

## 7. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	Yanmar 4TNV98-EPHYBU
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 × 110 mm (3.85" × 4.33")
Piston displacement	3319 cc (203 cu in)
Compression ratio	18.5 : 1
Rated gross horse power(SAE J1995)	57 Hp at 2400 rpm (42.5 kW at 2400 rpm)
Maximum torque at 1550rpm	20.5 kgf · m (148 lbf · ft)
Engine oil quantity	11.6 l (3.1 U.S. gal)
Dry weight	270 kg (595 lb)
High idling speed	2200+ 50 rpm
Low idling speed	1050 ± 100 rpm
Rated fuel consumption	175.6 g/Hp · hr at 2400 rpm
Starting motor	12V-3.0 kW
Alternator	12V-80A
Battery	1 × 12V × 100Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 25 cc/rev
Maximum pressure	220 kgf/cm <sup>2</sup> (3130 psi)
Rated oil flow	2 × 60 l /min (15.9 U.S. gpm/ 13.2 U.K. gpm)
Rated speed	2400 rpm

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	16.2/6.5 cc/rev
Maximum pressure	220/30 kgf/cm <sup>2</sup> (3130/430 psi)
Rated oil flow	38.9/15.6 l /min (10.3/4.1 U.S. gpm/8.6/3.4 U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	10 spools sectional block (+1 optional block)
Operating method	Hydraulic pilot system
Main relief valve pressure	220 kgf/cm <sup>2</sup> (3130 psi)
Overload relief valve pressure	240 kgf/cm <sup>2</sup> (3410 psi)

[ ]: Power boost

### 5) SWING MOTOR

Item	Specification
Type	Two fixed displacement axial piston motor
Capacity	32.3 cc/rev
Relief pressure	220 kgf/cm <sup>2</sup> (3130 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	14 kgf · m (101 lbf · ft)
Brake release pressure	20~40 kgf/cm <sup>2</sup> (284~570 psi)
Reduction gear type	2 - stage planetary

### 6) TRAVEL MOTOR

Item	Specification
Type	Bent axis design variable displacement axial piston motor
Relief pressure	220 kgf/cm <sup>2</sup> (3130 psi)
Counterbalance valve	Applied
Capacity	80 cc

## 7) POWER TRAIN

Item	Description		Specification
Gear box	Type		2 speed hydrostatic
	Gear ratio	1st	6.357
		2nd	1.961
Parking brake	Type		Multi disc brake integrated in rear axle
	Maximum braking power		945 kgf · m (6835 lbf · ft)
Axle	Type		4 wheel drive with differential
	Gear ratio		8.67
	Brake		Multi disc brake

## 8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 110 × ø 65 × 715mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 90 × ø 55 × 850mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 80 × ø 50 × 660mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	ø 110 × ø 60 × 219mm
	Cushion	-
Boom swing cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 50 × 535mm
	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) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R55W-9	STD	0.18 m <sup>3</sup> (0.24 yd <sup>3</sup> )	0.15 m <sup>3</sup> (0.20 yd <sup>3</sup> )	5	670 mm (26.4")	740 mm (29.1")
	OPT	0.07 m <sup>3</sup> (0.09 yd <sup>3</sup> )	0.06 m <sup>3</sup> (0.08 yd <sup>3</sup> )	3	315 mm (12.4")	360 mm (14.2")