

## 7. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	Cummins B3.9-C
Type	4-cycle turbocharged diesel engine
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	102 × 120mm(4.02" × 4.72")
Piston displacement	3900cc(238cu in)
Compression ratio	16.5 : 1
Rated gross horse power(SAE J1349)	110Hp at 2200rpm(82kw at 2200rpm)
Maximum torque at 1500rpm	42kgf · m(302lb · ft)
Engine oil quantity	10 l (2.6U.S. gal)
Dry weight	329kg(725lb)
High idling speed	2457 ± 50rpm
Low idling speed	950 ± 100rpm
Rated fuel consumption	167.6g/Hp · hr
Starting motor	Delco Remy 28MT(24V)
Alternator	Delco Remy(24V-50Amp)
Battery	2 × 12V × 100Ah

### 2) MAIN PUMP

Item	Specification	
Type	Variable displacement bent axis piston pump	
Capacity	2 × 60cc/rev	
Pressure	Rated	320kg/cm <sup>2</sup> (4550psi)
	Maximum(Power boost)	350kg/cm <sup>2</sup> (4978psi)
Rated oil flow	2 × 130 l / min(34.3U.S. gpm/ 28.6U.K. gpm)	
Rated speed	2200rpm(Clockwise viewed from shaft end)	

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	10cc/rev
Maximum pressure	40 <sup>+2</sup> <sub>0</sub> kg/cm <sup>2</sup> (570psi)
Rated oil flow	22 l /min(5.8U.S. gpm/4.8U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	9 spool
Operating method	Hydraulic pilot system
Main relief valve pressure	320kg/cm <sup>2</sup> (4550psi)/[350kg/cm <sup>2</sup> (4980psi)]
Overload relief valve pressure	380kg/cm <sup>2</sup> (5400psi)

[ ]: Power boost

### 5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	79cc/rev
Relief pressure	220kg/cm <sup>2</sup> (3130psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	12kg · m(87lb · ft)
Brake release pressure	20~50kg/cm <sup>2</sup> (285~710psi)
Reduction gear type	2 - stage planetary
Swing speed	14.3rpm

### 6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement bent-axis axial piston motor
Capacity(Max/min)	114.7/45cc/rev
Relief pressure	360kg/cm <sup>2</sup> (5120psi)
Counter balance valve	Applied

## 7) POWER TRAIN

Item	Description	Specification	
Transmission	Type	2 speed power shift transmission	
	Gear ratio	1st	5.35
		2nd	1.39
Parking brake	Type	Multi disc brake integrated in transmission	
	Maximum braking power	168kgf · m(2390lb · ft)	
Axle	Type	4 wheel drive with differential	
	Gear ratio	13.26	
	Brake	Multi disc brake	

## 8) REMOTE CONTROL VALVE

Item	Specification	
Type	Pressure reducing type	
Operating pressure	Minimum	5.5kg/cm <sup>2</sup> (78psi)
	Maximum	19.5kg/cm <sup>2</sup> (277psi)
Single operation stroke	Lever	82.7mm(3.3in)

## 9) CYLINDER

Item	Specification	
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 105 × ∅ 75 × 1075mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 115 × ∅ 80 × 1188mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 100 × ∅ 70 × 855mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	∅ 100 × ∅ 65 × 210mm
	Cushion	Extend only
Outrigger cylinder	Bore dia × Rod dia × Stroke	∅ 125 × ∅ 75 × 475mm
	Cushion	-
2 piece boom cylinder	Bore dia × Rod dia × Stroke	∅ 105 × ∅ 75 × 975mm
	Cushion	-
2 piece adjust cylinder	Bore dia × Rod dia × Stroke	∅ 145 × ∅ 90 × 610mm
	Cushion	-

## 10)BUCKET

Item	Capacity		Tooth quantity	Width	
	PCSA heaped	CECE heaped		Without side cutter	With side cutter
Standard	0.51m <sup>3</sup> (0.67yd <sup>3</sup> )	0.45m <sup>3</sup> (0.59yd <sup>3</sup> )	5	935mm (37")	1035mm (41")
Option	0.22m <sup>3</sup> (0.29yd <sup>3</sup> )	0.20m <sup>3</sup> (0.26yd <sup>3</sup> )	3	520mm (20")	620mm (24")
	0.40m <sup>3</sup> (0.52yd <sup>3</sup> )	0.35m <sup>3</sup> (0.46yd <sup>3</sup> )	4	760mm (30")	860mm (34")
	0.46m <sup>3</sup> (0.60yd <sup>3</sup> )	0.40m <sup>3</sup> (0.52yd <sup>3</sup> )	4	850mm (33")	950mm (37")
	0.58m <sup>3</sup> (0.76yd <sup>3</sup> )	0.50m <sup>3</sup> (0.65yd <sup>3</sup> )	5	1030mm (41")	1130mm (44")
	0.63m <sup>3</sup> (0.82yd <sup>3</sup> )	0.55m <sup>3</sup> (0.72yd <sup>3</sup> )	5	1110mm (44")	1210mm (47")
	0.70m <sup>3</sup> (0.92yd <sup>3</sup> )	0.60m <sup>3</sup> (0.78yd <sup>3</sup> )	6	1205mm (47")	-
	◆0.45m <sup>3</sup> (0.59yd <sup>3</sup> )	0.40m <sup>3</sup> (0.52yd <sup>3</sup> )	-	1520mm (60")	-
	■0.55m <sup>3</sup> (0.72yd <sup>3</sup> )	0.45m <sup>3</sup> (0.59yd <sup>3</sup> )	-	1800mm (71")	-

◆ : Ditching bucket

■ : Slope finishing bucket