

GRE-AFS Working Paper No. 6-14

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Comment on the AFS draft Regulation (R.XXX)

1. Failure tell-tale

Paragraph 5.9.1 is amended to read:

- 5.9.1 A failure signal in order to comply with the relevant provision of Regulation No.48 shall be provided,
- a) in the case that more than two light source (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).

Justification:

Para. 5.9.1 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 monitoring system is not necessary, we think. Therefore, if AFS has only one lighting unit on each side of the vehicle, monitoring system is not necessary. Therefore, I think the para. 5.9.1 should be amended, as shown in the above.

Thinking about 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 failure tell-tale is necessary. Therefore, I think not only light source failure but also electrical failures in changing the mode/class should be addressed, as shown in the above.

2. Failure provision

Paragraph 5.9.2 is newly inserted, as follows:

5.9.2 In the case of failure the illumination in zone IIIb shall not exceed 1.5 lx, in addition a minimum illumination of at least 5 lx shall be fulfilled in test point 25V (VV line, D 75 cm). If the above requirements are satisfied by other lamps such as front fog lamp, the system is deemed in compliance.

Justification:

In case of failure, I think some photometric provision is necessary. Please remember the failure provision of the fast track AFS in the current R98 and R112. There are the photometric requirement 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 I would add a new Paragraph 5.9.2 to do so.

3. Others

Paragraph 5.7.2 is amended 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.

Paragraph 5.7.3 is deleted:

Justification:

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 Para. 5.9.2 is newly inserted as shown in the above, the failure provision in Para 5.7.3. is not necessary. And also the last sentence of Para 5.7.2 should be deleted, and amended it, as shown in the above; (in the same manner as the current ECE R98 and R112)
