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	 IN EX	0.05–0.15 (0.002–0.006) 0.05–0.089 (0.002–0.0035) 0.015 (0.0006) 38.741 (1.5252) 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	0.23—0.28(0.0094–0.0110) 0.27—0.32(0.0110–0.1259) 5.485—5.495 (0.2159—0.2163) 5.450–5.460 (0.2145–0.2149) 0.020—0.045 (0.0007—0.0017) 0.055–0.080 (0.0021–0.0031)	— — 5.455 (0.2148) 5.420 (0.2133) 0.075 (0.0029) 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 manufacture
CH: CHUO HATSUJO manufacture

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	No Mark 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 48 (1.890) 0.15—0.30 (0.006—0.012)	— — — 0.40 (0.016)
Crankshaft	Main journal diameter Taper/out-of-round, main journal Rod journal diameter Taper/out-of-round, rod journal End play Runout	No.1, 2 Journals No.3 Journal No.4 Journal No.5 Journal	49.976—50.000 (1.9676—1.9685) 49.972—49.996 (1.9674—1.9683) 49.984—50.008 (1.9679—1.9688) 49.988—50.012 (1.9680—1.9690) 0.005 (0.0002) max. 44.976—45.000 (1.7710—1.7717) 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 Journal No.5 Journal	0.021—0.045 (0.0009—0.0018) 0.025—0.049 (0.0001—0.0019) 0.013—0.037 (0.0005—0.0015) 0.009—0.033 (0.0004—0.0013) 0.015—0.043 (0.0008—0.0019)	0.05 (0.002) 0.054 (0.0021) 0.05 (0.002) 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)	—
		No.3 journal	34.722–34.734 (1.3670–1.3674)	—
	Journal taper		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)	—
	Oil Clearance	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)	—
Balancer Shaft Bearing	I.D	No.1 journal (Front)	42.800–42.820 (1.6850–1.6858)	—
		(Rear)	21.000–21.013 (0.8268–0.8273)	—
		No.2 journal	38.800–38.820 (1.5276–1.5283)	—
		No.3 journal	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	78°C±2 (172°F±3)	86–90°C (187–194°F)
	Full open	90°C (194°F)	
	Valve lift at full open	8 (0.31) max.	
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	MT: 6.6 (6.97, 5.81) AT: 7.1 (7.50, 6.23)	
	at change	MT: 3.0 (3.17, 2.64) AT: 3.5 (3.70, 3.08)	
	pressure cap opening pressure	93-123 kpa (0.95-1.25 kg/cm^2, 13.5-17.8 psi)	
Cooling fan	"ON" temperature	87°–93°C (189°–199°F)	
	"OFF" temperature	80°–91°C (176°–196°F)	
	"ON" temperature (Fan timer)	105°–111°C (221°–231°F)	
	"OF" temperature (Fan timer)	98°–109°C (208°–228°F)	

Standards and Service Limits

6. Fuel and Emissions

	MEASUREMENT	STANDARD (NEW)
Fuel Pump	Displacement (minimum in 10 seconds) Relief valve opening pressure	230 cc (7.8 US oz., 8.1 Imp oz.) 441—588 kPa (4.5—6.0 kg/cm², 64—85 psi)
Pressure Regulator (PGM-FI)	Pressure with regulator vacuum hose disconnected	275—324 kPa (2.80—3.30 kg/cm², 40—47 psi)
Fuel Tank	Capacity	65 ℓ (17.2 US gal., 14.3 Imp gal.)
Engine	Fast idle	1,400 ± 400 min^{-1}(rpm)
	Idle speed (with headlights and cooling fan OFF) MT AT	770±50 min^{-1} (rpm) 770±50 min^{-1} (rpm) in [P] or [N] positions
	Idle CO	0.1% maximum

7. Clutch

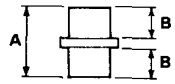
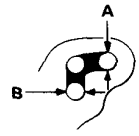
	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height RHD LHD Stroke Pedal play Disengagement height	210 (8.3) to floor 184 (7.2) to floor 142 (5.6) 9—15 (0.4—0.6) 90 (3.5) min. to floor 80 (3.1) min. to carpet	— — — — — —
Flywheel	Clutch surface runout	0.05 (0.002) max.	0.15 (0.006)
Clutch disc	Rivet head depth Surface runout Thickness	1.3 (0.05) min. 0.8 (0.03) max. 8.5—9.2 (0.33—0.36)	0.2 (0.008) 1.0 (0.04) 6.1 (0.24)
Clutch cover	Uneveness 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 Diameter of ball bearing contact area Diameter of third gear contact area Diameter of ball bearing contact area Runout	0.10—0.16 (0.0039—0.0063) 27.977—27.990 (1.1015—1.1020) 37.984—38.000 (1.4954—1.4961) 27.987—28.000 (1.1018—1.1024) 0.02 (0.0008) max.	Adjust with a shim. 27.940 (1.1000) 37.930 (1.4933) 27.940 (1.1000) 0.05 (0.002)
Mainshaft third and fourth gears	I.D. End play Thickness 3rd gear 4th gear	43.009—43.025 (1.6933—1.6939) 0.06—0.21 (0.0024—0.0083) 32.42—32.47 (1.276—1.278) 30.92—30.97 (1.217—1.219)	43.080 (1.6961) 0.30 (0.012) 32.3 (1.27) 30.8 (1.21)
Mainshaft fifth gear	I.D End play Thickness	43.009—43.025 (1.6933—1.6939) 0.06—0.21 (0.0024—0.0083) 30.92—30.97 (1.217—1.219)	43.080 (1.6961) 0.30 (0.012) 3.08 (0.12)
Countershaft	End play Diameter of needle bearing contact area Diameter of ball bearing needle bearing contact area Diameter of low gear contact area Runout	0.05—0.40 (0.0019—0.0157) 38.000—38.015 (1.4961—1.4967) 24.987—25.000 (0.9837—0.9845) 39.984—40.000 (1.5742—1.5748) 0.02 (0.0008) max.	0.50 (0.02) 37.95 (1.4941) 24.94 (0.982) 39.93 (1.572) 0.05 (0002)

8. Manual Transmission (cont'd)

Unit of length: mm (in.)

	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	47.009—47.025 (1.8507—1.8514) 0.04—0.10 (0.002—0.004) 34.62—34.67 (1.3630—1.3650)	47.08 (1.8535) Adjust with a collar. 33.5 (1.3186)
Spacer collar (Countershaft second gear)	I.D. O.D. Length A B	36.48—36.49 (1.4362—1.4366) 41.989—42.000 (1.6531—1.6535) 29.02—29.04 (1.1425—1.1433) 29.07—29.09 (1.1445—1.1453)	36.50 (1.437) 41.94 (1.651) — —
Spacer collar (Mainshaft fourth and fifth gears)	I.D. O.D. Length A B 	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)
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 (0.0006)
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 at A at B Fork-to fifth/ reverse shift Shaft clearance at A at B 	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)
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 clerance	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 R L	18.000—18.018 (0.7087—0.7094) 0.017—0.047 (0.0007—0.0019) 28.005—28.025 (1.1026—1.1033) 0.025—0.066 (0.0009—0.0026) 0.055—0.091 (0.0022—0.0036)	— 0.100 (0.0039) — 0.120 0.150
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	
Hydrauric 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)		520 kPa (5.3 kg/cm^2, 75 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 kd/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 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 pressure B		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 1st, 2nd 3rd, 4th	0.8–1.0 (0.031–0.039) 0.65–0.85 (0.026–0.033) 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 (0.074–0.079)	Until grooves worn out
	Clutch plate thickness		1st, 1.95–2.05 (0.0767–0.0807)	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 Mark 2 Mark 3 Mark 4 Mark 5 Mark 6 Mark 7 Mark 8 Mark 9	2.05–2.10 (0.081–0.083) 2.15–2.20 (0.085–0.087) 2.25–2.30 (0.089–0.091) 2.35–2.40 (0.093–0.094) 2.45–2.50 (0.096–0.098) 2.55–2.60 (0.100–0.102) 2.65–2.70 (0.104–0.106) 2.75–2.80 (0.108–0.110) 2.85–2.90 (0.112–0.114)	↓ Discoloration

9. Automatic Transmission (cont'd)

Unit of length: mm (in.)

	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 (1.1417–1.1422)	—
	Oil pump driven gear I.D.	14.016–14.034 (0.5518–0.5525)	Wear or damage
	Oil pump gear 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	0.21–0.265 (0.0083–0.0104)	—
	Oil pump gear-to-body clearance Driven	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	17.0–17.1 (0.6692–0.6732)	—
Servo body	Shift fork Shaft I.D. A	14.000–14.005 (0.5512–0.5514)	—
	Shift fork Shaft I.D. B	14.006–14.010 (0.5514–0.5516)	—
	Shift fork Shaft I.D. 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 On mainshaft and stator shaft	22.984–23.000 (0.9047–0.9055)	Wear or damage
	On mainshaft 4th gear collar	31.984–32.000 (1.2592–1.2598)	↕
	On mainshaft 3rd gear collar	45.984–46.000 (1.8103–1.8110)	↕
	On countershaft 1st gear collar	40.984–41.000 (1.6135–1.6142)	↕
	On countershaft 4th gear	31.975–31.991 (1.2589–1.2595)	↕
	On countershaft reverse gear	35.979–36.000 (1.4165–1.4173)	↕
	On countershaft parking gear	39.984–40.000 (1.5741–1.5748)	↕
	On secondary shaft 1st gear	31.975–31.991 (1.2588–1.2594)	↕
	On secondary shaft 2nd gear	31.975–31.991 (1.2588–1.2594)	↕
	Reverse idle shaft holder I.D.	14.416–14.434 (0.5675–0.5682)	↕
	Mainshaft 3rd gear I.D.	52.000–52.019 (2.0472–2.0479)	↕
	Mainshaft 4th gear I.D.	38.005–38.021 (1.4963–1.4969)	↕
	Countershaft 1st gear I.D.	47.000–47.016 (1.8504–1.8510)	↕
	Countershaft 4th gear I.D.	38.000–38.016 (1.4961–1.4967)	↕
	Countershaft reverse gear I.D.	42.000–42.016 (1.6535–1.6541)	↕
	Countershaft *idle gear I.D.*	48.000–48.016 (1.8897–1.8903)	↕
	Secondary shaft 1st gear I.D.	37.000–37.016 (1.4566–1.4573)	↕
	Secondary shaft 2nd gear I.D.	37.000–37.016 (1.4566–1.4573)	↕
	Mainshaft 3rd gear collar length	37.000–37.016 (1.4566–1.4573)	↕
	Mainshaft 4th gear collar length	47.500–47.550 (1.8700–1.8720)	↕
	Countershaft 1st gear collar length	27.500–27.550 (1.0826–1.0846)	↕
	Secondary shaft 2nd gear thrust washer thickness	4.35–4.45 (0.1713–0.1752)	↕
	Countershaft 1st gear thrust washer thickness	1.45–1.50 (0.0570–0.0590)	↕
	Countershaft idler gear thrust washer thickness	3.45–3.55 (0.1358–0.1398)	↕
	Countershaft parking gear length	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
	Regulator valve spring B	1.8 (0.0709)	9.6 (0.3779)	44.0 (1.7323)	12.7
	Stator reaction spring	4.5 (0.1772)	35.4 (1.3937)	30.3 (1.1929)	1.92
	Torque converter check valve spring	1.1 (0.0433)	8.4 (0.3307)	36.4 (1.4331)	12.0
	Relief valve spring	1.0 (0.0394)	8.4 (0.3307)	39.1 (1.5393)	15.1
	Cooler check valve spring	1.1 (0.0433)	8.4 (0.3307)	46.8 (1.8425)	17.0
	2nd orifice spring	0.6 (0.0236)	6.6 (0.2598)	55.8 (2.1968)	15.8
	Servo orifice spring	0.8 (0.0315)	6.6 (0.2598)	52.5 (2.0669)	33.0
	4th exhaust 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	1.8 (0.0709)	16.3 (0.6417)	115.4 (4.5433)	18.6
	4th accumulator spring	2.9 (0.1142)	22.0 (0.8661)	90.1 (3.5472)	10.9
	2nd accumulator spring	3.5 (0.1378)	22.0 (0.8661)	77.1 (3.0354)	10.0
	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)	51.1 (2.0118)	14.7
	Servo control 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	1.4 (0.0551)	8.5 (0.3346)	41.5 (1.6339)	10.5
		1.4 (0.0551)	8.5 (0.3346)	41.5 (1.6339)	11.2
		1.4 (0.0551)	8.5 (0.3346)	41.6 (1.6378)	12.4
	1st-hold accumulator spring	4.0 (0.1574)	25.0 (0.9842)	64.7 (2.5472)	7.3
	CPC valve spring	1.4 (0.0551)	9.4 (0.3700)	33.0 (1.2992)	10.5
	L/C control spring	0.7 (0.0276)	6.6 (0.2598)	38.0 (1.4961)	14.1

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	0.05—0.15 (0.02—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)	0.120 (0.005)
Differential tapered roller bearing preload	For used bearing	2.5—3.7 N·m (25—37 kg—cm, 1.8—2.7 lb-ft)	Adjust with a washer
	After replacement of bearing	2.8—4.0 N·m (28—48 kg-cm, 2.0—2.9 lb-ft)	Adjust with a washer

11. Steering

	MEASUREMENT		STANDARD (NEW)
Steering wheel	Play		10 (0.39) maximum
Gearbox	Pinion starting torque		Below 1.ON-m (10 kg-cm, 0.72 lb-ft)
	Angle of rack guide screw loosend from locked position		20° $^{+5°}_{-0}$
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	0.5 ℓ (0.53 US qt, 0.44 Imp qt)
		At change (approx.)	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 belt 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)

*When using a new belt, first adjust the deflection or tension to these values, then readjust the deflection or tension to the values for the used belts after running engine for five minutes.

12. Suspension

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Wheel alignment	Total toe	Front	0±2 (0±0.08)	—
		Rear	IN 2±2 (0.08±0.08)	—
	Camber	Front	0° 00″ ± 1°	—
		Rear	−0° 30′ ± 1°	—
	Caster	Front	3° 00′ ± 1°	—
	Front Wheel turning angle	Inward wheel	39°05′±2°	—
		Outward wheel (reference)	29°30′	—
Wheel	Rim runout	Steel wheel Axial	Below 1.0 (0.04)	2.0 (0.08)
		Steel wheel Radial	Below 1.0 (0.04)	1.5 (0.06)
		Aluminum wheel Axial	Below 0.7 (0.03)	2.0 (0.08)
		Aluminum wheel 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

Unit of length: mm (in.)

	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)	LHD: MT	165±0.5 (6.5±0.02)	—
		AT	170±0.5 (6.7±0.02)	—
		RHD: MT	190 (7.5) minimum	—
		AT	195 (7.7) minimum	—
	Free play		1—5 (0.04—0.20)	5 (0.20)
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			
		Vacuum	Line pressure Unit: kPa (kg/cm²/psi)	
		0 mm (0 in) Hg	813 (8.3/118) minimum	
		300 mm (11.8 in) Hg	6,076 (62/882) minimum	
		500 mm (19.7 in) Hg	8,134 (83/1,180) 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		90—120 cc (3.0—4.0 US oz, 3.2—4.2 Imp 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 98 N (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 belt tension gauge)	For used belt	441—588 N (45—60 kg, 99—132 lbs)*
		For new belt	931—1,127 N (95—115 kg, 209—254 lbs)

*When using a new belt, first adjust the deflection or tension to these values, then readjust the deflection or tension to the values for the used belts after running engine for five minutes.

Standards and Service Limits

16. Electrical

Unit of length: mm (in.)

	MEASUREMENT		STANDARD (NEW)		SERVICE LIMIT
Ignition coil	Rated voltage		12 Volts		
	Winding resistance	Primary Secondary	0.6–0.8 Ω 12.8–19.2 kΩ		
Ignition wire	Resistance		25 kΩ maximum		
Spark plug	Type ( ): Manufacturer	Standard	ZFR6F-11 (NGK) or KJ20CR-L11 (ND)		
		Option	ZFR5F-11 (NGK) or KJ16CR-L11 (ND) 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 Slip ring O.D. Brush length Brush spring tension		2.8–3.0 Ω 14.4 (0.57) 10.5 (0.41) 300–360 g (10.6–12.7 oz)		— 14.0 (0.55) 5.5 (0.22) —
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	KE Except KE	MT: 1.4 kW MT: 1.4 kW		AT: 1.4 kW AT: 1.6 kW
	Manufacturer: Mitsuba	Mica depth Commutator runout Commutator O.D. Brush length Brush spring tension	0.4–0.5 (0.016–0.02) 0–0.02 (0–0.001) 28.0–28.1 (1.10–1.11) 15.8–16.2 (0.62–0.64) 16–18 N (1.6–1.8 kg, 3.5–4.0 lbs)		0.15 (0.006) 0.05 (0.002) 27.5 (1.08) 10.0 (0.39) —

*When using a new belt, first adjust the deflection or tension to these values, then readjust the deflection or tension to the values for the used belts after running engine for five minutes.