

TO THE READER

- This manual is written for an experienced technician to provide technical information needed to maintain and repair this machine.
- If you have any questions or comments, or if you found any errors regarding the contents of this manual, please contact:
- Be sure to thoroughly read this manual for correct information concerning the service procedures.

NEW HOLLAND KOBELCO
 CONSTRUCTION MACHINERY S.p.A.
 Strada Settimo, 323
 San Mauro Torinese (TO)
 10099 ITALIA
 PRODUCT SUPPORT
 Fax. +39 011 0077357

ADDITIONAL REFERENCES

- Please refer to the materials listed below in addition to this service manual:
 - **Operator's Manual**
 - **Service Parts Catalogue**

COMPLETE SERVICE MANUAL

- The Service Manual consists of one volume:
 - E230CSR
 Service Manual for "Crawler Excavators"

The Service Manual for "Crawler Excavators" contains the necessary technical information to carry out maintenance and repair operations on the machine, the necessary tools to carry out maintenance operations, the information on service standards, the procedures for removal, installation, disassembly and reassembly.

The Service Manual regarding models E230CSR consists of the following volume, identified by the print number indicated below:

VOLUME	MACHINE TYPE	PRINT NUMBER
Service Manual - "Crawler Excavators"	E230CSR	47426609A

TO PREVENT ACCIDENTS

Most of the accidents and injuries occurring in the factory, at home or on the road are caused by the failure to follow simple and fundamental safety rules or precautions. For this reason, MOST ACCIDENTS CAN BE PREVENTED by recognizing the real cause and taking the necessary precautions before the accident occurs.

With any type of machine, although well designed and constructed, it is not possible to absolutely exclude any possibility of accidents.

A careful and cautious operator and/or technician is the best insurance against accidents. The scrupulous observance of this one simple rule would prevent many thousands of serious injuries each year.

This rule is: never attempt to clean, lubricate or service a machine with the engine running.

WARNING

Before carrying out any maintenance, adjustment or repair operation on machines equipped with attachments, controlled hydraulically or mechanically, make sure that the attachment is lowered and safely set on the ground. If it is necessary to have the attachment partially or fully raised to gain access to certain items, make sure the attachment is suitably supported by means other than the hydraulic lifting cylinders, the cables and/or the mechanical devices used for controlling the attachment.

COPYRIGHT BY NEW HOLLAND KOBELCO CONSTRUCTION MACHINERY S.p.A.

Product Support - Documentation Centre

Strada di Settimo, 323 - S. MAURO T.SE (TO) ITALY

All rights reserved.

Reproduction of text or illustrations, in whole or in part, is strictly prohibited.

GENERAL SAFETY INFORMATION

GENERAL SAFETY INFORMATION



Do not operate or perform any maintenance on this machine until all instructions found in the OPERATOR'S MANUAL and this MANUAL have been thoroughly read and understood.

Improper operation or maintenance of this machine may cause accidents and could result in serious injury or death.

Always keep the manual in storage.

If it is missing or damaged, place an order with an authorized our Distributor for a replacement.

If you have any questions, please consult an authorized our Distributor.

- (1) Most accidents, which occur during operation, are due to neglect of precautionary measures and safety rules. Sufficient care should be taken to avoid these accidents. Erroneous operation, lubrication or maintenance services are very dangerous and may cause injury or death of personnel. Therefore all precautionary measures, NOTES, DANGERS, WARNINGS and CAUTIONS contained in the manual and on the machine should be read and understood by all personnel before starting any work with or on the machine.
- (2) Operation, inspection, and maintenance should be carefully carried out, and safety must be given the first priority. Messages of safety are indicated with marks. The safety information contained in the manual is intended only to supplement safety codes, insurance requirements, local laws, rules and regulations.
- (3) Messages of safety appear in the manual and on the machine : All messages of safety are identified by either word of "DANGER", "WARNING" and "CAUTION".

- 1) **DANGER**- Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury and is represented as follows:



- 2) **WARNING**- Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury and is represented as follows:



- 3) **CAUTION**- Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against possible damage to the machine and its components and is represented as follows:



- (4) It is very difficult to forecast every danger that may occur during operation. However, safety can be ensured by fully understanding proper operating procedures for this machine according to methods recommended by Manufacturer.
- (5) While operating the machine, be sure to perform work with great care, so as not to damage the machine, or allow accidents to occur.
- (6) Continue studying the manual until all Safety, Operation and Maintenance procedures are completely understood by all persons working with the machine.

SAFETY PRECAUTIONS



The proper and safe lubrication and maintenance for this machine, recommended by Manufacturer, are outlined in the OPERATOR'S MANUAL for the machine.

Improper performance of lubrication or maintenance procedures are dangerous and could result in injury or death. Read and understand the MANUAL before performing any lubrication or maintenance.

The serviceman or mechanic may be unfamiliar with many of the systems on this machine. This makes it important to use caution when performing service work. A knowledge of the system and or components is important before the removal or disassembly of any component.

Because of the size of some of the machine components, the serviceman or mechanic should check the weights noted in this manual. Use proper lifting procedures when removing any components. Weight of components table is shown in the section ; SPECIFICATIONS.

The following is a list of basic precautions that must always be observed.

- (1) Read and understand all Warning plates and decal on the machine before Operating, Maintaining or Repairing this machine.
- (2) Always wear protective glasses and protective shoes when working around machines. In particular, wear protective glasses when using hammers, punches or drifts on any part of the machine or attachments. Use welders gloves, hood/goggles, apron and the protective clothing appropriate to the welding job being performed. Do not wear loose fitting or torn clothing. Remove all rings from fingers, loose jewelry, confine long hair and loose clothing before working on this machinery.
- (3) Disconnect the battery and hang a "Do Not Operate" tag in the Operators Compartment. Remove ignition keys.
- (4) If possible, make all repairs with the machine parked on a firm level surface. Block the machine so it does not roll while working on or under the machine. Hang a "Do Not Operate" tag in the Operators Compartment.
- (5) Do not work on any machine that is supported only by lift, jacks or a hoist. Always use blocks or jack

stands, capable of supporting the machine, before performing any disassembly.



Do not operate this machine unless you have read and understand the instructions in the OPERATOR'S MANUAL. Improper machine operation is dangerous and could result in injury or death.

- (6) Relieve all pressure in air, oil or water systems before any lines, fittings or related items are disconnected or removed. Always make sure all raised components are blocked correctly and be alert for possible pressure when disconnecting any device from a system that utilizes pressure.
- (7) Lower the bucket, dozer, or other attachments to the ground before performing any work on the machine. If this cannot be done, make sure the bucket, dozer, ripper or other attachment is blocked correctly to prevent it from dropping unexpectedly.
- (8) Use steps and grab handles when mounting or dismounting a machine. Clean any mud or debris from steps, walkways or work platforms before using. Always face to the machine when using steps, ladders and walkways. When it is not possible to use the designed access system, provide ladders, scaffolds, or work platforms to perform safe repair operations.
- (9) To avoid back injury, use a hoist when lifting components which weigh 20kg (45lbs) or more. Make sure all chains, hooks, slings, etc., are in good condition and are the correct capacity. Be sure hooks are positioned correctly. Lifting eyes are not to be side loaded during a lifting operation.
- (10) To avoid burns, be alert for hot parts on machines which have just been stopped and hot fluids in lines, tubes and compartments.
- (11) Be careful when removing cover plates. Gradually back off the last two capscrews or nuts located at opposite ends of the cover or device and carefully pry cover loose to relieve any spring or other pressure, before removing the last two capscrews or nuts completely.
- (12) Be careful when removing filler caps, breathers and plugs on the machine. Hold a rag over the cap or plug to prevent being sprayed or splashed by liquids under pressure. The danger is even greater if the machine has just been stopped because fluids can be hot.

It's a preview. You can download the full file by clicking the link below.

<https://shopservicemanual.com/>

Service Manuals from 2\$