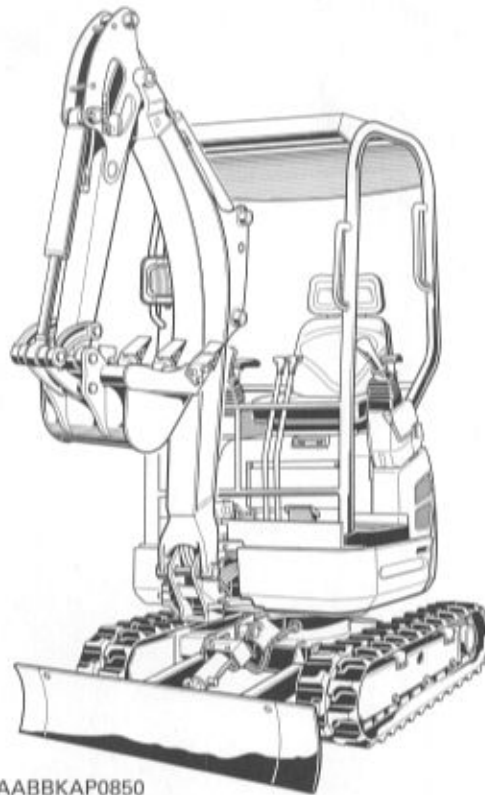


OPERATOR'S MANUAL

KUBOTA EXCAVATOR

MODEL U17



1BAABBKAP0850

U
17

READ AND SAVE THIS MANUAL

Kubota

LIST OF ABBREVIATION

Abbreviations	Description
API	American Petroleum Institute
ASTM	American Society for Testing and Materials, USA
CECE	Committee for European Construction Machinery
DIN	German Institute for Standards, Federal Republic of Germany
EN	European Standard
Front	"Front" means the front view towards the boom and dozer
Hi	High speed
ISO	International Organization for Standardization
JIS	Japanese Industrial Standard
L	Volume (Liter)
Lo	Low speed
L/min	Liter per minute
MIL	Military Standards
OPG (Top Guard Level I)	Operator Protective Guards of Top Guard Level I
ROPS	Roll-over Protective Structures
rpm	Revolutions Per minute
SAE	Society of Automotive Engineering
TPSS	Two Pattern Selection System

California Proposition 65

WARNING




































Engine exhaust, some of its constituents, certain vehicle components and fluids, contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

IMPORTANT

The engine in this machine is not equipped by the manufacturer with a standard spark arrester.
It is a violation of California Public Resource Code Section 4442 to use or operate this engine on or near any forest-covered, brush-covered land, or grass-covered land unless the exhaust system is equipped with a working spark arrester meeting state laws. Other states or federal areas may have similar laws.

GENERAL SYMBOLS

The instruments and operation elements have been marked with a series of symbols in order to simplify the operation of your excavator. These symbols are listed below with the respective descriptions.

	Safety alert Symbol		Bucket dump
	Warning lamp "Fuel level too low"		Boom swing (left)
	System lamp		Boom swing (Right)
	Warning lamp "Engine Oil pressure"		Dozer raise
	Warning lamp "Battery charge"		Dozer lower
	Warning lamp "Auto Idle (AI) Lamp"		Operation direction of control lever
	Indicator lamp "Glow"		Operation direction of control lever
	Working light switch		Read operator's manual
	Horn		Engine stop control lamp
	Wiper/Washer switch		Lock
	Diesel		Unlock
	Hydraulic fluid		Reducing / Increasing track width
	Gear oil		
	Grease		
	Fast		
	Slow		
	Excavator - Overhead movement toward the front		
	Excavator - Overhead movement toward the rear		
	Boom up		
	Boom down		
	Arm up		
	Arm crowd		
	Bucket crowd		

FOREWORD

You are now the proud owner of a KUBOTA excavator. This excavator is a product of KUBOTA quality engineering and manufacturing. It is made of the fine materials and under rigid quality control systems. It will give you long, satisfactory service. To obtain the best use of your excavator, please read this manual carefully. It will help you become familiar with the operation of the excavator and contains many helpful hints about excavator maintenance. It is KUBOTA's policy to utilize as quick as possible every advance in our research. The immediate use of new techniques in the manufacture of products may cause some small parts of this manual to be outdated. KUBOTA distributors and dealers will have the most up-to-date information. Please do not hesitate to consult with them.



SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.



DANGER : Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION : Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT : Indicates that equipment or property damage could result if instructions are not followed.

NOTE : Gives helpful information.



SAFE OPERATION

The best insurance against accidents is to abide by the safety regulations.

Read and understand this section carefully, before operating the excavator.

Every user, however experienced, should carefully read and understand this section and those of the attachments and accessories before taking the excavator into operation. The owner is obliged to inform the operators of these instructions in detail.

Keep this manual in the storage place. (See "Keeping the Operator's Manual" in the BEFORE START section.)

1. BEFORE OPERATION

1. Make yourself acquainted with the excavator and be aware of its limits. Read this operator's manual carefully before starting the excavator.
2. Obey the danger, warning and caution labels on the machine.
3. For your safety, a ROPS/OPG (Top Guard Level I) with a seat belt is installed by KUBOTA.

- ROPS: Roll-Over Protective Structure
- OPG (Top Guard Level I): Operator Protective Guards of Top Guard Level I

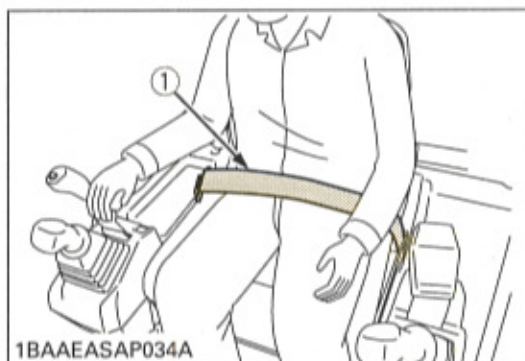
OPG (Top Guard Level I) in accordance with ISO10262 is equivalent in definition to FOPS (Falling Object Protective Structure).

Always use the seat belt when the machine is equipped with a ROPS/OPG (Top Guard Level I) as this combination will reduce the risk of serious injury or death, should the excavator be upset or falling objects occur.

Do not modify any structural members of the ROPS/OPG (Top Guard Level I) by welding, drilling, bending, grinding or cutting, as this may weaken the structure.

If any component is damaged, replace it. Do not attempt repairs. If the ROPS/OPG (Top Guard Level I) is loosened or removed for any reason, make sure all parts are reinstalled correctly. Tighten mounting bolts to proper torque.

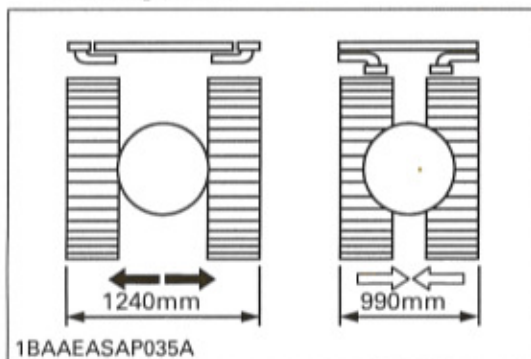
4. ROPS meets requirements of ISO 3471. OPG (Top Guard Level I) meets requirements of OSHA 1926.1003/ISO 10262.
5. The seat belt must be inspected regularly and replaced if frayed or damaged.



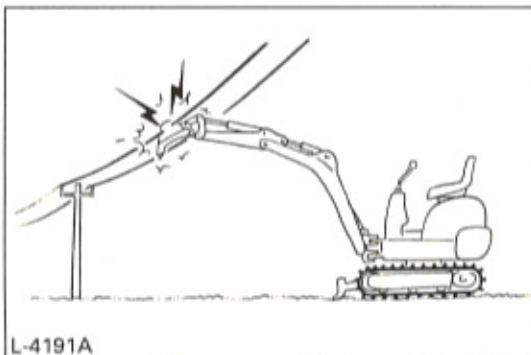
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(1) Seat belt

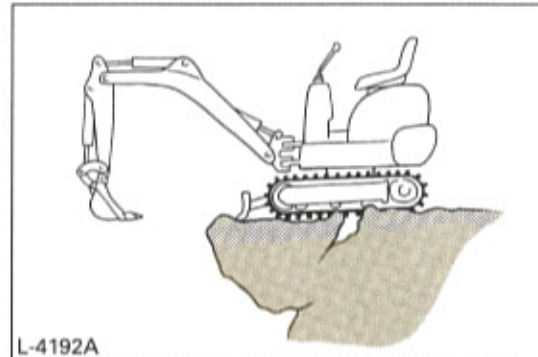
6. Track can be set at the narrow width 39in. (990mm) and the standard width 49in. (1240mm).
(for details see "OPERATION OF TRACK WIDTH CHANGE AND DOZER")
Do not operate in narrow track width 39in. (990mm), it makes risk of the excavator tipping over, operate always in standard track width 49in. (1240mm), except to pass through narrow space on a even ground.



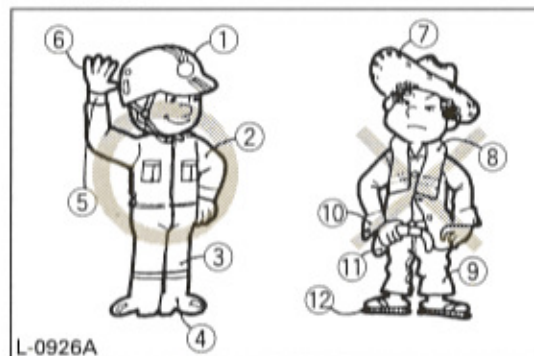
7. Do not use the excavator under the influence of alcohol, medication as well as other substances. Fatigue is also dangerous.
8. Check the surroundings carefully before using the excavator or when attachments are being attached.
- Pay attention to the overhead clearance with electric wires.



- Check for pipes and buried cables.
- Check for hidden holes, hindrances, soft underground and overhangs.



- During excavator use do not allow any persons within the working range.
9. Do not allow other persons to use the machine before having informed him on the exact operation and work instructions, and be assured that the operator's manual has been read and understood.
10. Do not wear baggy, torn or too large clothing when working with the excavator. Clothing can get caught in rotating parts or control elements which can cause accidents or injuries. Wear adequate safety clothing, e.g. safety helmet, safety shoes, eye protection, ear protection, working gloves, etc., as necessary and as prescribed by law or statutes.

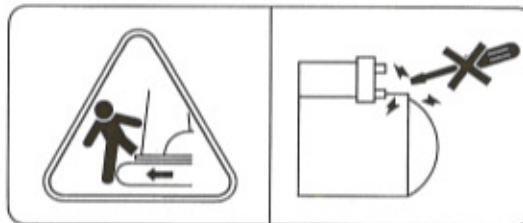


- (1) Helmet
(2) Clothing fit for work
(3) Tight seams
(4) Good grip footwear
(5) Well fitting cuffs
(6) Working gloves
(7) Straw hat
(8) Towel
(9) Baggy trousers
(10) Loose cuffs of the shirt
(11) Baggy shirt
(12) Rubber sandals

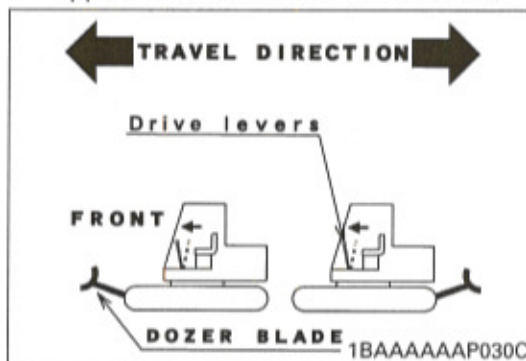
11. Do not allow passengers to get on any part of the excavator seat throughout operation.
12. Check mechanical parts for correct adjustments and wear. Exchange worn or damaged parts immediately.
13. Keep your excavator clean. Heavy soiling, grease, dust and grass can inflame and cause accidents or injuries.
14. Use only KUBOTA authorized attachments.
15. Before starting the excavator, be absolutely sure that the excavator has been filled with fuel, lubricated, greased and undergone other maintenance work.
16. Do not modify the excavator, otherwise it could lead to unforeseen safety problems.
17. Make sure attachments, particularly those utilizing quick attach systems, are securely mounted.

2. STARTING OF THE EXCAVATOR

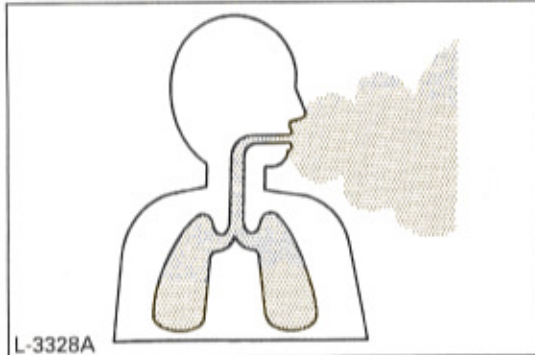
1. Get into and out of the machine safely. Always face the machine. Always use handrails and available steps and keep yourself well balanced. Do not hold any of the control levers and switches. Do not jump on or off the machine, whether stationary or in motion.
2. Start and control the excavator only from the operator's seat. The driver should not lean out of his seat when the engine is running.
3. Before starting the engine, make sure that all control levers (including auxiliary control levers) are in their neutral positions.
4. Do not start the engine by jumping the starter connections. Do not try to circumvent using the starter switch, otherwise the engine could start suddenly and the excavator could move.



5. Make sure that the dozer is on the front side. (The dozer must be raised.) If the levers are activated with the dozer on the rear end, the driving direction is in the opposite direction of the drive levers.



6. Do not run the engine in closed or badly ventilated rooms. Carbon monoxide is colourless, odourless and deadly.



7. Keep all safety equipment and covers in place. Replace damaged or missing safety device.
8. Precautions against tipping over. In order to secure safe operation, keep away from steep slopes and embankments. Do not swing the bucket downwards. Lower the dozer during digging. Keep the bucket as low as possible while driving upwards. Turn slowly on slopes (do not fast). Do not keep the excavator near the edges of trenches and banks, as the earth can give away due to the weight of the excavator.
9. Watch out at all times where the excavator is being moved to. Keep an eye out for hindrances.
10. Keep enough distance from trench and bank edges.

◆ Safety for children

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to machines and the work they do.

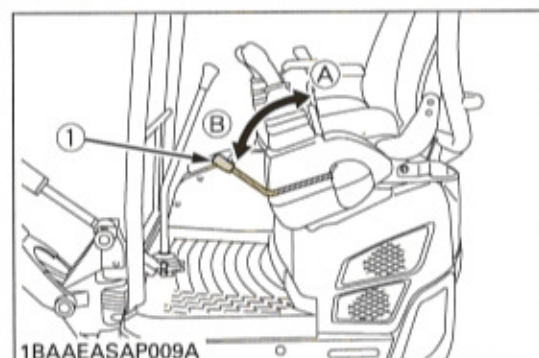
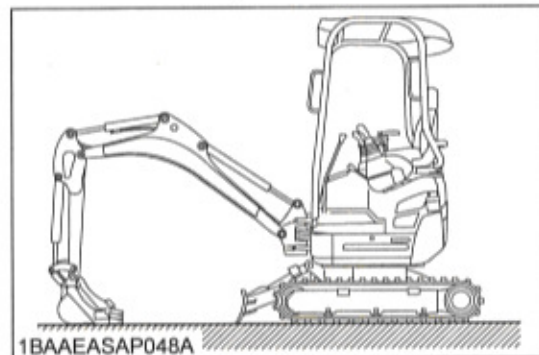
1. Never assume that children will remain where you last saw them.
2. Keep children out of the work area and under the watchful eye of another responsible adult.
3. Be alert and shut your machine down if children enter the work area.
4. Never carry children on your machine. There is no safe place for them to ride. They may fall off and be run over or interfere with your control of the machine.

5. Never allow children to operate the machine even under adult supervision.
6. Never allow children to play on the machine or on the attachments.
7. Use extra caution when backing up. Look behind and down to make sure the area clear before moving.
8. When parking your machine, if at all possible, park on a firm, flat and level surface; if not, park across a slope. Lower the bucket and dozer to the ground, remove the key place the control lock levers in the locked position from the ignition before you leave.

3. AFTER OPERATION

Before leaving the machine,

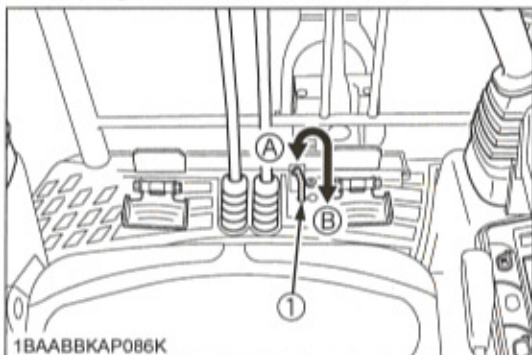
- Bring the excavator on a firm, flat and level surface.
- Lower the attachments and the dozer blade on the ground.
- Stop the engine.
- Lock all control levers.
- Remove the key.



- (1) lock lever for control lever (Left side) (A) "Lock" (B) "Unlock"

4. SAFE LOADING AND TRANSPORT OF THE EXCAVATOR

1. Observe all regulations concerning the transport of excavators on public roads.
2. Use adequately long and robust ramps when loading on a truck. (for details see "TRANSPORTING THE EXCAVATOR ON A TRUCK")
3. Do not change the running direction and to avoid a tipping over, do not try to swing the attachment crosswise to the loading ramps.
4. After loading of the excavator on a truck, engage the swing lock pin.
Lower the attachment on the loading plane and release the pressure from the hydraulic system.
Block the tracks with blocks and wire down the excavator. After loading the excavator on a truck, tie down the undercarriage of the excavator with a strong steel wire on the truck.



(1) Swing lock pin

(A) "Unlock"
(B) "Lock"



L-4200A

5. Do not brake abruptly with the excavator loaded. Mortal accidents could happen.
6. If the excavator is used to tow another machine, the load must be smaller than the strength of the hook.
7. Do not use hooks on the roof of canopy for lifting the excavator.

Max. drawbar pull at coupling hook	32.3 kN
Max. vertical load at coupling hook	2.7 kN

5. MAINTENANCE

Before doing maintenance work on the excavator, place the machine on a firm, flat and level surface, lower the attachments on the ground, stop the engine then remove the key and release the cylinder pressure by actuating the levers. When dismantling hydraulic parts, make sure that the hydraulic oil has cooled down sufficiently to avoid burns.

Start maintenance work carefully, e.g. loosen screws slowly so that oil will not squirt out.

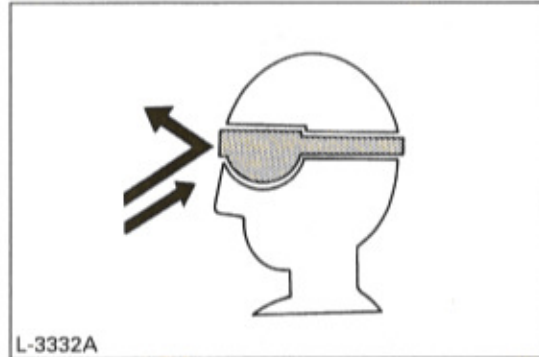
1. Before doing work on the engine, the exhaust system, the radiator and the hydraulics, let the excavator cool down sufficiently.
2. Turn off the engine at all times when filling with fuel. Avoid spilling and overfilling of fuel.
3. Smoking is prohibited while tanking and handling the battery! Keep sparks and fire away from the fuel tank and battery. Flammable gases escape from the battery, especially during charging.
4. Do not use or charge the refillable type battery if the fluid level is below the LOWER (lower limit level) mark. Otherwise, the battery component parts may prematurely deteriorate, which may shorten the battery's service life or cause an explosion. Check the fluid level regularly and add distilled water as required so that the fluid level is between the UPPER and LOWER levels.
5. Read and follow "STARTING WITH AN AUXILIARY BATTERY" in "OPERATION OF THE ENGINE", when starting with an auxiliary battery.

6. To avoid short-circuiting the battery, always remove the earth cable first and attach the plus cable first.
7. Keep a first-aid box and a fire extinguisher at hand at all times.
8. Do not open the radiator cap before the radiator has cooled down sufficiently. First loosen the cap to the first stop and allow the system enough time to release the remaining pressure. Then loosen the cap completely.
9. Leaking hydraulic fluid has enough pressure to penetrate the skin and cause serious injuries. Leakages from pin holes can be totally invisible. Do not use the bare hand for checking on possible leakages. Always use a piece of wood or cardboard. It is strongly recommended to use a face mask or eye protection. Should injuries occur with leaking hydraulic fluid, contact a doctor immediately. This fluid can cause gangrene or serious allergic reactions.



10. To avoid leakage of battery acid which contains heavy metals, do not throw the battery away.
11. Observe all laws and regulations concerning the disposal of used oil, coolants, solvents, hydraulic fluids, battery acids and batteries.
12. To avoid fire, do not heat the hydraulic components (tanks, pipes, hoses, cylinders) before they are drained and washed.

13. Use a face mask or eye protection to protect the eyes and respiratory system against dust and other foreign particles.



14. Securely support excavator with stands or suitable blocking before working underneath. For your safety, do not work under any hydraulically supported devices. They can settle, suddenly leak down, or be accidentally lowered.
15. Do not crawl under the excavator if the excavator is only supported by the boom and arm or the dozer. The excavator can tip over or lower itself due to hydraulic pressure loss. Always use safety struts or other appropriate supports.
16. KUBOTA uses no parts which are lined with asbestos. Do not use these kind of parts even if they can be installed.
17. Fire prevention
Excavator and some attachments have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcing or sparks.
The following fire prevention guidelines will help to keep your equipment up and running efficiently and keep the risk of fire to a minimum.

- Blow off all accumulated debris near hot engine exhaust components such as turbocharger and exhaust manifold as well as exhaust pipes and muffler more frequently when working in severe conditions.
- Clean out all accumulated flammable debris such as leaves, straw, pine needles, branches, bark, small wood chips and any other combustible materials from inside the machine belly pans or lower unit structures as well as from area in proximity to the engine.
- Inspect all fuel lines and hydraulic hoses for wear or for deterioration. Replace them immediately if they begin to leak.
- Examine electrical wiring and connectors frequently for damage. Repair any wires that are loose or frayed before operating the machine. Clean all electrical connections and tighten all electrical connections as necessary.
- Inspect the exhaust system daily for any signs of leakage. Check for broken pipes and muffler and also for loose or missing bolts, nuts and clamps. If any exhaust leaks or fractured parts are found, repairs must be completed prior to operation.
- Always keep a multipurpose fire extinguisher on or near the machine. Be familiar with the operation of the fire extinguisher.


6. DANGER, WARNING AND CAUTION LABELS

(1) Code No. RA238-5747-1

⚠ WARNING

TO AVOID PERSONAL INJURY OR DEATH:

- Do not move or use load when down.
- If it is forbidden to lift loads greater than those determined in the lifting capacity tables.
- The attachment used in the table are set for only one load position when lifting on both ground (maximum lift) and due to the fact that the load is distributed only on one side of the machine.
- The load is unbalanced and located at the end of the arm - that is, the bucket. Therefore, if it is lifted in order to reach maximum height, the bucket will not be supported from the side of the table.
- Operate always at standard track width (2400mm/8 ft), except to pass through narrow tracks.
- The maximum capacity is 100% of the rated capacity.



1. The lifting capacity tables are based on ISO 10001 and do not exceed 35% of the static lift load of the machine or 80 % of the load on the lift capacity of the machine.

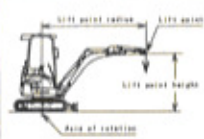
2. The strokes are as follows:

- 1) The load point corresponds to the front part of the arm.
- 2) The machine position are: 0) over-front (blade down), 1) over-front (blade up), and 2) over-side.
- 3) The operating position is the boom position.

3. The height of the excavator, the boom, the dipper and other lifting accessories are taken into consideration for the loads.

LIFT POINT HEIGHT (mm)	LIFTING CAPACITY (kg)				LIFTING CAPACITY (kg)				LIFTING CAPACITY (kg)				LIFTING CAPACITY (kg)			
	BLADE DOWN		BLADE UP		BLADE DOWN		BLADE UP		BLADE DOWN		BLADE UP		BLADE DOWN		BLADE UP	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1200	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
1400	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
1600	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
1800	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
2000	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Machine with ROPS canopy and rubber crawler, without bucket



1BAAEAZAP0030


(2) Code No. RA228-5733-1

⚠ CAUTION

TO AVOID PERSONAL INJURY:

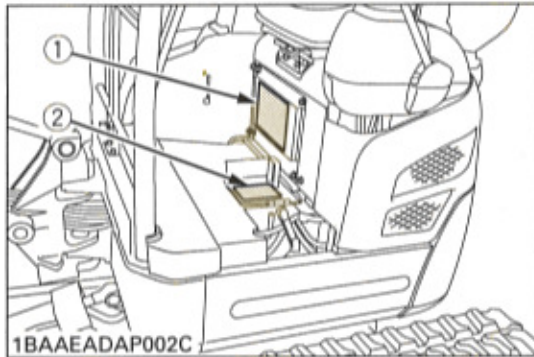
1. Study control lever pattern A and pattern B. Then choose the one which is most familiar.
2. Position the pattern selector lever in either the left side position of the machine (pattern A) or the right side position (pattern B).
3. Familiarize yourself with the pattern selected by operating slowly.

Pattern B



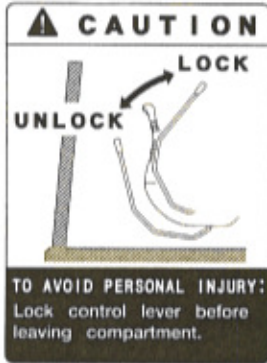
Pattern A

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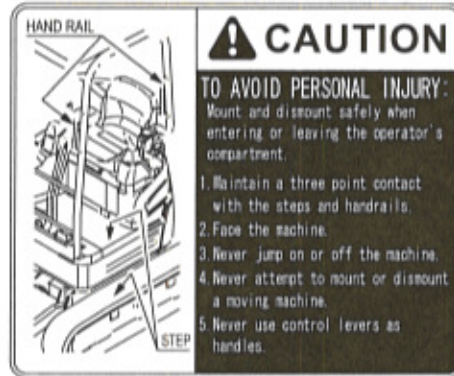
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(1) Code No. RC418-5753-1



1BAAAARAP0450

(2) Code No. RA228-5762-1

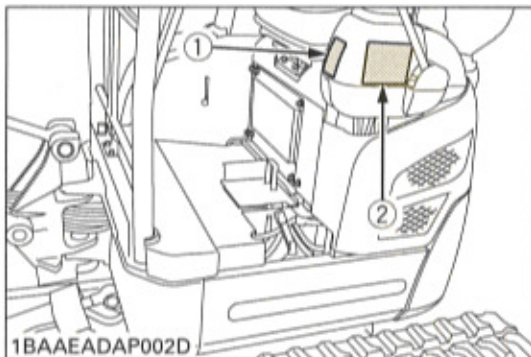


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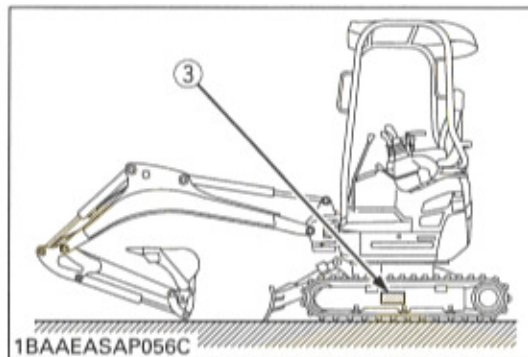
(3) Code No. RD517-5795-2
[Both sides]



1BAABAMAP0010



1BAAEADAP002D



1BAAEASAP056C

(1) Code No. RC418-5728-4

CAUTION	TO AVOID PERSONAL INJURY:
	<ol style="list-style-type: none"> 1. Read and understand operator's manual before attempting to start or operate the excavator. 2. Before starting engine, make sure all control levers are in neutral and the operating area is clear of all bystanders. 3. Never allow passengers on any part of the excavator while operating. 4. Know your work area before starting operation. <ul style="list-style-type: none"> ● Check underground lines and cables. ● Stay off slopes too steep for safe operation. ● Check overhead clearance with electric wires. ● Check for hidden holes, obstacles or drop-offs and overhangs. 5. Make sure all shields are in place and securely fastened. 6. Before dismounting from the machine, lower all attachment to the ground, stop the engine and remove the key. 7. Damaged ROPS must be replaced, not repaired or revised.
IMPORTANT	Never use boom, dipper, or bucket to hammer or beat sideways. Excavator is not intended for these uses.

1BAAAAQAP0780

(2) Code No. RC418-5727-4

WARNING	TO AVOID PERSONAL INJURY OR DEATH:	DO NOT OPERATE WITHOUT ROPS.
	<p>Before moving the excavator, KNOW THE LOCATION OF THE DOZER BLADE. The excavator will travel in the direction of the dozer blade when drive levers are moved away from the operator.</p>	<p>YOU COULD BE CRUSHED.</p> <p>USE SEAT BELT</p>

1BAAAAQAP0790

(3) Code No. RC418-5733-5

DANGER
<p>TO AVOID SERIOUS INJURY OR DEATH: Check overhead clearance with electric wires.</p>

1BAAAAQAP0800

(4) Code No. RD809-5738-2

WARNING
<p>ATTACHMENT IMPACT HAZARD KEEP ATTACHMENT AWAY FROM CAB AND MACHINE. FAILURE TO DO SO MAY RESULT IN SEVERE INJURIES OR DEATH OR DAMAGE TO THE BOOM/CYLINDER, HYDRAULIC HOSES OR THE CAB.</p>

1BAAAAAP1000

(6) Code No. 6C300-4744-1

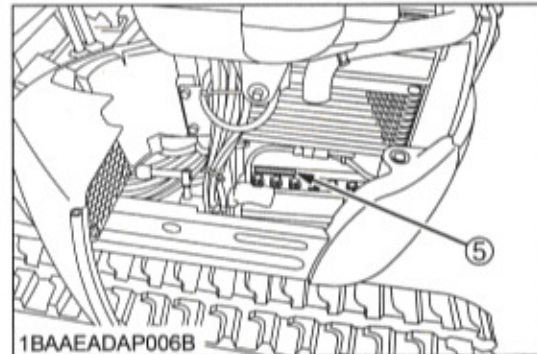
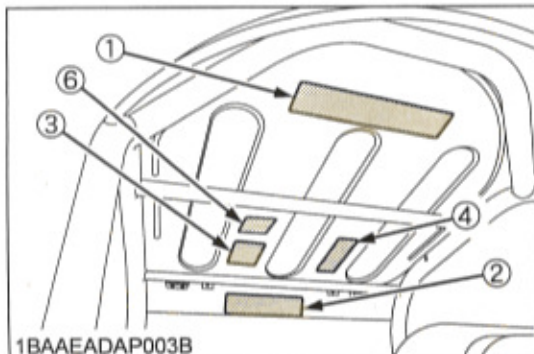
WARNING
<p>Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.</p>

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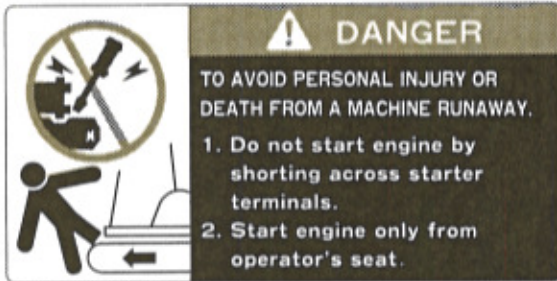
(5) Code No. RA228-5751-2

<p>DANGER EXPLOSIVE GASES Cigarettes, flames or sparks could cause battery to explode. Always shield eyes and face from battery. Do not charge or use booster cables or adjust post connections without proper instruction and training.</p> <p>KEEP VENT CAPS TIGHT AND LEVEL</p> <p>POISON CAUSES SEVERE BURNS Contains sulfuric acid. Avoid contact with skin, eyes or clothing. In event of accident flush with water and call a physician immediately.</p> <p>KEEP OUT OF REACH OF CHILDREN</p>
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1BAAAAQAP0960



(1) Code No. RC108-5718-1



1BAAAAQAP0910

(2) Code No. RA228-5728-2
[Both sides]



1BAAAAQAP0900

(3) Code No. RD358-5736-1
Diesel fuel only No fire



1BAAGAAAP1810

(4) Code No. RA228-5776-1



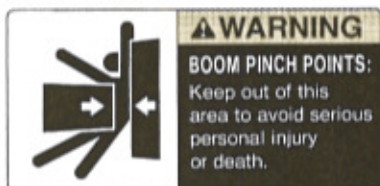
1BAAEADAP016A

(6) Code No. RC108-5796-1
[Both sides]



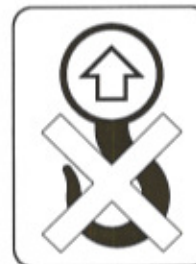
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(5) Code No. 68328-5735-1 [Both sides]

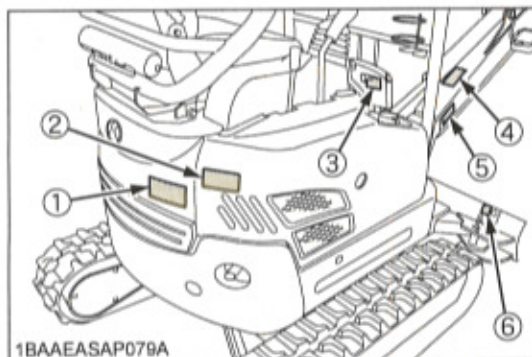


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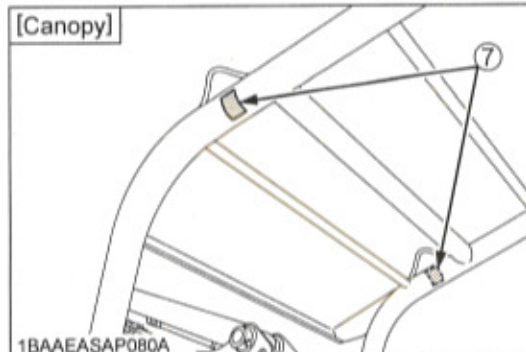
(7) Code No. RB419-5796-2
[Both sides]



1BAABAUAP2720

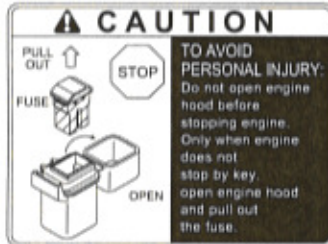


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1BAAEASAP080A

(1) Code No. RB238-5737-1



1BAAEADAP013A

(2) Code No. RC418-5737-2



1BAAAAQAP0880

(3) Code No. TC030-4958-1

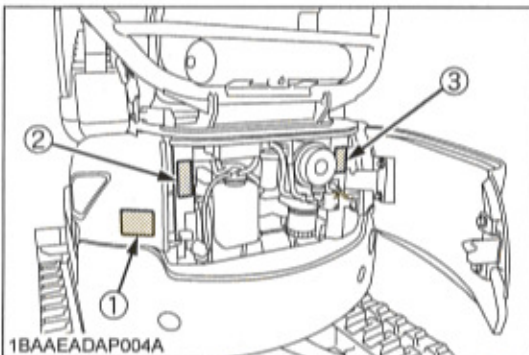


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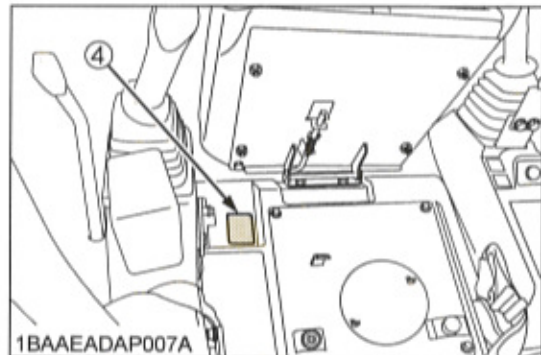
(4) Code No. RC108-5754-1



1BAAAAQAP0890



1BAAEADAP004A



1BAAEADAP007A

7. CARE OF DANGER, WARNING AND CAUTION LABELS

- (1) Keep danger, warning and caution labels, clean and free from obstructing material.
- (2) Clean danger, warning and caution labels with soap and water, dry with a soft cloth.
- (3) Replace damaged or missing danger, warning and caution labels with new labels from your KUBOTA dealer.
- (4) If a component with danger, warning and caution label (s) affixed is replaced with new part, make sure new label (s) is (are) attached in the same location (s) as the replaced component.
- (5) Mount new danger, warning and caution labels by applying on a clean dry surface and pressing any bubbles to outside edge.

DEALER SERVICE

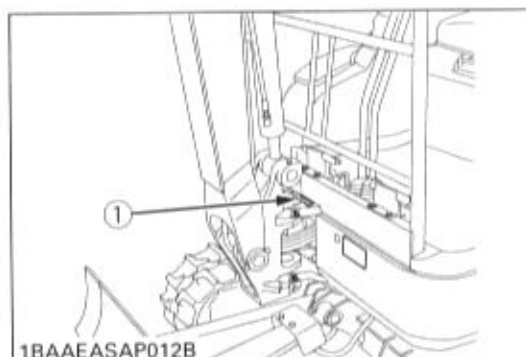
Your KUBOTA dealer is always ready to help so that your excavator offers the best performance. After having carefully read this manual, you will realize that much of the routine maintenance can be done by yourself. Your KUBOTA dealer is responsible for servicing and the delivery of spare parts. When ordering spare parts from your KUBOTA dealer, always mention the serial number of the excavator and the engine. Note these numbers right away in the supplied lines.

Model Serial No.
 Excavator _____
 Engine _____
 Dealer's name
 (To be filled in through the owner)



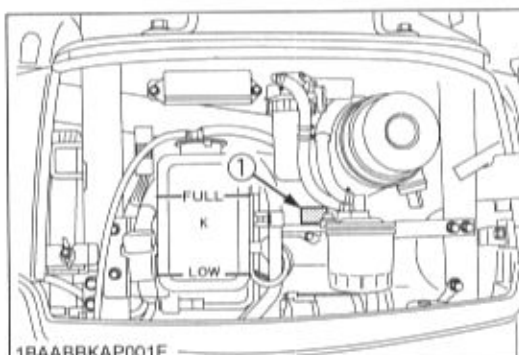
1BAAEAZAP001A

KUBOTA Corporation	
2-47, Shikitsuhgashi 1-Chome Naniwa-ku, Osaka, 556-8601 JAPAN	
MODEL	_____
SERIAL No.	_____
ENGINE No.	_____
PRODUCT IDENTIFICATION NUMBER	_____



1BAAEASAP012B

(1) Serial No.



1BAABBKAP001E

(1) Engine serial No.

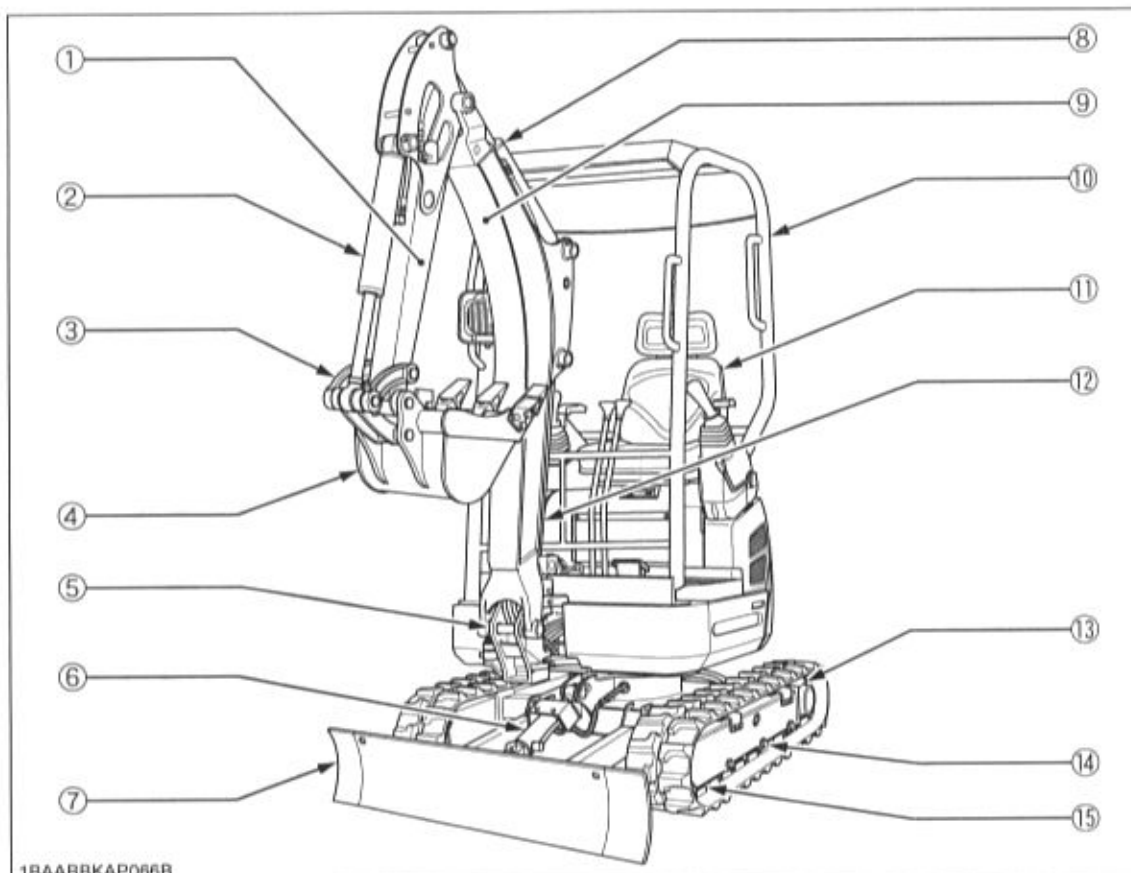
TECHNICAL DATA

		KUBOTA EXCAVATOR		
Model name		U17		
Type		Canopy		
Operating weight (including operator's)		lbs.(kg)	3704 (1680)	
Engine	Type	Water cooled 4 cycle diesel engine with 3 cylinder		
	Model name	KUBOTA D902		
	Total displacement cc (cu.in)	898 (54.8)		
	Engine power SAE gross	kW(Hp)	12.0 (16.1)	
	Rated speed	rpm	2300	
	Low idle speed	rpm	1300 ~ 1400	
Performance	Unit swing speed	rpm	9.1	
	Travel speed	Fast	mph (km/h)	2.6 (4.1)
		Slow	mph (km/h)	1.4 (2.1)
	Ground pressure (With operator)	psi (kPa) [kgf/cm ²]	3.7 26 [0.26]	
Climbing angle	%(deg)	58 (30)		
Dozer	Width X Height	in.(mm)	39.0/48.8 X 10.2 (990/1240 X 260)	
Boom swing angle	Left	deg (rad)	65 (1.13)	
	Right	deg (rad)	58 (1.01)	
Pressure connection for attachments	Max. displacement (Theoretical)	US gal (L)/min	7.32 (27.7)	
	Max. pressure	psi (MPa) [kgf/cm ²]	2702 (18.6) [190]	
Fuel tank capacity		US gal (L)	5.0 (19)	

NOTE:

- Above dimensions are based on the machine with rubber trucks and JPN bucket.
JPN = made in Japan
- Specifications subject to change without notice.
- * With unloaded digging bucket.
- * Firm compacted soil.
- * Operators must exercise extra caution and follow instructions in the operator's manual.
- * Worse condition or heavier attachment to the above will decrease climbing angle.

DESCRIPTION OF MACHINE PARTS



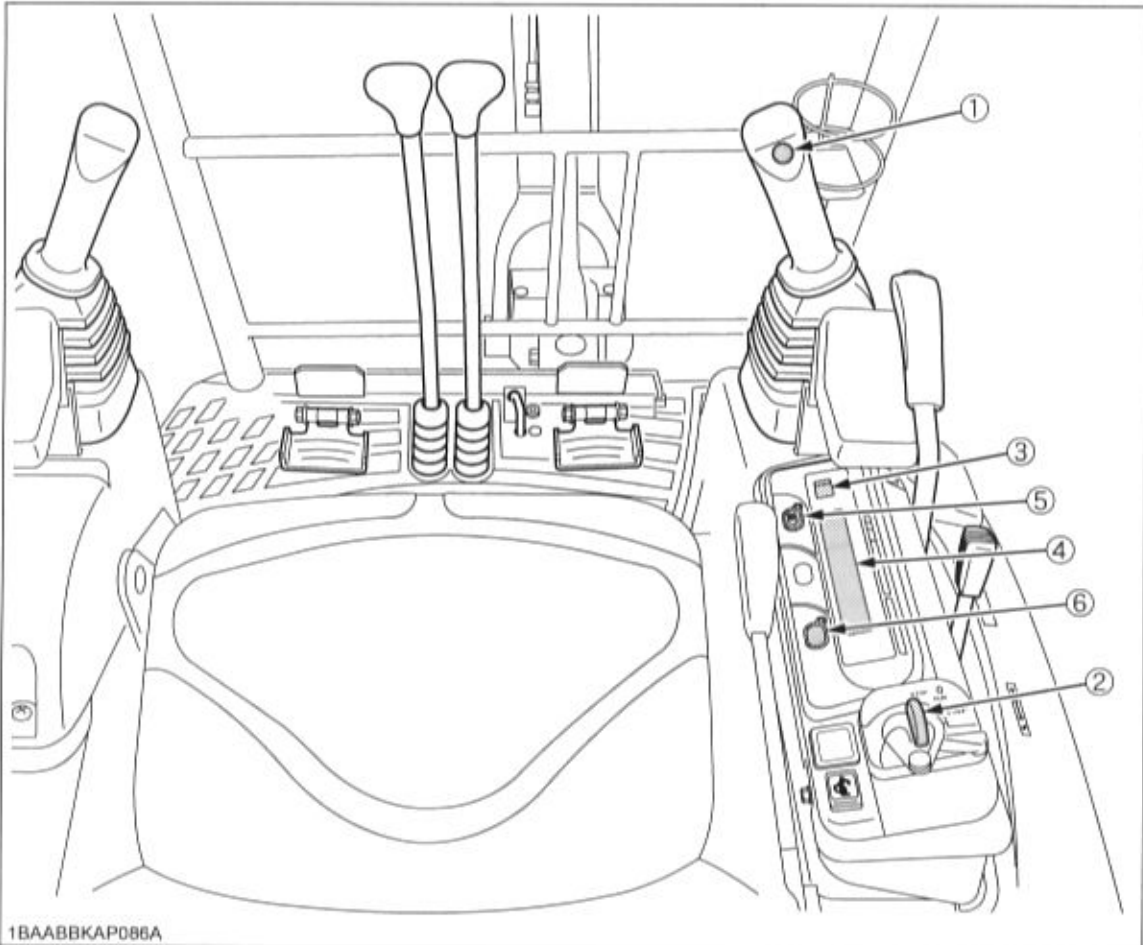
1BAABBKAP066B

DEPICTED CONTENTS

- (1) Arm
- (2) Bucket cylinder
- (3) Bucket link
- (4) Bucket
- (5) Swing bracket
- (6) Dozer cylinder
- (7) Dozer
- (8) Arm cylinder
- (9) Boom
- (10) Canopy (Rops / OPG (Top Guard Level I))
- (11) Operator's seat
- (12) Boom cylinder
- (13) Drive sprocket
- (14) Track roller
- (15) Front idler

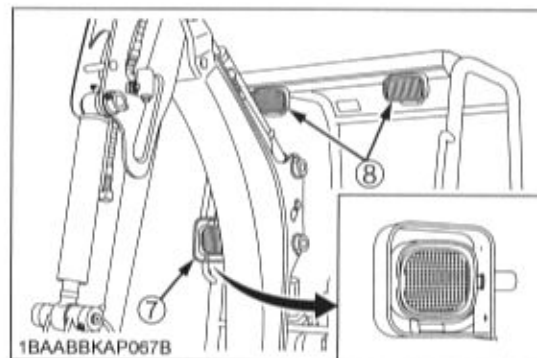
INSTRUMENT PANEL AND CONTROL ELEMENTS

■ Instrument Panel, Switches

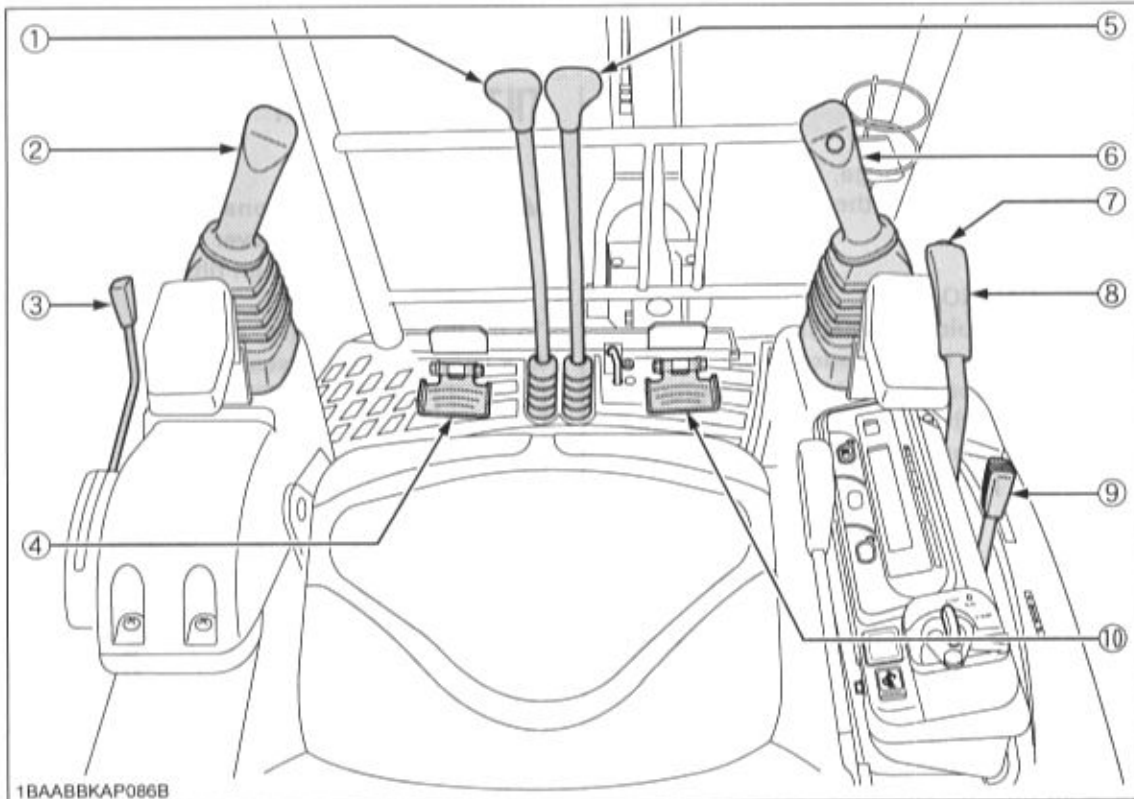


DEPICTED CONTENTS

- (1) Horn switch
- (2) Starter switch
- (3) Warning lamp
- (4) LCD display
- (5) Working light switch
- (6) Display selector switch
- (7) Working light
- (8) Working light (Option)

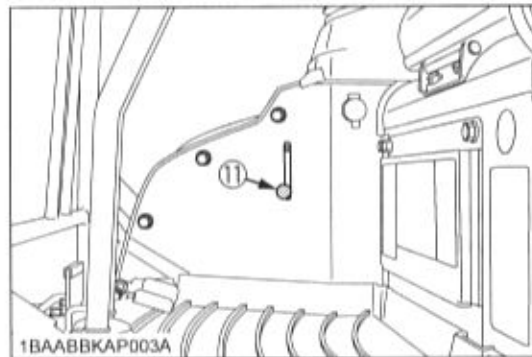


■ Control Pedals and Levers

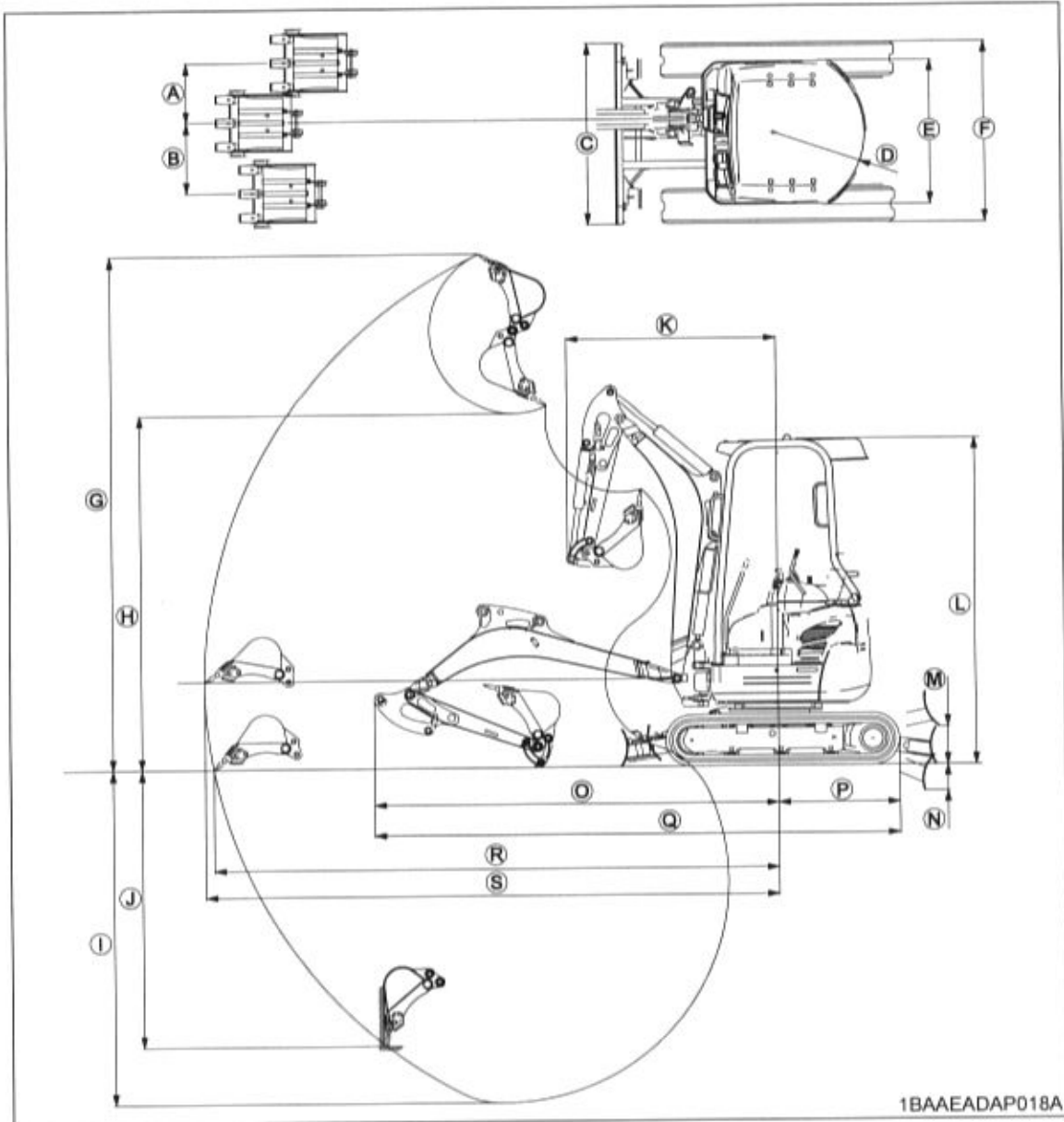


DEPICTED CONTENTS

- (1) Drive lever (left)
- (2) Control lever for front attachments (left)
- (3) Lock lever for attachment control
- (4) Service port pedal
- (5) Drive lever (right)
- (6) Control lever for front attachments (right)
- (7) Two travel speed switch
- (8) Control lever for dozer or track width
- (9) Throttle lever
- (10) Boom swing pedal
- (11) Track width change / dozer select lever



MAIN DIMENSIONS



in. (mm)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
20.08 (510)	15.2 (385)	39/ 48.8 (990/ 1240)	24.4 (620)	39.0 (990)	39/ 48.8 (990/ 1240)	139.0 (3540)	96.1 (2440)	90.9 (2310)	75.2 (1910)	56.7 (1440)	92.1 (2340)	11.0 (280)	7.5 (190)	108.3 (2750)	31.3 (795)	139.6 (3545)	151.2 (3840)	153.5 (3900)

LIFTING CAPACITY

- The lifting capacities are based on ISO 10567 and do not exceed 75% of the static tilt load of the machine or 87% of the hydraulic lifting capacity of the machine.
- The strokes are as follows.
 - The load point corresponds to the front bolt part of the arm.
 - The machine positions are (i) over – front (Blade up), (ii) over – front (Blade down), and (iii) over – side.
 - The operating cylinder is the boom cylinder.
- The bucket of the excavator, the hook, the sling and other lifting accessories are taken into consideration for the loads.

Machine conditions:

No bucket, all others according to the standard regulations.



WARNING

To avoid personal injury or death:

- It is forbidden to lift loads greater than those values mentioned in the lifting capacity tables.
- The values mentioned in the table are valid only on even, hard grounds. When lifting on soft ground, the machine can tilt over due to the fact that the load is concentrated only on one side of the machine.
- The table values are calculated at the end of the arm without the bucket. In order to find the allowable loads for machines with bucket, the bucket weight must be subtracted from the values in the table.

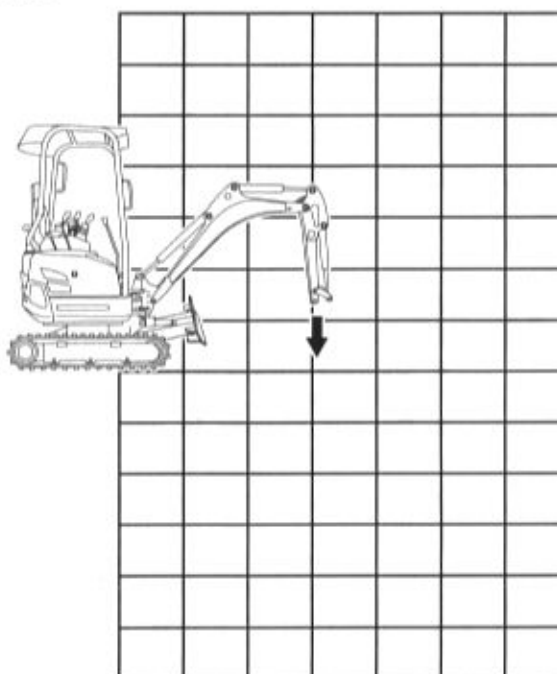


WARNING

To avoid personal injury or death:

- In this manual, the machine's lifting capacity is discussed, but it does not mean that it is recommended to use the machine for lifting jobs.
- It is specified in item 3.4 of ISO 10567:1992 that the following devices must be additionally installed if a hydraulic excavator with the rated lift load of over 2,205 lbs (1,000 kg) at its minimum lifting radius or the tilting moment of over 29,504 ft-lbs (40,000 N-m) is used for lifting loads.

- Lifting hook
- Acoustic alarm or warning lamp for the operator when the rated load or the corresponding tilting moment has been exceeded.
- Boom decending control device conforming to ISO 8643:1997



1BAAEASAP059A

U17 ROPS CANOPY
RUBBER TRACK

LIFTING CAPACITY OVER-FRONT BLADE DOWN
Unit=1000 lbs.

LIFT POINT HEIGHT (ft)	LIFT POINT RADIUS (ft)				
	4	6	8	10	
GL	8		0.67		
	6		0.62	0.70	
	4		1.17	0.85	0.69
	2		1.50	0.96	0.70
	0		1.40	0.94	0.67
	-2	1.64	1.19	0.82	
	-4	1.58	0.94	0.63	

LIFTING CAPACITY OVER-FRONT BLADE UP
Unit=1000 lbs.

LIFT POINT HEIGHT (ft)	LIFT POINT RADIUS (ft)				
	4	6	8	10	
GL	8		0.57		
	6		0.62	0.57	
	4		0.85	0.55	0.39
	2		0.78	0.52	0.38
	0		0.76	0.50	0.37
	-2	1.53	0.76	0.50	
	-4	1.55	0.77	0.50	

LIFTING CAPACITY OVER-SIDE TRACK WIDTH 49.0 in
Unit=1000 lbs.

LIFT POINT HEIGHT (ft)	LIFT POINT RADIUS (ft)				
	4	6	8	10	
GL	8		0.54		
	6		0.62	0.53	
	4		0.78	0.51	0.36
	2		0.72	0.49	0.35
	0		0.70	0.47	0.34
	-2	1.37	0.70	0.46	
	-4	1.38	0.71	0.47	



WARNING

To avoid personal injury or death:

- Operate always in standard track width 49.0 in(1240mm), except to pass through narrow space.
- Do not operate in narrow track width 39.0 in(990mm), it makes risk of the excavator tipping over.

LIFTING CAPACITY OVER-SIDE TRACK WIDTH 39.0 in
ONLY REFERENCE

Unit=1000 lbs.

LIFT POINT HEIGHT (ft)	LIFT POINT RADIUS (ft)				
	4	6	8	10	
GL	8		0.36		
	6		0.56	0.36	
	4		0.52	0.34	0.24
	2		0.46	0.32	0.23
	0		0.44	0.30	0.22
	-2	0.81	0.44	0.29	
	-4	0.83	0.45	0.30	