

A brief guide
for identification
of non-compliant
construction
machinery



Is this
wheel loader
compliant with
European legislation?

INTRODUCTION

Construction equipment placed on the EU market for the first time must comply with the relevant EU legislation - and meet all valid safety and environmental requirements. Machinery which does not fulfill these requirements is non-compliant and is not allowed to be placed on the EU market.

This guideline is meant to help to easily distinguish between compliant and non-compliant machinery. It describes only those essential criteria which can be checked even without in-depth knowledge and technical information. Thus, this brochure is not meant to be comprehensive but is designed to act as an “early warning” tool. However, if one or more items are out of line with the criteria then it is likely that you have non-compliant equipment.

The import of non-compliant construction equipment into the EU, and its sale and use, remains a major problem for the European construction equipment industry. It is a source of unfair competition and compromises bona fide suppliers' ability to fund R&D. This in turn threatens the competitiveness of the European construction equipment industry and the jobs it provides. Accidents with non-compliant machines are more likely to happen and they often do not meet the environmental standards demanded by the EU.

CECE, as the recognized organization representing and promoting European construction equipment manufacturers and related industries, calls upon all responsible authorities and stakeholders to work together to rid the EU of non-compliant construction equipment.

QUICK REFERENCE GUIDE TO NON-COMPLIANCE OF WHEEL LOADERS

Most common items of non-compliance with EU regulations:

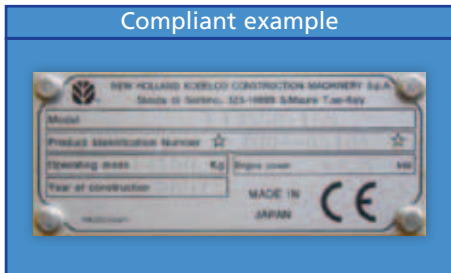
- › Marking
- › Documents
- › Instructions
- › Diesel engine emissions
- › Noise emissions
- › Roll Over Protective Structure (ROPS) and Falling Object Protective Structure (FOPS)
- › Warnings and marking
- › Access systems
- › Articulated frame lock



1. IDENTIFICATION OF MACHINE AND MANUFACTURER

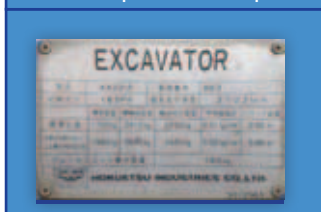
All construction machinery placed on the EU market must be marked clearly and permanently with the following, in one of the languages of the Community:

Compliant example



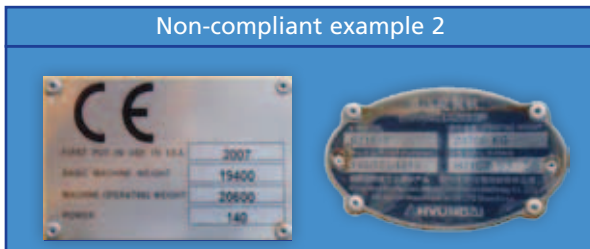
- › Name and address of the manufacturer (and their EU representative, if appropriate)
- › The CE mark
- › Designation of the machinery
- › Serial number of the machinery
- › The year of construction
- › The engine power in kW
- › The weight of the machine in kg

Non-compliant example 1



- › Not in a Community language
- › No CE mark
- › No address
- › No year of construction

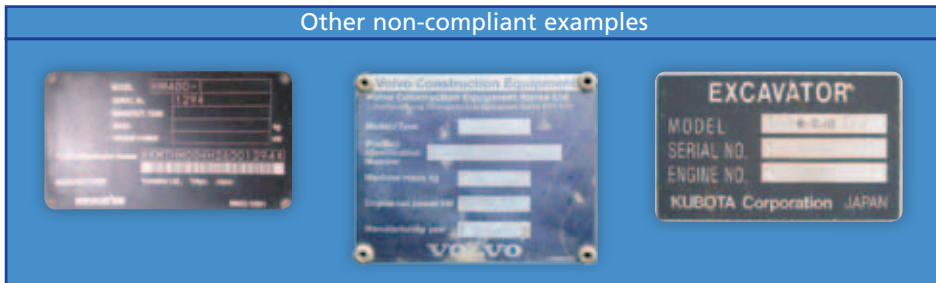
Non-compliant example 2



- › CE mark added by unidentified "representative" without name and address.
- › No year of construction

An unidentified additional CE plate like this is non-compliant.

Other non-compliant examples



No CE marks: these machines were not designed and constructed for the EU market even though built by global companies.

2. DOCUMENTS

All construction machinery placed on the EU market first time must be **accompanied** by a **Declaration of Conformity**. The Declaration of Conformity for different directives can be separate.

Example of Declaration of Conformity

EC DECLARATION OF CONFORMITY

Black type: obligatory, what you should always see
Blue type: recommended best practice though not obligatory

Business name and full address of the manufacturer, or
Name and address of the manufacturer's authorised representative established in the EC & the business name and address of the manufacturer.

Hereby declares that the below mentioned machine:

Description of the machinery:

Make / brand
Type / model
Serial number

Is in accordance with:

Machinery Directive ■ 2006/42/EC modified and the corresponding national regulations

As well as to the following other Directives and the corresponding national regulations:

Noise Directive ■ 2000/14/EC modified
Electro-Magnetic Compatibility Directive ■ 89/336/EC modified (after 20 July 2009: 2004/108)
Low Voltage Directive ■ 2006/95/EC

Concerning 2000/14/CE, technical documentation is held at [address], the conformity assessment procedure is [procedure identification], the notified body involved is [name of independent testing organisation]. Measured sound power level: [a value measured in dBA] and guaranteed sound power level: [a value measured in dBA].

Clear identification of the person empowered to sign on behalf of the manufacturer or its authorised representatives, plus the person's title.

A signature, a date and a place.

The Declaration of Conformity is a critical document which shows which **EU directives** the machine complies with. It must be in a **Community language** and must include at **least** the following:

A statement that the machine meets the requirements of the following EU directives:

- 2006/42/EC – the Machinery Directive;
- 2000/14/EC¹ – the Directive on Noise Emissions in the Environment by Equipment for Use Outdoors;
- 2004/108/EC – the Directive on Electromagnetic Compatibility.
- The name and address of the manufacturers and of his EU representative, if applicable.
- A description of the machine, including designation and serial number. **The serial number on the DoC must be the same as that marked on the machine.**

- Name and address of the person **in the EU** who can be contacted to compile the **technical file about the safety of the machine** if requested to do so by a suitable EU authority.
- The name and address of the person who **keeps the technical documentation on noise emissions and the name of Notified body involved.**
- The **conformity assessment procedure** followed for noise emissions (e.g. Annex VI Procedure 1).
- The **measured sound power level.**
- The **guaranteed sound power level.**
- The **date and place** of the declaration
- **Identity and signature of the person making the declaration.**

¹ Valid for machines below 500 kW only.

3. INSTRUCTIONS



Instructions on the safe use are a requirement of EU law and must **accompany** the machine. The basic requirements are:

- They must be in the **language of the member state** where the machine is placed on the market or put into service.
- They must be either “Original instructions” or a “Translation of the original instructions”, in which case the translation must be **accompanied by the original instructions**.
- The words “Original instructions” must appear on the language version(s) verified by the manufacturer or his authorised representative. Where no “Original instructions” exist and translations have been provided the translations must bear the words “Translation of the original instructions”.
- The instructions must include the **name and address of the manufacturer**.
- The instructions must include a **repeat of the machine markings**, except for the serial number.
- The instructions must include a repeat of the main items of the Declaration of Conformity.
- The instructions must contain measurement results for noise and vibration levels in the cabin for this type of machine.

4. ENGINE EXHAUST EMISSION

All diesel engines from 18 to 560 kW in wheel loaders must comply with European Directive 97/68/EC (as amended) when the engine is placed on the EU market for the first time. For machines imported into the EU the engine is placed on the market when the machine clears customs.

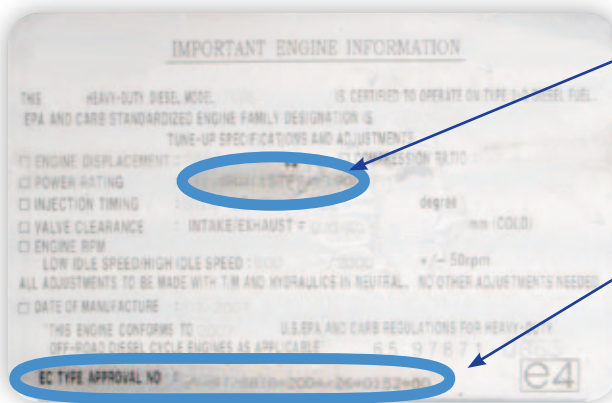
The compliance of the engine can be checked as follows:



Engine data plate

Open the engine hood and look for the data plate on the engine, as in the following example. It is a requirement of the directive that the plate is visible in the machine. If there is no data plate visible the machine is non-compliant.

The engine data plate must include the EC Type Approval Number. If it does not the machine is non-compliant.



Engine power

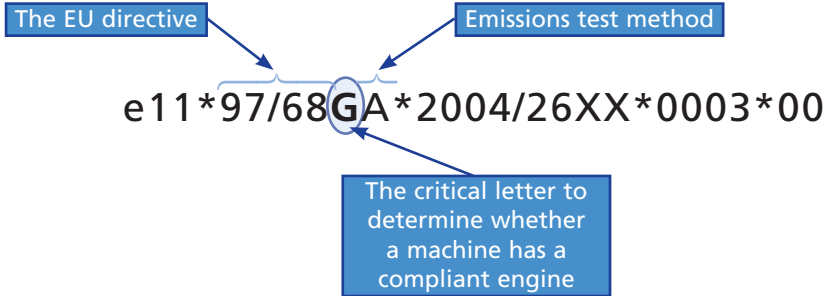
EC Type Approval Number

The Type Approval Number contains critical information on the engine compliance. See next sheet for detail.

4. DIESEL ENGINE COMPLIANCE

To confirm the compliance of the engine it is only necessary to check **one letter** of the EC Type Approval Number, which gives information about compliance with regard to date of placing on the EU market.

The format of the “EC TYPE APPROVAL NO” on the engine data plate is as follows.



The critical letter relates to the emissions level and to the end date for legally selling the engine in the EU. The following table shows the **last allowable date for first placing an engine installed on a machine on the EU market** based on the critical letter.

A	31/12/2003	G	31/12/2009	L	31/12/2015
B	31/12/2004	H	31/12/2012	M	30/09/2016
C	31/03/2005	I	31/12/2013	N	30/09/2016
D	31/12/2008	J	31/12/2014 (for power < 56 kW)	P	No expiry
E	31/12/2007	J	31/12/2013 (for power ≥ 56 kW)	Q	No expiry
F	31/12/2008	K	No expiry	R	No expiry

In the example above an engine with this EC Type Approval Number could not be placed on the EU market for the first time after 31/12/2009.

In some special circumstances an engine can be legally placed on the market after these dates under the “flexibility scheme”. If so it will be marked “Engine placed on the market under the flexibility scheme”. The machine will also have additional markings giving details of the flexibility scheme applied.

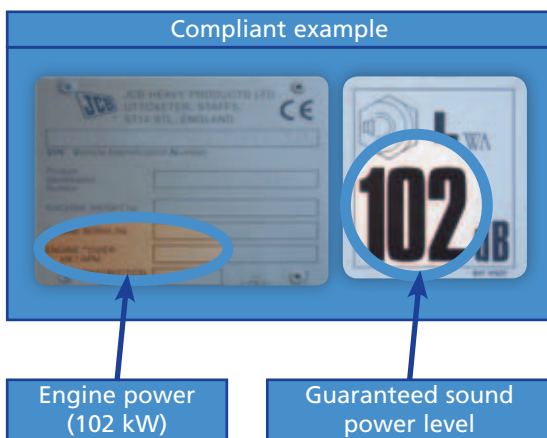
5. NOISE EMISSIONS

All wheel loaders must be marked with their guaranteed sound power level. The maximum allowable guaranteed sound power level depends on the engine power. Check the power on the machine marking and check the sound power limit from the table below.

Engine power		Sound power limit
From	To	
0	59	101
60	73	102
74	90	103
91	111	104
112	136	105
137	168	106
169	208	107
209	256	108
257	316	109
317	389	110
390	480	111

Example 1

A machine with engine power 102 kW (as below) must have a guaranteed sound power of no more than 104dB. The example below complies.



Example 2

A machine with engine power 110 kW (as below) must have a guaranteed sound power of no more than 104dB. The example below is non-compliant.

Guaranteed sound power level



6. ROLL-OVER AND FALLING OBJECT PROTECTIVE STRUCTURE (ROPS, FOPS)

Wheel loaders over 700kg weight must have a cabin structure which protects the operator from falling objects (FOPS) and also against rolling over (ROPS).

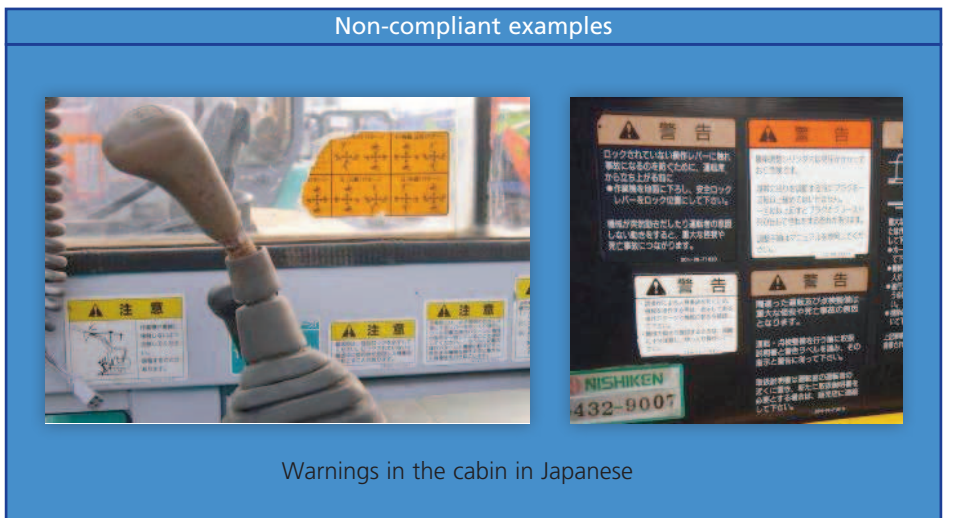
ROPS/FOPS cabins (or separate structure around the cabin) must have a permanent label attached, giving at least the following information:

- › the name and address of the manufacturer
- › machine make, model(s), or serial number(s) of the machines that the structure is designed to fit.
- › maximum machine mass for which the structure meets the performance requirements of the standard.
- › standards for which the structure meets the performance requirements (ROPS: ISO 3471, FOPS: ISO 3449).

Machines with a ROPS must have a seat belt. This should have a label declaring conformity with either ISO 6683 or SAE J386, or both.

7. WARNINGS AND MARKINGS

Information and warnings on machinery must be in pictograms or in a language of the Community for the country where the machine is placed on the market or put into service.



8. ACCESS SYSTEMS

Access systems must allow safe entry to, and exit from, the cabin and the service areas.

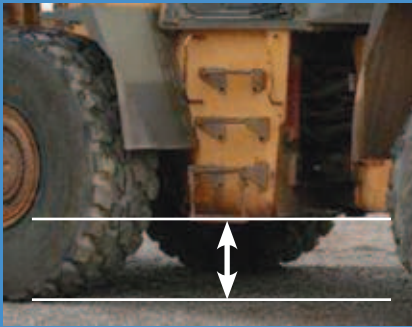
Non-compliant examples



1. This top step has no protection against slipping



2. This bottom step is too flexible (25kg force should push the step inward by no more than 80mm)



3. The bottom step should not be more than 700mm from the ground.



4. This cabin has a tripping hazard on exit.

CECE

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