

7. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSB 6.7
Type	4-cycle turbocharged diesel engine, low emission
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	107 × 124 mm (4.2" × 4.9")
Piston displacement	6700 cc (409 cu in)
Compression ratio	17.2 : 1
Rated gross horse power (SAE J1995)	163 Hp (122 kW) at 2100 rpm
Maximum torque	74.7 kgf · m (540 lbf · ft) at 1400 rpm
Engine oil quantity	24 l (6.3 U.S. gal)
Dry weight	556 kg (1226 lb)
High idling speed	2000 ± 50 rpm
Low idling speed	800 ± 100 rpm
Rated fuel consumption	175.0 g/Hp · hr at 2100 rpm
Starting motor	Nippon densor (24 V - 4.5 kW)
Alternator	Delco remy (24 V - 70 A)
Battery	2 × 12 V × 100 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 80 cc/rev
Maximum pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Rated oil flow	2 × 168 l /min (44.4 U.S. gpm / 37.0 U.K. gpm)
Rated speed	2100 rpm

[]: Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm ² (570 psi)
Rated oil flow	31.5 l /min (8.3 U.S. gpm/6.9 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools two-block
Operating method	Hydraulic pilot system
Main relief valve pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Overload relief valve pressure	400 kgf/cm ² (5690 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	117.8 cc/rev
Relief pressure	285 kgf/cm ² (4050 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	59 kgf · m (427 lbf · ft)
Brake release pressure	33~50 kgf/cm ² (469~711 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement bent-axis axial piston motor
Relief pressure	380 kgf/cm ² (5400 psi)
Counter balance valve	Applied
Capacity	140 cc/rev

7) POWER TRAIN

Item	Description		Specification
Transmission	Type		2 speed power shift transmission
	Gear ratio	1st	4.87
		2nd	1.20
Parking brake	Type		Multi disc brake integrated in transmission
	Maximum braking torque		3044 kgf · m (22020 lbf · ft)
Axle	Type		4 wheel drive with differential
	Gear ratio		16.0
	Brake		Multi disc brake

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 115 × ∅ 80 × 1090mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 120 × ∅ 85 × 1355mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 115 × ∅ 75 × 995mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	∅ 110 × ∅ 65 × 235mm
	Cushion	Extend only
Outrigger cylinder	Bore dia × Rod dia × Stroke	∅ 125 × ∅ 75 × 475mm
	Cushion	-

9) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
R170W-9	0.76 m ³ (0.99 yd ³)	0.65 m ³ (0.85 yd ³)	5	1060 mm (41.7")	1180 mm (46.5")
	0.39 m ³ (0.51 yd ³)	0.34 m ³ (0.44 yd ³)	3	620 mm (24.4")	740 mm (29.1")
	0.50 m ³ (0.65 yd ³)	0.44 m ³ (0.58 yd ³)	4	760 mm (29.9")	880 mm (34.6")
	0.64 m ³ (0.84 yd ³)	0.55 m ³ (0.72 yd ³)	5	920 mm (36.2")	1040 mm (40.9")
	0.89 m ³ (1.16 yd ³)	0.77 m ³ (1.01 yd ³)	6	1220 mm (48.0")	1340 mm (52.8")
	1.05 m ³ (1.37 yd ³)	0.90 m ³ (1.18 yd ³)	6	1400 mm (55.1")	1520 mm (59.8")
	◆ 0.69 m ³ (0.90 yd ³)	0.62 m ³ (0.81 yd ³)	5	990 mm (39.0")	-

◆ : Heavy duty bucket