

SERVICE SPECIFICATIONS

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MAINTENANCE

Engine

Drive belt tension w/Borroughs drive belt tension gauge No. BT-33-73F or Nippondenso BTG-20 (95506-00020)				
Alternator	New belt	170 ± 10 lb		
	Used belt	135 ± 20 lb		
PS pump and A/C compressor	New belt	125 ± 25 lb		
	Used belt	80 ± 20 lb		
Coolant capacity	M/T	8.0 liters	8.5 US qts	7.0 Imp. qts
	A/T	7.9 liters	8.3 US qts	7.0 Imp. qts
Engine oil capacity	Drain and refill			
	w/Oil filter change	5.1 liters	5.4 US qts	4.5 Imp. qts
	w/o Oil filter change	4.6 liters	4.9 US qts	4.1 Imp. qts
Spark plug				
Type	ND	P16R		
	NGK	BPR5EP11		
Gap		1.1 mm	0.043 in.	
Firing order		1-5-3-6-2-4		

Chassis

Front and rear brake				
Pad thickness	Limit	1 mm	0.04 in.	
Disc thickness	Limit	Front	21 mm	0.83 in.
		Rear	17 mm	0.67 in.
Disc runout	Limit	0.15 mm	0.0059 in.	
Parking brake				
Lining thickness	Limit	1 mm	0.04 in.	
Drum inner diameter	Limit	168 mm	6.61 in.	
Front axle and suspension				
Ball joint vertical play	Limit	2.5 mm	0.098 in.	
Wheel bearing friction preload				
In addition rotation friction force of the oil seal		0 – 1,050 g	0 – 2.3 lb	0 – 10 N
Steering wheel freeplay		Max. 30 mm	1.18 in.	
Chassis and body tightening torque:				
Front seat mounting bolt		375 kg-cm	27 ft-lb	37 N·m
Front suspension member x Body		1,300 kg-cm	94 ft-lb	127 N·m
Strut bar bracket x Body		440 kg-cm	32 ft-lb	43 N·m
Rear suspension member x Body (Front & Rear)		1,320 kg-cm	95 ft-lb	129 N·m

ENGINE MECHANICAL

Specifications

Idle speed				650 rpm				
Intake manifold vacuum				More than 430 mmHg (16.93 in.Hg, 57.3 kPa)				
Compression pressure		at 250 rpm	STD	11.5 kg/cm ²		164 psi	1,128 kPa	
			Limit	9.0 kg/cm ²		128 psi	883 kPa	
Differential of pressure between each cylinder				Less than 1.0 kg/cm ² (14 psi, 98 kPa)				
Cylinder head	Head surface warpage		Limit	0.10 mm		0.0039 in.		
	Camshaft housing surface warpage		Limit	0.10 mm		0.0039 in.		
	Exhaust manifold surface warpage		Limit	0.10 mm		0.0039 in.		
	Intake manifold surface warpage		Limit	0.10 mm		0.0039 in.		
	Valve seat	Refacing angle	Intake	30°, 45°, 60°				
			Exhaust	30°, 45°, 67.5°				
			Contacting angle	45°				
	Contacting width		1.2 – 1.6 mm		0.047 – 0.063 in.			
Valve guide bushing	Inner diameter			8.01 – 8.03 mm		0.3154 – 0.3161 in.		
	Outer diameter	STD		13.040 – 13.051 mm		0.5134 – 0.5138 in.		
			O/S type 0.05	13.090 – 13.101 mm		0.5154 – 0.5158 in.		
	Replacing temperature (cylinder head side)			Approx. 90°C (194°F)				
Valve	Valve overall length	STD	Intake	107.5 mm		4.232 in.		
			Exhaust	109.7 mm		4.319 in.		
	Valve face angle		IN & EX	44.5°				
	Stem diameter		Intake	7.970 – 7.985 mm		0.3138 – 0.3144 in.		
			Exhaust	7.965 – 7.980 mm		0.3136 – 0.3142 in.		
	Stem oil clearance	STD	Intake	0.025 – 0.060 mm		0.0010 – 0.0024 in.		
			Exhaust	0.030 – 0.065 mm		0.0012 – 0.0026 in.		
		Limit	Intake	0.08 mm		0.0031 in.		
			Exhaust	0.10 mm		0.0039 in.		
	Stem end refacing		Limit	IN & EX	0.5 mm		0.020 in.	
	Valve head edge thickness	Limit	Intake	0.5 mm		0.020 in.		
			Exhaust	1.0 mm		0.039 in.		
Valve spring	Free length		Intake	49.1 mm		1.933 in.		
			Exhaust	52.5 mm		2.067 in.		
	Installed length		Intake	40.0 mm		1.575 in.		
			Exhaust	43.0 mm		1.693 in.		
	Installed load		Intake	34.7 – 38.3 kg	76.5 – 84.4 lb	340 – 376 N		
			Exhaust	33.3 – 36.7 kg	73.4 – 80.9 lb	327 – 360 N		
	Squareness			2.0 mm		0.079 in.		
Lash adjuster	Leak down test at 20 kg (44.1 lb)			2 – 7 seconds/1 mm (0.04 in.)				

Specifications (Cont'd)

Camshaft	Thrust clearance	STD	0.05 – 0.25 mm	0.0020 – 0.0098 in.	
		Limit	0.30 mm	0.0118 in.	
	Journal oil clearance	STD	0.025 – 0.066 mm	0.0010 – 0.0026 in.	
		Limit	0.1 mm	0.004 in.	
	Journal diameter	No. 1	37.959 – 37.975 mm	1.4944 – 1.4951 in.	
		No. 2	42.959 – 42.975 mm	1.6913 – 1.6919 in.	
		No. 3	43.459 – 43.475 mm	1.7110 – 1.7116 in.	
		No. 4	43.959 – 43.975 mm	1.7307 – 1.7313 in.	
		No. 5	44.459 – 44.475 mm	1.7504 – 1.7510 in.	
		No. 6	44.959 – 44.975 mm	1.7700 – 1.7707 in.	
		No. 7	45.459 – 45.475 mm	1.7897 – 1.7904 in.	
	Circle runout	Limit	IN & EX	0.04 mm	0.0016 in.
	Cam height	STD	Intake	35.660 – 35.670 mm	1.4039 – 1.4043 in.
			Exhaust	35.662 – 35.672 mm	1.4040 – 1.4044 in.
	Limit	Intake	35.465 mm	1.3963 in.	
		Exhaust	35.467 mm	1.3963 in.	
Camshaft housing	Cylinder head surface warpage	Limit	0.10 mm	0.0039 in.	
Intake and exhaust manifold	Manifold surface warpage				
	Limit	Intake	0.1 mm	0.004 in.	
		Exhaust	0.75 mm	0.0295 in.	
Air intake chamber	Intake manifold surface warpage	Limit	0.1 mm	0.004 in.	
Idler pulley tension spring	Free length		69 mm	2.72 in.	
Pump drive shaft	Thrust clearance	STD	0.06 – 0.13 mm	0.0024 – 0.0051 in.	
		Limit	0.3 mm	0.012 in.	
	Oil clearance	STD	0.025 – 0.066 mm	0.0010 – 0.0026 in.	
		Limit	0.08 mm	0.0031 in.	
	Journal diameter	Front	40.959 – 40.975 mm	1.6126 – 1.6132 in.	
		Rear	32.959 – 32.975 mm	1.2976 – 1.2982 in.	
Cylinder block	Warpage	Limit	0.05 mm	0.0020 in.	
	Cylinder bore	STD	82.99 – 83.04 mm	3.2673 – 3.2693 in.	
	Cylinder bore wear				
	On standard sized piston	Limit	83.25 mm	3.2776 in.	
	On oversized piston (O/S 0.50)	Limit	83.75 mm	3.2972 in.	
	(O/S 0.75)	Limit	84.00 mm	3.3071 in.	
	(O/S 1.00)	Limit	84.25 mm	3.3169 in.	
	Difference of bore limit between cylinder		Less than 0.05 mm (0.0020 in.)		
Taper and our-of-round	Limit	0.02 mm	0.0008 in.		

Specifications (Cont'd)

Piston and piston ring	Piston diameter		STD	82.93 – 82.98 mm	3.2650 – 3.2669 in.
			O/S type 0.50	83.43 – 83.48 mm	3.2846 – 3.2866 in.
			O/S type 0.75	83.68 – 83.73 mm	3.2945 – 3.2965 in.
			O/S type 1.00	83.93 – 83.98 mm	3.3043 – 3.3063 in.
	Piston to cylinder clearance			0.06 – 0.08 mm	0.0024 – 0.0031 in.
	Piston ring end gap	No. 1	STD	0.29 – 0.47 mm	0.0114 – 0.0185 in.
			Limit	0.71 mm	0.0280 in.
		No. 2	STD	0.25 – 0.55 mm	0.0098 – 0.0217 in.
			Limit	1.15 mm	0.0453 in.
		Oil	STD	0.17 – 0.85 mm	0.0067 – 0.0335 in.
			Limit	1.45 mm	0.0571 in.
Ring groove clearance	No. 1		0.03 – 0.07 mm	0.0012 – 0.0028 in.	
	No. 2		0.02 – 0.06 mm	0.0008 – 0.0024 in.	
Piston pin installing temperature			60°C	140°F	
Connecting rod and bearing	Thrust clearance		STD	0.160 – 0.296 mm	0.0063 – 0.0117 in.
			Limit	0.3 mm	0.012 in.
	Bearing oil clearance		STD	0.021 – 0.053 mm	0.0008 – 0.0021 in.
			Limit	0.08 mm	0.0031 in.
	Pin to bushing oil clearance		STD	0.005 – 0.011 mm	0.0002 – 0.0004 in.
			Limit	0.015 mm	0.0006 in.
	Piston pin diameter			21.997 – 22.009 mm	0.8660 – 0.8665 in.
	Rod bend	Limit	per 100 mm (3.94 in.)	0.05 mm	0.0020 in.
Rod twist	Limit	per 100 mm (3.94 in.)	0.15 mm	0.0059 in.	
Crankshaft	Thrust clearance		STD	0.05 – 0.25 mm	0.0020 – 0.0098 in.
			Limit	0.3 mm	0.012 in.
	Thrust washer thickness		STD	2.925 – 2.975 mm	0.1152 – 0.1171 in.
			O/S type 0.125	2.988 – 3.038 mm	0.1176 – 0.1196 in.
			O/S type 0.250	3.050 – 3.100 mm	0.1201 – 0.1220 in.
	Main journal oil clearance	STD	0.034 – 0.058 mm	0.0013 – 0.0023 in.	
		Limit	0.08 mm	0.0031 in.	
	Main journal diameter		STD	59.988 – 60.012 mm	2.3617 – 2.3627 in.
	Main journal finished diameter	U/S 0.25	59.730 – 59.740 mm	2.3516 – 2.3520 in.	
		U/S 0.50	59.480 – 59.490 mm	2.3417 – 2.3421 in.	
		Bearing U/S type		0.25, 0.50	
	Crank pin diameter		STD	51.976 – 52.000 mm	2.0463 – 2.0472 in.
	Crank pin finished diameter	U/S 0.25	51.725 – 51.735 mm	2.0364 – 2.0368 in.	
		U/S 0.50	51.475 – 51.485 mm	2.0266 – 2.0270 in.	
		Bearing U/S type		0.25, 0.50	
	Circle runout		Limit	0.06 mm	0.0024 in.
	Main journal taper and out-of-round		Limit	0.02 mm	0.0008 in.
Check pin journal taper and out-of-round		Limit	0.02 mm	0.0008 in.	
Flywheel	Runout	Limit	0.1 mm	0.004 in.	

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Cylinder head x Cylinder block		800	58	78
Manifold x Cylinder head	Intake	180	13	18
	Exhaust	400	29	39
Camshaft housing x Cylinder head		220	16	22
Camshaft pulley x Camshaft		700	51	69
No. 2 timing belt cover x Cylinder head		130	9	13
Pump drive shaft x Cylinder block		130	9	13
Timing belt case x Cylinder block	8 mm bolt & Nut	185	13	18
	10 mm bolt	375	27	37
Pump drive shaft pulley x Drive shaft		220	16	22
Idler pulley x Timing belt case x Cylinder block		500	36	49
Distributor x Camshaft housing		140	10	14
Crankshaft bearing cap x Cylinder block		1,040	75	102
Connecting rod cap x Connecting rod		450	33	44
Crankshaft pulley x Crankshaft		2,200	159	216
Flywheel x Crankshaft		750	54	74
Oil pump x Cylinder block		220	16	22
Oil pump outlet pipe nut		350	25	34
Oil pump union bolt		350	25	34
Oil pan x Cylinder block		80	69 in.-lb	7.8

EFI SYSTEM

Specifications

Pressure regulator	Fuel pressure	w/No vacuum	2.3 – 2.7 kg/cm ² 33 – 38 psi 226 – 265 kPa
Cold start injector	Resistance Leakage		3 – 5 Ω Less than one drop of fuel per minute
Injector	Resistance Injection volume Difference between each injector Leakage		1.5 – 3.0 Ω 40 – 50 cc/15 sec (2.4 – 3.1 cu in.) Less than 6 cc (0.37 cc in.) Less than one drop of fuel per minute
Air flow meter	Resistance $E_2 - V_s$ $E_2 - V_c$ $E_1 - F_c$ $E_2 - T_H A$		20 – 400 Ω (Measuring plate fully closed) 20 – 1,000 Ω (Measuring plate fully open) 200 – 400 Ω ∞ (Measuring plate closed) 0 (Measuring plate open) 10 – 20 k Ω (–20°C, –4°F) 4 – 7 k Ω (0°C, 32°F) 2 – 3 k Ω (20°C, 68°F) 0.9 – 1.3 k Ω (40°C, 104°F) 0.4 – 0.7 k Ω (60°C, 140°F)
ISC valve	Resistance $B_1 - S_1$ or S_3 $B_2 - S_2$ or S_4		10 – 30 Ω 10 – 30 Ω
Throttle body	Throttle valve fully closed angle		6°
Throttle position sensor	Clearance between stop screw and lever	Between terminals	Resistance (k Ω)
	0 mm or 0 in.	VTA – E_2	0.2 – 0.8
	0.50 mm 0.0197 in.	IDL – E_2	0 – 100
	0.90 mm 0.0354 in.		Infinity
	Throttle valve fully open	VTA – E_2	3.3 – 10
	–	$V_c - E_2$	3 – 7
Main relay	Resistance 1 – 2 3 – 4	No. 1 Main relay	No. 2 Main relay
		40 – 60 Ω	60 – 120 Ω
		∞	∞
Circuit opening relay	Resistance $STA - E_1$ $+B - F_c$ $+B - F_p$		17 – 25 Ω 88 – 112 Ω ∞
Resistor	Resistance No. 10 or No. 20 – +B		2 Ω
Start injector	Resistance $STJ - STA$ $STA - \text{Ground}$		24 – 40 Ω (Below 30°C, 86°F) 40 – 60 Ω (Above 40°C, 104°F) 20 – 80 Ω
Water temp. sensor	Resistance		10 – 20 Ω (–20°C, –4°F) 4 – 7 k Ω (0°C, 32°F) 2 – 3 k Ω (20°C, 68°F) 0.9 – 1.3 k Ω (40°C, 104°F) 0.4 – 0.7 k Ω (60°C, 140°F) 0.2 – 0.4 k Ω (80°C, 176°F)

Specifications (Cont'd)

- NOTE:** 1. Perform all voltage and resistance measurements with the computer connected.
2. Verify that the battery voltage is 11 V or above when the ignition switch is ON.

Terminals	STD voltage	Condition	
BAT-E ₁	10-14	Ignition S/W ON	—
+B-E ₁			—
IG S/W-E ₁			—
M-REL-E ₁			—
IDL-E ₂	4-6	Ignition S/W ON	Throttle valve open
VTA-E ₂	4-5		Throttle valve fully opened
	0.1-1.0		Throttle valve fully closed
Vc-E ₂	4-6		—
Vs-E ₂	4-5		Measuring plate fully closed
	0.02-0.08		Measuring plate fully open
	2-4		Idling
	0.3-1.0		3,000 rpm
THA-E ₂	1-2	IG S/W ON	Intake air temperature 20°C (68°F)
THW-E ₂	0.1-0.5		Coolant temperature 80°C (176°F)
STA-E ₁	6-12	Ignition switch ST position	
No. 10 No. 20-E ₁	9-14	Ignition switch ON	
IGt-E ₁	0.7-1.0	Cranking or idling	
ISC ₁ ISC ₄ -E ₁	9-14	Ignition switch ON	
	9-14	After engine off 2-3 secs.	
+B-EGR	10-13	Ignition switch ON	
	0	Engine start and warm up Oxygen sensor	
N/C-E ₁	0	Ignition S/W ON	Shift position P or N range (for A/T)
	10-14		Except P or N range (for A/T)
	0		Clutch pedal not depressed (for M/T)
	10-14		Clutch pedal depressed (for M/T)
	9-11	Cranking	
T-E ₁	4-6	Ignition S/W ON	Check connector T ₁ and E ₁ not short
	0		Check connector T ₁ and E ₁ short
OIL-E ₁	4-6	Ignition switch ON (Warning light lights up)	
	0	Engine start (Warning light goes out)	
A/C-E ₁	10-13	Ignition S/W ON	A/C switch ON
	0		A/C switch OFF
Vf-E ₁	0-5	Engine start (Throttle valve open)	
W-E ₁	0	Ignition switch ON	
	10-13	Engine start	
TCD-E ₁	2-3	Ignition S/W ON	Coolant temperature Less than 35°C (95°F)
	0		Coolant temperature 35-60°C (95-140°F)
	4-6		Coolant temperature More than 70°C (158°F)

Specifications (Cont'd)

Terminals	Resistance (Ω)	Condition
IDL – E ₂	∞	Throttle valve open
	0 – 100	Throttle valve fully closed
VTA – E ₂	3,300 – 10,000	Throttle valve fully opened
	200 – 800	Throttle valve fully closed
Vc – E ₂	3,000 – 7,000	Disconnect air flow meter connector
	200 – 400	Disconnect throttle position sensor connector
Vs – E ₂	20 – 400	Measuring plate fully closed
	20 – 1,000	Measuring plate fully open
THA – E ₂	2,000 – 3,000	Intake air temperature 20°C (68°F)
G – G $\ominus$	140 – 180	—
Ne – G $\ominus$		—
ISC ₁ , ISC ₂ ISC ₃ , ISC ₄ – +B	10 – 30	—

Torque Specifications

Part tightened	kg-cm	ft-lb	N·m
Fuel tank and line			
Fuel tank band x Fuel tank bracket	220	16	22

COOLING SYSTEM

Radiator	Relief valve opening pressure	STD Limit	0.75 – 1.05 kg/cm ² 0.6 kg/cm ²	10.7 – 14.9 psi 8.5 psi	74 – 103 kPa 59 kPa
Thermostat	Valve opening temperature				
	Start to open at		86 – 90°C	187 – 194°F	
	Fully opens at		100°C	212°F	
	Valve opening travel at 100°C (212°F)		8 mm	0.31 in.	

LUBRICATION SYSTEM

Oil pressure			at Idle speed at 3,000 rpm	More than 0.3 kg/cm ² (4.3 psi, 29 kPa) 2.5 – 5.0 kg/cm ²	36 – 71 psi 245 – 490 kPa
Oil pump	Body clearance	STD Limit	0.03 – 0.06 mm 0.2 mm	0.0012 – 0.0024 in. 0.008 in.	
	Side clearance	STD Limit	0.03 – 0.09 mm 0.15 mm	0.0012 – 0.0035 in. 0.0059 in.	
	Gear backlash	STD Limit	0.5 – 0.6 mm 0.9 mm	0.020 – 0.024 in. 0.035 in.	
	Drive shaft diameter	STD Limit	14.00 – 14.01 mm 13.9 mm	0.5512 – 0.5516 in. 0.547 in.	
	Relief valve operating pressure		4.4 – 5.0 kg/cm ²	63 – 71 psi	431 – 490 kPa

IGNITION SYSTEM

Ignition timing	T/M in N range		10° BTDC @ (Check connector T and E ₁ short)
Spark plug	Type	ND NGK	P16R BPR 5E P11
	Gap	Limit	1.4 mm 0.055 in.
High-tension cord	Resistance	Limit	Less than 25 kΩ per cord
Ignition coil	Primary coil resistance Secondary coil resistance		0.4 – 0.5 Ω 8.5 – 11.5 kΩ
Distributor	Pickup coil resistance	G – G ⊖ Ne – G ⊖	140 – 180 Ω

STARTING SYSTEM

Starter	Rated voltage and output power			12 V, 1.4 kW			
	No-load characteristic			Ampere	Less than 90 A		
				rpm	More than 3,500 rpm at 11.5 V		
	Brush	Length	STD	15.5 mm	0.610 in.		
			Limit	10 mm	0.39 in.		
	Commutator	Outer diameter	STD	30 mm	1.18 in.		
			Limit	29 mm	1.14 in.		
		Undercut depth	STD	0.6 mm	0.024 in.		
			Limit	0.2 mm	0.008 in.		
			Circle runout	Limit	0.05 mm	0.0020 in.	
				Spring installed load		STD	1,785 — 2,415 g

CHARGING SYSTEM

Battery specific gravity when fully charged at 20°C (68°F)		1.25 – 1.27	
Drive belt tension			
w/Borroughs drive belt tension gauge No. BT-33-73F			
		New belt	170 ± 10 lb
		Used belt	135 ± 20 lb
Alternator	Rated output		12 V 60 A
	Rotor coil resistance		Less than 3 Ω
	Brush exposed length	STD	10.5 mm 0.413 in.
		Limit	4.5 mm 0.177 in.
Alternator regulator (IC)	Regulating voltage		13.5 – 15.1 V (25°C or 77°F)

CLUTCH**Specifications**

Pedal height (from asphalt sheet)			154 — 164 mm	6.06 — 6.46 in.
Push rod play at pedal top			1 — 5 mm	0.04 — 0.20 in.
Pedal freeplay			5 — 15 mm	0.20 — 0.59 in.
Release fork end play			Non adjustable type	
Disc rivet head depth	Limit		0.3 mm	0.012 in.
Disc runout	Limit		0.8 mm	0.031 in.
Diaphragm spring out of alignment	Limit		0.5 mm	0.020 in.
Diaphragm spring finger wear	Depth	Limit	0.6 mm	0.024 in.
	Width	Limit	5.0 mm	0.197 in.
Flywheel runout			0.2 mm	0.008 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
Clutch cover x Flywheel	185	13	18
Release fork support x Clutch housing	400	29	39
Pressure plate x Clutch cover	250	18	25
Master cylinder set bolt	250	18	25
Reservoir set bolt	250	18	25
Clutch tube union nut	155	11	15
Flexible hose	235	17	23
Clutch pedal setting nut	425	31	42

MANUAL TRANSMISSION

Specifications

Manual transmission (W58)	Output shaft			
	2nd gear journal diameter	Limit	42.85 mm	1.6870 in.
	3rd gear journal diameter	Limit	37.80 mm	1.4882 in.
	Flange thickness	Limit	5.60 mm	0.2205 in.
	Runout	Limit	0.06 mm	0.0024 in.
	1st gear inner race flange thickness	Limit	4.70 mm	0.1850 in.
	1st gear inner race outer diameter	Limit	42.85 mm	1.6870 in.
	Counter gear			
	Center bearing journal outer diameter			
		Limit	29.90 mm	1.1772 in.
	5th gear journal outer diameter	Limit	26.85 mm	1.0571 in.
	Gear thrust clearance			
	1st, 2nd & 3rd	STD	0.10 – 0.25 mm	0.0039 – 0.0098 in.
		Limit	0.30 mm	0.0118 in.
	Counter 5th	STD	0.10 – 0.41 mm	0.0039 – 0.0161 in.
		Limit	0.46 mm	0.0181 in.
	Gear oil clearance 1st & 2nd	STD	0.009 – 0.060 mm	0.0004 – 0.0024 in.
		Limit	0.15 mm	0.0059 in.
	3rd	STD	0.060 – 0.103 mm	0.0024 – 0.0041 in.
		Limit	0.20 mm	0.0079 in.
	Counter 5th	STD	0.009 – 0.062 mm	0.0004 – 0.0024 in.
		Limit	0.15 mm	0.0059 in.
	Shift fork to hub sleeve clearance	Limit	1.0 mm	0.039 in.
	Synchronizer ring to gear clearance	STD	0.7 – 1.7 mm	0.028 – 0.067 in.
		Limit	0.5 mm	0.020 in.
	Input shaft snap ring thickness			
		Mark		
		1	2.05 – 2.10 mm	0.0807 – 0.0827 in.
		2	2.10 – 2.15 mm	0.0827 – 0.0846 in.
		3	2.15 – 2.20 mm	0.0846 – 0.0866 in.
		4	2.20 – 2.25 mm	0.0866 – 0.0886 in.
		5	2.25 – 2.30 mm	0.0886 – 0.0906 in.
		11	2.30 – 2.35 mm	0.0906 – 0.0925 in.
		12	2.35 – 2.40 mm	0.0925 – 0.0945 in.

Specifications (Cont'd)

Manual transmission (W58)	Output shaft snap ring thickness			
	Front	Mark		
		D		
		11	1.80 – 1.85 mm	0.0709 – 0.0728 in.
		12	1.86 – 1.91 mm	0.0732 – 0.0752 in.
		13	1.92 – 1.97 mm	0.0756 – 0.0776 in.
		14	1.98 – 2.03 mm	0.0780 – 0.0799 in.
		15	2.04 – 2.09 mm	0.0803 – 0.0823 in.
		15	2.10 – 2.15 mm	0.0827 – 0.0846 in.
	Rear	Mark		
		8	2.31 – 2.36 mm	0.0909 – 0.0929 in.
		9	2.37 – 2.42 mm	0.0933 – 0.0953 in.
		10	2.43 – 2.48 mm	0.0957 – 0.0976 in.
		11	2.49 – 2.54 mm	0.0980 – 0.1000 in.
		12	2.55 – 2.60 mm	0.1004 – 0.1024 in.
		13	2.61 – 2.66 mm	0.1028 – 0.1047 in.
		14	2.68 – 2.73 mm	0.1055 – 0.1075 in.
		15	2.74 – 2.79 mm	0.1079 – 0.1098 in.
	Reverse gear	Mark		
		5	2.25 – 2.30 mm	0.0886 – 0.0906 in.
		11	2.30 – 2.35 mm	0.0906 – 0.0925 in.
		12	2.35 – 2.40 mm	0.0925 – 0.0945 in.
		13	2.40 – 2.45 mm	0.0945 – 0.0965 in.
		14	2.45 – 2.50 mm	0.0965 – 0.0984 in.
		15	2.50 – 2.55 mm	0.0984 – 0.1004 in.
		16	2.55 – 2.60 mm	0.1004 – 0.1024 in.
		17	2.61 – 2.66 mm	0.1028 – 0.1047 in.
		18	2.67 – 2.72 mm	0.1051 – 0.1071 in.
		19	2.73 – 2.78 mm	0.1075 – 0.1094 in.
		20	2.79 – 2.84 mm	0.1098 – 0.1118 in.
		21	2.85 – 2.90 mm	0.1122 – 0.1142 in.
		22	2.91 – 2.96 mm	0.1146 – 0.1165 in.
		23	2.97 – 3.02 mm	0.1169 – 0.1189 in.

Specifications (Cont'd)

Manual transmission (W58)	Countershaft snap ring thickness			
	Front	Mark		
		1	2.05 – 2.10 mm	0.0807 – 0.0827 in.
		2	2.10 – 2.15 mm	0.0827 – 0.0846 in.
		3	2.15 – 2.20 mm	0.0846 – 0.0866 in.
		4	2.20 – 2.25 mm	0.0866 – 0.0886 in.
		5	2.25 – 2.30 mm	0.0886 – 0.0906 in.
		6	2.30 – 2.35 mm	0.0906 – 0.0925 in.
		7	2.35 – 2.40 mm	0.0925 – 0.0945 in.
	Rear	Mark		
		1	1.90 – 1.95 mm	0.0748 – 0.0768 in.
		2	1.96 – 2.01 mm	0.0772 – 0.0791 in.
		3	2.02 – 2.07 mm	0.0795 – 0.0815 in.
		4	2.08 – 2.13 mm	0.0819 – 0.0839 in.
		5	2.14 – 2.19 mm	0.0843 – 0.0862 in.
		6	2.20 – 2.25 mm	0.0866 – 0.0886 in.
		7	2.26 – 2.31 mm	0.0890 – 0.0909 in.
	No. 3 clutch hub	Mark		
		2	2.06 – 2.11 mm	0.0811 – 0.0831 in.
		3	2.12 – 2.17 mm	0.0835 – 0.0854 in.
		4	2.18 – 2.23 mm	0.0858 – 0.0878 in.
		5	2.24 – 2.29 mm	0.0882 – 0.0902 in.

Torque Specifications

Manual transmission (W58)	Part tightened			
		kg-cm	ft-lb	N-m
	Shift fork set bolt	125	9	12
	Straight screw plug	250	18	25
	Idler shaft stopper bolt	250	18	25
	Reverse restrict pin	250	18	25
	Front bearing retainer set bolt	250	18	25
	Extension housing x Intermediate plate	375	27	37
	Restrict pin	410	30	40
	Shift lever housing x Shift and select lever	400	29	39
	Shift lever retainer x Extension housing	185	13	18
	Drain and filler plugs	410	30	40
	Back-up light switch	410	30	40
	Clutch housing x Transmission case	375	27	37

AUTOMATIC TRANSMISSIONSpecifications

Line pressure (wheel locked)									
Engine idling		D range		3.7 – 4.1 kg/cm ²		53 – 58 psi		363 – 402 kPa	
		R range		5.1 – 5.7 kg/cm ²		73 – 81 psi		500 – 559 kPa	
at stall		D range		10.6 – 13.0 kg/cm ²		151 – 185 psi		1,040 – 1,275 kPa	
		R range		14.3 – 19.0 kg/cm ²		203 – 270 psi		1,402 – 1,863 kPa	
(Throttle valve fully opened)									
Engine stall revolution				2,100 ± 150 rpm					
Time lag	N range	→	D range	Less than 1.2 seconds					
	N range	→	R range	Less than 1.5 seconds					
Engine idling speed (A/C OFF)				650 rpm					
Throttle cable adjustment									
Throttle valve fully opened				Between boot end face and inner cable stopper					
				0 – 1 mm		0 – 0.04 in.			
Torque converter installing									
Drive plate runout				Limit		0.20 mm		0.0079 in.	

Shift point schedule km/h (mph)			Throttle valve fully open [] Fully closed							km/h (mph)
			1–2	2–3	3–OD	[3–OD]	[OD–3]	OD–3	3–2	2–1
	D range	NORM	47–52 (29–32)	92–101 (57–63)	135–144 (84–89)	[36–40] (22–25)	[26–30] (16–19)	130–138 (81–86)	88–96 (55–60)	42–47 (26–29)
		PWR	52–57 (32–36)	105–114 (65–71)	152–161 (94–100)	[42–46] (26–29)	[28–32] (17–20)	146–155 (91–96)	101–109 (63–68)	42–47 (26–29)
	2 range	NORM PWR	47–52 (29–32)	112–121 (70–75)	–	–	–	–	102–110 (63–68)	42–47 (26–29)
	L range	NORM PWR	–	–	–	–	–	–	–	51–55 (32–34)

Lock-up point schedule km/h (mph)			Throttle valve opening 5%						km/h (mph)
			Lock-up ON			Lock-up OFF			
			2nd	3rd(*)	OD	2nd	3rd(*)	OD	
	D range	NORM PWR	–	53–58 (33–36)	53–58 (33–36)	–	49–54 (30–34)	49–54 (30–34)	
	2 range	NORM PWR	–	–	–	–	–	–	
	L range	NORM PWR	–	–	–	–	–	–	

(*) OD Switch OFF

Specifications (Cont'd)

Valve body spring mm (in.)		Free length	Coil outer diameter	No. Coils	Wire diameter	Color
	Lower valve body					
	Lock-up relay valve	32.60 (1.2835)	11.30 (0.4449)	8.5	1.00 (0.0394)	Green
	Pressure relief valve	32.14 (1.2654)	13.14 (0.5173)	9	2.03 (0.0799)	None
	Primary regulator valve	56.30 (2.2165)	17.20 (0.6772)	13	1.80 (0.0709)	Blue
	Low coast modulator valve	42.35 (1.6673)	10.00 (0.3937)	15	0.84 (0.0331)	None
	Intermediate modulator valve	35.43 (1.3949)	10.00 (0.3937)	14	0.89 (0.0350)	Red
	Oil cooler by-pass valve	33.32 (1.3118)	13.82 (0.5441)	7	1.32 (0.0520)	Yellow
	Upper rear valve body					
	1-2 shift valve	29.15 (1.1476)	8.90 (0.3504)	10.0	0.90 (0.0354)	Blue
	2-3 shift valve	29.15 (1.1476)	8.90 (0.3504)	10.0	0.90 (0.0354)	Blue
	3-4 shift valve	29.15 (1.1476)	8.90 (0.3504)	10.0	0.90 (0.0354)	Blue
	Reverse clutch sequence valve	37.55 (1.4783)	10.00 (0.3937)	14.5	1.17 (0.0461)	None
	Upper front valve body					
	Throttle valve	19.24 (0.7575)	8.58 (0.3378)	8	0.71 (0.0280)	None
	Down shift plug	39.55 (1.5571)	10.90 (0.4291)	9.4	1.20 (0.0472)	Green
	Secondary regulator valve	71.27 (2.8059)	17.43 (0.6862)	15	1.93 (0.0760)	Green
	Cut-back valve	23.00 (0.9055)	6.85 (0.2697)	10.5	0.65 (0.0256)	Green
Clutch piston return spring (C ₀ , C ₁ , C ₂)	Free length		15.1 mm		0.594 in.	
	Coil outer diameter		8.0 mm		0.315 in.	
	No. of coils		5.5			
Clutch and brake piston return spring (B ₀ , B ₁ , B ₂ , B ₃)	Free length		16.12 mm		0.6346 in.	
	Coil outer diameter		8.0 mm		0.315 in.	
	No. of coil		6			
Oil pump	Side clearance	STD	0.02 – 0.05 mm		0.0008 – 0.0020 in.	
		Limit	0.1 mm		0.004 in.	
	Body clearance	STD	0.07 – 0.15 mm		0.0028 – 0.0059 in.	
		Limit	0.3 mm		0.012 in.	
	Tip clearance	Driven gear	0.11 – 0.14 mm		0.0043 – 0.0055 in.	
		Limit	0.3 mm		0.012 in.	
Clutch piston stroke	Front clutch (C ₁)		1.40 – 2.24 mm		0.0551 – 0.0882 in.	
	Rear clutch (C ₂)		0.90 – 1.75 mm		0.0354 – 0.0689 in.	
	OD direct clutch (C ₀)		1.77 – 2.58 mm		0.0697 – 0.1016 in.	
Brake piston stroke	No. 1 brake (B ₁)		0.80 – 1.73 mm		0.0315 – 0.0681 in.	
	No. 2 brake (B ₂)		1.01 – 2.25 mm		0.0398 – 0.0886 in.	
Brake piston clearance	No. 3 brake (B ₃)		0.61 – 2.64 mm		0.0240 – 0.1039 in.	
	OD brake (B ₀)		0.40 – 1.38 mm		0.0157 – 0.0543 in.	

Specifications (Cont'd)

Accumulator piston spring mm (in.)				Free length	Coil outer diameter	No. coils	Wire diameter	Color
	B ₂	Front	Upper	50.68 (1.9953)	20.00 (0.7874)	7.09	2.80 (0.1102)	Light Gray
			Lower	35.13 (1.3831)	16.16 (0.6362)	6	1.30 (0.0512)	Red
	C ₂	Center	Upper	43.56 (1.7150)	14.30 (0.5630)	9.45	1.80 (0.0709)	Blue
			Lower	32.73 (1.2886)	14.80 (0.5827)	8.23	1.30 (0.0512)	Green
	C ₁	Rear		64.68 (2.5465)	17.50 (0.6890)	22.5	2.00 (0.0787)	None
Bushing mm (in.)	Bushing name			Length	Finished bore			Bore limit
	Stator support		Front	17.45 (0.6870)	21.501 – 21.527 (0.8465 – 0.8475)			21.577 (0.8495)
			Rear	17.45 (0.6870)	23.025 – 23.051 (0.9065 – 0.9075)			23.101 (0.9095)
	Oil pump body			13.46 (0.5299)	38.113 – 38.138 (1.5005 – 1.5015)			38.188 (1.5035)
	OD sun gear	Front & Rear	9.70 (0.3819)	23.062 – 23.088 (0.9080 – 0.9090)			23.138 (0.9109)	
	OD input shaft			9.00 (0.3543)	11.200 – 11.221 (0.4409 – 0.4418)			11.271 (0.4437)
	Sun gear	Front & Rear	13.50 (0.5315)	21.501 – 21.527 (0.8465 – 0.8475)			21.577 (0.8495)	
	Center support			65.68 (2.5858)	36.386 – 36.411 (1.4325 – 1.4335)			36.461 (1.4355)
	Transmission case			13.46 (0.5299)	38.113 – 38.138 (1.5005 – 1.5015)			38.188 (1.5035)
	Output shaft			9.70 (0.3819)	18.001 – 18.026 (0.7087 – 0.7097)			18.076 (0.7117)
	Extension housing			29.75 (1.1713)	38.010 – 38.035 (1.4965 – 1.4974)			38.085 (1.4994)
Output shaft	Thrust play				0.3 – 0.9 mm		0.012 – 0.035 in.	
Oil pump input shaft	Thrust play				0.3 – 0.9 mm		0.012 – 0.035 in.	
Drive plate	Runout			Limit	Less than 0.20 mm (0.0079 in.)			
Torque converter	Runout			Limit	Less than 0.30 mm (0.0118 in.)			

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Engine x Transmission		650	47	64
Transmission housing	12 mm	580	42	57
	10 mm	345	25	34
Extension housing		345	25	34
Engine rear support member		425	31	42
Drive plate		650	47	64
Torque converter		280	20	27
Oil pump		215	16	21
Center support		260	19	25
Upper valve body x Lower valve body		55	48 in.-lb	5.4
Valve body		100	7	10
Oil strainer		55	48 in.-lb	5.4
Oil pan		45	39 in.-lb	4.4
Oil pump cover bolt		75	65 in.-lb	7.4
Cooler pipe union nut		350	25	34
Testing plug		75	65 in.-lb	7.4
Parking lock pawl bracket		75	65 in.-lb	7.4

PROPELLER SHAFT Specifications

Shaft runout	Limit	0.8 mm	0.031 in.
Spider axial play		0 mm	0 in.

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Intermediate shaft x Center bearing x Joint flange				
1st		1,850	134	181
2nd		Loosen nut		
3rd		700	51	69
Center bearing flange x Universal joint flange yoke		430	31	42
Universal joint flange yoke x Companion flange		430	31	42
Center bearing bracket x Body		410	30	40

FRONT AXLE AND SUSPENSION

Specifications

Cold tire inflation pressure		1.9 kg/cm ²	27 psi	186 kPa
NOTE: For continuous high-speed driving in excess of 120 km/h (75 mph), inflate the tires to 0.3 kg/cm ² (4.3 psi, 29 kPa) higher than the recommended cold tire inflation pressure.				
Front wheel alignment		Inspection STD	Adjustment STD	
Toe-in		3 ± 2 mm (0.12 ± 0.08 in.)	3 ± 1 mm (0.12 ± 0.04 in.)	
Camber		50' ± 45'	—	
Left-right error		30'		
Steering axis inclination		10° 10' ± 45'	—	
Left-right error		30'		
Caster		4° 10' ± 45'	4° 10' ± 30'	
Left-right error		30'	30'	
Side slip		Less than 3.0 mm/m (0.118 in./3.3 ft)		
Wheel angle		37° 35' ± 2°		
Inside wheel				
Outside wheel		30° 45' (Reference)		
Disc wheel lateral runout		Max. limit		1.0 mm
				0.039 in.
Wheel bearing preload (turning load at hub in addition to rotation friction force of the oil seal)		0 — 1,050 g	0 — 2.3 lb	0 — 10 N
Hub axial play		Max. limit		0.05 mm
				0.0020 in.
Ball joint vertical play		Max. limit		2.5 mm
				0.098 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N·m
Shock absorber piston rod x Suspension support	475	34	47
Shock absorber shell x Ring nut	1,250	90	123
Lower arm x Suspension member	1,100	80	108
Lower ball joint x Steering knuckle arm	800	58	78
Strut bar x Strut bar bracket	1,050	76	103
Steering knuckle arm x Tie rod	600	43	59
Strut bar x Lower arm	670	48	66
Strut bar bracket x Body	475	34	47
Stabilizer bar x Lower arm	180	13	18
Stabilizer bar bracket x Strut bar bracket	130	9	13
Suspension support x Fender apron	375	27	37
Shock absorber x Knuckle arm	1,000	72	98
Suspension member x Body	1,100	80	108
Wheel nut x Front wheel hub	1,050	76	103
Disc brake assembly x Shock absorber	930	67	91

REAR AXLE AND SUSPENSION

Specifications

Rear axle shaft	Oil seal drive in depth	Inner	31 mm	1.22 in.
		Outer	6 mm	0.24 in.
	Flange runout	Max. limit	0.1 mm	0.004 in.
	Rear axle shaft bearing preload		Add oil seal rotation resistance	
		at Starting	1 – 4 kg-cm	
			(0.9 – 3.5 in.-lb, 0.1 – 0.4 N·m)	
Rear drive shaft (IRS type)	Inboard joint pack in grease			
		Race	60 g	0.13 lb
		Boot	60 g	0.13 lb
	Outboard joint pack in grease			
		Race	60 g	0.13 lb
		Boot	60 g	0.13 lb
	Installed length (between flange and flange)		416.5 – 419.5 mm	16.398 – 16.516 in.
Differential	Drive pinion bearing preload at Starting		12 – 19 kg-cm	
		New bearing	(10.4 – 16.5 in.-lb, 1.2 – 1.9 N·m)	
		Reused bearing	6 – 10 kg-cm	
			(5.2 – 8.7 in.-lb, 0.6 – 1.0 N·m)	
	Total preload	at Starting	Add drive pinion bearing preload	
			4 – 6 kg-cm	
			(3.5 – 5.2 in.-lb, 0.4 – 0.6 N·m)	
	Drive pinion to ring gear backlash		0.13 – 0.18 mm	0.0051 – 0.0071 in.
	Pinion gear to side gear backlash		0.05 – 0.20 mm	0.0020 – 0.0079 in.
	Ring gear runout	Limit	0.07 mm	0.0028 in.
	Companion flange runout			
		Limit		
		Radial	0.10 mm	0.0039 in.
		Lateral	0.10 mm	0.0039 in.
	Ring gear installing temperature		90 – 110°C	194 – 230°F
	Drive pinion oil seal drive in depth		1.5 mm	0.06 in.
	Side gear oil seal drive in depth		Flash the carrier end surface	
	Side gear shaft runout	Max. limit	0.2 mm	0.008 in.
	Drive pinion adjusting plate washer thickness		2.23 – 2.25 mm	0.0878 – 0.0886 in.
			2.26 – 2.28 mm	0.0890 – 0.0898 in.
			2.29 – 2.31 mm	0.0902 – 0.0909 in.
			2.32 – 2.34 mm	0.0913 – 0.0921 in.
			2.35 – 2.37 mm	0.0925 – 0.0933 in.
			2.38 – 2.40 mm	0.0937 – 0.0945 in.
			2.41 – 2.43 mm	0.0949 – 0.0957 in.
			2.44 – 2.46 mm	0.0961 – 0.0969 in.
			2.47 – 2.49 mm	0.0972 – 0.0980 in.
			2.50 – 2.52 mm	0.0984 – 0.0992 in.
			2.53 – 2.55 mm	0.0996 – 0.1004 in.
			2.56 – 2.58 mm	0.1008 – 0.1016 in.
			2.59 – 2.61 mm	0.1020 – 0.1028 in.
			2.62 – 2.64 mm	0.1031 – 0.1039 in.
			2.65 – 2.67 mm	0.1043 – 0.1051 in.
			2.68 – 2.70 mm	0.1055 – 0.1063 in.
			2.71 – 2.73 mm	0.1067 – 0.1075 in.

Specifications (Cont'd)

Differential (Cont'd)	Side gear thrust washer thickness	0.96 – 1.04 mm	0.0378 – 0.0409 in.
		1.06 – 1.14 mm	0.0417 – 0.0449 in.
		1.16 – 1.24 mm	0.0457 – 0.0488 in.
		1.26 – 1.34 mm	0.0496 – 0.0528 in.
	Side bearing adjusting plate thickness	2.57 – 2.59 mm	0.1012 – 0.1020 in.
		2.60 – 2.62 mm	0.1024 – 0.1031 in.
		2.63 – 2.65 mm	0.1035 – 0.1043 in.
		2.66 – 2.68 mm	0.1047 – 0.1055 in.
		2.69 – 2.71 mm	0.1059 – 0.1067 in.
		2.72 – 2.74 mm	0.1071 – 0.1079 in.
		2.75 – 2.77 mm	0.1083 – 0.1091 in.
		2.78 – 2.80 mm	0.1094 – 0.1102 in.
		2.81 – 2.83 mm	0.1106 – 0.1114 in.
		2.84 – 2.86 mm	0.1118 – 0.1126 in.
		2.87 – 2.89 mm	0.1130 – 0.1138 in.
		2.90 – 2.92 mm	0.1142 – 0.1150 in.
		2.93 – 2.95 mm	0.1154 – 0.1161 in.
		2.96 – 2.98 mm	0.1165 – 0.1173 in.
		2.99 – 3.01 mm	0.1177 – 0.1185 in.
		3.02 – 3.04 mm	0.1189 – 0.1197 in.
		3.05 – 3.07 mm	0.1201 – 0.1209 in.
		3.08 – 3.10 mm	0.1213 – 0.1220 in.
		3.11 – 3.13 mm	0.1224 – 0.1232 in.
		3.14 – 3.16 mm	0.1236 – 0.1244 in.
		3.17 – 3.19 mm	0.1248 – 0.1256 in.
		3.20 – 3.22 mm	0.1260 – 0.1268 in.
		3.23 – 3.25 mm	0.1272 – 0.1280 in.

Cold tire inflation pressure	Tire size	Inflation pressure kg/cm ² (psi, kPa)	
		Front	Rear
	225/60 HR 14	1.9 (27, 186)	1.9 (27, 186)
Rear wheel alignment		Inspection STD	Adjustment STD
Toe-in		0 ± 2 mm (0 ± 0.08 in.)	0 ± 1 mm (0 ± 0.04 in.)
Camber		–10' ± 45'	–10' ± 30'
Left-right error		20'	20'

Torque Specifications

	Part tightened	kg-cm	ft-lb	N·m
Rear axle shaft	Rear axle shaft x Flange			
	(retighten the nut 5 — 10° at a time until the specified preload is reached.)	1st Max.		
		800	58	78
		2,000	145	196
Drive shaft	Drive shaft x Rear axle shaft	700	51	69
	Drive shaft x Differential	700	51	69
Differential	Propeller shaft x Companion flange	430	31	42
	Carrier cover	220	16	22
	Drive shaft x Side gear shaft	700	51	69
	Companion flange x Drive pinion			
	(retighten the nut 130 kg-cm (9 ft-lb, 13 N·m) at a time until the specified preload is reached.)	1st		
		1,100	80	108
		Max.		
		2,400	174	235
	Ring gear x Differential case	985	71	97
Suspension	Side bearing cap	800	58	78
	Differential carrier x Support	850	61	83
	Carrier support x Member	850	61	83
	Shock absorber x Body	250	18	25
	Shock absorber x Suspension arm	375	27	37
	Stabilizer link x Suspension arm	180	13	18
	Stabilizer bar end x Stabilizer link	310	22	30
	Stabilizer bar bracket x Member	185	13	18
	Suspension arm x Member			
	Inside	1,325	96	130
	Outside	1,175	85	115
	Differential support member x Body	1,200	87	118

BRAKE SYSTEM**Specifications**

Brake	Pedal height (from asphalt sheet)		154 – 164 mm	6.06 – 6.46 in.
	Pedal freeplay		3 – 6 mm	0.12 – 0.24 in.
	Pedal reserve distance at 50 kg (110.2 lb, 490 N)		More than 75 mm (2.95 in.)	
Brake booster	Booster push rod to piston clearance			
	at Idling vacuum		0.1 – 0.5 mm	0.004 – 0.020 in.
	at No vacuum		0.60 – 0.65 mm	0.0236 – 0.0256 in.
Front brake		w/ SST	0 mm	0 in.
	Disc thickness	STD	20 mm	0.79 in.
		Limit	19 mm	0.75 in.
	Disc runout	Limit	0.15 mm	0.0059 in.
	Pad thickness	STD	10.5 mm	0.413 in.
		Limit	3.0 mm	0.118 in.
Rear brake	Disc thickness	STD	18 mm	0.71 in.
		Limit	17 mm	0.67 in.
	Disc runout	Limit	0.15 mm	0.0059 in.
	Pad thickness	STD	10.5 mm	0.413 in.
		Limit	3.0 mm	0.118 in.
Parking brake	Rear drum inner diameter	STD	167 mm	6.57 in.
		Limit	168 mm	6.61 in.
	Lining thickness	STD	2.0 mm	0.079 in.
		Limit	1.0 mm	0.039 in.
	Lever travel	at 20 kg (44.1 lb, 196 N)	5 – 8 clicks	
	Clearance between rear shoe and lever		0 – 0.35 mm	0 – 0.0138 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N·m
Brake booster clevis lock nut	250	18	25
Brake booster x Pedal bracket	130	9	13
Master cylinder x Brake booster	130	9	13
Reservoir set bolt x Master cylinder	250	18	25
Outlet plug x Master cylinder	450	33	44
Piston stopper bolt x Master cylinder	100	7	10
P & B valve x Spring Support	90	78 in.-lb	8.8
Front disc brake caliper x Knuckle	925	67	91
Front disc brake dust cover x Knuckle	185	13	18
Front disc brake cylinder installation bolt	200	14	20
Flexible hose	235	17	23
Brake tube flare nut	155	11	15
Bleeder plug			
Front	85	74 in.-lb	8.3
Rear	85	74 in.-lb	8.3
Front disc x Front axle hub	650	47	64
Parking brake lever x Floor	130	9	13
Parking brake No. 1 cable lock nut	55	48 in.-lb	5.4
Parking brake cable clamp x Side member or cable retainer	55	48 in.-lb	5.4
Rear disc brake caliper x Rear suspension arm	475	34	47
Rear disc brake cylinder installation bolt	200	14	20
Rear suspension arm x Parking brake backing plate	185	13	18
Rear suspension arm x Parking brake backing plate anchor pin	1,450	105	142

STEERING

Specifications

Steering	Steering wheel freeplay	Limit	30 mm	1.18 in.		
	Steering rack runout	Limit	0.3 mm	0.012 in.		
Power steering	Maximum rise of oil level		5 mm	0.20 in.		
	Oil pressure	at Idle speed	More than 65 kg/cm ² (924 psi, 6,374 kPa)			
	Variation in vane pump discharge pressure		Less than 5 kg/cm ² (71 psi, 490 kPa)			
	(at 1,000 rpm and 3,000 rpm)					
	Drive belt tension	New belt	125 ± 25 lb			
		Used belt	80 ± 20 lb			
	Steering effort	at Steering wheel	Less than 4 kg (8.8 lb, 39N)			
	Vane plate	Length	STD	15.00 mm	0.5906 in.	
			Limit	14.97 mm	0.5894 in.	
		Height	STD	8.2 mm	0.323 in.	
			Limit	7.8 mm	0.307 in.	
		Thickness	STD	1.8 mm	0.071 in.	
			Limit	1.7 mm	0.067 in.	
	Vane plate to vane plate groove clearance					
			Limit	0.06 mm	0.0024 in.	
	Shaft to bushing clearance		STD	0.010 – 0.030 mm	0.0004 – 0.0012 in.	
			Limit	0.07 mm	0.0028 in.	
	Flow control valve spring length		STD	50.0 mm	1.969 in.	
			Limit	47.0 mm	1.850 in.	
	Pump rotating torque			Less than 2.8 kg-cm (2.4 in.-lb, 0.3 N·m)		
	Steering rack runout		Limit	0.3 mm	0.012 in.	
	Control valve shaft preload	at Turning		4.5 – 6.5 kg-cm (3.9 – 5.6 in.-lb, 0.4 – 0.6 N·m)		
	Total preload	at Turning		9 – 12 kg-cm (7.8 – 10.4 in.-lb, 0.9 – 1.2 N·m)		
		Vane length	Rotor and cam ring mark			
				None	14.996 – 14.998 mm	0.5904 – 0.5905 in.
				1	14.994 – 14.996 mm	0.5903 – 0.5904 in.
				2	14.992 – 14.994 mm	0.5902 – 0.5903 in.
				3	14.990 – 14.992 mm	0.59016 – 0.59024 in.
				4	14.988 – 14.990 mm	0.5901 – 0.5902 in.
Tilt steering	Collar No. 1 outer diameter		17.989 – 17.996 mm	0.7082 – 0.7085 in.		
			17.996 – 18.003 mm	0.7085 – 0.7088 in.		
			18.003 – 18.010 mm	0.7088 – 0.7091 in.		
			18.010 – 18.017 mm	0.7091 – 0.7093 in.		
			18.017 – 18.024 mm	0.7093 – 0.7096 in.		

Specifications (Cont'd)

Tilt steering (Cont'd)	Collar No. 2 outer diameter	17.982 — 18.000 mm	0.7080 — 0.7087 in.
		18.000 — 18.018 mm	0.7087 — 0.7094 in.
	Tilt steering support shim thickness	0.2 mm	0.008 in.
		0.5 mm	0.020 in.
		0.8 mm	0.031 in.
		1.4 mm	0.055 in.
		1.8 mm	0.071 in.

Torque Specifications

Steering main shaft	Part tightened	kg-cm	ft-lb	N·m
	Steering wheel x Steering main shaft	350	25	34
	Column tube x Column hole cover	130	9	13
	Column bracket x Instrument panel	250	18	25
	Intermediate shaft x Steering worm shaft	350	25	34
Power steering	Rack housing x Cylinder housing	185	13	18
	Cylinder end stopper nut x Cylinder housing	1,750	127	172
	Steering rack end x Steering rack	1,050	76	103
	Control valve housing x Rack housing	185	13	18
	Pinion bearing adjust screw lock nut x Rack housing	700	51	69
	Rack guide spring cap lock nut x Rack housing	700	51	69
	Return pressure right and left tube union	300	22	29
	Pressure line x Rack housing	390	28	38
	Rack housing bracket x Body	770	56	76
	Front housing x Rear housing	475	34	47
	Union x Rear housing	700	51	69
	PS pump x Bracket	375	27	37
	Pressure line	450	33	44
	Pump pulley x Rotor shaft	445	32	44
	Tie rod end x Steering rack end	175	13	17
	Knuckle arm x Tie rod	600	43	59
Tilt steering	Tilt steering pawl set bolt	185	13	18
	Tilt lever retainer	185	13	18
	Support x Column bracket	185	13	18
	Support stopper bolt	100	7	10
	Upper bracket x Tilt steering support	75	65 in.-lb	7.4
	Support reinforcement x Tilt steering support	75	65 in.-lb	7.4
	Column bracket x Column tube	185	13	18
	Main shaft x Intermediate shaft	250	18	25

BODY**Torque Specifications**

Part tightened		kg-cm	ft-lb	N·m
Front seat				
Seat back x Seat adjuster		375	27	37
Seat back x Seat truck		130	9	13
Seat cushion x Seat adjuster		185	13	18
Seat cushion x Seat truck		185	13	18
Seat adjuster x Body		375	27	37
Rear seat				
Seat back center hinge x Body		80	69 in.-lb	7.8
Seat belt (Front)				
ELR x Body	Upper side	55	43 in.-lb	4.9
	Lower side	440	32	43
Belt shoulder anchor x Body		440	32	43
Outer belt lower anchor x Body		440	32	43
Inner belt anchor x Body	Front side	195	14	19
	Rear side	440	32	43
Seat belt (Rear)				
ALR x Body		440	32	43
Belt anchor x Body		440	32	43

LUBRICANT

Item	Capacity			Classification
	Liters	US qts	Imp. qts	
Engine oil				API grade SF or SF/CC, multigrade viscosity oil
Dry fill	5.7	6.0	5.0	
Drain and refill				
w/ Oil filter change	5.1	5.4	4.5	
w/o Oil filter change	4.6	4.9	4.1	
Munual transmission oil				API GL-4 or GL-5 SAE 75W-90 or 80W-90
W58	2.4	2.5	2.1	
Automatic transmission fluid				ATF DEXRON® II
Dry fill	6.5	6.9	5.7	
Drain and refill	2.4	2.5	2.1	
Differential oil				API GL-5 hypoid gear oil w/LSD Use LSD oil only Above -18°C (0°F) SAE 90 Below -18°C (0°F) SAE 80W-90 or 80W
IRS type	1.2	1.3	1.1	
Power steering fluid				
Pump	350 cc		21.4 cu in.	
Total	800 cc		48.8 cu in.	ATF DEXRON® or DEXRON® II
Ball joint grease		—		Molybdenum disulphide lithium base, NLGI No. 1 or No. 2
Wheel bearing grease		—		Lithium base multipurpose, NLGI No. 2
Brake fluid		—		SAE J1703, DOT 3
Antifreeze		—		Anti-rust type ethylene-glycol base coolant