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WORKING PAPER

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WORKING DOCUMENT

From:	Presidency
To:	Working Party on Technical Harmonisation (Motor vehicles)
Subject:	2-column document (comparison: GA vs. EP amendments) prepared by the Commission

text in yellow: EP text to be reviewed in the Council

text in green: EP text identical with GA

Commission position: not indicated in this document

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858 and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee[1],

Having regard to the opinion of the Committee of the Regions[2],

Acting in accordance with the ordinary legislative procedure,

Whereas:

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1 OJ C , , p. .

2 OJ C , , p. .

(1) Regulation (EU) 2018/**858** of the European Parliament and of the Council[3+] lays down administrative provisions and technical requirements for the type-approval of new vehicles, systems, components and separate technical units with a view to ensuring the proper functioning of the internal market and in order to offer a high level of safety and environmental performance.

(2) This Regulation is a regulatory act for the purposes of the EU type-approval procedure laid down by Regulation (EU) 2018/**858**[+]. Therefore, Annex II to that Regulation should be amended accordingly.

(2a) Road safety in the European Union requires a coordinated policy at international level in the framework of the UNECE convention and especially in the working party 29 (WP.29) and an integrated approach at Union, national, regional and local level. It is therefore necessary to coordinate actions and measures taken by different authorities in key components of the road safety covering vehicles, driving behaviours and road signs and infrastructures;

(3) Over the past decades, developments in vehicle safety have contributed significantly to the overall reduction in the number of road fatalities and severe injuries. However, these reductions have recently stalled in the Union due to various factors, such as structural and behavioural factors, and without new initiatives on general road safety, the safety effects of the current approach will no longer be able to off-set the effects of increasing traffic volumes. Therefore, the safety performance of vehicles	(3) Over the past decades, developments in vehicle safety have contributed significantly to the overall reduction in the number of road fatalities and severe injuries. However~~, these reductions have recently stalled in the Union due to various factors, such as structural and behavioural factors, and~~, ***25 300 people died in 2017 on EU roads, a figure that has stagnated*** in the ***last four years. Moreover, 135 000 people are seriously injured in collisions every years. The European Union shall do its utmost to reduce***

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3 Regulation (EU) 2018/**858** of the European Parliament and of the Council on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (OJ L **151**, **14.06.2018**, p. **1**)

\+ PO: please insert in the text the number of the Regulation contained in document PE-CONS No73/17 (2016/0014 (COD)) and insert the number, date and OJ reference of that Regulation in the footnote.

needs to be further improved as part of an integrated road safety approach and in order to protect vulnerable road users better.	***these figures drastically aiming at the Vision Zero goal of "no fatalities". In addition[4] to the safety measures to protect vehicle occupants, the implementation of specific measures to prevent fatalities and injuries of vulnerable road users***, such as ***cyclists and pedestrians, is needed to protect users outside of the vehicle.*** ~~w~~***W***ithout new initiatives on general road safety, the safety effects of the current approach will no longer be able to off-set the effects of increasing traffic volumes. Therefore, the safety performance of vehicles needs to be further improved as part of an integrated road safety approach and in order to protect vulnerable road users better.

(3a) The definition of vulnerable road users should include motorised road users such as segways, scooters, wheelchairs and e-bikes.

(4) Technical progress in the area of advanced vehicle safety systems offers new possibilities for reducing casualty numbers. In order to minimise the number of fatalities, some of the relevant new technologies need to be introduced.	(4) Technical progress in the area of advanced vehicle safety systems offers new possibilities for reducing casualty numbers. In order to minimise the number of ***severe injuries and*** fatalities, ~~some~~ ***a package*** of the relevant new technologies need to be introduced.

(5) Within the context of Regulation (EC) No 661/2009 of the European Parliament and of the Council[5], the Commission assessed the feasibility of extending the existing requirement in that Regulation to install certain systems (for example, advanced emergency braking systems and tyre pressure monitoring systems) in certain categories of vehicle so that it applied to all vehicle categories. The Commission also assessed the technical and economic feasibility and market maturity of imposing a new requirement to install other advanced safety features. Based on those assessments, the Commission published a report for the European Parliament and the Council in December 2016 entitled "Saving Lives: Boosting Car Safety in the EU"[6]. The staff working document accompanying that report identified and put forward 19 potential regulatory measures that would be effective in further reducing the number of road accidents and road fatalities and injuries.

Recital 5a (new)

To ensure technology neutrality as regards tyre pressure monitoring systems, the performance requirement should allow both direct and indirect tyre pressure monitoring systems.

(5a [sic]) The regulatory measures proposed can be effective, in reducing fatalities, decreasing the number of road accidents and mitigating injuries and damage, only if they gain the acceptance of users. Therefore, vehicle manufacturers should do their utmost to ensure that the systems and features provided for in this Regulation are developed in such a way so as to support the driver, ensure the user acceptance and their likeliness of being used. To this end, the functioning of those systems and features and their limitations should also be explained in a clear and consumer-friendly manner in the motor vehicle's user instructions.

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5 Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor, OJ L 200, 31.7.2009, p. 1.

6 COM (2016) 787 final

(6) Intelligent speed assistance, **emergency** lane-keeping systems, driver drowsiness and attention monitoring and **advanced** distraction ~~detection~~ **recognition** and reversing detection systems have a high potential to reduce casualty numbers considerably. In addition, those systems are based on technologies which will be used for the deployment of connected and automated vehicles too. Therefore, harmonised rules and test procedures for the type-approval of vehicles as regards those systems and for the type-approval of those systems as separate technical units should be established at Union level.	(6) ***Advanced emergency braking systems,*** ~~I~~***i***ntelligent speed assistance, ***emergency*** lane-keeping systems, driver drowsiness and ***distraction warning, advanced driver distraction*** ***warning*** and reversing detection systems ***are safety systems that*** have a high potential to reduce casualty numbers considerably. In addition, some of those ***safety*** systems ***form the basis of*** technologies which will be used for the deployment of ~~connected and~~ automated vehicles ~~too~~. ***Any such safety system*** should ***function*** without ***use of any kind of biometric information of drivers or passengers, including facial recognition.*** Therefore, harmonised rules and test procedures for the type-approval of vehicles as regards those systems and for the type-approval of those systems as separate technical units should be established at Union level. ***The technological progress of these systems should be taken into account in every evaluation of the existing legislation, in order to be future proof, strictly adhering to the principle of privacy and data protection, and to support the development towards Vision Zero driving. It should also be ensured that these systems can be used safely, throughout the life cycle of the vehicle.***

Recital 6a (new)

There should be a possibility to switch off the intelligent speed assistance, for instance, when a driver experiences false warnings or inappropriate feedback as a result of inclement weather

conditions, temporary conflicting road markings in construction zones and misleading, defective or missing road signs. Such switch-off feature should be under the control of the driver, last as long as necessary and may be easily switched on by the driver. The system should be always active when switching the ignition on and the driver should always be made aware whether the system is on or off.

Recital 6b (new)

It is widely recognised that the safety-belt is one of the most important and effective vehicle safety features. Safety-belt reminder systems therefore have the potential to further prevent fatalities or mitigate injuries by increasing the safety-belt wearing rates across the Union. For this reason, the ~~General Safety~~ Regulation (EC) No 661/2009 made the safety-belt reminder system already compulsory for the driver seat in all new passenger cars since 2014. This was achieved through the implementation of UN Regulation 16 that contained the relevant technical provisions. Thanks to the adaptation to technical progress of that UN Regulation, it will now also become obligatory to fit all front and rear seats of M_1 and N_1 vehicles, as well as all front seats of N_2, N_3, M_2 and M_3 vehicles with safety-belt reminder systems as from 1 September 2019 for new types and 1 September 2021 for all new motor vehicles.

(7) The introduction of event ~~(accident)~~ data recorders storing a range of crucial vehicle data**, accompanied by requirements for data range, accuracy, resolution and for its collection, storage and retrievability,** over a short timeframe before, during and after a triggering event (for example, the deployment of an airbag) is a valuable step in obtaining more accurate, in-depth accident data. Motor vehicles should therefore be required to be equipped with such recorders. It should also be a requirement that such recorders are capable for recording and storing data in such a way that the data can **only** be used by Member States to conduct road safety analysis and assess the effectiveness of specific measures taken.	(7) The introduction of accident ~~event~~ data recorders storing a range of crucial ***anonymised*** vehicle data over a short timeframe ***shortly*** before, during and immediately after a ~~triggering event~~ ***road accident*** (for example, ***triggered by*** the deployment of an airbag) is a valuable step in obtaining more accurate, in-depth accident data. ***All motor vehicles*** should therefore be required to be equipped with such recorders. ~~It should also be a requirement that such~~ ***These*** recorders ~~are~~ ***should be*** capable for recording and storing data in such a way that the***se*** data can be used by Member States to conduct road safety analysis and assess the effectiveness of specific measures taken ***without the possibility of identifying the owner or the holder of a particular vehicle on the basis of the stored data.***
(8) Any processing of personal data, such as information about the driver processed in event (accident) data recorders or information about the driver on drowsiness and attention monitoring or advanced distraction recognition, should be carried out in accordance with EU legislation on data protection, in particular the General Data Protection Regulation[7]. In	(8) Any processing of personal data, such as information about the driver processed in ~~event~~ ~~(~~accident~~)~~ data recorders or information about the driver***'s*** ~~on~~ drowsiness and attention ~~monitoring~~ or advanced ***driver*** distraction ~~recognition~~, should be carried out in accordance with ***Union*** legislation on data protection, in particular the General Data Protection Regulation[28]. ***Accident data recorders should operate on a closed loop system, whereby the data stored is overwritten,***

[7] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119, 4.5.2016, p. 1.

addition, the processing of personal data collected through the 112-based eCall in-vehicle system is subject to specific safeguards[8].	***and which does not allow the vehicle or driver to be identified.*** In addition***, the driver drowsiness, attention and distraction warning systems should not continuously record nor retain any data other than what is necessary in relation to the purposes for which they were collected or otherwise processed within the closed-loop system. Furthermore***, the processing of personal data collected through the 112-based eCall in-vehicle system is subject to specific safeguards.

Recital 8a

Recognising that driving whilst using a mobile phone or other device significantly impairs driving ability, vehicle manufacturers should publish their tests to show compliance with the human-machine interface (HMI) Guidance Statement of Principles on in-vehicle information and infotainment systems.

Recital 8b (new)

Advanced emergency braking or emergency lane-keeping systems might not be fully operational in some cases, in particular due to shortcomings in road infrastructure. In those cases, the systems should deactivate themselves and give information about the deactivation to the driver. If

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8 Regulation (EU) 2015/758 of the European Parliament and of the Council of 29 April 2015 concerning type-approval requirements for the deployment of the eCall in-vehicle system based on the 112 service and amending Directive 2007/46/EC, OJ L 123, 19.5.2015, p. 77.

they do not deactivate automatically, it should be possible to switch them off manually. Such deactivation should be temporary and last for a period when the system is not fully operational only. Drivers may also need to overrride advanced emergency braking or emergency lane keeping systems, where the functioning of the system could lead to greater risk or harm. This ensures that the vehicles are at all times under the driver´s control, nevertheless the system could also recognise instances where the driver is incapacitated and therefore intervention by the system is needed in order to prevent the worsening of an accident.

(9) Regulation (EC) No 661/2009 exempted vans, sport utility vehicles (SUVs) and multi-purpose vehicles (MPVs) from safety requirements due to seating height and vehicle mass characteristics. Given the increased rate of market penetration of such vehicles (up from only 3% in 1996 to 14% in 2016) and the technological developments in post-crash electric safety checks, those exemptions are outdated and unjustified. Therefore, the exemptions should be removed and the whole range of advanced vehicle system requirements should be applied to those vehicles.

(10) Regulation (EC) No 661/2009 achieved significant simplification of Union legislation by replacing 38 Directives with equivalent Regulations of the United Nations Economic Commission for Europe (UN Regulations) that are mandatory under Council Decision 97/836/EC[9]. In order to achieve further simplification, more Union rules should be replaced with existing UN Regulations that apply in the Union on a compulsory basis. Furthermore, the Commission should promote and support the on-going work at United Nations level in order to establish, without any delay and in accordance with the highest road safety standards available, technical requirements for the type-approval of the vehicle safety systems provided by this Regulation.

(11) UN Regulations and the amendments thereto which the Union has voted in favour of or that the Union applies, in accordance with Decision 97/836/EC, should be incorporated within the Union type-approval legislation. Accordingly, the power should be delegated to the Commission to amend the list of UN Regulations that apply on a compulsory basis to ensure that it is kept up-to-date.

(12) Regulation (EC) No 78/2009 of the European Parliament and of the Council[10] sets out requirements for the protection of pedestrians, cyclists and other vulnerable road users in the form of compliance tests and limit values for the approval of vehicles with regard to their front structure and for the approval of frontal protection systems (for example, bull-bars). Since the adoption of Regulation (EC) No 78/2009, technical requirements and test procedures for vehicles have developed further at United Nations level to take account of technical progress. UN Regulation No 127[11] currently also applies in the Union in respect to type-approval of motor vehicles.

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9 Council Decision 97/836/EC of 27 November 1997 (OJ L 346, 17.12.1997, p. 78).

10 Regulation (EC) No 78/2009 of the European Parliament and of the Council of 14 January 2009 on the type approval of motor vehicles with regard to the protection of pedestrians and other vulnerable road users, amending Directive 2007/46/EC and repealing Directives 2003/102/EC and 2005/66/EC, OJ L 35, 4.2.2009, p. 1.

11 Regulation No 127 laying down uniform provisions concerning the approval of motor vehicles with regard to their pedestrian safety performance

(13) Following the adoption of Regulation (EC) No 79/2009 of the European Parliament and of the Council[12], the technical requirements and test procedures for the approval of hydrogen-powered vehicles and hydrogen systems and components, have been further developed at United Nations level to take account of technical progress. UN Regulation No 134[13] currently also applies in the Union in respect of type-approval of hydrogen systems in motor vehicles. In addition to those requirements, criteria for the quality of the materials used in compressed hydrogen vehicle systems ~~also apply but are currently only established at~~ **should also be established** at Union level.

(14) In the interests of clarity, rationality and simplification, Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 should be repealed and replaced by this Regulation.

(15) Historically, Union rules have limited the overall length of truck combinations which resulted in the typical cab-over-engine designs as they maximise the cargo space. However, the high position of the driver led to an increased blind spot area and poorer direct visibility around the truck cab. This is a major factor for truck accidents involving vulnerable road users. The number of casualties could be reduced significantly by improving direct vision. Requirements should therefore be introduced to improve the direct vision.	(15) Historically, Union rules have limited the overall length of truck combinations which resulted in the typical cab-over-engine designs as they maximise the cargo space. However, the high position of the driver led to an increased blind spot area and poorer direct visibility around the truck cab. This is a major factor for truck accidents involving vulnerable road users. The number of casualties could be reduced significantly by improving direct vision. Requirements should therefore be introduced to improve the direct ***vision so as to enhance the direct visibility of pedestrians, cyclists and other vulnerable road users from the driver's position. When designing the specific requirement for direct vision, specificities of***

[12] Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on the type approval of hydrogen-powered motor vehicles and amending Directive 2007/46/EC, OJ L 35, 4.2.2009, p. 32.

[13] UN Regulation No 134 on uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen-fuelled vehicles (HFCV)

	different types of vehicles should be taken into account.

~~(16) Given the emphasis of EU vehicle safety regulations to protect vulnerable road users, *inter alia*, by ensuring adequate visibility for drivers, public and private entities should refrain from requiring the affixing of any kind of label, vignette or sticker meant for whichever purpose to any part of the transparent surface of the vehicles' glazing. Furthermore, national authorities should enforce that windscreens and side windows are indeed kept clear of labels, vignettes, stickers and any other vision impairing items as to not negate the effectiveness of the Union law on visibility for drivers.~~	(16) Given the emphasis of ***Union*** vehicle safety regulations to protect vulnerable road users, inter alia, by ensuring adequate visibility for drivers, ***keeping windscreens clear of labels, vignettes, stickers, toll boxes and other items should be promoted. Vehicle manufacturers, in cooperation with national authorities and safety advocacy groups, should, for that*** purpose, ***consider specifying which areas*** of the transparent surface of the vehicles' glazing ***are safe to be used for affixing of any kind of label, vignette, toll box or sticker, without diminishing the safety of vulnerable road users***.

(17) Automated and connected vehicles may be able to make a huge contribution in reducing road fatalities since in the region of 90 per cent of road accidents are estimated to result from human error. As automated vehicles will gradually be taking over tasks of the driver, harmonised rules and technical requirements for automated vehicle systems should be adopted at Union level, **while respecting the principle of technological neutrality.**

(17a) Road users like pedestrians and cyclists as well as drivers of non-automated vehicles that cannot receive electronic vehicle-to-vehicle information about the behaviour of an automated vehicle should be kept informed by conventional means as foreseen in UN Regulations or other regulatory acts as soon as possible after their entry into force.

(18) Vehicle platooning has the potential to bring about safer, cleaner and more efficient transport in the future. In anticipation of the introduction of platooning technology and the relevant standards, a regulatory framework with harmonised rules and procedures will be needed. In this regard, the Commission should be empowered to adopt delegated acts to establish a harmonised format for the exchange of data for the purposes of multi-brand vehicle platooning, in compliance with EU legislation on data protection.

(18a) The connectivity and automation of vehicles increase the possibility for unauthorized access and modification of software; to take into account the upcoming risks resulting

of that, UN Regulations or other regulatory acts on cyber security should be applied mandatory as soon as possible after their entry into force.

(18a) As the average age of a vehicle in the Union is over 10 years, retrofitting existing vehicles with Advanced Driver Assistance Systems can contribute substantially to reducing road fatalities in the Union. In this regard, the Union should continue to assess whether retrofitting the existing fleet, particularly buses and trucks, with Advanced Driver Assistance Systems is feasible and cost-effective.

(18b) Software modifications can change vehicle functionalities in a significant manner. Harmonised rules and technical requirements for software modifications in line with the type-approval processes should be established. Therefore, UN Regulations or other regulatory acts on software update processes should be applied mandatory as soon as possible after their entry into force.

(18b) Vehicle security is not any longer limited to protection against vehicle theft, but needs to target protection of the whole vehicle architecture preventing loss or compromise of system and component integrity. This, to ensure that a vehicle, system, separate technical unit, components as well as parts and equipment compliance with safety and environmental approval requirements remain effective and have reduced risk of being compromised during the vehicle's life, within reasonable but up to date protection measures. The connectivity and automation of vehicles increase the possibilities for unauthorised, remote access to in-vehicle data and illegal modification of software over-the-air; to take into account the upcoming risks resulting of that, UN Regulations on security, cyber security and over-the-air software updates should be applied mandatory as soon as possible after their entry into force. It should be ensured that vehicles, their systems, separate technical units, components, parts and equipment are equipped with up to date security technology when placed on the market and that this high level of security is maintained by regularly updating hardware and software until a vehicle's end-of-life. However, these security measures should not compromise the obligations from the vehicle manufacturer to provide access to comprehensive diagnostic information and in-vehicle data relevant to repair and maintain a vehicle.

(19) The Union should continue to promote the development of technical requirements for tyre noise, rolling resistance and wet grip performance of tyres at the United Nations level. This is because UN Regulation No 117 now contains these detailed provisions. The process of adapting the requirements on tyres to take account of technical progress should continue at United Nations level, in particular	(19) The Union should continue to promote the development of technical requirements for tyre noise, rolling resistance and wet grip performance of tyres at the United Nations level. This is because UN Regulation No 117 now contains these detailed provisions. The process of adapting the requirements on tyres to take account of technical progress should ***be rapidly and ambitiously continued*** at United Nations level, in

to ensure that tyre performance is also assessed at the end of a tyre's life in its worn state and to promote the idea that tyres should meet the requirements throughout their life and not be replaced prematurely. Existing requirements in Regulation (EC) No 661/2009 relating to tyre performance should be replaced by equivalent UN Regulations.	particular to ensure that tyre performance is also assessed at the end of a tyre's life in its worn state and to promote the idea that tyres should meet the requirements throughout their life and not be replaced prematurely. ***To ensure that rigorous standards are met,*** existing requirements in Regulation (EC) No 661/2009 relating to tyre performance should be ***monitored and evaluated, and should be*** replaced ***when tyre performance can be improved within the European Union***.

(20) In order to ensure the effectiveness of this Regulation, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission ~~in respect of type-approval requirements concerning the safety performance, the general construction and the relevant environmental performance of motor-vehicles and their trailers, and systems, components and separate technical units intended for such vehicles~~ **for amendments in Annex I and Annex II**. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making[14]. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.

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14 OJ L 123, 12.5.2016, p. 1.

(21) In view of the alignment of the Union legislation referring to the regulatory procedure with scrutiny with the legal framework introduced by the Treaty on the Functioning of the European Union and in order to further simplify the Union legislation in the field of vehicle safety, the following Regulations should be repealed and replaced by delegated acts adopted under this Regulation:

– Commission Regulation (EC) No 631/2009[15],

– Commission Regulation (EU) No 406/2010[16],

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15 Commission Regulation (EC) No 631/2009 of 22 July 2009 laying down detailed rules for the implementation of Annex I to Regulation (EC) No 78/2009 of the European Parliament and of the Council on the type-approval of motor vehicles with regard to the protection of pedestrians and other vulnerable road users, amending Directive 2007/46/EC and repealing Directives 2003/102/EC and 2005/66/EC (OJ L 195, 25.7.2009, p. 1).

16 Commission Regulation (EU) No 406/2010 of 26 April 2010 implementing Regulation (EC) No 79/2009 of the European Parliament and of the Council on type-approval of hydrogen-powered motor vehicles (OJ L 122, 18.5.2010, p. 1).

– Commission Regulation (EU) No 672/2010[17],

– Commission Regulation (EU) No 1003/2010[18],

– Commission Regulation (EU) No 1005/2010[19],

– Commission Regulation (EU) No 1008/2010[20],

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17 Commission Regulation (EU) No 672/2010 of 27 July 2010 concerning type-approval requirements for windscreen defrosting and demisting systems of certain motor vehicles and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 196, 28.7.2010, p. 5).

18 Commission Regulation (EU) No 1003/2010 of 8 November 2010 concerning type-approval requirements for the space for mounting and the fixing of rear registration plates on motor vehicles and their trailers and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 291, 9.11.2010, p. 22).

19 Commission Regulation (EU) No 1005/2010 of 8 November 2010 concerning type-approval requirements for motor vehicle towing devices and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 291, 9.11.2010, p. 36).

20 Commission Regulation (EU) No 1008/2010 of 9 November 2010 concerning type-approval requirements for windscreen wiper and washer systems of certain motor vehicles and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 292, 10.11.2010, p. 2).

– Commission Regulation (EU) No 1009/2010[21],

– Commission Regulation (EU) No 19/2011[22],

– Commission Regulation (EU) No 109/2011[23],

– Commission Regulation (EU) No 458/2011[24],

– Commission Regulation (EU) No 65/2012[25],

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21 Commission Regulation (EU) No 1009/2010 of 9 November 2010 concerning type-approval requirements for wheel guards of certain motor vehicles and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 292, 10.11.2010, p. 21).

22 Commission Regulation (EU) No 19/2011 of 11 January 2011 concerning type-approval requirements for the manufacturer's statutory plate and for the vehicle identification number of motor vehicles and their trailers and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 8, 12.1.2011, p. 1).

23 Commission Regulation (EU) No 109/2011 of 27 January 2011 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards type-approval requirements for certain categories of motor vehicles and their trailers as regards spray suppression systems (OJ L 34, 9.2.2011, p. 2).

24 Commission Regulation (EU) No 458/2011 of 12 May 2011 concerning type-approval requirements for motor vehicles and their trailers with regard to the installation of their tyres and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 124, 13.5.2011, p. 11).

25 Commission Regulation (EU) No 65/2012 of 24 January 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards gear shift indicators and amending Directive 2007/46/EC of the European Parliament and of the Council (OJ L 28, 31.1.2012, p. 24).

– Commission Regulation (EU) No 130/2012[26],

– Commission Regulation (EU) No 347/2012[27],

– Commission Regulation (EU) No 351/2012[28],

– Commission Regulation (EU) No 1230/2012[29],

– Commission Regulation (EU) 2015/166[30].

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26 Commission Regulation (EU) No 130/2012 of 15 February 2012 concerning type-approval requirements for motor vehicles with regard to vehicle access and manoeuvrability and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 43, 16.2.2012, p. 6).

27 Commission Regulation (EU) No 347/2012 of 16 April 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with respect to type-approval requirements for certain categories of motor vehicles with regard to advanced emergency braking systems (OJ L 109, 21.4.2012, p. 1).

28 Commission Regulation (EU) No 351/2012 of 23 April 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards type-approval requirements for the installation of lane departure warning systems in motor vehicles (OJ L 110, 24.4.2012, p. 18).

29 Commission Regulation (EU) No 1230/2012 of 12 December 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with regard to type-approval requirements for masses and dimensions of motor vehicles and their trailers and amending Directive 2007/46/EC of the European Parliament and of the Council (OJ L 353, 21.12.2012, p. 31).

30 Commission Regulation (EU) 2015/166 of 3 February 2015 supplementing and amending Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards the inclusion of specific procedures, assessment methods and technical requirements, and amending Directive 2007/46/EC of the European Parliament and of the Council, and Commission Regulations (EU) No 1003/2010, (EU) No 109/2011 and (EU) No 458/2011 (OJ L 28, 4.2.2015, p. 3).

(22) Given that approvals issued in accordance with Regulation (EC) No 78/2009, Regulation (EC) No 79/2009, Regulation (EC) No 661/2009 and their implementing measures should be considered equivalent, unless the relevant requirements are changed by this Regulation or until they are modified by the implementing legislation, transitional provisions should ensure that such approvals are not invalidated.

(23) As concerns the dates for refusal to grant EU type-approval, refusal of vehicle registration and prohibition of the placing on the market or entry into service of components and separate technical units, these dates should be laid down for each regulated item.

(24) Since the objective of this Regulation, namely ensuring the proper functioning of the internal market through the introduction of harmonised technical requirements concerning the safety and environmental performance of motor vehicles and their trailers, cannot be sufficiently achieved by the Member States and can therefore, by reason of its scale and effects, be better achieved at Union level, the Union may adopt measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve that objective.

(25) Detailed technical requirements and ~~specific~~ **adequate** test procedures for type-approval of motor vehicles and their trailers, and of systems, components and separate technical units should be laid down in ~~delegated~~ **implementing** acts before the date of application of this Regulation. Moreover, manufacturers should be allowed sufficient time to adapt to the requirements of this Regulation and the ~~delegated~~ **implementing** acts adopted pursuant to it. Therefore, the application of this Regulation should be deferred,	(25) Detailed technical requirements and specific test procedures for type-approval of motor vehicles and their trailers, and of systems, components and separate technical units should be laid down in delegated acts before the date of application of this Regulation. Moreover, manufacturers should be allowed sufficient time to adapt to the requirements of this Regulation and the delegated acts adopted pursuant to it. Therefore, the application of this Regulation should be deferred, ***when necessary.***

(25a) In order to ensure compliance with this Regulation, Member States should take all necessary actions to ensure that the provisions on corrective measures and penalties laid down in

Regulation (EU) 2018/858 are implemented.

(26) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council (*).

HAVE ADOPTED THIS REGULATION:

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* **Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mech-anisms for control by Member States of the Commission's exercise of implement-ing powers (OJ L 55, 28.2.2011, p. 13).**

CHAPTER I

SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

Subject matter

This Regulation establishes requirements: 1. for the type-approval of vehicles, and systems, components and separate technical units designed and constructed for vehicles, with regard to their general characteristics and safety, and to the protection of vehicle occupants and vulnerable road users; 2. for the type-approval of vehicles, in respect of tyre pressure monitoring systems, with regard to their safety, fuel efficiency and CO_2 emissions; and 3. for the type-approval of newly-manufactured tyres with regard to their safety and environmental performance.	1. This Regulation establishes requirements: ***(a)*** for the type-approval of vehicles, and systems, components and separate technical units designed and constructed for vehicles, with regard to their general characteristics and safety, and to the protection ***and safety*** of vehicle occupants and vulnerable road users; ***(b)*** for the type-approval of vehicles, in respect of tyre pressure monitoring systems, with regard to their safety, fuel efficiency and CO_2 emissions; and ***(c)*** for the type-approval of newly-manufactured tyres with regard to their safety and environmental performance. 2. ***This Regulation specifies and complements Regulation (EU) 2018/858 as regards the general safety of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, and as regards the protection of vehicle occupants and vulnerable road users.***

Article 2

Scope

This Regulation applies to vehicles of categories M, N and O, as defined in Article 4 of Regulation (EU) 2018/**858**, and to systems, components and separate technical units designed and constructed for such vehicles, subject to Articles 4 to 11 of this Regulation.

Article 3

Definitions

For the purposes of this Regulation, the definitions laid down in Article 3 of Regulation (EU) 2018/**858** shall apply.

In addition, the following definitions shall apply:

(1)	'vulnerable road user' means a road user using two- **or three-**wheel powered vehicle or a non-motorised road user, such as a cyclist or a pedestrian;	(1) 'vulnerable road user' means a road user using ***a one or multiple-wheel*** powered vehicle ***without protective bodywork*** or a non-motorised road user, such as a cyclist or a pedestrian;

(2) 'tyre pressure monitoring system' means a system fitted on a vehicle which can evaluate the pressure of the tyres or the variation of pressure over time and transmit corresponding information to the user while the vehicle is running;

(3)	'intelligent speed assistance' means a system to aid the driver in ~~observing~~ **maintaining** the appropriate speed for the road environment by providing ~~haptic feedback through the accelerator pedal~~ **dedicated and appropriate feedback** ~~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) 'intelligent speed assistance' means a system to ***assist*** the driver in observing the appropriate speed for the road environment by providing ***dedicated and appropriate*** feedback through the accelerator ***control, or through other means sufficiently effective in raising the awareness of the driver, based on*** 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;

(4) 'alcohol interlock installation facilitation' means a standardised interface facilitating the fitment of aftermarket alcohol interlock devices in motor vehicles;

(5)	'driver drowsiness and attention monitoring' means a system assessing the driver's alertness through vehicle systems analysis and warning the driver if needed;	(5)	'driver drowsiness and attention ***warning*** ~~monitoring~~' means a system assessing the driver's alertness through vehicle systems analysis and warning the driver if needed;
(6)	'advanced distraction recognition' means a system capable of **recognising** ~~recognition of~~ the ~~level~~ visual attention **level** of the driver to the traffic situation and warning the driver if needed;	(6)	'advanced ***driver*** distraction ~~recognition~~ ***warning***' means a system ~~capable of recognition the level visual attention of the driver to the traffic situation and~~ warning the driver ***when the driver is distracted or prompting to avoid distraction***;

(7) 'emergency stop signal' means ~~rapid flashing stop lamps~~ **a light-signalling function** 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;

(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;	'reversing detection' means a camera ***and*** 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;

(9) 'lane departure warning system' means a system to warn the driver that the vehicle is drifting out of its travel lane;

(10) 'advanced emergency braking system' means a system which can automatically detect a potential collision and activate the vehicle braking system to decelerate the vehicle with the purpose of avoiding or mitigating a collision;	(10) 'advanced emergency braking system' means a system which can automatically detect a potential collision and ***automatically*** activate the vehicle braking system ***at the latest possible moment*** to decelerate the vehicle with the purpose of avoiding or mitigating a collision;

(11) '**emergency** lane-keeping system' means a system ~~monitoring the~~ **assisting the driver in keeping a safe** position of the vehicle with respect to the lane **or road** 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;

(12) 'vehicle master control switch' means the device by which the vehicle's on-board electronics system is brought, from being switched off, as in the case where a vehicle is parked without the driver being present, to normal operation mode;

(13) 'event ~~(accident)~~ data recorder' means a system recording and storing critical crash-related parameters and information before, during and after a	(13)'***accident*** ~~event~~ data recorder' means a system solely designed for the purpose of recording and storing critical crash-related parameters and information ***shortly*** before,

collision;	during and ***immediately*** after a collision;

(14) 'frontal protection system' means a separate structure or structures, such as a bull bar, or a supplementary bumper which, in addition to the original-equipment bumper, is intended to protect the external surface of the vehicle from damage in the event of a collision with an object, with the exception of structures having a mass of less than 0,5 kg, intended to protect only the vehicle's lights;

(15) 'bumper' means any front, lower, outer structures of a vehicle, including attachments thereto, which are intended to give protection to a vehicle when involved in a low speed frontal collision with another vehicle; it does not include however any frontal protection system;

(16) 'hydrogen-powered vehicle' means any motor vehicle that uses hydrogen as fuel to propel the vehicle;

(17) 'hydrogen system' means an assembly of hydrogen components and connecting parts fitted on a hydrogen-powered vehicle, excluding the hydrogen-powered propulsion system or the auxiliary power unit;

(18) 'hydrogen-powered propulsion system' means the ~~internal combustion engine or fuel cell system~~ **energy converter** used to propel the vehicle;

(19) 'hydrogen component' means hydrogen containers and all other parts of hydrogen-powered vehicles that are in direct contact with hydrogen or which form part of a hydrogen system;

(20) 'hydrogen container' means the component within the hydrogen system that stores the primary volume of hydrogen fuel;

(21) 'automated vehicle' means a motor vehicle designed and constructed to move autonomously for extended periods of time without continuous human supervision;	(21) 'automated vehicle' means a motor vehicle designed and constructed to move autonomously for ~~extended~~ ***certain*** periods of time without continuous human supervision ***but where driver intervention is still expected or required***;
	(21a) 'fully automated vehicle' means a motor vehicle designed and constructed to move autonomously without any human supervision;

(22) 'driver availability monitoring system' means a system to assess whether the driver is in a position to take over the driving function from an automated vehicle in particular situations, where appropriate;

(23) 'vehicle platooning' means the linking of two or more vehicles in a convoy using connectivity technology and automated driving support systems which allow the vehicles to maintain automatically a set, close distance between each other when connected for certain parts of a journey and to adapt to changes in the movement of the lead vehicle with little to no action from the drivers;

(24) 'maximum mass' means the technically permissible maximum laden mass stated by the manufacturer;

(25) 'A-pillar' means the foremost and outermost roof support extending from the chassis to the roof of the vehicle;

~~(26) 'corner of frontal protection system' means the frontal protection system's point of contact with a vertical plane, which makes an angle of 60° with the vertical longitudinal plane of the vehicle and is tangential to the outer surface of the frontal protection system;~~

~~(27) 'lower frontal protection system height' means, at any transverse position, the vertical distance between the ground and the lower frontal protection system reference line, with the vehicle positioned in its normal ride attitude.~~

(27b) 'cyber security' means protection against remote tampering and vehicle integrity compromising manipulations;

CHAPTER II

OBLIGATIONS OF MANUFACTURERS

Article 4

General obligations and technical requirements

1. Manufacturers shall demonstrate that all new vehicles that are placed on the market, registered or entered into service, and all new systems, components and separate technical units that are placed on the market or entered into service, are type-approved in accordance with the requirements of this Regulation and of the ~~delegated~~ **implementing** acts adopted pursuant to it.	1. Manufacturers shall demonstrate that all new vehicles that are placed on the market, registered or entered into service, and all new systems, components and separate technical units that are placed on the market or entered into service, are type-approved in accordance with the requirements of this Regulation and of the delegated acts adopted pursuant to it.
2. Type-approval in accordance with the UN Regulations listed in Annex I shall be considered as EU type-approval in accordance with the requirements of this Regulation and of the ~~delegated~~ **implementing** acts adopted pursuant to it.	2. Type-approval in accordance with the UN Regulations listed in Annex I shall be considered as EU type-approval in accordance with the requirements of this Regulation and of the delegated acts adopted pursuant to it.
3. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex I in order to take account of technical progress and regulatory developments by introducing and updating references to the UN Regulations, and relevant series of amendments, that apply on a compulsory basis.	3. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex I in order to take account of technical progress and regulatory developments by introducing and updating references to the UN Regulations, and relevant series of amendments, that apply on a compulsory basis.
4. Manufacturers shall ensure that vehicles are designed, constructed and assembled so as to minimise the risk of injury to vehicle occupants	4. Manufacturers shall ensure that vehicles are designed, constructed and assembled so as to ***prevent or*** minimise the risk of injury to vehicle occupants and vulnerable road users.

and vulnerable road users. 5. Manufacturers shall also ensure that vehicles, systems, components and separate technical units comply with the applicable requirements listed in Annex II with effect from the dates specified in that Annex and with the detailed technical requirements and test procedures laid down in the ~~delegated~~ **implementing** acts ~~adopted pursuant to this Regulation~~, including the requirements relating to:	5. Manufacturers shall also ensure that vehicles, systems, components and separate technical units comply with the applicable requirements listed in Annex II with effect from the dates specified in that Annex and with the detailed technical requirements and test procedures laid down in the delegated acts adopted pursuant to this Regulation, including the requirements relating to:
(a) restraint systems, crash testing, fuel system integrity and high voltage electrical safety; (b) pedestrians, cyclists, vision and visibility; (c) vehicle chassis, braking, tyres and steering; (d) on board instruments, electrical system, vehicle lighting and protection against unauthorized use including cyberattacks; (e) driver and system behaviour; (f) general vehicle construction and features;	(a) restraint systems, crash testing, fuel system integrity and high voltage electrical safety; (b) ~~pedestrians, cyclists~~***vulnerable road users***, vision and visibility; (c) vehicle chassis, braking, tyres and steering; (d) on board instruments, electrical system, vehicle lighting and protection against unauthorized use including cyberattacks; (e) driver and system behaviour; (f) general vehicle construction and features;

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).	
	5a. Manufacturers shall also ensure that systems and features referred to in Articles 5 to 11 of this Regulation are developed in such a way so as to ensure the user acceptance and that motor vehicle's user instructions contain clear and comprehensive information in regard to the functioning of those systems and features.
6. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex II in order to take account of technical progress and regulatory developments, in particular in relation to the matters listed in points (a) to (f) of paragraph 5 of this Article and with a view to ensuring a high level of general safety of vehicles, systems, components and separate technical units and a high level of protection of vehicle occupants and vulnerable road users **by introducing and updating references to UN Regulations and implementing acts.** 7. In order to ensure that a high level of general safety of vehicles and of protection of vehicle occupants and vulnerable road users is attained, the Commission is empowered to adopt	6. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex II in order to take account of technical progress and regulatory developments, in particular in relation to the matters listed in points (a) to (f) of paragraph 5 of this Article and with a view to ensuring a high level of general safety of vehicles, systems, components and separate technical units and a high level of protection of vehicle occupants and vulnerable road users. 7. In order to ensure that a high level of general safety of vehicles and of protection of vehicle occupants and vulnerable road users is attained, the Commission ~~is empowered to~~ ***shall*** adopt delegated acts in accordance with Article 12 ***supplementing this Regulation by laying down*** detailed rules concerning the specific test procedures and technical requirements for type-

~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down detailed rules concerning the specific test procedures and technical requirements for type-approval of vehicles, systems, components and separate technical units with regard to the requirements listed in Annex II. **Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).**	approval of vehicles, systems, components and separate technical units with regard to the requirements listed in Annex II. ***Those detailed rules shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.***

Article 5

Specific provisions relating to tyre pressure monitoring systems and tyres

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 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.

2. Tyre pressure monitoring systems shall be designed to avoid resetting or recalibration at a low tyre pressure.

3. All tyres placed on the market shall meet the safety and environmental performance requirements set out in the respective regulatory acts listed in Annex II.

4. The Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down detailed rules concerning specific test procedures and technical requirements for: (a) the type-approval of vehicles with regard to their tyre pressure monitoring systems; (b) the type-approval of tyres, including technical requirements concerning their installation. **Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).**	4. The Commission ***shall*** adopt delegated acts in accordance with Article 12 to lay down detailed rules concerning specific test procedures and technical requirements for: a) the type-approval of vehicles with regard to their tyre pressure monitoring systems; b) the type-approval of tyres, including ***in worn condition and*** technical requirements concerning their installation. ***Those detailed rules shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.***

Article 6

Advanced vehicle systems for all categories of motor vehicle

1. Motor vehicles shall be equipped with the following advanced vehicle systems:

(a) intelligent speed assistance;

(b) alcohol interlock installation facilitation;

(c) driver drowsiness and attention monitoring; (d) advanced distraction recognition;	(c) driver drowsiness and attention ***warning*** ~~monitoring~~; (d) advanced ***driver*** distraction ~~recognition~~ ***warning***;

(e) emergency stop signal;

(f) reversing detection.

	(e) Accident data recorder

2. Intelligent speed assistance systems shall have the following minimum specifications: (a) it shall be possible for the driver to **be made aware** ~~feel~~ through ~~the accelerator pedal~~ dedicated **and appropriate feedback** ~~warning(s)~~ that the applicable speed limit is reached or exceeded; **(ab) the dedicated and appropriate feedback shall be based on speed limit information obtained through observation of road signs and signals, based on infrastructure signals or electronic**	2. Intelligent speed assistance systems shall have the following minimum specifications: (a) it shall be possible to provide the driver with ***dedicated and appropriate ~~haptic~~ feedback on*** the accelerator ***control, or through other effective means,*** that the applicable speed limit is exceeded; (b) it shall ~~not~~ be possible to switch off ~~or supress~~ the system; (c) it shall be possible for the driver to override the system's prompted vehicle speed smoothly through normal

map data, or both, made available in-vehicle; (b) it shall not be possible to switch off or supress the system; (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~~ **it shall not affect the drivers' possibility to exceed the system's prompted vehicle speed**; (d) where a cruise control system is engaged, the intelligent speed assistance system must automatically adapt to any lower speed limit.	operation of the accelerator ***control***; (d) ~~where a cruise control system is engaged, the intelligent speed assistance system must automatically adapt to~~ ***road*** ~~speed limit.~~ ***(da) its performance targets shall be set in order to avoid or minimise the error rate in real driving conditions;*** ***(db) it shall be in normal operation mode upon each activation of the vehicle master control switch.***
3. A motor vehicle equipped with an advanced distraction recognition system in accordance with point (d) of paragraph 1, may be considered to meet the requirement in point (c) of that paragraph too.	***deleted***
3a. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex II in order to take account of technical progress and regulatory developments, in particular in relation to the matters listed in points (a) to (f) of paragraph 1 of this Article and with a view to ensuring a high level of general safety of vehicles, systems, components and	

separate technical units and a high level of protection of vehicle occupants and vulnerable road users by introducing and updating references to UN Regulations and implementing acts.	
	3a (new) Driver drowsiness, attention and distraction warning systems shall be designed in such a way that these systems do not continuously record nor retain any data other than what is necessary in relation to the purposes for which they were collected or otherwise processed within the closed-loop system. Furthermore, this data shall not be accessible or made available to third party at any time and shall be immediately deleted after processing. Those systems shall also be designed to avoid overlap and shall not prompt the driver separately and concurrently or in a confusing manner in case one action triggers both systems. ***3b (new) Accident data recorders shall meet the following requirements in particular:*** ***a) the data that they are capable of recording and storing with respect of the period shortly before, during and immediately after a collision shall include the vehicle's speed, breaking, position and tilt of the vehicle on the road, the state and rate of activation of all its safety systems, 112-based eCall in-vehicle system, brake activation and relevant input parameters of the on-board active safety and accident avoidance systems, with high level of***

	accuracy and ensured survivability of data; ***b) it shall not be possible to deactivate the devices;*** ***c) the way in which they are capable of recording and storing data shall be such that:*** ***(i) they operate on a closed-loop system;*** ***(ii) the data collected is anonymised and protected against manipulation and misuse;*** ***(iii) precise vehicle type, version and variant, and in particular the active safety and accident avoidance systems fitted to the vehicle, can be identified.*** ***d) the data can be made available to national authorities, on the basis of Union or national legislation only for the purpose of accident research and analysis, including for the purposes of type approval of systems and componentsand in compliance with Regulation (EU) No 2016/679, over a standardised interface.*** ***However, the data that an accident ~~event~~ data recorder is capable of recording and storing shall not include the last four digits of the vehicle indicator section of the vehicle identification number nor any other information which could allow the individual vehicle itself, its owner or holder, to be identified.***

	3b. Safety features and warnings used in assisting driving shall be easily perceived by every driver, including the elderly and people with disabilities.
4. The Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down detailed rules concerning the specific test procedures and technical requirements for: (a) the type-approval of vehicles with regard to the advanced vehicle systems listed in paragraph 1; (b) the type-approval of the advanced vehicle systems listed in points (a) and (f) of that paragraph as separate technical units. **Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).**	4. The Commission ***shall*** adopt delegated acts in accordance with Article 12 to lay down detailed rules concerning the specific test procedures and technical requirements for: a) the type-approval of vehicles with regard to the advanced vehicle systems listed in paragraph 1; b) the type-approval of the advanced vehicle systems listed in points (a) and (g) of that paragraph as separate technical units. ***Those detailed rules shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.***

Article 7

Specific requirements relating to passenger cars and light commercial vehicles

1. In addition to the other requirements of this Regulation and of the ~~delegated~~ **implementing** acts adopted pursuant to it that are also applicable to vehicles of categories M_1 and N_1, vehicles of those categories shall meet the requirements set out in paragraphs 2 to 6 and in the delegated acts adopted under paragraph 7.

2. Vehicles of categories M_1 and N_1 shall be equipped with advanced emergency braking systems designed and fitted in two phases and providing for:

a) detection of **obstacles and of** moving vehicles ~~and stationary obstacles~~ ahead of the motor vehicle in the first phase; b) extending the detection capability to also include ~~vulnerable road users~~ **pedestrians and cyclists** ahead of the motor vehicle in the second phase	a) detection ***and deceleration*** ~~of~~ ***for*** moving vehicles and stationary obstacles ahead of the motor vehicle in the first phase; b) ~~extending~~ ***extension of*** the detection ***and deceleration*** capability to also include vulnerable road users ahead of the motor vehicle in the second phase.

3. Vehicles of categories M_1 and N_1 shall be equipped with a**n emergency** lane-keeping system. ~~**Motor vehicles with hydraulic-powered steering assist systems may be exempted due to technical reasons and shall be equipped with a lane departure warning system instead.**~~

~~**The emergency lane keeping system shall monitor the position of the vehicle with respect to the lane or road boundary and apply 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.**~~

4. Advanced emergency braking systems and **emergency** lane-keeping systems shall meet the following requirements in particular:

(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;	(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~~;

(b) the systems shall be in normal operation mode upon each activation of the vehicle master control switch;

(c) it shall be possible to easily suppress audible warnings, but such action shall not at the same time suppress system functions other than audible warnings.

(d) it shall be possible to override the systems by the driver.

5. Vehicles of categories M_1 and N_1 shall be equipped with an event ~~(accident)~~ data recorder. Event ~~(accident)~~ data recorders shall meet the following requirements in particular: (a) the data that they are capable of recording and storing with respect of the period before, during and after a collision shall include, as a minimum, the vehicle's speed, the state and rate of activation of its safety systems and any other relevant input parameters of the on-board active safety and accident avoidance systems**, with adequate accuracy and ensured survivability of data**; (b) it shall not be possible to deactivate the devices; (c) the way in which they are capable of recording and storing data shall be such that the data is protected against manipulation and can be made available to national authorities, on the basis of Union or national legislation **only for the purposes of accident data analysis** in compliance with Regulation (EU) No 2016/679, over a standardised interface ~~for the purposes of accident data analysis~~, and such that the precise vehicle type, version and variant, and in particular the active safety and accident avoidance systems fitted to the	***Deleted (because extended to all motor vehice categories)***

vehicle, can be identified. However, the data that an event ~~(accident)~~ data recorder is capable of recording and storing shall not include the last four digits of the vehicle indicator section of the vehicle ~~information~~ **identification** number nor any other information which could allow the individual vehicle itself to be identified.	

6. Vehicles of categories M_1 and N_1 shall be designed and constructed so as to provide for 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.

6a. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex II in order to take account of technical progress and regulatory developments, in particular in relation to the matters listed in paragraphs 2, 3, 5 and 6 of this Article and with a view to ensuring a high level of general safety of vehicles, systems, components and separate technical units and a high level of protection of vehicle occupants and vulnerable road users by introducing and updating references to UN Regulations and implementing acts.	
7. The Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down detailed rules concerning the specific test procedures and technical requirements for: (a) the type-approval of vehicles with regard to the requirements laid down in paragraphs 2 to 6 of this Article; (b) the type-approval of event ~~(accident)~~ data recorders as separate technical units. **Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).**	7. The Commission ***shall*** adopt delegated acts in accordance with Article 12 to lay down detailed rules concerning the specific test procedures and technical requirements for: a) the type-approval of vehicles with regard to the requirements laid down in paragraphs 2 to 6 of this Article; b) the type-approval of accident data recorders as separate technical units. ***Those detailed rules shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.***

Article 8

Frontal protection systems for passenger cars and light commercial vehicles

1. Frontal protection systems, either fitted as original equipment to vehicles of categories M_1 and N_1 or made available on the market as separate technical units for such vehicles, shall comply with the requirements laid down in paragraph 2~~, in Annex IV~~ and in the ~~delegated~~ **implementing** acts adopted under paragraph 3 of this Article.	1. Frontal protection systems, either fitted as original equipment to vehicles of categories M1 and N1 or made available on the market as separate technical units for such vehicles, shall comply with the requirements laid down in paragraph 2~~, in Annex IV~~ and in the delegated acts ***referred to in*** ~~adopted under~~ paragraph 3 of this Article.

2. Frontal protection systems made available on the market as separate technical units shall be accompanied by a detailed list of vehicle types, variants and versions for which the frontal protection system is type-approved, as well as by clear assembly instructions.

3. The Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down detailed rules concerning the specific test procedures and technical requirements for the type-approval of frontal protection systems referred to in paragraph 1 of this Article, including technical requirements	3. The Commission ~~is empowered~~ ***shall*** to adopt delegated acts in accordance with Article 12 to lay down detailed rules concerning the specific test procedures and technical requirements for the type-approval of frontal protection systems referred to in paragraph 1 of this Article, including technical requirements concerning their construction and installation.

	concerning their construction and installation. **Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).**	***Those detailed rules shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.***

Article 9

Specific requirements relating to buses and trucks

1.	In addition to the other requirements of this Regulation and of the ~~delegated~~ **implementing** acts adopted pursuant to it that are also applicable to vehicles of categories M_2, M_3, N_2 and N_3, vehicles of those categories shall meet the requirements laid down in paragraphs 2 to 5 and in the ~~delegated~~ **implementing** acts adopted under paragraph 7. Vehicles of categories M_2 and M_3, shall also meet the requirement laid down in paragraph 6.	1. In addition to the other requirements of this Regulation and of the delegated acts adopted pursuant to it that are also applicable to vehicles of categories M_2, M_3, N_2 and N_3, vehicles of those categories shall meet the requirements laid down in paragraphs 2 to 5 and in the delegated acts adopted under paragraph 7. Vehicles of categories M_2 and M_3, shall also meet the requirement laid down in paragraph 6.
2.	Vehicles of categories M_2, M_3, N_2 and N_3 shall be equipped with a lane departure warning system and an advanced emergency braking system, which comply with the requirements set out in the ~~delegated~~ **implementing** acts adopted under paragraph 7.	2. Vehicles of categories M_2, M_3, N_2 and N_3 shall be equipped with a lane departure warning system and an advanced emergency braking system, which comply with the requirements set out in the delegated acts adopted under paragraph 7.

3. Vehicles of categories M_2, M_3, N_2 and N_3 shall be equipped with advanced systems capable of detecting ~~vulnerable road users~~ **pedestrians and cyclits** 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 M_2, M_3, N_2 and N_3 shall be equipped with advanced systems capable of detecting vulnerable road users located in close proximity to the front ~~or~~ ***and*** nearside of the vehicle and providing a warning or avoiding collision with such vulnerable road users.

4. With respect of systems referred to in paragraphs 2 and 3 of this Article, they shall meet the following requirements in particular:

(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;	(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~~;
	(aa) it shall be possible to override the systems by the driver;
(b) the systems shall be in normal operation mode upon each activation of the vehicle master control switch;	(b) the systems shall be in normal operation mode upon each activation of the vehicle master control switch;
(c) it shall be possible to easily suppress audible warnings, but such action shall not at the same time suppress system functions other than audible warnings.	(c) it shall be possible to easily suppress audible warnings, but such action shall not at the same time suppress system functions other than audible warnings.

5. Vehicles of categories M_2, M_3, N_2 and N_3 shall be designed and constructed so as to enhance the direct visibility of vulnerable road users from the driver seat.	5. Vehicles of categories M_2, M_3, N_2 and N_3 shall be designed and constructed so as to enhance the direct visibility of vulnerable road users from the driver seat. ***This requirement shall remove the blind spots in front of the driver seat and significantly reduce the blind spots through the side windows. Specificities of different types of vehicles shall be taken into account.***

6. Vehicles of categories M_2 and M_3 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.

6a. The Commission is empowered to adopt delegated acts in accordance with Article 12 to amend Annex II in order to take account of technical progress and regulatory developments, in particular in relation to the matters listed in paragraphs 2, 3 and 5 of this Article and with a view to ensuring a high level of general safety of vehicles, systems, components and separate technical units and a high level of protection of vehicle occupants and vulnerable road users by introducing and updating references to UN Regulations and implementing acts.	
7. The Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down detailed rules concerning the specific test procedures and technical requirements for: (a) the type-approval of vehicles with regard to the requirements laid down in paragraphs 2 to 5 of this Article; (b) the type-approval of the systems referred to in paragraph 3 of this Article as separate technical units. **Those implementing acts shall be**	7. The Commission ***shall*** adopt delegated acts in accordance with Article 12 to lay down detailed rules concerning the specific test procedures and technical requirements for: a) the type-approval of vehicles with regard to the requirements laid down in paragraphs 2 to 5 of this Article; b) the type-approval of the systems referred to in paragraph 3 of this Article as separate technical units.

adopted in accordance with the examination procedure referred to in Article 12a (2).	***The detailed rules with regard to the requirements laid down in paragraphs 2 to 4 of this Article shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.*** ***The detailed rules with regard to the requirements laid down in paragraph 5 of this Article shall be laid down and published at least thirty-six months before the relevant dates specified in Annex II***

Article 10

Specific requirements relating to hydrogen-powered vehicles

1.	In addition to the other requirements of this Regulation and of the ~~delegated~~ **implementing** acts adopted pursuant to it that are also applicable to vehicles of categories M and N, hydrogen-powered vehicles of those categories, their hydrogen systems and components of such systems shall comply with the requirements laid down ~~in Annex V and~~ in the ~~delegated~~ **implementing** acts adopted under paragraph 3 of this Article.	1. In addition to the other requirements of this Regulation and of the delegated acts adopted pursuant to it that are also applicable to vehicles of categories M and N, hydrogen-powered vehicles of those categories, their hydrogen systems and components of such systems shall comply with the requirements laid down in ~~Annex V and in~~ the delegated acts ~~adopted under~~ ***referred to in*** paragraph 3 of this Article.
2.	Manufacturers shall ensure that hydrogen systems and hydrogen components are installed in accordance with the requirements set out in the ~~delegated~~ **implementing** acts adopted under paragraph 3. Manufacturers shall also make available, if necessary information for the purposes of inspection of hydrogen systems and components during the service life of hydrogen-powered vehicles.	2. Manufacturers shall ensure that hydrogen systems and hydrogen components are installed in accordance with the requirements set out in the delegated acts adopted under paragraph 3. Manufacturers shall also make available, if necessary information for the purposes of inspection of hydrogen systems and components during the service life of hydrogen-powered vehicles.
3.	The Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to:	3. The Commission ~~is empowered to~~ ***shall*** adopt delegated acts in accordance with Article 12 to~~:~~

~~(a)~~ lay down detailed rules concerning the specific test procedures and technical requirements for the type-approval of hydrogen-powered vehicles with regard to their hydrogen systems and for the type-approval of hydrogen components, including requirements for their installation. ~~(b) to amend Annex V in order to adapt it to technical progress.~~ **Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 12a (2).**	~~(a)~~ lay down detailed rules concerning the specific test procedures and technical requirements for the type-approval of hydrogen-powered vehicles with regard to their hydrogen systems***, including material compatibility and fuelling receptacles,*** and for the type-approval of hydrogen components, including requirements for their installation. ~~(b) to amend Annex V in order to adapt it to technical progress.~~ ***Those detailed rules shall be laid down and published at least fifteen months before the relevant dates specified in Annex II.***

Article 11

Specific requirements relating to automated vehicles	***Specific requirements relating to automated vehicles and fully automated vehicles***
1. In addition to the other requirements of this Regulation and of the ~~delegated~~ **implementing** acts adopted pursuant to it that are applicable to vehicles of the respective categories, automated vehicles shall comply with the requirements set out in the ~~delegated~~ **implementing** acts adopted under paragraph 2 relating to: (a) systems to replace the driver's control of the vehicle, including steering, accelerating and braking; (b) systems to provide the vehicle with real-time information on the state of the vehicle and the surrounding area; (c) driver ~~readiness~~ **availability** monitoring systems; (d) event (accident) data recorders for automated vehicles; (e) harmonised format for the exchange of data for instance for multi-brand vehicle platooning; **(f) systems to provide safety information to other road users.** **1a. The Commission is empowered to adopt**	1. In addition to the other requirements of this Regulation and of the delegated acts adopted pursuant to it that are applicable to vehicles of the respective categories, automated ***and fully automated*** vehicles shall comply with the requirements set out in the delegated acts adopted under paragraph 2 relating to: a) systems to replace the driver's control of the vehicle, including ***signalling,*** steering, accelerating and braking; b) systems to provide the vehicle with real-time information on the state of the vehicle and the surrounding area; c) driver ~~readiness~~ ***availability*** monitoring systems; ~~d) event (accident) data recorders for automated vehicles;~~ e) harmonised format for the exchange of data for instance for multi-brand vehicle platooning.

	delegated acts in accordance with Article 12 to amend Annex II in order to take account of technical progress and regulatory developments, in particular in relation to the matters listed in paragraph 1 of this Article and with a view to ensuring a high level of general safety of vehicles, systems, components and separate technical units and a high level of protection of vehicle occupants and vulnerable road users by introducing and updating references to UN Regulations and implementing acts.	
		2. Driver availability monitoring system referred to in point (c) shall not apply to fully automated vehicles.
2.	In order to ensure the safe operation of automated vehicles on public roads, the Commission is empowered to adopt ~~delegated~~ **implementing** acts ~~in accordance with Article 12~~ to lay down requirements relating to the systems and other items listed in points (a) to (e) of paragraph 1 of this Article, and to lay down detailed rules concerning the specific test procedures and technical requirements for the type-approval of automated vehicles with regard to those requirements. **Those implementing acts shall be adopted in accordance with the examination procedure referred to in**	***3.*** In order to ensure the safe operation of automated ***and fully automated*** vehicles on public roads, the Commission ***shall*** adopt delegated acts in accordance with Article 12 to lay down requirements relating to the systems and other items listed in points (a) to (e) of paragraph 1 of this Article, and to lay down detailed rules concerning the specific test procedures and technical requirements for the type-approval of automated ***and fully automated*** vehicles with regard to those requirements.

Article 12a (2).	

CHAPTER III
FINAL PROVISIONS

Article 12

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Articles **[**4(3), 4(6), 4(7), 5(4), 6(4), 7(7), 8(3), 9(7), 10(3) and 11(2)**]** shall be conferred on the Commission for a~~n indeterminate~~ period of ~~time~~ **of five years** from [*PO: Please insert the date of entry into force of this Regulation*]. **The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.**

3. The delegation of power referred to in Articles **[**4(3), 4(6), 4(7), 5(4), 6(4), 7(7), 8(3), 9(7), 10(3) and 11(2)**]** may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. A delegated act adopted under Article **[**4(3), 4(6), 4(7), 5(4), 6(4), 7(7), 8(3), 9(7), 10(3) or 11(2)**]** shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

Article 12a

Committee procedure

1. The Commission shall be assisted by the Technical Committee — Motor Vehicles (TCMV). That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.

Article 12b ***Reporting and review*** **Every five years after [*PO: Please insert the date 36 months following the date of entry into force of this Regulation*], the Commission shall prepare an evaluation report to be presented to the European Parliament and to the Council on the achievements of safety measures and system, including their penetration rate. The Commission shall investigate whether these measures and systems act as intended by this Regulation. Where appropriate, the Commission shall present a legislative proposal.**	(see Article 16a)

Article 13

Transitional provisions

1. This Regulation shall not invalidate any EU type-approval granted to vehicles, systems, components or separate technical units which were granted in accordance with Regulation (EC) No 78/2009, Regulation (EC) No 79/2009, Regulation (EC) No 661/2009 and their implementing measures, by [PO: *Please insert the date immediately preceding the date of application of this Regulation*], unless the relevant requirements applying to such vehicles, systems, components or separate technical units have been modified or new requirements have been added by this Regulation and the **implementing acts and** delegated acts adopted pursuant to it.

2. Approval authorities shall continue to grant extensions of EU type-approvals referred to in paragraph 1 of this Article.

3. By way of derogation from this Regulation, Member States shall continue to permit until the dates specified in Annex VI the registration of vehicles, as well as the sale or entry into

service of components, which do not comply with the requirements of the respective UN Regulations listed in that Annex.

Article 14

Implementation dates

With respect to vehicles, systems, components and separate technical units, national authorities shall:

(a) with effect from the dates specified in Annex II, for a particular requirement, refuse, on grounds relating to that requirement, to grant EU type-approval or national type-approval in respect of new types of vehicle, systems, components or separate technical units which do not comply with the requirements of this Regulation and of the **implementing acts and** delegated acts adopted pursuant to it;

(b) with effect from the dates specified Annex II, for a particular requirement, consider, on grounds relating to that requirement, certificates of conformity in respect to new vehicles to be no longer valid for the purposes of Article 48 of Regulation (EU) 2018/**858**, and prohibit the registration of such vehicles, which do not comply with the requirements of this Regulation and of the **implementing acts and** delegated acts adopted pursuant to it;

(c) with effect from the dates specified in Annex II, for a particular requirement, prohibit, on grounds relating to that requirement, the placing on the market or entry into service of components and separate technical units, where they do not comply with the requirements of this Regulation and of the **implementing acts and** delegated acts adopted pursuant to it.

Article 14a

Penalties

Article 84 of the Regulation (EU) 2018/858 shall apply mutatis mutandis to infringements of this Regulation.

Article 15

Amendments to Regulation (EU) 2018/858

Annex II to Regulation (EU) 2018/… is amended in accordance with Annex III to this Regulation.

Article 16

Repeal

1. Regulations (EC) No 78/2009, (EC) No 79/2009, (EC) No 631/2009 and (EC) No 661/2009 and Regulations (EU) No 406/2010, (EU) No 672/2010, (EU) No 1003/2010, (EU) No 1005/2010, (EU) No 1008/2010, (EU) No 1009/2010, (EU) No 19/2011, (EU) No 109/2011, (EU) No 458/2011, (EU) No 65/2012, (EU) No 130/2012, (EU) No 347/2012, (EU) No 351/2012, (EU) No 1230/2012 and (EU) No 2015/166 are repealed with effect from the date of application of this Regulation.
2. References to Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 shall be construed as references to this Regulation.

See Article 12b	***Article 16a*** ***Review and Reporting*** **1.** ***1. By ... [four years after the date of application of this Regulation] and every three years thereafter, the Commission shall submit an evaluation report, to the European Parliament and to the Council, on the functioning of all safety measures and systems, including those retrofitted to existing vehicles. The Commission shall evaluate whether these measures and systems operate in accordance with this Regulation, as well as their penetration rates and users' acceptance. Where appropriate, that report shall be accompanied by recommendations, including a legislative proposal to amend the requirements as regards general safety and the protection of vehicle occupants***

	and vulnerable road users, in order to support the developments towards Vision Zero driving. ***2. Before each session of the UNECE's World Forum for Harmonization of Vehicle Regulations (WP.29), the Commission shall provide information to the European Parliament on the progress made in the implementation of vehicle safety standards with regard to the requirements referred to in Articles 5 to 11 and on the position of the Union at the session.***

Article 17

Entry into force and date of application

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*. It shall apply from [*PO: Please insert the date 36 months following the date of entry into force of this Regulation*].	This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union. It shall apply from [PO: Please insert the date ~~36~~ ***1st of September following 18*** months ~~following~~ ***after*** the date of entry into force of this Regulation]. ***However, Article 4(7), Article 5(4), Article 6(4), Article 7(7), Article 8(3), Article 9(7), Article 10(3), Article 11(2) and Article 12 shall apply from ... [date of entry into force of this Regulation].***

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the European Parliament	*For the Council*
The President	*The President*

ANNEX I

List of UN Regulations referred to in Article 4(2)

Regulation Number	Subject	Series of amendments published in the OJ	OJ Reference	Scope covered by the UN Regulation
1	Headlamps emitting an asymmetrical passing beam and/or driving beam equipped with filament lamps R2 and/or HS1	*02 series of amendments*	OJ L 177, 10.7.2010, p. 1	M, N ([a])
3	Retro-reflecting devices for power-driven vehicles	~~Supplement 12 to the~~ 02 series of amendments	OJ L 323, 6.12.2011, p. 1	M, N, O
4	Illumination of rear-registration plates of power-driven vehicles and their trailers	~~Supplement 15 to the o~~ **O**riginal version of the Regulation	OJ L 4, 7.1.2012, p. 7	M, N, O

6	Direction indicators for power-driven vehicles and their trailers	~~Supplement 25 to the~~ 01 series of amendments	OJ L 213, 18.7.2014, p. 1.	M, N, O
7	Front and rear position (side) lamps, stop-lamps and end-outline marker lamps for power-driven vehicles and their trailers	~~Supplement 23 to the~~ 02 series of amendments	OJ L 285, 30.9.2014, p. 1.	M, N, O
8	Motor vehicles headlamps (H1, H2, H3, HB3, HB4, H7, H8, H9, HIR1, HIR2 and/or H11)	05 series of amendments Corrigendum 1 to Revision 4	OJ L 177, 10.7.2010, p. 71	M, N ([a])
10	Electromagnetic compatibility	~~Supplement 01 to the~~ 05 series of amendments	OJ L 41, 17.2.2017, p. 1	M, N, O
11	Door latches and door retention components	~~Supplement 2 to the~~ 03 series of amendments	OJ L 120, 13.5.2010, p. 1 *[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1

12	Protection of the driver against the steering mechanism in the event of impact	~~Supplement 1 to the~~ 04 series of amendments	OJ L 89, 27.3.2013, p. 1 *[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1
13	Braking of vehicles and trailers	~~Supplement 13 to the~~ 11 series of amendments	OJ L 42, 18.2.2016, p. 1.	M_2, M_3, N, O ([b])
13-H	Braking of passenger cars	~~Supplement 16 to the o~~ **O**riginal version of the Regulation	OJ L 335, 22.12.2015, p. 1.	M_1, N_1
14	Safety-belt anchorages, ISOFIX anchorages systems and ISOFIX top tether anchorages	~~Supplement 5 to the~~ 07 series of amendments	OJ L 218, 19.8.2015, p. 27 *[PO: scheduled for translation in 2018, please update the references when available]*	M, N

16	Safety-belts, restraint systems, child restraint systems and ISOFIX child restraint systems	~~Supplement 2 to the~~ 07 series of amendments	OJ L 109, 27.4.2018, p. 1	M, N
17	Seats, their anchorages and any head restraints	08 series of amendments	OJ L 230, 31.8.2010, p. 81 *[PO: scheduled for translation in 2018, please update the references when available]*	M, N
18	Protection of motor vehicles against unauthorized use	~~Supplement 2 to the~~ 03 series of amendments	OJ L 120, 13.5.2010, p. 29	M_2, M_3, N_2, N_3
19	Power-driven vehicle front fog lamps	~~Supplement 6 to the~~ 04 series of amendments	OJ L 250, 22.8.2014, p. 1	M, N
20	Headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (H4)	03 series of amendments	OJ L 177, 10.7.2010, p. 170	M, N ([a])

21	Interior fittings	~~Supplement 3 to the~~ 01 series of amendments	OJ L 188, 16.7.2008, p. 32	M_1
23	Reversing lights for power-driven vehicles and their trailers	~~Supplement 19 to the o~~ **O**riginal version of the Regulation	OJ L 237, 8.8.2014, p. 1	M, N, O
25	Head restraints (headrests), whether or not incorporated in vehicle seats	04 series of amendments Corrigendum 2 to Revision 1	OJ L 215, 14.8.2010, p. 1 *[PO: scheduled for translation in 2018, please update the references when available]*	M_1
26	External projections	~~Supplement 1 to the~~ 03 series of amendments	OJ L 215, 14.8.2010, p. 27	M_1
28	Audible warning devices and signals	~~Supplement 3 to the o~~ Original version of the Regulation	OJ L 323, 6.12.2011, p. 33	M, N

29	Protection of the occupants of the cab of a commercial vehicle	03 series of amendments	OJ L 304, 20.11.2010, p. 21 *[PO: scheduled for translation in 2018, please update the references when available]*	N
30	Pneumatic tyres for motor vehicles and their trailers (Class C1)	~~Supplement 16 to the~~ 02 series of amendments	OJ L 307, 23.11.2011, p. 1	M, N, O
31	Power-driven vehicle's sealed-beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both	~~Supplement 7 to the~~ 02 series of amendments	OJ L 185, 17.7.2010, p. 15	M, N
34	Prevention of fire risks (liquid fuel tanks)	~~Supplement 1 to the~~ 03 series of amendments	OJ L 231, 26.8.2016, p. 41	M, N, O

37	Filament lamps for use in approved lamp units of power-driven vehicles and their trailers	~~Supplement 42 to the~~ 03 series of amendments	OJ L 213, 18.07.2014, p. 36	M, N, O
38	Rear fog lamps for power-driven vehicles and their trailers	~~Supplement 15 to the o~~ **O**riginal version of the Regulation	OJ L 4, 7.1.2012, p. 20	M, N, O
39	Speedometer equipment including its installation	~~Supplement 5 to the o Original version of the Regulation~~ **01 series of amendments**	OJ L 120, 13.5.2010, p. 40 ***[PO: scheduled for translation in 2018, please update the references when available]***	M, N
43	Safety glazing materials	~~Supplement 2 to the~~ 01 series of amendments	OJ L 42, 12.2.2014, p. 1	M, N, O
44	Restraining devices for child occupants of power-driven vehicles ("child restraint system")	~~Supplement 10 to the~~ 04 series of amendments	OJ L 265, 30.9.2016, p. 1	M, N
45	Headlamps cleaners	~~Supplement 11 to the~~ 01 series of amendments	*[PO: scheduled for translation in 2018, please update the references when available]*	M, N

46	Devices for indirect vision and their installation	~~Supplement 1 to the~~ 04 series of amendments	OJ L 237, 8.8.2014, p. 24	M, N
48	Installation of lighting and light-signalling devices on motor vehicles	~~Supplement 7 to the~~ 06 series of amendments	OJ L 265, 30.09.2016, p. 125 ***[PO: scheduled for translation in 2018, please update the references when available]***	M, N, O ([c])
54	Pneumatic tyres for commercial vehicles and their trailers (Classes C2 and C3)	~~Supplement 17 to the o~~ **O**riginal version of the Regulation	OJ L 307, 23.11.2011, p. 2	M, N, O
55	Mechanical coupling components of combinations of vehicles	~~Supplement 1 to the~~ 01 series of amendments	OJ L ~~227~~ **153**, ~~28.8.2010~~ **15.6.2016**, p. 1**79** *[PO: scheduled for translation in 2018, please update the references when available]*	M, N, O ([c])

58	Rear underrun protective devices (RUPDs) and their installation; Rear underrun protection (RUP)	~~Supplement 3 to the~~ 0~~2~~**3** series of amendments	~~OJ L 89, 27.3.2013, p. 34~~ *[PO: scheduled for translation in 2018, please update the references when available]*	M, N, O
61	Commercial vehicles with regard to their external projections forward of the cab's rear panel	~~Supplement 1 to the o~~ **O**riginal version of the Regulation	OJ L 164, 30.6.2010, p. 1	N
64	Temporary–use spare unit, run-flat tyres/system (and tyre pressure monitoring system)	~~Corrigendum 1 to the~~ 02 series of amendments	OJ L 310, 26.11.2010, p. 18	M_1, N_1
66	Strength of the superstructure of large passenger vehicles	02 series of amendments	OJ L 84, 30.3.2011, p. 1	M_2, M_3
67	Motor vehicles using LPG	~~Supplement 14 to the~~ 01 series of amendments	OJ L 285, 20.10.2016, p. 1	M, N

73	Lateral protection of goods vehicles	01 series of amendments	OJ L 122, 8.5.2012, p. 1	N_2, N_3, O_3, O_4
77	Parking lamps for power-driven vehicles	~~Supplement 14 to the o~~ **O**riginal version of the Regulation	OJ L 4, 7.1.2012, p. 21	M, N
79	Steering equipment	~~Supplement 3 to the~~ 0~~1~~**3** series of amendments Corrigendum	~~OJ L 137, 27.5.2008, p. 25~~ ***[PO: scheduled for translation in 2018, please update the references when available]***	M, N, O
80	Seats of large passenger vehicles	03 series of amendments to the Regulation	OJ L 226, 24.8.2013, p. 20 *[PO: scheduled for translation in 2018, please update the references when available]*	M_2, M_3
87	Daytime running lamps for power-driven vehicles	~~Supplement 15 to the o~~ **O**riginal version of the Regulation	OJ L 4, 7.1.2012, p. 24	M, N

89	Speed limitation devices	~~Supplement 2 to the o~~ **O**riginal version of the Regulation	OJ L 4, 7.1.2012, p. 25	M, N ([d])
90	Replacement brake lining assemblies and drum brake linings for power-driven vehicles and their trailers	02 series of amendments	OJ L 185, 13.7.2012, p. 24	M, N, O
91	Side-marker lamps for motor vehicles and their trailers	~~Supplement 13 to the o~~ **O**riginal version of the Regulation	OJ L 4, 7.1.2012, p. 27	M, N, O
93	Front underrun protective devices (FUPDs) and their installation; front underrun protection (FUP)	Original version of the Regulation	OJ L 185, 17.7.2010, p. 56	N_2, N_3
94	Protection of occupants in the event of a frontal collision	03 series of amendments	OJ L 35, 8.2.2018, p. 1	M_1
95	Protection of occupants in the event of a lateral collision	~~Supplement 4 to the~~ 03 series of amendments	OJ L 183, 10.7.2015, p. 91	M_1, N_1

97	Vehicle Alarm Systems (VAS)	~~Supplement 6 to the~~ 01 series of amendments	OJ L 122, 8.5.2012, p. 19	M_1, N_1 ([e])
98	Motor vehicle headlamps equipped with gas-discharge light sources	~~Supplement 4 to the~~ 01 series of amendments	OJ 176, 14.6.2014, p. 64	M, N
99	Gas-discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles	~~Supplement 9 to the o~~ **O**riginal version of the Regulation	OJ L 285, 30.09.2014, p. 35	M, N
100	Electric safety	~~Supplement 1 to the~~ 02 series of amendments	OJ L 87, 31.3.2015, p. 1 *[PO: scheduled for translation in 2018, please update the references when available]*	M, N
102	Close-coupling device (CCD); fitting of an approved type of CCD	Original version of the Regulation	OJ L 351, 30.12.2008, p. 44	N_2, N_3, O_3, O_4

104	Retro-reflective markings (heavy and long vehicles)	~~Supplement 7 to the o~~ **O**riginal version **of the Regulation**	OJ L 75, 14.3.2014, p. 29	M_2, M_3, N, O_2, O_3, O_4
105	Vehicles for the carriage of dangerous goods	05 series of amendments	OJ L 4, 7.1.2012, p. 30	N,O
107	M_2 and M_3 vehicles	~~Supplement 1 to the~~ 07 series of amendments	OJ L 52 of 23.2.2018, p.1	M_2, M_3
108	Retrea~~t~~**d**ed tyres for passenger cars and their trailers	~~Supplement 1 to the o~~ **O**riginal version of the Regulation	OJ L 181, 4.7.2006, p. 1	M_1, O_1, O_2
109	Retrea~~t~~**d**ed tyres for commercial vehicles and their trailers	~~Supplement 2 to the o~~ **O**riginal version of the Regulation	OJ L 181, 4.7.2006, p. 1	M_2, M_3, N, O_3, O_4
110	Specific components for CNG	~~Supplement 2 to~~ 01 series of amendments	OJ L 166, 30.6.2015, p. 1	M, N

112	Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules	~~Supplement 4 to the~~ 01 series of amendments	OJ L 250, 22.8.2014, p. 67	M, N
114	Replacement airbag	Original version of the Regulation	OJ L 373, 27.12.2006, p. 272	M_1, N_1
115	LPG and CNG retrofit systems	~~Supplement 6 to the o~~ **O**riginal version of the Regulation	OJ L 323, 7.11.2014, p. 91	M, N
116	Protection of motor vehicles against unauthorized use	~~Supplement 3 to the o~~ **O**riginal version of the Regulation	OJ L 45, 16.2.2012, p. 1	M_1, N_1 ([e])
117	Tyres with regard to rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes C1, C2 and C3)	~~Supplement 8 to the~~ 02 series of amendments	OJ L 218, 12.08.2016, p. 1	M, N, O

118	Fire resistance of interior materials in buses	~~Supplement 1 to the~~ 02 series of amendments	OJ L 102, 21.4.2015, p.67 *[PO: scheduled for translation in 2018, please update the references when available]*	M_3
119	Cornering lamps	~~Supplement 3 to the~~ 01 series of amendments	OJ L 89, 25.3.2014, p. 101	M, N
121	Location and identification of hand controls, tell-tales and indicators	01 series of amendments	OJ L 5, 8.1.2016, p. 9	M, N
122	Heating system of vehicles	~~Supplement 1 to the o~~ Original version of the Regulation	OJ L 164, 30.6.2010, p. 231 *[PO: scheduled for translation in 2018, please update the references when available]*	M, N, O

123	Adaptive front-lighting systems (AFS) for motor vehicles	~~Supplement 4 to the original version of the Regulation~~ **01 series of amendments**	~~OJ L 222, 24.8.2010, p. 1~~ ***[PO: scheduled for translation in 2018, please update the references when available]***	M, N
124	Replacement wheels	Original version of the Regulation	OJ L 375, 27.12.2006, p. 568	M_1, N_1, O_1, O_2
125	Forward field of vision	~~Supplement 1 to the~~ 01 series of amendments	OJ L 20, 25.1.2018, p. 16	M_1
126	Partitioning systems	Original ~~series~~ **version of the Regulation**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1
127	Pedestrian safety	02 series **of amendments**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1

128	Light Emitting Diode (LED) light sources	~~Supplement 2 to the o~~ **O**riginal version of the Regulation	OJ L 162, 29.5.2014, p. 43	M, N, O
129	Enhanced child restrained systems	~~Supplement 2 to the o~~ **O**riginal version of the Regulation	OJ L 97, 29.03.2014, p. 21	M, N
130	Lane departure warning	Original version of the Regulation	OJ L 178, 18.06.2014, p. 29	M_2, M_3, N_2, N_3 ([f])
131	Advanced emergency braking	~~Supplement 1 to~~ 01 series of amendments	OJ L 214, 19.07.2014, p. 47	M_2, M_3, N_2, N_3 ([f])
134	Hydrogen safety	~~Supplement 2 to the o~~ **O**riginal ~~series~~ **version** of amendments	*[PO: scheduled for translation in 2018, please update the references when available]*	M, N

135	Pole side impact	~~Supplement 1 to the~~ 01 series of amendments	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1
137	Frontal full-width impact	01 series of amendments	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1
139	Brake assist	Original ~~series of amendments~~ **version of the Regulation**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1
140	Stability control	Original ~~series of amendments~~ **version of the Regulation**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1

141	Tyre pressure monitoring	Original ~~series of amendments~~ **version of the Regulation**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1, N_1 **(g)**
142	Tyre installation	Original ~~series of amendments~~ **version of the Regulation**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1
[145]	Child restraint anchorages	Original ~~series of amendments~~ **version of the Regulation**	*[PO: scheduled for translation in 2018, please update the references when available]*	M_1

Notes to the table

The series of amendments indicated in the table reflects the version that has been published in the *Official Journal* and is without prejudice to the series of amendments that shall be complied with on the basis of the transitional provisions provided therein.

Compliance with a series of amendments adopted after the particular series indicated in the table shall be accepted as an alternative.

The dates specified in the relevant series of amendments of the UN Regulations listed in the table, as regards the obligations of Contracting Parties to the 'Revised 1958 Agreement'[1], linked to first registration, entry into service, making available on the market, sale, the recognition of type-approvals, and any similar provisions, apply on a compulsory basis for the purposes of Articles 48 and 50 of Regulation (EU) 2018/**858** except where alternative dates are specified in Article 14 of this Regulation in which case those alternative dates are to be followed instead.

In certain instances, a UN Regulation listed in the table provides in its transitional provisions that as from a specified date, Contracting Parties to the 'Revised 1958 Agreement' applying a certain series of amendments to that UN Regulation shall not be obliged to accept or may refuse to accept, for the purpose of national or regional type-approval, a type approved in accordance with a preceding series of amendments, or wording with similar intention and meaning. This shall be construed as a binding provision for national authorities to consider the certificates of conformity to be no longer valid for the purposes of Article 48 of Regulation (EU) 2018/**858**, except where alternative dates are specified in Annex II of this Regulation in which case those alternative dates are to be followed instead.

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1 Council Decision of 27 November 1997 with a view to accession by the European Community to the Agreement of the United Nations Economic Commission for Europe concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted to and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions ('Revised 1958 Agreement') (OJ L 346, 17.12.1997, p. 78).

([a]) UN Regulation Nos 1, 8 and 20 are not applicable for EU type-approval of vehicles.

([b]) The mandatory fitting of a stability control function is required in accordance with the UN Regulations. However, it is also mandatory for vehicles of category N_1.

([c]) Where it is declared by the vehicle manufacturer that a vehicle is suitable for towing loads (point 2.11.5. of the information document referred to in Article 24(1) of Regulation (EU) 2018/**858**) and any part of a suitable mechanical coupling device, whether fitted or not to the type of motor-vehicle, could (partly) obscure any lighting component and/or the space for mounting and fixing the rear registration plate, the following shall apply:

- the motor-vehicle's user instructions (e.g. owner's manual, vehicle handbook) shall clearly specify that installation of a mechanical coupling device that cannot be easily removed or repositioned is not permitted;
- the instructions shall also clearly specify that, when fitted, a mechanical coupling device must always be removed or repositioned when it is not in use; and
- in the case of vehicle system type-approval according to UN Regulation 55, it shall be ensured that the removal, repositioning and/or alternate location provisions are also fully complied with as regards lighting installation and space for mounting and fixing the rear registration plate .

([d]) Only Speed Limitation Devices (SLD) and the mandatory installation of SLD on vehicles of category M_2, M_3, N_2 and N_3 are concerned.

([e]) Devices to prevent unauthorised use shall be fitted on vehicles of categories M_1 and N_1 and immobilizer systems shall be fitted on vehicles of category M_1.

([f]) See explanatory note [4] to the table in Annex II.

([g]) For vehicles of categories M_1 with a maximum mass ≤ 3 500 kg and N_1, that are not fitted with twin wheels on an axle.

ANNEX II

List of the requirements referred to in Article 4(5) and Article 5(3) as well as the dates referred to in Article 14

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
A	**Requirements concerning RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY**														
A1	Interior fittings	UN Regulation No 21		A											
A2	Seats and head restraints	UN Regulation No 17		A	A	A	A	A	A						
A3	Bus seats	UN Regulation No 80			A	A									A
A4	Safety-belt anchorages	UN Regulation No 14		A	A	A	A	A	A						
A5	Safety-belts and restraint systems	UN Regulation No 16		A	A	A	A	A	A					A	A
A5a	***Safety-belt reminders***			***A***	***A***	***A***	***A***	***A***	***A***						
A6	Partitioning systems	UN Regulation No 126		X										B	

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
A7	Child restraint anchorages	UN Regulation No 145		A											
A8	Child restraint systems	UN Regulation No 44		A^1	A^1	A^1	A^1	A^1	A^1					A	A
A9	Enhanced child restraint systems	UN Regulation No 129		X	X	X	X	X	X					B	B
A10	Front underrun protection	UN Regulation No 93						A	A					A	A
A11	Rear underrun protection	UN Regulation No 58		A	A	A	A	A	A	A	A	A	A	A	A
A12	Lateral protection	UN Regulation No 73						A	A			A	A		
A13	Fuel tank safety	UN Regulation No 34		A	A	A	A	A	A	A	A	A	A	A	
A14	Liquified petroleum gas safety	UN Regulation No 67		A	A	A	A	A	A						A
A15	Compressed and liquified natural gas safety	UN Regulation No 110		A	A	A	A	A	A						A

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
A16	Hydrogen safety	UN Regulation No 134		A	A	A	A	A	A						A
A17	Hydrogen system material qualification		~~Annex V~~	A	A	A	A	A	A						A
A18	In-use electric safety	UN Regulation No 100		A	A	A	A	A	A						
A19	Frontal off-set impact	UN Regulation No 94	Applies to vehicle categories M_1 **with a maximum mass ≤ 3 500 kg** and N_1 ~~with a maximum mass ≤ 3 500 kg~~ **For vehicles with a maximum mass > 2 500 kg, dates in note B apply.**	A			A[6]								
			Applies to vehicle categories M1 and N1 with a maximum mass ≤ ***2.500 kg***	A			A								

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
A20	Frontal full-width impact	UN Regulation No 137	Use of the anthropomorphic test device "Hybrid III" crash dummy is permitted until the test device for human occupant restraint "THOR" is available in the UN Regulation	B			B								
A21	Protective steering	UN Regulation No 12		A			A							A	
A22	Replacement airbag	UN Regulation No 114		X			X							B	
A23	Cab impact	UN Regulation No 29					A	A	A						

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
A24	Side impact	UN Regulation No 95	Applies to all vehicles of categories M_1 and N_1 including those with R point of the lowest seat > 700 mm from ground level. **For vehicles having R point of the lowest seat > 700 mm from ground level, dates in Note B apply.**	A			A								
A25	Pole side impact	UN Regulation No 135		B			B								
A26	Rear impact	UN Regulation No 34	Applies to vehicle categories M_1 **with a maximum mass ≤ 3 500 kg** and N_1 ~~with a maximum mass ≤ 3 500 kg~~. Post-crash electrical safety requirements shall be ensured	~~A~~ **B**			~~A~~ **B**								

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
B	**Requirements concerning PEDESTRIANS, CYCLISTS, VISION AND VISIBILITY**		~~PEDESTRIANS, CYCLISTS~~ ***VULNERABLE ROAD USERS***, VISION AND VISIBILITY												
B1	Pedestrian leg and head protection	UN Regulation No 127		A			A								
B2	Pedestrian and cyclist enlarged head impact zone	UN Regulation No 127	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.	~~B~~ C			~~B~~ C								
B3	Frontal protection system		~~Annex IV~~	X			X							A	
B4	Advanced emergency braking for pedestrian and cyclist			C			C								

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
B5	Pedestrian and cyclist collision warning				B	B		B	B					B	
B6	Blind spot information system				B	B		B	B					B	
B7	Reversing ~~safety~~ **detection**			B	B	B	B	B	B	B	B	B	B	B	
B8	Forward vision	UN Regulation No 125	Applies to vehicle categories M_1 and N_1	~~B~~ **A**			C								
B9	Heavy duty direct vision				D	D		D	D						
B10	Safety glazing	UN Regulation No 43		A	A	A	A	A	A	A	A	A	A		A
B11	Defrost/demist			A	A^2	A^2	A^2	A^2	A^2						
B12	Wash/wipe			A	A^3	A^3	A^3	A^3	A^3					A	
B13	Indirect vision devices	UN Regulation No 46		A	A	A	A	A	A						A

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
C	**Requirements concerning VEHICLE CHASSIS, BRAKING, TYRES AND STEERING**														
C1	Steering equipment	UN Regulation No 79		A	A	A	A	A	A	A	A	A	A		
C2	Lane departure warning **system**	UN Regulation No 130			A^4	A^4		A^4	A^4						
C3	Emergency lane keeping **system**			B^6			B^6								
C4	Braking	UN Regulation No 13 UN Regulation No 13-H		A	A	A	A	A	A	A	A	A	A		
C5	Replacement braking parts	UN Regulation No 90		X	X	X	X	X	X	X	X	X	X	A	
C6	Brake assist	UN Regulation No 139		A			A								
C7	Stability control	UN Regulation No 13 UN Regulation No 140		A	A	A	A	A	A	A	A	A	A		

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
C8	Advanced emergency braking on heavy duty vehicles	UN Regulation No 131			A^4	A^4		A^4	A^4						
C9	Advanced emergency braking on light duty vehicles			B			B								
C10	Tyre safety and environmental performance	UN Regulation No 30 UN Regulation No 54 UN Regulation No 117	***A test procedure for worn tyres shall also be ensured; the dates in note C apply***	X	X	X	X	X	X	X	X	X	X		A
C11	Spare wheels and run-flat systems	UN Regulation No 64		A^1			A^1								
C12	Retreaded tyres	UN Regulation No 108 UN Regulation No 109		X	X	X	X	X	X	X	X	X	X		A

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
C13	Tyre pressure monitoring for light duty	UN Regulation No 141	Applies to vehicle categories M_1 **with a maximum mass ≤ 3 500 kg** and N_1	A			B								
C14	Tyre pressure monitoring for heavy duty				B	B		B	B			B	B		
C15	Tyre installation	UN Regulation No 142	Applies to all vehicle categories	A	A	A	A	A	A	A	A	A	A		
C16	Replacement wheels	UN Regulation No 124		X			X			X	X				B
D	**Requirements concerning ON BOARD INSTRUMENTS, ELECTRICAL SYSTEM ~~AND~~ VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORIZED USE INCLUDING CYBERATTACKS**		ON BO*A*RD INSTRUMENTS, ELECTRICAL SYSTEM**,** VEHICLE LIGHTING ***AND PROTECTION AGAINST UNAUTHORIZED USE, INCLUDING CYBERATTACKS***												
D1	Audible warning	UN Regulation No 28		A	A	A	A	A	A						A

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
D2	Radio interference (electromagnetic compatibility)	UN Regulation No 10		A	A	A	A	A	A	A	A	A	A	A	A
D3	Protection against unauthorised use, cyber attacks, immobilizer and alarm systems	UN Regulation No 18 UN Regulation No 97 UN Regulation No 116		A	A[1]	A[1]	A	A[1]	A[1]					A	A
D3a	***Protection of vehicle against cyberattacks***			***B***	***B***	***B***	***B***	***B***	***B***					***B***	***B***
D4	Speedometer	UN Regulation No 39		A	A	A	A	A	A						
D5	Odometer	UN Regulation No 39		A	A	A	A	A	A						
D6	Speed limitation devices	UN Regulation No 89			A	A		A	A						A
D7	Intelligent speed assistance			B	B	B	B	B	B					B	
D8	Identification of controls, tell-tales and indicators	UN Regulation No 121		A	A	A	A	A	A						
D9	Heating systems	UN Regulation No 122		A	A	A	A	A	A	A	A	A	A		A

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
D10	Light signalling devices	UN Regulation No 4 UN Regulation No 6 UN Regulation No 7 UN Regulation No 19 UN Regulation No 23 UN Regulation No 38 UN Regulation No 77 UN Regulation No 87 UN Regulation No 91		X	X	X	X	X	X	X	X	X	X		A
D11	Road illumination devices	UN Regulation No 31 UN Regulation No 98 UN Regulation No 112 UN Regulation No 123		X	X	X	X	X	X						A
D12	Retro-reflective devices	UN Regulation No 3		X	X	X	X	X	X	X	X	X	X		A

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
D13	Light sources	UN Regulation No 37 UN Regulation No 99 UN Regulation No 128		X	X	X	X	X	X	X	X	X	X		A
D14	Installation of light signalling, road illumination and retro-reflective devices	UN Regulation No 48		A	A	A	A	A	A	A	A	A	A		
D15	Emergency Stop Signal			B	B	B	B	B	B	B	B	B	B		
D16	Headlamp cleaners	UN Regulation No 45		A[1]	A[1]	A[1]	A[1]	A[1]	A[1]						A
D17	Gear shift indicator			A											
E	**Requirements concerning DRIVER AND SYSTEM BEHAVIOUR**														
E1	Alcohol interlock installation facilitation		**EN 50436-7:2016**	B	B	B	B	B	B						

Item	Subject		UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	S T U	Component
E2	**Driver** drowsiness and attention **monitoring** ~~detection~~	D***river d***rowsiness and attention ~~detection~~ ***warning***			B	B	B	B	B	B						
E3	Advanced distraction recognition	Advanced ***driver*** distraction ~~recognition~~***warning***		Advanced distraction recognition may also cover drowsiness and attention **monitoring** ~~detection~~. Distraction avoidance by technical means may also be taken into consideration as an alternative to advanced distraction recognition	C	C	C	C	C	C						
				~~Advanced distraction recognition may also cover drowsiness and attention detection.~~ Distraction avoidance by technical means may also												

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
			be taken into consideration. ~~as an alternative to advanced distraction recognition~~												
E4	Driver ~~availability~~ **readiness** monitoring **system**			B^5	B^5	B^5	B^5	B^5	B^5						
	Driver availability monitoring			***E***	***E***	***E***	***E***	***E***	***E***						
E5	Event ~~(accident)~~ data recorder			B	B^5	B^5	B	B^5	B^5					B	
	~~Event(a~~Accident~~)~~ data recorder			B	**B**	**B**	B	**B**	**B**					B	
E6	Systems to replace driver's control			B^5	B^5	B^5	B^5	B^5	B^5						
				E	***E***	***E***	***E***	***E***	***E***						
E7	Systems to provide the vehicle with information on state of vehicle and surrounding area			B^5	B^5	B^5	B^5	B^5	B^5						
				E	***E***	***E***	***E***	***E***	***E***						

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	S T U	Com pon ent
E8	Platooning			B^5	B^5	B^5	B^5	B^5	B^5						

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
				E	***E***	***E***	***E***	***E***	***E***						

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
F	**Requirements concerning** **GENERAL VEHICLE CONSTRUCTION AND FEATURES**														
F1	Registration plate space			A	A	A	A	A	A	A	A	A	A		
F2	Reversing motion			A	A	A	A	A	A						
F3	Door latches and hinges	UN Regulation No 11		A			A	~~A~~	~~A~~						
F4	Door entry steps, handholds and running boards			A			A	A	A						
F5	External projections	UN Regulation No 26		A											
F6	External projections of commercial vehicle cabs	UN Regulation No 61					A	A	A						

Item	Subject	UN Regulations **Regulatory acts**	Additional specific technical ~~requirements~~ **provisions**	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3	O_4	STU	Component
F7	Statutory plate and vehicle identification number			A	A	A	A	A	A	A	A	A	A		
F8	Towing devices			A	A	A	A	A	A						
F9	Wheel guards			A											
F10	Spray suppression systems						A	A	A	A	A	A	A		
F11	Masses and dimensions			A	A	A	A	A	A	A	A	A	A		
F12	Mechanical couplings	UN Regulation No 55 UN Regulation No 102		A^1	A^1	A^1	A^1	A^1	A^1	A	A	A	A	**A**	A
F13	Vehicles intended for the transportation of dangerous goods	UN Regulation No 105					A	A	A	A	A	A	A		
F14	General bus construction	UN Regulation No 107			A	A									
F15	Bus strength of superstructure	UN Regulation No 66			A	A									
F16	Flammability in buses	UN Regulation No 118				A									A

Notes to the table

A: 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 of application of this Regulation*]

B: Date for refusal to grant EU type-approval:

[*PO: Please insert 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 24 months after the date of application of this Regulation*]

C: Date for refusal to grant EU type-approval:

[*PO: Please insert the date 24 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 48 months after the date of application of this Regulation*]

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*]	Date for refusal to grant EU type-approval: [PO: Please insert the date ***36 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 ***78 months*** after the date of application of this Regulation]

X: The component or separate technical unit in question applies to the vehicle categories as indicated.

[1] Compliance is required if fitted.

[2] Vehicles of this category shall be fitted with an adequate windscreen defrosting and demisting device.

[3] Vehicles of this category shall be fitted with adequate windscreen washing and wiping devices.

4 The following vehicles are exempted:

- semi-trailer towing vehicles of category N_2 with a maximum mass exceeding 3,5 tonnes but not exceeding 8 tonnes;
- vehicles of categories M_2 and M_3 of Class A, Class I and Class II as defined in paragraph 2.1 of UN Regulation No 107;
- articulated buses of category M_3 of Class A, Class I and Class II as defined in paragraph 2.1 of UN Regulation No 107;
- off-road vehicles of categories M_2, M_3, N_2 and N_3;
- special purpose vehicles of categories M_2, M_3, N_2 and N_3; and
- vehicles of categories M_2, M_3, N_2 and N_3 with more than three axles.

5 Compliance is required in case of automated vehicles.

6 **For motor vehicles with hydraulic power assisted steering systems dates in note C apply. Those vehicles, however, shall be equipped with a lane departure warning system instead.**

ANNEX III

Amendments to Annex II to Regulation (EU) 2018/858

Annex II to Regulation (EU) 2018/**858** is amended as follows:

(1) in the table in Part I, in the entry for item 3A, the reference in the third column to 'Regulation (EC) No 661/2009' is replaced by the following:

'Regulation (EU) 2019/…*+

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* Regulation (EU) 2019/… of the European Parliament and of the Council of […] on type-approval requirements for motor vehicles and their trailers, and for systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/**858** and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 [OJ …, p…]'

and each subsequent reference to 'Regulation (EC) No 661/2009' throughout Annex II is replaced by a reference to 'Regulation (EU) 2019/…', unless otherwise provided in the succeeding provisions of this Annex;

(2) Part I is amended as follows:

(a) the table is amended as follows:

(i) the following entry is inserted in the appropriate place by item number:

'55A	Pole side impact	Regulation (EU) 2019/…+ UN Regulation No 135	X			X';							

+ *[OP: Please insert relevant details in the text and in the footnote.]*

(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/…[+] UN Regulation No 127	X			X							X';

(iii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/…[+] UN Regulation No 134	X	X	X	X	X	X					X
63	General safety	Regulation (EU) 2019/...[+]	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)';

(iv) the entries for items 65 and 66 are replaced by the following:

'65	Advanced emergency braking system	Regulation (EU) 2019/…[+] UN Regulation No 131		X	X		X	X					
66	Lane departure warning system	Regulation (EU) 2019/…[+] UN Regulation No 130		X	X		X	X';					

(b) the explanatory notes are amended as follows:

(i) explanatory notes 3 and 4 are replaced by the following:

'([3]) The fitting of vehicle stability function is required in accordance with Article 4(5) of Regulation (EU) 2019/…[+]

([4]) The fitting of an electronic stability control system is required in accordance with Article 4(5) of Regulation (EU) 2019/…[+]

(ii) explanatory note 9A is replaced by the following:

([9A]) The fitting of a tyre pressure monitoring system is required in accordance with Article 5(1) of Regulation (EU) 2019/…[+]';

(iii) explanatory note 15 is replaced by the following:

'([15]) Compliance with Regulation (EU) 2019/...[+] is mandatory. However, type-approval under this specific item is not envisaged as it merely represents the collection of individual items listed elsewhere in the table that make reference to Regulation (EU) 2019/...[+].';

(3) in Appendix 1 of Part I, Table 1 is amended as follows:

(a) the entry for item 46A is replaced by the following:

'46A	Installation of tyres	Regulation (EU) 2019/...[+] UN Regulation No 142		B';

(b) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/...[+] UN Regulation No 127		A';

~~*(b) the entry for item 58 is replaced by the following:*~~

~~'58~~	~~Pedestrian protection~~	~~Regulation (EU) 2019/...+ UN Regulation No 127~~	~~A';~~

(c) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...+ UN Regulation No 134	X
63	General safety	Regulation (EU) 2019/...+	Compliance with Regulation (EU) 2019/...+ is mandatory. However, type-approval under this specific item is not envisaged as it merely represents the collection of individual items listed elsewhere in the table that make reference to Regulation (EU) 2019/...+.';

(4) in the explanatory notes to Table 1 of Appendix 1, the final paragraph is deleted;

(5) in Appendix 1 of Part I, Table 2 is amended as follows:

(a) the entry for item 46A is replaced by the following:

'46A	Installation of tyres	Regulation (EU) 2019/...[+] UN Regulation No 142	B';

(b) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/...[+] UN Regulation No 127	A';

~~*(b) the entry for item 58 is replaced by the following:*~~

~~*'58*~~	~~*Pedestrian protection*~~	~~*Regulation (EU) 2019/...*~~ [+] ~~*UN Regulation No 127*~~	~~*A';*~~

(c) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/... [+] UN Regulation No 134		X
63	General safety	Regulation (EU) 2019/... [+]		Compliance with Regulation (EU) 2019/... [+] is mandatory. However, type-approval under this specific item is not envisaged as it merely represents the collection of individual items listed elsewhere in the table that make reference to Regulation (EU) 2019/... [+].';

(6) in Appendix 2 of Part I, point 4 is amended as follows:

(a) the table headed 'Part I: Vehicles belonging to category M_1' is amended as follows:

(i) the entry for item 58 is replaced by the following:

'58	UN Regulation No 127 Regulation (EU) 2019/...[+] (Pedestrian protection)	Vehicles shall be fitted with an electronic antilock braking system acting on all wheels. The requirements of UN Regulation No 127 shall apply. Any frontal protection system shall either be an integral part of the vehicle and thus compliant with the requirements of UN Regulation No 127 or be type-approved as separate technical unit';

(ii) the following entry is inserted in the appropriate place by item number:

'62	UN Regulation No 134 Regulation (EU) 2019/...[+] (Hydrogen system)	The requirements of UN Regulation No 134 shall apply. Alternatively, it shall be demonstrated that the vehicle complies with: - Substantive requirements of Regulation (EC) No 79/2009 in its version applicable on [*PO: Please insert the date immediately preceding the date of application of this Regulation*]; - Attachment 100 – Technical Standard For Fuel Systems Of Motor Vehicle Fueled By Compressed Hydrogen Gas (Japan); - GB/T 24549-2009 Fuel cell electric vehicles – safety requirements (China); - International standard ISO 23273:2013 Part 1: Vehicle functional safety and Part 2: Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen; or - SAE J2578 – General Fuel Cell Vehicle Safety';

(b) the table headed 'Part II Vehicles belonging to category N_1' is amended as follows:

(i) the entry for item 58 is replaced by the following:

'58	UN Regulation No 127 Regulation (EU) 2019/...[+] (Pedestrian protection)	Vehicles shall be fitted with an electronic antilock braking system acting on all wheels. The requirements of UN Regulation No 127 shall apply. Any frontal protection system shall either be an integral part of the vehicle and thus compliant with the requirements of UN Regulation No 127 or be type-approved as separate technical unit';

(ii) the following entry is inserted in the appropriate place by item number:

'62	UN Regulation No 134 Regulation (EU) 2019/...[+] (Hydrogen system)	The requirements of UN Regulation No 134 shall apply. Alternatively, it shall be demonstrated that the vehicle complies with: - Substantive requirements of Regulation (EC) No 79/2009 in its version applicable on [*PO: Please insert the date immediately preceding the date of application of this Regulation*]; - Attachment 100 – Technical Standard For Fuel Systems Of Motor Vehicle Fueled By Compressed Hydrogen Gas (Japan); - GB/T 24549-2009 Fuel cell electric vehicles – safety requirements (China); - International standard ISO 23273:2013 Part 1: Vehicle functional safety and Part 2: Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen; or - SAE J2578 – General Fuel Cell Vehicle Safety';

(7) in Part II, in the table, the entries for items 58, 65 and 66 are deleted;

(8) Part III is amended as follows:

(a) in Appendix 1, the table is amended as follows:

(i) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/...[+] UN Regulation No 127	X	X';		

(ii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...+ UN Regulation No 134	X	X	X	X
63	General safety	Regulation (EU) 2019/...+	X(15)	X(15)	X(15)	X(15)';

(iii) the entries for items 65 and 66 are replaced by the following:

'65	Advanced emergency braking system	Regulation (EU) 2019/...+ UN Regulation No 131			N/A	N/A
66	Lane departure warning system	Regulation (EU) 2019/...+ UN Regulation No 130			N/A	N/A';

(b) in Appendix 2, the table is amended as follows:

(i) the following entry is inserted in the appropriate place by item number:

'55A	Pole side impact	Regulation (EU) 2019/...+ UN Regulation No 135	N/A			N/A';						

(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/...+ UN Regulation No 127	N/A			N/A';					

(iii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...+ UN Regulation No 134	X	X	X	X	X	X				
63	General safety	Regulation (EU) 2019/...+	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)';

(iv) the entries for items 65 and 66 are replaced by the following:

'65	Advanced emergency braking system	Regulation (EU) 2019/...+ UN Regulation No 131		N/A	N/A		N/A	N/A				

66	Lane departure warning system	Regulation (EU) 2019/...[+] UN Regulation No 130		N/A	N/A		N/A	N/A';				

(c) Appendix 3 is amended as follows:

(i) in the table, the following entry is inserted in the appropriate place by item number:

'55A	Pole side impact	Regulation (EU) 2019/...[+] UN Regulation No 135	N/A';

(ii) in the table, the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/...[+] UN Regulation No 127	G';

(iii) in the table, the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...[+] UN Regulation No 134	X
63	General safety	Regulation (EU) 2019/...[+]	X ([15]);

(iv) the following point is added:

'5. Points 1. to 4.2. also apply to vehicles of category M_1 that are not categorised as special purpose vehicles but are wheelchair accessible.';

(d) in Appendix 4, the table is amended as follows:

(i) the following entry is inserted in the appropriate place by item number:

'55A	Pole side impact	Regulation (EU) 2019/...+ UN Regulation No 135			A';					

(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/...+ UN Regulation No 127			A';						

(iii) the entries for items 62, 63, 65 and 66 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...+ UN Regulation No 134	X	X	X	X	X				
63	General safety	Regulation (EU) 2019/...+	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)	X(15)
65	Advanced emergency braking system	Regulation (EU) 2019/…+ UN Regulation No 131			N/A	N/A		N/A	N/A		

66	Lane departure warning system	Regulation (EU) 2019/...+ UN Regulation No 130	N/A	N/A		N/A	N/A';	

(e) in Appendix 5, in the table, the entries for items 62, 63, 65 and 66 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...+ UN Regulation No 134
63	General safety	Regulation (EU) 2019/...+
65	Advanced emergency braking system	Regulation (EU) 2019/...+ UN Regulation No 131
66	Lane departure warning system	Regulation (EU) 2019/...+ UN Regulation No 130

(f) in Appendix 6, in the table, the entries for items 62, 63, 65 and 66 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/...+ UN Regulation No 134	X
63	General safety	Regulation (EU) 2019/...+	X(15)

65	Advanced emergency braking system	Regulation (EU) 2019/...[+] UN Regulation No 131	N/A
66	Lane departure warning system	Regulation (EU) 2019/...[+] UN Regulation No 130	N/A';

(g) the Explanatory Notes are amended as follows:

(i) the explanatory note for X is replaced by the following:

'X The requirements set out in the relevant regulatory act are applicable.';

(ii) explanatory notes 3 and 4 are replaced by the following:

'([3]) The fitting of vehicle stability function is required in accordance with Article 4(5) of Regulation (EU) 2019/…[+]

([4]) The fitting of an electronic stability control system is required in accordance with Article 4(5) of Regulation (EU) 2019/…[+]';

(iii) explanatory note 9A is replaced by the following:

'([9A]) Applies only if vehicles are fitted with equipment covered by UN Regulation No 64. However, tyre pressure monitoring system is compulsory in accordance with Article 5(1) of Regulation (EU) 2019/…[+]';

(iv) explanatory note 15 is replaced by the following:

'([15]) Compliance with Regulation (EU) 2019/…[+] is mandatory. However, type-approval under this specific item is not envisaged as it merely represents the collection of individual items listed elsewhere in the relevant table.';

(v) explanatory notes 16 and 17 are deleted.

ANNEX IV

Frontal protection systems fitted as original equipment to vehicles of categories M_1 and N_1 or made available on the market as separate technical units intended for such vehicles

1. Provisions for the approval of frontal protection systems

1.1. A frontal protection system intended as original equipment shall be approved in accordance with UN Regulation 127 and be considered as an integral part of the relevant vehicle.

1.2. A frontal protection system intended as separate technical unit shall fulfil the following requirements:

1.2.1. Frontal protection systems shall be accompanied by information that describes the exact vehicle type, variant and version for which it is type-approved and shall be accompanied by detailed installation instructions providing sufficient information for a competent person to be able to install it properly on the vehicle. The instructions shall be provided in all the official languages of the Union.

1.2.2. All tests shall be carried out either with the frontal protection system mounted on a vehicle of the type, variant and version for which it is intended or on a test frame closely representing the essential outer front-end dimensions of the intended vehicle. When using a test frame, it is not permitted that, apart from the initial mounting points, the frontal protection system makes contact with the frame during testing. Contact of the legform or headform testing device with the frame during testing is also not permitted. In case of such contact, the test in question shall instead be carried out with the frontal protection system mounted on the relevant vehicle type, variant and version.

1.2.3. For frontal protection systems to be mounted on vehicles resulting in a lower frontal protection system height at the test position which ≥ 425 mm and < 500 mm either the tests according to point 1.2.4. or 1.2.5. shall apply, at the choice of the manufacturer. Where the height < 425 mm, the tests in accordance with 1.2.4. shall apply. Where the height ≥ 500 mm, the tests in accordance with 1.2.5. shall apply.

1.2.4. The flexible lower legform tests on the frontal protection system shall be carried out in accordance with the relevant provisions laid down in UN Regulation 127 for the 'bumper test area' compliance tests where this is understood to be for the purpose of the frontal protection system legform test area, including applying the relevant injury criteria requirements. However, the corners of the frontal protection system shall be taken into account and no relaxation zone shall apply. The test points shall be clearly identified in the test report.

1.2.5. The upper legform tests on the frontal protection system shall be carried out in accordance with the relevant provisions laid down in UN Regulation 127 for the 'bumper test area' compliance tests where this is understood to be for the purpose of the frontal protection system legform test area, including applying the relevant injury criteria requirements. However, the corners of the frontal protection system shall be taken into account. The test points shall be clearly identified in the test report.

1.2.6. A minimum of three child headform impact tests in accordance with point 1.2.7. shall be carried out at all positions on the frontal protection system that are considered by the technical service to be the worst case. The tests shall be carried out to different types of structure, where these vary throughout the area to be assessed. The test points shall be clearly identified in the test report and shall be chosen directly onto the frontal protection system where the relevant part or parts are located beyond a wrap-around distance (WAD) of 900 mm considered with the intended vehicle type, variant and version in its normal ride attitude.

1.2.7. The tests shall be carried out in accordance with the relevant provisions laid down in UN Regulation 127 for 'child headform test area' compliance tests where this is understood to be for the purpose of the frontal protection system child headform test area. However, the head injury criteria (HIC) recorded shall not exceed 1 000 in all cases. The test points shall be clearly identified in the test report.

2. Markings

2.1. Each frontal protection system shall be clearly and indelibly marked with the trade name, make or trade mark and type designation as well as the EU type-approval mark for which the space shall be sufficient.

ANNEX V

Hydrogen-powered vehicles, their hydrogen systems and hydrogen components

1. Scope

This Annex applies to hydrogen-powered vehicles of categories M and N including their hydrogen systems and hydrogen components.

1.1. Materials used in compressed hydrogen vehicle systems.

1.1.1. The materials used in hydrogen systems, components and containers shall be compatible with hydrogen when they are in contact with it in liquid and/or gaseous state. The material tables of SAE J 2579 B2 shall apply where appropriate. Incompatible materials shall not be in contact with each other.

1.1.2. Steels

Steels for containers and liners shall conform to the material requirements of sections 6.1 to 6.4 of standard EN 9809-1 or sections 6.1. to 6.3. of standard EN 9809-2 as appropriate.

1.1.3. Stainless steels

Stainless steels for containers and liners shall conform to sections 4.1. to 4.4. of standard EN 1964-3.

1.1.3.1. Welded stainless steels for liners of containers shall conform to sections 4.1. to 4.3. as well as sections 6.1., 6.2. and 6.4. of standard EN 13322-2 as appropriate.

1.1.4. Aluminium alloys

Aluminium alloys for containers and liners shall conform to the material requirements of sections 6.1. and 6.2. of international standard ISO 7866:2012.

1.1.4.1. Welded aluminium alloys for liners of containers shall conform to sections 4.2. and 4.3. as well as sections 4.1.2. and 6.1. of standard EN 12862.

1.1.5. Plastic liner materials

The material for plastic liners of hydrogen storage containers may be thermosetting or thermoplastic.

1.1.6. Fibres

The manufacturer of the container shall keep on file for the intended life of the container design the published specifications for composite materials including principal test results, i.e. tensile test, the material manufacturer's recommendations for storage, conditions and shelf life.

The manufacturer of the container shall keep on file, for the intended life of each batch of containers, the fibre manufacturer's certification that each shipment conforms to the manufacturer's specifications for the product.

1.1.6.1. Resins

The polymeric material for impregnation of the fibres may be thermosetting or thermoplastic resin.

1.1.7. Hydrogen compatibility test

This test is not required for

- steels that conform to paragraphs 6.3. and 7.2.2 of standard EN 9809-1;
- aluminium alloys that conform to paragraph 6.1. of international standard ISO 7866:2012; and
- in case of fully wrapped containers with a non-metallic liner.

For other metallic containers, liners and components, where their maximum allowable working pressure > 2.0 MPa, hydrogen compatibility of the material, including that of welds, shall be demonstrated in accordance with international standard ISO 11114-1 and ISO 11114-4 with the tests carried out in hydrogen environments as anticipated in service (e.g. in case of 70 MPa systems, the hydrogen compatibility testing is carried out in 70 MPa environment at the temperature of -40°C).

1.1.7.1. Test procedure for containers used in vehicles

At the appropriate ambient temperature, use hydrogen to pressure cycle for 3,0 times the number of manufacturer declared filling cycles, either:

- the container between ≤ 2,0 MPa and ≥ 1,25 times the nominal working pressure; or
- the liner between the pressure levels that shall provide an equivalent liner wall stress as would be present at ≤ 2,0 Mpa and ≥ 1,25 times the nominal working pressure for the container.

The container or liner shall not fail before the test is completed.

1.1.7.2 Test procedure for components used in hydrogen systems

If a component is exposed to pressure due to refilling operations, then filling cycles shall be used. If a component is exposed to pressure due to the operation of the vehicle (e.g. switching of vehicle activation device) then duty cycles shall be used.

At the appropriate ambient temperature, use hydrogen to pressure cycle for 3,0 times the number of manufacturer declared filling cycles or 2,0 times the number of manufacturer declared duty cycles, components between the pressure levels that shall provide an equivalent component stress as would be present at ≤ 2,0 Mpa and ≥ 1,25 times either the maximum allowable working pressure or the nominal working pressure for the container, as appropriate.

The component shall not fail before the test is completed.

1.1.8. For the purpose of point 1.1.7. to 1.1.7.2., the number of manufacturer declared filling cycles shall be as laid down in UN Regulation 134, i.e. at least 11 000 and the number of manufacturer declared duty cycles shall be at least 37 500.

1.1.9. The technical service shall verify all items above and the test results shall be documented in detail in the test report.

The manufacturer shall also keep the test results on file throughout the anticipated service life of all components, containers and systems as made available on the market.

1.2. The fuelling receptacle of compressed hydrogen gas vehicles shall conform to international standard ISO 17268:2012 (or later revisions) and be compatible with specification H35, H35HF, H70 or H70HF depending on its nominal working pressure and specific application.

1.3. The specific components installed on compressed hydrogen gas vehicles shall be type-approved in accordance with the provisions set out in UN Regulation 134. In addition to the type-approval mark and information required by UN Regulation 134 for specific components, they shall also be marked with the nominal working pressure (NWP) and, if located downstream of the first pressure regulator, the maximum allowable working pressure (MAWP).

1.4. Vehicles with liquefied hydrogen systems shall be approved in accordance with Article 39 of Regulation (EU) 2018/… concerning exemptions for new technologies or new concepts, based on UN Global technical regulation on hydrogen and fuel cell vehicles No 13, part II, section 7.

~~1.4.1.~~ ~~The materials used in hydrogen components, containers and systems shall be compatible with hydrogen when they are in contact with it in liquid and/or gaseous state. This shall be demonstrated in accordance with international standard ISO 11114-1 and ISO 11114-4 insofar relevant and possible, with the tests carried out in hydrogen environments as anticipated in service. The technical service shall verify all these items and the test results shall be documented in detail in the test report.~~

ANNEX VI

Transitional provisions referred to in Article 13(3)

UN Regulation	Specific requirements	Final date for registration of non-compliant vehicles as well as sale or entry into service of non-compliant components ([1])
29	Commercial vehicle cab strength	29 January 2021
	Vehicles of category N shall comply with the Regulation	
142	Tyre installation	31 October 2018
	Vehicles of categories O_1, O_2, O_3 and O_4 shall have class C1 or C2 tyres complying with Stage 2 rolling resistance requirements	
	Deleted	
	Tyre installation	31 October 2020
	Vehicles of categories O_3 and O_4 shall have class C3 tyres complying with Stage 2 rolling resistance requirements	
	Deleted	

117	Tyres with regard to rolling sound emissions, adhesion on wet surfaces and rolling resistance	30 April 2019
	Tyres of classes C1, C2 and C3 shall comply with Stage 2 rolling sound emission requirements	
	Deleted	
	Tyres with regard to rolling sound emissions, adhesion on wet surfaces and rolling resistance	30 April 2019
	Tyres of class C3 shall comply with Stage 1 rolling resistance requirements	
	Deleted	
	Tyres with regard to rolling sound emissions, adhesion on wet surfaces and rolling resistance	30 April 2021
	Tyres of classes C1 and C2 shall comply with Stage 2 rolling resistance requirements	
	Tyres with regard to rolling sound emissions, adhesion on wet surfaces and rolling resistance	30 April 2023
	Tyres of class C3 shall comply with Stage 2 rolling resistance requirements	
127	Pedestrian safety performance	23 August 2019
	Vehicles of categories M_1 with a maximum mass > 2 500 kg and N_1	
	Deleted	

Notes to the table

([1]) The dates as laid down in Regulation (EC) No 661/2009 in respect of types of vehicle, system and component complying with the requirements in its version applicable on *[PO: Please insert the date immediately preceding the date of application of this Regulation]* and Regulation (EC) No 78/2009 in respect of types of vehicle and system complying with the requirements in its version applicable on *[PO: Please insert the date immediately preceding the date of application of this Regulation]*.