

SERVICE SPECIFICATIONS

REFER TO 1988 CELICA REPAIR MANUAL
(Pub. No. RM071U)

NOTE: The following pages contain only the points which differ from the above listed manual.

	Page
MAINTENANCE	A-2
ENGINE MECHANICAL	A-3
TURBOCHARGER SYSTEM	A-6
EFI SYSTEM	A-7
COOLING SYSTEM	A-9
LUBRICATION SYSTEM	A-10
IGNITION SYSTEM	A-10
STARTING SYSTEM	A-11
CHARGING SYSTEM	A-11
CLUTCH	A-11
MANUAL TRANSAXLE	A-12
PROPELLER SHAFT	A-18
FRONT AXLE AND SUSPENSION	A-19
REAR AXLE AND SUSPENSION	A-20
BRAKE SYSTEM	A-23
STEERING	A-24
LUBRICANT	A-25

A-2

SERVICE SPECIFICATIONS — Maintenance

MAINTENANCE

Engine

Drive belt tension					
Alternator	w/ A/C	New belt	175 ± 5 lb		
		Used belt	115 ± 20 lb		
	w/o A/C	New belt	150 ± 25 lb		
		Used belt	130 ± 25 lb		
PS pump	New belt	125 ± 10 lb			
	Used belt	80 ± 20 lb			
Engine coolant capacity (w/ Heater)			8.0 liters	8.5 US qts	7.0 Imp. qts
Intercooler coolant capacity			1.7 liters	1.8 US qts	1.5 Imp. qts
Engine oil capacity (Drain and refill)					
w/ Oil filter change			3.6 liters	3.8 US qts	3.2 Imp. qts
w/o Oil filter change			3.3 liters	3.6 US qts	2.9 Imp. qts
Spark plug					
Type	ND	PQ16R8			
	NGK	BCPR5EP8			
Gap		0.8 mm		0.031 in.	
Firing order		1-3-4-2			
Valve clearance	Intake	0.15 – 0.25 mm		0.006 – 0.010 in.	
	Exhaust	0.20 – 0.30 mm		0.008 – 0.012 in.	

Chassis

Front and rear brake					
Pad thickness		Limit	1.0 mm	0.039 in.	
Disc thickness	Front	Limit	24.0 mm	0.945 in.	
	Rear	Limit	9.0 mm	0.354 in.	
Disc runout		Limit	0.15 mm	0.0059 in.	
Parking brake					
Lining thickness		Limit	1.0 mm	0.039 in.	
Drum inside diameter		Limit	171.0 mm	6.732 in.	
Front axle and suspension					
Ball joint vertical play		Limit	0 mm	0 in.	
Steering wheel freeplay			30 mm (1.18 in.) or less		
Torque specifications					
Front seat mount bolts			375 kg-cm	27 ft-lb	37 N·m
Engine mounting center member-to-body mount bolts			400 kg-cm	29 ft-lb	39 N·m
Front suspension lower crossmember-to-body mount nuts			2,125 kg-cm	154 ft-lb	208 N·m
Rear suspension member-to-body mount nuts			1,620 kg-cm	117 ft-lb	159 N·m

SERVICE SPECIFICATIONS – Engine Mechanical

A-3

ENGINE MECHANICAL

Specifications

Idle speed				750 ± 50 rpm	
Intake manifold vacuum		at Idle speed		450 mmHg	17.72 in. Hg 60.0 kPa
Compression pressure		at 250 rpm	STD	12.5 kg/cm ² (178 psi, 1,226 kPa) or more	
			Limit	9.0 kg/cm ² 128 psi 883 kPa	
		Difference of pressure between each cylinder		1.0 kg/cm ² (14 psi, 98 N) or less	
Cylinder head	Warpage	Cylinder block side	Limit	0.2 mm	0.008 in.
		Manifold side	Limit	0.2 mm	0.008 in.
			Intake	0.3 mm	0.012 in.
			Exhaust	0.3 mm	0.012 in.
	Valve seat	Refacing angle		30°, 45°, 75°	
		Contacting angle		45°	
		Contacting width		1.0 – 1.4 mm	0.039 – 0.055 in.
Valve guide bushing	Inside diameter			6.000 – 6.018 mm	0.2362 – 0.2369 in.
	Outside diameter		STD	11.033 – 11.044 mm	0.4344 – 0.4348 in.
			O/S 0.05	11.083 – 11.094 mm	0.4363 – 0.4368 in.
Valve	Valve overall length	STD	Intake	102.85 mm	4.0492 in.
			Exhaust	101.90 mm	4.0118 in.
		Limit	Intake	102.15 mm	4.0216 in.
			Exhaust	101.20 mm	3.9842 in.
	Valve face angle			44.5°	
	Stem diameter		Intake	5.960 – 5.975 mm	0.2346 – 0.2352 in.
			Exhaust	5.955 – 5.970 mm	0.2344 – 0.2350 in.
	Stem oil clearance	STD	Intake	0.025 – 0.058 mm	0.0010 – 0.0023 in.
			Exhaust	0.030 – 0.063 mm	0.0012 – 0.0025 in.
		Limit	Intake	0.08 mm	0.0031 in.
			Exhaust	0.10 mm	0.0039 in.
	Margin thickness	STD		0.8 – 1.2 mm	0.031 – 0.047 in.
		Limit		0.5 mm	0.020 in.
Valve spring	Squareness		Limit	2.0 mm	0.079 in.
	Free length			45.3 mm	1.783 in.
	Installed tension			18.4 – 21.6 kg (40.6 – 47.6 lb, 180 – 212 N)	
Valve lifter	Lifter diameter			27.975 – 27.985 mm	1.1014 – 1.1018 in.
	Lifter bore diameter			28.000 – 28.021 mm	1.1024 – 1.1032 in.
	Oil clearance	STD		0.015 – 0.046 mm	0.0006 – 0.0018 in.
		Limit		0.07 mm	0.0028 in.
Manifold	Warpage	Limit	Intake	0.3 mm	0.012 in.
			Exhaust	1.0 mm	0.039 in.
Air control valve	Warpage		Limit	0.2 mm	0.008 in.
T-VIS VSV	Resistance			33 – 39 Ω	
Camshaft	Thrust clearance	STD		0.100 – 0.240 mm	0.0039 – 0.0094 in.
		Limit		0.30 mm	0.0118 in.
	Journal oil clearance	STD		0.025 – 0.062 mm	0.0010 – 0.0024 in.
		Limit		0.08 mm	0.0031 in.

A-4

SERVICE SPECIFICATIONS – Engine Mechanical

Specifications (Cont'd)

Camshaft (cont'd)	Journal diameter			26.959 – 26.975 mm	1.0614 – 1.0620 in.
	Circle runout	Limit		0.06 mm	0.0024 in.
	Cam lobe height	STD		35.460 – 35.560 mm	1.3961 – 1.4000 in.
		Limit		35.40 mm	1.3937 in.
Idler pulley tension spring	Free length			43.8 mm	1.724 in.
	Installed load at 51.9 mm (2.043 in.)			7.54 kg 16.6 lb	74 N
Cylinder block	Cylinder head surface warpage	Limit		0.05 mm	0.0020 in.
	Cylinder bore diameter	STD		86.000 – 86.030 mm	3.3858 – 3.3870 in.
		Limit		86.23 mm	3.3949 in.
Piston and piston ring	Piston diameter (at right angles to piston pin center, 29.1 mm (1.146 in.) from piston head)			85.960 – 85.990 mm	3.3854 – 3.4138 in.
	Piston oil clearance	STD		0.030 – 0.050 mm	0.0012 – 0.0020 in.
		Limit		0.070 mm	0.0028 in.
	Piston ring groove clearance	No. 1		0.040 – 0.080 mm	0.0015 – 0.0031 in.
		No. 2		0.030 – 0.070 mm	0.0012 – 0.0028 in.
	Piston ring end gap	STD	No. 1	0.330 – 0.570 mm	0.0130 – 0.0224 in.
			No. 2	0.450 – 0.690 mm	0.0177 – 0.0272 in.
			Oil	0.200 – 0.620 mm	0.0079 – 0.0244 in.
		Limit	No. 1	0.87 mm	0.0343 in.
			No. 2	0.99 mm	0.0390 in.
			Oil	0.92 mm	0.0362 in.
Connecting rod	Thrust clearance	STD		0.160 – 0.312 mm	0.0063 – 0.0123 in.
		Limit		0.35 mm	0.35 in.
	Connecting rod bearing center wall thickness				
		STD	Mark 1	1.484 – 1.488 mm	0.0584 – 0.0586 in.
			Mark 2	1.488 – 1.492 mm	0.0586 – 0.0587 in.
			Mark 3	1.492 – 1.496 mm	0.0587 – 0.0589 in.
	Connecting rod oil clearance	STD		0.024 – 0.055 mm	0.0009 – 0.0022 in.
		Limit		0.08 mm	0.0031 in.
	Rod bent 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.
	Bushing inside diameter			22.005 – 22.017 mm	0.8663 – 0.8668 in.
Crankshaft	Piston pin diameter			21.997 – 22.009 mm	0.8660 – 0.8665 in.
	Piston pin oil clearance	STD		0.005 – 0.011 mm	0.0002 – 0.0004 in.
		Limit		0.05 mm	0.0020 in.
	Thrust clearance	STD		0.020 – 0.220 mm	0.0008 – 0.0087 in.
		Limit		0.30 mm	0.0118 in.
	Thrust washer thickness	STD		2.440 – 2.490 mm	0.0961 – 0.0980 in.
	Main journal oil clearance	STD	No. 3	0.028 – 0.047 mm	0.0011 – 0.0019 in.
			Others	0.018 – 0.037 mm	0.0007 – 0.0015 in.
		Limit		0.08 mm	0.0031 in.
	Main journal diameter			54.985 – 55.000 mm	2.1648 – 2.1653 in.
	Main bearing center wall thickness				
		STD	No. 3	1.992 – 1.995 mm	0.0784 – 0.0785 in.
			Mark 1	1.992 – 1.995 mm	0.0784 – 0.0785 in.
			Mark 2	1.995 – 1.998 mm	0.0785 – 0.0787 in.
			Mark 3	1.998 – 2.001 mm	0.0787 – 0.0788 in.
			Mark 4	2.001 – 2.004 mm	0.0788 – 0.0789 in.
			Mark 5	2.004 – 2.007 mm	0.0789 – 0.0790 in.

SERVICE SPECIFICATIONS – Engine Mechanical

A-5

Specifications (Cont'd)

Crankshaft (cont'd)	Main bearing center wall thickness (cont'd)				
	STD	Others	Mark 1	1.997 – 2.000 mm	0.0786 – 0.0787 in.
			Mark 2	2.000 – 2.003 mm	0.0787 – 0.0789 in.
			Mark 3	2.003 – 2.006 mm	0.0789 – 0.0790 in.
			Mark 4	2.006 – 2.009 mm	0.0790 – 0.0791 in.
			Mark 5	2.009 – 2.012 mm	0.0791 – 0.0792 in.
		Crank pin diameter			47.985 – 48.000 mm
	Circle runout		Limit	0.06 mm	0.0024 in.
	Main journal taper and out-of-round		Limit	0.02 mm	0.0008 in.
	Crank pin taper and out-of-round		Limit	0.02 mm	0.0008 in.

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Oil pump pulley x Oil pump drive shaft		290	21	28
No. 1 idler pulley x Cylinder head		440	32	43
No. 2 idler pulley x Cylinder block		440	32	43
Camshaft timing pulley x Camshaft		600	43	59
Crankshaft pulley x Crankshaft		1,100	80	108
Cylinder head x Cylinder block	1st	550	40	53
	2nd	90° turns		
RH engine hanger x Cylinder head		195	14	19
Camshaft bearing cap x Cylinder head		190	14	19
No. 3 timing belt cover x Cylinder head		80	69 in.-lb	7.8
Cylinder head cover x Cylinder head		25	21 in.-lb	2.5
Intake manifold x Cylinder head		195	14	19
Intake manifold stay x Intake manifold		260	119	25
Intake manifold stay x Cylinder block		260	19	25
EGR valve x Intake manifold		195	14	19
EGR pipe x Cylinder head		195	14	19
Water outlet x Cylinder head		130	9	13
LH engine hanger x Cylinder head	12 mm bolt head	130	9	13
	14 mm bolt head	195	14	19
Exhaust manifold x Cylinder head		530	38	52
Alternator bracket x Cylinder head		400	29	39
Alternator bracket x Cylinder block		400	29	39
Alternator bracket x Turbine outlet elbow		440	32	43
Catalytic converter x Turbine outlet elbow		300	22	29
Catalytic converter stay x Catalytic converter		650	47	64
Catalytic converter stay x Cylinder block		650	47	64
Suspension upper brace x Body	Bolt	210	15	21
	Nut	375	27	37
Main bearing cap x Cylinder block		600	43	59
Connecting rod cap x Connecting rod		680	49	67
Rear oil seal retainer x Cylinder block		95	82 in.-lb	9.3
Rear end plate x Cylinder block		95	82 in.-lb	9.3
Flywheel x Crankshaft	New bolt	900	65	88
	Reused bolt	950	69	93
Suspension lower crossmember x Body		2,125	154	208
Suspension lower crossmember x Engine mounting center member		400	29	39
Engine mounting center member x Body		400	29	39

A-6

SERVICE SPECIFICATIONS – Engine Mechanical, Turbocharger System

Torque Specifications (Cont'd)

Part tightened	kg-cm	ft-lb	N-m
Engine mounting center member x Engine mounting bracket	530	38	52
Engine mounting insulator x Body	800	58	78
Engine mounting insulator x Engine mounting bracket	530	38	52
Engine mounting bracket x Cylinder block	530	38	52
Catalytic converter x Exhaust pipe	440	32	43

TURBOCHARGER SYSTEM

Specifications

Intercooler coolant capacity		See page A-2		
Turbocharger	Turbocharging pressure	0.40 – 0.70 kg/cm ² (5.7 – 10.0 psi, 39 – 69 kPa)		
	Impeller wheel axial play	0.13 mm (0.0051 in.) or less		
Intercooler filler cap	Relief valve opening pressure	0.75 – 1.05 kg/cm ² (10.7 – 14.9 psi, 74 – 103 kPa)		
		0.6 kg/cm ²	8.5 psi	59 kPa

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
No. 3 turbo water pipe x Turbocharger	120	9	11
No. 1 turbo water pipe x Turbocharger	120	9	11
Turbocharger x Exhaust manifold	650	47	64
No. 2 oil pipe x Turbocharger	175	13	17
No. 2 oil pipe x No. 1 oil pipe	195	14	19
Turbocharger stay x Turbocharger	810	59	79
Turbocharger stay x Cylinder block	530	38	52
Turbine outlet elbow x Turbocharger	650	47	64

SERVICE SPECIFICATIONS – EFI System

A-7

EFI SYSTEM

Specifications

Fuel pressure regulator	Fuel pressure at No vacuum	2.3 – 2.7 kg/cm ² (33 – 38 psi, 226 – 265 kPa)	
Cold start injector	Resistance Fuel leakage	2 – 4 Ω One drop or less per minute	
Injector	Resistance Injection volume Difference between each cylinder Fuel leakage	2 – 4 Ω 104 – 110 cc (6.3 – 6.7 cu in.) per 15 sec. 5 cc (0.31 cu in.) or less One drop or less per minute	
Throttle body	Throttle body fully closed angle	6°	
Throttle position sensor	Clearance between stop screw and lever	Between terminals	Resistance
	0 mm 0 in. 0.50 mm 0.020 in. 0.70 mm 0.028 in. Throttle valve fully opened position –	VTA – E2 IDL – E2 IDL – E2 VTA – E2 VC – E2	0.2 – 0.8 kΩ 2.3 kΩ or less Infinity 3.3 – 10.3 kΩ 3 – 8.3 kΩ
ISC valve	Resistance +B – ISC 1 or ISC 2	16.0 – 17.0 Ω	
Cold start injector time switch	Resistance STA – STJ below 10°C (50°F) above 25°C (77°F) STA – Ground	30 – 50 Ω 70 – 90 Ω 30 – 90 Ω	
Air flow meter	Resistance VS – E2 VC – E2 FC – E1 THA – E2 at –20°C (–4°F) at 0°C (32°F) at 20°C (68°F) at 40°C (104°F) at 60°C (140°F)	200 – 600 Ω (Measuring plate fully closed) 20 – 1,000 Ω (Measuring plate fully open) 200 – 400 Ω Infinity (Measuring plate fully closed) Zero (Others) 10 – 20 kΩ 4 – 7 kΩ 2 – 3 kΩ 0.9 – 1.3 kΩ 0.4 – 0.7 kΩ	
Fuel pump resistor	Resistance	Approx. 0.73 Ω	
Solenoid resistor	Resistance +B – No. 10, No. 20, No. 30 or No. 40	5 – 7 Ω	
Water temp. sensor	Resistance at –20°C (–4°F) at 0°C (32°F) at 20°C (68°F) at 40°C (104°F) at 60°C (140°F) at 80°C (176°F)	10 – 20 kΩ 4 – 7 kΩ 2 – 7 kΩ 0.9 – 1.3 kΩ 0.4 – 0.7 kΩ 0.2 – 0.4 kΩ	
EGR gas temp. sensor (Calif. only)	Resistance at 50°C (122°F) at 100°C (212°F) at 150°C (302°F)	69.40 – 88.50 kΩ 11.89 – 14.37 kΩ 2.79 – 3.59 kΩ	
Oxygen sensor	Heater coil resistance	5.1 – 6.3 Ω	
T-VIS VSV	Resistance	33 – 39 Ω	
EGR VSV	Resistance	33 – 39 Ω	
Turbocharging pressure VSV	Resistance	24 – 30 Ω	
Fuel pressure VSV	Resistance	33 – 39 Ω	

A-8

SERVICE SPECIFICATIONS – EFI System

Specifications (Cont'd)

ECU	NOTE: ● Perform all voltage and resistance measurements with the computer connected. ● Verify that the battery voltage is 11 V or above with the ignition switch is ON.		
	Voltage		
	Terminals	Condition	STD voltage (V)
	+B +B1 – E1	IG S/W ON	10 – 14
	BATT – E1	–	10 – 14
	IDL – E2	IG S/W ON	Throttle valve open
	VTA – E2		Throttle valve fully closed
			Throttle valve fully open
	VC – E2		–
	IGT – E1	Cranking or idling	0.7 – 1.0
	STA – E1	Cranking	6 – 14
	No. 1 No. 2 – E01 No. 3 – E02 No. 4	IG S/W ON	10 – 14
	W – E1	No trouble (Check engine warning light off) and engine running	8 – 14
	VS – E2	IG S/W ON	Measuring plate fully closed
			Measuring plate fully open
		Idling	2 – 4
	THA – E2	IG S/W ON	Intake air temperature 20°C (68°F)
	THW – E2		Coolant temperature 80°C (176°F)
	ISC1 ISC2 – E1	IG S/W ON	9 – 14
	PIM – E2		2.5 – 4.5
	A/C – E1	IG S/W ON	Air conditioning ON
w/ Regular gasoline	T-VIS – E1		Throttle valve fully closed
			Throttle valve open
w/ Premium gasoline	T-VIS – E1	Idling	2 or less
		4,200 rpm or more	10 – 14
	T – E1	IG S/W ON	Check connector T – E1 not short
			Check connector T – E1 short
	Resistance		
	Terminals	Condition	Resistance (Ω)
	IDL – E1	Throttle valve open	Infinity
		Throttle valve fully closed	Less than 2,300
	VTA – E2	Throttle valve fully open	3,300 – 10,000
		Throttle valve fully closed	200 – 800
	VS – E2	Measuring plate fully closed	200 – 600
		Measuring plate fully open	20 – 1,000
	THA – E2	Intake air temperature 20°C (68°F)	2,000 – 3,000
	THW – E2	Coolant temperature 80°C (176°F)	200 – 400
	G1 G2 – G⊖ NE	–	140 – 180
	Fuel cut rpm w/ Vehicle speed 0 km/h and coolant temperature 80°C (176°F)		Fuel cut rpm Fuel return rpm
			2,000 rpm 1,600 rpm

SERVICE SPECIFICATIONS – EFI System, Cooling System

A-9

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Fuel line	Union bolt type	300	22	29
	Flare nut type	310	22	30
Fuel sender gauge x Fuel tank		15	13 in.-lb	1.5
Fuel pump x Fuel tank		30	26 in.-lb	2.9
Fuel evaporation bent tube x Fuel tank		15	13 in.-lb	1.5
Fuel inlet pipe x Fuel tank		30	26 in.-lb	2.9
Fuel tank drain plug		130	9	13
Fuel tank band x Body		220	16	22
Cold start injector x Intake manifold (Air intake chamber)		60	52 in.-lb	5.9
Cold start injector pipe x Cold start injector		180	13	18
Cold start injector pipe x Delivery pipe		180	13	18
Fuel pressure regulator x Delivery pipe		300	22	29
Delivery pipe x Cylinder head		195	14	19
Fuel inlet hose x Delivery pipe		300	22	29
Throttle body x Intake manifold (Air intake chamber)		195	14	19
Air connector stay x Throttle body		195	14	19
Air connector stay x Cylinder head		80	69 in.-lb	7.8
Air connector x Throttle body		195	14	19

COOLING SYSTEM

Specifications

Engine coolant capacity			See page A-2		
Radiator cap	Relief valve opening pressure	STD	0.75 – 1.05 kg/cm ² (10.7 – 14.9 psi, 74 – 103 kPa)		
		Limit	0.6 kg/cm ²	8.5 psi	59 kPa
Thermostat	Valve opening temperature		80 – 84°C 176 – 183°F		
	Valve lift at 95°C (203°F)		8 mm (0.31 in.) or more		

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Engine coolant x Drain plug		130	9	13
Water pump x Water pump cover		80	69 in.-lb	7.8
Water pump x Cylinder block		80	69 in.-lb	7.8
Water by-pass pipe x Water pump		80	69 in.-lb	7.8
Water inlet housing x Water pump		80	69 in.-lb	7.8
Oil cooler x Radiator lower tank		220	16	22

A-10

SERVICE SPECIFICATIONS – Lubrication System, Ignition System

LUBRICATION SYSTEM

Specifications

Engine oil capacity			See page A-25	
Oil pressure	at Idling		0.3 kg/cm ² (4.3 psi, 29 kPa) or more	
	at 3,000 rpm		2.5 – 5.0 kg/cm ² (36 – 71 psi, 245 – 490 kPa)	
Oil pump	Body clearance	STD	0.10 – 0.16 mm	0.0039 – 0.0063 in.
		Limit	0.20 mm	0.0079 in.
	Tip clearance	STD	0.08 – 0.16 mm	0.0031 – 0.0063 in.
		Limit	0.20 mm	0.0079 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
Engine oil drain plug	250	18	25
Oil pump body cover x Oil pump body	90	78 in.-lb	8.8
Oil pump x Cylinder block	80	69 in.-lb	7.8
Oil strainer x Cylinder block	90	78 in.-lb	8.0
Oil strainer x Oil pump	55	48 in.-lb	5.4
Oil pan x Cylinder block	55	48 in.-lb	5.4
Oil pan x Oil pump	55	48 in.-lb	5.4
Stiffener plate x Cylinder block	380	27	37
Stiffener plate x Transaxle case	380	27	37
Relief valve plug x Oil filter bracket	375	27	37
Union (for oil filter bracket) x Cylinder block	300	22	29
Oil filter bracket x Cylinder block	80	69 in.-lb	7.8
Oil cooler pipe x Cylinder block	525	38	51
Oil cooler pipe x Oil filter bracket	525	38	51
Oil nozzle x Cylinder block	93	81 in.-lb	9.1

IGNITION SYSTEM

Ignition timing		10° BTDC @ idle (w/ Terminals T and E1 short-circuited)	
Firing order		1 – 3 – 4 – 2	
Spark plug		See page A-2	
High-tension cord	Resistance	25 kΩ per cord	
Ignition coil	Primary coil resistance	0.40 – 0.50 Ω	
	Secondary coil resistance	10.2 – 13.8 kΩ	
Distributor	Air gap	0.2 – 0.4 mm	0.008 – 0.016 in.
	Pickup coil resistance	140 – 180 Ω	

SERVICE SPECIFICATIONS – Starting System, Charging System, Clutch**A-11****STARTING SYSTEM**

Starter	Rated voltage and output power			12 V 1.0 kW, 12 V 1.4 kW		
	No-load characteristic			Current	90 A or less at 11.5 V	
				rpm	3,000 rpm or more	
	Brush	Length	STD	1.0 kW type	13.5 mm	0.531 in.
				1.4 kW type	15.5 mm	0.610 in.
		Limit	1.0 kW type	8.5 mm	0.335 in.	
			1.4 kW type	10.0 mm	0.394 in.	
	Spring installed load			1.79 – 2.41 g	3.9 – 5.3 lb	18 – 24 N
	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.	

CHARGING SYSTEM

Drive belt tension			See page A-2	
Battery specific gravity			When fully charge at 20°C (68°F)	
			1.25 – 1.27	
Alternator	Rated output		12 V 70 A	
	Rotor coil resistance		2.8 – 3.0 Ω	
	Slip ring diameter	STD	14.2 – 14.4 mm	0.559 – 0.567 in.
		Limit	12.8 mm	0.504 in.
	Brush exposed length	STD	10.5 mm	0.413 in.
		Limit	1.5 mm	0.059 in.
Alternator regulator	Regulating voltage	at 25°C (77°F)	13.9 – 15.1 V	
		at 115°C (239°F)	13.5 – 14.3 V	

CLUTCH**Specifications**

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		Limit	0.1 mm	0.004 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N·m
Clutch cover x Flywheel	195	14	19
Release fork support	480	35	47

A-12

SERVICE SPECIFICATIONS – Manual Transaxle

MANUAL TRANSAXLE

Specifications

TRANSMISSION ASSEMBLY				
Input shaft				
Roller bearing journal diameter		Limit	32.930 mm	1.2964 in.
3rd gear journal diameter		Limit	35.950 mm	1.4154 in.
4th gear journal diameter		Limit	35.950 mm	1.4154 in.
Runout		Limit	0.060 mm	0.0024 in.
Output shaft				
1st gear journal diameter		Limit	38.950 mm	1.5335 in.
2nd gear journal diameter		Limit	38.950 mm	1.5335 in.
Runout		Limit	0.060 mm	0.0024 in.
Gear thrust clearance	1st	STD	0.10 – 0.35 mm	0.0039 – 0.0138 in.
		Limit	0.40 mm	0.0157 in.
	2nd	STD	0.10 – 0.45 mm	0.0039 – 0.0177 in.
		Limit	0.50 mm	0.0197 in.
	3rd	STD	0.10 – 0.35 mm	0.0039 – 0.0139 in.
		Limit	0.40 mm	0.0157 in.
	4th	STD	0.10 – 0.55 mm	0.0039 – 0.0217 in.
		Limit	0.60 mm	0.0236 in.
	5th	STD	0.10 – 0.57 mm	0.0039 – 0.0224 in.
		Limit	0.65 mm	0.0256 in.
Gear oil clearance				
1st and 4th gear	STD	0.009 – 0.051 mm	0.0004 – 0.0020 in.	
	Limit	0.080 mm	0.0031 in.	
2nd and 3rd gear	STD	0.009 – 0.053 mm	0.0004 – 0.0020 in.	
	Limit	0.080 mm	0.0031 in.	
5th gear	STD	0.009 – 0.050 mm	0.0004 – 0.0020 in.	
	Limit	0.070 mm	0.0028 in.	
Shift fork to hub sleeve clearance		Limit	1.0 mm	0.039 in.
Synchronizer ring to gear clearance		Limit	0.6 mm	0.024 in.
Oil pump assembly				
Rotor body clearance	STD	0.10 – 0.16 mm	0.0039 – 0.0063 in.	
	Limit	0.30 mm	0.0118 in.	
Rotor tip clearance	STD	0.08 – 0.15 mm	0.0031 – 0.0059 in.	
	Limit	0.30 mm	0.0118 in.	
Side clearance	STD	0.03 – 0.08 mm	0.0012 – 0.0031 in.	
	Limit	0.15 mm	0.0059 in.	
Input shaft snap ring thickness				
No. 2 clutch hub	Mark			
	H	2.30 – 2.35 mm	0.0906 – 0.0925 in.	
	J	2.35 – 2.40 mm	0.0925 – 0.0945 in.	
	K	2.40 – 2.45 mm	0.0945 – 0.0965 in.	
	L	2.45 – 2.50 mm	0.0965 – 0.0984 in.	
	M	2.50 – 2.55 mm	0.0984 – 0.1004 in.	
	N	2.55 – 2.60 mm	0.1004 – 0.1024 in.	
	P	2.60 – 2.65 mm	0.1024 – 0.1043 in.	

SERVICE SPECIFICATIONS – Manual Transaxle

A-13

Specifications (Cont'd)

Input shaft snap ring thickness (cont'd)				
4th gear and rear bearing	Mark			
	1	2.35 – 2.40 mm		0.0925 – 0.0945 in.
	2	2.40 – 2.45 mm		0.0945 – 0.0965 in.
	3	2.45 – 2.50 mm		0.0965 – 0.0984 in.
	4	2.50 – 2.55 mm		0.0984 – 0.1004 in.
	5	2.55 – 2.60 mm		0.1004 – 0.1024 in.
	6	2.60 – 2.65 mm		0.1024 – 0.1043 in.
	7	2.65 – 2.70 mm		0.1043 – 0.1063 in.
	8	2.70 – 2.75 mm		0.1063 – 0.1083 in.
Output shaft snap ring thickness				
No. 1 clutch hub	Mark			
	A	2.80 – 2.85 mm		0.1102 – 0.1122 in.
	B	2.85 – 2.90 mm		0.1122 – 0.1142 in.
	C	2.90 – 2.95 mm		0.1142 – 0.1161 in.
	D	2.95 – 3.00 mm		0.1161 – 0.1181 in.
	E	3.00 – 3.05 mm		0.1181 – 0.1201 in.
	F	3.05 – 3.10 mm		0.1201 – 0.1220 in.
	G	3.10 – 3.15 mm		0.1220 – 0.1240 in.
DIFFERENTIAL ASSEMBLY				
Output shaft preload (at starting)	New bearing	8.0–16.0 kg-cm	6.9 – 13.9 in.-lb	0.8 – 1.6 N·m
	Reused bearing	5.0–10.0 kg-cm	4.3 – 8.7 in.-lb	0.5 – 1.0 N·m
Differential case preload (at starting)	New bearing	1.9–3.7 kg-cm	1.6 – 3.2 in.-lb	0.2 – 0.4 N·m
	Reused bearing	1.2–2.3 kg-cm	1.0 – 2.0 in.-lb	0.1 – 0.2 N·m
Left case inner diameter				
Right case bushing	STD	111.000 – 111.035 mm		4.3701 – 4.3714 in.
	Limit	110.060 mm		4.3724 in.
Left case bushing	STD	90.500 – 90.535 mm		3.5630 – 3.5644 in.
	Limit	90.560 mm		3.5653 in.
No. 2 differential case outer diameter				
Right side	STD	110.929 – 110.964 mm		4.3673 – 4.3687 in.
	Limit	110.850 mm		4.3632 in.
Left side	STD	90.429 – 90.464 mm		3.5602 – 3.5616 in.
	Limit	90.350 mm		3.5571 in.
Differential No. 2 case inner diameter				
Side gear bushing	STD	35.000 – 35.025 mm		1.3780 – 1.3789 in.
	Limit	35.030 mm		1.3791 in.
Conical spring washer height				
Left conical spring washer	STD	2.60 – 2.80 mm		0.1024 – 0.1102 in.
	Limit	2.50 mm		0.0984 in.
Right conical spring washer	STD	1.70 – 1.90 mm		0.0669 – 0.0748 in.
	Limit	1.60 mm		0.0630 in.
Right case backlash		0.05 – 0.20 mm		0.0020 – 0.0079 in.
No. 2 differential case backlash		0.05 – 0.20 mm		0.0020 – 0.0079 in.
Intermediate case backlash		0.05 – 0.20 mm		0.0020 – 0.0079 in.

A-14

SERVICE SPECIFICATIONS – Manual Transaxle

Specifications (Cont'd)

Thrust washer thickness			
For right case side gear		0.80 mm	0.0315 in.
		0.85 mm	0.0335 in.
		0.90 mm	0.0354 in.
		0.95 mm	0.0374 in.
		1.00 mm	0.0394 in.
		1.05 mm	0.0413 in.
		1.10 mm	0.0433 in.
		1.15 mm	0.0453 in.
		1.20 mm	0.0472 in.
		1.25 mm	0.0492 in.
		1.30 mm	0.0512 in.
		1.35 mm	0.0531 in.
		1.40 mm	0.0551 in.
For intermediate case side gear		0.80 mm	0.0315 in.
		0.85 mm	0.0335 in.
		0.90 mm	0.0354 in.
		0.95 mm	0.0374 in.
		1.00 mm	0.0394 in.
		1.05 mm	0.0413 in.
		1.10 mm	0.0433 in.
		1.15 mm	0.0453 in.
		1.20 mm	0.0472 in.
		1.25 mm	0.0492 in.
		1.30 mm	0.0512 in.
		1.35 mm	0.0531 in.
		1.40 mm	0.0551 in.
For No. 2 differential case side gear	Mark		
	B	1.00 mm	0.0394 in.
	C	1.05 mm	0.0413 in.
	D	1.10 mm	0.0433 in.
	E	1.15 mm	0.0453 in.
	F	1.20 mm	0.0472 in.
	G	1.25 mm	0.0492 in.
For left case side gear	Mark		
	A	0.95 mm	0.0374 in.
	B	1.00 mm	0.0394 in.
	C	1.05 mm	0.0413 in.
	D	1.10 mm	0.0433 in.
	E	1.15 mm	0.0453 in.
	F	1.20 mm	0.0472 in.
	G	1.25 mm	0.0492 in.
	H	1.30 mm	0.0512 in.
	J	1.35 mm	0.0531 in.
	K	1.40 mm	0.0551 in.

SERVICE SPECIFICATIONS – Manual Transaxle

A-15

Specifications (Cont'd)

Adjusting shim thickness			
For differential preload	Mark		
	0	2.00 mm	0.0787 in.
	1	2.05 mm	0.0807 in.
	2	2.10 mm	0.0827 in.
	3	2.15 mm	0.0846 in.
	4	2.20 mm	0.0866 in.
	5	2.25 mm	0.0886 in.
	6	2.30 mm	0.0906 in.
	7	2.35 mm	0.0925 in.
	8	2.40 mm	0.0945 in.
	9	2.45 mm	0.0965 in.
	A	2.50 mm	0.0984 in.
	B	2.55 mm	0.1004 in.
	C	2.60 mm	0.1024 in.
	D	2.65 mm	0.1043 in.
	E	2.70 mm	0.1063 in.
	F	2.75 mm	0.1083 in.
	G	2.80 mm	0.1102 in.
	H	2.85 mm	0.1122 in.
For output shaft preload	Mark		
	0	1.30 mm	0.0512 in.
	1	1.35 mm	0.0531 in.
	2	1.40 mm	0.0551 in.
	3	1.45 mm	0.0571 in.
	4	1.50 mm	0.0591 in.
	5	1.55 mm	0.0610 in.
	6	1.60 mm	0.0630 in.
	7	1.65 mm	0.0650 in.
	8	1.70 mm	0.0669 in.
	9	1.75 mm	0.0689 in.
	A	1.80 mm	0.0709 in.
	B	1.85 mm	0.0728 in.
	C	1.90 mm	0.0748 in.
	D	1.95 mm	0.0768 in.
	E	2.00 mm	0.0787 in.
	F	2.05 mm	0.0807 in.
	G	2.10 mm	0.0827 in.
	H	2.15 mm	0.0846 in.
	J	2.20 mm	0.0866 in.
	K	2.25 mm	0.0886 in.
	L	2.30 mm	0.0906 in.
	M	2.35 mm	0.0925 in.
	N	2.40 mm	0.0945 in.
	P	2.45 mm	0.0965 in.
	Q	2.50 mm	0.0984 in.

A-16

SERVICE SPECIFICATIONS – Manual Transaxle

Specifications (Cont'd)

TRANSFER ASSEMBLY				
Ring gear backlash		0.13 – 0.18 mm		0.0051 – 0.0071 in.
Ring gear runout	Limit	0.1 mm		0.004 in.
Driven pinion preload (at starting)	New bearing	1.8 – 2.9 kg	4.0 – 6.4 lb	17.7 – 28.4 N
	Reused bearing	0.5 – 0.9 kg	1.1 – 2.0 lb	4.9 – 8.8 N
Transfer total preload (at starting) (Add driven pinion preload)	New bearing	1.3 – 1.4 kg	2.9 – 3.1 lb	12.7 – 13.7 N
	Reused bearing	0.5 – 0.9 kg	1.1 – 2.0 lb	4.9 – 8.8 N
Right case bushing inner diameter	STD	69.000 – 69.035 mm		2.7165 – 2.7179 in.
	Limit	69.060 mm		2.7189 in.
Left case bushing inner diameter	STD	69.000 – 69.035 mm		2.7165 – 2.7179 in.
	Limit	69.060 mm		2.7189 in.
Control coupling washer thickness	STD	1.49 – 1.51 mm		0.0587 – 0.0594 in.
	Limit	1.45 mm		0.0571 in.
Adjusting shim thickness				
For ring gear backlash	Mark			
	1	2.13 mm		0.0839 in.
	2	2.16 mm		0.0850 in.
	3	2.19 mm		0.0862 in.
	4	2.22 mm		0.0874 in.
	5	2.25 mm		0.0886 in.
	6	2.28 mm		0.0898 in.
	7	2.31 mm		0.0909 in.
	8	2.34 mm		0.0921 in.
	9	2.37 mm		0.0933 in.
	10	2.40 mm		0.0945 in.
	11	2.43 mm		0.0957 in.
	12	2.46 mm		0.0968 in.
	13	2.49 mm		0.0980 in.
	14	2.52 mm		0.0992 in.
	15	2.55 mm		0.1004 in.
	16	2.58 mm		0.1016 in.
	17	2.61 mm		0.1028 in.
	18	2.64 mm		0.1039 in.
	19	2.67 mm		0.1051 in.
	20	2.70 mm		0.1063 in.
	21	2.73 mm		0.1075 in.
	22	2.76 mm		0.1087 in.
	23	2.79 mm		0.1098 in.
	24	2.82 mm		0.1110 in.

SERVICE SPECIFICATIONS – Manual Transaxle

A-17

Specifications (Cont'd)

Adjusting shim thickness (cont'd)			
For tooth contact	Mark		
	A	0.30 mm	0.0118 in.
	B	0.33 mm	0.0130 in.
	C	0.36 mm	0.0142 in.
	D	0.39 mm	0.0154 in.
	E	0.42 mm	0.0165 in.
	F	0.45 mm	0.0177 in.
	G	0.48 mm	0.0189 in.
	H	0.51 mm	0.0201 in.
	J	0.54 mm	0.0213 in.
	K	0.57 mm	0.0224 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
Oil pump x Cover	105	8	10
Ring gear x Differential case	1,260	91	124
Rear bearing retainer x Transmission case	430	31	42
Transmission case x Transaxle case	300	22	29
Oil pump assembly x Transaxle case	175	13	17
Shift fork x Shift fork shaft	240	17	24
Oil pipe x Housing	175	13	17
Transmission case x Transmission case cover	300	22	29
Shift and select lever assembly x Transmission case	200	14	20
Bellcrank x Transmission case	200	14	20
Back-up light switch x Transmission case	410	30	40
Driven pinion x Bearing cage	See page MT-70		
Ring gear x Ring gear mounting	985	71	97
Driven pinion cage x Transfer case	400	29	39
Transfer case x Transfer right case	450	33	44
Transfer case x Inspection hole cover	160	12	16
Differential lock sleeve x Shift fork	160	12	16
Transfer right case x Transfer case cover	175	13	17
Driven pinion cage x Extension housing	260	19	25
Extension housing x Dynamic damper	260	19	25
Transaxle assembly x Transfer assembly	700	51	69
Transaxle assembly x Engine M12 bolt	650	47	64
M10 bolt	470	34	46

A-18

SERVICE SPECIFICATIONS – Propeller Shaft

PROPELLER SHAFT**Specifications**

Bearing axial play			0.05 mm	0.0020 in.
Front propeller shaft runout	Limit		0.8 mm	0.031 in.
Intermediate shaft runout	Limit		0.8 mm	0.031 in.
Rear propeller shaft runout	Limit		0.8 mm	0.031 in.
Intermediate shaft flange runout	Limit		0.1 mm	0.0039 in.
Snap ring thickness	Color	None	1.475 – 1.525 mm	0.0581 – 0.0600 in.
		Brown	1.525 – 1.575 mm	0.0600 – 0.0620 in.
		Blue	1.575 – 1.625 mm	0.0620 – 0.0640 in.

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Propeller shaft x Differential		750	54	74
Intermediate shaft x Propeller shaft		750	54	74
Center support bearing x Body		375	27	37
Intermediate shaft x Center support bearing x Joint flange		1st	1,850	134
		2nd	Loosen nut	181
		3rd	700	51
Cross groove joint set bolt		660	48	69
				65

SERVICE SPECIFICATIONS – Front Axle and Suspension**A-19****FRONT AXLE AND SUSPENSION****Specifications**

Cold tire inflation pressure	Tire size	Inflation pressure kg/cm ² (psi, kPa)	
		Front	Rear
	205/60 VR 14 205/60 R 14 87H	2.1 (30, 210)	2.1 (30, 210)
Front wheel alignment		Inspection STD	Adjustment STD
	Toe-in	0 ± 2 mm (0 ± 0.08 in.)	0 ± 1 mm (0 ± 0.04 in.)
	Camber Left-right error	-10' ± 45' 30'	-10' ± 30' 30'
	Steering axis inclination Left-right error	13° 30' ± 45' 30'	—
	Caster Left-right error	1° 10' ± 45' 30'	—
	Side slip	Less than 3.0 mm/m (0.118 in./3.3 ft)	
	Wheel angle Inside wheel Max. Outside wheel	34° 00' 30° 00'	
	At 20° (Outside wheel) Inside wheel	21° 30'	
Front axle and suspension	Wheel lateral runout	Limit	Less than 1.0 mm (0.039 in.)
	Hub bearing axial direction play	Limit	0.05 mm 0.0020 in.
	Drive shaft length		400.6 mm 15.772 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
Tie rod end x Steering knuckle	500	36	49
Tie rod lock nut	570	41	56
Wheel bearing lock nut	1,900	137	186
Lower arm x Ball joint	1,300	94	127
Stabilizer bar x Stabilizer bar link	360	26	35
Stabilizer bar bracket x Body	195	14	19
Drive shaft x Side gear shaft	660	48	65
Wheel nut	1,050	76	103
Stabilizer bar link x Lower arm	360	26	35

A-20

SERVICE SPECIFICATIONS — Rear Axle and Suspension

REAR AXLE AND SUSPENSION

Specifications

Rear wheel alignment			Inspection STD	Adjustment STD
	Toe-in		5 ± 2 mm (0.20 ± 0.08 in.)	5 ± 1 mm (0.20 ± 0.04 in.)
	Camber		-45' ± 45'	
	Left-right error		30'	
Rear axle and suspension	Disc wheel lateral runout	Limit	Less than 1.0 mm (0.039 in.)	
	Hub bearing axial direction	Limit	0.05 mm	0.0020 in.
	Drive shaft length		558.5 mm	21.988 in.
Differential	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		
		Lateral runout	0.1 mm	0.004 in.
		Radial runout	0.1 mm	0.004 in.
	Ring gear installing temperature		90 – 110°C	194 – 230°F
	Drive pinion oil seal drive in depth		2.0 mm	0.079 in.
	Side gear oil seal drive in depth		Flash the carrier end surface	
	Side gear thrust washer thickness		0.95 mm	0.0374 in.
			1.00 mm	0.0394 in.
			1.05 mm	0.0413 in.
			1.10 mm	0.0433 in.
			1.15 mm	0.0453 in.
			1.20 mm	0.0472 in.
	Drive pinion adjusting plate washer thickness		2.27 mm	0.0894 in.
			2.30 mm	0.0906 in.
			2.33 mm	0.0917 in.
			2.36 mm	0.0929 in.
			2.39 mm	0.0941 in.
			2.42 mm	0.0953 in.
			2.45 mm	0.0965 in.
			2.48 mm	0.0976 in.
			2.51 mm	0.0988 in.
			2.54 mm	0.1000 in.
			2.57 mm	0.1012 in.
			2.60 mm	0.1024 in.
			2.63 mm	0.1035 in.
			2.66 mm	0.1047 in.
			2.69 mm	0.1059 in.

SERVICE SPECIFICATIONS – Rear Axle and Suspension

A-21

Specifications (Cont'd)

Differential (cont'd)	Side bearing adjusting plate thickness	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.
		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.

Torque Specifications

Axle hub and rear suspension	Part tightened	kg-cm	ft-lb	N·m
	Drive shaft x Side gear shaft	700	51	69
	No. 1 and No. 2 suspension arm x Axle carrier	1,250	90	123
	No. 1 suspension arm x Body	1,150	83	113
	No. 2 suspension arm x Body	1,150	83	113
	Strut rod x Axle carrier	1,150	83	113
	Strut rod x Body	1,150	83	113
	Stabilizer bar x Link	360	26	35
	Stabilizer bar bracket x Body	195	14	19
	Stabilizer link x Shock absorber	360	26	35
	Wheel nut	1,050	76	103

A-22

SERVICE SPECIFICATIONS – Rear Axle and Suspension

Torque Specifications (Cont'd)

Differential	Part tightened	kg-cm	ft-lb	N-m
	Differential x Support member (Under side)	970	70	95
	(Rear side)	1,500	108	147
	Carrier x Carrier cover	475	34	47
	Carrier x Drain plug	500	36	49
	Carrier x Filler plug	400	29	39
	Carrier x Side bearing cap	800	58	78
	Ring gear x Differential case	985	71	97
	Drive pinion x Companion flange	See page RA-39		
	Companion flange x Propeller shaft	750	54	74

SERVICE SPECIFICATIONS – Brake System

A-23

BRAKE SYSTEM**Specifications**

Front brake	Pad thickness	STD	10.0 mm	0.394 in.
		Limit	1.0 mm	0.039 in.
	Disc thickness	STD	25.0 mm	0.984 in.
		Limit	24.0 mm	0.945 in.
	Disc runout	Limit	0.15 mm	0.0059 in.

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
Front disc brake cylinder installation bolt	370	27	36
Front disc brake torque plate x Steering knuckle	1,015	73	100
Front disc brake cylinder x Flexible hose	310	22	30
Rear disc brake cylinder installation bolt	200	14	20
Rear disc brake torque plate x Dust cover	475	34	47
Rear disc brake cylinder x Flexible hose	310	22	30
Bleeder plug	85	74 in.-lb	8.3
A.B.S. actuator x Actuator bracket	55	48 in.-lb	5.4
Brake tube union nut	155	11	15
A.B.S. actuator x Proportioning valve bracket	90	78 in.-lb	8.8
Proportioning valve installation bolt	90	78 in.-lb	8.8
A.B.S. tube connector x Brake tube (Body side)	260	19	25
A.B.S. tube connector installation bolt	80	69 in.-lb	7.8
A.B.S. actuator bracket x Body (Nut)	130	9	13
Front speed sensor installation bolt	120	9	12
Front sensor rotor x Axle hub	140	10	14
Rear speed sensor installation bolt	195	14	19
A.B.S. computer x Computer bracket	55	48 in.-lb	5.4
A.B.S. deceleration sensor x Computer bracket	32.5	28 in.-lb	3.2
A.B.S. computer bracket installation bolt			
Front left	130	9	13
Front right	195	14	19
Rear	195	14	19
A.B.S. computer sub-bracket x Body	185	13	18

A-24

SERVICE SPECIFICATIONS – Steering

STEERING**Specifications**

Power steering	Steering rack runout	Maximum	0.3 mm	0.012 in.
	Bearing preload		4.5–6.5 kg-cm	3.9 – 5.6 in.-lb 0.4 – 0.6 N·m
	Total preload		9 – 12 kg-cm	7.8 – 10.4 in.-lb 0.9 – 1.2 N·m

Torque Specifications

Power steering	Part tightened	kg-cm	ft-lb	N·m
	PS pump x Pressure tube	525	38	51
	PS pump x Bracket			
	Upper	440	32	43
	Lower	400	29	39
	Rear pump stay x Pump bracket	400	29	39
	Stabilizer bar bracket x Body	195	14	19
	Stabilizer link x Lower arm	360	26	35
	Propeller shaft x Intermediate shaft	750	54	74
	Exhaust pipe clamp	210	15	21
	Lower crossmember			
	Center	400	29	39
	Others	2,120	153	208
	Pressure hose x Pressure tube	370	27	36
	Control valve housing x Rack housing	315	23	31
	Bearing guide lock nut	570	41	56
	Rack guide spring cap lock nut	570	41	56
	Rack x Rack end	730	53	72
	Turn pressure tube x Gear housing	200	14	20
	Gear housing x Body	600	43	59
	Rear mount bracket	530	38	52
	Gear housing x Return line	450	33	44
	Gear housing x Pressure line	450	33	44
	Center member x Body	400	29	39
	Tie rod end x Knuckle arm	500	36	49
	Pinion x Universal joint	360	26	35
	Tie rod end lock nut	570	41	56

SERVICE SPECIFICATIONS – Lubricant

A-25

LUBRICANT

Item	Capacity			Classification
	Liters	US qts	Imp. qts	
Engine oil				API grade SF or SF/CC, multigrade, recommended viscosity and fuel-efficient oil
Dry fill	4.6	4.9	4.0	
Drain and refill				
w/ Oil filter change	3.6	3.8	3.2	
w/o Oil filter change	3.3	3.6	2.9	
Manual transaxle oil (E50F2) (w/ Differential and transfer)	4.8	5.1	4.2	Transaxle oil E50 (08885-80206) or equivalent Recommended oil Oil grade : API GL-5 Viscosity : SAE 75W-90 or 80W-90 SAE 90 (above – 18°C (0°F)) SAE 80W (below – 18°C (0°F))
Power steering fluid	Pump	350 cc	21.4 cu in.	ATF DEXRON® or DEXRON® II
	Total	800 cc	48.8 cu in.	
Steering gear housing grease		—		Molybdenum disulphide lithium base, NLGI No. 2
Brake fluid		—		SAE J1703, DOT3