

4. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSB4.5
Type	4-cycle turbocharged and charge air-cooled diesel engine.
Cooling method	Water cooling
Number of cylinders and arrangement	4 cylinders, in-line
Firing order	1-3-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	107 × 124 mm (4.2" × 4.9")
Piston displacement	4500 cc (275 cu in)
Compression ratio	17.2 : 1
Rated gross horse power	125 hp at 2100 rpm
Maximum gross torque at 1400rpm	56 kgf · m (408 lbf · ft)
Engine oil quantity	11 l (2.9 U.S. gal)
Dry weight	371 kg (818 lb)
High idling speed	2230 ± 50rpm
Low idling speed	950 ± 25 rpm
Rated fuel consumption (at rated)	237 g/kw · hr
Starting motor	Nippondenso 228000-7902 (24 V-3.7 kW)
Alternator	Delco Remy 24SI (24V-70Amp)
Battery	2 × 12V × 100Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement piston pump
Capacity	36+32.3 cc/rev
Maximum operating pressure	250 kgf/cm ² (3560 psi)
Rated operating speed	2100 rpm
Rated output flow	126 l /min (33.3 U.S.gpm)

3) FAN AND BRAKE PUMP

Item	Specification	
	Fan	Brake
Type	Fixed displacement tandem gear pump	
Capacity	9.17 cc/rev	9.17 cc/rev
Maximum operating pressure	100 kgf/cm ² (1422 psi)	150 kgf/cm ² (2130 psi)
Rated operating speed	2100 rpm	
Rated output flow	19 l /min (5.0 U.S.gpm)	19 l /min (5.0 U.S.gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	2 spool
Operating method	Hydraulic pilot assist
Main relief valve set pressure	250 kgf/cm ² (3560 psi)
Overload relief valve set pressure	300 kgf/cm ² (4270 psi)

5) REMOTE CONTROL VALVE

Item	Specification	
Type	Joystick (or with aux lever)	
Control pressure	Minimum	3.7 kgf/cm ² (52.6 psi)
	Maximum	30 kgf/cm ² (427 psi)

6) CYLINDER

Item	Specification
Boom cylinder	Bore dia × Rod dia × Stroke ø 100 × ø 65 × 750 mm
Bucket cylinder	Bore dia × Rod dia × Stroke ø 110 × ø 65 × 510 mm
Steering cylinder	Bore dia × Rod dia × Stroke ø 60 × ø 35 × 412 mm

7) DYNAMIC POWER TRANSMISSION DEVICES

Item		Specification
Torque converter	Model	ZF 4WG130
	Type	Single-stage, single-phase
	Ratio	1.87 : 1
Transmission	Type	Full-automatic power shift
	Gear shift	Forward fourth gear, reverse third gear
	Control	Electrical single lever type, kick-down system
	Pump rated flow	85 ℓ /min (22.5 U.S.gpm) at 2000 rpm
Axle	Drive devices	4-wheel drive
	Front	Front fixed location
	Rear	Oscillation $\pm 13^\circ$ of center pin-loaded
Wheels	Tires	17.5-25, 12PR (L3)
Brakes	Travel	Four-wheel, wet-disc type, full hydraulic
	Parking	Spring applied, hydraulic released brake on front axle
Steering	Type	Full hydraulic, articulated
	Steering angle	40° to both right and left angle, respectively