

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Yanmar 3TNV88
Type	4-cycle diesel engine, low emission
Cooling method	Water cooling
Number of cylinders and arrangement	3 cylinders, in-line
Firing order	1-3-2
Combustion chamber type	Direct injection type
Cylinder bore × stroke	88 × 90mm(3.46" × 3.54")
Piston displacement	1642cc(100.2cu in)
Compression ratio	19.1 : 1
Rated gross horse power(SAE J1995)	27Hp at 2200rpm(20.3kW at 2200rpm)
Maximum torque at 1400rpm	10.8kgf · m(78.1lbf · ft)
Engine oil quantity	6.7 l (1.8U.S. gal)
Dry weight	155kg(340lb)
High idling speed	2400+ 30rpm
Low idling speed	1100± 30rpm
Rated fuel consumption	185g/Hp · hr at 2200rpm
Starting motor	12V-1.2kW
Alternator	12V-40A
Battery	1 × 12V × 55Ah(5h rating)

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 17.5cc/rev
Maximum pressure	230kgf/cm ² (3270psi)
Rated oil flow	2 × 38.5 l /min (10.2U.S. gpm/ 8.5U.K. gpm)
Rated speed	2200rpm

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	10.7/5.1cc/rev
Maximum pressure	230/30kgf/cm ² (3270/430psi)
Rated oil flow	23.5/11.2 l /min(6.2/3.0U.S. gpm/ 5.2/2.5U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	Sectional, 10 spools(11 Blocks)
Operating method	Hydraulic pilot system
Main relief valve pressure	230kgf/cm ² (3270psi)
Overload relief valve pressure	250kgf/cm ² (3560psi)

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	22cc/rev
Relief pressure	200kgf/cm ² (2845psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	9.2kgf · m(66.5lbf · ft)
Brake release pressure	15~45kgf/cm ² (215~640psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	230kgf/cm ² (3270psi)
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	8kgf/cm ² (114psi)
Braking torque	6.5kgf · m(47lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	5kgf/cm ² (71psi)
	Maximum	20kgf/cm ² (284psi)
Single operation stroke	Lever	6.5/8.5mm(0.26/0.33in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 85 × ø 45 × 540mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 80 × ø 45 × 585mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 70 × ø 45 × 510mm
	Cushion	-
Boom swing cylinder	Bore dia × Rod dia × Stroke	ø 80 × ø 45 × 400mm
	Cushion	-
Dozer cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 50 × 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
R35Z-7	300mm(12")	0.34kgf/cm ² (4.83psi)	44	1740mm(5' 9")

10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R35Z-7	STD	0.11m ³ (0.14yd ³)	0.09m ³ (0.12yd ³)	4	550mm(21.7")	610mm(24.0")