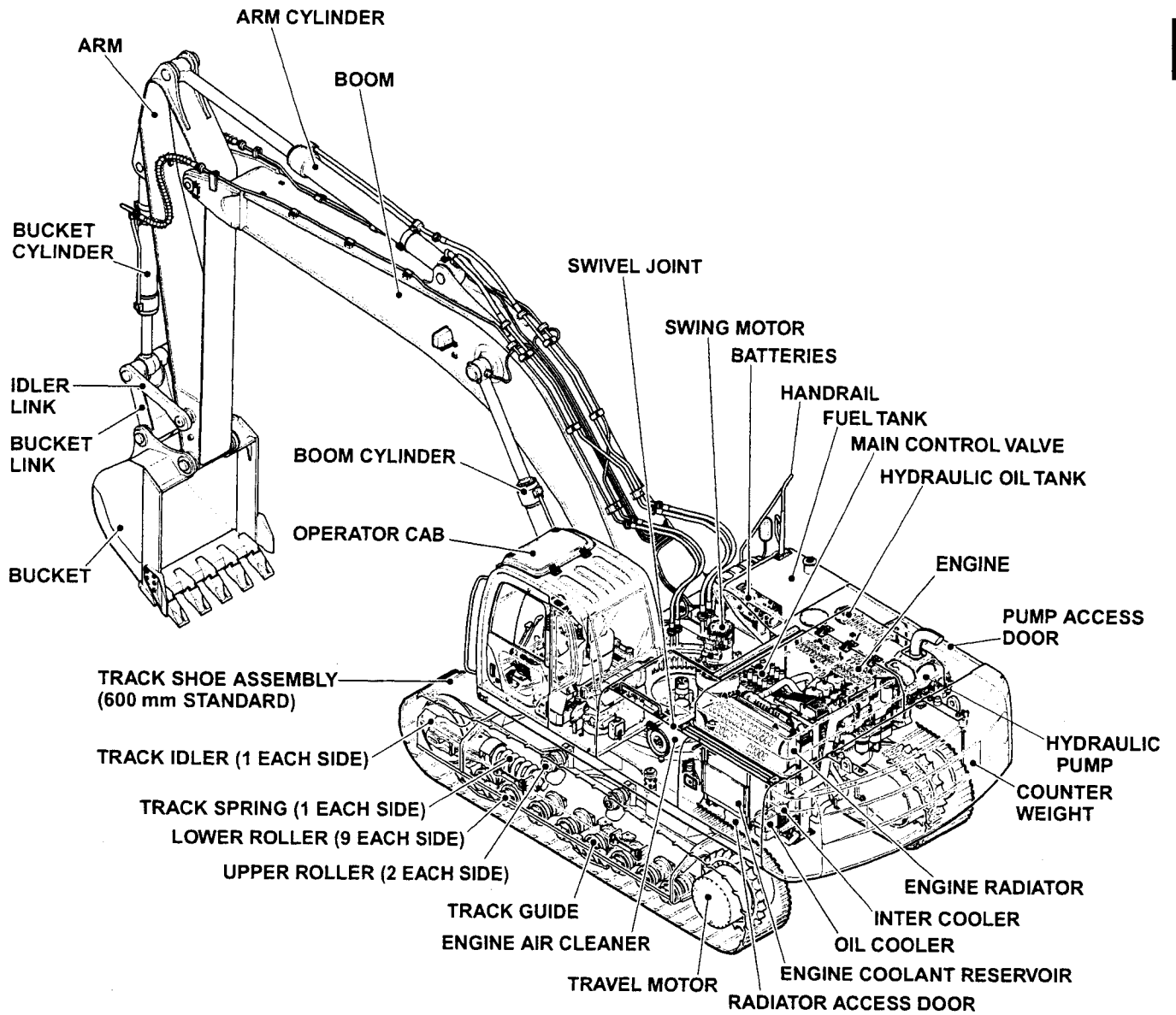


# 1. NAME OF COMPONENTS



## 2. GENERAL DIMENSIONS

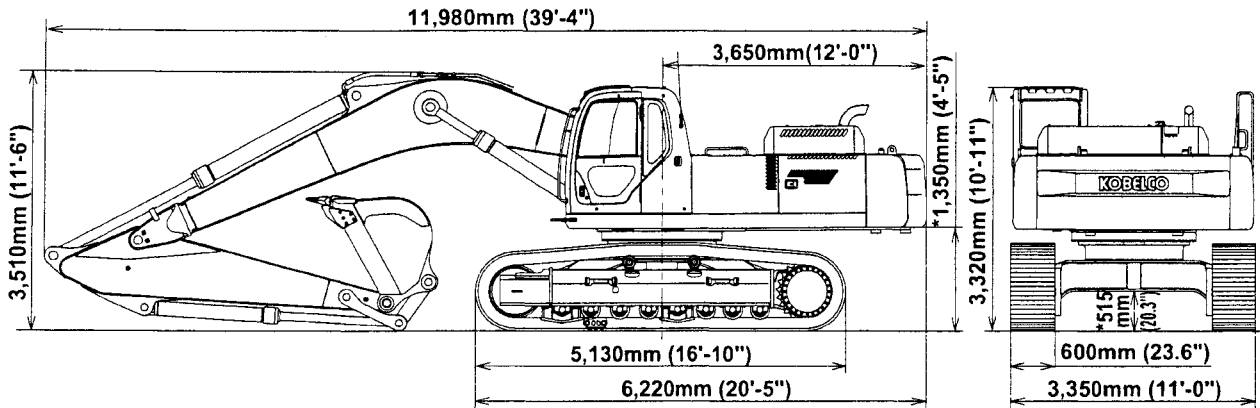
SK450-6

Unit : mm (ft-in)

2.1 7.00m (23' 0") Boom+3.45m (11' 4") Standard Arm+1.80m<sup>3</sup> (2.35cu-yd) Bucket+600mm (23.6") Shoe

**NOTE :**

Dimensions marked ※ do not include the height of the shoe lug.



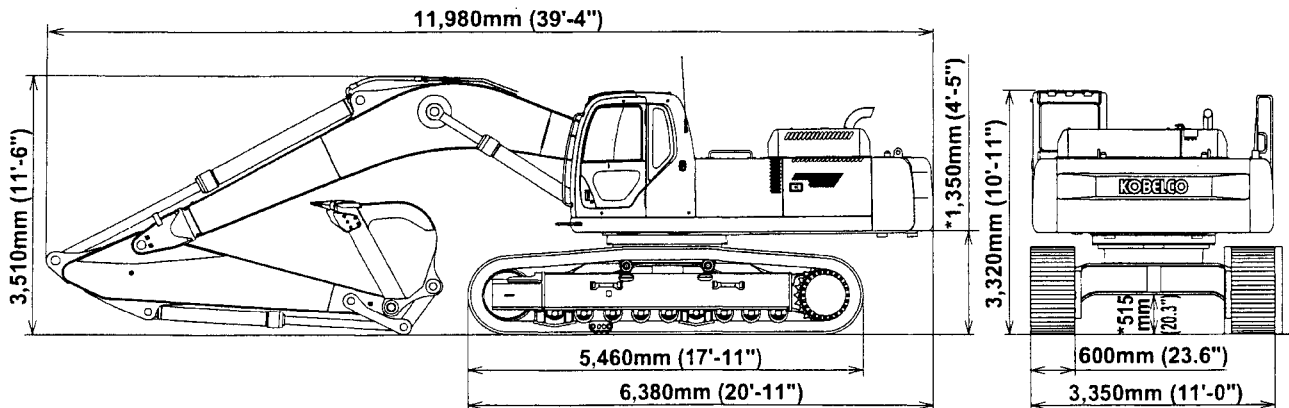
SK450LC-6 SK480LC-6(S)

Unit : mm (ft-in)

2.2 7.00m (23' 0") Boom+3.45m (11' 4") Standard Arm+1.80m<sup>3</sup> (2.35cu-yd) Bucket+600mm (23.6") Shoe

**NOTE**

Dimensions marked ※ do not include the height of the shoe lug.



### 3. WEIGHT OF COMPONENTS

Unit : kg (lb)

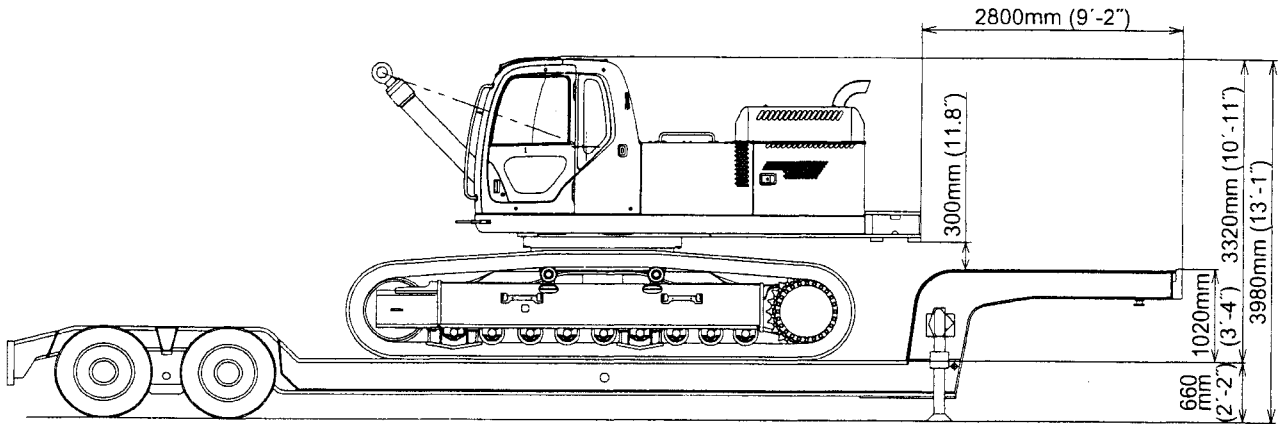
Item	Model	SK450LC-6 SK480LC-6(S)	SK450-6
Machine complete		45,900 (101,190)	45,200 (99,650)
1. Upper frame assy (including the following :)		20,800 (45,860)	←
1.1	Upper frame	4,630 (10,210)	←
1.2	Counterweight	9,230 (20,350)	←
1.3	Cab	260 (570)	←
1.4	Engine	※ 1,020 (2,250)	←
1.5	Hydraulic oil tank	※ 360 (790)	←
1.6	Fuel tank	※ 230 (510)	←
1.7	Slewing motor (including reduction unit)	720 (1,590)	←
1.8	Control valve	380 (840)	←
1.9	Boom cylinder	※ 400 (880)×2	←
1.10	Pin (for mounting boom)	110 (240)	←
1.11	Pump	190 (420)	←
1.12	Radiator	190 (420)	←
2. Lower frame assy (including the following :)		17,000 (37,490)	16,300 (35,930)
2.1	Lower frame	5,890 (12,290)	5,690 (12,550)
2.2	Slewing bearing	700 (1,540)	←
2.3	Travel motor (including reduction unit)	650 (1,430)×2	←
2.4	Upper roller	30 (66)×4	←
2.5	Lower roller	98 (220)×18	98 (220)×16
2.6	Front idler	270 (600)×2	←
2.7	Idler adjuster	325 (720)×2	←
2.8	Sprocket	100 (220)×2	←
2.9	Swivel joint	58 (130)	←
2.10	Track guide	50 (110)×4	←
2.11	Track link with 600mm (23.6in) shoes assy	2,700 (5,990)×2	2,540 (5,600)×2
2.11.1	Track link assy	1,160 (2,560)×2	1,090 (2,400)×2
3. Attachment (including the following / STD :) [7.0m (23ft) Boom+3.45m (11ft-4in) Arm +1.8m <sup>3</sup> (2.35cu.yd) Bucket]		8,100 (17,860)	←
3.1	Bucket assy (STD)	1,440 (3,170)	←
3.2	STD Arm assy (including the following :)	2,410 (5,310)	←
3.2.1	STD Arm	1,470 (3,240)	←
3.2.2	Bucket cylinder	※ 360 (790)	←
3.2.3	Idler link	56 (120)×2	←
3.2.4	Bucket link	150 (330)	←
3.2.5	Pin (2pcs. for mounting bucket cylinder / 2pcs. for mounting bucket)	155 (340)	←
3.3	Boom assy	4,240 (9,350)	←
3.3.1	Boom	3,330 (7,280)	←
3.3.2	Arm cylinder	※ 590 (1,300)	←
3.3.3	Pin (Mounting arm • Mounting arm cylinder)	124 (270)	←
4. Lubricant and water (including the following :)		1,200 (2,650)	←
4.1	Hydraulic oil	570 (1,260)	←
4.2	Engine oil	42 (90)	←
4.3	Fuel	540 (1,190)	←
4.4	Water	48 (105)	←

NOTE : Numerical values marked ※ indicate the dry weight.

## 4. TRANSPORTATION

### 4.1 DIMENSIONS OF MACHINE ON A TRAILER (WITHOUT COUNTERWEIGHT)

Item	Model	SK450LC-6 SK480LC-6(S)	SK450-6
Width	600mm (23.6in) shoes	mm(ft-in)	3,350 (11' 0")
Weight	kg(lb)	28,000(61,730)	27,800 (61,290)



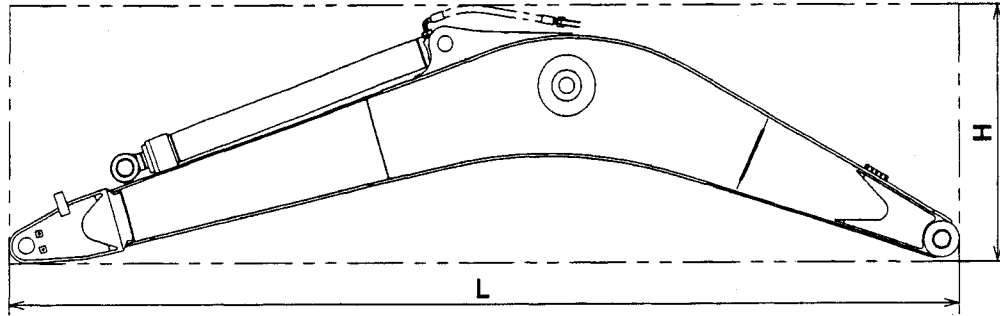
#### NOTE

This illustration is for demonstration purposes only. Always, make sure to check actual dimensions after machine is loaded on trailer.

## 4.2 DIMENSIONS OF ATTACHMENT

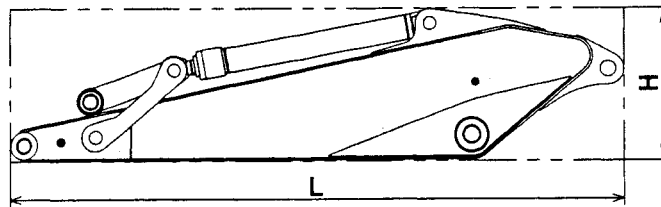
### (1) BOOM

Item	Type	7.00m (23ft-0in) Boom
Length×Height×Width L×H×W	m(ft-in)	7.26×1.90×0.93 (23' 10"×6' 3"×3' 1")
Weight	kg (lb)	4,210 (9,280)



### (2) ARM

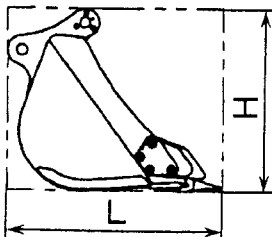
Item	Type	3.0m (9ft-10in)	3.45m (11ft-4in)	4.04m (13ft-3in)	4.9m (16ft-1in)
Length×Height×Width L×H×W	m(ft-in)	4.18×1.21×0.78 (13' 9"×3' 8"×2' 7")	4.70×1.15×0.78 (15' 5"×3' 9"×2' 7")	5.30×1.15×0.78 (17' 5"×3' 9"×2' 7")	6.14×1.26×0.78 (20' 2"×4' 2"×2' 7")
Weight	kg (lb)	2,250 (4,960)	2,380 (5,250)	2,570 (5,670)	2,940 (6,480)



### (3) BUCKET

Type	Hoe bucket	
Length×Height×Width L×H×W	1.78×1.56×1.52 (5' 10"×5' 1"×5' 0")	
Weight	kg (lb)	1,440 (3,170)
Bucket capacity	m <sup>3</sup> (cu·yd)	1.80 (2.35)

#### ● Hoe bucket



## 5. SPECIFICATIONS AND PERFORMANCE

### 5.1 SPEED AND CLIMBING CAPABILITY

Item	Area & Model	KCME	ASIA
		SK480LC-6(S)	SK450(LC)-6
Swing speed		9.0rpm	←
Travel speed (1-speed/2-speed)	km/h (mile/h)	3.5 / 5.6 (2.2 / 3.5)	←
Gradeability	%(degree)	70 (35)	←

### 5.2 ENGINE

Engine model	MMC (Mitsubishi) 6D24—TLU2G	MMC 6D24—TLE2A
Type	Water-cooled, 4-cycle direct injection type engine with turbo charger and inter cooler	←
Number of cylinders—Bore×Stroke	6—130mm×150mm (5.12in×5.91in)	←
Total displacement	11,950cc (729cu·in)	←
Rated output / Rotation speed	235kW (320PS) / 2,000rpm	←
Maximum torque / Rotation speed	129kgf·m (933 lbf·ft) / 1,200rpm	←
Starter	24V / 7.0kW	←
Alternator	24V / 35A	←

### 5.3 HYDRAULIC COMPONENTS

Hydraulic pump	Variable displacement axial piston + gear pump	←
Hydraulic motor (swing)	Axial piston motor	←
Hydraulic motor (travel)	2-speed axial piston motor	←
Control valve	6-spool control valve	←
Cylinder (Boom, Arm, Bucket)	Double action cylinder	←
Oil cooler	Air-cooled type	←

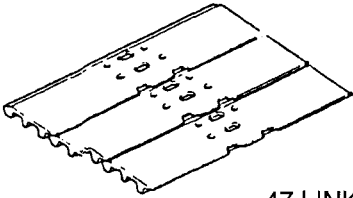
### 5.4 WEIGHT

Unit : kg (lb)

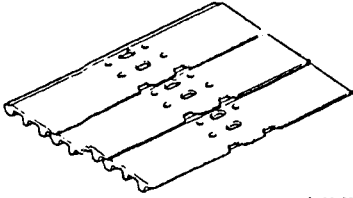
	SK480LC-6(S)	SK450LC-6	SK450-6
Fully equipped weight	45,900 (101,190)	←	45,200 (99,670)
Upper structure	20,800 (45,860)	←	←
Lower machinery	17,000 (37,490)	←	16,300 (35,930)
Attachment (7.00m (23ft-0in) Boom+3.45m (11ft-4in) Arm +1.80m <sup>3</sup> (2.35cu·yd) Bucket)	8,100 (17,860)	←	←

## 6. TYPE OF CRAWLER

### 6.1 NORMAL CRAWLER

Shape	Shoe width mm (in)	Overall width of crawler mm (ft-in)	Ground pressure kgf /cm <sup>2</sup> (psi)
Grouser shoe  47 LINKS	600 (23.6")	3,350 (11'0")	0.85 (12.2)
	900 (35.4")	3,660 (12'0")	0.61 (8.68)

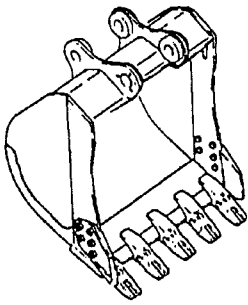
### 6.2 LONG CRAWLER

Shape	Shoe width mm (in)	Overall width of crawler mm (ft-in)	Ground pressure kgf /cm <sup>2</sup> (psi)
Grouser shoe  50 LINKS	600 (23.6")	3,350 (11'0")	0.80 (11.4)
	900 (35.4")	3,660 (12'0")	0.57 (8.11)

**NOTE :**

Use grouser shoes on rough ground (areas covered with rocks and gravel). If you drive or excavate with other shoes, this may cause shoe bending, shoe bolt looseness, and track assembly (link, roller, etc.) damage.

## 7. TYPE OF BUCKET

Hoe bucket	Heaped capacity m <sup>3</sup> (cu·yd)	Struck m <sup>3</sup> (cu·yd)	Outer width mm (ft-in)		Number of tooth	W or W/O side cutter	Availability of face shovel	Weight kg (lb)
			With side cutter	Without side cutter				
	1.35 (1.77)	1.00 (1.31)	1,230 (4'0")	1,100 (3'7")	4	W	YES	1,250 (2,760)
	1.60 (2.09)	1.15 (1.50)	1,380 (4'6")	1,250 (4'1")	4	W	YES	1,330 (2,930)
	1.80 (2.35) (STD)	1.30 (1.70)	1,520 (5'0")	1,390 (4'7")	5	W	YES	1,440 (3,180)
	2.05 (2.68)	1.50 (1.96)	1,670 (5'6")	1,540 (5'1")	5	W	YES	1,520 (3,350)
	2.30 (3.01)	1.65 (2.16)	1,820 (6'0")	1,690 (5'7")	5	W/O	YES	1,600 (3,530)

## 8. COMBINATIONS OF ATTACHMENT

Type	Bucket		Available Arm		
	Heaped capacity m <sup>3</sup> (cu·yd)	Struck m <sup>3</sup> (cu·yd)	3.45m (11ft-4in) Arm (STD)	4.90m (16ft-1in) Arm (Long)	3.0m (9ft-10in) Arm (Short)
Hoe bucket	1.35 (1.77)	1,00 (1.31)	○	⊙	○
	1.60 (2.09)	1,15 (1.50)	○	△	○
	Standard 1.80 (2.35)	1,30 (1.70)	⊙	×	○
	2.05 (2.68)	1,50 (1.96)	△	×	⊙
	2.30 (3.01)	1,65 (2.16)	×	×	△
Breaker	—	—	○ (Reinforced arm)	○ (Reinforced arm)	○ (Reinforced arm)
Nibbler	—	—	○ (Reinforced arm)	×	○ (Reinforced arm)

### NOTE :

- ⊙ Standard combination
  - General operation : Excavation or loading of sand, gravel, and clay
  - △ Light operation : Mainly loading or loose gravel (e.g., cultivation or loading of sand or gravel)
  - ×
- × Prohibited combination : There are problems from the view points of strength and stability.

- ⚠ ● Use the attachments recommended by KOBELCO. Reinforcement of arm allows to use it as nibbler and breaker.

The trouble due to the use in the condition "Use not allowed" described in the above table is not included in our responsibility

### ⚠ CAUTION

If any other bucket, except for the backhoe bucket, is turned over and used for excavation, damage to the arm and bucket may occur.



## 9. ENGINE SPECIFICATIONS

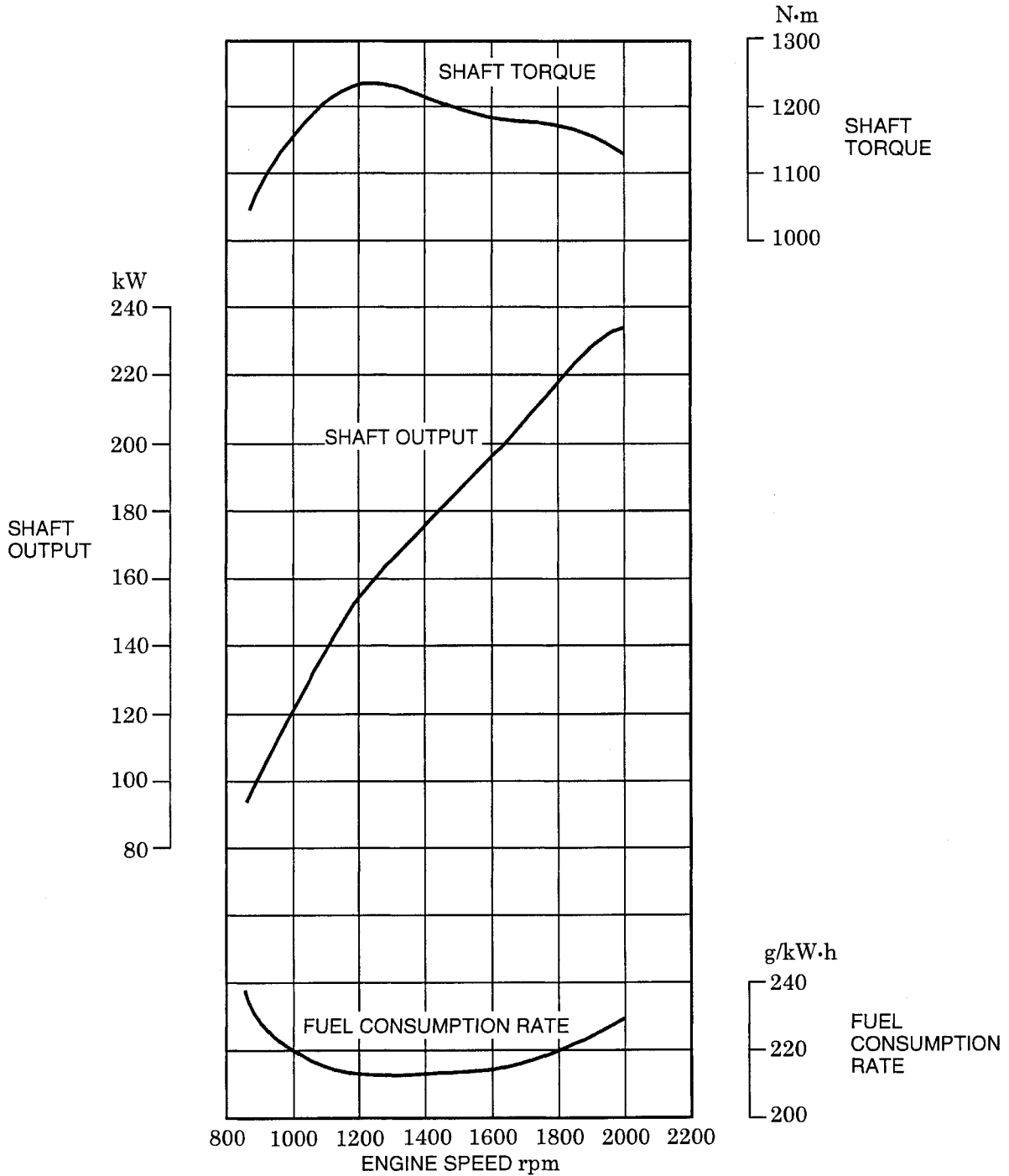
### 9.1 SPECIFICATIONS

Applicable machine		SK450(LC)-6, SK480LC-6(S)		
Engine model		MITSUBISHI 6D24-TLE2A, 6D24-TLU2G		
Type		Diesel, 4-cycle water-cooled, in-line, direct injection, turbo charged and with inter cooler		
Number of cylinder× Bore×Stroke	mm (in)	6×130×150 (5.12×5.91)		
Total displacement	cc (cu·in)	11,950 (729)		
Compression ratio		17.5		
Rated output	PS (kW) at rpm	320 (235) at 2,000		
Maximum torque	kgf·m (lbf·ft) at rpm	129 (933) at 1,200		
High idling	rpm	2,200±20		
Low idling	rpm	1,000±30		
Injection valve opening pressure	kgf/cm <sup>2</sup> (psi)	161 (2,290)		
Thermostat action Start/Full open	°C (°F)	76.5 / 90 (170 / 194)		
Firing order		1-5-3-6-2-4		
Compression pressure	kgf/cm <sup>2</sup> (psi) at min <sup>-1</sup>	28 (400) at 200		
Lubrication oil pressure	kgf/cm <sup>2</sup> (psi) at rpm	—		
Fuel injection timing		2° before top dead point		
Valve clearance		Valve clearance	Open	Close
	Intake valve	0.4mm (0.016") at cool	18° before top dead point	50° after bottom dead point
	Exhaust valve	0.6mm (0.024") at cool	50° before bottom dead point	18° after top dead point
Starter capacity	V×kW	24×7.0		
Generator capacity (Alternator)	V×A	24×35		
Cooling fan drive method		Ø813 (32") suction type 9 fans, V-belt drive, pulley ratio Crank / Fan= 0.9		
Engine oil quantity	ℓ (gal)	Full level 45 (11.9) Low level sensor actuation 32.5 (8.6) Oil filter, etc. 4 (1.1)		
Dry weight	kg (lb)	1,020 (2,250)		
Fuel consumption ratio		g / PS·h		
Allowable inclination (Limited by E/G lubrication)		Front / Rear and Right / Left : 35°		
Dimension (L×W×H)	mm (in)	1,688×900×1,220 (66.5×35.4×48.0)		
Rotating direction		Counterclockwise seeing from flywheel side		

9.2 ENGINE CHARACTERISTIC CURVE (MITSUBISHI 6D24-TL)

Condition to be measured : With fan, alternator and air cleaner

: Without muffler



$$\begin{aligned}
 & \text{Fuel consumption volume} \\
 &= \frac{\text{Fuel consumption rate}}{0.835 \times 1000} \times \text{kW} \times \text{Load factor } (\alpha) \\
 &= \frac{228 \text{ g / kW} \cdot \text{h}}{0.835 \times 1000} \times 235 \text{ kW} \times \alpha \\
 &= 64.2 \alpha \cdot \ell/\text{h}
 \end{aligned}$$

$$\begin{aligned}
 & \text{Fuel consumption volume} \\
 &= \frac{\text{Fuel consumption rate}}{0.835 \times 1000} \times \text{PS} \times \text{Load factor } (\alpha) \\
 &= \frac{167 \text{ g / PS} \cdot \text{h}}{0.835 \times 1000} \times 320 \text{ PS} \times \alpha \\
 &= 64.2 \alpha \cdot \ell/\text{h}
 \end{aligned}$$

$\alpha$  : Standard load factor  
(0.70~0.80)

Fuel consumption in regular operation  
(load factor : 0.70~0.80)  
44.9~51.4  $\ell/\text{h}$

# KOBELCO

Book code No.

S5LS03<sub>10E</sub>

## SHOP MANUAL **SK450(LC)-6** **SK480LC-6(S)**

**LS03**

### — ATTACHMENT DIMENSION —

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**KOBELCO CONSTRUCTION MACHINERY CO., LTD.**

Applicable Machines  
LS09-01501~  
YS09-01301~

Revision	Date of Issue	Remarks
First edition	November, 2004	S5LS0310E K

# 1. BOOM

## 1.1 BOOM DIMENSIONAL DRAWING

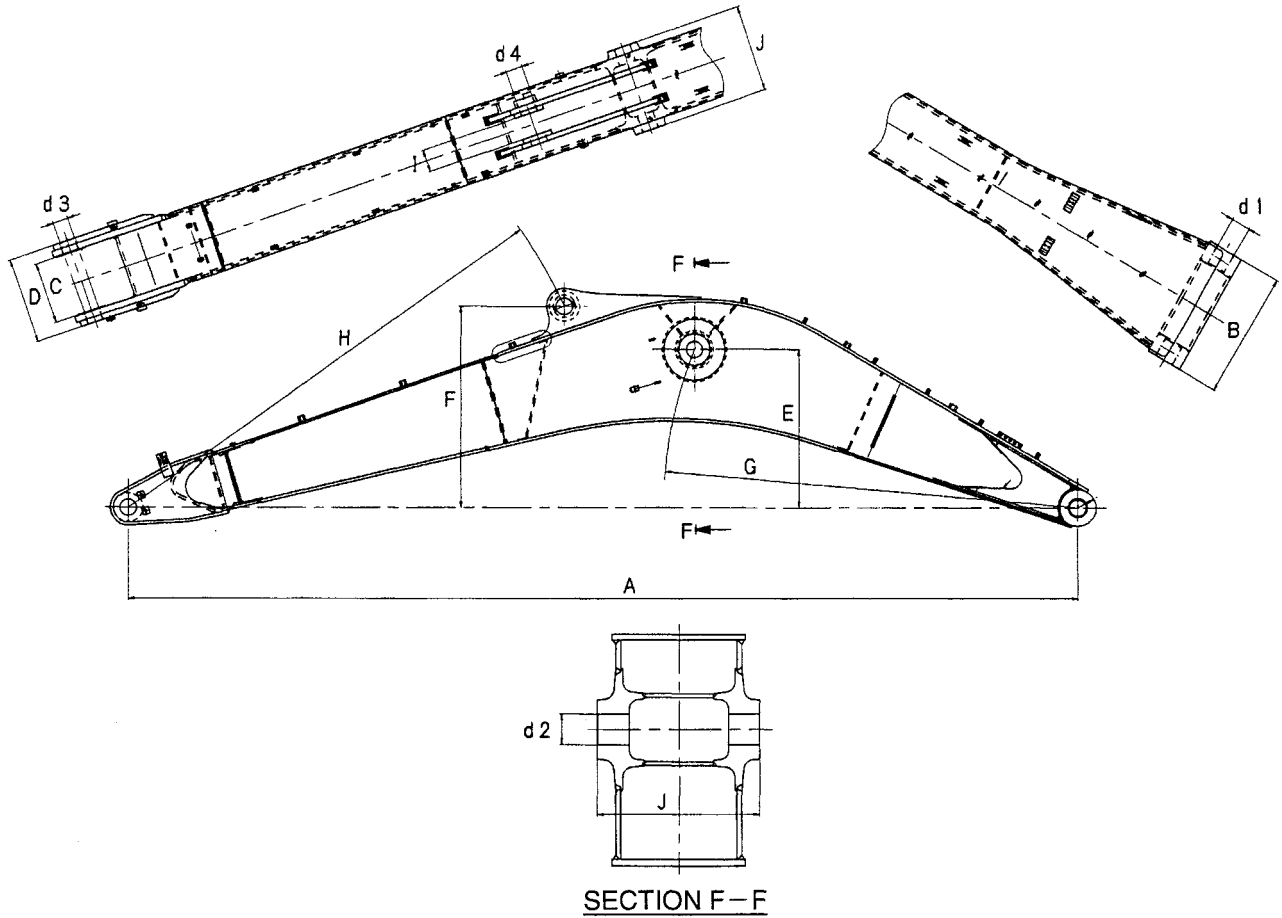


Fig. 1-1 Boom dimensional drawing

Table 1-1

Unit : mm (ft-in)

7.0M (23ft) BOOM		STD specification	LS02B00002F5	DIMENSION
No	NAME			
A	Boom length			7,000 (23')
B	Boom foot width			930 (36.6")
C	Boom end inner width			449.8 (17.7")
D	Boom end outer width			627 (24.7")
E	Height of boom cylinder rod pin			1,162 (3'10")
F	Height of arm cylinder (head side) pin			1,477 (4'10")
G	Distance between pins of boss			R3,069 (10'1")
H	Distance between pins of bracket			R3,530 (11'7")
I	Arm cylinder (head side) inner width			162 (6.38")
J	Outer width of bracket on the arm cylinder (rod side) mounting			638 (25.1")
d1	Boom foot pin dia. (inner dia. of bushing)			Ø120 (4.72")
d2	Boom cylinder (rod side) pin dia.			Ø120 (4.72")
d3	Pin dia. of arm end. (inner dia. of bushing)			Ø120 (4.72")
d4	Arm cylinder (head side) pin dia.			Ø120 (4.72")
	Weight	kg (lb)		3,330 (7,340)