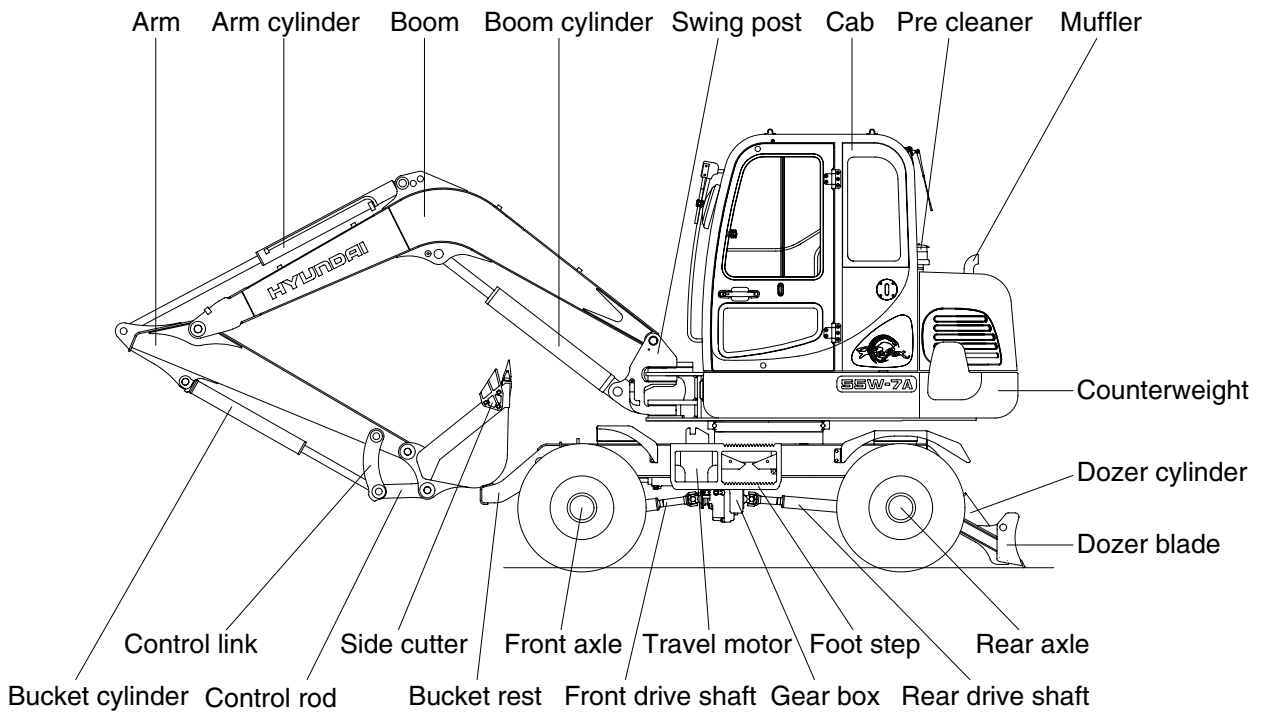
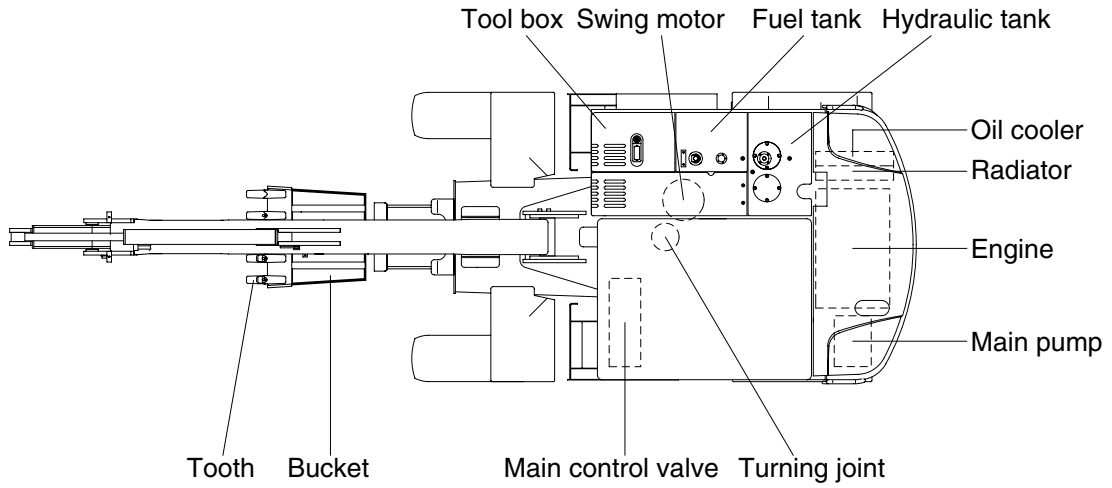


# GROUP 2 SPECIFICATIONS

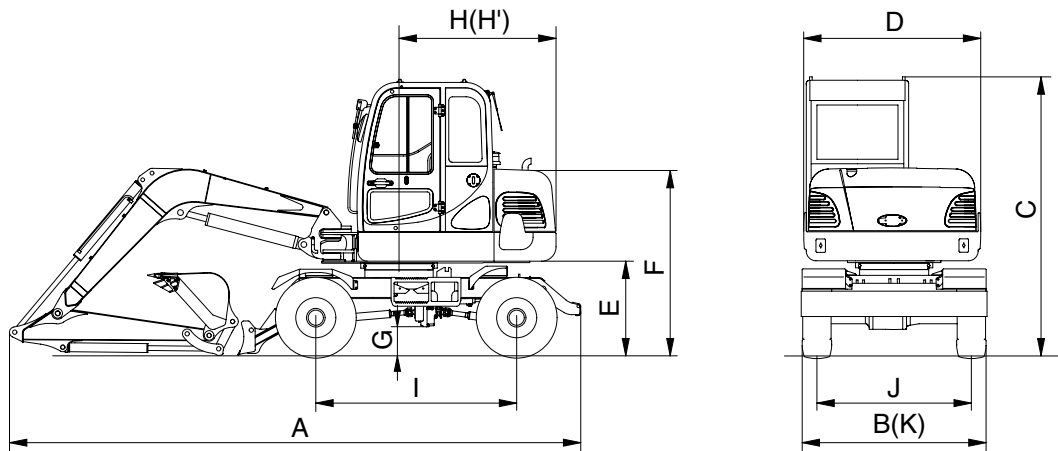
## 1. MAJOR COMPONENT



55W7A2SP01

## 2. SPECIFICATIONS

### 1) 3.0m(9'10") ONE PIECE BOOM, 1.6m(5' 3") ARM WITH BOOM SWING POST

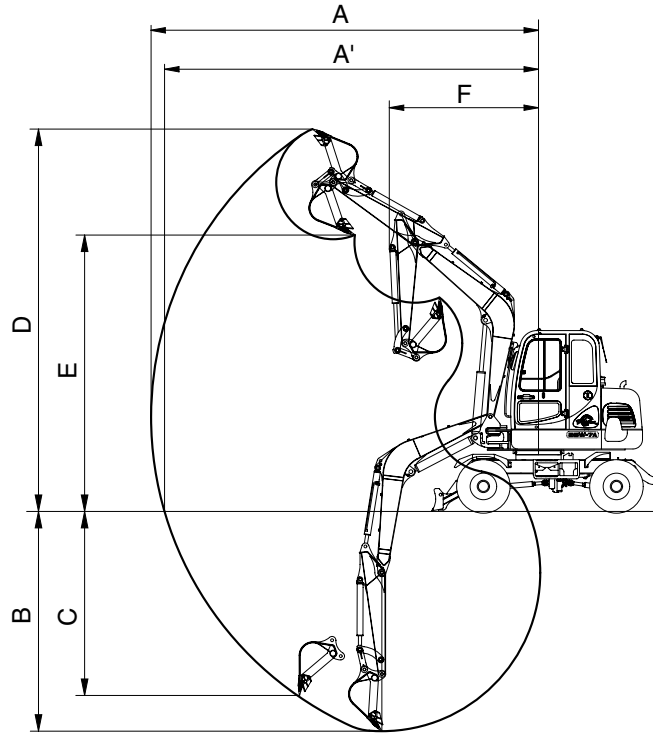


55W7A2SP02

Description		Unit	Specification
Operating weight		kg(lb)	5600(12350)
Bucket capacity(SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	0.18(0.24)
Overall length	A	mm(ft-in)	5970(19' 6")
Overall width	B		1925( 6' 4")
Overall height	C		2850( 9' 4")
Upperstructure width	D		1830( 6' 0")
Ground clearance of counterweight	E		986( 3' 3")
Engine cover height	F		1930( 6' 4")
Minimum ground clearance	G		290(11.4")
Rear-end distance	H		1650( 5' 5")
Rear-end swing radius	H'		1650( 5' 5")
Wheel base	I		2100( 6'11")
Tread	J		1600( 5' 3")
Dozer blade width	K		1925( 6' 4")
Travel speed	Low		km/hr(mph)
	High	27(16.8)	
Swing speed		rpm	9.3
Gradeability		Degree(%)	35(70)

### 3. WORKING RANGE

#### 1) 3.0m(9'10") MONO BOOM WITH BOOM SWING POST



55W7A2SP05

Description		1.6m(5' 3") Arm
Max digging reach	A	6150mm (20' 2")
Max digging reach on ground	A'	5980mm (19' 7")
Max digging depth	B	3500mm (11' 6")
Max vertical wall digging depth	C	2960mm ( 9' 9")
Max digging height	D	6070mm (19'11")
Max dumping height	E	4340mm (14' 3")
Min swing radius	F	2350mm ( 7' 9")
Boom swing radius(left/right)		80° /50°
Bucket digging force	SAE	37.7 kN
		3850 kgf
		8490 lbf
	ISO	42.4 kN
		4330 kgf
		9550 lbf
Arm digging force	SAE	28.4 kN
		2900 kgf
		6390 lbf
	ISO	31.9 kN
		3260 kgf
		7190 lbf

## 4. WEIGHT











### 1) MONO BOOM

Item	R55W-7A	
	kg	lb
Upperstructure assembly	2500	5510
Main frame weld assembly	680	1500
Engine assembly	280	620
Main pump assembly	30	70
Main control valve assembly	40	90
Swing motor assembly	70	160
Hydraulic oil tank assembly	80	180
Boom swing post	110	240
Fuel tank assembly	60	130
Counterweight	200	440
Cab assembly	280	620
Lower frame weld assembly	500	1090
Swing bearing	100	220
Travel motor assembly	80	180
Turning joint	30	70
Gear box	63	140
Front axle assembly	280	610
Rear axle assembly	200	430
Dozer blade assembly	190	420
Front attachment assembly(3.0m boom, 1.6m arm, 0.18m <sup>3</sup> SAE heaped bucket)	740	1630
3.0m boom assembly	260	570
1.6m arm assembly	140	310
0.18m <sup>3</sup> SAE heaped bucket assembly	170	370
Boom cylinder assembly	60	130
Arm cylinder assembly	50	110
Bucket cylinder assembly	30	70
Bucket control link assembly	40	90
Boom swing cylinder assembly	45	100
Blade cylinder assembly	50	110











## 5. LIFTING CAPACITIES

1) 3.0m( 9'10" ) boom, 1.6m( 5' 3" ) arm equipped with 0.18m<sup>3</sup>(SAE heaped) bucket and the dozer blade down with 200kg(440lb) counterweight.

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

Load point height		Load radius								At max. reach		
		2.0m(6.6ft)		3.0m(9.8ft)		4.0m(13.1ft)		5.0m(16.4ft)		Capacity		Reach m(ft)
												
5.0m (16.4ft)	kg lb									*960 *2120	*960 *2120	4.46 (14.6)
4.0m (13.1ft)	kg lb					*1020 *2250	*1020 *2250			*990 *2180	720 1590	5.26 (17.3)
3.0m (9.9ft)	kg lb					*1150 *2540	1110 2450			*1030 *2270	610 1340	5.69 (18.7)
2.0m (6.6ft)	kg lb			*1910 *4210	1670 3680	*1410 *3110	1060 2340	*1210 *2670	740 1630	*1070 *2360	570 1260	5.86 (19.2)
1.0m (3.3ft)	kg lb			*2510 *5530	1570 3460	*1670 *3680	1010 2230	*1320 *2910	720 1590	*1120 *2470	570 1260	5.80 (19.0)
Ground Line	kg lb	*2680 *5910	*2680 *5910	*2730 *6020	1510 3330	*1820 *4010	980 2160			*1160 *2560	610 1340	5.51 (18.1)
-1.0m (-3.3ft)	kg lb	*4040 *8910	3020 6660	*2620 *5780	1510 3330	*1770 *3900	970 2140			*1190 *2620	740 1630	4.91 (16.1)
-2.0m (-6.6ft)	kg lb	*3410 *7520	3080 6790	*2100 *4630	1540 3400							

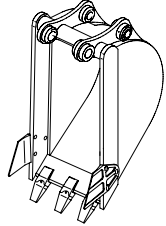
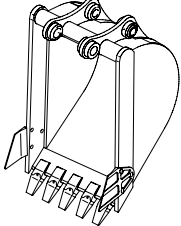
2) 3.0m( 9'10" ) boom, 1.6m( 5' 3" ) arm equipped with 0.18m<sup>3</sup>(SAE heaped) bucket and the dozer blade up with 200kg(440lb) counterweight.

Load point height		Load radius								At max. reach		
		2.0m(6.6ft)		3.0m(9.8ft)		4.0m(13.1ft)		5.0m(16.4ft)		Capacity		Reach m(ft)
												
5.0m (16.4ft)	kg lb									*960 *2120	880 1940	4.46 (14.6)
4.0m (13.1ft)	kg lb					*1020 *2250	*1020 *2250			760 1680	650 1430	5.26 (17.3)
3.0m (9.9ft)	kg lb					*1150 *2540	1010 2230			650 1430	550 1210	5.69 (18.7)
2.0m (6.6ft)	kg lb			1760 3880	1500 3310	1120 2470	960 2120	780 1720	660 1460	610 1340	510 1120	5.86 (19.2)
1.0m (3.3ft)	kg lb			1650 3640	1390 3060	1070 2360	910 2010	760 1680	640 1410	600 1320	510 1120	5.80 (19.0)
Ground Line	kg lb	*2680 *5910	2610 5750	1600 3530	1350 2980	1040 2290	880 1940			650 1430	550 1210	5.51 (18.1)
-1.0m (-3.3ft)	kg lb	3190 7030	2630 5800	1590 3510	1340 2950	1030 2270	870 1920			780 1720	660 1460	4.91 (16.1)
-2.0m (-6.6ft)	kg lb	3250 7170	2690 5930	1620 3570	1370 3020							

- 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.

## 6. BUCKET SELECTION GUIDE

### 1) GENERAL BUCKET

	
<p>0.07m<sup>3</sup> SAE heaped bucket</p>	<p>0.18m<sup>3</sup> SAE heaped bucket</p>

Capacity		Width		Weight	Recommendation
					3.0m ( 9'10" ) boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.6m ( 5' 3" ) arm
0.07m <sup>3</sup> (0.09yd <sup>3</sup> )	0.06m <sup>3</sup> (0.08yd <sup>3</sup> )	315mm (12.4")	360mm (14.2")	84kg (185lb)	Applicable for materials with density of 1600kgf/m <sup>3</sup> (2700lbf/yd <sup>3</sup> ) or less
0.18m <sup>3</sup> (0.24yd <sup>3</sup> )	0.15m <sup>3</sup> (0.20yd <sup>3</sup> )	705mm (27.8")	770mm (30.3")	137kg (300lb)	

## 7. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	Yanmar 4TN98-EPHYB
Type	4-cycle diesel engine, low emission
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	98 × 110mm(3.85" × 4.33")
Piston displacement	3319cc(203cu in)
Compression ratio	18.5 : 1
Rated gross horse power(SAE J1995)	57Hp at 2400rpm(42.5kW at 2400rpm)
Maximum torque at 1550rpm	20.5kgf · m(148lbf · ft)
Engine oil quantity	11.6 l (3.1U.S. gal)
Dry weight	270kg(595lb)
High idling speed	2400+ 50rpm
Low idling speed	1050 ± 100rpm
Rated fuel consumption	175.6g/Hp · hr at 2400rpm
Starting motor	12V-3.0kW
Alternator	12V-80A
Battery	1 × 12V × 100Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 26.3cc/rev
Maximum pressure	220kgf/cm <sup>2</sup> (3130psi)
Rated oil flow	2 × 58 l /min (15.3U.S. gpm/ 12.8U.K. gpm)
Rated speed	2200rpm

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	16.2/6.5cc/rev
Maximum pressure	200/30kgf/cm <sup>2</sup> (2840/430psi)
Rated oil flow	38.9/15.6 l /min(10.3/4.1U.S. gpm/8.6/3.4U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	10 spools sectional block(+1 optional block)
Operating method	Hydraulic pilot system
Main relief valve pressure	220kgf/cm <sup>2</sup> (3130psi)
Overload relief valve pressure	240kgf/cm <sup>2</sup> (3410psi)

### 5) SWING MOTOR

Item	Specification
Type	Two fixed displacement axial piston motor
Capacity	30.4cc/rev
Relief pressure	200kgf/cm <sup>2</sup> (2840psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	14kgf · m(101lb · ft)
Brake release pressure	20~40kgf/cm <sup>2</sup> (284~570psi)
Reduction gear type	2 - stage planetary

### 6) TRAVEL MOTOR

Item	Specification
Type	Bent axis design variable displacement axial piston motor
Relief pressure	220kgf/cm <sup>2</sup> (3130psi)
Counterbalance valve	Applied
Capacity	80cc

## 7) POWER TRAIN

Item	Description		Specification
Gear box	Type		2 speed hydrostatic
	Gear ratio	1st	6.357
		2nd	1.961
Parking brake	Type		Multi disc brake integrated in rear axle
	Maximum braking power		945kgf · m(6835lbf · ft)
Axle	Type		4 wheel drive with differential
	Gear ratio		8.67
	Brake		Multi disc brake

## 8) REMOTE CONTROL VALVE

Item	Specification	
Type	Pressure reducing type	
Operating pressure	Minimum	5kgf/cm <sup>2</sup> (71psi)
	Maximum	20kgf/cm <sup>2</sup> (284psi)
Pushrod stroke	6.5/8.5mm(0.26/0.33in)	

## 9) CYLINDER

Item	Specification	
Boom cylinder	Bore dia × Rod dia × Stroke	ø 110 × ø 65 × 715mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 90 × ø 55 × 850mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 80 × ø 50 × 660mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	ø 100 × ø 50 × 159mm
	Cushion	-
Boom swing cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 50 × 535mm
	Cushion	-

※ 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.

## 10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R55W-7A	STD	0.18m <sup>3</sup> (0.24yd <sup>3</sup> )	0.15m <sup>3</sup> (0.20yd <sup>3</sup> )	5	705mm(27.8")	770mm(30.3")
	OPT	0.07m <sup>3</sup> (0.09yd <sup>3</sup> )	0.06m <sup>3</sup> (0.08yd <sup>3</sup> )	3	315mm(12.4")	360mm(14.2")

## 8. 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	11.6(3.1)	SAE 30						
			SAE 10W						
			SAE 10W-30						
			SAE 15W-40						
Swing drive	Gear oil	1.5(0.4)	SAE 85W-140						
	Grease	0.2(0.05)	NLGI NO.1						
			NLGI NO.2						
Gear box case	Gear oil	1.85(0.49)	SAE 85W-90						
Front axle		Center : 4.5(1.19) Hub : 0.4 × 2 (0.11 × 2)							
Rear axle		Center : 4.5(1.19) Hub : 0.4 × 2 (0.11 × 2)							
Hydraulic tank	Hydraulic oil	Tank: 70(18.5)	ISO VG 32						
			ISO VG 46						
			ISO VG 68						
Fuel tank	Diesel fuel	120(31.7)	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	10(2.6)	Ethylene glycol base permanent type						

**SAE** : Society of Automotive Engineers

**API** : American Petroleum Institute

**ISO** : International Organization for Standardization Material

**NLGI** : National Lubricating Grease Institute

**ASTM** : American Society of Testing and