Operation & Maintenance Manual

VEAM420100

WA150PZ-5

WHEEL LOADER

SERIAL NUMBERS H50051 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 near the machine for reference and periodically reviewed by all personnel who will come into contact with it.

NOTICE

Komatsu has had the operating and maintenance instructions translated into all the languages of the member states in the European Union. Should you wish to have a version of the operating instructions in another language, please don't hesitate to ask at your local dealer's.

Printed in Europe 06-05

KOMATSU

1. Foreword

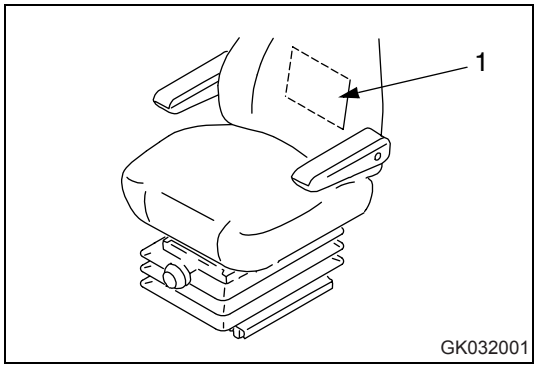
1.1 Foreword

This manual provides rules and guidelines which will help you use this machine safely and effectively. The precautions in this manual must be followed at all times when performing operation and maintenance. Most accidents are caused by the failure to follow fundamental safety rules for the operation and maintenance of machines. Accidents can be prevented by knowing beforehand conditions that may cause a hazard when performing operation and maintenance.

⚠ CAUTION

- **Operators and maintenance personnel must always do as follows before beginning operation or maintenance.**
- **Always be sure to read and understand this manual thoroughly before performing operation and maintenance.**
- **Read the safety messages given in this manual and the safety labels affixed to the machine thoroughly and be sure that you understand them fully.**
- **Keep this manual at the storage location for the Operation and Maintenance Manual given below, 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 immediately from KOMATSU or your KOMATSU distributor.**
- **If you sell the machine, be sure to give this manual to the new owners together with the machine.**
- **KOMATSU delivers machines that comply with all 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.**

Storage location for the Operation and Maintenance Manual:
Pocket (1) at rear of operator's seat



1.1.1 EU Directives

Machines supplied by us fulfil the Directive for Machinery 89/392/EEC and all supplements. If the machine is being used in another country, it is possible that certain safety regulations and specifications may not be fulfilled for use in that country. For example, priority vehicle warning lamps may be used in some countries, but are forbidden in others.

Please contact our dealer before using the machine if you have any questions regarding the fulfilment of standards and regulations in a specific country.

Notes on subsequent installation of electrical and electronic equipment and components

Electrical and electronic equipment and/or components which have been installed subsequently, emit electromagnetic radiation which can influence the function of the electronic components and sections of the machine. This can have an influence on the safety of the machine and endanger persons. For this reason, please ensure that the following safety instructions are observed.

If you are installing electrical or electronic equipment and/or components in the machine and connect them to the vehicle electrical system, you must check at own responsibility that the installations do not cause any disturbance to the vehicle's electronic system or other components. Above all, you must ensure that any subsequently installed electrical and electronic components comply with the EMV Directive 89/336/EEC in its current edition and bear the CE mark.

The following requirements also have to be met for subsequent installation of mobile communication systems (e.g. radio, telephone):

- Only equipment approved by national legislation may be used
- The unit must be fixed in position
- Portable or mobile units may only be used inside the vehicles if they are connected to a fixed outside antenna
- The transmitter unit must be spatially separated from the vehicle's electronic system
- Make sure when installing the antenna that this is installed correctly with good earth connection between antenna and vehicle mass

Also observe KOMATSU and manufacturer's installation instructions for wiring, installation and maximum permitted power consumption.

1.2 Safety information

To enable you to use this machine safely, safety precautions and labels are given in this manual and affixed to the machine to give explanations of situations involving potential hazards and of the methods of avoiding such situations.

1.2.1 Signal words

The following signal words are used to inform you that there is a potential hazardous situation that may lead to personal injury or damage.

In this manual and on machine labels, the following signal words are used to express the potential level of hazard.

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. This word is used also to alert against unsafe practices that may cause property damage.

Example of safety message using signal word

WARNING

When standing up from the operator's seat, always place the safety lock lever in the LOCK position.
If you accidentally touch the control levers when they are not locked, this may cause a serious injury or death.

Other signal words

In addition to the above, the following signal words are used to indicate precautions that should be followed to protect the machine or to give information that is useful to know.

NOTE
This word is used for precautions that must be taken to avoid actions which could shorten the life of the machine.

REMARK
This word is used for information that is useful to know.

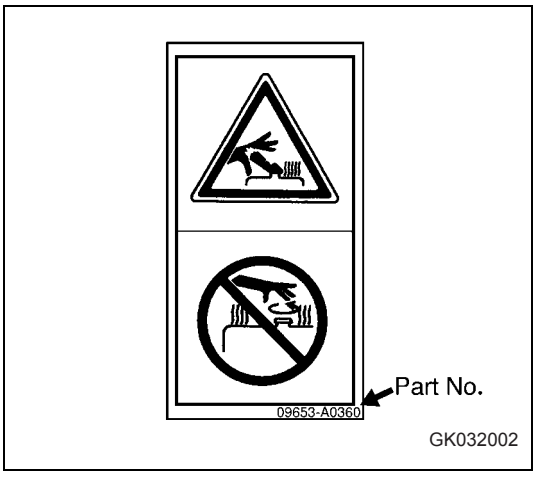
1.2.2 Safety labels

Safety labels are affixed to the machine to inform the operator or maintenance worker on the spot when carrying out operation or maintenance of the machine that may involve hazard.

For details of safety labels, see "Safety labels (2-2)".

Safety labels using pictogram

Safety pictograms use a picture to express a level of hazardous condition equivalent to the signal word. These safety pictograms use pictures in order to let the operator or maintenance worker understand the level and type of hazardous condition at all times. Safety pictograms show the type of hazardous condition at the top or left side, and the method of avoiding the hazardous condition at the bottom or right side. In addition, the type of hazardous condition is displayed inside a triangle and the method of avoiding the hazardous condition is shown inside a circle.



KOMATSU 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, it is your responsibility to take the necessary steps to ensure safety.
In no event should you engage in prohibited uses or actions described in this manual.

The explanations, values, and illustrations in this manual were prepared based on the latest information available at that time. 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 of your machine or for questions regarding information in this manual.

1.3 Introduction

This loader is a machine with independent transmission, moving on chains or wheels. Driving in forward direction, the loader can load or dig material using its attachments intended for loading operations (i.e. bucket).

The standard operation cycle of a loader includes filling up and loading of the bucket, transporting the material and emptying the bucket.

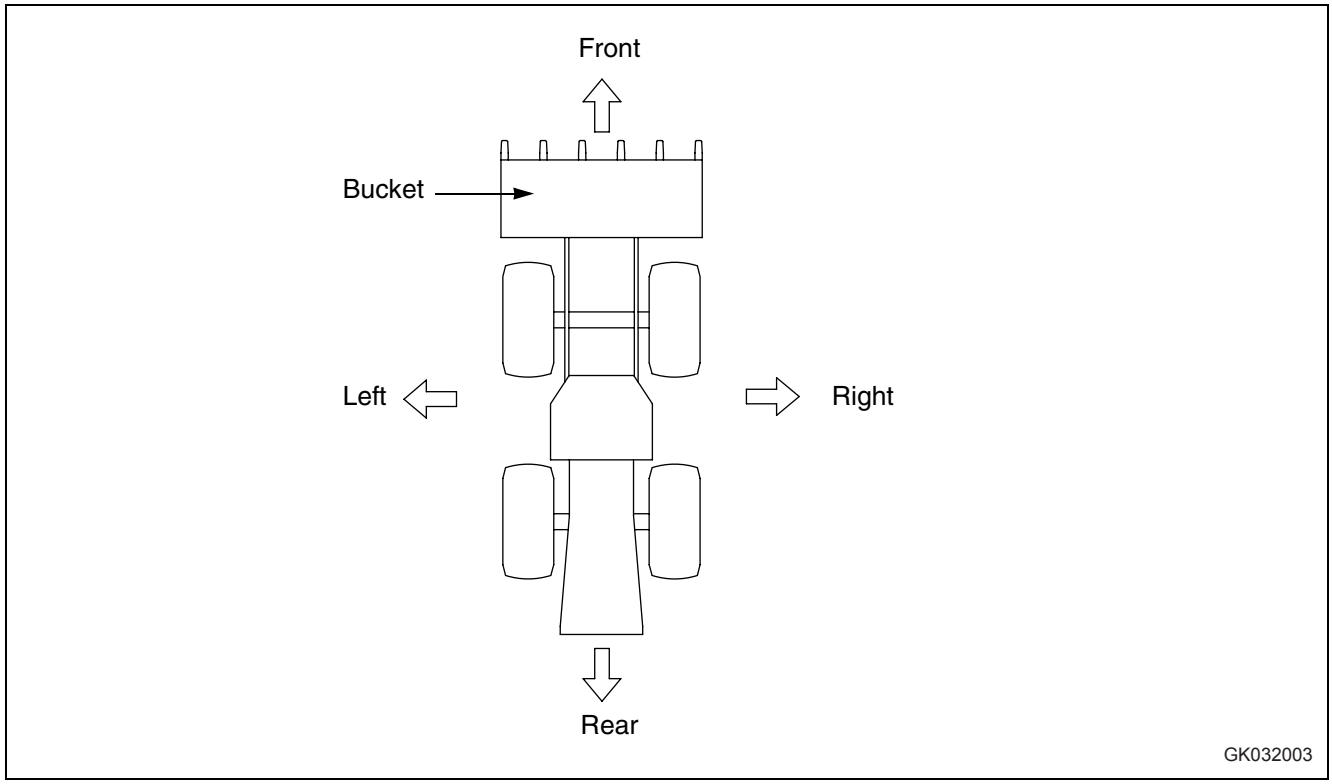
1.3.1 Intended use

If you use the machine for any other purpose than specified above, we will not accept any responsibility for safety. All considerations concerning safety will then be up to the owner or the operating and maintenance personnel. In any case, neither you nor any other person are/is authorised to perform work and functions explicitly prohibited in these operating instructions.

The transport of persons in the work equipment is strictly forbidden!

For details of the operating procedure, see "Work possible using wheel loader (3-88)"

1.3.2 Directions of machine



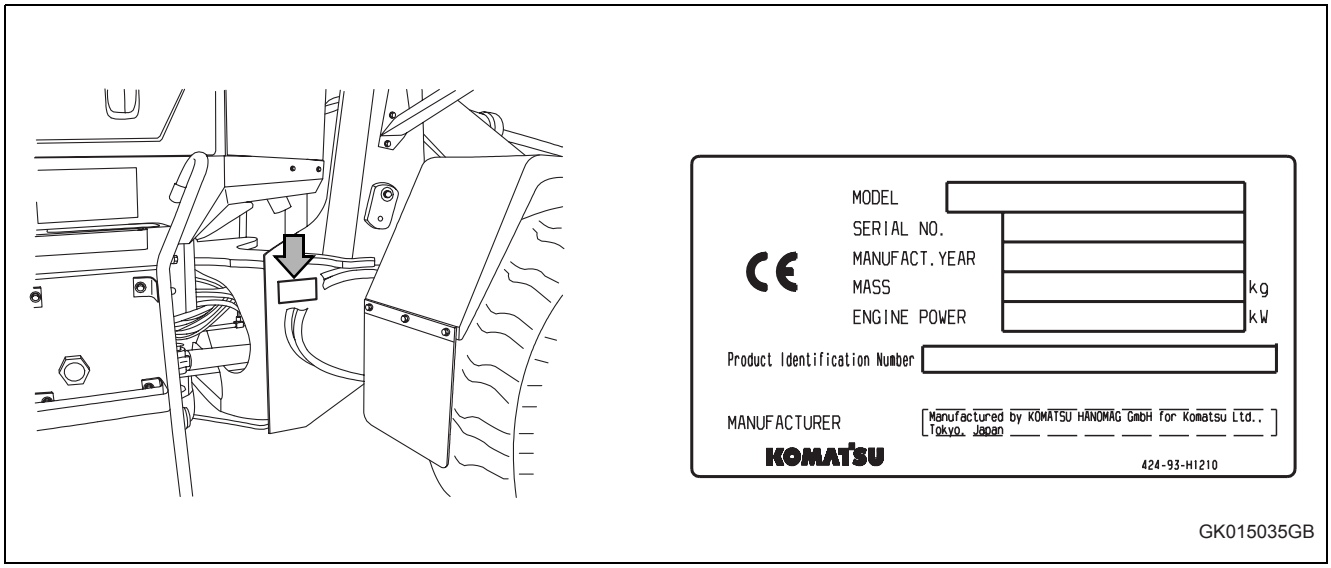
In this manual, the directions of the machine (front, rear, left, right) are determined according to the view from the operator's seat in the direction of travel (front) of the machine.

1.4 Necessary information

When requesting service or ordering replacement parts, please inform your KOMATSU distributor of the following items.

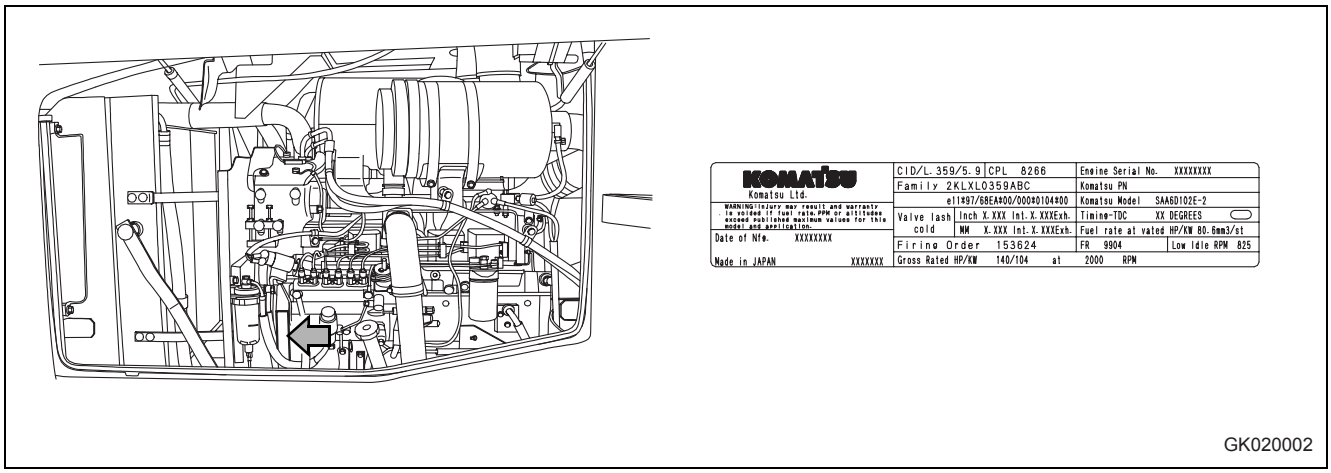
1.4.1 PIN/Machine serial no. plate and position

On the center right of the front frame.



1.4.2 Engine serial no. plate and position

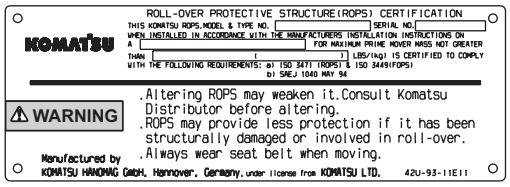
This is on the side face of the engine cover on the right side of the machine.



EPA: Environmental Protection Agency, U.S.A.

1.4.3 ROPS/FOPS-Cab serial no. plate

This plate is located on the right inside cab on the rear beam.



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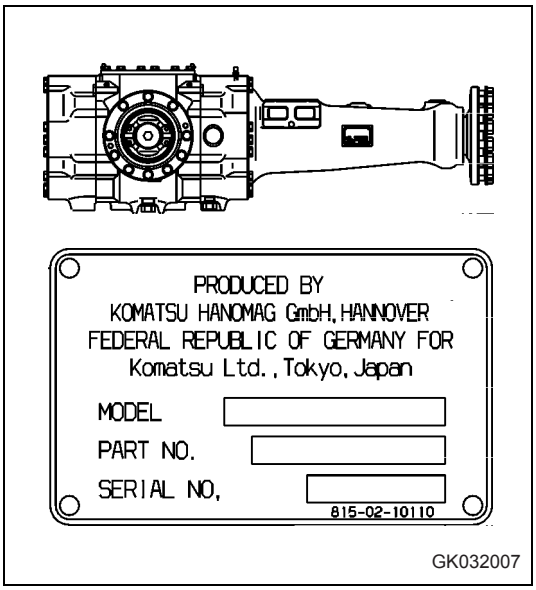
1.4.4 Axle serial no. plate

This plate is located on the right of front axle and on the left of rear axle.



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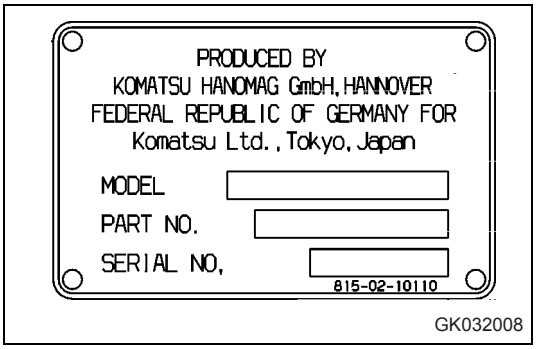
1.4.5 Transmission serial no. plate

This plate is located in travel direction front, above the transmission output.



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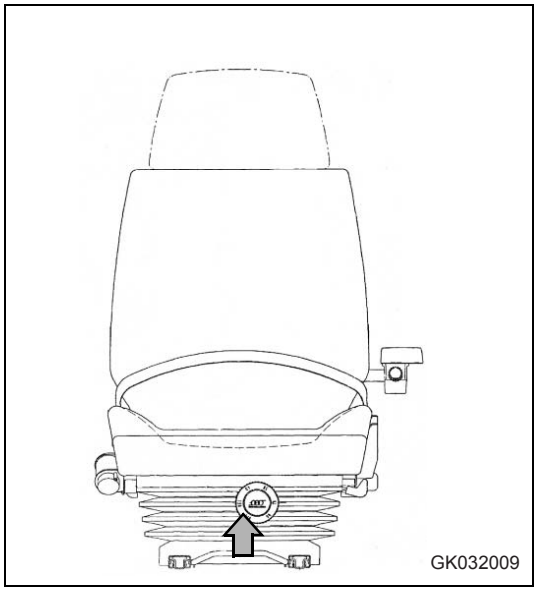
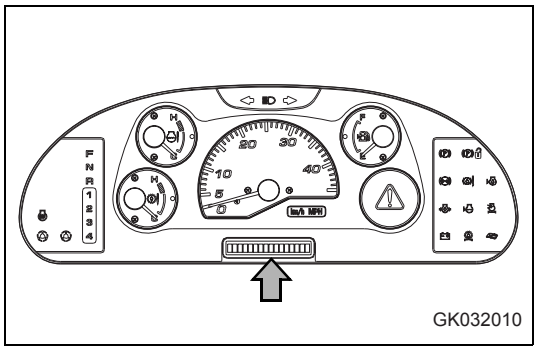
1.4.6 Seat operator serial no. plate

This plate is located in front of seat, covered by the bellows.



1.4.7 Position of service meter

It is at the center bottom of the machine monitor.



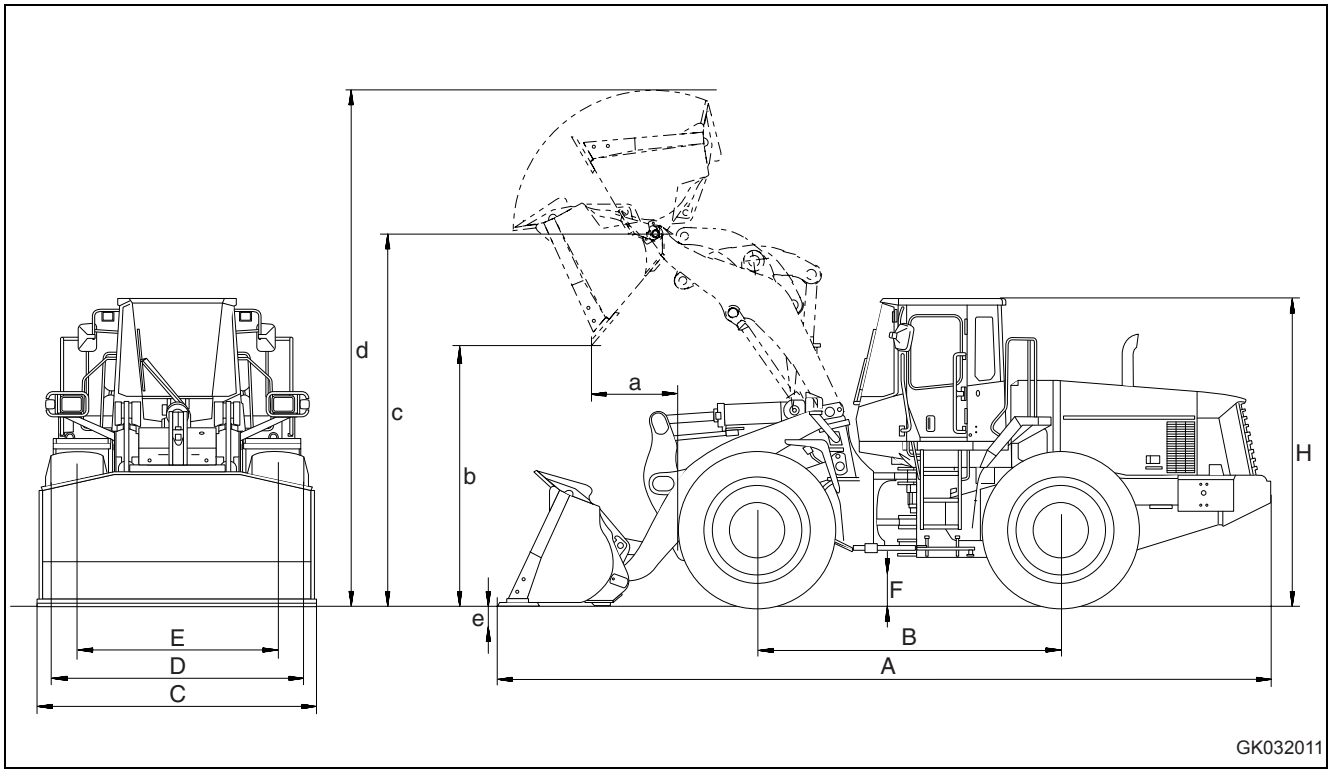
1.4.8 Table to enter serial no. and distributor

Machine serial No.	
Engine serial No.	
Distributor name Address	
Service Personnel Phone/Fax	

1.5 Contents

1.6 Dimensions, weights and operating data

1.6.1 WA150PZ-5: Dimensions, weights and operating data



Measurements, operating data

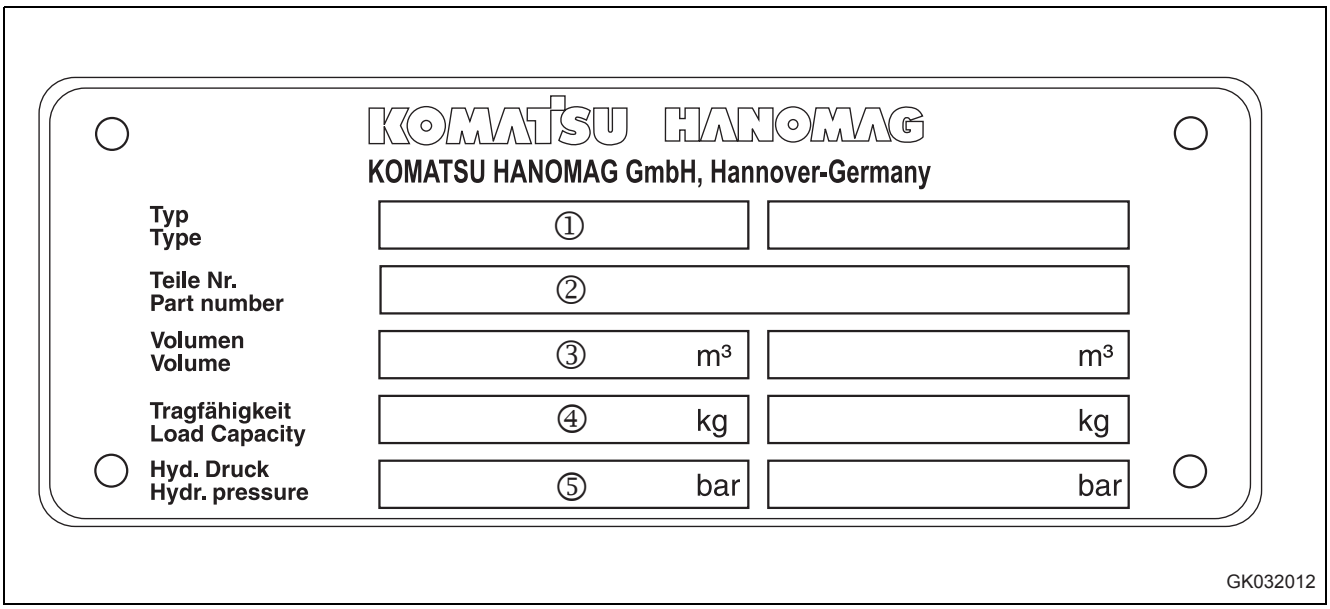
	Bucket capacity to ISO 7546	**m³**	1.5	without teeth and without BOC, without Quick coupler)
	Material density	t/m³	1.8	
	Bucket weight without teeth	kg	645	
	Static tipping load, straight	kg	6,740	
	Static tipping load, 40° angle	kg	5,960	
	Breakout force, hydraulic	kN	80,9	with QC (Quick coupler)
	Lifting capacity, hydraulic, on ground	kN	98,4	with QC (Quick coupler)
	Operating weight	kg	8,590	
a	Reach at 45° discharge	mm	824	
b	Dumping height at 45° discharge	mm	2,891	
c	Lift height, hinge pin	mm	3,697	
d	Height to upper edge of bucket	mm	4,979	
e	Digging depth	mm	60	
A	Overall length, bucket on ground	mm	6,400	
B	Wheel base	mm	2,600	
C	Bucket width	mm	2,400	
D	Width over tyres	mm	2,228	These values refer to machines with 17,5R25
E	Gauge	mm	1,872	
F	Ground clearance	mm	420	
H	Overall height	mm	3,063	

1.7 CE-Conforming equipment

1.7.1 CE-Conforming equipment

CE-Conforming equipment

	1	2	3	4	5	–
	Type	Part No.	Volume m^3	Load Capacity kg	Hydraulic pressure bar	Weight kg
Bucket	WA150PZ-5	416-71-H2C00	1.5	2,700	---	700
		416-71-H2C10	1.5	2,700	---	650
		416-71-H2C20	1.6	2,880	---	740
		416-71-H2C30	1.5	2,700	---	750
		416-71-H2C40	1.5	2,700	---	700
		416-71-H2C50	1.6	2,880	---	750
		416-71-H2C60	1.6	2,880	---	790
		416-71-H2C70	1.6	2,880	---	740
		416-71-H2C80	1.7	3,060	---	830
		416-71-H2D30	1.6	2,880	---	770
		416-71-H2D20	1.6	2,880	---	728
		416-71-H2D40	1.7	3,060	---	821
Fork		416-71-H2B00	---	3,400	---	422
Quick coupler		416-71-H2A90	---	4,000	---	270



1.7.2 Manufacturer-supplied CE-Conforming equipment, according to document 419-93-H1250

The responsibility for observing valid regulations in the case of wheel loaders with "interchangeable equipment" (e.g. bucket or fork-lift) which was not supplied from works lies with the customer which was subsequently fitted to the machine.

The directives for CE conformity and road-traffic registration are deemed to have been fulfilled when the manufacturer of the equipment confirms fulfilment of the form 419-93-H1250 alongside.

The certification must be sent to the customer and the wheel loader manufacturer. The CE conformity declaration for a specific wheel loader is only legally valid once this has taken place.

The dimensions X1, X2, Y1 and Y2 must be provided by the customer for approval for use on public roads.

The dimension Sh (smallest tyre radius) must be added to the dimension D2.

The figure G (in kg) represents the maximum load (equipment and operating load) which may act upon this point.