

Standards and Service Limits

Cylinder Head/Valve Train <Except ZC1> — Section 6

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Compression	300 min ⁻¹ (rpm) and wide-open throttle	Nominal PGM-FI Carburetor Minimum PGM-FI Carburetor maximum variation	1,274 kPa (13.0 kg/cm ² , 185 psi) 1,176 kPa (12.0 kg/cm ² , 171 psi) 1,078 kPa (11.0 kg/cm ² , 156 psi) 980 kPa (10.0 kg/cm ² , 142 psi) 196 kPa (2 kg/cm ² , 28 psi)
Cylinder head	Warpage Height	90 (3.54)	0.05 (0.002) 89.8 (3.53)
Camshaft	End play Oil clearance Runout Camlobe height	0.05—0.15 (0.002—0.006) 0.050—0.098 (0.002—0.004) 0.03 (0.001) max. PGM-FI IN EX 1500 IN EX 1300 IN EX 1200 IN EX	0.5 (0.02) 0.15 (0.006) 0.06 (0.002) 40.865 (1.6089) 40.884 (1.6096) 40.370 (1.5894) 40.391 (1.5902) 40.056 (1.5770) 40.078 (1.5779) 39.095 (1.5392) 39.120 (1.5402)
Valve	Valve clearance Valve stem O.D. Stem-to-guide clearance Stem installed height	IN EX IN EX IN EX IN and EX	0.17—0.22 (0.007—0.009) 0.22—0.27 (0.009—0.011) 6.58—6.59 (0.2591—0.2594) 6.55—6.56 (0.2579—0.2583) 0.02—0.05 (0.001—0.002) 0.05—0.08 (0.002—0.003) 48.16 (1.896)
Valve seat	Width	IN and EX	1.25—1.55 (0.049—0.061) 2.0 (0.08)
Valve spring	Free length Squareness Inner and Outer	IN and EX	47.6 (1.87) 46.6 (0.83) 1.75 (0.068)
Valve guide	I.D.	IN and EX	6.61—6.63 (0.260—0.261) 6.65 (0.262)
Rocker arm	Arm-to-shaft clearance		0.018—0.054 (0.0007—0.0021) 0.08 (0.003)

Cylinder Head/Valve Train <ZC1> — Section 6

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Compression	300 min ⁻¹ (rpm) and wide-open throttle	Nominal Minimum Maximum variation	1,323 kPa (13.5 kg/cm ² , 192 psi) 1,127 kPa (11.5 kg/cm ² , 164 psi) 196 kPa (2 kg/cm ² , 28 psi)
Cylinder head	Warpage Height	132.0 (5.20)	0.05 (0.002) 131.8 (5.19)
Camshaft	End play Oil clearance Runout Cam lobe height	0.05—0.15 (0.002—0.006) 0.050—0.089 (0.002—0.004) 0.03 (0.001) max. IN EX	0.5 (0.02) 0.15 (0.006) 0.06 (0.002) 32.982 (1.2985) 32.342 (1.2733)
Valve	Valve clearance Valve stem O.D. Stem-to-guide clearance Stem installed height	IN EX IN EX IN EX IN EX	*0.13—0.17 (0.0051—0.0067) *0.15—0.19 (0.0059—0.0075) 6.58—6.59 (0.2591—0.2594) 6.55—6.56 (0.2579—0.2583) 0.02—0.05 (0.001—0.002) 0.05—0.08 (0.002—0.003) 45.78 (1.802) 44.97 (1.770)
Valve seat	Width	IN and EX	1.25—1.55 (0.049—0.061) 2.0 (0.08)
Valve spring	Free length Squareness Inner and Outer	IN EX	45.8 (1.80) 47.1 (1.85) 44.8 (1.76) 46.1 (1.81) 1.6 (0.063)
Valve guide	I.D.	IN and EX	6.61—6.63 (0.260—0.261) 6.65 (0.262)

Engine Block <Except ZC1> — Section 7

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface Bore diameter Bore taper Reboring limit	0.07 (0.003) max. 74.00—74.02 (2.9133—2.9142) 0.007—0.012 (0.0003—0.0005)	0.10 (0.004) 74.10 (2.9173) 0.05 (0.002) 0.5 (0.02)
Piston	Skirt O.D. Clearance in cylinder Piston-to-ring clearance	At 16 mm (0.63 in) from bottom of skirt 0.01—0.05 (0.0004—0.0020) (Top) (Second)	73.97—73.99 (2.9122—2.9133) 0.07 (0.003) 0.13 (0.005) 0.13 (0.005)
Piston ring	Ring end gap (Top and second) Ring end gap (Oil)	0.15—0.35 (0.006—0.014) 0.30—0.90 (0.012—0.035)	0.6 (0.024) 1.1 (0.043)
Connecting rod	Pin-to-rod interference Large end bore diameter End play installed on crankshaft	0.02—0.04 (0.0008—0.0016) Nominal 45 (1.77) *43 (1.69) 0.15—0.30 (0.006—0.012)	0.40 (0.016)

*1300 and 1200

Engine Block <Except ZC1> — Section 7

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Crankshaft	Main Journal diameter	49.976–50.000 (1.9676–1.9685)	—
	Taper/out-of-round main journal	0.005 (0.0002) max.	0.010 (0.0004)
	Rod Journal diameter	41.976–42.000 (1.6526–1.6535)	—
		*39.976–40.000 (1.5739–1.5748)	—
	Taper/out-of-round rod Journal	0.005 (0.0002) max.	0.010 (0.0004)
	End play	0.10–0.35 (0.004–0.014)	0.45 (0.018)
Bearings	Runout	0.03 (0.0012) max.	0.06 (0.0024)
	Main bearing-to-journal oil clearance	0.024–0.042 (0.0009–0.0017)	0.07 (0.003)
	Rod bearing-to-journal oil clearance	0.020–0.038 (0.0008–0.0015)	0.07 (0.003)

*1300 and 1200

Engine Block <ZC1> — Section 7

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface	0.07 (0.003) max.	0.10 (0.004)
	Bore diameter	75.00–75.02 (2.9528–2.9535)	75.07 (2.9555)
	Bore taper	0.007–0.012 (0.0003–0.0005)	0.05 (0.002)
	Reboring limit	—	0.5 (0.02)
Piston	Skirt O.D.	At 16 mm (0.63 in) from bottom of skirt	74.98–74.99 (2.9520–2.9524)
	Clearance in cylinder	0.01–0.05 (0.0004–0.0020)	0.07 (0.003)
	Piston-to-ring clearance (Top)	0.03–0.06 (0.0012–0.0024)	0.13 (0.005)
	(Second)	0.030–0.055 (0.0012–0.0022)	0.13 (0.005)
Piston ring	Ring end gap (top and second)	0.15–0.35 (0.006–0.014)	0.6 (0.02)
	Ring end gap (oil)	0.20–0.70 (0.008–0.028)	0.8 (0.03)
Connecting rod	Pin-to-rod interference	0.014–0.040 (0.0006–0.0016)	—
	Large end bore diameter	Nominal 48.0 (1.89)	—
	End play installed on crankshaft	0.15–0.30 (0.006–0.012)	0.40 (0.016)
Crankshaft	Main Journal diameter	54.976–55.000 (2.1644–2.1654)	—
	Taper/out-of-round, main journal	0.005 (0.0002) max.	0.010 (0.0004)
	Rod Journal diameter	44.976–45.000 (1.7707–1.7717)	—
	Taper/out-of-round, rod Journal	0.005 (0.0002) max.	0.010 (0.0004)
	End play	0.10–0.35 (0.004–0.014)	0.45 (0.018)
	Runout	0.03 (0.0012) max.	0.06 (0.0024)
Bearings	Main bearing-to-journal oil clearance	No.3 Journal 0.030–0.048 (0.0012–0.0019)	0.05 (0.002)
		Other Journals 0.024–0.042 (0.0009–0.0017)	0.05 (0.002)
	Rod bearing-to-journal oil clearance	0.020–0.038 (0.0008–0.0015)	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) After engine disassembly	—
		3.5 (3.7, 3.1) After oil change, including oil filter	—
		3.0 (3.2, 2.6) After oil change, without oil filter	—
Oil pump	Displacement	35 ℓ (9.2 US gal., 7.7 Imp gal.) 3,000 min ⁻¹ (rpm)	—
		*46 ℓ (12.4 US gal., 10.3 Imp gal.) 5,000 min ⁻¹ (rpm)	—
		0.14 (0.006) max.	0.2 (0.008)
		0.10–0.175 (0.004–0.007)	0.2 (0.008)
		0.03–0.08 (0.001–0.003)	0.15 (0.006)
Relief valve	Pressure setting 80°C (176°F)	Idle	147 kPa (1.5 kg/cm ² , 21psi) min
		3,000 min ⁻¹ (rpm)	333–412 kPa (3.4–4.2 kg/cm ² , 48–60 psi) 412–539 kPa (4.2–5.5 kg/cm ² , 60–78 psi)

*ZC1 Engine

HM: Automatic or Hondamatic

Cooling — Section 10

	MEASUREMENT	STANDARD (NEW)
Radiator	Capacity (incl. heater) ℓ (US. Gal., Imp. Gal.) Includes reservoir tank 0.4 (0.11, 0.09)	Coupe 5.6 (1.5, 1.2)
		PGM-FI 5.1 (1.3, 1.1)
		1200 4MT 4.4 (1.4, 1.2) KG KW only
		4MT 5.2 (1.4, 1.1) Other models
		HM 4.9 (1.3, 1.1)
		1300 4MT 5.2 (1.4, 1.1)
		5MT 4.9 (1.3, 1.1) KT only
		5MT 4.4 (1.2, 1.0) Other models
		HM 4.9 (1.3, 1.1) EC models
		HM 5.2 (1.4, 1.1) Other models
Thermostat	Starts to open	76–78°C (169–173°F)
		Full open 91°C (196°F)
		Valve lift at full open 8 (0.31) max.
Cooling fan	Fan-to-core clearance	ND 22 mm (0.87 in.) TOYO 17.5 mm (0.69 in.) *50 (1.97)
		Thermoswitch "ON" temperature 88.5–91.5°C (191–197°F)
		Thermoswitch "OFF" temperature 85.5–86.5°C (186–188°F)

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Standards and Service Limits (cont'd)

Fuel — Section 11

	MEASUREMENT		STANDARD (NEW)
Idle	Fast idle	Coupe 2D H/B	1,000–1,800 min ⁻¹ (rpm) 1,250–2,250 min ⁻¹ (rpm)
	Idle speed with headlights and cooling fan off. (On Swedish model: on)	Coupe 2D H/B	850±50 min ⁻¹ (rpm) 750±50 min ⁻¹ (rpm)
	Idle CO	Coupe 2D H/B	KX below 0.1%, Other models 1.0±1.0% KX below 0.5%, Other models below 1.5%
Fuel pump	Delivery pressure Displacement Relief valve opening pressure		230–270 kPa (2.35–2.75 kg/cm ² , 33–39 psi) 230 cc/min in 10 seconds 441–588 kPa (4.5–6.0 kg/cm ² , 64–85 psi)
Pressure Regulator	Pressure		230–270 kPa (2.35–2.75 kg/cm ² , 33–39 psi)
Fuel tank	Capacity	Coupe 2D H/B	41 ℓ (10.8 US. Gal., 9.0 Imp. Gal.) 45 ℓ (11.9 US. Gal., 9.9 Imp. Gal.)

HM: Automatic or Hondamatic

Fuel and Carburetor — Section 12

	MEASUREMENT		STANDARD (NEW)
Idle	Choke fast idle		1,500–2,000 min ⁻¹ (rpm)
	Idle speed with headlights and cooling fan off	Manual HM	750±50 min ⁻¹ (rpm) 700±50 min ⁻¹ (rpm)
	Idle CO		0.2–1.0%
	Float level		35.4–37.4 (13.9–14.7 in.)
Fuel pump	Delivery pressure Displacement		17.7–26.5 kPa (0.18–0.27 kg/cm ² , 27–38 psi) 170 cc/min at camshaft rpm 300 min ⁻¹ (rpm)
Fuel tank	Capacity	Coupe 2D H/B 4D, 4D H/B	41 ℓ (10.8 US. Gal., 9.0 Imp. Gal.) 45 ℓ (11.9 US. Gal., 9.9 Imp. Gal.) 46 ℓ (12.1 US. Gal., 10.1 Imp. Gal.)

Clutch — Section 13

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height	Coupe EC Except Coupe EC	175 (6.89) to floor 179 (7.05) to floor	—
	Stroke		135–140 (5.3–5.5)	—
	Pedal play	Coupe EC Except Coupe EC	10–30 (0.39–1.18) 16–21 (0.63–0.83)	—
	Disengagement height	Coupe EC	56 (2.2) min. to floor	—
		Coupe KY 2D H/B, 4D 4D H/B	61 (2.4) min. to floor 31 (1.2) min. to carpet 83 (3.3) min. to floor 53 (2.1) min. to carpet 78 (3.1) min. to floor 48 (1.9) min. to carpet	—
Clutch arm	Release arm adjustment		4.0–5.0 (0.16–0.20)	—
Flywheel	Clutch surface runout		0.05 (0.002) max.	0.15 (0.006)
Clutch plate	Rivet head depth		1.3 (0.05) min.	0.2 (0.008)
	Surface runout Thickness		0.8 (0.03) max. 8.1–8.8 (0.32–0.35)	1.0 (0.04) 5.7 (0.22)
Clutch release bearing holder	I.D.		29.000–29.059 (1.142–1.144)	29.20 (1.150)
	Holder-to-guide sleeve clearance	Coupe EC	31.000–31.059 (1.220–1.223)	31.09 (1.224)
		Coupe EC	0.040–0.132 (0.0016–0.0052) 0.050–0.15 (0.002–0.006)	0.2 (0.008) 0.22 (0.009)
Clutch cover	unevenness of diaphragm spring		0.8 (0.03) max.	1.0 (0.04)

Manual Transmission <GV and GW> — Section 14 and 15

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity ℓ (US. qt., Imp. qt.)		2.5 (2.6, 2.2) at assembly 2.3 (2.4, 2.0) at oil change	
Mainshaft	End play		0.11–0.25 (0.004–0.0010)	—
	Diameter of needle bearing contact area		27.997–28.010 (1.1022–1.1028)	27.94 (1.100)
	Diameter of fifth gear contact area		24.987–25.000 (0.9837–0.9843)	24.93 (0.981)
	Diameter of 62/22 ball bearing contact area		21.987–22.000 (0.8656–0.8661)	21.93 (0.863)
	Diameter of 6304 ball bearing contact area		19.983–19.996 (0.7867–0.7872)	19.93 (0.7846)
	Runout		0.02 (0.0008) max.	0.05 (0.019)
Mainshaft third gear	I.D. End Play		30.007–30.020 (1.1814–1.1819) 0.05–0.35 (0.0020–0.0138)	30.07 (1.184) —
Countershaft	End play		0.35 (0.0138)	0.65 (0.026)
	Diameter of needle bearing contact area		30.004–30.017 (1.1813–1.1818)	29.94 (1.179)
	Diameter of ball bearing contact area		24.9935–25.0065 (0.9840–0.9845)	24.94 (0.982)
	Diameter of low gear contact area		31.984–32.000 (1.2592–1.2598)	31.93 (1.257)
	Runout		0.04 (0.0016)	0.10 (0.004)
Countershaft low gear	I.D.		37.009–37.025 (1.4570–1.4577)	37.08 (1.460)
	End play		0.03–0.08 (0.0012–0.0031)	0.18 (0.007)
Countershaft second, third/fourth gear	I.D.		37.009–37.025 (1.4570–1.4577)	37.08 (1.460)
	End play		0.05–0.12 (0.0020–0.0047)	0.18 (0.007)

Manual Transmission <GV and GW> – Section 14 and 15

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Specer collar	Second, Third	I.D.	25.980–25.991 (1.0228–1.0233)	26.04 (1.025)
		O.D. Length	31.989–32.000 (1.2594–1.2598) 28.01–28.13 (1.1028–1.1074)	31.93 (1.257)
	Fourth	I.D.	25.007–25.037 (0.9845–0.9857)	25.08 (0.987)
		O.D. Length	31.989–32.000 (1.2594–1.2598) 28.01–28.13 (1.1028–1.1074)	31.93 (1.257)
Reverse idler gear	I.D. Gear-to-reverse gear shaft clearance		15.016–15.043 (0.5912–0.5922) 0.032–0.077 (0.0013–0.0030)	15.08 (0.594) 0.14 (0.006)
Synchronizer ring	Ring-to-gear clearance (ring pushed against gear)		0.85–1.10 (0.033–0.043)	0.4 (0.016)
Shift fork	Synchronizer sleeve gear		6.95–7.05 (0.2736–0.2776)	1.0 (0.039)
	Fork-to-synchronizer sleeve clearance		0.45–0.65 (0.018–0.026)	
Reverse shift fork	End gap		6.9–7.0 (0.27–0.28)	0.7 (0.028)
	Fork-to-reverse idler gear clearance		0.1–0.3 (0.004–0.012)	
	Groove width		7.05–7.25 (0.278–0.285)	0.5 (0.020)
	Fork-to-fifth/reverse shift shaft clearance		0.05–0.35 (0.002–0.014)	
Shift arm B	I.D.		11.8–12.0 (0.465–0.472)	0.8 (0.032)
	Shift arm-to-shift guide clearance		0.05–0.35 (0.002–0.014)	



Manual Transmission <CG> – Section 14

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity ? (US. qt., Imp. qt.)		2.4 (2.5, 2.1) at assembly 2.3 (2.4, 2.0) at oil change	
Mainshaft	End play		0.10–0.35 (0.004–0.014)	0.5 (0.02)
	Diameter of needle bearing contact area		27.920–27.980 (1.099–1.102)	27.87 (1.097)
	Diameter of third gear contact area		31.984–32.000 (1.2592–1.2598)	31.93 (1.2571)
	Diameter of ball bearing contact area		24.980–24.993 (0.9835–0.9840)	24.93 (0.981)
	Runout		0.04 (0.0016) max.	0.10 (0.004)
Mainshaft third and fourth gears	I.D.		37.009–37.025 (1.4570–1.4577)	37.07 (1.459)
	End Play		0.03–0.18 (0.0012–0.0071)	0.3 (0.012)
	Thickness		31.42–31.47 (1.237–1.239)	31.3 (1.232)
Mainshaft fifth gear	I.D.		37.009–37.025 (1.4570–1.4577)	37.07 (1.459)
	End play		0.03–0.13 (0.0012–0.0051)	0.25 (0.01)
	Thickness		32.42–32.47 (1.276–1.278)	32.3 (1.272)
Countershaft	End play		0.10–0.35 (0.004–0.014)	0.5 (0.02)
	Diameter of needle bearing contact area		33.000–33.015 (1.2992–1.2998)	32.95 (1.297)
	Diameter of ball bearing contact area		24.980–24.993 (0.9835–0.9840)	24.93 (0.981)
	Diameter of low gear contact area		33.984–34.000 (1.3380–1.3386)	33.93 (1.336)
	Runout		0.04 (0.0016)	0.10 (0.004)
Countershaft low gear	I.D.		39.008–39.025 (1.5357–1.5364)	39.07 (1.538)
	End play		0.03–0.08 (0.0012–0.0031)	0.18 (0.007)
Countershaft second gear	I.D.		43.008–43.025 (1.6932–1.6939)	43.07 (1.696)
	End play		0.03–0.10 (0.0012–0.0039)	0.18 (0.007)
	Thickness		30.42–30.47 (1.1976–1.1996)	30.3 (1.193)
Spacer collar (Countershaft second gear)	I.D.		30.98–30.99 (1.2197–1.2201)	31.4 (1.236)
	O.D.		37.989–38.000 (1.4956–1.4961)	37.93 (1.493)
	Length		30.53–30.55 (1.2020–1.2028)	30.51 (1.201)
Spacer collar (Mainshaft fourth and fifth gears)	I.D.		25.002–25.012 (0.9843–0.9847)	25.06 (0.987)
	O.D.		31.989–32.000 (1.2594–1.2598)	31.93 (1.257)
	Length		27.03–27.08 (1.0642–1.0661)	27.01 (1.063)
Reverse idler gear	I.D. Gear-to-reverse gear shaft clearance		17.016–17.043 (0.6699–0.6710) 0.032–0.077 (0.0013–0.0030)	17.09 (0.673) 0.15 (0.006)
Synchromizer ring	Ring-to-gear clearance (ring pushed against gear)		0.73–1.18 (0.029–0.046)	0.4 (0.016)
Shift fork	Synchronizer sleeve gear		6.75–6.85 (0.266–0.270)	6.0 (0.24)
	Fork-to-synchromizer sleeve clearance		0.35–0.65 (0.014–0.026)	1.0 (0.04)
Reverse shift fork	End gap		11.8–12.1 (0.46–0.48)	1.7 (0.07)
	Fork-to-reverse idler gear clearance		0.2–1.0 (0.008–0.039)	
	Groove width		7.05–7.25 (0.278–0.285)	0.5 (0.02)
	Fork-to-fifth/reverse shift shaft clearance		0.05–0.35 (0.002–0.014)	
Shift arm	Width of groove in shift rod guide		11.8–12.0 (0.46–0.47)	0.8 (0.03)
	Shift arm-to-shift rod guide		0.05–0.35 (0.002–0.014)	
	Width in shift guide		7.9–8.0 (0.311–0.315)	0.6 (0.02)
	Shift arm-to-shift guide clearance		0.1–0.3 (0.004–0.012)	
Shift rod guide	I.D.		14.000–14.068 (0.5512–0.5539)	0.15 (0.006)
	Guide-to-shaft clearance		0.011–0.092 (0.0004–0.0036)	
	O.D.		11.9–12.0 (0.469–0.472)	0.8 (0.03)
	Guide-to-fifth/reverse shift shaft clearance		0.2–0.5 (0.008–0.020)	
Selector arm	Width		11.9–12.0 (0.469–0.472)	0.5 (0.02)
	Arm-to-shift rod guide clearance		0.05–0.25 (0.002–0.010)	
	End gap		10.05–10.15 (0.396–0.400)	0.7 (0.03)
	Arm-to-interlock clearance		0.05–0.25 (0.002–0.010)	
	Arm-to-holder clearance		0.01–0.20 (0.004–0.0079)	Selection with 5 types of shims

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Standards and Service Limits (cont'd)

Hondamatic Transmission (AV) — Section 16

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity ℓ (US. qt., Imp. qt)	2.4 (2.5, 2.1) at oil change 5.0 (5.3, 4.4) at assembly	
Hydraulic pressure	Line pressure at 2,000 min ⁻¹ (rpm) 1500 1200, 1300	735–784 kPa (7.5–8.0 kg/cm ² , 107–114 psi) 637–686 kPa (6.5–7.0 kg/cm ² , 92–100 psi)	686 kPa (7.0 kg/cm ² , 100 psi) 588 kPa (6.0 kg/cm ² , 85 psi)
	OD clutch pressure at 2,000 min ⁻¹ (rpm) 1500 1200, 1300	686–784 kPa (7.0–8.0 kg/cm ² , 100–114 psi) 588–686 kPa (6.0–7.0 kg/cm ² , 85–100 psi)	637 kPa (6.5 kg/cm ² , 92 psi) 539 kPa (5.5 kg/cm ² , 78 psi)
	☆ clutch pressure at 2,000 min ⁻¹ (rpm) 1500 1200, 1300	686–784 kPa (7.0–8.0 kg/cm ² , 100–114 psi) 588–686 kPa (6.0–7.0 kg/cm ² , 85–100 psi)	637 kPa (6.5 kg/cm ² , 92 psi) 539 kPa (5.5 kg/cm ² , 78 psi)
	1st clutch pressure at 2,000 min ⁻¹ (rpm) 1500 1200, 1300	686–784 kPa (7.0–8.0 kg/cm ² , 100–114 psi) 588–686 kPa (6.0–7.0 kg/cm ² , 85–100 psi)	637 kPa (6.5 kg/cm ² , 92 psi) 539 kPa (5.5 kg/cm ² , 78 psi)
	Governor pressure at 60 km/h	221–230 kPa (2.25–2.35 kg/cm ² , 32–33 psi)	216 kPa (2.2 kg/cm ² , 31 psi)
	Throttle pressure 1500 1200, 1300	735–784 kPa (7.5–8.0 kg/cm ² , 107–114 psi) 637–686 kPa (6.5–7.0 kg/cm ² , 92–100 psi)	686 kPa (7.0 kg/cm ² , 100 psi) 588 kPa (6.0 kg/cm ² , 85 psi)
Stall speed	Check with car on level ground	2,700 min ⁻¹ (rpm)	2,300–2,900 min ⁻¹ (rpm)
Clutch	Clutch initial clearance 1st 2nd 3rd	0.4–0.7 (0.016–0.028) 0.65–0.80 (0.026–0.031) 0.4–0.6 (0.016–0.024)	— — —
	Clutch return spring free length	30.5 (1.20)	28.5 (1.12)
	Clutch disc thickness	1.88–2.0 (0.074–0.079)	Until grooves worn out
	Clutch plate thickness	1.95–2.05 (0.077–0.079)	Discoloration
	Clutch end plate thickness Mark 1	2.3–2.4 (0.091–0.094)	
	Mark 2	2.4–2.5 (0.094–0.098)	
	Mark 3	2.5–2.6 (0.098–0.102)	
	Mark 4	2.6–2.7 (0.102–0.106)	
	Mark 5	2.7–2.8 (0.106–0.110)	
	Mark 6	2.8–2.9 (0.110–0.114)	
	Mark 7	2.9–3.0 (0.114–0.118)	
	Mark 8	3.0–3.1 (0.118–0.122)	
	Mark 9	3.1–3.2 (0.122–0.126)	
	Mark 10	3.2–3.3 (0.126–0.130)	Discoloration
Transmission	Diameter of needle bearing contact area on main and stator shaft	19.980–19.993 (0.7866–0.7871)	
	Diameter of needle bearing contact area on main 2nd gear collar	31.975–31.991 (1.2588–1.2594)	
	Diameter of needle bearing contact area on mainshaft 1st gear collar	30.975–30.991 (1.2195–1.2201)	
	Diameter of needle bearing contact area on countershaft (L side)	32.984–33.000 (1.2986–1.2993)	
	Diameter of needle bearing contact area on countershaft 3rd gear	31.975–31.991 (1.2589–1.2595)	
	Diameter of needle bearing contact area on countershaft 2nd gear	27.980–27.993 (1.1016–1.1021)	
	Diameter of needle bearing contact area on countershaft reverse gear collar	29.980–29.993 (1.1803–1.1808)	
	Diameter of needle bearing contact area on reverse idle gear	13.994–14.000 (0.5509–0.5512)	
	Reverse idler shaft holder diameter	14.016–14.034 (0.5518–0.5525)	
	Mainshaft 2nd gear I.D.	38.000–38.016 (1.4961–1.4967)	
	Mainshaft 1st gear I.D.	36.000–36.016 (1.4173–1.4179)	
	Countershaft 3rd gear I.D.	38.000–38.016 (1.4966–1.4966)	
	Countershaft 2nd gear I.D.	33.000–33.016 (1.4173–1.4179)	
	Countershaft 1st gear I.D.	35.000–35.016 (1.3779–1.3785)	
	Countershaft reverse gear I.D.	36.000–36.016 (1.4173–1.4179)	
	Reverse idler gear I.D.	18.007–18.020 (0.7086–0.7094)	
	Mainshaft 2nd gear end play	0.07–0.15 (0.003–0.006)	
	Mainshaft 1st gear end play	0.08–0.20 (0.003–0.008)	
	Countershaft 3rd gear end play	0.07–0.15 (0.003–0.006)	
	Countershaft 2nd gear end play	0.07–0.15 (0.003–0.006)	
	Reverse idle gear end play	0.05–0.18 (0.0020–0.0071)	
	Countershaft reverse gear end play	0.10–0.20 (0.004–0.008)	
	Reverse gear hub O.D.	51.87–51.90 (2.0421–2.0433)	
	Thrust washer thickness		
	Mainshaft 2nd gear, Countershaft 3rd gear A	2.97–3.00 (0.1169–0.1181)	
	B	3.02–3.05 (0.1189–0.1201)	
	C	3.07–3.10 (0.1209–0.1220)	
	D	3.12–3.15 (0.1228–0.1240)	
	E	3.17–3.20 (0.1248–0.1260)	
	F	3.22–3.25 (0.1268–0.1280)	
	G	3.27–3.30 (0.1287–0.1299)	
	H	3.32–3.35 (0.1307–0.1319)	
	I	3.37–3.40 (0.1327–0.1339)	

Unit: mm (in.)

Unit: mm (in.)

Unit: mm (in.)

Unit: mm (in.)

Unit: mm (in.)

Standards and Service Limits (cont'd)

Automatic Transmission <CA> — Section 16

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Clutch	Clutch initial clearance	1st 0.65–0.85 (0.026–0.034) 2nd 0.65–0.80 (0.026–0.031) 3rd and 4th 0.4–0.6 (0.016–0.024)	— — —
	Clutch return spring free length	1st 31.0 (1.22) Except 1st 30.5 (1.20)	29.0 (1.14) 28.5 (1.12) Until grooves worn out
	Clutch disc thickness	1.88–2.0 (0.074–0.079)	Discoloration
	Clutch plate thickness	1.55–1.65 (0.061–0.065)	
	Clutch end plate thickness	Mark1 2.3–2.4 (0.091–0.094) [2.2–2.3 (0.087–0.091)]	
	[] 1300	Mark2 2.4–2.5 (0.094–0.098) [2.5–2.6 (0.098–0.102)]	
		Mark3 2.5–2.6 (0.098–0.102) [2.8–2.9 (0.106–0.110)]	
		Mark4 2.6–2.7 (0.102–0.106) [3.1–3.2 (0.122–0.126)]	
		Mark5 2.7–2.8 (0.106–0.110) [3.4–3.5 (0.134–0.138)]	
		Mark6 [11] 2.8–2.9 (0.110–0.114) [2.05–2.15 (0.081–0.085)]	
		Mark7 [12] 2.9–3.0 (0.114–0.118) [2.35–2.45 (0.093–0.096)]	
		Mark8 [13] 3.0–3.1 (0.118–0.122) [2.65–2.75 (0.104–0.108)]	
Transmission		Mark9 [14] 3.1–3.2 (0.122–0.126) [2.95–3.05 (0.116–0.120)]	
		Mark10 [15] 3.2–3.3 (0.126–0.130) [3.25–3.35 (0.128–0.132)]	Discoloration
	Diameter of needle bearing contact area on main and stator shaft	19.980–19.993 (0.7866–0.7871)	Wear or damage
	Diameter of needle bearing contact area on mainshaft 2nd gear collar	35.975–35.991 (1.4163–1.4169)	
	Diameter of needle bearing contact area on main 4th gear collar	31.975–31.991 (1.2588–1.2594)	
	Diameter of needle bearing contact area on mainshaft 1st gear collar	30.975–30.991 (1.2195–1.2201)	
	Diameter of needle bearing contact area on countershaft (L side)	36.004–36.017 (1.4175–1.4180)	
	Diameter of needle bearing contact area on countershaft 3rd gear	31.975–31.991 (1.2589–1.2595)	
	Diameter of needle bearing contact area on countershaft 4th gear collar	27.980–27.993 (1.1016–1.1021)	
	Diameter of needle bearing contact area on countershaft reverse gear collar	29.980–29.993 (1.1803–1.1808)	
	Diameter of needle bearing contact area on countershaft L gear collar	29.980–29.993 (1.1803–1.1808)	
	Diameter of needle bearing contact area on reverse idle gear	13.990–14.000 (0.5508–0.5512)	
	Diameter of needle bearing contact area on main and stator shaft (stator side)	19.980–19.993 (0.7866–0.7871)	
	Reverse idler shaft holder diameter	14.416–14.434 (0.5676–0.5683)	
	Mainshaft 1st gear I.D.	36.000–36.016 (1.4173–1.4180)	
	Mainshaft 2nd gear I.D.	41.000–41.016 (1.6141–1.6148)	
	Mainshaft 4th gear I.D.	38.000–38.016 (1.4961–1.4966)	
	Countershaft 1st gear I.D.	35.000–35.016 (1.3780–1.3786)	
	Countershaft 3rd gear I.D.	38.000–38.016 (1.4961–1.4966)	
	Countershaft 4th gear I.D.	33.000–33.016 (1.2992–1.2998)	
	Countershaft reverse gear I.D.	36.000–36.016 (1.4173–1.4179)	
	Reverse idle gear I.D.	18.007–18.020 (0.7086–0.7094)	
	Stator or-shaft needle bearing bore I.D. (R.side)	26.000–26.013 (1.0236–1.0241)	
	Stator or-shaft needle bearing contact and I.D. (Stator side)	24.000–24.021 (0.9449–0.9457)	
	Mainshaft 4th gear end play	0.10–0.22 (0.004–0.009)	Wear or damage
	Mainshaft 2nd gear end play	0.07–0.15 (0.003–0.006)	
	Mainshaft 1st gear end play	0.08–0.24 (0.0031–0.0094)	
	Countershaft 1st gear end play	0.05–0.20 (0.002–0.008)	
	Countershaft 3rd gear end play	0.07–0.15 (0.003–0.006)	
	Countershaft 4th gear end play	0.07–0.15 (0.003–0.006)	
	Reverse idle gear end play	0.05–0.18 (0.0020–0.0071)	
	Countershaft reverse gear end play	0.05–0.20 (0.002–0.008)	
	Reverse gear hub O.D.	51.87–51.90 (2.0421–2.0433)	Wear or damage
	Thrust washer thickness		
	Mainshaft 2nd gear	A 3.47–3.50 (0.137–0.138) B 3.52–3.55 (0.139–0.140) C 3.57–3.60 (0.141–0.142) D 3.62–3.65 (0.143–0.144) E 3.67–3.70 (0.145–0.146) F 3.72–3.75 (0.147–0.148) G 3.77–3.80 (0.149–0.150) H 3.82–3.85 (0.151–0.152) I 3.87–3.90 (0.152–0.154)	
	Thrust washer thickness		
	Countershaft 3rd gear	A 2.97–3.00 (0.1169–0.1181) B 3.02–3.05 (0.1189–0.1201) C 3.07–3.10 (0.1209–0.1220) D 3.12–3.15 (0.1228–0.1240) E 3.17–3.20 (0.1248–0.1260) F 3.22–3.25 (0.1268–0.1280) G 3.27–3.30 (0.1287–0.1299) H 3.32–3.35 (0.1307–0.1319) I 3.37–3.40 (0.1327–0.1339)	

Automatic Transmission <CA> — Section 16

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission (cont'd)	Countershaft distance collar length	A 33.97—34.00 (1.337—1.339) B 34.02—34.05 (1.339—1.341) C 34.07—34.10 (1.341—1.343) D 34.12—34.15 (1.343—1.344) E 34.17—34.20 (1.345—1.346) F 34.22—34.25 (1.347—1.348) G 34.27—34.30 (1.349—1.350)	— — — — — — —
	Mainshaft 4th gear	2.95—3.05 (0.1161—0.1201)	Wear or damage
	Mainshaft 1st gear R side	2.43—2.50 (0.0957—0.0984)	Wear or damage
	Thrust washer thickness (mainshaft 1st gear L side)	1.45—1.50 (0.057—0.059)	Wear or damage
	Mainshaft 4th gear collar length	40.00—40.05 (1.5748—1.5768)	—
	Mainshaft 1st gear collar length	25.0—25.15 (0.984—0.9990)	—
	Mainshaft 1st gear collar flange thickness	2.5—2.6 (0.098—0.102)	Wear or damage
	Countershaft reverse gear collar length	14.50—14.55 (0.531—0.535)	—
	Countershaft reverse gear collar flange thickness	2.45—2.55 (0.096—0.100)	Wear or damage
	Countershaft 1st gear collar length	13.5—13.6 (0.0020—0.0035)	—
	Countershaft 1st gear collar flange thickness	2.4—2.6 (0.0095—0.102)	Wear or damage
	Diameter of countershaft one-way clutch contact area	74.414—74.440 (2.9297—2.9307)	Wear or damage
	Diameter of parking gear one-way clutch contact area	57.755—57.768 (2.2738—2.2743)	Wear or damage
	Mainshaft feed pipe A: O.D. (at 15 mm from end)	8.970—8.980 (0.353—0.354)	8.95 (0.352)
	Mainshaft feed pipe B: O.D. (at 12 mm from end)	5.97—5.98 (0.2350—0.2354)	5.95 (0.234)
	Countershaft feed pipe O.D. (at 20 mm from end)	7.97—7.98 (0.3138—0.3142)	7.95 (0.31)
	Mainshaft sealing ring 32 mm thickness	1.980—1.995 (0.0780—0.0785)	1.8 (0.071)
	Mainshaft bushing I.D.	6.018—6.030 (0.2369—0.2374)	6.045 (0.238)
	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)
	Mainshaft sealing ring groove width	2.025—2.060 (0.0797—0.0811)	2.08 (0.082)
Regulator valve body	Sealing ring contact area diameter	32.000—32.025 (1.2598—1.2608)	32.05 (1.26)
Shifting device and parking brake control	Reverse shift fork thickness	5.9—6.0 (0.232—0.236)	5.4 (0.21)
	Parking brake ratchet pawl	—	Wear or other defect
	Parking gear Throttle cam stopper	18.5—18.6 (0.7283—0.7323)	Wear or other defect
Servo body	Shift fork shaft bore 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)
Valve body	Oil pump gear side clearance	0.03—0.05 (0.0012—0.0020)	0.07 (0.003)
	Oil pump gear-to-body clearance	Drive: 0.21—0.266 (0.008—0.010) Driven: 0.05—0.088 (0.002—0.004)	— —
	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

Differential <Coupe European Model> Section 17

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Ring gear	Backlash	0.14—0.20 (0.006—0.008)	0.25 (0.010)
Differential carrier	Pinion shaft bore diameter	18.000—18.018 (0.7087—0.7094)	18.1 (0.71)
	Carrier-to-pinion shaft clearance	0.016—0.052 (0.0006—0.0020)	0.1 (0.004)
	Driveshaft bore diameter	28.00—28.021 (1.1024—1.1032)	—
	Carrier-to-driveshaft clearance	0.020—0.0662 (0.0010—0.0027)	0.12 (0.005)
Differential pinion gear	Backlash	0.05—0.15 (0.002—0.006)	0.2 (0.008)
	Pinion gear bore diameter	18.041—18.061 (0.7103—0.7111)	—
	Pinion gear-to-pinion shaft clearance	0.057—0.095 (0.0022—0.0037)	0.15 (0.006)

Differential <Except Coupe European Model> Section 17

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Ring gear	Backlash	0.073—0.132 (0.0029—0.0052)	0.25 (0.010)
Differential carrier	Pinion shaft bore diameter	18.000—18.018 (0.7087—0.7094)	18.1 (0.71)
	Carrier-to-pinion shaft clearance	0.016—0.052 (0.0006—0.0020)	0.1 (0.004)
	Driveshaft bore diameter	26.005—26.025 (1.0238—1.0246)	—
	Carrier-to-driveshaft clearance	28.000—28.021 (1.1024—1.1032) 0.025—0.066 (0.0010—0.0026)	0.12 (0.005)
Differential Pinion gear	Backlash	0.05—0.15 (0.002—0.006)	—
	Pinion gear bore diameter	18.041—18.061 (0.7103—0.7111)	—
	Pinion gear-to-pinion shaft clearance	0.057—0.095 (0.0022—0.0037)	0.15 (0.006)

(cont'd)

Standards and Service Limits (cont'd)

Driveshaft—Section 18

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Driveshaft	* Right boot As installed	471–476 (18.5–18.7)	—
	* Left boot As installed	771–776 (30.4–30.6)	—
	* Right and Left boot as installed	469.2–474.2 (18.5–18.7)	—

* Coupe

Steering—Section 19

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Steering wheel	Play	10.0 (0.39) Max	—
	Pinion-starting torque N·m (kg·m, lb·ft)	0.4–1.4 (0.04–0.14, 0.29–1.01)	—
	* KY	* 0.5–1.7 (0.03–0.19, 0.36–1.23)	—
	Pinion-starting torque N·m (kg·m, lb·ft) without P/S with P/S	0.5–1.3 (0.05–0.13, 0.36–0.94) 1.2 (0.12, 0.87) Max.	
Power steering Pump belt	Pump pressure with valve closed (Oil temp./speed: 40°C (104°F) min/idle. Do not run for more than 5 seconds)		
	Fluid capacity kPa (kg/cm², psi)	6,370–7,056 (65–72, 924–1,014)	
	Reservoir At change	0.3 l (0.32 US. qt., 0.26 imp. qt.) 1.0 l (1.1 US. qt., 0.9 imp. qt.)	
Deflection midway between pulleys/load		18–22 (0.7–0.9)/98N (10 kg, 22 lb) for used belt	
		18–20 (0.7–0.8)/98N (10 kg, 22 lb) after replacement of belt	

Suspension—Section 20

Suspension – Section 20					
	MEASUREMENT			STANDARD (NEW)	SERVICE LIMIT
Wheel alignment	Front camber	2D H/B		–0°10'±1°	*with P/S
		Coupe 4D		–0°10'±1° KY:0°20'±1°	
	Rear camber	4D H/B		0°20'±1° EC:0°16'±1°	
		Coupe		–0°45'±15'	
	Caster	2°50'±1°		KY:2°15'±1°	
		2D H/B		2°20'±1° KY:2°10'±1°	
				*2°55'±1° KY:2°55'±1°	
		4D		2°25'±1° *3°55'±1°	
	Front toe	4D H/B		2°00'±1° EC:1°49'±1°	
				*2°35'±1° EC:2°25'±1°	
Rear toe			0±3 mm (0±0.118 in.)		
Steering angle R/L			IN 2±2 mm (0.079±0.079 in.)		
	Steering angle R/L	Inside Outside	41°30'±2° 34°30'±2°		
Wheel	Rim runout	Steel	Axial	0–1.0 (0–0.039)	—
			Radial	0–1.0 (0–0.039)	—
		Alumium	Axial	0–0.7 (0–0.028)	—
			Radial	0–0.7 (0–0.028)	—
Front spring	Clearance between wheel arch and ground	EC	639 (25.2)	624–654 (24.6–25.1)	
		KY	659 (25.9)	644–674 (25.4–26.5)	

Brake—Section 21

Brake — Section 21				
	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Parking brake lever	Play stroke 200N (20 kg, 44 lbs)		To be locked when pulled 4—8 notches	
Foot brake Pedal	Pedal height Free play		174 (6.8) 4DH/B; 168 (6.6) to floor 1—5 (0.04—0.20)	— 5 (0.20)
Master cylinder	Piston-to-push rod clearance		0—0.4 (0—0.016)	—
Brake drum	I.D.		180 (7.09) 4DH/B 200 (7.87)	181 (7.13) 4DH/B (7.87)
Lining	Thickness		4.5 (0.18)	2.0 (0.08)
Disc brake	Disc thickness	Ventilated	17.0 (0.67) *219.0 (0.75)	15.0 (0.59) *217.0 (0.67)
		Solid	12.0 (0.47)	10.0 (0.39) (0.31)
	Disc runout		0—0.1 (0.004)	0—0.1 (0.004)
	Disc parallelism		0.007 (0.0003)	0.15 (0.0006)
	Pad thickness	*1	10.0 (0.39)	1.6 (0.06)
		other models	9.5 (0.37)	1.6 (0.06)
Brake Booster	Characteristic	Vacuum (mmHg)	Pedal Pressure kg (lbs)	Line Pressure kg/cm ² (psi)
				Coupe European other models
		0	20 (44)	15 (213) min 16 (228) min
		300 500	20 (44) 20 (44)	47 (668) min 46 (654) min 67 (953) min 66 (939) min

*1: Coupe EC and 4D H/B EC and KX

*2: Coupe EC

Engine Electrical — Section 25, 26 and 27

		MEASUREMENT		STANDARD (NEW)	
Ignition coil	Rated voltage			12 Volts	
	Performance winding resistance			1.24–1.46 ohms *1.215–1.485 ohms	
	Secondary winding resistance			8,000–12,000 ohms *9,040–13,560 ohms	
Ignition wire	Resistance			25,000 ohms max	
Spark plug	Type	Standard		NGK: BCP6EY-11, BCP6EY-N11, BCP6E-11, *BP6EY-11 ND: Q20PR-U11, *W20EX-U11, W20 EXR-U11	
	Gap			1.0–1.1 (0.039–0.043)	
Ignition timing	At idling	1200		17±2° BTDC	
		1300		12±2° BTDC	
	1500	European model		14±2° BTDC	
		PGM-Fi model		16±2° BTDC	
		General export model		16±2° BTDC	
	1600	European model		20±2° BTDC	
		KS		10±2° BTDC	
		KX		17±2° BTDC	
Battery	Lighting capacity (20-hour ratio)			40, 45, 47 Ampere Hours	
	Starting capacity (5-second ratio)			8.4 V minimum at 300 Ampere draw	
Alternator		ND		MITSUBISHI	
		STANDARD (NEW)		SERVICE LIMIT	
	Output at no-load	14V at 1,090 min ⁻¹ (rpm)		14V at 1,100 min ⁻¹ (rpm)	
	Output	14V/55A at 6,000 min ⁻¹ (rpm)		14V/55A at 6,000 min ⁻¹ (rpm)	
	Coil resistance (rotor)	2.9 ohm		3 ohm	
Alternator belt	Slip ring O.D.	14.4 (0.57)		23.0 (0.91)	
	Brush length	13.5 (0.53)		18.0 (0.71)	
	Brush spring tension	330 g (11.6 oz)		370 g (13.05 oz)	
				22.5 (0.89)	
Starting motor	MEASUREMENT	ND 0.8 kW		HITACHI 0.8 kW	
		STANDARD (NEW)		SERVICE LIMIT	
Starting motor	Mica depth	0.5–0.8 (0.020–0.031)		0.2 (0.008)	
	Commutator runout	0–0.5 (0.020)		0.3 (0.012)	
	Commutator O.D.	28.0 (1.10)		27.0 (1.06)	
	Brush length	15.5–16.5 (0.61–0.65)		10.0 (0.39)	
	Spring pressure (new)	1.2 kg (2.6 lb)		—	