

I

(Legislative acts)

REGULATIONS

REGULATION (EU) 2019/2144 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 27 November 2019

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 of the European Parliament and of the Council and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 of the European Parliament and of the Council and Commission Regulations (EC) No 631/2009, (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) 2015/166

(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⁾,

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure ⁽²⁾,

Whereas:

- (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 all 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 Regulation (EU) 2018/858 should be amended accordingly. The administrative provisions of Regulation (EU) 2018/858, including the provisions on corrective measures and penalties, are fully applicable to this Regulation.

⁽¹⁾ OJ C 440, 6.12.2018, p. 90.

⁽²⁾ Position of the European Parliament of 16 April 2019 (not yet published in the Official Journal) and decision of the Council of 8 November 2019.

⁽³⁾ Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 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, 14.6.2018, p. 1).

- (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, 25 300 people died on Union roads in 2017, a figure that has remained constant in the last four years. Moreover, 135 000 people are seriously injured in collisions every year ⁽⁴⁾. The Union should do its utmost to reduce or to eliminate accidents and injuries in road transport. In addition to 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 road users outside of the vehicle. 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 needs to be further improved as part of an integrated road safety approach and in order to protect vulnerable road users better.
- (4) Type-approval provisions should ensure that motor vehicle performance levels are assessed in a repeatable and reproducible manner. Therefore, the technical requirements in this Regulation only refer to pedestrians and cyclists, as only these presently exist as formally harmonised testing target subjects. Besides pedestrians and cyclists, vulnerable road users, in general, also include other non-motorised and motorised road users who might use personal mobility solutions without protective bodywork. Moreover, current technology creates a reasonable expectation that advanced systems will also react to other vulnerable road users under normal driving conditions, despite not being specifically tested. The technical requirements in this Regulation should be further adapted to technical progress following an assessment and review process in order to cover all road users who use personal mobility solutions without protective bodywork, such as scooters, self-balancing vehicles and wheelchairs.
- (5) 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, a set of new technologies needs to be introduced.
- (6) 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 vehicles 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 on 12 December 2016 entitled 'Saving Lives: Boosting Car Safety in the EU'. The Commission 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.
- (7) To ensure technology neutrality, the performance requirements should allow both direct and indirect tyre pressure monitoring systems.
- (8) Advanced vehicle systems can be more effective in reducing fatalities, decreasing the number of road accidents and mitigating injuries and damage if they are designed to be convenient for 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 that supports the driver. The functioning of those systems and features and their limitations should be explained in a clear and consumer-friendly manner in the motor vehicle's user instructions.
- (9) Safety features and warnings used in assisting driving should be easily perceivable by every driver, including the elderly and persons with disabilities.
- (10) Advanced emergency braking systems, intelligent speed assistance, emergency lane-keeping systems, driver drowsiness and attention warning, advanced driver distraction warning and reversing detection 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 also be used for the deployment of automated vehicles. Any such safety systems should function without the 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

⁽⁴⁾ https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/vademecum_2018.pdf

⁽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).

systems and for the type-approval of those systems as separate technical units should be established at Union level. The technological progress of those systems should be taken into account in every evaluation of the existing legislation, in order to be future-proof, whilst strictly adhering to the principles of privacy and data protection, and to reduce or eliminate accidents and injuries in road transport. It is also necessary to ensure that those systems can be used safely throughout the life cycle of the vehicle.

- (11) It should be possible to switch off intelligent speed assistance, for instance, when a driver experiences false warnings or inappropriate feedback as a result of inclement weather conditions, temporarily conflicting road markings in construction zones, or misleading, defective or missing road signs. Such a switch-off feature should be under the control of the driver. It should allow for intelligent speed assistance to be switched off for as long as necessary and to be easily switched back on by the driver. When the system is switched off, information about the speed limit may be provided. The system should be always active when switching the ignition on and the driver should always be made aware of whether the system is on or off.
- (12) It is widely recognised that safety-belts are 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 that reason, under Regulation (EC) No 661/2009 the safety-belt reminder system was made compulsory for the driver seat in all new passenger cars from 2014 in implementation of United Nations (UN) Regulation No 16, which established the relevant technical provisions. As a result of the amendment of that UN Regulation to take account of technical progress, it is obligatory to fit all front and rear seats of M₁ and N₁ vehicles, as well as all front seats of N₂, N₃, M₂ and M₃ vehicles, with safety-belt reminder systems from 1 September 2019 for new types of motor vehicles and 1 September 2021 for all new motor vehicles.
- (13) The introduction of event data recorders storing a range of crucial anonymised vehicle data, accompanied by requirements for data range, accuracy, resolution and for its collection, storage and retrievability over a short timeframe before, during and immediately after collision (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. Those recorders should be capable of 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 without the possibility of identifying the owner or the holder of a particular vehicle on the basis of the stored data.
- (14) Any processing of personal data, such as information about the driver processed in event data recorders or information about the driver's drowsiness and attention or the driver's distraction, should be carried out in accordance with with Union data protection law, in particular Regulation (EU) 2016/679 of the European Parliament and of the Council ⁽⁶⁾. Event data recorders should operate on a closed-loop system, in which the data stored is overwritten, and which does not allow the vehicle or holder to be identified. In addition, the driver drowsiness and attention warning or advanced driver distraction warning 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 set out in Regulation (EU) 2015/758 of the European Parliament and of the Council ⁽⁷⁾.
- (15) Advanced emergency braking systems 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 they do not deactivate automatically, it should be possible to switch them off manually. Such deactivation should be temporary and should only last for the period when the system is not fully operational. Drivers might also need to override advanced emergency braking system or emergency lane keeping system where the functioning of the system could lead to greater risk or harm.

⁽⁶⁾ 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).

⁽⁷⁾ 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).

This would ensure that the vehicles are under the driver's control at all times. Nevertheless such systems could also recognise instances where the driver is incapacitated and intervention by the system is therefore needed in order to prevent an accident being worse than it would otherwise be.

- (16) 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.
- (17) Regulation (EC) No 661/2009 achieved significant simplification of Union legislation by replacing 38 Directives with equivalent UN Regulations that are mandatory under Council Decision 97/836/EC⁽⁸⁾. 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 UN 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.
- (18) 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 that list is kept up-to-date.
- (19) Regulation (EC) No 78/2009 of the European Parliament and of the Council⁽⁹⁾ 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 type-approval of vehicles with regard to their front structure and for the type-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 UN level to take account of technical progress. UN Regulation No 127 laying down uniform provisions concerning the approval of motor vehicles with regard to their pedestrian safety performance ('UN Regulation No 127') currently also applies in the Union in respect to type-approval of motor vehicles.
- (20) Following the adoption of Regulation (EC) No 79/2009 of the European Parliament and of the Council⁽¹⁰⁾, the technical requirements and test procedures for the type-approval of hydrogen-powered vehicles and hydrogen systems and components, have been further developed at UN level to take account of technical progress. 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)⁽¹¹⁾ ('UN Regulation No 134') 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 and fuelling receptacles used in hydrogen vehicle systems should be established at Union level.
- (21) 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.

⁽⁸⁾ Council Decision 97/836/EC 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).

⁽⁹⁾ 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).

⁽¹⁰⁾ Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC (OJ L 35, 4.2.2009, p. 32).

⁽¹¹⁾ OJ L 129, 17.5.2019, p. 43.

- (22) 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 in 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 direct vision to enhance the direct visibility of pedestrians, cyclists and other vulnerable road users from the driver's seat by reducing to the greatest possible extent the blind spots in front and to the side of the driver. The specificities of different categories of vehicles should be taken into account.
- (23) Automated vehicles have the potential to make a huge contribution to reducing road fatalities, given that more than 90 % of road accidents are estimated to result from some level of human error. As automated vehicles will gradually take over the tasks of the driver, harmonised rules and technical requirements for automated vehicle systems, including those regarding verifiable safety assurance for decision-making by automated vehicles, should be adopted at Union level, while respecting the principle of technological neutrality, and promoted at international level in the framework of the UNECE's World Forum for Harmonization of Vehicle Regulations (WP.29).
- (24) Road users such as 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 about that behaviour by conventional means as provided for in UN Regulations or other regulatory acts as soon as possible after their entry into force.
- (25) 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.
- (26) The connectivity and automation of vehicles increase the possibility for unauthorised remote access to in-vehicle data and the illegal modification of software over the air. In order to take into account such risks, UN Regulations or other regulatory acts on cyber security should be applied on a mandatory basis as soon as possible after their entry into force.
- (27) Software modifications can significantly change vehicle functionalities. Harmonised rules and technical requirements for software modifications should be established in line with the type-approval procedures. Therefore, UN Regulations or other regulatory acts regarding software update processes should be applied on a mandatory basis as soon as possible after their entry into force. However, those security measures should not compromise the obligations of the vehicle manufacturer to provide access to comprehensive diagnostic information and in-vehicle data relevant to vehicle repair and maintenance.
- (28) The Union should continue to promote the development of technical requirements for tyre noise, rolling resistance and wet grip performance of tyres at the UN level. This is because UN Regulation No 117 on uniform provisions concerning the approval of tyres with regard to rolling sound emissions and/or to adhesion on wet surfaces and/or to rolling resistance ⁽¹²⁾ ('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 UN level, in particular to ensure that tyre performance is also assessed at the end of a tyre's life in its worn condition 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.
- (29) 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 (TFEU) should be delegated to the Commission to supplement this Regulation in respect of type-approval requirements concerning advanced vehicle systems and to amend this Regulation in respect of Annex II thereof to take into account technical progress and regulatory developments. 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

⁽¹²⁾ OJ L 218, 12.8.2016, p. 1.

the Interinstitutional Agreement of 13 April 2016 on Better Law-Making ⁽¹³⁾. 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.

- (30) 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 ⁽¹⁴⁾.
- (31) In view of the alignment of the Union legislation referring to the regulatory procedure with scrutiny with the legal framework introduced by the TFEU and in order to further simplify the Union legislation in the field of vehicle safety, the following Regulations should be repealed and replaced by implementing acts adopted under this Regulation:
- Commission Regulation (EC) No 631/2009 ⁽¹⁵⁾,
 - Commission Regulation (EU) No 406/2010 ⁽¹⁶⁾,
 - 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⁾,
 - Commission Regulation (EU) No 1009/2010 ⁽²¹⁾,
 - Commission Regulation (EU) No 19/2011 ⁽²²⁾,

⁽¹³⁾ OJ L 123, 12.5.2016, p. 1.

⁽¹⁴⁾ 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 mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

⁽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).

⁽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).

⁽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).

- Commission Regulation (EU) No 109/2011 ⁽²³⁾,
 - Commission Regulation (EU) No 458/2011 ⁽²⁴⁾,
 - Commission Regulation (EU) No 65/2012 ⁽²⁵⁾,
 - 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⁾.
- (32) Given that EU type-approvals granted in accordance with Regulation (EC) No 78/2009, Regulation (EC) No 79/2009 or Regulation (EC) No 661/2009 and their implementing measures are to be considered equivalent to those granted in accordance with this Regulation, unless the relevant requirements are changed by this Regulation or until they are modified by the delegated acts or implementing acts adopted pursuant to this Regulation, transitional provisions are needed to ensure that such approvals are not invalidated.
- (33) 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 should be laid down for each regulated item.
- (34) 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, and systems, components and separate technical units intended for such vehicles 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.

⁽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).

⁽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).

- (35) Detailed technical requirements and adequate test procedures, as well as provisions concerning uniform procedures and technical specifications, for type-approval of motor vehicles and their trailers, and of systems, components and separate technical units should be laid down in delegated acts and implementing acts sufficiently in advance before their date of application in order to allow enough time for manufacturers to adapt to the requirements of this Regulation and the delegated acts and implementing acts adopted pursuant to it. Some vehicles are produced in small quantities. Therefore, it is appropriate that requirements set out in this Regulation and the delegated acts and implementing acts adopted pursuant to it take into account such vehicles or classes of vehicles where such requirements are incompatible with the use or design of such vehicles, or where the additional burden imposed by them is disproportionate. Therefore, the application of this Regulation should be deferred,

HAVE ADOPTED THIS REGULATION:

CHAPTER I

SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

Subject matter

This Regulation establishes requirements:

- (a) for the type-approval of vehicles, and of 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 CO₂ emissions; and
- (c) for the type-approval of newly-manufactured tyres with regard to their safety and environmental performance.

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.

Article 3

Definitions

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

In addition, the following definitions apply:

- (1) 'vulnerable road user' means non-motorised road users, including, in particular, cyclists and pedestrians, as well as users of powered two-wheelers;
- (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 maintaining the appropriate speed for the road environment by providing dedicated and appropriate feedback;
- (4) 'alcohol interlock installation facilitation' means a standardised interface that facilitates the fitting of aftermarket alcohol interlock devices in motor vehicles;
- (5) 'driver drowsiness and attention warning' means a system that assesses the driver's alertness through vehicle systems analysis and warns the driver if needed;

- (6) 'advanced driver distraction warning' means a system that helps the driver to continue to pay attention to the traffic situation and that warns the driver when he or she is distracted;
- (7) 'emergency stop signal' means 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 system to make the driver aware of people and objects at the rear of the vehicle with the primary aim of avoiding collisions when 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;
- (11) 'emergency lane-keeping system' means a system that assists the driver in keeping a safe position of the vehicle with respect to the lane or road boundary, at least when a lane departure occurs or is about to occur and a collision might 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 data recorder' means a system with the only purpose of recording and storing critical crash-related parameters and information shortly before, 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 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 certain periods of time without continuous driver supervision but in respect of which driver intervention is still expected or required;
- (22) 'fully automated vehicle' means a motor vehicle that has been designed and constructed to move autonomously without any driver supervision;
- (23) '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;
- (24) '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;
- (25) 'maximum mass' means the technically permissible maximum laden mass stated by the manufacturer;
- (26) 'A-pillar' means the foremost and outermost roof support extending from the chassis to the roof of the vehicle.

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 acts and 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 and implementing 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.
4. Manufacturers shall ensure that vehicles are designed, constructed and assembled so as to minimise the risk of injury to vehicle occupants 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, with the detailed technical requirements and test procedures laid down in the delegated acts and with the uniform procedures and technical specifications laid down in the implementing 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) vulnerable road users, vision and visibility;
 - (c) vehicle chassis, braking, tyres and steering;
 - (d) on-board instruments, electrical system, vehicle lighting and protection against unauthorised use including cyberattacks;
 - (e) driver and system behaviour; and
 - (f) general vehicle construction 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 as well as those referred to in points (a) to (g) of Article 6(1), Article 7(2), (3), (4) and (5), Article 9(2), (3) and (5) and Article 11(1), 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, as well as to delegated acts and implementing acts.
7. The Commission shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications for the 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 13(2). They shall be published at least 15 months before the applicable 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, over a wide range of road and environmental conditions, of giving an in-vehicle warning to the driver when a loss of pressure occurs in a tyre.

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 relevant regulatory acts listed in Annex II.
4. The Commission shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications for:
 - (a) the type-approval of vehicles with regard to their tyre pressure monitoring systems;
 - (b) the type-approval of tyres, including technical specifications concerning their installation.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 13(2). They shall be published at least 15 months before the applicable dates specified in Annex II.

Article 6

Advanced vehicle systems for all motor vehicle categories

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 warning;
 - (d) advanced driver distraction warning;
 - (e) emergency stop signal;
 - (f) reversing detection; and
 - (g) event data recorder.
2. Intelligent speed assistance shall meet the following minimum requirements:
 - (a) it shall be possible for the driver to be made aware through the accelerator control, or through dedicated, appropriate and effective feedback, that the applicable speed limit is exceeded;
 - (b) it shall be possible to switch off the system; information about the speed limit may still be provided, and intelligent speed assistance shall be in normal operation mode upon each activation of the vehicle master control switch;
 - (c) the dedicated and appropriate feedback shall be based on speed limit information obtained through the observation of road signs and signals, based on infrastructure signals or electronic map data, or both, made available in-vehicle;
 - (d) it shall not affect the possibility, for the drivers, of exceeding the system's prompted vehicle speed;
 - (e) its performance targets shall be set in order to avoid or minimise the error rate under real driving conditions.
3. Driver drowsiness and attention warning and advanced driver distraction warning systems shall be designed in such a way that those 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, those data shall not be accessible or made available to third parties 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 where one action triggers both systems.
4. Event 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, braking, 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) they cannot be deactivated;
 - (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 that they collect is anonymised and protected against manipulation and misuse; and
 - (iii) the data that they collect enables precise vehicle type, variant and version, and in particular the active safety and accident avoidance systems fitted to the vehicle, to be identified; and
 - (d) the data that they are capable of recording can be made available to national authorities, on the basis of Union or national law, only for the purpose of accident research and analysis, including for the purposes of type approval of systems and components and in compliance with Regulation (EU) 2016/679, over a standardised interface.
5. An event data recorder shall not be capable of recording and storing the last four digits of the vehicle indicator section of the vehicle identification number or any other information which could allow the individual vehicle itself, its owner or holder, to be identified.
6. The Commission 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:
- (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), (f) and (g) of paragraph 1 as separate technical units.

Those delegated acts shall be published at least 15 months before the applicable 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 acts and implementing acts adopted pursuant to it that are also applicable to vehicles of categories M₁ and N₁, vehicles of those categories shall meet the requirements set out in paragraphs 2 to 5 and the technical specifications set out in the implementing acts referred to in paragraph 6.
2. Vehicles of categories M₁ and N₁ shall be equipped with advanced emergency braking systems designed and fitted in two phases and providing for:
- (a) the detection of obstacles and moving vehicles ahead of the motor vehicle in the first phase;
 - (b) extending the detection capability referred to in point (a) to also include pedestrians and cyclists ahead of the motor vehicle in the second phase.
3. Vehicles of categories M₁ and N₁ shall also be equipped with an emergency lane-keeping system.
4. Advanced emergency braking systems and emergency lane-keeping systems shall meet the following requirements in particular:
- (a) it shall only be possible to switch off such systems one at a time by a 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 for the driver to override such systems.
5. Vehicles of categories M₁ and N₁ shall be designed and constructed 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.
6. The Commission shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications for the type-approval of vehicles with regard to the requirements laid down in paragraphs 2 to 5 of this Article.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 13(2). They shall be published at least 15 months before the applicable dates specified in Annex II.

Article 8

Frontal protection systems for passenger cars and light commercial vehicles

1. Frontal protection systems, whether 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 and with the technical specifications set out in the implementing acts referred to in paragraph 3.
2. Frontal protection systems made available on the market as separate technical units shall be accompanied by a detailed list of the vehicle types, variants and versions for which the frontal protection system is type-approved, as well as by clear assembly instructions.
3. The Commission shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications for the type-approval of frontal protection systems, including technical specifications concerning their construction and installation.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 13(2). They shall be published at least 15 months before the applicable 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 acts and implementing acts adopted pursuant to it that are also applicable to vehicles of categories M₂, M₃, N₂ and N₃, vehicles of those categories shall meet the requirements laid down in paragraphs 2 to 5 and the technical specifications set out in the implementing acts referred to in paragraph 7. Vehicles of categories M₂ and M₃, shall also meet the requirement laid down in paragraph 6.
2. Vehicles of categories M₂, M₃, N₂ and N₃ shall be equipped with a lane departure warning system and an advanced emergency braking system, both of which shall comply with the the technical specifications set out in the implementing acts referred to in paragraph 7.
3. Vehicles of categories M₂, M₃, N₂ and N₃ shall be equipped with advanced systems that are capable of detecting pedestrians and cyclists located in close proximity to the front or nearside of the vehicle and of providing a warning or avoiding collision with such vulnerable road users.
4. With respect of systems referred to in paragraphs 2 and 3, they shall meet the following requirements in particular:
 - (a) it shall only be possible to switch off such systems one at a time by a 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 for the driver to override such systems.
5. Vehicles of categories M₂, M₃, N₂ and N₃ shall be designed and constructed to enhance the direct visibility of vulnerable road users from the driver seat, by reducing to the greatest possible extent the blind spots in front of and to the side of the driver, while taking into account the specificities of different categories of vehicles.
6. Vehicles of categories M₂ and M₃ with a capacity exceeding 22 passengers in addition to the driver and constructed with areas for standing passengers to allow frequent passenger movement shall be designed and constructed to be accessible by persons with reduced mobility, including wheelchair users.

7. The Commission shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications 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 adopted in accordance with the examination procedure referred to in Article 13(2).

Where those implementing acts concern the requirements laid down in paragraphs 2, 3 and 4 of this Article, they shall be published at least 15 months before the applicable dates specified in Annex II.

Where those implementing acts concern the requirements laid down in paragraph 5 of this Article, they shall be published at least 36 months before the applicable 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 acts and 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 technical specifications set out in the implementing acts referred to in paragraph 3.

2. Manufacturers shall ensure that hydrogen systems and hydrogen components are installed in accordance with the technical specifications set out in the implementing acts referred to in 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 shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications for the type-approval of hydrogen-powered vehicles with regard to their hydrogen systems, including those with regard to material compatibility and fuelling receptacles, and for the type-approval of hydrogen components, including technical specifications for their installation.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 13(2). They shall be published at least 15 months before the applicable dates specified in Annex II.

Article 11

Specific requirements relating to automated vehicles and fully automated vehicles

1. In addition to the other requirements of this Regulation and of the delegated acts and implementing acts adopted pursuant to it that are applicable to vehicles of the respective categories, automated vehicles and fully automated vehicles shall comply with the technical specifications set out in the implementing acts referred to in paragraph 2 that relate 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 availability monitoring systems;
- (d) event 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.

However, those technical specifications relating to driver availability monitoring systems, referred to in point (c) of the first subparagraph, shall not apply to fully automated vehicles.

2. The Commission shall by means of implementing acts adopt provisions concerning uniform procedures and technical specifications for the systems and other items listed in points (a) to (f) of paragraph 1 of this Article, and for the type-approval of automated and fully automated vehicles with regard to those systems and other items in order to ensure the safe operation of automated and fully automated vehicles on public roads.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 13(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 Article 4(3) and (6) and Article 6(6) shall be conferred on the Commission for a period of five years from 5 January 2020. 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 Article 4(3) and (6) and Article 6(6) 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) and (6) and Article 6(6) 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 13

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 14

Review and reporting

1. By 7 July 2027 and every five years thereafter, the Commission shall submit an evaluation report to the European Parliament and to the Council on the achievements of the safety measures and systems, including their penetration rates

and convenience for the user. The Commission shall investigate whether those safety measures and systems act as intended by this Regulation. Where appropriate, that report shall be accompanied by recommendations, including a legislative proposal to amend the requirements concerning general safety and the protection and safety of vehicle occupants and vulnerable road users, in order to further reduce or to eliminate accidents and injuries in road transport.

In particular, the Commission shall evaluate the reliability and efficiency of new intelligent speed assistance systems and the accuracy and error rate of such systems under real driving conditions. Where appropriate, the Commission shall present a legislative proposal.

2. By 31 January of each year, for the previous year, the Commission shall submit to the European Parliament and to the Council a report on the activities of the UNECE's World Forum for Harmonization of Vehicle Regulations (WP.29) as regards the progress made in the implementation of vehicle safety standards with regard to the requirements set out in Articles 5 to 11 and as regards the position of the Union related to these matters.

Article 15

Transitional provisions

1. This Regulation shall not invalidate any EU type-approvals 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 or Regulation (EC) No 661/2009 and their implementing measures, by 5 July 2022, 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 delegated acts adopted pursuant to it, as further specified in the implementing acts adopted pursuant to this Regulation.

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

3. By way of derogation from this Regulation, Member States shall continue to permit until the date specified in Annex IV the registration of vehicles, as well as the sale or entry into service of components, which do not comply with the requirements of UN Regulation No 117.

Article 16

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, with respect to a particular requirement listed in that Annex, refuse, on grounds relating to that requirement, to grant EU type-approval or national type-approval to any new type of vehicle, system, component or separate technical unit that does not comply with the requirements of this Regulation and of the delegated acts and implementing acts adopted pursuant to it;
- (b) with effect from the dates specified in Annex II, with respect to a particular requirement listed in that Annex, 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, if those vehicles do not comply with the requirements of this Regulation and of the delegated acts and implementing acts adopted pursuant to it;
- (c) with effect from the dates specified in Annex II, with respect to a particular requirement listed in that Annex, 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 delegated acts and implementing acts adopted pursuant to it.

Article 17

Amendments to Regulation (EU) 2018/858

Annex II to Regulation (EU) 2018/858 is amended in accordance with Annex III to this Regulation.

*Article 18***Repeal**

1. Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 and Regulations (EC) No 631/2009, (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) 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.

*Article 19***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 6 July 2022.

However, Article 4(3), (6) and (7), Article 5(4), Article 6(6), Article 7(6), Article 8(3), Article 9(7), Article 10(3), Article 11(2) and Articles 12 and 13 shall apply from 5 January 2020.

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

Done at Strasbourg, 27 November 2019.

For the European Parliament
The President
D. M. SASSOLI

For the Council
The President
T. TUPPURAINEN

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

UN 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 ⁽⁴⁾
3	Retro-reflecting devices for power-driven vehicles and their trailers	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	Original version of the Regulation	OJ L 4, 7.1.2012, p. 17	M, N, O
6	Direction indicators for power-driven vehicles and their trailers	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	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 Corrigen-dum 1 to Revision 4	OJ L 177, 10.7.2010, p. 71	M, N ⁽⁴⁾
10	Electromagnetic compatibility	05 series of amendments	OJ L 41, 17.2.2017, p. 1	M, N, O
11	Door latches and door retention components	04 series of amendments	OJ L 218, 21.8.2019, p. 1	M ₁ , N ₁
12	Protection of the driver against the steering mechanism in the event of impact	04 series of amendments	OJ L 89, 27.3.2013, p. 1	M ₁ , N ₁
13	Braking of vehicles and trailers	11 series of amendments	OJ L 42, 18.2.2016, p. 1	M ₂ , M ₃ , N, O ⁽⁶⁾
13-H	Braking of passenger cars	Original version of the Regulation	OJ L 335, 22.12.2015, p. 1	M ₁ , N ₁
14	Safety-belt anchorages	07 series of amendments	OJ L 218, 19.8.2015, p. 27	M, N
16	Safety-belts, restraint systems, child restraint systems and ISOFIX child restraint systems	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	M, N
18	Protection of motor vehicles against unauthorised use	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	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 lamps)	03 series of amendments	OJ L 177, 10.7.2010, p. 170	M, N ⁽⁴⁾
21	Interior fittings	01 series of amendments	OJ L 188, 16.7.2008, p. 32	M ₁

UN Regulation Number	Subject	Series of amendments published in the OJ	OJ Reference	Scope covered by the UN Regulation
64	Temporary-use spare unit, run-flat tyres/system (and tyre pressure monitoring system)	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	01 series of amendments	OJ L 285, 20.10.2016, p. 1	M, N
73	Lateral protection devices 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	Original version of the Regulation	OJ L 4, 7.1.2012, p. 21	M, N
79	Steering equipment	03 series of amendments	OJ L 318, 14.12.2018, p. 1	M, N, O
80	Seats of large passenger vehicles	03 series of amendments	OJ L 226, 24.8.2013, p. 20	M ₂ , M ₃
87	Daytime running lamps for power-driven vehicles	Original version of the Regulation	OJ L 4, 7.1.2012, p. 24	M, N
89	Speed limitation devices and adjustable speed limitation devices	Original version of the Regulation	OJ L 4, 7.1.2012, p. 25	M, N ^(d)
90	Replacement brake lining assemblies, drum-brake linings and discs and drums for power-driven vehicles and their trailers	02 series of amendments	OJ L 290, 16.11.2018, p. 54	M, N, O
91	Side-marker lamps for motor vehicles and their trailers	Original 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	03 series of amendments	OJ L 183, 10.7.2015, p. 91	M ₁ , N ₁
97	Vehicle Alarm Systems (VAS)	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	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	Original version of the Regulation	OJ L 320, 17.12.2018, p. 45	M, N
100	Electric safety	02 series of amendments	OJ L 302, 28.11.2018, p. 114	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)	Original version of the Regulation	OJ L 75, 14.3.2014, p. 29	M ₂ , M ₃ , N, O ₂ , O ₃ , O ₄

UN Regulation Number	Subject	Series of amendments published in the OJ	OJ Reference	Scope covered by the UN Regulation
105	Vehicles for the carriage of dangerous goods	05 series of amendments	OJ L 4, 7.1.2012, p. 30	N, O
107	General construction of category M2 and M3 vehicles	07 series of amendments	OJ L 52, 23.2.2018, p. 1	M ₂ , M ₃
108	Retreaded pneumatic tyres for passenger cars and their trailers	Original version of the Regulation	OJ L 181, 4.7.2006, p. 1	M ₁ , O ₁ , O ₂
109	Retreaded pneumatic tyres for commercial vehicles and their trailers	Original 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 and LNG	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	01 series of amendments	OJ L 250, 22.8.2014, p. 67	M, N
114	Replacement Airbag Systems	Original version of the Regulation	OJ L 373, 27.12.2006, p. 272	M ₁ , N ₁
115	LPG and CNG retrofit systems	Original version of the Regulation	OJ L 323, 7.11.2014, p. 91	M, N
116	Protection of motor vehicles against unauthorised use	Original 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)	02 series of amendments	OJ L 218, 12.8.2016, p. 1	M, N, O
118	Fire resistance of interior materials in buses	02 series of amendments	OJ L 102, 21.4.2015, p. 67	M ₃
119	Cornering lamps	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 systems of vehicles	Original version of the Regulation	OJ L 164, 30.6.2010, p. 231	M, N, O
123	Adaptive front-lighting systems (AFS) for motor vehicles	01 series of amendments	OJ L 49, 20.2.2019, p. 24	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	01 series of amendments	OJ L 20, 25.1.2018, p. 16	M ₁
126	Partitioning systems	Original version of the Regulation		M ₁
127	Pedestrian safety	02 series of amendments		M ₁ , N ₁
128	Light Emitting Diode (LED) light sources	Original version of the Regulation	OJ L 320, 17.12.2018, p. 63	M, N, O

UN Regulation Number	Subject	Series of amendments published in the OJ	OJ Reference	Scope covered by the UN Regulation
129	Enhanced Child Restraint Systems	Original version of the Regulation	OJ L 97, 29.3.2014, p. 21	M, N
130	Lane Departure Warning Systems	Original version of the Regulation	OJ L 178, 18.6.2014, p. 29	M ₂ , M ₃ , N ₂ , N ₃ (¶)
131	Advanced Emergency Braking Systems	01 series of amendments	OJ L 214, 19.7.2014, p. 47	M ₂ , M ₃ , N ₂ , N ₃ (¶)
134	Hydrogen safety	Original version of the Regulation	OJ L 129, 17.5.2019, p. 43	M, N
135	Pole side impact	01 series of amendments		M ₁ , N ₁
137	Frontal full-width impact	01 series of amendments		M1
139	Brake Assist Systems	Original version of the Regulation	OJ L 269, 26.10.2018, p. 1	M ₁ , N ₁
140	Electronic Stability Control Systems	Original version of the Regulation	OJ L 269, 26.10.2018, p. 17	M ₁ , N ₁
141	Tyre Pressure Monitoring Systems	Original version of the Regulation	OJ L 269, 26.10.2018, p. 36	M ₁ , N ₁ (§)
142	Tyre installation	Original version of the Regulation		M ₁
145	Child restraint anchorages	Original version of the Regulation		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 of the European Union 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', 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 Annex II to 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 to this Regulation in which case those alternative dates are to be followed instead.

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- (^e) UN Regulation Nos 1, 8 and 20 are not applicable for EU type-approval of vehicles.
- (^f) 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 N₁.
- (^g) 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 in accordance with UN Regulation No 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.
- (^h) Only Speed Limitation Devices (SLD) and the mandatory installation of SLD on vehicles of category M₂, M₃, N₂ and N₃ are concerned.
- (ⁱ) Devices to prevent unauthorised use shall be fitted on vehicles of categories M₁ and N₁ and immobiliser systems shall be fitted on vehicles of category M₁.
- (^j) See explanatory note ⁴ to the table in Annex II.
- (^k) For vehicles of categories M₁ with a maximum mass ≤ 3 500 kg and N₁, 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 16

Subject	Regulatory acts	Additional specific technical 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
Requirements concerning														
A 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
A6 Safety-belt reminders	UN Regulation No 16		A	A	A	A	A	A						
A7 Partitioning systems	UN Regulation No 126		X										B	
A8 Child restraint anchorages	UN Regulation No 145		A											
A9 Child restraint systems	UN Regulation No 44		A ⁽¹⁾	A ⁽¹⁾	A ⁽¹⁾	A ⁽¹⁾	A ⁽¹⁾	A ⁽¹⁾					A	A
A10 Enhanced child restraint systems	UN Regulation No 129		X	X	X	X	X	X					B	B
A11 Front underrun protection	UN Regulation No 93						A	A					A	A
A12 Rear underrun protection	UN Regulation No 58		A	A	A	A	A	A	A	A	A	A	A	A
A13 Lateral protection	UN Regulation No 73						A	A			A	A		
A14 Fuel tank safety	UN Regulation No 34		A	A	A	A	A	A	A	A	A	A	A	
A15 Liquefied petroleum gas safety	UN Regulation No 67		A	A	A	A	A	A						A

Subject	Regulatory acts	Additional specific technical 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
A16 Compressed and liquefied natural gas safety	UN Regulation No 110		A	A	A	A	A	A						A
A17 Hydrogen safety	UN Regulation No 134		A	A	A	A	A	A						A
A18 Hydrogen system material qualification			A	A	A	A	A	A						A
A19 In-use electric safety	UN Regulation No 100		A	A	A	A	A	A						
A20 Frontal off-set impact	UN Regulation No 94	Applies to vehicle categories M1 with a maximum mass ≤ 3 500 kg and N1 with a maximum mass ≤ 2 500 kg. For vehicles with a maximum mass > 2 500 kg, dates in note B apply.	A			A								
A21 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								
A22 Protective steering	UN Regulation No 12		A			A							A	
A23 Replacement airbag	UN Regulation No 114		X			X							B	
A24 Cab impact	UN Regulation No 29					A	A	A						
A25 Side impact	UN Regulation No 95	Applies to all vehicles of categories M1 and N1 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								

Subject	Regulatory acts	Additional specific technical 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
A26 Pole side impact	UN Regulation No 135		B			B								
A27 Rear impact	UN Regulation No 34	Applies to vehicle categories M1 with a maximum mass ≤ 3 500 kg and N1. Post-crash electrical safety requirements shall be ensured.	B			B								

Requirements concerning

B VULNERABLE ROAD USERS, VISION AND VISIBILITY

B1 Pedestrian leg and head protection	UN Regulation No 127		A			A								
B2 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.	C			C								
B3 Frontal protection system			X			X							A	
B4 Advanced emergency braking for pedestrian and cyclist			C			C								
B5 Pedestrian and cyclist collision warning				B	B		B	B					B	
B6 Blind spot information system				B	B		B	B					B	
B7 Reversing detection			B	B	B	B	B	B					B	
B8 Forward vision	UN Regulation No 125	Applies to vehicle categories M1 and N1	A			C								
B9 Heavy-duty vehicles direct vision				D	D		D	D						

Subject	Regulatory acts	Additional specific technical 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
B10 Safety glazing	UN Regulation No 43		A	A	A	A	A	A	A	A	A	A		A
B11 Defrost/demist			A	A ^(?)	A ^(?)	A ^(?)	A ^(?)	A ^(?)						
B12 Wash/wipe			A	A ^(?)	A ^(?)	A ^(?)	A ^(?)	A ^(?)					A	
B13 Indirect vision devices	UN Regulation No 46		A	A	A	A	A	A						A

Requirements concerning

C 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		
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⁾								

Subject	Regulatory acts	Additional specific technical 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
C12 Retreaded tyres	UN Regulation No 108 UN Regulation No 109		X	X	X	X	X	X	X	X	X	X		A
C13 Tyre pressure monitoring for light-duty vehicles	UN Regulation No 141	Applies to vehicle categories M1 with a maximum mass ≤ 3 500 kg and N1.	A			B								
C14 Tyre pressure monitoring for heavy-duty vehicles				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

Requirements concerning

D ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS

D1 Audible warning	UN Regulation No 28		A	A	A	A	A	A						A
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, immobiliser 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
D4 Protection of vehicle against cyberattacks			B	B	B	B	B	B					B	B
D5 Speedometer	UN Regulation No 39		A	A	A	A	A	A						
D6 Odometer	UN Regulation No 39		A	A	A	A	A	A						
D7 Speed limitation devices	UN Regulation No 89			A	A		A	A						A
D8 Intelligent speed assistance			B	B	B	B	B	B					B	
D9 Identification of controls, tell-tales and indicators	UN Regulation No 121		A	A	A	A	A	A						

Subject	Regulatory acts	Additional specific technical 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- ponent
D10 Heating systems	UN Regulation No 122		A	A	A	A	A	A	A	A	A	A		A
D11 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
D12 Road illumination devices	UN Regulation No 31 UN Regulation No 98 UN Regulation No 112 UN Regulation No 119 UN Regulation No 123		X	X	X	X	X	X						A
D13 Retro-reflective devices	UN Regulation No 3 UN Regulation No 104		X	X	X	X	X	X	X	X	X	X		A
D14 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
D15 Installation of light signalling, road illumination and retro-reflective devices	UN Regulation No 48		A	A	A	A	A	A	A	A	A	A		
D16 Emergency Stop Signal			B	B	B	B	B	B						
D17 Headlamp cleaners	UN Regulation No 45		A (!)	A (!)	A (!)	A (!)	A (!)	A (!)						A
D18 Gear shift indicator			A											

Requirements concerning

E DRIVER AND SYSTEM BEHAVIOUR

E1 Alcohol interlock installation facilitation		EN 50436:2016	B	B	B	B	B	B						
E2 Driver drowsiness and attention warning			B	B	B	B	B	B						

Subject	Regulatory acts	Additional specific technical 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- ponent
E3 Advanced driver dis- traction warning		Distraction avoidance by technical means may also be taken into consideration	C	C	C	C	C	C						
E4 Driver availability monitoring system			B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾						
E5 Event data recorder			B	D	D	B	D	D					B	
E6 Systems to replace driver's control			B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾						
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⁾						
E8 Platooning				B ⁽⁴⁾	B ⁽⁴⁾		B ⁽⁴⁾	B ⁽⁴⁾						
E9 Systems to provide safety information to other road users			B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾	B ⁽⁵⁾						

Requirements concerning

F 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								
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						

Subject	Regulatory acts	Additional specific technical 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
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: 6 July 2022
- B: Date for refusal to grant EU type-approval: 6 July 2022
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: 7 July 2024
- C: Date for refusal to grant EU type-approval: 7 July 2024
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: 7 July 2026
- D: Date for refusal to grant EU type-approval: 7 January 2026
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: 7 January 2029
- 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 N2 with a maximum mass exceeding 3,5 tonnes but not exceeding 8 tonnes,
 - vehicles of categories M2 and M3 of Class A, Class I and Class II as defined in paragraph 2.1 of UN Regulation No 107,
 - articulated buses of category M3 of Class A, Class I and Class II as defined in paragraph 2.1 of UN Regulation No 107,
 - off-road vehicles of categories M2, M3, N2 and N3,
 - special purpose vehicles of categories M2, M3, N2 and N3, and
 - vehicles of categories M2, M3, N2 and N3 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.
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ANNEX III

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

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

(1) references to ‘Regulation (EC) No 661/2009’ are amended as follows:

(a) 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) 2019/2144 of the European Parliament and of the Council (*)

(*) Regulation (EU) 2019/2144 of the European Parliament and of the Council of 27 November 2019 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 of the European Parliament and of the Council and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 of the European Parliament and of the Council and Commission Regulations (EC) No 631/2009, (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) 2015/166 (OJ L 325, 16.12.2019, p. 1);

(b) each subsequent reference to ‘Regulation (EC) No 661/2009’ throughout Annex II is replaced by a reference to ‘Regulation (EU) 2019/2144’;

(2) Part I is amended as follows:

(a) the table is amended as follows:

(i) the following entry is inserted after the entry for item 54A:

‘55A	Pole side impact	Regulation (EU) 2019/2144 UN Regulation No 135	X				X;						
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(ii) the entry for item 58 is replaced by the following:

‘58	Pedestrian protection	Regulation (EU) 2019/2144 UN Regulation No 127	X				X						X;
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(iii) the entries for items 62 and 63 are replaced by the following:

‘62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134	X	X	X	X	X	X					X
63	General safety	Regulation (EU) 2019/2144	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) 2019/2144 UN Regulation No 131		X	X		X	X					
66	Lane departure warning system	Regulation (EU) 2019/2144 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) 2019/2144.

(⁴) The fitting of an electronic stability control system is required in accordance with Article 4(5) of Regulation (EU) 2019/2144.;

(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) 2019/2144.;

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

(¹⁵) Compliance with Regulation (EU) 2019/2144 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) 2019/2144.;

(c) in Appendix 1, Table 1 is amended as follows:

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

'46A	Installation of tyres	Regulation (EU) 2019/2144 UN Regulation No 142		B';
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(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/2144 UN Regulation No 127		C Date for refusal to grant EU type-approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034';
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(iii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134		X
63	General safety	Regulation (EU) 2019/2144		Compliance with Regulation (EU) 2019/2144 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) 2019/2144.;

(d) the explanatory note NA to Table 1 of Appendix 1 is replaced by the following:

'N/A

The regulatory act shall not apply. Compliance with one or more specific aspects included in the regulatory act may however be imposed.;

(e) in Appendix 1, Table 2 is amended as follows:

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

'46A	Installation of tyres	Regulation (EU) 2019/2144 UN Regulation No 142		B';
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(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/2144 UN Regulation No 127		C Date for refusal to grant EU type-approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034;
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(iii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134		X
63	General safety	Regulation (EU) 2019/2144		Compliance with Regulation (EU) 2019/2144 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) 2019/2144.;

(f) in Appendix 2, point 4 is amended as follows:

(i) the table 'Part I: Vehicles belonging to category M1' is amended as follows:

— the entry for item 58 is replaced by the following:

'58	UN Regulation No 127 Regulation (EU) 2019/2144 (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.;
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— the following entry is inserted after the entry for item 61:

'62	UN Regulation No 134 Regulation (EU) 2019/2144 (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 5 July 2022; — 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;
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(ii) the table 'Part II Vehicles belonging to category N1' is amended as follows:

— the entry for item 58 is replaced by the following:

'58	UN Regulation No 127 Regulation (EU) 2019/2144 (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';
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— the following entry is inserted after the entry for item 61:

'62	UN Regulation No 134 Regulation (EU) 2019/2144 (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 5 July 2022; — 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';
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(3) in Part II, in the table, the entries for items 58, 65 and 66 are deleted;

(4) 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) 2019/2144 UN Regulation No 127	X	X';		
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(ii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134	X	X	X	X
63	General safety	Regulation (EU) 2019/2144	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) 2019/2144 UN Regulation No 131			N/A	N/A
66	Lane departure warning system	Regulation (EU) 2019/2144 UN Regulation No 130			N/A	N/A;

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

(i) the following entry is inserted after the entry for item 54A:

'55A	Pole side impact	Regulation (EU) 2019/2144 UN Regulation No 135	N/A			N/A;							
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(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/2144 UN Regulation No 127	N/A			N/A;							
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(iii) the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134	X	X	X	X	X	X					
63	General safety	Regulation (EU) 2019/2144	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) 2019/2144 UN Regulation No 131		N/A	N/A		N/A	N/A					
66	Lane departure warning system	Regulation (EU) 2019/2144 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 after the entry for item 54A:

'55A	Pole side impact	Regulation (EU) 2019/2144 UN Regulation No 135	N/A;
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(ii) in the table, the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/2144 UN Regulation No 127	G;
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(iii) in the table, the entries for items 62 and 63 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134	X
63	General safety	Regulation (EU) 2019/2144	X ⁽¹⁵⁾ ;

(iv) the following point is added:

'5. Points 1 to 4 also apply to vehicles of category M1 that are not categorised as special purpose vehicles but are wheelchair accessible vehicles.';

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

(i) the following entry is inserted after the entry for item 54A:

'55A	Pole side impact	Regulation (EU) 2019/2144 UN Regulation No 135			A';						
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(ii) the entry for item 58 is replaced by the following:

'58	Pedestrian protection	Regulation (EU) 2019/2144 UN Regulation No 127			A';						
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(iii) the entries for items 62, 63, 65 and 66 are replaced by the following:

'62	Hydrogen system	Regulation (EU) 2019/2144 UN Regulation No 134	X	X	X	X	X				
63	General safety	Regulation (EU) 2019/2144	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) 2019/2144 UN Regulation No 131	N/A	N/A		N/A	N/A				
66	Lane departure warning system	Regulation (EU) 2019/2144 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) 2019/2144 UN Regulation No 134	X
63	General safety	Regulation (EU) 2019/2144	X ⁽¹⁵⁾
65	Advanced emergency braking system	Regulation (EU) 2019/2144 UN Regulation No 131	N/A
66	Lane departure warning system	Regulation (EU) 2019/2144 UN Regulation No 130	N/A';

(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) 2019/2144 UN Regulation No 134	X	
63	General safety	Regulation (EU) 2019/2144	X ⁽¹⁵⁾	X ⁽¹⁵⁾
65	Advanced emergency braking system	Regulation (EU) 2019/2144 UN Regulation No 131	N/A	
66	Lane departure warning system	Regulation (EU) 2019/2144 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:

'(?) The fitting of vehicle stability function is required in accordance with Article 4(5) of Regulation (EU) 2019/2144.

- (⁴) The fitting of an electronic stability control system is required in accordance with Article 4(5) of Regulation (EU) 2019/2144’;
- (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) 2019/2144’;
- (iv) explanatory note 15 is replaced by the following:
- ‘(¹⁵) Compliance with Regulation (EU) 2019/2144 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.
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ANNEX IV

Transitional provisions referred to in Article 15(3)

UN Regulation Number	Specific requirements	Final date for registration of non-compliant vehicles as well as sale or entry into service of non-compliant components ⁽¹⁾
117	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	

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 5 July 2022 and Regulation (EC) No 78/2009 in respect of types of vehicle and system complying with the requirements in its version applicable on 5 July 2022.