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INLAND TRANSPORT COMMITTEE

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Working Party on Lighting and Light-Signalling

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Item 4.6. of the provisional agenda

REGULATION No. 48
(Installation of lighting and light-signalling devices)

Provisions for the installation of end-outline marker lamps

Proposal for draft amendments to Regulation No. 48

Submitted by the expert from Japan

The text reproduced below was prepared by the expert from Japan proposing to reduce the required downward visibility angle of end-outline lamps in cases when the visibility zone is obscured by installed rear-view mirror or other device for indirect vision. The modifications to the current text of the Regulation (up to Supplement 1 to the 03 series of amendments) are marked in **bold** characters.

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**Note**: This document is distributed to the Experts of the Working Party on Lighting and Light-Signalling (GRE) only.

GE.06-
A. PROPOSAL

Paragraph 6.13.5., amend to read:

"6.13.5. Geometric visibility

Horizontal angle: 80º outwards.

Vertical angle: 5º above and 20º (5º if the shape of the bodywork makes it impossible to meet the requirements for geometric visibility due to the installed rear-view mirror or other devices for indirect vision regulated by each Contracting Party) below the horizontal."

B. JUSTIFICATION

In cases of cab-over trucks, unlike vans, the cab itself is the highest position of the vehicle, therefore, the required downward visibility angle (alpha 2) between end-outline marker lamp and rear-view mirror cannot be fulfilled.

Japanese manufacturers of large-sized trucks had made experiments to study the limit of the angle of downward visibility (alpha 2) on cab-over trucks. The results showed that the limit was 5 degrees (see Figures 1 and 2).

The Japanese domestic legislation provides an exemption for geometric visibility requirements for end-outline marker lamps if a rear-view mirror is installed within the downward visibility zone.
Japanese domestic requirements

The mirror partly interferes with visibility, but the problem may be solved by changing its form.

Line where the downward visibility (alpha 2) is 5° (Can comply with the requirement up to 5°).

The body of the mirror partly interferes with visibility, but we cannot move it because of the vision requirements.

Plane where the downward visibility angle is 20°.

Plane where the angle β is 0°.
Japanese domestic requirements

- Can comply with the requirement for inside angle of visibility by changing the form of the mirror.
- Line where the downward visibility (alpha 2) angle is 5º.
- Plane where the inward visibility angle is 0º.
- Plane where the downward visibility angle is 20º.
- Incompatible with the requirement for the angle of visibility because the body of the mirror is to be installed within the range of the angle of visibility.

Figure 2