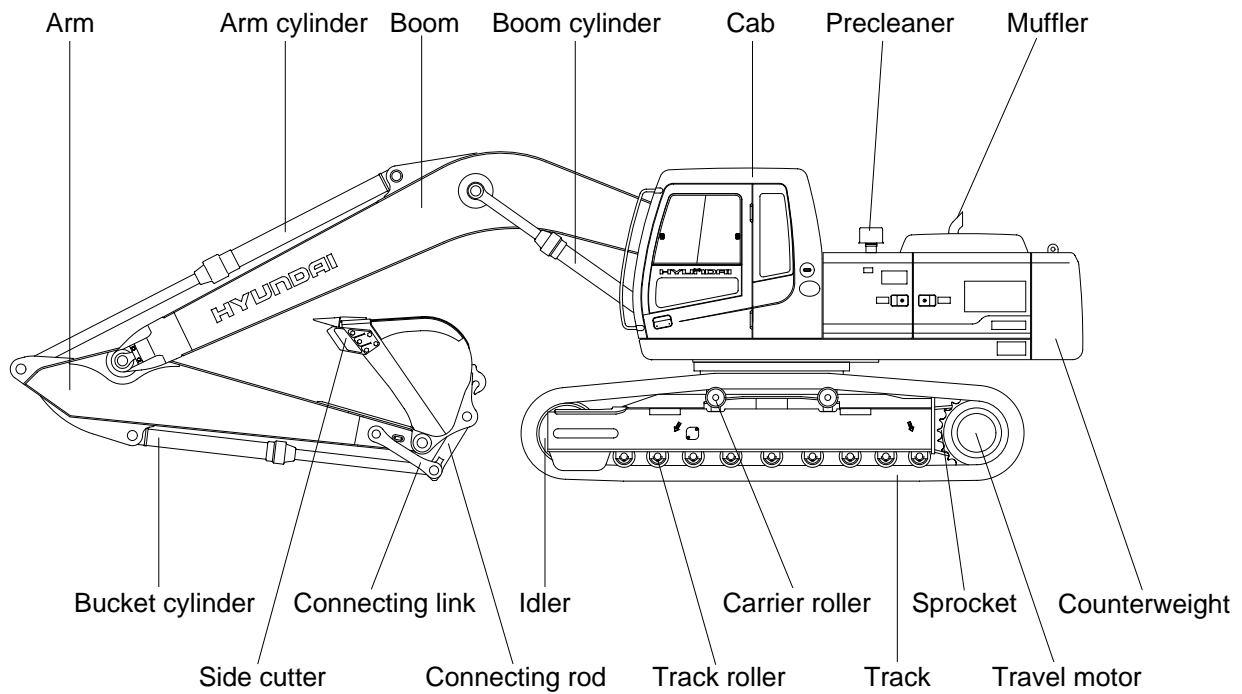
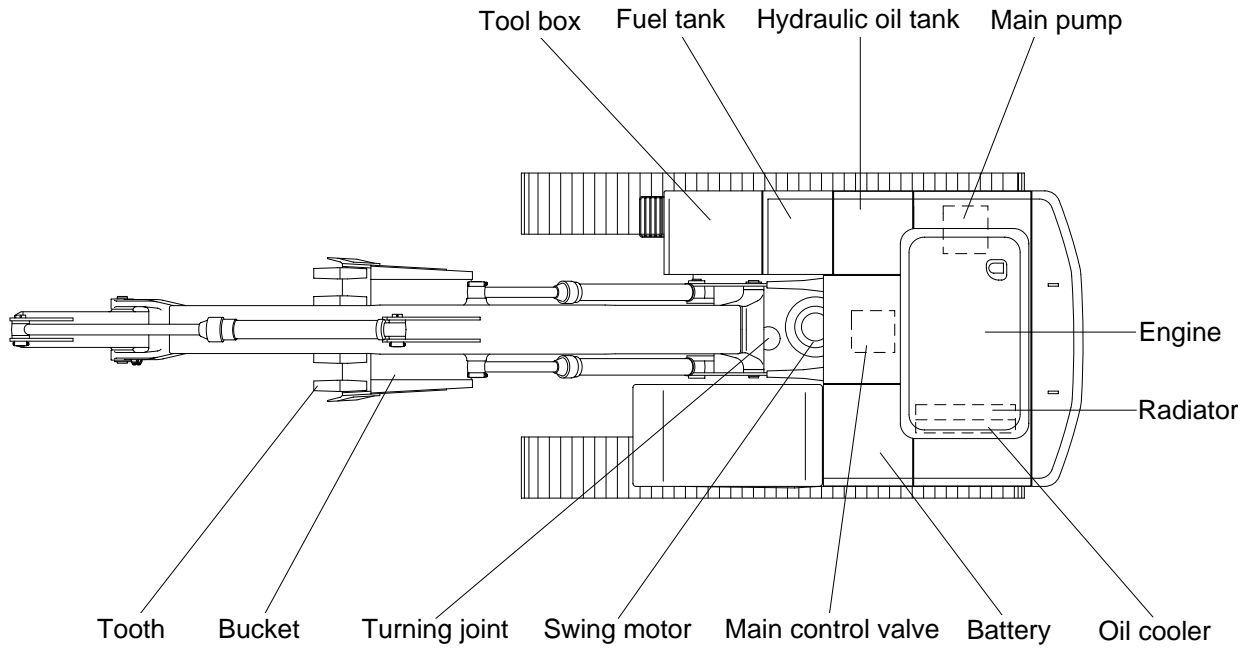


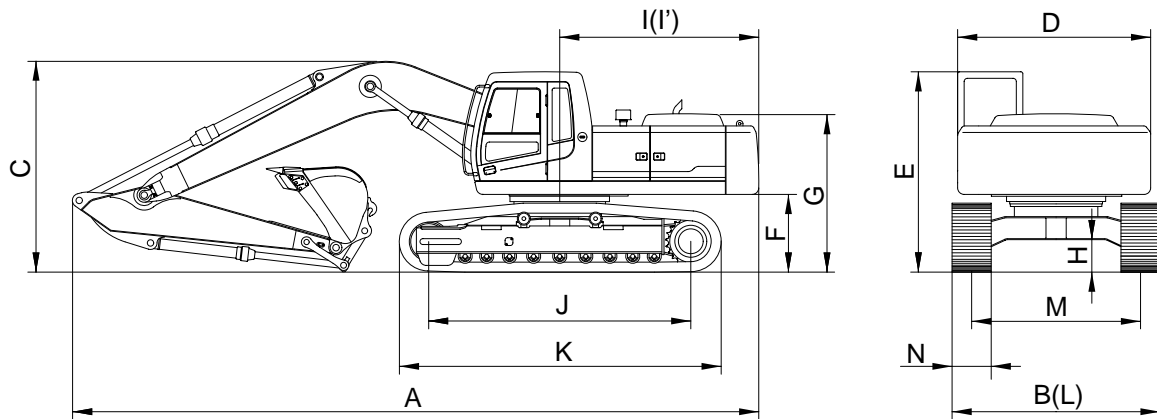
# GROUP 2 SPECIFICATIONS

## 1. MAJOR COMPONENT



29072SP00

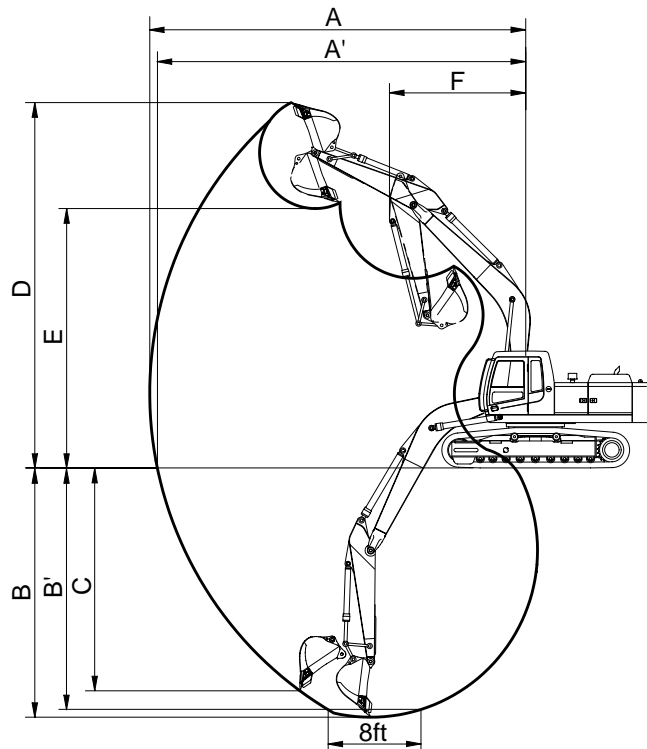
## 2. SPECIFICATIONS



29072SP01

Description		Unit	Specification
Operating weight		kg(lb)	32200(70990)
Bucket capacity(PCSA heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	1.44(1.88)
Overall length	A	mm(ft-in)	10980(36' 0")
Overall width, with 600mm shoe	B		3280(10' 9")
Overall height	C		3380(11' 1")
Superstructure width	D		2980( 9' 9")
Overall height of cab	E		3110(10' 2")
Ground clearance of counterweight	F		1215( 3' 12")
Engine cover height	G		2580( 8' 6")
Minimum ground clearance	H		500( 1' 8")
Rear-end distance	I		3265(10' 9")
Rear-end swing radius	I'		3330(10' 11")
Distance between tumbler	J		4030(13' 3")
Undercarriage length	K		4940(16' 2")
Undercarriage width	L		3280(10' 9")
Track gauge	M		2680( 8' 10")
Track shoe width, standard	N		600(23.6")
Travel speed(Low/high)		km/hr(mph)	3.2/5.4(2.0/3.4)
Swing speed		rpm	9.1
Gradeability		Degree(%)	35(70)
Ground pressure(600mm shoe)		kgf/cm <sup>2</sup> (psi)	0.62(8.82)

### 3. WORKING RANGE



36072SP04

Description	6.45m(21' 2") Arm				6.15m(20' 2") Boom	
	2.2m(7' 3") Arm	2.5m(8' 2") Arm	3.2m(10' 6") Arm	4.05m(13' 3") Arm	2.2m(7' 3") Arm	
Max digging reach	A 10330mm (33' 11")	10550mm (34' 7")	11140mm (36' 7")	11950mm (39' 2")	10020mm (32' 10")	
Max digging reach on ground	A' 10110mm (33' 2")	10330mm (33' 11")	10940mm (35' 11")	11760mm (38' 7")	9800mm (32' 2")	
Max digging depth	B 6370mm (20' 11")	6710mm (22' 0")	7370mm (24' 2")	8220mm (26' 12")	6160mm (20' 3")	
Max digging depth (8ft level)	B' 6160mm (20' 3")	6470mm (21' 3")	7210mm (23' 8")	8080mm (26' 6")	5950mm (19' 6")	
Max vertical wall digging depth	C 5980mm (19' 7")	5920mm (19' 5")	6360mm (20' 10")	7260mm (23' 10")	5710mm (18' 9")	
Max digging height	D 10220mm (33' 6")	10170mm (33' 4")	10310mm (33' 10")	10710mm (35' 2")	9940mm (32' 7")	
Max dumping height	E 7050mm (23' 2")	7050mm (23' 2")	7240mm (23' 9")	7630mm (25' 0")	6780mm (22' 3")	
Min swing radius	F 4700mm (15' 5")	4500mm (14' 9")	4470mm (14' 8")	4470mm (14' 8")	4520mm (14' 10")	
Bucket digging force	SAE	177.5[193.6] kN	177.5[193.6] kN	177.5[193.6] kN	177.5[193.6] kN	177.5[193.6] kN
		18100[19750] kgf	18100[19750] kgf	18100[19750] kgf	18100[19750] kgf	18100[19750] kgf
		39900[43530] lbf	39900[43530] lbf	39900[43530] lbf	39900[43530] lbf	39900[43530] lbf
	ISO	198.1[216.1] kN	198.1[216.1] kN	198.1[216.1] kN	198.1[216.1] kN	198.1[216.1] kN
		20200[22040] kgf	20200[22040] kgf	20200[22040] kgf	20200[22040] kgf	20200[22040] kgf
		44530[48580] lbf	44530[48580] lbf	44530[48580] lbf	44530[48580] lbf	44530[48580] lbf
Arm crowd force	SAE	185.3[202.2] kN	168.7[184.0] kN	132.4[144.4] kN	112.8[123.0] kN	185.3[202.2] kN
		18900[20620] kgf	17200[18760] kgf	13500[14730] kgf	11500[12550] kgf	18900[20620] kgf
		41670[45460] lbf	37920[41370] lbf	29760[32470] lbf	25350[27650] lbf	41670[45460] lbf
	ISO	191.2[208.6] kN	174.6[190.4] kN	136.3[148.7] kN	115.7[126.2] kN	191.2[208.6] kN
		19500[21270] kgf	17800[19420] kgf	13900[15160] kgf	11800[12870] kgf	19500[21270] kgf
		42990[46900] lbf	39240[42810] lbf	30640[33430] lbf	26010[28370] lbf	42990[46900] lbf

[ ] : Power boost











#### 4. WEIGHT

Item	R320LC-7	
	kg	lb
Upperstructure assembly	14520	31590
Main frame weld assembly	2680	5900
Engine assembly	590	1300
Main pump assembly	180	380
Main control valve assembly	200	440
Swing motor assembly	310	680
Hydraulic oil tank assembly	230	490
Fuel tank assembly	210	450
Counterweight	6200	13670
Cab assembly	310	680
Radiator total assy	280	620
Lower chassis assembly	11500	25770
Track frame weld assembly	3970	8750
Swing bearing	410	900
Travel motor assembly	390	860
Turning joint	50	110
Tension cylinder	210	450
Idler	250	540
Sprocket	80	170
Carrier roller	40	80
Track roller	60	120
Track-chain assembly(600mm standard triple grouser shoe)	1860	4100
Front attachment assembly(6.45m boom, 3.2m arm, 1.44m <sup>3</sup> PCSA heaped bucket)	6110	13470
6.45m boom assembly	2590	5710
3.2m arm assembly	1140	2510
1.44m <sup>3</sup> PCSA heaped bucket	1110	2450
Boom cylinder assembly	280	620
Arm cylinder assembly	380	840
Bucket cylinder assembly	270	570
Bucket control linkage assembly	370	820

## 5. LIFTING CAPACITIES











1) 6.15m(20' 2") boom, 2.2m(7' 3") arm equipped with 1.44m<sup>3</sup>(PCSA heaped) bucket and 600mm (24") triple grouser shoe.

-  : 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)
7.5m (25.0ft)	kg lb									*6910 *15230	5680 12520	7.69 (25.2)
6.0m (20.0ft)	kg lb					*7760 *17110	*7760 *17110	*7460 *16450	5770 12720	*6960 *15340	4510 9940	8.61 (28.2)
4.5m (15.0ft)	kg lb			*11210 *24710	*11210 *24710	*8910 *19640	8260 18210	*7850 *17310	5630 12410	6180 13620	3920 8640	9.16 (30.1)
3.0m (10.0ft)	kg lb			*14450 *31860	12090 26650	*10390 *22910	7760 17110	8500 18740	5400 11900	5810 12810	3650 8050	9.39 (30.8)
1.5m (5.0ft)	kg lb			*16730 *36880	11300 24910	*11700 *25790	7330 16160	8250 18190	5180 11420	5780 12740	3610 7960	9.35 (30.7)
Ground Line	kg lb			*17390 *38340	11020 24290	11570 25510	7070 15590	8080 17810	5030 11090	6090 13430	3800 8380	9.02 (29.6)
-1.5m (-5.0ft)	kg lb	*16010 *35300	*16010 *35300	*16940 *37350	11010 24270	11480 25310	7000 15430	8040 17730	5000 11020	6900 15210	4330 9550	8.37 (27.5)
-3.0m (-10.0ft)	kg lb	*21280 *46910	*21280 *46910	*15440 *34040	11200 24690	*11470 *25290	7100 15650			*7700 *16980	5530 12190	7.29 (23.9)
-4.5m (-15.0ft)	kg lb	*16550 *36490	*16550 *36490	*12170 *26830	11630 25640							

- 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) 6.45m(21' 2") boom, 2.2m(7' 3") arm equipped with 1.44m<sup>3</sup>(PCSA heaped) bucket and 600mm (24") triple grouser shoe.

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)
7.5m (25.0ft)	kg lb									*6570 *14480	5120 11290	8.07 (26.5)
6.0m (20.0ft)	kg lb					*7600 *16760	*7600 *16760	*7100 *15650	5710 12590	6450 14220	4110 9060	8.95 (29.4)
4.5m (15.0ft)	kg lb			*11460 *25260	*11460 *25260	*8830 *19470	8070 17790	*7610 *16780	5520 12170	5730 12630	3590 7910	9.47 (31.1)
3.0m (10.0ft)	kg lb					*10320 *22750	7530 16600	8350 18410	5260 11600	5400 11900	3350 7390	9.70 (31.8)
1.5m (5.0ft)	kg lb					*11580 *25530	7090 15630	8080 17810	5030 11090	5370 11840	3310 7300	9.66 (31.7)
Ground Line	kg lb			*17110 *37720	10680 23550	11310 24930	6840 15080	7910 17440	4870 10740	5650 12460	3480 7670	9.34 (30.6)
-1.5m (-5.0ft)	kg lb	*13660 *30120	*13660 *30120	*16560 *36510	10730 23660	11240 24780	6780 14950	7870 17350	4830 10650	6350 14000	3940 8690	8.72 (28.6)
-3.0m (-10.0ft)	kg lb	*20480 *45150	*20480 *45150	*15160 *33420	10930 24100	11360 25040	6890 15190			*7290 *16070	4950 10910	7.70 (25.3)
-4.5m (-15.0ft)	kg lb	*16460 *36290	*16460 *36290	*12360 *27250	11350 25020							

3) 6.45m(21' 2") boom, 2.5m(8' 2") arm equipped with 1.44m<sup>3</sup>(PCSA heaped) bucket and 600mm (24") triple grouser shoe.

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)
7.5m (25.0ft)	kg lb											*6180 *13620	4840 10670	8.34 (27.4)
6.0m (20.0ft)	kg lb							*6750 *14880	5750 12680			6170 13600	3920 8640	9.19 (30.2)
4.5m (15.0ft)	kg lb			*10750 *23700	*10750 *23700	*8420 *18560	8120 17900	*7310 *16120	5540 12210			5500 12130	3430 7560	9.70 (31.8)
3.0m (10.0ft)	kg lb			*14010 *30890	11740 25880	*9940 *21910	7550 16640	*8080 *17810	5260 11600			5190 11440	3190 7030	9.92 (32.5)
1.5m (5.0ft)	kg lb			*16290 *35910	10880 23990	*11280 *24870	7070 15590	8060 17770	5000 11020	5970 13160	3680 8110	5150 11350	3150 6940	9.88 (32.4)
Ground Line	kg lb			*16990 *37460	10590 23350	11260 24820	6790 14970	7860 17330	4820 10630			5390 11880	3300 7280	9.57 (31.4)
-1.5m (-5.0ft)	kg lb	*14220 *31350	*14220 *31350	*16670 *36750	10590 23350	11150 24580	6700 14770	7790 17170	4760 10490			6010 13250	3700 8160	8.97 (29.4)
-3.0m (-10.0ft)	kg lb	*21440 *47270	*21440 *47270	*15460 *34080	10760 23720	11240 24780	6770 14930					*7290 *16070	4590 10120	7.98 (26.2)
-4.5m (-15.0ft)	kg lb	*17640 *38890	*17640 *38890	*12990 *28640	11140 24560	*9520 *20990	7060 15560					*6680 *14730	*6680 *14730	6.42 (21.1)

4) 6.45m(21' 2") boom, 3.2m(10' 6") arm equipped with 1.44m<sup>3</sup>(PCSA heaped) bucket and 600mm (24") triple grouser shoe.

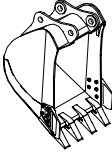
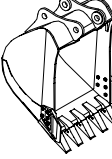
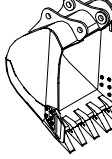
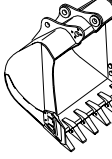
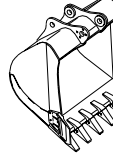
Load point height		Load radius												At max. reach		
		1.5m(5.0ft)		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		Capacity		Reach
																m(ft)
7.5m (25.0ft)	kg lb									*4880 *10760	*4880 *10760			*5500 *12130	4200 9260	9.06 (29.7)
6.0m (20.0ft)	kg lb									*6000 *13230	5890 12990			5510 12150	3470 7650	9.84 (32.3)
4.5m (15.0ft)	kg lb						*7490 *16510	*7490 *16510	*6640 *14640	5640 12430	*5070 *11180	3980 8770	4960 10930	3060 6750	10.31 (33.8)	
3.0m (10.0ft)	kg lb				*12430 *27400	12180 26850	*9090 *20040	7700 16980	*7490 *16510	5320 11730	6140 13540	3830 8440	4690 10340	2850 6280	10.52 (34.5)	
1.5m (5.0ft)	kg lb				*15210 *33530	11110 24490	*10610 *23390	7150 15760	8090 17840	5020 11070	5970 13160	3670 8090	4640 10230	2800 6170	10.48 (34.4)	
Ground Line	kg lb			*9720 *21430	*9720 *21430	*16620 *36640	10580 23320	11260 24820	6780 14950	7830 17260	4790 10560	5830 12850	3540 7800	4810 10600	2900 6390	10.19 (33.4)
-1.5m (-5.0ft)	kg lb	*10800 *23810	*10800 *23810	*13710 *30230	*13710 *30230	*16830 *37100	10440 23020	11060 24380	6600 14550	7700 16980	4660 10270			5280 11640	3200 7050	9.63 (31.6)
-3.0m (-10.0ft)	kg lb	*14530 *32030	*14530 *32030	*18410 *40590	*18410 *40590	*16100 *35490	10510 23170	11050 24360	6600 14550	7700 16980	4670 10300			6240 13760	3840 8470	8.74 (28.7)
-4.5m (-15.0ft)	kg lb			*20220 *44580	*20220 *44580	*14270 *31460	10790 23790	*10560 *23280	6780 14950					*6880 *15170	5250 11570	7.37 (24.2)
-6.0m (-20.0ft)	kg lb					*10450 *23040	*10450 *23040									

5) 6.45m(21' 2") boom, 4.05m(13' 3") arm equipped with 1.44m<sup>3</sup>(PCSA heaped) bucket and 600mm (24") triple grouser shoe.

Load point height		Load radius												At max. reach		
		1.5m(5.0ft)		3.0m(10.0ft)		4.5m(15.0ft)		6.0m(20.0ft)		7.5m(25.0ft)		9.0m(30.0ft)		Capacity		Reach
																m(ft)
7.5m (25.0ft)	kg lb													*4760 *10490	3440 7580	10.00 (32.8)
6.0m (20.0ft)	kg lb											*4160 *9170	*4160 *9170	4700 10360	2890 6370	10.71 (35.1)
4.5m (15.0ft)	kg lb									*5710 *12590	*5710 *12590	*5320 *11730	4030 8880	4270 9410	2570 5670	11.13 (36.5)
3.0m (10.0ft)	kg lb			*16820 *37080	*16820 *37080	*10330 *22770	*10330 *22770	*7880 *17370	*7880 *17370	*6640 *14640	5380 11860	*5940 *13100	3830 8440	4050 8930	2390 5270	11.32 (37.1)
1.5m (5.0ft)	kg lb			*9930 *21890	*9930 *21890	*13560 *29890	11450 25240	*9590 *21140	7260 16010	*7630 *16820	5030 11090	5940 13100	3630 8000	4000 8820	2340 5160	11.29 (37.0)
Ground Line	kg lb			*10280 *22660	*10280 *22660	*15690 *34590	10640 23460	*10950 *24140	6770 14930	7790 17170	4730 10430	5750 12680	3460 7630	4120 9080	2410 5310	11.03 (36.2)
-1.5m (-5.0ft)	kg lb	*9390 *20700	*9390 *20700	*12710 *28020	*12710 *28020	*16580 *36550	10290 22690	10950 24140	6490 14310	7580 16710	4540 10010	5630 12410	3350 7390	4450 9810	2620 5780	10.52 (34.5)
-3.0m (-10.0ft)	kg lb	*12370 *27270	*12370 *27270	*16100 *35490	*16100 *35490	*16450 *36270	10230 22550	10840 23900	6400 14110	7500 16530	4480 9880	5620 12390	3340 7360	5110 11270	3060 6750	9.72 (31.9)
-4.5m (-15.0ft)	kg lb	*15810 *34860	*15810 *34860	*20640 *45500	*20640 *45500	*15320 *33770	10390 22910	10930 24100	6470 14260	7590 16730	4550 10030			*6410 *14130	3940 8690	8.53 (28.0)
-6.0m (-20.0ft)	kg lb			*18370 *40500	*18370 *40500	*12770 *28150	10780 23770	*9220 *20330	6760 14900					*6150 *13560	6120 13490	6.71 (22.0)


## 6. BUCKET SELECTION GUIDE


### 1) GENERAL BUCKET

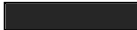
				
0.9m <sup>3</sup> PCSA heaped bucket	1.14m <sup>3</sup> PCSA heaped bucket	1.44m <sup>3</sup> PCSA heaped bucket	1.74m <sup>3</sup> PCSA heaped bucket	2.10m <sup>3</sup> PCSA heaped bucket

Capacity		Width		Weight	Recommendation 6.45m (21' 2") boom				6.15m (20' 2") boom
PCSA heaped	CECE heaped	Without side cutter	With side cutter		2.2m arm (7' 3")	2.5m arm (8' 2")	3.2m arm (10' 6")	4.05m arm (13' 3")	2.2m arm (7' 3")
0.9m <sup>3</sup> (1.18yd <sup>3</sup> )	0.8m <sup>3</sup> (1.05yd <sup>3</sup> )	950mm (37.4")	1070mm (42.2")	870kg (1920lb)					
1.14m <sup>3</sup> (1.49yd <sup>3</sup> )	1.0m <sup>3</sup> (1.31yd <sup>3</sup> )	1140mm (44.9")	1260mm (49.6")	980kg (2160lb)					
1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1.25m <sup>3</sup> (1.63yd <sup>3</sup> )	1380mm (54.3")	1500mm (59.1")	1110kg (2450lb)					
1.74m <sup>3</sup> (2.28yd <sup>3</sup> )	1.5m <sup>3</sup> (1.96yd <sup>3</sup> )	1610mm (63.4")	1730mm (68.1")	1230kg (2710lb)					
2.10m <sup>3</sup> (2.75yd <sup>3</sup> )	1.8m <sup>3</sup> (2.35yd <sup>3</sup> )	1900mm (74.8")	2020mm (79.5")	1370kg (3020lb)					

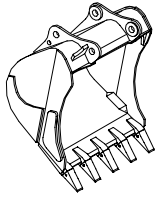
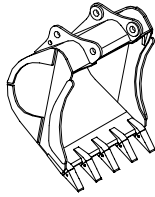
: Standard bucket

 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

## 2) ROCK AND HEAVY DUTY BUCKET

	
<p>1.44m<sup>3</sup> PCSA heaped bucket</p>	<p>⚡1.44m<sup>3</sup> PCSA heaped bucket</p>

Capacity		Width		Weight	Recommendation				6.15m (20' 2") boom
					6.45m (21' 2") boom				
PCSA heaped	CECE heaped	Without side cutter	With side cutter		2.2m arm (7' 3")	2.5m arm (8' 2")	3.2m arm (10' 6")	4.05m arm (13' 3")	2.2m arm (7' 3")
1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1.25m <sup>3</sup> (1.63yd <sup>3</sup> )	1380mm (54.3")	-	1380kg (3040lb)					
⚡1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1.25m <sup>3</sup> (1.63yd <sup>3</sup> )	1380mm (54.3")	-	1390kg (3060lb)					

□ : Heavy duty bucket

⚡ : Rock bucket

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

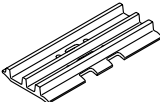
⚡ Applicable for materials with density of 1600kg/m<sup>3</sup> (2700lbf/yd<sup>3</sup>) or less

## 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			
						
R320LC-7	Shoe width	mm(in)	600(24)	700(28)	800(32)	900(36)
	Operating weight	kg(lb)	32200(71000)	32800(72300)	33200(73200)	33600(74100)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.62(8.82)	0.54(7.68)	0.48(6.83)	0.43(6.11)
	Overall width	mm(ft-in)	3280(10' 9")	3380(11' 1")	3480(11' 5")	3580(11' 9")

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

Item	Quantity
Carrier rollers	2EA
Track rollers	9EA
Track shoes	48EA

### 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
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 C8.3-C
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 x stroke	114 x 135mm(4.49" x 5.32")
Piston displacement	8300cc(505cu in)
Compression ratio	18 : 1
Rated gross horse power(SAE J1995)	259Hp at 1750rpm(193kW at 1750rpm)
Maximum torque	124.3kgf · m(899lbf · ft) at 1300rpm
Engine oil quantity	25.5 (6.7U.S. gal)
Dry weight	588kg(1296lb)
High idling speed	1900+ 50rpm
Low idling speed	850 ± 50rpm
Rated fuel consumption	158.8g/Hp · hr at 1750rpm
Starting motor	Delco Remy 39MT(24V-7.2kW)
Alternator	Delco Remy 24V-50A
Battery	2 x 12V x 160Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 x 148.6cc/rev
Maximum pressure	330kgf/cm <sup>2</sup> (4690psi)[360kgf/cm <sup>2</sup> (5120psi)]
Rated oil flow	2 x 260 /min (68.7U.S. gpm/ 57.2U.K. gpm)
Rated speed	1750rpm

[ ]: Power boost

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	35kgf/cm <sup>2</sup> (500psi)
Rated oil flow	27 /min(7.1U.S. gpm/6.0U.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	390kgf/cm <sup>2</sup> (5550psi)

[ ]: Power boost

### 5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	169.4cc/rev
Relief pressure	265kgf/cm <sup>2</sup> (3770psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	70kgf · m(505lbf · ft)
Brake release pressure	26kgf/cm <sup>2</sup> (370psi)
Reduction gear type	2 - stage planetary
Swing speed	9.1rpm

### 6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	330kgf/cm <sup>2</sup> (4700psi)
Capacity(max / min)	160/279.1cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	15.7kgf/cm <sup>2</sup> (225psi)
Braking torque	78.8kgf · m(570lbf · 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	Ø150 × Ø105 × 1480mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø160 × Ø110 × 1685mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø140 × Ø100 × 1285mm
	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
R320LC-7	Standard	600mm(24")	0.62kgf/cm <sup>2</sup> (8.82psi)	48	3280mm(10' 9")
	Option	700mm(28")	0.54kgf/cm <sup>2</sup> (7.68psi)	48	3380mm(11' 1")
		800mm(32")	0.48kgf/cm <sup>2</sup> (6.83psi)	48	3480mm(11' 5")
		900mm(36")	0.43kgf/cm <sup>2</sup> (6.11psi)	48	3580mm(11' 9")

## 10) BUCKET

Item		Capacity		Tooth quantity	Width	
		PCSA heaped	CECE heaped		Without side cutter	With side cutter
R320LC-7	Standard	1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1.25m <sup>3</sup> (1.63yd <sup>3</sup> )	5	1380mm(54.3")	1500mm(59.1")
	Option	0.9m <sup>3</sup> (1.18yd <sup>3</sup> )	0.8m <sup>3</sup> (1.05yd <sup>3</sup> )	3	950mm(37.4")	1070mm(42.2")
		1.14m <sup>3</sup> (1.49yd <sup>3</sup> )	1.0m <sup>3</sup> (1.31yd <sup>3</sup> )	4	1140mm(44.9")	1260mm(49.6")
		1.74m <sup>3</sup> (2.28yd <sup>3</sup> )	1.5m <sup>3</sup> (1.96yd <sup>3</sup> )	5	1610mm(63.4")	1730mm(68.1")
		2.10m <sup>3</sup> (2.75yd <sup>3</sup> )	1.8m <sup>3</sup> (2.35yd <sup>3</sup> )	5	1900mm(74.8")	2020mm(79.5")
		1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1.25m <sup>3</sup> (1.63yd <sup>3</sup> )	5	1380mm(54.3")	-
		≡ 1.44m <sup>3</sup> (1.88yd <sup>3</sup> )	1.25m <sup>3</sup> (1.63yd <sup>3</sup> )	5	1380mm(54.3")	-

: 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 (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	25(6.6)	SAE 30						
			SAE 10W						
			SAE 10W-30						
							SAE 15W-40		
Swing drive	Gear oil	7.0(1.9)	SAE 85W-140						
Final drive		11.0 × 2 (2.9 × 2)							
Hydraulic tank	Hydraulic oil	Tank; 210(55.5) System; 320(84.5)	ISO VG 32						
			ISO VG 46						
			ISO VG 68						
Fuel tank	Diesel fuel	480(127)	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	45(12)	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