

Proposal for amendments regarding lane change

Modifications to the existing text of UN-Regulation No. 157 are in **bold** for new or ~~strikethrough~~ for deleted characters.

UK modifications to UNR157-11-04 are in **blue bold** for new or ~~blue-strikethrough~~ for deleted characters.

I. Proposal

5.2.6.7.2.1. When there is an approaching vehicle

~~An approaching vehicle in the target lane should not have to~~ The ALKS vehicle shall not make an approaching vehicle in target lane decelerate but where this is **reasonable necessary [due to the traffic situation]** ~~it shall not be~~ at a higher level than A m/s², B seconds after the ALKS vehicle starts ~~crossing a lane marking the lane change manoeuvre~~, to ensure the distance between the two vehicles is never less than that which the ~~lane change~~ **ALKS** vehicle travels in C seconds.

With:

- (a) A equal to **[3.0] m/s²**
- (b) B equal to:
 - (i) **[0.4] seconds after the ~~outside edge of the tyre tread of the vehicle's front wheel closest to the lane marking crosses the outside edge of the lane marking~~ start of the lane change manoeuvre**, provided **that the full width of the approaching vehicle was detected by the ALKS vehicle during its lateral movement for at least 1.0s there was at least 1.0 s lateral movement of the ALKS vehicle within the starting lane that was in principle visible to an the approaching vehicle from the rear without an obstruction** before the LCM starts; or
 - (ii) **[1.4] seconds after the ~~outside edge of the tyre tread of the vehicle's front wheel closest to the lane marking crosses the outside edge of the lane marking~~ start of the lane change manoeuvre**, provided **there was not at least 1.0 s lateral movement of the ALKS vehicle within the starting lane in principle visible to an approaching vehicle from the rear before the LCM starts**.
- (c) C equal to **[1.0] second**.

~~5.5.2.1.~~ The minimum risk manoeuvre shall bring the vehicle to standstill unless the system is deactivated by the driver during the manoeuvre.

This shall be in a target stop area according to paragraph 5.2.6., if:

- (i) **the ALKS is capable of performing a lane change during an MRM; and**
- (ii) **the target stop area can be considered minimising the risk under the given circumstances (e.g. traffic situation, environmental conditions, system failures).**

Otherwise, within its current lane, or in the case the lane markings are not visible, following an appropriate trajectory taking into account surrounding traffic and road infrastructure.

- 5.5.1.2. During the minimum risk manoeuvre the vehicle shall be slowed down ~~inside the lane or, in case the lane markings are not visible, remain on an appropriate trajectory taking into account surrounding traffic and road infrastructure~~, with an aim of achieving a deceleration demand not greater than 4.0 m/s².

Higher deceleration demand values are permissible for very short durations, e.g. as haptic warning to stimulate the driver's attention, or in case of a severe ALKS or severe vehicle failure.

Additionally, the signal to activate the hazard warning lights shall be generated with the start of the minimum risk manoeuvre **but suspended during a LCP.**

8.2.1.

...

(e) Start of Emergency Manoeuvre;

(i) **Remaining in lane**

(ii) **Crossing lane**

(f) End of Emergency Manoeuvre;

(i) **Remaining in lane**

(ii) **Crossing lane**

...

(k) Severe vehicle failure-;

(l) **Start of Lane Change Procedure;**

(m) **End of Lane Change Procedure.**

II. Justification

1. .

2. .
