Operation & Maintenance Manual

VEAM948102

WA430-6E0

WHEEL LOADER

SERIAL NUMBERS H60266 AND UP

⚠ DANGER

Incorrect operation and maintenance of this machine may be hazardous and cause injuries. The operator and maintenance personnel must read this manual before commencing operation or maintenance. Keep this manual within reach at all times and ensure that operating personnel read it at regular intervals.

NOTE

Komatsu has had the operating and maintenance instructions translated into all the languages of the European Union. Should you require a copy in another language please inquire at your local dealer's.

ORIGINAL INSTRUCTIONS

Printed in Europe 10-2009

KOMATSU

1. Foreword

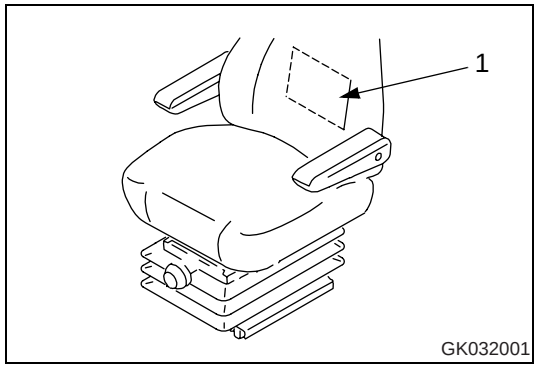
1.1 Foreword

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.

WARNING

- 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



EU Directives

Machines supplied by us fulfil the Directive for Machinery 89/392/EEC or 2006/42/EEC (for machines placed on the market as from 29th December 2009) 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 or 2004/108/EC (for machines placed on the market as from 29th December 2009) 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 (e.g. BZT approval for Germany) 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 work equipment 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.

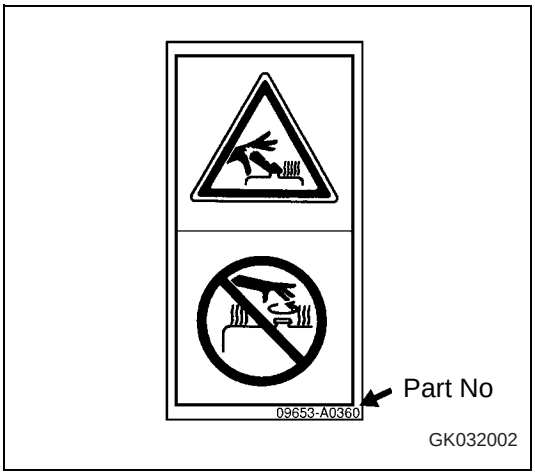
1.2.2 Safety labels

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).

This KOMATSU machine is designed to be used mainly for the following work:

- Digging work
- Smoothing
- Pushing work
- Loading work

For details of the operating procedure, see "Work possible using wheel loader (3-148)".

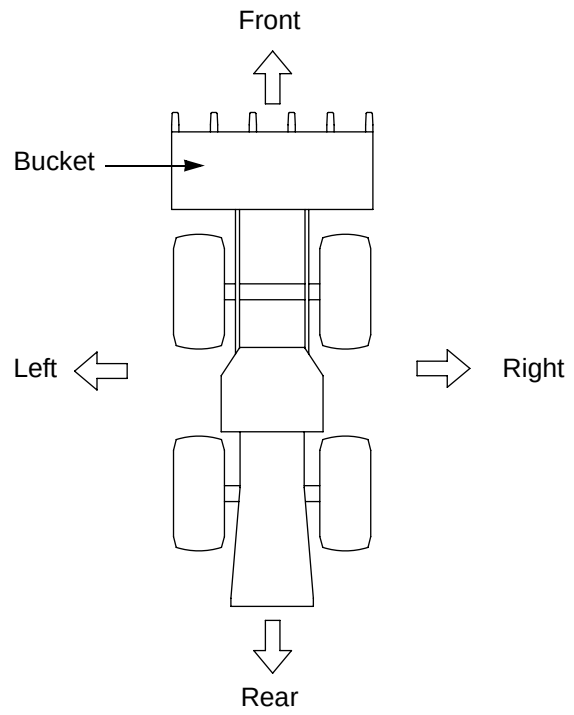
1.3.1 Intended use

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 (3-148)".

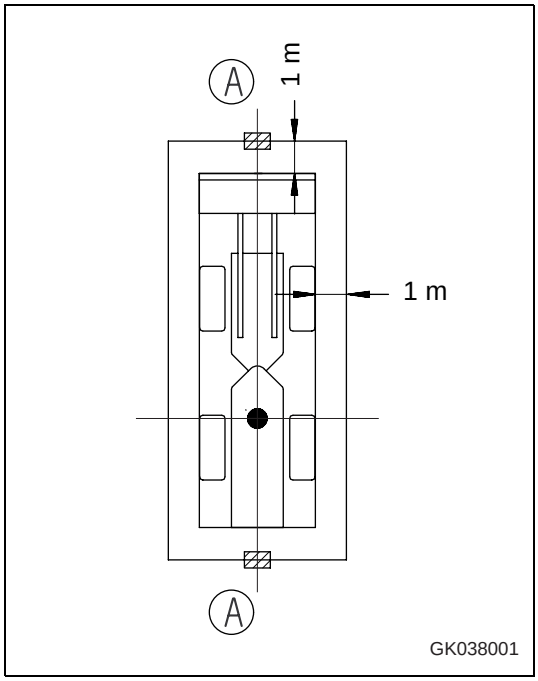
1.3.2 Directions of machine



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.

1.3.3 Visibility from operator's seat

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

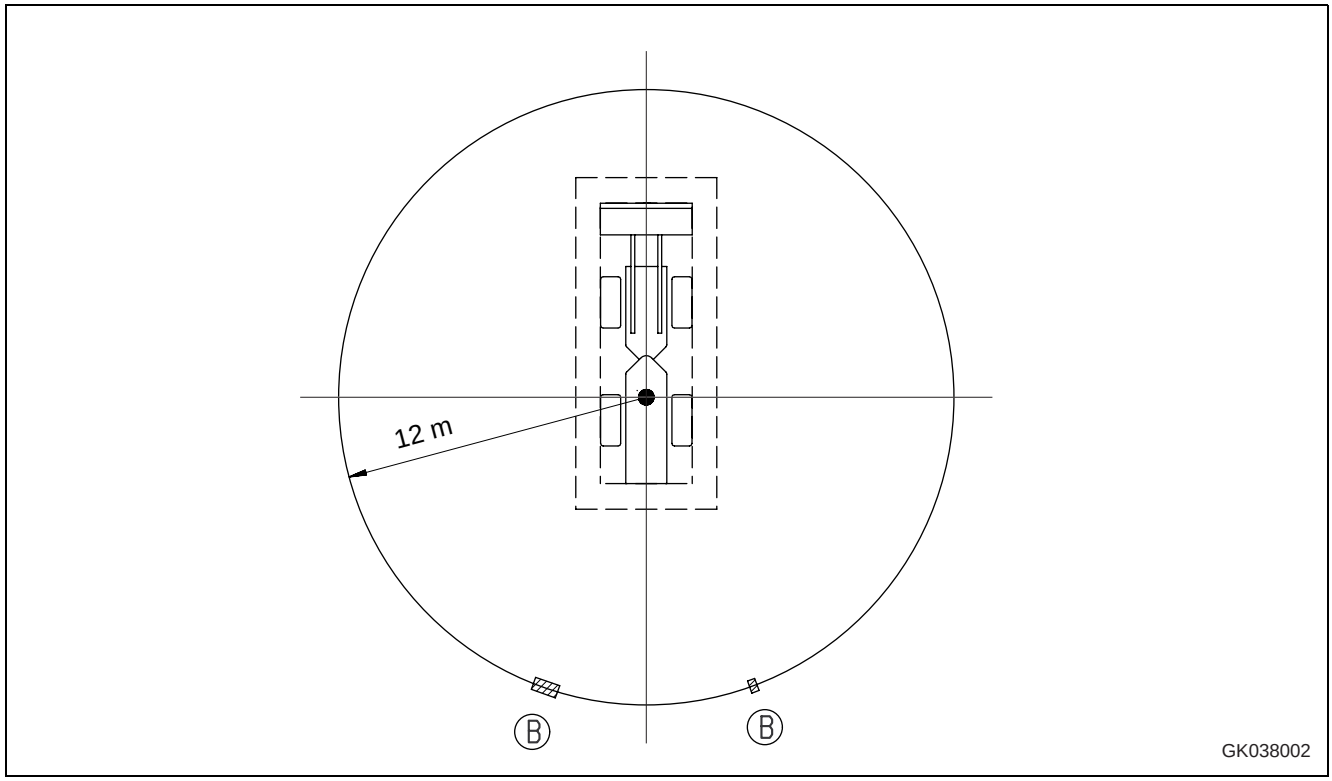


Visibility in immediate area

The visibility of this machine in the area 1 m from the outside surface of the machine at a height of 1.5 m is shown in the diagram on the right side. 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. Please be fully aware that there are places that cannot be seen when operating the machine.

12-M Radius visibility

The visibility at a radius of 12 m from the machine is as shown in the diagram below. The hatched areas (B) show the areas where the view is blocked when mirrors or other aids to visibility are installed as standard. Please be fully aware that there are places that cannot be seen when operating the machine.



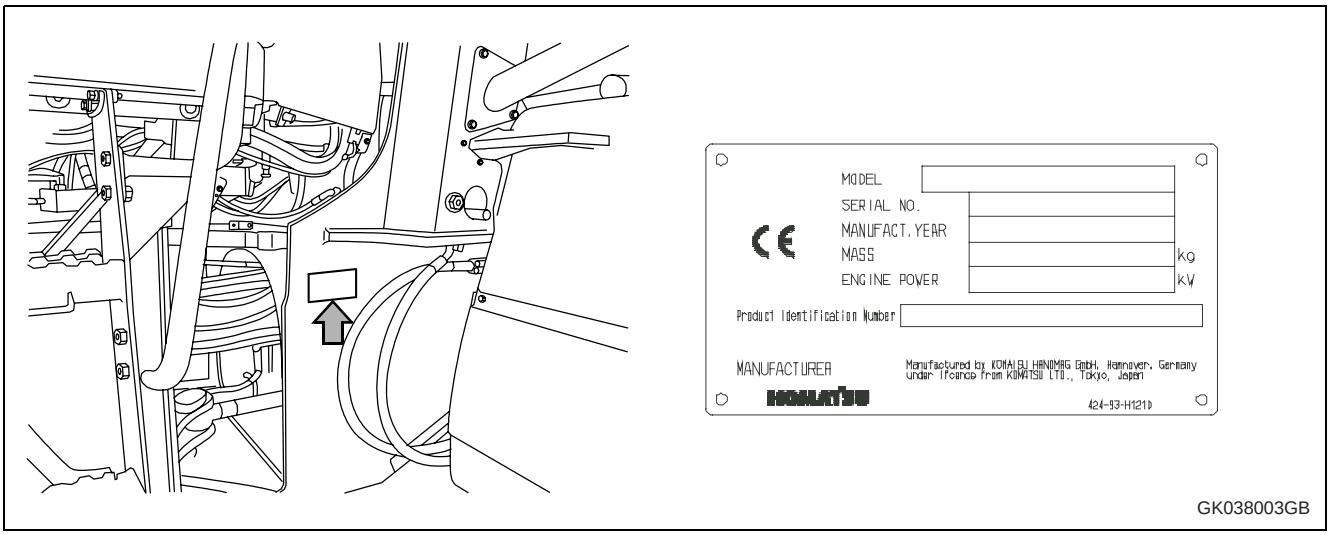
1.4 Necessary information

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

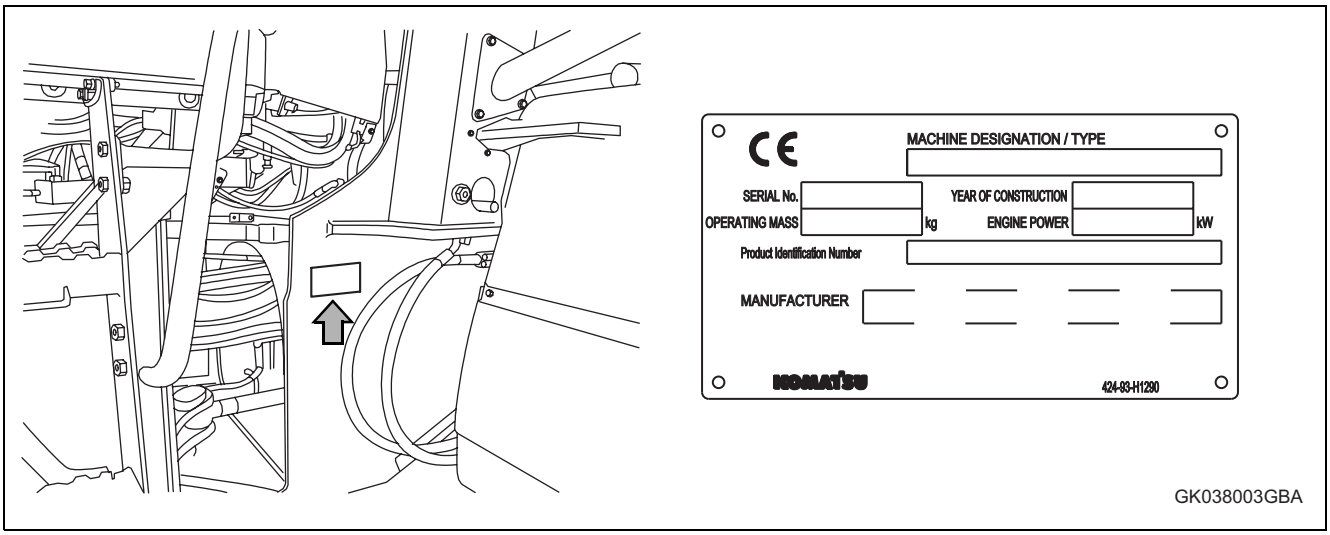
1.4.1 Product Identification Number (PIN)/Machine serial no. plate and position

On the center right of the front frame.

Version 1

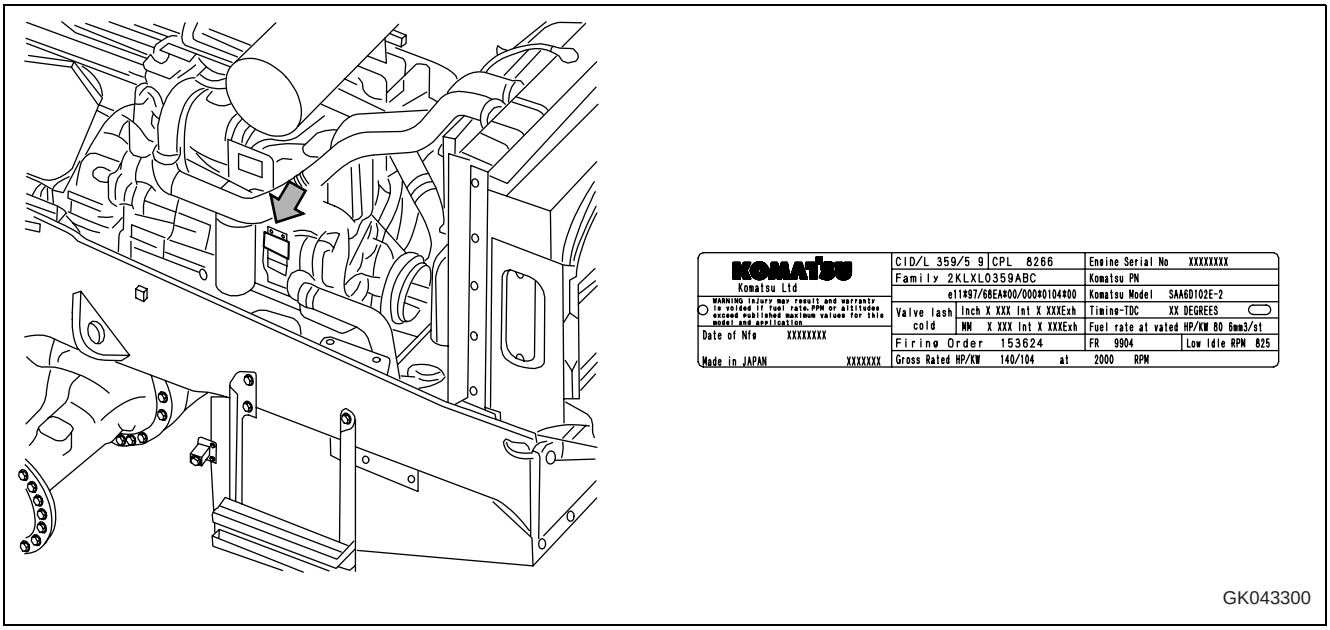


Version 2



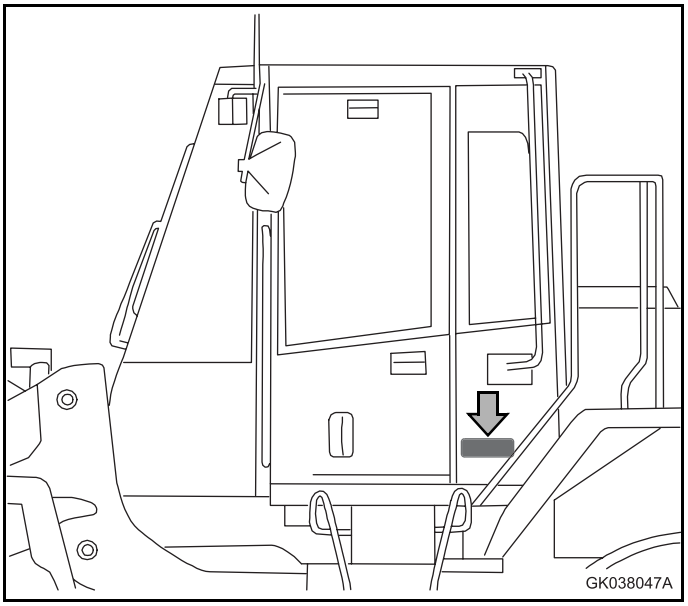
1.4.2 Engine serial no. plate and position

It is at the top at the rear of the engine on the right side of the machine.



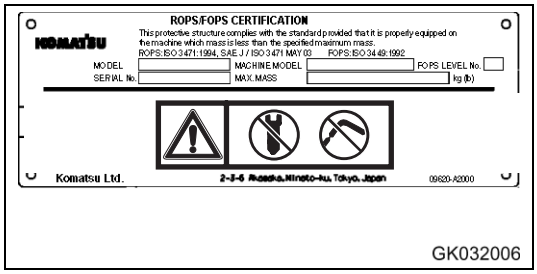
EPA: Environmental Protection Agency, U.S.A.

1.4.3 ROPS/FOPS-Cab serial no. plate



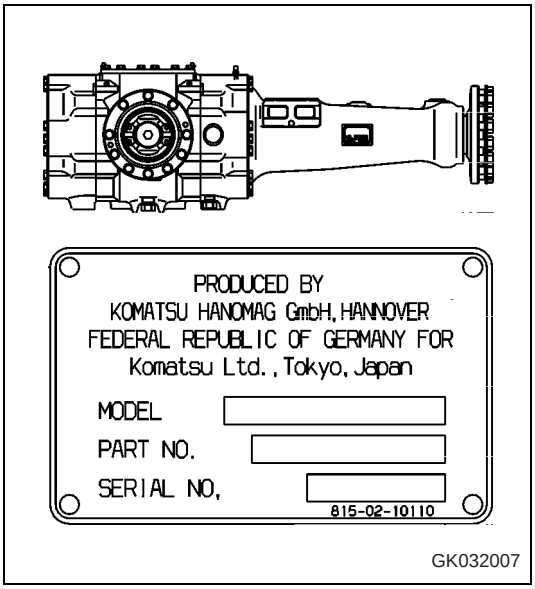
Version 1

Version 2



1.4.4 Axle serial no. plate

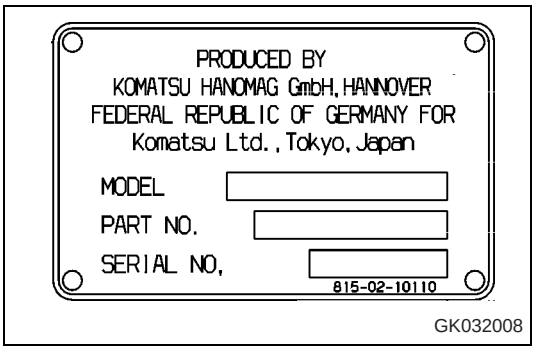
This plate is located on the right of front axle and on the left of rear axle.



GK032007

1.4.5 Transmission serial no. plate

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



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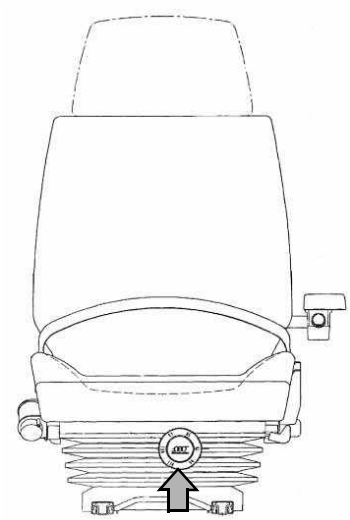
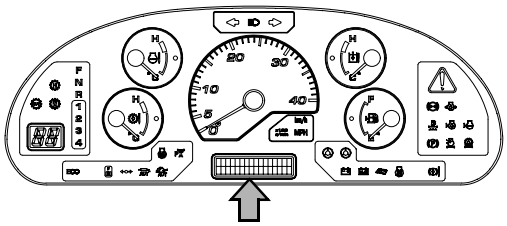
1.4.6 Seat operator serial no. plate

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



1.4.7 Position of service meter

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



1.4.8 Table to enter serial no. and distributor

Machine serial No.	
Engine serial No.	
Product identification number (PIN)	
Manufacturer name Address	KOMATSU Hanomag GmbH
	Hanomag Straße 9
	30449 Hannover
	Germany
Distributor name Address	
Service Personnel Phone/Fax	

1.4.9 Declaration of conformity (for machines placed on the market as from 29th December 2009)

The manufacturer:

KOMATSU Hanomag GmbH

Hanomag Straße 9

30449 Hannover

Germany

Declares that this machine:

WA430-6E0

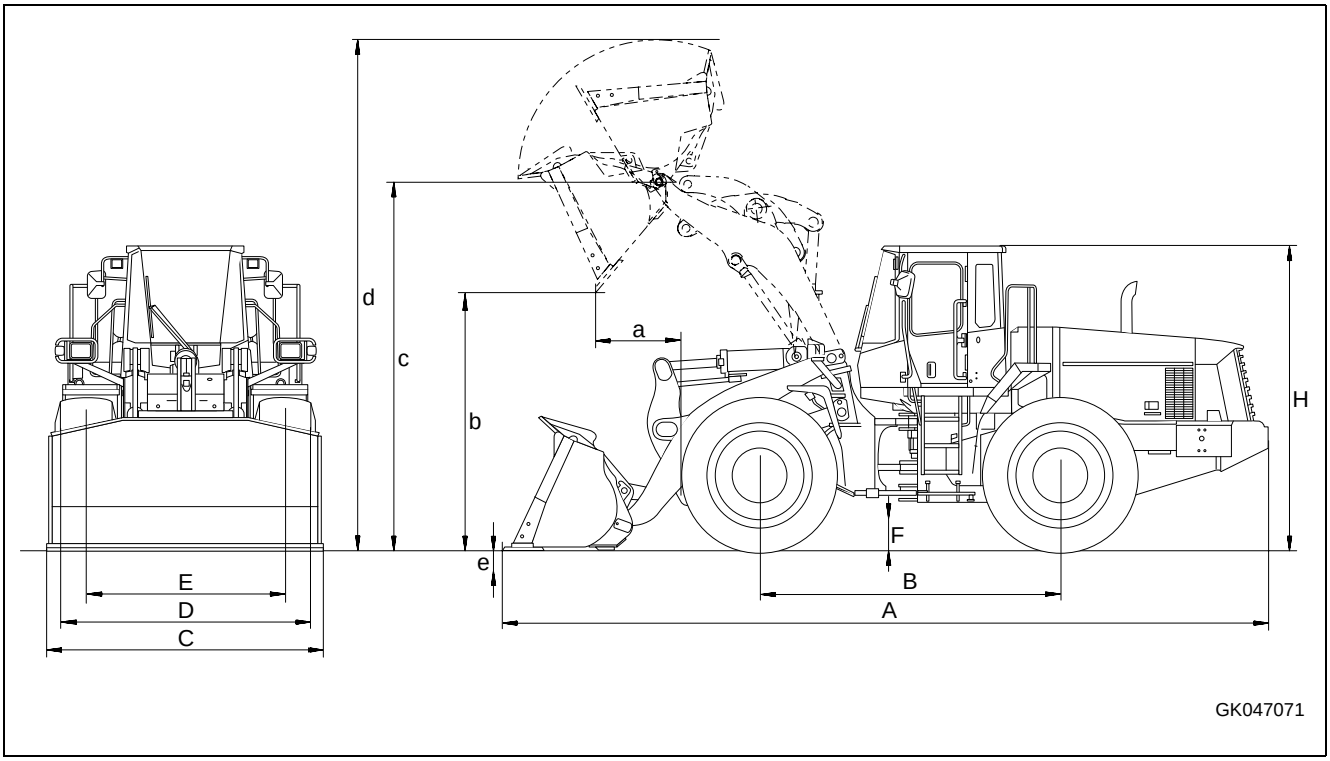
Fulfils all the relevant provisions of following EC Directives:

Machinery directive	2006/42/EC
Electro Magnetic Compatibility Directive	2004/108/EC
Outdoor Noise Directive	2000/14/EC amended by 2005/88/EC

1.5 Contents

1.6 Dimensions, weights and operating data

1.6.1 WA430-6E0: Dimensions, weights and operating data

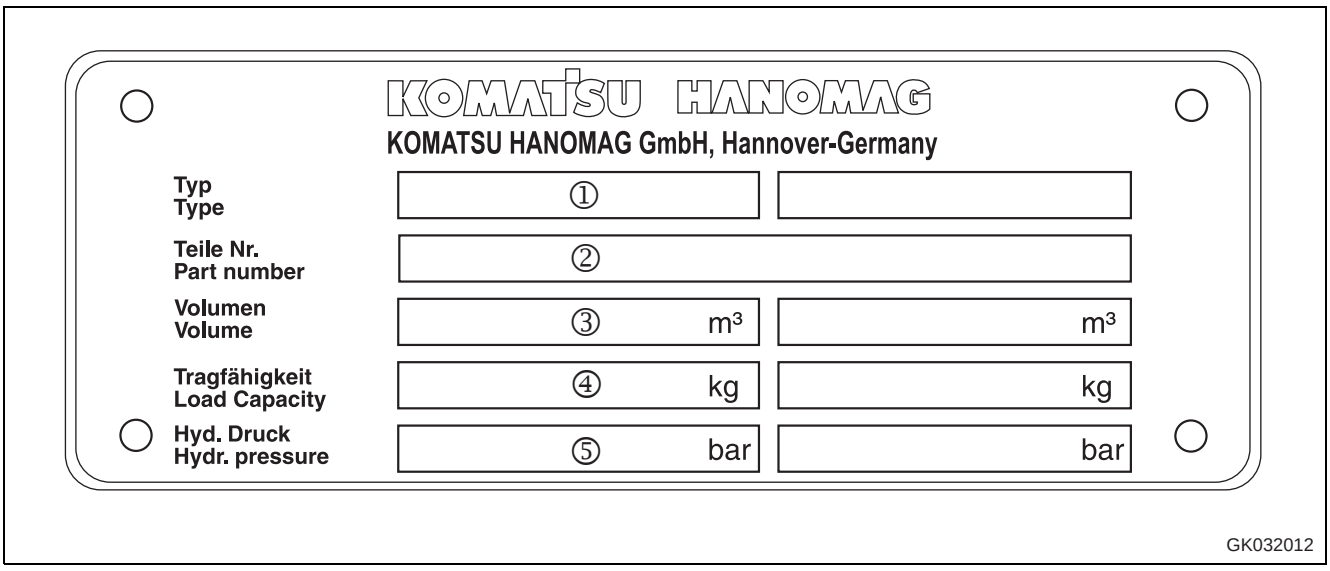


	Measurements, operating data			
	Bucket capacity to ISO 7546	m³	3.3	without teeth and without BOC
	Material density	t/m³	1.8	
	Bucket weight without teeth	kg	1,548	
	Static tipping load, straight	kg	13,985	
	Static tipping load, 35° angle	kg	12,655	
	Breakout force, effective	kN	150.3	
	Lifting capacity, effective, on ground	kN	159.7	
	Operating weight *)	kg	18,080	
a	Reach at 45° discharge	mm	1,190	
b	Dumping height at 45° discharge	mm	2,970	
c	Lift height, hinge pin	mm	4,155	
d	Height to upper edge of bucket	mm	5,545	
e	Digging depth	mm	160	
A	Overall length, bucket on ground	mm	8,390	
B	Wheel base	mm	3,300	
C	Bucket width	mm	2,990	These values refer to machines with 23,5-25XHA
D	Width over tyres	mm	2,885	
E	Gauge	mm	2,280	
F	Ground clearance	mm	450	*) Machine without additional counterweight
H	Overall height	mm	3,380	

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	WA430-6E0	423-72-H2100	3.0	5,400	-	1,516
		423-72-H2110	3.0	5,400	-	1,710
		423-72-H2120	3.45	6,210	-	1,790
		423-72-H2130	3.4	6,120	-	1,580
		423-72-H2140	3.4	6,120	-	1,730
		423-72-H2150	3.55	6,390	-	1,810
		423-72-H2160	3.6	6,480	-	1,735
		423-72-H2170	3.6	6,480	-	1,885
		423-72-H2180	3.7	6,660	-	1,965
		423-72-H2190	3.4	6,120	-	1,815
		423-72-H2200	3.4	6,120	-	1,965
		423-72-H2210	3.5	6,300	-	2,045
		423-72-H2680	3.4	6,120	-	1,813
		423-72-H2690	3.4	6,120	-	1,813
		423-72-H2B00	4.0	7,200	-	1,898
		423-72-H2B10	4.0	7,200	-	2,055
		423-72-H2B20	4.2	7,560	-	2,130
Fork Carrier	WA430-6E0	423-71-H2680				



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.

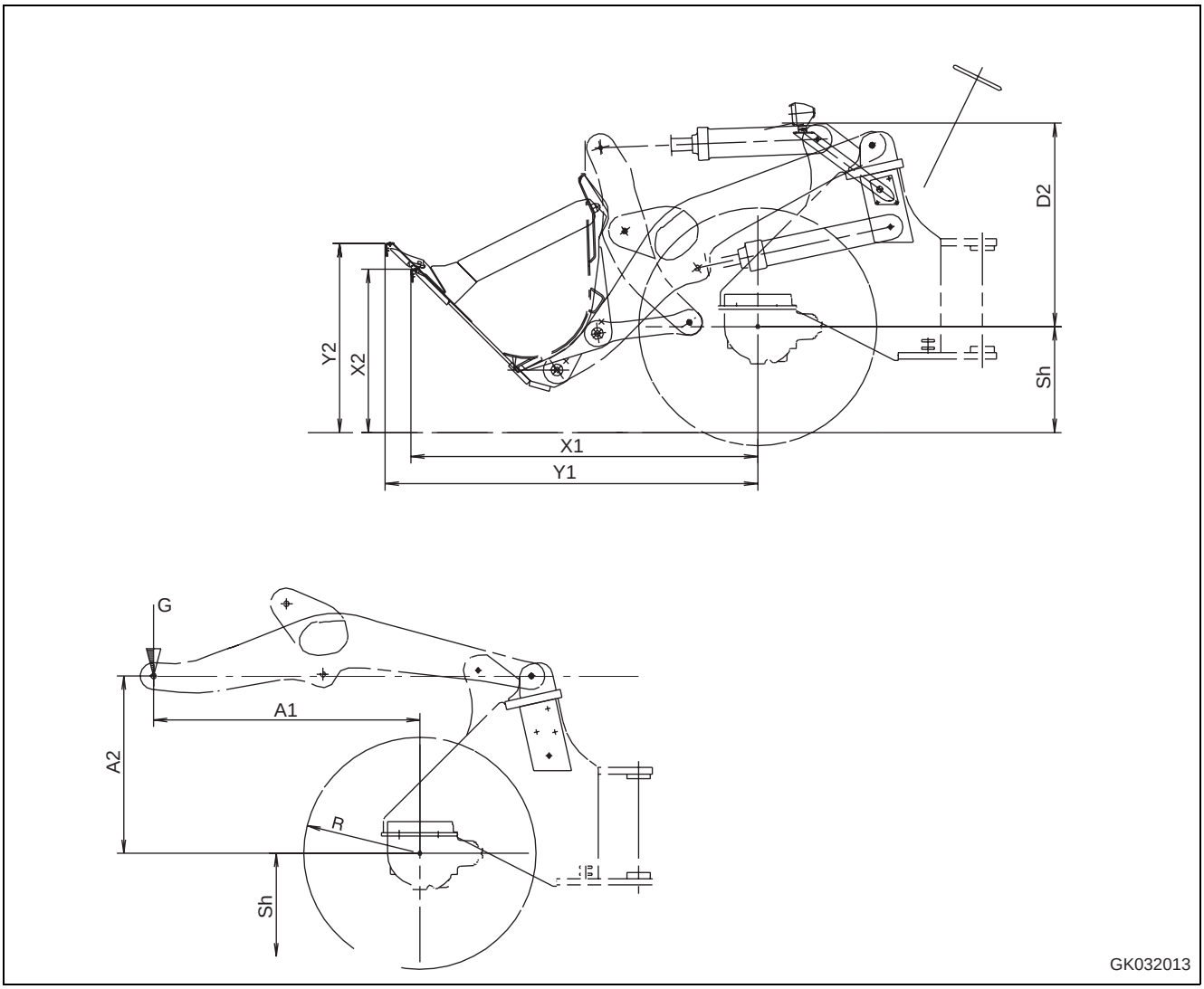
The directives for CE conformity and road-traffic registration are deemed to have been fulfilled when the manufacturer of the equipment confirms fulfilment of the form 419-93-H1250 alongside.

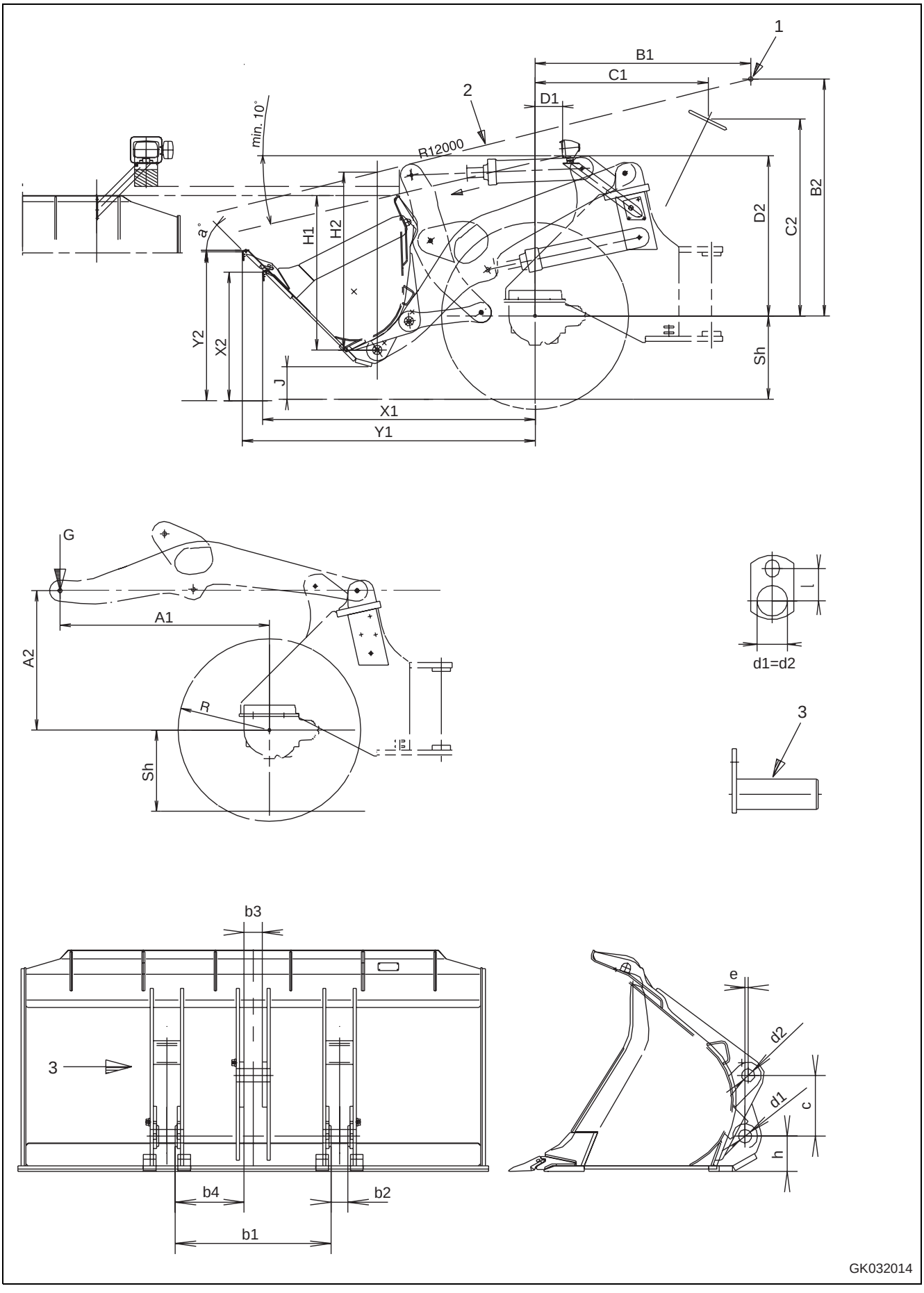
The certification must be sent to the customer and the wheel loader manufacturer. The CE conformity declaration for a specific wheel loader is only legally valid once this has taken place.

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

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.




1
B1
C1
2
D1
min. 10°
R12000
a°
H1
H2
x
D2
C2
B2
Y2
X2
J
X1
Y1
Sh
G
A1
A2
R
d1=d2
3
b3
3
b4
b2
b1
e
d2
d1
c
h
GK032014

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

A1	Distance: bucket pivoting point - front axle, horizontal
A2	Distance: bucket pivoting point - front axle, vertical
Sh	Distance: road level - front axle
B1	Distance: driver's eye (1) - front axle, horizontal
B2	Distance: driver's eye (1) - front axle, vertical
C1	Distance: centre steering wheel - centre front axle, horizontal
C2	Distance: center steering wheel - centre front axle, vertical
D1	Distance: headlight - centre front axle, horizontal
D2	Distance: headlight - centre front axle, vertical
G	Weight of equipment and working load
H1	Distance: bucket pivoting point - bucket upper edge, vertical (carrying position)
H2	Distance: bucket pivoting point - vision line, vertical (carrying position)
J	Distance: road level - bucket bottom edge (carrying position)
X1	Distance: cutter protection - front axle, horizontal
X2	Distance: cutter protection - road level, vertical
Y1	Distance: teeth protection - front axle, horizontal
Y2	Distance: teeth protection - road level, vertical
b1	Bucket connection dimension, boom width inside
b2	Bucket connection dimension, boom arm
b3	Bucket connection dimension, tilt rod
b4	Bucket connection dimension, temporary size
c	Bucket connection dimension between d1 and d2, vertical
d1	Bucket connection dimension, bolt (3) for boom
d2	Bucket connection dimension, bolt (3) for tilt rod
e	Bucket connection dimension d1 - d2, horizontally displaced
h	Distance: bucket bottom edge - boom bolt hole
l	Distance: centre of bolt - centre of fastening screw

WA430-6E0	419-93-H1250
A1	2,130
A2	1,295
Sh	750
B1	2,050
B2	2,178
C1	1,616
C2	1,777
D1	182
D2	1,477
G	7,300
H1	1,388
H2	1,613
J	270
X1	2,863
X2	1,198
Y1	3,051
Y2	1,378
b1	992
b2	108
b3	116
b4	438
c	387
d1	85
d2	85
e	20
h	290
l	90
1	Driver's eye
2	Vision line
3	Bolts
Tyres	23.5R25XHA
Bucket	423-72-H2110