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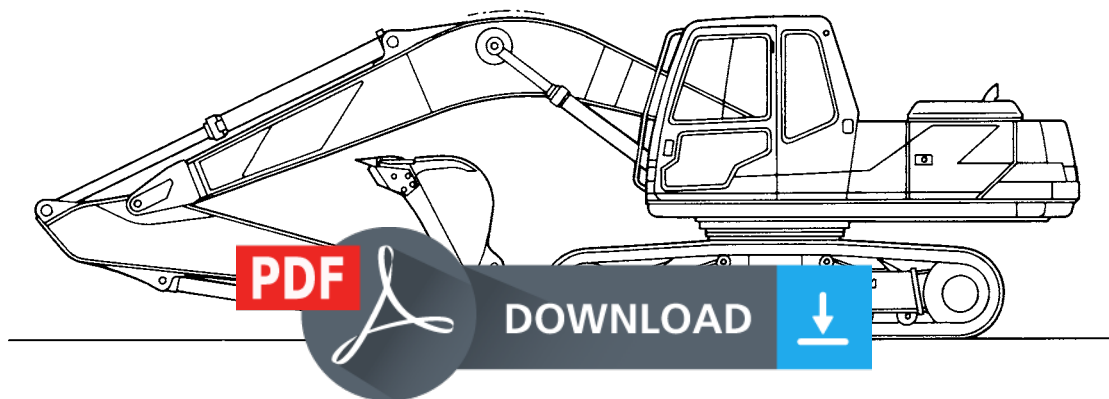
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KOBELCO

Hydraulic Excavator

MARK III
SERIES

SERVICEMAN HANDBOOK



 **KOBE STEEL, LTD.**

· PRINTED IN JAPAN
1990.10

APPLIED MACHINES

This serviceman's handbook provides essential information regarding the following models of excavator.

SK 60

SK 100

SK 120

SK 120_{LC}

SK 200

SK 200_{LC}

SK 220

SK 220_{LC}

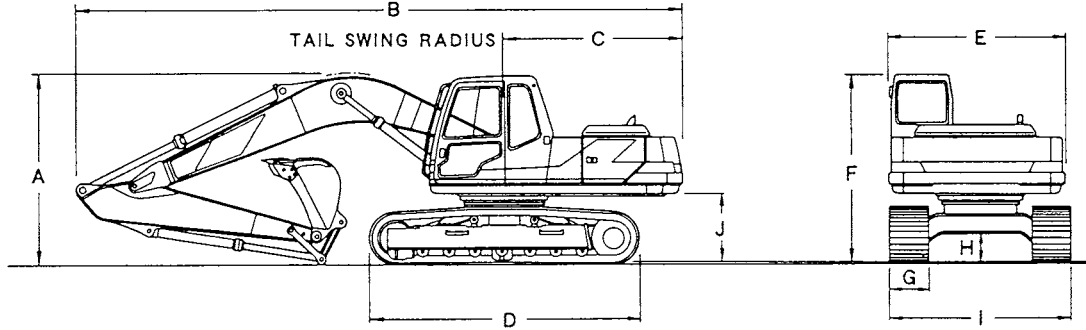
PREFACE

This serviceman's handbook for the KOBELCO hydraulic excavator provides maintenance and repair personnel with basic information concerning routine maintenance and repair of the KOBELCO machine.

This handbook is compiled for the user's convenience using extracts mainly from the Operators and Shop Manuals.

For inspection and maintenance of the machine in the field, use this handbook as a reference to improve your work efficiency.

DIMENSIONS



MODEL	DIMENSIONS											Unit: mm (ft-in)			
	A	B	C	D	E	F	G	H	I	J	ARM				
SK60	2,950 (9' 8.1")	6,005 (19' 8.4")	(R1,700) (R5' 6.9")	2,770 (9' 1.0")	2,160 (7' 1.0")	2,595 (8' 6.1")	400 (15.7")	380 (1' 2.9")	2,100 (6' 10.6")	770 (2' 6.3")	2,150 (7' 11")				
	2,610 (8' 6.7")	6,020 (19' 9.0")					500 (19.6")		2,200 (7' 2.5")		1,730 (5' 8")				
	2,815 (9' 2.8")	6,020 (19' 9.0")					600 (23.6")		2,300 (7' 6.5")		1,730 + 450 (5' 8" + 1' 6")				
SK100	2,570 (8' 5.2")	7,240 (23' 9.0")	R2,130 (R7' 0")	3,320 (10' 11.0")	2,430 (7' 12.0")	2,725 (8' 11.2")	500 (19.6")	455 (1' 6.0")	2,490 (8' 2.0")	900 (2' 11.4")	2,270 (7' 5")				
	2,570 (8' 5.2")	7,290 (23' 11.0")					600 (23.6")		2,590 (8' 6.0")		1,900 (6' 3")				
	2,900 (9' 6.1")	7,180 (23' 6.6")					700 (27.6")		2,690 (8' 10.0")		2,770 (9' 1")				
	2,835 (9' 3.6")	7,195 (23' 7.2")					800 (31.5")		2,790 (9' 2.0")		2,270 + 600 (7' 5" + 1' 11")				
SK120 SK120LC	2,650 (8' 8.3")	7,595 (24' 11.0")	R2,150 (R7' 0.6")	3,490 (11' 5.4")	2,430 (7' 11.6")	2,725 (8' 11.2")	500 (19.6")	455 (1' 6.0")	2,490 (8' 2.0")	900 (2' 11.4")	2,500 (8' 2")				
	2,595 (8' 6.1")	7,585 (24' 10.6")					600 (23.6")		2,590 (8' 6.0")		2,100 (6' 11")				
	3,035 (6' 8.1")	7,550 (24' 9.2")					700 (27.6")		2,690 (8' 10.0")		3,000 (9' 10")				
	3,065 (10' 0.6")	7,530 (24' 8.4")					800 (31.5")		2,790 (9' 2.0")		2,500 + 1,000 (8' 2" + 3' 3")				
SK200 SK200LC	3,060 (10' 0.4")	9,380 (30' 9.3")	R2,700 (R8' 10.3")	4,070 (13' 4.2")	2,720 (8' 11.0")	2,890 (9' 5.7")	600 (23.6")	465 (1' 6.3")	2,800 (9' 2.2")	1,055 (3' 5.5")	2,400 (7' 11")				
	2,910 (9' 6.5")	9,320 (30' 7.0")					800 (31.5")		3,000 (9' 10.1")		2,940 (9' 7")				
	2,860 (9' 4.6")	9,310 (30' 6.5")					900 (35.4")		3,190 (10' 5.6")		3,300 (10' 10")				
	3,730 (12' 2.8")	9,210 (30' 2.6")					4,450 (14' 7.2")		3,190 (10' 5.6")		2,400 + 1,500 (7' 11" + 4' 11")				
	3,450 (11' 3.8")	9,310 (30' 6.5")					600 (23.6")		2,990 (9' 9.7")		2,940 + 1,500 (9' 8" + 4' 11")				
SK220 SK220LC	3,210 (10' 6.3")	10,070 (33' 0.4")	R2,850 (R9' 4.2")	4,350 (14' 3.2")	2,830 (9' 3.4")	2,920 (9' 7.0")	600 (23.6")	480 (1' 6.7")	2,990 (9' 9.7")	1,080 (3' 6.5")	2,500 (8' 2")				
							700 (27.6")		3,090 (10' 1.6")						
							800 (31.5")		3,190 (10' 5.6")						
	3,070 (10' 0.8")	9,980 (32' 9.0")					4,650 (15' 3.0")	600 (23.6")	465 (1' 6.3")		600 (23.6")	465 (1' 6.3")	3,190 (10' 5.6")	3,190 (10' 5.6")	2,980 (9' 9")
											700 (27.6")		3,290 (10' 9.5")		
											800 (31.5")		3,390 (11' 1.4")	3,660 (12' 0")	

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MACHINE SPECIFICATIONS

Item	Model	SK60		
Std. bucket capacity	M ³ (cuyd)	0.25 (0.33)		
Range of bucket	M ³ (cuyd)	0.1~0.3 (0.13~0.39)		
Overall weight	ton (lbs)	6.4 (400 mm shoe) [14,110 (16" shoe)]		
Performance	Swing speed	rpm	13	
	Travel speed	km/h(M/h)	3.7/5.5 (2.3/3.4)	
	Gradeability	%	70 (35°)	
	Digging Force	Bucket	ton (lbs)	4.8 (10,580)
		Arm	ton (lbs)	3.7 (8,160)
		Arm length	mm (in)	1,730 (5' 8.1")
Tractive force	ton (lbs)	5.2 (11,460)		
General dimensions	Arm length	mm (in)	1,730 (5' 8.1")	2,150 (7' 0.6")
	Overall length	mm (in)	6,020 (19' 9.0")	6,005 (19' 8.4")
	Overall width	mm (in)	2,180 (7' 1.8")	2,180 (7' 1.8")
	Overall height	mm (in)	2,610 (8' 6.7")	2,610 (8' 6.7")
	Ground clearance of undercarriage	mm (in)	380 (15")	380 (15")
Track	Overall length of crawler	mm (in)	2,770 (9' 1.0")	
	Center distance of tumblers	mm (in)	2,160 (7' 1.0")	
	Center distance of crawler	mm (in)	1,700 (5' 6.9")	
	Width of track shoe	mm, kg/cm (in, psi)	Grouser (Equal height)	400/0.34 (16" / 4.83)
				500/0.27 (20" / 3.83)
	600/0.23 (24" / 3.27)			
	Ground pressure		Flat	400/0.34 (16" / 4.83)
600/0.23 (24" / 3.27)				
Triangle			700/0.20 (27.6" / 2.84)	
Maker/Model		ISUZU 4JB1		
Type		Water-cooled 4-cycle, direct injection type		
Rated output power	ps/rpm	75/2,200		
Maximum torque	kgm/rpm	18/1,800		
Number of cylinder -- Bore × Stroke	mm (in)	4 - 93 × 102 (4 - 3.66" × 4.02")		
Total displacement	cc (cuin)	2,771 (169)		
Fuel consumption	g/psh	170		
Dry weight	kg (lbs)	240 (530)		
Fuel tank capacity	L (gal)	130 (24)		

SK100

Item	Model	SK100				
Std. bucket capacity	M ³ (cuyd)	0.4 (0.52)				
Range of bucket	M ³ (cuyd)	0.15~0.45 (0.20~0.59)				
Overall weight	ton (lbs)	10.5 (500 mm shoe) [23,150 (20" shoe)]				
Performance	Swing speed	rpm	12.7			
	Travel speed	km/h(M/h)	1ST SPEED 4 (2.4) 2ND SPEED 5.5 (3.4)			
	Gradeability	%	70 (35°)			
	Digging Force	Bucket	ton (lbs)	7.3 (16,100)		
		Arm	ton (lbs)	6.2 (13,670)	5.4 (11,900)	4.7 (10,360)
		Arm length	mm (in)	1,900 (6' 2.8")	2,270 (7' 5.3")	2,770 (9' 1.0")
	Tractive force	ton (lbs)	6.1/8.9 (13,450/19,620)			
General dimensions	Arm length	mm (in)	1,900 (6' 2.8")	2,270 (7' 5.3")	2,770 (9' 1.0")	
	Overall length	mm (in)	7,290 (23' 11.0")	7,240 (23' 9.0")	7,180 (23' 6.6")	
	Overall width	mm (in)	2,490 (8' 2.0")	2,490 (8' 2.0")	2,490 (8' 2.0")	
	Overall height	mm (in)	2,725 (8' 11.2")	2,725 (8' 11.2")	2,900 (9' 6.1")	
	Ground clearance of undercarriage	mm (in)	455 (18)	455 (18")	455 (18")	
Track	Overall length of crawler	mm (in)	3,320 (10' 10.7")			
	Center distance of tumblers	mm (in)	1,990 (6' 6.3")			
	Center distance of crawler	mm (in)	2,610 (8' 6.7")			
	Width of track shoe	mm, kg/cm (in, psi)	Grouser (Equal height)	500 / 0.36 (20" / 5.12)		
				600 / 0.30 (24" / 4.27)		
				700 / 0.26 (27.6" / 3.70)		
	Ground pressure		Flat	500 / 0.36 (20" / 5.12)		
Triangle			800 / 0.23 (32" / 3.27)			
Maker/Model		ISUZU 4BD1				
Type		4-cycle, water-cooled direct injection type diesel				
Rated output power	ps/rpm	76/2,300				
Maximum torque	kgm/rpm	24/1,600				
Number of cylinder - Bore × Stroke	mm (in)	4 - 102 × 118 (4 - 4.0" × 4.6")				
Total displacement	cc (cuin)	3,856 (235)				
Fuel consumption	g/psh	173 ± 5				
Dry weight	kg (lbs)	325 (715)				
Fuel tank capacity	L (gal)	250 (66)				

SK120 SK120LC

Item		Model	SK120	SK120LC		
Std. bucket capacity		M ³ (cuyd)	0.45 (0.52)			
Range of bucket		M ³ (cuyd)	0.3~0.6 (0.39~0.78)			
Overall weight		ton (lbs)	11.5 (500 mm shoe) [25,350 (20" shoe)]	11.7 (500 mm shoe) [25,790 (20" shoe)]		
Performance	Swing speed		rpm 12.7			
	Travel speed		km/h(M/h) 1ST SPEED 4 (2.5) 2ND SPEED 7 (4.3)			
	Gradeability		% 70 (35°)			
	Digging Force	Bucket	ton (lbs)	7.7 (16,975)		
		Arm	ton (lbs)	6.8 (14,990)	6.1 (13,450) 5.4 (11,900)	
		Arm length	mm (in)	2,100 (6' 10.6")	2,500 (8' 2.4") 3,100 (10' 2.0")	
	Tractive force		ton (lbs)	4.9/9.3 (10,800/20,500)		
General dimensions	Arm length		mm (in)	2,100 (6' 10.6") 2,500 (8' 2.4") 3,100 (10' 2.0")		
	Overall length		mm (in)	7,585 (24' 10.6") 7,595 (24' 11.0") 7,550 (24' 9.2")		
	Overall width		mm (in)	2,490 (8' 2.0") 2,490 (8' 2.0") 2,490 (8' 2.0")		
	Overall height		mm (in)	2,725 (8' 11.2") 2,725 (8' 11.2") 2,725 (8' 11.2")		
	Ground clearance of undercarriage		mm (in)	455 (18") 455 (18") 455 (18")		
Track	Overall length of crawler		mm (in)	3,490 (11' 5.3") 3,740 (12' 3.2")		
	Center distance of tumblers		mm (in)	1,990 (6' 6.3") 1,990 (6' 6.3")		
	Center distance of crawler		mm (in)	2,780 (9' 1.4") 3,035 (9' 11.4")		
	Width of track shoe	mm, kg/cm (in, psi)	Grouser (Equal height)	500 / 0.38 (20" / 5.40)	Grouser (Equal height)	500 / 0.36 (20" / 5.12)
				600 / 0.32 (24" / 4.55)	600 / 0.30 (24" / 4.27)	
	700 / 0.28 (27.6" / 3.98)	700 / 0.26 (27.6" / 3.70)				
	Ground pressure		Flat	500 / 0.38 (20" / 5.40)	Flat	500 / 0.36 (20" / 5.12)
Triangle			800 / 0.24 (32" / 3.41)	Triangle	800 / 0.23 (32" / 3.27)	
Maker/Model		ISUZU 4BD1T				
Type		4-cycle, water-cooled direct injection type with turbo charger				
Rated output power		ps/rpm	85/2,150			
Maximum torque		kgm/rpm	30/1,600			
Number of cylinder - Bore × Stroke		mm (in)	4 - 102 × 118 (4 - 4.0" × 4.64")			
Total displacement		cc (cuin)	3,856 (235)			
Fuel consumption		g/psh	165 ± 5			
Dry weight		kg (lbs)	350 (770)			
Fuel tank capacity		L (gal)	250 (66)			



Thank you very much
for your reading.
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