

SERVICE SPECIFICATIONS

	Page
MAINTENANCE	A-2
ENGINE MECHANICAL	A-3
EFI SYSTEM	A-5
COOLING SYSTEM	A-7
LUBRICATION SYSTEM	A-7
IGNITION SYSTEM	A-7
STARTING SYSTEM	A-8
CHARGING SYSTEM	A-8
CLUTCH	A-8
MANUAL TRANSMISSION	A-9
AUTOMATIC TRANSMISSION	A-12
PROPELLER SHAFT	A-15
FRONT AXLE AND SUSPENSION	A-16
REAR AXLE AND SUSPENSION	A-17
BRAKE SYSTEM	A-23
STEERING	A-25
LUBRICANT	A-27

MAINTENANCE

Engine

Drive belt tension (w/ Nippondenso belt tension gauge BTG-20 (95506-00020) or Borroughs belt tension gauge No. BT-33-73F)				
New belt		125 ± 25 lb		
Used belt		80 ± 20 lb		
Coolant capacity (w/ Heater or A/C)		8.4 liters	8.9 US qts	7.4 Imp. qts
Engine oil capacity	Dry fill	4.8 liters	5.1 US qts	4.2 Imp. qts
	Drain and refill			
	w/ Oil filter change	4.6 liters	4.9 US qts	4.0 Imp. qts
	w/o Oil filter change	3.8 liters	4.0 US qts	3.3 Imp. qts
Spark plug				
Type	ND	W16EXR-U		
	NGK	BPR5EY		
Gap		0.8 mm		0.031 in.
Firing order		1 – 3 – 4 – 2		
Valve clearance (hot)	Intake	0.20 mm		0.008 in.
	Exhaust	0.30 mm		0.012 in.
Idle speed	750 rpm			

Chassis

Front and rear disc brake				
Pad thickness	Limit	3.0 mm		0.118 in.
Disc thickness	Limit	19.0 mm		0.748 in.
		17.0 mm		0.669 in.
Disc runout	Limit	0.15 mm		0.0059 in.
Rear drum brake				
Lining thickness	Limit	1.0 mm		0.039 in.
Drum inner diameter	Limit	230.6 mm		9.079 in.
Parking brake				
Lining	Limit	1.0 mm		0.039 in.
Drum inner diameter	Limit	168 mm		6.61 in.
Steering wheel freeplay	Limit	30 mm		1.18 in.
Front axle and suspension				
Ball joint vertical play	Limit	2.5 mm		0.098 in.
Wheel bearing friction preload		0 – 1,050 g	0 – 2.3 lb	0 – 10 N

ENGINE MECHANICAL

Specifications

Compression pressure	STD		More than 12.0 kg/cm ²	171 psi	1,177 kPa
	Limit		10.0 kg/cm ²	142 psi	981 kPa
	Differential of pressure between each cylinder		Less than 1.0 kg/cm ²	14 psi	98 kPa
Cylinder head	Head surface warpage	Limit	0.15 mm	0.0059 in.	
	Valve seat	Refacing angle	IN	30°, 45°, 60°	
			EX	30°, 45°, 65°	
		Contacting angle	45°		
		Contacting width	1.2 – 1.6 mm	0.047 – 0.063 in.	
Valve guide bushing	Inner diameter	Intake	8.01 – 8.03 mm	0.3154 – 0.3161 in.	
		Exhaust	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.	
	Protrusion from cylinder head		19 mm	0.75 in.	
	Replacing temperature (cylinder head side)		Normal temperature		
Valve	Valve overall length	STD	Intake	113.5 mm	4.468 in.
			Exhaust	112.4 mm	4.425 in.
	Valve face angle		IN & EX	44.5°	
	Stem diameter	STD	Intake	7.970 – 7.985 mm	0.3138 – 0.3144 in.
			Exhaust	7.965 – 7.980 mm	0.3136 – 0.3142 in.
	Stem end refacing	Limit	IN & EX	0.5 mm	0.020 in.
	Stem oil clearance	STD	Intake	0.02 – 0.06 mm	0.0008 – 0.0024 in.
			Exhaust	0.03 – 0.07 mm	0.0012 – 0.0028 in.
		Limit	Intake	0.08 mm	0.0031 in.
			Exhaust	0.10 mm	0.0039 in.
	Valve head edge thickness	Limit		0.6 mm	0.024 in.
Valve spring	Free length			45.8 mm	1.803 in.
	Installed length			40.5 mm	1.594 in.
	Installed load	STD		25.0 kg	55.1 lb 245 N
		Limit		22.5 kg	49.6 lb 221 N
	Squareness	Limit		1.7 mm	0.067 in.
Rocker arm and shaft	Rocker shaft diameter			15.97 – 15.99 mm	0.6287 – 0.6295 in.
	Shaft to arm oil clearance	STD		0.01 – 0.05 mm	0.0004 – 0.0020 in.
		Limit		0.08 mm	0.0031 in.
Intake and exhaust manifold	Manifold surface warpage	Limit	Intake	0.20 mm	0.0079 in.
			Exhaust	0.70 mm	0.0276 in.
Chain and sprocket	Crankshaft sprocket wear	Limit		59.4 mm	2.339 in.
	Camshaft sprocket wear	Limit		113.8 mm	4.480 in.
Tension and damper	Tension head thickness	Limit		11.0 mm	0.433 in.
	Damper No. 1 wear	Limit		0.5 mm	0.020 in.
	Damper No. 2 wear	Limit		0.5 mm	0.020 in.

Specifications (Cont'd)

Camshaft	Thrust clearance	STD	0.08 – 0.18 mm	0.0031 – 0.0071 in.
		Limit	0.25 mm	0.0098 in.
	Journal oil clearance	STD	0.01 – 0.05 mm	0.0004 – 0.0020 in.
		Limit	0.1 mm	0.004 in.
	Journal diameter	STD	32.98 – 33.00 mm	1.2984 – 1.2992 in.
	Circle runout	Limit	0.2 mm	0.008 in.
	Cam height	Intake	42.63 – 42.72 mm	1.6783 – 1.6819 in.
		Exhaust	42.69 – 42.78 mm	1.6807 – 1.6842 in.
Cylinder block	Warpage	Limit	0.05 mm	0.0020 in.
	Cylinder bore	STD	92.00 – 92.03 mm	3.6220 – 3.6232 in.
	Cylinder bore wear	Limit	0.2 mm	0.008 in.
	Difference of bore limit between cylinder		Less than 0.03 mm (0.0012 in.)	
	Taper and out-of-round	Limit	0.02 mm	0.0008 in.
Piston and piston ring	Piston diameter	STD	91.938 – 91.968 mm	3.6196 – 3.6208 in.
		O/S type 0.50	92.438 – 92.468 mm	3.6393 – 3.6405 in.
		O/S type 1.00	92.938 – 92.968 mm	3.6590 – 3.6602 in.
	Piston to cylinder clearance		0.03 – 0.05 mm	0.0012 – 0.0020 in.
	Piston ring end gap	Standard	No. 1	0.24 – 0.39 mm
			No. 2	0.18 – 0.42 mm
			Oil	0.20 – 0.82 mm
		Maximum	No. 1	0.99 mm
			No. 2	1.02 mm
			Oil	1.42 mm
	Ring to ring groove clearance	Limit	No. 1, No. 2	0.2 mm
Connecting rod and bearing	Thrust clearance	STD	0.16 – 0.26 mm	0.0063 – 0.0102 in.
		Limit	0.30 mm	0.0118 in.
	Bearing clearance	STD	0.025 – 0.055 mm	0.0010 – 0.0022 in.
		Limit	0.10 mm	0.0039 in.
	Pin to bushing oil clearance	STD	0.005 – 0.011 mm	0.0002 – 0.0004 in.
		Limit	0.015 mm	0.0006 in.
	Rod bend	Limit	0.05 mm	0.0020 in.
	Rod twist	Limit	0.15 mm	0.0059 in.
Crankshaft	Thrust clearance	STD	0.02 – 0.22 mm	0.0008 – 0.0087 in.
		Limit	0.30 mm	0.0118 in.
	Thrust washer thickness	STD	2.00 mm	0.0787 in.
		O/S type 0.125	2.06 mm	0.0811 in.
		O/S type 0.25	2.13 mm	0.0839 in.
	Main journal oil clearance	STD	0.025 – 0.055 mm	0.0010 – 0.0022 in.
		Limit	0.08 mm	0.0031 in.
	Main journal diameter	STD	59.984 – 60.000 mm	2.3616 – 2.3622 in.
		Bearing U/S type 0.25	59.70 – 59.71 mm	2.3504 – 2.3508 in.
		Bearing U/S type	0.25 mm	0.0098 in.
	Crank pin oil clearance	STD	0.025 – 0.055 mm	0.0010 – 0.0022 in.
		Limit	0.08 mm	0.031 in.
	Crank pin diameter	STD	52.988 – 53.000 mm	2.0861 – 2.0866 in.
		Bearing U/S type 0.25	52.70 – 52.71 mm	2.0748 – 2.0752 in.
		Bearing U/S type	0.25 mm	0.0098 in.
	Circle runout	Limit	0.1 mm	0.004 in.
	Main journal taper and out-of-round	Limit	0.01 mm	0.0004 in.
	Crank pin journal taper and out-of-round	Limit	0.01 mm	0.0004 in.

Tightening Torque

Tightening part		kg-cm	ft-lb	N-m
Cylinder head x Cylinder block		800	58	78
Manifold x Cylinder head	Intake	195	14	19
	Exhaust	450	33	44
Crankshaft bearing cap x Cylinder block		1,050	76	103
Connecting rod cap x Connecting rod		630	46	62
Crankshaft pulley x Crankshaft		1,600	116	157
Flywheel x Crankshaft		1,100	80	108
Camshaft bearing cap x Cylinder head		200	14	20
Camshaft timing sprocket x Camshaft		800	58	78
Oil pan x Cylinder block		60	52 in.-lb	5.9

EFI SYSTEM

Pressure regulator	Fuel pressure	at No vacuum	2.3 – 2.7 kg/cm ² 33 – 38 psi 226 – 265 kPa	
Cold start injector	Resistance		2 – 4 Ω	
	Leakage		Less than one drop of fuel per minute	
Injector	Resistance		1.5 – 3.0 Ω	
	Injection volume		40 – 50 cc (2.4 – 3.1 cu in.)/15 sec.	
	Difference between each injector		Less than 6 cc (0.37 cu in.)	
	Leakage		Less than one drop of fuel per minute	
Air flow meter	Resistance	$E_2 - V_s$	20 – 400 Ω (Measuring plate fully closed)	
			20 – 1,000 Ω (Measuring plate fully open)	
		$E_2 - V_c$	100 – 300 Ω	
		$E_2 - V_B$	200 – 400 Ω	
		$E_1 - F_c$	∞ (Measuring plate fully closed)	
			0 (Measuring plate open)	
		$E_2 - THA$	10 – 20 k Ω (–20°C, –4°F)	
			4 – 7 k Ω (0°C, 32°F)	
Auxiliary air valve	Resistance		39 – 59 Ω	
		Temperature w/ Valve closed	About 120°C (248°F)	
Throttle body	Throttle valve fully closed angle		6°	
Throttle position sensor	Clearance between lever and stop screw		Between terminals	Resistance
	0 mm	0 in.	$VTA - E_2$	0.2 – 0.8 k Ω
	0.57 mm	0.0224 in.	$IDL - E_2$	0 – 100 Ω
	0.85 mm	0.0335 in.	$IDL - E_2$	Infinity
	Throttle valve fully opened position		$VTA - E_2$	3.3 – 10 k Ω
	—		$V_{cc} - E_2$	3 – 7 k Ω

EFI SYSTEM (Cont'd)

Main relay	Resistance	1 – 2 3 – 4	60 – 80 Ω ∞		
Circuit opening relay	Resistance	STA – E ₁ +B – Fc +B – Fp	17 – 25 Ω 88 – 132 Ω ∞		
Solenoid resistor	Resistance		2 – 4 Ω each		
Start injector time switch	Resistance	STA – STJ STA – Ground	20 – 40 Ω (below 30°, 86°F) 40 – 60 Ω (above 40°C, 104°F) 20 – 80 Ω		
Temperature sensor	Resistance		10 – 20 kΩ (–20°C, –4°F) 4 – 7 kΩ (0°C, 32°F) 2 – 3 kΩ (20°C, 68°F) 0.9 – 1.3 kΩ (40°C, 104°F) 0.4 – 0.7 kΩ (60°C, 140°F) 0.2 – 0.4 kΩ (80°C, 176°F)		
ECU	NOTE: 1. Perform all voltage and resistance measurements with the ECU connected. 2. Verify that the battery voltage is 11V or above when the ignition switch is ON. 3. The testing probes must not make contact with the computer Ox and Vf terminals.				
	+B – E ₁	10 – 14	Ignition switch ON		
	BAT – E ₁	10 – 14	–		
	IDL – E ₂	4 – 10	Throttle valve open		
	VTA – E ₂	0.1 – 1.0	Ignition switch ON	Throttle valve fully closed	
		4 – 6		Throttle valve fully open	
	Vcc – E ₂	4 – 6		–	
	IGt – E ₁	0.7 – 1.0	Idling		
	STA – E ₁	6 – 12	Ignition switch ST position		
	No. 10 – E ₁ No. 20 – E ₁	9 – 14	Ignition switch ON		
	W – E ₁	8 – 14	No trouble (CHECK ENGINE light go off) and engine running		
	Vc – E ₂	4 – 10	Ignition switch ON	–	
	Vs – E ₂	0.5 – 2.5		Measuring plate fully closed	
		4 – 10		Measuring plate fully open	
		2.5 – 7.5	Idling		
	THA – E ₂	2 – 6	Ignition switch ON	Intake air temperature	20°C or 68°F
	THW – E ₂	0.3 – 2.5	Ignition switch ON	Coolant temperature	80°C or 176°F
	B/K – E ₂	8 – 14	Stop light switch ON		
	Resistance	E ₁ – E ₂	0 Ω		
		E ₁ – BODY	0 Ω		
		E ₁ – E ₀₁	0 Ω		
		E ₁ – E ₀₂	0 Ω		
	Fuel cut rpm	Cut	1,900 rpm		
		Hysteresis	200 – 400 rpm		

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				
	Starts to open at		86 — 90°C	187 — 194°F	
	Fully opens at		100°C	212°F	
	Valve opening travel		More than 8 mm	More than 0.31 in.	

LUBRICATION SYSTEM

Oil pressure (normal operating temperature) 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	0.09 — 0.15 mm 0.2 mm	0.0035 — 0.0059 in. 0.008 in.	
	Tip clearance				
	Driven gear to crescent	STD Limit	0.15 — 0.21 mm 0.3 mm	0.0059 — 0.0083 in. 0.012 in.	
	Drive gear to crescent	STD Limit	0.22 — 0.25 mm 0.3 mm	0.0087 — 0.0098 in. 0.012 in.	
	Side clearance	STD Limit	0.03 — 0.09 mm 0.15 mm	0.0012 — 0.0035 in. 0.0059 in.	
	Relief valve operating pressure		4.5 kg/cm ²	64 psi	441 kPa

IGNITION SYSTEM

Spark plug	Type	ND NGK	W16EXR-U BPR5EY		
	Gap		0.8 mm	0.031 in.	
Distributor	Air gap		0.2 — 0.4 mm	0.008 — 0.016 in.	
High tension wire	Resistance	Limit	Less than 25 kΩ per cord		
Ignition coil	Primary coil resistance		0.5 — 0.7 Ω		
	Secondary coil resistance		11.4 — 15.6 kΩ		
	Insulation resistance w/ 500V megohm meter		10 MΩ or more		
Ignition timing	T/M	N range	5° BTDC at idle (Check engine connector T-E ₁ Short)		

STARTING SYSTEM

Reduction type starter	Rated voltage and output power			12V, 1.0 kW		12V, 1.4 kW	
				No-load characteristic		No-load characteristic	
			Ampere rpm	Less than 90A More than 3,000 rpm at 11.5V	Less than 90A More than 3,500 rpm at 11.5V		
Brush	Length	STD	13.5 mm	0.531 in.	14.5 mm	0.571 in.	
		Limit	8.5 mm	0.335 in.	10.0 mm	0.394 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.	←		
	Runout	Limit	0.05 mm	0.0020 in.	←		
Spring installed load		1,785 – 2,415 g (3.9 – 5.3 lb, 18 – 24N)			←		

CHARGING SYSTEM

Battery specific gravity when fully charged at 20°C (68°F)			1.25 – 1.27	
Alternator	Rated output ampere		60A	
	Brush exposed length	STD	10.5 mm	0.413 in.
		Limit	4.5 mm	0.177 in.
	Rotor coil resistance		2.8 – 3.0 Ω	
	Slip ring diameter	STD	14.4 mm	0.567 in.
		Limit	14.0 mm	0.551 in.
Alternator regulator	Regulator voltage		13.5 – 15.1 V (at 25°C)	

CLUTCH**Specifications**

Pedal height (from asphalt sheet)		154 – 164 mm	6.06 – 6.46 in.
Pedal freeplay		5 – 15 mm	0.20 – 0.59 in.
Push rod play at pedal		1 – 5 mm	0.04 – 0.20 in.
Release fork end play		None adjusting 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	Limit	0.6 mm	0.024 in.
Flywheel runout	Limit	0.2 mm	0.008 in.

Tightening Torque

Tightening part	kg-cm	ft-lb	N·m
Clutch cover x Flywheel	185	13	18
Clutch housing x Engine	730	53	72
Master cylinder set bolt	130	9	13
Release fork support x Clutch housing	400	29	39
Strap x Pressure plate	250	18	25

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.
	1st and 2nd gear inner diameter	Limit	49.15 mm	1.9350 in.
	3rd gear inner diameter	Limit	38.15 mm	1.5020 in.
	Counter 5th gear inner diameter	Limit	33.15 mm	1.3051 in.
	Reverse idler gear inner diameter	Limit	20.2 mm	0.795 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.
	Reverse idler gear shaft outer diameter	Limit	19.9 mm	0.783 in.
	Reverse shift arm shoe to idler gear groove clearance	Limit	0.9 mm	0.035 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			
		STD	0.7 – 1.7 mm	0.028 – 0.067 in.
		Limit	0.5 mm	0.020 in.

Specifications (Cont'd)

Manual transmission (W58)	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.	
	Output shaft snap ring thickness			
	Front	Mark		
		D	1.80 – 1.85 mm	0.0709 – 0.0728 in.
		11	1.86 – 1.91 mm	0.0732 – 0.0752 in.
		12	1.92 – 1.97 mm	0.0756 – 0.0776 in.
		13	1.98 – 2.03 mm	0.0780 – 0.0799 in.
		14	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.
	Clutch hub No. 3	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.

Tightening Torque

Manual transmission (W58)	Tightening part	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

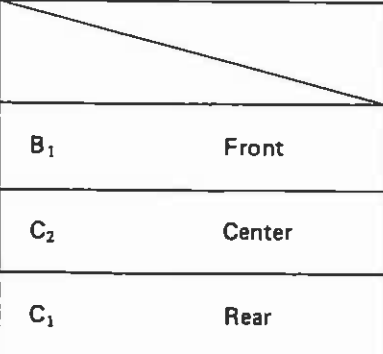
Specifications

Governor pressure								
Output shaft rpm (Vehicle speed reference)								
1,000 (approx. 32 km/h 20 mph)		0.9 – 1.5 kg/cm ²		13 – 21 psi		88 – 147 kPa		
1,800 (approx. 57 km/h 35 mph)		1.6 – 2.2 kg/cm ²		23 – 31 psi		157 – 216 kPa		
3,500 (approx. 111 km/h 69 mph)		4.1 – 5.3 kg/cm ²		58 – 75 psi		402 – 520 kPa		
Line pressure (Wheele locked)								
Engine idling "D" range		4.4 – 4.8 kg/cm ²		63 – 68 psi		431 – 471 kPa		
		"R" range		5.2 – 6.2 kg/cm ²		74 – 88 psi		510 – 608 kPa
At stall "D" range		9.8 – 10.8 kg/cm ²		139 – 154 psi		961 – 1,059 kPa		
		"R" range		11.5 – 14.4 kg/cm ²		164 – 205 psi		1,128 – 1,412 kPa
Engine stall revolution		2,000 ±150 rpm						
Time lag "N" range → "D" range		Less than 1.2 seconds						
		"N" range → "R" range		Less than 1.5 seconds				
Throttle cable adjustment								
Throttle valve fully opened		Between boot end face and inner cable stopper						
		0 – 1 mm		0 – 0.04 in.				
Torque converter sleeve runout		Limit		0.30 mm		0.0118 in.		
Drive plate runout		Limit		0.20 mm		0.0079 in.		
Shift point schedule km/h (mph)	Differential gear ratio	"D" range (throttle valve fully open)						"L" range
		1 → 2	2 → 3	3 → OD	OD → 3	3 → 2	2 → 1	2 → 1
	3.583	57 – 73 (35 – 45)	105 – 122 (65 – 76)	*1	*2	91 – 108 (57 – 67)	42 – 54 (26 – 34)	47 – 65 (29 – 40)
	*1. 3 → OD up-shift point with closed throttle valve is at 38 – 52 km/h (24 – 32 mph). *2. OD → 3 down-shift possible up to maximum speed. NOTE: Tire size and tire inflation pressure should be as specified.							

Specifications (Cont'd)

Valve body spring mm (in.)		Free length	Coil outer diameter	No. Coils	Wire diameter
	Lower valve body				
	1-2 shift valve	34.62 (1.3630)	7.56 (0.2976)	13	0.56 (0.0220)
	Pressure relief valve ball	32.14 (1.2654)	13.14 (0.5173)	9	2.03 (0.0799)
	Primary regulator valve	60.13 (2.3673)	17.20 (0.6772)	13	1.80 (0.0709)
	3-4 shift valve	35.18 (1.3850)	10.60 (0.4173)	14.5	1.10 (0.0433)
	Overdrive clutch exhaust	31.09 (1.2240)	8.84 (0.3480)	12.5	0.84 (0.0331)
	Check valve	33.32 (1.3118)	13.82 (0.5441)	7	1.32 (0.0520)
	Damping ball	20.00 (0.7874)	4.97 (0.1957)	16	0.40 (0.0157)
	Cooler return	13.70 (0.5394)	10.50 (0.4134)	10	0.50 (0.0197)
	Upper rear valve body				
	2-3 shift timing valve	29.82 (1.1740)	9.40 (0.3701)	9	0.90 (0.0354)
	Sequence valve	37.55 (1.4783)	9.17 (0.3610)	14.5	1.17 (0.0461)
	Governor modulator valve	36.07 (1.4201)	9.09 (0.3579)	12	0.71 (0.0280)
	Low coast modulator valve	42.35 (1.6673)	9.24 (0.3638)	15	0.84 (0.0331)
	2-3 shift valve	34.09 (1.3421)	9.43 (0.3713)	10.5	0.76 (0.0299)
	Detent regulator valve	30.43 (1.1980)	8.90 (0.3504)	13	0.90 (0.0354)
	3-2 kick down orifice control valve	25.17 (0.9909)	9.40 (0.3701)	7.5	0.90 (0.0354)
	Upper front valve body				
	Throttle valve	21.94 (0.8638)	8.58 (0.3378)	8	0.71 (0.0280)
	Down shift plug	39.71 (1.5634)	10.89 (0.4287)	11.5	1.19 (0.0469)
	Secondary regulator valve	71.27 (2.8059)	17.43 (0.6862)	15	1.93 (0.0760)
Clutch piston return spring (C ₀ , C ₁)	Free length	15.10 mm		0.5945 in.	
	Coil outer diameter	8.0 mm		0.315 in.	
	No. of coils	5.5			
Clutch and Brake piston return spring (C ₂ , B ₀ , B ₁ , B ₃)	Free length	16.12 mm		0.6346 in.	
	Coil outer diameter	8.0 mm		0.315 in.	
	No. of coils	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 STD	0.11 – 0.14 mm	0.0043 – 0.0055 in.	
		Limit	0.3 mm	0.012 in.	
Clutch piston stroke	Front clutch (C ₁)	STD	1.32 – 2.66 mm	0.0520 – 0.1047 in.	
	Rear clutch (C ₂)	STD	1.10 – 1.30 mm	0.0433 – 0.0512 in.	
	OD direct clutch (C ₀)	STD	1.47 – 2.28 mm	0.0579 – 0.0898 in.	
Brake piston stroke	No. 1 brake (B ₁)	STD	1.00 – 1.20 mm	0.0394 – 0.0472 in.	
Brake clearance	No. 3 brake (B ₃)	STD	0.61 – 2.64 mm	0.0240 – 0.1039 in.	
	OD brake (B ₀)	STD	0.26 – 1.83 mm	0.0102 – 0.0720 in.	

Specifications (Cont'd)

Accumulator piston	B ₁	Front	Length	48.5 mm	1.909 in.			
			Outer diameter	34.8 mm	1.370 in.			
	C ₂	Center	Length	45.0 mm	1.772 in.			
			Outer diameter	31.8 mm	1.252 in.			
	C ₁	Rear	Length	49.5 mm	1.949 in.			
			Outer diameter	31.8 mm	1.252 in.			
Accumulator piston spring mm (in.)			Free length	Coil outer diameter	No. coils	Wire diameter		
			B ₁	Front	66.68 (2.6252)	16.36 (0.6441)	14.5	2.60 (0.1024)
			C ₂	Center	61.21 (2.4098)	16.54 (0.6512)	11.5	2.50 (0.0984)
			C ₁	Rear	68.56 (2.6992)	17.53 (0.6902)	15.5	2.03 (0.0799)
Bushing mm (in.)	Bushing name		Length	Finished bore		Bore limit		
	Stator support	Front	9.70 (0.3819)	21.501 – 21.527 (0.8465 – 0.8475)		21.577 (0.8495)		
		Rear	17.45 (0.6870)	21.501 – 21.527 (0.8465 – 0.8475)		21.577 (0.8495)		
	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)	21.538 – 21.564 (0.8480 – 0.8490)		21.614 (0.8509)		
	OD input shaft		9.0 (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		60.07 (2.3650)	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.			

Tightening Torque

Tightening part		kg-cm	ft-lb	N·m
Engine x Transmission		650	47	64
Transmission housing	10 mm	345	25	34
	12 mm	580	42	57
Extension housing		345	25	34
Engine rear support member		425	31	42
Drive plate		850	61	83
Torque converter		185	13	18
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
Neutral start switch (bolt)		55	48 in.-lb	5.4
Neutral start switch (nut)		70	61 in.-lb	6.9

PROPELLER SHAFT**Specifications**

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

Tightening Torque

Tightening part		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	w/PS	5 ± 4 mm (0.20 ± 0.16 in.)	5 ± 1 mm (0.20 ± 0.04 in.)	
	w/o PS	4 ± 4 mm (0.16 ± 0.16 in.)	4 ± 1 mm (0.16 ± 0.04 in.)	
Camber		55' ± 45'	55' ± 30'	
	Left-right error	30'	30'	
Steering axis inclination		9°20' ± 45'	9°20' ± 30'	
	Left-right error	30'	30'	
Caster		3°20' ± 45'	3°20' ± 30'	
	Left-right error	30'	30'	
Side slip		Less than 3.0 mm/m (0.118 in./3.3 ft)		
Wheel angle	Inside wheel	38° ^{+0°} _{-2°}		
	Outside wheel	30° ^{+1°} _{-3°}		
Disc wheel lateral runout		Max. limit	1.0 mm	0.039 in.
Wheel bearing preload (turning load at bulb 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.

Tightening Torque

Tightening part	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	800	58	78
Lower ball joint x Steering knuckle arm	800	58	78
Strut bar x Strut bar bracket	925	67	91
Steering knuckle arm x Tie rod	600	43	59
Strut bar x Lower arm	670	48	66
Strut bar bracket x Body	425	31	42
Stabilizer bar x Lower arm	180	13	18
Stabilizer bar bracket x Strut bar bracket	185	13	18
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 Dust cover	700	51	69

REAR AXLE AND SUSPENSION

Specifications

Rear axle (4-Link type)	Rear axle shaft bearing inner retainer installing temperature		150°C	302°F
	Rear axle shaft runout	Max. Limit	1.5 mm	0.059 in.
	Rear axle shaft flange runout	Max. Limit	0.1 mm	0.004 in.
Rear axle shaft (IRS type)	Oil seal drive in depth	Inner	31 mm	1.22 in.
		Outer	6.0 mm	0.236 in.
	Flange runout	Max. Limit	0.1 mm	0.004 in.
	Rear axle shaft bearing preload	at Starting	Add oil seal rotation resistance 1 — 4 kg-cm (0.9 — 3.5 in.-lb, 0.1 — 0.4 N·m)	
Rear drive shaft (IRS type)	Inboard joint grease			
	NTN type	Race	60 g	0.13 lb
		Boot	60 g	0.13 lb
	TOYOTA type	Race	70 g	0.15 lb
		Boot	70 g	0.15 lb
	Outboard joint grease			
	NTN type	Race	60 g	0.13 lb
		Boot	60 g	0.13 lb
	TOYOTA type	Race	90 g	0.20 lb
		Boot	90 g	0.20 lb
	Installed length (between flange and flange)			
		NTN type	418.0 ± 1.5 mm	16.457 ± 0.059 in.
		TOYOTA type	415.5 ± 1.5 mm	16.358 ± 0.059 in.
Differential (4-Link type)	Drive pinion bearing preload	at Starting		
		New bearing	10 — 16 kg-cm (8.7 — 13.9 in.-lb, 1.0 — 1.6 N·m)	
		Reused bearing	5 — 8 kg-cm (4.3 — 6.9 in.-lb, 0.5 — 0.8 N·m)	
	Total preload	at Starting	Add drive pinion bearing preload 3 — 5 kg-cm (2.6 — 4.3 in.-lb, 0.3 — 0.5 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		100°C	212°F
	Oil seal drive in depth		4.0 mm	0.157 in.
	Side gear thrust washer thickness		0.92 — 0.98 mm	0.0362 — 0.0386 in.
			0.97 — 1.03 mm	0.0382 — 0.0406 in.
			1.02 — 1.08 mm	0.0402 — 0.0425 in.
			1.07 — 1.13 mm	0.0421 — 0.0445 in.
			1.12 — 1.18 mm	0.0441 — 0.0465 in.
			1.17 — 1.23 mm	0.0461 — 0.0484 in.
			1.27 — 1.33 mm	0.0500 — 0.0524 in.
			1.37 — 1.43 mm	0.0539 — 0.0563 in.

Specifications (Cont'd)

Differential (4-link type) (Cont'd)	Drive pinion adjusting plate washer thickness		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.
Differential (IRS type)	Drive pinion bearing preload	at Starting		
		(6.7 in. Differential)	New bearing	10 – 16 kg-cm (8.7 – 13.9 in.-lb, 1.0 – 1.6 N-m)
			Reused bearing	5 – 8 kg-cm (4.3 – 6.9 in.-lb, 0.5 – 0.8 N-m)
	(7.5 in. Differential)	New bearing		
		Reused bearing		
	Total preload	at Starting		
	(6.7 in. Differential)			
	(7.5 in. Differential)			
	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
			Lateral	0.10 mm
	Ring gear installing temperature		100°C	212°F
	Drive pinion oil seal drive in depth			
	(6.7 in. Differential)		2.0 mm	0.079 in.
	(7.5 in. Differential)		1.5 mm	0.059 in.
	Side gear oil seal drive in depth		Flash the carrier end surface	
	Side gear shaft runout	Max. Limit	0.20 mm	0.0079 in.

Specifications (Cont'd)

Differential (IRS type) (Cont'd)	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.
	Side gear thrust washer thickness (6.7 in. Differential)	0.92 — 0.98 mm	0.0362 — 0.0386 in.
		0.97 — 1.03 mm	0.0382 — 0.0406 in.
		1.02 — 1.08 mm	0.0402 — 0.0425 in.
		1.07 — 1.13 mm	0.0421 — 0.0445 in.
		1.12 — 1.18 mm	0.0441 — 0.0465 in.
		1.17 — 1.23 mm	0.0461 — 0.0484 in.
	Side gear thrust washer thickness (7.5 in. Differential)	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 (6.7 in. Differential)	2.21 — 2.23 mm	0.0870 — 0.0878 in.
		2.24 — 2.26 mm	0.0882 — 0.0890 in.
		2.27 — 2.29 mm	0.0894 — 0.0902 in.
		2.30 — 2.32 mm	0.0906 — 0.0913 in.
		2.33 — 2.35 mm	0.0917 — 0.0925 in.
		2.36 — 2.38 mm	0.0929 — 0.0937 in.
		2.39 — 2.41 mm	0.0941 — 0.0949 in.
		2.42 — 2.44 mm	0.0953 — 0.0961 in.
		2.45 — 2.47 mm	0.0965 — 0.0972 in.
		2.48 — 2.50 mm	0.0976 — 0.0984 in.
		2.51 — 2.53 mm	0.0988 — 0.0996 in.
		2.54 — 2.56 mm	0.1000 — 0.1008 in.
		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.

Specifications (Cont'd)

Differential (IRS type) (Cont'd)	Side bearing adjusting plate thickness (6.7 in. Differential) (Cont'd)	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.
	Side bearing adjusting plate thickness (7.5 in. Differential)	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.

Specifications (Cont'd)

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)
NOTE: For continuous high-speed driving in excess of 120 km/h (75 mph), inflate the tire to 0.3 kg/cm ² (4.3 psi, 29 kPa) higher than the recommended cold tire inflation pressure.			
Rear wheel alignment		Inspection STD	Adjustment STD
Toe-in		0 ± 4 mm (0 ± 0.16 in.)	0 ± 2 mm (0 ± 0.08 in.)
Camber		−10' ± 45'	−10' ± 30'
Left-right error		30'	30'
Side slip		Less than 3.0 mm/m (0.118 in./3.3 ft)	

Tightening Torque

	Tightening part	kg-cm	ft-lb	N-m
Rear axle shaft (4-link type)	Bearing retainer x Backing plate	670	48	66
Rear axle shaft (IRS type)	Rear axle shaft x Flange			
	(Retighten the nut 5 — 10° at a time) 1st (until the specified preload is reached.) Max.	800 2,000	58 145	78 196
Drive shaft (IRS type)	Drive shaft x Rear axle shaft	700	51	69
	Drive shaft x Differential	700	51	69
Differential (4-link type)	Propeller shaft x Companion flange	430	31	42
	Drive pinion x Companion flange			
	(Retighten the nut 130 kg-cm (9 ft-lb, 13 N-m) at a time until the specified) 1st preload is reached.) Max.	1,100 2,400	80 174	108 235
	Ring gear x Differential case	985	71	97
	Side bearing cap x Differential carrier	800	58	78
	Side bearing adjusting nut lock	130	9	13
	Differential carrier x Axle housing	315	23	31
Differential (IRS type)	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) 1st the specified preload is reached.) Max.	1,100 2,400	80 174	108 235
	Ring gear x Differential case	985	71	97
	Side bearing cap	800	58	78
	Differential carrier x Support	850	61	83
	Carrier support x Member	850	61	83

Tightening Torque (Cont'd)

	Tightening part	kg-cm	ft-lb	N-m
Suspension (4-link type)	Shock absorber x Body	250	18	25
	Shock absorber x Rear axle housing	375	27	37
	Lateral control rod x Rear axle housing	590	43	58
	Lateral control rod x Body	800	58	78
	Upper control arm x Rear axle housing	1,250	90	123
	Upper control arm x Body	1,450	105	142
	Lower control arm x Rear axle housing	1,250	90	123
	Lower control arm x Body	1,450	105	142
	Stabilizer bracket x Rear axle housing	185	13	18
	Stabilizer link x Stabilizer bar	310	22	30
Suspension (IRS type)	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 Body 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 w/ SST		0.60 — 0.65 mm 0 mm	0.0236 — 0.0256 in. 0 in.
Front brake (Disc)	Disc thickness	STD	20.0 mm	0.787 in.
		Limit	19.0 mm	0.748 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 (Drum)	Drum inner diameter	STD	228.6 mm	9.000 in.
		Limit	230.6 mm	9.079 in.
	Lining thickness	STD	5.0 mm	0.197 in.
		Limit	1.0 mm	0.039 in.
	Drum to shoe clearance (reference)		0.6 mm	0.024 in.
Parking brake (Drum)	Lever travel at 20 kg (44.1 lb, 196 N)		4 — 7 clicks	
	Clearance between rear shoe and lever		0 — 0.35 mm	0 — 0.0138 in.
Rear brake (Disc)	Disc thickness	STD	18.0 mm	0.709 in.
		Limit	17.0 mm	0.669 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 (Disc)	Rear drum inner diameter	STD	167 mm	6.57 in.
		Limit	168 mm	6.61 in.
	Limit 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.

Tightening Torque

Tightening part		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
Outer plug x Master cylinder		450	33	44
Piston stopper bolt x Master cylinder		100	7	10
P & B valve x P & B valve bracket		90	78 in.-lb	8.8
P & B valve bracket x Dash panel		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
Drum brake backing plate x Rear axle housing		630	46	62
Drum brake backing plate x Rear suspension arm		450	33	44
Rear brake wheel cylinder x Backing plate		100	7	10
Brake vacuum tube x Cowl panel		90	78 in.-lb	8.8
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		Less than 30 mm (1.18 in.)
	Steering rack runout	Limit	0.3 mm 0.012 in.
	Pinion bearing preload	at Turning	2.3 — 3.3 kg-cm (2.0 — 2.9 in.-lb, 0.2 — 0.3 N-m)
	Total preload	at Turning	10 — 13 kg-cm (8.7 — 11.3 in.-lb, 1.0 — 1.3 N-m)
Power steering	Maximum rise of oil level		Below 5 mm (0.20 in.)
	Oil pressure	at Idle speed	More than 72 kg/cm ² (1,024 psi, 7,061 kPa)
	Variation in vane pump discharge pressure (at 1,000 rpm and 3,000 rpm)		Less than 5 kg/cm ² (71 psi, 490 kPa)
	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, 39 N)
	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.
	Vane plate 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.
	Shaft to bushing clearance	STD	0.0010 — 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)
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.
	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.

Tightening Torque

	Tightening part	kg-cm	ft-lb	N-m
Steering main shaft	Steering wheel x Steering main shaft	350	25	34
	Column tube x Column hole cover	130	9	13
	Breakaway bracket x Instrument panel	250	18	25
	Intermediate shaft x Universal joint x Steering worm shaft	350	25	34
Steering gear housing	Pinion bearing adjust screw lock nut x Rack housing	1,150	83	113
	Rack guide spring cap lock nut x Rack housing	700	51	69
	Steering rack end x Steering rack	1,050	76	103
	Tie rod end x Steering rack end	175	13	17
	Steering gear housing x Body	475	34	47
	Knuckle arm x Tie rod	600	43	59
Power steering	Front housing x Rear housing	475	34	47
	Union x Rear housing	130	9	13
	PS pump x Bracket	375	27	37
	Pressure line	450	33	44
	Pump pulley x Rotor shaft	500	36	49
	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
	Turn pressure right and left tube union	300	22	29
	Pressure line x Rack housing	390	28	38
	Steering gear housing x Body	475	34	47
Tilt steering	Tilt steering pawl set bolt	185	13	18
	Tilt lever retainer	185	13	18
	Castle nut (Support x Breakaway 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
	Breakaway bracket x Column tube	185	13	18
	Main shaft x Intermediate shaft	250	18	25

LUBRICANT

Item	Capacity			Classification
	Liters	US qts	Imp. qts	
Engine oil				API grade SF or SF/CC, multigrade viscosity and fuel-efficient oil
Dry fill	4.8	5.1	4.2	
Drain and refill				
w/ Oil filter change	4.6	4.9	4.0	
w/o Oil filter change	3.8	4.0	3.3	
Manual 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
A40D				
Dry fill	6.3	6.7	5.5	
Drain and refill	2.4	2.5	2.1	
Differential oil				API GL-5 hypoid gear oil Above –18°C (0°F) SAE90 Below –18°C (0°F) SAE 80W or 80W-90
4-link type	1.3	1.4	1.1	
IRS type				
6.7 in.	1.0	1.1	0.9	
7.5 in.	1.2	1.3	1.1	
Steering gear housing grease	—			Molybdenum disulphide lithium base NLGI No. 2
w/Manual type				
Power steering fluid				ATF DEXRON® or DEXRON® II
Pump	250 cc	15.3 cu in.		
Total	800 cc	48.8 cu in.		
Front shock absorber fluid	325 cc	19.8 cu in.		ATF
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