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Working Party on Lighting and Light-Signalling (GRE)
(Fifty-third session, 4-8 October 2004,
agenda item 14.1.)

PROPOSAL FOR DRAFT AMENDMENTS TO THE NEW DRAFT REGULATION:

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF ADAPTIVE FRONT-LIGHTING SYSTEMS (AFS) FOR MOTOR VEHICLES

Transmitted by the expert from Japan

Note: The text reproduced below was prepared by the expert from Japan in order to amend the technical requirements of failure tell-tale, failure provision and others in document TRANS/WP.29/GRE/2004/27, transmitted by the expert from the Working Party "Brussels 1952" (GTB). It is based on a document without a symbol (Informal document No. GRE-52-22), distributed during the fifty-second GRE session. The modifications to the above mentioned document are marked in **bold** characters.

Note: This document is distributed to the Experts on Lighting and Light-Signalling only.

A. PROPOSAL

Paragraph 5.9., amend to read:

"5.9. The system shall be so made that, if a light source has failed, a failure signal in order to comply with the relevant provisions of Regulation No. 48 shall be provided,

a) in the case that more than two light sources (per vehicle) are operated for the class C (basic) passing beam, if a failure of light source(s) does not comply with the photometric requirement of the class C passing beam, or

b) other than the failure of light source(s) specified in the above, if a failure occurs and it does not comply with the photometric requirement of class C passing beam (the system cannot return to the class C passing beam*).*"

Insert a new paragraph 5.9.1., to read:

"5.9.1. **In the case of failure, for the passing beam the illumination in zone IIIb shall not exceed 1.5 lx, in addition for the passing and/or the driving beam a minimum illumination of at least 5 lx shall be temporarily fulfilled in test point 25V (VV line, D 75 cm)**."

Paragraph 5.7.2., amend to read:

"5.7.2. either the passing beam or the driving beam shall always be obtained, without any possibility of **the mechanism stopping in between two positions .**~~remaining in an intermediate or undefined state; if this is not possible,such a state must be covered by the provisions according to paragraph 5.7.3. below~~;"

Paragraph 5.7.3., should be deleted.

* * *

B. JUSTIFICATION

Paragraph 5.9. requires a monitoring system of light source, and actually it is important and necessary. But, thinking about the current passing beam, there is one lighting unit on each side of the vehicle, and no monitoring system is required. If one light source on one side of the vehicle fails, the driver can easily detect it, so a monitoring system is not necessary. Therefore, if the AFS has only one lighting unit on each side of the vehicle, a monitoring system is not necessary. Therefore, Japan considers that paragraph 5.9. should be amended, as shown in the above.

Concerning the failure tell-tale, not only light source failure, but also the other electrical failure in changing the AFS mode and class should be considered. For example, if the system fails in Motorway Mode and it cannot return to Basic Mode, in such a case a failure tell-tale is necessary. Therefore, Japan considers that not only light source failure but also electrical failures in changing the mode/class should be addressed, as shown in the above.

In case of failure, it is felt that some photometric provision is necessary. The failure provision of the fast track AFS in the current Regulations Nos. 98 and 112 should be taken into consideration. There are the photometric requirements of 1.5 lx max in Zone III and 5 lx min on 25V in case of failure. The same photometric provision is necessary also in AFS, and Japan would add a new paragraph 5.9.1. to do so.

Paragraph 5.7. is specified for the fail-safe of mechanical switching between driving beam and passing beam, and not for the fail-safe of AFS, so if paragraph 5.9.1. is newly inserted as shown in the above, the failure provision in paragraph 5.7.3. is not necessary. In addition, the last sentence of paragraph 5.7.2. should be deleted, and amended, as shown in the above (in the same manner as the current UNECE Regulations Nos. 98 and 112).
