

SERVICE SPECIFICATIONS

SA00V-02

SERVICE DATA

Cold tire inflation pressure kPa (kgf/cm ² , psi)		Tire size	Front	Rear
	STD seat	P275/70R 16	220 (2.2, 32)	220 (2.2, 32)
	w/3rd seat	P275/70R 16	220 (2.2, 32)	220 (2.2, 32)
Follw spring and bumper stopper clearance	A: Follow spring clearance (Front)		A	B
	B: Bumper Stopper clearance (Rear)		36 mm (1.42 in.)	104 mm (4.09 in.)
Front wheel alignment	Camber	Inspection standard		1° ± 45'
	Steering axis inclination	Inspection standard		13°00' ± 45'
	Caster	Inspection standard		3°00 ± 1°
	Toe-in	Inspection STD		Adjustment STD
		2±2 mm (0.08±0.08 in.)		2±1 mm (0.08 t 0.04 in.)
	Wheel angle	Max.	Inside wheel	35°00' $\begin{smallmatrix} +0^{\circ} \\ -3^{\circ} \end{smallmatrix}$
			Outside wheel	31°00'
Side slip (Reference only)			Less than 3.0 mm/m 10.118 in./ 3.3 ft)	
Tire runout .			3.0 mm (0.118 in.) or less	
Wheel balance (Unbalance after adjustment)			13.0 g (0.029 lb) or less	
Wheel bearing preload (starting)			Front	28 – 56 N
(rotating load at hub bolt)			Rear	25 – 56 N
Steering knuckle bearing preload				2.9 – 5.7 kgf
(rotating load at knuckle end, before installing dust seal)				6.4 – 12.6 lbf
				2.6 – 5.7 kgf
				5.7 – 12.6 lbf
				2.5 – 4.4N
				2.5 – 4.5 kgf
				5.5 – 9.9 l bf

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Front differen- tial	Drive pinion bearing preload	at starting	
	New bearing		0.9 – 1.6 N-m 10 – 16 kgf-cm 8.7 – 13.9 in.-lbf
	Reused bearing		0.5 – 0.8 N-m 5 – 8 kgf-cm 4.3 – 6.9 in.-lbf
	Total preload	at starting	Add drive pinion bearing preload
	New and reused bearing		0.4 – 0.6 N-m 4 – 6 kgf-cm 3.5 – 5.2 in.-lbf
	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	0.10 mm 0.0039 in.
	Companion flange runout	Limit	
		Radial	0.10 mm 0.0039 in.
		Lateral	0.10 m 0.0039 in.
	Oil seal drive depth		1.0 mm 0.039 in.
	Side gear thrust washer thickness		
	w/o Differential lock		1.6 mm 0.063 in.
			1.7 mm 0.067 in.
			1.8 mm 0.071 in.
	wl Differential lock		0.9 mm 0.035 in.
			1.0 mm 0.039 in.
			1.1 mm 0.043 in.
			1.2 mm 0.047 in.
			1.3 mm 0.051 in.
	Drive pinion adjusting plate washer thickness		1.70 mm 0.0669 in.
			1.73 mm 0.0681 in.
			1.76 mm 0.0693 in.
			1.79 mm 0.0705 in.
			1.82 mm 0.0717 in.
			1.85 mm 0.0728 in.
			1.88 mm 0.0740 in.
			1.91 mm 0.0752 in.
			1.94 mm 0.0764 in.
			1.97 mm 0.0776 in.
			2.00 mm 0.0787 in.
			2.03 mm 0.0799 in.
			2.06 mm 0.0811 in.
			2.09 mm 0.0823 in.
			2.12 mm 0.0835 in.
			2.15 mm 0.0846 in.
			2.18 mm 0.0858 in.
			2.21 mm 0.0870 in.
			2.24 mm 0.0882 in.
			2.27 mm 0.0894 in.
			2.30 mm 0.0906 in.
			2.33 mm 0.0917 in.

Rear differential	Drive pinion bearing preload at starting	1.3 - 2.0 N-m 13 - 20 kgf-cm 11.3 - 17.4 in. -lbf	
	New bearing	0.7 - 1.0 N-m 7 - 10 kgf-cm 6.1 - 8.7 in. -lbf	
	Reused bearing at starting	Add drive pinion bearing preload	
	Total preload	0.4 - 0.6 N-m 4 - 6 kgf-cm 3.5 - 5.2 in.-lbf	
	w/o Differential lock	0.3 - 0.7 N-m 3 - 7 kgf-cm 2.6 - 6.1 in. -lbf	
	w/ Differential lock	0.15 - 0.20 mm 0.0059 - 0.0079 in.	
	Drive pinion to ring gear backlash	0.02 - 0.20 mm 0.0008 - 0.0079 in.	
	Pinion gear to side gear backlash	0.10 mm 0.0039 in.	
	Ring gear runout	Limit	
	Companion flange runout	Limit	
		Radial	
		Lateral	
	Oil seal drive in depth	0.10 mm	0.0039 in.
	Side gear thrust washer thickness	0.10 mm	0.0039 in.
		1.0 mm	0.039 in.
		1.60 mm	0.0630 in.
		1.75 mm	0.0689 in.
		1.90 mm	0.0748 in.
		2.05 mm	0.0807 in.
	Drive pinion adjusting plate washer thickness	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.
		1.45 mm	0.0571 in.
		1.50 mm	0.0591 in.
		1.55 mm	0.0610 in.
	Side bearing adjusting plate thickness (w/ Differential lock only)	2.67 mm	0.1051 in.
		2.70 mm	0.1063 in.
		2.73 mm	0.1075 in.
		2.76 mm	0.1087 in.
		2.79 mm	0.1098 in.
		2.82 mm	0.1110 in.
		2.85 mm	0.1122 in.
		2.88 mm	0.1134 in.
		2.91 mm	0.1146 in.
		2.94 mm	0.1157 in.
		2.97 mm	0.1169 in.
		3.00 mm	0.1181 in.
		3.03 mm	0.1193 in.
		3.06 mm	0.1205 in.
		3.09 mm	0.1217 in.
		3.12 mm	0.1228 in.
		3.15 mm	0.1240 in.
		3.18 mm	0.1252 in.
		3.21 mm	0.1264 in.
		3.24 mm	0.1276 in.
		3.27 mm	0.1287 in.
		3.30 mm	0.1299 in.
		3.33 mm	0.1311 in.
Rear axle	Rear axle shaft runout	Maximum	
	Distance between top surface of axle housing and lock nut	0.8 mm - 0.2 ~ 0.9mm	0.031 in. - 0.0079 ~ 0.0354 in.

TORQUE SPECIFICATIONS

(FRONT)

Part tightened	N-m	kgf-cm	ft-lbf
Axle hub x Rotor disc	74	750	54
Axle hub bearing lock nut	64	650	47
Flange x Axle hub	35	360	26
Disc brake cylinder x Axle carrier	123	1,250	90
Disc brake cylinder x Flexible hose	30	310	22
Steering knuckle x Knuckle arm	96	980	71
Bearing cap x Steering knuckle	96	980	71
Knuckle arm x Tie rod	91	925	67
Steering knuckle x Knuckle spindle	47	475	34
Propeller shaft x Companion flange	74	750	54
Side bearing cap x Differential carrier	78	800	58
Ring gear x Differential case	97	985	71
Drive pinion x Companion flange	196– 343	2,000 – 3,500	145 –253
Differential LH case x RH case	47	480	35
Differential lock shift retainer	24	240	17
Differential lock screw plug	22	220	16
Differential lock indicator switch	40	410	30
Differential lock actuator	26	270	20
Differential carrier x Axle housing	25	250	18
Adjusting nut lock x Bearing cap	13	130	9
Follow spring x Frame	9.2	94	82in.-lbf
Stabilizer bar x Axle housing	25	260	19
Shock absorber x Axle housing	69	700	51
Shock absorber x Body	69	700	51
Stabilizer bar link x Bracket	18	185	13
Stabilizer bar link x Frame	103	1,050	76
Lateral control rod x Frame	171	1,750	127
Lateral control rod x Body	171	1,750	127
Leading arm x Body	177	1,800	130
Leading arm x Axle housing	171	1,750	127
Hub nut	147	1,500	108

(REAR)

Part tightened	N-m	kgf-cm	ft-lbf
LSPV shackle bracket x Differential cover	19	195	14
Follow spring x Frame	28	290	21
Lateral control rod x Axle housing	245	2,500	181
Shock absorber x Bracket	69	700	51
Shock absorber bracket x Frame	50	510	37
Shock absorber x Axle housing	64	650	47
Stabilizer bar bracket x Axle housing	18	185	13
Lateral control rod x Frame	177	1,800	130
Upper control rod x Frame	177	1,800	130
Upper control rod x Axle housing	177	1,800	130
Stabilizer bar link x Frame	103	1,050	76
Stabilizer bar x Link	25	260	19
Hub nut	147	1,500	108
Lower control arm x Frame	177	1,800	130
Lower control arm x Axle housing	177	1,800	130
Pinion shaft pin (w/o Differential lock)	27	275	20
Pinion shaft pin (w/ Differential lock)	58	590	43
Differential cover x Axle housing	13	130	9
Differential cover x Parking brake cable clamp	13	130	9
Propeller shaft x Companion flange	88	900	65
Rear axle shaft x Axle hub (Disc brake)	33	340	25
Rear axle bearing lock nut (Disc brake)	59	600	43
Rear axle bearing lock nut screw	5.4	55	48in.-lbf
Rear brake caliper x Axle carrier	103	1,050	76
Side bearing cap x Differential carrier (w/o Differential lock)	78	800	58
Side bearing cap x Differential carrier (w/ Differential lock)	113	1,150	83
Ring gear x Differential case	110	1,125	81
Companion flange x Drive pinion (Maximum torque)	441	4,500	325
Differential carrier x Axle housing	97	985	71
Adjusting nut lock x Bearing cap	13	130	9
Differential case x Cover	58	590	43
Differential lock shift fork set bolt	20	200	14
Differential lock actuator	24	240	17
Differential lock cover	18	185	13
Differential lock indicator switch	40	410	30