

Operation & Maintenance Manual



PW150ES-6K

HYDRAULIC EXCAVATOR

SERIAL NUMBER

PW150ES-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

FOREWORD

FOREWORD

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 can not 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 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.

- **The description of safety is given see "SAFETY INFORMATION" on page 6. and in "SAFETY" from page 19**
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SAFETY INFORMATION


SAFETY MESSAGES


Most accidents are caused by the failure to follow fundamental safety 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.

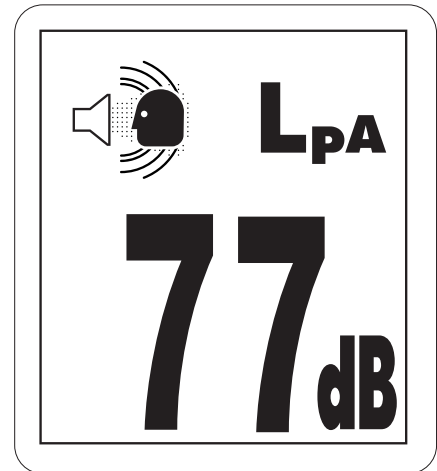
NOTICE - This word is used for precautions that must be taken to avoid actions which could shorten the life of the machine.

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

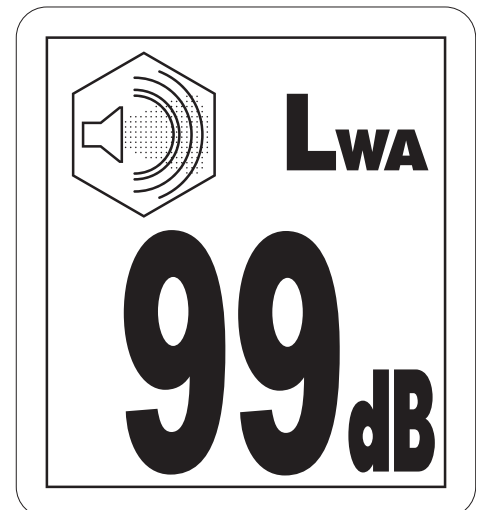
Komatsu cannot predict every circumstance that might involve a potential hazard in operation and maintenance. Therefore the safety message in this manual and on the machine may not include all possible safety precautions. If any procedures or actions not specifically recommended or allowed in this manual 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.

NOISE

- Sound pressure level at the operator's station, measured according to ISO6396 (Dynamic test method, simulated working cycle)



- Sound power level emitted. This is the guaranteed value as specified in European directive 2000/14/EC.



This machine complies with the requirements of RAL (German Institute for quality assurance and marking) pertaining to the award of the environmental mark (blue angel) for low noise.



VIBRATION

- The weighted root mean square acceleration value to which the operator's arms are subjected does not exceed 2.5 m/s²
- The weighted root mean square acceleration value to which the operator's body is subjected was measured at 0.64 m/s²

These results were obtained by accelerometers during trench digging.

EMERGENCY STEERING

This machine is equipped with an emergency steering system and complies to ISO 5010. In the advent of failure of the source of power for the steering system (engine failure) whilst travelling the machine can be steered allowing the machine to be safely stopped.

In such a case the effort required at the steering wheel and the number of turns to steer the machine will increase. To confirm function of emergency steering system raise the front wheels off the ground (using the work equipment) and with the engine off, turn the steering wheel and check movement of the wheels.

INTRODUCTION

INTENDED USE

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

- Digging
- Smoothing work
- Ditching work
- Loading work

See the section “WORK POSSIBLE USING HYDRAULIC EXCAVATOR” on page 136 for further details

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 & travel speed are selectable.
- Digging and lifting force can be increased by light-touch control. (For details, see operation section.)
- Adjustable wrist control levers make operations smooth and easy.
- Fresh filtered air conditioner assures comfortable operation.
- Low noise level and smart urban style design and colouring.
- Superb operation performance provided by powerful engine and high-performance hydraulic pump.
- Low fuel consumption controlled by an electronic control system provides an environment-friendly machine.

BREAKING IN YOUR NEW 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 machine life.

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

During breaking in:

- Idle the engine for 5 minutes after starting it up.
- Avoid operation with heavy loads or at high speeds.
- Sudden starting or acceleration, unnecessarily abrupt braking and sharp turning should be avoided except in cases of emergency.

Additionally for the first 20 hours

- Avoid operating engine for prolonged periods at constant speed (including idle.)
- Avoid high speed travelling for periods of more than 5 minutes.

Pay particular attention to oil pressure and temperature indicators & check coolant and oil levels frequently during breaking in.

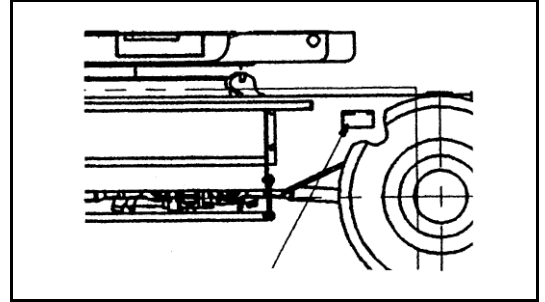
The precautions given in this manual for operating, maintenance, and safety procedures are only those that apply when this product is used for the specified purpose. If the machine is used for a purpose that is not listed in this manual, Komatsu cannot bear any responsibility for safety. All consideration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

LOCATIONS OF PLATES, TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR

MACHINE SERIAL NO. PLATE POSITION

On the front right of the undercarriage



ENGINE SERIAL NO. PLATE POSITION

On valve cover (A).

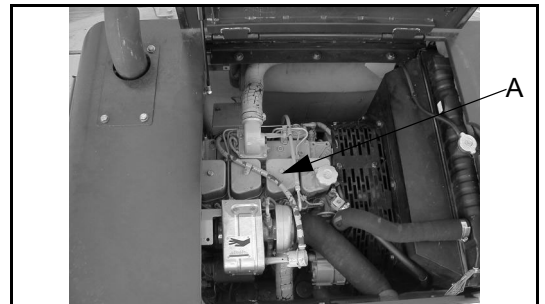


TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR

Machine serial No.:

Engine Serial No.:

Product Identification Number :

Manufacturer's name: Komatsu UK Ltd.

Address

Durham Road
Birtley
Chester-Le-Street
County Durham DH32QX
United Kingdom

Distributor



Address

Phone



MACHINE SERIAL PLATES

Valid until 31 December 2003



STANDARD SERIAL PLATE

 	MODEL	<input type="text"/>
	SERIAL No	<input type="text"/>
	MANUFACTURING YEAR	<input type="text"/>
	MAX. DRAWBAR PULL	<input type="text"/> N
	WEIGHT	<input type="text"/> kg
	ENGINE POWER	<input type="text"/> kW
Manufactured by Komatsu UK Ltd. Birtley, CO. Durham, United Kingdom under Licence from Komatsu Ltd.		
20G-00-K2380		

GERMANY SERIAL PLATE

 	TYPE	<input type="text"/>
	FABR. NR.	<input type="text"/>
	BAUJAHR	<input type="text"/>
	ZUL. ZUGKRAFT	<input type="text"/> N
	ZUL. GESAMTGEWICHT	<input type="text"/> kg
	LEISTUNG	<input type="text"/> kW
	ZUL. ACHSLAST VORN	<input type="text"/> kg
	ZUL. ACHSLASTHINTEN	<input type="text"/> kg
Hergestellt von Komatsu UK Ltd., Birtley CO. Durham, United Kingdom unter lizenz der Komatsu Ltd.		
20G-00-K2390		

ITALIAN SERIAL PLATE

 	Manufactured by Komatsu UK Ltd. Birtley, CO. Durham, United Kingdom under Licence from Komatsu Ltd.		
	TIPO TYPE-MODEL	<input type="text"/>	
	NUMERO DI OMOLOGAZIONE HOMOLOGATION NUMBER	<input type="text"/>	
	MATRICOLA SERIAL NUMBER	<input type="text"/>	
	MASSA TOTALE AMMISSIBILE TOTAL MAX WEIGHT	DA FROM <input type="text"/>	A TO <input type="text"/>
	CARICO AMMISSIBILE ASSE ANT. FRONT AXLE WEIGHT	DA FROM <input type="text"/>	A TO <input type="text"/>
	CARICO AMMISSIBILE ASSE POST. REAR AXLE WEIGHT	DA FROM <input type="text"/>	A TO <input type="text"/>
	POTENZA MOTORE ENGINE POWER	<input type="text"/> kW	ANNO YEAR <input type="text"/>
	20G-00-K2570		

Valid as of 1 January 2004

STANDARD SERIAL PLATE

MANUFACTURING YEAR

Labels on the left side of the plate:

- MODEL
- SERIAL NUMBER
- MAX. DRAWBAR PULL
- MASS
- ENGINE POWER
- PRODUCT ID NUMBER
- MANUFACTURER

Fields on the plate:

- MODEL
- SERIAL No.
- MANUFACT. YEAR
- MAX. DRAWBAR PULL (N)
- MASS (kg)
- ENGINE POWER (kW)
- Product Identification Number
- MANUFACTURER: Manufactured by Komatsu UK Ltd. for Komatsu Ltd., Tokyo, Japan
- Reference: 21G-00-K2382

GERMANY SERIAL PLATE

Fields on the plate:

- TYP
- FABR. NR.
- BAUJAHR
- ZUL. ZUGKRAFT (N)
- ZUL. GESAMTGEWICHT (kg)
- LEISTUNG (kW)
- ZUL. ACHSLAST VORN (kg)
- ZUL. ACHSLAST HINTEN (kg)
- Produkt-Identifizierung Nummer
- HERSTELLER: Hergestellt vom Komatsu UK Ltd. Birtley Co Durham, United Kingdom unter Lizenz der Komatsu Ltd.
- Reference: 20G-00-K2382

ITALIAN SERIAL PLATE

Fields on the plate:

- MANUFACTURER: Manufactured by Komatsu UK Ltd. for Komatsu Ltd., Tokyo, Japan
- TIPO / TYPE-MODEL
- NUMERO DI OMOLOGAZIONE / HOMOLOGATION NUMBER
- MATRICOLA / SERIAL NUMBER
- MASSA TOTALE AMMISSIBILE / TOTAL MAX WEIGHT (kg)
- CARICO AMMISSIBILE ASSE ANT. / WEIGHT FRONT AXLE (kg)
- CARICO AMMISSIBILE ASSE POST. / WEIGHT REAR AXLE (kg)
- POTENZA MOTORE / ENGINE POWER (kW)
- ANNO / YEAR
- Numero di Identificazione del Prodotto / Product Identification Number
- Reference: 20E-00-K1932

Additional text at the bottom:

- Massa rimorchiabile ammissibile: non atto
- Massa rimorchiabile con frenata indipendente: non atto
- Massa rimorchiabile con frenatura ad inerzia: non atto
- Massa rimorchiabile con frenatura assistita: non atto

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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.

⚠ WARNING: For reasons of safety, always follow these safety precautions.

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.
- When working with another operator or a person on worksite traffic duty, be sure all personnel understand all hand signals that are to be used.

SAFETY FEATURES

- Be sure all guards and covers are in their proper position. Have guards and covers repaired if damaged.
- Use safety features such as safety lock lever properly.
- NEVER remove any safety features. ALWAYS keep them in good operating condition.

Safety lever, see “PARKING MACHINE” on page 140.

- 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 serious injury or death. Also, do not wear oily cloths 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, this is so 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.

Driving in pins, see “REPLACEMENT AND INVERSION OF BUCKET” on page 137.

Cleaning of air cleaner element, see “WHEN REQUIRED” on page 192. in service procedure.

UNAUTHORISED MODIFICATION

- Any modification made without authorisation from Komatsu can create hazards.

