

Proposal for draft amendment to Regulation No. 53 (Installation of lighting and light-signalling devices for L3 category vehicles)

Note: The text reproduced below was prepared by the expert from the International Motorcycle Manufacturers Association (IMMA) in order to change the inward visibility angle of front position lamp in Regulation No. 53. The modifications to the current text are marked in bold or strikethrough characters.

I. PROPOSAL

6.6.4. Geometric visibility

Horizontal angle: 80 degrees to left and to right for a single lamp:
the horizontal angle may be 80 degrees outwards and ~~45~~ **20** degrees inwards for each pair of lamps.

Vertical angle: 15 degrees above and below the horizontal. The vertical angle below the horizontal may be reduced to 5 degrees, however, if the height of the lamp is less than 750 mm.

II. JUSTIFICATION

1. Following the approvals of "deletion of stipulation that prohibits 'combined' and 'reciprocally incorporated' of the direction indicator lamp (R53)" as a result of 152nd WP29 and "addition of amber to the colours of the front position lamp (R50, R53)" as a result of 153rd WP29, reciprocal incorporation of the direction indicator lamp and front position lamp were made possible.
2. However, because the horizontal visibility angle of the pairing front position lamp is 45 degrees inwards, which is different from that of the indicator lamp (20 degrees), we propose that the horizontal angle of the front position lamp should be 20 degrees inwards to conform to that of the direction indicator lamp. The horizontal angle of the direction indicator lamp is 20 degrees inwards, which has no problem in terms of visibility.
3. In the case of the distance between reference axes of the pairing front position lamp being 1100mm, that is considered to be the MAX for the L3 category, narrowing the horizontal angle from 45 degrees to 20 degrees inwards will only change the lamp's visibility distance on the median longitudinal plan of the vehicle by 0.961m, which has no impact on the vehicle visibility from either pedestrians or other road users.
4. Lamp visibility distance with the horizontal angle of 45 degrees inwards:
 $D1=1100\text{mm} \times 0.5\cot 45^\circ = 550\text{mm}$
5. Lamp visibility distance with the horizontal angle of 20 degrees inwards:

