Proposal for a amend the document GRE-82-25 transmitted by GRE-IWG SLR.

The text reproduced below was prepared by expert from Poland. The modifications are marked in **bold** for new and ~~strikethrough~~ for deleted characters.

**I. Proposal**

*Paragraph 6.2.6 and related sub-paragraphs,* amend to read:

…

**~~0.5 m < h < 1.0 m:~~**

 **~~the minimum vertical inclination limit is -0.2 %~~**

**~~and~~**

**~~the maximum vertical inclination limit is - 1.4 % to headlamp mounting height 0.7 m, then is increasing linearly, in relation to the dipped‑beam headlamp mounting height, from - 1.4 % to - 2.3 %;~~**

**~~1.0 m < h < 1.2 m:~~**

 **~~the minimum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,~~**

 **~~from - 0.2 % to – 1.0 %~~**

 **~~and~~**

 **~~the maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,~~**

 **~~from – 2.3 % to - 2.45 %;~~**

~~For category N~~~~3~~~~G (off-road) vehicles, where the headlamps exceed a height of 1,200 mm the limits for the vertical inclination of the cut-off shall be between: -1.5 per cent and -3.5 per cent~~

**~~1.2 m < h < 1.5 m:~~**

 **~~the minimum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,~~**

 **~~from - 1 % to - 2.2 %~~**

 **~~and~~**

 **~~the maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,~~**

 **~~from - 2.45 % to - 3.1 %;~~**

**0.5 m < h < 0.7 m:**

 **the minimum vertical inclination limit is -0.2 %**

**and**

**the maximum vertical inclination limit is - 1.4 %**

**0.7 m < h < 1.0 m:**

 **the minimum vertical inclination limit is -0.2 %**

**and**

**the maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,**

 **from – 1.4 % to - 2.05 %;**

**1.0 m < h < 1.2 m:**

 **the minimum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,**

 **from - 0.2 % to – 1.0 %**

 **and**

 **the maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,**

 **from – 2.05 % to - 2.45 %;**

For category N3G (off-road) vehicles, where the headlamps exceed a height of 1,200 mm the limits for the vertical inclination of the cut-off shall be between: ~~-1.5 per cent and -3.5 per cent~~

**1.2 m < h < 1.5 m:**

 **the minimum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,**

 **from - 1 % to - 2.2 %**

 **and**

 **the maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height,**

 **from - 2.45 % to - 3.1 %;**

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*Annex 9, paragraph 1.3.2* amend to read:

“1.3**.**2. Variation of inclination with load

 The variation of the dipped-beam downward inclination as a function of the loading conditions specified within this section shall remain within the range **defined in p. 6.2.6.1.2.**:

**~~0.5 m < h < 0.9 m~~**

**~~0% minimum vertical inclination and -1,7 % to -2,1 % maximum vertical inclination, in relation to the dipped‑beam headlamp mounting height.~~**

**~~0.9 m < h < 1.2 m:~~**

**~~0%to -0,55 % minimum vertical inclination increasing linearly, in relation to the dipped‑beam headlamp mounting height and~~**

**~~-2,1 % to -2,75 % maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height~~**

**~~1.2 m < h < 1.5 m:~~**

**~~-0.55 % to -1.2 % minimum vertical inclination increasing linearly, in relation to the dipped‑beam headlamp mounting height and~~**

**~~-2.75 % to -3.4 % maximum vertical inclination limit increasing linearly, in relation to the dipped‑beam headlamp mounting height.~~**



**II. Justification**

1. Segment A-B. There is no valid technical justification for this proposal. The IWG VGL Group has identified two proposals during its work:
* Segment A'-C-C 'as a expression of the minimum road illumination range of 50 m.
* Segment A''-B and B-C as an expression of insufficiently substantiated industry demand to maintain a 1.6% inclination for each headlight height above the road surface.

Segment A-B is an artificial creation without technical justification and cannot be accepted.

Poland may agree to a compromise solution (line A-B') as a concession to the industrial lobby to half the value between points A' and A'' as an arbitrary but constant value of 1.4% down. The same value should be maintained until meeting the A'-C-C' line.

2. Segment D-D 'is an artificial extension of the segment E-D and it has no correct technical justification. The correct course of this segment is specified in documents GRE-79-23, GRE-79-24 and VGL-10-09 (line 6, segment E'-D ''), as the same glare conditions regardless of the reflector mounting height.

3. The IWG-VGL group proposed that the CoP requirements would be the same as for the type-approval. Therefore, Poland will not support the proposal to extend them by another 0.4%. (p. 1.3.2 Annex 9 in the GRE-82-25), because adding the uncertainty of inclination measurement in real conditions and taking into account the unevenness of the diagnostic floor, there is a real danger that the cut-line will be above the horizon and the range of road illumination will be shortened below the acceptable distances.

