

**New proposal for
“Front and Close-proximity Passenger-side”
Field of vision.**

2019.9.26 (VRU-Proxi IWG #11)

JAPAN.

Background

Japan has mandatory regulation for driver vision for safety of vehicle front and passenger side direction when the vehicle moving forward.

Japan has been harmonized R46.

Therefore, it is currently described as exemption in R46.

“1.2. This Regulation does not apply to devices other than those prescribed under paragraph 1.1.(a) and their installation, for observing the vision area(s) immediately adjacent to the front and/or the passenger's side of vehicles of category M1, M2, M3, N1 and N2 < 7.5 t.”

Originally, it was proposed with reversing in GRSG until 2015. VRU-Proxi started in 2016, Japan decided to focus on reversing first by some reason.

Therefore, Japan would like to propose it to UN again.

Purpose

To provide driver vision for safety of vehicle front and passenger side direction when the vehicle moving forward.

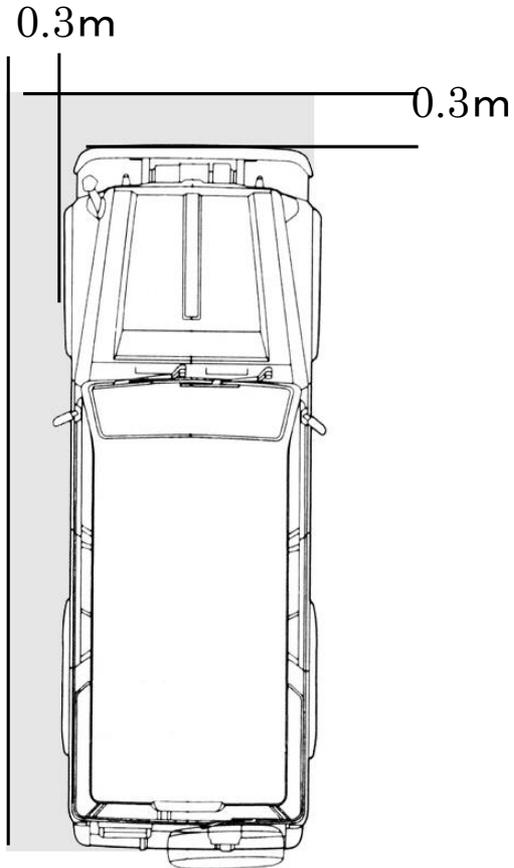
In order to achieve the purpose, "Front and Close-proximity Passenger-side " view was proposed.

Scope

M1~3, N1, N2 ≤ 7.5 t.

(N2 > 7.5t, N3 are covered by Class V and VI).

Definitions of Field of View



Swipe pole (0.3m diameter, 1m height)

Requirement

At least part of pole should be visible within the field of view.

In addition,
Static test and

The driver's ocular point adjustment same as R-125 were added.

Multimodal approach for Field of Vision

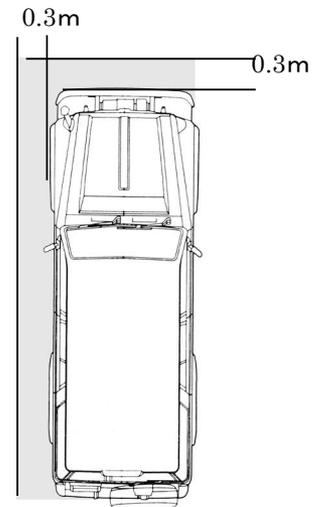
Driver can be perceived VRU existence Field of Vision by;

- Direct vision from driver's ocular points
- Indirect vision
 - Camera monitor system (side-view or around-view etc.)
 - Combination of mirrors
- Detection systems (e.g. Sonar system)

In case of detection system, it needs clearance (non-detection area) like Reversing test procedure.

Detection need to be available from 0.2~0.3m.

Test method is similar as reversing detection system.



Discussion points

- ✓ NEW regulation or combined with MOIS or amendments of R46.
 - ✓ Filed of view is very similar to Class V and VI of N categories
 - ✓ This proposal for M categories and small N categories
 - ✓ Multimodal approach including detection system
 - ✓ R46 Class VI allow vision support system such as detection system

- ✓ Detection system capability
 - ✓ Availability of detection system for passenger side

- ✓ Combinations of modalities
 - ✓ Direct view + Front close proximity mirror
 - ✓ Combination of several camera integrated into one image
 - ✓ Detection + Camera
 - etc.

Further activity

- ✓ Japan will prepare regulation proposal draft for next VRU-Proxi #12.
*The version not include detection system is existing as VRU-08-10.
- ✓ Japan will show accidentology for effectiveness based on Japanese regulation in VRU-Proxi #13.
- ✓ VRU-Proxi TOR for Forward motion is 2020 April GRSG

Thank you for your attentions.