Transmitted by the expert from OICA

Informal document No. **GRE-54-12**
(54th GRE, 4-8 April 2005,
agenda item 14.1.)

PROPOSAL FOR DRAFT AMENDMENTS TO DOCUMENT TRANS/WP.29/GRE/2005/9
(Regulation No. 6 - Direction indicators)

Transmitted by the experts from OICA

The text in bold characters is changed compared to document TRANS/WP.29/GRE/2005/9.

A. PROPOSAL

Insert a new paragraph 2.2.4., to read:

"**2.2.4.** For a direction indicator equipped with more than one light source (including those specified in paragraph (i) of footnote 3 to paragraph 6.1. of this Regulation), information regarding the activation criteria for the operating tell-tale (**number and location of the light sources causing the photometric performances to drop below the 50 per cent of the minimum intensity -** see paragraph 6.5.8. of Regulation No. 48);"

Paragraph 2.2.4. (former), renumber as paragraph 2.2.5.

Paragraph 6.1., footnote 3, ~~delete~~ **amend** paragraph (ii) to read: ~~and renumber the former paragraph (iii) as paragraph (ii)~~.

"3/ The total value of maximum intensity for an assembly of two or more lamps is given by multiplying by 1.4 the value prescribed for a single lamp, except for category 2a.

When an assembly of two or more lamps having the same function is deemed to be, for the purpose of installation on a vehicle, a "single lamp" (following the definition of Regulation No. 48 and its series of amendments in force at the time of application for type approval), this assembly shall comply with the minimum intensity required when one lamp has failed, and, all the lamps together shall not exceed the admissible maximum intensity (last column of the table).

In the case of a single lamp containing more than one light source:

(i) all light sources which are connected in series are considered to be one light source;

(ii) ~~the lamp shall comply with the minimum intensity required when any one light source has failed. However, f~~ **F**or front or rear direction indicator lamps ~~designed for only two light sources~~ 50 per cent of the minimum intensity **[**in the axis of reference of the lamp**]** shall be considered sufficient **in the case of failure of one or more light sources** , provided that a note in the communication form states that the

lamp is only for use on a vehicle fitted with an operating tell-tale which indicates when ~~any one of these two light sources has failed~~ **the above 50 per cent limit is no more achieved and information on number and location of the light sources the failure of which is causing the minimum intensity to drop below this limit are provided (see paragraph 2.2.4. above).**

(iii) when all light sources are illuminated the maximum intensity specified for a single lamp may be exceeded provided that the single lamp is not marked "D" and the maximum intensity specified for an assembly of two or more lamps (last column of the table) is not exceeded."

Annex 2

Item 9., add at the end:

"For direction indicators equipped with more than one light source:
Activation criteria for the operating tell-tale **(number and location of the light sources causing the photometric performances to drop below the 50 per cent of the minimum intensity): .....**"

* * *

B. JUSTIFICATION

The changes proposed by OICA to the GTB proposed text are aimed to reduce the – non useful - severity of the requirement proposed by GTB, in order to allow a good diffusion of multi-light sources lamps.
The control of any single small light sources (and in particular LED) to activate the operating tell-tale in the event of any one failure is extremely complicate and costly . Consequently, the decision of most vehicle manufacturers will probably be to switch off the complete direction indicator in the event of failure of the first light source (i.e. connection in series of the light sources) or even to strictly avoid the equipment of all multi light sources lamps.

The consequent reduction in diffusion of multi light sources lamps, in particular where LED are used, will negatively affect safety for three main reasons:

- multi-light sources lamps maintain a certain degree of efficiency even below the normal level, hence continue to give their signal, even in case of failure, for a longer time compared to single light source lamps;
- multi-light sources lamps using LEDs are less subject to light sources failures since LED have a longer life time compared to filament lamps;
- LEDs are faster than filament lamps in giving light; consequently the contrast between the on and off time is better compared to the filament lamps hence the perception of the signalization is improved.

_____