

GENERAL SAFETY REGULATION – PROPOSAL FOR AMENDMENTS

Explanation:

- The left column is the text of the Commission's proposal to be amended
- The right column is the suggested amendment (text modified is in bold and italic)
- The justification explains the proposed changes

1) Proposed different systems/solutions

Article 3 – paragraph 3 (1)	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
(3) 'intelligent speed assistance' means a system to aid the driver in observing the appropriate speed for the road environment by providing haptic feedback through the accelerator pedal with speed limit information obtained through observation of road signs and signals, based on infrastructure signals or electronic map data, or both, made available in-vehicle;	(3) ' <i>speed limit information system</i> ' (meaning ' <i>intelligent speed assistance</i> ' in a way of <i>informing about the current speed limit</i>) means a system to aid the driver in observing the appropriate speed for the road environment by providing haptic feedback through the accelerator pedal with speed limit information obtained through observation of road signs and signals, based on infrastructure signals or electronic map data, or both, made available in-vehicle;
Article 6 – paragraph 1a	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
(a) intelligent speed assistance;	(a) <i>Intelligent speed assistance/speed limit information system</i>
Annex 2 – page 18	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
Intelligent speed assistance	<i>Intelligent speed assistance/speed limit information system</i>
Article 6 – paragraph 2	
<i>Text proposed by the Commission</i>	<i>Amendment</i>

<p>2. Intelligent speed assistance systems shall have the following minimum specifications:</p> <p>(a) it shall be possible for the driver to feel through the accelerator pedal that the applicable speed limit is reached or exceeded;</p> <p>(b) it shall not be possible to switch off or suppress the system;</p> <p>(c) it shall be possible for the driver to override the system's prompted vehicle speed smoothly through normal operation of the accelerator pedal without need for kick-down;</p> <p>(d) where a cruise control system is engaged, the intelligent speed assistance system must automatically adapt to any lower speed limit.</p>	<p>2. speed limit information systems shall have the following minimum specifications:</p> <p>(a) it shall be able to feel through the accelerator pedal that the applicable speed limit is reached or exceeded; to indicate the current speed limit at any time in the vehicle</p> <p>(b) it shall not be possible for the driver to switch off or suppress the system.</p> <p>(c) it shall be possible for the driver to override the system's prompted vehicle speed smoothly through normal operation of the accelerator pedal without need for kick-down</p> <p>(d) where a cruise control system or a speed limiter is engaged, the intelligent speed assistance system must automatically adapt to any lower speed limit the current speed limit can be adapted by the driver.</p>
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Justification:

Intelligent speed assistance is currently not available with a performance which would be accepted by the customers (reason: too many false warnings and the vehicle is not able to capture the correct speed limit in any circumstance). Therefore, Speed Limit Information System should be used as an effective alternative and infrastructure has to be updated in the same way. The objective of the legislation should not be to prescribe how technology must be specifically designed. Haptic feedback is not necessary for an intelligent speed assistance system to work properly.

Article 3 – paragraph 6	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
<p>(6) 'advanced distraction recognition' means a system capable of recognition of the level visual attention of the driver to the traffic situation and warning the driver if needed;</p>	<p>(6) 'advanced distraction recognition' means a system capable of recognition of the level visual attention of the driver to the traffic situation and warning the driver if needed;</p>

Justification:

There is no reliable technology available to clearly indicate that a driver is being distracted. Enforcement via police controls, automated emergency braking, lane keeping systems and driver education should be considered as effective alternatives to address distraction of the driver

occurring, for example, via the use of smartphone.

Article 6 – paragraph 1d

<i>Text proposed by the Commission</i>	<i>Amendment</i>
(d) advanced distraction recognition	(d) advanced distraction recognition

Justification:

Enforcement via police controls, automated emergency braking, lane keeping systems and driver education should be considered as effective alternatives to address distraction of the driver occurring, for example, via the use of smartphone. There is no reliable technology available to clearly indicate a distracted driver.

Annex 2 – page 20

<i>Text proposed by the Commission</i>	<i>Amendment</i>
Advanced distraction recognition, advanced distraction recognition may also cover drowsiness and attention detection. Distraction avoidance by technical means may also be taken into consideration as an alternative to advanced distraction recognition	Advanced distraction recognition, advanced distraction recognition may also cover drowsiness and attention detection. Distraction avoidance by technical means may also be taken into consideration as an alternative to advanced distraction recognition.

Justification:

Enforcement via police controls, automated emergency braking, lane keeping systems and driver education should be considered as effective alternatives to address distraction of the driver occurring, for example, via the use of smartphone. There is no reliable technology available to clearly indicate a distracted driver.

Article 7 – paragraph 6 (2)

<i>Text proposed by the Commission</i>	<i>Amendment</i>
6. Vehicles of categories M1 and N1 shall be designed and constructed so as to provide for an	6. Vehicles of categories M1 and N1 shall be designed and constructed so as to provide for

enlarged head impact protection zone with the aim of enhancing the protection of vulnerable road users and mitigating their potential injuries in the event of a collision.	<i>an enlarged head impact protection zone with the aim of enhancing the protection of vulnerable road users and mitigating their potential injuries in the event of a collision.</i>
Justification:	
Automated emergency braking addresses the pedestrian protection in a much more effective way than an enlargement of the head impact zone which is not fully effective since for example restricted by several exemption zones like A-pillar. This is proven by the accident analysis.	

Annex 2 – page 15 (2)	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
<p>Pedestrian and cyclist enlarged head impact zone: Child and adult headform test area are bounded by the "adult wrap-around-distance" of 2 500 mm or "windscreen rear reference line" whichever is more forward. Headform contact with A-pillars, windscreen header and cowl is excluded, but shall be monitored.</p>	<p><i>Pedestrian and cyclist enlarged head impact zone: Child and adult headform test area are bounded by the "adult wrap-around-distance" of 2 500 mm or "windscreen rear reference line" whichever is more forward. Headform contact with A-pillars, windscreen header and cowl is excluded, but shall be monitored.</i></p>
Justification:	
Automated emergency braking addresses the pedestrian protection in a much more effective way than an enlargement of the head impact zone which is not fully effective since for example restricted by several exemption zones like A-pillar. This is proven by the accident analysis. A type approval piece of legislation is not intended for monitoring the vehicle performance. This will increase the number of tests without having a (defined) benefit/outcome.	

Article 7 – paragraph 4a (3)	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
<p>(a) it shall be possible to switch off systems only one at a time, and only at standstill with the parking brake engaged, by a complex sequence of actions to be carried out by the driver;</p>	<p><i>(a) it shall be possible to switch off systems only one at a time, and only at standstill with the parking brake engaged, by a complex sequence of actions to be carried out by the driver</i></p>
Justification:	

There are driving situations where the system has to be switched off to ensure that the vehicle is working in the intended way (as for example electronic stability control can be switched off in some driving situations). Non switchable systems may lead to negative safety side effects as users could turn to third parties who may alter the system which is detrimental to safety. The switch off procedure is already prescribed in the relevant UNECE Regulation(s) (UNECE R131).

Annex 2 – page 14

<i>Text proposed by the Commission</i>	<i>Amendment</i>
Frontal offset impact, applies to vehicle categories M1 and N1 with a maximum mass ≤ 3 500 kg	Frontal offset impact, applies to vehicle categories M1 and N1 with a maximum mass ≤ 2 500 kg
<p><u>Justification:</u></p> <p>Heavier vehicles have already a high level of occupant protection according to accident analysis. The most frequent type of impact involving Light Commercial Vehicles is against a passenger car. Additional requirements for front crash for heavier vehicles could jeopardize safety of occupants in smaller cars.</p>	

Annex 2 – page 15

<i>Text proposed by the Commission</i>	<i>Amendment</i>
Side impact, applies to all vehicles of categories M1 and N1 including those with R point of the lowest seat > 700 mm from ground level	Side impact, applies to all vehicles of categories M1 and N1 <i>excludingincluding</i> those with R point of the lowest seat > 700 mm from ground level
<p><u>Justification:</u></p> <p>Heavier vehicles have already a high level of occupant protection according to TRL-CEESAR-accident analysis.</p>	

Annex 2 – page 23

<i>Text proposed by the Commission</i>	<i>Amendment</i>
4 The following vehicles are exempted: -vehicles of	4 The following vehicles are exempted: - vehicles of - vehicles with technical and physical constraints (e.g. snowplough).
<u>Justification:</u> In addition, technical and physical constraints make it impossible to install the collision detection equipment in a way that would ensure their reliable functioning. Vehicles with technical and physical constraints should therefore be exempted from the obligation to install AEBS. It should not be proposed to install AEBS when the system never will work or when the driver forgets to deactivate the system, the vehicle could show uncontrolled braking-manoeuvres.	

2) Comments to detailed solutions, updated definitions

Article 9 – paragraph 5 (4)	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
5. Vehicles of categories M2, M3, N2 and N3 shall be designed and constructed so as to enhance the direct visibility of vulnerable road users from the driver seat.	5. Vehicles of categories M2, M3, N2 and N3 shall be designed and constructed so as to enhance the direct visibility of vulnerable road users from the driver seat. <i>This should be done, for new types of cabs only, within the existing vehicle concepts and according to a new requested vision standard based on a holistic approach (contributions from direct visibility, mirrors, cameras and detection systems).</i>
<u>Justification:</u> The requirement should be precise in order to make it clear for the manufacturers how to implement it and based on the holistic approach. Drivers entire field of view and awareness of surrounding traffic consists of contributions from direct visibility, mirrors, cameras and detection systems. The combined effects of these systems are required to fulfil the drivers needs in complex traffic. Requirements for each part must therefore be based on the sum of all contributions.	

Article 3 – paragraph 11		(5)
<i>Text proposed by the Commission</i>	<i>Amendment</i>	
(11) 'lane-keeping system' means a system monitoring the position of the vehicle with respect to the lane boundary and applying a torque to the steering wheel, or pressure to the brakes, at least when a lane departure occurs or is about to occur and a collision may be imminent;	(11) 'lane-keeping system' means a system monitoring the position of the vehicle with respect to the lane boundary and issuing a warning or applying a torque to the steering system/wheel , or pressure to the brakes, at least when a lane departure occurs or is about to occur and a collision may be imminent ;	
<u>Justification:</u> The lane-keeping systems available on the market are designed to keep the position of the vehicle when a lane departure occurs or is about to occur, without considering a risk of collision. This is done through the steering system – not the wheel. There is no evidence that emergency lane keeping is more effective than lane departure warning		

Article 7 – paragraph 3	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
3. Vehicles of categories M1 and N1 shall be equipped with a lane-keeping system.	3. Vehicles of categories M1 and N1 shall be equipped with a lane-keeping system or lane departure warning system .
<u>Justification:</u> The requirement should be technology neutral or at least leave it up to the manufacturers to choose the most appropriate system as there is no evidence that emergency lane keeping system is more effective than lane departure warning system. A new regulation should refer to UN-ECE-regulation.	

Article 7 – paragraph 4d	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
	(d) lane-keeping systems should apply dynamic corrections to the vehicle's path from 70 km/h to 130 km/h.
<u>Justification:</u>	

The LKA systems might cause safety issues especially for vulnerable road users if used in urban areas (narrow streets, complex road markings when lane fusion or new lane apparition). Therefore, it is proposed that this system is activated from 70km/h to 130 km/h.

Annex 2 – page 16	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
Emergency lane keeping	<i>Emergency</i> lane keeping <i>system</i>
<p><u>Justification:</u></p> <p>The requirement should be technology neutral or at least leave it up to the manufacturers to choose the most appropriate system as there is no evidence that emergency lane keeping is more effective than lane departure warning. The requirements should refer to UN-ECE-regulation (existing R79/R130).</p>	

Article 3 – paragraph 4	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
(4) 'alcohol interlock installation facilitation' means a standardised interface facilitating the fitment of aftermarket alcohol interlock devices in motor vehicles;	(4) 'alcohol interlock installation facilitation' means a standardised <i>interface information data set</i> facilitating the fitment of aftermarket alcohol interlock devices in motor vehicles;
<p><u>Justification:</u></p> <p>Only the information on how to connect an alcohol interlock device should be required.</p>	

Article 5 – paragraph 2	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
2. Tyre pressure monitoring systems shall be designed to avoid resetting or recalibration at a low tyre pressure.	2. Tyre pressure monitoring systems shall be designed to avoid resetting or recalibration at a low tyre pressure technology neutral.
<p><u>Justification:</u></p> <p>The requirement should be technology neutral. Like it is, it requests direct systems. Both direct and indirect systems have been proven to be equally effective in the field.</p>	

A study has been presented to the February session of the GRRF:
<http://www.unece.org/fileadmin/DAM/trans/doc/2018/wp29grrf/GRRF-86-17e.pdf>

Annex 2 – page 17	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
Tyre pressure monitoring for heavy duty	<i>deletion the whole table line</i>
Article 5 – paragraph 1	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
1. Vehicles shall be equipped with an accurate tyre pressure monitoring system capable of giving an in-vehicle warning to the driver when a loss of pressure occurs in a tyre, in the interests of optimum fuel consumption and road safety, over a wide range of road and environmental conditions.	1. Vehicles <i>of categories M1 and N1</i> shall be equipped with an accurate tyre pressure monitoring system capable of giving an in-vehicle warning to the driver when a loss of pressure occurs in a tyre, in the interests of optimum fuel consumption and road safety, over a wide range of road and environmental conditions.
<u>Justification:</u> The requirement should be deleted as there is no evidence of the safety-benefit of the system for trucks and busses. Existing studies dealing with tyre pressure monitoring systems focus on fuel consumption and not on safety.	

Article 3 – paragraph 13	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
(13) 'event (accident) data recorder' means a system recording and storing critical crash-related parameters and information before, during and after a collision;	(13) 'event (accident) data recorder' means a system recording and storing critical crash-related parameters and information before, and during <i>and after</i> a collision;
<u>Justification:</u> EDR records information before and during the crash, not after.	

Article 3 – paragraph 8

<i>Text proposed by the Commission</i>	<i>Amendment</i>
(8) 'reversing detection' means a camera or monitor, optical or detection system to make the driver aware of people and objects at the rear of the vehicle with the primary aim to avoid collisions upon reversing;	(8) 'reversing detection' means a camera or monitor, optical or detection system to make the driver aware of people and objects at the rear of the vehicle with the primary aim to avoid collisions upon reversing;
<u>Justification:</u> The definition should be limited to performance requirements.	

Article 9 – paragraph 3	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
3. Vehicles of categories M2, M3, N2 and N3 shall be equipped with advanced systems capable of detecting vulnerable road users located in close proximity to the front or nearside of the vehicle and providing a warning or avoiding collision with such vulnerable road users.	3. Vehicles of categories M2, M3, N2 and N3 shall be equipped with advanced systems capable of detecting vulnerable road users located in close proximity to the front or nearside of the vehicle and providing a warning or avoiding in case of a risk of a collision with such vulnerable road users. Road users should be applied in a 1st step to cyclists under conditions of low speed manoeuvres and extended in a 2nd step to other vulnerable road users (pedestrians).
<u>Justification:</u> This amendment aims at taking into account development at UNECE-level. This requirement is related to the « blind spot information system / BSIS » as referred to in annexe II with application dates NT = 2022 & AR = 2024. Current discussions at Informal Working Group Vulnerable Road User-PROXI (IWG VRU-PROXI / GRSG (ONU) are limited today only on the detection of cyclists under low speed manoeuvre conditions. The other vulnerable road users shall be considered later on.	

3) Comments to consistency of rulemaking (UN-ECE etc.)

Article 3 – paragraph 7	
<i>Text proposed by the Commission</i>	<i>Amendment</i>

(7) 'emergency stop signal' means rapid flashing stop lamps to indicate to other road users to the rear of the vehicle that a high retardation force is being applied to the vehicle relative to the prevailing road conditions;	(7) 'emergency stop signal' means rapid flashing stop lamps <i>or direction-indicator lamps</i> to indicate to other road users to the rear of the vehicle that a high retardation force is being applied to the vehicle relative to the prevailing road conditions;
Justification:	
UNECE regulation R48 foresees the choice of stop lamps or direction-indicator lamps to be used for the emergency stop signal. This regulation should be consistent with R48.	

Article 9 – paragraph 4a/b/c	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
<p>(a) it shall be possible to switch off systems only one at a time, and only at standstill with the parking brake engaged, by a complex sequence of actions to be carried out by the driver;</p> <p>(b) the systems shall be in normal operation mode upon each activation of the vehicle master control switch;</p> <p>(c) shall be possible to easily suppress audible warnings, but such action shall not at the same time suppress system functions other than audible warnings.</p>	<p>(a) it shall be possible to switch off systems <i>only one at a time, and only at standstill with the parking brake engaged, by a complex sequence of actions to be carried out by the driver</i></p> <p>(b) <i>the systems shall be in normal operation mode upon each activation of the vehicle master control switch;</i></p> <p>(c) <i>shall be possible to easily suppress audible warnings, but such action shall not at the same time suppress system functions other than audible warnings.</i></p>
Justification:	
<p>The principal of mutual recognition should be respected. Existing UNECE regulations should be duly considered. Further details for switching off systems are already defined in existing UN-regulations.</p> <p>(a) The proposed switch off “one at a time at standstill” could be misinterpreted as an invitation to switch off highly beneficial driver assistance systems. This would undermine the acceptance of assistance systems overall – to the massive disadvantage for road safety.</p> <p>(b) Is already current law</p> <p>(a) and (c) additional provisions are not feasible because these parts would not be in line with the UNECE regulations R 130 or the R 131 type-approval. 347/2012 and 351/2012 should be repealed. These provisions could be changed in the UNECE-regulations only, but generally not recommendable. The warning function is the most effective measure to improve road safety in the cascade of the functioning of an assistance system by bringing the attention for a potentially critical situation to the driver. To allow for easily suppressing the most effective part of a driver assistance</p>	

system will result in a far lower effectiveness of assistance systems in real life traffic and rather will endanger road safety.

Article 11	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
(b) systems to provide the vehicle with real time information on the state of the vehicle and the surrounding area	(b) systems to provide the vehicle with real time information on the state of the vehicle and the surrounding area
Justification: The requirements should be technology neutral.	

4) Timing of implementation

Article 17	(6)
<i>Text proposed by the Commission</i>	<i>Amendment</i>
It shall apply from [PO: Please insert the date 36 months following the date of entry into force of this Regulation].	It shall apply from [PO: Please insert the date 36 months following the date of entry into force of this Regulation]. The delegated acts referred to in article 12 shall be published at least 24 months before their application.
Justification: New or updated requirements need a reasonable period of time for manufacturers to make sure to comply with these regulations. If there is an unspecified time period to adopt delegated acts, there is a high risk that affected manufacturers cannot react within the remaining time slot until the date of application.	

Annex 2 – page 16	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
Heavy duty direct vision	Heavy duty direct vision for new types of cabs only, within the existing vehicle concepts and according to a new requested vision standard

	<i>based on a holistic approach (contributions from direct visibility, mirrors, cameras and detection systems).</i>
<u>Justification:</u>	
<p>The requirement should be precise in order to make it clear for the manufacturers how to implement it and based on the holistic approach. Drivers entire field of view and awareness of surrounding traffic consists of contributions from direct visibility, mirrors, cameras and detection systems. The combined effects of these systems are required to fulfil the drivers needs in complex traffic. Requirements for each part must therefore be based on the sum of all contributions.</p>	

Annex 2 – page 23	
<i>Text proposed by the Commission</i>	<i>Amendment</i>
<p>D: Date for refusal to grant EU type-approval: [PO: Please insert the date 48 months after the date of application of this Regulation] Date for the prohibition of the registration of vehicles, as well as the placing on the market and entry into service of components and separate technical units: [PO: Please insert the date 84 months after the date of application of this Regulation]</p>	<p>D: Date for refusal to grant EU type-approval: [PO: Please insert the date 48 months after the date of application of this Regulation] <i>Date for the prohibition of the registration of vehicles, as well as the placing on the market and entry into service of components and separate technical units:</i> <i>[PO: Please insert the date 84 months after the date of application of this Regulation]</i></p>
<u>Justification:</u>	
<p>New Direct Vision requirements should apply when designing new cabin/body. For existing designs, safety benefits will be brought by VRU detection systems. Transitional provisions for direct vision should be kept at 2035.</p>	

5) Questions

Article 9 – paragraph 6	
<i>Text proposed by the Commission</i>	<i>Amendment</i>

<p>6. Vehicles of categories M2 and M3 with a capacity exceeding 22 passengers in addition to the driver and constructed with areas for standing passengers to allow frequent passenger movement shall be designed and constructed so as to be accessible by persons with reduced mobility, including wheelchair users.</p>	
<p><u>Justification:</u> Higher requirements than today for persons with reduced mobility?</p>	