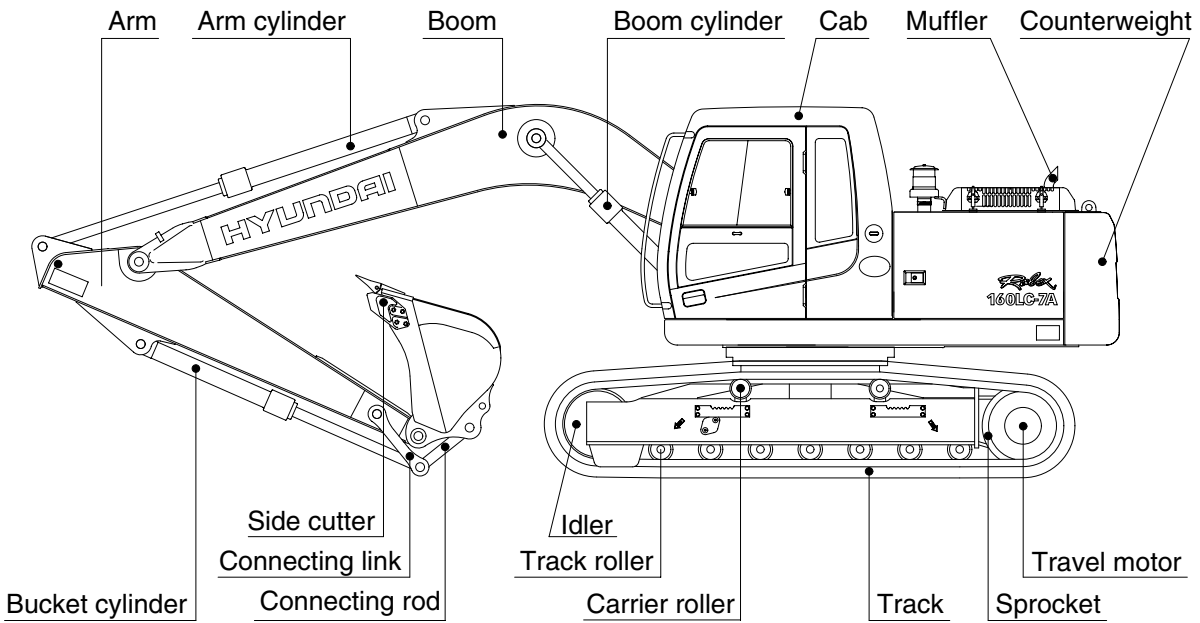
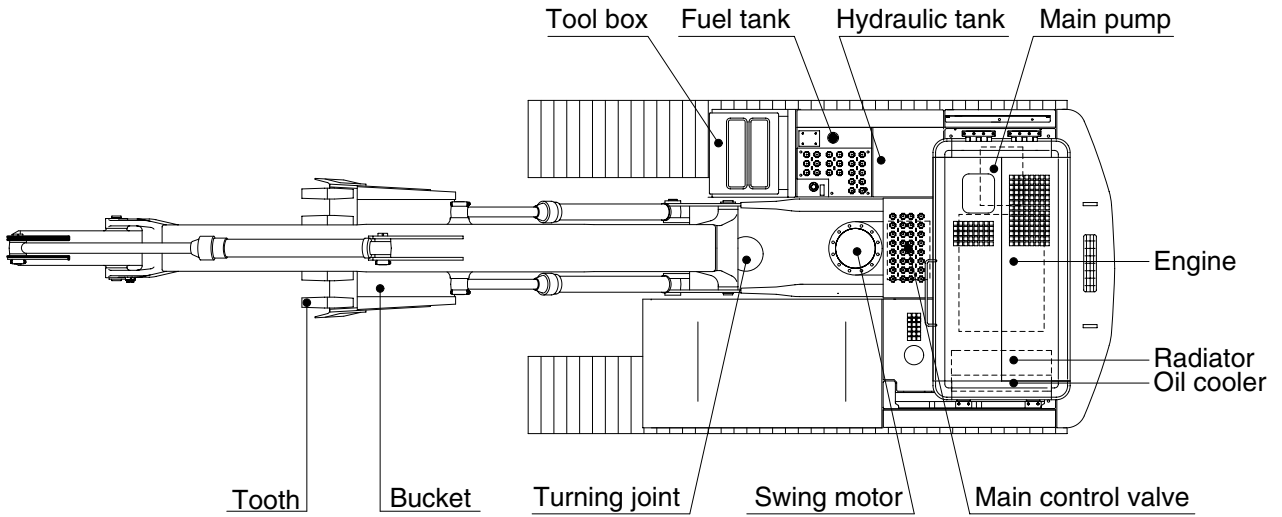


# GROUP 2 SPECIFICATIONS

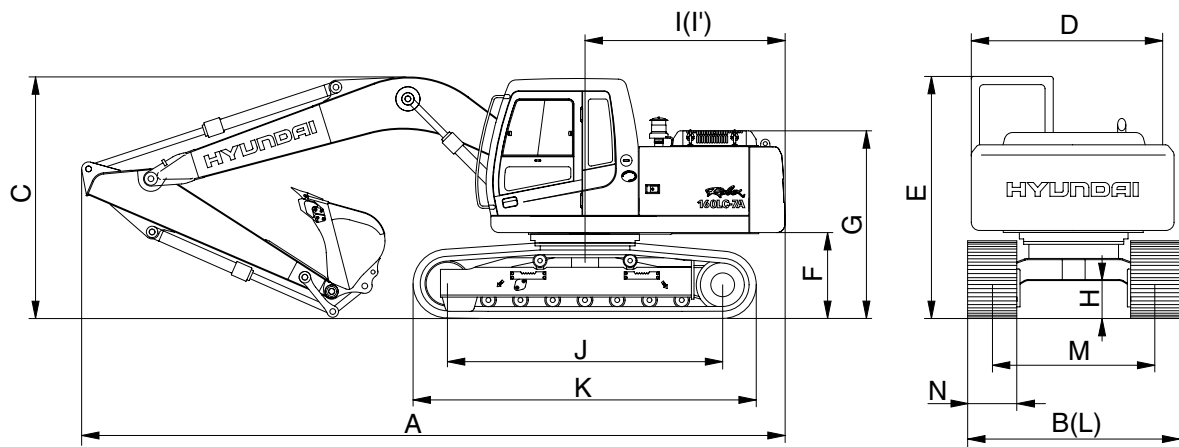
## 1. MAJOR COMPONENT



1607A2SP01

## 2. SPECIFICATIONS

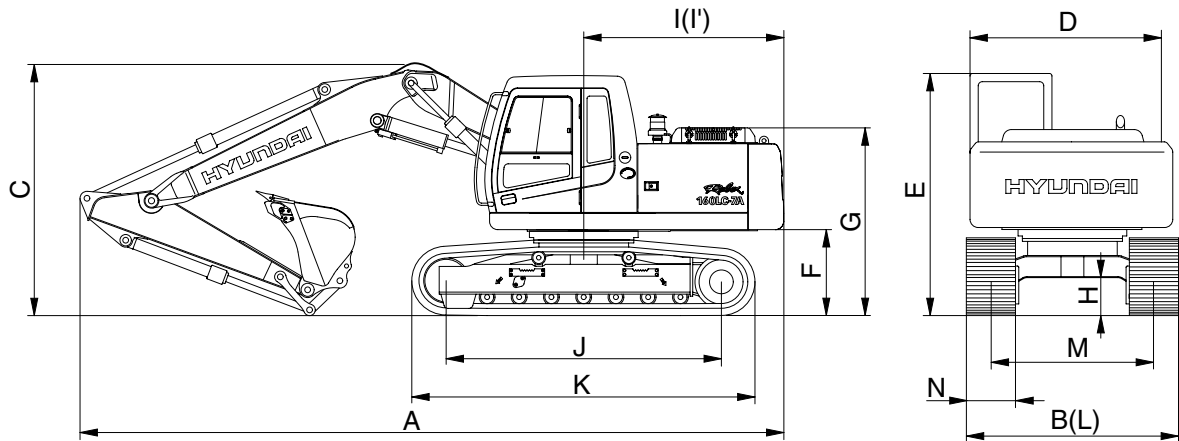
### 1) 5.1m(16' 9") MONO BOOM, 2.6m(8' 6") ARM



1607A2SP02

Description	Unit	Specification
Operating weight	kg(lb)	17400(38360)
Bucket capacity(SAE heaped), standard	m <sup>3</sup> (yd <sup>3</sup> )	0.70(0.92)
Overall length	A	8600(28' 3")
Overall width, with 600mm shoe	B	2590( 8' 6")
Overall height	C	2910( 9' 7")
Superstructure width	D	2475( 8' 1")
Overall height of cab	E	2915( 9' 7")
Ground clearance of counterweight	F	1035( 3' 5")
Engine cover height	G	2295( 7' 6")
Minimum ground clearance	H	460( 1' 6")
Rear-end distance	I	2530( 8' 4")
Rear-end swing radius	I'	2480( 8' 2")
Distance between tumblers	J	3190(10' 6")
Undercarriage length	K	3980(13' 1")
Undercarriage width	L	2590( 8' 6")
Track gauge	M	1990( 6' 6")
Track shoe width, standard	N	600(24")
Travel speed(Low/high)	km/hr(mph)	3.7/5.6(2.3/3.5)
Swing speed	rpm	11.3
Gradeability	Degree(%)	30(58)
Ground pressure(600mm shoe)	kgf/cm <sup>2</sup> (psi)	0.42(5.97)

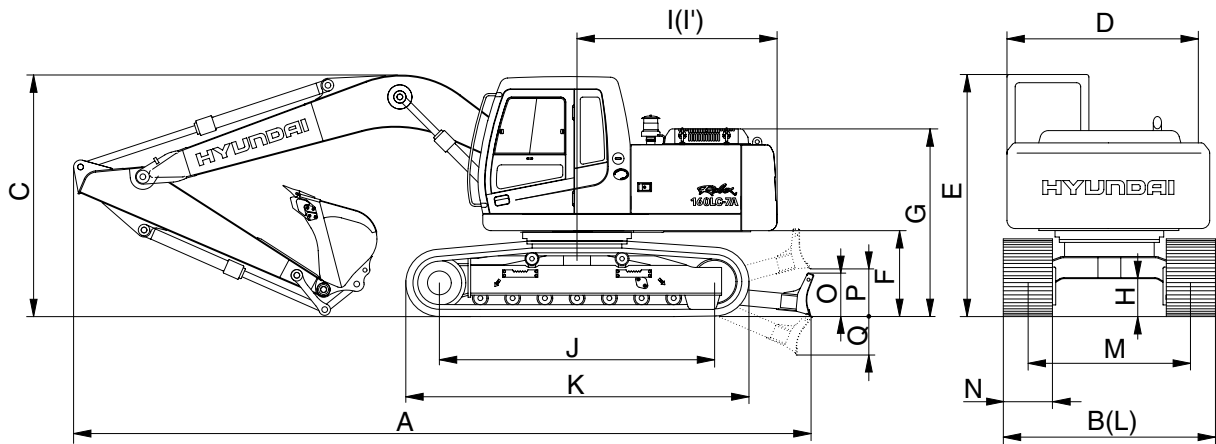
## 2) 5.1m(16' 9") HYDRAULIC ADJUSTABLE BOOM, 2.6m(8' 6") ARM



1607A2SP03

Description		Unit	Specification
Operating weight		kg(lb)	17930(39530)
Bucket capacity(SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	0.70(0.92)
Overall length	A	mm(ft-in)	8570(28' 1")
Overall width, with 600mm shoe	B		2590( 8' 6")
Overall height	C		3040( 9' 12")
Superstructure width	D		2475( 8' 1")
Overall height of cab	E		2915( 9' 7")
Ground clearance of counterweight	F		1035( 3' 5")
Engine cover height	G		2295( 7' 6")
Minimum ground clearance	H		460( 1' 6")
Rear-end distance	I		2480( 8' 2")
Rear-end swing radius	I'		2530( 8' 4")
Distance between tumblers	J		3190(10' 6")
Undercarriage length	K		3980(13' 1")
Undercarriage width	L		2590( 8' 6")
Track gauge	M		1990( 6' 6")
Track shoe width, standard	N		600(24")
Travel speed(Low/high)		km/hr(mph)	3.7/5.6(2.3/3.5)
Swing speed		rpm	11.3
Gradeability		Degree(%)	30(58)
Ground pressure(600mm shoe)		kgf/cm <sup>2</sup> (psi)	0.43(6.1)

### 3) R160LCD-7A



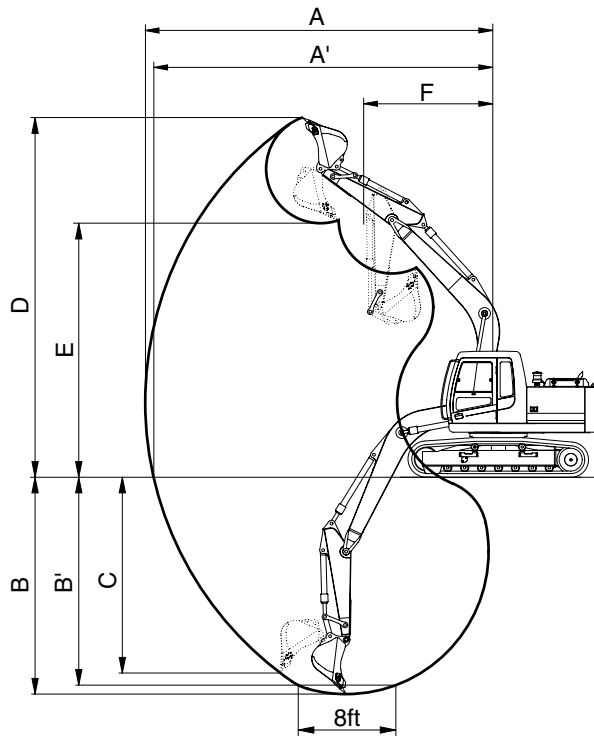
D

1607A2SP04

Description		Unit	Specification	
Operating weight		kg(lb)	18400(40570)	
Bucket capacity(SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	0.70(0.92)	
Overall length	A	mm(ft-in)	8990(29' 6")	
Overall width, with 600mm shoe	B		2590( 8' 6")	
Overall height	C		2910( 9' 7")	
Superstructure width	D		2475( 8' 1")	
Overall height of cab	E		2915( 9' 7")	
Ground clearance of counterweight	F		1035( 3' 5")	
Engine cover height	G		2295( 7' 6")	
Minimum ground clearance	H		460( 1' 6")	
Rear-end distance	I		2480( 8' 2")	
Rear-end swing radius	I'		2530( 8' 4")	
Distance between tumblers	J		3190(10' 6")	
Undercarriage length	K		3980(13' 1")	
Undercarriage width	L		2590( 8' 6")	
Track gauge	M		1990( 6' 6")	
Track shoe width, standard	N		600(24")	
Height of blade	O		645( 2' 1")	
Ground clearance of blade up	P		780( 2' 7")	
Depth of blade down	Q		520( 1' 8")	
Travel speed(Low/high)			km/hr(mph)	3.7/5.6(2.3/3.5)
Swing speed			rpm	11.3
Gradeability		Degree(%)	30(58)	
Ground pressure(600mm shoe)		kgf/cm <sup>2</sup> (psi)	0.45(6.40)	

### 3. WORKING RANGE

#### 1) 5.1m(16' 9") MONO BOOM



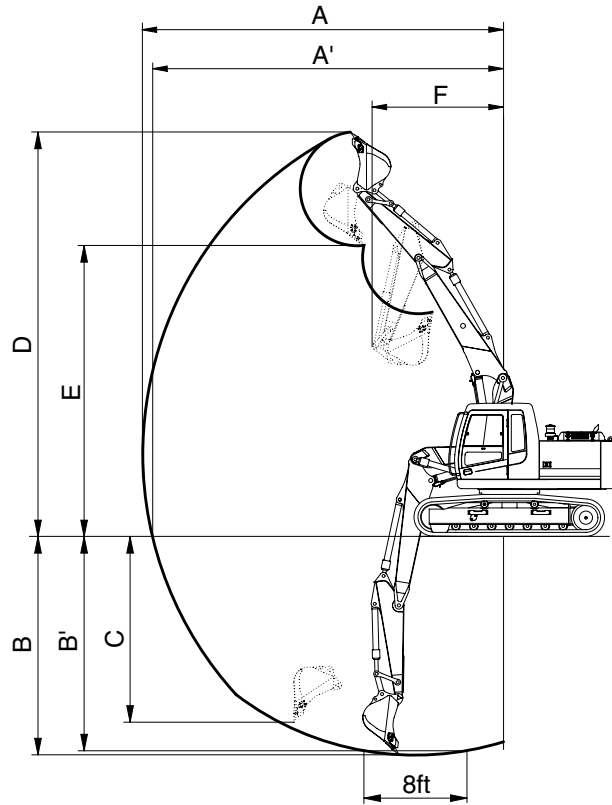
1607A2SP05

Description		2.2m(7' 3") Arm	*2.6m(8' 6") Arm	3.1m(10' 2") Arm
Max digging reach	A	8690mm (28' 6")	9030mm (29' 8")	9450mm (31' 0")
Max digging reach on ground	A'	8530mm (27'12")	8870mm (29' 1")	9300mm (30' 6")
Max digging depth	B	5660mm (18' 7")	6060mm (19'11")	6560mm (21' 6")
Max digging depth (8ft level)	B'	5440mm (17'10")	5860mm (19' 3")	6370mm (20'11")
Max vertical wall digging depth	C	5140mm (16'10")	5440mm (17'10")	5730mm (18'10")
Max digging height	D	8740mm (28' 8")	8870mm (29' 1")	8970mm (29' 5")
Max dumping height	E	6100mm (20' 0")	6240mm (20' 6")	6380mm (20'11")
Min swing radius	F	3180mm (10' 5")	3170mm (10' 5")	3180mm (10' 5")
Bucket digging force	SAE	108.6 [118.4]kN	108.6 [118.4] kN	108.6 [118.4] kN
		11070 [12080]kgf	11070 [12080] kgf	11070 [12080] kgf
		24410 [26630]lbf	24410 [26630] lbf	24410 [26630] lbf
	ISO	124.5 [135.9]kN	124.5 [135.9] kN	124.5 [135.9] kN
		12700 [13850]kgf	12700 [13850] kgf	12700 [13850] kgf
		28000 [30550]lbf	28000 [30550] lbf	28000 [30550] lbf
Arm digging force	SAE	85.2 [93.0]kN	75.0 [81.8] kN	67.4 [73.5] kN
		8690 [9480]kgf	7650 [8350] kgf	6870 [7490] kgf
		19160 [20900]lbf	16870 [18400] lbf	15150 [16530] lbf
	ISO	89.0 [97.1]kN	77.6 [84.6] kN	69.4 [75.7] kN
		9080 [9910]kgf	7910 [8630] kgf	7080 [7720] kgf
		20020 [21840]lbf	17440 [19030] lbf	15610 [17030] lbf

[ ] : Power boost

\* : STD

## 2) 5.1m(16' 9") HYDRAULIC ADJUSTABLE BOOM



1607A2SP06

Description		2.2m(7' 3") Arm	2.6m(8' 6") Arm
Max digging reach	A	8750mm (28' 8")	9110mm (29'11")
Max digging reach on ground	A'	8600mm (28' 3")	8960mm (29' 5")
Max digging depth	B	5460mm (17'11")	5830mm (19' 2")
Max digging depth (8ft level)	B'	5350mm (17' 7")	5750mm (18'10")
Max vertical wall digging depth	C	4670mm (15' 4")	5030mm (16' 6")
Max digging height	D	9390mm (30'10")	9600mm (31' 6")
Max dumping height	E	6680mm (21'11")	6900mm (22' 8")
Min swing radius	F	3130mm (10' 3")	2970mm ( 9' 9")
Bucket digging force	SAE	108.6 [118.4] kN	108.6 [118.4] kN
		11070 [12080] kgf	11070 [12080] kgf
		24410 [26630] lbf	24410 [26630] lbf
	ISO	124.5 [135.9] kN	124.5 [135.9] kN
		12700 [13850] kgf	12700 [13850] kgf
		28000 [30550] lbf	28000 [30550] lbf
Arm digging force	SAE	85.2 [93.0] kN	75.0 [81.8] kN
		8690 [9480] kgf	7650 [8350] kgf
		19160 [20900] lbf	16870 [18400] lbf
	ISO	89.0 [97.1] kN	77.6 [84.6] kN
		9080 [9910] kgf	7910 [8630] kgf
		20020 [21840] lbf	17440 [19030] lbf

[ ] : Power boost

## 4. WEIGHT

### 1) R160LC-7A













Item	kg	lb
Upperstructure assembly	7480	16490
Main frame weld assembly	1400	3090
Engine assembly	420	930
Main pump assembly	90	200
Main control valve assembly	80	180
Swing motor assembly	250	550
Hydraulic oil tank assembly	180	400
Fuel tank assembly	140	310
Counterweight	2950	6500
Cab assembly	310	680
Lower chassis assembly	6900	15210
Track frame weld assembly	2030	4480
Swing bearing	260	570
Travel motor assembly	240	530
Turning joint	50	120
Track recoil spring	140	310
Idler	160	350
Carrier roller	20	45
Track roller	50	120
Track-chain assembly(600mm standard triple grouser shoe)	1180	2600
Front attachment assembly(5.1m boom, 2.6m arm, 0.7m <sup>3</sup> SAE heaped bucket)	3020	6660
5.1m boom assembly	1050	2315
2.6m arm assembly	540	1190
0.7m <sup>3</sup> SAE heaped bucket	540	1190
Boom cylinder assembly	160	350
Arm cylinder assembly	180	400
Bucket cylinder assembly	140	310
Bucket control link assembly	120	265

## 5. LIFTING CAPACITIES

### 1) ROBEX 160LC-7A

(1) 5.1m(16' 9") boom, 2.6m(8' 6") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.











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

Load point height		Load radius										At max. reach					
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach			
														kg	lb	m(ft)	
7.5m (25ft)	kg lb														*3080 *6790	2940 6480	6.33 (20.8)
6.0m (20ft)	kg lb							*2760 *6080	*2760 *6080						*3070 *6770	2090 4610	7.56 (24.8)
4.5m (15ft)	kg lb							*3500 *7720	3050 6720						2880 6350	1710 3770	8.28 (27.2)
3.0m (10ft)	kg lb			*7360 *16230	*7360 *16230	*4940 *10890	4630 10210	*4000 *8820	2900 6390	*2560 *5640	1940 4280	2630 5800	1520 3350	8.64 (28.3)			
1.5m (5ft)	kg lb			*7670 *16910	*7670 *16910	*6190 *13650	4250 9370	*4570 *10080	2720 6000	3220 7100	1870 4120	2560 5640	1470 3240	8.68 (28.5)			
Ground Line	kg lb			*7420 *16360	*7420 *16360	*6980 *15390	3990 8800	4480 9880	2590 5710	3150 6940	1810 3990	2660 5860	1520 3350	8.42 (27.6)			
-1.5m (-5ft)	kg lb	*6300 *13890	*6300 *13890	*10000 *22050	7410 16340	6990 15410	3890 8580	4400 9700	2520 5560			3000 6610	1730 3810	7.81 (25.6)			
-3.0m (-10ft)	kg lb	*9330 *20570	*9330 *20570	*9580 *21120	7530 16600	*6480 *14290	3910 8620	4430 9770	2540 5600			*3370 *7430	2230 4920	6.75 (22.1)			
-4.5m (-15ft)	kg lb			*6950 *15320	*6950 *15320	*4610 *10160	4090 9020										













- 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) 5.1m(16' 9") boom, 2.2m(7' 3") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius								At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		Capacity		Reach
												m(ft)
7.5m (25ft)	kg lb									*3400 *7500	3380 7450	5.81 (19.1)
6.0m (20ft)	kg lb									*3340 *7360	2300 5070	7.16 (23.5)
4.5m (15ft)	kg lb					*4260 *9390	*4260 *9390	*3820 *8420	3030 6680	3120 6880	1860 4100	7.92 (26.0)
3.0m (10ft)	kg lb			*8470 *18670	*8470 *18670	*5390 *11880	4580 10100	*4280 *9440	2890 6370	2830 6240	1660 3660	8.30 (27.2)
1.5m (5ft)	kg lb					*6540 *14420	4220 9300	4640 10230	2740 6040	2760 6080	1600 3530	8.34 (27.4)
Ground Line	kg lb			*6700 *14770	*6700 *14770	7130 15720	4010 8840	4510 9940	2620 5780	2890 6370	1680 3700	8.06 (26.4)
-1.5m (-5ft)	kg lb	*6610 *14570	*6610 *14570	*10490 *23130	7530 16600	7060 15560	3950 8710	4460 9830	2570 5670	3300 7280	1930 4250	7.42 (24.3)
-3.0m (-10ft)	kg lb	*10560 *23280	*10560 *23280	*8970 *19780	7680 16930	*6210 *13690	4010 8840			*3380 *7450	2570 5670	6.28 (20.6)
-4.5m (-15ft)	kg lb			*5840 *12870	*5840 *12870							













(3) 5.1m(16' 9") boom, 3.1m(11' 1") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
7.5m (25ft)	kg lb											*2730 *6020	2520 5560	6.92 (22.7)
6.0m (20ft)	kg lb						*2640 *5820	*2640 *5820				*2760 *6080	1850 4080	8.05 (26.4)
4.5m (15ft)	kg lb						*3110 *6860	3080 6790	*1940 *4280	*1940 *4280	2630 5800	1530 3370	8.73 (28.6)	
3.0m (10ft)	kg lb					*4380 *9660	*4380 *9660	*3640 *8020	2920 6440	*2840 *6260	1940 4280	2410 5310	1370 3020	9.06 (29.7)
1.5m (5ft)	kg lb			*9510 *20970	8060 17770	*5730 *12630	4300 9480	*4290 *9460	2720 6000	3200 7050	1850 4080	2340 5160	1310 2890	9.10 (29.9)
Ground Line	kg lb			*8210 *18100	7460 16450	*6710 *14790	3900 8800	4460 9830	2560 5640	3120 6880	1770 3900	2420 5340	1350 2980	8.85 (29.0)
-1.5m (-5ft)	kg lb	*5960 *13140	*5960 *13140	*9730 *21450	7320 16140	6940 15300	3830 8440	4350 9590	2470 5450	*2970 *6550	1730 3810	2680 5910	1510 3330	8.28 (27.2)
-3.0m (-10ft)	kg lb	*8420 *18560	*8420 *18560	*10150 *22380	7380 16270	*6700 *14770	3820 8420	4340 9570	2450 5400			*3290 *7250	1900 4190	7.30 (24.0)
-4.5m (-15ft)	kg lb	*11640 *25660	*11640 *25660	*8040 *17730	7600 16760	*5380 *11860	3930 8660							

(4) 5.1m(16' 9") hydraulic adjustable boom, 2.2m(7' 3") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
6.0m (20ft)	kg lb											*3390 *7470	2230 4920	7.24 (23.8)
4.5m (15ft)	kg lb							*3860 *8510	3020 6660			3080 6790	1810 3990	7.99 (26.2)
3.0m (10ft)	kg lb					*5440 *11990	4570 10080	*4280 *9440	2880 6350			2800 6170	1610 3550	8.36 (27.4)
1.5m (5ft)	kg lb					*6500 *14330	4190 9240	4660 10270	2710 5970	*3240 *7140	1860 4100	2730 6020	1560 3440	8.41 (27.6)
Ground Line	kg lb			*5860 *12920	*5860 *12920	*7040 *15520	3960 8730	4520 9960	2590 5710			2860 6310	1630 3590	8.13 (24.6)
-1.5m (-5ft)	kg lb	*5850 *12900	*5850 *12900	*9740 *21470	7460 16450	*6890 *15190	3900 8600	4480 9880	2540 5600			3270 7210	1890 4170	7.50 (24.6)
-3.0m (-10ft)	kg lb			*8500 *18740	7650 16870	*5940 *13100	3980 8770					*2930 *6460	2530 5580	6.37 (20.9)













(5) 5.1m(16' 9") hydraulic adjustable boom, 2.6m(8' 6") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
6.0m (20ft)	kg lb											*3120 *6880	2010 4430	7.66 (25.1)
4.5m (15ft)	kg lb											2850 6280	1640 3620	8.37 (27.5)
3.0m (10ft)	kg lb							*4020 *8860	2890 6370	*2940 *6480	1920 4230	2600 5730	1470 3240	8.72 (28.6)
1.5m (5ft)	kg lb			*6640 *14640	*6640 *14640	*6170 *13600	4220 9300	*4550 *10030	2700 5950	3250 7170	1840 4060	2540 5600	1420 3130	8.77 (28.8)
Ground Line	kg lb			*6650 *14660	*6650 *14660	*6880 *15170	3940 8690	4510 9940	2550 5620	3180 7010	1780 3920	2650 5840	1480 3260	8.50 (27.9)
-1.5m (-5ft)	kg lb	*5680 *12520	*5680 *12520	*9340 *20590	7340 16180	*6930 *15280	3840 8470	4440 9790	2480 5470			2980 6570	1680 3700	7.90 (25.9)
-3.0m (-10ft)	kg lb	*8890 *19600	*8890 *19600	*9150 *20170	7480 16490	*6240 *13760	3880 8550	*4340 *9570	2520 5560			*2970 *6550	2180 4810	6.86 (22.5)
-4.5m (-15ft)	kg lb			*6330 *13960	*6330 *13960	*4220 *9300	4080 8990							

## 2) ROBEX 160LCD-7A











(1) 5.1m(16' 9") boom, 2.6m(8' 6") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

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













Load point height		Load radius										At max. reach				
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach		
														kg	lb	m(ft)
7.5m (25ft)	kg lb													*3080 *6790	*3080 *6790	6.33 (20.8)
6.0m (20ft)	kg lb							*2760 *6080	*2760 *6080					*3070 *6770	2210 4870	7.56 (24.8)
4.5m (15ft)	kg lb							*3500 *7720	3210 7080					*3120 *6880	1820 4010	8.28 (27.2)
3.0m (10ft)	kg lb			*7360 *16230	*7360 *16230	*4940 *10890	4870 10740	*4000 *8820	3060 6750	*2560 *5640	2070 4560	2940 6480	1630 3590	8.64 (28.3)		
1.5m (5ft)	kg lb			*7670 *16910	*7670 *16910	*6190 *13650	4480 9880	*4570 *10080	2890 6370	*3340 *7360	1990 4390	2870 6330	1570 3460	8.68 (28.5)		
Ground Line	kg lb			*7420 *16360	*7420 *16360	*6980 *15390	4220 9300	4980 10980	2750 6060	*3170 *6990	1930 4250	2980 6570	1630 3590	8.42 (27.6)		
-1.5m (-5ft)	kg lb	*6300 *13890	*6300 *13890	*10000 *22050	7840 17280	*7090 *15630	4120 9080	4900 10800	2680 5910			3350 7390	1850 4080	7.81 (25.6)		
-3.0m (-10ft)	kg lb	*9330 *20570	*9330 *20570	*9580 *21120	7950 17530	*6480 *14290	4150 9150	*4530 *9990	2710 5970			*3370 *7430	2380 5250	6.75 (22.1)		
-4.5m (-15ft)	kg lb			*6950 *15320	*6950 *15320	*4610 *10160	4320 9520									

- 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) 5.1m(16' 9") boom, 2.2m(7' 3") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius								At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		Capacity		Reach
												m(ft)
7.5m (25ft)	kg lb									*3400 *7500	*3400 *7500	5.81 (19.1)
6.0m (20ft)	kg lb									*3340 *7360	2440 5380	7.16 (23.5)
4.5m (15ft)	kg lb					*4260 *9390	*4260 *9390	*3820 *8420	3190 7030	*3370 *7430	1980 4370	7.92 (26.0)
3.0m (10ft)	kg lb			*8470 *18670	*8470 *18670	*5390 *11880	4820 10630	*4280 *9440	3060 6750	3160 6970	1770 3900	8.30 (27.2)
1.5m (5ft)	kg lb					*6540 *14420	4460 9830	*4800 *10580	2900 6390	3090 6810	1720 3790	8.34 (27.4)
Ground Line	kg lb			*6700 *14770	*6700 *14770	*7150 *15760	4250 9370	5010 11050	2780 6130	3230 7120	1790 3950	8.06 (26.4)
-1.5m (-5ft)	kg lb	*6610 *14570	*6610 *14570	*10490 *23130	7950 17530	*7070 *15590	4190 9240	4960 10930	2740 6040	*3610 *7960	2060 4540	7.42 (24.3)
-3.0m (-10ft)	kg lb	*10560 *23280	*10560 *23280	*8970 *19780	8100 17860	*6210 *13690	4240 9350			*3380 *7450	2730 6020	6.28 (20.6)
-4.5m (-15ft)	kg lb			*5840 *12870	*5840 *12870							













(3) 5.1m(16' 9") boom, 3.1m(11' 1") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius									At max. reach			
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
7.5m (25ft)	kg lb											*2730 *6020	2650 5840	6.92 (22.7)
6.0m (20ft)	kg lb							*2640 *5820	*2640 *5820			*2760 *6080	1970 4340	8.05 (26.4)
4.5m (15ft)	kg lb							*3110 *6860	*3110 *6860	*1940 *4280	*1940 *4280	*2830 *6240	1630 3590	8.73 (28.6)
3.0m (10ft)	kg lb					*4380 *9660	*4380 *9660	*3640 *8020	3080 6790	*2840 *6260	2070 4560	2700 5950	1470 3240	9.06 (29.7)
1.5m (5ft)	kg lb			*9510 *20970	8480 18700	*5730 *12630	4530 9990	*4290 *9460	2890 6370	*3560 *7850	1980 4370	2630 5800	1410 3110	9.10 (29.9)
Ground Line	kg lb			*8210 *18100	7890 17390	*6710 *14790	4220 9300	*4810 *10600	2730 6020	3490 7690	1900 4190	2720 6000	1460 3220	8.85 (29.0)
-1.5m (-5ft)	kg lb	*5960 *13140	*5960 *13140	*9730 *21450	7740 17060	*7050 *15540	4070 8970	4850 10690	2630 5800	*2970 *6550	1850 4080	3100 6640	1630 3590	8.28 (27.2)
-3.0m (-10ft)	kg lb	*8420 *18560	*8420 *18560	*10150 *22380	7800 17200	*6700 *14770	4050 8930	*4750 *10470	2620 5780			*3290 *7250	2030 4480	7.30 (24.0)
-4.5m (-15ft)	kg lb	*11640 *25660	*11640 *25660	*8040 *17730	8020 17680	*5380 *11860	4170 9190							

(4) 5.1m(16' 9") hydraulic adjustable boom, 2.2m(7' 3") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

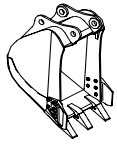
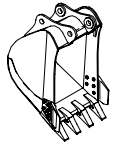
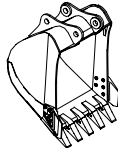
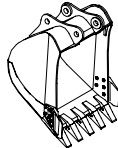
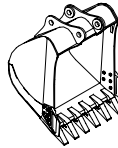
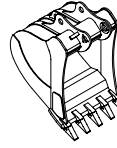
Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
6.0m (20ft)	kg lb											*3390 *7470	2360 5200	7.24 (23.8)
4.5m (15ft)	kg lb							*3860 *8510	3190 7030			*3360 *7410	1920 4230	7.99 (26.2)
3.0m (10ft)	kg lb					*5440 *11990	4810 10600	*4280 *9440	3040 6700			3120 6880	1720 3790	8.36 (27.4)
1.5m (5ft)	kg lb					*6500 *14330	4430 9770	*4760 *10490	2870 6330	*3240 *7140	1990 4390	3050 6720	1670 3680	8.41 (27.6)
Ground Line	kg lb			*5860 *12920	*5860 *12920	*7040 *15520	4200 9260	5020 11070	2750 6060			3200 7050	1750 3860	8.13 (26.7)
-1.5m (-5ft)	kg lb	*5850 *12900	*5850 *12900	*9740 *21470	7880 17370	*6890 *15190	4140 9130	*4940 *10890	2710 5970			*3340 *7360	2010 4430	7.50 (24.6)
-3.0m (-10ft)	kg lb			*8500 *18740	8070 17790	*5940 *13100	4220 9300					*2930 *6460	2680 5910	6.37 (20.9)

(5) 5.1m(16' 9") hydraulic adjustable boom, 2.6m(8' 6") arm equipped with 0.7m<sup>3</sup>(SAE heaped) bucket, 600mm(24") triple grouser shoe and 2950kg counterweight.

Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
6.0m (20ft)	kg lb											*3120 *6880	2130 4700	7.66 (25.1)
4.5m (15ft)	kg lb											*3110 *6860	1760 3880	8.37 (27.5)
3.0m (10ft)	kg lb							*4020 *8860	3050 6720	*2940 *6480	2050 4520	2900 6390	1580 3480	8.72 (28.6)
1.5m (5ft)	kg lb			*6640 *14640	*6640 *14640	*6170 *13600	4450 9810	*4550 *10030	2860 6310	3600 7940	1970 4340	2830 6240	1520 3350	8.77 (28.8)
Ground Line	kg lb			*6650 *14660	*6650 *14660	*6880 *15170	4180 9220	*4930 *10870	2720 6000	3530 7780	1910 4210	2950 6500	1580 3480	8.50 (27.9)
-1.5m (-5ft)	kg lb	*5680 *12520	*5680 *12520	*9340 *20590	7760 17110	*6930 *15280	4080 8990	4910 10820	2650 5840			*3210 *7080	1800 3970	7.90 (25.9)
-3.0m (-10ft)	kg lb	*8890 *19600	*8890 *19600	*9150 *20170	7900 17420	*6240 *13760	4110 9060	*4340 *9570	2680 5910			*2970 *6550	2320 5110	6.86 (22.5)
-4.5m (-15ft)	kg lb			*6330 *13960	*6330 *13960	*4220 *9300	*4220 *9300							

## 6. BUCKET SELECTION GUIDE

### 1) GENERAL BUCKET

					
0.39m <sup>3</sup> SAE heaped bucket	0.50m <sup>3</sup> SAE heaped bucket	0.64m <sup>3</sup> SAE heaped bucket	※0.70m <sup>3</sup> SAE heaped bucket	0.89m <sup>3</sup> SAE heaped bucket	◆0.69m <sup>3</sup> SAE heaped bucket

Capacity		Width		Weight	Recommendation				
					5.1m (16' 9") Mono boom			5.1m (16' 9") Hydraulic adjustable boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.0m arm (7' 3")	2.6m arm (8' 6")	3.1m arm (10' 2")	2.2m arm (7' 3")	2.6m arm (8' 6")
0.39m <sup>3</sup> (0.51yd <sup>3</sup> )	0.34m <sup>3</sup> (0.44yd <sup>3</sup> )	620mm (24.4")	740mm (29.1")	410kg (900lb)					
0.50m <sup>3</sup> (0.65yd <sup>3</sup> )	0.44m <sup>3</sup> (0.58yd <sup>3</sup> )	760mm (29.9")	880mm (34.6")	470kg (1040lb)					
0.64m <sup>3</sup> (0.84yd <sup>3</sup> )	0.55m <sup>3</sup> (0.72yd <sup>3</sup> )	920mm (36.2")	1040mm (40.9")	510kg (1120lb)					
※0.70m <sup>3</sup> (0.92yd <sup>3</sup> )	0.60m <sup>3</sup> (0.78yd <sup>3</sup> )	990mm (39.0")	1110mm (43.7")	540kg (1190lb)					
0.89m <sup>3</sup> (1.16yd <sup>3</sup> )	0.77m <sup>3</sup> (1.01yd <sup>3</sup> )	1220mm (48.0")	1340mm (52.8")	610kg (1340lb)					
◆0.69m <sup>3</sup> (0.9yd <sup>3</sup> )	0.62m <sup>3</sup> (0.81yd <sup>3</sup> )	990mm (39.0")	-	700kg (1540lb)					

※ : Standard bucket

◆ : Heavy duty 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

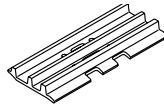
 Applicable for materials with density of 1100kg/m<sup>3</sup> (1850lb/yd<sup>3</sup>) or less

## 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			
						
R160LC-7A	Shoe width	mm(in)	500(20)	600(24)	700(28)	800(32)
	Operating weight	kg(lb)	17150(37810)	17400(38360)	17650(38910)	17900(39460)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.50(7.11)	0.42(5.97)	0.37(5.26)	0.32(4.55)
	Overall width	mm(ft-in)	2490(8' 2")	2590(8' 6")	2690(8'10")	2790(9' 2")

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

Item	Quantity
Carrier rollers	2EA
Track rollers	7EA
Track shoes	49EA

### 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
500mm triple grouser	Option	A
600mm triple grouser	Standard	A
700mm triple grouser	Option	B
800mm 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	Mitsubishi D04FD-TAA
Type	4-cycle turbocharged, charge air cooled diesel engine.
Cooling method	Water cooling
Number of cylinders and arrangement	4 cylinders, in-line
Firing order	1-3-4-2
Combustion chamber type	Direct injection type
Cylinder bore × stroke	102 × 130mm(4.02" × 5.12")
Piston displacement	4249cc(259cu in)
Compression ratio	16.5 : 1
Rated gross horse power(SAE J1995)	126Hp at 2000rpm(94kW at 2000rpm)
Maximum torque at 1800rpm	47.7kgf · m(345lb · ft)
Engine oil quantity	18.5 l (4.9U.S. gal)
Dry weight	420kg(926lb)
High idling speed	2100 ± 50rpm
Low idling speed	800 ± 100rpm
Rated fuel consumption	170.6g/Hp · hr at 2000rpm
Starting motor	Mitsubishi 24V-5.0kW
Alternator	Mitsubishi 24V-50A
Battery	2 × 12V × 100Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 80cc/rev
Maximum pressure	330kgf/cm <sup>2</sup> (4694psi) [360kgf/cm <sup>2</sup> (5120psi)]
Rated oil flow	2 × 168 l /min (44.4U.S. gpm/ 37.0U.K. gpm)
Rated speed	2100rpm

[ ]: Poer 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	31.5 l /min(8.3U.S. gpm/7.0U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools two-block
Operating method	Hydraulic pilot system
Main relief valve pressure	330kgf/cm <sup>2</sup> (4695psi) [360kgf/cm <sup>2</sup> (5120psi)]
Overload relief valve pressure	380kgf/cm <sup>2</sup> (5550psi)

[ ]: Pooer boost

### 5) SWING MOTOR

Item	Specification
Type	Two fixed displacement axial piston motor
Capacity	117.8cc/rev
Relief pressure	240kgf/cm <sup>2</sup> (3414psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	56kgf · m(405lbf · ft)
Brake release pressure	20kgf/cm <sup>2</sup> (284psi)
Reduction gear type	2 - stage planetary

### 6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	330kgf/cm <sup>2</sup> (4695psi)
Reduction gear type	Planetary & differential type
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	6kgf/cm <sup>2</sup> (85psi)
Braking torque	40.6kgf · m(294lbf · 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	∅ 115 × ∅ 80 × 1090mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 120 × ∅ 85 × 1340mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 115 × ∅ 80 × 950mm
	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
R160LC-7A	Option	500mm(20")	0.50kgf/cm <sup>2</sup> (7.11psi)	49	2490mm( 8' 2")
	Standard	600mm(24")	0.42kgf/cm <sup>2</sup> (5.97psi)	49	2590mm( 8' 6")
	Option	700mm(28")	0.37kgf/cm <sup>2</sup> (5.26psi)	49	2690mm( 8' 10")
	Option	800mm(32")	0.32kgf/cm <sup>2</sup> (4.55psi)	49	2790mm( 9' 2")

## 10) BUCKET

Item		Capacity		Tooth quantity	Width		
		SAE heaped	CECE heaped		Without side cutter	With side cutter	
R160LC-7A	STD	0.70m <sup>3</sup> (0.92yd <sup>3</sup> )	0.60m <sup>3</sup> (0.78yd <sup>3</sup> )	5	990mm(39.0")	1110mm(43.7")	
	OPT	◆	0.39m <sup>3</sup> (0.51yd <sup>3</sup> )	0.34m <sup>3</sup> (0.44yd <sup>3</sup> )	3	620mm(24.4")	740mm(29.1")
		◆	0.50m <sup>3</sup> (0.65yd <sup>3</sup> )	0.44m <sup>3</sup> (0.58yd <sup>3</sup> )	4	760mm(29.9")	880mm(34.6")
		◆	0.64m <sup>3</sup> (0.84yd <sup>3</sup> )	0.55m <sup>3</sup> (0.72yd <sup>3</sup> )	5	920mm(36.2")	1040mm(40.9")
		◆	0.89m <sup>3</sup> (1.16yd <sup>3</sup> )	0.77m <sup>3</sup> (1.01yd <sup>3</sup> )	6	1220mm(48.0")	1340mm(52.8")
		◆	◆0.69m <sup>3</sup> (0.90yd <sup>3</sup> )	0.62m <sup>3</sup> (0.81yd <sup>3</sup> )	5	990mm(39.0")	-

◆ : Heavy duty bucket

## 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	18.5(4.9)	SAE 30						
			SAE 10W						
			SAE 10W-30						
			SAE 15W-40						
Swing drive	Gear oil	5(1.3)	SAE 85W-140						
Final drive		3×2 (0.8×2)							
Hydraulic tank	Hydraulic oil	Tank: 160(42.2) System: 240(63.4)	ISO VG 32						
			ISO VG 46						
			ISO VG 68						
Fuel tank	Diesel fuel	260(68.7)	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	28(7.4)	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