

# Operation & Maintenance Manual



# PC130-6K

# PC150LGP-6K

## HYDRAULIC EXCAVATOR

SERIAL NUMBER

PC130-6K - K30001 and up

PC150LGP-6K - K35001 and up



### WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept inside the cab for reference and periodically reviewed by all personnel who will come into contact with the machine.

# KOMATSU



# 1. FOREWORD

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This manual provides rules and guidelines which will help you use this machine safely and effectively. Keep this manual handy and have all personnel read it periodically. If this manual has been lost or has become dirty and cannot be read, request a replacement manual from Komatsu or your Komatsu distributor.

If you sell the machine, be sure to give this manual to the new owners.

Continuing improvements in the design of this machine can lead to changes in detail which may not be reflected in this manual. Consult Komatsu or your Komatsu distributor for the latest available information for your machine or for questions regarding information in this manual.

## WARNING

- **This operation & maintenance manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you require.**
- **This machine complies with EC directive (89/392/EEC).  
Machines complying with this directive display the CE mark.**
- **Improper operation and maintenance of this machine can be hazardous and could result in serious injury or death.**
- **Operators and maintenance personnel should read this manual thoroughly before beginning operation or maintenance.**
- **Some actions involved in operation and maintenance of the machine can cause a serious accident, if they are not done in a manner described in this manual.**
- **The procedures and precautions given in this manual apply only to intended uses of the machine. If you use your machine for any unintended uses that are not specifically prohibited, you must be sure that it is safe for you and others. In no event should you or others engage in prohibited uses or actions as described in this manual.**
- **Komatsu delivers machines that comply with alle applicable regulations and standards of the country to which it has been shipped. If this machine has been purchased in another country or purchased from someone in another country, it may lack certain safety devices and specifications that are necessary for use in your country. If there is any question about whether your product complies with the applicable standards and regulations of your country, consult Komatsu or your Komatsu distributor before operating the machine.**
- **The description of safety is given in SAFETY INFORMATION on page 0-2 and in SAFETY from page 1-1.**

## 2. SAFETY INFORMATION




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### 2.1 SAFETY MESSAGES

Most accidents are caused by the failure to follow fundamental rules for the operation and maintenance of machines.

To avoid accidents, read, understand and follow all precautions and warnings in this manual and on the machine before performing operation and maintenance.

To identify hazards on the machine pictorial decals are used (see POSITION FOR ATTACHING SAFETY LABELS)

-  **RED WARNING TRIANGLE** - This is used on safety labels where there is a high probability of serious injury or death if the hazard is not avoided. These safety messages or labels usually describe precautions that must be taken to avoid the hazard. Failure to avoid this hazard may also result in serious damage to the machine.
-  **ORANGE WARNING TRIANGLE** - This is used on safety labels where there is a potentially dangerous situation which could result in serious injury or death if the hazard is not avoided. These safety messages or labels usually describe precautions that must be taken to avoid the hazard. Failure to avoid this hazard may also result in serious damage of the machine
-  **YELLOW SAFETY TRIANGLE** - This is used on safety labels for hazards which could result in minor or moderate injury if the hazard is not avoided. This word might also be used for a hazard where the only result could be damage to the machine.
- NOTICE** - This word is used for precautions that must be taken to avoid actions which could shorten the life of the machine.

Safety precautions are described in SAFETY from page 1-1.

Komatsu cannot predict every circumstance that might involve a potential hazard in operation and maintenance. Therefore that safety message in this manual and on the machine may not include all possible safety precautions. If any procedures or actions not specifically recommended or allowed in this manual are used, you must be sure that you and others can do such procedures and actions safely and without damaging the machine. If you are unsure about the safety of some procedures, contact Komatsu or your Komatsu distributor.

**NOTICE:**

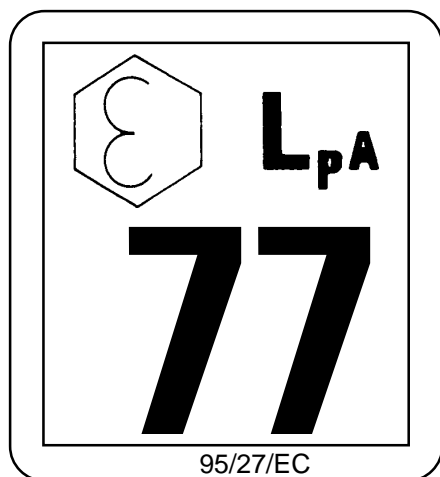
The PC150LGP has been designed specifically for low ground pressure applications. Under no circumstances should this machine be used for heavy duty/demolition purposes. If you are unsure of the suitability of the machine to your particular application, please contact Komatsu or your Komatsu distributor.

## 2.2 NOISE

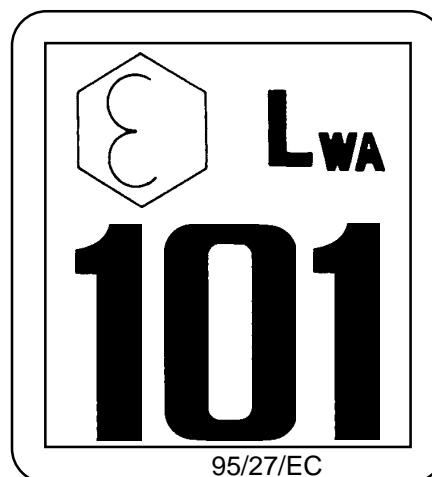
### PC130-6K + PC150LGP-6K

Valid until 31 december 2001

Operator ears noise value  
(Sound pressure level)



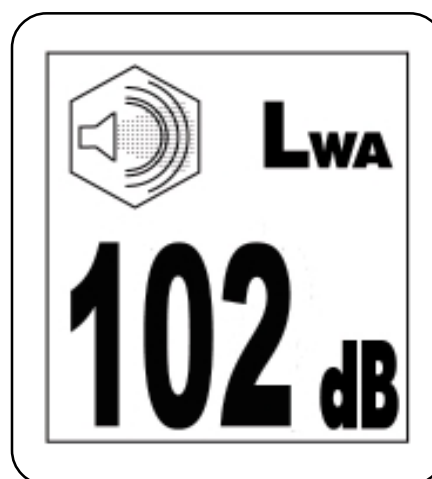
Ambient noise value  
(Sound power level)



Noise level indicated is the guaranteed value as specified in the directive 86/662/EEC, as amended by 95/27/EC.

Valid as of 1 January 2002

- Sound pressure level at the operator's station, measured according to ISO6395 (Dynamic test method, simulated working cycle)
- Sound power level emitted. This is the guaranteed value as specified in European directive 2000/14/EC.



## 2.3 VIBRATION

The weighted root mean square acceleration value to which the operator's arms are subjected does not exceed 2.5 m/s<sup>2</sup>

The weighted root mean square acceleration value to which the operator's body is subjected does not exceed 0.5 m/s<sup>2</sup>

These results were obtained by accelerometers during trench digging.

# 3. INTRODUCTION

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## 3.1 INTENDED USE

This Komatsu HYDRAULIC EXCAVATOR is designed to be used mainly for the following work:

- Digging work
- Smoothing work
- Ditching work
- Loading work

See the section "12.15 WORK POSSIBLE USING HYDRAULIC EXCAVATOR" for further details.

## 3.2 FEATURES

- This Komatsu HYDRAULIC EXCAVATOR is equipped with various controls based on an advanced electronics system.
  - The monitor panel greatly facilitates daily maintenance and self-diagnosis.
  - Working mode, active mode and travel speed are selectable.
  - Digging and lifting force can be increased by light-touch control.  
(For details, see operaton section).
- Adjustable wrist control levers make operations smooth and easy.
- Fresh filtered air heater assures comfortable operaton.
- Low noise level and smart urban-style design and coloring.
- Superb operating performance provided by powerful engine and high-performance hydraulic pumps.
- Low fuel consumption controlled by an electronic control system provides an environment-friendly machine.

## 3.3 BREAKING IN THE MACHINE

Your Komatsu machine has been thoroughly adjusted and tested before shipment.

However, operating the machine under severe conditions at the beginning can adversely affect the performance and shorten the life of the machine.

Be sure to break in the machine for the initial 100 hours (as indicated by the service meter).

During breaking in:

- Idle the engine for 5 minutes after starting it up.
- Avoid operation with heavy loads or at high speeds.
- Avoid sudden starts, sudded acceleration, sudden steering and sudded stops except in cases of emergency.

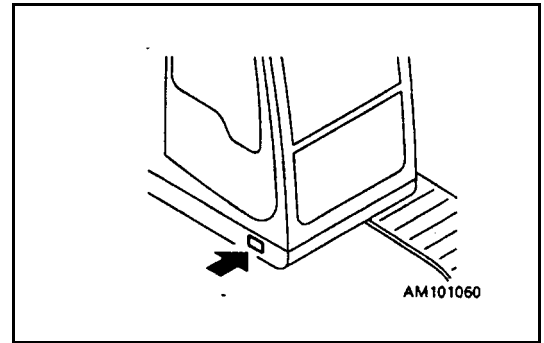
The precautions given in this manual for operating, maintenance and safety procedures are only those that apply when this product is used for the specific purpose. If the machine is used for a purpose that is not listed in this manual, Komatsu cannot bear any responsibility for safety. Alle consideration of safety in such operations is the responsibility of the user.

Operations that are prohibited in this manual must never be carried out under any circumstances.

## 4. LOCATION OF PLATES, TABLES TO ENTER SERIAL NO. AND DISTRIBUTOR

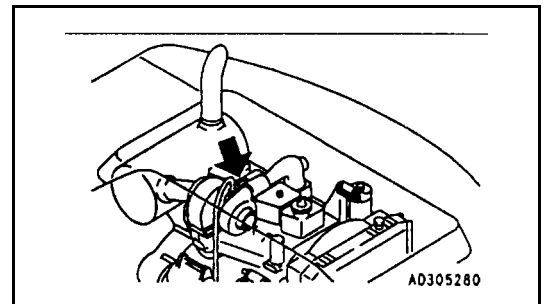
### MACHINE SERIAL NO. PLATE POSITION

On the front bottom right of the operator's cab



### ENGINE SERIAL NO. PLATE POSITION

On the upper side of the engine cylinder head cover.



### TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR

---

Machine serial No.

---

Engine serial No.

---

Product Identification Number :

---

Manufacturers name: KOMATSU UK Ltd.  
Address: Durham Road  
Birtley  
Chester-Le street  
County Durham DH32QX  
United Kingdom



Distributor  
Address

Phone



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### MACHINE SERIAL PLATE.

Valid until 31 December 2003

  	MODEL	<input type="text"/>
	SERIAL NO	<input type="text"/>
	MANUFACTURING YEAR	<input type="text"/>
	WEIGHT	<input type="text"/>
	ENGINE POWER	<input type="text"/>
	MANUFACTURER	Manufactured by Komatsu UK Ltd, Birtley Co Durham United Kingdom under licence from Komatsu Ltd.
		09602-00050

Valid as of 1 January 2004

	MODEL	<input type="text"/>	
	SERIAL No.	<input type="text"/>	
	MANUFACT. YEAR	<input type="text"/>	
	MASS	<input type="text"/>	kg
	ENGINE POWER	<input type="text"/>	kW
Product Identification Number	<input type="text"/>		
MANUFACTURER	Manufactured by Komatsu UK Ltd. for Komatsu Ltd., Tokyo, Japan		
		205-00-K1291	



# 5. CONTENTS

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1. Foreword .....	0-1
2. Safety information .....	0-2
3. Introduction .....	0-4
4. Location of plates, tabel to enter serial No. and distributor .....	0-5

## SAFETY

6. General precautions .....	1-2
7. Precautions during operation .....	1-9
7.1 Before starting engine .....	1-9
7.2 After starting engine .....	1-11
7.3 Transportation .....	1-18
7.4 Battery .....	1-19
7.5 Towing .....	1-21
7.6 Bucket with hook .....	1-22
8. Precautions for maintenance .....	1-23
8.1 Before carrying out maintenance .....	1-23
8.2 During maintenance .....	1-27
9. Position for attaching safety labels .....	1-32
9.1 Lifting capacity .....	1-36

## OPERATION

10. General view .....	2-2
10.1 General view of machine .....	2-2
10.2 General view of controls and gauges .....	2-3
11. Explanation of components .....	2-4
11.1 Machine monitor .....	2-4
11.2 Switches .....	2-15
11.3 Control levers, pedals .....	2-19
11.4 Ceiling window .....	2-24
11.5 Front window .....	2-25
11.6 Door lock .....	2-27
11.7 Cap, cover with lock .....	2-28
11.8 Luggage tray .....	2-29
11.9 Ashtray .....	2-29
11.10 Car heater .....	2-30
11.11 Car radio .....	2-32
11.12 Fuse .....	2-34
11.13 Fusible link .....	2-34
11.14 Controllers .....	2-34
11.15 Tool box .....	2-34
11.16 Grease pump holder .....	2-34
11.17 Refueling pump .....	2-35

<b>12. Operation</b> .....	2-36
12.1 Check before starting .....	2-38
12.2 Starting engine .....	2-48
12.3 Operations and checks after starting engine .....	2-51
12.4 Moving machine off .....	2-57
12.5 Steering machine .....	2-60
12.6 Stopping machine .....	2-62
12.7 Swinging .....	2-63
12.8 Operation of work equipment .....	2-64
12.9 Working mode selection .....	2-65
12.10 Handling active mode .....	2-67
12.11 Prohibitions for operation .....	2-69
12.12 Precautions for operation .....	2-71
12.13 Precautions when traveling up or down hills .....	2-72
12.14 How to escape from mud .....	2-74
12.15 Work possible using hydraulic excavator .....	2-75
12.16 Replacement and inversion of bucket .....	2-76
12.17 Parking machine .....	2-78
12.18 Check after finishing work .....	2-79
12.19 Stopping engine .....	2-80
12.20 Check after stopping engine .....	2-81
12.21 Locking .....	2-81
12.22 Overload warning device .....	2-82
12.23 Offset boom .....	2-83
<b>13. Transportation</b> .....	2-85
13.1 Loading, unloading work .....	2-85
13.2 Precautions for loading .....	2-86
13.3 Precautions for transportation .....	2-87
13.4 Lifting the machine .....	2-87
<b>14. Cold weather operation</b> .....	2-92
14.1 Precautions for low temperature .....	2-92
14.2 Precautions after completion of work .....	2-94
14.3 After cold weather .....	2-94
<b>15. Long-term storage</b> .....	2-95
15.1 Before storage .....	2-96
15.2 During storage .....	2-96
15.3 After storage .....	2-96
15.4 Starting machine after long-term storage .....	2-96
<b>16. Troubleshooting</b> .....	2-97
16.1 When machine runs out of fuel .....	2-97
16.2 Phenomena that are not failures .....	2-97
16.3 Method of towing machine .....	2-97
16.4 Using method for light-weight towing hook .....	2-98
16.5 Precautions on particular jobsites .....	2-98
16.6 If battery is discharged .....	2-99
16.7 Other trouble .....	2-103

## MAINTENANCE

<b>17. Guides to maintenance</b> .....	3-2
<b>18. Outlines of service</b> .....	3-4
18.1 Outline of oil, fuel, coolant .....	3-4
18.2 Outline of electric system .....	3-8
18.3 Outline of hydraulic system .....	3-9
<b>19. Wear parts list</b> .....	3-10
<b>20. Use of fuel, coolant and lubricants according to ambient temperature</b> .....	3-11
<b>21. Standard tightening torques for bolts and nuts</b> .....	3-15
21.1 Introduction of necessary tools .....	3-15
21.2 Torque list .....	3-16
<b>22. Periodic replacement of safety critical parts</b> .....	3-17
<b>23. Maintenance schedule chart</b> .....	3-21
23.1 Maintenance schedule chart .....	3-21
23.2 Maintenance interval when using hydraulic breaker .....	3-23
<b>24. Service procedure</b> .....	3-24
24.1 Initial 250 hours service .....	3-24
24.2 When required .....	3-25
24.3 Check before starting .....	3-41
24.4 Every 50 hours service .....	3-46
24.5 Every 100 hours service .....	3-47
24.6 Every 250 hours service .....	3-50
24.7 Every 500 hours service .....	3-54
24.8 Every 1000 hours service .....	3-60
24.9 Every 2000 hours service .....	3-63
24.10 Every 4000 hours service .....	3-65
24.11 Every 5000 hours service .....	3-66

## SPECIFICATIONS

<b>25. Specifications</b> .....	4-2
---------------------------------	-----

## OPTIONS AND ATTACHMENTS

26. General Precautions .....	5-2
26.1 General precautions related to safety .....	5-2
26.2 Precautions when installing attachments .....	5-3
27. Handling bucket with hook .....	5-4
27.1 Checking for damage to bucket with hook .....	5-4
27.2 Prohibited operations .....	5-4
27.3 Precautions during operation .....	5-4
28. Machine ready for attachments .....	5-5
28.1 Explanation of components .....	5-5
28.2 Operation .....	5-7
28.3 Long-term storage .....	5-9
28.4 Specifications .....	5-9
29. Introduction of optional parts and attachments .....	5-10
29.1 Introduction of optional parts and attachments .....	5-10
29.2 Attachment installation combination table .....	5-11
29.3 Selection of track shoes .....	5-12
30. Extending machine service life .....	5-14
30.1 Hydraulic breaker .....	5-14
30.2 Power ripper .....	5-17
30.3 Fork grab .....	5-18
30.4 Grapple bucket .....	5-19
30.5 Scrap grapple .....	5-20
30.6 Crusher & cutter .....	5-21
30.7 Hydraulic pile driver .....	5-22
30.8 Hydraulic excavator with multi-purpose crane .....	5-23

# SAFETY

 **WARNING**

**Read and follow all safety precautions. Failure to do so may result in serious injury or death.**

This safety section also contains precautions for optional equipment and attachments.

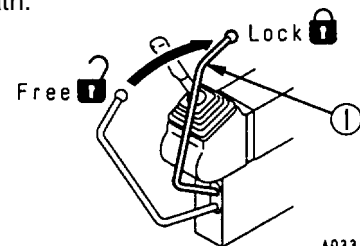
## 6 GENERAL PRECAUTIONS

### SAFETY RULES

- Only trained and authorised personnel can operate and maintain the machine.
- Follow all safety rules, precautions and instructions when operating or performing maintenance on the machine.
- Do not operate the machine if you are not feeling well, or if you are taking medicine which will make you sleepy, or if you have been drinking. Operating in such condition will adversely affect your judgement and may lead to an accident.
- When working with another operator or with a person on worksite traffic duty, be sure that all personnel understand all hand signals that are to be used.
- Always follow all rules related to safety.

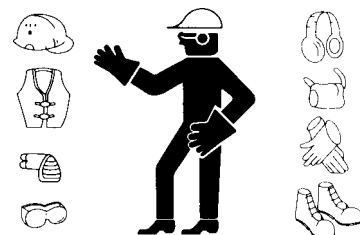
### SAFETY FEATURES

- Be sure that all guards and covers are in their proper position. Have guards and covers repaired if damaged.
- Use safety features such as safety lock levers ① properly.
- Never remove any safety features. Always keep them in good operating condition.  
**Safety lock lever → see "12.17 PARKING MACHINE".**
- Improper use of safety features could result in serious bodily injury or death.



### CLOTHING AND PERSONAL PROTECTIVE ITEMS

- Avoid loose clothing, jewellery, and loose long hair. They can catch on controls or in moving parts and cause injury or death.
- Also, do not wear oily clothes, because they are flammable.
- Wear a hard hat, safety glasses, safety shoes, mask or gloves when operating or maintaining the machine. Always wear safety goggles, hard hat and heavy gloves if your job involves scattering metal chips or minute materials particularly when driving pins with a hammer and when cleaning the air cleaner element with compressed air. Check also that there is no one near the machine.
- Check that all protective equipment functions properly before using.



### UNAUTHORIZED MODIFICATION

Any modification made without authorization from Komatsu can create hazards. Before making a modification, consult your Komatsu distributor. Komatsu will not be responsible for any injury or damage caused by any unauthorized modification.

**⚠ WARNING:** Failure to follow these safety precautions may lead to a serious accident.

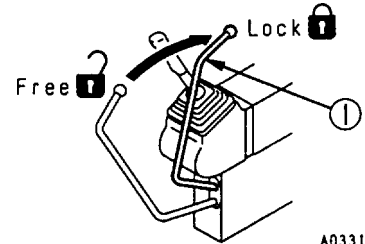
### ALWAYS APPLY LOCK WHEN LEAVING OPERATOR'S SEAT

- When standing up from the operator's seat, always place the safety lock levers ① securely in the LOCK position. If you accidentally touch the levers when they are not locked, the work equipment may suddenly move and cause serious injury or damage.
- When leaving the machine, lower the blade and ripper completely to the ground, set the safety lock levers ① to the LOCK position, then stop the engine. Use the key to lock all the equipment.

Always remove the key and take it with you.

**Work equipment posture** → see "12.17 PARKING MACHINE".

**Locking** → see "12.21 LOCKING"

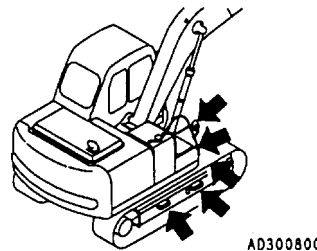
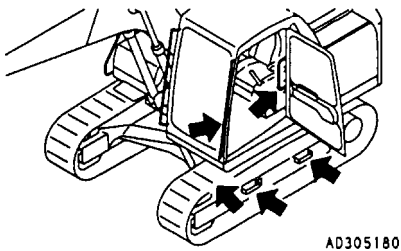


### MOUNTING AND DISMOUNTING

- Never jump on or off the machine. Never get on or off a moving machine.
- When getting on or off the machine, always face the machine and use the handrails and steps.
- Never hold any control levers or lock levers when getting on or off the machine.
- To ensure safety, always maintain three-point contact (both feet and one hand, or both hands and one foot) with the handrails and steps to ensure that you support yourself.
- If there is any oil, grase, or mud on the handrails or steps, wipe it off immediately. Always keep these parts clean. Repair any damage and tighten any loose bolts.
- When getting on or off the machine, or when moving along the top of the track, if you hold the handrail inside the door when moving on top of the track shoe, and the door lock is not locked securely, the door may move and cause you to fall.

Always lock the door securely.

**Method of locking door** → see "11.6 DOOR LOCK"

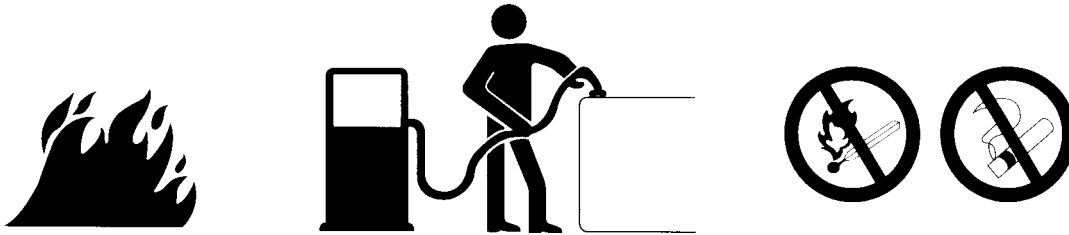


## 6 GENERAL PRECAUTIONS

### FIRE PREVENTION FOR FUEL AND OIL

Fuel, oil, and antifreeze can be ignited by a flame. Fuel is particularly flammable and can be hazardous. Always observe the following:

- Keep any flame or lighted cigarette away from flammable fluids.
- Stop the engine and do not smoke when refueling
- Tighten all fuel and oil caps securely
- Use well-ventilated areas for adding or storing oil and fuel.
- Keep oil and fuel in the determined place and do not allow unauthorized persons to enter.



### PRECAUTIONS WHEN HANDLING AT HIGH TEMPERATURE

- Immediately after operations are stopped, the engine oil and hydraulic oil are at high temperature and are still under pressure. Attempting to remove the cap, drain the oil or water, or replace the filters may lead to serious burns. Always wait for the temperature to go down, and follow the specified procedures when carrying out these operations.
- To prevent hot water from spurting out, stop the engine, wait for the water to cool, then loosen the cap slowly to relieve the pressure before removing the cap.  
(When checking if the water temperature has gone down, put your hand near the front face of the radiator and check the air temperature. Be careful not to touch the radiator).
- To prevent hot oil from spurting out, stop the engine, wait for the oil to cool, then loosen the cap slowly to relieve the pressure before removing the cap.  
(When checking if the oil temperature has gone down, put your hand near the front face of the hydraulic tank and check the air temperature. Be careful not to touch the hydraulic tank).





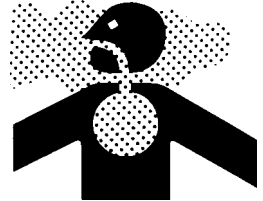
**⚠ WARNING:** Failure to follow these safety precautions may lead to a serious accident.

### ASBESTOS DUST HAZARD PREVENTION

Asbestos dust can be hazardous to your health if it is inhaled.

Komatsu does not use asbestos in its products, but if you handle materials containing asbestos fibers, follow the guidelines given below:

- Never use compressed air for cleaning.
- Use water to keep down the dust when cleaning
- If there is danger that there may be asbestos dust in the air, operate the machine from an upwind position whenever possible.
- Use an approved respirator if necessary.



### CRUSHING OR CUTTING PREVENTION

Do not enter, or put your hand or arm or any other part of your body between movable parts such as the work equipment and cylinders, or between the machine and work equipment.

If the work equipment is operated, the clearance will change and this may lead to serious damage or personnel injury.

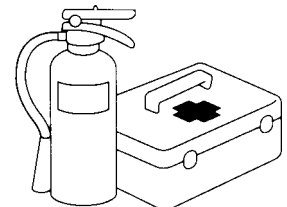
If it is necessary to go between movable parts, always lock the levers and be sure that the work equipment cannot move. For details, see "8. PRECAUTIONS FOR MAINTENANCE".



### FIRE EXTINGUISHER AND FIRST AID KIT

Always follow the precautions below to prepare for action if any injury or fire should occur.

- Be sure that fire extinguishers have been provided and read the labels to ensure that you know how to use them.
- Provide a first aid kit at the storage point. Carry out periodic checks and add to the contents if necessary.
- Know what to do in the event of a fire or injury.
- Decide which phone numbers of persons (doctor, ambulance, fire station etc.) to contact in case of an emergency. Post these contact numbers in specified places and make sure that all personnel know the numbers and correct contact procedures.



### PROTECTION AGAINST FALLING OR FLYING OBJECTS

If there is any danger of falling or flying objects hitting the operator, install protective guards in place to protect the operator as required for each particular situation.

- For work with breakers, install a front guard on the windshield. Also, place a laminate coating sheet over the windshield.
- For demolition of shear workk, install a front guard on the windshield and a top guard on the cab. Also, place a laminate coating sheet over the windshield.
- For work in mines, quarries, demolition, tunnels or other places where there is danger of falling rocks, put FOPS (falling object protective structure) in place. Also, place a laminate coating sheet over the windshield.

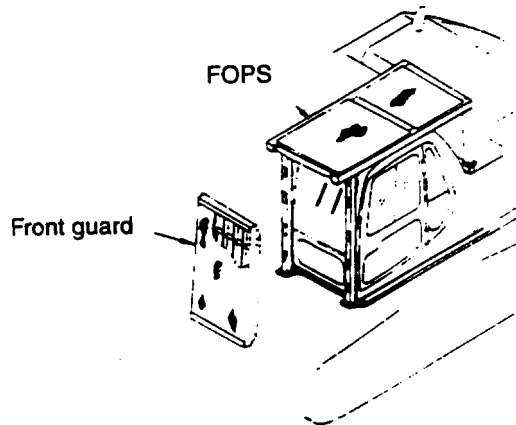
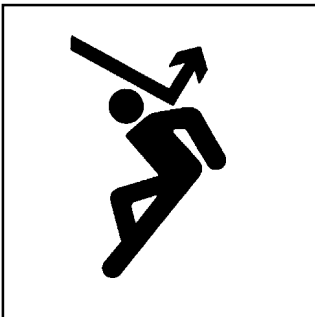
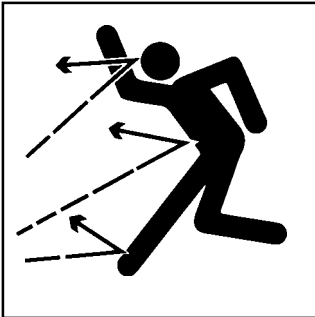
The above comments are made with regards to typical working conditions. By all means you should put on other guards if required by conditions at your particular site.

For details of safety guards, please contact your Komatsu distributor.

Also, even for other types of work, if there is any danger of being hit by falling or flying objects or of objects entering the operator's cab, select and install a guard that matches the working conditions.

Be sure to close the front window before commencing work.

When carrying out the above operations, make sure to keep all persons other than the operator outside that range of falling or flying objects. Be particularly sure to maintain a proper distance when carrying out shear operations



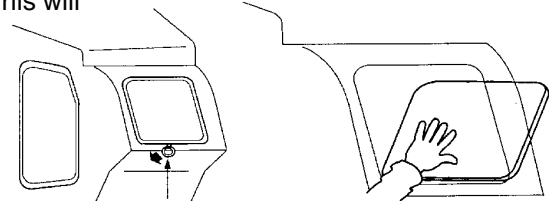
**⚠ WARNING:** Failure to follow these safety precautions may lead to a serious accident.

### PRECAUTIONS FOR ATTACHMENTS

- When installing and using an optional attachment, read the instruction manual for the attachment and the information related to attachments in this manual.
- Do not use attachments that are not authorized by Komatsu or your Komatsu distributor. Use of unauthorized attachments could create a safety problem and adversely affect the proper operation and useful life of the machine.
- Any injuries, accidents, product failures resulting from the use of unauthorized attachments will not be the responsibility of Komatsu.

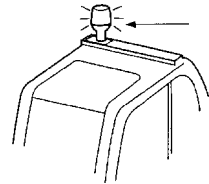
### EMERGENCY EXIT

- When exit by normal means is prevented in an emergency you can get out through the emergency exit (rear window).
- Pull the ring at the bottom of the window and remove strip. This will allow you to push out the glass.



### ROTATING BEACON (OPTION)

- When the machine is operated on or beside a road, a rotating beacon is required to avoid a traffic accident
- Contact your Komatsu distributor to install a beacon lamp.

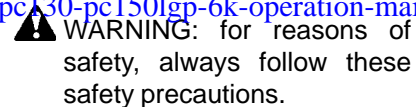


### ELECTROMAGNETIC INTERFERENCE

When this machine is operating close to a source of high electromagnetic interference, such as a radar station, some abnormal phenomena may be observed.

- The display on the monitor panel may behave erratically
- The warning buzzer may sound

These effects do not signify a malfunction and the machine will return to normal as soon as the source of interference is removed.



## 6 GENERAL PRECAUTIONS

### VENTILATION FOR ENCLOSED AREAS

Exhaust fumes from the engine can kill.

- If it is necessary to start the engine within an enclosed area, or you handle fuel, flushing oil, or paint, open the doors and windows to ensure that you provide adequate ventilation to prevent gas poisoning.
- If opening the doors and windows still does not provide adequate ventilation, set up fans.



### PRECAUTIONS WITH CAB GLASS

If by mistake the cab glass on the work equipment side should crack, there is danger of direct contact between the operator's body and the work equipment. This is extremely dangerous. If the glass is cracked, stop operations immediately and replace the glass.