



Quintessences

Proposal for Category C of Germany and Japan



Topics

- 2 Step Initiation (by 2 deliberate actions)
- Monitoring to the rear and to the side
- Restriction to a designated infrastructure
- Hands On during lane change manoeuvre

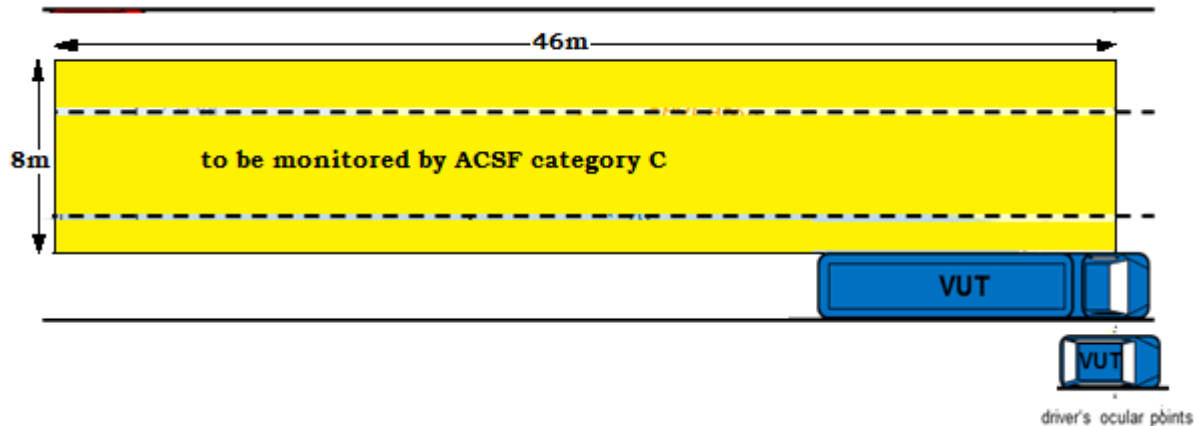


2 Step Initiation (by 2 deliberate actions)

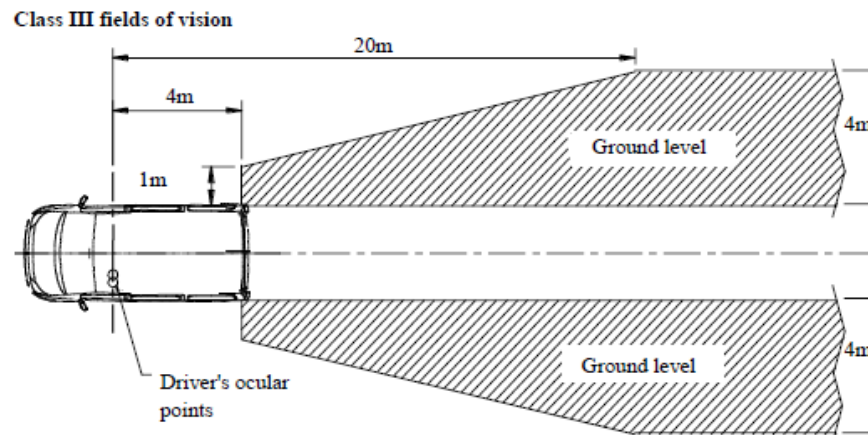
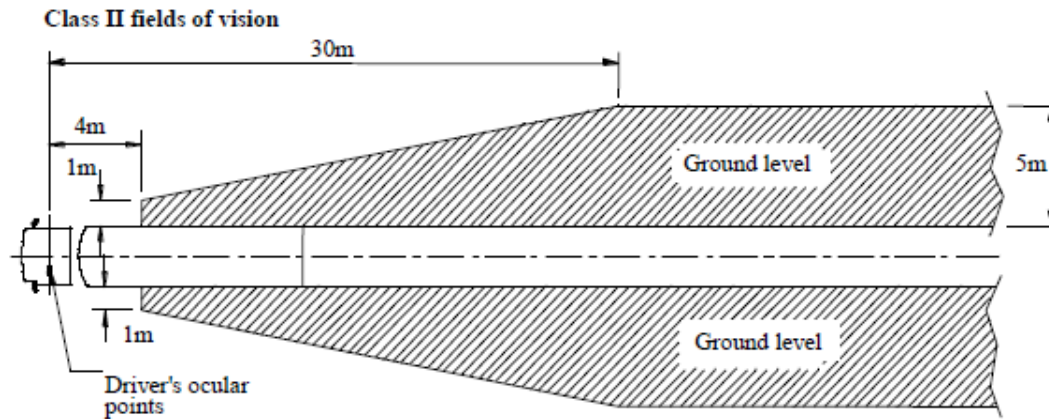
- 5.6.4.2.11.4.** Any single lane change manoeuvre shall be initiated only if commanded by two subsequent deliberate actions of the driver, within an interval of maximum [10s].
- 5.6.4.2.11.4.1.** The first deliberate action of the driver to start the lane change procedure shall be the manual activation of the direction indicator lamps to the intended side for the lane change.
- 5.6.4.2.11.5.1.** The second deliberate action of the driver to start the lane change manoeuvre shall be a manual steering input in the direction of the deliberate lane change with a required steering input to the driver of more than the steering control effort necessary to override the directional control provided by the corresponding ACSF of category B1.

Monitoring to the rear and to the side

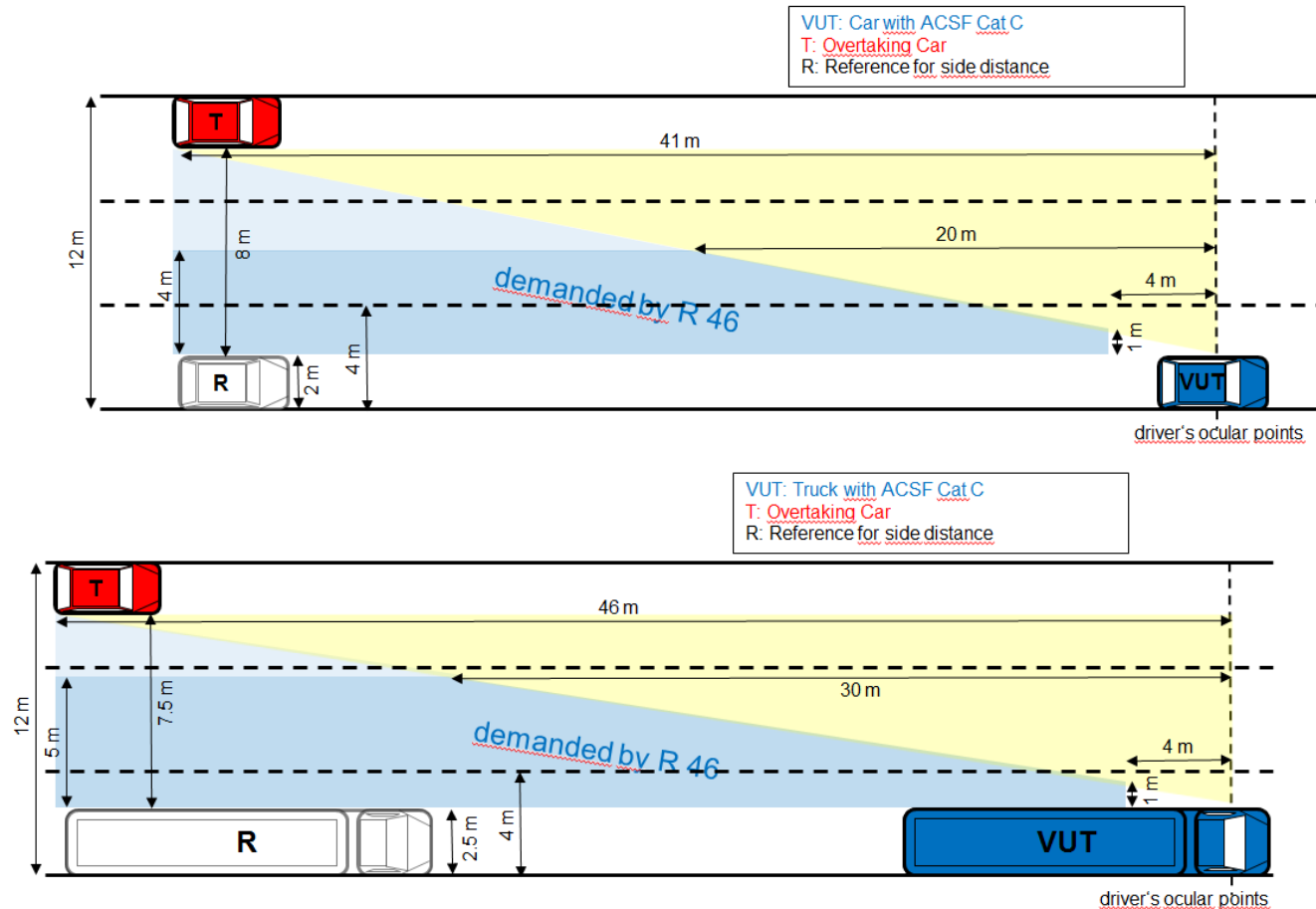
A range of 8m to the side and 46m to the rear of the vehicle shall be monitored by the system. This area is based on the requirements of field of vision in R-46 (devices for indirect vision).



Monitoring to the rear and to the side



Monitoring to the rear and to the side





Monitoring to the rear and to the side

5.6.4.2.12.1.

- **The vehicle with ACSF category C shall be equipped with means to monitor the driving environment, to recognise other road users at the side and the rear of the vehicle.**
- **The vehicle shall not carry out a lane change if a collision with a vehicle at the side or at the rear of the vehicle is imminent.**
- **The vehicle shall abort an already started lane change manoeuvre and return to the initial lane if a collision with a vehicle at the side or at the rear of the vehicle is imminent.**
- **The vehicle shall indicate to the driver if a vehicle is at the side or at the rear of the vehicle by an optical warning signal.**



Restriction to a designated infrastructure

5.6.4.1.4.

It shall be technically ensured that the activation of a system of Category C is only possible on a road section which is not dedicated to pedestrians or cyclists and which has a physical or constructional separation of traffic moving in opposite directions and which has at least two lanes for the direction the vehicle is driving.



Hands On during lane change manoeuvre

5.6.4.2.7.

- During the lane change procedure and in the speed range between 10 km/h or V_{smin} , whichever is higher, and V_{smax} , it shall provide a means of detecting that the driver is holding the steering control.
- When the system detects that the driver is not holding the steering control, an optical warning signal shall be provided. This signal may be the same as the signal specified below in this paragraph.
- The optical warning signal shall indicate to the driver to place their hands on the steering control. It shall consist of pictorial information showing hands and the steering control and may be accompanied by additional explanatory text or warning symbols.



Hands On during lane change manoeuvre

- **If, after a period of no longer than 1 second the driver is not holding the steering control, at least the hands or steering control in the pictorial information provided as optical warning signal shall be shown in red and an acoustic warning signal shall be provided.**
- **The warning signals shall be active until the driver is holding the steering control, or until the system is deactivated, either manually or automatically.**



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