

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:

...

$0.5\text{ m} \leq h \leq 1.0\text{ m}$:

~~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 %;

$1.0\text{ m} < h \leq 1.2\text{ m}$:

~~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 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~~

$1.2\text{ m} < h \leq 1.5\text{ m}$:

~~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 %;~~

$0.5\text{ m} \leq h \leq 0.7\text{ m}$:

the minimum vertical inclination limit is -0.2 %

and

the maximum vertical inclination limit is - 1.4 %

$0.7 \text{ m} \leq h \leq 1.0 \text{ m}$:

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 %;

$1.0 \text{ m} < h \leq 1.2 \text{ m}$:

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 %;

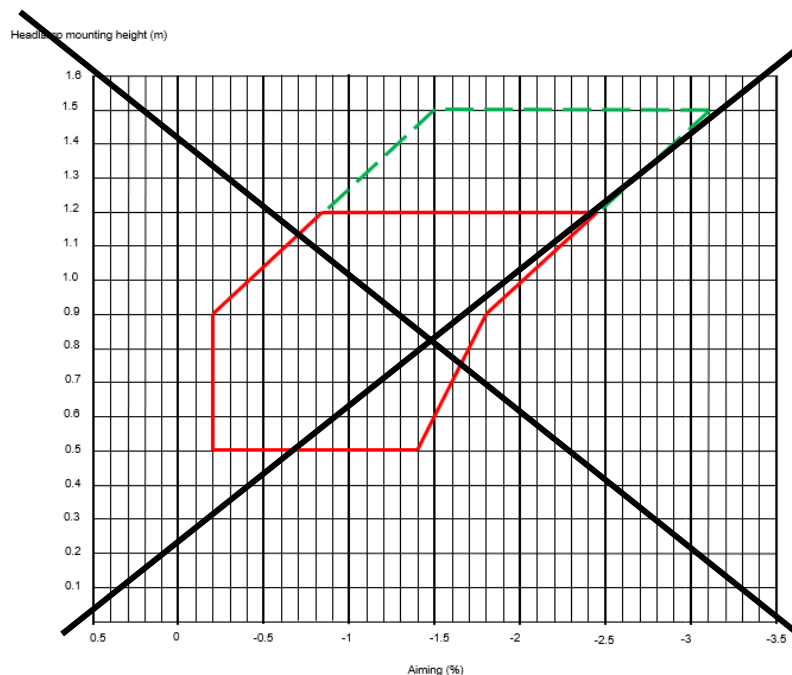
For category N₃G (off-road) vehicles, where the headlamps exceed a height of 1,200 mm the limits for the vertical inclination of the cut-off shall be between: ~~-1.5 per cent and -3.5 per cent~~

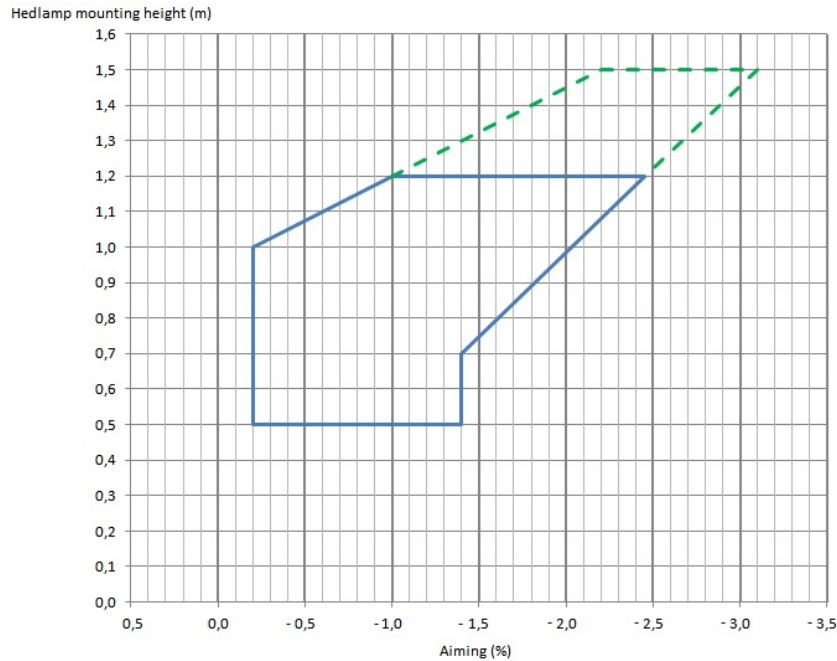
$1.2 \text{ m} < h \leq 1.5 \text{ m}$:

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 %;





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.:

$0.5\text{ m} \leq h \leq 0.9\text{ m}$

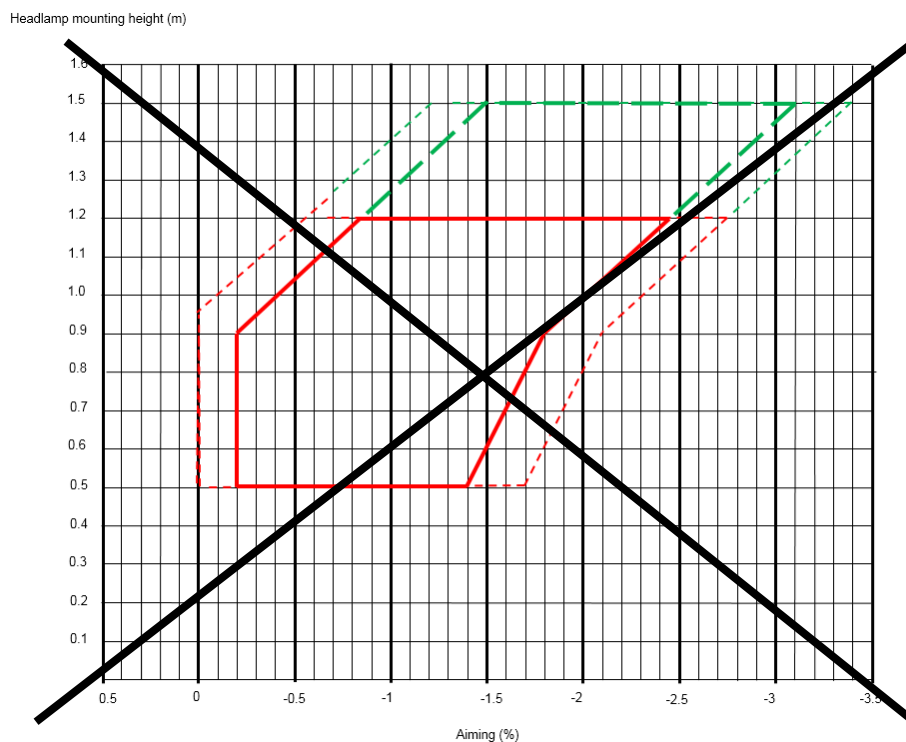
~~0% minimum vertical inclination and 1,7 % to 2,1 % maximum vertical inclination, in relation to the dipped beam headlamp mounting height.~~

$0.9\text{ m} < h \leq 1.2\text{ m}$:

~~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~~

$1.2\text{ m} < h \leq 1.5\text{ m}$:

~~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 an 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.

- 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.

Headlamp mounting height (m)

