

## 8. 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 borexstroke	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)	57.8 Hp at 2400 rpm (42.5 kW at 2400 rpm)
Maximum torque at 1550 rpm	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	12 V-3.0 kW
Alternator	12 V-80 A
Battery	1 × 12 V × 100 Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 27.5 cc/rev
Maximum pressure	220 kgf/cm <sup>2</sup> (3130 psi)
Rated oil flow	2 × 55 l /min (14.5 U.S. gpm / 12.1 U.K. gpm)
Rated speed	2000 rpm

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	18.3 cc/rev
Maximum pressure	220/30 kgf/cm <sup>2</sup> (3130/430 psi)
Rated oil flow	36.6/9.0 l /min (9.7/2.4 U.S. gpm / 8.0/2.0 U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	Sectional, 9 spools+1 option
Operating method	Hydraulic pilot system+Mechanical control 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	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	Variable displacement axial piston motor
Relief pressure	220 kgf/cm <sup>2</sup> (3130 psi)
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	9 kgf/cm <sup>2</sup> (128 psi)
Braking torque	8.4 kgf · m (61 lbf · ft)

## 7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 110 × ∅ 65 × 715 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 90 × ∅ 55 × 850 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 80 × ∅ 50 × 660 mm
	Cushion	Extend only
Dozer blade	Bore dia × Rod dia × Stroke	∅ 110 × ∅ 60 × 219 mm
	Cushion	Extend only

※ 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.

## 8) SHOE

Item	Width	Ground pressure	Link quantity	Overall width
R55-9	380 mm (15")	0.33 kgf/cm <sup>2</sup> (4.69 psi)	40	1880 mm (6' 2")

## 9) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R55-9	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")