

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSB6.7
Type	4-cycle turbocharged diesel engine
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 (4.21" × 4.88")
Piston displacement	6700 cc (409cu in)
Compression ratio	17.2 : 1
Rated gross horse power (SAE J1995)	227 Hp at 1900 rpm (169 kW at 1900 rpm)
Maximum torque	96.8 kgf · m (700 lbf · ft) at 1500 rpm
Engine oil quantity	24 l (6.3 U.S. gal)
Dry weight	556 kg (1226 lb)
High idling speed	1850 ± 50 rpm
Low idling speed	800 ± 100 rpm
Rated fuel consumption	166.3 g/Hp · hr at 1900 rpm
Starting motor	24 V-4.5 kW
Alternator	24 V-50 A
Battery	2 × 12 V × 160 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 140 cc/rev
Maximum pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Rated oil flow	2 × 252 l /min (66.6 U.S. gpm / 55.4 U.K. gpm)

[] : Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15 cc/rev
Maximum pressure	40 kgf/cm ² (570 psi)
Rated oil flow	27 l /min (7.1 U.S. gpm / 5.9 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification	
	R290LC-9	R290LC-9 Long reach
Type	10 spools	
Operating method	Hydraulic pilot system	
Main relief valve pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]	
Port relief valve pressure	Boom	400 kgf/cm ² (5690 psi)
	Arm	400 kgf/cm ² (5690 psi)
	Bucket	400 kgf/cm ² (5690 psi)
		400 kgf/cm ² (5690 psi)
		250 kgf/cm ² (3560 psi)
		270 kgf/cm ² (3840 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	169.4 cc/rev
Relief pressure	300 kgf/cm ² (4270 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	70 kgf · m (506 lbf · ft)
Brake release pressure	26 kgf/cm ² (370 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	350 kgf/cm ² (4980 psi)
Capacity (max / min, -#0306)	279.1/155 cc/rev
Capacity (max / min, #0307-)	154.8/88.5 cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure (-#0306)	15.7 kgf/cm ² (223 psi)
Brake release pressure (#0307-)	9 kgf/cm ² (128 psi)
Braking torque (-#0306)	92 kgf · m (670 lbf · ft)
Braking torque (#0307-)	40 kgf · m (290 lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	6.5 kgf/cm ² (92 psi)
	Maximum	26 kgf/cm ² (370 psi)
Single operation stroke	Lever	61 mm (2.4 in)
	Pedal	123 mm (4.84 in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 140 × ∅ 100 × 1465 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 150 × ∅ 110 × 1765 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 135 × ∅ 95 × 1185 mm
	Cushion	Extend only
Bucket cylinder (LONG REACH)	Bore dia × Rod dia × Stroke	∅ 100 × ∅ 70 × 870 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.

9) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R290LC-9	Standard	600 mm (24")	0.56 kgf/cm ² (7.97 psi)	48	3200 mm (10' 6")
	Option	700 mm (28")	0.49 kgf/cm ² (6.97 psi)	48	3300 mm (10' 10")
		800 mm (32")	0.44 kgf/cm ² (6.26 psi)	48	3400 mm (11' 1")
		900 mm (36")	0.40 kgf/cm ² (5.69 psi)	48	3500 mm (11' 5")
R290NLC-9	Standard	600 mm (24")	0.56 kgf/cm ² (7.97 psi)	48	2990 mm (9' 10")
R290LC-9 LONG REACH	Standard	800 mm (32")	0.47 kgf/cm ² (6.68 psi)	48	3400 mm (11' 2")
R290LC-9 HIGH WALKER	Standard	600 mm (24")	0.62 kgf/cm ² (8.82 psi)	48	3470 mm (11' 5")
	Option	700 mm (28")	0.54 kgf/cm ² (7.68 psi)	48	3570 mm (11' 9")
		800 mm (32")	0.48 kgf/cm ² (6.83 psi)	48	3670 mm (12' 0")
		★710 mm (28")	0.54 kgf/cm ² (7.68 psi)	48	3580 mm (11' 9")

★ : Double grouser

10) BUCKET

Item		Capacity		Tooth quantity	Width		
		SAE heaped	CECE heaped		Without side cutter	With side cutter	
R290LC-9 R290NLC-9 H/WALKER	Std	1.27 m ³ (1.66 yd ³)	1.10 m ³ (1.44 yd ³)	5	1290 mm (50.8")	1410 mm (55.5")	
	Opt		0.79 m ³ (1.03 yd ³)	0.70 m ³ (0.92 yd ³)	3	890 mm (35.0")	1010 mm (39.8")
			1.03 m ³ (1.35 yd ³)	0.90 m ³ (1.18 yd ³)	4	1090 mm (42.9")	1210 mm (47.6")
		◆	1.07 m ³ (1.40 yd ³)	0.95 m ³ (1.24 yd ³)	5	1150 mm (45.3")	-
		◆	1.27 m ³ (1.66 yd ³)	1.10 m ³ (1.44 yd ³)	5	1210 mm (47.6")	-
		◆	1.46 m ³ (1.91 yd ³)	1.28 m ³ (1.67 yd ³)	5	1460 mm (57.5")	-
		⊙	1.16 m ³ (1.52 yd ³)	1.00 m ³ (1.05 yd ³)	5	1340 mm (52.8")	-
		⊙	1.49 m ³ (1.95 yd ³)	1.28 m ³ (1.67 yd ³)	5	1620 mm (63.8")	-
			1.50 m ³ (1.96 yd ³)	1.30 m ³ (1.70 yd ³)	6	1490 mm (58.7")	1610 mm (63.4")
			1.73 m ³ (2.26 yd ³)	1.50 m ³ (1.96 yd ³)	6	1700 mm (66.9")	1820 mm (71.7")
			1.85 m ³ (2.42 yd ³)	1.60 m ³ (2.09 yd ³)	5	1800 mm (70.9")	1920 mm (75.6")
LONG REACH	Std	0.52 m ³ (0.68 yd ³)	0.46 m ³ (0.60 yd ³)	5	935 mm (36.8")	1035 mm (40.8")	

◆ : Heavy duty bucket

⊙ : Rock bucket