

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Yanmar 4TNV98-ZVHYB
Type	4-cycle diesel engine, low emission
Cooling method	Water cooling
Number of cylinders and arrangement	4 cylinders, in-line
Firing order	1-3-4-2
Combustion chamber type	Direct injection type
Cylinder bore × stroke	98 × 110mm(3.86" × 4.33")
Piston displacement	3319cc(203cu in)
Compression ratio	18.5:1
Rated gross horse power(SAE J1995)	59.6Hp at 2100rpm(44.4kW at 2100rpm)
Maximum torque at 1000rpm	24.5kgf · m(177lbf · ft)
Engine oil quantity	11.6 l (3.1U.S. gal)
Dry weight	270kg(595lb)
High idling speed	2200 ± 50rpm
Low idling speed	1050 ± 50rpm
Rated fuel consumption	174.4g/Hp · hr at 2100rpm
Starting motor	Hitachi 12V-3kW
Alternator	Hitachi 12V-80A
Battery	1 × 12V × 100Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 36cc/rev
Maximum pressure	280kgf/cm ² (3983psi)
Rated oil flow	2 × 75.6 l /min (2 × 20U.S.gpm)
Rated speed	2100rpm

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	8.9cc/rev
Maximum pressure	35kgf/cm ² (500psi)
Rated oil flow	18.7 l /min(4.9U.S.gpm/4.1U.K.gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools mono-block
Operating method	Hydraulic pilot system
Main relief valve pressure	280kgf/cm ² (3983psi)
Overload relief valve pressure	310kgf/cm ² (4410psi)

5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	43cc/rev
Relief pressure	170kgf/cm ² (2418psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	14kgf · m ² (101lb · ft)
Brake release pressure	20~40kgf/cm ² (284~569psi)
Reduction gear type	2 - stage planetary
Swing speed	12.0rpm

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	300kgf/cm ² (4267psi)
Reduction gear type	2 stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	Less than 9kgf/cm ² (128psi)
Braking torque	8.4kgf · m ² (61lb · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	5kgf/cm ² (71psi)
	Maximum	20kgf/cm ² (284psi)
Push rod stroke	Lever	6.5/8.5mm(0.26/0.34in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 115 × ∅ 70 × 980mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 95 × ∅ 60 × 860mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 85 × ∅ 55 × 650mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	∅ 110 × ∅ 65 × 152mm
	Cushion	-

※ Discoloration of cylinder rod can occur when the friction reduction additive of lubrication oil spreads on the rod surface.

※ Discoloration does not cause any harmful effect on the cylinder performance.

9) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R80-7A	Standard	450mm(18")	0.37kgf/cm ² (5.26psi)	38	2260mm(7' 5")
	Option	600mm(24")	0.28kgf/cm ² (3.98psi)	38	2350mm(7' 9")

10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R80-7A	STD	0.28m ³ (0.37yd ³)	0.25m ³ (0.33yd ³)	4	670mm(26.4")	750mm(29.5")
	OPTION	0.15m ³ (0.19yd ³)	0.13m ³ (0.17yd ³)	3	390mm(15.4")	460mm(18.1")
	OPTION	0.31m ³ (0.41yd ³)	0.27m ³ (0.35yd ³)	4	720mm(28.3")	815mm(32.1")