

Product: Kobelco Model SK430,SK430LC Hydraulic Excavator Service Repair Workshop Manual(No.S5LS0005E)
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HYDRAULIC EXCAVATOR

SHOP MANUAL

model

SK430 SK430LC

This is the shop manual for KOBELCO hydraulic excavator. Contained is the necessary technical data concerning the maintenance and repair of this model. The manual is divided into the following four major sections; GENERAL, SYSTEMS, COMPONENTS and PROCEDURE.

*GENERAL

- LS01. SPECIFICATION
- OPERATION AND CONTROLS
(Refer to Operators Manual)
- LS03. LOCATION AND
WEIGHT OF COMPONENTS

- LS04. MAINTENANCE STANDARD AND
TEST PROCEDURE
- PREVENTIVE MAINTENANCE
(Refer to Operators Manual)
- LS07. WORKING STANDARD
- LS08. STANDARD MAN-HOUR TABLE

*SYSTEMS

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- LS15. SWING FRAME
- LS18. TRAVEL SYSTEM
- LS21. ATTACHMENTS

- LS22. CONTROL SYSTEM
- LS25. ELECTRICAL SYSTEM
- LS26. AIR-CONDITIONER SYSTEM
- LS29. TROUBLE SHOOTING

*COMPONENTS

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- 13. CONTROL VALVE
- 14. OTHER VALVES
- 15. HYDRAULIC MOTOR

- 16. SWIVEL JOINT
- 17. HYDRAULIC CYLINDER
- 21. REDUCTION UNIT
- 50. ENGINE

*PROCEDURE

When checking or repairing the machine we suggest that you refer to this manual carefully. We hope that reference to this manual will help to maintain a high level of working efficiency and reliability. For further details on maintenance and checks refer to the "OPERATORS MANUAL" which has been supplied with the machine.

Although all data was correct at the time of printing, due to continual design changes and improvements, some contents may not conform to the actual machine. Take special care to order parts only after confirming the validity of the part number in the "PARTS MANUAL".

If you notice any explanatory discrepancies, after consulting one of our representatives, please update your manual according to the latest data. However, in the event of any specification changes, we will issue revised edition.

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KOBELCO

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SAFETY

WARNING

The proper and safe lubrication and maintenance for this machine, recommended by KOBELCO are outlined in the OPERATION & MAINTENANCE GUIDE for this machine.

Improper performance of lubrication or maintenance procedures is dangerous and could result in injury or death. Read and understand the OPERATION & MAINTENANCE GUIDE before performing any lubrication or maintenance.

The serviceman or mechanic may be unfamiliar with many of the systems on this machine. This makes it important to use caution when performing service work. A knowledge of the system and or components is important before the removal or disassembly of any component.

Because of the size of some of the machine components, the serviceman or mechanic should check the weights noted in this Manual. Use proper lifting procedures when removing any components.

Following is a list of basic precautions that should always be observed.

1. Read and understand all Warning plates and labels on the machine before operating, lubricating or repairing this product.
2. Always wear protective glasses and protective shoes when working around machines. In particular, wear protective glasses when pounding on any part of the machine or its attachments with a hammer or sledge. Use welders gloves, hood/goggles, apron and other protective clothing appropriate to the welding job being performed. Do not wear loose-fitting or torn clothing. Remove all rings from fingers when working on machinery.
3. Disconnect battery and discharge any capacitors before starting to work on machine. Hang "Do Not Operate" tag in the Operator's Compartment.
4. If possible, make all repairs with the machine parked on a level, hard surface. Block machine so it does not roll while working on or under machine.
5. Do not work on any machine that is supported only by lift jacks or a hoist. Always use blocks or jack stands to support the machine before performing any disassembly.

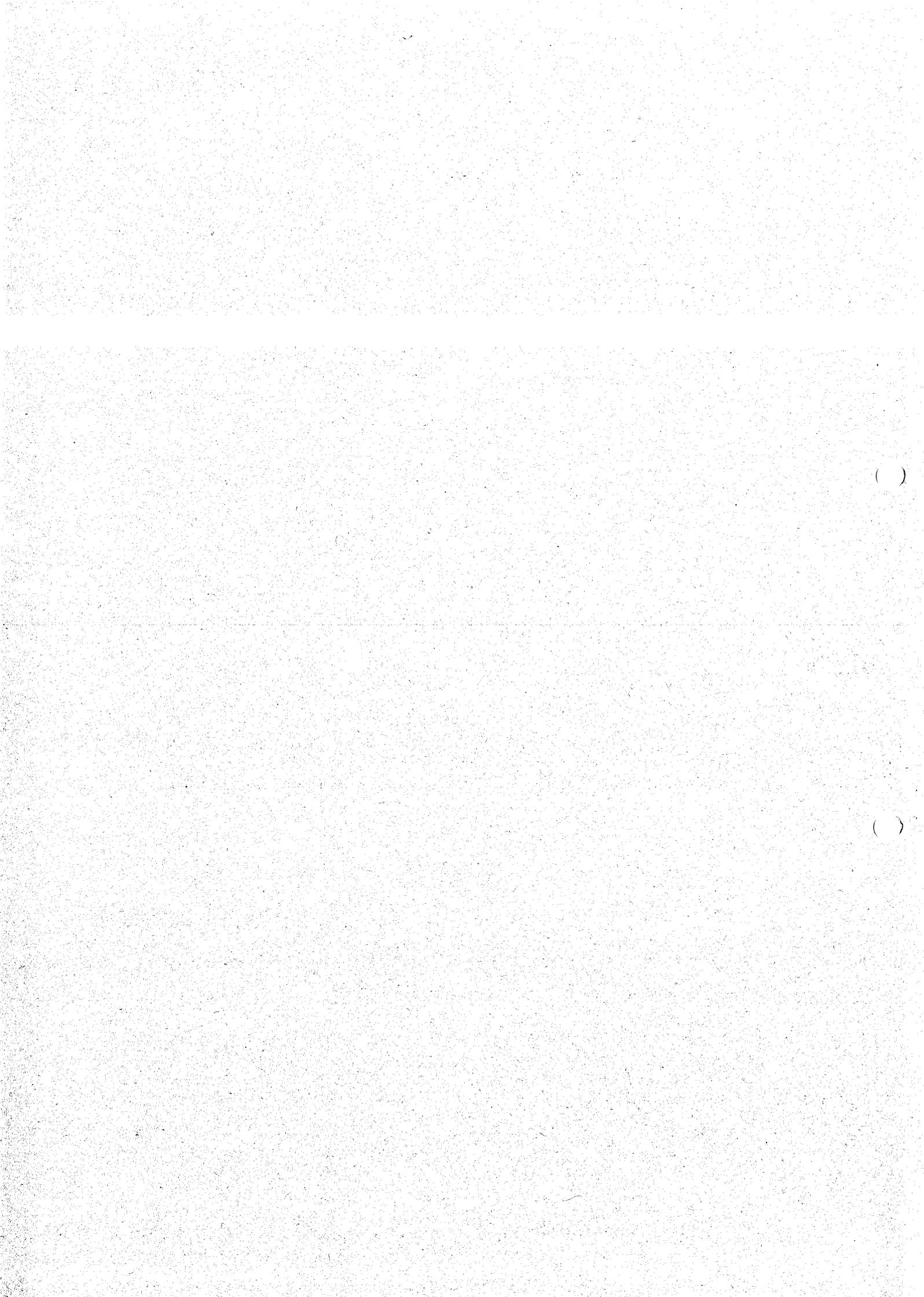
WARNING

Do not operate this machine unless you have read and understand the instructions in the OPERATORS MANUAL. Improper machine operation is dangerous and could result in injury or death.

6. Relieve all pressure in air, oil or water systems before any lines, fittings or related items are disconnected or removed. Always make sure all raised components are blocked correctly and be alert for possible pressure when disconnecting any device from a system that utilizes pressure.
7. Lower the bucket, blade, ripper or other attachments to the ground before performing any work on the machine. If this cannot be done, make sure the bucket, blade, ripper or other attachments is blocked correctly to prevent it from dropping unexpectedly.
8. Use steps and grab handles when mounting or dismounting a machine. Clean any mud or debris from steps, walkways or work platforms before using. Always face machine when using steps, ladders and walkways. When it is not possible to use the designed access system, provide ladders, scaffolds, or work platforms to perform safe repair operations.
9. To avoid back injury, use a hoist when lifting components which weigh 23 kg (50 lbs) or more. Make sure all chains, hooks, slings, etc., are in good condition and are in the correct capacity. Be sure hooks are positioned correctly. Lifting eyes are not to be side loaded during a lifting operation.
10. To avoid burns, be alert for hot parts on machines which have just been stopped and hot fluids in lines, tubes and compartments.
11. Be careful when removing cover plates. Gradually back off the last two bolts or nuts located at opposite ends of the cover or device and pry cover loose to relieve any spring or other pressure, before removing the last two bolts or nuts completely.
12. Be careful when removing filler caps, breathers and plugs on the machine. Hold a rag over the cap or plug to prevent being sprayed or splashed by liquids under pressure. The danger is even greater if the machine has just been stopped because fluids can be hot.

 **WARNING**

13. Always use tools that are in good condition and be sure you understand how to use them before performing any service work.
 14. Reinstall all capscrews with same part number. Do not use a lesser quality capscrew if replacements are necessary.
 15. Repairs which require welding should be performed only with the benefit of the appropriate reference information and by personnel adequately trained and knowledgeable in welding procedures. Determine type of metal being welded and select correct welding procedure and electrodes, rods or wire to provide a weld metal strength equivalent at least to that of parent metal. Always disconnect battery during welding operations to protect sensitive electric equipment.
 16. Do not damage wiring during removal operations. Reinstall the wiring so it is not damaged nor will it be damaged in operation by contacting sharp corners, or by rubbing against some object or hot surface. Do not connect wiring to a line containing fluid.
 17. Be sure all protective devices including guards and shields are properly installed and functioning correctly before starting a repair. If a guard or shield must be removed to perform the repair work, use extra caution.
 18. Loose or damaged fuel, lubricant and hydraulic lines, tubes and hoses can cause fires. Do not bend or strike high pressure lines or install ones which have been bent or damaged. Inspect lines, tubes and hoses carefully. Do not check for leaks with your hands. Pin hole (very small) leaks can result in a high velocity oil stream that will be invisible close to the hose. This oil can penetrate the skin and cause personal injury. Use cardboard or paper to locate pin hole leaks.
 19. Tighten connections to the correct torque. Make sure that all heat shields, clamps and guards are installed correctly to avoid excessive heat, vibration or rubbing against other parts during operation. Shields that protect against oil spray onto hot exhaust components in event of a line, tube or seal failure must be installed correctly.
 20. Do not operate a machine if any rotating part is damaged or contacts any other part during operation. Any high speed rotating component that has been damaged or altered should be checked for balance before reusing.
 21. On track-type machines, be careful when servicing or separating tracks. Chips can fly when removing or installing a track pin. Wear safety glasses and long sleeve shirts. Track can unroll very quickly when separated. Keep away from front and rear of machine. The machine can move unexpectedly when both tracks are disengaged from the sprockets. Block the machine to prevent it from moving.
 22. Caution should be used to avoid breathing dust that may be generated when handling components containing asbestos fibers. If this dust is inhaled, it can be hazardous to your health. Components in KOBELCO products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates and some gaskets. The asbestos used in these components is usually bound in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust which contains asbestos is not generated.
- If dust which may contain asbestos is present, there are several common sense guidelines that should be followed.
- a. Never use compressed air for cleaning.
 - b. Avoid brushing or grinding of asbestos containing materials.
 - c. For clean up, use wet methods or a vacuum equipped with a high efficiency particulate air (HEPA) filter.
 - d. Use exhaust ventilation on permanent machining jobs.
 - e. Wear an approved respirator if there is no other way to control the dust.
 - f. Comply with applicable rules and regulations for the work place.
 - g. Follow environmental rules and regulations for disposal of asbestos.
 - h. Avoid areas where asbestos particles may be in the air.



SHOP MANUAL

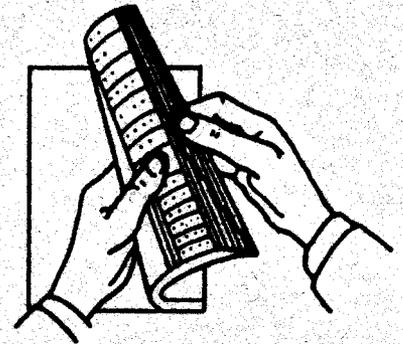
model

SK430 SK430_{LC}

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- How to Index each Shop Manual Section
The GENERAL of this shop manual consists of 7 headings as shown above. Each section can be easily referred to by indexes appended to the margin of the page as indicated on the right. Please use the indexes for speedy reference.



KOBELCO

GENERAL

KOBELCO

SHOP MANUAL

Book code No.

S5LS0105E

SK430 
SK430 **Lc** 

LS01

SPECIFICATION

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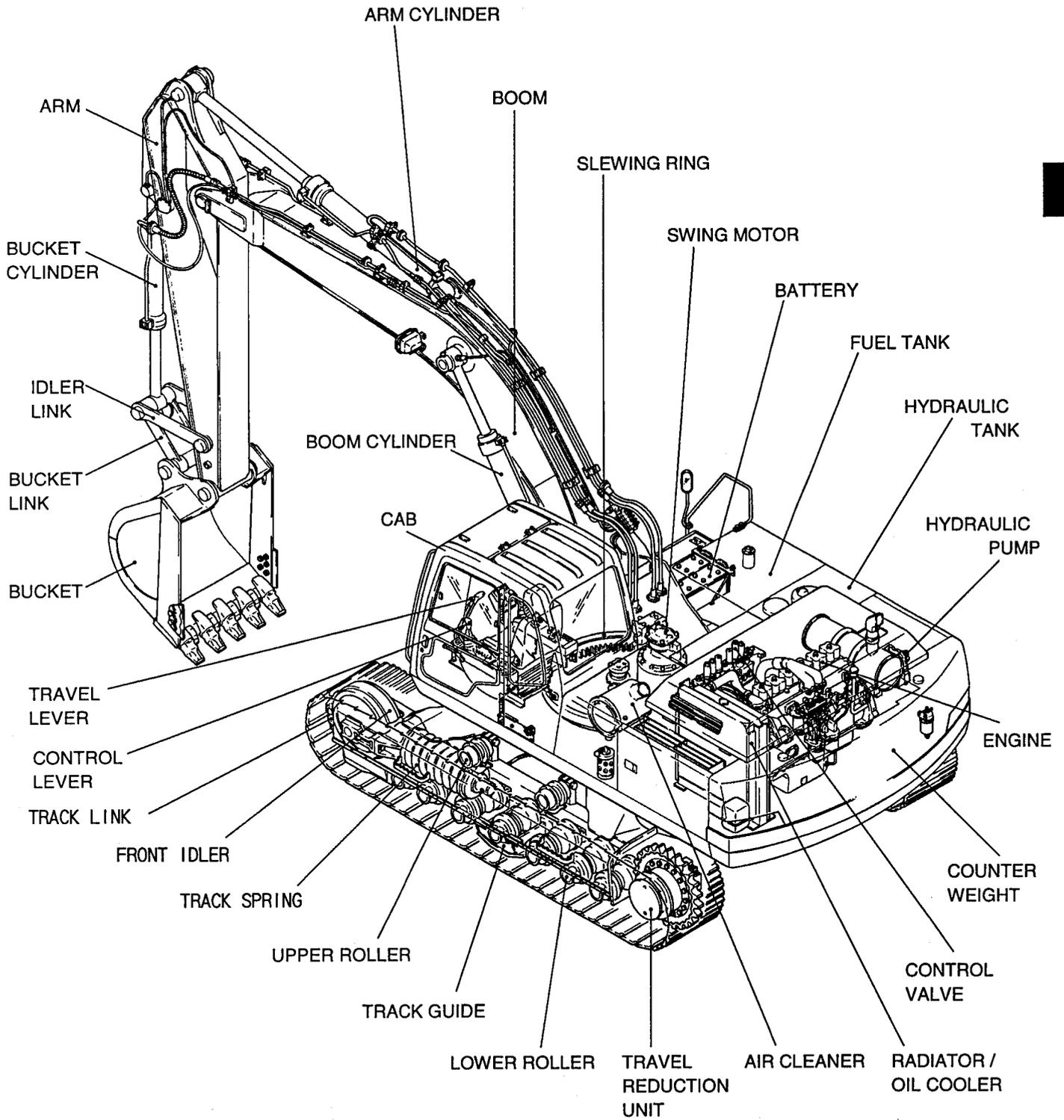


KOBE STEEL, LTD.

Applicable Machines
LS00801~
YS00701~

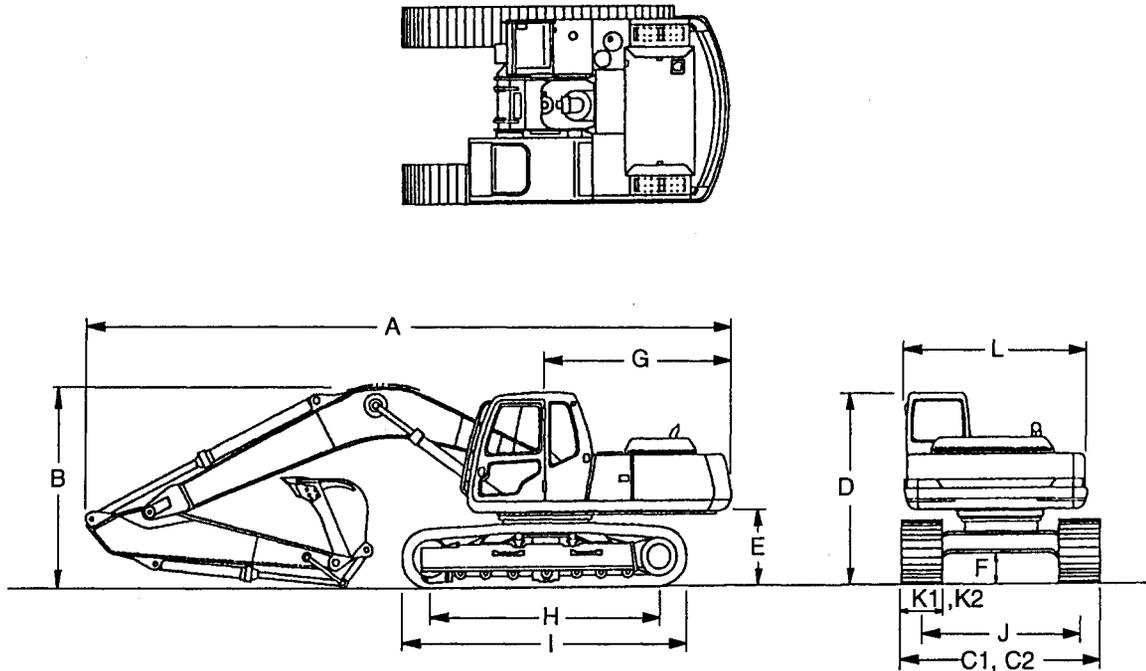
Revision	Date of Issue	Remarks
First edition	August, 1999	S5LS0105E K

1. LOCATION OF COMPONENTS



2. GENERAL DIMENSIONS

SK430 III

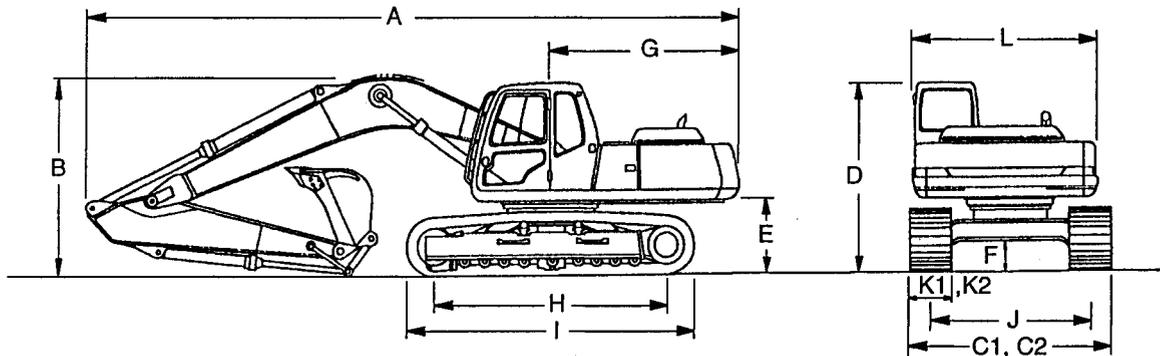
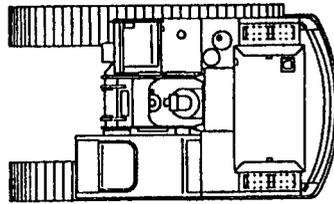


Unit : m (ft-in)

Item	Arm length	3.0m SHORT (9'10")	3.45m STD (11'4")	3.95m LONG (13'0")	4.9m LONG (16'1")
A	Overall length	11,730 (38'6")	11,670 (38'3")	11,720 (38'5")	10,880 (35'8")
B	Overall height (to top of boom)	3,610 (11'10")	3,430 (11'3")	3,570 (11'9")	3,360 (11'0")
C-1	Overall width (800mm (32in) shoe)	3,550 (11'8")	←	←	←
C-2	Overall width (600mm (24in) shoe)	3,350 (11'0")	←	←	←
D	Overall height (to top of cab)	3,210 (10'6")	←	←	←
E	Ground clearance of rear end*	1,325 (4'4")	←	←	←
F	Ground clearance*	515, (20.3")	←	←	←
G	Tail swing radius	3,400 (11'2")	←	←	←
H	Tumbler distance	4,055 (13'4")	←	←	←
I	Overall length of crawler	5,115 (16'9")	←	←	←
J	Track gauge	2,750 (9'00")	←	←	←
K-1	Shoe width	800 (32")	←	←	←
K-2	Shoe width	600 (24")	←	←	←
L	Overall width of upper structure	3,250 (10'8")	←	←	←

NOTE : Figure of asterisk (*) apply to value without shoe lug.

SK430LC III



Unit : m (ft-in)

Item	Arm length	3.0m SHORT (9'10")	3.45m STD (11'4")	3.95m LONG (13'0")	4.9m LONG (16'1")
A	Overall length	11,730 (38'6")	11,670 (38'3")	11,720 (38'5")	10,880 (35'8")
B	Overall height (to top of boom)	3,610 (11'10")	3,430 (11'3")	3,570 (11'9")	3,360 (11'0")
C-1	Overall width (800mm (32in) shoe)	3,550 (11'8")	←	←	←
C-2	Overall width (600mm (24in) shoe)	3,350 (11'0")	←	←	←
D	Overall height (to top of cab)	3,210 (10'6")	←	←	←
E	Ground clearance of rear end*	1,325 (4'4")	←	←	←
F	Ground clearance*	515, (20.3")	←	←	←
G	Tail swing radius	3,400 (11'2")	←	←	←
H	Tumbler distance	4,370 (14'4")	←	←	←
I	Overall length of crawler	5,460 (17'11")	←	←	←
J	Track gauge	2,750 (9'0")	←	←	←
K-1	Shoe width	800 (32")	←	←	←
K-2	Shoe width	600 (24")	←	←	←
L	Overall width of upper structure	3,250 (10'8")	←	←	←

NOTE : Figure of asterisk (*) apply to value without shoe lug.

3. SPECIFICATIONS AND PERFORMANCE

■ SPEED AND CLIMBING ABILITY

Item	Model	SK430 III · SK430Lc III
Swing speed		9.0rpm
Travel speed		5.5 / 3.5km / h (3.4 / 2.2 mph)
Gradeability		35° (70%)

■ ENGINE

Model		Mitsubishi 6D24-TCE1
Type		Water-cooled 4-cycle direct injection type diesel engine with intercooled, turbo-charger
Number of cylinder-Bore×Stroke		6-130mm×150mm(5.12in×5.91in)
Total displacement		11,945c.c. (729cu.in)
Rated output power/revolution	JIS D 1005 NET	310PS / 2,000rpm
	ISO 9249 NET	228KW / 2,000min ⁻¹
Maximum torque/revolution	JIS D 1005 NET	121kgf·m / 1,400rpm
	ISO 9249 NET	1,187N·m / 1,400min ⁻¹

■ HYDRAULIC COMPONENTS

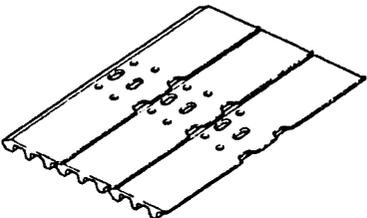
Hydraulic pump	Double-pump variable displacement, axial piston + gear pump
Hydraulic motor (swing)	Axial piston motor
Hydraulic motor (travel)	Axial piston motor
Control valve	6 -spool multiple control valve + 1- spool control valve (swing)
Cylinders (Boom, Arm, and Bucket)	Double acting cylinder
Return filter	Safety valve containing filter type
Oil cooler	Air-cooled type

■ WEIGHT

Unit : kg (lbs)

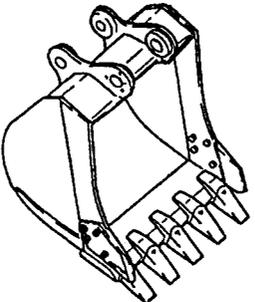
Item	Model	SK430 III		SK430Lc III	
Fully-equipped weight		41,900 (92,400)	43,200 (95,300)	42,500 (93,700)	43,900 (96,800)
Upper machinery		18,600 (41,000)	←	←	←
Lower machinery with grouser shoe	600(24")	15,500 (34,200)	—	16,100 (35,500)	—
	800(32")	—	16,800 (37,000)	—	17,500 (38,600)
Attachment (7.0m(23ft) Boom+3.45m (11ft-4in) Arm+1.8m ³ (2.35cu.yd) Bucket)		7,800 (17,200)	←	←	←

4. TYPE OF SHOES

Shape	Model	Width of track shoe (mm (in))	Overall width of crawler (mm (ft-in))	Ground pressure (kg /cm ² (psi))
 Grouser(equal height)	SK430 III	600 (24")	3,350 (11'0")	0.79 (11.24)
	50 link	800 (32")	3,550 (11'8")	0.61 (8.68)
	SK430LC III	600 (24")	3,350 (11'0")	0.75 (10.67)
	53 link	800 (32")	3,550 (11'8")	0.58 (8.25)

NOTE : The 800mm (32") shoes is applied for general civil work, one is used for soft ground operation. Do not use them in rough operations, such as gravel and rock digging.

5. TYPES AND COMBINATIONS OF ATTACHMENTS

HOE BUCKET 	SAE, JIS Heaped capacity m ³ (cu.yd)	Outside width of Bucket mm (ft in)		No. of teeth	Equipped with side cutter	Possibility of turnover	Weight kg (lbs)
		With side cutter	Without side cutter				
	1.40 (1.83)	1,225 (4'0")	1,100 (3'7")	4	Yes	Yes	1,210 (2,670)
	1.60 (2.09)	1,375 (4'6")	1,250 (4'1")	4	Yes	Yes	1,280 (2,820)
	1.80 (2.35)	1,520 (5'0")	1,395 (4'7")	5	Yes	Yes	1,380 (3,040)
	2.10 (2.75)	1,670 (5'6")	1,540 (5'1")	5	Yes	Yes	1,460 (3,220)

■ COMBINATIONS OF ATTACHMENTS

Type	Bucket		Applicable arm			
	SAE · JIS heaped capacity m ³ (cu.yd)	JIS · SAE struck capacity m ³ (cu.yd)	3.0m (9ft-10in) Arm	3.45m (11ft-4in) Arm	3.95m (13ft-0in) Arm	4.9m (16ft-1in) Arm
Hoe bucket	1.40 (1.83)	1.10 (1.44)	○	○	○	◎
	1.60 (2.09)	1.20 (1.57)	○	○	◎	△
	1.80 (2.35)	1.40 (1.83)	○	◎	○	×
	2.10 (2.75)	1.60 (2.09)	◎	○	○	×

NOTE : ◎ Standard combinations

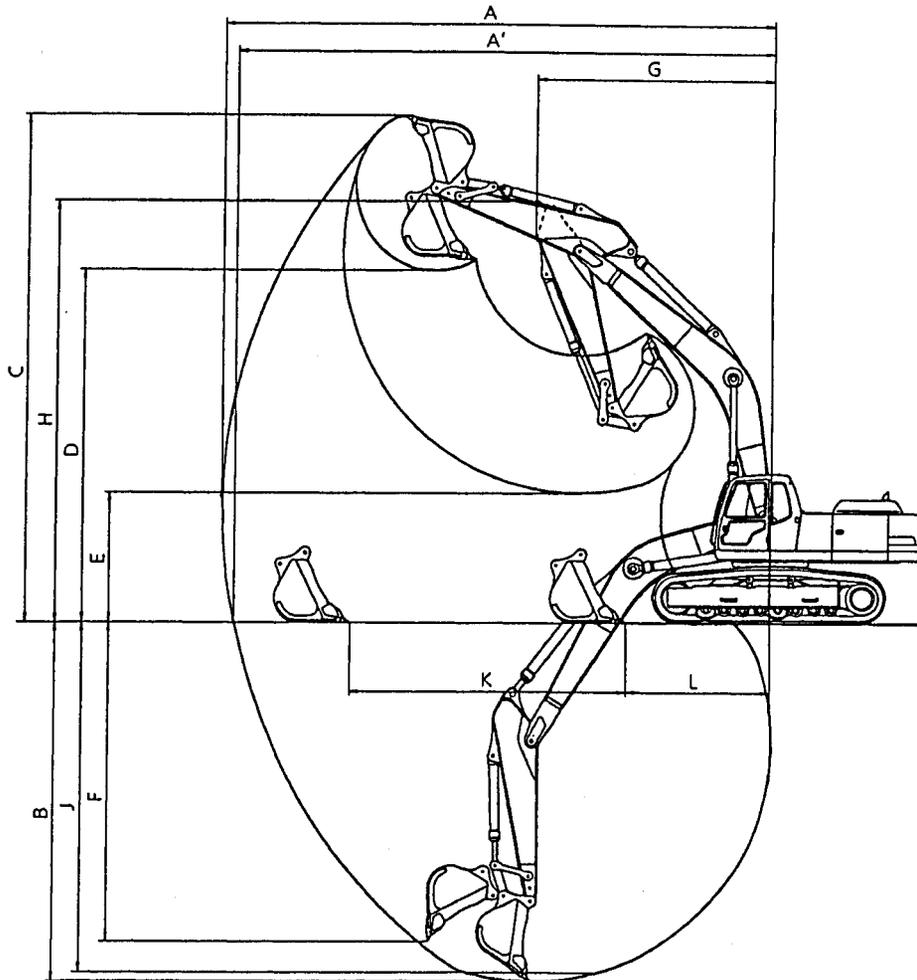
- General operation : Digging and loading of sand, gravels and clay-mixed soil
- △ Light operation : Operations mainly consisting of loading of loose sand and soil (for instance, operations in paddy fields and loading of sand and gravels)
- × Not usable : Do not operate in such combinations as guarantee does not cover them.

⚠ CAUTION

- If a bucket other than a hoe bucket is used to execute face shovel operation, it will cause damage to the arm and the bucket.
- The combinations other than those mentioned in the above table cannot be used in principle. For further details, contact KOBELCO.

6. WORKING RANGES OF ATTACHMENTS

■ BACKHOE ATTACHMENT

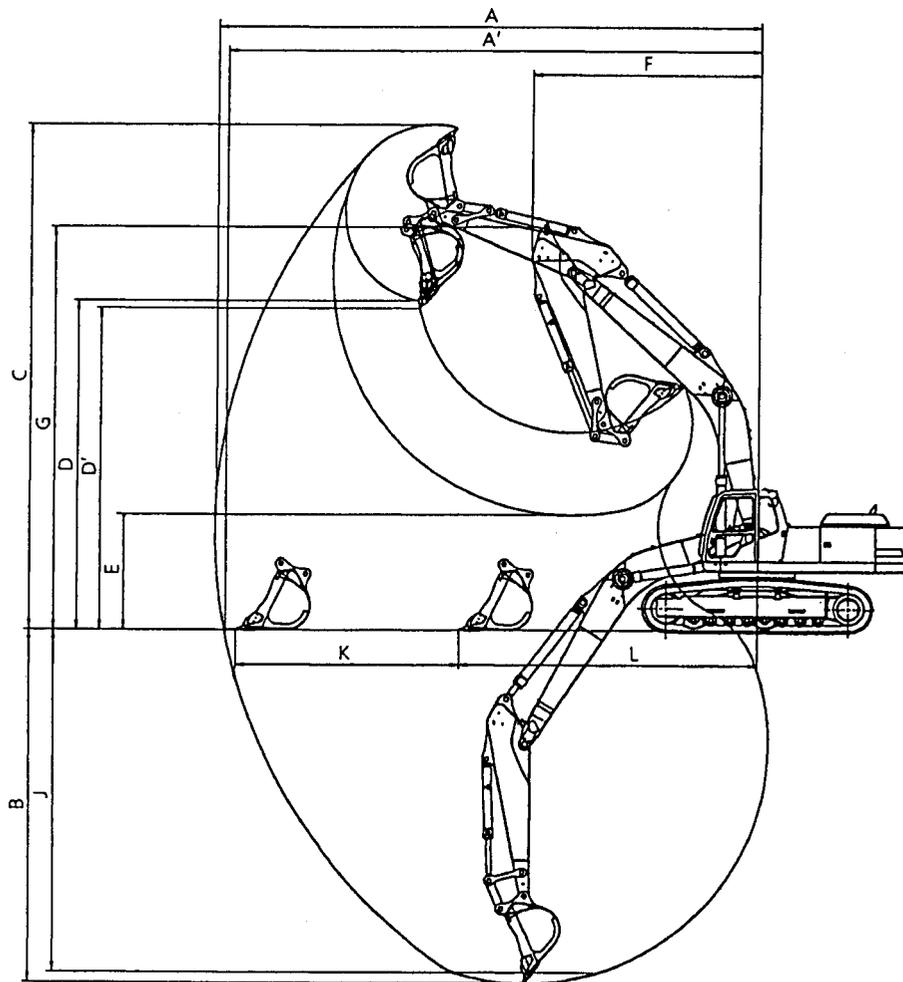


Unit ; m (ft-in)

Type of attachment		3.0m (9ft10in) Arm with 2.10m ³ (2.75cuyd) Bucket	3.45m (11ft4in) Arm with 1.80m ³ (2.35cuyd) Bucket	3.95m (13ft) Arm with 1.60m ³ (2.09cuyd) Bucket	4.9m (16ft1in) Arm with 1.40m ³ (1.83cuyd) Bucket	
Item Range						
A	Max. digging reach	11.72 (38'5")	12.03 (39'6")	12.49 (41'0")	13.40 (44'0")	
A'	Max. reach at ground level	11.49 (37'8")	11.80 (38'9")	12.28 (40'4")	13.20 (43'4")	
B	Max. digging depth	7.35 (24'1")	7.80 (25'7")	8.30 (27'3")	9.25 (30'4")	
C	Max. digging height	11.17 (36'8")	10.97 (36'0")	11.16 (36'7")	11.58 (38'0")	
D	Max. dumping height	7.70 (25'3")	7.58 (24'10")	7.77 (25'6")	8.18 (26'10")	
E	Min. dumping height	3.24 (10'8")	2.79 (9'2")	2.29 (7'6")	1.34 (4'5")	
F	Vertical digging depth	6.50 (21'4")	6.94 (22'9")	7.42 (24'4")	8.35 (27'5")	
G	Min. swing radius	5.17 (17'0")	5.14 (16'10")	5.18 (17'0")	5.26 (17'3")	
H	Height at min. swing	9.04 (29'8")	9.04 (29'8")	9.05 (29'8")	9.05 (29'8")	
J	8-foot level digging depth	7.19 (23'7")	7.66 (25'2")	8.17 (26'10")	9.14 (30'0")	
K	Horizontal digging stroke at ground level	Stroke	5.20 (17'1")	6.08 (19'11")	6.91 (22'8")	8.24 (27'0")
L		At min.	3.70 (12'2")	3.12 (10'3")	2.76 (9'1")	2.34 (7'8")

NOTE : The figures in this table do not include the grouser of shoes [30mm (1.18in)] .

■ FACE SHOVEL ATTACHMENT



Unit ; m (ft-in)

Type of attachment		3.0m (9ft10in) Arm with 2.10m ³ (2.75cuyd) Bucket	3.45m (11ft4in) Arm with 1.80m ³ (2.35cuyd) Bucket	3.95m (13ft) Arm with 1.60m ³ (2.09cuyd) Bucket	4.9m (16ft1in) Arm with 1.40m ³ (1.83cuyd) Bucket	
Item	Range					
A	Max. digging reach	11.93 (39'2")	12.23 (40'1")	12.70 (41'8")	13.61 (44'8")	
A'	Max. reach at ground level	11.70 (38'5")	12.01 (39'5")	12.49 (41'0")	13.41 (44'0")	
B	Max. digging depth	7.56 (24'10")	8.01 (26'3")	8.51 (27'11")	9.46 (31'0")	
C	Max. digging height	11.47 (37' 8")	11.35 (37'3")	11.54(37'10")	11.94 (39'2")	
D	Max. dumping height	7.57 (24'10")	7.39 (24'3")	7.59 (24'11")	8.00 (26'3")	
D'	Max. dumping height (45°)	7.07 (23'2")	7.23 (23'9")	7.41 (24'4")	7.72 (25'4")	
E	Min. dumping height	3.03 (9'11")	2.58 (8'6")	2.08 (6'10")	1.13 (3'8")	
F	Min. swing radius	5.17 (17'0")	5.14 (16'10")	5.18 (17'0")	5.26 (17'3")	
G	Height at min. swing	9.04 (29'8")	9.04 (29'8")	9.04 (29'8")	9.05 (29'8")	
J	8-foot level digging depth	7.41 (24'4")	7.85 (25'10")	—	9.35 (30'8")	
K	Horizontal digging stroke	Stroke	4.42 (14'6")	5.05 (16'7")	8.38 (27'6")	7.66 (25'2")
		At min.	7.02 (23'0")	6.70 (22'0")	6.31 (20'8")	5.47 (17'11")

NOTE : The figures in this table do not include the grouser of shoes [30mm (1.18in)] .

7. LIFTING DIAGRAM

(1) Calculation condition

The numerical values in the diagrams indicate either 87% of the hydraulic lift capacity or 75% of the tipping load, whichever value is smaller.

- 1) The load point is the fulcrum of the bucket and the bucket position is a closed posture.
- 2) The figures on the upper stage indicate the lifting-up ability of a machine facing sideways, while the figures at the bottom stage represent a machine facing longitudinally.

⚠ Do not use the power boost switch while lifting a load.



POWER BOOST SWITCH



⚠ WARNING

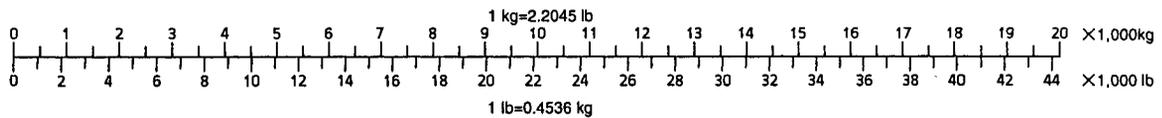
Releasing power boost switch while lifting a load can cause unexpected lowering of load, resulting in severe injury or death.

Never use power boost switch for lifting a load.

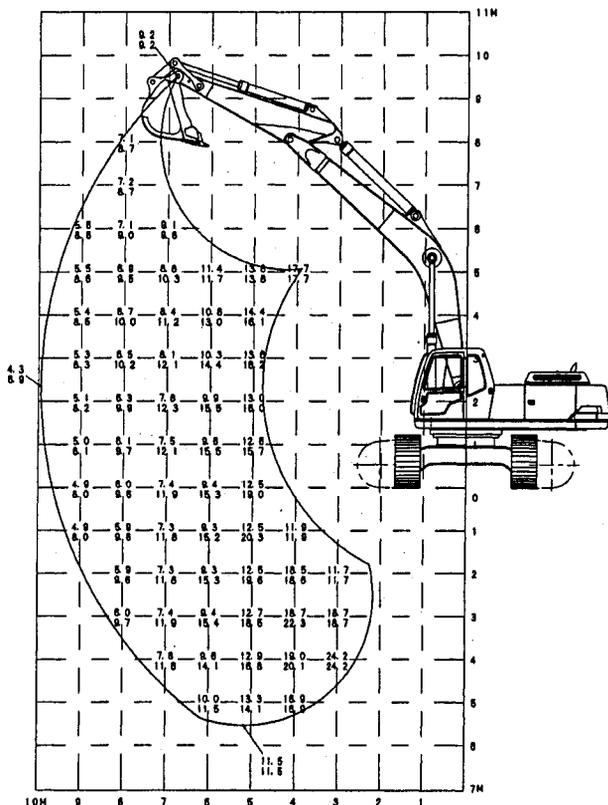
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(2) Lifting diagram Item No. table

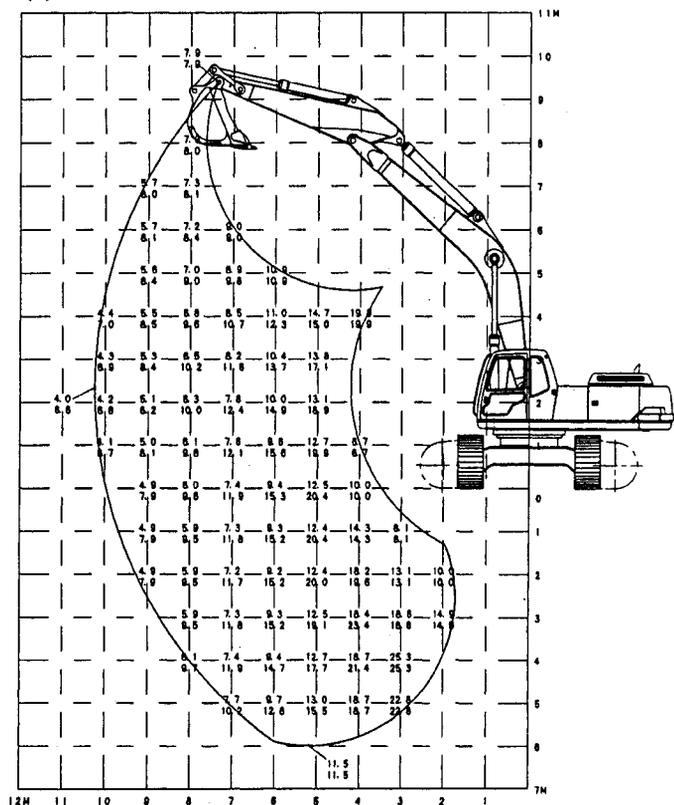
Shoe width	Arm length (M) + Bucket											
	600 (24")				800 (32")				900 (35")			
Arm length	3.0M	3.45M	3.95M	4.9M	3.0M	3.45M	3.95M	4.9M	3.0M	3.45M	6.95M	4.9M
SK430 III	(1) J7952	(2) J7940	(3) J7964	(4) J7970	(5) J7956	(6) J7944	(7) J7966	(8) J7972	(9) J7960	(10) J7948	(11) J7968	(12) J7974
SK430LC III	(13) J7954	(14) J7942	(15) J7965	(16) J7971	(17) J7958	(18) J7946	(19) J7967	(20) J7973	(21) J7962	(22) J7950	(23) J7969	(24) J7975



(1) Unit : ton

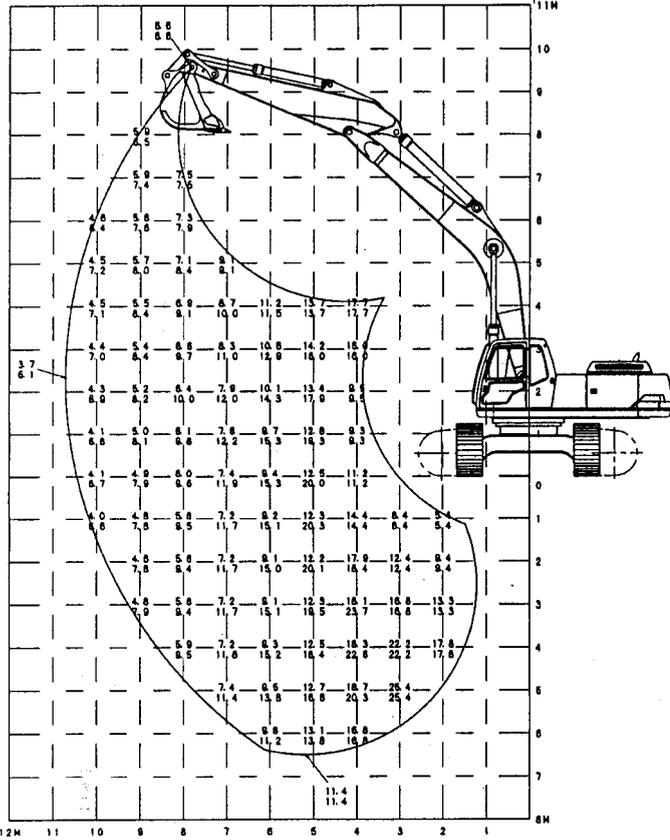


(2) Unit : ton



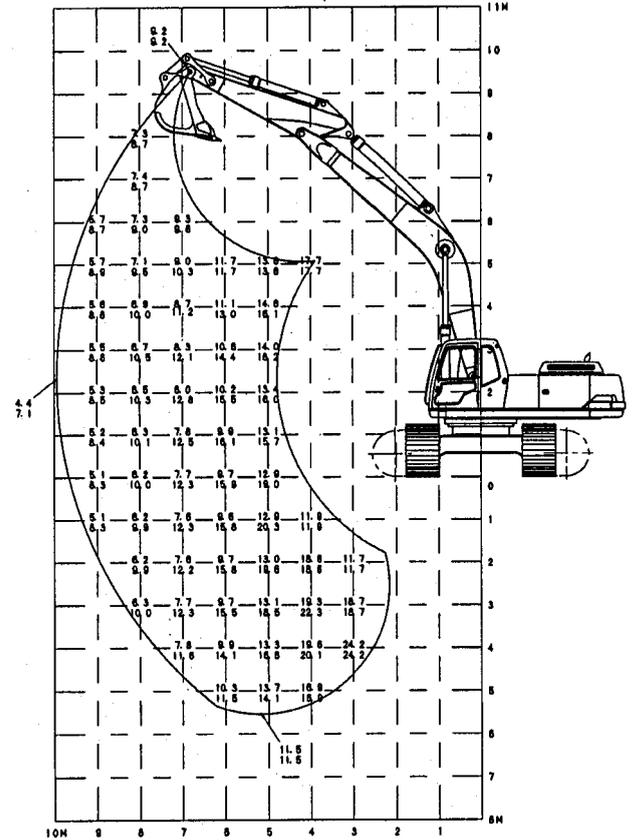
(3)

Unit : ton



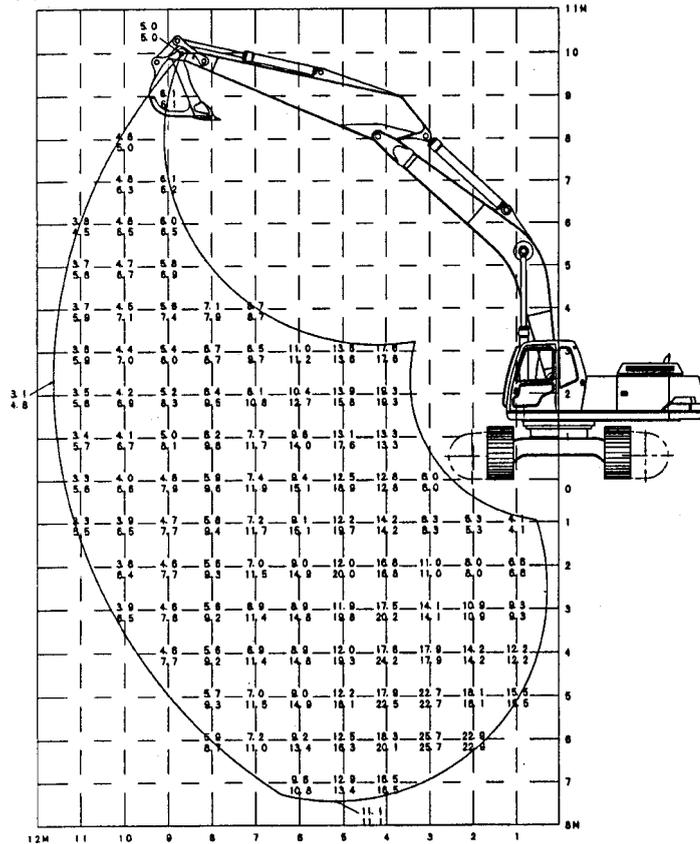
(5)

Unit : ton



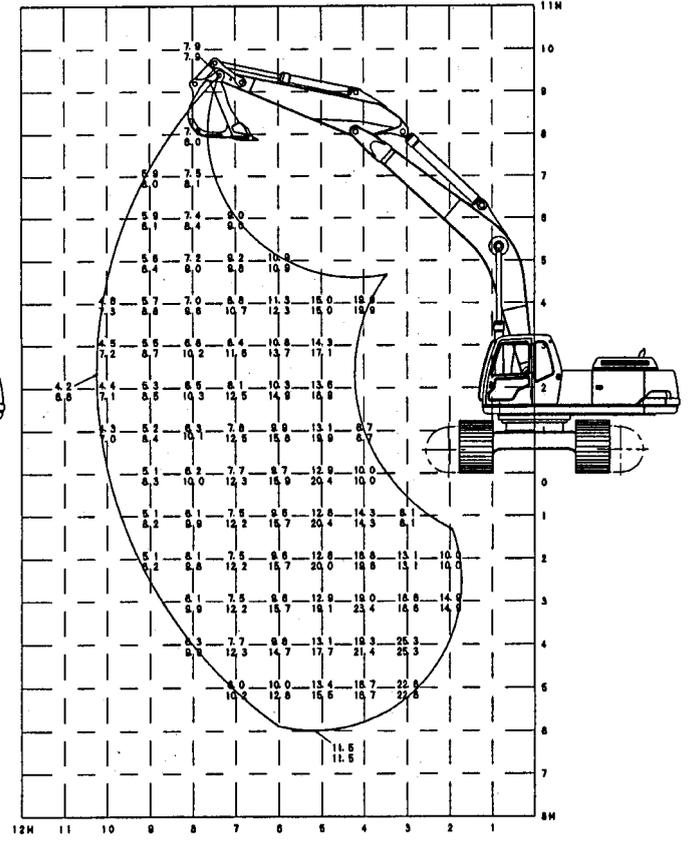
(4)

Unit : ton



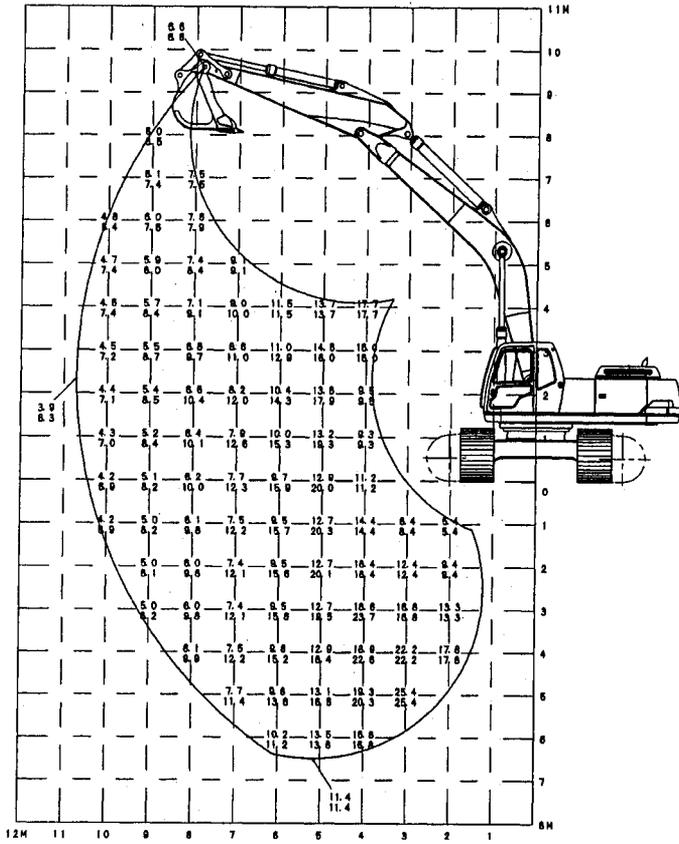
(6)

Unit : ton



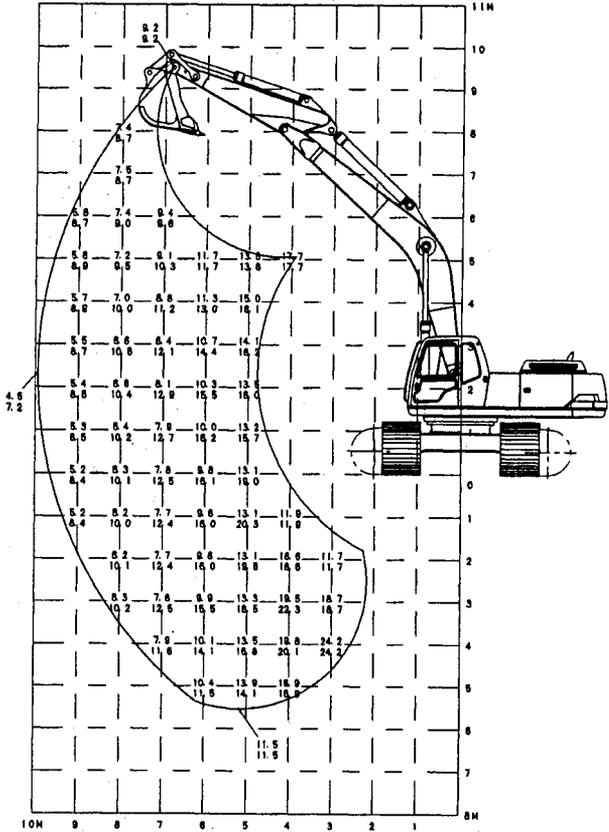
(7)

Unit : ton



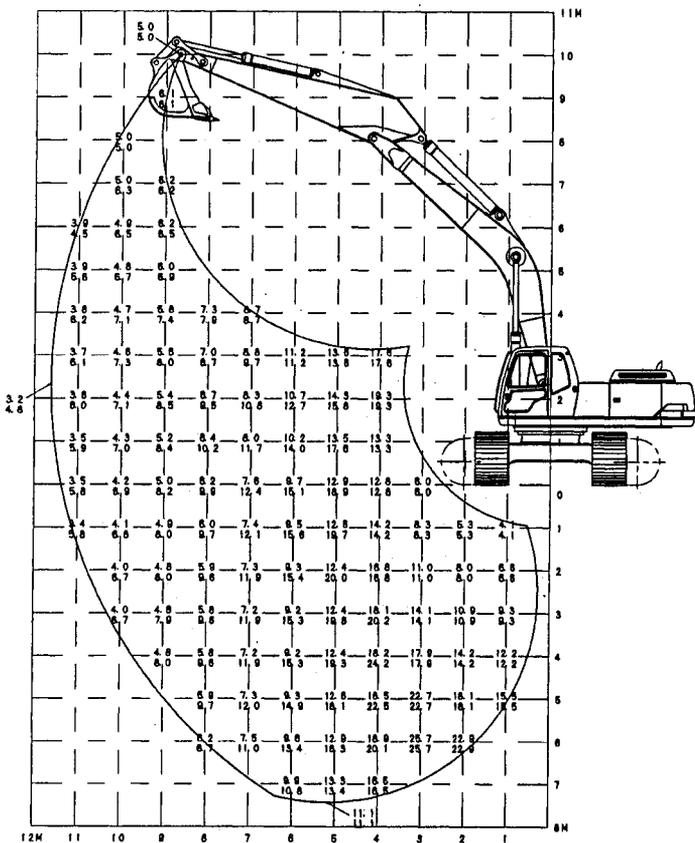
(9)

Unit : ton



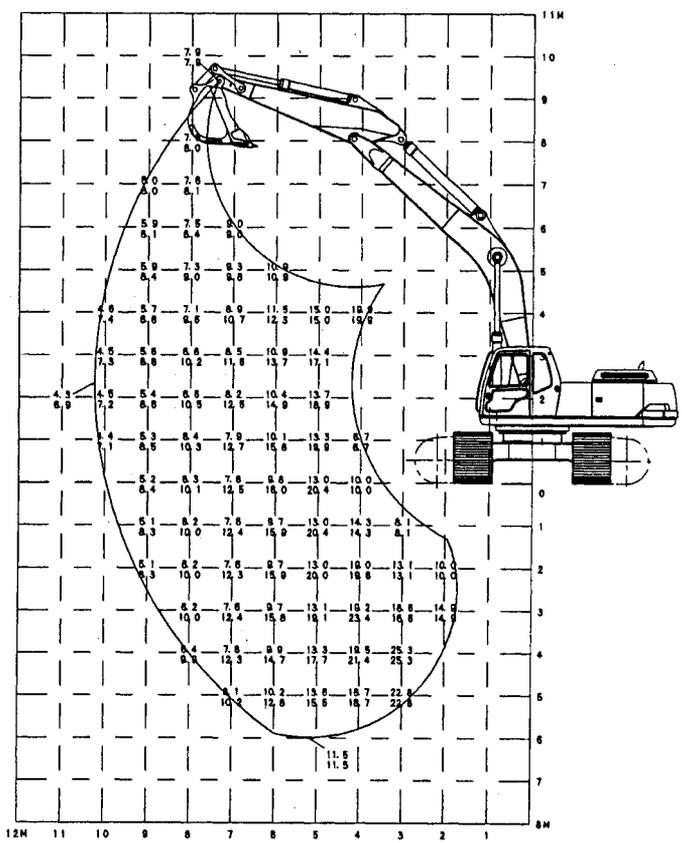
(8)

Unit : ton



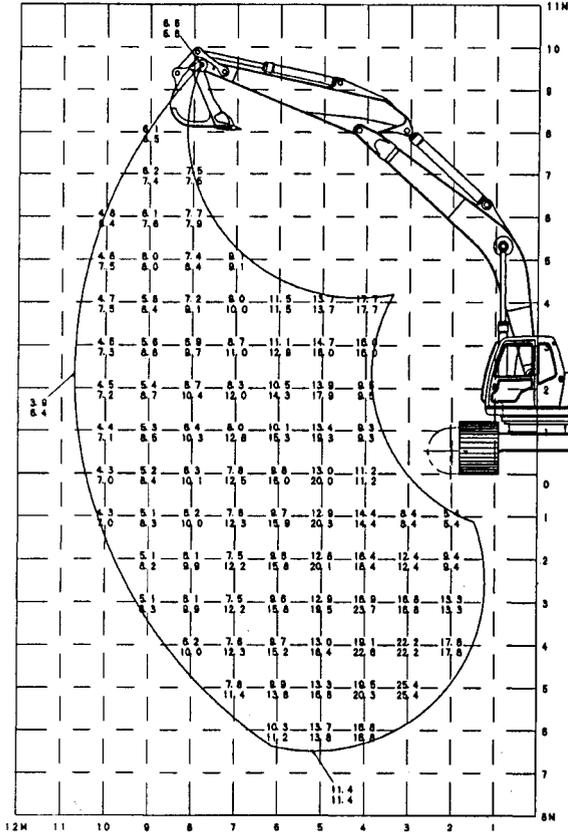
(10)

Unit : ton



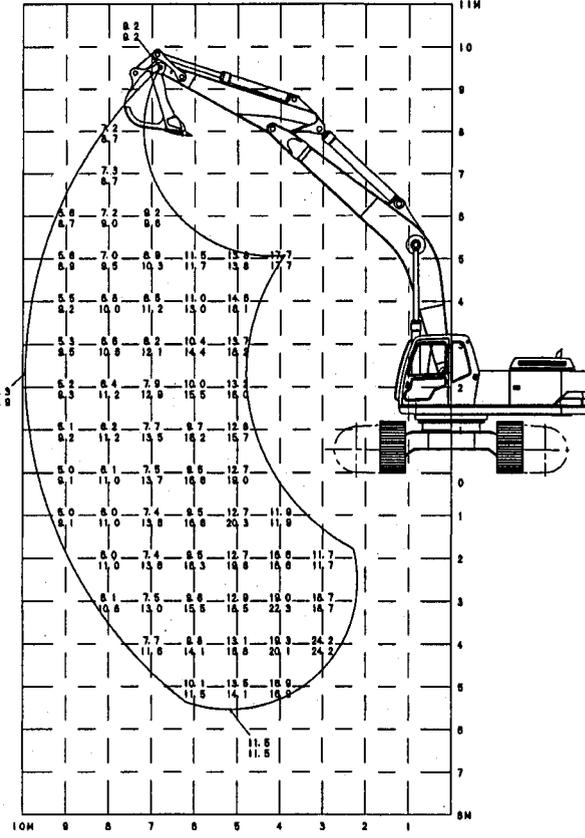
(11)

Unit : ton



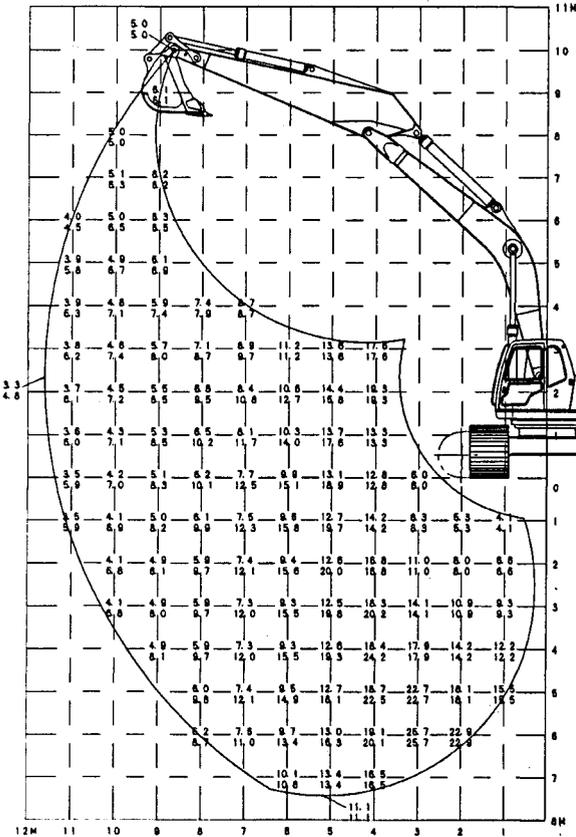
(13)

Unit : ton



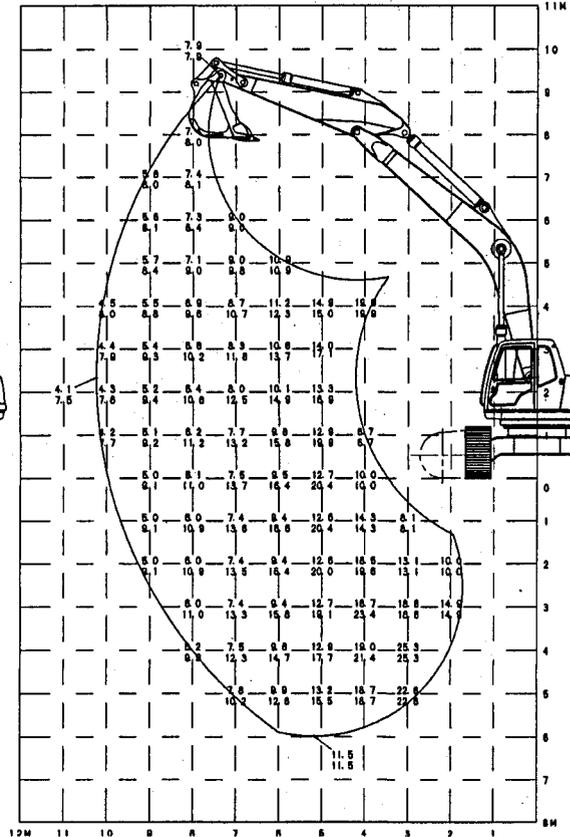
(12)

Unit : ton



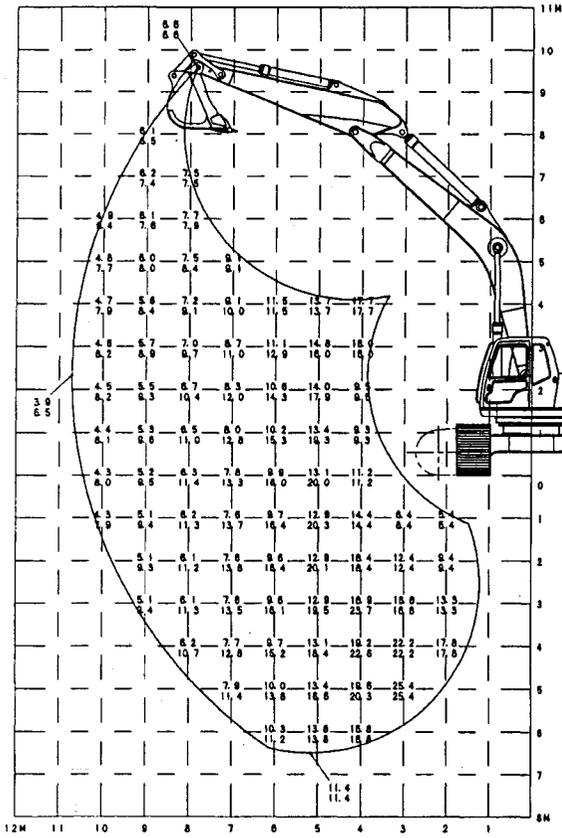
(14)

Unit : ton



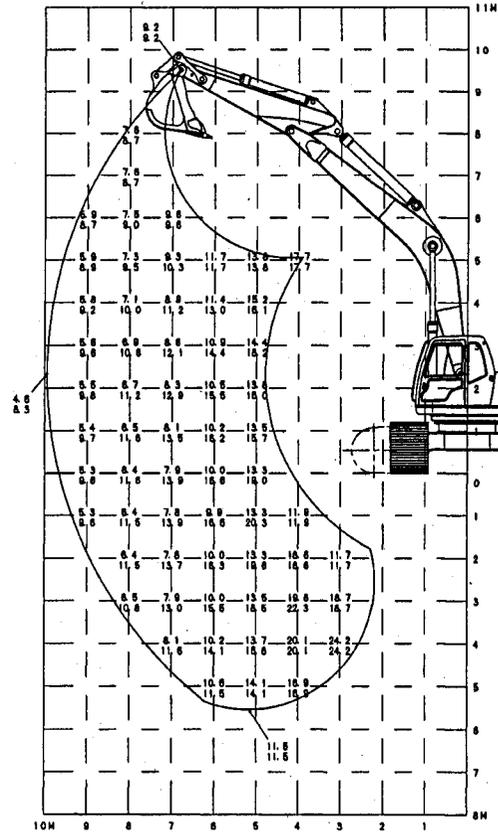
(19)

Unit : ton



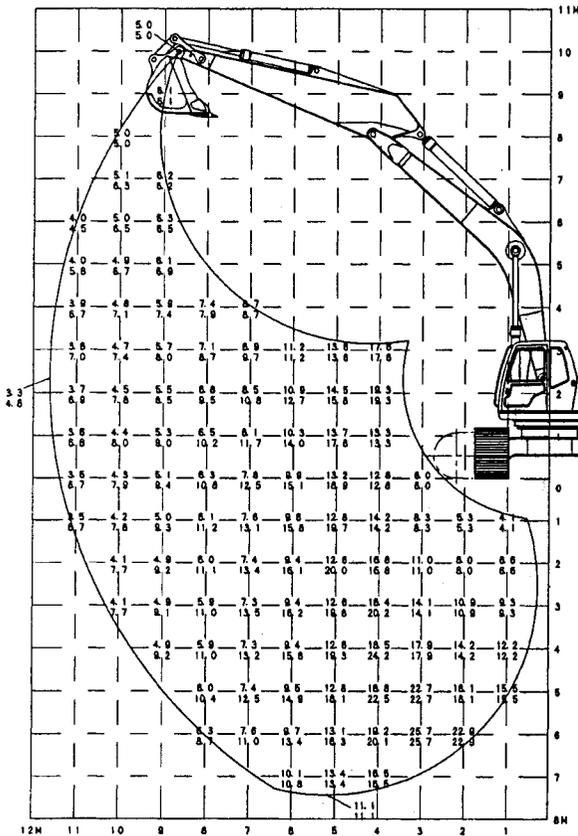
(21)

Unit : ton



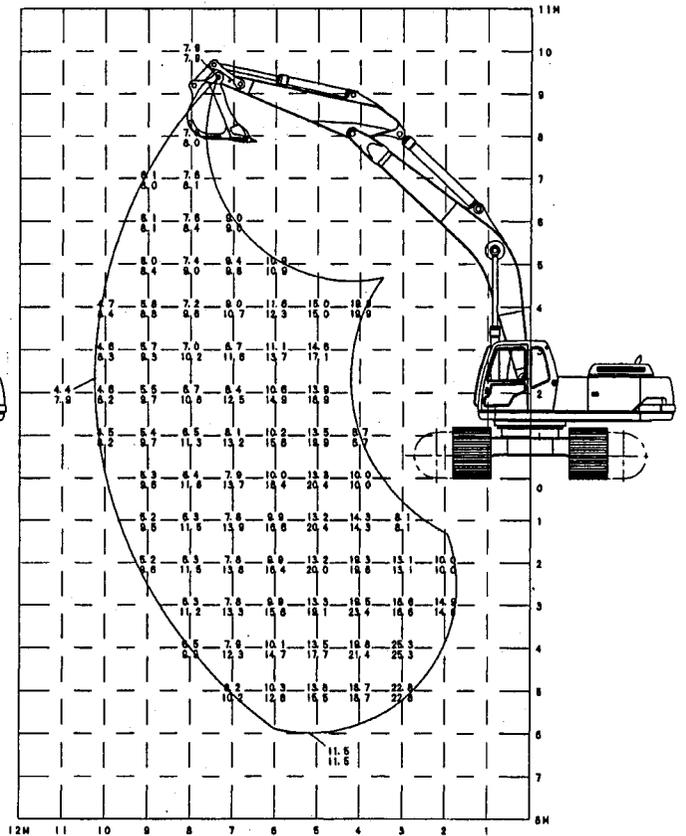
(20)

Unit : ton



(22)

Unit : ton



8. ENGINE SPECIFICATIONS

SPECIFICATIONS

SK430 III, SK430LC III

Model	Mitsubishi 6D24-TCE1 Diesel engine			
Type	4-cycle water-cooled, in-line, direct injection, intercooled turbo charging type			
No. of cylinders – Bore × Stroke	6 – 130mm × 150mm (5.12 in × 5.90 in)			
Total displacement	11,945cc (729cu.in)			
Compression ratio	16.5			
Output rating	310PS / 2,000rpm (228kW / 2,000min ⁻¹)			
Max. torque	121kgf·m (1,187N·m) / 1,400min ⁻¹			
High idling	2,200 ± 20min ⁻¹			
Low idling	850 ± 30min ⁻¹			
Injection start pressure	180kgf / cm ² (17.7Mpa) at 200min ⁻¹			
Thermostat action	Opening 76.5°C Full open 90°C			
Ignition order	1 – 5 – 3 – 6 – 2 – 4			
Compression pressure	28kgf / cm ² (398psi) at 200 rpm			
Lube oil pressure	Rating 1.5 ~ 5kgf/cm ² (21.3 ~ 71.1psi)			
Fuel injection timing	13° before the top dead point			
Valve clearance, valve action timing		Valve clearance	Open	Close
	Intake valve	In cold condition 0.4mm (0.016")	18° before the top dead point	50° after the bottom dead point
	Exhaust valve	In cold condition 0.6mm (0.024")	50° before the bottom dead point	18° after the top dead point
Starter capacity	5.5kw × 24V			
Alternator capacity	24V × 35A			
Cooling fan drive method	Ø700 – 8blades (Ø28in)suction type Belt drive pulley ratio:1.05			
Engine oil volume	Engine body 45ℓ (11.9gal)+4ℓ (1.1gal) (oil filter)			
Dry weight	1,090kg (2,402 lbs)			
Fuel consumption rate	245g / (kW·h) {180g / (PS·h)}			
Allowable tilting angles	Back and forth, right and left 35°			
Engine dimension L × W × H mm (in)	1,668 × 900 × 1,293 (65.7 × 35.4 × 50.9)			
Rotating direction	Counterclockwise as seen from flywheel side			

ENGINE CHARACTERISTIC CURVE

(MITSUBISHI 6D24-TCE1)

Atmospheric condition JIS D1005-1989

Standard atmospheric temperature 298°K(25°C)

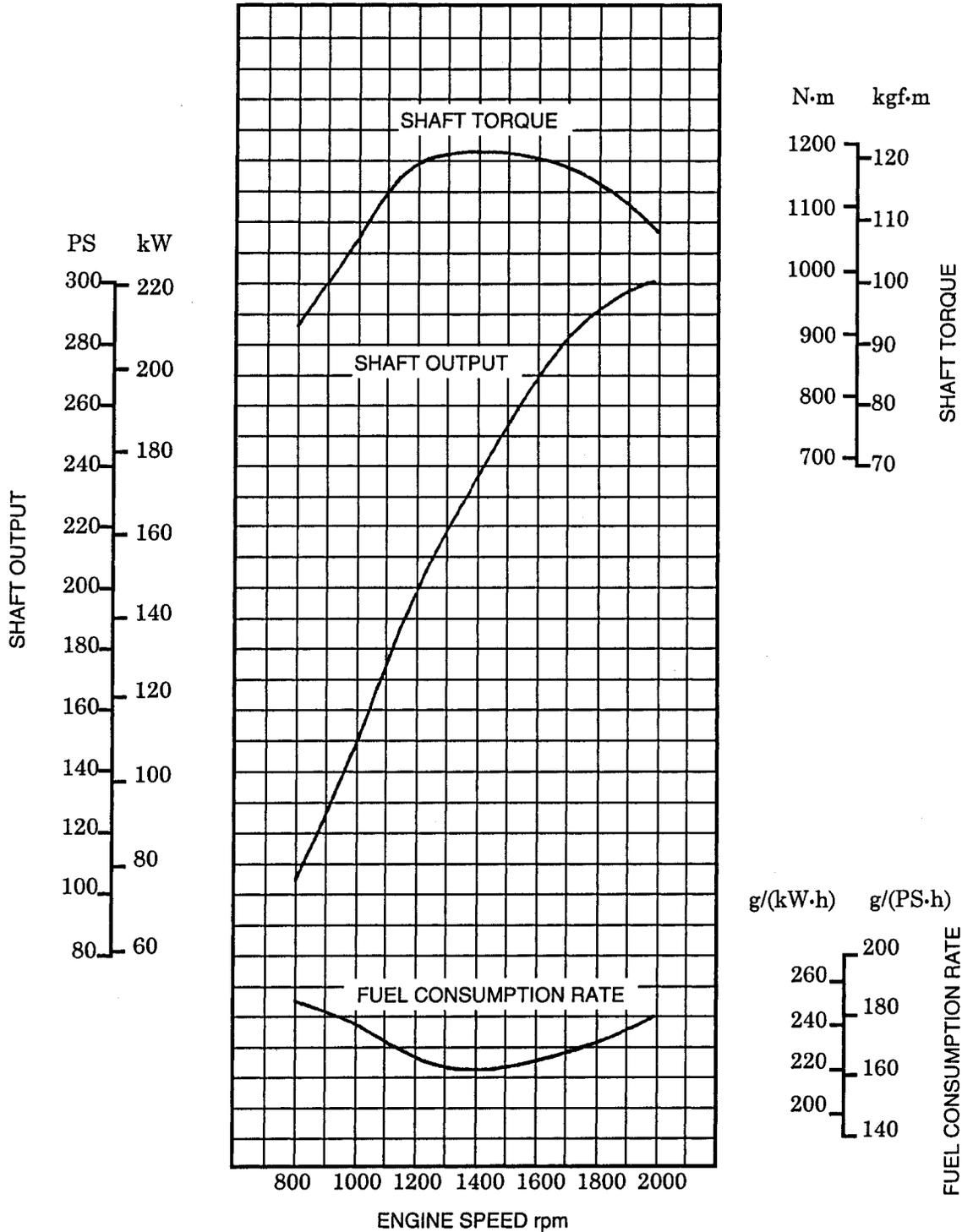
Standard dry atmospheric pressure 743mmHg (99kPa)

[Atmospheric pressure 750mmHg (100kPa)

Water vapor pressure 7.5mmHg (1kPa)]

Auxiliary device

Fan, air cleaner, with alternator, without muffler



$$\begin{aligned}
 \text{FUEL CONSUMPTION VOLUME} &= \frac{\text{FUEL CONSUMPTION RATE}}{0.835 \times 1000} \times \text{PS} \times \text{LOAD RATIO } (\alpha) \\
 &= \frac{180 \text{ g / PSh}}{0.835 \times 1000} \times 310 \text{ PSh} \times \alpha \\
 &= 66.8 \alpha \cdot \ell / \text{h}
 \end{aligned}$$

At standard working ratio, $\alpha \approx 0.6 \sim 0.7$

KOBELCO

SHOP MANUAL

Book code No.

S5LS0305E

SK430 
SK430lc 

LOCATION AND WEIGHT OF COMPONENTS

LS03

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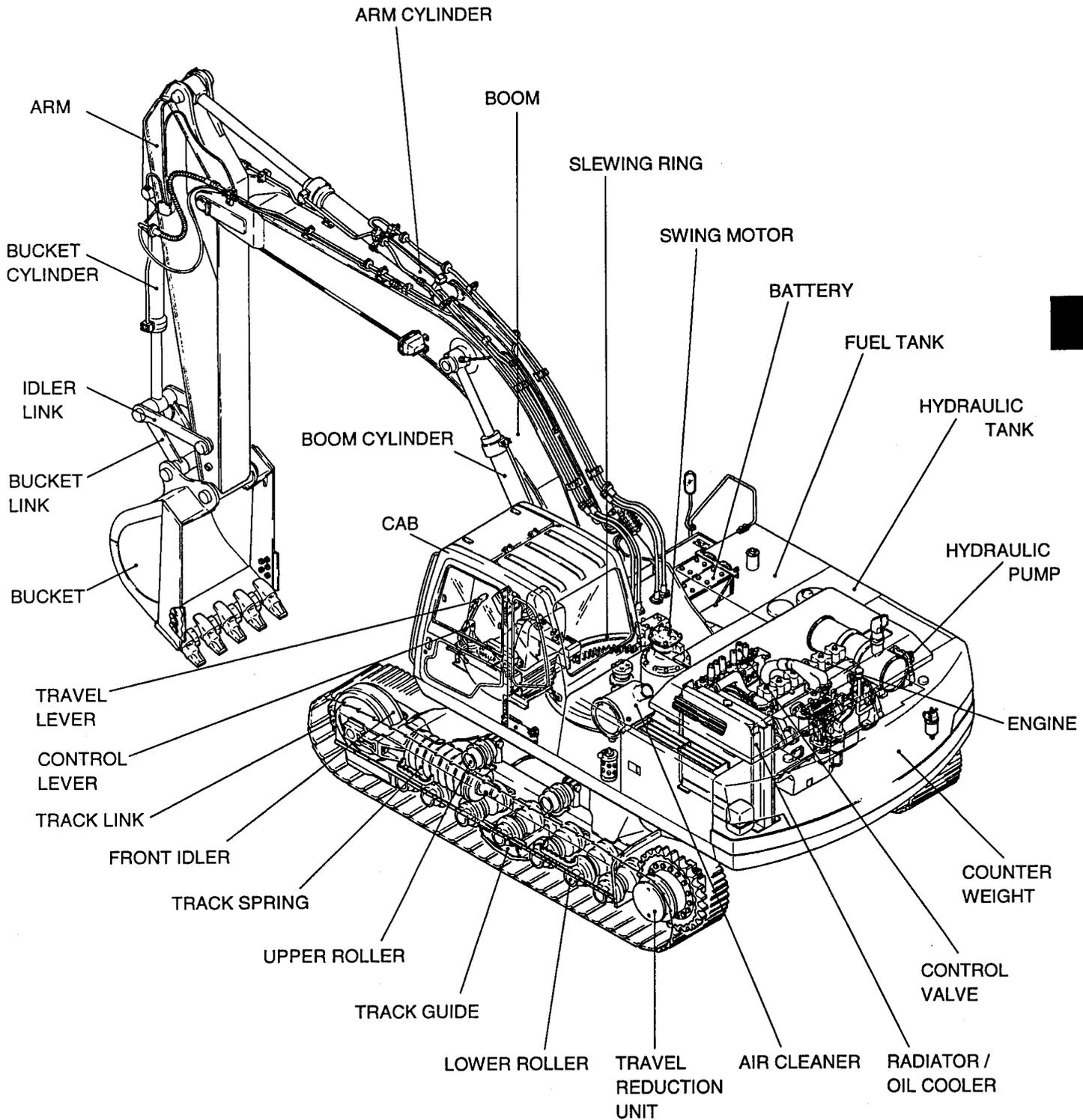


KOBE STEEL, LTD.

Applicable Machines
LS00801~
YS00701~

Revision	Date of Issue	Remarks
First edition	August, 1999	S5LS0305E K

1. LOCATION OF COMPONENTS



2. WEIGHT OF COMPONENTS

Unit : kg (lbs)

Item	Model	SK430 III	SK430LC III
Complete Machine [STD Export 600mm (24") shoe]		41,900 (92,400)	42,500 (93,700)
Complete Machine [OPT Export 800mm (32") shoe]		43,200 (95,300)	43,900 (96,800)
1.	Upper frame assy (incl. 1.1~1.10)	18,600 (41,000)	←
1.1	• Counterweight	7,950 (17,530)	←
1.2	• Cab	250 (550)	←
1.3	• Boom cylinder	※ 410 (900)×2	←
1.4	• Engine	※ 1,065 (2,350)	←
1.5	• Radiator	※ 150 (330)	←
1.6	• Pump assy	175 (390)	←
1.7	• Control valve	330 (730)	←
1.8	• Fuel tank	※ 200 (440)	←
1.9	• Hydraulic tank	※ 400 (880)	←
1.10	• Slewing motor & reduction unit	※ 730 (1,610)	←
2.	Lower frame assy (incl. 2.1~2.10)	15,500 (34,200)	16,100 (35,500)
2.1	• Slewing ring	640 (1,410)	←
2.2	• Travel motor & reduction unit	700 (1,540)×2	←
2.3	• Idler assy	285 (630)×2	←
2.4	• Lower roller assy	85 (190)×16	85 (190)×18
2.5	• Upper roller assy	20 (44)×4	←
2.6	• Track tension assy	310 (680)×2	←
2.7	• Sprocket	97 (210)×2	←
2.8	• Swivel joint	57 (125)	←
2.9	• Track guide	38 (84)×4	←
2.10	• Track link with 600mm (24") shoes assy	2,290 (5,040)×2	2,420 (5,340)×2
	• Track link with 800mm (32") shoes assy	2,940 (6,490)×2	3,120 (6,880)×2
	• Track link with 900mm (36") shoes assy	3,190 (7,040)×2	3,380 (7,460)×2
2.10.1	•• Track link	940 (2,070)×2	1,000 (2,200)×2
3	Attachment (incl. 3.1~3.3)	7,800 (17,200)	←
3.1	• Bucket assy [1.80m ³ (2.35cu.yd) STD]	1,380 (3,040)	←
3.2	• Arm assy [3.45m (11ft-4in) STD] (incl. following)	2,210 (4,870)	←
3.2.1	•• Arm	1,420 (3,120)	←
3.2.2	•• Bucket cylinder	※ 370 (820)	←
3.2.3	•• Idler link	55 (120)×2	←
3.2.4	•• Bucket link	160 (350)	←
3.2.5	•• Pin	150 (330)	←
	(2pcs. for mounting the arm cylinder and the bucket)	4,380 (9,650)	←
3.3	• Boom assy (Including the following :)	3,750 (8,260)	←
3.3.1	•• Boom (with hose, tube)	※ 570 (1,260)	←
3.3.2	•• Arm cylinder	60 (130)	←
3.3.3	•• Pin (mounting the arm)		
4.	Oil, grease, water, etc. (incl. 4.1~4.4)	1,130 (2,490)	←
4.1	•• Hydraulic oil	515 (1,130)	←
4.2	•• Fuel	530 (1,170)	←
4.3	•• Water	55 (120)	←
4.4	•• Engine oil	30 (66)	←
4.5	•• Gear oil	50 (110)	←

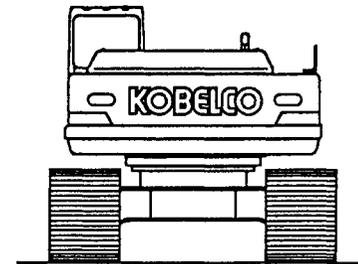
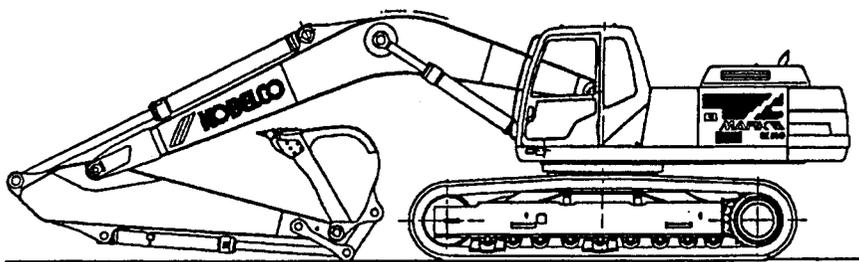
※ Mark indicate dry weight.

3. TRANSPORTATION WEIGHT

● OVERALL SPECIFICATIONS OF A FULLY-ASSEMBLED MACHINE ON A TRAILER

Model	SK430 III		SK430Lc III		
Shoe of type	mm (in)	Width of shoe 600 (24")	Width of shoe 800 (32") STD	Width of shoe 600 (24") STD	Width of shoe 800 (32") STD
Total width	mm (ft-in)	3,350 (11' 0")	3,550 (11' 8")	3,350 (11' 0")	3,550 (11' 8")
Weight	kg (lbs)	41,900 (92,400)	43,200 (95,300)	42,500 (93,700)	43,900 (96,800)

NOTE : With 3.45M (11ft-4in) Arm



● MACHINE LIFTING

CAUTION

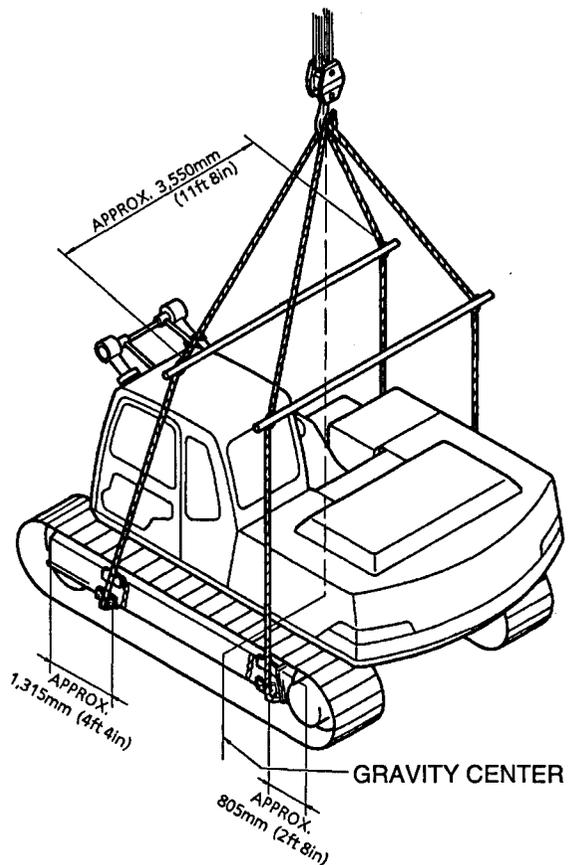
Improper lifting can allow load to shift and cause injury or damage.

1. Weight and instructions given herein apply to machine as manufactured by KOBELCO Inc.

● LIFTING THE WEIGHT

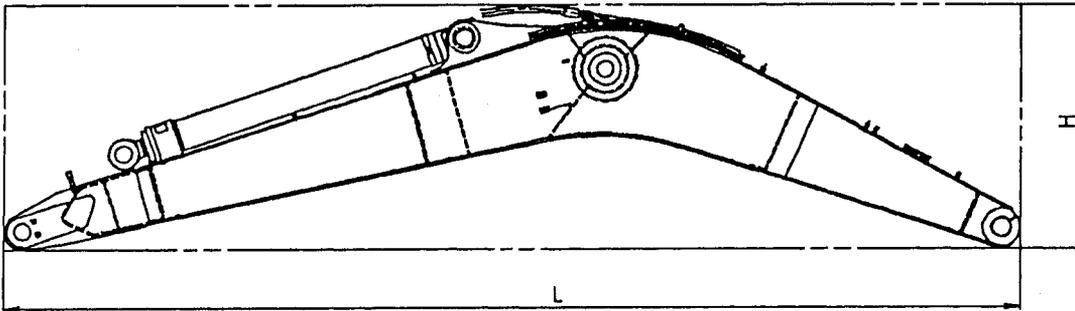
Model	SK430 III	SK430Lc III
Shoe of type	Width of sho 600mm (24")	Width of shoe 600mm (24")
Width	3,350mm (11ft-0in)	3,350mm (11 ft-0in)
Weight	34.1 ton (75,200 lbs)	34.7ton(76,500 lbs)

2. Use proper rated cables and slings for lifting. Position crane for level machine lift.
3. Lifting cables should have sufficient length to prevent contact with machine.
4. Use the rear and front eyes on lower frame provided for lifting.



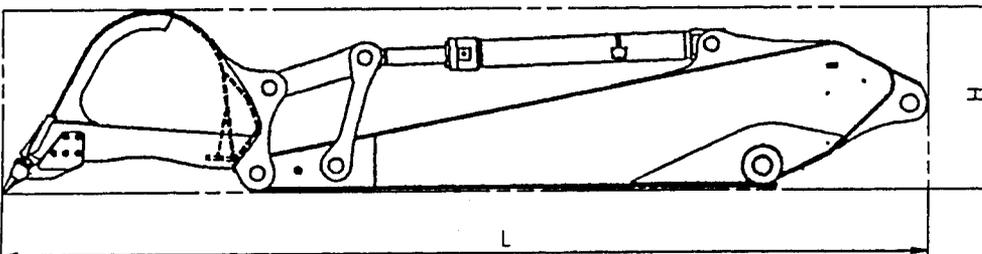
● OVERALL SPECIFICATIONS OF BOOM

	7.0m (23ft) Boom
Total length × total height × total width L×H×W m (ft-in)	7.26×1.76×0.93 (23' 10"×5' 9"×3' 1")
Weight kg (lbs)	4,060 (8,950)



● OVERALL SPECIFICATIONS OF ARM AND BUCKET

Combination	3.0m(9ft-10in) arm+ 2.1m ³ (2.75 cu-yd) bucket	3.45m(11ft-4 in) arm+ 1.8m ³ (2.35 cu-yd) bucket	3.95m(13ft-0 in) arm+ 1.6m ³ (2.09 cu-yd) bucket	4.9m(16ft-1 in) arm+ 1.40m ³ (1.83 cu-yd) bucket
Total length× total height× total width L×H×W m (ft-in)	5.85×1.25×1.67 (19' 2"×4' 1"×5' 6")	6.35×1.25×1.52 (20' 10"×4' 1"×5')	6.85×1.25×1.38 (22' 6"×4' 1"×4' 6")	7.80×1.25×1.23 (25' 7"×4' 1"×4')
Weight kg (lbs)	3,410 (7,520)	3,630 (8,000)	3,680 (8,100)	4,040 (8,900)



● OVERALL SPECIFICATIONS OF ARM

Length of arm	3.0m(9ft-10in) arm	3.45m(11ft-4 in) arm	3.95m(13ft-0 in) arm	4.9m(16ft-1 in) arm
Total length× total height× total width L×H×W m (ft-in)	4.17×1.15×0.64 (13' 8"×3' 9"×2' 1")	4.68×1.14×0.64 (15' 4"×3' 9"×2' 1")	5.18×1.14×0.64 (17' 0"×3' 9"×2' 1")	6.12×1.23×0.64 (20' 1"×4' ×2' 1")
Weight kg (lbs)	1,950 (4,300)	2,250 (4,960)	2,410 (5,310)	2,840 (6,260)

