

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSM 11
Type	4-cycle turbocharged charger air cooled 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	125 × 147.1 mm (4.92" × 5.79")
Piston displacement	10800 cc (659 cu in)
Compression ratio	16.3 : 1
Rated gross horse power (SAE J1995)	362 ps at 1900 rpm (357 Hp / 266 kW at 1900 rpm)
Maximum torque	170.6 kgf · m (1234 lbf · ft) at 1400 rpm
Engine oil quantity	37.85 l (10 U.S. gal)
Dry weight	942 kg (2077 lb)
Low idling speed	1900 ± 50 rpm
High idling speed	950 + 50 rpm
Rated fuel consumption	161.8 g/Hp · hr at 1900 rpm
Starting motor	Delco Remy 42MT (24V-7.2 kW)
Alternator	Delco Remy 24V-70A
Battery	2 × 12V × 200Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 200 cc/rev
Maximum pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5120 psi)]
Rated oil flow	2 × 360 l /min (95.1 U.S. gpm / 79.2 U.K. gpm)
Rated speed	1800 rpm

[]: 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	
	R480/520LC-9	R480/520LC-9 Long reach
Type	9 spools	
Operating method	Hydraulic pilot system	
Main relief valve pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5120 psi)]	
Port relief valve pressure	Boom	380 kgf/cm ² (5400 psi)
	Arm	380 kgf/cm ² (5400 psi)
	Bucket	380 kgf/cm ² (5400 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	151 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 (470~711 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	345 kgf/cm ² (4910 psi)
Capacity (max / min)	160/100 cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	17~50 kgf/cm ² (242~711 psi)
Braking torque	103 kgf · m (745 lbf · ft)

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 170 × ∅ 115 × 1570 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 190 × ∅ 130 × 1820 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 160 × ∅ 110 × 1370 mm (R480LC-9) ∅ 160 × ∅ 115 × 1370 mm (R520LC-9)
	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.

8) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R480-9	Standard	600 mm (24")	10.89 kgf/cm ² (12.66 psi)	48	3340 mm (10' 11")
	Option	700 mm (28")	0.77 kgf/cm ² (10.95 psi)	48	3440 mm (11' 3")
		750 mm (30")	0.73 kgf/cm ² (10.38 psi)	48	3490 mm (11' 5")
		800 mm (32")	0.68 kgf/cm ² (9.67 psi)	48	3540 mm (11' 7")
		900 mm (36")	0.61 kgf/cm ² (8.67 psi)	48	3640 mm (11' 11")
R480LC-9	Standard	600 mm (24")	0.83 kgf/cm ² (11.80 psi)	53	3340 mm (10' 11")
	Option	700 mm (28")	0.72 kgf/cm ² (10.24 psi)	53	3440 mm (11' 3")
		750 mm (30")	0.68 kgf/cm ² (9.67 psi)	53	3490 mm (11' 5")
		800 mm (32")	0.64 kgf/cm ² (9.10 psi)	53	3540 mm (11' 7")
		900 mm (36")	0.57 kgf/cm ² (8.11 psi)	53	3640 mm (11' 11")
R520LC-9	Standard	★600 mm (24")	0.88 kgf/cm ² (12.51 psi)	53	3540 mm (11' 7")
	Option	★700 mm (28")	0.76 kgf/cm ² (10.81 psi)	53	3640 mm (11' 11")
		★750 mm (30")	0.72 kgf/cm ² (10.24 psi)	53	3690 mm (12' 1")
		★800 mm (32")	0.67 kgf/cm ² (9.53 psi)	53	3740 mm (12' 3")
		※600 mm (24")	0.88 kgf/cm ² (12.51 psi)	53	3540 mm (11' 7")
		※700 mm (28")	0.76 kgf/cm ² (10.81 psi)	53	3640 mm (11' 11")

★ : Triple grouser

※ : Double grouser

9) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R480LC-9	Standard	2.15 m ³ (2.81 yd ³)	1.92 m ³ (2.51 yd ³)	5	1415 mm (55.7")	1565 mm (61.6")
	Option	1.00 m ³ (1.31 yd ³)	0.90 m ³ (1.17 yd ³)	3	915 mm (36.0")	1065 mm (47.6")
		1.38 m ³ (1.80 yd ³)	1.25 m ³ (1.63 yd ³)	4	1100 mm (43.3")	1250 mm (49.2")
		1.84 m ³ (2.41 yd ³)	1.65 m ³ (2.16 yd ³)	5	1140 mm (44.9")	1290 mm (50.8")
		⊙2.20 m ³ (2.88 yd ³)	1.80 m ³ (2.35 yd ³)	5	1840 mm (72.4")	-
		⊙2.43 m ³ (3.18 yd ³)	2.10 m ³ (2.75 yd ³)	5	1885 mm (74.2")	-
		2.79 m ³ (3.65 yd ³)	2.47 m ³ (3.23 yd ³)	7	1760 mm (69.3")	1910 mm (75.2")
		3.03 m ³ (3.96 yd ³)	2.67 m ³ (3.49 yd ³)	7	1890 mm (74.4")	2040 mm (80.3")
R520LC-9	Standard	2.15 m ³ (2.81 yd ³)	1.92 m ³ (2.51 yd ³)	5	1415 mm (55.7")	1565 mm (61.6")
		1.65 m ³ (2.16 yd ³)	1.48 m ³ (1.94 yd ³)	5	1140 mm (44.9")	1290 mm (50.8")
		2.79 m ³ (3.65 yd ³)	2.47 m ³ (3.23 yd ³)	5	1760 mm (69.3")	1910 mm (75.2")
		3.03 m ³ (3.96 yd ³)	2.67 m ³ (3.49 yd ³)	6	1890 mm (74.4")	2040 mm (80.3")
		★1.00 m ³ (1.31 yd ³)	0.90 m ³ (1.17 yd ³)	3	915 mm (36.0")	1065 mm (47.6")
		★1.38 m ³ (1.80 yd ³)	1.25 m ³ (1.63 yd ³)	5	1100 mm (43.3")	1250 mm (49.2")
		◆2.20 m ³ (2.88 yd ³)	1.80 m ³ (2.35 yd ³)	5	1840 mm (71.3")	-
		⊙1.80 m ³ (2.35 yd ³)	1.50 m ³ (1.96 yd ³)	5	1560 mm (61.4")	-
		⊙3.20 m ³ (4.19 yd ³)	2.80 m ³ (3.66 yd ³)	7	2095 mm (82.5")	-

★ : 5.85 m arm only

◆ : Heavy duty bucket

⊙ : Rock - heavy duty bucket