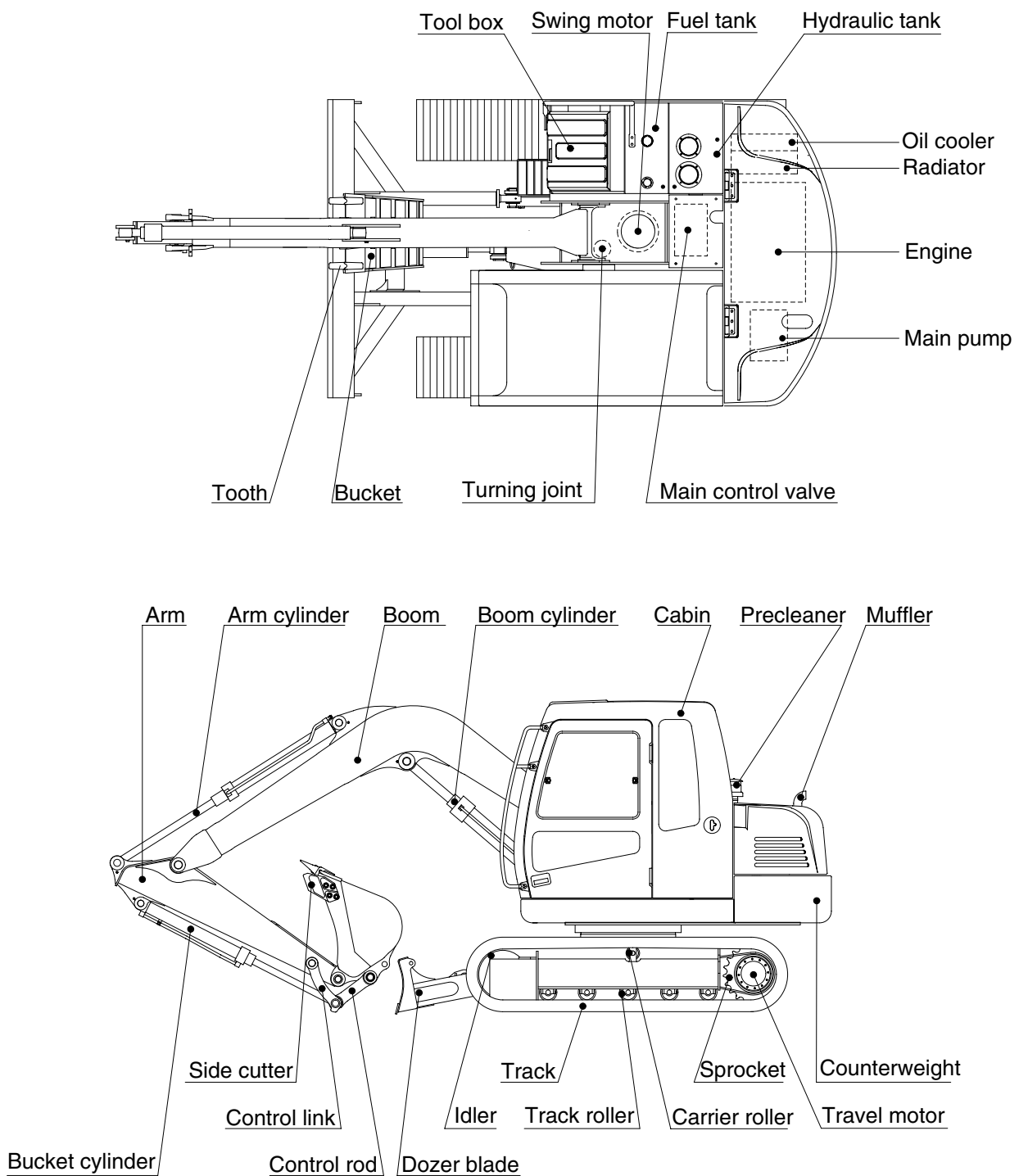


SPECIFICATIONS

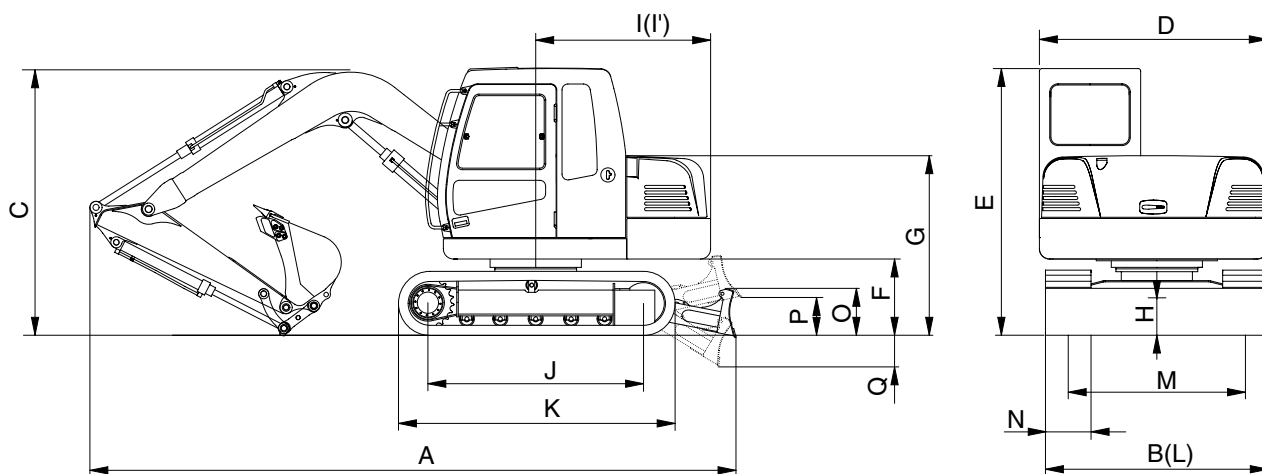
1. MAJOR COMPONENT



7072SP01

2. SPECIFICATIONS

1) 3.7m(12' 2") MONO BOOM, 1.67m(5' 6") ARM AND FRONT DOZER BLADE



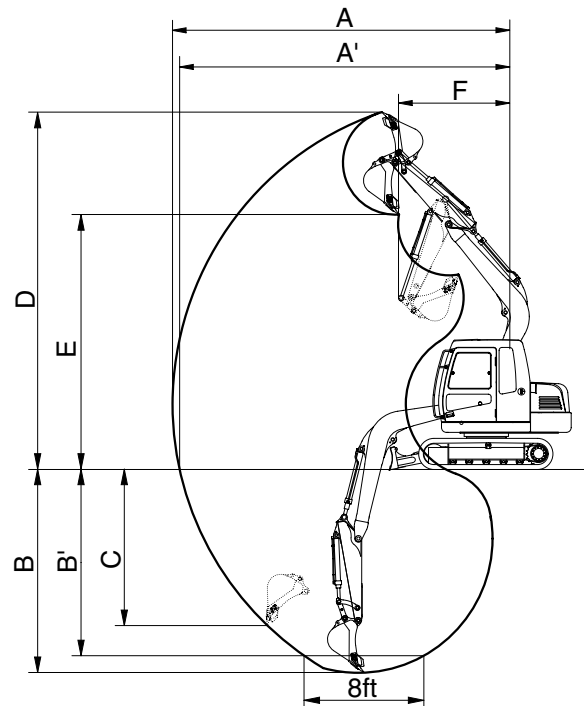
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Description		Unit	Specification
Operating weight		kg(lb)	7800(17200)
Bucket capacity(SAE heaped), standard		m ³ (yd ³)	0.28(0.25)
Overall length	A	mm(ft-in)	6325(20' 9")
Overall width, with 450mm shoe	B		2260(7' 5")
Overall height of boom	C		2605(8' 7")
Superstructure width	D		2250(7' 5")
Overall height	E		2650(8' 8")
Ground clearance of counterweight	F		755(2' 6")
Engine cover height	G		1775(5' 10")
Minimum ground clearance	H		360(1' 2")
Rear-end distance	I		1727(5' 8")
Rear-end swing radius	I'		1750(5' 9")
Distance between tumblers	J		2130(6' 12")
Undercarriage length	K		2724(8' 11")
Undercarriage width	L		2200(7' 3")
Track gauge	M		1750(5' 9")
Track shoe width, standard	N		450(1' 6")
Height of blade	O		460(1' 6")
Ground clearance of blade up	P		400(1' 4")
Depth of blade down	Q		280(0' 11")
Travel speed(Low/high)		km/hr(mph)	3.3/4.6(2.1/2.9)
Swing speed		rpm	12.0
Gradeability		Degree(%)	30(58)
Ground pressure(450mm shoe)		kgf/cm ² (psi)	0.37(5.26)

3. WORKING RANGE

1) R80-7

(1) 3.7m(12' 2") MONO BOOM



7072SP03

Description		1.67m(5' 6") Arm
Max digging reach	A	6330mm (20' 9")
Max digging reach on ground	A'	6190mm (20' 4")
Max digging depth	B	4150mm (13' 7")
Max digging depth (8ft level)	B'	3810mm (12' 6")
Max vertical wall digging depth	C	3200mm (10' 6")
Max digging height	D	7260mm (23'10")
Max dumping height	E	5170mm (17' 0")
Min swing radius	F	1750mm (5' 9")
Bucket digging force	SAE	44.1 kN
		4500 kgf
		9920 lbf
	ISO	51.0 kN
		5200 kgf
		11460 lbf
Arm digging force	SAE	38.2 kN
		3900 kgf
		8600 lbf
	ISO	39.2 kN
		4000 kgf
		8820 lbf

4. WEIGHT

1) R80-7

Item	kg	lb
Upperstructure assembly	3750	8270
Main frame weld assembly	820	1810
Engine assembly	290	640
Main pump assembly	50	110
Main control valve assembly	60	130
Swing motor assembly	80	170
Hydraulic oil tank assembly	120	260
Fuel tank assembly	80	170
Counterweight	540	1190
Cab assembly	310	680
Lower chassis assembly	2820	6220
Track frame weld assembly	980	2160
Swing bearing	140	310
Travel motor assembly	160	360
Turning joint	30	60
Track recoil spring	110	240
Idler	130	290
Carrier roller	20	40
Track roller	160	360
Track-chain assembly(450mm standard triple grouser shoe)	810	1790
Dozer blade assembly	330	730
Front attachment assembly(3.7m boom, 1.67m arm, 0.28m ³ SAE heaped bucket)	1230	2710
3.7m boom assembly	490	1080
1.67m arm assembly	200	440
0.28m ³ SAE heaped bucket	230	510
Boom cylinder assembly	120	260
Arm cylinder assembly	80	180
Bucket cylinder assembly	50	110
Dozer blade cylinder	50	110
Bucket control link assembly	60	130

5. LIFTING CAPACITIES

1) ROBEX 80-7

(1) 3.7m(12' 2") boom, 1.67m(5' 6") arm equipped with 0.28m³(SAE heaped) bucket and 450mm(18") triple grouser shoe and dozer blade up with 540kg(1300lb) counterweight.

Load point height		Load radius						At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		Capacity		Reach
										m(ft)
4.5m (15.0ft)	kg lb			*1810 *3990	*1810 *3990			1160 2560	1050 2310	5.06 (16.6)
3.0m (10.0ft)	kg lb	*3900 *8600	*3900 *8600	*2380 *5250	*2380 *5250	1390 3060	1250 2760	880 1940	790 1740	5.75 (18.9)
1.5m (5.0ft)	kg lb			2540 5600	2230 4920	1290 2840	1160 2560	790 1740	710 1570	5.95 (19.5)
Ground Line	kg lb			2340 5160	2040 4500	1210 2670	1080 2380	820 1810	740 1630	5.70 (18.7)
-1.5m (-5.0ft)	kg lb	*4800 *10580	*4800 *10580	2300 5070	2000 4410	1190 2620	1060 2340	1050 2310	950 2090	4.93 (16.2)
-3.0m (-10.0ft)	kg lb	*3960 *8730	*3960 *8730	*2340 *5160	2100 4630					

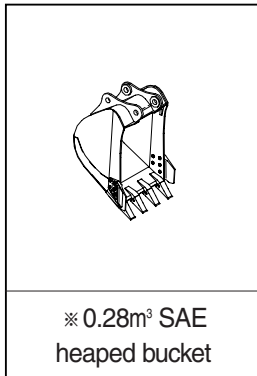
(2) 3.7m(12' 2") boom, 1.67m(5' 6") arm equipped with 0.28m³(SAE heaped) bucket and 450mm(18") triple grouser shoe and dozer blade down with 540kg(1300lb) counterweight.

Load point height		Load radius						At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		Capacity		Reach
										m(ft)
4.5m (15.0ft)	kg lb			*1810 *3990	*1810 *3990			*1690 *3730	1120 2470	5.06 (16.6)
3.0m (10.0ft)	kg lb	*3900 *8600	*3900 *8600	*2380 *5250	*2380 *5250	*1930 *4250	1330 2930	*1710 *3770	850 1870	5.75 (18.9)
1.5m (5.0ft)	kg lb			*3330 *7340	2400 5290	*2230 *4920	1240 2730	*1760 *3880	760 1680	5.95 (19.5)
Ground Line	kg lb			*3800 *8380	2200 4850	*2420 *5340	1160 2560	*1810 *3990	790 1740	5.70 (18.7)
-1.5m (-5.0ft)	kg lb	*4800 *10580	*4800 *10580	*3560 *7850	2160 4760	*2220 *4890	1140 2510	*1790 *3950	1010 2230	4.93 (16.2)
-3.0m (-10.0ft)	kg lb	*3960 *8730	*3960 *8730	*2340 *5160	2260 4980					

- 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



Capacity		Width		Weight	Recommendation
					3.7m (12' 2") Mono boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.67m arm (5' 6")
※ 0.28m³ (0.37yd³)	0.25m³ (0.33yd³)	670mm (26.4")	750mm (29.5")	230kg (510lb)	

※ : Standard bucket

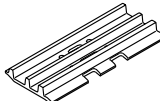
 Applicable for materials with density of 2000kg/m³ (3370lb/yd³) or less

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	
				
R80-7	Shoe width	mm(in)	450(18)	600(24)
	Operating weight	kg(lb)	7800(17196)	7960(17550)
	Ground pressure	kgf/cm ² (psi)	0.37(5.26)	0.28(3.98)
	Overall width	mm(ft-in)	2260(7' 5")	2350(7' 9")

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	1EA
Track rollers	5EA
Track shoes	38EA

4) SELECTION OF TRACK SHOE

Suitable track shoes should be selected according to operating conditions.

※ Table 1

Track shoe	Specification	Category
450mm triple grouser	Standard	A
600mm triple grouser	Option	A

※ Table 2

Category	Applications	Precautions
A	Rocky ground, river beds, normal soil	Travel at low speed on rough ground with large obstacles such as boulders or fallen trees

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Yanmar 4TNV98
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(3.86" × 4.33")
Piston displacement	3318cc(202cu in)
Compression ratio	18.5:1
Rated gross horse power(SAE J1995)	60Hp at 2100rpm(44kW at 2100rpm)
Maximum torque at 1000rpm	25.2kgf · m(182lbf · ft)
Engine oil quantity	12.0 l (3.2U.S. gal)
Dry weight	260kg(584lb)
High idling speed	2290 ± 50rpm
Low idling speed	1050 ± 50rpm
Rated fuel consumption	172.3g/Hp · hr at 2100rpm
Starting motor	Hitachi 24V-3.5kW
Alternator	Hitachi 24V-40A
Battery	2 × 12V × 68Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 36cc/rev
Maximum pressure	280kgf/cm ² (3983psi)
Rated oil flow	2 × 75.6 l /min (2 × 20U.S.gpm)
Rated speed	1950rpm

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	8.9cc/rev
Maximum pressure	35kgf/cm ² (500psi)
Rated oil flow	18.7 l /min(4.9U.S.gpm/4.1U.K.gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools mono-block
Operating method	Hydraulic pilot system
Main relief valve pressure	280kgf/cm ² (3983psi)
Overload relief valve pressure	310kgf/cm ² (4410psi)

5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	43cc/rev
Relief pressure	190kgf/cm ² (2702psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	14kgf · m ² (101lbf · ft)
Brake release pressure	20~40kgf/cm ² (284~569psi)
Reduction gear type	2 - stage planetary
Swing speed	12.0rpm

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	300kgf/cm ² (4267psi)
Reduction gear type	2 stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	Less than 9kgf/cm ² (128psi)
Braking torque	8.4kgf · m ² (61lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	5kgf/cm ² (71psi)
	Maximum	20kgf/cm ² (284psi)
Push rod stroke	Lever	6.5/8.5mm(0.26/0.34in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 115 × ø 70 × 980mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 60 × 860mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 85 × ø 55 × 650mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	ø 110 × ø 65 × 152mm
	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.

9) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R80-7	Standard	450mm(18")	0.37kgf/cm ² (5.26psi)	38	2260mm(7' 5")
	Option	600mm(24")	0.28kgf/cm ² (3.98psi)	38	2350mm(7' 9")

10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R80-7	STD	0.28m ³ (0.37yd ³)	0.25m ³ (0.33yd ³)	4	670mm(26.4")	750mm(29.5")

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	12(3.17)					SAE 30		
						SAE 10W			
						SAE 10W-30			
						SAE 15W-40			
Swing drive	Gear oil	1.5(0.4)							
Final drive		1.2×2 (0.32×2)					SAE 85W-140		
Swing drive	Grease	0.2kg(0.4lb)	NLGI NO.1						
					NLGI NO.2				
Hydraulic tank	Hydraulic oil	Tank:75(19.8) System: 130(34.3)	ISO VG 32						
					ISO VG 46				
					ISO VG 68				
Fuel tank	Diesel fuel	135(35.7)	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	11(2.9)							
					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