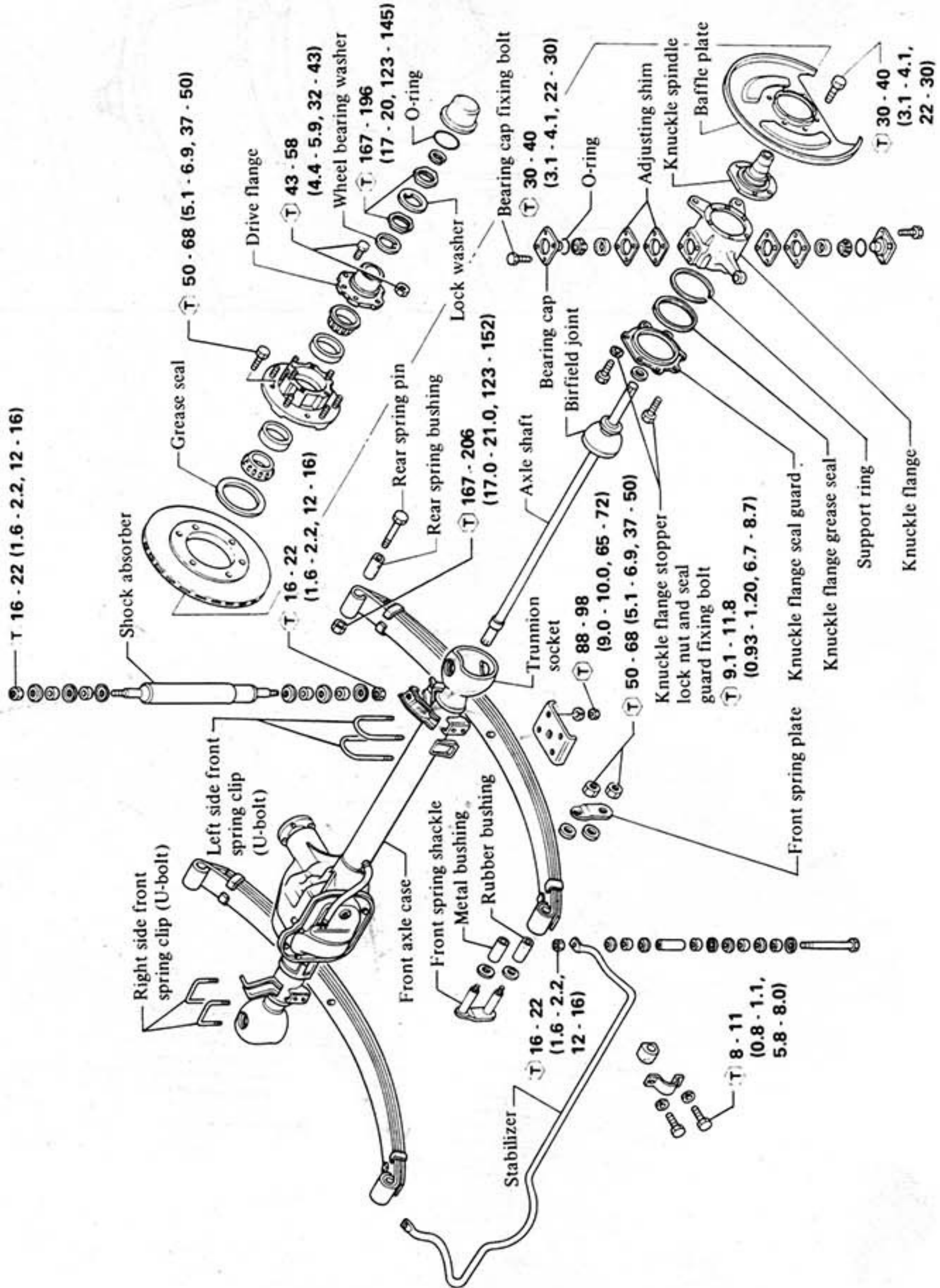


FRONT AXLE & FRONT SUSPENSION

FRONT AXLE AND FRONT SUSPENSION



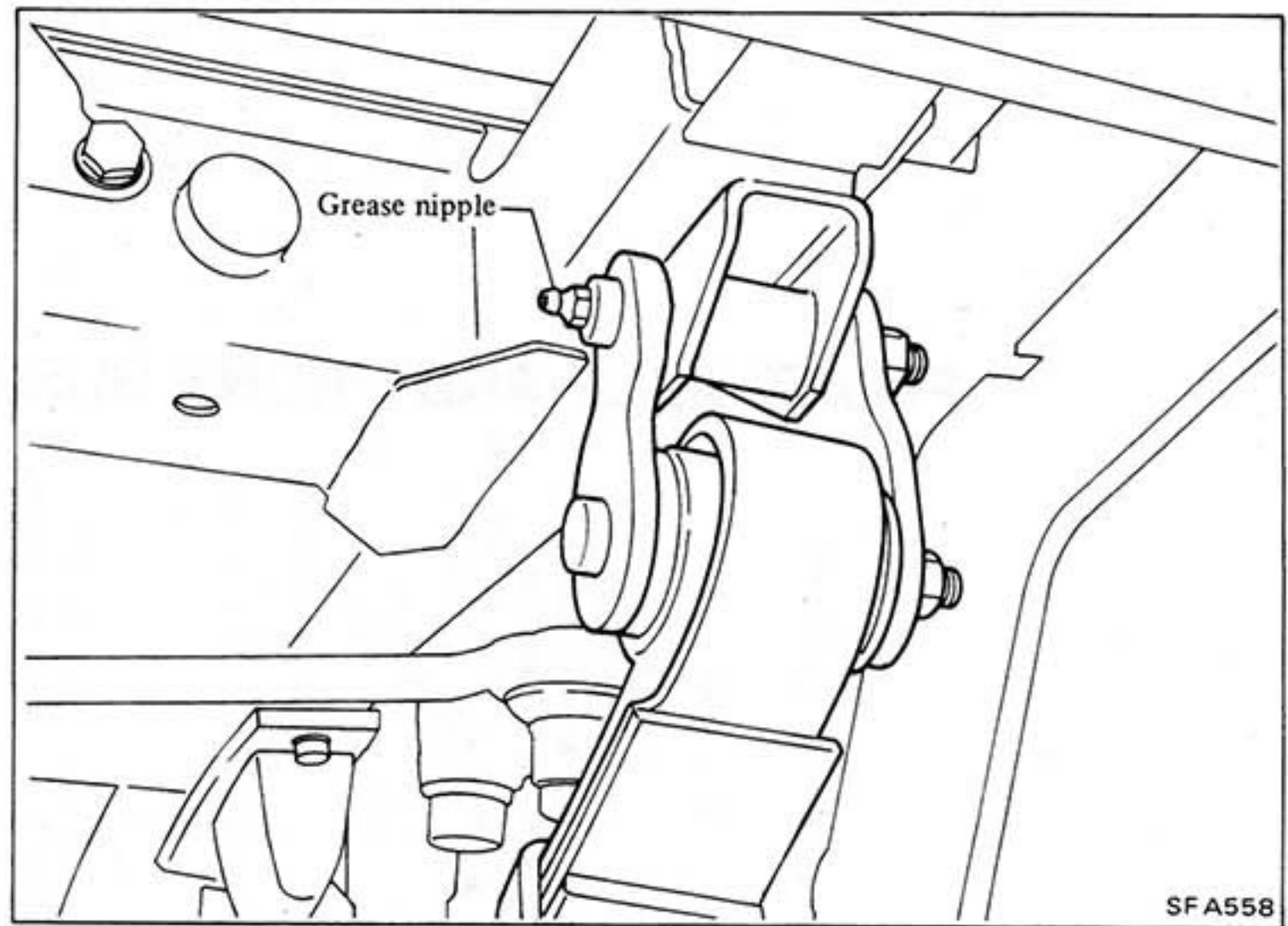
T : N·m (kg·m, ft·lb)

FRONT SUSPENSION

LEAF SPRING

INSTALLATION

After tightening spring shackle nut to specified torque, insert chassis grease into grease nipple of metal bushing.



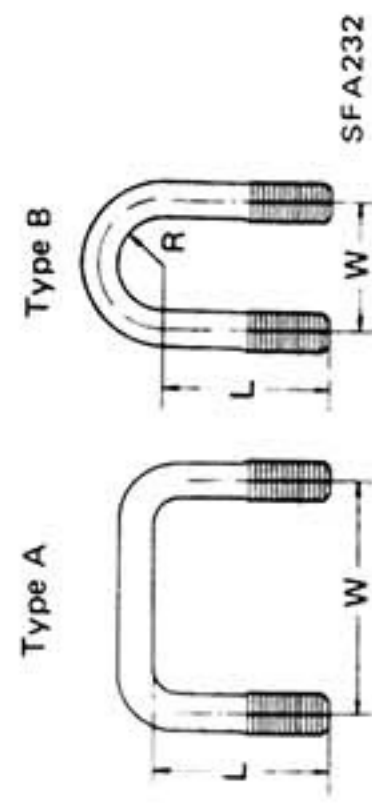
SERVICE DATA AND SPECIFICATIONS

GENERAL SPECIFICATIONS

Item	Europe				Australia			
	Hardtop	Wagon	Pick-up	Hardtop	Van	Wagon	Pick-up	
Destination								
Vehicle model	SD33 SD33T	L28	SD33	SD33 SD33T	L28	SD33 SD33T	L28	
Engine	P		SD33	P	SD33		SD33	
Parallel semi-elliptic leaf spring								
Suspension type								
Leaf spring								
Part number	54010-C8200	54010-C8200	54010-C8500	54010-C8502	54010-C8502	54010-C8500	54010-C8502	
Length x Width x Thickness mm (in) — Number of leaves	1,100 x 60 x 9 (43.31 x 2.36 x 0.35) — 3		1,100 x 60 x 9 (43.31 x 2.36 x 0.31) — 3		1,100 x 60 x 8 (43.31 x 2.36 x 0.31) — 6		1,100 x 60 x 8 (43.31 x 2.36 x 0.31) — 6	
Camber Free	133.7 (5.26)	143.7 (5.66)	133.7 (5.26)	137.9 (5.43)	137.9 (5.43)	123.0 (4.84)	137.9 (5.43)	
Spring constant N/mm (kg/mm, lb/in)	45.8 (4.67, 261.5)		55.0 (5.61, 314.2)		63.8 (6.51, 364.6)		55.0 (5.61, 314.2)	
Shock absorber								
Type	Double acting hydraulic type							
Maximum length	446 (17.56)							
Damping force [at 0.3 m (1.0 ft)]/sec								
Expansion	1,667 (170, 375)							
Compression	981 (100, 221)							
Stabilizer bar diameter	20 (0.79)		23 (0.91)	20 (0.79)	23 (0.91)	20 (0.79)	23 (0.91)	
U-bolt								
Type A R.H. Length (L) x Width (W)	73 x 73.5 (2.87 x 2.894)		91 x 73.5 (3.58 x 2.894)		73 x 73.5 (2.87 x 2.894)		91 x 73.5 (3.58 x 2.894)	
Type B L.H. Length (L) x Width (W)	120 x 89 (4.72 x 3.50)		143 x 89 (5.63 x 3.50)		120 x 89 (4.72 x 3.50)		143 x 89 (5.63 x 3.50)	
Drive shaft								
Axle type	Full floating type							
Joint type	Birfield							
Grease Name	Multi-purpose grease							
Capacity	Approximately 60 (2.12) g (oz)							

SERVICE DATA AND SPECIFICATIONS

Item	Destination	Middle East				Except Europe, Australia and Middle East			
		Hardtop	Van	Wagon	Pick-up	Hardtop	Van	Wagon	Pick-up
Vehicle model		P L28	P	P L28	P	P SD33-SD33T L28	P SD33 SD33T	L28	P SD33 L28
Engine									
Parallel semi-elliptic leaf spring									
Suspension type		Parallel semi-elliptic leaf spring							
Leaf spring									
Part number		54010-C8260	54010-C8560	54010-C8260	54010-C8560	54010-C8200	54010-C8210	54010-C8200	54010-C8500
Length x Width x Thickness - Number of leaves	mm (in)	1,100 x 60 x 6 (43.31 x 2.36 x 0.24) -6	1,100 x 60 x 6 (43.31 x 2.36 x 0.24) -7	1,100 x 60 x 6 (43.31 x 2.36 x 0.24) -6	1,100 x 60 x 6 (43.31 x 2.36 x 0.24) -7	1,100 x 60 x 9 (43.31 x 2.36 x 0.35) - 3			
Camber	Free mm (in)	136.2 (5.36)	125.9 (4.96)	136.2 (5.36)	125.9 (4.96)	133.7 (5.26)	148.4 (5.84)	123.0 (4.84)	133.7 (5.26)
Spring constant	N/mm (kg/mm, lb/in)	44.1 (4.50, 252.0)	52.2 (5.32, 297.9)	44.1 (4.50, 252.0)	52.2 (5.32, 297.9)	45.8 (4.67, 261.5)	37.9 (3.86, 216.2)	55.0 (5.61, 314.2)	45.8 (4.67, 261.5)
Shock absorber		Double acting hydraulic type							
Type		446 (17.56)							
Maximum length	mm (in)	446 (17.56)							
Damping force (at 0.3 m (1.0 ft)/sec)		1,667 (170, 375)							
Expansion	N (kg, lb)	981 (100, 221)							
Compression	N (kg, lb)	981 (100, 221)							
Stabilizer bar diameter	mm (in)	20 (0.79)	23 (0.91)	20 (0.79)	23 (0.91)	20 (0.79)	23 (0.91)	20 (0.79)	23 (0.91)
U-bolt									
Type A R.H.	mm (in)	80 x 73.5 (3.15 x 2.894)							
Type B L.H.	mm (in)	130 x 89 (5.12 x 3.50)							
Drive shaft		Full floating type							
Axle type		Birfield							
Joint type		Multi-purpose grease							
Grease	Name	Approximately 60 (2.12)							
Capacity	g (oz)	Approximately 60 (2.12)							



SERVICE DATA AND SPECIFICATIONS

INSPECTION AND ADJUSTMENT

WHEEL ALIGNMENT (Unladen*1)

Camber	degree	0° 30'	
Caster	degree	3° 15' Wagon except Australia 3° 35'	
Toe-in		Radial tire	Bias tire
	mm (in)	-2 to 0 (-0.08 to 0)	0 to 2 (0 to 0.08)
	degree*2	-9' to 0'	0' to 9'
Kingpin inclination	degree	7° 30'	
Front wheel turning angle			
Toe-out-turn			
Inside/Outside	degree	20°/19° 50'	
Full turn			
Inside/Outside	Degree	30°/29° 30'	

*1: Tankful of fuel, radiator coolant and engine oil full.
Spare tire, jack, hand tools, mats in designed position

*2: Total toe-in

WHEEL BEARING

Wheel bearing axial play	mm (in)	Less than 0.08 (0.0031)
Wheel bearing lock nut Tightening torque	N·m (kg·m, ft·lb)	167 - 196 (17 - 20, 123 - 145)
Wheel bearing starting torque	N·m (kg·cm, in·lb)	
With new grease seal		1.8 - 3.1 (18 - 32, 16 - 28)
With used grease seal		1.3 - 2.6 (13 - 27, 11 - 23)
At wheel hub bolt	N (kg, lb)	
With new grease seal		25.5 - 44.1 (2.6 - 4.5, 5.7 - 9.9)
With used grease seal		18.6 - 37.3 (1.9 - 3.8, 4.2 - 8.4)

BEARING CAP SHIM

Thickness mm (in)	Part No.
0.075 (0.0030)	40606-44000
0.127 (0.0050)	40605-44000
0.254 (0.0100)	40604-44000
0.762 (0.0300)	40603-44000

FLANGE FREE PLAY SNAP RING

Thickness mm (in)	Part No.
1.1 (0.043)	39253-C6000
1.3 (0.051)	39253-C6001
1.5 (0.059)	39253-C6002
1.7 (0.067)	39253-C6003
1.9 (0.075)	39253-C6004
2.1 (0.083)	39253-C6005

TIGHTENING TORQUE

Item	N·m	kg·m	ft·lb
Wheel hub			
Wheel hub to rotor disc	50 - 68	5.1 - 6.9	37 - 50
Drive flange fixing bolt	43 - 58	4.4 - 5.9	32 - 43
Drive flange stud nut	43 - 58	4.4 - 5.9	32 - 43
Wheel bearing lock nut	167 - 196	17 - 20	123 - 145
Wheel nut	118 - 147	12 - 15	87 - 108
Knuckle flange			
Flange stopper lock nut	9.1 - 11.8	0.93 - 1.20	6.7 - 8.7
Seal guard fixing bolt	9.1 - 11.8	0.93 - 1.20	6.7 - 8.7
Bearing cap fixing bolt	30 - 40	3.1 - 4.1	22 - 30
Flange to knuckle spindle	30 - 40	3.1 - 4.1	22 - 30
Flange to tie rod	46 - 54	4.7 - 5.5	34 - 40
Flange to torque arm	108 - 147	11 - 15	80 - 108
Flange to back plate			
Disc brake	30 - 40	3.1 - 4.1	22 - 30
Drum brake	30 - 40	3.1 - 4.1	22 - 30
Torque arrester fixing nut	16 - 22	1.6 - 2.2	12 - 16
Drain plug	59 - 98	6.0 - 10.0	43 - 72
Filler plug	39 - 59	4.0 - 6.0	29 - 43
Shock absorber			
Shock absorber to axle case	16 - 22	1.6 - 2.2	12 - 16
Piston rod self-locking nut	16 - 22	1.6 - 2.2	12 - 16
Stabilizer bar			
Stabilizer bar clamp to axle case	8 - 11	0.8 - 1.1	5.8 - 8.0
Stabilizer bar to frame	16 - 22	1.6 - 2.2	12 - 16
Leaf spring			
U-bolt to spring seat	88 - 98	9.0 - 10.0	65 - 72
Rear spring pin nut	167 - 206	17.0 - 21.0	123 - 152
Spring shackle nut			
Spring side	50 - 68	5.1 - 6.9	37 - 50
Frame side	50 - 68	5.1 - 6.9	37 - 50
Bound bumper			
Bound bumper to frame	16 - 22	1.6 - 2.2	12 - 16
Free-running hub			
Free-running hub to wheel hub	54 - 59	5.5 - 6.0	40 - 43
Steering stopper bolt	9.1 - 11.8	0.93 - 1.2	6.7 - 8.7
Propeller shaft to companion flange	78 - 88	8.0 - 9.0	58 - 65
Brake tube flare nut	15 - 18	1.5 - 1.8	11 - 13
Brake hose connector	17 - 20	1.7 - 2.0	12 - 14
Wheel cylinder air bleeder	7 - 9	0.7 - 0.9	5.1 - 6.5