SERVICE SPECIFICATIONS

SERVICE DATA

Steering wheel freeplay	Maximum	30 mm (1.18 in.) or less
TILT STEERING COLUMN		
Pawl stopper	Mark	
	1 or A	12.65 – 12.75 mm (0.4980 – 0.5020 in.)
	2 or B	12.55 – 12.65 mm (0.4941 – 0.4980 in.)
	3 or C	12.45 – 12.55 mm (0.4902 – 0.4941 in.)
	4 or D	12.35 – 12.45 mm (0.4862 – 0.4902 in.)
	5 or E	12.25 – 12.35 mm (0.4823 – 0.4862 in.)
PS ON–VEHICLE INSPECTION		
Drive belt deflection	New belt	100 – 150 lbf
Drive belt deflection	Used belt	60 – 100 lbf
Maximum rise of oil level		5 mm (0.20 in.)
Oil pressure at idle speed with valve closed	22R–E Minimum	7,355 kPa (75 kgf/cm², 1,067 psi)
	3VZ–E Minimum	7,845 kpa (80 kgf/cm², 1,138 psi)
Steering effort		5.9 N·m (60 kgf·cm, 8.8 in.·lbf)
PS VANE PUMP		
22R–E:		
Rotor shaft bushing oil clearance	STD	0.030 – 0.047 mm (0.0012 – 0.0019 in.)
Rotor shaft bushing oil clearance	Maximum	0.07 mm (0.0028 in.)
Rotor to cam ring oil clearance	Maximum	0.06 mm (0.0024 in.)
Vane plate to rotor groove clearance	Maximum	0.06 mm (0.0024 in.)
Vane plate length	Minimum	14.97 mm (0.5894 in.)
Vane plate height	Minimum	7.8 mm (0.307 in.)
Vane plate thickness	Minimum	1.7 mm (0.067 in.)
Vane plate length	Pump rotor and cam ring marks	
	None	14.996 – 14.998 mm (0.59039 – 0.59047 in.)
	1	14.994 – 14.996 mm (0.59031 – 0.59039 in.)
	2	14.992 – 14.994 mm (0.59024 – 0.59031 in.)
	3	14.990 – 14.992 mm (0.59016 – 0.59024 in.)
	4	14.988 – 14.990 mm (0.59008 – 0.59016 in.)
Flow control valve spring length	STD	50 mm (1.97 in.)
Flow control valve spring length	Minimum	47 mm (1.85 in.)
Pump rotating torque	Maximum	0.3 N·m (2.8 kgf·cm, 2.4 in.·lbf)
3VZ – E:		
Rotor shaft bushing oil clearance	STD	0.01 – 0.03 mm (0.0004 – 0.0012 in.)
Rotor shaft bushing oil clearance	Maximum	0.07 mm (0.0028 in.)
Vane plate to rotor groove clearance	Maximum	0.03 mm (0.0012 in.)
Vane plate length	Minimum	14.988 mm (0.5901 in.)
Vane plate height	Minimum	8.1 mm (0.319 in.)
Vane plate thickness	Minimum	1.797 mm (0.0707 in.)
Vane plate length	Pump rotor and cam ring marks	
	None	14.996 – 14.998 mm (0.59039 – 0.59047 in.)
	1	14.994 – 14.996 mm (0.59031 – 0.59039 in.)
	2	14.992 – 14.994 mm (0.59024 – 0.59031 in.)
	3	14.990 – 14.992 mm (0.59016 – 0.59024 in.)
	4	14.988 – 14.990 mm (0.59008 – 0.59016 in.)

Flow control valve spring length	STD	37 mm (1.46 in.)
Flow control valve spring length	Minimum	35 mm (1.38 in.)
Pump rotating torque	Maximum	0.3 N·m (2.8 kgf·cm, 2.4 in.·lbf)
PS GEAR		
Worm gear valve body ball clearance		0.15 mm (0.059 in.)
Cross shaft adjusting screw thrust clearance		0.03–0.05 mm (0.0012–0.0020 in.)
Worm gear preload		0.3–0.5 N·m (3–5.5 kgf·cm, 2.6–4.8 in.·lbf)
Total preload		0.5–0.9 N·m (5–9.5 kgf·cm, 4.3–8.3 in.·lbf)

TORQUE SPECIFICATIONS

Part tightened		N·m	kgf·cm	ft·lbf
STEERING COLUMN				
Main shaft assembly x Intermediate No.2 shaft		35	360	26
Steering column assembly x Body		25	260	19
Steering wheel		34	350	25
Column hole cover x Body		7.8	80	69in.·lbf
Intermediate No.2 shaft x Control valve assembly		35	360	26
Turn signal bracket x Column upper tube		7.8	80	69in.·lbf
Tilt pawl set nut		5.9	60	52in.·lbf
Tilt lever retainer set nut		15	150	11
Protector x Column tube		19	195	14
PS VANE PUMP				
PS vane pump x Pressure feed tube	22R–E(4WD)	36 (44)	365 (450)	26 (33)
PS vane pump x Pressure feed tube	22R–E(2WD), 3VZ–E	47	475	34
Pulley set nut		43	440	32
PS vane pump assembly	22R–E	39	400	29
PS vane pump x Bracket				
Through bolt	3VZ–E	58	590	43
Adjusting bolt	3VZ–E	39	400	29
PS vans pump x Adjusting stay	3VZ–E	41	420	30
Reservoir tank x PS vane pump	3VZ–E			
12 mm bolt		13	130	9
14 mm bolt		41	420	30
Suction port union	22R–E	13	130	9
Air control valve		36	370	27
Pressure port union		69	700	51
Front housing x Rear housing	22R–E	46	470	34
PS GEAR				
Pressure feed tube		36 (44)	365 (450)	26 (33)
Return hose		49	500	36
Intermediate No.2 shaft x Control valve assembly		35	360	26
Power steering gear x Body		142	1,450	105
Pitman arm x Cross shaft		177	1,800	130
Adjusting screw lock nut		46	470	34
Side cover set bolt		61	620	45
Bleeder plug		7.8	80	69in.·lbf

( ): For use without SST

Part tightened	N·m	kgf·cm	ft·lbf
Power piston plunger guide nut	20	205	15
Control valve assembly set bolt	61	620	45
Tie rod end x Knuckle arm	90	920	67
STEERING LINKAGE			
Pitman arm x Cross shaft	177	1,800	130
Pitman arm x Steering relay rod	90	920	67
Tie rod tube clamp nut	25	260	19
Tie rod X Steering relay rod	90	920	67
Tie rod x Knuckle arm	90	920	67
Steering relay rod x Idler arm	59	600	43
Steering relay rod x Steering damper	59	600	43
Knuckle arm x Steering knuckle	183	1,870	135
Idler arm x Idler arm bracket	78	800	58
Idler arm bracket Frame	142	1,450	105