



WHEEL AND RIM MARKINGS

ES
3.08

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MARQUAGES DES ROUES ET DES JANTES
 RÄDER- UND FELGENSTEMPELUNGEN

1 - SCOPE AND FIELD OF APPLICATION

This Euwa specification covers the wheel / rim identification by markings that must be applied on the disc wheel or/and on the rim for passenger cars, trucks, trailers, agricultural machines and earth-moving machines.

The general characteristics of such markings comply with the ISO 3911 requirements and in particular are readable on mounted tyres, while the representation of dates must follow the ISO 8601 rules.

2 - MARKING CHARACTERISTICS
2.1 - Dimensions of characters (letter or figure) logo excluded

Height [mm]: 2 min / 6 max - for passenger car wheels (*)
 2,5 min / 7 max - for truck / EM / agricultural wheels (*)

Depth projecting [mm]: 0.2 min / 0.5 max

Marking edges shape must be not sharp, but slightly rounded. Logo dimensions are free, in function of the allowable space.

Note: (*) max values are referred to the cast wheels.

2.2 Possible position of the markings

2.2.1 **Rim:** in circumferential sequence, in free position (preferably near the valve hole), visible with both disc and tyre mounted.

Radius areas must be avoided, because critical.

Marking sequence: a marking order is not required.

2.2.2 **Disc:** in correspondence of bolt fixing area, between two subsequent holes, or in other disc areas for the cast wheels.

- Marking sequence and orientation:

It is not compulsory to follow a marking order except when drawings specify such requirement (i.e. particular military needs).

Also the mutual orientation between marking and rim valve hole position is not required.

2.2.3 **Removable rings** of multipieces wheels for commercial, industrial and EM wheels. Similar rules as shown above at point 2.2.1(rim) will be followed.

3 - LIST OF THE NECESSARY MARKINGS

First of all we must take into consideration all the possible data that could appear on the wheel. Some of them are normally placed on the disc; others, especially when the space available is not sufficient, are transferred on the rim in addition to the specific own markings.

Main changes compared to the last issue:

3.1 - Marking list

	Compul- sory	Option- al	Disc only	OR	Rim/rings only	OR	Both [●]
A - Manufacturer name (or trade mark)	*		*		*		*
B - Manufacturer P/N	*		*			OR	*
C1- Rim size designation	*				*	OR	*
C2- Rim type designation	*				*	OR	*
D1- Offset (half dual spacing)		*	*				
D2- Inset		*	*	OR	*		
E - Manufacturing date	*						*
F - DOT-E or similar (when required)		*	*	OR	*		
G - Type of bolt holes		*	*				
H - Customer P/N (when required)		*	*				
I - Customer name or logo (when required)		*	*				
J - Load and speed references	[#]	*	*				
K - Made in or country identif. Code		*	*	OR	*		
L - Additional production ref. (shift, line, identification code, melt No, batch No, etc.)		*	*	OR	*	OR	*
M - Special requirements: label for temporary use of spare wheels (ECE regulation N°64)		*	*	OR	*		

LEGEND:

[●] "Both" means that the markings appear on the disc AND on the rim.

[#] Item to be considered, only if relevant regulations will come in force.

3.2 - Markings details

- A. The manufacturers' identification could consist either of their complete name or of a short reference as trademark/logo.
- B. Mostly the manufacturer P/N corresponds to the appropriate drawing reference
- C1 The rim size designation must be expressed according to ETRTO-ISO recommendations, for instance 17.5x5.25 or 20-8.5.
- C2 The rim type designation includes, when necessary, safety shoulders (H2 or FH,), rim system (universal,), special notes (LT,).
- D. EUWA adopts the ISO 3911 symbols: "OS" for half dual spacing, "IS" for positive inset and "IS-" for negative inset.
- E. The manufacturing date is represented in different ways, but in any way according to ISO 8601 norm: year-month, year-week, year-day

(progressive), year-week-day and others optional, related to the shift indication or special references.

The production batch dimensions and the frequency of production vary widely, according to type and dimension of the wheels.

Consequently we can consider separately the passenger car wheels from all the other kinds.

The date marking for truck, EM and agricultural wheels consists of four digits: two digits corresponding to the last two figures of the year, followed by other two digits corresponding to the month.

The date marking for passenger car wheels usually follows the customer's requirements. This could be done because each car model mounts a specific disc execution.

- F. The symbol "DOT" is required to the USA market and is not necessary for the European one. This designation is completed by a letter which indicates the source of the rim published standard, as follows: "E" = ETRTO "D" = DIN.
- G. The fixing holes identification marking is according to the customer's requirements.
- H. Some vehicle manufacturers ask to have their own identification P/N for internal logistic organisation. As a principle, wheel manufacturers should try to avoid such engagement, especially when the involved quantities are limited.
Such numbers often consist of many digits and it would be difficult to place them on single raw.
When the space available is not sufficient, two alternatives could be followed:
 1. place the P/N on two raws
 2. put the P/N on an adhesive label, of course, unremovable.
- I. Also the customer's name or logo is, in some cases, requested on the wheel, because of product liability purposes in order to identify "original" parts.
The solutions are either to mark or to add an adhesive label.
- J. The speed symbol and the load index are two additional data requested for safety reasons, to be marked on the wheel.

Euwa considers the above marking as generally optional but they get compulsory for special wheel execution having limitation in the load capacity, deviating from the standard.
In such a case, Euwa proposes to combine the two symbols in a single mark (i.e. 152/149 M).
- K. Generally the wheel manufacturers add the country of production under the form "MADE IN ...". A code instead of "Made in" is allowed.

- L. The additional special references are used for both shift or line identification. In some cases such references are included in the marking of production date.

Due to the particular internal purposes of the wheel manufacturers, it is not convenient to standardise such matter but rather let free choice.

4 - MARKINGS COMBINATION

As stated at the beginning the available space is often very reduced and therefore we have to try to put together homogeneous markings.

Some examples of possible combinations (in no case compulsory) are the following:

-Wheel size - load index
speed symbol

22.5 x 9.00
152 / 149 M

-Manufacturer P/N - offset

123456
OS 175

-Manufacturing date and
production reference

93-03 - A

-DOT-E - MADE IN

DOT-E
MADE IN

The other references remain alone.

For the 6 fixing holes truck wheels, the numbers of markings on the disc must be reduced, because of the limited available space. The alternatives are to avoid the unnecessary marks or transfer some of them on the rim.

Note:

Markings concerning safety matters have priority to the others.