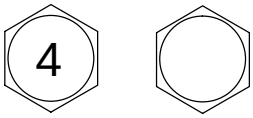
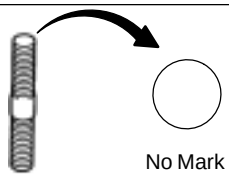
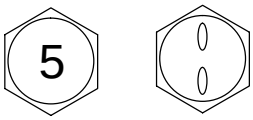
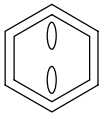
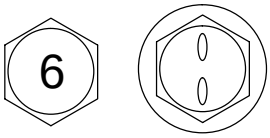
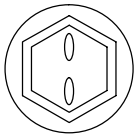
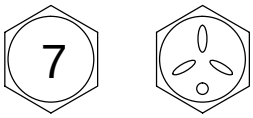
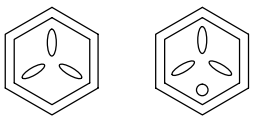
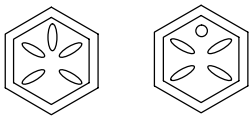
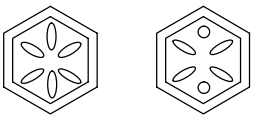
STANDARD BOLT

HOW TO DETERMINE BOLT STRENGTH

SS0ZS–01

Bolt Type				Class
Hexagon Head Bolt		Stud Bolt	Weld Bolt	
Normal Recess Bolt	Deep Recess Bolt			
 No Mark	 No Mark	 No Mark		4T
				5T
 w/ Washer	 w/ Washer			6T
				7T
				8T
				9T
				10T
				11T

B06431

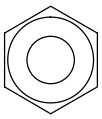
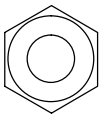
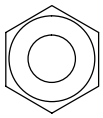
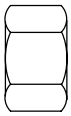
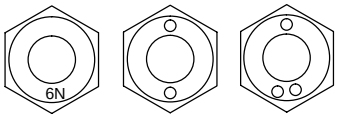
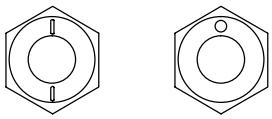
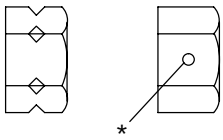
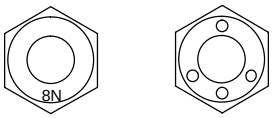
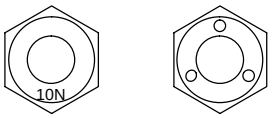
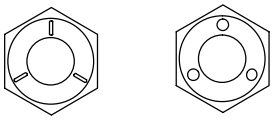
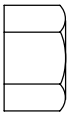
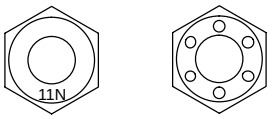
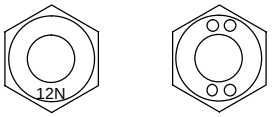
SS0ZT–01

SPECIFIED TORQUE FOR STANDARD BOLTS

Class	Diameter mm	Pitch mm	Specified torque					
			Hexagon head bolt			Hexagon flange bolt		
			N·m	kgf·cm	ft·lbf	N·m	kgf·cm	ft·lbf
4T	6	1	5	55	48 in.·lbf	6	60	52 in.·lbf
	8	1.25	12.5	130	9	14	145	10
	10	1.25	26	260	19	29	290	21
	12	1.25	47	480	35	53	540	39
	14	1.5	74	760	55	84	850	61
	16	1.5	115	1,150	83	–	–	–
5T	6	1	6.5	65	56 in.·lbf	7.5	75	65 in.·lbf
	8	1.25	15.5	160	12	17.5	175	13
	10	1.25	32	330	24	36	360	26
	12	1.25	59	600	43	65	670	48
	14	1.5	91	930	67	100	1,050	76
	16	1.5	140	1,400	101	–	–	–
6T	6	1	8	80	69 in.·lbf	9	90	78 in.·lbf
	8	1.25	19	195	14	21	210	15
	10	1.25	39	400	29	44	440	32
	12	1.25	71	730	53	80	810	59
	14	1.5	110	1,100	80	125	1,250	90
	16	1.5	170	1,750	127	–	–	–
7T	6	1	10.5	110	8	12	120	9
	8	1.25	25	260	19	28	290	21
	10	1.25	52	530	38	58	590	43
	12	1.25	95	970	70	105	1,050	76
	14	1.5	145	1,500	108	165	1,700	123
	16	1.5	230	2,300	166	–	–	–
8T	8	1.25	29	300	22	33	330	24
	10	1.25	61	620	45	68	690	50
	12	1.25	110	1,100	80	120	1,250	90
9T	8	1.25	34	340	25	37	380	27
	10	1.25	70	710	51	78	790	57
	12	1.25	125	1,300	94	140	1,450	105
10T	8	1.25	38	390	28	42	430	31
	10	1.25	78	800	58	88	890	64
	12	1.25	140	1,450	105	155	1,600	116
11T	8	1.25	42	430	31	47	480	35
	10	1.25	87	890	64	97	990	72
	12	1.25	155	1,600	116	175	1,800	130

SS0ZU–01

HOW TO DETERMINE NUT STRENGTH

Nut Type			Class
Present Standard Hexagon Nut	Old Standard Hexagon Nut		
	Cold Forging Nut	Cutting Processed Nut	
 No Mark			4N
 No Mark (w/ Washer)	 No Mark (w/ Washer)	 No Mark	5N (4T)
 6N			6N
		 *	7N (5T)
 8N			8N
 10N		 No Mark	10N (7T)
 11N			11N
 12N			12N

*: Nut with 1 or more marks on one side surface of the nut.

B06432

HINT:

Use the nut with the same number of the nut strength classification or the greater than the bolt strength classification number when tightening parts with a bolt and nut.

Example: Bolt = 4T

Nut = 4N or more

MAINTENANCE

SS0MG–02

SERVICE DATA

Axle and suspension		
Ball joint vertical play	Maximum	0 mm (0 in.)

SS0MH–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Seat x Body	37	375	27
Rear suspension member x Body	80	816	59

ENGINE MECHANICAL

SERVICE DATA

SS0MI–04

Compression pressure		STD	1,270 kPa (13.0 kgf/cm^2, 184 psi) at 250 rpm
		Minimum	1,000 kPa (10.2 kgf/cm^2, 145 psi) at 250 rpm
		Difference of pressure between each cylinder	100 kPa (1.0 kgf/cm^2, 15 psi) or less
Valve clearance		Intake	0.15 – 0.25 mm (0.006 – 0.010 in.) at cold
		Exhaust	0.25 – 0.35 mm (0.010 – 0.014 in.) at cold
	Valve clearance adjusting shim	No. 06	5.060 mm (0.1992 in.)
		No. 08	5.080 mm (0.2000 in.)
		No. 10	5.100 mm (0.2008 in.)
		No. 12	5.120 mm (0.2016 in.)
		No. 14	5.140 mm (0.2024 in.)
		No. 16	5.160 mm (0.2031 in.)
		No. 18	5.180 mm (0.2039 in.)
		No. 20	5.200 mm (0.2047 in.)
		No. 22	5.220 mm (0.2055 in.)
		No. 24	5.240 mm (0.2063 in.)
		No. 26	5.260 mm (0.2071 in.)
		No. 28	5.280 mm (0.2079 in.)
		No. 30	5.300 mm (0.2087 in.)
		No. 32	5.320 mm (0.2094 in.)
		No. 34	5.340 mm (0.2102 in.)
		No. 36	5.360 mm (0.2110 in.)
		No. 38	5.380 mm (0.2118 in.)
		No. 40	5.400 mm (0.2126 in.)
		No. 42	5.420 mm (0.2134 in.)
		No. 44	5.440 mm (0.2142 in.)
		No. 46	5.460 mm (0.2150 in.)
		No. 48	5.480 mm (0.2157 in.)
		No. 50	5.500 mm (0.2165 in.)
		No. 52	5.520 mm (0.2173 in.)
		No. 54	5.540 mm (0.2181 in.)
		No. 56	5.560 mm (0.2189 in.)
		No. 58	5.580 mm (0.2197 in.)
		No. 60	5.600 mm (0.2205 in.)
		No. 62	5.620 mm (0.2213 in.)
		No. 64	5.640 mm (0.2220 in.)
		No. 66	5.660 mm (0.2228 in.)
		No. 68	5.680 mm (0.2236 in.)
		No. 70	5.700 mm (0.2244 in.)
		No. 72	5.720 mm (0.2252 in.)
		No. 74	5.740 mm (0.2260 in.)
Ignition timing			8 – 12° BTDC at idle
Further ignition timing			6 – 15° BTDC at idle
Idle speed			700 ± 50 rpm
Chain and timing sprocket	Chain length at 16 links	Maximum	122.6 mm (4.827 in.)
	Camshaft timing sprocket wear (w/ chain)	Minimum	97.3 mm (3.831 in.)
	Crankshaft timing sprocket wear (w/ chain)	Minimum	51.6 mm (2.031 in.)
Chain tensioner slipper and vibration damper	Wear	Maximum	1.0 mm (0.039 in.)

Cylinder head	Warpage	Maximum	0.05 mm (0.0020 in.)
	Valve seat		
	Refacing angle		30°, 45°, 75°
	Contacting angle		45°
	Contacting width		1.0 – 1.4 mm (0.039 – 0.055 in.)
	Residuary width	Minimum Intake	3.3 mm (0.130 in.)
		Exhaust	3.2 mm (0.126 in.)
	Valve guide busing bore diameter	STD	10.285 – 10.306 mm (0.4049 – 0.4057 in.)
		O/S 0.05	10.335 – 10.356 mm (0.4068 – 0.4077 in.)
	Cylinder head bolt diameter	at tension portion STD	9.0 – 9.2 mm (0.354 – 0.362 in.)
		Minimum	9.0 mm (0.354 in.)
Valve guide bushing	Inside diameter		5.510 – 5.530 mm (0.2169 – 0.2177 in.)
	Protrusion height		8.7 – 9.1 mm (0.342 – 0.358 in.)
Valve	Valve overall length	STD Intake	88.65 mm (3.4902 in.)
		Exhaust	88.69 mm (3.4917 in.)
		Minimum Intake	88.35 mm (3.4783 in.)
		Exhaust	88.39 mm (3.4799 in.)
	Valve face angle		44.5°
	Stem diameter	Intake	5.470 – 5.485 mm (0.2154 – 0.2159 in.)
		Exhaust	5.465 – 5.480 mm (0.2152 – 0.2157 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.)
		Maximum Intake	0.08 mm (0.0031 in.)
		Exhaust	0.10 mm (0.0039 in.)
	Margin thickness	STD	1.0 mm (0.039 in.)
		Minimum	0.7 mm (0.028 in.)
Valve spring	Deviation	Maximum	1.6 mm (0.063 in.)
	Angle (Reference)	Maximum	2°
	Free length		45.90 mm (1.807 in.)
	Installed tension at 33.6 mm (1.323 in.)		139.6 – 154.4 N (14.2 – 15.8 kgf, 31.3 – 34.8 lbf)
	Maximum working tension at 24.6 mm (0.969 in.)		244.9 – 276.1 N (25.5 – 28.1 kgf, 56.2 – 61.9 lbf)
Valve lifter	Lifter diameter		30.966 – 30.976 mm (1.2191 – 1.2195 in.)
	Lifter bore diameter		31.000 – 31.025 mm (1.2205 – 1.2215 in.)
	Oil clearance	STD	0.024 – 0.059 mm (0.0009 – 0.0023 in.)
		Maximum	0.079 mm (0.0031 in.)
Camshaft	Thrust clearance	STD	0.040 – 0.095 mm (0.0016 – 0.0037 in.)
		Maximum	0.11 mm (0.0043 in.)
	Journal oil clearance	STD	0.035 – 0.072 mm (0.0014 – 0.0028 in.)
		Maximum	0.10 mm (0.0039 in.)
	Journal diameter	No. 1	34.449 – 34.465 mm (1.3563 – 1.3569 in.)
		Others	22.949 – 22.965 mm (0.9035 – 0.9041 in.)
	Circle runout	Maximum	0.03 mm (0.0012 in.)
	Cam lobe height	STD Intake	44.578 – 44.678 mm (1.7550 – 1.7590 in.)
		Exhaust	43.761 – 43.861 mm (1.7229 – 1.7268 in.)
		Minimum Intake	44.43 mm (1.7492 in.)
		Exhaust	43.61 mm (1.7169 in.)
Intake manifold	Warpage	Maximum	0.10 mm (0.0039 in.)
Exhaust manifold	Warpage	Maximum	0.70 mm (0.0276 in.)
Cylinder block	Cylinder head surface warpage	Maximum	0.05 mm (0.0020 in.)
	Cylinder bore diameter	STD	79.000 – 79.013 mm (3.1102 – 3.1107 in.)
		Maximum	79.013 mm (3.1107 in.)
	12 pointed head bearing cap sub–assembly bolt diameter at tension portion STD		7.3 – 7.5 mm (0.287 – 0.295 in.)
		Minimum	7.3 mm (0.287 in.)

Piston and piston ring	Piston diameter		
	at 25.6 mm (1.008 in.) from the piston head		78.925 – 78.935 mm (3.1073 – 3.1077 in.)
	Piston oil clearance	STD	0.065 – 0.088 mm (0.0026 – 0.0035 in.)
		Maximum	0.10 mm (0.0039 in.)
	Piston ring groove clearance		0.020 – 0.070 mm (0.0008 – 0.0028 in.)
	Piston ring end gap	STD No. 1	0.25 – 0.35 mm (0.0098 – 0.0138 in.)
		No. 2	0.35 – 0.50 mm (0.0138 – 0.0197 in.)
		Oil (Side rail)	0.15 – 0.40 mm (0.0059 – 0.0157 in.)
		Maximum No. 1	1.05 mm (0.0413 in.)
		No. 2	1.20 mm (0.0472 in.)
		Oil (side rail)	1.05 mm (0.0413 in.)
Connecting rod	Thrust clearance	STD	0.160 – 0.342 mm (0.0063 – 0.0135 in.)
		Maximum	0.342 mm (0.0135 in.)
	Connecting rod thickness		19.788 – 19.840 mm (0.7791 – 0.7811 in.)
	Connecting rod bearing center wall thickness		
	Reference	Mark 1	1.486 – 1.490 mm (0.0585 – 0.0587 in.)
		Mark 2	1.490 – 1.494 mm (0.0587 – 0.0588 in.)
		Mark 3	1.494 – 1.498 mm (0.0588 – 0.0590 in.)
	Connecting rod oil clearance	STD	0.028 – 0.060 mm (0.0011 – 0.0024 in.)
		Maximum	0.08 mm (0.0031 in.)
	Rodout–of–alignment	Maximum per/100 mm (3.94 in.)	0.05 mm (0.0020 in.)
	Rod twist	Maximum per/100 mm (3.94 in.)	0.05 mm (0.0020 in.)
	Bushing inside diameter		20.012 – 20.021 mm (0.7879 – 0.7882 in.)
	Piston pin diameter		20.004 – 20.013 mm (0.7876 – 0.7879 in.)
	Bushing oil clearance	STD	0.005 – 0.011 mm (0.0002 – 0.0004 in.)
		Maximum	0.05 mm (0.0020 in.)
	Connecting rod bolt diameter	at tension portion STD	6.6 – 6.7 mm (0.260 – 0.264 in.)
		Minimum	6.4 mm (0.252 in.)
Crankshaft	Thrust clearance	STD	0.04 – 0.24 mm (0.0016 – 0.0094 in.)
		Maximum	0.30 mm (0.0118 in.)
	Thrust washer thickness		2.430 – 2.480 mm (0.0957 – 0.0976 in.)
	Main journal oil clearance	STD	0.015 – 0.032 mm (0.0006 – 0.0013 in.)
		Maximum	0.050 mm (0.0020 in.)
	Main journal diameter	Mark 0	47.998 – 48.000 mm (1.8897 – 1.8898 in.)
		Mark 1	47.996 – 47.998 mm (1.8896 – 1.8897 in.)
		Mark 2	47.994 – 47.996 mm (1.8895 – 1.8896 in.)
		Mark 3	47.992 – 47.994 mm (1.8894 – 1.8895 in.)
		Mark 4	47.990 – 47.992 mm (1.8893 – 1.8894 in.)
		Mark 5	47.988 – 47.990 mm (1.8892 – 1.8893 in.)
	Main bearing center wall thickness		
	Reference	Mark 1	1.993 – 1.996 mm (0.0785 – 0.0786 in.)
		Mark 2	1.996 – 1.999 mm (0.0786 – 0.0787 in.)
		Mark 3	1.999 – 2.002 mm (0.0787 – 0.0788 in.)
		Mark 4	2.002 – 2.005 mm (0.0788 – 0.0789 in.)
	Crank pin diameter		43.992 – 44.000 mm (1.7320 – 1.7323 in.)
	Circle runout	Maximum	0.03 mm (0.0012 in.)
	Main journal taper and out–of round	Maximum	0.02 mm (0.0008 in.)
	Crank pin taper and out–of round	Maximum	0.02 mm (0.0008 in.)

SS0MJ–04

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Drive belt idler pulley x Drive belt idler		43	440	32
Camshaft timing sprocket x Camshaft		54	551	40
VVT timing sprocket x Camshaft		54	551	40
Chain vibration damper x Cylinder block		9	92	80 in.·lbf
Chain tensioner slipper x Cylinder block		18.5	189	14
Timing chain cover x Cylinder head, cylinder block	Bolt A	18.5	189	14
	Bolt B	13	133	10
	Bolt C	9	92	80 in.·lbf
	Others	11	113	8
RH engine mounting bracket x Timing chain cover		47	479	35
Driver belt tensioner x Timing chain cover	Bolt	69	704	51
	Nut	29	296	21
Crankshaft position sensor x Timing chain cover		9	92	80 in.·lbf
Crankshaft pulley x Crankshaft		138	1,409	102
Chain tensioner x Timing chain cover		9	92	80 in.·lbf
Oil dipstick guide x Cylinder block		13	133	10
Cylinder head cover x Cylinder head	w/ Washer	9	92	80 in.·lbf
	w/o Washer	11	113	8
RH engine mounting insulator x RH engine mounting bracket, body		52	530	38
Drive belt idler x Engine assembly		36	370	27
Camshaft bearing cap x Cylinder head	No. 1	23	235	17
	No. 3	13	133	10
Cylinder head x Cylinder block	1st	49	500	36
	2nd	Turn 90°	Turn 90°	Turn 90°
Water bypass pipe x Cylinder head		9	92	80 in.·lbf
Intake manifold x Cylinder head		30	306	22
Exhaust manifold x Cylinder head		37	377	27
Exhaust manifold stay x Exhaust manifold, cylinder block		37	377	27
Heated Oxygen sensor x Exhaust manifold		44	450	32
Suspension upper brace x Body	Bolt	74	755	55
	Nut	80	816	59
Transaxle x Engine	17 mm head bolt	64	650	47
	14 mm head long bolt	47	480	35
	14 mm head short bolt	23	230	19
Clutch cover x Flywheel		19	195	14
Flywheel x Crankshaft	1st	49	500	36
	2nd	Turn 90°	Turn 90°	Turn 90°
Suspension member x Body		80	816	59
Rear engine mounting insulator throught bolt x nut		93	948	69
Front engine mounting insulator throught bolt x nut		89	908	66
LH engine mounting insulator throught bolt x nut		87	887	64
A/C compressor x Cylinder block		25	255	18
Front exhaust pipe x Tailpipe		43	438	32
Front exhaust pipe x Exhaust manifold		62	632	46
Accelerator cable x Throttle body		21	214	15

Bearing cap subassembly x Cylinder block	12 pointed head 1st	22	225	16
	2nd	44	449	32
	3rd	Turn 45°	Turn 45°	Turn 45°
	4th	Turn 45°	Turn 45°	Turn 45°
	Hexagon head	18.5	189	14
Connecting rod cap x Connecting rod	1st	20	204	15
	2nd	Turn 90°	Turn 90°	Turn 90°
Oil strainer x Bearing cap assembly		9	92	80 in.·lbf
Oil pan x Bearing cap assembly		9	92	80 in.·lbf
Oil filter union x Bearing cap assembly		30	306	21
Engine coolant drain union x Cylinder block		20	204	15
Knock sensor x Cylinder block		39	400	29
Water bypass pipe x Cylinder block		9	92	80 in.·lbf
Heated oxygen sensor x Front exhaust pipe		44	450	32

EMISSION CONTROL

TORQUE SPECIFICATION

SS0MK–03

Part tightened		N·m	kgf·cm	ft·lbf
Charcoal canister x Body		27	275	20
Exhaust manifold x Cylinder head		37	377	27
Exhaust manifold x No.1 exhaust manifold stay		49	500	36
Exhaust manifold x No.2 exhaust manifold stay		37	377	27
Front exhaust pipe x Exhaust manifold		62	632	46
Tailpipe x Front exhaust pipe		43	438	32
Heated oxygen sensor x Exhaust manifold	for Bank 1 sensor 1	44	450	33
	for Bank 2 sensor 1	44	450	33

SFI

SS0MM–05

SERVICE DATA

Fuel pressure regulator	Fuel pressure		301 – 347 kPa (3.1 – 3.5 kgf/cm^2, 44 – 50 psi)
Fuel pump	Resistance	at 20˚C (68˚F)	0.2 – 3.0 Ω
Injector	Resistance Injection volume Difference between each cylinder Fuel leakage	at 20˚C (68˚F)	13.4 – 14.2 Ω 60 – 73 cm^3 (3.2 – 3.9 cu in.) per 15 seconds 13 cm^3 (0.7 cu in.) or less One drop or less per 12 minutes
Mass air flow meter	Resistance	at –20˚C (–4˚F) at 20˚C (68˚F) at 60˚C (140˚F)	13.6 – 18.4 kΩ 2.21 – 2.69 kΩ 0.49 – 0.67 kΩ
Throttle position sensor	Clearance between stop screw and lever 0 mm (0 in.) Throttle valve fully open –	 VTA – E2 VTA – E2 VC – E2	 0.2 – 5.7 kΩ 2.0 – 10.2 kΩ 2.5 – 5.9 kΩ
Camshaft timing oil control valve	Resistance	at 20˚C (68˚F)	6.9 – 7.9 Ω
VSV (EVAP)	Resistance	at 20˚C (68˚F)	27 – 33 Ω
VSV (CCV)	Resistance	at 20˚C (68˚F)	25 – 30 Ω
VSV (Pressure switching valve)	Resistance	at 20˚C (68˚F)	30 – 36 Ω
ECT 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 – 3 kΩ 0.9 – 1.3 kΩ 0.4 – 0.7 kΩ 0.2 – 0.4 kΩ
Vapor pressure sensor	Power source voltage		4.5 – 5.5 V
Heated oxygen sensor	Heater coil resistance	at 20˚C (68˚F) at 800˚C (1,472˚F)	11 – 16 Ω
Fuel cut rpm	Fuel return rpm		1,400 rpm

SS0MN–05

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Fuel pump x Fuel tank		3.4	35	30 in.·lbf
Delivery pipe x Cylinder head		19	190	13
Suspension upper brace x Body	(Bolt)	74	755	55
	(Nut)	80	816	59
No. 2 cylinder head cover x Cylinder head cover		7.0	71	62 in.·lbf
Fuel tank x Body		33	337	24
Throttle body x Intake manifold		30	306	22
Camshaft timing oil control valve x Cylinder head		9.0	92	80 in.·lbf
Engine coolant temperature sensor x Cylinder head		20.4	208	15
Knock sensor x Cylinder block		39	398	29
Intake manifold x Cylinder head		30	306	22
Heated oxygen sensor x Exhaust manifold	for Bank 1 sensor 1	44	450	33
	for Bank 2 sensoer 1	44	450	33
Heated oxygen sensor x Front exhaust pipe	for Bank 1 sensor 2	44	450	33

COOLING

SS0MO–03

SERVICE DATA

Thermostat	Valve opening temperature Valve lift at 90°C (194°F)	80 – 84°C (176 – 183.2°F) 10 mm (0.39 in.) or more
Radiator cap	Relief valve opening pressure STD Minimum	93 – 123 kPa (0.95 – 1.25 kgf/cm^2, 13.5 – 17.8 psi) 79 kPa (0.8 kgf/cm^2, 11.5 psi)
Electric cooling fan	Rotating amperage	5.7 – 7.7 A

SS0MP–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Drain plug x Engine coolant drain union on cylinder block	13	133	9.6
Drain plug x Radiator pipe	16.5	168	12
Water pump x Timing chain cover	9	92	80 in.·lbf
Water pump x Cylinder block	11	113	8
Water inlet x Cylinder block	9	90	80 in.·lbf
Radiator upper support x Body	12.5	128	9
Spear wheel carrier extension x Body	8	82	70 in.·lbf
Radiator x Fan shroud	5	51	44 in.·lbf
Fan x Fan motor	6.18	63	55 in.·lbf
Fan shroud x Fan motor	2.55	26	23 in.·lbf

LUBRICATION

SS0MQ–04

SERVICE DATA

Oil pressure		at idle speed	29 kPa (0.3 kgf/cm^2, 43 psi) or more
		at 3,000 rpm	294 – 539 kPa (3.0 – 5.5 kgf/cm^2, 43 – 78 psi)
Oil pump	Side clearance	STD	0.025 – 0.071 mm (0.0010 – 0.0028 in.)
		Maximum	0.71 mm (0.0028 in.)
	Tip clearance	STD	0.040 – 0.160 mm (0.0016 – 0.0063 in.)
		Maximum	0.160 mm (0.0063 in.)
	Body clearance	STD	0.200 – 0.325 mm (0.0102 – 0.0130 in.)
		Maximum	0.325 mm (0.0130 in.)

SS0MR–04

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Oil pressure switch x Bearing cap sub–assembly	13	130	9
Drain plug x Oil pan	37	378	27
Oil pump body cover x Oil pump body	10.3	105	8
Plug x Oil pump	37	375	27
Oil pump x Cylinder block	8	81.5	72 in.·lbf

IGNITION

SS0MS–09

SERVICE DATA

Spark plug	Recommended spark plug	DENSO made	SK16R11
		NGK made	IFR5A11
	Electrode gap	DENSO made	1.0 – 1.1 mm (0.039 – 0.043 in.)
		NGK made	1.0 – 1.1 mm (0.039 – 0.043 in.)
Camshaft position sensor	Resistance	at cold	835 – 1,400 Ω
		at hot	1,060 – 1,645 Ω
Crankshaft position sensor	Resistance	at cold	1,630 – 2,740 Ω
		at hot	2,065 – 3,225 Ω

SS0MT–07

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Spark plug x Cylinder head		25	255	19
Ignition coil (w/ Igniter) x Cylinder head cover		9.0	92	80 in.·lbf
No. 2 cylinder head cover x Cylinder head cover		7.0	71	62 in.·lbf
Suspension upper brace x Body	(Bolt) (Nut)	74 80	755 816	55 59
Camshaft position sensor x Cylinder head		9.0	92	80 in.·lbf
Crankshaft position sensor x Timing chain cover		9.0	92	80 in.·lbf
A/C compressor x Engine block		25	255	18

STARTING

SS0MU–03

SERVICE DATA

Starter	Rated voltage and output power		12 V 1.4 kW
	No–load characteristics	Current	90 A or less at 11.5 V
		rpm	3,000 rpm or more
	Brush length	STD	15.5 mm (0.610 in.)
		Minimum	10.0 mm (0.394 in.)
	Spring installed load	STD	17.6 – 23.5 N (1.8 – 2.4 kgf, 4.0 – 5.3 lbf)
		Minimum	11.8 N (1.2 kgf, 2.6 lbf)
	Commutator		
	Diameter	STD	30.0 mm (1.181 in.)
		Minimum	29.0 mm (1.412 in.)
	Undercut depth	STD	0.6 mm (0.024 in.)
		Minimum	0.2 mm (0.008 in.)
	Circle runout	Maximum	0.05 mm (0.0020 in.)
	Magnetic switch		
	Contact plate for wear	Maximum	0.9 mm (0.035 in.)

SS0MV–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Starter x Transaxle	37	380	28
End cover x Brush holder	1.5	15	13 in.·lbf
Starter housing x Magnetic switch	5.9	60	52 in.·lbf
End cover x Starter housing	5.9	60	52 in.·lbf
Lead wire x Terminal C of starter	5.9	60	52 in.·lbf
Terminal nut x Terminal C of starter, Terminal 30 of starter	17	170	12
Magnetic switch end cover x Magnetic switch	2.5	26	23 in.·lbf

CHARGING

SS0MW–04

SERVICE DATA

Battery	Voltage	at 20˚C (68˚F)	12.5 – 12.9 V
	Specific gravity	at 20˚C (68˚F)	1.25 – 1.29
Generator	Rated output		12 V 80 A
	Rotor coil resistance		2.1 – 2.5 Ω
	Slip ring diameter	STD	14.2 – 14.4 mm (0.559 – 0.567 in.)
		Minimum	12.8 mm (0.504 in.)
	Brush exposed length	STD	9.5 – 11.5 mm (0.374 – 0.453 in.)
		Minimum	1.5 mm (0.059 in.)
Voltage regulator	Regulating voltage		13.2 – 14.0 V

SS0MX–04

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Bearing retainer x Drive end frame		3.0	31	27 in.·lbf
Rectifier end frame x Drive end frame	Nut A	4.5	46	40 in.·lbf
	Nut B	5.4	55	48 in.·lbf
Generator pulley x Rotor		110.5	1,125	81
Rectifier end frame x Brush holder, Voltage regulator		2.0	20	18 in.·lbf
Rectifier holder x Coil lead on rectifier end frame		2.9	30	26 in.·lbf
Rear end cover x Rectifier holder		4.4	45	39 in.·lbf
Plate terminal x Rectifier holder	Nut	4.4	45	39 in.·lbf
	Bolt	3.9	39	35 in.·lbf
Terminal insulator x Rectifier holder		4.1	42	36 in.·lbf
Generator x RH engine mount bracket		25	255	18
Generator x Cylinder block		54	550	40

CLUTCH

SERVICE DATA

SS09I–04

Pedal height from asphalt sheet		128.2 – 138.2 mm (5.047 – 5.441 in.)
Pedal freeplay		1.0 – 5.0 mm (0.039 – 0.197 in.)
Push rod play at pedal top		5.0 – 15.0 mm (0.197 – 0.591 in.)
Clutch release point from pedal full stroke end position		25 mm (0.98 in.) or more
Slotted spring pin protrusion		1.5 – 2.5 mm (0.059 – 0.098 in.)
Disc rivet head depth	Min.	0.3 mm (0.012 in.)
Disc runout	Max.	0.8 mm (0.031 in.)
Flywheel runout	Max.	0.1 mm (0.004 in.)
Diaphragm spring finger wear	Max. depth	0.5 mm (0.020 in.)
Diaphragm spring finger wear	Max. width	6.0 mm (0.236 in.)
Diaphragm spring tip non–alignment	Max.	0.5 mm (0.020 in.)

SS09J–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Clutch line union	20	204	15
for use with SST	18	185	13
Master cylinder installation nut	12	120	9
Release cylinder installation bolt	12	120	9
Flywheel set bolt	49	500	36
Clutch cover x Flywheel	19	195	14
Release fork support	37	375	27

MANUAL TRANSAXLE

SERVICE DATA

SS02P–04

Input shaft roller bearing journal diameter	Min.	24.985 mm (0.9837 in.)
Input shaft 3rd gear journal diameter	Min.	30.985 mm (1.2199 in.)
Input shaft 4th gear journal diameter	Min.	28.985 mm (1.1411 in.)
Input shaft 5th gear journal diameter	Min.	24.885 mm (0.9797 in.)
Input shaft runout	Max.	0.03 mm (0.0012 in.)
Output shaft roller bearing journal diameter	Min.	32.985 mm (1.2986 in.)
Output shaft 1st gear journal diameter	Min.	37.985 mm (1.4955 in.)
Output shaft 2nd gear journal diameter	Min.	31.985 mm (1.2592 in.)
Output shaft runout	Max.	0.03 mm (0.0012 in.)
Gear thrust clearance 1st	STD Max.	0.10 – 0.40 mm (0.0039 – 0.0157 in.) 0.40 mm (0.0157 in.)
Gear thrust clearance 2nd	STD Max.	0.10 – 0.55 mm (0.0039 – 0.0217 in.) 0.55 mm (0.0217 in.)
Gear thrust clearance 3rd	STD Max.	0.10 – 0.35 mm (0.0039 – 0.0138 in.) 0.35 mm (0.0138 in.)
Gear thrust clearance 4th	STD Max.	0.10 – 0.55 mm (0.0039 – 0.0217 in.) 0.55 mm (0.0217 in.)
Gear thrust clearance 5th	STD Max.	0.10 – 0.57 mm (0.0039 – 0.0224 in.) 0.57 mm (0.0224 in.)
Gear radial clearance 1st, 2nd, 3rd, 4th and 5th (KOYO made)	STD Max.	0.015 – 0.058 mm (0.0006 – 0.0023 in.) 0.058 mm (0.0023 in.)
Gear radial clearance 1st, 2nd, 3rd, 4th and 5th (NSK made)	STD Max.	0.015 – 0.056 mm (0.0006 – 0.0022 in.) 0.056 mm (0.0022 in.)
No. 3 gear shift fork to No. 3 hub sleeve clearance	Max.	0.5 mm (0.020 in.)
No. 2 gear shift fork to No. 2 hub sleeve clearance	Max.	0.35 mm (0.014 in.)
No. 1 gear shift fork to reverse gear clearance	Max.	0.35 mm (0.014 in.)
Synchronizer ring to gear clearance 1st, 4th	Min.	0.75 mm (0.0295 in.)
Synchronizer ring to gear clearance 2nd	Min.	0.70 mm (0.0276 in.)
Synchronizer ring to gear clearance 3rd	Min.	0.65 mm (0.0256 in.)
Synchronizer ring to gear clearance 5th	Min.	0.75 mm (0.030 in.)
Depth		
Input shaft front oil seal		15.8 ± 0.2 mm (0.622 ± 0.008 in.)
Input shaft front bearing		0 – 0.3 mm (0 – 0.012 in.)
Control shaft cover bushing		0.65 ± 0.25 mm (0.0256 ± 0.0098 in.)
Control shaft cover oil seal		0.70 ± 0.50 mm (0.0276 ± 0.0197 in.)
Transmission case oil seal		9.9 ± 0.3 mm (0.390 ± 0.012 in.)
Transaxle case oil seal		1.9 ± 0.3 mm (0.075 ± 0.012 in.)
Select inner lever slotted spring pin		0 ± 0.5 mm (0 ± 0.020 in.)
No. 1 shift inner lever slotted spring pin		0 ± 0.5 mm (0 ± 0.020 in.)
No. 2 shift inner lever slotted spring pin		3.5 ± 0.5 mm (0.138 ± 0.020 in.)

Input shaft snap ring thickness		
No.2 clutch hub	Mark 0	2.30 mm (0.0906 in.)
	Mark 1	2.36 mm (0.0929 in.)
	Mark 2	2.42 mm (0.0953 in.)
	Mark 3	2.48 mm (0.0976 in.)
	Mark 4	2.54 mm (0.1000 in.)
	Mark 5	2.60 mm (0.1024 in.)
Rear radial ball bearing	Mark A	2.29 mm (0.0902 in.)
	Mark B	2.35 mm (0.0925 in.)
	Mark C	2.41 mm (0.0949 in.)
	Mark D	2.47 mm (0.0972 in.)
	Mark E	2.53 mm (0.0996 in.)
	Mark F	2.59 mm (0.1020 in.)
Output shaft snap ring thickness		
No.1 clutch hub	Mark A	2.50 mm (0.0984 in.)
	Mark B	2.56 mm (0.1008 in.)
	Mark C	2.62 mm (0.1031 in.)
	Mark D	2.68 mm (0.1055 in.)
	Mark E	2.74 mm (0.1079 in.)
	Mark F	2.80 mm (0.1102 in.)
Front bearing inner race	Mark 7	1.85 mm (0.0728 in.)
	Mark 8	1.90 mm (0.0748 in.)
	Mark 1	1.95 mm (0.0768 in.)
	Mark 2	2.00 mm (0.0787 in.)
	Mark 3	2.05 mm (0.0807 in.)
	Mark 4	2.10 mm (0.0827 in.)
	Mark 5	2.15 mm (0.0846 in.)
	Mark 6	2.20 mm (0.0866 in.)
No.3 clutch hub	Mark A	2.25 mm (0.0886 in.)
	Mark B	2.31 mm (0.0909 in.)
	Mark C	2.37 mm (0.0933 in.)
	Mark D	2.43 mm (0.0957 in.)
	Mark E	2.49 mm (0.0980 in.)
	Mark F	2.55 mm (0.1004 in.)
	Mark G	2.61 mm (0.1028 in.)
In case that w/o LSD Differential tapered roller bearing preload (at starting)(For use with SST)		
	New bearing	0.78 – 1.57 N·m (7.96 – 16.0 kgf·cm, 6.9 – 13.9 in.·lbf)
	Reused bearing	0.49 – 0.98 N·m (5.0 – 10.0 kgf·cm, 4.3 – 8.7 in.·lbf)
In case that w/o LSD Differential tapered roller bearing preload (at starting)(For use with SST)		
	New bearing	0.17 – 0.35 N·m (1.73 – 3.57 kgf·cm, 1.50 – 3.10 in.·lbf)
	Reused bearing	0.11 – 0.22 N·m (1.12 – 2.24 kgf·cm, 0.97 – 1.95 in.·lbf)
Differential pinion to side gear backlash		0.05 mm – 0.20 mm (0.0020 – 0.0079 in.)
Differential 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.)

Differential tapered roller bearing adjusting shim thickness	Mark AA	2.10 mm (0.0827 in.)
	Mark BB	2.15 mm (0.0846 in.)
	Mark CC	2.20 mm (0.0866 in.)
	Mark DD	2.25 mm (0.0886 in.)
	Mark EE	2.30 mm (0.0906 in.)
	Mark FF	2.35 mm (0.0925 in.)
	Mark GG	2.40 mm (0.0945 in.)
	Mark HH	2.45 mm (0.0965 in.)
	Mark JJ	2.50 mm (0.0984 in.)
	Mark KK	2.55 mm (0.1004 in.)
	Mark LL	2.60 mm (0.1024 in.)
	Mark MM	2.65 mm (0.1043 in.)
	Mark NN	2.70 mm (0.1063 in.)
	Mark PP	2.75 mm (0.1083 in.)
	Mark QQ	2.80 mm (0.1102 in.)
	Mark RR	2.85 mm (0.1122 in.)
	Mark SS	2.90 mm (0.1142 in.)
	Mark TT	2.95 mm (0.1161 in.)
	Mark UU	3.00 mm (0.1181 in.)

SS02Q–05

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Engine hood x Body		20	204	15
Suspension upper brace x Body	Bolt	74	755	55
	Nut	80	816	59
Battery carrier x Body		24	245	18
Control cable bracket x Transaxle		25	255	18
Transaxle x Engine (From transaxle side)		64	650	47
No.1 and No.2 engine hangers set bolt		38	387	28
Left engine mounting insulator	Through bolt and nut	87	887	64
	Bolt	52	530	38
Left engine mounting bracket x Transaxle		52	530	38
Filler and drain plugs		39	400	29
Clutch release cylinder x Transaxle		12	120	9
Front engine mounting bracket	Through bolt and nut	93	949	69
	Bolt	78	796	56
Front engine mounting insulator x Body		54	551	40
Starter x Transaxle		37	378	28
Rear engine mounting insulator	Through bolt and nut	93	949	69
	Bolt	89	908	66
Transaxle x Engine (From engine side)	Bolt A	47	480	35
	Bolt B	23	230	17
Back–up light switch		40	410	30
Control cable bracket x Transaxle case		25	250	18
Control shaft assembly		12	122	9
Selecting bellcrank assembly x Transaxle case		20	204	15
Shifting bellcrank assembly x Transmission case		20	204	15
Lever lock pin set nut		12	122	9
Transmission case x Transmission case cover		18	185	13
Lock ball assembly (Shift and select lever shaft side)		29	300	22
Control shaft cover x Transmission case		20	200	14
5th driven gear lock nut		118	1,200	87
No.1, No.2 and No.3 gear shift forks set bolt		16	160	12
Rear bearing retainer x Transmission case		27	280	20
Reverse idler gear shaft lock bolt		29	300	22
Straight screw plug		25	250	18
Lock ball assembly (Reverse shift fork side)		39	400	29
Transmission case x Transaxle case		29	300	22
Oil receiver pipe set bolt		17	175	13
Reverse shift arm bracket x Transaxle case		17	175	13
No.1 gear shift head set bolt		16	160	12
Output shaft front bearing lock plate set bolt		11	115	8
Transaxle case receiver x Transaxle case		11	115	8
Straight screw plug (Reverse restrict pin)		13	130	9
Differential case x Ring gear	w/o LSD	77	790	57
	w/ LSD	101	1,030	74

Shift and select control cable x Body	4.9	50	43 in.·lbf
Shift lever assembly x Body	12	50	43

SUSPENSION AND AXLE

SS04W–09

SERVICE DATA

Cold tire inflation pressure	185/55R15 81V 205/50R15 85V	Front Rear	180 kPa (1.8 kgf/cm^2, 26 psi) 220 kPa (2.2 kgf/cm^2, 32 psi)
Front Wheel alignment	Vehicle height	Front*1 Rear*2	204 mm (8.03 in.) 270 mm (10.63 in.)
	Camber	Right–left error	–0˚47' ± 45' (–0.78˚ ± 0.75˚) 45' (0.75˚) or less
	Caster	Right–left error	3˚08' ± 45' (3.13˚ ± 0.75˚) 45' (0.75˚) or less
	Steering axis inclination	Right–left error	14˚52' ± 45' (14.87˚ ± 0.75˚) 45' (0.75˚) or less
	Toe–in (total)	Rack end length difference	0˚09' ± 12' (0.15˚ ± 0.2˚, 1.5 ± 2 mm, 0.06 ± 0.08 in.) 1.5 mm (0.059 in.) or less
	Wheel angle	Inside wheel Outside wheel: Reference	38˚03' ± 2˚ (38.05˚ ± 2˚) 32˚56' (32.93˚)
Rear wheel alignment	Camber	Right–left error	–1˚05' ± 45' (–1.08˚ ± 0.75˚) 45' (0.75˚) or less
	Toe–in (total)	Right–left error	0˚18' ± 12' (0.3˚ ± 0.2˚, 3 ± 2 mm, 0.12 ± 0.08 in.) 0.3 mm (0.012 in.) or less
Front axle	Axle bearing backlash	Maximum	0.05 mm (0.0020 in.)
	Axle hub deviation	Maximum	0.07 mm (0.0028 in.)
Front suspension	Lower ball joint turning torque		0.59 – 3.43 N·m (6 – 35 kgf·cm, 5.2 – 30 in.·lbf)
	Stabilizer bar link ball joint turning torque		0.05 – 1.0 N·m (0.5 – 10 kgf·cm, 0.4 – 8.7 in.·lbf)
Rear axle	Axle bearing backlash	Maximum	0.05 mm (0.0020 in.)
	Axle hub deviation	Maximum	0.07 mm (0.0028 in.)
Rear drive shaft	Drive shaft standard length	RH LH	814.1 ± 5.0 mm (32.051 ± 0.197 in.) 570.4 ± 5.0 mm (22.457 ± 0.197 in.)
Rear suspension	Stabilizer bar link ball joint turning torque		0.05 – 1.0 N·m (0.5 – 10 kgf·cm, 0.4 – 8.7 in.·lbf)

*1: Front measuring point
Measure the distance from the ground to the center of the front side lower suspension arm mounting bolt.
*2: Rear measuring point
Measure the distance from the ground to the center of the front side strut rod mounting bolt.

SS04X–09

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
FRONT AXLE			
Hub nut	103	1,050	76
Tie rod end lock nut	47	479	35
Steering knuckle x Shock absorber	140	1,430	103
Brake caliper x Steering knuckle	109	1,112	80
Axle hub x Steering knuckle	56	571	41
Steering knuckle x Tie rod end	49	500	36
Lower suspension arm x Steering knuckle	98	1,000	72
FRONT SUSPENSION			
Suspension support x Body	39	400	29
Shock absorber center nut	51	520	38
Flexible hose x Shock absorber	29	296	21
ABS speed sensor wire harness x Shock absorber	8.0	82	71 in.·lbf
Lower suspension arm, suspension member brace x Body	73	745	54
Lower suspension arm x Suspension member	87	887	64
Suspension member brace x Body	75	765	55
Stabilizer bar bracket x Body	30	306	22
Stabilizer bar link x Stabilizer bar	44	449	32
Stabilizer bar link x Lower suspension arm	18	184	13
REAR AXLE			
Hub nut	103	1,050	76
Axle carrier x Shock absorber	173	1,765	128
Brake caliper x Axle carrier	59	602	34
Axle hub x Drive shaft	216	2,200	159
ABS speed sensor x Axle carrier	8.0	82	71 in.·lbf
ABS speed sensor wire harness clamp x Axle carrier	5.0	51	44 in.·lbf
Strut rod x Axle carrier	78	796	58
No. 1 lower suspension arm x Axle carrier	103	1,051	76
No. 2 lower suspension arm x Axle carrier	49	500	36
Dust cover x Axle carrier	8.3	85	74 in.·lbf
REAR DRIVE SHAFT			
Drive shaft center bearing case lock bolt	64	650	47
REAR SUSPENSION			
Flexible hose x Shock absorber	29	296	21
Suspension support x Body	80	816	59
Shock absorber center nut	73	745	54
Strut rod x Suspension member	78	796	58
No. 1 lower suspension arm x Suspension member	87	887	64
No. 2 lower suspension arm x Suspension member	87	887	64
Stabilizer bar bracket set bolt	39	398	29
Stabilizer bar link set nut	44	449	32

BRAKE

SERVICE DATA

SS0LM–03

Brake pedal height from asphalt sheet		142.1 – 152.1 mm (5.594 – 5.988 in.)
Brake pedal freeplay		1 – 6 mm (0.04 – 0.24 in.)
Stop light switch clearance		0.5 – 2.4 mm (0.020 – 0.094 in.)
Brake pedal reserve distance at 490 N (50 kgf, 110.2 lbf)		More than 85 mm (3.35 in.)
Brake booster push rod to piston clearance (w/ SST)		0 mm (0 in.)
Front brake pad thickness	STD	11.0 mm (0.433 in.)
Front brake pad thickness	Minimum	1.0 mm (0.039 in.)
Front brake disc thickness	STD	20.0 mm (0.787 in.)
Front brake disc thickness	Minimum	18.0 mm (0.709 in.)
Front brake disc runout	Maximum	0.05 mm (0.0020 in.)
Rear brake pad thickness	STD	10.0 mm (0.394 in.)
Rear brake pad thickness	Minimum	1.0 mm (0.039 in.)
Rear brake disc thickness	STD	16.0 mm (0.630 in.)
Rear brake disc thickness	Minimum	15.0 mm (0.591 in.)
Rear brake disc runout	Maximum	0.10 mm (0.0039 in.)
Parking brake crank clearance	STD	0.38 – 1.02 mm (0.0150 – 0.0416 in.)
Parking brake lever travel at 196N (20 Kgf, 44.1 lbf)		5 – 8 clicks

SS0LN–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Brake booster clevis lock nut	26	265	19
Pedal bracket x Reinforcement	20	204	15
Brake pedal x Pedal bracket	37	375	27
Parking brake adjusting nut x Lock nut	5.4	55	48 in.·lbf
Master cylinder x Brake booster	13	130	9
Brake line union nut for use with SST	15 14	155 143	11 10
Brake booster x Pedal bracket	13	130	9
Front disc brake caliper installation bolt	34	350	25
Hub nut	103	1,050	76
Brake caliper x Flexible hose	30	310	22
Bleeder plug	8.3	85	73 in.·lbf
Front disc brake torque plate x Steering knuckle	109	1,112	80
Rear disc brake caliper installation bolt	20	204	15
Flexible hose x Shock absorber	29	296	21
Rear disc brake torque plate x Knuckle	59	60	44
Rear caliper cable support bracket x Caliper body	47	479	35
ABS actuator x ABS actuator bracket assembly	5.4	55	48 in.·lbf
ABS actuator assembly x Body	19	195	14
Front speed sensor harness clamp bolt	5.0	51	44 in.·lbf
Rear speed sensor harness clamp bolt Body side Lower arm side	19 5.0	195 51	14 44 in.·lbf
Rear speed sensor installation bolt	8.0	82	71 in.·lbf

STEERING

SERVICE DATA

SS16Y–04

POWER STEERING FLUID		
Fluid level rise	Maximum	5 mm (0.20 in.)
Fluid pressure at idle speed with valve closed	Minimum	4,900 kPa (50 kgf/cm^2, 711 psi)
STEERING WHEEL		
Steering wheel free play	Maximum	30 mm (1.18 in.)
Steering effort at idle speed	Reference	6.5 N·m (65 kgf·cm, 58 in.·lbf)
POWER STEERING VANE PUMP		
Vane plate height	Minimum	5.4 mm (0.213 in.)
Vane plate thickness	Minimum	0.882 mm (0.0347 in.)
Vane plate length	Minimum	4.596 mm (0.1809 in.)
Vane plate and vane pump rotor groove clearance	Maximum	0.023 mm (0.0009 in.)
Vane plate length	pump rotor and cam ring mark	
	0	4.604 – 4.606 mm (0.18126 – 0.18134 in.)
	1	4.602 – 4.604 mm (0.18118 – 0.18126 in.)
	2	4.600 – 4.602 mm (0.18110 – 0.18118 in.)
	3	4.598 – 4.600 mm (0.18102 – 0.18110 in.)
	4	4.596 – 4.598 mm (0.18094 – 0.18102 in.)
Spring free length	Minimum	28.7 mm (1.130 in.)
POWER STEERING GEAR		
Steering rack runout	Maximum	0.1 mm (0.004 in.)
Total preload	Turning	0.8 – 1.3 N·m (8 – 13 kgf·cm, 6.9 – 11.3 in.·lbf)

SS16Z–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
TILT STEERING COLUMN			
Adjusting nut	See page SR–16		
No. 2 tilt lever lock bolt	5.4	55	48 in.·lbf
Tilt steering support x Column tube	15	155	11
No. 2 intermediate shaft assembly x Main shaft assembly	35	360	26
Column assembly set bolt and nut	21	210	15
No. 2 intermediate shaft assembly x Control valve assembly	35	360	26
Steering wheel set nut	34	350	25
Steering wheel pad set screw (Torx screw)	8.8	90	78 in.·lbf
POWER STEERING VANE PUMP			
Rear housing set bolt	8.5	90	7.5 in.·lbf
Reservoir clamp bolt	7.0	70	61 in.·lbf
PS vane pump set bolt and nut	19	190	14
Pressure feed tube x PS vane pump assembly	39.5 (43)	400 (440)	29 (32)
POWER STEERING GEAR			
Control valve housing x Rack housing	21	210	15
Control valve self–locking nut	24.5	250	18
Rack guide spring cap lock nut x Rack housing	28 (39)	290 (400)	21 (29)
Rack end x Steering rack	62 (83)	630 (850)	46 (61)
Tie rod end lock nut	47	480	35
Turn pressure tube x Rack housing	10 (13)	100 (130)	7 (9)
Pressure feed tube assembly x PS gear assembly	22.5 (24.5)	230 (250)	17 (18)
Pressure feed tube assembly x PS vane pump assembly	39.5 (43)	400 (440)	29 (32)
PS gear assembly x Steering gear suport member	57	580	42

( ): For use without SST

SUPPLEMENTAL RESTRAINT SYSTEM

SS061–36

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Steering wheel	34	350	25
Steering wheel pad	8.8	90	78 in.·lbf
Front passenger airbag assembly x Instrument panel reinforcement	20	205	15
Airbag sensor assembly	20	205	15
Front airbag sensor	20	205	15

BODY ELECTRICAL

SS0B0–09

SERVICE DATA

Daytime running lighit relay (main)	Voltage		
	(3 – Ground)	at constant	Battery positive voltage
	(6 – Ground)	at constant	Battery positive voltage
	(9 – Ground)	at engine runninig	Battery positive voltage
	(12 – Ground)	at ignition switch position lock or ACC	No voltage
		at ignition switch position ON or START	Battery positive voltage
Combination meter (Speedometer) USA:	mhp (on vehicle)	Standard indication	Allowable range
		at 20 mhp	19 – 22 mhp
		at 40 mhp	39 – 42.5 mhp
		at 60 mhp	59.5 – 63.5 mhp
		at 80 mhp	80 – 85 mhp
		at 100 mhp	100 – 105.5 mhp
		at 120 mhp	120 – 125.5 mhp
		at 140 mhp	140 – 146 mhp
Combination meter (Speedometer)	Resistance		
	(A – B)		250 Ω
	(C – D)		250 Ω
Combination meter (Tachometer)	RPM	Standard indication (DC 13.5 V, 25˚C (77˚F))	Allawable range
		at 700 rpm	630 – 770 rpm
		at 1,000 rpm	900 – 1,000 rpm
		at 2,000 rpm	1,850 – 2,150 rpm
		at 3,000 rpm	2,800 – 3,200 rpm
		at 4,000 rpm	3,800 – 4,200 rpm
		at 5,000 rpm	4,800 – 5,200 rpm
		at 6,000 rpm	5,800 – 6,200 rpm
		at 7,000 rpm	6,800 – 7,200 rpm
Combination meter (Tachometer)	Resistance		
	(A – B)		250 Ω
	(C – D)		250 Ω
Combination meter (Fuel receiver gauge)	Resistance		
	(A – B)		250 Ω
	(C – D)		250 Ω
Fuel sender gauge	Resistance	Float position	
		at approx. 68.8 mm (2.71 in.)	Approx. 16.4 Ω
		at approx. 207.4 mm (8.17 in.)	Approx. 192.7 Ω
Combination meter (Engine coolant temperature reciever gauge)	Resistance		
	(A – B)		250 Ω
	(C – D)		250 Ω
Defoger switch (Wire harness side)	Voltage (Connector disconnected)		
	(4 – Ground)	at ignition switch LOCK or ACC	No voltage
	(4 – Ground)	at ignition switch ON	Battery positive voltage
Defoger switch (Wire harness side)	Voltage (Connector connected)		
	(4 – Ground)	at ignition switch ON and defogger switch OFF	Battery positive voltage
	(4 – Ground)	at ignition switch ON and defogger switch ON	No voltage

Radio reciever aseembly (Wire harness side)	Voltage		
	(A1 – Ground)	at audio sounding	5 – 7 V
	(A2 – Ground)	at audio sounding	5 – 7 V
	(A3 – Ground)	at ignition switch ACC	Battery positive voltage
	(A4 – Ground)	at constant	Battery positive voltage
	(A5 – Ground)	at audio sounding	5 – 7 V
	(A6 – Ground)	at audio sounding	5 – 7 V
	(A10 – Ground)	at light control switch TAIL or HEAD	Battery positive voltage
	(B1 – Ground)	at audio sounding	5 – 7 V
	(B2 – Ground)	at audio sounding	5 – 7 V
	(B3 – Ground)	at audio sounding	5 – 7 V
	(B6 – Ground)	at audio sounding	5 – 7 V
Anntena motor control relay (Wire harness side)	Voltage		
	(1 – Ground)	at constant	Battery positive voltage
	(4 – Ground)	at ignition switch position LOCK or ACC	No voltage
	(4 – Ground)	at ignition switch position ON	Battery positive voltage
	(5 – Ground)	at ignition switch position LOCK	No voltage
	(5 – Ground)	at ignition switch position ACC or ON	Battery positive voltage
	(7 – Ground)	at radio switch and cassete OFF	No voltage
	(7 – Ground)	at radio switch and cassete ON	Battery positive voltage
Clock		at per day	± 1.5 seconds

BODY

TORQUE SPECIFICATION

SS16Q–03

Part tightened		N·m	kgf·cm	ft·lbf
FRONT BUMPER		–	–	–
Front bumper reinforcement x Body		20	200	14
Front bumper x Body		5.5	56	48 in.·lbf
REAR BUMPER		–	–	–
Rear bumper reinforcement x Body		20	200	14
HOOD		–	–	–
Hood hinge x Hood		8	82	71 in.·lbf
Hood lock x Body		6.9	70	61 in.·lbf
FRONT DOOR		–	–	–
Upper window stop x Door panel		13	130	10
Door glass x Window regulator		8.0	80	70 in.·lbf
Lower plate x Door panel		5.0	50	44 in.·lbf
Window regulator x Door panel	Bolt:	8.3	85	74 in.·lbf
Window regulator x Door panel	Nut:	8.3	85	74 in.·lbf
Door glass female stabilizer x Door panel		13	130	10
Door lock x Door panel	Screw:	5.0	50	44 in.·lbf
Outside handle x Door panel		5.4	55	48 in.·lbf
Key cylinder x Outside handle		5.4	55	48 in.·lbf
Door hinge x Body		25	260	19
Door hinge x Door panel	Upper bolt:	40	410	29
Door hinge x Door panel	Lower bolt:	26	270	19
Door lock striker x Body		23	230	17
ENGINE HOOD		–	–	–
Engine hood hinge x Hood		13	130	9
Hood lock x Body		6.9	70	61 in.·lbf
FRONT WIPER AND WASHER		–	–	–
Wiper motor x Wiper link assembly		5.4	55	48 in.·lbf
Wiper motor and link assembly x Body		5.4	55	48 in.·lbf
Wiper arm x Wiper motor and link assembly		20	200	15
INSTRUMENT PANEL		–	–	–
Steering wheel set nut		34	350	25
Passenger airbag assembly x Reinforcement		20	205	15
FRONT SEAT		–	–	–
Front seat x Body		37	375	27
Seat cushion assembly x Seat adjuster		21	210	15
Seatback assembly x Seat adjuster		43	440	32
SEAT BELT		–	–	–
Front seat outer belt shoulder anchor x Body		42	420	30
Front seat outer belt floor anchor x Body		42	420	30
Front seat outer belt retractor x Body	Upper side:	7.5	76	66 in.·lbf
Front seat outer belt retractor x Body	Lower side:	42	420	30
Front seat inner belt x Front seat		42	420	30

SOFT TOP	–	–	–
Center tarpaulin bow stay catch handle x Tarpaulin	62	630	45
Tarpaulin lock x Tarpaulin	62	630	45
Tarpaulin x Body	11	115	8

AIR CONDITIONING

SS0MB–03

SERVICE DATA

Refrigerant	Charge volume		500 ± 30 g (17.64 ± 1.06 oz.)
Idle–up speed		at magnetic clutch is not engaged	700 ± 50 rpm
		at magnetic clutch is engaged	900 ± 50 rpm
Thermistor	Resistance	at 25˚C (77˚F)	1.700 Ω
Compressure	Resistance (1 – 2)		165 – 205 Ω
Magnetic clutch	Crearance		0.45 ± 0.10 mm (0.018 ± 0.004 in.)
	Adjust shim thickness		0.1 mm (0.004 in.)
			0.3 mm (0.012 in.)
			0.5 mm (0.020 in.)
Condenser fan	Amperage	at 20˚C (68 ˚F)	9.2 – 11.0 A
Combination meter (wire harness side)	Resistance (C1 – C4)	at evaparator temperature 25˚C (77˚F)	1.5 kΩ
Combination meter (From back side)	Voltage (B13 – Ground)	at A/C switch ON & Blower motor: operative	Below 1.0 V
		at A/C switch OFF	Battery positive voltage
	(C10 – Ground)	Mode selector: DEF.	Below 1.0 V
		Mode Selector: Except DEF.	Battery positive voltage
	(C9 – Ground)	at A/C switch ON	Below 1.0 V
		at A/C switch OFF	Battery positive voltage
	(A1 – Ground)	Blower motor: at operative	Below 2.0 V
		Blower motor: at no operative	Battery positive voltage
ECM (From back side)	Voltage (E2–12 – Ground)	at start engine.	Below 1.0 V
		at magnetic clutch: ON	
		at start engine. magnetic clutch: OFF	Battery positive voltage
	(E3–28 – Ground)	at start engine. A/C switch ON	Battery positive voltage
		at start engine. A/C switch OFF	No voltage
	(E3–18 – Ground)	Refrigerant pressure: at 196 – 1,340 kPa	Battery positive voltage
		Refrigerant pressure: at less than 196 or more than 1,340 kPa	No voltage

SS0MC–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Condenser x Discharge tube	9.8	100	87 in.·lbf
Condenser x Liquid tube	9.8	100	87 in.·lbf
No. 1 suction Tube x Suction tube	9.8	100	87 in.·lbf
Discharge tube x Discharge tube	9.8	100	87 in.·lbf
Discharge tube x Discharge tube (Washer Bolt)	22.1	225	16
Suction tube x Suction tube (Washer Bolt)	31.9	325	24
Compressor x Discharge hose	9.8	100	87 in.·lbf
Compressor x Suction hose	9.8	100	87 in.·lbf
Expansion valve x Evaporator	3.4	35	30 in.·lbf
Steering wheel x Steering column	34	350	24
Compressor x Engine	24.5	250	18
Pressure plate x Compressor	13.2	135	10
Spare tire carrier extension x Body	8	82	70 in.·lbf
Radiator upper support x Body	12.5	128	9
Condenser x Body	8.8	90	78 in.·lbf
Condenser x Cap	12.3	125	9
Pressure switch x Liquid tube	10.8	110	8