HYDRAULIC DRILL RIG
AF220D

Caterpillar 330D

Instructions for use and safe maintenance

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IMT INTERNATIONAL Spa

Head office:
v. dei Gracchi, 91 - 00192 Roma

Offices and production unit:
via d'Ancona, 39 - 60027 Osimo (AN)
Italy

Tel. 071 723341 - Fax 071 7133352

e-mail:imt@imtspa.com
www.imtspa.com

IMPORTANT

Keep this handbook in a well-known and easily accessible place throughout the working life of the machine

SUMMARY

CONTENTS

AIM OF THE MANUAL

– This manual is an integral part of the machine and has been produced by the manufacturer in order to furnish necessary information to those that are authorised to interact with it.

– In addition to adopting good use techniques, the recipients must carefully read and strictly apply this information.

– This information has been produced by the manufacturer in his own original language (Italian) and can be translated into other languages to satisfy legal and/or commercial requirements.

– Time dedicated to reading this information will avoid personal safety and health risks and economic damages.

– In the event that supplementary information to the actual machine set up is found in this manual it will not interfere with reading.

– Keep this manual for the full machine life in a known and easily accessible place in order to have it ready available in the event consultation is required.

The manufacturer reserves the right to carry out modifications without obligation of prior notice.

– This manual always comes with the excavator manual written by the Manufacturer in order to provide the use and maintenance information concerning the motor-drive, essential hydraulic system and original control devices.

– Special attention must be paid to the safety information in both manuals.

– To better stress the importance of some passages or to indicate important specifications, symbols, whose meanings are described as follows, have been adopted.

Danger - Beware

Indicates critically dangerous situations that if neglected can result in serious personal safety and health hazards.

Caution - Warning

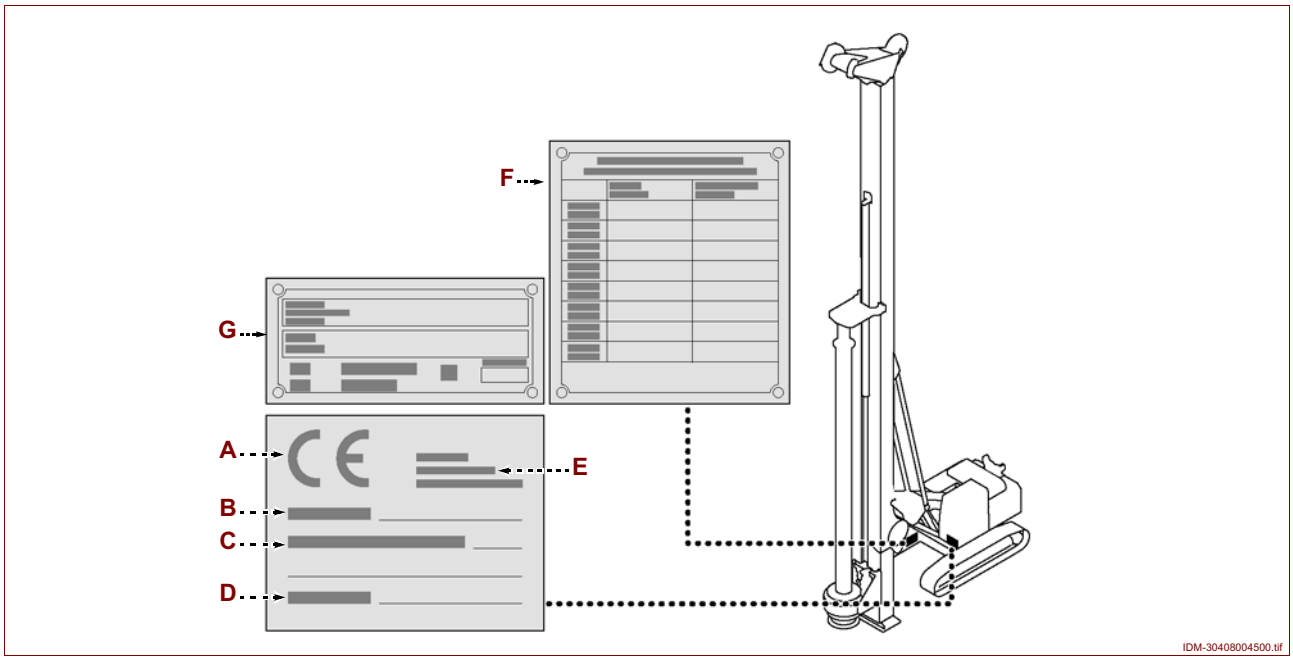
Indicates that suitable actions must be employed in order to avoid personal safety and health hazards and economic damages.

Important

Indicates particularly important technical information that should not be neglected.

MANUFACTURER AND MACHINE IDENTIFICATION

The illustrated identification plate is applied directly on the machine. It contains references and indispensable operating safety indications.



A) CE conformity markings
B) IMT machine serial number
C) IMT machine name
D) IMT machine model
E) manufacturer identification
F) Caterpillar engine information
G) Caterpillar undercarriage information

ATTACHED DOCUMENTATION

The stated documentation is supplied to the client along with this manual.

– Documents concerning the Caterpillar base, 330 series **(D)** model

– List of authorised assistance centres

– Declaration of conformity

Important

For information regarding the electric or hydraulic systems, please contact the nearest dealer or contact the constructor's AFTER SALES DEPARTMENT.

GLOSSARY AND TERMINOLOGY

Some recurring terms found within the manual are described in order to provide a more complete image of their meanings.

– **Ordinary maintenance**: group of functions necessary to maintain suitable machine operations and efficiency. Normally the manufacturer, who defines the necessary skills and intervention procedures, plans these operations.

– **Extraordinary maintenance**: group of operations required to upkeep good machine operations and efficiency. These operations are not scheduled by the manufacturer and must be performed by the maintenance technician.
– **Expert operator**: person selected among those having the necessary requirements, skills and information for the ordinary maintenance of the machine.

MODES OF REQUESTING FOR ASSISTANCE

For any information, contact the manufacturer's service centre.
For every technical service request regarding the machine, please indicate the data found on the identification plate, the approximate hours of use and the type of fault detected. ■

MACHINE GENERAL DESCRIPTION

The hydraulic drill rig (from now on called machine), has been designed and created in order to be installed on a Caterpillar base, 330 model and **(D)** series to drill all type of grounds, create piling and wells with a variable depth and diameter according to the tool used. This application, with suitable connection changes, exploits all the Caterpillar power units, motor-drive, hydraulic system and controls.
The machine stability is ensured by the ballast and undercarriage that can extend during the drilling phases.
The mast is supported by an articulation that allows to carry out drills at a variable distance from the machine, without needing continuous shifting.
For more details, see "Main unit descriptions" heading.
Only one operator who meets the necessary requirements in terms of safe operation and use is necessary to operate the machine.

ERRONEOUS USE

The machine is not planned to lift or draw things or people and shall not be used to move ground or any kind of inert material.
The lack of the conditions above may cause injuries to people and economic damages.

MAIN UNIT DESCRIPTIONS

The main units installed and integrated by the drill rig Manufacturer are described below.

A) Rotary: conveys the rotation to the tool by means of a drive unit with power-shift gear with 6 speeds, ensures high torques when drilling and a high number of revolutions when unloading. It is supported by the mast where it runs vertically.

B) Rod unit: to give the tool the entire pull-down thrust and the torque force of the rotary. It is made up of a set of removable and coupled tubes.

C) Mast: carrying structure built with highly resistant materials. It is connected to the Caterpillar base by means of a joint that allows for the swinging on both sides and fronts.

C1) Upper mast: it is pivoted around the mast and can be closed hydraulically during transport.

C2) Lower mast: it is pivoted around the mast and can be closed mechanically during transport.

C3) Mast foot: ensures better stability during the working phases.

D) Jib: to support the pulley of the winch cables.

E) Pull-down cylinder: to give the tool the axial thrust.

F) Triangular element: connects the arm to the mast and allows for its movements.

G) Struts: to connect the triangular articulation of the rotating turret.

H) Driving seat: soundproof cabin with nonglare glass, security roof, air conditioning and emergency exit. The operator can activate all machine controls from the driving seat, which is built according to ergonomical principles.