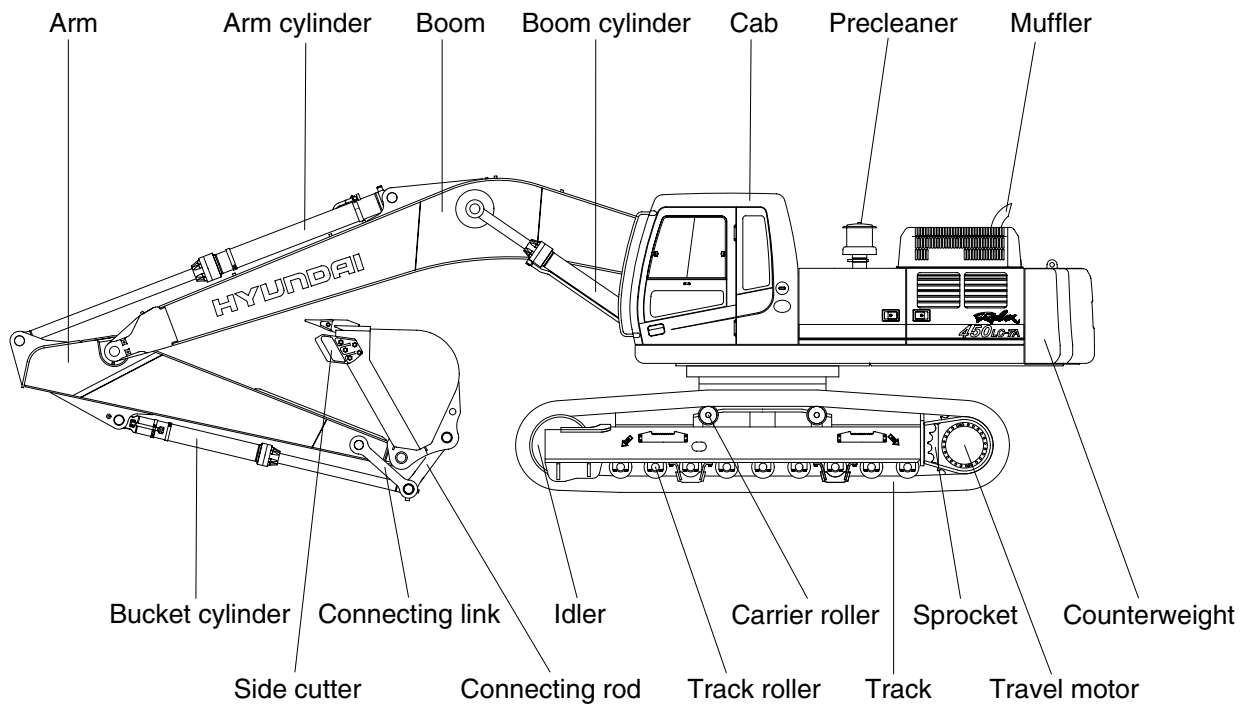
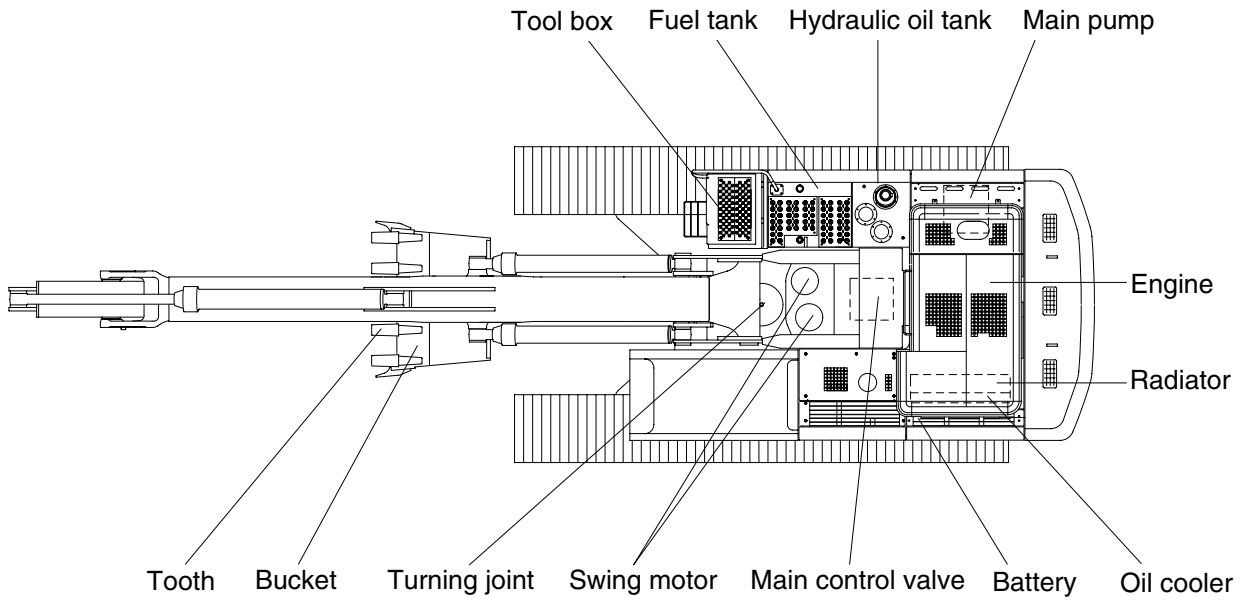


# SPECIFICATIONS

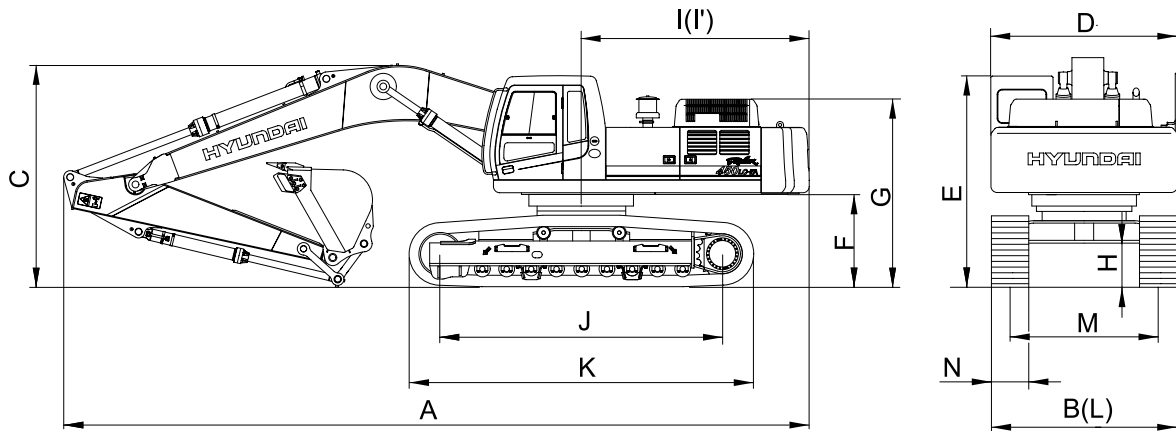
## 1. MAJOR COMPONENT



4507A2SP00

## 2. SPECIFICATIONS

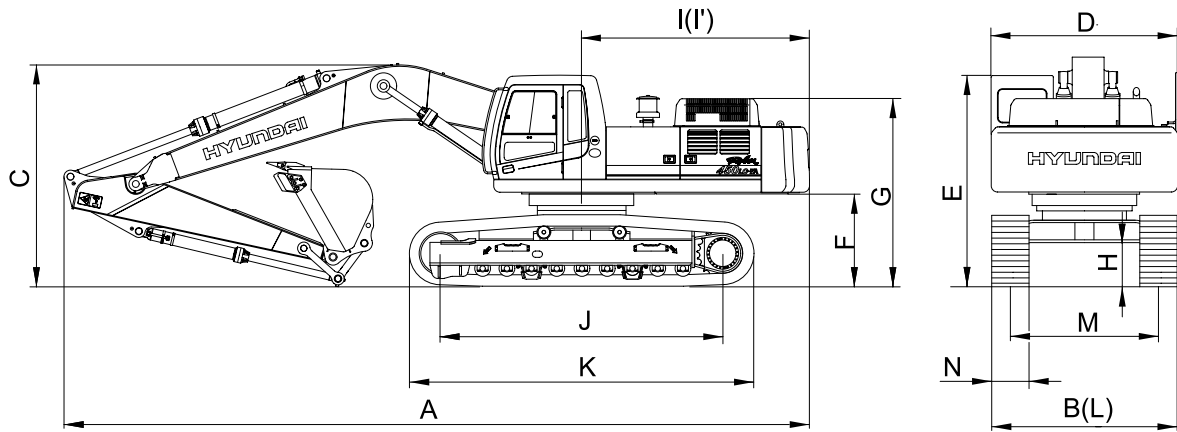
### 1) ROBEX 450LC-7A



4507A2SP02

Description		Unit	Specification
Operating weight		kg(lb)	45200(99650)
Bucket capacity(SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	2.15(2.81)
Overall length	A	mm(ft-in)	12000(39' 4")
Overall width, with 600mm shoe	B		3340(10'11")
Overall height	C		3600(11'10")
Superstructure width	D		2980( 9' 9")
Overall height of cab	E		3250(10' 8")
Ground clearance of counterweight	F		1340( 4' 5")
Engine cover height	G		2792( 9' 2")
Minimum ground clearance	H		555( 1'10")
Rear-end distance	I		3665(12' 0")
Rear-end swing radius	I'		3720(12' 2")
Distance between tumblers	J		4470(14' 8")
Undercarriage length	K		5462(17'11")
Undercarriage width	L		3340(10'11")
Track gauge	M		2740( 8'12")
Track shoe width, standard	N		600(24")
Travel speed(Low/high)		km/hr(mph)	3.2/5.3(2.0/3.3)
Swing speed		rpm	10.3
Gradeability		Degree(%)	35(70)
Ground pressure(600mm shoe)		kgf/cm <sup>2</sup> (psi)	0.78(11.09)

## 2) ROBEX 450-7A

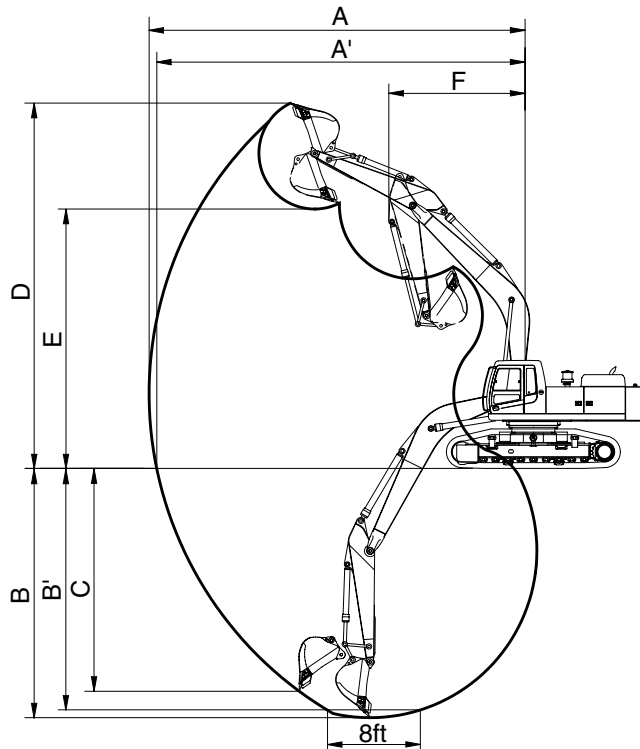


4507A2SP02

Description		Unit	Specification
Operating weight		kg(lb)	43800(96560)
Bucket capacity(SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	2.15(2.81)
Overall length	A	mm(ft-in)	12000(39' 4")
Overall width, with 600mm shoe	B		3340(10'11")
Overall height	C		3600(11'10")
Superstructure width	D		2980( 9' 9")
Overall height of cab	E		3230(10' 7")
Ground clearance of counterweight	F		1340( 4' 5")
Engine cover height	G		2852( 9' 4")
Minimum ground clearance	H		555( 1'10")
Rear-end distance	I		3665(12' 0")
Rear-end swing radius	I'		3720(12' 2")
Distance between tumbler	J		4040(13' 3")
Undercarriage length	K		5032(16' 6")
Undercarriage width	L		3340(10'11")
Track gauge	M		2740( 8'12")
Track shoe width, standard	N		600(24")
Travel speed(Low/high)			km/hr(mph)
Swing speed		rpm	10.0
Gradeability		Degree(%)	35(70)
Ground pressure(600mm shoe)		kgf/cm <sup>2</sup> (psi)	0.83(11.8)

### 3. WORKING RANGE

• 7.06m(23' 2") BOOM

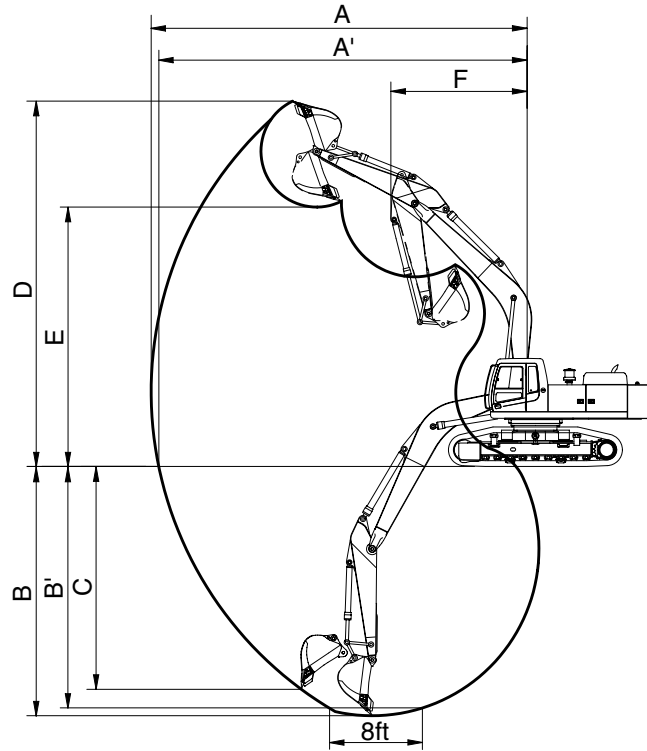


4507A2SP04

Description		2.40m(7'10") Arm	2.90m(9' 6") Arm	3.38m(11' 1") Arm	4.00m(13' 1") Arm	4.50m(14' 9") Arm
Max digging reach	A	11160mm (36' 7")	11550mm (37'11")	12100mm (39' 8")	12660mm (41' 6")	13150mm (43' 2")
Max digging reach on ground	A'	10940mm (35'11")	11340mm (37' 2")	11900mm (39' 1")	12470mm (40'11")	12960mm (42' 6")
Max digging depth	B	6810mm (22' 4")	7310mm (23'12")	7790mm (25' 7")	8410mm (27' 7")	8910mm (29' 3")
Max digging depth (8ft level)	B'	6620mm (21' 9")	7140mm (23' 5")	7640mm (25' 1")	8280mm (27' 2")	8790mm (28'10")
Max vertical wall digging depth	C	5990mm (19' 8")	5850mm (19' 2")	6560mm (21' 6")	7290mm (23'11")	7690mm (25' 3")
Max digging height	D	10600mm (34' 9")	10550mm (34' 7")	11030mm (36' 2")	11250mm (36'11")	11500mm (37' 9")
Max dumping height	E	7190mm (23' 7")	7240mm (23' 9")	7660mm (25' 2")	7880mm (25'10")	8120mm (26' 8")
Min swing radius	F	5090mm (16' 8")	4900mm (16' 1")	4780mm (15' 8")	4830mm (15'10")	4870mm (15'12")
Bucket digging force	SAE	224[244] kN	224[244] kN	224[244] kN	224[244] kN	224[244] kN
		22800[24870] kgf	22800[24870] kgf	22800[24870] kgf	22800[24870] kgf	22800[24870] kgf
		50270[54840] lbf	50270[54840] lbf	50270[54840] lbf	50270[54840] lbf	50270[54840] lbf
	ISO	256[279] kN	256[279] kN	256[279] kN	256[279] kN	256[279] kN
		26100[28470] kgf	26100[28470] kgf	26100[28470] kgf	26100[28470] kgf	26100[28470] kgf
		57540[62770] lbf	57540[62770] lbf	57540[62770] lbf	57540[62770] lbf	57540[62770] lbf
Arm crowd force	SAE	266[290] kN	216[235] kN	180[197] kN	164[179] kN	153[167] kN
		27100[29560] kgf	22000[24000] kgf	18400[20070] kgf	16700[18220] kgf	15600[17020] kgf
		59750[65180] lbf	48500[52910] lbf	40570[44260] lbf	36820[40170] lbf	34390[37520] lbf
	ISO	279[304] kN	226[246] kN	187[204] kN	170[185] kN	158[172] kN
		28400[30980] kgf	23000[25090] kgf	19100[20840] kgf	17300[18870] kgf	16100[17560] kgf
		62610[68300] lbf	50710[55320] lbf	42110[45940] lbf	38140[41610] lbf	35490[38720] lbf

[ ] : Power boost

• 6.55m(21' 6") BOOM

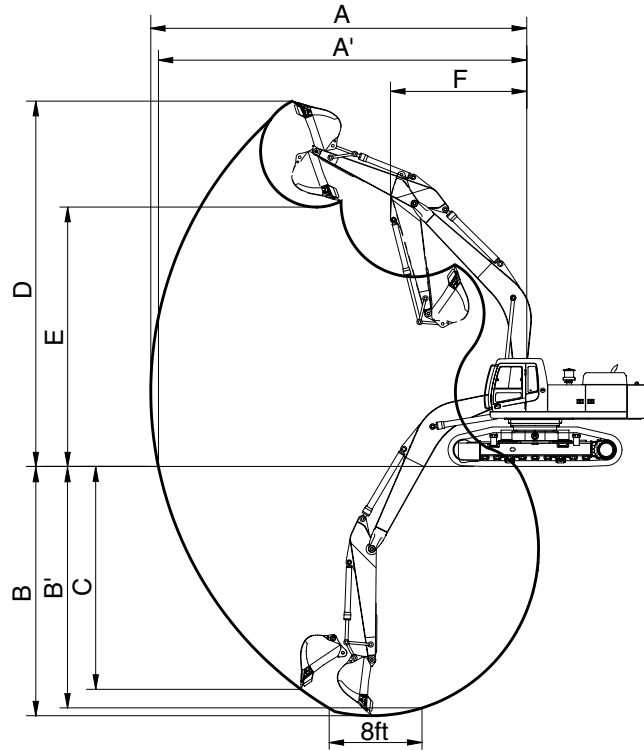


4507A2SP04

Description		2.40m(7' 10") Arm
Max digging reach	A	10610mm (34' 10")
Max digging reach on ground	A'	10370mm (34' 0")
Max digging depth	B	6330mm (20' 9")
Max digging depth (8ft level)	B'	6150mm (20' 2")
Max vertical wall digging depth	C	5430mm (17' 10")
Max digging height	D	10210mm (33' 6")
Max dumping height	E	6810mm (22' 4")
Min swing radius	F	4640mm (15' 3")
Bucket digging force	SAE	224[244] kN
		22800[24870] kgf
		50270[54840] lbf
	ISO	256[279] kN
		26100[28470] kgf
		57540[62770] lbf
Arm crowd force	SAE	266[290] kN
		27100[29560] kgf
		59750[65180] lbf
	ISO	279[304] kN
		28400[30980] kgf
		62610[68300] lbf

[ ] : Power boost

· 9.00m(29' 6") BOOM



4507A2SP04

Description		5.85m(19' 2") Arm
Max digging reach	A	16350mm (53' 8")
Max digging reach on ground	A'	16200mm (53' 2")
Max digging depth	B	11560mm (37'11")
Max digging depth (8ft level)	B'	11460mm (37' 7")
Max vertical wall digging depth	C	10320mm (33'10")
Max digging height	D	13840mm (45' 5")
Max dumping height	E	10440mm (34' 3")
Min swing radius	F	5940mm (19' 6")
Bucket digging force	SAE	224[244] kN
		22800[24870] kgf
		50270[54840] lbf
	ISO	256[279] kN
		26100[28470] kgf
		57540[62770] lbf
Arm crowd force	SAE	123[134] kN
		12500[13640] kgf
		27560[30070] lbf
	ISO	127[138] kN
		12900[14070] kgf
		28440[31030] lbf

[ ] : Power boost











## 4. WEIGHT

Item	R450LC-7A		R450-7A	
	kg	lb	kg	lb
Upperstructure assembly	16790	37020	←	←
Main frame weld assembly	3520	7760	←	←
Engine assembly	940	2070	←	←
Main pump assembly	240	530	←	←
Main control valve assembly	420	930	←	←
Swing motor assembly	230	510	←	←
Hydraulic oil tank assembly	450	990	←	←
Fuel tank assembly	250	550	←	←
Counterweight(for 7.06m boom)	9200	20280	←	←
Counterweight(for 9.0m boom)	10700	23590	←	←
Cab assembly	310	680	←	←
Lower chassis assembly	19000	41890	16520	36420
Track frame weld assembly	7060	15570	6600	14550
Swing bearing	600	1320	←	←
Travel motor assembly	360	790	←	←
Turning joint	50	110	←	←
Track recoil spring and idler	300	660	←	←
Idler	250	550	←	←
Carrier roller	80	180	←	←
Track roller	80	180	←	←
Track-chain assembly(600mm standard triple grouser shoe)	6050	13330	←	←
Front attachment assembly(7.06m boom, 3.38m arm, 2.15m <sup>3</sup> SAE heaped bucket)	8710	19200	←	←
7.06m boom assembly	3300	7360	←	←
6.55m boom assembly	3160	7000	←	←
9.0m boom assembly	4050	8930	←	←
3.38m arm assembly	1450	3200	←	←
2.15m <sup>3</sup> SAE heaped bucket	1560	3440	←	←
Boom cylinder assembly	910	2010	←	←
Arm cylinder assembly	540	1190	←	←
Bucket cylinder assembly	300	660	←	←
Bucket control rod assembly	130	290	←	←

## 5. LIFTING CAPACITIES













1) 6.55m(21' 6") boom, 2.40m(7' 10") arm equipped with 2.15m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 9,200kg(20,280lb) counterweight.

-  : Rating over-front
-  : Rating over-side or 360 degree













Load point height		Load radius								At max. reach		
		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		Capacity		Reach
												m(ft)
6.0m (20.0ft)	kg lb					*12650 *27890	*12650 *27890	*11210 24710	8690 19160	*9660 *21300	6120 13490	9.15 (30.0)
4.5m (15.0ft)	kg lb			*18690 *41200	*18690 *41200	*14180 *31260	12170 26830	*11850 *26120	8400 18520	9470 20880	5390 11880	9.65 (31.7)
3.0m (10.0ft)	kg lb					*15840 *34920	11400 25130	*12650 *27890	8020 17680	8970 17980	5040 11110	9.86 (32.3)
1.5m (5.0ft)	kg lb					*16990 *37460	10770 23740	*13250 *29210	7680 16930	8930 19690	4970 10960	9.80 (32.2)
Ground Line	kg lb			*23200 *51150	16210 35740	*17220 *37960	10420 22970	*13350 *29430	7450 16420	9370 20660	5210 11490	9.47 (31.1)
-1.5m (-5.0ft)	kg lb	*25480 *56170	*25480 *56170	*21390 *47160	16250 35830	*16370 *36090	10320 22750	*12620 *27820	7380 16270	*9480 *20900	5860 12920	8.83 (29.0)
-3.0m (-10.0ft)	kg lb	*22320 *49210	*22320 *49210	*18300 *40340	16520 36420	*14220 *31350	10450 23040			*8650 *19070	7280 16050	7.80 (25.6)
-4.5m (-15.0ft)	kg lb			*13110 *28900	*13110 *28900							

- Note
1. Lifting capacity are based on SAE J1097 and ISO 10567.
  2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
  3. The load point is a hook located on the back of the bucket.
  4. \*indicates load limited by hydraulic capacity.













2) 7.06m(23' 2") boom, 2.40m(7' 10") arm equipped with 2.15m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 9,200kg(20,280lb) counterweight.

Load point height		Load radius										At max. reach		
		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		Capacity		Reach
														m(ft)
6.0m (20.0ft)	kg lb					*12160 *26810	*12160 *26810	*10540 *23240	8580 18920			*8790 *19380	5320 11730	9.75 (32.0)
4.5m (15.0ft)	kg lb					*13850 *30530	11800 26010	*11340 *25000	8200 18080			8460 18650	4730 10430	10.21 (33.5)
3.0m (10.0ft)	kg lb					*15560 *34300	10960 24160	*12220 *26940	7780 17150	10250 22600	5730 12630	8050 17750	4430 9770	10.41 (34.2)
1.5m (5.0ft)	kg lb					*16660 *36730	10340 22800	*12880 *28400	7420 16360	10040 22130	5540 12210	8020 17680	4380 9660	10.36 (34.0)
Ground Line	kg lb					*16840 *37130	10030 22110	*13080 *28840	7190 15850			8370 18450	4570 10080	10.05 (33.0)
-1.5m (-5.0ft)	kg lb			*20660 *45550	15820 34880	*16130 *35560	9970 21980	*12610 *27800	7110 15670			*8800 *19400	5080 11200	9.46 (31.0)
-3.0m (-10.0ft)	kg lb	*21190 *46720	*21190 *46720	*18150 *40010	16110 35520	*14430 *31810	10110 22290	*11140 *24560	7220 15920			*8270 *18230	6160 13580	8.51 (27.9)
-4.5m (-15.0ft)	kg lb			*14140 *31170	*14140 *31170	*11160 *24600	10480 23100					*6610 *14570	*6610 *14570	7.04 (23.1)















3) 7.06m(23' 2") boom, 2.90m(9' 6") arm equipped with 2.15m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 9,200kg(20,280lb) counterweight.

Load point height		Load radius										At max. reach		
		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		Capacity		Reach
														m(ft)
6.0m (20.0ft)	kg lb							*9890 *21800	8690 19160			*8170 *18010	4920 10850	10.17 (33.4)
4.5m (15.0ft)	kg lb			*17370 *38290	*17370 *38290	*13010 *23680	12000 26460	*10760 *23720	8280 18250	*9430 *20790	5970 13160	7920 17460	4380 9660	10.62 (34.8)
3.0m (10.0ft)	kg lb			*21190 *46720	17040 37570	*14850 *32740	11110 24490	*11740 *25880	7820 17240	*9910 *21850	5730 12630	7540 16620	4110 9060	10.80 (35.4)
1.5m (5.0ft)	kg lb			*22600 *49820	15880 35010	*16210 *35740	10390 22910	*12540 *27650	7410 16340	10010 22070	5500 12130	7490 16510	4040 8910	10.75 (35.3)
Ground Line	kg lb			*22850 *50380	15550 34280	*16730 *36880	9980 22000	*12930 *28510	7120 15700	9830 21670	5340 11770	7780 17150	4190 9240	10.46 (34.3)
-1.5m (-5.0ft)	kg lb	*19300 *42550	*19300 *42550	*21590 *47600	15570 34330	*16350 *36050	9840 21690	*12720 *28040	6990 15410			*8500 *18740	4610 10160	9.89 (32.4)
-3.0m (-10.0ft)	kg lb	*24620 *54280	*24620 *54280	*19390 *42750	15790 34810	*15030 *33140	9900 21830	*11680 *25750	7030 15500			*8240 *18170	5490 12100	9.00 (29.5)
-4.5m (-15.0ft)	kg lb	*19660 *43340	*19660 *43340	*15870 *34990	*15870 *34990	*12420 *27380	10190 22470					*7260 *16010	*7260 *16010	7.65 (25.1)















4) 7.06m(23' 2") boom, 3.38m(11' 1") arm equipped with 2.15m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 9,200kg(20,280lb) counterweight.

Load point height		Load radius										At max. reach		
		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		Capacity		Reach
														m(ft)
6.0m (20.0ft)	kg lb							*9410 *20750	8880 19580	*7440 *16400	6310 13910	*7720 *17020	4480 9880	10.76 (35.3)
4.5m (15.0ft)	kg lb					*12360 *27250	12300 27120	*10350 *22820	8470 18670	*9130 *20130	6110 13470	7310 16120	4030 8880	11.18 (36.7)
3.0m (10.0ft)	kg lb			*20190 *44510	17790 39220	*14350 *31640	11420 25180	*11430 *25200	8000 17640	*9700 *21380	5860 12920	6950 15410	3800 8380	11.35 (37.2)
1.5m (5.0ft)	kg lb			*22780 *50220	16430 36220	*15960 *35190	10670 23520	*12370 *27270	7570 16690	10120 22310	5610 12370	6950 15320	3740 8250	11.30 (37.1)
Ground Line	kg lb	*11960 *26370	*11960 *26370	*23320 *51410	15860 34970	*16780 *36990	10190 22470	*12940 *28530	7250 15980	9900 21830	5420 11950	7180 15830	3870 8530	11.03 (36.2)
-1.5m (-5.0ft)	kg lb	*17460 *38490	*17460 *38490	*22500 *49600	15740 34700	*16700 *36820	9970 21980	*12940 *28530	7080 15610	9790 21580	5320 11730	7770 17130	4210 9280	10.50 (34.4)
-3.0m (-10.0ft)	kg lb	*23150 *51040	*23150 *51040	*20630 *45480	15860 34970	*15700 *34610	9960 21960	*12200 *26900	7050 15540			*7850 *17310	4900 10800	9.67 (31.7)
-4.5m (-15.0ft)	kg lb	*22870 *50420	*22870 *50420	*17530 *38650	16200 35710	*13540 *29850	10150 22380	*10250 *22600	7220 15920			*7190 *15850	6290 13870	8.44 (27.7)
-6.0m (-20.0ft)	kg lb			*12450 *27450	*12450 *27450	*9310 *20530	*9310 *20530							















5) 7.06m(23' 2") boom, 4.00m(13' 1") arm equipped with 2.15m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 9,200kg(20,280lb) counterweight.

Load point height		Load radius											At max. reach			
		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		10.5m(35.0ft)		Capacity		Reach
																m(ft)
6.0m (20.0ft)	kg lb									*7780 *17150	6350 14000			*7000 *15430	3970 8750	11.35 (37.2)
4.5m (15.0ft)	kg lb							*9530 *21010	8530 18810	*8480 *18700	6110 13470	*4660 *10270	4460 9830	6630 14620	3570 7870	11.75 (38.5)
3.0m (10.0ft)	kg lb			*18320 *40390	18290 40320	*13280 *29280	11560 25490	*10680 *23550	8020 17680	*9120 *20110	5820 12830	*6310 *13910	4310 9500	6350 14000	3360 7410	11.91 (39.1)
1.5m (5.0ft)	kg lb			*21560 *47530	16630 36660	*15110 *33310	10700 23590	*11760 *25930	7530 16600	*9730 *21450	5530 12190	*7150 *15760	4150 9150	6300 13890	3300 7280	11.87 (38.9)
Ground Line	kg lb	*12740 *28090	*12740 *28090	*22920 *50530	15750 34720	*16260 *35850	10090 22240	*12510 *27850	7140 15740	9790 21580	5290 11660	*6660 *14680	4020 8860	6480 14290	3390 7470	11.61 (38.1)
-1.5m (-5.0ft)	kg lb	*16670 *36750	*16670 *36750	*22740 *50130	15440 34040	*16550 *36490	9770 21540	*12760 *28130	6900 15210	9620 21210	5140 11330			6950 15320	3660 8070	11.11 (36.5)
-3.0m (-10.0ft)	kg lb	*21280 *46910	*21280 *46910	*21390 *47160	15450 34060	*15950 *35160	9680 21340	*12350 *27230	6820 15040	9580 21120	5110 11270			*7420 *16360	4200 9260	10.34 (33.9)
-4.5m (-15.0ft)	kg lb	*25850 *56990	*25850 *56990	*18860 *41580	15700 34610	*14320 *31570	9790 21580	*11000 *24250	6900 15210					*7070 *15590	5240 11550	9.21 (30.2)
-6.0m (-20.0ft)	kg lb	*19310 *42570	*19310 *42570	*14670 *32340	*14670 *32340	*11140 *24560	10140 22350							*5870 *12940	*5870 *12940	7.55 (24.8)

6) 7.06m(23' 2") boom, 4.50m(14' 9") arm equipped with 2.15m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 9,200kg(20,280lb) counterweight.

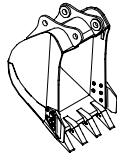
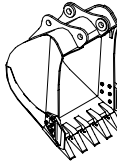
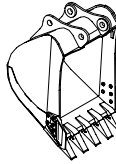
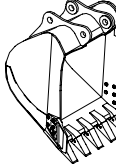
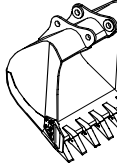

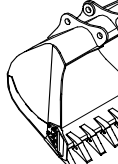
Load point height		Load radius												At max. reach		
		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		10.5m(35.0ft)		Capacity	Reach	
																m(ft)
6.0m (20.0ft)	kg lb									*7400 *16310	6420 14150	*4260 *9390	*4260 *9390	*6490 *14310	3580 7890	11.86 (38.9)
4.5m (15.0ft)	kg lb						*8870 *19550	8630 19030	*7970 *17570	6160 13580	*6020 *13270	4480 9880	6130 13510	3230 7120	12.24 (40.2)	
3.0m (10.0ft)	kg lb			*16790 *37020	*16790 *37020	*12400 *27340	11740 25880	*10080 *22220	8090 17840	*8660 *19090	5840 12870	*7350 *16200	4300 9480	5870 12940	3040 6700	12.40 (40.7)
1.5m (5.0ft)	kg lb			*20440 *45060	16910 37280	*14400 *31750	10800 23810	*11250 *24800	7550 16640	*9350 *20610	5510 12150	7700 16980	4110 9060	5820 12830	2980 6570	12.35 (40.5)
Ground Line	kg lb	*12980 *28620	*12980 *28620	*22400 *49380	15780 34790	*15790 *34810	10090 22240	*12140 *26760	7110 15670	9740 21470	5240 11550	7520 16580	3950 8710	5960 13140	3040 6700	12.10 (39.7)
-1.5m (-5.0ft)	kg lb	*16020 *35320	*16020 *35320	*22740 *50130	15290 33710	*16360 *36070	9680 21340	*12570 *27710	6810 15010	9530 21010	5050 11130	7410 16340	3850 8490	6350 14000	3270 7210	11.63 (38.2)
-3.0m (-10.0ft)	kg lb	*19970 *44030	*19970 *44030	*21830 *48130	15190 33490	*16070 *35430	9510 20970	*12390 *27320	6680 14730	9440 20810	4970 10960			*7010 *15450	3710 8180	10.90 (35.8)
-4.5m (-15.0ft)	kg lb	*24940 *54980	*24940 *54980	*19740 *43520	15360 33860	*14810 *32650	9560 21080	*11410 *25150	6700 14770	*8670 *19110	5040 11110			*6810 15010	4540 10010	9.85 (32.3)
-6.0m (-20.0ft)	kg lb	*22050 *48610	*22050 *48610	*16160 *35630	15790 34810	*12230 *26960	9830 21670	*9040 *19930	6940 15300					*6070 *13380	*6070 *13380	8.34 (27.4)

7) 9.0m(29' 6") boom, 5.85m(19' 2") arm equipped with 1.65m<sup>3</sup>(SAE heaped) bucket, 600mm (24") triple grouser shoe and 10,700kg(23,590lb) counterweight.

Load point height		Load radius												At max. reach			
		3.0m(10.0ft)		5.0m(15.0ft)		7.0m(25.0ft)		9.0m(30.0ft)		11.0m(35.0ft)		13m(45.0ft)		Capacity	Reach		
																m(ft)	
10.0m (35.0ft)	kg lb														*4090 *9020	3170 6990	13.54 (44.4)
8.0m (25.0ft)	kg lb									*4790 *10560	*4790 *10560	*2310 *5090	*2310 *5090	*3970 *8750	2520 5560	14.55 (47.7)	
6.0m (20.0ft)	kg lb									*5170 *11400	4780 10540	*3890 *8580	3200 7050	*3980 *8770	2120 4670	15.20 (49.9)	
4.0m (15.0ft)	kg lb							*6790 *14970	6540 14420	*5700 *12570	4420 9740	*4980 *10980	3010 6640	4080 8990	1880 4140	15.55 (51.0)	
2.0m (5.0ft)	kg lb			*16110 *35520	14690 32390	*10460 *23060	8870 19550	*7790 *17170	5880 12960	*6260 *13800	4040 8910	*5280 *11640	2800 6170	3950 8710	1760 3880	15.61 (51.2)	
Ground Line	kg lb			*16240 *35800	13060 28790	*11800 *26010	7920 17460	*8600 *18960	5320 11730	*6740 *14860	3700 8160	5370 11840	2600 5730	3980 8770	1760 3880	15.39 (50.5)	
-2.0m (-5.0ft)	kg lb	*10680 *23550	*10680 *23550	*16760 *36950	12460 27470	*12370 *27270	7370 16250	*9040 *19930	4930 10870	6930 15280	3460 7630	5220 11510	2460 5420	4200 9260	1890 4170	14.87 (48.8)	
-4.0m (-15.0ft)	kg lb	*13660 *30120	*13660 *30120	*17510 *38600	12370 27270	*12180 *26850	7160 15790	*8990 *19820	4750 10470	6800 14990	3330 7340	*4160 *9170	2430 5360	*4460 *9830	2180 4810	14.02 (46.0)	
-6.0m (-20.0ft)	kg lb	*17110 *37720	*17110 *37720	*15620 *34440	12590 27760	*11180 *24650	7200 15870	*8300 *18300	4750 10470	*6180 *13620	3360 7410			*4330 *9550	2750 *6060	12.76 (41.9)	
-8.0m (-28.0ft)	kg lb	*18070 *39840	*18070 *39840	*12490 *27540	*12490 *27540	*9140 *20150	7480 16490	*6630 *14620	4960 10930					*3840 *8470	*3840 *8470	10.94 (35.9)	
-10.0m (-35.0ft)	kg lb					*5220 *11510	*5220 *11510										


## 6. BUCKET SELECTION GUIDE


### 1) GENERAL BUCKET


						
1.38m <sup>3</sup> SAE heaped bucket	1.65m <sup>3</sup> SAE heaped bucket	1.84m <sup>3</sup> SAE heaped bucket	※ 2.15m <sup>3</sup> SAE heaped bucket	2.56m <sup>3</sup> SAE heaped bucket	2.79m <sup>3</sup> SAE heaped bucket	3.03m <sup>3</sup> SAE heaped bucket

Capacity		Width		Weight	Recommendation							
					7.06m (23' 2") boom					6.55m(21' 5") boom	9.00m(29' 6") boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.4m arm (7' 10")	2.9m arm (9' 6")	3.38m arm (11' 1")	4.0m arm (13' 1")	4.5m arm (14' 9")	2.4m arm (7' 10")	5.85m arm (19' 2")	
1.38m <sup>3</sup> (1.80yd <sup>3</sup> )	1.20m <sup>3</sup> (1.57yd <sup>3</sup> )	1100mm (43.3")	1250mm (49.2")	1360kg (3000lb)								
1.65m <sup>3</sup> (2.16yd <sup>3</sup> )	1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1350mm (53.1")	1500mm (59.1")	1550kg (3420lb)								
1.84m <sup>3</sup> (2.41yd <sup>3</sup> )	1.60m <sup>3</sup> (2.09yd <sup>3</sup> )	1420mm (55.9")	1570mm (61.8")	1590kg (3510lb)								
※ 2.15m <sup>3</sup> (2.81yd <sup>3</sup> )	1.85m <sup>3</sup> (2.40yd <sup>3</sup> )	1610mm (63.4")	1760mm (69.3")	1740kg (3840lb)								
2.56m <sup>3</sup> (3.35yd <sup>3</sup> )	2.20m <sup>3</sup> (2.90yd <sup>3</sup> )	1870mm (73.6")	2020mm (79.5")	1970kg (4340lb)								
2.79m <sup>3</sup> (3.65yd <sup>3</sup> )	2.40m <sup>3</sup> (3.14yd <sup>3</sup> )	2020mm (79.5")	2170mm (85.4")	2100kg (4630lb)								
3.03m <sup>3</sup> (3.96yd <sup>3</sup> )	2.60m <sup>3</sup> (3.40yd <sup>3</sup> )	2170mm (85.4")	2320mm (91.3")	2140kg (4720lb)								

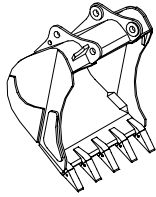
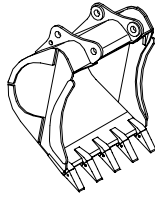
※ : Standard bucket

 Applicable for materials with density of 2000kg/m<sup>3</sup> (3370lb/yd<sup>3</sup>) or less

 Applicable for materials with density of 1600kg/m<sup>3</sup> (2700lb/yd<sup>3</sup>) or less

 Applicable for materials with density of 1100kg/m<sup>3</sup> (1850lb/yd<sup>3</sup>) or less

## 2) ROCK AND HEAVY DUTY BUCKET

	
◆ 2.2m <sup>3</sup> SAE heaped bucket	⊙ 1.8m <sup>3</sup> , 2.2m <sup>3</sup> , 2.43m <sup>3</sup> , 3.20m <sup>3</sup> SAE heaped bucket

Capacity		Width		Weight	Recommendation					
					7.06m (23' 2") boom					6.55m boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.4m arm (7' 10")	2.9m arm (9' 6")	3.38m arm (11' 1")	4.0m arm (13' 1")	4.5m arm (14' 9")	2.4m arm (7' 10")
◆ 2.20m <sup>3</sup> (2.88yd <sup>3</sup> )	1.80m <sup>3</sup> (2.35yd <sup>3</sup> )	1840mm (72.4")	-	2160kg (4760lb)						
⊙ 1.80m <sup>3</sup> (2.35yd <sup>3</sup> )	1.50m <sup>3</sup> (1.96yd <sup>3</sup> )	1560mm (61.4")	-	2090kg (4610lb)						
⊙ 2.20m <sup>3</sup> (2.88yd <sup>3</sup> )	1.80m <sup>3</sup> (2.35yd <sup>3</sup> )	1810mm (71.3")	-	2255kg (4970lb)						
⊙ 2.43m <sup>3</sup> (3.18yd <sup>3</sup> )	2.10m <sup>3</sup> (2.75yd <sup>3</sup> )	1860mm (73.2")	-	2330kg (5140lb)						
⊙ 3.20m <sup>3</sup> (4.19yd <sup>3</sup> )	2.80m <sup>3</sup> (3.66yd <sup>3</sup> )	2080mm (81.9")	-	2790kg (6150lb)						

◆ : Heavy duty bucket

⊙ : Rock bucket

Applicable for materials with density of 2000kgf/m<sup>3</sup> (3370lbf/yd<sup>3</sup>) or less

Applicable for materials with density of 1600kgf/m<sup>3</sup> (2700lbf/yd<sup>3</sup>) or less

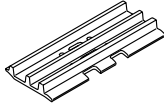
Applicable for materials with density of 1100kgf/m<sup>3</sup> (1850lbf/yd<sup>3</sup>) or less

## 7. UNDERCARRIAGE

### 1) TRACKS

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes dry tracks, lubricated rollers, idlers, sprockets, hydraulic track adjusters with shock absorbing springs and assembled track-type tractor shoes with triple grousers.

### 2) TYPES OF SHOES

Model	Shapes		Triple grouser				
							
R450-7A	Shoe width	mm(in)	600(24)	700(28)	750(30)	800(32)	900(36)
	Operating weight	kg(lb)	43800(96560)	44300(97660)	44500(98110)	44700(98550)	45200(99650)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.83(11.8)	0.72(10.2)	0.68( 9.7)	0.64( 9.1)	0.57( 8.1)
	Overall width	mm(ft-in)	3340(10' 11")	3440(11' 3")	3490(11' 5")	3540(11' 7")	3640(11' 11")
R450LC-7A	Shoe width	mm(in)	600(24)	700(28)	750(30)	800(32)	900(36)
	Operating weight	kg(lb)	45200(99650)	45700(100800)	46000(101400)	46300(102000)	46800(103200)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.78(11.09)	0.68( 9.67)	0.64( 9.10)	0.60( 8.53)	0.54( 7.68)
	Overall width	mm(ft-in)	3340(10' 11")	3440(11' 3")	3490(11' 5")	3540(11' 7")	3640(11' 11")

### 3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2EA
Track rollers	9EA
Track shoes	53EA

### 4) SELECTION OF TRACK SHOE

Suitable track shoes should be selected according to operating conditions.

#### Method of selecting shoes

Confirm the category from the list of applications in **table 2**, then use **table 1** to select the shoe. Wide shoes(Categories B and C) have limitations on applications. Before using wide shoes, check the precautions, then investigate and study the operating conditions to confirm if these shoes are suitable.

Select the narrowest shoe possible to meet the required flotation and ground pressure. Application of wider shoes than recommendations will cause unexpected problem such as bending of shoes, crack of link, breakage of pin, loosening of shoe bolts and the other various problems.

※ **Table 1**

Track shoe	Specification	Category
600mm triple grouser	Standard	A
700mm triple grouser	Option	B
750mm triple grouser	Option	B
800mm triple grouser	Option	C
900mm triple grouser	Option	C

※ **Table 2**

Category	Applications	Precautions
A	Rocky ground, river beds, normal soil	<ul style="list-style-type: none"> <li>• Travel at low speed on rough ground with large obstacles such as boulders or fallen trees</li> </ul>
B	Normal soil, soft ground	<ul style="list-style-type: none"> <li>• These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>• Travel at high speed only on flat ground</li> <li>• Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>
C	Extremely soft ground (Swampy ground)	<ul style="list-style-type: none"> <li>• Use the shoes only in the conditions that the machine sinks and it is impossible to use the shoes of category A or B</li> <li>• These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>• Travel at high speed only on flat ground</li> <li>• Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>

## 8. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	Cummins QSM 11-C
Type	4-cycle turbocharged charge 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 × 147.1mm(4.92" × 5.79")
Piston displacement	10800cc(659cu in)
Compression ratio	16.3 : 1
Rated gross horse power(SAE J1995)	362ps at 1900rpm(357Hp / 266kW at 1900rpm)
Maximum torque	170.6kgf · m(1234lb · ft) at 1400rpm
Engine oil quantity	37.85 l (10U.S. gal)
Dry weight	942kg(2077lb)
High idling speed	1850 ± 50rpm
Low idling speed	700 ± 50rpm
Rated fuel consumption	161.8g/Hp · hr at 1900rpm
Starting motor	Delco Remy 42MT (24V-7.2kW)
Alternator	Delco Remy 24V-50A
Battery	2 × 12V × 200Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 200cc/rev
Maximum pressure	330kgf/cm <sup>2</sup> (4690psi)[360kgf/cm <sup>2</sup> (5120psi)]
Rated oil flow	2 × 380 l /min (100.4U.S. gpm/83.6U.K. gpm)
Rated speed	1900rpm

[ ]: Power boost

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	35kgf/cm <sup>2</sup> (498psi)
Rated oil flow	28.5 l /min(7.5U.S. gpm/6.3U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	9 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	330kgf/cm <sup>2</sup> (4690psi) [360kgf/cm <sup>2</sup> (5120psi)]
Overload relief valve pressure	380kgf/cm <sup>2</sup> (5400psi)

[ ]: Power boost

### 5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	148.5cc/rev
Relief pressure	285kgf/cm <sup>2</sup> (4050psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	63kgf · m(456lb · ft)
Brake release pressure	23~50kgf/cm <sup>2</sup> (327~711psi)
Reduction gear type	2 - stage planetary
Swing speed	9.0rpm

### 6) TRAVEL MOTOR

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

## 7) REMOTE CONTROL VALVE

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

## 8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 170 × ∅ 120 × 1570mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 185 × ∅ 125 × 1820mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 160 × ∅ 110 × 1370mm
	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
R450LC-7A	Standard	600mm(24")	0.78kgf/cm <sup>2</sup> (11.09psi)	53	3340mm(10' 11")
	Option	700mm(28")	0.67kgf/cm <sup>2</sup> ( 9.53psi)	53	3440mm(11' 3")
		750mm(30")	0.63kgf/cm <sup>2</sup> ( 8.96psi)	53	3490mm(11' 5")
		800mm(32")	0.60kgf/cm <sup>2</sup> ( 8.53psi)	53	3540mm(11' 7")
		900mm(36")	0.54kgf/cm <sup>2</sup> ( 7.68psi)	53	3640mm(11' 11")

## 10) BUCKET

Item		Capacity		Tooth quantity	Width	
		PCSA heaped	CECE heaped		Without side cutter	With side cutter
R450LC-7A	Standard	2.15m <sup>3</sup> (2.81yd <sup>3</sup> )	1.85m <sup>3</sup> (2.40yd <sup>3</sup> )	5	1610mm(63.4")	1760mm(69.3")
	Option	1.38m <sup>3</sup> (1.80yd <sup>3</sup> )	1.20m <sup>3</sup> (1.57yd <sup>3</sup> )	4	1100mm(43.3")	1250mm(49.2")
		1.65m <sup>3</sup> (2.16yd <sup>3</sup> )	1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	5	1350mm(55.9")	1500mm(59.1")
		⊙1.80m <sup>3</sup> (2.35yd <sup>3</sup> )	1.50m <sup>3</sup> (1.96yd <sup>3</sup> )	5	1560mm(61.4")	-
		1.84m <sup>3</sup> (2.41yd <sup>3</sup> )	1.60m <sup>3</sup> (2.09yd <sup>3</sup> )	5	1420mm(55.9")	1570mm(61.8")
		◆2.20m <sup>3</sup> (2.88yd <sup>3</sup> )	1.80m <sup>3</sup> (2.35yd <sup>3</sup> )	5	1840mm(72.4")	-
		⊙2.20m <sup>3</sup> (2.88yd <sup>3</sup> )	1.80m <sup>3</sup> (2.35yd <sup>3</sup> )	5	1810mm(71.3")	-
		⊙2.43m <sup>3</sup> (3.18yd <sup>3</sup> )	2.10m <sup>3</sup> (2.75yd <sup>3</sup> )	5	1860mm(73.2")	-
		2.56m <sup>3</sup> (3.35yd <sup>3</sup> )	2.20m <sup>3</sup> (2.90yd <sup>3</sup> )	6	1870mm(73.6")	2020mm(79.5")
		2.79m <sup>3</sup> (3.65yd <sup>3</sup> )	2.40m <sup>3</sup> (3.14yd <sup>3</sup> )	7	2020mm(79.5")	2170mm(85.4")
		3.03m <sup>3</sup> (3.96yd <sup>3</sup> )	2.60m <sup>3</sup> (3.40yd <sup>3</sup> )	7	2170mm(85.4")	2320mm(91.3")
		⊙3.20m <sup>3</sup> (4.19yd <sup>3</sup> )	2.80m <sup>3</sup> (3.66yd <sup>3</sup> )	5	2080mm(81.9")	-

◆ : Heavy duty bucket

⊙ : Rock bucket(Esco type)

## 9. RECOMMENDED OILS

Use only oils listed below or equivalent.

Do not mix different brand oil.

Service point	Kind of fluid	Capacity l (U.S. gal)	Ambient temperature °C (°F)								
			-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)	40 (104)		
Engine oil pan	Engine oil	38(10)						SAE 30			
			SAE 10W								
			SAE 10W-30								
			SAE 15W-40								
Swing drive	Gear oil	5.0×2 (1.3×2)					SAE 85W-140				
Final drive		5.0×2 (1.3×2)									
Hydraulic tank	Hydraulic oil	Tank; 250(66) System; 380(100)	ISO VG 32								
			ISO VG 46								
			ISO VG 68								
Fuel tank	Diesel fuel	610(161)	ASTM D975 NO.1								
			ASTM D975 NO.2								
Fitting (Grease nipple)	Grease	As required	NLGI NO.1								
			NLGI NO.2								
Radiator (Reservoir tank)	Mixture of antifreeze and water 50 : 50	50(13.2)	Ethylene glycol base permanent type								

**SAE** : Society of Automotive Engineers

**API** : American Petroleum Institute

**ISO** : International Organization for Standardization

**NLGI** : National Lubricating Grease Institute

**ASTM** : American Society of Testing and Material