0.7094) 0.017–0.047 (0.0007–0.0019) 28.005–28.025 (1.1026–1.1033) 0.020–0.062 (0.0008–0.0024) 0.055–0.091 (0.0022–0.0036)	— 0.100 (0.0039) — 0.120 0.150
	R L		
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) 0.059–0.095 (0.0023–0.0037)	Selection with 7 types of washers. — 0.150 (0.0059)
Differential taper roller bearing	Preload	1.4–2.6 N·m (14–26 kg-cm, 1.0–1.9 lb-ft)	Selection with 20 types of shims.

Standards and Service Limits

9. Automatic Transmission

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity ^ℓ (U.S. qt., Imp. qt.)	2.4 (2.5, 2.1) at oil change 6.0 (6.4, 5.2) at assembly	
Hydraulic pressure	Line pressure at 2,000 min ⁻¹ (rpm)	784 kPa (8.0 kg/cm ² , 113 psi) Throttle valve full-closed 833 kPa (8.5 kg/cm ² , 120 psi) Throttle valve more than 2/8 open	735 kPa (7.5 kg/cm ² , 106 psi) Throttle valve more than 2/8 open
	4th clutch pressure at 2,000 min ⁻¹ (rpm)	490 kPa (5.0 kg/cm ² , 74 psi) Throttle valve full-closed 833 kPa (8.5 kg/cm ² , 120 psi) Throttle valve more than 2/8 open	460 kPa (4.7 kg/cm ² , 66 psi) Throttle valve full-closed 735 kPa (7.5 kg/cm ² , 106 psi) Throttle valve more than 2/8 open
	3rd clutch pressure at 2,000 min ⁻¹ (rpm)	490 kPa (5.0 kg/cm ² , 71 psi) Throttle valve full-closed 833 kPa (8.5 kg/cm ² , 71 psi) Throttle valve more than 2/8 open	441 kPa (4.5 kg/cm ² , 64 psi) Throttle valve full-closed 735 kPa (7.5 kg/cm ² , 106 psi) Throttle valve more than 2/8 open
	2nd clutch pressure at 2,000 min ⁻¹ (rpm)	490 kPa (5.0 kg/cm ² , 71 psi) Throttle valve full-closed 833 kPa (8.5 kg/cm ² , 120 psi) Throttle valve more than 2/8 open	441 kPa (4.5 kg/cm ² , 64 psi) Throttle valve full-closed 735 kPa (7.5 kg/cm ² , 106 psi) Throttle valve more than 2/8 open
	1st clutch pressure at 2,000 min ⁻¹ (rpm)	784–833 kPa (8.0–8.5 kg/cm ² , 113–120 psi)	735 kPa (7.5 kg/cm ² , 106 psi)
	Throttle B pressure	closed 0 open 784–833 kPa (8.0–8.5 kg/cm ² , 113–120 psi)	— 735 kPa (7.5 kg/cm ² , 106 psi)
Stall speed	Check with car on level ground	2,350–2,650 min ⁻¹ (rpm)	
Clutch	Clutch initial clearance	1st hold 0.8–1.0 (0.031–0.039) 1st, 2nd 0.65–0.85 (0.026–0.033) 3rd, 4th 0.4–0.6 (0.016–0.024)	— — —
	Clutch return spring free length	1st, 2nd, 3rd, 4th, 33.5 (1.318)	31.5 (1.240)
	Clutch disc thickness	1.88–2.0 (0.074–0.0807)	Until grooves worn out
	Clutch plate thickness	1st, 1.95–2.05 (0.0767–0.0807)	Discoloration ↑ ↓ Discoloration
		2nd, 2.55–2.65 (0.1003–0.1043)	
		3rd, 4th, 2.25–2.35 (0.0885–0.0925)	
	Clutch end plate thickness	Mark 1 2.05–2.10 (0.081–0.083) 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)	

9. Automatic Transmission (cont'd)

9. Automatic Transmission (cont'd)						
	MEASUREMENT		STANDARD (NEW)		SERVICE LIMIT	
Valve body	Stator camshaft needle bearing contact area I.D. (torque converter side)		27.000—27.021 (1.0630—1.0638)		Wear or damage	
	Stator camshaft needle bearing contact area I.D. (oil pump side)		29.000—29.013 (1.417—1.1422)		—	
	Oil pump driven gear I.D.		14.016—14.034 (0.5518—0.5525)		Wear or damage	
	Oil pump shaft O.D.		13.980—13.990 (0.5504—0.5508)		Wear or damage	
	Oil pump gear side clearance		0.03—0.05 (0.0012—0.0020)		0.07 (0.0028)	
	Oil pump gear-to-body clearance	Drive Driven	0.21—0.265 (0.0083—0.0104) 0.07—0.125 (0.0027—0.0049)		—	
Regulator valve body	Sealing ring contact area diameter		35.000—35.025 (1.3780—1.3789)		35.050 (1.3799)	
Accumulator body	Sealing ring contact area diameter		32.000—32.025 (1.2598—1.2608)		32.05 (1.2618)	
Stator camshaft	Sealing ring contact area diameter		29.000—29.013 (1.1417—1.1422)		29.05 (1.1436)	
Shifting device and parking brake control	Reverse shift fork thickness		5.90—6.00 (0.232—0.236)		5.40 (0.213)	
	Parking brake ratchet pawl		—		Wear or other defect	
	Parking gear		—		Wear or other defect	
Throttle cam stopper	Carburetor PGM-FI		18.5—18.6 (0.7283—0.7322) 17.0—17.1 (0.6692—0.6732)		—	
	Servo body	Shif fork Shaft I.D.	A	14.000—14.005 (0.5512—0.5514)	—	
		B	14.006—14.010 (0.5514—0.5516)	—		
C		14.011—14.015 (0.5516—0.5518)	—			
Shift fork shaft valve bore I.D.			37.000—37.039 (1.4567—1.4582)	37.045 (1.4585)		
Transmission	Diameter of needle bearing contact area		22.984—23.000 (0.9047—0.9055)		Wear or damage	
	On mainshaft and stator shaft		31.984—32.000 (1.2592—1.2598)			
	On mainshaft 4th gear collar					
	On mainshaft 3rd gear collar					
	Carburetor PGM-FI		41.984—42.000 (1.6529—1.6535)			
	On countershaft 1st gear collar		45.984—46.000 (1.8103—1.8110)			
	On countershaft 4th gear collar		40.984—42.000 (1.6135—1.6535)			
	On countershaft reverse gear collar		35.980—35.996 (1.4165—1.4171)			
	On countershaft parking gear		35.984—36.000 (1.4166—1.4173)			
	On secondary shaft 1st gear		39.984—40.000 (1.5741—1.5748)			
	On secondary shaft 2nd gear		31.975—31.991 (1.2588—1.2594)			
	Reverse idle shaft holder I.D.		35.984—36.000 (1.4166—1.4173)			
	Mainshaft 3rd gear I.D.		14.416—14.434 (0.5675—0.5682)			
	4th gear I.D.		52.000—52.019 (2.0472—2.0479)			
	Countershaft 1st gear I.D.		38.000—38.016 (1.4960—1.4966)			
	4th gear I.D.		47.000—47.016 (1.8504—1.8510)			
	reverse gear I.D.		42.000—42.016 (1.6535—1.6541)			
	idle gear I.D.		42.000—42.016 (1.6535—1.6541)			
	Secondary shaft 1st gear I.D.		48.000—48.016 (1.8897—1.8903)			
	2nd gear I.D.		37.000—37.016 (1.4566—1.4573)			
	Mainshaft 3rd gear collar length		42.010—42.025 (1.6539—1.6545)			
	4th gear collar length		20.000—20.050 (0.7874—0.7893)			
	Countershaft 1st gear collar length		47.500—47.550 (1.8700—1.8720)			
	4th gear collar length		27.500—27.550 (1.0826—1.0846)			
	reverse gear collar length		20.04—20.08 (0.7889—0.7905)			
	Secondary shaft distance collar length		15.00—15.05 (0.5905—0.5925)			
	Countershaft 1st gear thickness		4.95—5.00 (0.1948—0.1968)			
Countershaft parking gear length		1.45—1.50 (0.0570—0.0590)				
		25.030—25.048 (0.9854—0.9861)				
				Wear or damage		
			WIRE DIA.	O.D.	FREE LENGTH	No. of COILS
Spring	Regulator valve Spring	A	1.8 (0.0709)	14.7 (0.5887)	86.5 (3.4055)	16.5
		B	1.8 (0.0709)	9.6 (0.3780)	44.0 (1.7323)	7.5
	Stator reaction spring		5.5 (0.2165)	37.4 (1.4724)	30.3 (1.1929)	2.1
	Torque converter check valve spring		1.1 (0.0433)	8.4 (0.3307)	33.8 (1.3307)	12.5
	Relief valve spring		1.0 (0.0394)	8.4 (0.3307)	39.1 (1.5393)	15.1
	Cooler relief valve spring		1.1 (0.0433)	8.4 (0.3307)	46.8 (1.8425)	17.0
	2nd orifice control valve spring		0.6 (0.0236)	6.6 (0.2598)	52.2 (2.0551)	21.0
	Servo orifice control valve spring		0.8 (0.0315)	6.6 (0.2598)	52.5 (2.0669)	33.0
	4th exhaust valve spring		0.9 (0.0354)	7.1 (0.2795)	60.8 (2.3936)	28.9
	1-2 shift spring		1.0 (0.0393)	8.6 (0.3386)	41.3 (1.6259)	16.9
	2-3 shift spring		0.9 (0.0354)	7.6 (0.2992)	57.0 (2.2440)	26.8
	1st accumulator spring		2.1 (0.0826)	16.3 (0.6417)	96.0 (3.7795)	17.1
	4th accumulator spring		2.9 (0.1142)	22.0 (0.8661)	84.5 (3.3267)	10.9
	2nd accumulator spring		3.2 (0.1260)	20.7 (0.8149)	80.7 (3.1771)	10.8
	3rd accumulator spring		2.8 (0.1102)	17.5 (0.6889)	94.2 (3.7086)	16.1
	L/C shift spring		0.9 (0.0354)	7.6 (0.2992)	73.7 (2.9016)	32.0
	L/C timing spring		0.8 (0.0314)	6.6 (0.2598)	64.0 (2.5196)	40.1
	D-inhibitor spring (Servo control valve spring)		1.0 (0.0394)	8.1 (0.3188)	52.6 (2.0708)	22.4
	3rd kick-down spring		1.1 (0.0433)	7.6 (0.2992)	48.3 (1.9015)	23.3
	2nd kick-down spring		1.2 (0.0472)	7.1 (0.2795)	46.9 (1.8464)	20.6
	Throttle adjust spring		0.8 (0.0314)	6.2 (0.2440)	30.0 (1.1811)	8.0
	Throttle B spring		1.5 (0.0591)	8.5 (0.3346)	41.5 (1.6334)	11.2
	1st-hold accumulator spring		4.0 (0.1574)	25.0 (0.9842)	64.7 (2.5472)	7.3
	Modulator valve spring/CPC valve spring		1.4 (0.0551)	9.4 (0.3700)	33.0 (1.2992)	10.5
	L/C control spring		0.8 (0.0314)	6.6 (0.2598)	41.0 (1.6141)	25.0

Standards and Service Limits

9. Automatic Transmission (cont'd)

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Rign gear	Backlash	0.085—0.142 (0.003—0.006)	0.200 (0.008)
Differential carrier	Pinion shaft bore diameter	18.000—18.018 (0.7087—0.7094)	—
	Carrier-to-pinion shaft clearance	0.017—0.047 (0.001—0.002)	0.100 (0.004)
	Driveshaft bore diameter	28.005—28.025 (1.1026—1.1033)	—
	Carrier-to driveshaft clearance	0.025—0.066 (0.001—0.003)	0.120 (0.005)
Differential pinion gear	Backlash	0.08—0.15 (0.03—0.006)	Adjust with a washer
	Pinion gear bore diameter	18.042—18.066 (0.710—0.711)	—
	Pinion gear-to pinion shaft clearance	0.059—0.095 (0.002—0.004)	0.150 (0.006)
Differential taper roller bearing preload	For used bearing	2.5—3.7 N·m (25—37 kg-cm, 22—32 lb-in)	Adjust with a washer
	After replacement of bearing	2.8—4.0 N·m (28—40 kg-cm, 24—35 lb-in)	Adjust with a washer

11. Steering

	MEASUREMENT	STANDARD (NEW)
Steering wheel	Play	10 (0.39) maximum
Gearbox	Pinion starting torque	Below 1.0N·m (10 kg-cm, 0.72 lb-ft)
	Angle of rack guide screw loosend from locked position	35° $\pm \frac{5}{8}$
Pump	Pump pressure with valve closed (oil temperature: 40°C/104°F minimum) Do not run for more than 5 seconds	7,845—8,826 kPa (80—90 kg/cm², 1,138—1,280 psi) at idle
Power steering fluid	Capacity Reservoir At change (approx.)	0.5 ℓ (0.53 US qt., 0.44 Imp qt.) 1.8 ℓ 1.90 US qt. 1.58 Imp qt.)
Power steering belt	Deflection between pulleys with 98 N (10 kg, 22 lbs) force	For used belt 13.0—16.0 (0.51—0.62) For new belt 9.5—11.5 (0.37—0.45)
	Belt tension between pulleys (measured with tension gauge)	For used belt 343—490 N (35—50 kg, 77—110 lb) For new belt 686—882 N (70—90 kg, 154—198 lb)

12. Suspension

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Wheel alignment	Total toe	0±2 (0±0.08)	—
	Front	IN 4±2 (0.16±0.08)	—
	Rear	0° 00' ± 1'	—
	Camber	—0° 30' ± 1'	—
	Caster	3° 00' ± 1'	—
	Front Wheel turning angle	Inward wheel 39° ± 2'	—
		Outward wheel 29° 30'	—
Wheel	Rim runout	Steel wheel Axial 0±2 (0±0.08)	2.0 (0.08)
		Radial Below 1.0 (0.04)	1.5 (0.06)
	Aluminum wheel	Axial Below 0.7 (0.03)	2.0 (0.08)
		Radial Below 0.7 (0.03)	1.5 (0.06)
Wheel bearing	End play	Front 0—0.05 (0—0.002)	—
		Rear 0—0.05 (0—0.002)	—

13. Brakes

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Parking brake lever	Play in stroke 200 N (20 kg, 44 lbs)		To be locked when pulled 4–8 notches	—
Foot brake pedal	Pedal height (from floor)	MT AT	190 (7.5) 195 (7.7)	—
Master cylinder	Piston-to-push rod clearance		0–0.4 (0–0.016)	—
Disc brake	Disc thickness	Front	23.0 (0.91)	21.0 (0.83)
		Rear	10.0 (0.39)	8.0 (0.32)
	Disc runout	Front	—	0.10 (0.004)
		Rear	—	0.15 (0.006)
	Disc parallelism	Front and rear	—	0.015 (0.0006)
Pad thickness		Front	12.5 (0.49)	1.6 (0.06)
		Rear	9.0 (0.35)	1.6 (0.06)
Brake booster	Characteristics at 20 kg (44 lbs) pedal pressure		Line pressure Unit: kPa (kg/cm ² /psi)	
	Vacuum			
	0 mm (0 in) Hg		922 (9.4/134) minimum	
	300 mm (11.8 in) Hg		5,494 (56/796) minimum	
	500 mm (19.7 in) Hg		8,535 (87/1,237) minimum	

15. Air Conditioner

	MEASUREMENT		STANDARD (NEW)
Air conditioner system	Lubricant capacity	Condenser	10 cc (0.3 US oz., 0.4 Imp oz.)
		Evaporator	25 cc (0.8 US oz., 0.9 Imp oz.)
		Line or hose	10 cc (0.3 US oz., 0.4 Imp oz.)
		Reservoir	10 cc (0.3 US oz., 0.4 Imp oz.)
Compressor	Lubricant capacity		900–950 g (31.7–33.5 oz)
	Stator coil resistance at 20°C (68°F)		3.4–3.8 Ω
	Pulley-to pressure plate clearance		0.35–0.65 (0.014–0.026)
Compressor belt	Deflection between pulleys with 98N (10 kg, 22 lbs) force	For used belt	10–12 (0.4–0.5)
		For new belt	4.5–7.0 (0.18–0.28)
	Belt tension between pulleys (measured with tension gauge)	For used belt For new belt	441–588 N (45–60 kg, 99–132 lbs) 931–1,127 N (95–115 kg, 209–254 lbs)

Standards and Service Limits

Unit of length: mm (in.)

16. Electrical

			MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Ignition coil	Rated voltage			12 Volts	
	Winding resistance		Primary Secondary	0.6–0.8 Ω 12.9–19.3 kΩ	
Ignition wire	Resistance			25 kΩ maximum	
Spark plug	Type	standard		ZFR6F-11 (NGK) or KJ20CR-L11 (ND)	
	(): Manufacturer	Option		ZFR7F-11 (NGK) or KJ22CR-L11 (ND)	
	Gap			1.0–1.1 (0.039–0.043)	
Ignition timing	At idling			15° ± 2° BTDC	
Battery	Lighting capacity (20-hours ratio)			65Ah	
	Starting capacity (voltage after 5 sec.)			8.4 V minimum/300 ampere draw at –15°C (59°F)	
Alternator	Output			80A	
	Rotor coil resistance			2.8–3.0 Ω	
	Slip ring O.D.			14.4 (0.57)	14.0 (0.55)
	Brush length			10.5 (0.41)	5.5 (0.22)
	Brush spring tension			300–360 g (10.6–12.7 oz)	
Alternator belt	Deflection at midway between pulleys with 98 N (10 kg, 22 lb) force		Model without A/C	Used belt	10–12 (0.39–0.47)
				New belt	8.5–11 (0.33–0.43)
			Model with A/C	Used belt	10–12 (0.39–0.47)
				New belt	4.5–7.0 (0.18–0.28)
	Belt tension between pulleys (measured with tension gauge)		Model without A/C	Used belt	294–441 N (30–45 kg, 66–99 lb)
				New belt	441–637 N (45–65 kg, 99–143 lb)
			Model with A/C	Used belt	441–637 N (45–65 kg, 99–143 lb)
				New belt	931–1,128 N (95–115 kg, 209–154 lb)
Starting motor	Output			1.6 kw	
	Manufacturer: Mitsuba	Mica depth		0.4–0.5 (0.016–0.02)	0.15 (0.006)
		Commutator runout		0–0.02 (0–0.001)	0.05 (0.002)
		Commutator O.D.		28.0–28.1 (1.10–1.11)	27.5 (1.08)
		Brush length		15.8–16.2 (0.62–0.64)	10.0 (0.39)
		Brush spring tension		16–18N (1.6–1.8 kg, 3.5–4.0 lbs)	
	Manufacturer: NIPPONDENSO	Mica depth		0.5–0.8 (0.02–0.03)	0.2 (0.01)
		Commutator runout		0–0.02 (0–0.001)	0.05 (0.002)
		Commutator O.D.		29.9–30.0 (1.18–1.18)	29.0 (1.14)
		Brush length		15.0–15.5 (0.59–0.61)	10.0 (0.39)
				19–24N (1.9–2.4 kg, 4.2–5.3 lbs)	