ref.: R.48 Draft Amend-ments on AFS

Submitted by the Expert from GTB-AFS

The present proposals have been prepared by the Expert from GTB-AFS after further review of the Draft Amendments to Regulation No.48 on AFS in its form resulting from the second session of the Informal Group on AFS, 28-30 January 2003 (working paper 4-5).

PROPOSAL (new text is displayed in **bold**)

Paragraph 2.7.26.6., amend to read:

" 2.7.26.6. "Neutral state" means the state of the AFS when ***a defined mode of the*** *class C (basic) passing beam* ***or of the main beam, if any,*** *is produced,* ***being specified for initial adjustment of the AFS or parts of; "***

Rationale: to be consistent with the text in WD 4-1.

Paragraph 3.2.6.4., amend to read:

(3.2.6. where an AFS is fitted on the vehicle, the applicant shall submit a detailed description providing the following information: ...)

" 3.2.6.4. instruction for the inspection of the light sources and the visual observation of the beam; "

Rationale:
This may be needed for periodical check on lighting units not being lit in the system's neutral state

Paragraph 6.20.4.1., amend to read:

" 6.20.4.1. In width and height:
... according to the applicant's description.

All dimensions refer to the nearest edge(s) of the apparent surface(s) of the lighting unit(s) in the direction of the reference axis. "

Rationale: this definition should be made for all provisions regarding width and height; paragraph 6.20.4.1.4. may be shortened accordingly.

Paragraph 6.20.4.1.4., amend to read:

" 6.20.4.1.4. ... and,
the distance between the inner edges of the apparent surfaces of the lighting units on the right and left hand side of the vehicle (B in the figure) shall be not less than 600 mm, or, ~~*except*~~ ***in case of a*** *category* M_1 ***or*** N_1 *vehicle, not less than 400 mm when the overall width of the vehicle is less than 1300 mm.* ***"***

Rationale: editorially, for clarification only.

Paragraph 6.20.5., amend to read:

" 6.20.5. Geometric visibility

On each side of the vehicle, for each lighting function and mode provided:
the angles of geometric visibility prescribed for the respective lighting functions according to paragraphs 6.1.5. and 6.2.5. of this Regulation, shall be met by ***at least one of the lighting*** *units that are simultaneously energized to perform said function and mode(s), according to the description of the applicant.* ***Individual lighting units may be used to comply with the requirements for different angles."***

Rationale: editorially, for clarification.

Delete paragraphs 6.20.7.1.(d), 6.20.7.2.(d) and 6.20.7.2.(e) and.

Insert a new paragraph 6.20.7.6. to read:

" 6.20.7.6. It shall be possible for the driver to set the AFS to the neutral state and to return it to its automatic operation. "

Rationale: this amendment is essentially editorial and for clarification. In addition: we deem it very useful that means are left to the driver's decision to exclude the automatic AFS operation. The text we propose is open to different technical solutions to satisfy this requirement and applies also to the setting to "neutral state" for aiming purposes, so the paragraphs related to this aspect (6.20.7.1. (d), 6.20.7.2. (d) and 6.20.7.2. (e)) can be deleted.

Paragraphs 6.20.7.4. through 6.20.7.4.5. amend to read:

"6.20.7.4. Automatic operation of the AFS **passing beam** modes

The changes ~~within and~~ between the provided modes of the AFS lighting functions as specified **in the paragraphs 6.20.7.4.1. to 6.20.7.4.5.** below, shall be performed automatically, without any possibility of intervention by the driver, with exception of the provisions set out in paragraphs ~~6.20.7.**1.(d),** 6.20.7.**2.(d) and (e)** and~~ 6.20.7.5. **and 6.20.7.6.** of this Regulation.

The changes shall be such that no discomfort, neither for the driver nor for other road users, is caused.

The following conditions apply for the activation of the modes of the dipped-beam ~~and, where applicable, of the main beam~~.

6.20.7.4.1. The class C (basic) mode(s) of the passing beam shall be activated **if no mode of another class according to the provisions of the paragraphs 6.20.7.4.2. through 6.20.7.4.4. is activated.**

6.20.7.4.2. The class V mode(s) of the passing beam may be activated **only** (V-signal **applies**) **[under conditions, where a reduced headlamp intensity is of advantage ("negative contrast") or is not detrimental**.

This shall be deemed to be the case] if one or more of the following conditions is/are automatically detected:

(a) roads in built-up areas, and,
the vehicle's speed does not exceed [60] km/h;

(b) roads equipped with a fixed road illumination, and,
the vehicle's speed does not exceed [60] km/h;

(c) [1] cd/m^2 road surface luminance and/or [10] lx road illumination, being exceeded continuously;

(d) vehicle's speed does not exceed [50] km/h.

6.20.7.4.3. The class E mode(s) of the passing beam may be activated only (E-signal **applies**)

(a) when the vehicle's speed is not less than [80] km/h, and,

(b) the road characteristics correspond to motorway conditions **[**8/**]**;

where said condition according to (b) above shall be deemed to be satisfied if a continuous evaluation of one or more sets of information data is provided that can indicate motorway conditions, (e.g. the vehicle's speed being essentially steady together with steering parameters, or, the width and the course of the road lanes as indicated by means of optical detection).

[8 / Such conditions can be found in Chapter I, Article 1 of the Convention on Road Traffic (Vienna Agreement, 1968) **]**

6.20.7.4.4. The class W-mode(s) of the passing beam may be activated only (W-signal **applies**)

(a) when the front fog lamps, if any, are switched OFF, and,

(b) **[** the road surface is wet and/or rain or snow fall is present; where said condition according to (b) above shall be deemed to be satisfied **]** if:

(i) **the** wetness of the road has been detected automatically, **and /or**

(ii) the windshield wiper is switched ON and its continuous or automatically controlled operation has occurred for a period of at least [2] minutes.

6.20.7.4.5. **A** bending mode of a class C, V, E, or W passing beam may be activated (T-signal applies) in combination with **said** passing-beam mode according to paragraphs 6.20.7.4.2. to 6.20.7.4.4. above, **based on the evaluation of at least one of the following possibilities**

(a) the road curvature,
(b) the angle of lock of the steering,
(c) the trajectory of the centre of gravity of the vehicle,
(d) other information which provides equivalent indication.

In addition the following provisions apply: ... . "
(Rest of this paragraph to remain unchanged as written in WD 4–5e.)

Rationale /explanatory notes:
- Class C (6.20.7.4.1.): editorially changed for clearer reading
- Classes V (6.20.7.4.2.) and T (6.20.7.4.5.): more detailed criteria added
- class W (6.20.7.4.4.): "and/or" needs to be re-instituted
- generally: criteria listed for clearer reading
- Paragraphs 6.20.7.4.2. through 6.20.7.4.4.: text in brackets is indicating the intentions behind the proposed switching criteria; they shall serve for the rule-making discussion and might be removed later;
