

Japan's Comment to GRE-CM-1-11

Transmitted by expert from Japan

Note: The amendments to the texts are marked in ***bold and italic characters***, and existing texts to be deleted are double crossed through.

Note: This document is distributed to the Experts on Passive Safety only.

General View;

1. Installation of retro-reflective markings is optional in Japan, where R104 has been adopted. As regards R48, it has been adopted for vehicles of M1 and N1 categories only; however, discussions are being held with a view to applying the regulation to other categories as well after the issues concerning mandatory installation of centre side turn signals on heavy-duty vehicles, mandatory lighting of stop lamps in conjunction with activation of the retarder, etc. have been solved with the cooperation of other Contracting Parties.
2. Japan has adopted R48 for N1 vehicles, and its relevant national regulation has been harmonised with R48 including installation requirements. Accordingly, the current amendments will affect the Japanese national regulation whether the installation is optional or not. For this reason and also for extending the scope of application to vehicles of other categories than M1 and N1 (i.e., complete adoption of R48), Japan proposes the following changes to the amendments proposed by Chairman.

Concrete comments;

- 5.15. The colours of the light emitted by the lamps are the following:
- ...
- | | |
|----------------------|--|
| cornering lamp: | white |
| conspicuity marking: | white or yellow to the side;
red [, white and yellow] to the rear. ^{1/} |

Justification; In Japan, white retro-reflector, retro-reflective plates and markings are prohibited at the rear of vehicles.
This issue was already discussed when this requirement was added to R48.

^{1/} Nothing in this Regulation shall preclude the contracting Parties applying this Regulation from [allowing]/[prohibiting] the use of yellow ~~or white~~ conspicuity markings to the rear in their territories.

6.21.1. Presence

Prohibited: on vehicles of category M₁.

Optional: to the side of:

- vehicles less than or equal to 6 m in length of the categories M₂, [M₃,] N₁, N₂, O₁ and O₂;
- ~~{chassis-cabs}~~;
- [M₃-class I, city-buses];

to the rear of

- vehicles less than or equal to 2.10 m in width of the categories M₂, [M₃,] N₁, N₂, O₁ and O₂;
- ~~{chassis-cabs and tractor units}~~;
- [M₃-class I, city-buses].

Mandatory: contour **or line** markings to the side and rear of all other vehicles.
~~However, line marking may be installed where the shape, structure, design or operation requirements of the vehicle make it impracticable to install a contour marking.~~

Justification; Chassis-cab: Vehicles in the manufacturing process (semi-tractors before painting are included) shall be optional. This is because following the installation of the necessary structure onto the chassis, the outer panels, including the cab, will be repainted by high temperature baking at the request of the user, necessitating the removal of the retro-reflective marking materials and thus causing waste.

The type of contour or line marking on the vehicle side and rear shall be selectable. Since contour markings are difficult to install on certain types of vehicles, especially those of special equipment vehicles, the wording “contour or line markings” is preferable. This wording is better than the originally proposed sentence (“However, line marking may be installed where the shape, structure, ... of the vehicle make it impracticable to install a contour marking.”) because the original sentence may be interpreted differently by each lab. Furthermore, from a standpoint of conspicuity, contour marking is not necessarily more effective than line marking.

6.21.2. Number

- 1 conspicuity marking ~~on~~ to the rear;
- 1 conspicuity marking ~~on~~ to each side;

6.21.4.1. Width

The conspicuity marking shall be as close as practicable to the edge of the vehicle ~~and reach to within [150] mm of the overall width of the vehicle.~~

Justification; It may be difficult to install on the outermost rim for some vehicles such as special-equipment vehicles. In addition, it is assumed that it causes little problem in vehicle width visibility by combination with other lamps and stipulation for 80% of vehicle width

6.21.4.2 Length

The conspicuity marking shall be as close as practicable to the ends of the vehicle ~~and reach to within [150] mm of the overall length of the vehicle.~~

The cumulative horizontal length of the conspicuity marking elements, as mounted on the vehicle, should equate to at least 80 per cent of the overall length of the vehicle, excluding any horizontal overlap of individual elements.

However, for the semi-tractors, the above requirement shall be applied only on the side of the cab.

Justification; It may be difficult to install on the outermost rim on special-equipment vehicles and cabin blocks. Installing on 80% of vehicle width causes little problem.

In the case of semi tractor, although it can install on the side of the cab, it cannot install near the tire. Because there is almost nothing to run without a semi tractor's leading a trailer, we request to attach only on the side of the cab part of a semi tractor.

6.21.4.3. Height

Upper element(s) of contour markings

As high as practicable, ~~but within 400 mm of the upper extremity of the vehicle.~~

Justification; Within 400 mm from the topmost block shall be deleted (the topmost block is not clear for some vehicles such as the top of tank vehicles, crane vehicles and bucket vehicles, and it may be impossible to install).

6.21.7.2. In case of a non-continuous conspicuity marking the distance between ~~adjacent~~ elements should be as small as possible ~~and should not exceed 50 per cent of the shortest adjacent element length.~~

Justification; Application is difficult on some sections such as the cabin block and the section between the cabin block and load block, and considerable inconvenience is caused by its application

6.21.7.4 Other retro-reflective *plates and signal markings* fitted in accordance with national use requirements may be considered as part of the conspicuity marking, for the purposes of calculating the length of the conspicuity marking and its proximity to the side and/or end of the vehicle, even if the retro-reflective marking is of a different colour.

Justification; Though R70 is not stipulated in R48, it is mandatory in many nations. We would like to check if the large rear reflective plate of R70 is applied for this stipulation.

In particular, R70 and R104 are made of equivalent retro-reflective materials, and equivalent effect can be ensured when the two occupy 80% of the vehicle width in total.