

# Operation & Maintenance Manual

# WA500-6

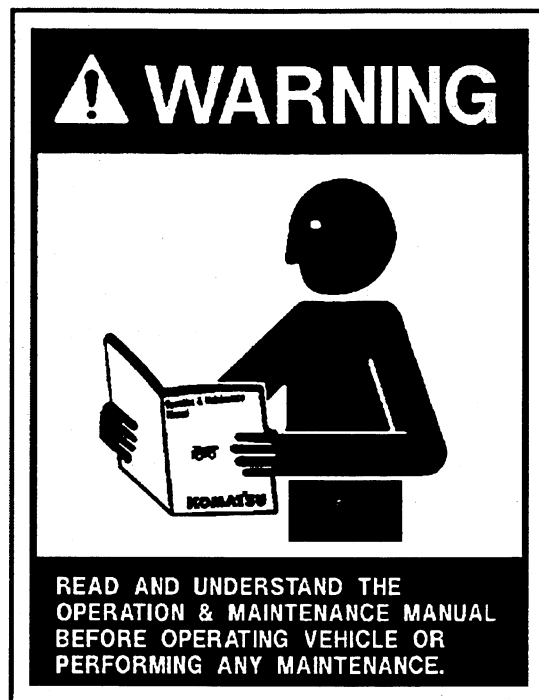
## WHEEL LOADER

SERIAL NUMBERS **WA500-6** **A92001** and UP

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Due to this continuous program of research and development, periodic revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.



**! 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 near the machine for reference and periodically reviewed by all personnel who come in contact with it.

**CALIFORNIA**

**Proposition 65 Warning**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

**CALIFORNIA**

**Proposition 65 Warning**

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects and reproductive harm. Wash hands after handling.

# **INTRODUCTION**

## INTRODUCTION

# FOREWORD

This manual describes procedures for operation, handling, lubrication, maintenance, checking, and adjustment. It will help the operator and maintenance personnel achieve peak performance through effective, economical, and safe machine operation and maintenance.

Keep this manual handy and have all personnel read it periodically. If this manual is lost, damaged, or becomes dirty and can not be read, request a replacement manual from your local distributor.

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

The explanations, values, and illustrations in this manual have been prepared based on the latest information available at the date of its publication. Continuing improvements in the design of this machine may lead to additional changes that are not reflected in this manual. Consult Komatsu or your Komatsu distributor for the latest available information concerning your machine or with questions regarding information contained in this manual.

This manual may contain attachments and optional equipment that are not available in your area. Consult your local Komatsu distributor for items that you may require.

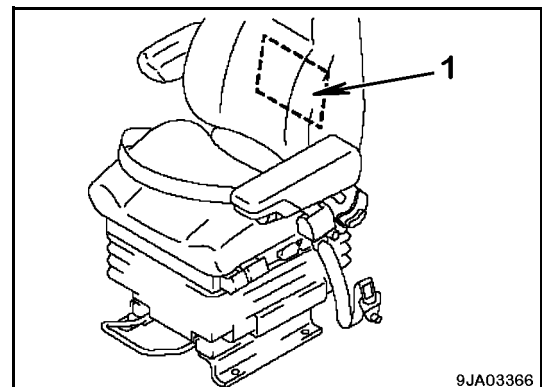
The numbers in the illustrations correspond to the numbers in ( ) in the text.

## **WARNING**

**Improper operation and maintenance of this machine can be hazardous and could result in serious injury or death.**

- **Operators and maintenance personnel must read this manual thoroughly before operating or maintaining this machine.**
- **This manual should be kept near, or with, the machine for reference. All personnel who operate the machine should periodically review the manual.**
- **Some actions involved in operation and maintenance can cause a serious accident if they are not performed in the manner described in this manual.**
- **The procedures and precautions given in this manual apply only to the intended uses of this 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. You or others should never engage in prohibited uses or actions described in this manual.**
- **Komatsu delivers machines that comply with all applicable regulations and standards of the country to which they are shipped. If this machine has been purchased in another country, or purchased from someone in another country, it may lack certain safety features 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 your local distributor or Komatsu before operating the machine.**
- **The safety description is given in “SAFETY INFORMATION” on page 0-3 and in Section 1, “SAFETY AND WARNING DECALS” on page 1-2.**

- ★ Storage location for *Operation & Maintenance Manual* is in the pocket (1) at the rear of the operator's seat back rest.



9JA03366

## SAFETY INFORMATION

Most accidents are caused by failure to follow fundamental safety rules for the operation and maintenance of the machine. To avoid accidents, read, understand, and follow all precautions and warnings in this manual and on the machine before performing maintenance and machine operations. Failure to do so may result in serious injury or death.

The following signal words are used to inform you that there is a potentially hazardous situation that may lead to personal injury or damage. In this manual and on the machine labels, different signal words are used to express the potential level of hazard.

The Safety Alert Symbol identifies important safety messages on machines, in manuals, and elsewhere. When you see this symbol, be alert to the risk of personal injury or death. Follow the instructions in the safety message.



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to most extreme situations.



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



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

### **Remark**

*This word is used for precautions that must be taken to avoid actions which could shorten the life of the machine. It is also used to indicate information that is useful to know.*

Safety precautions are described in the **SAFETY** section (Section 1).

KOMATSU AMERICA CORP. cannot predict every circumstance that might involve a potential hazard in operation and maintenance. Therefore the safety messages 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 your local distributor or KOMATSU AMERICA CORP.

# APPROVED AND NON-APPROVED USES

The Komatsu WHEEL LOADER described in this manual has been designed and constructed to be used mainly for the following functions. Any non-approved use may void the warranty, damage the machine, or possibly injure the operator.

## Approved Functions

- Loading operations
- Excavating
- Grading
- Pushing
- Digging

Installation of optional equipment can also be used in the following applications.

- Handling of materials (bucket - pallet forks)
- Lifting of materials (extendable boom)

## Non-Approved Functions

This paragraph describes some of the improper or unauthorized uses of the machine.

It is impossible to predict all the possible improper uses. If the machine is used for any particular application other than those listed in the Approved Functions list, it is important to contact your authorized Komatsu dealer before carrying out the work operations.

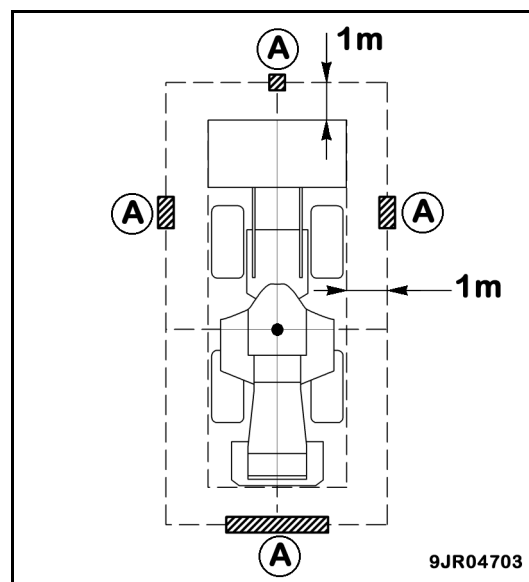
- Use of machine for lifting or transporting personnel in any manner
- Transportation of flammable liquids
- Lifting, moving, or transporting other machines with the front-end loader
- Towing other equipment with the tractor unit or work equipment
- Using the loader as a hammer or for striking or driving objects
- Towing the machine at high speeds
- Traveling at high speeds

## VISIBILITY STANDARD

The visibility standards (ISO 5006) for this machine require a view shown in this diagram.

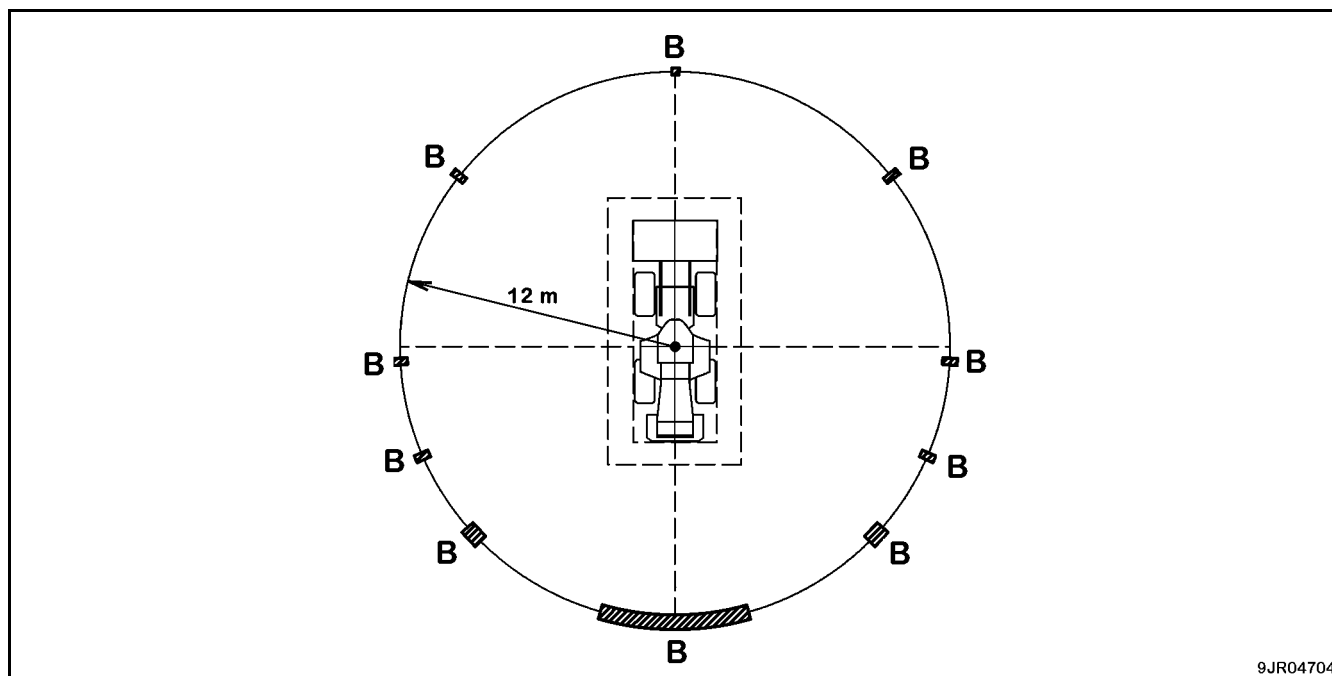
### Visibility in Immediate Area

The visibility of this machine in the area 1 meter (3.28 ft) from the outside surface of the machine at a height of 1.5 m (5 ft) is shown in the diagram. The hatched area (A) shows the area where the view is blocked by part of the machine when mirrors or other aids to visibility are installed as standard. Be careful; there are places around the machine that cannot be seen when operating the machine.



### 12-M Radius Visibility

The visibility at a radius of 12 meters (40 ft) from the machine is shown in the following diagram. The hatched areas (B) show the areas where the view is blocked when mirrors or other aids to visibility are installed as standard. Be careful; there are places around the machine that cannot be seen when operating the machine.



## INTRODUCTION

# PRODUCT IDENTIFICATION

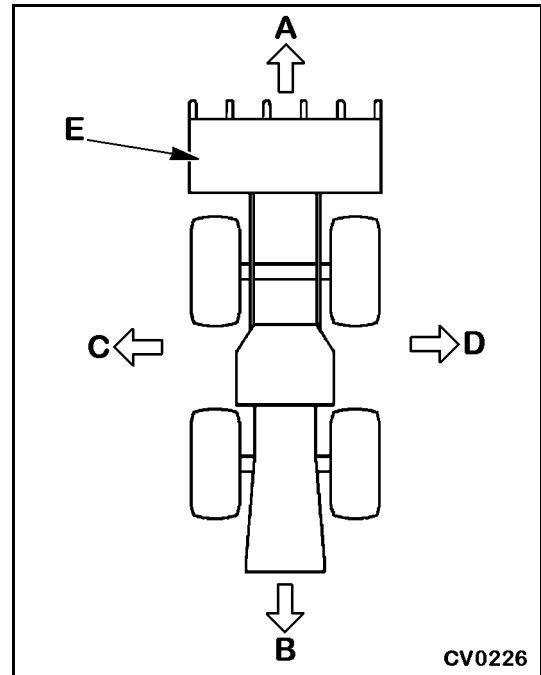
The serial numbers and model numbers on the components are the only numbers that your dealer needs when you require assistance or order replacement parts.

It is a good idea to record this information in this manual. See “SERIAL NUMBERS AND DEALER INFORMATION” on page 0-8.

## Directions Of Machine

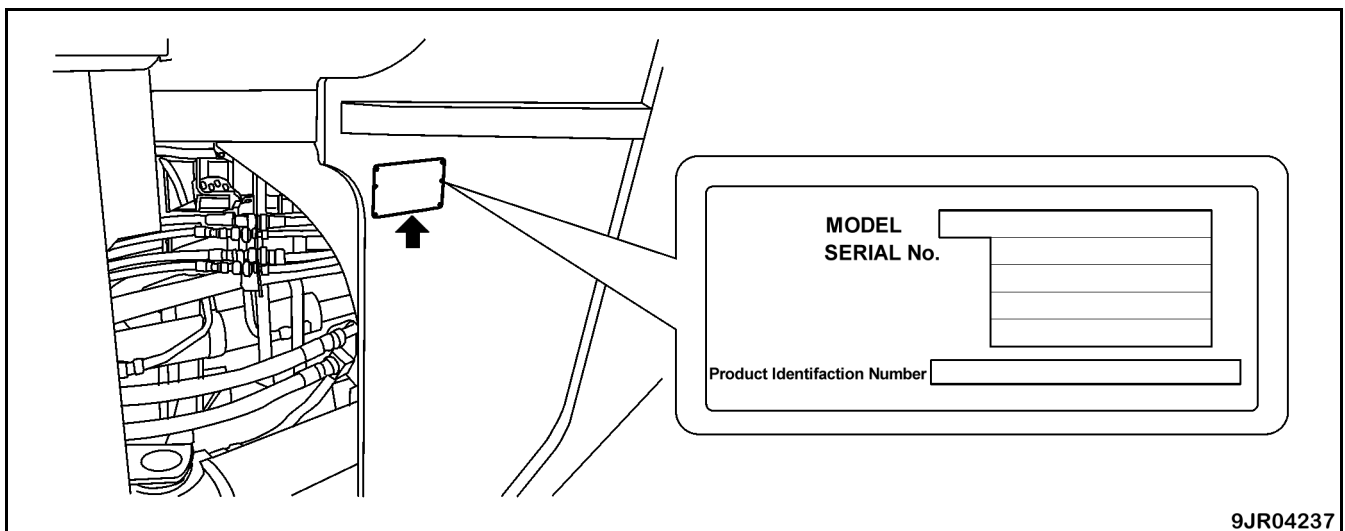
In this manual, the direction of the machine is determined according to the view from the operator’s seat, in the direction of travel (front) of the machine.

- A. Front
- B. Rear
- C. Left
- D. Right
- E. Bucket



## Machine Serial Number

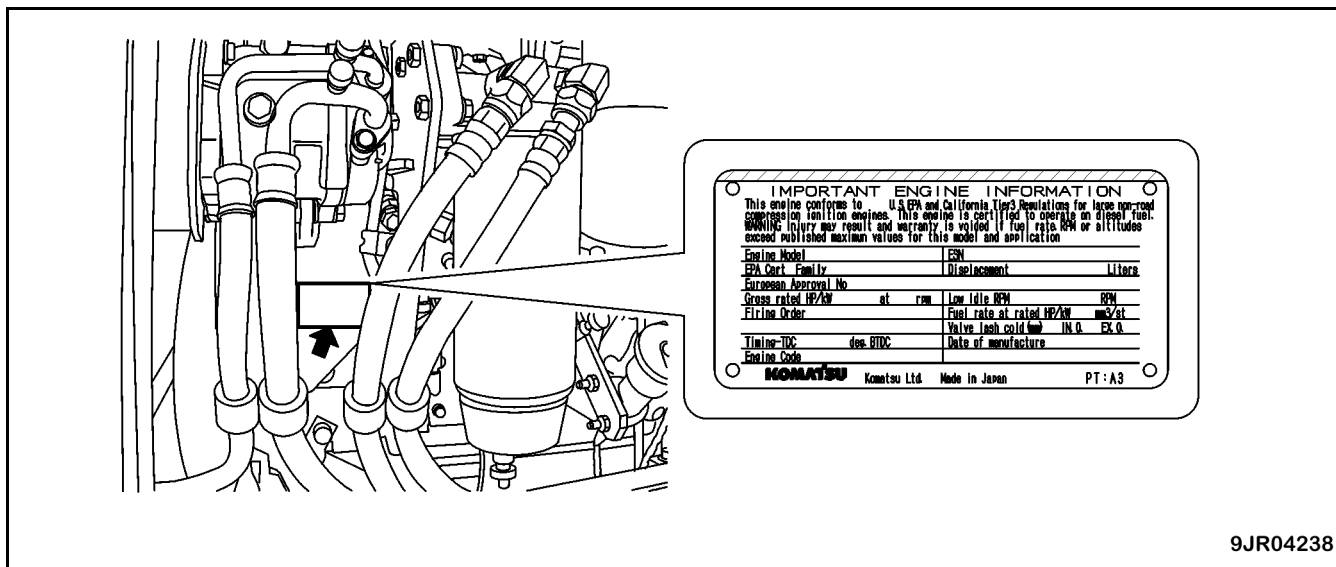
The machine serial number is stamped on the right side, center of the front frame.





## Engine Serial Number, EPA Regulations

The engine serial number is on a plate on the air conditioner compressor bracket on the right side of the machine.

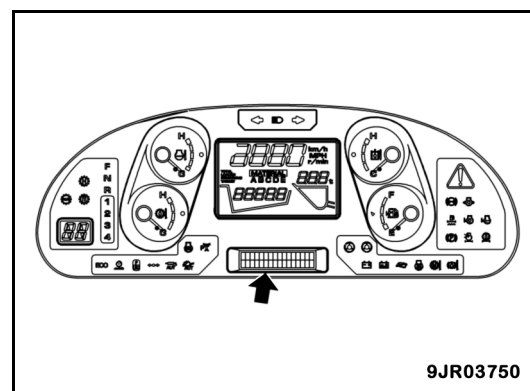


9JR04238

★ EPA: Environmental Protection Agency, USA

## Service Meter Location

The service meter is located on the character display at the bottom, center of the machine monitor.



9JR03750

# **SERIAL NUMBERS AND DEALER INFORMATION**

**Model: WA500-6**

<b>Machine #</b>	
<b>Engine #</b>	

**Dealer:**

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**Address:**

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**Phone #**

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**Contacts:**

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**NOTES:**

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**MEMORANDUM**



# SAFETY



## **WARNING**

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

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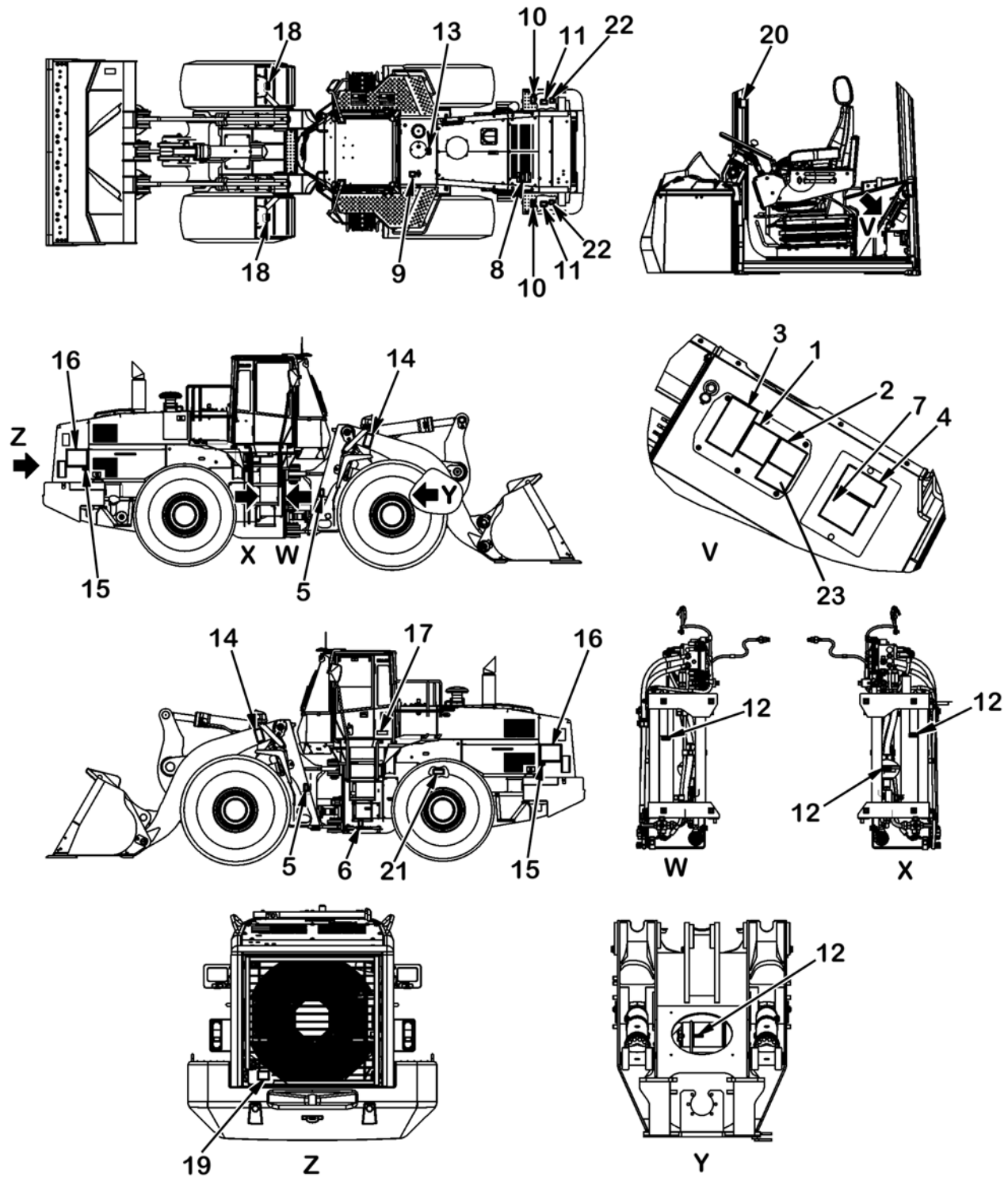
This safety section also contains precautions for optional equipment and attachments.

# **SAFETY AND WARNING DECALS**

It is important that all safety and warning decals are in place, not damaged, covered up, or removed. It is also important for the operator to be aware of the decal content and location.

## **Location of the Safety Decals**

- To ensure that the content of these safety decals can be read properly, be sure that they are placed correctly and always keep them clean.
- When cleaning any decal, use soap and water. **NEVER** use organic solvents or gasoline; these solutions may cause the decal to peel off.
- Your **Komatsu** Dealer can provide new replacement decals if the ones on the machine are damaged or missing.
- For part numbers of the safety decals, see this manual or check the actual decal then order the new decals from your Komatsu distributor.
- When replacing damaged or missing decals, be sure that they are placed in the proper location.
- Additional safety or warning decals may be added to your machine, if desired.



9JR06004A

## SAFETY

### Safety Labels

1. Cautions before starting (09651-03001).

Improper operation and maintenance can cause serious injury or death.

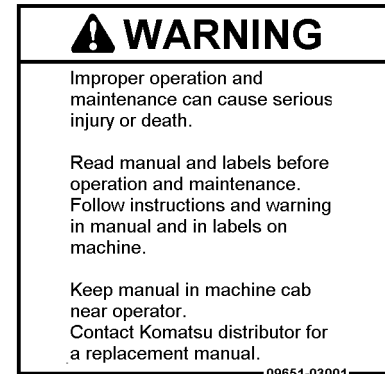
Read manual and labels before operation and maintenance.

Follow instructions and warning in manual and in labels on machine.

Keep manual in machine cab near operator.

Contact Komatsu distributor for a replacement manual.

★ Plate number for (1), (2): 425-93-41191

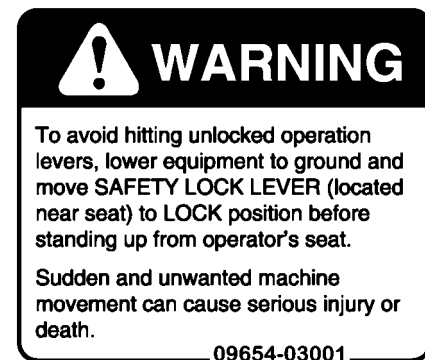


2. Cautions for lock lever (09654-03001).

To avoid hitting unlocked operation levers, lower work equipment to ground and move SAFETY LOCK LEVER (located near seat) to LOCK position before standing up from operator's seat.

Sudden and unwanted machine movement can cause serious injury or death.

★ Plate number for (1), (2): 425-93-41191



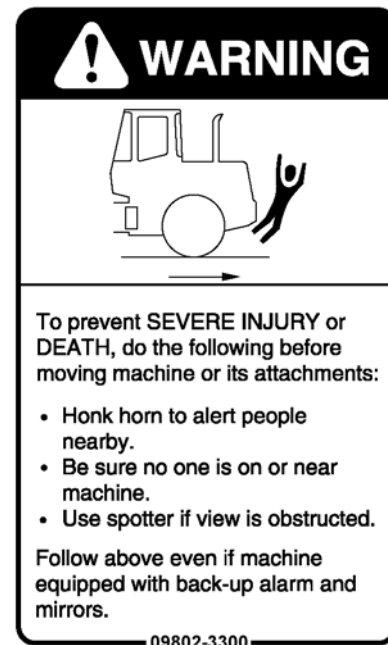
3. Cautions when travelling in reverse (09802-33000).

To prevent SEVERE INJURY or DEATH, do the following before moving machine or its attachments:

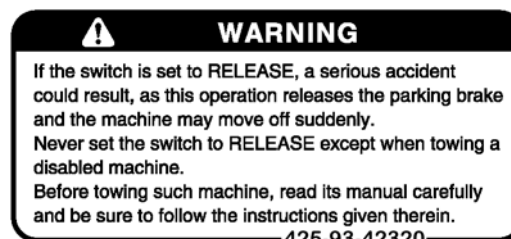
- Honk horn to alert people nearby.
- Be sure no one is on or near machine.
- Use spotter if view is obstructed.

Follow above even if machine is equipped with back-up alarm and mirrors.

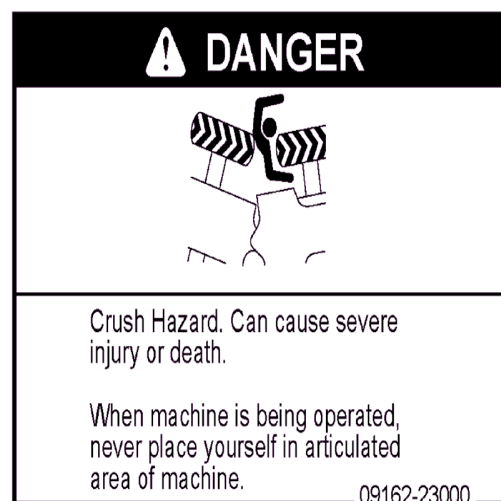
★ Plate number for (3), (4): 425-93-42320



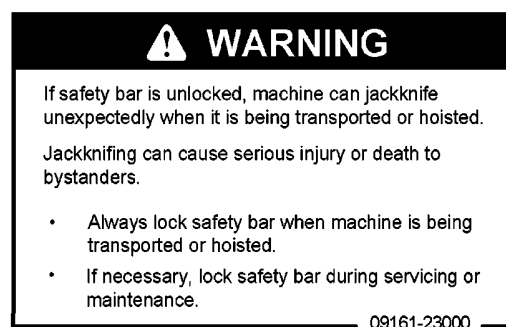
4. Cautions for parking brake.  
 If the switch is set to **RELEASE**, a serious accident could result, as this operation releases the parking brake and the machine may move off suddenly.  
 Never set the switch to **RELEASE** except when towing a disabled machine.  
 Before towing such machine, read its manual carefully and be sure to follow the instructions given therein.  
 ★ Plate number for (3), (4): 425-93-42320



5. There is a crush hazard between the articulating parts of the vehicle (09162-23000).  
 Crush Hazard. Can cause severe injury or death.  
 When machine is being operated, never place yourself in articulated area of machine.  
 ★ Plate number for (5), (6), (8) to (10): 421-93-21311




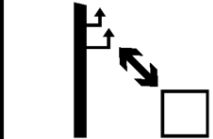
6. Cautions for frame lock bar (09161-23000).  
 If safety bar is unlocked, machine can jackknife unexpectedly when it is being transported or hoisted.  
 Jackknifing can cause serious injury or death to bystanders.
- Always lock safety bar when machine is being transported or hoisted.
  - If necessary, lock safety bar during servicing or maintenance.
- ★ Plate number for (5), (6), (8) to (10): 421-93-21311



## SAFETY

7. Cautions for going close to electric cables (09801-13002).  
 Hazardous voltage hazard  
 Serious injury or death can occur if machine or attachments are not kept safe distance away from electric lines.

**⚠ DANGER**

Electrocution Hazard

Serious injury or death will occur if machine or attachments are not kept away from electric lines. Maintain a minimum clearance in accordance with this chart.

VOLTAGE	MIN. DISTANCE
50 kV or Less	3.1 m (10 ft)
50 kV to 200 kV	4.6 m (15 ft)
200 kV to 350 kV	6.1 m (20 ft)
350 kV to 500 kV	7.7 m (25 ft)
500 kV to 750 kV	10.7 m (35 ft)
750 kV to 1,000 kV	13.8 m (45 ft)

09801-13002

8. Cautions when coolant is at high temperature (09668-03001).  
 Hot water hazard.  
 To prevent hot water from spurting out:
- Turn engine off.
  - Allow water to cool.
  - Slowly loosen cap to relieve pressure before removing.
  - ★ Plate number for (5), (6), (8) to (10): 421-93-21311

**⚠ WARNING**

Hot water hazard.

To prevent hot water from spurting out:

- Turn engine off.
- Allow water to cool.
- Slowly loosen cap to relieve pressure before removing.

09668-03001

9. Cautions when oil is at high temperature (09653-03001).  
 Hot oil hazard.  
 To prevent hot oil from spurting out:
- Turn engine off.
  - Allow oil to cool.
  - Slowly loosen cap to relieve pressure before removing.
  - ★ Plate number for (5), (6), (8) to (10): 421-93-21311

**⚠ WARNING**

Hot oil hazard.

To prevent hot oil from spurting out:

- Turn engine off.
- Allow oil to cool.
- Slowly loosen cap to relieve pressure before removing.

09653-03001

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