

## **Technical neutral failure provisions for R48 based on R149-01 - Proposal to amend Par. 6.2.8.2. of UN Regulation No. 48 -**

This proposal, discussed and agreed at SLR-63 (see SLR-63-09/Rev.1), is intended to make UN Regulation No. 48 more comprehensive and future-proof, covering all possible cases for light sources and light source modules (current and future ones).

### **I. Proposal**

*Paragraph 6.2.8.2.*, amend to read:

- “6.2.8.2. A visual failure tell-tale whether flashing or not is mandatory:
- (a) In the case where the whole beam or the kink of the elbow of the cut-off is moved to produce bend lighting; or
  - (b) If one or more ~~LED~~ **light source** module(s) **or non-replaceable light source(s) or if more than one UN approved light source(s)** are used to produce the principal dipped-beam, except when they are wired so that the failure of any one ~~LED module of them~~ causes all of them to stop emitting light.

It shall be activated:

- (a) In the event of a malfunction of the displacement of the kink of the elbow of the cut-off; or
- (b) In case of a failure of any one of the ~~LED~~ **light source** module(s) **or non-replaceable light source(s) or UN approved light source(s)** producing the principal dipped-beam, except when they are wired so that the failure of any one ~~LED module of them~~ causes all of them to stop emitting light.

It shall remain activated while the failure is present. It may be cancelled temporarily, but shall be repeated whenever the device, which starts and stops the propulsion system, is switched ON and OFF. ”

### **II. Justification**

- 1 The goal of this proposal is to adapt UN Regulation No. 48 to align with the new 01 series of UN Regulation No. 149 for road illumination devices. UN Regulation No. 149 introduces greater flexibility for the use of light sources in lamps and their combination.
- 2 Paragraph 6.2.8.2. of UN Regulation No. 48, concerning the requirement for failure tell-tale of passing-beam headlamps (presence and activation), needs to be amended as a consequence. Currently, only the case of LED modules is covered, corresponding to the current state-of-the-art.
- 3 This proposal is a correction to the 09 series of amendments to UN Regulation No. 48 adopted in principle by GRE at its 88<sup>th</sup> session. Unfortunately, this amendment was missed in the initial proposal (refer to informal document GRE-88-27).
- 4 This proposal is intended to complete the requirements needed for device transition, as requested by the European Commission, i.e. the mandatory installation of headlamps from UN R149-01.

- 5 If this proposal is unable to be adopted, the failure requirements will not be fully aligned with the 01 series of UN Regulation No. 149. This will mean that some new light sources or light sources modules will have no failure provisions.
- 6 The current philosophy of exempting a mandatory failure tell-tale when the light sources or light source modules are wired so that the failure of any one of them causes all of them to stop emitting light is kept (referred as 'one fails all fail'). As a matter of fact, the driver is informed of the failure by all the light sources being switched OFF, therefore a visual failure tell-tale is not needed in this case.

Note: It is recognised that, in the case of one non-replaceable light source or one UN approved light source, it seems illogical to specify that a failure tell-tale is mandatory, however the tell-tale will not be required in practice as a failure of one would cause the light source to stop emitting light.