

Order on detailed rules for the construction, equipment and use of vehicles

Pursuant to Sections 33a (2), 35 (1) (2), 68 (1) and (4), 68d (1), 68f (1), 69, paragraph 2, Section 70 (3), Section 83, Section 84 (1), Section 85 (1), Section 118 (1) (2) and (15), point 1, and Section 134e of the Road Traffic Act, cf. Consolidation Act No 1312 of 26 November 2024, are laid down pursuant to Section 3 (1) and (2) of Order No 787 of 18 June 2025 on the tasks and powers of the Road Traffic Authority and the right to appeal:

Chapter 1

Scope and definitions

PARAGRAPH 1. This Order shall apply to the following vehicles and equipment:

- 1) Vehicles and their equipment approved or subject to national approval.
- 2) Vehicles and their equipment not subject to authorisation before entry into service.
- 3) Vehicles and their equipment referred to in Section 4.

Paragraph 2. Chapter 4 shall also apply to vehicles and their equipment that are EU or EC type-approved tea.

PARAGRAPH 2. For the purposes of this Order:

- 1) CoC: The document issued by the manufacturer certifying that a manufactured vehicle conforms to the approved vehicle type and to all the regulatory acts in force at the time of production.
- 2) Directive 2002/24/EC: Directive 2002/24/EC of the European Parliament and of the Council of 18 March 2002 relating to the type-approval of two or three-wheel motor vehicles and repealing Council Directive 92/61/EEC.
- 3) Directive 2003/37/EC: Directive 2003/37/EC of the European Parliament and of the Council of 26 May 2003 on type-approval of agricultural or forestry tractors, their trailers and interchangeable towed machinery, together with their systems, components and separate technical units and repealing Directive 74/150/EEC.
- 4) Directive 2007/46/EC: Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles
- 5) Directive 70/156/EEC: Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers, as amended.
- 6) e-approval (respectively e-approved): An approval of a vehicle or equipment pursuant to an earlier EC Directive (EC type-approval) or a more recent EU Regulation (EU type-approval).
- 7) E-approval (respectively E-approved): An approval of a vehicle or equipment pursuant to a UN Regulation.
- 8) Regulation 167/2013/EU: European Parliament and Council Regulation (EU) No 167/2013 of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles.
- 9) Regulation 168/2013/EU: European Parliament and Council Regulation (EU) No 168/2013 of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles.
- 10) Regulation (EU) 2018/858: Council 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 Regulation (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC.
- 11) Type-approval: EC/EU type-approvals notified, type-approvals, type-approvals and approval declarations.

12) Equipment: Equipment, systems, components, separate technical units and spare parts.

Chapter 2

General provisions

PARAGRAPH 3. Vehicles and their equipment covered by this Order shall comply with the requirements set out in Annexes 1 and 2.

PARAGRAPH 4. Vehicles approved under one of the following directives or regulations shall comply with the provisions of Annex 1 if these vehicles have changed, subject to Sections 6-8 and Annex 2:

- 1) Directive 70/156/EEC.
- 2) Directive 2002/24/EC.
- 3) Directive 2003/37/EC.
- 4) Directive 2007/46/EC.
- 5) Regulation 167/2013/EU.
- 6) Regulation 168/2013/EU.
- 7) Regulation (EU) 2018/858.

Chapter 3

EU type-approved vehicles and equipment

Accept of EU type-approved vehicles and equipment

PARAGRAPH 5. A vehicle and its equipment approved under a Community or EU Directive or under an EU Directive —
Regulation, approval cannot be refused on the ground that it does not comply with national provisions on vehicle layout and equipment.

Equipment fitted to an EU type-approved vehicle or trailer

PARAGRAPH 6. Equipment fitted to an EU type-approved car or trailer covered by Regulation (EU) 2018/858 and covered by this Regulation shall have been approved in accordance with the provisions of that Regulation and the implementing acts applicable under that Regulation or UN Regulations.

Paragraph 2. Equipment fitted to a vehicle or its trailer authorised in accordance with Directive 70/156/EEC or Directive 2007/46/EC shall have been approved in accordance with that Directive or the UN Regulations referred to therein, if the equipment is also covered by that Directive or equivalent more recent Union rules. This shall not apply to vehicles registered, approved or put into service before 1 January 1998.

Equipment fitted to an EU type-approved tractor or its trailer

PARAGRAPH 7. Equipment fitted to an EU type-approved vehicle covered by Regulation 167/2013/EU and covered by this Regulation shall have been approved in accordance with the provisions of the Regulation and the implementing acts applicable under that Regulation or UN Regulations.

Paragraph 2. Equipment fitted to tractors approved under Directive 2003/37/EC shall have been approved in accordance with that Directive or the UN Regulations referred to therein, if the equipment is also covered by that Directive or by equivalent more recent regulations. This shall not apply to vehicles registered, approved or put into service before 1 April 2005.

Equipment fitted to EU type-approved two- or three-wheel motor vehicles and quadricycles

PARAGRAPH 8. Equipment fitted to an EU type-approved vehicle covered by Regulation 168/2013/EU and covered by this Regulation shall have been approved in accordance with the provisions of the Regulation and the implementing acts applicable under that Regulation or UN Regulations.

Paragraph 2. Equipment fitted to a vehicle approved in accordance with Directive 2002/24/EC shall be approved in accordance with that Directive or the UN Regulations referred to therein, if the equipment is also covered by that Directive or by equivalent more recent regulations. This shall not apply to vehicles registered, approved or put into service before 1 January 2004.

Exemptions to equipment type-approval requirements

PARAGRAPH 9. Brake linings fitted to a large passenger car, lorry and trailer O3/O4 that are e-approved shall not be E-approved if the vehicle was first registered before 1 November 2014.

Paragraph 2. Brake discs or brake drums fitted to a passenger car, a large passenger car, a van, a lorry, trailer O1/O2/O3/O4 and an e-approved caravan shall not be E- approved if the vehicle was first registered before 1 November 2016.

PARAGRAPH 10. Equipment fitted to vehicles older than 20 years from the date of first registration of the vehicle shall not comply with the requirements of Sections 6-8 as regards braking and exhaust components.

Paragraph 2. In the case of vehicles not subject to registration, the time referred to in paragraph 1 shall be counted from the date of entry into service of the vehicle.

Chapter 4

Use of mini-ruck by vehicles

PARAGRAPH 11. Minitruck, as referred to in Annex 1, paragraph 1.03.061, may only be used on private land, including private roads, and in minor extent on public roads, including when the road is crossed, subject to paragraph 3.

Paragraph 2. On minitruck, no more than one person may be transported in addition to the driver.

Paragraph 3. The police may, with the consent of the road authority, allow electric minitruck registered in the Vehicle Register and bearing registration plates to be used on walking streets and streetlike areas, as well as in connection with their entry and exit. The authorisation shall specify the route to be used. The said authorities may lay down other conditions relating to the authorisation.

Paragraph 4. Minitruck used in accordance with paragraph 3 may be connected to only one trailer or trailer. The trailer must be registered in the Vehicle Register.

Interconnection

PARAGRAPH 12. A vehicle used for traction of a trailer shall be fitted with a coupling device as specified in Annex 1, paragraph 9.05.

Paragraph 2. The trailer shall be fitted with coupling devices as described in Annex 1, paragraph 9.05.

PARAGRAPH 13. Without prejudice to paragraph 2, a passenger or van vehicle may be combined with an unbraked trailer or with inertia brakes only if the following conditions are met:

- 1) The coupling devices are suitable for each other and the securing of the coupling is in operation.
- 2) The trailer's electrical equipment is connected to the vehicle so that the lamps function properly.
- 3) The towed vehicle brakes are automatically activated in the event of breakage of the coupling device or other decoupling. This shall be done by fitting a burst wire from the trailer brakes to a bracket or eye designed for that purpose and fitted close to the coupling device of the vehicle.
- 4) The vehicle shall be registered with coupling device.
- 5) The actual total axle load of the trailer does not exceed the value indicated for the weight of the trailer in the registration basis of the vehicle.
- 6) The actual total axle load of the vehicle combination does not exceed the value declared for the combination weight in the vehicle registration basis, if a value is indicated.
- 7) The car's mirrors or camera system provide rearward visibility.

Paragraph 2. The rules on the non-visual interconnection of passenger and goods vehicles with a trailer in the Order on the non-visual interconnection of vehicles and trailers with a maximum authorised weight not exceeding 3.500 kg may be used as an alternative to paragraph 1.

PARAGRAPH 14. The tractor or motor gear may be coupled with one or two trailers, with one trailer or with one trailer and one trailer and with one trailer only if the following conditions are met:

- 1) The coupling devices are suitable for each other and the securing of the coupling is in operation.
- 2) The towed vehicle's electrical equipment is connected to the tractor or engine gear so that the lamps operate correctly.
- 3) The towed vehicle brakes are connected to the tractor or the engine tool so that the brakes function correctly if the towed vehicle is braked.
- 4) The actual total axle load of the towed vehicle (s) does not exceed the weight that the tractor or engine gear may tow according to the tractor/engine gear manufacturer.
- 5) The total axle load of the trailer (s) does not exceed the weights for which the coupling devices are designed.
- 6) The mirrors or camera systems of the tractor or engine gear provide rearward visibility.

Specific types of service

PARAGRAPH 15. The movement of a vehicle as part of its construction or repair and by a new vehicle between ship, rail and business premises may be carried out without complying with the following rules:

- 1) Provisions relating to headlamps when the vehicle is driven outside the time of application of the lamp. However, the provisions concerning the position of the lamps may be waived irrespective of the time when they are driven.
- 2) Provisions relating to rear position lamps, rear registration plate lamps and end-outline marker lamps. However, the vehicle shall be equipped with two rear position lamps while driving during the period of its illumination.
- 3) Provisions concerning retro-reflecting devices, reflectance planes and contour markings when the vehicle is driven outside the time of application of the lamp.
- 4) Provisions concerning direction-indicator lamps, hazard warning devices and stop lamps, where clear signs may be provided by other means.
- 5) Provisions on mirrors, safety belts and screens. However, the vehicle shall be fitted with at least one mirror.
- 6) Provisions for the fitting of tyres if the tyres fitted have a load bearing capacity at least equivalent to the actual load.

Paragraph 2. In the case of a trailer or semi-trailer, the service brake requirement may also be waived if the combination does not travel at a speed greater than 30 km/h.

PARAGRAPH 16. Driving outside the voltage time may take place without observing the rules on the use of dipped-beam headlamps, front fog lamps or special daytime running lights, cf. Section 33a of the Road Traffic Act, in the following cases:

- 1) By repair or as part of the construction of a power-driven vehicle.
- 2) For occasional services of motor vehicles first registered before 1 January 1951.

Parking during the time of lighting

PARAGRAPH 17. When an uncoupled trailer is stopped or parked on the road for the duration of the lamp, it shall be marked with at least two rearward-facing red lamps and two forward-facing white lamps which are lit. The lamps shall comply with the requirements for rear position (side) lamps and front position (side) lamps respectively.

Paragraph 2. The provision in paragraph 1 shall not apply if the road is so well informed that the vehicle can be clearly observed at a sufficiently long distance, or if it is stopped or parked in a car park or other marked parking area, cf. Section 36 (1) of the Road Traffic Act.

Studded tyres

PARAGRAPH 18. On cars, motorcycles, large mopeds and on a vehicle or motorcycle trailer subject to registration, studded tyres may only be used during the period from 1 November to 15 April and only if all the wheels of the vehicle or vehicle combination are fitted with them.

Paragraph 2. Studded tyres may only be used in the period from 1 November to 15 April if all wheels on the same axle are fitted with them.

Paragraph 3. The number of spikes shall be approximately the same for all wheels. Twin wheels may have spiked tyres on only one wheel if there is symmetry with regard to the longitudinal axis of the vehicle.

Squirrel fittings

PARAGRAPH 19. On cars, snowploughs and console may be fitted only between 15 September and 15 May. Where snowploughs are not fitted to the car during the period, the snowploughing bracket and the console shall be rounded or shielded.

Paragraph 2. Outside the period referred to in paragraph 1 (1), snowploughs and console shall be removed from the front.

Paragraph 3. The provisions of paragraph 2 shall not apply to snowploughs if the external projections of the bracket are rounded or shielded.

Slow-moving vehicle marking

PARAGRAPH 20. Tractors which are not part of a vehicle combination must be marked as a slow-moving vehicle.

Paragraph 2. Engine tools which are not part of vehicle combinations and which are not intended to be driven by a pedestrian shall be marked as a slow-moving vehicle.

Paragraph 3. The following combinations of vehicles shall be marked with a slow-moving vehicle marking:

- 1) Tractor with tractor trailer or trailer.
- 2) Motor gear with trailer or trailer. This does not apply to an engine gear intended to be driven by a pedestrian.
- 3) Car with attachments which are not subject to registration.

Paragraph 4. Other vehicles in the vehicle combinations referred to in paragraph 3 (1) and (2) may be

marked as a slow-moving vehicle.

Paragraph 5. Markings referred to in paragraphs 1 to 4 shall comply with the conditions set out in Annex 1, point 6.10.001.

Tractor occupants

PARAGRAPH 21. Passengers may only be carried on a tractor in an enclosed cab.

Fire extinguishers

PARAGRAPH 22. Passenger cars M2 shall be fitted with at least one fire extinguisher located in the vicinity of the driver's seat.

Paragraph 2. Passenger cars M3 shall be fitted with at least one fire extinguisher located in the vicinity of the driver's seat.

Paragraph 3. In addition to the fire extinguisher referred to in paragraph 2, passenger cars M3 shall be fitted on two floors with fire extinguishers on the upper floor.

Paragraph 4. A caravan designed for more than 9 persons shall be fitted with at least one fire extinguisher.

PARAGRAPH 23. Mandatory fire extinguishers shall be suitably located and easily accessible and unlocked for the driver.

PARAGRAPH 24. Mandatory extinguishers shall be approved, marked and continuously checked in accordance with one of the following standards:

- 1) DS 2320 or more.
- 2) DS/EN 3 or more recent.

Paragraph 2. Fire extinguishers referred to in Section 22 (1), (2) and (4) shall also be approved and marked in at least Classes 5 A, 34 B.

Paragraph 3. However, for cars equipped for the carriage of more than 19 persons, fire extinguishers referred to in Section 22 (1), (2) and (4) shall be approved and marked in at least Class 13A, 89B.

Light moped in service

PARAGRAPH 25. EC type-approved light mopeds which are exempt from registration in accordance with the Vehicle Registration Order shall carry with them documentation issued by a testing centre for exemption from registration and maximum constructive speed, cf. the Order on the approval and inspection of vehicles.

Paragraph 2. Paragraph 1 shall not apply to EC type-approved light mopeds which are exempt from registration pursuant to the Order on the Registration of Vehicles if they have been EC type-approved with the following:

- (1) an engine power of not more than 1 kW.
- (2) a maximum design speed not exceeding 25 km/h per hour.
- (3) pedals.

Alerting audible warning devices on BRT electric buses

PARAGRAPH 26. Alerting audible warning devices on electric buses used for bus rapid transport (BRT), as described in Annex 1, paragraph 6.06.023, may only be used in dense traffic and where this is deemed necessary to signal the presence of the bus.

Chapter 5
Administrative provisions

Compensation

PARAGRAPH 27. The Road Traffic Authority may, in special cases, grant derogations from the provisions of this Order.

Right of appeal

PARAGRAPH 28. The police's decision under Section 11 (3) may be brought before the Road Traffic Authority.

Paragraph 2. Decisions taken by the Danish Road Safety and Transport Agency pursuant to this Order may not be brought before the Minister for Transport or any other administrative authority, cf. the Order on the tasks and powers of the Road Traffic Authority and the right of appeal.

Technical specifications and standards

PARAGRAPH 29. Technical specifications referred to in this Order shall not be introduced in the Official Journal.

Paragraph 2. Technical specifications, cf. paragraph 1, means Danish, foreign, European or international standards, norms and guidelines, etc.

Paragraph 3. Technical specifications and standards, cf. paragraph 1, may be reviewed by the Danish Road Safety and Transport Agency or purchased by the Danish Standard.

Paragraph 4. Technical specifications and standards referred to in paragraph 1 shall apply even if they are not available in Danish.

UN Regulations

PARAGRAPH 30. UN Regulations referred to in this Order shall not be introduced in the Official Gazette.

Paragraph 2. UN Regulations, cf. paragraph 1, shall apply even if they are not available in Danish.

Paragraph 3. UN Regulations referred to in this Order can be found on the website of the United Nations Economic Commission for Europe, www.unece.org.

Chapter 6

Punishment

PARAGRAPH 31. A fine shall be imposed on anyone who infringes Sections 3 and 4, Sections 6-9, Section 11 (1), (2) and (4), Section 12, Section 13 (1), Section 14, Section 17 (1), Sections 18 and 19, Section 20 (1) – (3) and (5), Sections 21-24, Section 25 (1) and Section 26.

Paragraph 2. Failure to comply with conditions for authorisation under Section 11 (3) shall be punishable by a fine under Section 118 (1) (2) of the Road Traffic Act.

Paragraph 3. Companies, etc. (legal persons) may be held liable under the provisions of Chapter 5 of the Criminal Code.

Chapter 7

Entry into force

PARAGRAPH 32. This Order shall enter into force on 1 January 2026.

Paragraph 2. Order No 907 of 25 June 2025 on detailed requirements for the construction, equipment and use of vehicles, as amended, is hereby repealed.

Technical provisions for vehicles

1. General information on the Annex

1.1 Structure of the annex

1.1.01 Numbering system

- (1) The requirements are set out in the Annex in a numbering system in which the individual number consists of three groups of numbers:
- a) 1th group (one or two digits) denotes the main section.
 - b) 2. number group (two digits) denotes the sub-section.
 - c) The 3th number group (three digits) denotes the detailed prescriptions.

1.1.02 Main sections

- (1) The Annex is divided into 11 main sections of which:
- a) main section 1 provides general information – including overview of vehicle types and uses and definitions;
 - b) the main sections 2 to 10 contain requirements relating to the construction and equipment of vehicles; and
 - c) section 11 describes the measurement methods used for some of the regulations.
- (2) The main sections 2 to 10 are broken down by vehicle components and systems.

1.1.03 Subsection

- (1) The sub-sections are broken down by such components or systems in the main section concerned, which share certain common characteristics.

1.1.04 Detailed rules

- (1) The numbering of detailed requirements covers two types of retail prescriptions:
- a) Numbers 001 to 009 denote detailed requirements of a general nature for components or systems contained in the subsection.
 - b) Number 010 denotes specific detailed requirements applicable to one or more vehicle species or applications.
- The detailed requirements referred to in (b) may include both tightening and relaxing of the general requirements referred to in (a).

1.1.05 Breakdown of detailed rules

- (1) The detailed rules – depending on their content – are divided into numbers and/or letters.

1.1.06 Transitional provisions

- (1) Transitional provisions for the detailed rules are marked with a dash below, and apply, unless otherwise specified, to vehicles registered, approved or put into service for the first time before that date. Years in the range 00-25 refer to years 2000-2025, while in the range 26-99 years refer to years 1926-1999.

The terms 'registered, approved or put into service' refer to vehicles subject to registration, persons subject to approval and other vehicles, respectively.

1.2 Numbering system

1.2.01 Use of the numbering system

- (1) The structure of the numbering system implies that detailed requirements for, for example, a component exist on the back of the number of that component.
- (2) General requirements for the component in question can be found under one or more of the numbers 001 to 009.
- (3) Requirements for a specific type or use of the vehicle can be found under the number of the vehicle type or use concerned (see the list of vehicle types and uses in Section 1.03).

1.3 Vehicle types and

applications 010 – Motor-driven

vehicle

Power-driven vehicle.

Motor vehicles are divided into motor vehicles (car and motorcycle), mopeds, tractors and motor tools.

020 – car

Motor vehicle equipped with four or more wheels or with caterpillar treads, cylinders, runners or the like, and three-wheeled motor vehicles with an unladen weight of more than 400 kg.

Four-wheeled vehicle, including ATV, is considered to be a car. If the vehicle is e-approved as a “quadricycle”, category L6e (light quadricycle) or L7e (heavy quadricycle), it may be approved on the basis of the CoC, regardless of whether the quadricycle does not comply with the technical requirements for the vehicle. The approval shall be valid only as long as the quadricycle is technically equivalent to the approval. Therefore, on quadricycle no structural changes may subsequently be made to the steering, brakes, engine or load-bearing elements.

Tractor, including ATV, which is e-approved as a tractor with a maximum design speed exceeding 40 km/h (with associated tolerance) is considered to be a car.

A three-wheel vehicle with an unladen weight exceeding 400 kg shall be considered to be a motor vehicle. If the vehicle is e-approved as

‘powered tricycle’ may be approved on the basis of the CoC, regardless of the vehicle’s failure to comply with the technical provisions applicable to the vehicle. The approval shall be valid only as long as the three-wheel vehicle is technically equivalent to the approval.

Cars produced in small series are those manufactured by a car manufacturer which produces a total of no more than 1.500 cars per year.

A car specially designed for the carriage of both persons (with one or more seats behind the front row of seats) and goods, but which is not a stationary car derived from a saloon/hatchback, shall be considered to be a commercial vehicle if the following conditions are met:

- The car is designed for a maximum of seven persons including the driver.
- The permissible weight of goods with all seats occupied and fully refuelled by operational means is at least equal to the weight of passengers (68 kg).

021 – passenger car M1

Car with a maximum of eight seats in addition to the driver's seating position. No space shall be provided for standing passengers.

022 – passenger car M2

A car with more than eight seats in addition to the driver's seating position and having a maximum authorised mass not exceeding 5.000 kg.

023 – passenger car M3

Motor vehicle, including articulated buses, with more than eight seats in addition to the driver's seating position and having a maximum authorised weight exceeding 5.000 kg.

Articulated buses are defined as a car consisting of two or more rigid sections articulated with each other. The passenger compartments of each section intercommunicate so that passengers can move freely between them; The rigid sections are permanently linked to each other, so that they can only be separated by means of equipment normally provided only in a workshop.

024 – van N1

Motor vehicles fitted out for the carriage of goods and having a maximum authorised mass not exceeding 3.500 kg.

025 – truck N2

Motor vehicles fitted out for the carriage of goods and having a maximum authorised mass exceeding 3.500 kg but not exceeding 12.000 kg.

026 – truck N3

Motor vehicles fitted out for the carriage of goods and having a maximum authorised mass exceeding 12.000 kg.

030 – motorcycle

Two-wheel motor vehicle, with or without sidecar, and three-wheel motor vehicle with an unladen weight not exceeding 400 kg.

031 – motorcycle

032 – two-wheel motorcycle with

sidecar 033 – Motorcycle

Power-driven vehicles with two front wheels and twin rear wheels shall be considered to be motor tricycles if the twin wheels are located no more than 0.15 m apart, are not disconnected from each other and are fitted in such a way that one wheel can be removed without significantly altering the operational characteristics of the vehicle.

A vehicle approved as a tricycle in accordance with Directive 2002/24/EC or Regulation 168/2013/EU may have two wheels (one twin wheel) mounted on the same axle and with a distance between the centres of tyre contact with the ground of up to 0.46 m. The twin wheel is then considered to be a single wheel.

040 – moped

Two- or three-wheel vehicle with an internal combustion engine of a cylinder capacity not exceeding 50 cm³ or with an electric motor and with a maximum design speed not exceeding 45 km/h.

041 – large moped

Mopeds with a maximum design speed exceeding 30 km/h.

042 – light moped

Mopeds with a maximum design speed not exceeding 30 km/h.

Before 01.01.20: The Invalideknallert that has an authorisation (Tum- or K-approval) issued by the Danish Road Traffic Authority may be put into service (without registration) before that date. The invalid moped is a three-wheel moped designed for the carriage of a disabled driver and may be designed for only one person (the driver).

Before 01.07.06: Light mopeds are not subject to registration but must have a licence (Tum- or K-approval) issued by the Road Traffic Authority.

050 – tractor

A power-driven vehicle principally designed to tow another vehicle or working gear and designed for a speed not exceeding 40 km/h.

The condition ‘principally designed to tow’ means that, according to the tractor manufacturer, the tractor must be designed to tow a mass at least equal to its own technically permissible maximum laden mass (the combination weight must be at least twice the technically permissible maximum laden mass of the tractor) and that it does not carry a load platform.

However, these two requirements do not apply to an e-approved agricultural and forestry tractor (approved up to a maximum of 40 km/h with associated tolerance, see point 11.03.050), which is used only in accordance with the rules of the Registration Act on approved tractors. However, a tractor may be fitted with a transport box suspended in the three-point suspension of the tractor.

A tractor may be equipped with permanently installed working tools, such as excavation and loading tools.

060 – engine tools

A power-driven vehicle which is principally designed for working purposes and which is designed for a speed not exceeding 40 km/h. Motor-driven vehicle intended to be driven by a pedestrian road shall be regarded as an engine tool.

The installation of easily replaceable working tools shall not result in a tractor being regarded as an engine gear.

A tractor with a permanent fitting of cheese is not considered to be an engine tool.

061 – minitruck

Engine gear which complies with the following conditions may be regarded as mini-ruck:

- The motor vehicle is fitted with three or more wheels.
- The specific weight of the engine gear does not exceed 1.500 kg. In the case of electric motor tools, batteries, in this context, are not included in the specific weight.
- The engine tool has a loading surface or a similar device designed for the carriage of goods.
- The engine tool is designed for the carriage of no more than one person in addition to the driver.

099 – powered block wagon

A motor vehicle whose weight, axle load, dimensions or other structure excludes the vehicle from registration and which is intended for the carriage of particularly heavy or bulky goods.

100 – trailer

A vehicle which, according to its layout, is intended to be towed by another vehicle.

Trailers are divided into trailers and semi-trailers designed mainly for the carriage of passengers or goods, and trailers.

A semi-trailer is a trailer for the transport of persons or goods which is coupled to a tractor in such a way that the vehicle or its load is partly resting on the vehicle.

A trailer with a maximum authorised mass exceeding 3.500 kg, constructed on trailer chassis or semi-trailer chassis, shall be regarded as a trailer or semi-trailer and not as a caravan.

A foldable trailer designed for accommodation (camping) shall be regarded as a trailer in one of the following cases:

- The surface of the folded box is designed as a loading surface for the carriage of goods.
- The tent can be removed immediately without the use of tools to create a loading surface for the transport of goods.

Cross-chain wagons designed to transport, for example, crops from fields with subsequent silo distribution are considered to be trailers.

Asbestos boiling is considered a trailer when it is mainly used for the transport and/or heating of asphalt.

110 – trailer for car

Including centre-axle trailer, which means a rigid drawbar trailer (drawbar bar) with a total axle load exceeding 3.500 kg.

111 – hinge/semi-trailer O1

Trailer with a maximum authorised mass – in the case of a semi-trailer and a rigid drawbar trailer with a total axle load – not exceeding 750 kg.

112 – hinge/semi-trailer O2

Trailer with a maximum authorised weight, in the case of a semi-trailer and a rigid drawbar trailer with a total axle load, exceeding 750 kg but not exceeding 3.500 kg.

113 – hinge/semi-trailer O3

Trailer with a maximum authorised weight, in the case of a semi-trailer and a rigid drawbar trailer with a total axle load, exceeding 3.500 kg but not exceeding 10.000 kg.

114 – hinge/semi-trailer O4

Trailer with a maximum authorised mass – in the case of a semi-trailer and a rigid drawbar trailer with a total axle load – of more than 10.000 kg.

120 – trailer

A tractor trailer is considered to be a tractor trailer even if it is partly resting on the tractor.

130 – motor gear trailer 140 –

Trailer

Trailer other than trailer and semi-trailer.

141 – caravan

Outboard equipment with accommodation and accommodation facilities.

Trailer equipment designed solely for accommodation (curtain) is not considered to be a caravan.

142 – other attachments subject to registration

143 – attachments subject to registration

150 – motorcycle trailer

151 – motorcycle trailer 153 – trailer

for motorcycle 160 – trailer for large

moped 199 – block trailer

A trailer whose weight, axle load, dimensions or other structure excludes the vehicle from registration and which is intended for the carriage of particularly heavy or bulky goods.

200 – vehicle combinations

300 – special purpose vehicles 310 –

Non-visual coupling vehicle 320 –

School vehicle

330 – hired vehicle

340 – emergency vehicle

341 – vehicle used to instruct and accompany vehicles

357 – Sovebus

Sovebus is a passenger car M2 or M3 designed so that all or some of the passenger seats can be converted into berths. A seat where the seat-back can be retracted to the rear up to 45 degrees shall not be considered as a berth. Passenger cars M2 or M3 fitted with fixed berths for passengers ('hotel bus') are also considered to be sleeping buses.

360 – special purpose vehicles

361 – Invalid vehicle

362 – loading vehicle

363 – vehicle specially designed for work on the road

Snow clearance vehicle, gravel spreader, sludge suction vehicle, passenger lift vehicle, road stripping vehicle, cable car, road processing machine, TMA vehicle and similar vehicle specially designed to carry out work on the road.

364 – camping car

A vehicle of category M with living accommodation space which contains the following equipment as a minimum:

- Seats and table.
- Sleeping seats which may also result from the conversion of seats.
- Cooking facilities.
- Storage facilities.

These accessories shall be attached to the accommodation room. However, the table may be designed in such a way that it can be easily removed;

The categorisation of a passenger car M1, M2 or M3 shall be determined solely on the basis of the number of seats intended to be used while driving.

371 – airport vehicles

381 – Tivolitrain

400 – special transport vehicles

410 – dangerous goods vehicle

460 – vehicles for other special transport

461 – animal transport vehicle

1.04 definitions Axle

pressure

The pressure applied to the road from the wheels of an axle.

Alternative fuels

“Alternative fuels” means fuels or power sources which serve, at least partly, as a substitute for fossil oil sources in the energy supply to transport and which have the potential to contribute to its decarbonisation and enhance the environmental performance of the transport sector. Alternative fuels include, among others, electricity, hydrogen, biofuels as defined in Article 2(i) of Directive 2009/28/EC, synthetic and paraffinic fuels, natural gas, including biomethane, in gaseous form (compressed natural gas (CNG)) and liquefied form (liquefied natural gas (LNG)) and liquefied petroleum gas (LPG).

Automatic load dependent braking force control (ALB)

Control device which automatically regulates the braking force/brake force distribution according to vehicle load.

Brake phage

Reduction of the braking performance of a vehicle by very hot brakes.

Brake transmission

The combination of components which exist between the control and the brake itself. If the braking power is wholly or partly derived from a source of energy independent of the driver but controlled by him, the energy storage device shall be regarded as part of the brake transmission.

Urban bus

‘Urban bus’ means a bus which has standing places designed for frequent departures and passengers and offers more than 22 passengers. However, a bus which is mainly fitted with seating positions but has standing places in the gangway and/or in an area not exceeding the space provided for two double seats shall not be counted as urban buses.

Chiptuning

Chiptuning means changes to the factory-specified electronic engine control, including the replacement and reprogramming of the engine control or the manipulation of signals to and from the engine control.

Engine control update as specified by the vehicle manufacturer is not considered to be chiptuning.

Braking rate

The relation between the deceleration and the acceleration of gravity. The braking rate (d_0) may be determined as the ratio between total braking force and total mass, in the case of trailers of the centre-axle type and, in the case of semi-trailers, as the ratio of total braking force to total static axle load.

Dolly

Dolly means a rigid drawbar trailer designed to be a semi-trailer tractive force.

Self-weight

The weight of a vehicle with accessories normally carried by the vehicle. The weight of the materials, including fuel, lubricating oil and cooling water, and the driver shall not be included in the specific weight.

Actual total weight

The instantaneous weight of the vehicle with the means of operation, the driver and the load.

Dangerous cargo

The substances and articles covered by the Order on the carriage of dangerous goods by road.

Leading management

A vehicle with previous steering means a vehicle in which the steering wheel hub is in the forward quarter of the vehicle.

Brake operation time

The time elapsing between the actuation of the control and the deceleration having reached 50 % of the required value.

Before 01.05.77: The time elapsing between the actuation of the control and the deceleration reaching 50 % of the maximum achieved value.

Folding

‘Folding seat’ means auxiliary seats intended for occasional use, which are normally parked up; folding seats are not included in the number of seating positions situated on a standing space.

Coupling length

Coupling length means, in the case of a car, the distance from the foremost point of the vehicle to the centre line of the coupling device and, in the case of a trailer, the distance from the rearmost point of the trailer to the centre line of the coupling device, excluding the parts referred to in paragraph 3.02.001 (7).

Running weight

The weight of the specific vehicle with accessories normally carried by the vehicle and fully refuelled by means of operation and including the driver (75 kg). However, in the case of vehicles covered by Regulation 168/2013/EU, the weight in running order is without the driver.

Linktrailer

Link-trailer means a semi-trailer intended to be tractive by a semi-trailer.

Zero-emission vehicle

A zero-emission heavy-duty vehicle as defined in Article 3, point (11), of Regulation (EU) 2019/1242.

Payload

The difference between the maximum permissible weight and the service weight.

R-point of seat

Reference point defined by the vehicle manufacturer corresponding to the theoretical point of rotation of the upper body/thigh when the seat is placed in the lowest and rearmost normal driving positions or positions of use as specified by the manufacturer.

Steered axle

The steering axle of a power-driven vehicle shall be regarded as the axle on which there is a connection between the steering wheel and the wheels.

The steered axle of a trailer shall be deemed to be the axle on which there is a connection between the actuator and the wheels.

Steering transmission

The steering transmission is the part of the steering control which exists between the steering control and the steered wheels. The power source for power control shall not be considered to be part of the transmission.

Tank container

Means of transport designed for repeated use, designed to be raised in full, designed for liquid, gaseous, powdered and granular substances and having a capacity greater than 0.45 m³.

Off-road car

Off-road car as defined in Regulation (EU) 2018/858.

Permissible cargo

The difference between the maximum permissible weight and the unladen weight.

Maximum authorised mass.

The maximum permissible mass of the vehicle with the means of transport, driver and load at the time of registration or approval.

Service weight

The weight of the vehicle with accessories normally carried by the vehicle and fully refuelled by means of operation and including the driver (75 kg).

Thus, in the case of a power-driven vehicle, the duty weight equals the unladen weight plus the mass of the equipment plus 75 kg.

Peak speed

Maximum design speed of a motor vehicle.

If a power-driven vehicle is equipped with a speed limiter, the limited speed shall be considered to be the maximum speed of the vehicle.

Road-friendly suspension

Air-suspension or equivalent suspension as laid down in Annex II to Directive 96/53/EC.

2. Identification and inscriptions

2.1 Identification and inscriptions

2.1.01 General provisions

(1) The vehicle subject to registration, tractor, motorcycle sidecar, power-driven vehicle and block wagon shall bear the manufacturer's name or trade mark, as well as the type designation and chassis number of the vehicle. If the type designation is included as part of the chassis number, a further separate indication of the type designation is unnecessary.

Before 01.07.56: The requirement to indicate the type and chassis number does not apply to vehicles already registered in Denmark.

(2) Type designation and chassis number

a) be easily accessible and clearly visible; and

b) shall be embossed in the self-supporting body, chassis, frame or plate welded for that purpose in such a way as to avoid erasing or altering numbers and letters.

Before 01.07.56: The chassis number (both an assigned and an original) may be placed on a plate riveted or screw on the vehicle.

(3) The 17 character frame number (VIN marking) for a car and its trailers subject to registration shall comply with the provisions of Regulation (EU) 2021/535.

Before 01.07.25: The 17 character frame number (VIN marking) may comply with the provisions of Regulation 19/2011/EU.

Before 01.01.17: The chassis number may comply with the provisions of Directive 76/114/EEC as amended by Directive 78/507/EEC.

Before 01.04.04: Not applicable.

- (4) The 17 character frame number (VIN marking) for motorcycles, mopeds and their trailers shall comply with the provisions of Regulation 901/2014/EU.

Before 01.01.17: The chassis number may comply with the provisions of Directive 93/34/EEC as amended by Directive 1999/25/EC.

Before 01.04.04: Not applicable.

- (5) The 17 character frame number (VIN marking) for tractor and its trailers shall comply with the provisions of Regulation (EU) 2015/504.

Before 01.07.25: Not applicable.

- (6) The car, motorcycle, moped, tractor, trailer/semi-trailer for motor vehicles, caravans, tractor trailers and other trailers subject to registration, as well as motorcycle and moped trailers, shall bear the 17 character frame number (VIN marking).

Before 01.07.25: Tractor, tractor trailer and trailer for mopeds shall not bear the chassis number of the 17 character.

Before 01.04.04: Not applicable.

- (7) Mandatory markings may only be affixed;

- a) by the manufacturer,
- b) by the manufacturer's representative,
- c) by, or under the control of, a testing centre; or
- d) by – or under the control of – an insurance company's treasury in accordance with the relevant provisions of the Ministry of Taxation.

- (8) Changes to the required marking shall not be permitted.

- (9) Such markings shall not be affixed to vehicles which, due to their shape, content or manner in which they are affixed, are liable to be confused with mandatory marking.

However, it is permissible that the original frame marking of the vehicle may appear in two places on the vehicle when, for example, it is also present on a plate visible from the outside of the windscreen of the vehicle due to requirements abroad for its location. The mandatory marking of the vehicle shall be deemed to be the one embossed in accordance with paragraph;

(2) (b).

2.01.020 car

- (1) A vehicle shall bear a manufacturer's plate containing the contents of Regulation (EU) 2021/535, but without an EU type-approval number if the vehicle is not EU type-approved.

Before 01.07.25: Not applicable.

2.01.030 motorcycle

- (1) Motorcycles shall bear a manufacturer's plate containing the contents specified in Regulation 901/2014/EU, but without an EU type-approval number if the motorcycle is not EU type-approved.

Before 01.07.25: Not applicable.

2.01.040 moped

- (1) Mopeds shall bear a manufacturer's plate containing the contents specified in Regulation 901/2014/EU, but without an EU type-approval number if the moped is not EU type-approved.

Before 01.01.17: The manufacturer's plate may also contain the contents specified in Directive 93/34/EEC as amended by Directive 1999/25/EC.

Before 01.04.04: Only applicable to light mopeds bearing the chassis number of the 17 sign.

- (2) Mopeds must bear a marking of components on the engine, etc. in accordance with point 6 of Annex II to Regulation 44/2014/EU.

Before 01.07.25: Not applicable.

2.01.042 light moped

- (1) The manufacturer's plate shall contain the number of the vehicle's EU type-approval (ex XXX).

Before 01.07.25: Type-approval number requirements apply only to type-approved mopeds.

Before 01.04.04: Only applicable to mopeds bearing the chassis number of the 17 sign.

In addition, mopeds not bearing the chassis number of the 17 character must bear in the frame the vehicle type-approval number (DK-K- XXX) and the engine type number (DK-M-XXX) laid down in the type-approval shall be embossed or moulded in the engine.

Before 01.05.77: Mopeds shall bear the approval number (TUM XXX) laid down in the engine type-approval.

2.01.050 tractor

- (1) The tractor shall bear a manufacturer's plate containing the contents of Regulation (EU) 2015/504, but without an EU type-approval number if the tractor has not been EU type-approved.

Before 01.07.25: Not applicable.

2.01.100 trailer for car

- (1) The trailer shall be marked with a manufacturer's plate containing the contents of Regulation (EU) 2021/535, but without an EU type-approval number if the trailer/semi-trailer is not EU type-approved.

Before 01.07.25: Not applicable.

2.01.120 Trader trailer

- (1) The trailer shall bear a manufacturer's plate containing the contents of Regulation (EU) 2015/504, but without an EU type-approval number if the tractor trailer is not EU type-approved.

Before 01.07.25: Not applicable.

2.01.141 caravan

- (1) A caravan shall bear a manufacturer's plate containing the contents of Regulation (EU) 2021/535, but without an EU type-approval number if the caravan is not EU type-approved. Before 01.07.25: Not applicable.

2.01.150 motorcycle trailer

- (1) A motor vehicle shall bear a manufacturer's plate with the contents specified in Regulation 901/2014/EU, but without an EU type-approval number if the trailer is not EU type-approved.

Before 01.07.25: Not applicable.

2.01.160 trailer for mopeds

- (1) The trailer for mopeds shall bear a manufacturer's plate containing the contents specified in Regulation 901/2014/EU, but without an EU type-approval number if the trailer is not EU type-approved.

Before 01.07.25: Not applicable.

2.2 Inscriptions on the maximum authorised weight, cargo, etc.

2.2.01 General provisions

- (1) Such inscriptions and signs shall not be affixed to vehicles which, by their external shape, content and equipment or the manner in which they are affixed, are liable to be confused with those required.
- (2) Inscriptions shall be made in a durable colour which is clearly different from that of the vehicle or sign.

2.02.310 non-visual coupling vehicle

- (1) Heavy goods vehicles N2 and N3 and linktrailer with displacement of semi-trailer shall be marked or marked with an indication of the permissible railcar hitch load and with an arrow indicating the displacement of the centreline of the king pin in the railcar hitch at the railcar hitch position used to determine the permitted railcar hitch load.

The inscription or billboard shall take the form of the example given in Figure 1, where the dimension indicated indicates minimum dimensions.

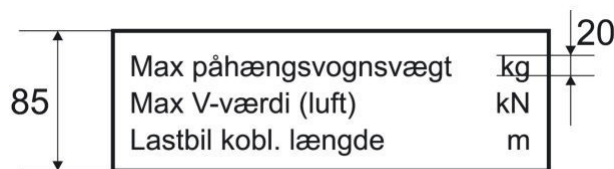


Mål i mm

Figure 1

- (2) A lorry intended for non-visual coupling with a trailer O3 or O4 or a trailer tool on a trailer schassis shall bear in a clearly visible position at the rear of the vehicle a markings or signs indicating the maximum maximum weight of the trailer, the maximum V-value of the centre-axle trailer and the coupling length of the vehicle.

The inscription or billboard shall take the form of the example in Fig. 2 if the vehicle has a road-friendly suspension of the driving axle and Fig. 3 if the vehicle does not have a road-friendly suspension of the driving axle. The dimensions given in the figures indicate minimum dimensions.



Mål i mm

Figure 2



Figure 3

Before 01.04.96: A lorry may bear an inscription or a sign indicating 'PhV T' for the maximum trailer weight and 'car LKL' for the coupling length of the vehicle.

- (3) A lorry intended for non-visual coupling with a trailer O3 or O4 or a trailer tool on a trailer schassis registered with several exits shall bear in a clearly visible position in the immediate vicinity of the coupling device the markings or signs in the form of the example given in Fig 3 or Fig 4, indicating the values of the 'Max trailer weight', 'Max V value' and 'Long truck coupled length' for each operation with coupling device.
- (4) For trailers O3 and O4 (except dolly) and trailers on the chassis of such a trailer:
- The vehicle shall bear on the drawbar an inscription or a sign indicating its length of coupling. The inscription or billboard shall take the form of the example given in Figure 4, where the dimensions indicated indicate minimum dimensions.

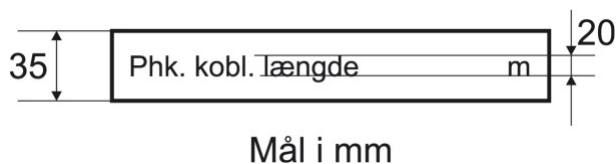


Figure 4

Before 01.04.96: The coupling length of the trailer may be indicated as 'PKL'.

- b) On the centre-axle trailer and trailer of the type of centre-axle trailer, the inscriptions or signs shall also indicate the V values of the vehicle.
- The inscription or billboard shall take the form of the example given in Figure 5, where the dimensions indicated indicate minimum dimensions.
- For centre-axle trailers and trailers of the type of centre-axle trailer, which are limited to non-visual coupling with air-suspended car, the words 'V value (MEK.)' shall be replaced by the words 'air-suspended car only'.



Figure 5

- c) If the drawbar is sliding, an unambiguous marking, e.g. two opposite arrows, shall clearly indicate the position of the drawbar at the specified coupling length. The marking shall be placed on the inscription or sign or in its vicinity.

2.02.362 loading vehicle

- (1) The loading vehicle shall bear on each side an inscription indicating the maximum authorised weight to be placed on the towing device (transport lift) and the maximum authorised weight of the towed vehicle. If there are more than one possibility of attaching the device, the inscription shall indicate a minimum and maximum permissible load range.

The texts shall be as follows:

- Maximum suspended axle load: XXXX kg

It is the vertical load (xxxx) on the device, expressed in kg as the highest possible value calculated from the rules on axle loads and weights on steered wheels. A range shall be indicated if there are several options for attaching the device.

- Maximum weight of towed vehicle: YYYY kg.

It is the actual weight (yyyy) of the whole towed vehicle, expressed in kilograms, determined by the maximum weight the towing vehicle may tow (at a speed down to 30 km/h).

2.3 Speed limit inscription

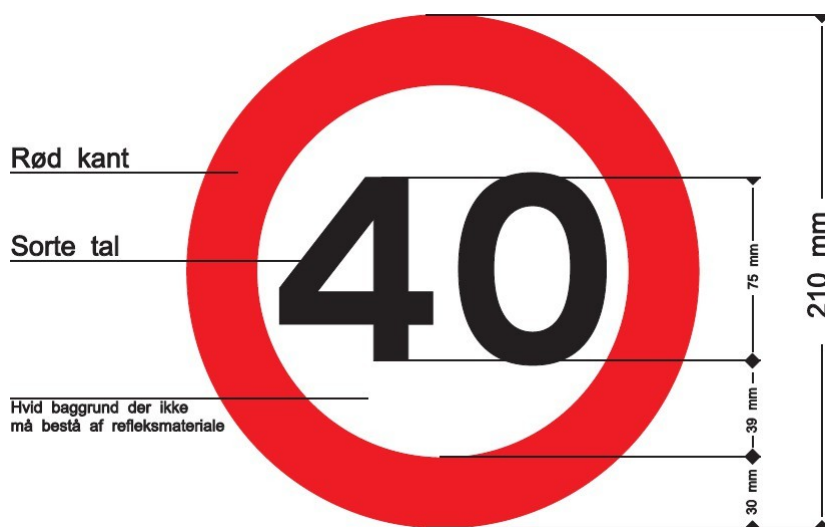
2.3.01 General provisions

- (1) If, at the time of registration or approval of a vehicle, a speed limit other than that laid down in Sections 2 and 43 of the Road Traffic Act is set, the vehicle must bear an inscription or a sign indicating the speed limit thus laid down for the vehicle in question.

Block wagons (including powered vehicles), mobile cranes and large trailers shall be subject to the provisions of the Order on special transport.

- (2) Inscriptions or signs shall be placed at the rear of the vehicle.

- (3) Inscriptions or signs shall be presented as shown in the following example, in which the dimensions are expressed in millimetres:



3. Weights and dimensions

3.1 Weight and axle load, etc.

3.1.01 General provisions

- (1) The maximum permissible axle load, load and maximum mass shall not exceed the technically permissible maximum mass guaranteed by the vehicle manufacturer.
- (2) For the purposes of the provisions on axle loads and gross weights, axles spaced less than 1.00 m apart shall be regarded as an axle.
- (3) The maximum permissible mass on the axle shall not exceed 10.000 kg.
- (4) In the case of a vehicle fitted with smooth rollers, the permissible mass on each axle shall not exceed 10 kg per mm of the width of the contact surface.
If the outer diameter of the roller is less than 0.50 m, the permissible mass on the axles shall be reduced according to the ratio of the actual diameter and a diameter of 0.50 m.
- (5) In the case of a vehicle fitted with tracks in whole or in part, the permissible pressure on a rolling stock shall not exceed 1.500 kg.
If the width of the belt is less than 0.35 m, the allowable pressure shall be reduced according to the ratio between the actual width of the belt and a width of 0.35 m.
In the case of a tractor and motor gear fitted in whole or in part with tracks, running between the field and the breeding farm, between properties with the tractor or motor gear in common line, between a machinery station and its customers, to and from survey or to and from workshop, the pressure on a track roll shall not exceed 2.250 kg, in accordance with Annex XXXIII to Regulation (EU) 2015/208.
- (6) The maximum authorised mass shall not exceed the sum of the authorised axle loads, in the case of a semi-trailer and a trailer with a king pin or rigid drawbar, but the sum of the permissible axle loads and the permissible coupling pressures.
- (7) In the case of a vehicle fitted with smooth rollers, the maximum authorised mass shall not exceed 15.000 kg, plus 250 kg for each full 0.20 m by which the distance between the first and last axle exceeds 2.50 m.
- (8) In the case of a vehicle fitted wholly or partly with tracks, the maximum permissible mass shall not exceed 4.000 kg per metre of the distance between the front and the rear rollers, up to a maximum of 16.000 kg.
In the case of tractors and motor tools fitted in whole or in part with tracks and running between the field and the breeding farm, between properties with the tractor or motor gear in common line between a machinery station and its customers, to and from survey or to and from workshop, the total weight shall not exceed 32.000 kg and the mean contact surface pressure shall not exceed 5 kg/cm² for rubber tracks as defined in Annex XXXII to Regulation (EU) 2015/208.

3.01.010 power-driven vehicle

- (1) At the maximum authorised mass, at least 20 % of this weight shall rest on the steered front wheels.
- (2) In the case of a power-driven vehicle with two axles, the maximum authorised mass shall not exceed 18.000 kg.
- (3) For lorries with two axles approved without coupling device using alternative fuels (as referred to in Article 2 of Directive 96/53/EC as amended by Directive (EU) 2015/719), the maximum authorised mass may be increased by the additional weight required for the alternative fuel technology, but not more than 1.000 kg. Similarly, the maximum authorised weight of zero-emission vehicles (as referred to in Article 2 of Directive 96/53/EC as amended by Regulation (EU) 2019/1242) may be increased by the additional weight of the zero-emission technology up to a maximum of 2.000 kg.
- (4) In the case of a motor vehicle with three axles, the maximum authorised mass shall not exceed 26.000 kg. It is a prerequisite that the driving axle of the vehicle has twin-mounted tyres; and
 - a) road-friendly suspension; or
 - b) no maximum permissible mass on the vehicle exceeds 9.500 kg.
 Without prejudice to paragraph 3.01.023 (2), in the case of other motor vehicles with three axles, the maximum authorised mass shall not exceed 24.000 kg.
- (5) However, for cars with three axles using alternative fuels (as referred to in Article 2 of Directive 96/53/EC as amended by Directive 2015/719/EC), the maximum authorised mass may be increased by

the additional weight required for the alternative fuel technology up to a maximum of 1.000 kg. Similarly, the maximum authorised weight of zero-emission vehicles (as referred to in Article 2 of Directive 96/53/EC as amended by Regulation 1242/2019/EU) may be increased by the additional weight of the zero-emission technology up to a maximum of 2.000 kg.

- (6) In the case of a motor vehicle with four axles, the maximum authorised mass shall not exceed the following:
- a) 36.000 kg if the distance between the front and the rear axle of the vehicle is 6.40 m or more, or if the two foremost axles are steered, and the distance between the front and the rear axle of the vehicle is 5.50 m or more.
 - b) 34.000 kg if the two front axles are steered and the distance between the front and rear axles of the vehicle is between 5.00 m and 5.49 m.
 - c) 29.500 kg for other motor vehicles with four axles, but 34.000 kg for articulated buses.
- (7) In the case of a power-driven vehicle with five or more axles, the maximum authorised mass shall not exceed the following:
- a) 42.000 kg if the distance between the front and the rear axle of the vehicle is 7.40 m or more.
 - b) 40.000 kg if the distance between the front and the rear axle of the vehicle is between 6.80 m and 7.39 m.
 - c) 36.000 kg if the distance between the front and the rear axle of the vehicle is between 5.50 m and 6.79 m.
 - d) 32.000 kg for other motor vehicles with five or more axles.
- (8) The maximum permitted driving pressure may be up to 11.500 kg if the driving axle is fitted with twin tyres and road-friendly suspension.
- (9) For bogies with two axles, the total permissible mass on the axles may be up to:
- a) 19.000 kg if the wheelbase between them is less than 2.00 m but not less than 1.30 m and the driven axle is fitted with twin tyres; and
 - i) road-friendly suspension; or
 - ii) the maximum mass on each axle does not exceed 9.500 kg.
 - b) 18.000 kg if the wheelbase between them is less than 1.80 m but not less than 1.30 m.
 - c) 16.000 kg if the wheelbase between them is less than 1.30 m but not less than 1.00 m.
 - d) 11.500 kg if the wheelbase between them is less than 1.00 m.
- (10) For bogies with three axles, the total permissible mass on the axles shall not exceed 24.000 kg. However, the maximum permissible mass on the axles shall not exceed 22.000 kg if one of the axles' distances is less than 1.30 m.
- The maximum permissible mass on the two axles with the highest axle load in the bogie shall be equal to the total permissible mass on the axles of a corresponding two-axle bogie as set out in point (8).
- (11) The provisions of paragraphs 3.01.001 (3) and (2) to (9) above relating to the permissible mass on the axles and maximum weights shall not apply to power-driven vehicles used as traction for a vehicle.

3.01.023 M3 passenger car

- (1) In the case of a two-axle passenger car with two axles, the maximum authorised mass shall not exceed 3 kg.
- (2) For articulated buses with three axles the maximum authorised mass shall not exceed 28.000 kg and for articulated buses with four or more axles the maximum authorised mass shall not exceed 34.000 kg.
- (3) For articulated buses with three axles using alternative fuels (as referred to in Article 2 of Directive 96/53/EC as amended by 2015/719/EC), the maximum authorised mass may be increased by the additional weight required for the alternative fuel technology up to a maximum of 1.000 kg. Similarly, the maximum authorised weight of zero-emission vehicles (as referred to in Article 2 of Directive 96/53/EC as amended by Regulation (EU) 2019/1242) may be increased by the additional weight of the zero-emission technology up to a maximum of 2.000 kg.

3.01.026 truck N3

- (1) For heavy goods vehicles N3 with two axles approved with coupling device, the maximum authorised mass shall not exceed 20.000 kg.

3.01.030 motorcycle

- (1) At the maximum authorised mass, at least 25 % of this weight shall rest on the front wheel (s).

3.01.040 moped

- (1) Mopeds must comply with the requirements for motorcycles.

Before 01.05.77: Not applicable to light mopeds approved before that date (TUM mark).

3.01.050 tractor

- (1) At the maximum authorised mass, at least 20 % of this weight shall rest on the steered wheels.

3.01.060 engine tools

- (1) Engine tools shall comply with the provisions of the tractor.
(2) However, the rules on the weight of steered wheels do not apply to fork-lift trucks which comply with the Order on the construction of technical aids.

3.01.099 powered block wagon

- (1) The provisions of paragraphs 3.01.001 (3), (5) and (8) and 3.01.010 (2) to (10) concerning the permissible mass on the axles and maximum weights shall not apply to power-driven articulated vehicles.

3.01.100 trailer

- (1) In the case of a trailer for a motor vehicle, with the exception of a rigid drawbar trailer, the maximum authorised weight shall not exceed 27.000 kg. The same applies to vehicle trailers built on such a chassis. In the case of a rigid drawbar trailer, the total mass on an axle group of three axles shall not exceed 24.000 kg.
- (2) However, in the case of a trailer for a motor vehicle other than a rigid drawbar trailer where the trailer has four or more axles and the trailer meets the following conditions, the maximum authorised weight may be up to 32.000 kg:
- a) The two front axles are steered and are less than 1.80 m apart or the rear bogie has not more than two fixed axles and a total authorised mass not exceeding 70 % of the maximum authorised mass.
 - b) The trailer has anti-lock brakes (ABS).
- The same applies to vehicle trailers built on trailer schassis.
- (3) In the case of a semi-trailer and a trailer with a king pin subject to registration, the total permissible mass on the axles shall not exceed:
- a) 24.000 kg, but
 - b) 30.000 kg if the semi-trailer or trailer has anti-lock brakes (ABS).
- (4) For bogies with two axles, the total permissible mass on the axles shall not exceed:
- a) 18.000 kg if the wheelbase between them is less than 1.80 m but not less than 1.30 m.
Where the total permissible mass on the axle exceeds 16.000 kg, the maximum permissible mass on each axle shall not exceed 9.000 kg.
 - b) 16.000 kg if the distance between the axles is less than 1.30 m but not less than 1.00 m. For each axle, the permissible mass on each axle shall not exceed 8.000 kg.
 - c) 11.000 kg if the wheelbase between them is less than 1.00 m.
The maximum permissible mass on each axle shall not exceed 8.000 kg.
- (5) For bogies with three axles, the total permissible mass on the axles shall not exceed:

- a) 27.000 kg, but
- b) 24.000 kg if the distance between the first and last axle of the group of axles is less than 2.80 m or if one of the axles is less than 1.30 m apart,
- c) 22.000 kg if only one of the spacing of axles between them is less than 1.30 m but not less than 1.00 m, and
- d) 21.000 kg if only one of the spacing of axles between the axles is less than 1.00 m.

If the total permissible mass on the bogie exceeds 24.000 kg, the mass on the axles shall be evenly distributed among the axles.

Before 01.08.14: Rigid drawbar towed vehicles may have a bogie load of 24.000 kg, regardless of the spacing of axles from each other to 1.00 m.

(6) For bogies with four or more axles, the total permissible mass on the axles shall not exceed:

- a) 30.000 kg, but
- b) 24.000 kg if only one of the spacing of axles between the axles is less than 1.30 m. The total permissible mass on each axle shall be equally distributed. There shall be no more than three fixed axles in the bogie.

3.01.150 motorcycle trailer

(1) The maximum authorised weight shall not exceed 200 kg.

3.01.160 trailer for large moped

(1) The maximum authorised weight shall not exceed 100 kg.

3.1.199 Block wagon

(1) The provisions of paragraphs 3.01.001 (3) to (5), (7) and (8) and 3.01.100 concerning the permissible axle weights and maximum weights do not apply to a wagon.

3.1.200 Vehicle combinations

(1) The maximum permissible combination mass shall not exceed the following:

- a) 56.000 kg for combinations of vehicles with seven or more axles consisting of a vehicle with a trailer subject to registration.
- b) 53.000 kg for vehicle combinations with six axles consisting of a three-axle vehicle with a trailer subject to registration.
- c) 52.000 kg for vehicle combinations with six axles consisting of a four-axle vehicle with a trailer subject to registration.
- d) 50.000 kg for other vehicle combinations with six axles consisting of a vehicle with a vehicle subject to registration.
- e) 47.000 kg for five-axle combinations consisting of a vehicle with a trailer subject to registration.
- f) 44.000 kg for other vehicle combinations.

(2) The maximum permissible mass of the trailer shall not exceed:

- a) technically permissible as guaranteed by the manufacturer of the towing vehicle; and
- b) technically permissible as guaranteed by the manufacturer of the coupling device.

(3) The maximum permissible combination mass shall not exceed that guaranteed by the tractor manufacturer.

(4) In combinations where the towing vehicle is a motor vehicle with a maximum authorised weight not exceeding 3.500 kg, the maximum weight of the trailer, except for semi-trailer and rigid drawbar trailer, shall not exceed:

- a) 50 % of the running mass of the towing vehicle if the trailer is not fitted with a service brake;
- b) the maximum permissible mass of the towing vehicle, if the trailer is fitted with a service brake, and
- c) 1,5 times the maximum permissible mass of the towing vehicle, if the vehicle is off-road and the trailer is fitted with a service brake. The maximum mass of the trailer or the total axle load shall not

exceed 3.500 kg.

- (5) In combinations of vehicles with a trailer subject to registration, where the towing vehicle is a motor vehicle with a maximum authorised weight exceeding 3.500 kg, the maximum weight of the trailer – except in the case of semi-trailer and rigid drawbar trailer – shall not exceed 1,5 times the maximum authorised weight of the towing vehicle.
- (6) In combinations of vehicles with a trailer subject to registration which are hauled by a vehicle with a maximum authorised weight exceeding 3.500 kg or by a tractor, at least 20 % thereof shall rest on the drive wheels of the tractor vehicle. The provision can be considered to be fulfilled for cars fitted with bogie with a driving axle and retractable/unloadable bogie axle if the maximum authorised mass of the driving axle represents at least 20 % of the maximum authorised mass of the combination.
- (7) Lockway trains shall comply with the provisions of paragraphs (2) and (3).

- (8) In vehicle combinations with a vehicle equipped with smooth rollers, the maximum permissible mass of the combination shall not exceed 15.000 kg, plus 250 kg for each full 0.20 m resulting in a distance between the first and last axle of the combination exceeding 2.50 m.
- (9) In vehicle combinations with motorcycle and trailer, the maximum weight of a trailer shall not exceed 50 % of the unladen weight of the motorcycle.
- (10) In vehicle combinations with large mopeds and trailers, the maximum weight of a trailer shall not exceed 50 % of the unladen weight of the moped.

3.01.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

3.02 height, width and length

3.02.001 general provisions

- (1) The height of a vehicle shall not be greater than 4.00 m. The height shall be measured vertically from the flat road track to the most protrusive part, except for:
 - antennae; and
 - pantographs or trolleybdenum in raised position.
 For a vehicle with retractable bogie axle, measure with the axle at the maximum height position. Before 01.04.87: The measurement instructions for vehicle with retractable bogie axle do not apply.
- (2) The width of a vehicle shall not exceed 2.55 m, subject to paragraphs (3) and (4) below. The width shall be measured over the furthest external projections, except for the following:
 - a) Customs sealing devices and their protection (shielding).
 - b) Sheet attachment devices and the protection (protection) of these devices which protrude not more than 20 mm if they are not more than 2.0 m from the ground and not more than 50 mm if they are more than 2.0 m from the ground. The edges shall be rounded to a radius of not less than 2.5 mm.
Before 01.11.14: There is no requirement for the devices to protrude no more than a certain number of mm.
 - c) Tyre burst indicators.
 - d) Protruding flexible parts of the wheel guard.
 - e) Lamps and reflectors.
 - f) Ununfolded loading platforms, loading bays and similar equipment, provided that the equipment protrudes not more than 10 mm from the sides of the car, that its forward or rearward facing corners are rounded to a radius of not less than 5 mm and that its edges are rounded to a radius of not less than 2.5 mm.
 - g) Mirrors and other devices for indirect vision.
 - h) Tyre pressure gauges.
 - i) Steps that can be folded (retracted) in.
 - j) Deflected parts of the sidewalls immediately above the point where the tyre touches the ground.
 - k) Visual and detection assistance, including radars.
 - l) Retractable lateral guidance devices intended for use on guided bus system, if not retracted.
 - m) Foldable devices and equipment on truck N2/N3, passenger car M2/M3, or trailer/semi-trailer O3/O4, specially designed to reduce air drag, provided that they do not increase loading capacity. Such devices shall be so designed that, when the vehicle is stationary, they can be folded together in such a way that the maximum permissible width is not exceeded by more than 25 mm on either side of the vehicle and that they do not impair the ability of the vehicle to be used for intermodal transport operations. The width of the vehicle shall not exceed 2.60 m, whether or not the devices are

in the in-use or folded position. The devices shall be type-approved in accordance with Regulation (EU) 2021/535.

Before 01.07.25: The devices may comply only with the technical requirements laid down in Regulation 1230/2012/EU.

Before 01.09.20: The projection may be 50 mm on either side and the total width up to 2.65 m.

- n) Snow chains.
 - o) Safety rails on a vehicle or trailer designed and constructed for the carriage of at least two other vehicles, if the safety rails are more than 2.00 m but not more than 3.70 m from the ground and do not project more than 50 mm from the outermost point on the side of the vehicle. The vehicle width shall not exceed 2.65 m.
 - p) Antennas.
 - q) Flexible hoses forming part of tyre pressure monitoring systems, provided that they do not project more than 70 mm on either side with respect to the widest dimension of the vehicle.
- (3) A vehicle with a temperature-controlled structure may have a width of up to 2.60 m. A temperature-controlled structure means a fixed or detachable structure specially equipped for the transport of goods at a controlled temperature, the thickness of which, including insulation, is not less than 45 mm.
- (4) The tractor and tractor trailer may have a width of up to 3.00 m if the width of 2.55 m is due solely to wheel mounting and wheel guards.
- (5) In the case of motor tools, works or trailers specially designed for agricultural, forestry or road work, the width of both the towing vehicle and the trailer may exceed 2.55 m.
- (6) A tractor or motor towing vehicle built as a buffer tank may have a width of up to 3.30 m.
- (7) The length of a vehicle or vehicle combination shall be measured over the parts which protrude furthest forward or rearward, except for any of the following:
- a) Windscreen wipers and washers.
 - b) Marking plates (signs) at the front and rear.
 - c) Customs sealing devices and their protection (shielding).
 - d) The device for attaching and protecting the tarpaulins (shielding).
 - e) Lamps and reflectors.
 - f) Mirrors and other devices for indirect vision.
 - g) Visual and detection assistance, including radars.
 - h) Air intake.
 - i) Length tops for removable build-up.
 - j) Step board and handholds.
 - k) Tumour horns and similar equipment.
 - l) Loading platforms, loading ramps and similar equipment in running order, provided that the projection does not exceed 0.30 m and that the loading capability of the vehicle is not increased.
 - m) Coupling devices on motor vehicles (fixed and foldable).
 - n) Safflower grilles, etc. (frontal protection system) approved, marked and fitted in accordance with Regulation 78/2009/EU.
 - o) Bicycle stands (removable or foldable).
 - p) Foldable devices and equipment on truck N2/N3, large passenger car M2/M3 or trailer/semi-trailer O3/O4 intended to reduce air drag, provided that they do not increase the length of the loading surface and the load capacity of the vehicle. Such devices shall be fitted to the rear of the vehicle and be so designed that, when the vehicle is stationary, they can be folded together in such a way that the maximum permissible length of the vehicle is not exceeded by more than 200 mm and that they do not impair;

the ability of the vehicle to be used for intermodal transport operations. The devices shall be type-approved in accordance with Regulation (EU) 2021/535.

Before 01.07.25: The devices may comply only with the technical requirements laid down in Regulation 1230/2012/EU.

Before 01.09.20: The devices are not required to comply with the technical requirements of Regulation 1230/2012/EU.

q) External sun visors.

r) Trolley booms on electrically driven vehicles.

s) Antennas.

Vehicle combinations shall be measured in full, corresponding to straight running.

(8) When measuring distances (load length, etc.) referred to in point 3.02.200 (8) (a) and (b), the following shall be disregarded:

a) The loading surface in front of the rearmost point of the cab.

b) The devices referred to in point (7).

c) Protruding cooling units and other auxiliaries situated forward of the loading area.

3.02.010 power-driven vehicle

(1) The length, except for cars M2 and M3, shall not exceed 12.00 m.

If the front of the cab of a truck N2/N3, including all external projections such as chassis, bumper, wheel guards and wheels, fully complies with the requirements of Regulation (EU) 2021/535 and the length of the loading area does not exceed 10.5 m, the length of the vehicle shall exceed 12.00 m. In this case, the manufacturer's cab shall be marked with the following additional text below or next to the prescribed inscription on the manufacturer's statutory plate outside a clearly marked square containing only the statutory information:

“IN ACCORDANCE WITH ARTICLE 9A OF DIRECTIVE 96/53/EC”

The required inscription may be indicated in any of the official languages of the European Union.

3.02.022 M2 passenger car

(1) The length of M2 passenger cars with two axles shall not exceed 13.50 m.

Before 09.03.04: For M2 passenger cars, the length may be up to 13.85 m if some specific requirements on reversing are met. These requirements have been verified during vehicle type-approval.

(2) The length of the M2 passenger car with more than two axles shall not exceed 15.00 m.

(3) The height of the M2 passenger car shall not exceed 4.10 m.

3.02.023 M3 passenger car

(1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

(2) For articulated buses, the length may be up to 18.75 m, without prejudice to paragraph (3).

(3) In the case of articulated buses with three or more rigid sections, the length may exceed 18.75 m if the vehicle complies with the technical provisions of paragraphs 6.11.023 (2), 10.03.023 (3) – (4) and UN Regulation 107-06.

3.02.025 truck N2

(1) The height of the N2 lorry shall not exceed 4.10 m.

3.02.026 truck N3

(1) Truck N3 shall comply with the requirements for truck N2.

3.02.040 moped

(1) The width of a two-wheel moped must not exceed 1.00 m.

3.02.099 powered block wagon

(1) The provisions of paragraphs 3.02.001 and 3.02.010 shall not apply to powered articulated vehicles.

3.02.110 trailer for car

(1) In the case of a semi-trailer:

- a) the coupling length does not exceed 13.38 m, excluding the parts mentioned in point; 3.02.001 (7), and
- b) the horizontal distance (radius) between the axis of the king pin and any point on the front of the semi-trailer does not exceed 2.04 m, no part being disregarded.

In the case of a semi-trailer with two king pins, the provisions for the forward king pin shall apply.

Before 15.09.97: When measuring semi-trailers, tarpaulins and similar laces to be attached thereto shall be disregarded.

Before 28.11.89: A semi-trailer with lengths greater than those specified may continue to be used, provided that the total length of the semi-trailer does not exceed 13.60 m.

(2) The length of the trailer shall not exceed 12.00 m.

Before 15.09.97: Not applicable to trailers O3 and O4.

(3) In the case of a semi-trailer, the distance from the king pin to the theoretical rotary axle of the bogie shall not exceed 8.15 m.

In the case of a semi-trailer with one or more axles, the distance from the king pin to the fixed axle or the centre between the fixed axles shall be taken into account.

In the case of a semi-trailer where one or more axles are retractable, the provision shall also be fulfilled with the lifted axle (s).

In the case of a semi-trailer, the condition shall be fulfilled in the pushed condition.

Before 01.04.00: Only applicable to a semi-trailer for non-visual coupling.

Before 15.09.97: Not applicable.

(4) The height of the hinge/semi-trailer O3 and O4 for the vehicle shall not exceed 4.10 m.

3.02.150 motorcycle trailer

(1) The length shall not exceed 2.50 m.

(2) The width shall not exceed 1.30 m.

3.02.160 trailer for large moped

(1) The length shall not exceed 2.50 m.

(2) The width shall not exceed 1.00 m.

3.02.199 block wagon

(1) The provisions of paragraph 3.02.001 shall not apply to a block wagon.

3.02.200 vehicle combinations

(1) The total length shall not exceed the following:

- a) 17.88 m for vehicle combinations and semi-trailers.
- b) 18.75 m for other vehicle combinations.

(2) In the case of combinations of vehicles equipped with a loading lane of a capacity exceeding 8 tm, consisting of a lorry and coupled to a semi-trailer, the permissible length shall be increased by up to 0.62 m by the length required for mounting the loading frame, provided that the total length does not exceed 18.50 m.

(3) In the case of combinations of vehicles equipped with a loading lane with a capacity exceeding 8 tm, consisting of a lorry and coupled to a trailer, the permissible length shall be increased by up to 2.00 m by the length required for mounting the loading frame, provided that the total length does not exceed

20.75 m.

- (4) For vehicle combinations consisting of a lorry with semi-trailer where the truck is a zero-emission vehicle or uses alternative fuels (as referred to in Article 2 of Directive 96/53/EC as amended by Regulation (EU) 2019/1242), the length allowed by the zero-emission technology or equipment required for the use of alternative fuels shall be increased by up to 0.62 m.
- (5) In the case of combinations of vehicles comprising a tractor and one or two trailers, or a tractor and a trailer and a trailer the width of which does not exceed 3.00 m, the length shall not exceed 22.00 m.
- (6) In the case of vehicle combinations consisting of tractor or motor gear equipped with a trailer, the length shall not exceed 22.00 m.
- (7) Combinations of vehicles consisting of joint sleepers or skimmers and trailers, loaded with a cutting table, may not exceed 25.00 m in length if the trailer is:
 - a) a minimum of two axles; and
 - b) force-control on all axles.
- (8) For truck and trailer combinations:
 - a) The maximum distance measured parallel to the longitudinal axis of the vehicle combination from the front point of the load platform behind the cab to the rearmost point of the trailer shall not exceed 16.40 m. For vehicle combinations equipped with a loading lane with a capacity of more than 8 tm, this distance may be increased by the distance required for mounting the loading frame. However, the increased length shall not exceed 2.00 m.
Before 15.09.97: Shall not apply to vehicle combinations where at least one of the vehicles was first registered before 15 September 1997.
 - b) The maximum distance measured parallel to the longitudinal axis of the vehicle combination from the foremost point of the load platform behind the cab to the rearmost point of the trailer, less the distance between the rearmost point on the loading platform of the vehicle and the front of the trailer, shall not exceed 15.65 m. This does not apply to vehicle combinations specially designed for the carriage of vehicles.
Before 15.09.97: Shall not apply to combinations of vehicles where at least one of the vehicles was first registered before 15 September 1997, provided that the sum of the external loading length of the truck and trailer (behind the cab) does not exceed 15.65 m.
- (9) The distance between the rear edge of a towing vehicle and the front edge of the platform or structure of a trailer or trailer subject to registration shall not exceed 2.00 m. For non-compulsory trailers, the distance shall not exceed 4.00 m.
- (10) The width of the trailer required to be registered shall not exceed the width of the towing vehicle by more than 0.35 m on either side.
- (11) In semi-trailers with five or more axles, the distance between the rear axle of the vehicle and the front axle of the semi-trailer shall be at least:
 - a) 2.50 m, except that
 - b) 3.00 m if the semi-trailer has three axles with a distance of less than 1.10 m apart; and
 - c) 3.00 m for semi-trailers with a maximum permissible mass exceeding 44.000 kg, and
 - d) 3.50 m for semi-trailers with five axles and with a maximum permissible mass exceeding 46.000 kg, and
 - e) 3.50 m for semi-trailers with six axles and with a maximum permissible mass exceeding 50.000 kg.
- (12) In truck combinations with trailer, the distance between the rear axle of the vehicle and the front axle of the trailer shall be at least:
 - a) 3.00 m, except that
 - b) 3.50 m for combinations of vehicles with five axles and with a maximum authorised mass exceeding 46.000 kg, and
 - c) 3.50 m for combinations of vehicles with six axles and with a maximum authorised mass exceeding 50.000 kg.
- (13) In vehicle combinations consisting of lorries with rigid drawbar trailers or lorries and semi-trailers with a maximum permissible mass exceeding 54.000 kg, the distance between the rear axle of the vehicle and the front axle of the vehicle shall not be less than 4.00 m.
- (14) If the front of the cab of a truck N2/N3, including all external projections such as chassis, bumper,

wheel guards and wheels, fully complies with the requirements of Regulation (EU) 2021/535, Annex;

XIII, and the length of the truck loading area does not exceed 10.5 m, the length of the vehicle combination may exceed the maximum length allowed under point (1). In this case, the cab shall be marked by the manufacturer with the following additional wording below or next to the prescribed inscription on the manufacturer's statutory plate outside a clearly marked square containing only the statutory information:

“IN ACCORDANCE WITH ARTICLE 9A OF DIRECTIVE 96/53/EC”

The required inscription may be indicated in any of the official languages of the European Union.

(15) Lockway trains shall comply with the provision of point (9).

3.02.310 non-visual coupling vehicle

(1) In the case of semi-trailers used in accordance with the non-visual coupling rules, they shall apply in point 3.02.200.

(11) and (13) provisions listed with the use of actual gross vehicle weight.

3.02.320 school vehicle

(1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

3.02.363 vehicle specially designed for work on the road

(1) In the case of a vehicle which is part of the snow clearance response, the length measurement shall disregard the snow clearance unit and its fittings.

(2) A snow-pair may have a width of up to 3.50 m.

(3) Vehicles fitted with snowploughs where the width of the snow law exceeds the width of the vehicle by more than 0.30 m shall be marked to the rear in accordance with paragraph 6.10.002.

4. Steering

4.1 Steering

4.1.01 General provisions

(1) The steering equipment shall be so arranged that:

- a) that the vehicle can be easily, safely and quickly controlled;
- b) it can withstand the stresses arising under normal operating conditions;
- c) when driving, it is either self-righting or indifferent for all steering shapes; and
- d) that the vehicle can be controlled even in the event of failure of any auxiliary control.

Driving as referred to in point (c) means driving with a speed of at least 10 km/h and steering shaft of less than 50 % of the maximum steering stroke.

Self-adjustment as referred to in point (c) means that when the vehicle is travelling on a level road, the vehicle itself moves back to straight line.

Indifferent to all steering shapes as referred to in point (c) means that a change in the position of the steered wheels when travelling on a flat road is produced only by the action of the hands on the steering wheel.

(2) The control shall be easy to operate and its direction of movement shall correspond to the intended direction change of the vehicle.

(3) The wheelhouse shall be firmly attached to the supporting elements and all assemblies of the steering equipment shall be securely secured.

(4) Parts forming part of the transmission between the control device and the steered wheels and not protected by fixed parts of the vehicle shall be at least 0.15 m above the ground.

(5) No significant veil shall be present in the steering equipment as a whole or in its individual parts because of wear or similar wear.

4.1.02 Electronic Stability System (ESC)

- (1) Electronic Stability System (ESC) is a system capable of discouraging overturning and slipping by braking one or more wheels and complying with UN Regulations 13 or 140.

4.1.03 Lane departure arm (LDWS)

- (1) Lane departure arm (LDWS) means a system in which an unintentional lane departure causes a warning to the driver with a light, sound or vibration signal and which meets the technical requirements of Regulation (EU) 2021/646 or UN Regulation 130.

Before 01.07.25: LDWS may comply with Regulation 351/2012/EU, Regulation 661/2009/EU or Directive 2007/46/EC.

4.1.04 Lane keeping assistant (ELKS)

- (1) Lane Assistant (ELKS) means a system that helps the driver to keep the vehicle in a safe position relative to the lane or road boundary and that meets the technical requirements of Regulation (EU) 2021/646 or UN Regulation 157.

4.01.010 power-driven vehicle

- (1) A power-driven vehicle shall be fitted with steering equipment having a mechanical connection between the steering control and the steered wheels.
- (2) The steering equipment shall not act on the rear wheels alone.
- (3) A power-driven vehicle with five or more axles shall be equipped with steering equipment acting on at least two front axles.

4.1.020 Car

- (1) There shall be no mechanical connection to wheels with auxiliary steering if the vehicle complies with the supplementary steering provisions of UN Regulation 79-04.
Before 01.01.26: There shall be no mechanical connection to wheels with auxiliary steering if the vehicle complies with the supplementary steering provisions of UN Regulation 79-03.
Before 01.07.25: Such a car shall comply with UN Regulation 79-01.
- (2) The vehicle shall be capable of turning within a turning circle with an outer radius of 12.50 m and an inner radius of 5.30 m. When measuring the turning radii, the parts mentioned in paragraph 3.02.001 (2) shall be disregarded.
In the case of a vehicle with a retractable bogie axle, the axle shall be measured together with the axle raised.
Before 15.09.97: Applicable only to passenger car M2/M3 with a length of more than 12.00 m.
- (3) When a car turns tangential into the circle referred to in point (2), no part shall move outside the tangent by more than 0.60 m.

4.1.021 M1 passenger car

- (1) Passenger cars M1 shall be fitted with crash-proof steering equipment complying with the constructive provisions of one of the following sets of rules:
- a) UN Regulation 12-04.
- b) US standards FMVSS 203 and FMVSS 204.

A car complying with UN Regulation 94-01 shall be deemed to comply with the provision.

A special purpose car within the meaning of Regulation (EU) 2018/858, which is built in several stages and where, upon completion, the vehicle belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.01.17: Alternatively, passenger cars M1 may comply with UN Regulations 12-03, Directive 74/297/EEC as amended by Directive 91/662/EEC or US standards FMVSS 203 and FMVSS 204.

Cars with prior steerings are excluded.

Before 01.04.02: Alternatively, passenger cars M1 may comply with UN Regulation 12, Directive 74/297/EEC or US standards FMVSS 203 and FMVSS 204. Cars with prior steerings are excluded.

Before 01.05.77: Not applicable.

- (2) Passenger cars M1 shall be equipped with an Electronic Stability System (ESC). The requirement does not apply to car M1 manufactured in small series.

Before 01.11.14: Not applicable.

- (3) The M1 passenger car must be equipped with a Lane Lane Assistant (ELKS).

The requirement does not apply to small series passenger car M1.

Before 01.01.26: Not valid for

4.1.022 M2 passenger car

- (1) Passenger cars M2 shall be equipped with an Electronic Stability System (ESC). This provision does not apply to vehicles with more than three axles, articulated buses, urban buses and all-terrain vehicles.

Before 11.07.15: Not applicable.

- (2) The M2 passenger car shall be equipped with a lane departure arm (LDWS). The requirement does not apply to passenger cars

a) with more than three axles;

b) approved with standing spaces (see groups A, I and II of UN Regulation 107 on buses and coaches);

c) which is off-road; or

d) for special use (see Regulation (EU) 2018/858, Part A 2.2).

Before 01.11.15: Not applicable.

4.1.023 M3 passenger car

- (1) Passenger cars M3 shall be equipped with an Electronic Stability System (ESC). This provision does not apply to vehicles with more than three axles, articulated buses, urban buses and all-terrain vehicles.

Before 11.07.15: Not applicable to car M3 equipped with hydraulic brakes.

Before 01.11.14: Not applicable for maximum authorised mass of less than 12.000 kg. Not applicable in case of authorisation with (at least two) standing places for the use “Only authorised for regular services”.

Before 01.04.12: Not applicable for maximum authorised mass of less than 12.000 kg. Not applicable in case of approval with (at least two) standing places.

Before 01.07.05: Not applicable.

- (2) For M3 passenger cars, the provisions on lane departure arm (LDWS) in paragraph 4.01.022

(2) apply. Before 01.11.15: Not applicable.

4.1.024 Van N1

- (1) Goods vehicle N1 with a maximum permissible mass not exceeding 1.500 kg shall comply with the provisions of paragraph 4.01.021 (1) on collision proof steering equipment.

Before 01.04.02: Not applicable.

- (2) Vans N1 shall be equipped with an Electronic Stability System (ESC).

The requirement does not apply to vehicle N1 produced in small series.

Before 01.11.14: Not applicable.

- (3) Van N1 must be equipped with lane keeping assistant (ELKS).

The requirement does not apply to vehicle N1 produced in small series.

Before 01.01.26: Not applicable.

4.1.025 Truck N2

- (1) Truck N2 shall be equipped with an Electronic Stability System (ESC). The provision does not apply to truck

- a) with more than three axles;
- b) which is off-road; or
- c) for special use (see Regulation (EU) 2018/858, Part A 2.2.).

Furthermore, this provision does not apply to heavy goods vehicles N2, approved as tractive power of a semi-trailer and with a maximum permissible mass not exceeding 7.500 kg.

Before 11.07.15: Not applicable to truck with hydraulic brakes.

Before 01.11.14: Not applicable.

(2) Truck N2 shall be equipped with a lane departure arm (LDWS). The provision does not apply to truck

- a) with more than three axles;
- b) which is off-road; or
- c) for special use (see Regulation (EU) 2018/858, Part A 2.2.)

Before 01.11.15: Not applicable.

4.1.026 Truck N3

(1) Truck N3 shall comply with the requirements for truck N2.

4.1.031 Two-wheel motorcycle

(1) The design of the steering equipment shall be such that:

- a) full steering thrust is at least 25° to each side and
before 01.04.84: Not applicable.
- b) there is sufficient space for the driver's hands at every steering impact.
Before 01.04.70: Not applicable.

(2) Handlebars shall be attached directly to the front fork.

4.1.032 Two-wheel motorcycle with side-car

(1) Two-wheel motorcycles with side-car shall comply with the provisions applicable to two-wheel motorcycles.

4.1.033 Motor tricycle

(1) Tricycles with a front wheel shall comply with the provisions applicable to two-wheel motorcycles.

(2) Motorcycles with two front wheels must comply with the vehicle requirements.

4.01.040 moped

(1) mopeds must comply with the requirements for motorcycles.

4.01.050 tractor

(1) The tractor may be fitted with steering equipment which operates

- a) on the front wheels only,
- b) on the rear wheels alone; or
- c) simultaneously on the front and rear wheels.

(2) The tractor may be fitted with hydraulic transmission between the steering control and steered wheels.

(3) The tractor may be equipped with an electric transmission between the steering control and the steering if the system is a two-circuit system.

It must remain possible to control the tractor regardless of the failure of any part of the electrical system.

(4) Tractors fitted with tracks shall be fitted with steering equipment in accordance with Annexes V and XXXIII to Regulation (EU) 2015/208.

Before 01.07.25: Does not apply to a tractor which is not subject to registration.

4.01.060 engine tools

(1) Engine tools shall comply with the provisions of the tractor.

4.01.099 powered block wagon

- (1) Power-driven wheeled vehicles with a maximum design speed not exceeding 30 km/h shall comply with the requirements of the tractor.
- (2) Other power-driven articulated vehicles shall comply with the provisions applicable to the vehicle. However, power-driven articulated vehicles shall not comply with paragraph 4.01.020 (2) on turning circle.

4.01.100 trailer

- (1) A trailer equipped with a self-tracking axle shall comply with the provisions on rear swings set out in UN Regulation 79-04.

Before 01.07.26: A trailer equipped with a self-tracking axle shall comply with the provisions on rear swings set out in UN Regulation 79-03.

Before 01.07.25: A trailer equipped with a self-tracking axle shall comply with the provisions on rear swings set out in UN Regulation 79-01.

Before 01.01.17: Alternatively, a trailer may comply with the provisions of Directive 70/311/EEC as amended by Directive 1999/7/EC.

- (2) The trailer and trailer shall be fitted with steering equipment if the distance between the front and the rear axle exceeds 2.80 m. Such steering equipment shall act on the front axle.

Before 01.05.77: Not applicable.

- (3) A semi-trailer may be fitted with mechanically activated steering on the axle (s).

a) A semi-trailer may be equipped with hydraulically activated, automatically operated steering equipment on the axle (s). The following requirements shall be met: The steering equipment shall comply with the design provisions of UN Regulation 79-04.

Before 01.01.26: The steering equipment shall comply with the design provisions of UN Regulation 79-03.

Before 01.07.25: The steering equipment shall comply with the design provisions of UN Regulation 79-01.

Before 01.01.17: Alternatively, the steering equipment may comply with the provisions of Directive 70/311/EEC as amended by Directive 1999/7/EC.

b) A red drop warning signal for the hydraulic system shall be provided at the driving position of the towing lorry or at the front left corner of the semi-trailer, located at such a height and with such a brightness that it is clearly visible in the left side mirror of the truck. The tell-tale or equivalent tell-tale shall also illuminate if not all valves are properly locked or controlled.

c) There shall be a system (with tell-tales or similar) to allow accurate manual adjustment of the axles for straight ahead.

d) Supplementary manual control from the outside or from the driver's compartment is permitted if the sewing bar of the semi-trailer is such that it automatically prevents the use of the manual control at speeds greater than 20 km/h.

The system shall also prevent the use of manual control in the event of a failure in the system, including if the speed signal is not received in the control unit.

e) instructions in Danish concerning all conditions relating to the operation and maintenance of the steering system shall be provided on the semi-trailer.

f) L the vicinity of the semi-trailer's markings in the case of weights shall be marked with the following text: 'Hydraulically controlled semi-trailer. See instructions for instructions.';

4.1.113 Hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3 with air suspension shall be equipped with an electronic stability system (ESC). This provision does not apply to trailers with more than three axles.

Before 01.11.14: Not applicable.

4.1.114 Hinge/semi-trailer O4

(1) The hinge/semi-trailer O4 shall comply with the provisions applicable to the O3 trailer.

4.1.199 Block wagon

- (1) A block wagon may be fitted with steering equipment on one or more axles in accordance with the rules of the vehicle.

Before 01.04.00: A block wagon may be fitted with steering equipment on one or more axles (no specified requirements).

4.1.200 Vehicle combinations

- (1) The combination of vehicles in which the towing vehicle is a vehicle must be capable of turning within a turning circle with an outer radius of 12.50 m and an inner radius of 5.30 m, the provisions of paragraph 4.01.020 (2) applying mutatis mutandis.

However, this provision does not apply to vehicle combinations with a block wagon.

Before 15.09.97: Does not apply to vehicle combinations where at least one of the vehicles was first registered before it

15 September 1997.

- (2) Semi-trailer combinations where the semi-trailer meets the requirement of paragraph 3.02.110 (3) for distance from the king pin to the theoretical rotary axle shall be deemed to comply with point (1).
- (3) When a combination of vehicles in which the towing vehicle is a car turns tangential into the circle referred to in point (1), no part may move outside the tangent by more than 0.60 m.
- However, this provision does not apply to vehicle combinations with a block wagon.

4.01.310 non-visual coupling vehicle

- (1) A semi-trailer with mechanically or hydraulically activated steering on the rear axle (s) shall be fitted with coupling device (2 "king pin and steering wedge) in accordance with UN Regulation 79-04.

Before 01.01.26: A semi-trailer with mechanically or hydraulically activated steering on the rear axle (s) shall be fitted with coupling device (2 "king pin and steering wedge) in accordance with UN Regulation 79-03.

Before 01.07.25: A semi-trailer with mechanically or hydraulically activated steering on the rear axle (s) shall be fitted with coupling device (2 "king pin and steering wedge) in accordance with UN Regulation 79-01.

Before 01.01.17: Alternatively, the coupling device of the semi-trailer may comply with Directive 70/311/EEC as amended by Directive 92/62/EEC.

- (2) A semi-trailer with hydraulically activated steering on the rear axle (s) shall carry at the front left corner of the semi-trailer a red pressure drop warning signal of the hydraulic system, located at such a height and with a luminous intensity clearly visible in the left side mirror of the truck.

4.01.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

4.01.330 hired vehicle

- (1) A car for hire may not be driven on the right side.

5. Brakes

5.1 Braking systems

5.1.01 General provisions

- (1) The design of the braking system shall be such that the mode of operation remains satisfactory from the point of view of safety during normal use, vibrations, etc.,

- (2) Wear on the brakes shall be easily compensated by a manual or automatic adjusting device.
- (3) The braking system shall provide a reserve of travel such that the required performance can be achieved without immediate adjustment when the brakes become hot and when the surfaces have reached a certain degree of wear.
- (4) Braking surfaces of mandatory brakes shall be permanently mechanically connected to the wheels by means of sufficiently broken parts.

5.1.02 Service brake

- (1) The service brake shall be capable of braking and stopping the vehicle in a safe, rapid and effective manner at any speed and under all load conditions.
- (2) The performance of the service braking system shall:
 - a) be stepless variable; and
 - b) be distributed symmetrically in relation to the longitudinal axis of the vehicle.
- (3) The performance required by the service braking system shall be achieved by first actuation of the control.
- (4) In the case of a service braking system where the muscular energy of the driver alone is not sufficient to produce the prescribed secondary braking performance:
 - a) The system must be equipped with sufficient energy reserves, even in the event of failure of the energy source, to stop the vehicle with the required performance of the secondary braking system.
 - b) The vehicle shall be fitted with an optical or audible warning device providing a signal when the energy supply falls below 65 % of the lower limit value for the normal operating range.
Before 01.05.68: Not applicable.
 - c) The energy supplied to the auxiliary equipment of the vehicle shall not be capable of being taken from the energy reserve of the braking system when this is less than 65 % of the lower limit value for the normal operating range.

5.1.03 Emergency brake,

- (1) An emergency brake shall be capable of braking and stopping the vehicle in a safe and effective manner in the event of a failure in the transmission of the service brake.
- (2) The emergency brake may be:
 - a) a separate braking system,
 - b) combined with the service braking system, or
 - c) combined with the parking brake.
- (3) The performance required by the secondary braking system shall be achieved by first actuation of the control.
- (4) The performance of the secondary braking system shall be variable over time. Before 01.04.80: Not applicable.

5.1.04 Parking brake

- (1) The parking brake shall be capable of holding the vehicle stationary on inclined ground, the active braking components being held in a purely mechanical position.
The parking brake designed as a spring brake may be fitted on the tank vehicle with additional exterior controls so that the parking brake cannot be released as long as the door to the manoeuvring device is open.
A trailer where the parking brake is a spring brake shall be fitted with a manually operated device by which the spring brake cylinders can be vented in such a way that the spring immediately brakes the vehicle.

Before 01.09.75: A trailer shall not be fitted with the above-mentioned manually operated device. However, it shall be possible for the parking braking system to remain in a position in which the trailer is uncoupled, even when the trailer is uncoupled.

5.1.05 Anti-lock brakes (ABS)

(1) Anti-lock braking systems (ABS) shall comply with the design provisions of UN Regulation 13-11 or UN Regulation 13-H.

However, in the case of motorcycles, the design provisions of UN Regulation 78-03 shall apply.

However, a car with hydraulic brakes may meet US standard FMVSS 105 or 135.

Before 01.01.17: ABS may comply with the design provisions of UN Regulation 13-09 or Directive 71/320/EEC as amended by Directive 98/12/EC, except for motorcycles, UN Regulation 78-02.

Before 01.04.02: ABS may comply with the design provisions of UN Regulation 13-06 or Directive 71/320/EEC as amended by Directive 88/194/EEC, except for motorcycles, UN Regulation 78-01.

Before 01.04.92: ABS may comply with the design provisions of UN Regulation 13-03 or Directive 71/320/EEC as amended by Directive 85/647/EEC.

(2) Anti-lock brakes (ABS) of a car shall be divided in accordance with UN Regulation 13-11 into the following categories:

- a) Category 1 meeting all the requirements of this Regulation.
- b) Category 2 not required to meet specific performance requirements on the road with different friction on the right and left side.
- c) Category 3, which is not required to meet specific stability and performance requirements on the road with different frictions on the right and left sides.

(3) Anti-lock brakes (ABS) on trailers shall be divided according to UN Regulation 13-11 into the following categories:

- a) Category A meeting all the requirements of this Regulation.
- b) Category B not required to meet specific performance requirements on the road with different friction on the right and left side.

5.1.06 Brake brake

(1) Brake brake is a system which automatically brakes the vehicle by means of the service or parking braking system when:

- a) the vehicle is in reverse gear; and
- b) touch a tactile list at the rear of the vehicle.

(2) The arrangement of the brake brake shall be such that, in the event of a failure in the electrical part of the system, the brake is not inadvertently activated in forward motion.

5.1.07 Brake assistant

(1) 'Brake assistant' means a function of the service braking system where the need for severe braking is recorded on the basis of application of the driver's braking, and where:

- a) the function assists the driver in achieving maximum deceleration; or
- b) the function ensures full application of the anti-lock braking system (ABS).

5.1.08 Advanced Emergency Braking System (AEBS)

(1) Advanced Emergency Braking System (AEBS) means a function which meets the technical requirements of UN Regulation 131 or UN Regulation 152 and where an obstacle in front of the vehicle at risk of collision causes:

- a) warning to the driver with light, sound or vibration signal (collision warning phase); and
- b) application of the service braking system (emergency braking phase).

Before 01.07.25: AEBS may comply with Regulation 347/2012/EU, Regulation (EU) 2015/562 or Directive 2007/46/EC.

5.1.09 Combined braking system

- (1) Combined braking system means a service braking system in which at least two brakes on different wheels are actuated by the operation of a control device (a grip or pedal).

5.1.010 Power-driven vehicle

- (1) It shall be possible to activate from the driver's seat;
- a) the service braking system without moving the hands from the steering control,
 - b) the secondary brake with at least one hand on the steering control, and
 - c) parking brake.

5.1.020 Car

- (1) The vehicle shall be equipped with a service, secondary and parking brake.
Before 01.05.77: The vehicle shall be provided with a service brake and an independent parking brake capable of stopping the vehicle safely and effectively.
- (2) The service braking system shall act on all the wheels of the vehicle.
Before 01.05.77: Does not apply to a non-type-approved passenger car M1.
Before 01.07.68: Not applicable.
- (3) The control of the parking braking system shall be independent of the control of the service braking system.
- (4) It shall also be possible to use the parking brake when the vehicle is in motion.
- (5) In the case of a vehicle authorised to tow a trailer the service brake of which is connected to the service brake of the vehicle, the service brake of the vehicle shall be capable of braking the vehicle with the performance required for the secondary braking system in the event of a failure in the transmission of the brake between the vehicle and the trailer or in the service braking system of the trailer.
- (6) In the case of a vehicle authorised to tow a trailer O3 or O4, both the service brake of the vehicle and its secondary braking system shall be capable of actuating the service braking system of the trailer.
- (7) The vehicle shall be equipped with a two-circuit service braking system. Before 01.04.80:
Applies only to:
- Lorry N3 with two axles first registered on or after 1 May 1977.
 - Lorry N3 with more than two axles first registered on or after 1 July 1968.
 - Motor vehicles with a type-approved gross vehicle weight exceeding 8.000 kg registered for emergency services on or after 1 November 1964.
 - Passenger car M3 with a maximum authorised mass exceeding 8.000 kg registered for the commercial carriage of passengers.
- (8) A vehicle authorised to tow a trailer O3 or O4 with an anti-lock braking system (ABS) shall be fitted with a warning signal and connector for the trailer ABS in accordance with standard ISO 7638-1: 2018 or ISO 7638-2: 2018.
Before 01.04.93: Only applicable to car approved in new wagon train combination on or after 1 April 1993.
- (9) The service braking system shall be self-adjusting. Before 01.04.95: Not applicable.
- (10) Wear of the service brake lining shall be easy to control from the outside or underside of the vehicle using only tools or equipment normally supplied with the vehicle. Checks may be carried out by appropriate inspection openings or by other means. Alternatively, there may be an acoustic or optical tell-tale located at the driving position and warning when necessary;

to replace the coating. Checks, which are conditional on the dismantling of wheels, are only allowed on passenger cars M1 and vans N1.

Before 01.04.95: Not applicable.

5.1.021 M1 passenger car

- (1) Passenger cars M1 shall be fitted with category 1 anti-lock brakes (ABS).

Before 01.07.25: Not applicable.

- (2) Rear wheel brakes of passenger M1 shall not be self-adjusting.

- (3) A passenger car M1 shall be fitted with a brake assistant complying with UN Regulations 13-H or UN Regulation 139.

The requirement does not apply to small series passenger cars M1.

Before 01.04.12: Not applicable.

- (4) Passenger cars M1 shall be fitted with an Advanced Emergency Braking System (AEBS) complying with UN Regulation 152.

The requirement does not apply to small series passenger cars M1.

Before 01.01.26: Not applicable.

5.1.022 M2 passenger car

- (1) Passenger cars M2 shall be fitted with category 1 anti-lock brakes (ABS).

Before 01.04.01: Not applicable.

- (2) Passenger cars M2 may be fitted with a reverse brake.

- (3) Passenger cars M2 shall be fitted with an Advanced Emergency Braking System (AEBS) complying with UN Regulation 131-01. The requirement does not apply to passenger car M2

a) with more than three axles;

b) approved with standing spaces (according to Classes A, I and II of UN Regulation 107 on buses and coaches);

c) which is off-road; or

d) for special use (see point 5 of Part A of Annex I to Regulation (EU) 2018/858).

Before 01.07.25: The car may comply with approval level 2 of Annex II to Regulation (EU) 2015/562.

Before 01.11.19: The vehicle shall only meet approval level 1 and a vehicle that does not have both compressed air brakes and air-suspended rear axle suspension shall not have AEBS.

Before 01.11.15: Not applicable.

5.1.023 M3 passenger car

- (1) Passenger cars M3 shall be fitted with category 1 anti-lock brakes (ABS).

Before 01.04.01: Applicable only to M3 passenger cars with a maximum authorised mass exceeding 12.000 kg, which have no standing space beyond the aisle, have no double doors and have proper luggage compartments.

Before 01.04.93: Only applicable to M3 passenger cars with a maximum authorised mass exceeding 12.000 kg and not fitted with special standing space beyond the aisle.

Before 01.04.92: Not applicable.

- (2) Passenger cars M3 may be fitted with a reverse brake.

- (3) Passenger cars M3 shall comply with the provisions of point 5.01.022 (3) on AEBS. Before 01.11.15: Not applicable.

5.1.024 Van N1

- (1) Vans N1 shall be fitted with anti-lock brakes (ABS) of category 1. Before 01.07.25: Not applicable.

- (2) Rear wheel brakes of van N1 shall not be self-adjusting.

- (3) Van N1 shall be fitted with a brake assistant complying with UN Regulations 13-H or UN Regulation

139.

The requirement does not apply to goods vehicle N1 manufactured in small series.

Before 01.07.25: Vans derived from passenger cars M1 and with a maximum authorised mass not exceeding 2.500 kg shall be fitted with a brake assistant.

Before 01.04.12: Not applicable.

- (4) Van N1 shall be fitted with an Advanced Emergency Braking System (AEBS) complying with UN Regulation 152. The requirement does not apply to goods vehicle N1 manufactured in small series.

Before 01.01.26: Not applicable.

5.1.025 Truck N2

- (1) Truck N2 shall be equipped with anti-lock brakes (ABS) of category 1.

Before 01.04.01: In the case of a vehicle authorised to tow a trailer O3 or O4, the rear axle (s) shall be fitted with ALB if the ratio between the authorised axle load and the axle load in running order is greater than 4: 3. On a retractable axle in a bogie, ALB may be omitted. ALB may also be omitted on a car with ABS.

Before 01.10.72: The provisions on the ALB apply only to vehicles for non-visual interconnection and to vehicles approved after that date in new combinations of vehicles.

- (2) Heavy goods vehicles N2 authorised to tow trailers or trailers O3 and O4 with compressed-air brakes shall be fitted with a two-conductor brake connection. The maximum pressure in the supply line shall be not less than 7.0 bar and not more than 8.5 bar and the maximum pressure in the control line shall be not less than 6.5 bar and not more than 8.5 bar. The truck shall be fitted with a tell-tale and connector for the trailer ABS in accordance with standard ISO 7638-1: 2018 or ISO 7638-2: 2018.

Before 01.04.01: The maximum pressure in the supply line may be at least 6.5 bar.

Before 01.04.93: Only applicable to non-visually connecting lorries. The maximum pressure in the control line may be at least 6.0 bar. In addition, a manual brake force governor may be installed in the control line to control the maximum braking force of a foreign semi-trailer, if this semi-trailer is not equipped with ALB or ABS to obtain its power supply via the stop-lamp circuit of the electrical connector.

- (3) Heavy goods vehicles N2 shall not be fitted with a device capable of braking the trailer alone (sling brake).

Before 01.04.95: Only applicable to truck N2 approved for non-visual coupling.

Before 01.04.89: In the case of a vehicle approved before that date for non-visual coupling, any sling brake fitted shall be removed (at least the control shall be removed).

- (4) Off-road truck N2 shall not have self-adjusting brakes.

- (5) Truck N2 may be fitted with a reversing brake.

- (6) Heavy goods vehicles N2 shall be equipped with an Advanced Emergency Braking System (AEBS) complying with UN Regulation 131-01.

The requirement does not apply to truck N2

a) with more than three axles;

b) designed for tractive power of a semi-trailer and having a maximum authorised weight not exceeding 8.000 kg,

c) which is off-road; or

d) for special use (see point 5 of Part A of Annex I to Regulation (EU) 2018/858).

During the period from 15 September to 15 May, heavy goods vehicles equipped with AEBS may be fitted with snowploughs, regardless of whether their design or location prevents the operation of the AEBS. When fitted, the AEBS system may be switched off according to the manufacturer's instructions or deactivated by a switch located at the driving position.

Before 01.07.25: The car may comply with approval level 2 of Annex II to Regulation (EU) 2015/562.

Before 01.11.19: The vehicle shall only meet approval level 1 and a vehicle that does not have both compressed air brakes and air-suspended rear axle suspension shall not have AEBS. In addition,

lorries with a maximum authorised mass not exceeding 8.000 kg shall not have AEBS.
Before 01.11.15: Not applicable.

5.1.026 Truck N3

(1) Truck N3 shall meet the system requirements for truck N2.

Before 01.04.01: A lorry N3 with a maximum authorised mass exceeding 16.000 kg authorised to tow a trailer O4 shall be fitted with category 1 ABS. If a lorry is authorised to tow a maximum of 10.000 kg, it shall be deemed not to have been authorised to tow a trailer O4.

Before 01.04.92: Truck N3 is not required to have ABS.

5.1.031 Two-wheel motorcycle

(1) Two-wheel motorcycles shall be fitted with a service brake divided into two independent braking systems which operate at least on each wheel.

Before 01.05.77: The two braking systems do not need to operate on a separate wheel.

(2) The control devices of the braking systems are as follows:

- a) The front wheel brake shall be hand-operated with the bar positioned on the right side of the control or may be combined with the rear wheel brake as referred to in point (c).
- b) On a motorcycle equipped with an automatic coupling, the rear-wheel brake may be manually operated with the grip positioned on the left side of the steering wheel.
- c) The rear wheel brake may be combined with the front wheel brake. Before 01.04.81: Not applicable.

(3) Two-wheel motorcycles shall be fitted with ABS.

However, this provision shall not apply to the following motorcycles:

- a) Low performance motorcycle (cylinder capacity $\leq 125 \text{ cm}^3$, engine power $\leq 11 \text{ kW}$ and power to weight ratio $\leq 0.1 \text{ kW/kg}$) if the motorcycle is fitted with a combined braking system.
- b) Enduro motorcycle that understands motorcycle with a seat height $\geq 900 \text{ mm}$, ground clearance $\geq 310 \text{ mm}$ and total gear ratio in highest gear $\geq 6,0$, mass in running order -140 kg and without passenger seating position.
- c) Tri-motorcycle, which means motorcycles with a seat height $\leq 700 \text{ mm}$, ground clearance $\geq 280 \text{ mm}$, fuel tank capacity -4 litres, total gear ratio in highest gear $\geq 7,5$, mass in running order -100 kg and without seating position for passengers.

Before 01.01.17: Not applicable.

5.1.032 Two-wheel motorcycle with side-car

(1) Two-wheel motorcycles with side-car shall be fitted with a service brake divided into two independent braking systems which operate at least on each wheel of the motorcycle.

Before 01.05.77: The two braking systems do not need to operate on a separate wheel.

(2) The performance of the service braking system shall not be distributed symmetrically in relation to the longitudinal axis of the vehicle.

(3) A two-wheel motorcycle with a side-car which is also approved with a trailer shall also be fitted with a brake on the side-car wheels.

5.1.033 Motor tricycle

(1) The three-wheel motorcycle shall meet the system requirements for the vehicle.

5.01.040 moped

(1) mopeds must meet the system requirements for motorcycles. However, mopeds shall not have anti-lock brakes (ABS) or combined braking systems.

If the rear-wheel brake is applied by reversing the propulsion pedals of the moped, full braking performance

shall be achieved by detracting the pedal from the horizontal position.

5.01.050 tractor

- (1) The tractor shall be fitted with a service, secondary and parking brake.

Before 01.10.96: The emergency brake requirement does not apply.

Before 01.05.77: The tractor shall be fitted with at least one braking device (service brake) which must always be capable of being operated with a sufficient level of effectiveness, safety and rapid braking under all loading conditions.

- (2) The service braking system shall act on the wheels of at least one axle.
- (3) The parking brake may be a locking device which locks the transmission system of the tractor (transmission lock).
- (4) A tractor authorised to tow a towed vehicle with a service brake actuated by the service brake of the tractor shall be fitted with a two-conductor brake connection in accordance with Regulation (EU) 2015/68.
- Before 01.01.25: Not applicable.

5.01.060 engine tools

- (1) Engine tools shall comply with the system requirements of the tractor.

Before 01.05.77: The equipment of the engine shall be such that it can be brought to a halt with sufficient speed and can be stopped on inclined grounds, even if left by the driver. The requirements shall be met regardless of whether the traction engine of the vehicle is running or stopped.

- (2) The engine equipment intended to be driven by a walking shall be such that, if the driver escapes the handle, it is automatically brought to a halt.

5.01.099 powered block wagon

- (1) Power-driven wheeled vehicles with a maximum authorised speed not exceeding 30 km/h shall comply with the system requirements for the tractor.

Before 01.05.77: Power-driven vehicle shall meet the system requirements for the vehicle.

Before 01.01.71: Power-driven articulated vehicles shall meet the system requirements for engine tools.

- (2) Power-driven vehicle with a maximum permissible speed of 45 km/h shall meet the system requirements for the vehicle, except for the anti-lock brake (ABS) requirement.
- (3) Power-driven vehicle with a maximum permissible speed of 60 km/h shall meet the system requirements for the vehicle and shall be fitted with category 1 anti-lock brakes (ABS).

5.1.110 Trailer for car

- (1) The suspension/semi-trailer for the vehicle shall be fitted with a service and parking brake.

- (2) The service braking system shall act on all the wheels on the vehicle.

Before 01.05.77: Not applicable. For trailer/semi-trailer not fitted with brakes on all wheels:

The braking wheels shall rest at least 50 % of the maximum authorised mass of the vehicle.

- (3) The service braking system shall be such that the vehicle is automatically braked in the event of breakage of the coupling device between the vehicle and the trailer/semi-trailer.
- (4) The service braking system of the semi-trailer shall be connected to the service brake of the towing vehicle.
- (5) Wear of the service brake lining shall be easy to control from the outside or underside of the vehicle using only tools or equipment normally supplied with the vehicle. Checks may be carried out by appropriate inspection openings or by other means.
- Before 01.04.95: Not applicable.

5.1.111 Hinge/semi-trailer O1

- (1) The hinge/semi-trailer O1 shall not be fitted with brakes.

- (2) If a trailer/semi-trailer O1 is fitted with brakes, the brakes shall comply with the provisions of point

5.1.112 in the case of a trailer O2.

5.1.112 Hinge/semi-trailer O2

(1) The service brake of the trailer O2 shall be:

- a) be connected to the service brake of the towing car; or
- b) be an inertia brake.

However, a trailer fitted with an advance shall not be fitted with inertia brakes.

If the brakes of the trailer/semi-trailer are connected to the service brake of the towing car, these shall comply with the requirements of UN Regulation No 13 for electric or compressed-air brakes.

(2) The provision of paragraph 5.01.110 (3) shall not be fulfilled for a trailer O2, with one axle or two axles spaced less than 1.00 m apart if:

- a) the maximum authorised weight does not exceed 1.500 kg; and
- b) in addition to the coupling device between the vehicle and the trailer, there is also an additional mechanical connection, which may take the form of a chain or wire which, if the coupling is separated, prevents the trailer's drawbar from touching the ground and can maintain a certain steering of the trailer.

5.1.113 Hinge/semi-trailer O3

(1) The service braking system shall be connected to the service brake of the towing car.

(2) The hinge/semi-trailer O3 shall be fitted with compressed-air brakes with two conductor brakes.

Before 01.07.25: The requirement for brakes to be compressed air brakes applies only to trailer/semi-trailer for non-visual coupling.

Before 01.04.93: The requirement to have a two-conductor brake connection applies only to trailer/semi-trailer for visual coupling.

(3) The hinge/semi-trailer O3 shall be fitted with category A anti-lock (ABS) brakes and ABS connectors in accordance with standard ISO 7638-1: 2018 or ISO 7638-2: 2018.

Before 01.10.14: ABS need not be category A.

Before 01.04.01: Not applicable. Instead, the following rules applied:

Axles in which the ratio between the permissible axle load and the axle load in running order is greater than 4: 3 shall be fitted with the ALB.

However, the hinge/semi-trailer O3 fitted with ABS shall not be fitted with ALB if:

- the power supply to ABS shall also be provided via the stop information connection in the general connector without exceeding the limit of the stop lamp circuit; or
- the trailer/semi-trailer is authorised only in combination with a vehicle fitted with a tell-tale and connector for the trailer ABS in accordance with international standards ISO 7638-1: 2018 or ISO 7638-2: 2018.

The provision ensures that a trailer with ABS can also be used after a vehicle which does not have the special ISO connector for ABS.

The hinge/semi-trailer O3, where the power supply to ABS can be provided through the stop information connection, shall be fitted with a green tell-tale located within the field of vision of the rear-view mirror, which is also visible in daylight, and which shall warn the driver of a failure in the power supply or connection of sensors to the ABS.

Before 01.10.72: The hinge/semi-trailer for non-visual coupling shall be fitted with ALB. The second trailer may be equipped with a manual brake force control (MB) with at least two control steps in addition to any lifting position.

Before 01.05.68: The hinge/semi-trailer for non-visual coupling shall be fitted with ALB. Other trailer/semi-trailer shall not be fitted with braking force control (ALB or MB) unless the vehicle is approved in a new wagon train combination.

(4) The service braking system shall be self-adjusting. Before 01.04.95: Not

applicable.

- (5) The hinge/semi-trailer O3, approved in fixed or variable combination only, may be fitted with a reversing brake.

5.1.114 Hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the system requirements for trailers/semi-trailers O3. Before 01.04.01: The hinge/semi-trailer O4 shall also be fitted with ABS.
Before 01.04.92: The hinge/semi-trailer O4 shall not be fitted with ABS.
- (2) The hinge/semi-trailer O4, approved in fixed or variable combination only, may be fitted with a reversing brake.

5.01.120 Trader trailer

- (1) A trailer with a maximum authorised axle load exceeding 1.500 kg shall be fitted with a service and parking brake.
Service brake
- a) shall operate on at least one axle; and
 - b) shall be connected to the service brake of the tractor or may be an inertia braking system for tractor trailers with a maximum permissible mass of up to 8.000 kg.
- Before 01.07.25: A trailer, regardless of the maximum authorised weight, shall not be equipped with a service or parking brake.
A trailer, regardless of the maximum authorised weight, may have inertia brakes.
Before 01.04.97: The service braking system may be applied by the driver of the tractor from the driver's seat with at least one hand on the steering control, i.e. a separate handle.
- (2) A train trailer shall, where technically feasible, be equipped with automatic load dependent braking force control (ALB) or be fitted with manual braking force control (MB) in accordance with Regulation (EU) 2015/68.
Before 01.07.25: Not applicable.
- (3) A trailer with hydraulic or compressed-air brakes shall be fitted with a two-conductor brake connection in accordance with Regulation (EU) 2015/68.
Before 01.01.25: Not applicable.

5.01.130 motor tool trailer

- (1) Motor gear trailers shall comply with the system requirements for tractor trailers.

5.1.141 Caravan

- (1) Caravans shall comply with the system requirements for trailer/semi-trailer for car.

5.1.142 Other attachments subject to registration

- (1) Other trailers subject to registration shall comply with the system requirements for motor vehicle trailers/semi-trailers.

5.1.143 Attachments not subject to registration

- (1) Trailers not subject to registration with a total permissible axle load exceeding 3.500 kg shall comply with the system requirements for tractor trailers.
Before 01.07.25: At least 50 % of the actual total mass of the vehicle combination shall rest on the braked wheels. If these can consist only of the braked wheels of the towing vehicle together with the braked wheels of any other trailer in the vehicle combination, the trailer shall not be braked.
- (2) Attachments not subject to registration with a load capacity not exceeding 10 % of the sum of maximum axle loads shall not be equipped with automatic load dependent braking force control (ALB)

or manual brake force control (MB).

Before 01.07.25: No requirement for ALB or MB.

5.01.150 motorcycle trailer

- (1) If a motorcycle trailer is fitted with a service brake, it shall be a inertia brake.

5.01.160 trailer for large moped

- (1) If the trailer of a large moped is fitted with a service brake, it shall be a inertia brake.

5.01.199 block wagon

- (1) A lock wagon shall be fitted with a service and parking brake. Before 01.01.71: A block wagon shall meet the system requirements for engine tools.
- (2) A block wagon with a maximum authorised speed of 30 km/h shall meet the system requirements for a tractor trailer.
Before 01.05.77: A block wagon shall comply with the system requirements for trailer/semi-trailer for car. Before 01.01.71: A block wagon shall meet the system requirements for engine tools.
- (3) A vehicle with a maximum permissible speed of 45 km/h shall comply with the system requirements for trailer/semi-trailer for car, except for the anti-lock brake (ABS) requirement.
- (4) A block wagon with a maximum authorised speed of 60 km/h shall comply with the system requirements for trailer/semi-trailer.

5.01.200 vehicle combinations

- (1) Connecting hoses between vehicles shall be suitably positioned so that they cannot be detached while driving.
Glare flanges shall be provided to secure the hoses when the trailer is disconnected.
- (2) In vehicle combinations with two trailers, one of which is fitted with inertia brakes and the other is not fitted with brakes, the trailer without brakes shall be coupled to the rear.

5.01.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

5.01.361 Invalid vehicle

- (1) A disabled vehicle equipped with a hand-operated service brake shall not comply with the provision of paragraph 5.01.010 (1) (a).

5.01.410 dangerous goods vehicle

- (1) A trailer for the carriage of dangerous goods in tanks shall be fitted with a service brake connected to the service brake of the towing vehicle.

5.2 Braking components

5.2.01 General provisions

- (1) Service braking systems in which wear of brake linings does not result in increased travel of the control shall meet one of the following requirements:
- a) The service braking system shall meet the requirements of the Type-II fade test set out in UN Regulation 13-11 (Annex 4, paragraph 1.6.).
 - b) The available brake base release travel (S_b) shall be at least $S_b = 1,2$

+ 0,002 • d mm;
however, for self-adjusting brakes, at least

$SB = 0,85 (1,2 + 0,002 \cdot d)$ mm,

where d is the inside diameter of the brake drum.

For the required deceleration, other service braking systems shall use no more than 2/3 of the possible travel of the control.

5.2.02 Hydraulic plant

- (1) Hydraulic components shall be leak-proof.
 - (2) The filling openings of the liquid container shall be readily accessible and the level of liquid shall be easily verifiable, if necessary by means of an alarm device.
 - (3) The components of a foot operated system shall be capable of withstanding a force of 1000 N (100 kp).
 - (4) A vehicle equipped with hydraulic braking transmission shall be equipped with a red tell-tale illuminating in the event of a failure of any part of the brake transmission. Alternatively, the tell-tale may light up if the liquid level in the containers is below a certain value.
- Before 01.04.80: Not applicable.

5.2.03 Pressurised air system

- (1) The capacity of compressed air receptacles shall be such that after eight full-stroke actuations without the supply of compressed air, at least 50 % of the required performance can be braked.
- (2) The compressor shall have sufficient capacity to fill containers forming part of the braking system from empty condition to 65 % of the lower working pressure limit of less than 3 minutes for power-driven vehicles and 6 minutes for vehicle combinations.
- (3) Compressed air containers shall be fitted with devices which, without the use of tools, allow condensation water to be bottled. However, this shall not apply to containers of vehicles fitted with an air dryer in the compressed-air system.
- (4) In addition to the pressure control device, the pressure air system shall be fitted with a suitably adjusted safety valve connected close to the compressor.
- (5) The mandatory warning device for insufficient pressure in the air container may be replaced or supplemented by a manometer that can be read from the driver's seat.

5.2.04 Inertia brakes

- (1) Inertia brakes shall only be present on rigid drawbar towed vehicles.
- (2) The inertia arrangement shall have a short-term inertia force prior to application of the brake equal to or greater than 2 % of the maximum mass of the trailer.
There shall be a device to dampen the movement of the pressure rod.
- (3) At the required braking force, the required force shall not exceed 10 % of the maximum mass of the vehicle.

5.2.05 Spring brakes

- (1) Spring brakes shall not be used in a service braking system.
 - (2) During the build-up of pressure in the braking system from pressure relief, it shall not be possible to release the spring brakes of a power-driven vehicle until the pressure in the service braking system is sufficient to ensure that the prescribed secondary braking performance of the laden vehicle can be achieved using the service braking control device.
- Before 01.04.95: Not applicable.

5.2.06 Marking of automatic load dependent braking force control (ALB) or electronic braking system (EBS)

- (1) In the case of a vehicle equipped with compressed-air brakes, data relating to the braking system shall be available in accordance with paragraph 13 of UN Regulation 11-5.1.4.5.
Before 01.07.25: The vehicle, except passenger car M1, and the trailer/semi-trailer of a vehicle with ALB must bear a marking enabling the adjustment of the ALB to be checked.
Before 01.04.80: Not applicable.

5.02.008 test connections

- (1) The vehicle and trailer/semi-trailer of a vehicle equipped with a compressed-air braking system and an automatic load dependent braking control (ALB) shall be fitted in the pressure line before and after the ALB valve with a test connection designed in accordance with standard ISO 3583: 1984.
Before 01.07.25: The test connection may be designed in accordance with standard ISO 3583: 1982.
Before 01.04.89: Not applicable.

5.3 Performance

5.3.01 General provisions

- (1) It shall be possible to fulfil the requirements relating to the performance of a service or secondary braking system by braking on a smooth, horizontal road with good adhesion;
- a) with cold brakes at the beginning of the brake,
(less than 100 °C on the surface of the disc or drum);
 - b) without any wheel locking,
Before 01.04.80: For goods vehicles N1 and trucks N2 and N3, the provision applies only to the permissible maximum weight. Before 01.05.77: Not applicable.
 - c) without the vehicle deviating from its course,
 - d) without abnormal vibrations;
 - e) without exceeding the permissible control force; and
Before 01.05.77: No specific activation forces have been specified. However, the exchange between the control and the drum/disc shall be such that, having regard to the nature and size of the vehicle, disproportionate force is not required to be applied to the control in order to achieve full braking performance.
 - f) for all load ratios between service weight and maximum permissible weight.
- (2) The performance requirements for a parking brake shall be satisfied by braking on the road with good adhesion;
- a) cold brakes,
 - b) without exceeding the permissible control force; and
Before 01.05.77: This is the case under point 5.03.001 (1) e).
 - c) for all load ratios between unladen weight and maximum permissible weight.

5.3.020 Car

- (1) In the event of a failure in the transmission of the service braking system, Tokcircle shall be capable of giving the vehicle a deceleration of not less than 30 % of the deceleration required for the service braking system at the maximum authorised mass.
- (2) The braking forces of the service braking system shall be distributed over the axles of the vehicle in such a way that, for a given braking rate (d_0), no axle is subject to a coefficient of adhesion greater than that determined by:
- $$\mu \leq 1,18 \cdot d_0 + 0,082$$

The determination shall be fulfilled for $d_0 \leq 0,8$ and $i \leq 0,8$

This determination shall not be fulfilled in the case of a vehicle equipped with an anti-lock braking system (ABS) of category 1 or 2, or with category 3 ABS acting only on the rear wheels and

complying with paragraph 5.01.005 (1).

The provision shall not be met for a car complying with U.S. Standard FMVSS 135 on blocking order.
Before 01.04.80: The requirement applies only to the maximum authorised weight.

Not applicable for M1 passenger car.

Before 01.04.78: Not applicable.

(3) The parking brake shall be capable of holding the car stationary on a 18 % gradient.

(4) The parking brake of a vehicle authorised to tow a trailer other than a lock vehicle shall be capable of holding the combination of vehicles stationary on a 12 % gradient.

For combinations of vehicles with a total weight of more than 48.000 kg, it is sufficient that the requirement is met by:

48.000 kg.

Before 01.04.95: Not applicable.

(5) The service braking system shall meet the requirements of the Type I fade test set out in UN Regulation 13-11 (Annex 4, paragraph 1.5.) of UN Regulation 13-H (Annex 3, paragraph 1.5) or the fading test of the American standard FMVSS 135.

A M1 special purpose passenger car within the meaning of Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.04.88: Not applicable.

(6) In the case of a car fitted with compressed-air brakes, reference braking forces shall be available in accordance with UN Regulation 13-11, paragraph 5.1.4.6.

Before 01.11.14: Not applicable.

5.3.021 M1 passenger car

(1) The service braking system shall be capable of giving the vehicle a deceleration of at least 6.4 m/s².

In the case of a vehicle that is EU type-approved as a “large quadricycle category L7e”, the service braking system shall be capable of giving the vehicle a deceleration of at least 5.0 m/s².

Similarly, for ‘Class L6e small quadricycle’, the service braking system must be capable of providing the vehicle with a

deceleration of at least 4.4 m/s².

A M1 special purpose passenger car within the meaning of Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.01.17: The deceleration requirement is 5.8 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 8.4 m (two-wheel brakes: 14.0 m).

(2) The secondary braking system shall consist of a two-circuit system capable of giving the vehicle a deceleration of at least 2.4 m/s² in the event of failure of each circuit.

In the case of a vehicle with EU type approval as “quadricycle”, the secondary braking system may be the parking brake and shall be capable of giving the vehicle a deceleration of at least 2.5 m/s².

M1 special purpose passenger car within the meaning of Regulation (EU) 2018/858, built in several stages, where

upon completion, the vehicle belongs to a species other than the base vehicle, only to meet the requirements of the base vehicle.

Before 01.01.17: If a two-circuit system cannot give the vehicle a deceleration of at least 2.4 m/s², it shall be possible to use the parking braking system while driving and give the vehicle a deceleration of at least 2.9 m/s².

Before 01.05.77: Not applicable. See, however, point 5.03.020 (3).

(3) The service braking system shall:

- a) at all load ratios between the weight in running order and the maximum authorised weight;
- b) regardless of the adhesion of the road, and

c) for all decelerations up to 8.0 m/s^2 , not lock the rear wheels before the front wheels.

Does not apply to a car that is EU type-approved as “quadricycle”.

Before 01.05.77: Only applicable to a type approved car. Before 01.01.68: Not applicable.

- (4) The application force shall not exceed 500 N (50 kp) in the case of foot control and 400 N (40 kp) in the case of hand operation.

A M1 special purpose passenger car within the meaning of Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.05.77: Not applicable. See, however, point 5.03.001 (1) e).

5.3.022 M2 passenger car

- (1) The service braking system shall be capable of giving the vehicle a deceleration of at least 5.0 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 10.9 m (two-wheel brakes: 18.2 m).

- (2) The secondary brake shall be capable of giving the vehicle a deceleration of at least 2.5 m/s². Before 01.05.77: Not applicable. See, however, point 5.03.020 (3).

- (3) The service braking time shall not exceed 0,5 s. Before 01.05.77: Not applicable.

The application force shall not exceed 700 N (70 kp) in the case of foot control and 600 N (60 kp) in the case of hand operation.

Before 01.05.77: Not applicable. See, however, point 5.03.001 (1) e).

5.3.023 M3 passenger car

- (1) Passenger cars M3 shall meet the performance requirements for passenger cars M2.

5.3.024 Van N1

- (1) The service braking system shall be capable of giving the vehicle a deceleration of at least 5.0 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 8.4 m (two-wheel brakes: 14.0 m).

- (2) The secondary brake shall be capable of giving the vehicle a deceleration of at least 2.5 m/s². Before 01.05.77: Not applicable. See, however, point 5.03.020 (3).

- (3) Van N1, where the ratio between the permissible axle load and the rear axle load in running order does not exceed 1,5 or the maximum authorised mass of which is less than 2.000 kg, must comply with paragraph 5.03.021 (3).

Does not apply to a car that is EU type-approved as “quadricycle”.

Before 01.04.93: Not applicable.

- (4) The application force shall not exceed 700 N (70 kp) in the case of foot control and 600 N (60 kp) in the case of hand operation.

Before 01.05.77: Not applicable. See, however, point 5.03.001 (1) e).

5.3.025 Truck N2

- (1) The service braking system shall be capable of giving the vehicle a deceleration of at least 5.0 m/s². Before 01.04.89: The deceleration shall be at least 4.4 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 10.9 m; (two-wheel brakes: 18.2 m).

- (2) The secondary brake shall be capable of giving the vehicle a

deceleration of at least 2.2 m/s^2 . Before 01.05.77: Not applicable. See, however, point 5.03.020 (3).
(3) The service braking time shall not exceed 0,5 s.

Before 01.05.77: Not applicable.

- (4) The application force shall not exceed 700 N (70 kp) in the case of foot control and 600 N (60 kp) in the case of hand operation.

Before 01.05.77: Not applicable.

- (5) A truck N2 authorised to tow a trailer O3 or O4 with compressed air brakes shall have the relationship between braking rate and steering line pressure as specified in UN Regulation 13-11, Annex 10.

Before 01.01.17: The truck may comply with the provisions of Annex II (Appendix to point 1.1.4.2) to Directive 71/320/EEC as amended by Directive 75/524/EEC.

Before 01.04.93: Only applicable to lorries for non-visual coupling with trailer.

- (6) The actuation time of the compressed air system in the vehicle braking system including its connection to the trailer shall comply with the requirements of UN Regulation 13-11, Annex 6.

Before 01.01.17: The lorry may comply with the provisions of Annex III to Directive 71/320/EEC, as amended by Directive 79/489/EEC.

Before 01.04.93: Only applicable to lorries for non-visual coupling with trailer.

5.3.026 Truck N3

- (1) Truck N3 shall meet the performance requirements for truck N2.

5.3.031 Two-wheel motorcycle

- (1) The service braking system shall give the motorcycle a deceleration of at least 5.0 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 8.4 m.

- (2) In the case of official weights:

a) The front wheel brake alone could give the motorcycle a deceleration of at least 3.9 m/s².

b) The rear wheel brake alone could give the motorcycle a deceleration of at least 3.1 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance for each of the braking systems shall not exceed 14.0 m.

- (3) The application force shall not exceed 400 N (40 kp) in the case of foot control and 200 N (20 kp) in the case of hand operation.

Before 01.05.77: Not applicable. See, however, point 5.03.001 (1) e).

5.3.032 Two-wheel motorcycle with side-car

- (1) Two-wheel motorcycle with side-car shall meet the performance requirements for two-wheel motorcycles.

5.3.033 Motor tricycle

- (1) The service braking system shall give the motorcycle a deceleration of at least 5.0 m/s².

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 8.4 m.

- (2) The secondary brake shall be capable of giving the motorcycle a deceleration of at least 2.5 m/s².

- (3) The parking brake shall be capable of holding the motorcycle stationary on a 18 % gradient.

Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 14.0 m.

- (4) The application force shall not exceed 400 N (40 kp) in the case of foot control and 200 N (20 kp) in the case of hand operation.

Before 01.05.77: Not applicable. See, however, point 5.03.001 (1) e).

5.03.040 moped

- (1) The service braking system must be capable of giving the moped a deceleration of at least 4.4 m/s^2 .
Before 01.11.19: The service brake of a light moped must be capable of giving the moped a deceleration of at least 4.2 m/s^2 .
- (2) In the case of official weights:
- The front wheel brake alone could give the moped a deceleration of at least 2.7 m/s^2 . Before 01.11.19: Not applicable to light mopeds.
 - The rear wheel brake alone could give the moped a deceleration of at least 2.7 m/s^2 .
Before 01.11.19: In the case of a light moped, the rear wheel brake alone must be capable of giving the moped a deceleration of 2.1 m/s^2 .
- (3) The application force shall not exceed 350 N (35 kp) for foot control and 200 N (20 kp) for handholds.
Before 01.11.19: The application force in foot control shall not exceed 400 N (40 kp).

5.03.050 tractor

- (1) The service braking system shall be capable of giving the tractor a deceleration of at least the following:
- Tractor with a maximum speed of 30 km/h: 3.55 m/s^2 .
 - Tractor with a maximum speed of 40 km/h: 5.0 m/s^2 .
- Before 01.07.25: The service braking system shall be capable of giving the tractor a deceleration of 3.0 m/s^2 .
Before 01.05.77: At a speed of 30 km/h, the total braking distance shall not exceed 14.0 m.
- (2) The secondary braking system shall be capable of giving the tractor a deceleration of at least the following:
- Tractor with a maximum speed of 30 km/h: 1.5 m/s^2 .
 - Tractor with a maximum speed of 40 km/h: 2.2 m/s^2 .
- Before 01.07.25: The secondary braking system shall be capable of giving the tractor a deceleration of at least 1.2 m/s^2 . Before 01.10.96: Not applicable.
- (3) The service braking time shall not exceed 0,5 s. Before 01.05.77: Not applicable.
- (4) The parking brake must be capable of holding the tractor stationary on a 18 % gradient.
Before 01.07.25: The parking brake must be capable of holding the tractor stationary on a 12 % gradient.
Before 01.05.77: Not applicable.
- (5) The application force shall not exceed 600 N (60 kp) in the case of foot control and 400 N (40 kp) in the case of hand operation.
Before 01.07.25: The application force shall not exceed 700 N (70 kp) in the case of foot control and 600 N (60 kp) in the case of hand operation.
Before 01.05.77: Not applicable. See, however, point 5.03.001 (1) e).

5.03.060 engine tools

- (1) Engine tools shall meet the performance requirements of the tractor. Before 01.05.77: Not applicable. See, however, point 5.01.060.
- (2) However, the requirements do not apply to forklift trucks covered by the Order on the provision of technical aids.

5.03.099 powered block wagon

- (1) Powered articulated vehicles with a maximum authorised speed of 15 km/h shall comply with the following provisions:
- The service braking system shall give the lock vehicle a deceleration of at least 1.8 m/s^2 .
 - The service braking time shall not exceed 1,2 s.

- c) The parking brake shall be capable of holding the lock wagon stationary on a 12 % gradient.
- d) The application force shall not exceed 700 N (70 kp) in the case of foot control and 600 N (60 kp) in the case of hand operation.

Before 01.05.77: Power-driven block wagon shall meet the performance requirements for truck N2. Before 01.01.71: Not applicable. See, however, point 5.01.099.

- (2) Powered articulated vehicles with a maximum authorised speed of 30 km/h shall meet the performance requirements for the tractor.

Before 01.05.77: Power-driven block wagon shall meet the performance requirements for truck N2. Before 01.01.71: Not applicable. See, however, point 5.01.099.

- (3) Power-driven vehicle with a maximum permissible speed of 45 km/h or 60 km/h shall meet the performance requirements of truck N2, except that the service braking system shall only give a deceleration of 4.4 m/s^2 corresponding to a braking force of 45 % of the total axle load of the vehicle.

5.03.110 trailer for car

- (1) The service braking system of the trailer shall be capable of producing a total braking force of at least 50 % of the maximum mass of the trailer or, in the case of rigid drawbar trailers, 50 % of the sum of the authorised axle loads. For trailers with compressed-air brakes, this braking force shall be achieved with a maximum of 7.0 bar in the supply line and a maximum of 6.5 bar in the control line.

Before 01.04.93: The provision on pressure in the feed and steering line, cf. point 2, applies only to a non-visual coupling trailer.

Before 01.04.89: The braking force shall be at least 45 % of the total weight. The provision on pressure in the feed and steering line, cf. point 2, applies only to a non-visual coupling trailer.

- (2) The service braking system of the semi-trailer shall be capable of producing a total braking force of at least 45 % of the total axle load of the semi-trailer. For semi-trailers with compressed-air brakes, this braking force shall be achieved with a maximum of 7.0 bar in the supply line and a maximum of 6.5 bar in the control line.

Before 01.04.93: The provision on pressure in the feed and steering line, cf. paragraph 2, does not apply.

- (3) The braking force distribution of trailer other than centre-axle trailers shall comply with the provision in point.

5.03.020 (2). This does not apply to a trailer with an anti-lock braking system (ABS).

- (4) The suspension/semi-trailer O3 and O4 fitted with compressed-air brakes shall have the relationship between deceleration and pressure in the control line specified in Annex 10 to UN Regulation 13-11. For semi-trailers equipped with ABS, the deceleration may exceed the permitted deceleration at pressure pm of more than 5 bar.

Before 01.01.17: The trailer may comply with the provisions of Directive 71/320/EEC as amended by Directive 98/12/EEC.

Before 01.04.04: The trailer may comply with the provisions of Directive 71/320/EEC as amended by Directive 75/524/EEC.

Before 01.04.93: In the case of a trailer, the provision applies only in the case of non-visual coupling. In the case of a semi-trailer, the provision in point (3) applies.

- (5) The actuation time of the compressed air system of the braking system of the towed vehicle shall comply with the requirements of Annex 6 to UN Regulation 13-11.

Before 01.01.17: The trailer may comply with the provisions of Annex III to Directive 71/320/EEC as amended by Directive 79/489/EEC.

Before 01.04.93: Only applicable to non-visual coupling trailer.

- (6) The parking brake shall be capable of holding the vehicle stationary on a 18 % gradient.
- (7) The application force of the parking brake shall not exceed 600 N (60 kp).

Before 01.05.77: Not applicable. See, however, point 5.03.001 (2) b).

- (8) The service braking system shall meet the requirements of the Type-III fade test set out in UN Regulation 13-11 (Annex 4, paragraph 1.7.). However, the hinge/semi-trailer O3 may alternatively meet the Type I fade test set out in UN Regulation 13-11 (Annex 4, paragraph 1.5.).

Before 01.01.17: The hinge/semi-trailer may meet the requirements of the Type-III fade test laid down in Directive 71/320/EEC as amended by Directive 98/12/EC (Annex II, point 1.6). However, the hinge/semi-trailer O3 may meet the requirements for the Type I fade test laid down in Directive 71/320/EEC as amended by Directive 79/489/EEC (Annex II, point 1.3).

Before 01.04.03: The hinge/semi-trailer O4 may meet the requirements of the Type I fade test. Before 01.04.88: Not applicable.

- (9) For trailer with compressed-air brakes, reference braking forces shall be available according to UN Regulation 13-11, paragraph 5.1.4.6.

Before 01.11.14: Not applicable.

5.03.120 Trader trailer

- (1) The service braking system shall be capable of producing a total braking force of not less than 35 % of the maximum authorised mass of the tractor trailer or, in the case of a rigid drawbar trailer, not less than 35 % of the total permissible mass on the axle.

Before 01.07.25: The service braking system shall be capable of producing a total braking force of at least 30 % of the tractor trailer's total mass or, in the case of a rigid drawbar trailer, not less than 30 % of the total axle load.

Before 01.05.77: Not applicable. See, however, point 5.03.200.

- (2) The parking brake shall be capable of holding the vehicle stationary on a 18 % gradient.

5.03.130 motor tool trailer

- (1) The engine gear trailer shall meet the performance requirements of a tractor trailer.

5.3.141 Caravan

- (1) Caravans shall meet the performance requirements for trailer/semi-trailer for car.

5.3.142 Other attachments subject to registration

- (1) Other attachments subject to registration must meet the performance requirements for car trailers/semi-trailers.

5.3.143 towing gear subject to registration

- (1) Trailers which are not subject to registration shall comply with the performance requirements for tractor trailers.

5.03.150 motorcycle trailer

- (1) If a motorcycle trailer is fitted with a service brake, the service brake shall be capable of producing a total braking force of at least 50 % of the maximum mass of the trailer.

5.03.199 block wagon

- (1) A block wagon with a maximum permissible speed of 15 km/h shall comply with the following provisions:
- a) The service braking system shall be capable of producing a total braking force of at least 18 % of the total mass of the vehicle or, in the case of a semi-trailer, not less than 18 % of the total axle load.
 - b) The parking brake shall be capable of holding the lock wagon stationary on a 12 % gradient.
 - c) The application force of the parking brake shall not exceed 600 N (60 kp).

Before 01.01.71: Not applicable. See, however, point 5.01.199.

- (2) A block wagon with a maximum permissible speed of 30 km/h shall comply with the following provisions:

- a) The service braking system shall be capable of producing a total braking force of at least 30 % of the total mass of the vehicle or, in the case of a semi-trailer, not less than 30 % of the total axle load.
 - b) The parking brake shall be capable of holding the lock wagon stationary on a 12 % gradient.
 - c) The application force of the parking brake shall not exceed 600 N (60 kp).
- Before 01.01.71: Not applicable. See, however, point 5.01.199.
- (3) A block wagon with a maximum authorised speed of 45 km/h or 60 km/h shall meet the performance requirements of the trailer/semi-trailer for a car, provided that the service braking system shall only be capable of providing a braking force of 45 % of the total axle load of the vehicle.

5.03.200 vehicle combinations

- (1) The working time of vehicles in vehicle combinations shall be suitably calibrated.
 - (2) In the case of engine gear and tractor vehicle combinations involving unbraked towed vehicles, the brake performance of the combination of vehicles shall be at least 3.2 m/s² in the laden and unladen condition.
- Before 01.07.25: At least 50 % of the actual total mass of the vehicle combination shall rest on the braked wheels.
- Before 01.05.77: At least 50 % of the actual total mass of the vehicle combination shall rest on the braked wheels. In addition, at a speed of 30 km/h, the total stopping distance shall not exceed 14.0 m.

6. Electrical installations, lamps, reflectors, etc.

6.1 Electrical installations

6.1.01 General provisions

- (1) The accumulator shall be securely fixed and mounted or covered in such a way that it cannot be shortened during normal use of the vehicle.
As far as possible, the accumulator shall be located outside the driver's compartment. If located in the driver's compartment, it shall be shielded and ventilated directly to the outdoor.
 - (2) Wiring lines shall be well insulated and secured in such a way that there is no risk of short circuit or rupture during normal use of the vehicle. Where a wire passes through a hole in a conductive material plate, the hole shall be fitted with rubber or similar conduits.
 - (3) Fuses or other equivalent protection shall be provided in the electrical system in such a way as to prevent the risk of a fire in the vehicle due to short circuit in the electrical system. In the case of optional electrical equipment, a protective device shall be provided in the circuit.
- Before 01.05.77: If the vehicle has been supplied with fuses from the factory, they shall be intact and shall not be removed unless the vehicle is fitted with other protective devices offering protection at least equivalent to that of the original fuses. In addition, electrical accessories shall always be fitted with in-circuit protection.

6.1.02 Electromagnetic compatibility

- (1) EMC means electromagnetic compatibility and EMC relevance means that the equipment may cause electromagnetic disturbance or that its functioning may be affected by such disturbances.
 - (2) A vehicle with an electrical/electronic installation with EMC relevance and electrical/electronic equipment with EMC relevance installed on a vehicle shall comply with the provisions of the Order on radio equipment and electromagnetic conditions, without prejudice to points (3) – (5).
- Before 01.04.03: Electrical installations, including electrical equipment, may comply with the provisions on EMC applicable to the vehicle category in question in accordance with the following rules:

- Order on radio and telecommunications terminal equipment and electromagnetic conditions.

- Order on electromagnetic compatibility requirements for certain vehicles, etc.
 - Order on electromagnetic compatibility requirements for certain small vehicles.
 - Order on electromagnetic compatibility requirements for agricultural and forestry tractors.
- (3) A vehicle within the scope of Regulation (EU) 2018/858 (cars and their trailers) shall comply with the requirements of the EMC in UN Regulation 10-05.
Equipment fitted to such a vehicle shall be approved in accordance with UN Regulation 10-05 or comply with the provisions of paragraph (2).
Before 01.07.25: The vehicle and equipment may comply with the EMC requirements of UN Regulation 10-02.
Before 01.01.17: The vehicle and equipment may comply with the requirements of Directive 72/245/EEC as amended by Directive 95/54/EC.
Before 01.04.03: The transitional provision of point (2) shall apply.
- (4) Vehicles covered by Regulation 168/2013/EU (mopeds, motorcycles and light cars) shall comply with the EMC requirements of UN Regulation 10-05.
Equipment fitted to such a vehicle shall be approved in accordance with UN Regulation 10-05 or comply with the provisions of paragraph (2).
Before 01.07.25: The vehicle and equipment may comply with the requirements of EMC set out in Chapter 8 of Directive 97/24/EC or UN Regulation No 10-02.
Before 01.01.17: The equipment may have been approved in accordance with Directive 72/245/EEC as amended by Directive 95/54/EC.
Before 01.04.03: The transitional provision of point (2) shall apply.
- (5) Tractors covered by Regulation 167/2013/EU (agricultural and forestry tractors) shall comply with the requirements of EMC of Regulation (EU) 2015/208, Annex XV or UN Regulation 10-05.
Equipment fitted to such a tractor shall meet one of the following conditions:
- a) Be authorised in accordance with Directive 75/322/EEC as amended by Directive 2000/2/EC.
 - b) Be approved in accordance with UN Regulation 10-05.
 - c) Comply with the provisions of paragraph (2).
- Before 01.07.25: The equipment may have been approved according to Directive 75/322/EEC as amended by Directive 2000/2/EC or to UN Regulation 10-02.
Before 01.01.17: The equipment may have been approved in accordance with Directive 72/245/EEC as amended by Directive 95/54/EC.
Before 01.10.08: Except for equipment, the provision does not apply if the tractor has a positive-ignition engine (e.g. petrol engine) and was approved under Directive 75/322/EEC before 1 October 2002, or has a diesel engine and was approved under Directive 77/537/EEC before 1 October 2002.
Before 01.04.03: The transitional provision in point (2) shall apply.

6.1.03 Short-range radar

- (1) Short-range radar shall comply with the technical requirements of Commission Decision 2004/545/EC (79 GHz – short-range radar).
Before 02.01.22: Short-range radar may meet the technical requirements of EU Commission Decision 2005/50/EC (24 GHz short-range radar).

6.01.010 power-driven vehicle

- (1) A power-driven vehicle shall be equipped with an accumulator in such a way that mandatory front position (side) lamps, rear position (side) lamps, end-outline marker lamps and registration plate lamps can be kept lit without running the engine.
Before 01.04.81: Two-wheel motorcycles whose unladen weight does not exceed 120 kg shall not be fitted with an accumulator.

6.01.021 M1 passenger car

(1) The accumulator may be placed in the driver's compartment without special ventilation.

6.01.024 van N1

(1) Vans N1 must comply with the provisions for the M1 passenger car.

6.01.040 moped

(1) Two-wheel mopeds shall not be fitted with an accumulator.

Before 01.01.20: Invalid-mopeds (k-approved three-wheel mopeds) shall not be fitted with an accumulator.

Small mopeds shall not be fitted with fuses or other equivalent protection.

6.01.050 tractor

(1) The tractor shall be equipped with an electric connector for the trailer lamps.

6.01.060 engine tools

(1) An engine gear intended to be driven by a pedestrian shall not be fitted with an accumulator.

6.01.100 trailer

(1) The lamps on the trailer shall be electrically connected to the corresponding lamps of the towing vehicle or, in the case of a stop lamp, alternatively to the stop lamp switch.

6.01.120 Trader trailer

(1) A trailer for a tractor which is not subject to registration shall comply with the provisions of paragraph 6.01.100 (1).

Before 01.10.96: A trailer of a tractor which is not subject to registration may be fitted with an equivalent lamp instead of a fixed lamp. The headlamp shall only be used on a trailer which is part of the rear trailer of a vehicle combination.

6.01.130 motor tool trailer

(1) Motor gear trailers shall comply with the provisions of point 6.01.100 (1).

Before 01.10.96: An engine tool trailer may be fitted with an equivalent lamp instead of a fixed lamp. The headlamp shall only be used on a trailer which is part of the rear trailer of a vehicle combination.

6.01.143 attachments subject to registration

(1) No obligation to register attachments shall comply with the provision of point 6.01.100 (1).

Before 01.10.96: Attachments not subject to registration may be fitted with equivalent lamps instead of fixed lamps. The headlamp shall be used only on trailer tools which are part of the rear trailer of vehicle combinations.

6.01.310 non-visual coupling vehicle

(1) A vehicle intended for non-vision coupling with a trailer having a maximum authorised mass not exceeding 3.500 kg shall be equipped with a power supply of 12 V for a coupled trailer. The connection shall be one of the following:

a) A 7-pole connector calculated for 12 V (36 mm island) and with the electrical wiring connected to standard LSO 1724: 2003.

Before 01.07.25: The connection may be a 7-pole connector calculated for 12 V (36 mm island) and with the electrical wiring connected to standard LSO 1724: 1975.

- b) A 13-pole socket complying with the provisions of paragraph (a) and also having positions 8 to 13 positioned along the circumference.
 - c) A 13-pole connector calculated for 12 V (30 mm island) and with the electrical wiring connected to standard ISO 11446-1: 2012 and 11446-2: 2012 or DLN standard V 72570.
- (2) Truck N2 and N3 for non-visual coupling with trailers O3 and O4 or trailer cabinet on chassis of such trailer shall be equipped with 24 V power supply for a coupled trailer and may also be provided with 12 V power supply. In addition, the following apply:
- a) The connection shall be marked to indicate the voltage.
 - b) The connection to 12 V power supply follows the rules set out in point (1).
- (3) The connection to 24 V power supply shall be one of the following:
- a) A 7-pole socket (39 mm island) with the electrical wiring connected according to standard LSO 1185: 2003.

Before 01.07.25: The connection to 24 V power supply may be a 7-pole connector (39 mm island) with the electrical wiring connected to standard LSO 1185: 1975.

- b) A 15-pole connector with the electrical wiring connected to standard LSO 12098: 2020.
- Before 01.07.25: The connection to 24 V power supply may be a 15-pole connector with the electrical wiring connected according to standard LSO 12098: 2004;
- (4) A trailer with a maximum authorised mass not exceeding 3.500 kg shall be equipped with 12 V electrical equipment. The connection to power supply from the towing vehicle shall be as specified in point (1).
- (5) The hinge/semi-trailer O3 and O4 and the trailer on the chassis of such a trailer shall be equipped with 24 V electrical installations and may also be equipped with 12 V electrical systems. The connection to power sewing from the towing vehicle shall be marked to indicate the voltage. In addition, the following apply:
- a) In the case of a 12 V power plant, the connection shall correspond to that specified in point (1).
 - b) In the case of a 24 V power plant, the connection shall correspond to that specified in point (3).

6.2 Lighting lamps

6.2.01 General provisions

- (1) A vehicle shall only be equipped with mandatory or permitted lighting lamps.
- A lamp shall be deemed to be present if the light source is installed or if the lamp can be operated by installing a light source, mounting security, assembling electric connectors, connecting wires present or operating by a combination of one or more of these measures.
- (2) The lamps of a pair of lamps shall be the same, including the same design, colour and luminous intensity. They shall also be located symmetrically in relation to the median longitudinal plane of the vehicle and at the same height above the ground. A single main-beam headlamp, dipped-beam headlamp and front fog lamp shall be placed in the median longitudinal plane of the vehicle.
- Only lamp (light source) for which the lamp is intended, or e or E-approved, or where the lamp is E-approved to replace the lamp for which the lamp has originally been approved, may be used.
- (3) The maximum and minimum height above the ground of a lamp shall be measured by load excluding the upper and lower edge of the aperture.
- The distance of a lamp to the outermost edge of the vehicle shall be measured as the distance between it and the outer edge of the light orifice, excluding exterior rear-view mirrors and side direction-indicator lamps. The distance between two lamps of a pair of lamps shall be measured as the distance between the points of the apertures which are closest to each other.

- (4) Main-beam headlamps, dipped-beam headlamps, front fog lamps, work lamps and search lamps shall be capable of being switched on only when the mandatory marking lamps of the vehicle are switched on.

Before 01.07.25: The rule does not apply to work lamps and search lamps.

- (5) Main-beam headlamps, dipped-beam headlamps and front fog lamps shall be so arranged and positioned that they can be properly adjusted.

- (6) Lighting lamps may be arranged in such a way that they are covered or unfolded when not used.

6.2.02 Driving beam headlamps

- (1) The driving beam headlamp shall meet the following conditions:

- a) Shall emit white or yellowish (selective yellow) light.
- b) Shall be placed at the front of the vehicle.
- c) Be capable of illuminating the ground at least 100 metres in front of the vehicle.
- d) Shall have a luminous intensity of at least 10.000 cd. Before 01.01.71: Not applicable.

- (2) In the case of a vehicle with two or more main-beam headlamps, these shall only be switched on simultaneously or in pairs.

- (3) In the case of a glare from the main-beam to the dipped-beam, all main-beam headlamps shall be switched off simultaneously.

- (4) Main-beam headlamps shall be connected to the driver's seat tell-tale. Before 01.05.77: Not applicable.

- (5) The total luminous intensity of main-beam headlamps capable of illuminating simultaneously shall not exceed 430.000 cd. Before 01.05.77: Not applicable.

6.2.03 Dipped-beam headlamps

- (1) The dipped-beam headlamp shall meet the following conditions:

- a) Shall emit white or yellowish (selective yellow) light.
- b) Shall be placed at the front of the vehicle.
- c) Be capable of illuminating the ground at least 30 metres in front of the vehicle.
- d) Shall be designed for right-hand, asymmetrical passing beam.

Before 01.05.77: The dipped-beam headlamp may be designed for a symmetrical passing beam.

Before 01.04.74: The dipped-beam headlamp, except that equipped with a double twine valley lamp, may be arranged as the right dip lamp (radiated downwards to the right).

- e) Shall be located no more than 0.40 m from the outermost point of the vehicle.

Before 01.01.71: The dipped-beam headlamp may be located more than 0.40 m from the outermost point of the vehicle if the front position lamp cannot be switched off when the dipped-beam headlamp is switched on.

- f) Shall be at least 0.50 m and not more than 1.20 m above the ground.

Before 01.01.71: The dipped-beam headlamp may be located less than 0.50 m above the ground.

- g) Shall be visible at least 15° upwards and 10° downwards, and at least 45° outwards and 10° inwards. Before 01.05.77: Not applicable.

- (2) However, in the case of a vehicle with a dipped-beam headlamp the latter shall be visible at least 45° to each side. Before 01.05.77: Not applicable.

- (3) In the case of a vehicle with two dipped-beam headlamps, the distance between them shall be at least 0.60 m. Before 01.05.77: Not applicable.

- (4) Dipped-beam headlamps may be connected in such a way that they are kept on simultaneously with main-beam headlamps.

- (5) Dipped-beam headlamps shall be so adjusted that the light/dark limit of the beam has a drop of at least 1 %, equivalent to 10 mm per metre.

6.2.04 Front fog lamps

(1) The front fog lamp shall meet the following conditions:

- a) Shall emit white or yellowish (selective yellow) light.
 - b) Shall be placed at the front of the vehicle.
 - c) Shall be directed forward to illuminate the ground in invisible weather.
 - d) Shall be located no more than 0.40 m from the outermost point of the vehicle. Before 01.01.71: Not applicable.
 - e) Shall be at least 0.25 m above the ground but not higher than the dipped-beam headlamps. Before 01.05.77: The front fog lamp may be located less than 0.25 m above the ground.
- (2) Front fog lamps shall be so connected that they can be switched on independently of other lighting lamps.
- (3) Front fog lamps shall be so adjusted that the orifice core jams have a gradient of at least 1 %, equivalent to 10 mm/m.

6.2.05 Reversing lamps

- (1) The reversing lamp shall meet the following conditions:
- a) Shall emit white light.
Before 01.05.77: The reversing lamp may emit white, yellowish or yellow light.
 - b) Shall be positioned at the rear of the vehicle.
 - c) Shall be capable of illuminating the ground to the rear of the vehicle.
 - d) Shall be at least 0.25 m and not more than 1.20 m above the ground. Before 01.05.77: Not applicable.
- (2) The reversing lamp shall be capable of illuminating only when the ignition switch is switched off and either the reverse gear is connected or the speedometer switch is switched off.
The vehicle without ignition switch shall be equipped with a second manually operated switch for the reversing lamp.

6.2.06 Watchlights

- (1) The purpose of a search lamp is to illuminate areas or objects at a distance from the vehicle.
- (2) The soaking lamp shall emit white light.
Before 01.07.25: Search lights can emit yellowish (selective yellow) colour.
- (3) Key lamps shall be functionally marked as main-beam headlamp, dipped-beam headlamp or fog lamp. Before 01.07.25: Search lamps may be without functional marking.
- (4) The search lamp shall switch off automatically if the forward speed of the vehicle exceeds 15 km/h, regardless of the position of the separate control. In this case, it shall remain switched off until it is deliberately switched on again. The provision does not apply to police patrol vehicles.
Before 01.07.25: Not applicable.
- (5) The sealing lamp shall be so positioned that the beam can be moved by the driver from his driving position in relation to the vehicle.

6.2.07 Work lights

- (1) Work lamp is intended to illuminate a working area close to the vehicle.
- (2) Work lamp shall provide light of white or yellowish (selective yellow) colour.
- (3) Work lamps shall be functionally marked as reversing or manoeuvring lamps or shall be unmarked.

- (4) The working lamp shall be so positioned that the beam is directed downwards so that it does not perpendicular to other road users.

6.2.08 Manoeuvring lamps

- (1) The purpose of the manoeuvring lamp is to provide additional illumination to the side during slow manoeuvres.
- (2) The manoeuvring lamp shall emit white light.
- (3) Manoeuvring lamps shall be approved and marked in accordance with UN Regulation 23 or UN Regulation 148.
- (4) The manoeuvring lamp shall be so connected that it cannot be switched on unless the driving beam or the passing beam is simultaneously switched on.
- (5) The manoeuvring lamp shall switch off automatically if the forward speed of the vehicle exceeds 15 km/h, regardless of the position of the separate control. In this case, it shall remain switched off until it is deliberately switched on again.

6.02.020 car

- (1) Vehicles must be equipped with the following lamps:
- a) Two main-beam headlamps.
 - b) Two dipped-beam headlamps.
- (2) Vehicles may be fitted with the following lamps:
- a) Four or six main-beam headlamps which shall be connected in such a way that no more than four can be switched on simultaneously. Before 01.05.77: Cars may be equipped with an equal number of main-beam headlamps.
Before 01.01.71: A vehicle may be fitted with a main-beam projector in the case of dipped-beam headlamps if the following conditions are met:
 - Only one remote projector shall be installed.
 - It shall be capable of illuminating only when the dipped-beam headlamps are switched on.
 - The light shall not be dazzling.
 - The centre of the beam shall be at least 10 m to the right of a line passing through the centre of the lamp parallel to the median plane of the trolley at a distance of 0.30 m from the lamp and shall not be higher than the centre of the lamp.
 - The remote projector shall be positioned at the centre of the vehicle or on the left side of the vehicle and not more than 1.20 m above the ground measured to the upper edge of the aperture.
 - The lamp shall be fitted with a special switch.
 - b) Two front fog lamps.
 - c) One or two reversing lamps.
Before 01.05.77: A vehicle may be fitted with any number of reversing lamps.
 - d) A shank.
 - e) One or more work lamps.
 - f) One or two (one on each side) manoeuvring lamps.
- (3) Headlamps may be of the adaptive type (AFS), which shall be approved and marked in accordance with UN Regulation 123 or UN Regulation 149.
- (4) The dipped-beam headlamp and its lamp shall be approved and marked in accordance with one of the following UN Regulations:
- a) UN Regulation 1.
 - b) UN Regulation 2.
 - c) UN Regulation 5.
 - d) UN Regulation 8.

- e) UN Regulation 20.
- f) UN Regulation 31.
- g) UN Regulation 37.

- h) UN Regulation 98.
- i) UN Regulation 99.
- j) UN Regulation 112.
- k) UN Regulation 113.
- l) UN Regulation 123.
- m) UN Regulation 128.
- n) UN Regulation 149.

However, original equipment dipped-beam headlamps and lamps therefor may be constructed in accordance with US standard FMVSS 108 or Canadian standard CMVSS 108. The lamps shall be marked;
'DOT'.

Before 01.01.17: The dipped-beam headlamp and its lamp may comply with Directive 76/761/EEC. Before 01.05.77: Not applicable to a vehicle with a symmetrical passing-beam.

Before 01.01.71: Not applicable.

(5) The dipped-beam headlamp equipped with a gas-discharge lamp shall meet the following conditions:

- a) Shall remain lit when the driving beam is switched on.
- b) Shall be equipped with a lamp washer.
- c) Shall be fitted with the lamp adjustment system as specified in paragraph 6.02.021 (1). The system shall operate automatically.

Points (b) and (c) apply only to gas discharge lamps with a luminous intensity greater than 2.000 lumen.

Before 01.04.06: Not applicable to original equipment gas-discharge lamps performed in accordance with US standard FMVSS 108 and marked "DOT".

For all other gas-discharge lamps, the requirements apply regardless of the date of first registration.

(6) A dipped-beam headlamp with LED shall be fitted with a lamp cleaner.

This point applies only to the passing beam with LED with a luminous intensity greater than 2.000 lumen.

6.02.021 M1 passenger car

(1) A passenger car M1 shall be fitted with a headlamp alignment system for dipped-beam headlamps in accordance with UN Regulation 48-07 if loading of the vehicle results in a change greater than the values for inclination of the dipped-beam mentioned in this Regulation.

Before 01.07.25: A passenger car M1 may be fitted with a headlamp alignment system for dipped-beam headlamps in accordance with UN Regulation 48-01.

6.02.026 truck N3

(1) On off-road trucks N3, the dipped-beam headlamp may not be more than 1.50 m above the ground.

6.2.030 Motorbike

(1) Motorcycles shall be fitted with the following lamps:

- a) A main-beam headlamp.

Two main-beam headlamps where the overall width of the vehicle exceeds 1.30 m. Before 01.07.25: Not applicable.

Before 01.05.77: The luminous intensity of the main-beam headlamp shall be at least 5.000 cd.

- b) A dipped-beam headlamp.

Two dipped-beam headlamps where the overall width of the vehicle exceeds 1.30 m. Before 01.07.25: Not applicable.

(2) Motorcycles may be fitted with the following lamps:

- a) Two main-beam headlamps.

Before 01.05.77: Motorcycles may be equipped with more than two main-beam headlamps. The luminous intensity of the main-beam headlamp shall be at least 5.000 cd.

Before 01.01.71: The luminous intensity requirements do not apply.

- b) Two dipped-beam headlamps.
 - c) A front fog lamp where the overall width of the vehicle does not exceed 1.30 m.
 - d) Two front fog lamps.
 - e) A shank.
 - f) A work lamp.
- (3) The dipped-beam headlamp shall not comply with the provision of paragraph 6.02.003 (1) e) and may be designed for a symmetrical passing beam.
- (4) On motorcycles with a cylinder capacity of 100 cm or less, the main-beam headlamp shall have a minimum luminous intensity of³ cd.
- Before 01.05.77: On a motorcycle having a cylinder capacity not exceeding 100 cm³, the main-beam headlamp shall have a minimum luminous intensity of 2.500 cd.
- Before 01.01.71: Not applicable.

6.2.031 Two-wheel motorcycle

- (1) On two-wheel motorcycles with two dipped-beam headlamps the distance between them shall not exceed 0.10 m. Before 01.05.77: Not applicable.
- (2) The dipped-beam headlamp may be adjacent to the main-beam headlamp. The lamps shall be positioned symmetrically in relation to the median longitudinal plane of the vehicle and the distance between the lamps shall not exceed 0.10 m.

6.2.032 Two-wheel motorcycle with side-car

- (1) If a two-wheel motorcycle with side-car is equipped with two main-beam headlamps or two dipped-beam headlamps, one of the following conditions shall be fulfilled:
- a) Both lamps shall be mounted on the motorcycle in accordance with the relevant rules.
 - b) One lamp shall be mounted on the motorcycle in accordance with the relevant rules and the other lamp shall be placed as close as possible to the outer edge of the side-car. The dipped-beam headlamps, the main-beam headlamps on the motorcycle and the side-car respectively shall be of the same colour but shall not otherwise comply with the provisions of paragraph 6.02.001 (2).

6.2.033 Motor tricycle

- (1) Tricycles must be fitted with the following lamps:
- a) Two main-beam headlamps.
 - b) Two dipped-beam headlamps.
- The dipped-beam headlamp shall comply with the provision of paragraph 6.02.003 (1) (e).
- Before 01.09.95: Applicable only to tricycles with a width exceeding 1.30 m.
- Before 01.04.90: Not applicable.
- (2) Tricycles may be fitted with one or two reversing lamps.

6.02.040 moped

- (1) mopeds must comply with the requirements for motorcycles, except for the requirement for a main-beam headlamp.
- Before 01.05.77: mopeds approved before that date (the 'TUM' mark) must be fitted with a passing-beam headlamp capable of illuminating the ground at least 20 m in front of the vehicle without dazzling.
- (2) Three-wheel mopeds not exceeding 1.30 m in width do not have to comply with the requirements of point 6.02.033 (1).

- (3) The dipped-beam headlamp shall not comply with the provisions of paragraphs 6.02.003 (1) (e) and (g) and 6.02.003 (2) and may be designed for a symmetrical passing beam.
- (4) Mopeds may be fitted with a main-beam headlamp. Such a main-beam headlamp on a light moped shall not comply with the provisions of paragraphs 6.02.002 (1) (c) and (d) and 6.02.002 (4).

6.02.050 tractor

- (1) The tractor shall be equipped with two dipped-beam headlamps.
Dipped-beam headlamps shall not comply with the provision of paragraph 6.02.003 (3) and may be designed for a symmetrical passing beam.
- (2) The tractor may be fitted with the following lamps:
 - a) Two or four main-beam headlamps. These main-beam headlamps do not have to comply with the provisions of paragraph 6.02.002.
(1) (D).
 - b) Two front fog lamps.
 - c) One or two reversing lamps.
 - d) A shank.
 - e) One or more work lamps.
- (3) On the tractor, dipped-beam headlamps may be located up to 1.50 m above the ground and the distance between them may be less than 0.60 m.
- (4) On the tractor, main-beam headlamps, dipped-beam headlamps and front fog lamps may be located more than 0.40 m inside the outermost point of the tractor.
- (5) The tractor may be equipped with a set of additional dipped-beam headlamps situated up to 2.80 m above the ground. These lamps must be so adjusted that, at a distance of 15 m in front of the tractor, the light/dark limit of the beam is not more than half the distance between the upper edge of the light orifice and the ground. Such additional dipped-beam headlamps shall not be lit simultaneously with the required dipped-beam headlamps.
- (6) On the tractor, it must be possible to switch on the sleeve/work lamp without the mandatory marker lamps of the vehicle being switched on.
- (7) If working gear or external equipment covers the required dipped-beam headlamps of the tractor, the tractor must be equipped with additional dipped-beam headlamps in accordance with the rules laid down in point (5).
- (8) The tractor does not have to comply with the requirements of points 6.02.007 (4) and (5).

6.02.060 engine tools

- (1) The engine equipment shall comply with the provisions of the tractor, but the location dimensions may be waived if the construction of the vehicle so requires.
- (2) An engine tool designed to be propelled by a pedestrian shall not be fitted with lighting lamps.

6.02.099 powered block wagon

- (1) Power-driven articulated vehicles shall comply with the provisions applicable to the vehicle.
Before 01.01.71: Power-driven articulated vehicles shall comply with the provisions for engine tools.

6.02.100 trailer

- (1) A trailer may be fitted with the following lamps:
 - a) One or two reversing lamps.
 - b) One or more work lamps.

6.02.363 vehicle specially designed for work on the road

- (1) A second pair of highly-positioned dipped-beam headlamps shall be installed on a vehicle equipped with a sner-clearance unit which covers all or part of the vehicle's generally required dipped-beam headlamps in such a way that the visibility requirement is not met:
 - a) The lamps shall be positioned at a height such that they can illuminate the ground beyond the snow clearance unit at a distance of 10 m or less in front of the foremost point of the vehicle (without snowploughing etc.).
 - b) The lamps may be located up to 0.60 m from the extreme outer edge of the vehicle.
 - c) The lamps shall be so adjusted that, at a distance of 15 m in front of the vehicle, the light/dark boundary of the beam is not situated above the ground more than half the distance between the upper edge of the light orifice and the ground.
 - d) The lamps shall not be capable of being switched on at the same time as the generally required dipped-beam headlamps.
- (2) An additional pair of main-beam headlamps shall be fitted on a vehicle equipped with a sner-clearance unit which fully or partially covers the mandatory main-beam headlamps of the vehicle. If the snow clearance unit covers non-mandatory main-beam headlamps, an additional pair of main-beam headlamps may be installed.
 The electrical connections of the lamps shall be such that no more than four main-beam headlamps may be switched on at the same time.
 In addition, the lamps shall comply with the rules for main-beam headlamps set out in paragraph 6.02.002.
- (3) Vehicles fitted with attachments for sner-clearance units may be fitted with the dipped-beam and main-beam headlamps referred to in paragraphs (1) and (2) (auxiliary lamps).

6.3 Marker lamps

6.3.01 General provisions

- (1) A vehicle shall only be equipped with mandatory or permitted marker lamps.
- (2) The lamps of a pair of lamps shall be the same, including the same colour and luminous intensity.
 They shall be located symmetrically in relation to the median longitudinal plane of the vehicle and at the same height above the ground. A single front position lamp and rear position lamp shall be placed in the median longitudinal plane of the vehicle.
- (3) The position of the lamps shall be measured as described in paragraph 6.02.001 (3).
- (4) Marker lamps shall be switched on simultaneously and shall not be capable of being switched off when the lighting lamps of the vehicle are switched on.
Before 01.01.71: It must be possible to switch off the front position lamp when the dipped-beam headlamp is switched ON if the dipped-beam headlamp is located no more than 0.40 m from the outermost point of the vehicle.
- (5) Red light shall not be directly visible from the front and white light shall not be directly visible from the rear. However, this provision shall not apply to rear registration plate lamps.

6.3.02 Position lamps

- (1) The front position lamp shall meet the following conditions:
 - a) Shall emit white light.
Before 01.07.25: However, where a front position lamp is reciprocally incorporated with a driving or dipped-beam headlamp emitting yellowish light (selective yellow), position lamps may be of the same colour.
 - b) Shall be placed at the front of the vehicle.
 - c) Shall be directed forward and be clearly visible at least 300 m in front of the vehicle.
Before 01.01.71: The front position lamp shall be visible at least 150 m in front of the vehicle without dazzling.
 - d) Shall have a luminous intensity between 4 cd and 60 cd measured from the front. The minimum

luminous intensity requirement is deemed to be fulfilled if the lamp has a power consumption of 4 W and is positioned in front of a parabol. Before 01.01.71: Not applicable.

- e) Shall be located no more than 0.40 m from the outer edge of the vehicle. In the case of a vehicle with two required front position lamps, the distance between them shall be at least 0.60 m.

Before 01.05.77: The distance between front position lamps may be less than 0.60 m.

- f) Shall be at least 0.35 m and not more than 1.50 m above the ground. However, if the shape of the bodywork so requires, the front position lamp may be positioned at a height not exceeding 2.10 m above the ground.
- g) Shall be visible at least 45° inwards and 80° outwards and at least 15° above and below the horizontal. However, the angle below the horizontal may be 5° if the height of the lamp above the ground is less than 0.75 m.

6.3.03 Rear lamps

(1) The rear position lamp shall meet the following conditions:

- a) Shall indicate the presence and width of the vehicle when viewed from the rear.
- b) Shall provide red light.
- c) Shall be positioned at the rear of the vehicle.
- d) Shall be rearward and clearly visible at least 300 m to the rear of the vehicle.

Before 01.01.71: The rear position lamp shall be visible at least 150 m to the rear of the vehicle without dazzling.

- e) Shall have a luminous intensity between 4 cd and 12 cd measured from the rear.

Before 04.04.11: The luminous intensity of the rear position lamp shall be between 2 cd and 12 cd when measured straight from the rear. The minimum luminous intensity requirement is deemed to be fulfilled if the lamp has a power consumption of 5 W.

Before 01.01.71: Not applicable.

- f) Shall be at least 0.35 m and not more than 1.50 m above the ground. However, if the shape of the bodywork so requires, the rear position lamp may be positioned at a height not exceeding 2.10 m above the ground.
- g) Shall be visible at least 45° inwards and 80° outwards and at least 15° above and below the horizontal. However, the angle below the horizontal may be 5° if the height of the lamp above the ground is less than 0.75 m.
- h) Shall be located no more than 0.40 m from the outer edge of the vehicle. The distance between lamps in a pair of lamps shall be at least 0.40 m.

Before 01.11.19: The rear position lamp of the tractor may be located up to 0.60 m from the extreme outer edge of the vehicle. Before 01.05.77: The distance between lamps in a pair of lamps may be less than 0.40 m.

(2) In the case of a vehicle with one rear position lamp, it shall be visible at least 80° to each side.

(3) It shall not be possible to cover the required rear position lamp by more than 50 % when viewed from the rear by more than. If the required rear position lamp is covered by more than 50 %, the vehicle shall be marked with a marking lamp and a plate bearing the following text shall be affixed in the cab in a visible position:

‘When opening rear doors, rear flaps and the like, other road users shall be warned by a yellow marking lamp’.

(4) the mandatory rear position lamp shall not comply with the provisions on position and angles of visibility.

6.3.04 Marker lamps

(1) The forward-facing end-outline marker lamp shall emit white light and the rear marker lamp shall emit red light.

(2) The end-outline marker lamp shall meet the following conditions:

- a) Shall have the luminous intensity prescribed for the front and rear position (side) lamps.
- b) Shall be located no more than 0.40 m from the outer edge of the vehicle.
- c) In the case of a vehicle with a high fixed structure, shall be so high as to be compatible with the requirements relating to position in relation to width and to the symmetry of the lamps.
- d) Shall be visible at least 80° outwards and at least 5° above and 20° below the horizontal. Before 01.05.77: Not applicable.

(3) mandatory marker lamp:

- a) May, if forward looking, give light in yellow colour.
- b) Shall not comply with the provisions on positioning and angles of visibility.
- c) Shall be located symmetrically in relation to the median longitudinal plane of the vehicle.

6.3.05 Rear fog lamps

- (1) The rear fog lamp shall meet the following conditions:
 - a) Shall provide red light.
 - b) Shall be positioned at the rear of the vehicle and rearward.
 - c) Shall have a luminous intensity between 150 cd and 300 cd measured from the rear.
 - d) Shall be at least 0.25 m and not more than 1.00 m above the ground.
 - e) Shall be located at least 0.10 m from the stop lamps.
- (2) If there is only one rear fog lamp, it shall be located in the centre or to the left.
- (3) If there are two rear fog lamps, these shall be so arranged that their reference centres are symmetrical in relation to the median longitudinal plane of the vehicle.
- (4) The rear fog lamp shall be capable of being switched ON only when the main-beam headlamp, dipped-beam headlamp or front fog lamp, or a combination of these, is lit. It shall be possible to switch off the rear fog lamp independently of these lamps.

When the rear fog lamp is switched ON, the operation of switch contact for the passing beam/driving beam shall not cause it to switch off. The rear fog lamp may continue to be switched on together with the position lamps until they are switched off, provided that the rear fog lamp remains switched off until its control switch is activated again.

Before 01.04.88: It shall be possible to switch on the rear fog lamp only when the main-beam headlamps, dipped-beam headlamps or front fog lamps are switched ON and be capable of being switched off independently of these lamps.
- (5) The rear fog lamp shall be provided at the driver's position.

6.3.06 Rear registration-plate lamp

- (1) Registration plate lamps shall comply with the following conditions:
 - a) Shall emit white light.
 - b) Shall illuminate the rear registration plate in such a way that it is legible at least 20 m behind the vehicle.

6.3.07 Parking lamps

- (1) The front parking lamp shall emit white light and the rear parking lamp shall emit red light. A parking lamp reciprocally incorporated with a side direction-indicator lamp shall emit amber light.
- (2) Parking lamps shall be so positioned that there are two front and two rear lamps, or one lamp on each side of the vehicle.
- (3) Parking lamps shall be lit simultaneously or on one side of the vehicle. Registration plate lamps may be switched ON together with parking lamps.
- (4) Parking lamps shall meet the following conditions:
 - a) Shall have a luminous intensity between 2 cd and 60 cd measured from the front and between 2 cd and 30 cd when measured straight from the rear.

Before 01.04.83: Not applicable.
 - b) Shall be located no more than 0.40 m from the outer edge of the vehicle.
 - c) Shall be at least 0.35 m and not more than 1.50 m above the ground. If the shape of the bodywork so requires, parking lamps may be positioned at a height not exceeding 2.10 m above the ground.
 - d) Shall be visible from straight front and rear to 45° outwards and 15° above and below the horizontal. The angle below the horizontal may be 5° if the height of the lamp above the ground is less than 0.75 m.

6.3.08 Side marker lamps

- (1) The side-marker lamp shall meet the following conditions:
 - a) Shall emit yellow light. However, the rearmost side-marker lamp may be red in colour if it is grouped, combined or reciprocally incorporated with either the rear position lamp, the rear marker lamp, the rear fog lamp or the stop lamp. The same shall apply if the side-marker lamp is grouped

with or has part of its light-emitting surface in common with the rearmost reflector.

Before 01.07.25: The rear side-marker lamp may emit red light.

- b) Shall be directed to the side and be clearly visible at least 300 m without diaphragm.
 - c) Shall be at least 0.25 m and not more than 1.50 m above the ground. However, if the shape of the bodywork so requires, the side-marker lamp may be positioned at a height not exceeding 2.10 m above the ground.
 - d) Shall be visible at least 45° to each side and at least 10° above and below the horizontal. However, the angle below the horizontal may be reduced to 5° if the height of the side-marker lamp above the ground is less than 0.75 m.
 - e) Shall have the luminous intensity prescribed for the front position lamp. Before 01.04.80: Not applicable.
- (2) Side-marker lamps shall be installed to meet the following conditions:
- a) There shall be at least one side-marker lamp on each side on the middle third of the vehicle.
 - b) The front side-marker lamp on each side shall be located not more than 3.00 m from the foremost point of the vehicle, or 4.00 m if the shape of the vehicle so requires.
 - c) The distance between two consecutive side-marker lamps shall not exceed 3.00 m or 4.00 m if the structure of the vehicle so requires.
 - d) The rearmost side-marker lamp on each side shall be located not more than 1.00 m from the rearmost point of the vehicle.
- In the case of trailers, the coupling device shall be included in the length of the vehicle.
- Before 01.07.25: the mandatory side-marker lamp shall not comply with the provisions of paragraphs (1) (c), (d) and (2).

6.3.09 Special marker lamps

- (1) Billboards shall comply with the following conditions:
- a) Shall emit white or yellow light (non-flashing).
 - b) Shall have a luminous intensity not exceeding 60 cd.
 - c) Shall not give light rearward.
- (2) The distant sign shall meet the following conditions:
- a) Shall emit white or yellow light (non-flashing).
 - b) Shall have a luminous intensity not exceeding 60 cd.
 - c) Shall not give light rearward.
- (3) The Rutenum sign shall meet the following conditions:
- a) Must have all colours.
 - b) Shall have a luminous intensity not exceeding 60 cd.

6.3.021 M1 passenger car

- (1) M1 passenger cars shall be fitted with the following lamps:
- a) Two front position lamps.
 - b) Two rear position lamps.
 - c) One or more rear registration plate lamps.
 - d) Two forward and two rearward marker lamps if the vehicle width exceeds 2.10 m. Before 01.04.90: An M1 passenger car shall be equipped with two forward marker lamps with a vehicle running distance of more than 2.30 m.
Before 01.01.71: Not applicable.
 - e) Sidemarkeringslygter, hvis køretøjets længde overstiger 6,00 m. Før 01.04.95: Not applicable.
- (2) M1 passenger cars may be fitted with the following lamps and signs:
- a) Four rear position lamps.
Before 01.05.77: A motor vehicle M1 may be fitted with an equal number of rear position lamps.

- b) One or two rear fog lamps.
- c) Parking lamps, if the vehicle's width does not exceed 2.00 m and its length does not exceed 6.00 m.
- d) Two or four forward facing and two or four rearward marker lamps if the vehicle is at least 1.80 m wide.

Before 01.07.25: At least two forward and rearward-facing marker lamps, if the vehicle width is at least 1.80 m.

Before 01.05.77: A motor vehicle M1 may be equipped with an equal number of forward-facing and rearward-facing marker lamps, regardless of the width of the vehicle.

- e) Side-marker lamps which may flash in phase and simultaneously with the indicators on the same side of the vehicle.
- f) Billboard affixed to the roof.

6.3.022 M2 passenger car

- (1) The M2 passenger car, the maximum authorised mass of which does not exceed 3.500 kg, must comply with the provisions applicable to the M1 passenger car.
- (2) M2 passenger cars with a maximum authorised mass exceeding 3.500 kg must comply with the provisions applicable to passenger cars M3.

6.3.023 M3 passenger car

- (1) M3 passenger cars shall be fitted with the following lamps:

- a) Two front position lamps.
- b) Two rear position lamps.
- c) One or more rear registration plate lamps.
- d) Two forward and two rearward marker lamps if the vehicle width exceeds 2.10 m. Before 01.04.90: The requirement for forward-facing end-outline marker lamps applies only if the vehicle's width exceeds 2.30 m.

Rear end-outline marker lamps may be replaced by rear position lamps which do not have to meet the required positioning dimensions.

Before 01.05.77: A motor vehicle M3 authorised for regular services may be fitted with front position lamps which are illuminated in colours other than white or yellow.

Before 01.01.71: The requirement for forward-facing end-outline marker lamps does not apply.

- e) Side-marker lamps if the length of the vehicle exceeds 6.00 m.

Before 01.04.95: Not applicable.

- (2) M3 passenger cars may be fitted with the following lamps:

- a) Four or six rear position lamps.
Before 01.05.77: A motor vehicle M3 may be fitted with an equal number of rear position lamps.
- b) One or two rear fog lamps.
- c) Parking lamps, if the length of the vehicle does not exceed 6.00 m and its width does not exceed 2.00 m.
- d) At least two forward and rearward marker lamps.
- e) Side-marker lamps which may flash in phase and simultaneously with those on the same side of the vehicle if the length of the vehicle exceeds 6.00 m. However, the side-marker lamps shall not be able to flash if the vehicle is equipped with side direction-indicator lamps according to paragraph 6.04.022 (2) b).

- (3) Passenger cars M3 may carry advertising or destination signs above the windscreen.

- (4) The M3 passenger car approved for regular services may bear the following signs:

- a) Destination and flight number sign at the front and side.
- b) Rutenum plaque.

6.3.024 Van N1

(1) Vans N1 must comply with the provisions for the M1 passenger car.

6.3.025 Truck N2

(1) Heavy goods vehicle N2 shall comply with the provisions of the M3 passenger car.

However, end-outline marker lamps may be positioned at the front corners of the cab roof. Before 01.04.78: Truck N2 may be equipped with eight rear position lamps installed by the manufacturer.

6.3.026 Truck N3

(1) Truck N3 shall comply with the requirements for truck N2.

6.3.030 Motorbike

(1) Motorcycles shall be fitted with the following lamps:

a) One front position lamp or, alternatively, two front position lamps if the overall width of the motorcycle exceeds 1.30 m.

Before 01.07.25: Two position lamps, regardless of the width of the motorcycle, do not exceed 1.30 m.

b) One rear position lamp or, alternatively, two rear position lamps if the overall width of the motorcycle exceeds 1.30 m. Should be not less than 0.25 m and not more than 1.50 m above the ground.

Before 01.07.25: Two rear position lamps, regardless of the width of the motorcycle, do not exceed 1.30 m.

c) A registration plate lamp or, alternatively, two registration plate lamps if the overall width of the motorcycle exceeds 1.00 m.

Before 01.07.25: Two rear registration plate lamps are not required, regardless of the width of the motorcycle exceeding 1.00 m.

(2) Motorcycles may be fitted with the following lamps:

a) Two front position lamps. These may emit yellow light if they are amber or E-approved position lamps.

b) One or two rear fog lamps.

c) Side marker lamps. The angle of visibility may be down to 30° to either side.

6.3.031 Two-wheel motorcycle

(1) Position and rear position (side) lamps shall not comply with the provisions relating to the maximum distance from the extreme outer edge of the vehicle and to the minimum spacing between lamps of a pair of lamps.

6.3.032 Two-wheel motorcycle with side-car

(1) Two-wheel motorcycles with side-car shall be fitted with the following position and rear position lamps:

a) Two front position lamps, one of which shall be placed as close as possible to the outer edge of the side-car.

b) Two rear position lamps, one of which shall be placed as close as possible to the outer edge of the side-car.

6.3.033 Motor tricycle

(1) Motor tricycles shall be fitted with the following position and rear position lamps:

a) Two front position lamps.

b) Two rear position lamps.

(2) Tricycles may be fitted with parking lamps.

6.03.040 moped

(1) Mopeds must comply with the requirements for motorcycles.

Before 01.01.20: the Invalid-gallery put into service before that date shall not be fitted with a registration plate lamp and front position lamp and it is sufficient that the visibility of the rear position lamps is at least 30° to each side.

Before 01.11.19: Mopeds are not required to have a registration plate lamp.

In the case of a light moped approved or put into service before that date, the visibility of the rear position lamp shall be at least 30° to each side.

(2) However, two-wheel mopeds shall not be fitted with a front position lamp.

6.03.050 tractor

(1) The tractor shall be fitted with the following lamps:

- a) Two front position lamps.
- b) Two rear position lamps.
- c) One or more rear registration plate lamps, if the tractor is registered.

(2) The tractor may be fitted with the following lamps:

- a) Four rear position lamps.
- b) One or two rear fog lamps.
- c) Two or four forward facing and two or four rearward marker lamps if the vehicle is at least 1.80 m wide.

Before 01.07.25: At least two forward and rearward marker lamps.

- d) Parking lamps.
- e) Side marker lamps.

(3) In the case of a front position lamp:

- a) Shall not be placed at the front of the vehicle.
- b) May be located up to 2.50 m above the ground.

Before 01.11.19: The front position lamp may be positioned up to 0.60 m from the extreme outer edge of the vehicle.

- c) Shall be visible at least 10° inwards and 80° outwards. However, the angle may be 5° (for tractors with a width not exceeding 1.40 m, but 3°) if the design of the tractor makes it impossible to comply with 10°. Before 01.07.25: No outward angle required.

Before 01.05.77: The front position lamp shall not be visible inwards.

- d) Shall be visible at least 15° above and below the horizontal if the height of the lamp above the ground is not more than 1,90;

M. However, the angle may be 5° if the height of the lamp above the ground is less than 0.75 m. Before 01.07.25: Shall be visible at least 10° below the horizontal.

(4) The working tools and external equipment, including twin tyres, shall be marked for the duration of the lamp by a forward and rearward-facing marker lamp on the side (s) on which the working gear is located;

etc. protrude more than 0.15 m from the side of the tractor. The lamps shall indicate the width of the working gear;

etc. and may be mounted on the tractor.

(5) Where working gear or external equipment covers the mandatory marker lamps of the tractor, the working gear or external equipment shall be fitted with equivalent lamps, if necessary placed on a lamp boom.

6.03.060 engine tools

(1) Engine equipment shall comply with the provisions applicable to the tractor, except that the location dimensions may be waived if the construction of the vehicle so requires.

(2) Motor instruments subject to registration shall also be equipped with side-marker lamps if the length of the vehicle exceeds 6.00 m.

Before 01.04.95: Not applicable.

(3) An engine tool designed to be propelled by a pedestrian road shall be equipped with the following lamps to mark the lamp during the time of its ignition:

- a) Front position lamp emitting white or yellowish (selective yellow) light at the front of the left-hand side.

b) Rear position lamp placed on the left side.
The lamps shall be clearly visible at a distance of at least 300 metres.

6.03.099 powered block wagon

(1) Power-driven articulated vehicles shall comply with the requirements for heavy goods vehicles N2.

6.03.100 trailer

(1) In the case of a front position lamp:

- a) Shall be positioned in front of the front axle of the vehicle.
- b) Shall be located no more than 0.15 m from the outer edge of the vehicle.
Before 01.07.25: The angle of conspicuity of the front position lamp inwards may be 5°. An outward angle of visibility is not required.
Before 01.04.90: The front position lamp may be positioned not more than 0.40 m from the extreme outer edge of the vehicle.
- c) May be located up to 2.10 m above the ground.

6.3.111 Hinge/semi-trailer O1

(1) The hinge/semi-trailer O1 shall be fitted with the following lamps:

- a) Two front position lamps if the vehicle width exceeds 1.60 m. Before 01.04.90: Not applicable.
- b) Two rear position lamps.
- c) One or more rear registration plate lamps.
- d) Two forward and two rearward marker lamps if the vehicle width exceeds 2.10 m.
Before 01.04.90: A trailer with a width exceeding 1.60 m and authorised for non-visual coupling shall be equipped with two forward-facing end-outline marker lamps. The requirement for rear marker lamps does not apply.
- e) Sidemarkeringslygter, hvis køretøjets længde overstiger 6,00 m. Før 01.04.95: Not applicable.

At the time of loading and unloading, the ramp may cover for mandatory lamps.

(2) The hinge/semi-trailer O1 may be fitted with the following lamps:

- a) Four rear position lamps.
Before 01.05.77: The hinge/semi-trailer O1 may be equipped with an equal number of rear position lamps.
- b) Two front position lamps.
- c) Two or four forward facing and two or four rearward marker lamps if the vehicle is at least 1.80 m wide.
Before 01.07.25: The hinge/semi-trailer O1 may be equipped with at least two forward and rearward marker lamps if the vehicle is at least 1.80 m wide.
- d) Side marker lamps.
- e) One or two rear fog lamps.

6.3.112 Hinge/semi-trailer O2

(1) The hinge/semi-trailer O2 shall comply with the provisions applicable to the O1 trailer.

6.3.113 Hinge/semi-trailer O3

(1) The hinge/semi-trailer O3 shall be fitted with the following lamps:

- a) Two front position lamps.
- b) Two rear position lamps.
- c) One or more rear registration plate lamps.
- d) Two forward and two rearward marker lamps if the vehicle width exceeds 2.10 m.

Before 01.04.90: A trailer subject to registration, the width of which exceeds the width of the towing vehicle by more than 0.10 m on each side, shall be equipped with two forward marker lamps.

Rear end-outline marker lamps may be replaced by rear position lamps which do not have to meet the required positioning dimensions.

- e) Side-marker lamps if the length of the vehicle exceeds 6.00 m.

Before 01.04.95: Not applicable.

- (2) The hinge/semi-trailer O3 may bear:

- a) Four or six rear position lamps;

Before 01.05.77: The hinge/semi-trailer O3 may be equipped with an equal number of rear position lamps.

- b) At least two forward and rearward marker lamps.

- c) Side-marker lamps which may flash in phase and simultaneously with the indicators on the same side of the vehicle. However, the side-marker lamps shall not flash if the trailer/semi-trailer is equipped with side direction-indicator lamps according to paragraph 6.04.110 (2) (b).

- d) One or two rear fog lamps.

6.3.114 Hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the provisions applicable to the O3 trailer.

6.03.120 Trader trailer

- (1) The following lamps shall be fitted with a trailer:

- a) Two rear position lamps.

Before 01.10.96: On a tractor trailer which is not subject to registration, the rear position lamps may be seated on a lamp boom.

- b) Two rearward marker lamps if the vehicle width exceeds 2.10 m. Before 01.10.96: Does not apply to tractor trailers which are not subject to registration.

- c) One or more registration plate lamps, if the vehicle is registered.

- d) Side-marker lamps if both the maximum authorised weight of the vehicle exceeds 3.500 kg and the length exceeds 4.60 m.

Before 01.07.25: A trailer with a maximum authorised weight exceeding 3.500 kg shall be fitted with side-marker lamps only if the length exceeds 6.00 m.

Before 01.10.96: Only applicable to tractor trailer subject to registration. Before 01.04.95: Not applicable.

- (2) A trailer may be fitted with marker lamps in accordance with the rules applicable to the O1 trailer.

6.03.130 motor tool trailer

- (1) Motor gear trailers shall comply with the provisions applicable to tractor trailers.

6.3.141 Caravan

- (1) Caravans shall comply with the provisions applicable to the O1 trailer.

6.3.142 Other attachments subject to registration

- (1) Other trailers subject to registration shall comply with the provisions applicable to trailers/semi-trailers O1.

6.3.143 towing gear subject to registration

- (1) trailers subject to registration must comply with the provisions applicable to tractor trailers. However, the hinge shall not comply with the requirement for side-marker lamps in paragraph 6.03.120 (1) (d).

6.03.150 motorcycle trailer

- (1) The trailer for motorcycle shall comply with the provisions applicable to the trailer/semi-trailer O1.

6.03.160 trailer for large moped

- (1) A trailer for a large moped must comply with the provisions applicable to the O1 trailer.

6.03.199 block wagon

- (1) A block wagon with a maximum permissible mass not exceeding 3.500 kg shall comply with the provisions applicable to the O1 trailer.
- (2) A block wagon with a maximum permissible mass exceeding 3.500 kg shall comply with the provisions applicable to the O3 trailer.

6.03.363 vehicle specially designed for work on the road

- (1) A new pair of front position lamps may be installed on a vehicle fitted with an additional dipped-beam headlamp pursuant to paragraph 6.02.363 (1) or (3) with an additional dipped-beam headlamp, which may be located up to the same height as the above-mentioned dipped-beam headlamps and up to 0.60 m from the extreme outer edge of the vehicle.
- (2) In the case of a vehicle fitted with aperture or salt spreaders, at least one pair of rear lamps shall be visible from the rear.
- (3) Vehicles specially designed to carry out renovation works may be fitted with safety-zone lighting which, by means of lighting, marks an area behind the vehicle. The lamps shall not be dazzle and shall be marked and approved in accordance with UN Regulation 10.
- a) The lamps shall be connected so that they can be switched on independently of other lamps and switched on simultaneously or on one side of the vehicle.
- b) The lamps shall switch off automatically if the forward speed of the vehicle exceeds 15 km/h. In the case of automatic switch-off, the lamps shall remain switched off until they are manually activated again.

6.4 Signalling lamps

6.4.01 General provisions

- (1) A vehicle shall be fitted with only mandatory or permitted signalling lamps.
- (2) The lamps of a pair of lamps shall be the same, including the same colour and luminous intensity. They shall be located symmetrically in relation to the median longitudinal plane of the vehicle and at the same height above the ground. A single stop lamp shall be located in the median longitudinal plane of the vehicle.
- (3) The position of the lamps shall be measured as described in paragraph 6.02.001 (3).

6.4.02 Direction-indicator lamps (front direction-indicator lamps, rear direction-indicator lamps and side direction-indicator lamps)

- (1) The direction indicator lamp shall meet the following conditions:
- a) Shall emit yellow light.
- Before 03.11.89: The forward direction indicator lamp may alternatively emit white light and/or the rear direction indicator lamp may emit red light if the vehicle model was originally available with this colour of lamps and the installed lamps are identical to the original.

Before 01.01.71: In the case of a vehicle other than a car, a trailer/semi-trailer or a caravan, a forward direction indicator lamp may emit white, yellowish or yellow light and a rear indicator lamp red or yellow.

Before 01.01.66: The forward direction indicator lamp may emit white, yellowish or yellow light and rearward direction indicator lamps red or yellow.

b) Must be clearly visible in sunlight.

c) Shall operate independently of other lamps.

Before 01.11.89: The front position lamp may be reciprocally incorporated with the front position lamp, if it is not grouped with other lamps, and the rear direction indicator lamp may be reciprocally incorporated into the front position lamp; or

rear position lamp and flashing red. The power consumption of the indicator lamp shall be at least 3,5 times the power consumption of the position lamp or rear position lamp. It is a condition that the vehicle model is originally available with this type of lamp and that the lamps fitted correspond to the original ones.

Before 01.01.71: In the case of a vehicle other than a motor vehicle, a trailer/semi-trailer or a caravan, the forward direction indicator lamp may be reciprocally incorporated with the front position lamp if it is not grouped with other lamps and the rear direction indicator lamp may be incorporated into stopping or rear position lamps. The power consumption of the indicator lamp shall be at least 3,5 times the power use of the position lamp or rear position lamp.

Before 01.01.66: The front position lamp may be reciprocally incorporated into a front position lamp if it is not grouped with other lamps and the rear direction indicator lamp may be reciprocally incorporated with the rear position (side) lamp. The power consumption of the indicator lamp shall be at least 3,5 times the front power use of the front position lamp or rear position lamp.

- d) Shall be located no more than 0.40 m from the outer edge of the vehicle. The distance between the front or rear indicators of the vehicle shall be at least 0.60 m.

Before 01.01.71: For vehicles other than car, trailer/semi-trailer and caravan, no minimum distance between indicators is required.

Before 01.01.66: There is no requirement for minimum spacing between flashing lamps.

- e) Shall be placed at least 0.35 m – side direction-indicator lamps not less than 0.40 m – and not more than 1.50 m above the ground. If the shape of the bodywork so requires, front and rear indicators may be positioned at a height of up to 2.10 m and side direction-indicator lamps at a height of up to 2.30 m above the ground.

Before 01.01.71: Applicable only to car, trailer/semi-trailer for car and caravan. Before 01.01.66: Not applicable.

- f) Shall be visible at least 15° above and below the horizontal. However, the angle below the horizontal may be 5° if the height of the lamp above the ground is less than 0.75 m. Side direction-indicator lamp located less than 0.75 m above the ground shall not be visible below the horizontal. The front and rear indicator lamps shall be visible at least 80° outwards and 45° inwards, and the side direction indicator shall be between 5° and 60° rearward.

Before 01.05.77: The side direction-indicator lamp located less than 1.20 m above the ground shall not be visible below the horizontal.

The side direction-indicator lamp may be visible between 10° and 60° to the rear if it is visible from a point not more than 0.50 m outside the rear of the vehicle and at the same height as the indicator lamp.

Before 01.01.71: In the case of a vehicle other than a car, a trailer/semi-trailer for a motor vehicle and a caravan, the front and rear indicators shall be visible at a height of 1.00 m to the centre of the front and rear of the vehicle, respectively, at 2.00 m.

Before 01.01.66: The front and rear indicator lamps shall be visible 1.00 m from the vehicle to the centre of the front and rear end of the vehicle, respectively, at a height of 2.00 m.

- (2) The direction-indicator lamp shall be connected to the tell-tale if the lamp is not directly visible to the driver. In addition, the following apply:

- a) The tell-tale shall give light and/or audible signals.
- b) The light signal shall flash and, in the case of flashing lamps, shall be switched off, illuminating continuously or substantially changing the frequency.
- c) Audible signals shall be clearly audible and, in the case of flashing lamps, the frequency shall be substantially altered.
- d) The tell-tale shall not indicate errors in the case of additional non-mandatory indicators, side direction-indicator lamps or rear direction-indicator lamps of a trailer after passenger car M1 or van N1.

Before 01.01.71: In the case of a vehicle other than a car, a trailer/semi-trailer or a caravan, the tell-

tale shall not indicate any flashing errors.

Before 01.01.66: The tell-tale does not need to indicate flashing errors.

- (3) The front direction-indicator lamp shall be positioned at such a distance from the dipped-beam headlamp and the front fog lamp or have a luminous intensity such that the indicator lamp is clearly visible when the dipped-beam headlamp and the front fog lamp are lit.

Before 01.04.95: Not applicable.

- (4) Front direction-indicator and side direction-indicator may be grouped if the requirements for each of the lamps are met.
- (5) Direction indicators on the same side shall be illuminated simultaneously. If a vehicle on each side has two front direction-indicator lamps, two side direction-indicator lamps or two or three rear direction-indicator lamps and these are above each other, they may flash either simultaneously or alternately (alternate indicators).
- (6) The vertical distance between indicators that flash alternately (alternating) shall be at least 0.20 m.
- (7) The distance between the side direction-indicator lamp and the foremost point of the vehicle shall not exceed 1.80 m. However, this distance may be increased to 2.50 m if necessary for the visibility clause in the paragraph.

6.04.002 (1) (f).

Before 01.01.71: Applicable only to car, trailer/semi-trailer for car and caravan. Before 01.01.66: Not applicable.

- (8) The flashing frequency shall be between 60 and 120 lights per minute. Light and dark periods shall be clearly separated.
- (9) Additional, non-mandatory direction-indicator lamps shall not comply with the provisions concerning distance from the extreme edge of the vehicle, height above ground, angles of visibility and distance from side direction-indicator lamp to front point of the vehicle.

6.4.03 Stop-lamps

- (1) The stop lamp shall meet the technical requirements of one of the following sets of rules:

- a) UN Regulation 7.
- b) UN Regulation 148.
- c) American Standard FMVSS 108.
- d) Canadian standard CMVSS 108. Before 01.07.25: Not applicable.

- (2) The stop lamp shall meet the following conditions:

- a) Shall provide red light.

Before 01.01.71: On a vehicle other than a car, a trailer/semi-trailer for a motor vehicle and a caravan, the stop lamp may provide red or yellow light.

Before 01.01.66: The stop lamp may emit red or yellow light.

- b) Shall be rearward.
- c) Shall illuminate immediately when the service braking system is applied. Stop lamps may also be activated by the use of retarder or similar devices.
- d) Shall have a luminous intensity between 40 cd and 100 cd measured from the rear. The luminous intensity shall be substantially greater than that of the rear position lamps. The determination shall be deemed to be satisfied if the power consumption of the stop lamp is at least 3,5 times the power consumption of the rear position lamp or if both the stop and rear position lamps have been approved and marked in accordance with UN Regulation 7.

Before 01.01.17: Alternatively, the lamps may be approved and marked according to UN Regulation 7 for both the stop and rear position (side) lamps in accordance with Directive 76/758/EEC.

Before 01.04.83: There are no minimum and maximum luminous intensity requirements.

- e) Shall be at least 0.35 m and not more than 1.50 m above the ground. However, if the shape of the bodywork so requires, the stop lamp may be positioned at a height not exceeding 2.10 m above the ground.

Before 01.01.71: On a vehicle other than a car, a trailer/semi-trailer or a caravan, the stop lamp may be positioned not more than 1.50 m above the ground.

Before 01.01.66: The stop lamp may be located no more than 1.50 m above the ground.

- f) Shall be so arranged that the distance between the lamps of a pair of lamps is at least 0.60 m. However, this distance may be reduced to 0.40 m for vehicles less than 1.30 m wide.
- g) Shall be visible at least 45° inwards and outwards and at least 15° above and below the horizontal. However, the angle below the horizontal may be 5° if the height of the lamp above the ground is less than 0.75 m.

Before 01.01.71: The stop lamp shall be visible at least 30° inwards and outwards.

(3) For the third stop lamp:

- a) Shall not be reciprocally incorporated with any other lamp.
- b) May be located inside or outside the vehicle. If the stop lamp is fitted to the vehicle, the light emitted by it shall not cause discomfort to the driver through the rear-view mirrors and/or other surfaces of the vehicle including the rear window.
- c) Shall have a luminous intensity between 25 cd and 80 cd measured from the rear. This provision shall be deemed to be fulfilled if the stop lamp is approved and marked in accordance with UN Regulation 7.

Before 01.04.00: The provision shall be deemed to be satisfied if the stop lamp has been approved and marked in accordance with Directive 76/758/EEC.

- d) Shall be so placed that the lower edge of the aperture is either not more than 0.15 m below the visible lower edge of the rear window or not less than 0.85 m above the ground. However, the lower edge of the aperture shall be above the upper edge of the aperture of the other stop lamps.
- e) Shall be situated within the median longitudinal plane of the vehicle such that, if the stop lamp cannot be located in the median longitudinal plane of the vehicle on a fixed part of the bodywork, two stop lamps may be installed instead on the moving parts of the bodywork, including doors, as close to the median plane as possible or a stop lamp offset not more than 0.15 m to the right or left from the median plane measured from the median plane to the centre of reference of the lamp.
- f) Shall be visible at least 10° to the right and left of the longitudinal axis of the vehicle and 10° above and 5° below the horizontal.

Before 01.04.00: The following shall apply to an unprescribed stop lamp:

- Shall not be positioned at the rear of the vehicle;
- Shall not comply with the provisions on height above ground and angles of visibility; and
- May be located inside the rear window, in which case the influence of the glass pane on the luminous intensity may be ignored.

(4) Additional non-mandatory stop lamps shall not comply with the requirements regarding distance from the extreme edge of the vehicle, height above ground and angles of visibility.

(5) The emergency braking signal (signal indicating to other road users to the rear of the vehicle that the vehicle has been subjected to severe braking in relation to road conditions) shall meet the following requirements:

- a) Shall be provided by simultaneous activation of all stop lamps or direction-indicator lamps.
- b) Shall only be switched on when the vehicle speed exceeds 50 km/h and the braking system provides the emergency braking signal defined in UN Regulations 13 and 13-H.
- c) Shall be switched off automatically if the emergency brake signal defined in UN Regulations 13 and 13-H is no longer provided or if the hazard warning signal is activated.

6.4.04 Accident rate link

(1) The accident warning shall comply with the following conditions:

- a) Shall comply with the requirements for direction-indicator lamps with regard to colour, position, visibility and flashing frequency.
- b) Shall be connected in such a way that all required direction-indicator lamps are used simultaneously. Before 01.05.77: The accident warning link may be connected in one of the following ways:
 - So the direction indicator lamps are flashing simultaneously.
 - So the front direction-indicator lamps flash alternating with the rear direction-indicator lamps.
 - So the left-hand direction-indicator lamps flash alternating with the direction-indicator lamps on the right side.
- c) Shall be activated by separate control switch and may, in addition, be connected to a device for automatic activation in the event of severe deceleration of the vehicle, including in the event of a

collision.

- d) Shall be able to operate without the vehicle ignition system being connected or the engine running.

- e) Shall be connected to a flashing tell-tale, which may be the tell-tale of the direction-indicator lamps.
Before 01.05.77: The hazard warning signal shall be connected to a flashing tell-tale or audible signal or in such a way as to prevent it from operating while driving.

6.4.05 Marking lamps

- (1) The marking lamp shall meet the following conditions:
- Shall emit yellow light.
 - Shall be visible from all sides and at least 5° below the horizontal. The provision is deemed to be fulfilled if a vehicle is fitted with several marking lamps which, taken together, are visible from all sides. These lamps shall be connected to the same control switch.
 - Shall provide 60 to 240 lights per minute.
- (2) Marking lamps shall be approved and marked in accordance with UN Regulation 65. Before 01.07.25: The marking lamp may meet one of the following conditions:
- May have been approved by the Ministry of Justice under a previous approval scheme.
 - May have been approved by the Transport Agency, Sweden.
(»  Org«-mærket)
 - May be approved by the Kraftfahrt-Bundesamt, Germany.
(»  K«-mærket)
 - Can comply with the constructive provisions of US Standard SAE J 595 of August 1983, J 845 of January 1984 or J 1318 of April 1986 and be marked clearly and indelibly with 'SAE'.

6.4.06 Rapid reaction lamps

- (1) The emergency lamp shall meet the following conditions:
- Shall give blue light.
 - Shall be visible from all sides and at least 5° below the horizontal. The provision is deemed to be fulfilled if a vehicle is equipped with several rapid reaction lamps which, taken together, are visible from all sides. These lamps shall be connected to the same control switch.
 - Shall provide 60 to 240 lights per minute.
- (2) The emergency lamp shall be approved and marked in accordance with UN Regulation 65. Before 01.07.25: A rapid reaction lamp may fulfil one of the following conditions:
- May have been approved by the Ministry of Justice under a previous approval scheme.
 - May have been approved by the Transport Agency, Sweden.
(»  Bl«-mærket)
 - May be approved by the Kraftfahrt-Bundesamt, Germany.
(»  K«-mærket)
 - Can comply with the constructive provisions of US Standard SAE J 595 of August 1983, J 845 of January 1984 or J 1318 of April 1986 and be marked clearly and indelibly with 'SAE'.

6.4.07 Overtaking signal

- (1) Main-beam headlamps or dipped-beam headlamps may be connected in such a way that the lamps are switched ON by activation of a spring influenced switch. The other lamps of the vehicle shall not be switched on during operation of the switch.

6.4.020 Car

- (1) The vehicle shall be fitted with the following signalling lamps:
- A front direction-indicator lamp, a side direction-indicator lamp and a rear position indicator lamp on

each side.

Before 03.11.89: Guidelines may be arranged as side direction-indicator lamps in such a way that they flash in the displayed position. It is a condition that the car model could be originally obtained with directional directions.

Before 01.05.77: The vehicle shall be equipped with an equal number of front, rear and side direction-indicator lamps.

Before 01.01.66: Originally installed direction-direction-indicator lamps may be arranged as side direction-indicator lamps in such a way as to flash in the displayed position.

b) Two stop lamps.

Before 03.11.89: If the rear indicator lamp is grouped with the stop lamp, the stop lamp may be out of function on the side flashing. It is a condition that the car model was originally available with this function.

Before 01.01.66: A car must be fitted with at least one stop lamp.

If the rear indicator lamp is grouped with the stop lamp, the stop lamp may be out of function on the side flashing.

c) Emergency braking signal.

Before 01.07.25: Not applicable.

d) Accident warning link.

Before 01.04.78: Not applicable.

(2) Vehicles may be fitted with the following signalling lamps:

a) Three or four stop lamps.

In the case of a car equipped with three stop lamps, the third stop lamp shall comply with paragraph 6.04.003 (2). Before 01.05.77: A car may be fitted with more than four stop lamps.

b) Marking lamp (s).

c) Overtaking signal.

6.4.021 M1 passenger car

(1) The M1 passenger car shall be fitted with three stop lamps. Before 01.10.00: Not applicable.

6.4.022 M2 passenger car

(1) Passenger cars M2 may be fitted with:

a) Two front direction-indicator lamps on each side.

b) A motor vehicle M2 of a length exceeding 9.00 m may be fitted with four side direction-indicator lamps uniformly front-end up on each side. This does not apply if the vehicle is fitted with flashing side-marker lamps as described in paragraph 6.03.023 (2) (e).

c) Two or three rear direction-indicator lamps on each side.

d) Three, four or six stop lamps.

6.4.023 M3 passenger car

(1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

(2) Articulated buses shall be equipped with a side direction-indicator at each side placed immediately behind the articulated section.

6.04.025 truck N2

(1) Heavy goods vehicle N2 shall comply with the provisions of the M2 passenger car.

Before 01.04.78: Truck N2 may be equipped with eight factory stop lamps.

6.04.026 truck N3

(1) Heavy goods vehicle N3 shall comply with the provisions of the M2 passenger car.

Before 01.04.78: Truck N3 may be equipped with eight factory stop lamps.

6.4.031 Two-wheel motorcycle

- (1) Two-wheel motorcycles shall be fitted with a stop lamp to illuminate when both front and rear-wheel brakes are applied.
Before 01.10.75: The stop lamp is not required to light up when the front wheel brake is activated. Before 01.01.71: Not applicable to two-wheel motorcycles with an unladen weight not exceeding 120 kg.
Before 01.07.56: Not applicable.
- (2) A two-wheel motorcycle shall be fitted with a front direction-indicator lamp and a rear direction-indicator lamp on each side. These indicators are subject to the following conditions:
- a) The distance between the front direction-indicator lamps shall be at least 0.24 m.
 - b) The distance between the rear indicator lamps shall be at least 0.18 m.
 - c) The rear indicator lamps shall not be positioned more than 0.40 m forward of the rearmost point of the motorcycle.
 - d) The indicators shall be visible at least 20° inwards.
Before 01.09.95: Applies only to motorcycles for drill driving.
Before 01.04.83: The tell-tale for indicator lamps, if any, shall not indicate flashing errors.
- (3) Two-wheel motorcycles may be fitted with:
- a) Two stop lamps. These may be located less than 0.40 m apart. Before 01.05.77:
Two-wheel motorcycles may be fitted with several stop lamps.
 - b) Accident warning link.
 - c) Emergency braking signal.
 - d) Overtaking signal.
 - e) Marking lamp (s).
 - f) Six indicator lamps, if the two side direction-indicator lamps are installed in accordance with all relevant requirements of UN Regulation 48 as prescribed for vehicle category M1.

6.4.032 Two-wheel motorcycle with side-car

- (1) A two-wheel motorcycle with side-car shall comply with the provisions applicable to two-wheel motorcycles, with the exception that the indicator lamps on the right-hand side shall be placed on the side-car as close as possible to the outer edge of the side-car.

6.4.033 Motor tricycle

- (1) A motor tricycle shall be fitted with:
- a) Front direction-indicator lamps and rear direction-indicator lamps according to the vehicle rules.
Before 01.09.95: A tricycle without a cab and without a load or box behind the driver's seat shall not be fitted with direction-indicator lamps. Any rear direction-indicator lamps on these motorcycles may be fitted in accordance with the rules applicable to two-wheel motorcycles.
 - b) Stop lamps according to car regulations.
Before 01.04.81: Tricycles without a cab and without a load or box behind the driver's seat may be fitted with stop lamps in accordance with the rules applicable to two-wheel motorcycles.
- (2) Tricycles may be fitted with:
- a) Side direction-indicator lamps according to vehicle regulations.
 - b) Accident warning link.
 - c) Overtaking signal.
 - d) Marking lamp (s).
 - e) Emergency braking signal.
- (3) The distance between the front or rear indicators of the motorcycle shall be at least 0.50 m.

6.04.040 moped

(1) Mopeds must comply with the requirements for motorcycles.

Before 01.11.19: Light mopeds may bear the following:

- a) A front direction-indicator lamp and a rear direction-indicator lamp on each side, in accordance with the rules for two-wheel motorcycles, provided that the distance between the front direction-indicator lamps is not less than 0.22 m and between the rear direction-indicator lamps at least 0.14 m. The lamps shall not be more than 0.90 m above the ground.

The tell-tale does not need to indicate flashing errors.

- b) A stop lamp in accordance with the rules applicable to two-wheel motorcycles, provided that the stop lamp is not more than 0.90 m above the ground. The stop lamp shall not illuminate when the front wheel brake is applied.

However, two-wheel mopeds and three-wheel mopeds without cab shall not be fitted with direction-indicator lamps.

If the disability gallery is fitted with a stop lamp, there shall be two stop lamps.

Before 01.05.77: On mopeds approved before that date (the 'TUM' mark), the stop lamp may be placed not less than 0.30 m and not more than 1.50 m above the ground.

6.04.050 tractor

- (1) The tractor shall be fitted with one of the following direction-indicator systems:

- a) A front direction-indicator lamp, a side direction-indicator lamp and a rear position indicator lamp on each side in accordance with the vehicle rules.
- b) A front direction-indicator lamp, a side direction-indicator lamp and a rear position indicator lamp on each side. The front and rear direction-indicator lamps shall be visible at least 10° inwards and the front direction-indicator lamps shall not be positioned rearward of the front of the rear-screen or of the protective structure.
- c) A front direction-indicator lamp and a rear direction-indicator at the front edge and rear edge of the protective structure, respectively. The lamps shall be visible at least 10° inwards.
- d) A grouped front and rear indicator lamp on each side placed on the rear screen or the protective structure. The lamps shall be visible at least 5° inwards both to the front and to the rear.

- (2) The tractor shall be fitted with an accident warning signal. Before 01.10.96: Not applicable.

- (3) The tractor subject to registration shall be equipped with two stop lamps.

- (4) Tractors may be fitted with:

- a) Two front direction-indicator lamps on each side.
- b) Two rear direction-indicator lamps on each side.
- c) Stop lamps according to car regulations.
Before 01.05.77: The tractor may be fitted with an equal number of stop lamps.
- d) Accident warning link.
- e) Marking lamp.
- f) Overtaking signal.

- (5) In the case of a direction indicator:

- a) May be located up to 1.90 m above the ground. If the shape of the bodywork so requires, the direction indicator lamp may be positioned at a height not exceeding 2.30 m above the ground.
- b) Shall be visible at least 10° below the horizontal if the height of the lamp above the ground is not more than 1.90 m. However, the angle may be 5° if the height of the lamp above the ground is less than 0.75 m.

- (6) The tractor shall be fitted with the marking lamp (s) when working tools or other external equipment are fitted which must be marked with retro-reflectors in accordance with paragraph 6.05.050 (3).

- (7) If the working gear or external equipment covers the mandatory signalling lamps of the tractor, the working gear or external equipment shall be fitted with equivalent lamps, if necessary placed on a lamp boom.

6.04.060 engine tools

(1) Engine tools shall comply with the provisions of the tractor.

- (2) Engine tools shall be equipped with marking lamp (s) for the duration of the lamp if the vehicle width exceeds 2.50 m.
- (3) An engine tool intended to be driven by a pedestrian shall not be fitted with signalling lamps.

6.04.099 powered block wagon

- (1) Power-driven articulated vehicles shall comply with the provisions of the M2 passenger car.
- (2) Powered articulated vehicles shall also bear the marking lamp (s).

6.04.110 trailer for car

- (1) The hinge/semi-trailer for motor vehicles shall be fitted with:
 - a) One rear direction-indicator lamp on each side.
 - b) Two stop lamps.
- (2) The trailer may be fitted with:
 - a) One or two front direction-indicator lamps on each side.
 - b) The hinge/semi-trailer may be equipped with three side direction-indicator lamps evenly distributed on each side if the length of the vehicle exceeds 9.00 m. This paragraph does not apply if the vehicle is equipped with side marker lamps as described in paragraph 6.03.113 (2) (c).
 - c) Two or three rear direction-indicator lamps on each side.
 - d) Three, four or six stop lamps according to car regulations.
Before 01.05.77: The trailer may be fitted with more than six stop lamps.
 - e) Accident warning link.

6.04.120 Trader trailer

- (1) Train trailer must comply with the provisions for trailer/semi-trailer for car.
Before 01.10.96: On a tractor trailer which is not subject to registration, signalling lamps may be seated on a lamp boom.

6.04.130 motor tool trailer

- (1) Motor gear trailers shall comply with the provisions applicable to the trailer/semi-trailer for motor vehicles.
Before 01.10.96: On a trailer for motor equipment, signalling lamps may be seated on a lamp boom.

6.4.141 Caravan

- (1) Caravans must comply with the provisions for trailer/semi-trailer for motor vehicles.

6.4.142 Other attachments subject to registration

- (1) Other attachments subject to registration must comply with the provisions applicable to motor vehicle trailers/semi-trailers.
Before 01.10.96: In the case of a vehicle which is subject to registration, signalling lamps may be seated on a lamp boom.

6.4.143 towing gear subject to registration

- (1) trailer instruments subject to registration must comply with the provisions applicable to motor vehicle trailers/semi-trailers.
Before 01.10.96: On trailers which are not subject to registration, signalling lamps may be seated on a lamp boom.

6.04.150 motorcycle trailer

(1) Motorcycle trailers must comply with the provisions for trailer/semi-trailer for motor vehicles.

6.04.160 trailer for large moped

(1) The trailer of a large moped must comply with the provisions applicable to the trailer/semi-trailer for motor vehicles.

6.04.199 block wagon

(1) A block trailer shall comply with the provisions applicable to the trailer/semi-trailer for a vehicle.

Before 01.01.71: Does not apply to a block wagon the structure of which does not prevent the driver from giving characters by hand with sufficient clarity.

(2) A block wagon shall also be fitted with marking lamp (s). If the arrangement of the block wagon so requires, the marking lamp (s) may be located on the towing vehicle.

6.04.200 vehicle combinations

(1) Combinations of vehicles hauled by a tractor or an engine tool shall, for the duration of the lighting operation, be marked with the marking lamp (s) if the width of the combination exceeds 2.55 m.

6.04.320 school vehicle

(1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

6.04.340 emergency vehicle

(1) Emergency vehicles shall also be equipped with a rapid reaction lamp (s).

(2) Emergency lamps at the front and rear of a motorcycle shall be visible at least 80° to each side.

(3) An emergency vehicle may be equipped with one or more additional emergency lamps which must be connected to the same switch as the required emergency lamp. Additional rapid reaction lamp (s) shall not comply with the provisions of paragraphs 6.04.006 (1) (b) and (2).

(4) A building bridge with emergency signals on an emergency vehicle belonging to the police or to the State rescue service may be dismantled for other purposes than emergency services.

(5) Emergency vehicles may, in addition to blue emergency lamps, be equipped with flashing main-beam headlamps capable of flashing pairs or alternates.

(6) Flashing main-beam headlamps for emergency vehicles shall provide 60 to 240 lights per minute.

(7) An emergency vehicle may, instead of flashing main-beam headlamps, be equipped with two white flashing lamps which, according to paragraphs (5) and (6), meet the requirements for flashing main-beam headlamps.

6.04.362 loading vehicle

(1) The vehicle may also be fitted with two rear indicator lamps and two stop lamps behind the cab and in line with the roof of the cab.

6.04.363 vehicle specially designed for work on the road

(1) In the case of a vehicle fitted with a pit or salt spreader, at least one pair of stop lamps shall be visible from the rear.

(2) A marking lamp (s) shall be fitted to a vehicle with a snow clearance unit or a back-up gravel or salt spreader.

6.5 Retro-reflectors, etc.

6.5.01 General provisions

- (1) The front retro-reflector shall be white, the rear retro-reflector shall be red and the side-facing retro-reflector shall be yellow. However, if the rear side retro-reflector is grouped with the rear facing lamp or retro-reflector, it may be red.
- (2) Triangular retro-reflectors shall be fitted only to the rear of the trailer.
- (3) Mandatory retro-reflectors shall meet one of the following conditions:
 - a) Shall be approved and marked in class I (non-triangular) or III (triangular) according to UN Regulation 3.
 - b) Shall be carried out in accordance with U.S. standard FMVSS 108 and the 'DOT' mark. Before 01.01.17: Mandatory retro-reflectors may be approved and marked in accordance with Directive 76/757/EEC.
Before 01.04.92: Mandatory retro-reflectors may be approved by the Ministry of Justice ("JRU" mark). Forward-facing retro-reflectors and side-facing retro-reflectors may consist of 'JRU', marked retro-reflecting film with a minimum surface area of 100 cm², intended to be affixed directly to bodywork or similar.
- (4) Retro-reflecting devices in a pair of reflectors must be the same, including the same size, shape, colour and reflectivity. They shall be located symmetrically in relation to the median longitudinal plane of the vehicle and at the same height above the ground.
A single forward-facing or rearward-facing retro-reflector shall be located in the median longitudinal plane of the vehicle.
- (5) The position of the retro-reflecting device shall be measured as described in paragraph 6.02.001 (3).
- (6) The reflective registration plate, the distinguishing sign and the school sign shall not be considered to be a retro-reflector.
- (7) Advertising signs etc. incorporating reflective material shall be regarded as supplementary retro-reflecting devices.
- (8) It shall not be possible to cover the mandatory forward-facing or rearward-facing retro-reflector by doors, rear fittings or the like.

6.5.02 Forward-facing retro-reflectors

- (1) Mandatory forward-facing retro-reflector:
 - a) Shall be located no more than 0.15 m from the outer edge of the vehicle. The distance between retro-reflectors forming part of a pair of reflectors shall be at least 0.40 m.
Before 01.05.77: Retro-reflectors may be located no more than 0.40 m from the outermost edge of the vehicle and the distance between retro-reflectors may be less than 0.40 m.
 - b) Shall be at least 0.25 m and not more than 0.90 m above the ground. If the structure of the vehicle so requires, the height above the ground may be increased to 1.50 m.
Before 01.05.77: The retro-reflector may not be more than 1.50 m above the ground.
 - c) Shall be visible at least 30° inwards and outwards and at least 15° above and below the horizontal. However, the angle below the horizontal may be reduced to 5° if the height of the retro-reflector above the ground is less than 0.75 m.

6.5.03 Rearward-facing retro-reflectors

- (1) Mandatory rearward-facing retro-reflectors shall comply with the following conditions:
 - a) Shall be located no more than 0.40 m from the outer edge of the vehicle. The distance between retro-reflectors in a pair of reflectors shall be not less than 0.40 m or not less than 0.60 m in the case of triangular retro-reflectors if the width of the trailer is not less than 1.30 m.
Before 01.07.25: The distance between triangular retro-reflectors may be down to 0.40 m. Before 01.05.77: The distance between retro-reflectors may be less than 0.40 m.

- b) Shall be at least 0.25 m and not more than 0.90 m above the ground. If the structure of the vehicle so requires, the height above the ground may be increased to 1.50 m.
Before 01.03.67: The retro-reflector may not be more than 1.20 m above the ground.
- c) Shall be visible at least 30° inwards and outwards and at least 10° above and below the horizontal. However, the angle below the horizontal may be reduced to 5° if the height of the retro-reflector above the ground is less than 0.75 m.

6.5.04 Side-facing retro-reflectors (side retro-reflectors)

- (1) Mandatory side-facing retro-reflectors shall comply with the following conditions:
 - a) Shall be at least 0.25 m and not more than 0.90 m above the ground. If the structure of the vehicle so requires, the height may be increased to 1.50 m.
Before 01.05.77: The retro-reflector may not be more than 1.50 m above the ground.
 - b) Shall be visible at least 45° to each side and at least 10° above and below the horizontal. However, the angle below the horizontal may be reduced to 5° if the height of the retro-reflector above the ground is less than 0.75 m.
- (2) Mandatory side retro-reflectors shall be fitted in such a way that they meet the following conditions:
 - a) There shall be at least one retro-reflector on each side on the middle third of the vehicle.
 - b) The front retro-reflector on each side shall be located not more than 3.00 m from the foremost point of the vehicle.
 - c) The distance between two consecutive retro-reflectors shall not exceed 3.00 m if the structure of the vehicle so requires.
 - d) The rearmost retro-reflector on each side shall be located not more than 1.00 m from the rearmost point of the vehicle.

In the case of trailers, the coupling device shall be included in the length of the vehicle.

Before 01.05.77: If the length of the vehicle is not more than 6.00 m, a retro-reflector shall be fitted on each side; on a power-driven vehicle not more than 1.00 m from its front point and on a trailer not more than 0.40 m from its rearmost point.

If the length of the vehicle exceeds 6.00 m, two retro-reflectors shall be fitted on each side; on a power-driven vehicle not more than 1.00 m from its front point, 0.40 m respectively from its rearmost point and on a trailer not more than 0.40 m from the front edge of the chassis or 0.40 m from the rearmost point of the vehicle.

If the length of the vehicle exceeds 8.00 m but does not exceed 10.00 m, a retro-reflector shall also be fitted to the middle third of the vehicle on each side.

If the length of the vehicle exceeds 10.00 m, two retro-reflectors shall also be fitted on each side to the middle third of the vehicle at a distance of at least 2.00 m.

6.05.010 power-driven vehicle

- (1) A power-driven vehicle may bear the following:
 - a) Additional forward-facing retro-reflectors.
 - b) Additional rear-facing retro-reflectors.
 - c) Supplementary side-facing retro-reflectors.

6.05.020 car

- (1) A car must be fitted with:
 - a) Two rear retro-reflectors.
 - b) Side-facing retro-reflectors if the length of the vehicle exceeds 6.00 m.

Before 01.04.95: Not applicable for M1 passenger car. The side retro-reflector may be replaced by the side-marker lamp.

Before 01.04.90: Only applicable if the vehicle length exceeds 8.00 m or it is authorised to be part of a vehicle combination.

6.5.031 Two-wheel motorcycle

(1) A two-wheel motor cycle shall be fitted with one rear retro-reflector.

Two-wheel motorcycles may be fitted with additional reflective equipment and materials to the rear and to the side, provided that they do not impair the effectiveness of the mandatory lighting and light-signalling devices. It is a prerequisite that the side-facing reflex is yellow and rearward facing is red.

6.5.032 Two-wheel motorcycle with side-car

(1) Two-wheel motorcycles with side-car shall be fitted with two rear retro-reflectors.

6.5.033 Motor tricycle

(1) Tricycles shall be fitted with two rear retro-reflectors.

6.05.040 moped

(1) Mopeds must comply with the requirements for motorcycles.

6.05.050 tractor

(1) The tractor shall be fitted with two rear retro-reflectors which may be situated up to 0.60 m from the outermost edge of the vehicle. The height above the ground may be increased to 1.50 m if a lower position requires mounting fittings which can easily be damaged.

Before 01.05.77: The retro-reflector may not be more than 1.50 m above the ground.

(2) If the structure of the tractor makes it impossible to comply with the provisions relating to the position and visibility of rear retro-reflectors, two pairs of rear retro-reflectors may be fitted to the vehicle in accordance with the following rules:

a) One pair shall comply with the provision of a maximum height of 0.90 m and shall be at least 0.40 m apart and an angle of visibility above the horizontal of at least 15°.

Before 01.05.77: This pair may be located no more than 1.20 m above the ground if the other pair is located no more than 1.80 m above the ground.

b) The second pair may be positioned at a height of up to 2.10 m and shall otherwise comply with the provisions of paragraph 6.05.003 (1) (a) and be visible at least 30° outwards and inwards and at least 15° below the horizontal.

(3) Working tools and external equipment, including twin tyres, shall be marked with the following:

a) A forward facing retro-reflector and a rear retro-reflector on the side (s) on which the working gear, etc., protrudes more than 0.15 m from the side of the tractor.

b) Two forward-facing retro-reflectors and one side retro-reflector on each side if the working gear, etc., protrudes more than 1.00 m.

c) Two rear retro-reflectors and one side retro-reflector on each side if the working gear, etc., protrudes more than 2.00 m rearward.

The retro-reflecting devices shall be placed on the working gear, etc. as close as practicable to the outer edge.

(4) Where working gear or external equipment covers the mandatory retro-reflecting devices of the tractor, the working gear or external equipment shall be fitted with equivalent retro-reflectors, if necessary placed on a lamp boom.

6.05.060 engine tools

(1) Engine tools shall comply with the provisions of the tractor.

Before 01.05.77: The positioning dimensions may be waived if the design of the vehicle so requires.

(2) Motor equipment shall also be fitted with side retro-reflectors if the length of the vehicle exceeds 6.00 m.

Before 01.04.95: The side retro-reflector may be replaced by the side-marker lamp. Before 01.04.90: Only applicable if the length of the vehicle exceeds 8.00 m.

Before 01.05.77: The space dimensions may be waived if the structure of the vehicle so requires.

(3) Motor equipment intended to be driven by a pedestrian shall not be fitted with retro-reflectors.

6.05.099 powered block wagon

(1) Power-driven articulated vehicles shall comply with the provisions applicable to the vehicle.

6.05.100 trailer

(1) A trailer shall be fitted with the following:

a) Two forward-facing retro-reflectors.

Before 01.01.71: Not applicable.

b) Two rearward-facing triangular retro-reflectors with the tip upwards.

c) Side retro-reflectors.

Before 01.04.95: The side retro-reflector may be replaced by the side-marker lamp.

(2) A trailer may be fitted with the following:

a) Additional forward-facing retro-reflectors.

b) Additional rear-facing retro-reflectors. With the exception of retro-reflectors grouped with lamps or forming part of beam markings or similar devices, additional rear retro-reflectors shall be triangular and positioned with the tip upwards.

c) Additional side retro-reflectors.

6.05.340 emergency vehicle

(1) An emergency vehicle may bear additional reflective markings on all sides of the vehicle. The marking shall be designed in one of the following ways:

a) With red/white or red/yellow diagonal stripes with an angle of $45^\circ \pm 5^\circ$ and a width of 100 mm, ± 2.5 mm. The front and rear marking shall be symmetrically positioned in such a way that traffic is bypassing the vehicle.

b) Battenburg pattern. Colours shall be blue/yellow for police vehicles, green/yellow for ambulances and equivalent vehicles, red/yellow for fire and rescue.



(2) Emergency vehicles may bear reflective text in the same colour as the supplemental plate, including 'POLITI', 'ALARM 112', 'ambulance', 'medical watch'; 'Action manager' or equivalent relevant to the Corps.

6.05.341 vehicle used to instruct and accompany vehicles

(1) Vehicles used to instruct and accompany vehicles for checking vehicles may bear additional marking

on all sides of the vehicle.

- (2) Vehicles used to instruct and accompany vehicles may bear a reflective name and logo on all sides of the vehicle.
- (3) Additional side-facing plates may be other than yellow but not white or red.

6.05.363 vehicle specially designed for work on the road

- (1) In the case of a vehicle fitted with a pit or salt spreader, mandatory rear retro-reflectors shall be visible from the rear.
- (2) A vehicle specially designed to carry out work on the road may bear additional marking on all sides of the vehicle in accordance with the rules laid down in points (a) to (b):
 - a) The marking shall be made with either red/white or red/yellow diagonal stripes with an angle of $45^{\circ} \pm 5^{\circ}$ and a width of $100 \text{ mm} \pm 2.5 \text{ mm}$.
 - b) The marking shall be located symmetrically to the front and rear of the vehicle in such a way that traffic is diverted from the vehicle and on the sides so that the traffic is directed forward or outside the vehicle.

6.06 audible warning devices

6.06.001 general provisions

- (1) A vehicle may only be fitted with audible warning devices which comply with the following provisions:
 - a) The audible warning device shall display clearly expressed tone at constant intensity and frequency throughout the period of operation.
Before 01.11.19: Light mopeds may bear a clearly marked bell. An audible warning device may be made up of several combined sound-producing apparatus operating simultaneously.
 - b) The sound pressure level shall not exceed the following value: 118 dB (A). However, the sound pressure level shall be at least 105 dB (A). Applicable to audible warning devices for vehicles of categories M and N and motorcycles.
The sound pressure level shall be measured in accordance with UN Regulation 28, paragraph 6.2. Before 01.07.25: Not applicable.
- (2) The audible warning device for compressed air shall not be connected directly to containers of the compressed air braking system. The audible warning device for vacuum shall not be connected to the braking system of a vehicle equipped with vacuum brakes or vacuum reinforced brakes.
- (3) A vehicle may be fitted with a reversing signal complying with the following additional provisions:
 - a) The reversing signal shall not give a signal which would unduly disadvantage other road users.
 - b) It shall be possible to activate the reversing signal only when the ignition switch is switched on and when either the reverse gear is engaged or the speedometer switch is switched on.
The vehicle without ignition switch shall be provided with a second manually operated reversing signal switch.
 - c) Reversing signal may give intermittent (periodic) signal.

6.06.010 power-driven vehicle

- (1) A power-driven vehicle shall be equipped with audible warning devices. Before 01.05.77: Not applicable to engine gear.
Before 01.01.71: Not applicable to tractor not subject to registration or approval.
Not applicable to powered block wagon.

6.06.021 M1 passenger car

- (1) A passenger car M1 shall not be fitted with a reversing signal. This does not apply if the car is equipped with an electric motor or electric motor combined with an internal combustion engine as a driving engine and is not simultaneously fitted with a special sound system for continuous warning

sound for pedestrians, cyclists, etc.

6.06.023 M3 passenger car

- (1) An electric motor vehicle M3 used only in connection with BRT (Bus Rapid Transit) may be fitted with a separate attention warning device.
- (2) The sound of the attendant warning device shall sound as a bell and shall produce a maximum sound pressure of 75 dB A measured at a distance of 30 m.

6.06.060 engine tools

- (1) An engine tool intended to be driven by a pedestrian shall not be fitted with an audible warning device.

6.06.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

6.06.340 emergency vehicle

- (1) Emergency vehicles shall be equipped with one or more emergency shorns.
- (2) Emergency shorns shall be one of the following:
 - a) Two-tone (High-Low) changing between two tones.
 - b) MC Cloud (Yelp), where frequency increases rapidly.
 - c) Ulvehyl (Wail), where frequency increases and decreases slowly.
- (3) A building bridge with emergency signals on an emergency vehicle belonging to the police or to the State rescue service may be dismantled for other purposes than emergency services.
- (4) Ambulance with a maximum permissible mass exceeding 3.500 kg may be equipped with a reversing signal.

6.06.364 camping car

- (1) A motor caravan with a maximum authorised mass exceeding 3.500 kg may be fitted with a reversing signal.

6.7 Radio, television, etc.

6.7.01 General provisions

- (1) Radio and telephone systems, etc., shall be so arranged as not to obstruct the driver's vision or to impede his operation of the vehicle.

The apparatus shall be so arranged that, if it is intended to be operated by the driver while driving, it can be operated without the driver having to substantially change his position.
- (2) The call device for radio communication systems may be connected to the vehicle's audible warning device and/or dipped-beam headlamps. It must be possible to disconnect the connection between the radio system and the audible warning device (dipped-beam headlamps) by special contact.
- (3) Television sets and the like must meet one of the following conditions:
 - a) Shall be so positioned that the screen cannot be seen by the driver while driving.
 - b) Shall be connected in such a way that it cannot be switched on when the engine is running.

This provision does not apply to television equipment designed only to supplement mandatory rear-view mirrors or to monitor passenger spaces, including automatic doors.
- (4) The antenna shall be positioned and arranged as follows:
 - a) So no part of the antenna during driving, including in the case of heavy braking and acceleration,

moves outside the external limitation of the vehicle.

- b) So that it does not pose unnecessary danger to other road users.
- (5) Radio equipment and telecommunications terminal equipment shall comply with the provisions of the Order referred to in point 6.01.002 (1).

6.8 VAS, immobiliser, etc.

6.8.01 VAS

- (1) The VAS shall, upon activation, give a signal with one or more of the following:
 - a) With the vehicle audible warning device.
 - b) With special audible warning device.
 - c) With the vehicle dipped-beam headlamps.
 - d) With some or all of the vehicle's direction-indicator lamps.
- (2) Audible signals shall be automatically stopped within 30 seconds of activation and shall only start again when the alarm is reactivated.
- (3) The light signal, which shall consist of a flash, shall be automatically stopped no later than 5 minutes after activation and shall only start again when the alarm is reactivated.
- (4) Activation of the alarm shall not be possible in motion or when the vehicle is otherwise used and operated as intended.

6.8.02 Immobiliser systems

- (1) Mandatory immobilisers shall comply with the constructive provisions of one of the following sets of rules:
 - a) UN Regulation 116.
 - b) UN Regulation 162.
 - c) American Standard FMVSS 114.
 - d) Canadian standard CMVSS 114.
- Before 01.07.25: An immobiliser may comply with the design provisions of UN Regulation No 97.
- Before 01.01.17: Immobilisers may comply with the constructive provisions of Directive 74/61/EEC as amended by Directive 95/56/EC.

6.8.03 Accident data recorder

- (1) Required event data recorders shall comply with the constructive provisions of UN Regulation 160 and Article 3 to 5 of Regulation (EU) 2022/545.

6.8.04 Alcohol interlock

- (1) The alcohol interlock or preparation of a vehicle shall comply with the technical requirements of Regulation (EU) 2021/1243. It shall not be possible to deactivate the alcohol interlock.

6.8.05 Cybersecurity Management System

- (1) Mandatory cybersecurity management system shall comply with the constructive provisions of UN Regulation 155.

6.08.010 power-driven vehicle

- (1) A power-driven vehicle may be fitted with a VAS.
- (2) A power-driven vehicle may be equipped with an immobiliser.

6.08.020 car

- (1) The vehicle shall be prepared for the installation of an alcohol interlock in accordance with Regulation (EU) 2021/1243.

- (2) The car must be equipped with a cybersecurity management system.
Before 01.01.26: Not valid for

6.08.021 M1 passenger car

- (1) The M1 passenger car shall be equipped with an immobiliser. Before 01.10.98: Not applicable.
- (2) The M1 passenger car shall be fitted with an event data recorder (EDR).
The requirement does not apply to small series passenger cars M1.
Before 01.01.26: Not applicable.

6.08.024 van N1

- (1) Vans N1 shall be fitted with an immobiliser.
Before 01.07.25: Not applicable.
- (2) Vans N1 shall be fitted with an Event Data Recorder (EDR).
The requirement does not apply to goods vehicle N1 manufactured in small series.
Before 01.01.26: Not applicable.

6.9 Special marking

6.9.01 General provisions

- (1) Paints for marking external projections shall be carried out with yellow/black stripes according to standard DS/ISO 3864.
Before 01.07.25: Paints for marking external projections may be carried out with yellow/black stripes according to standard DS 734.
- (2) Retro-reflectors for external projections shall comply with the provisions of paragraph 6.05.001 (1), (3) and (7) and the visibility provisions in paragraphs 6.05.002, 6.05.003 and 6.05.004.
- (3) In the case of external projections, the following shall apply:
- a) The connection shall comply with the provisions of paragraph 6.03.001 (4).
 - b) The forward facing lamp shall comply with the provisions of paragraph 6.03.002 (1) (a), (b), (c), (d) and (g) and (2).
 - c) The rearward-facing lamp shall comply with the provisions of paragraph 6.03.003 (1) (a), (b), (c), (d) and (f) and (2).
 - d) Lateral facing lamps shall meet the requirements of paragraph 6.03.008 (1) (a), (b) and (d).
 - e) The marking lamp shall comply with the provisions of paragraph 6.04.005.
 - f) Special marking lamp on the rear lift only shall comply with the provisions of paragraph 6.09.002.

6.9.02 Special marking lamps on the rear lift

- (1) Special marking lamps on loading platforms shall meet the following conditions:
- a) Shall emit yellow light.
 - b) Shall be located no more than 0.40 m from the outer corners of the lift.
 - c) Shall be rearward when the rear lift is in the working position.
 - d) It shall not be possible to ignite when the lift is folded.
 - e) Shall provide 100 to 240 lights per minute.

6.9.03 Lamp boom

- (1) The lamp boom shall be equipped with the following:
- a) Device to ensure safe attachment.

- b) Two rear position lamps.
- c) Registration plate lamp (s).
- d) Two direction-indicator lamps.
- e) Two stop lamps.
- f) Two retro-reflectors.

The lamp shall be located not less than 0.35 m and not more than 0.90 m above the ground.

The dimensions of the lamp shall be such that the lamps and retro-reflectors, with the exception of registration plate lamps, are located not more than 0.40 m from the extreme outer edge of the vehicle.

The lamps on the headlamp pocket shall be connected to the corresponding required lamps at the rear of the vehicle.

Lamps and retro-reflectors on the lamp shall not be included in the number of lamps required or permitted and retro-reflectors at the rear of the vehicle.

6.9.020 Car

- (1) Parts which protrude 1.00 m or more forward of the original body of the vehicle as such shall comply with the following conditions:
 - a) At the front and on the front 0.50 m on the sides shall carry a paint to mark external projections.
 - b) Shall be fitted in the front with at least one lamp illuminating white forward.
 - c) Shall be fitted at the front of each side with at least one lamp illuminating yellow to the sides. Before 01.04.79: Not applicable.
- (2) Parts which protrude 2.00 m or more forward of the original body of the vehicle as such shall also be fitted at the front with a marking lamp. The lamp shall be so connected that it can be switched on without the vehicle's marker lamps being lit.
Before 01.04.79: Not applicable.
- (3) Parts which protrude less than 1.00 m forward of the original body of the vehicle as such as well as parts which protrude to the rear of the rear of the vehicle in the original construction may be fitted with paint for marking external parts.
- (4) Parts which protrude forward or rearward of the original body of the vehicle as such may be fitted with retro-reflectors to mark external projections.
- (5) The lift may have two special marking lamps on the rear lift.

6.9.021 M1 passenger car

- (1) A passenger car M1 may be fitted with a headlamp.

6.9.022 M2 passenger car

- (1) Passenger cars M2 must comply with the provisions applicable to passenger cars M1.

6.9.023 M3 passenger car

- (1) Passenger cars M3 must comply with the provisions applicable to passenger cars M1.

6.9.024 Van N1

- (1) Vans N1 must comply with the provisions for the M1 passenger car.

6.09.050 tractor

- (1) Tractors may bear special markings in accordance with the rules applicable to vehicles.

6.09.060 engine tools

- (1) Engine tools shall be equipped with lamps to mark external projections for the duration of the lamp.
Before 01.05.77: The forward facing lamp may emit white or yellowish light.
- (2) Motor tools may bear special markings in accordance with the rules applicable to vehicles.

6.09.099 powered block wagon

- (1) Motor vehicles may bear special markings in accordance with the rules applicable to vehicles.

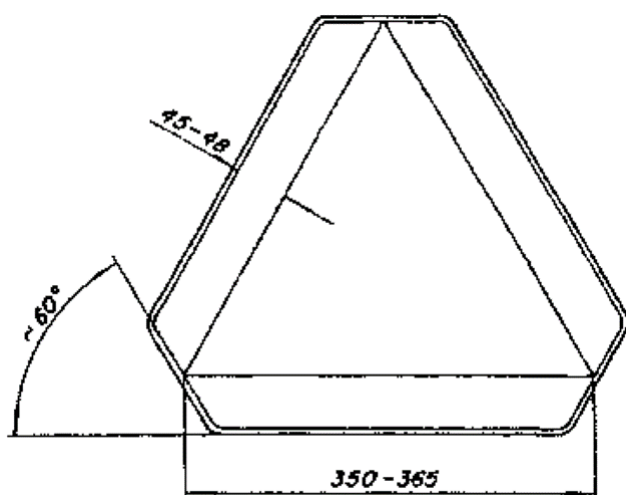
6.09.363 vehicle specially designed for work on the road

- (1) A vehicle designed as a mobile barrier may be fitted with reflective signs and yellow flashing lights in accordance with Order No 818 of 22 June 2017 on road markings, etc.

6.10 Marking of slow-moving vehicles

6.10.01 General provisions

- (1) A vehicle shall bear only mandatory or permitted marking as a slow-moving vehicle.
- (2) The slow-moving marking shall comply with the following conditions:
 - a) Shall consist of a red, fluorescent, equilateral triangle with a red reflective edge, as shown in the example below, in which the dimensions are expressed in millimetres.

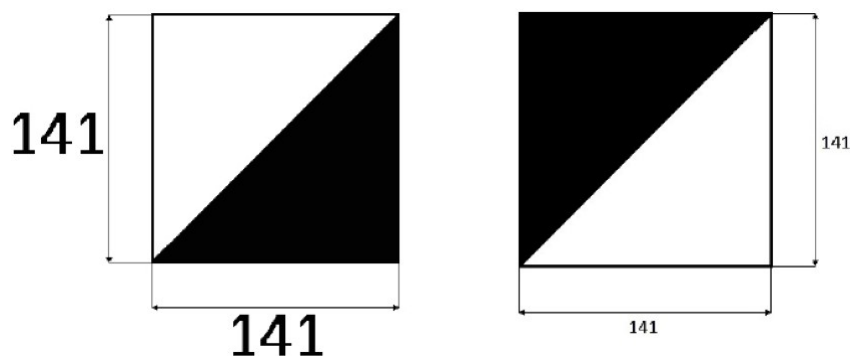


- b) Shall be positioned at the rear of the vehicle with the tip up and be rearward.
- (3) The slow-moving marking shall also meet one of the following conditions:
 - a) Shall be approved and marked in accordance with UN Regulation 69.
 - b) Must have been approved by the Transport Agency, Sweden.
(»  Lf«-mærket)
 - c) Shall comply with the light engineering requirements for fluorescent material set out in UN Regulation 27 and for reflective roadboard material type 4 of Order No 426 of 13 April 2023 on the use of road markings.
- (4) Marking as a slow-moving vehicle may be detachable.

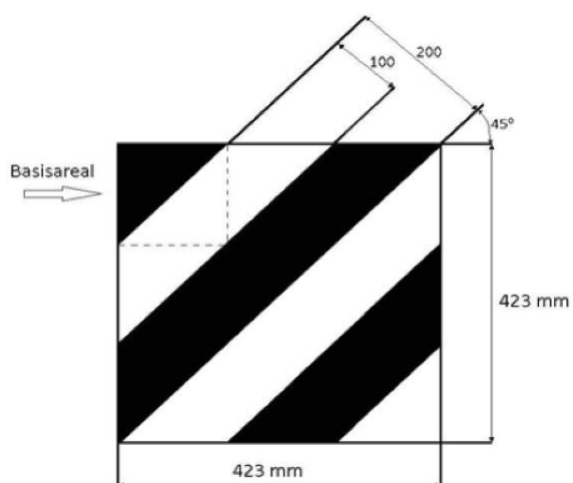
6.10.02 Special marking of broad vehicles

- (1) Special marking of wide vehicles shall be made with inclined fluorescent or reflective red/white

- stripes. The strips shall be positioned 45° on slopes from the centre and outwards/downwards.
- (2) The marking shall comply with the photometric requirements of UN Regulation 104, Annex 7. A base area is part of a marking with dimensions of 141 x 141 mm. Base areas:

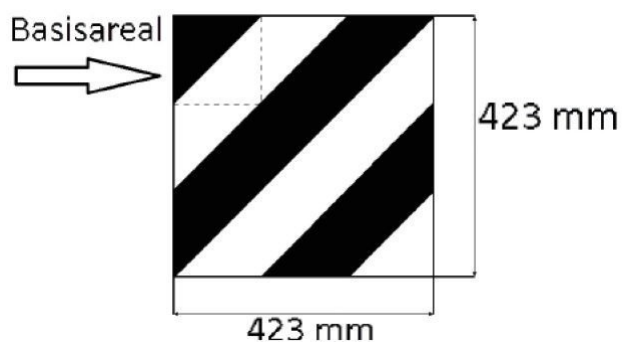


Sketch with dimensions of strips in millimetres

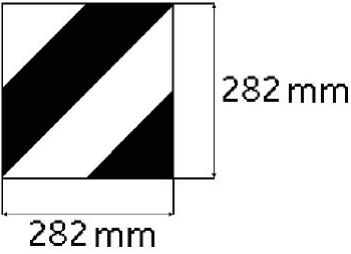


- (3) The dimension of each marking shall meet the objectives set out in the examples below. The figures only show the markings on one page:

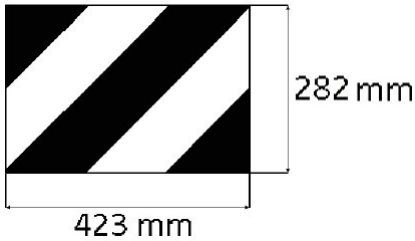
Form A



Form B



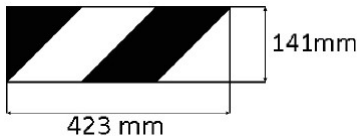
Shape R which may be mounted horizontally or vertically;



Shape L, which may be mounted horizontally or vertically;



Shape K. Two shall be fitted on each side and they may be mounted horizontally or vertically;



(4) Deviations from the areas are permitted under the following conditions:

- a) Det synlige areal af hver afmærkning skal være 795 cm² svarende til arealet af fire basisarealer.
- b) Where the shape of the bodywork so requires, each marking may be divided into two parts, each consisting of at least two base areas.

(5) The marking shall be no more than 0.10 m from the outer edge of the vehicle and shall be visible from the front and from the rear.

6.10.050 tractor

(1) Tractors with an actual width exceeding 2.55 m shall bear on each side one or two special markings of wide vehicles.

Before 01.11.19: Not applicable.

6.10.060 engine tools

(1) An engine gear with an actual width exceeding 2.55 m shall bear on each side one or two special markings of wide vehicles.

Before 01.11.19: Not applicable.

6.10.120 Trader trailer

(1) A trailer whose actual width exceeds 2.55 m shall bear on each side one or two special markings of wide vehicles.

Before 01.11.19: Not applicable.

(2) Trailer, may bear special markings on wide vehicles, regardless of the width not exceeding 2.55 m.

6.10.130 motor tool trailer

(1) Motor gear trailers with an actual width exceeding 2.55 m shall bear on each side one or two special markings of wide vehicles.

Before 01.11.19: Not applicable.

(2) Motor gear trailers may bear special markings for broad vehicles, regardless of the width not exceeding 2.55 m.

6.10.140 attachments

(1) Tractor or motor gear with an actual width exceeding 2.55 m shall bear on each side one or two special markings of wide vehicles.

Before 01.11.19: Not applicable.

(2) Tractor or motor gear may bear special markings on wide vehicles, regardless of the width not exceeding 2.55 m.

6.11 Reflective planks

6.11.01 General provisions

(1) The flex planes for the car shall be made with diagonal stripes of alternating yellow reflecting and red fluorescent material and shall be in accordance with models 1, 2, 3 or 4 below.

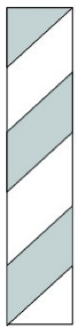
Model 1



Model 2



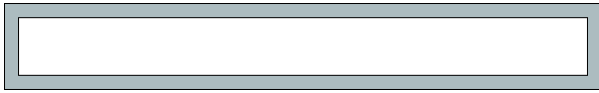
Model 3



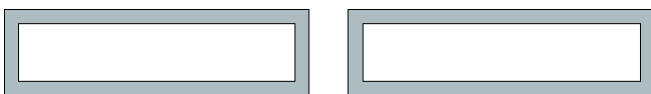
Model 4



(2) Reflective planes for trailer/semi-trailer for cars shall be made with yellow reflective material surrounded by a red fluorescent edge and shall be in accordance with models 5, 6, 7 or 8 below. Model 5



Model 6



Model 7



Model 8



(3) Flexitime planes shall have the following dimensions as defined in UN Regulation 70:

- a) The total length of reflective planes consisting of one, two or four parts shall be not less than 1 130 mm and not more than 2 300 mm. The length of each part of a reflex plane shall be the same.
 - b) The width shall be the following:
 - 140 ± 10 mm for a car.
 - 200 ± 30 mm or – 5 mm for car trailer/semi-trailer.
 - c) On reflective planes for the car, the diagonal stripes shall have an angle of 45 ± 5° and a width of 100 ± 2.5 mm.
 - d) On reflective planes for trailer/semi-trailer for car, the fluorescent edge shall be 40 ± 1 mm wide.
- (4) The flexitime plan shall meet the following conditions:
- a) Shall be positioned at the rear of the vehicle and rearward.
 - b) Shall be located symmetrically in relation to the median longitudinal plane of the vehicle. Parts forming part of a pair shall be the same.
 - c) Shall be located not more than 1.50 m above the ground, measured to the lower edge, or not more than 2.10 m above the ground, measured to the upper edge.
 - d) Shall be approved and marked in accordance with UN Regulation 70 or comply with the luminous requirements for fluorescent material set out in UN Regulation 27 and for reflective roadboard material type 4 of the Ordinance on the use of road markings.
- (5) A vehicle shall bear only mandatory or permitted reflectance planes.

6.11.023 M3 passenger car

- (1) Articulated buses with a length of up to 18.75 m shall be fitted with reflective planes for cars. However, the requirement does not apply to articulated buses categorised as urban buses.
Before 01.06.00: Articulated buses may have reflective planes for trailers.
- (2) Articulated buses with a length greater than 18.75 m shall, in addition to the reflective plane referred to in point (1), be fitted with a sign to the rear of which indicates the length of the bus at least 70 mm high. The length shall be expressed upwards as a whole number in metres followed by the letter 'm' with a height of at least 35 mm. The plate shall be white and shall have a minimum length of 565 mm and a height of at least 195 mm with a red fluorescent edge of at least 40 mm.

6.11.025 truck N2

- (1) Heavy goods vehicles N2 shall be fitted with reflective planes if the maximum authorised mass exceeds 7.500 kg. The requirement does not apply to lorries which are tractive for semi-trailers.

6.11.026 truck N3

- (1) Truck N3 shall be fitted with reflective planes. The requirement does not apply to lorries which are tractive for semi-trailers.

6.11.111 Hinge/semi-trailer O1

- (1) The hinge/semi-trailer O1, which is more than 8.00 m long, shall be fitted with a reflective plane. Before 01.07.25: Not applicable.

6.11.112 Hinge/semi-trailer O2

- (1) The hinge/semi-trailer O2, which is more than 8.00 m long, shall be fitted with a reflective plane. Before 01.07.25: Not applicable.

6.11.113 Hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3, which is more than 8.00 m long, shall be fitted with a reflective plane.

6.11.114 Hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall be fitted with a reflective plane.

6.11.200 vehicle combinations

- (1) In vehicle combinations consisting of lorries and centre-axle trailers, the vehicle shall not be fitted with a reflective plane.
- (2) Where the reflective plane is fitted to the RUPD, paragraph 6.11.001 (4) (a) shall be fulfilled only on the rear vehicle of the combination.

6.12 Daytime running light

6.12.01 General provisions

- (1) One of the following lamps may be used as daytime running lights:
- a) Dipped-beam headlamps.
 - b) Front fog lamps.
 - c) Daytime running lamps.
 - d) Dipped-beam headlamps with reduced voltage.
- (2) If dipped-beam headlamps or fog lamps are used as daytime running lamps, mandatory marker lamps shall be switched on simultaneously.
- Before 01.04.96: If the instrument lamp is not switched on at the same time as the dipped-beam headlamps or front fog lamps used as daytime running lights, the position lamps may not be lit simultaneously either.
- (3) If daytime running lamps or dipped-beam headlamps are used as daytime running lamps, rear position lamps and other marketing lamps may be switched ON simultaneously.
- (4) Traction automation shall cease to function when the vehicle's light switch is placed in the position of the vehicle's position or the passing/driving position.
- Before 01.04.96: Only applicable to daytime running machines connected to daytime running lamps or front fog lamps.
- (5) For daytime running automation:
- a) Dipped-beam headlamps may be connected to daytime running machines.
 - b) Front fog lamps shall not be connected to daytime running machines.
 - c) Daytime running lamps shall be connected to daytime running machines.
 - d) Dipped-beam headlamps with reduced voltage shall be connected to daytime running machines.
- Before 01.04.96: Traction automation for all those lamps was permitted but not required.
- When connecting daytime running machines to the dipped-beam headlamps, the main-beam headlamps may be switched on.
- (6) A vehicle shall only carry mandatory or permitted daytime running lights.

6.12.02 Daytime running lamps

- (1) Daytime running lamps shall meet the following conditions:
- a) Shall emit white or yellowish (selective yellow) light.
 - b) Shall be positioned at the front of the vehicle and be directed forward.
 - c) Shall be located no more than 0.40 m from the outer edge of the vehicle.
 - d) Shall be at least 0.25 m and not more than 1.50 m above the ground.
 - e) Shall have a luminous intensity between 400 cd and 1 200 cd.
- The determination is deemed to be fulfilled if the lamp has a power consumption of between 15 W and 21 W and is positioned in front of a parabol.

- f) Shall have a illuminating surface of at least 40 cm².
- (2) Daytime running lamps of a pair of lamps shall comply with the provisions of paragraph 6.02.001 (2).

(3) The position of daytime running lamps shall be measured as described in paragraph 6.02.001 (3).

6.12.03 Dipped-beam headlamps with reduced voltage

(1) The voltage above the lamp at a 12 V or 24 V plant shall be at least 11 V and 22 V respectively at full charge voltage.

6.12.020 car

(1) A car may be equipped with two daytime running lamps.

6.12.030 motorcycle

(1) Motorcycles may be equipped with two daytime running lamps.

(2) Special daytime running lights may be emitted from two daytime running lamps or two daytime running lamps and one dipped-beam headlamp (possibly with reduced voltage).

6.12.032 two-wheel motorcycle with side-car

(1) Daytime running lamps shall be placed on the motorcycle in accordance with the rules applicable to two-wheel motorcycles.

6.12.040 moped

(1) Mopeds must comply with the requirements for motorcycles.

Before 01.11.19: Light mopeds may be fitted with one daytime running lamp.

6.12.050 tractor

(1) The tractor may be equipped with two daytime running lamps.

6.12.060 engine tools

(1) Engine tools shall comply with the provisions of the tractor.

6.12.099 powered block wagon

(1) Power-driven articulated vehicles shall comply with the provisions applicable to the vehicle.

6.13 Contours marking

6.13.01 General provisions

(1) Contour markings shall show the horizontal and vertical dimensions of a vehicle and shall be reflective.

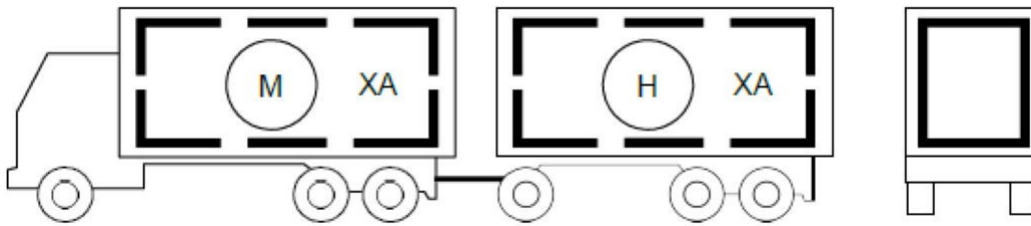
(2) One of the following options may be used as contours:

- a) Full contour marking, consisting of a contour marking showing the outline of the vehicle with a continuous line.
- b) Partial contour marking, consisting of a contour marking showing the horizontal dimension of the vehicle with a continuous line and its vertical dimension by marking the upper corners.
- c) Line markings, consisting of a conspicuity marking intended to display the horizontal dimensions (length and width) of a vehicle by a continuous line.

(3) Contour markings shall comply with the following conditions:

- a) Shall be approved and marked as Class 'C' in accordance with UN Regulation 104;
- b) Shall be made of 50-60 mm wide reflective material.
- c) Shall bear at least one visible 'E' mark on any part of the contour marking.

- d) Shall be of yellow or white colour at the side of the vehicle and of red or yellow colour at the rear of the vehicle.
 - e) Shall be so arranged that if the contiguous parts of the contour marking are broken, the distance between the parts shall not exceed 50 % of the length of the shortest part.
 - f) Shall be so arranged that, if the structure of the vehicle so requires, the lower part of the contour marking is not less than 0.25 m and not more than 1.50 m above the ground or 2.50 m above the ground.
 - g) Shall be positioned such that the distance from each required stop lamp is greater than 0.20 m.
- (4) Full contour marking shall be placed on the side and/or at the rear of the vehicle as close as possible to its outer edges as shown in the example below.



- (5) Partial contour markings shall comply with the following conditions:
- a) Shall be placed on the side and/or at the rear of the vehicle as close as possible to its outer edges.
 - b) Shall consist of the lower horizontal part of full contour markings and one marking in each of the upper corners with two perpendicular parts each having a length of at least 0.25 m.
- (6) Line markings shall comply with the following conditions:
- a) Shall be on the side, front and/or rear of the vehicle as close as possible to its lower edge.
 - b) Shall consist of the lower horizontal part of full contour marking.
 - c) Shall be white when placed at the front of the vehicle.
- (7) Vehicles bearing full contour markings on the side may bear reflective advertisements/logos as specified in points (8) and (9).
- (8) Advertisements/logos must meet the following conditions:
- a) Shall be approved and marked in class “D” or class “E” in accordance with UN Regulation 104, except that white reflective material used as basic material in full-print advertising/logos without free white fields shall be marked in class “D/E”.
 - b) Shall be made of a low reflective material, which may be of all colours.
 - c) Shall be positioned on the side of the vehicle.
 - d) Shall be located within the contour marking.
- (9) Reflective material of Class “D” shall be used in reflecting surfaces less than 2.0 m² and reflective materials of Class “E” shall be used for reflecting areas of 2.0 m² and larger.

6.13.010 power-driven vehicle

- (1) Power-driven vehicles may bear contours and low-reflective multi-colour advertising/logos.
- (2) Contour markings shall not be placed at the front of the vehicle.

6.13.021 M1 passenger car

- (1) A passenger car M1 with a maximum authorised mass not exceeding 3.500 kg shall not bear any contours. Before 01.07.25: Not applicable.

6.13.025 truck N2

- (1) Heavy goods vehicles N2 with a maximum authorised mass exceeding 7.500 kg and with a width exceeding 2.10 m shall bear a rearward full contour marking.
Before 01.07.25: Not applicable.
- (2) Heavy goods vehicles N2 with a maximum authorised weight of more than 7.500 kg and a length of more than 6.00 m shall bear lateral partial contours.
Before 01.07.25: Not applicable.
- (3) The requirements of paragraphs (1) and (2) do not apply to lorry N2 approved as tractive power of a semi-trailer.
- (4) A line marking may be installed instead of the mandatory contour marking if the shape, structure, construction or operating conditions of the vehicle make it impossible to install the mandatory contour marking.

6.13.026 truck N3

- (1) Heavy goods vehicle N3 shall comply with the provisions of N2.

6.13.030 motorcycle

- (1) Motorcycles shall not bear contours.

6.13.040 moped

- (1) Mopeds must not bear contours.

6.13.100 trailer

- (1) Trailers may bear contours and low reflective multi-colour advertising/logos.

6.13.111 hinge/semi-trailer O1

- (1) The hinge/semi-trailer O1 shall not bear contours. Before 01.07.25: Not applicable.

6.13.113 hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3 with a width of more than 2.10 m shall bear a rearward full contour marking.
Before 01.07.25: Not applicable.
- (2) The hinge/semi-trailer O3 with a length of more than 6.00 m, including the drawbar of the trailer, shall bear lateral partial contour markings.
Before 01.07.25: Not applicable.
- (3) A line marking may be installed instead of the mandatory contour marking if the shape, structure, construction or operating conditions of the vehicle make it impossible to install the mandatory contour marking.

6.13.114 hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the provisions of O3.

7. Engine, noise, air pollution, etc.

7.1.01 General provisions

- (1) The power output and speed of the engine shall be capable of being continuously controlled from the driving position. A gas pedal/handle shall not be fitted with a restraint system.

Before 01.01.80: The vehicle may originally be fitted with hand-holds fitted with restraint systems if it is easy to operate while driving.

7.1.02 Speed limitation devices

(1) Required speed limiters shall comply with the design provisions of UN Regulation No 89.

Before 01.01.17: The speed limiter may comply with Directive 92/24/EEC.

(2) The following cars are exempted from the speed limiter requirement:

- a) Car used by the Armed Forces, the Danish Emergency Management Agency, the fire brigade and similar emergency services and the police. Only cars authorised for emergency services are considered to be similar emergency services.
- b) A vehicle which, by reason of its design, cannot travel faster than the speed at which the speed limiter must be set.

Before 01.07.25: Cars used in scientific trials and cars used for public services in urban areas are exempted from speed limitation requirements.

7.01.010 power-driven vehicle

(1) A power-driven vehicle may be equipped with an automatic speed control if the steering device meets the following requirements:

- a) May be entered and uncoupled manually with a special control at the driving position.
- b) Can be disconnected by application of the service braking system.
- c) Easy and easy to operate.

7.01.022 M2 passenger car

(1) Passenger cars M2 shall be fitted with speed limiters set so that the speed cannot exceed 100 km/h.

Before 01.01.05: Only applicable to passenger car M2 with diesel engine which, according to the Danish type-approval, complies with Directive 88/77/EEC on air pollution.

Before 01.10.01: Not applicable.

(2) Fire safety in engine rooms:

- a) No combustible silencing material, material capable of absorbing fuel, lubricants, or other combustible material shall be used in the engine compartment unless this is covered by an impermeable plate.
- b) Precautions shall be taken, either by a suitable layout of the engine compartment or by the provision of drainage orifices, to avoid, so far as possible, the accumulation of fuel, lubricating oil or any other combustible material in any part of the engine compartment.
- c) A heat-resistant partition shall be provided between the engine compartment or other heat sources and the rest of the vehicle. All suspensions, clips, gaskets, etc. connected with the partition shall be fire resistant.

Before 01.04.10: Not applicable.

7.01.023 M3 passenger car

(1) Passenger cars M3 shall be fitted with speed limiters set so that the speed cannot exceed 100 km/h.

Before 01.10.01: Applicable only to passenger cars M3 with a maximum authorised mass exceeding 10.000 kg. Before 01.01.88: Not applicable.

(2) Passenger cars M3 shall comply with the provisions of paragraph 7.01.022 (2) relating to fire safety in engine spaces. Before 01.04.10: Not applicable.

7.1.025 Truck N2

- (1) Truck N2 shall be fitted with speed limiters set so that the speed cannot exceed 90 km/h.

Before 01.01.05: Applies only to heavy goods vehicles N2 with diesel engines which, according to the Danish type-approval, comply with Directive 88/77/EEC on air pollution.

Before 01.10.01: Not applicable.

7.1.026 Truck N3

- (1) Truck N3 shall be fitted with speed limiters set so that the speed cannot exceed 90 km/h.

Before 01.01.88: Not applicable.

7.01.040 moped

- (1) The power of the engine must be limited in such a way that it is difficult to increase the maximum speed of the moped. The engine shall comply with the technical requirements of Regulation 44/2014/EU, Annex II.

Before 01.07.25: The restriction may have been made in accordance with Chapter 7 of Directive 97/24/EC on anti-tampering measures or UN Resolution on the construction of vehicles (R. E. 3), paragraph 8.24.

7.01.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

7.2 Fuel plant

7.2.01 General provisions

- (1) The fuel tank and wiring shall be made of bright and abrasive material resistant to fuel and heat. The tank shall be made of non-combustible material or comply with the design provisions of UN Regulation 34-03, Annex 5.

Before 01.07.25: Plastic tank may comply with the design provisions on fire resistance in UN Regulation 34. Other fuel tanks made of combustible material, other than plastic, may comply with the design provisions of UN Regulation 34, Annex 5.

Before 01.01.17: Plastic fuel tank may comply with the design provisions on fire resistance set out in point 6.3.5 of Annex I to Directive 70/221/EEC, as amended by Directive 2000/8/EC.

- (2) Fuel tanks and wires shall be so designed, arranged and fixed that vibrations, etc., do not give rise to a risk of wear and tear in normal use of the vehicle.

- (3) Joints in fuel lines, including hoses, shall be protected against accidental separation.

- (4) A petrol fuelled vehicle without a feed pump between the fuel tank and the carburettor or equivalent shall be provided with a shut-off valve in the fuel line immediately adjacent to the fuel tank. Before 01.05.77: Not applicable to car.

- (5) Motor vehicles and mopeds placed on the market for the first time between 1 July 2022 and 12 April 2024 inclusive shall bear on or in the immediate vicinity of all fuel tanks a marking bearing one or more symbols indicating the types of fuel the vehicle may use. The symbols shall be designed and positioned according to standard DS/EN 16942: 2016 + A1: 2021.

Before 01.07.22: The symbols may be designed according to standard DS/EN 16942: 2016. Before 12.10.18: Not applicable.

- (6) Electrically rechargeable motor vehicles and mopeds placed on the market for the first time between 1 October 2022 and 12 April 2024 inclusive shall be marked in the vicinity of the vehicle or recharging inlet and associated charging plugs with one or more symbols indicating the connector type of the vehicle. The symbols shall be designed and positioned according to standard DS/EN 17186: 2019.
Before 01.10.22: Not applicable.

7.02.022 M2 passenger car

- (1) The fuel tank shall not be located inside the car. The determination is deemed to be fulfilled if the container is placed below the floor.
Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.
- (2) It shall be ensured that any spillage during refuelling cannot enter the car but is brought to the road.
Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.
- (3) Fuel lines shall not pass through the car body.
Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

7.02.023 M3 passenger car

- (1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

7.3 Transmission system

7.3.01 General provisions

- (1) The clutch pedal/grip shall operate evenly and shall not require excessive actuation. The clutch shall operate and shall not be capable of slipping during full engine torque output.
If the coupling on the motorcycle is operated only with a pedal, the pedal shall be able to remain in the disconnected position.
- (2) Transmission elements shall be shielded in such a way that they do not present unnecessary hazards.
- (3) Power-driven vehicles, other than motorcycles, with an unladen mass exceeding 400 kg shall be fitted with reversing gears or other devices for rearward operation.
Before 01.05.77: Not applicable to tractor and engine gear.

7.4 Exhaust system;

7.4.01 General provisions

- (1) The exhaust system shall be arranged and positioned as follows:
- Exhaust gases shall not be capable of entering the driver's and passenger compartments.
 - The exhaust gas shall not be driven to the right of the vehicle unless the vehicle is EU type-approved with the exhaust bearing on the right or has a particulate filter or catalytic converter.
 - There shall be no danger of ignition of combustible materials on the vehicle. The distance from non-heat-resistant material shall be greater than 50 mm.

7.04.040 moped

- (1) Mopeds do not have to comply with paragraph 7.04.001 (1) (b).

7.5 Noise

7.5.01 General provisions

- (1) Power-driven vehicles shall be so arranged that they do not emit excessive noise.
- (2) The sound level of motor vehicles shall be measured by the following methods:
 - a) Noise measurement method I (driving measurement).
 - b) Sound measurement method II (7 m stop).
 - c) Noise measurement method IV (near field stop).

Before 01.04.04: For light mopeds, noise measurement method III (rolling field measurement) was used.
- (3) At the time of first registration or entry into service of a car, motorcycle, moped and tractor, the noise level shall not exceed the noise limits applicable under Method I. For vehicles in service, the noise level shall not exceed the limits by more than 3 dB (A).

Before 01.10.82: At the time of first registration, the vehicle may have been measured using sound measurement method II.
- (4) In the case of a motor vehicle, motorcycle and moped in service, the noise level shall not exceed by more than 3 dB (A) the noise level at first registration measured according to sound measurement methods II or IV.

Before 01.04.04: For light mopeds put into service, the noise level shall not exceed the applicable noise limit for noise measurement method III.
- (5) In the case of a tractor in service, the noise level shall not exceed by more than 3 dB (A) the noise level measured according to sound measurement methods II or IV;

Before 01.05.77: Not applicable.
- (6) At the time of first entry into service of power-driven block wagons, the noise level shall not exceed the applicable noise limits for noise measurement method I or II. For power-driven wheeled vehicles in service, the noise level shall not exceed the limits by more than 3 dB (A).
- (7) In the case of power-driven wheeled vehicles in service, the noise level shall not exceed by more than 3 dB (A) the sound level measured according to sound measurement methods II or IV.

7.5.020 Car

- (1) For off-road vehicles with a maximum permissible mass exceeding 2.000 kg, the noise limits indicated are increased by:
 - a) 1 DB (A) for cars with an engine power of less than 150 kW.
 - b) 2 DB (A) for cars with an engine power equal to or greater than 150 kW. Before 01.10.90: Not applicable.

7.5.021 M1 passenger car

- (1) For passenger M1, the noise limit measured using the noise measurement method I is 75 dB (A) but 76 dB (A) in the case of a vehicle with a direct injection diesel engine.

Before 01.10.96: The following noise limits apply according to Noise Measurement Method I:
— 78 dB (A), but 79 dB (A) for direct injection diesel vehicles.

Before 01.10.90: The following noise limit shall apply according to the noise measurement method I:
— 81 dB (A).

Before 01.10.82: The following noise limits shall apply in accordance with noise measurement method II:

 - 83 DB (A) for vehicles with a maximum permissible mass not exceeding 3.500 kg and equipped with petrol or F-gas engines.
 - 87 DB (A) for vehicles with a maximum permissible mass not exceeding 3.500 kg and equipped with a diesel engine.
 - 87 DB (A) for vehicles with a maximum permissible mass exceeding 3.500 kg and equipped with petrol or F-gas engines.
 - 89 DB (A) for vehicles with a maximum permissible mass exceeding 3.500 kg and equipped with a diesel engine.

Before 01.07.69: The noise level must not be significantly higher than the original noise level of the car.

- (2) For M1 passenger cars with an engine power of more than 140 kW and an engine power/maximum permissible mass ratio of more than 75 kW/tonne, the noise limits indicated are increased by 1 dB (A) under the conditions laid down in Directive 70/157/EEC, as amended.
Applicable only in relation to the current noise limits in point (1).

7.5.022 M2 passenger car

- (1) For M2 passenger cars, the following noise limits apply according to noise measurement method I:
- a) 77 dB (A) for vehicles with a maximum permissible mass not exceeding 2.000 kg, but 78 dB (A) for direct injection diesel engines.
 - b) 78 dB (A) for vehicles with a maximum permissible mass exceeding 2.000 kg but not exceeding 3.500 kg, but 79 dB (A) for direct injection diesel vehicles.
 - c) 79 dB (A) for vehicles with a maximum permissible mass exceeding 3.500 kg, but 80 dB (A) for cars with an engine power equal to or greater than 150 kW.

Before 01.10.96: The following noise limits apply according to Noise Measurement Method I:

- 79 dB (A) for vehicles with a maximum permissible mass not exceeding 2.000 kg, but 80 dB (A) for direct injection diesel engines.
- 80 dB (A) for vehicles with a maximum permissible mass exceeding 2.000 kg but not exceeding 3.500 kg, but 81 dB (A) for direct injection diesel vehicles.
- 81 dB (A) for vehicles with a maximum permissible mass exceeding 3.500 kg, but 84 dB (A) for cars with an engine power equal to or greater than 150 kW.

Before 01.10.90: The following noise limits apply according to Noise Measurement Method I:

- 82 dB (A) for vehicles with a maximum permissible mass not exceeding 3.500 kg.
- 83 dB (A) for vehicles with a maximum permissible mass exceeding 3.500 kg, but 86 dB (A) for cars with an engine power of 200 hp (DIN) (147 kW) or more.

Before 01.10.82: The following noise limits shall apply in accordance with noise measurement method II:

- 83 dB (A) for vehicles with a maximum permissible mass not exceeding 3.500 kg and equipped with petrol or F-gas engines.
- 87 dB (A) for vehicles with a maximum permissible mass not exceeding 3.500 kg and equipped with a diesel engine.
- 87 dB (A) for vehicles with a maximum permissible mass exceeding 3.500 kg and equipped with petrol or F-gas engines.
- 89 dB (A) for vehicles with a maximum mass exceeding 3.500 kg and equipped with a diesel engine.

Before 01.07.69: The noise level must not be significantly higher than the original noise level of the car.

7.5.023 M3 passenger car

- (1) For M3 passenger cars, the following noise limits apply according to noise measurement method I: 79 dB (A), but 81 dB (A) for cars with an engine power equal to or greater than 150 kW. Before 01.10.96: The following noise limits apply according to Noise Measurement Method I:

- 81 dB (A), but 84 dB (A) for cars with an engine power equal to or greater than 200 hp (DIN) (147 kW).

Before 01.10.90: The following noise limits apply according to Noise Measurement Method I:

- 83 dB (A), but 86 dB (A) for cars with an engine power equal to or greater than 200 hp (DIN) (147 kW).

Before 01.10.82: The following noise limits shall apply in accordance with noise measurement method II:

- 87 dB (A) for motor vehicles equipped with petrol or F-gas engines.
- 89 dB (A) for a vehicle equipped with a diesel engine.

Before 01.07.69: The noise level must not be significantly higher than the original noise level of the car.

7.5.024 Van N1

(1) For van N1, the following noise limits apply according to noise measurement method I:

- a) 77 dB (A) for vehicles with a maximum permissible mass not exceeding 2.000 kg, but 78 dB (A) for direct injection diesel engines.
- b) 78 dB (A) for vehicles with a maximum permissible mass exceeding 2.000 kg but not exceeding 3.500 kg, but 79 dB (A) for direct injection diesel vehicles.

Before 01.10.96: The following noise limits apply according to Noise Measurement Method I:

- 79 dB (A) for vehicles with a maximum permissible mass not exceeding 2.000 kg, but 80 dB (A) for direct injection diesel engines.
- 80 dB (A) for vehicles with a maximum permissible mass exceeding 2.000 kg, but 81 dB (A) for direct injection diesel engines.

Before 01.10.90: The following noise limit shall apply according to the noise measurement method I:
— 82 dB (A).

Before 01.10.82: The following noise limits shall apply in accordance with
noise measurement method II:

- 83 dB (A) for motor vehicles equipped with petrol or F-gas engines.
- 87 dB (A) for a vehicle equipped with a diesel engine.

Before 01.07.69: The noise level must not be significantly higher than the original noise level of the car.

7.5.025 Truck N2

(1) For truck N2, the following noise limits apply according to Noise Measurement Method I:

- a) 78 dB (A) for cars with an engine power of less than 75 kW.
- b) 79 dB (A) for cars with an engine power equal to or greater than 75 kW but less than 150 kW.
- c) 81 dB (A) for cars with an engine power equal to or greater than 150 kW.

Before 01.10.96: The following noise limits apply according to Noise Measurement Method I:

- 82 dB (A) for cars, with an engine power of less than 75 kW.
- 84 dB (A) for cars, with an engine power equal to or greater than 75 kW but less than 150 kW.
- 85 dB (A) for cars, with an engine power equal to or greater than 150 kW.

Before 01.10.90: The following noise limit shall apply according to the noise measurement method I:
— 87 dB (A).

Before 01.10.82: The following noise limits shall apply in accordance with
noise measurement method II:

- 87 dB (A) for motor vehicles equipped with petrol or F-gas engines.
- 89 dB (A) for a vehicle equipped with a diesel engine.

Before 01.07.69: The noise level must not be significantly higher than the original noise level of the car.

7.5.026 Truck N3

(1) Truck N3 shall comply with the requirements for truck N2.

Before 01.10.90: The following noise limits apply according to Noise Measurement Method I:

- 87 dB (A), but 89 dB (A) for cars with an engine power equal to or greater than 200 hp (DIN) (147 kW).

Before 01.10.82: The following noise limits shall apply in accordance with
noise measurement method II:

- 87 dB (A) for motor vehicles equipped with petrol or F-gas engines.
- 89 dB (A) for a vehicle equipped with a diesel engine.

Before 01.07.69: The noise level must not be significantly higher than the original noise level of the car.

7.05.030 motorcycle

(1) For motorcycles, the following noise limits apply according to noise measurement method I:

- a) 75 dB (A) for motorcycles of a cylinder capacity not exceeding 80 cm³.
- b) 77 dB (A) for motorcycles with a cylinder capacity of more than 80 cm³ but not more than 175 cm³.
- c) 80 dB (A) for motorcycles with a cylinder capacity of more than

175 cm³. Before 01.04.04: The following noise limits apply according to Noise Measurement Method I:

- 77 DB (A) for motorcycles of a cylinder capacity not exceeding 80 cm³.
- 79 DB (A) for motorcycles with a cylinder capacity of more than 80 cm³ but not more than 175 cm³.
- 82 DB (A) for motorcycles with a cylinder capacity of more than 175 cm³. Before 01.10.90: The following noise limits apply according to Noise Measurement Method I:

- 78 DB (A) for motorcycles of a cylinder capacity not exceeding 80 cm³.
- 80 DB (A) for motorcycles with a cylinder capacity of more than 80 cm³ and not more than 125 cm³.
- 83 DB (A) for motorcycles with a cylinder capacity of more than 125 cm³ and not more than 350 cm³.
- 85 DB (A) for motorcycles with a cylinder capacity of more than 350 cm³ and not more than 500 cm³.
- 86 DB (A) for motorcycles with a cylinder capacity of more than 500 cm³. Before 01.10.82: The following noise limits shall apply in accordance with noise measurement method II:

- 84 DB (A) for two-stroke motorcycles.
- 88 DB (A) for four-stroke motorcycles.

Before 01.07.69: The noise level shall not be significantly higher than the original noise level of the motorcycle.

7.05.040 moped

- (1) For mopeds, the following noise limits, measured using noise measurement method I, shall apply:
- a) 66 DB (A) for two-wheel mopeds with a maximum design speed not exceeding 25 km/h.
 - b) 71 DB (A) for two-wheel mopeds with a maximum design speed exceeding 25 km/h.
 - c) 76 DB (A) for three-wheel mopeds.

Before 01.04.04: Large mopeds must comply with the requirements for motorcycles.

Light mopeds must meet one of the following noise limits:

By Noise Measurement Method I: 73

DB (A). According to Noise

Measurement Method III: 76 DB (A).

7.05.050 tractor

- (1) In the case of a tractor, the following noise limits shall apply according to the noise measurement method I:
- a) 85 DB (A) for tractors with a maximum permissible mass not exceeding 1.500 kg.
 - b) 89 DB (A) for tractors with a maximum permissible mass exceeding 1.500 kg. Before 01.05.77: Not applicable.

7.05.099 powered block wagon

- (1) For powered block wagons, the noise limits according to Noise Measurement Method IV apply to truck N2.

Before 01.07.25: Power-driven vehicle may meet the following noise limits according to sound measurement method II:

- a) 86 DB (A) for a vehicle equipped with petrol or F-gas engines.
- b) 88 DB (A) for a vehicle equipped with a diesel engine.

Before 01.01.71: Not applicable.

7.6 Air pollution

7.6.01 General provisions

- (1) The engine shall be so designed that it does not emit unnecessary smoke.
- (2) For the first registration of an internal combustion engine vehicle, the vehicle shall comply with the requirements and emission standards mentioned for each type of vehicle.

7.6.020 Car

- (1) For vehicles in service equipped with positive-ignition engines not equipped with a three-way catalytic converter equipped with oxygen sensor, the carbon monoxide content of the exhaust gas at idling speed shall not exceed 3,5 per cent measured using the measurement method described in paragraph 11.02.001.

Before 01.10.86: The carbon monoxide content shall not exceed 4.5 % by volume. Before 01.04.84: The carbon monoxide content shall not exceed 5.5 % by volume.

Not applicable to vehicles with a cylinder capacity not exceeding 0.8 litres or, if this volume cannot be ascertained, with an engine power not exceeding 30 hp (DIN).

Before 01.01.71: The carbon monoxide content shall not exceed 7 % by volume.

The vehicle may be approved at the lowest achievable carbon monoxide value if evidence is provided that the new vehicle has a carburettor system of such a nature that an excessive carbon monoxide value cannot be reduced without the risk of malfunction.

- (2) In the case of a vehicle in service equipped with a positive-ignition engine equipped with a three-way catalytic converter equipped with oxygen sensor:

a) At idling speed, the carbon monoxide content of the exhaust gas measured using the measurement method described in paragraph 11.02.001 shall not exceed 0,3 per cent.

Before 01.07.02: The carbon monoxide content shall not exceed 0.5 % by volume.

b) In the event of increased idle, the carbon monoxide content of the exhaust gas measured using the measurement method described in paragraph 11.02.003 shall not exceed 0,2 per cent and the lambda figure shall be $1 \pm 0,03$ or in accordance with the manufacturer's instructions.

Before 01.07.02: The carbon monoxide content shall not exceed 0.3 % by volume.

- (3) In the case of a car equipped with a diesel engine, the corrected value of the exhaust gas opacity during free acceleration shall be specified and the car shall be marked accordingly in accordance with Regulation 715/2007/EU and its implementing measures or UN Regulation 24-03.

This excludes cars that comply with Euro VI emission standards, which do not have to bear smoke markings.

Before 01.07.03: Not applicable.

- (4) In the case of an in-service vehicle with a diesel engine, the exhaust gas opacity of the exhaust gas during free acceleration of the engine, measured using the measurement method described in paragraph 11.02.004, shall not exceed the value specified for the vehicle in accordance with paragraph (3).

This excludes cars that comply with Euro VI emission standards, which do not have to bear smoke markings. These must comply with point (5).

- (5) For in-service vehicles with a diesel engine complying with Euro VI emission standards, the smoke density during free acceleration of the engine measured according to the measurement method described in paragraph 11.02.004 shall not exceed 0.7 m-1.

Before 01.07.03: For in-service vehicles with a diesel engine, the exhaust gas opacity of the exhaust gas during free acceleration of the engine shall not exceed one of the following values, measured using the measurement method described in paragraph 11.02.004:

- 2.5 m-1 for intake engines.

- 3.0 m-1 for turbo-charged engines.

The requirement shall be deemed to be satisfied if, at one of the first five free accelerations, the measured value does not exceed one of the following values:

- 1.8 m-1 for intake engines.

- 2.1 m-1 for turbo-charged engines.

Before 01.01.80: Not applicable.

7.6.021 M1 passenger car

- (1) Passenger cars M1 shall meet the technical requirements of one of the following sets of rules:

- a) Regulation 715/2007/EU and its implementing measures (Euro 6).
- b) Regulation 595/2009/EU and its implementing measures (Euro VI), or
- c) California Code of Regulations, as set out in Regulation (EU) 2017/1151 and applicable to the most recent model year.

Before 01.07.25: The M1 passenger car can comply with the California Code of Regulations, as specified in Regulation 692/2008/EU and applicable to the most recent model year.

Before 01.09.15: Passenger cars M1 can comply with Regulation 715/2007/EU and its implementing measures (Euro 5).

Passenger cars M1 with a diesel engine and with a reference mass exceeding 2.610 kg (corresponding to the mass in running order of 2.585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro V).

Before 01.04.11: Passenger cars M1 can comply with Directive 70/220/EEC as amended by Directive 2002/80/EC (Euro 4).

Alternatively, passenger cars M1 may meet California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDV (Light-Duty Vehicles equipped for a maximum of 12 passengers).

Passenger cars M1 with a diesel engine and with a reference mass exceeding 2.610 kg (corresponding to the mass in running order of 2.585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro IV).

Before 01.01.07: Passenger cars M1 can comply with Directive 70/220/EEC as amended by Directive 2001/1/EC (Euro 3).

Passenger cars M1 equipped with diesel engines and having a maximum authorised mass exceeding 2.500 kg may comply with Directive 88/77/EEC as amended by Directive 2001/27/EC (Euro III).

Before 01.01.01: Passenger cars M1 can comply with Directive 70/220/EEC as amended by Directive 96/44/EC (Euro 2).

Motor cars M1 with a diesel engine and having a maximum authorised mass exceeding 2.500 kg may comply with Directive 88/77/EEC as amended by Directive 96/1/EC (Euro II).

Before 01.01.96: Passenger cars M1 can comply with Directive 70/220/EEC as amended by Directive 89/458/EEC (Euro 1).

Before 01.01.93: The requirement shall not apply to M1 passenger cars with an engine capacity of not less than 1.400 cm³ and no more than 2.000 cm³.

Before 01.10.90: Not applicable.

7.6.022 M2 passenger car

(1) For passenger cars M2, the provisions of point 7.06.021 (1) shall apply to passenger cars M1.

7.6.023 M3 passenger car

(1) Passenger cars M3 must comply with the technical requirements of Regulation 595/2009/EU and its implementing measures as last amended (Euro VI).

Before 01.01.14: Diesel powered passenger cars M3 can comply with Directive 2005/55/EC (Euro V or EEV). For M3 passenger cars equipped with a petrol engine, compliance with a particular Euro standard is not required. The vehicle shall comply only with the general provision in paragraph 7.06.001 (1).

Before 01.10.09: M3 passenger cars with diesel engines may comply with Directive 2005/55/EC (B1), Directive 2005/78/EC or Directive 2006/51/EC (Euro IV).

Before 01.10.06: M3 passenger cars with diesel engines may comply with Directive 1999/96/EC or Directive 2001/27/EC (Euro III).

Truck N2 with a maximum permissible mass not exceeding 3.860 kg may meet the California

Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDT (Light-Duty Truck with a maximum permissible mass not exceeding 8.500 lb equivalent to 3.860 kg).

Alternatively, heavy goods vehicles N2 may meet California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDV (Light Duty Vehicles equipped for a maximum of 12 passengers).

Before 01.10.01: M3 passenger cars with diesel engines may comply with Directive 91/542/EEC (B), Directive 96/1/EC or Directive 96/69/EC (Euro II).

Before 01.10.96: M3 passenger cars with diesel engines may comply with Directive 91/542/EEC (A), Directive 93/59/EEC or Directive 96/44/EC (Euro I).

Before 01.10.93: Passenger cars M3 with diesel engine may comply with Directive 88/77/EEC or UN Regulation 49-01 (Euro 0).

Before 01.10.90: Not applicable.

7.6.024 Van N1

(1) Vans N1 shall meet the technical requirements of one of the following sets of rules:

- a) Regulation 715/2007/EU and its implementing measures (Euro 6).
- b) Regulation 595/2009/EU and its implementing measures (Euro VI).
- c) California Code of Regulations, as set out in Regulation (EU) 2017/1151 and applicable to the most recent model year.

Before 01.01.17: Van N1 can comply with Regulation 715/2007/EU and its implementing measures (Euro 5).

Vans N1 with a diesel engine and with a reference mass exceeding 2.610 kg (corresponding to the mass in running order of 2.585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro V).

Before 01.04.11: Van N1 can comply with Directive 70/220/EEC as amended by Directive 2002/80/EC (Euro 4).

Alternatively, vans N1 can meet California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDT (Light-Duty Truck with a maximum permissible mass not exceeding 8.500 lb equivalent to 3.860 kg).

Alternatively, vans N1 may meet California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level ULEV (Ultra Low Emission Vehicle) or better for category MDV (Medium-Duty Vehicles with a maximum permissible mass exceeding 8.500 lb and not exceeding 14.000 lb equivalent to 6.300 kg).

Vans N1 with a diesel engine and with a reference mass exceeding 2.610 kg (corresponding to the mass in running order of 2.585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro IV).

Before 01.01.07: Van N1 can comply with Directive 70/220/EEC as amended by Directive 2001/1/EC (Euro 3).

Vans N1 with a diesel engine and having a maximum authorised mass exceeding 2.500 kg may comply with Directive 88/77/EEC as amended by Directive 2001/27/EC (Euro III).

Before 01.01.02: Van N1 can comply with Directive 70/220/EEC as amended by Directive 96/44/EC (Euro 2).

Vans N1 with a diesel engine and having a maximum authorised mass exceeding 2.500 kg may comply with Directive 88/77/EEC as amended by Directive 96/1/EC (Euro II).

Before 01.01.97: Vans N1 can comply with Directive 70/220/EEC as amended by 89/458/EEC (Euro 1). Before 01.10.94: For vans N1 with a load capacity exceeding 685 kg, the requirement does not apply.

Before 01.10.90: Not applicable.

7.6.025 Truck N2

(1) Heavy goods vehicles N2 shall meet the technical requirements of one of the following sets of rules:

- a) Regulation 715/2007/EU and its implementing measures (Euro 6).
- b) Regulation 595/2009/EU and its implementing measures (Euro VI).

Before 01.07.25: Heavy goods vehicles N2 with a maximum permissible mass not exceeding 5.000 kg may comply with the provisions of paragraph 7.06.024.

Heavy goods vehicles N2 with a maximum permissible mass exceeding 5.000 kg may comply with the provisions of paragraph 7.06.023.

7.6.026 Truck N3

(1) Heavy goods vehicle N3 shall meet the technical requirements of point 7.06.023 for passenger M3.

7.6.031 Two-wheel motorcycle

(1) Two-wheel motorcycles shall comply with the technical requirements of Regulation 168/2013/EU and its implementing measures (Euro 5).

Before 01.01.21: Two-wheel motorcycles can comply with Regulation 168/2013/EU (Euro 4).

Before 01.01.17: Two-wheel motorcycles may comply with Directive 97/24/EC as amended by Directive 2003/77/EC and shall comply with the limit values set out in row B of the table in point 2.2.1.1.5. of Annex II to Chapter 5 of the Directive (Euro 3).

Before 01.01.08: Two-wheel motorcycles may comply with Directive 97/24/EC as amended by 2002/51/EC and shall comply with the limit values set out in row A of the table in point 2.2.1.1.5. of Annex II to Chapter 5 of the Directive (Euro 2).

Before 01.07.05: Not applicable to Trial and Enduro motorcycles.

Trial motorcycles are defined as vehicles with the following characteristics:

- Maximum seat height: 700 mm.
- Minimum ground clearance: 280 mm.
- Maximum fuel tank capacity: 4 litres.
- Minimum overall gear ratio in highest gear (primary ratio x gear ratio x final gear ratio): 7,5.

Enduro motorcycles are defined as vehicles having the following characteristics:

- Minimum seat height: 900 mm.
- Minimum ground clearance: 310 mm.
- Minimum overall gear ratio in highest gear (primary ratio x gear ratio x final gear ratio): 6,0.

Before 01.07.04: Not applicable.

7.6.032 Two-wheel motorcycle with side-car

(1) For two-wheel motorcycles with side-car, the provisions of paragraph 7.06.031 apply to two-wheel motorcycles.

7.6.033 Motor tricycle

(1) For tricycles, the provisions of paragraph 7.06.031 shall apply to two-wheel motorcycles.

Before 01.01.17: Tricycles may meet the technical requirements of Directive 97/24/EC as amended by 2002/51/EC and shall comply with the limit values set out in row A of the table in point 2.2.1.1.5. of Annex II to Chapter 5 of the Directive (Euro 2).

Before 01.07.04: Not applicable.

7.06.040 moped

(1) mopeds must comply with the technical requirements of Regulation 168/2013/EU and its implementing measures (Euro 5).

Before 01.01.21: mopeds can comply with Regulation 168/2013/EU and its implementing measures (Euro 4).

Before 01.01.18: mopeds may comply with Directive 97/24/EC or Regulation 168/2013/EU and its implementing measures (Euro 2).

Before 01.07.04: Not applicable.

7.06.050 tractor

(1) In the case of a tractor, the engine shall be approved and marked in accordance with the Annexes to Regulation (EU) 2016/1628;

III. However, petrol engines with a power of less than 56 kW are not required.

Before 01.07.25: Diesel engines may be approved and labelled in accordance with Stage IV of Directive 2000/25/EC as amended by Directive 2005/13/EC. However, there are no requirements for diesel engines with a power of less than 19 kW and for petrol engines regardless of power.

Alternatively, the engine may be approved and marked in accordance with Stage IV of Directive 97/68/EC (on non-road mobile machinery).

However, a tractor may be one step towards the rear provided that the tractor is approved according to the flexible arrangement described in Directive 2011/72/EU.

Flexible scheme approvals may be granted to tractor manufacturers for a limited number of engines which comply only with the previous stage of limit values.

Tractors approved under the flexible arrangement shall bear a label containing the following text:

‘TRACTOR NO: XXX (consecutive tractor numbers) AF yyy (total number of tractors in the respective power range) WITH MOTORNr zzz WITH TYPEGODUCTION (Directive 2000/25/EC) No www’ and the engine shall bear a label with the following text: ‘Motor placed on the market under the flexibility scheme’.

The texts must be in Danish or another Community language.

Before 01.10.16: Diesel engines may be approved and marked in accordance with Stage III B of Directive 2000/25/EC as amended by 2005/13/EC. However, there are no requirements for diesel engines with a power of less than 19 kW and for petrol engines regardless of power.

Alternatively, the engine may be approved and marked according to Stage III B of Directive 97/68/EC (on non-road mobile machinery).

Before 01.01.15: Diesel engines may be approved and marked in accordance with Stage III A of Directive 2000/25/EC as amended by 2005/13/EC. However, there are no requirements for diesel engines with a power of less than 19 kW and for petrol engines regardless of power.

Alternatively, the engine may be approved and marked according to Stage III A of Directive 97/68/EC (on non-road mobile machinery).

Before 01.01.10: Diesel engines may be approved and labelled in accordance with Stage II of Directive 2000/25/EC. However, there are no requirements for diesel engines with a power of less than 37 kW and for petrol engines regardless of power.

Alternatively, the engine may be approved and marked according to one of the following sets of rules:

- Step II of Directive 97/68/EC (on non-road mobile machinery).
- Stages A, B1, B2 or C of Directive 88/77/EEC as amended by Directive 96/96/EC (on air pollution from diesel engines for trucks and buses).
- UN Regulation 49-03 (on air pollution from diesel engines for trucks and buses).
- UN Regulation 96-01 Stage B (on air pollution from diesel engines for tractors).

Before 01.07.05: Diesel engines may be approved and labelled in accordance with Stage I of Directive 2000/25/EC. However, there are no requirements for diesel engines with a power of less than 37 kW and for petrol engines regardless of power.

Alternatively, the engine may be approved and marked according to Stage I of Directive 97/68/EC (on non-road mobile machinery).

Alternatively, an engine with a power not exceeding 129 kW may be approved and marked according to one of the following sets of rules:

- Directive 97/68/EC (on non-road mobile machinery).
- Directive 88/77/EEC as amended by 91/542/EEC (on air pollution from diesel engines for lorries and buses).

- UN Regulation 49-02 (on air pollution from diesel engines for trucks and buses).
- UN Regulation 96 (on air pollution from diesel engines for tractors).

Before 01.07.02: No requirement.

7.06.060 engine tools

- (1) In the case of an engine tool equipped with a diesel engine, the engine shall be approved and marked in accordance with Regulation (EU) 2016/1628.

Before 01.07.25: For engine tools equipped with diesel engines, the engine may be approved and marked in accordance with the Order on the limitation of air pollution from non-road mobile machinery.

7.7 Heating systems, etc.

7.7.01 General provisions

- (1) Heating systems shall be such that carbon monoxide cannot be present in the interior of the bodywork. During operation, the heaters and pipes of the heater shall not exceed 100 °C. Parts of the heating system which reach temperatures above 80 °C shall be shielded from contact.
- (2) Heating air blown into the driver's and passenger compartments shall not be warmed directly by the vehicle exhaust system.
- (3) Heating systems burning petrol or oil shall be approved in accordance with UN Regulation 122.

Before 01.07.25: Heating systems may have been approved under Directive 2001/56/EC, approved by the Danish National Agency for Emergency Management in Sweden (the 'B' or 'SB' mark), approved by the Statens Prodningsanstalt in Sweden (the 'SP' mark), or approved by the Kraftfahrt-Bundesamt in Germany.

(»  S«-mærket)

Before 01.04.92: Heating systems may be approved by the Ministry of Justice.

- (4) Heaters burning F-gas shall be approved and labelled in accordance with UN Regulation 122.
Before 01.07.25: Heating systems may have been approved in accordance with Directive 2001/56/EC or the Gas Regulations, Section C ('CE' or 'DG' label).
Before 01.04.84: F-gas installations shall not be approved unless they are connected to a fuel tank for the operation of a car on F-gas.
- (5) An F-gas heating system connected to a fuel tank in an F-gas vehicle operation system shall be provided between the fuel tank and the heater evaporator with a magnetic valve which obstructs the fuel line when the heating system is not used. The magnetic valve shall be so arranged that any excess pressure from the evaporator is returned to the fuel line.
- (6) Heating systems shall be installed as follows:
 - a) Piping connections, etc. to the combustion chamber shall be airtight and separate from the driver, passenger and goods compartments.
 - b) It shall not be possible to inject carbon monoxide air.
 - c) The outlet pipe for combustion products shall end outside the bodywork or be connected to the engine exhaust system.
 - d) Pipes and surfaces achieving a temperature of more than 90 °C shall have a minimum distance of 50 mm from combustible material.

7.7.02 Air Conditioning System

- (1) Original equipment for air conditioning of fluorinated greenhouse gases of EC-type approved passenger car M1 or N1 of Class I (reference mass not exceeding 1.305 kg corresponding to the mass in running order of not more than 1.280

(kg) shall meet the technical requirements of Directive 2006/40/EC as implemented by Regulation 706/2007/EU and shall comply with the provisions of point (a) below.

Retrofitted air conditioning systems containing fluorinated greenhouse gases in such vehicles shall be approved and labelled in accordance with Directive 2006/40/EC, as implemented by Regulation 706/2007/EU, and shall comply with the provisions of point (a) below.

The provisions for retrofitted air conditioners apply regardless of the time of first registration.

Fluorinated greenhouse gases shall have a global warming potential (GWP) of no more than 150.

Before 01.01.17: Original and retrofitted climate equipment with fluorinated greenhouse gases shall comply with the technical requirements set out in point (1). Fluorinated greenhouse gases must have a global warming potential (GWP) of more than 150.

Before 21.06.09: The requirements apply only in case of retrofit.

7.8 Electrical safety of electric vehicles

7.08.020 car

(1) An electric powertrain car shall comply with the provisions of UN Regulation 100-03.

Before 01.01.26: An electric powertrain car shall comply with the provisions of UN Regulation 100-02.

Before 01.07.25: A car may comply with UN Regulation 100-01.

Before 01.01.17: Not applicable.

7.08.030 motorcycle

(1) Motorcycles equipped with electric powertrains shall comply with the provisions of Regulation 3/2014/EU, Annex IV. Before 01.07.25: Not applicable.

7.08.040 moped

(1) mopeds equipped with electric drive lines shall comply with the provisions of Regulation 3/2014/EU, Annex IV. Before 01.07.25: Not applicable.

7.9 F-gas fuel plants

7.9.01 General provisions

(1) No part of the gas system shall be outside the outline of the vehicle, with the exception of the filling point, which shall not extend beyond its mounting space by a maximum of 10 mm.

(2) The fuel tank shall be permanently attached to the vehicle and shall not be installed in the engine compartment. The fuel tank shall not be fitted so that metal is in contact with metal with the exception of the mounting points.

(3) The fuel tank shall not be located close to the ground less than 200 mm unless it is appropriately protected.

(4) If installed inside the vehicle, the tank shall be ventilated to the atmosphere. Ventilation shall not be made to a wheel box or directed towards a heat source, such as the exhaust.

(5) No part of the gas system shall be located within 100 mm of the exhaust or an equivalent source of heat unless they are appropriately shielded from the heat.

Before 01.04.84: Not applicable for vehicle put into service after transition to F-gas operation before that date.

7.9.02 Compressed methane gas (CNG or CBG)

- (1) Original compressed methane gas (CNG, compressed natural gas or CBG, compressed biogas) installations shall comply with the provisions of UN Regulation 110-03.
Before 01.07.25: The installation may comply with UN Regulation 110.
- (2) Retrofitted compressed methane gas facilities shall comply with the provisions of UN Regulation No 115.

7.9.03 Liquefied methane gas (LNG or LBG)

- (1) Liquefied methane (LNG, liquefied natural gas or LBG, liquefied biogas) vehicles shall comply with the provisions of UN Regulation 110-01.

7.9.04 LPG

- (1) Original LPG (liquefied petroleum gas, liquefied petroleum gas or F-gas) systems shall comply with the provisions of one of the following sets of rules:
 - a) UN Regulation 67-03.
 - b) US standards FMVSS 301 and FMVSS 303.
 - c) Canadian standard CMVSS 301.1.Before 01.07.25: Original equipment LPG systems may comply with UN Regulation 67-01.
- (2) A vehicle with a retrofitted LPG system shall comply with the provisions of UN Regulation 115.

7.9.05 Retrofitted LPG and CNG installations

- (1) Retrofitted systems shall comply with the provisions of one of the following sets of rules:
 - a) UN Regulation 115.
 - b) US standards FMVSS 303 and FMVSS 304.
 - c) Canadian standard CMVSS 301.2.

7.10. Hydrogen safety and qualification requirements for materials for hydrogen systems

7.10.020 car

- (1) Vehicles powered by hydrogen shall comply with the provisions of UN Regulation 134 on hydrogen safety and Regulation (EU) 2021/535, Annex XIV, on qualification requirements for materials.
- (2) Alternatively to paragraph (1), the vehicle shall comply with one of the following sets of rules:
 - a) The substantive requirements of Regulation 79/2009/EC as amended.
 - b) Japanese Standard Attachment 100 – Technical Standard For Fuel Systems Of Motor Vehicle Fueled By Compressed Hydrogen Gas.
 - c) Chinese standard GB/T 24549-2009 Fuel cell electric vehicles – safety requirements.
 - d) Standard ISO 23273: 2013.
 - e) American Standard SAE J2578.

8. Load-bearing elements

8.1 Chassis

8.1.01 General provisions

- (1) Self-supporting body, chassis frame and frame shall be able to withstand the stresses arising during normal use and loading of the vehicle.
- (2) Self-supporting body, chassis frame and frame shall not be deformed or otherwise damaged or sealed to such an extent that the vehicle endangers road safety.

8.01.023 M3 passenger car

(1) Articulated bus:

- a) The articulated section shall be such that the individual rigid sections of the articulated bus are not separated, whether or not part of the articulated section is detached.
- b) The articulated section shall be designed and shielded in such a way as to avoid any danger to passengers.

8.2 Wheels

8.2.01 General provisions

(1) Tyres, rims and wheel bearings, etc. shall be undamaged.

8.2.02 Tires

(1) Tires

- a) Shall have a carrying capacity at least equal to the maximum permissible axle load of the vehicle and shall be intended at least for the maximum vehicle speed.
- b) Shall be sized and designed to correspond to the rim.
- c) Shall be clearly and indelibly marked with the size designation and the name or trade mark of the manufacturer and/or the retreader.

Before 01.04.91: Not applicable.

- d) On a vehicle with a maximum speed greater than 30 km/h, shall be clearly and indelibly marked with a bearing capacity and speed indication.

Before 01.04.91: Not applicable.

(2) The pattern depth on a vehicle with a maximum speed greater than 40 km/h shall be at least

- a) 1.6 mm for vehicles with a maximum authorised mass not exceeding 3.500 kg, and
- b) 1.6 mm for vehicles with a maximum permissible mass exceeding 3.500 kg.

The pattern depth is measured in the main pattern, which means the broad grooves in the central part of the tread covering approximately 3/4 of the width of the tread.

(3) Tyres for which a minimum design depth of 1.6 mm is required shall be fitted with wear indicators (TWI).

Wear indicators shall provide visual warning when the pattern depth of the main pattern is reduced to 1.6 mm. Wear indicators shall be placed in transverse rows in the main tread pattern.

Before 01.04.91: Not applicable.

(4) The inflation pressure shall be in accordance with that prescribed by the vehicle manufacturer.

(5) Tyres of the same size and type, except those intended for temporary use, shall be used on the same axle.

(6) Tyres are divided into types depending on the structure and category of use:

a) Structure:

- Radial tyres.
- Diagonal tyres.

b) Category of use:

- Ordinary tyres (without “M + S” marking).
- Terrain and snow tyres (with ‘M + S’ marking).
- Snow tyre for severe snow conditions (with the “M + S” label and the alpine symbol “three mountain walls and one snowflake”).
- Temporary use tyres (spare spare wheel).

8.2.03 Rims

- (1) Rims shall be designed for a load corresponding to the permissible axle load on the vehicle.
- (2) Hub, wheel and wing fixtures shall lie within the outer surface of the tyre or be shielded by a wheel cap or equivalent. However, plastic caps mounted on the wheel bolts/nuts of a wheel, which can show that the bolt/nut is detached, may protrude up to 20 mm outside the outer surface of the tyre or the shielding wheel cap or equivalent.
Before 01.05.77: Hub capsules and protective rings present in the original construction of the factory shall be present. Windings shall be located within the outer edge of the tyre.
- (3) There shall be no external projections, such as wheel caps, if these are so designed as to endanger other road users.

8.2.04 Tyre pressure monitoring system

- (1) The system shall comply with the technical requirements of UN Regulation 141-01 for 'Tyre Pressure Monitoring System (TPMS)', 'Tyre Pressure Refill System (TPRS)' or 'Central Tyre Pumping System (CTIS)'. Before 01.07.25: TPMS shall not comply with a specific UN Regulation.

8.02.010 power-driven vehicle

- (1) A power-driven vehicle shall be fitted with tyres.

8.2.020 Car

- (1) Vehicles may be fitted with terrain and snow tyres designed to be at least 160 km/h (speed marking at least Q), regardless of the vehicle's maximum speed exceeding 160 km/h.
- (2) Tyres, other than retreaded tyres, shall be approved and marked in accordance with Directive 92/23/EEC or UN Regulation 30, UN Regulation 54 or UN Regulation 64.
Before 01.04.03: Not applicable to tyres produced before week 27, 2003. Before 01.01.80: Not applicable.
- (3) Retreaded tyres shall be approved and marked according to UN Regulation 108 or UN Regulation 109.
Before 01.04.03: Not applicable to tyres produced before week 27, 2003. Before 01.01.80: Not applicable.
- (4) Tyres shall be sound approved and marked in accordance with UN Regulation 117-04, with the exception of:
 - retreaded tyres;
 - tyres intended for a speed of less than 80 km/h only,
 - tyres with a nominal rim diameter of not more than 254 mm (10') or not less than 635 mm (25'),
 - T-type temporary-use spare tyres and spiked tyres.Before 01.01.26: Tyres shall be sound approved and marked in accordance with UN Regulation 117-02, with the exception of:
 - retreaded tyres;
 - tyres intended for a speed of less than 80 km/h only,
 - tyres with a nominal rim diameter of not more than 254 mm (10') or not less than 635 mm (25'),
 - T-type temporary-use spare tyres and spiked tyres.Before 01.07.25: Tyres may be noise-approved and marked in accordance with Directive 92/23/EEC as amended by Directive 2001/43/EC or UN Regulation No 117.
Before 01.10.11: Does not apply to tyres produced before week 40, 2011. Before 01.01.80: Not applicable.

8.2.021 M1 passenger car

- (1) The M1 passenger car, regardless of the maximum authorised mass, must be fitted with tyres with a pattern depth of at least 1.6 mm.

(2) Passenger cars M1 shall be fitted with a tyre pressure monitoring system. The requirement does not apply to small series passenger cars M1.

The requirement does not apply to special purpose vehicles as defined in Regulation (EU) 2018/858, which are built in several steps and where the base vehicle is not a passenger car M1.

Before 01.11.14: Not valid for

8.2.022 M2 passenger car

- (1) Passenger cars M2 with a maximum authorised weight exceeding 3.500 kg may be fitted with tyres designed to carry at least 120 km/h, regardless of the maximum speed of the vehicle exceeding 120 km/h.

Before 01.04.91: Passenger cars M2 may be fitted with truck tyres designed to be at least 100 km/h, regardless of the vehicle's maximum speed exceeding 100 km/h.

- (2) Commercial and truck tyres on passenger cars M2 may, under the authorised axle load, be up to 15 % more than the load shown in the marking of carrying capacity on the tyre, provided that:
- a) the car is an urban bus approved only for regular services; or
 - b) the car has standing space and space for a maximum of 22 passengers and the car is only authorised for regular services.
- (3) Passenger cars M2 shall be fitted with a tyre pressure monitoring system.

Before 01.01.26: Not applicable.

8.2.023 M3 passenger car

- (1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

Before 01.04.91: Passenger cars M3 may be fitted with one of the specially marked truck tyres, designed for 80 km/h, as shown in the STRO (The Scandinavian Tire -Rim Organisation) data enhancer, even if the maximum speed of the vehicle exceeds 80 km/h.

8.2.024 Van N1

- (1) Commercial vehicle N1 shall be fitted with a tyre pressure monitoring system.
The requirement does not apply to goods vehicle N1 manufactured in small series.

Before 01.01.26: Not applicable.

8.2.025 Truck N2

- (1) Truck N2 may be fitted with tyres designed to be at least 100 km/h, regardless of the maximum speed of the vehicle exceeding 100 km/h.

Before 01.04.91: Truck N2 may be fitted with one of the specially marked truck tyres designed for 80 km/h, even if the maximum speed of the vehicle exceeds 80 km/h.

- (2) Heavy goods vehicles N2 shall be equipped with a tyre pressure monitoring system.

Before 01.01.26: Not applicable.

- (3) Heavy goods vehicles N2 capable of towing an O3 or O4 category vehicle shall be equipped with a tell-tale and communication interface for the exchange of TPMS data information between the towing vehicle and the trailer.

Before 01.01.26: Not applicable.

8.2.026 Truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

- (2) In the case of heavy goods vehicles N3, calculated as traction for block vehicles, when using axle loads up to those generally permitted, the vehicle must comply with the rules applicable to lorries. In the event that the normal vehicle axle load is exceeded, the vehicle shall comply with the requirements for power-driven articulated vehicles in terms of load/speed.

8.02.030 motorcycle

- (1) Motorcycles shall be fitted with tyres with a pattern depth of not less than 1.0 mm.

8.02.040 moped

- (1) mopeds shall be fitted with tyres with a pattern depth of at least 1.0 mm.

Before 01.05.77: For mopeds approved before that date (the 'TUM' mark), there are no minimum tyre pattern depth sizes.

8.02.050 tractor

- (1) Tractors not subject to approval or registration may be fitted with other elastic wheel coverings, tracks of similar characteristics or smooth rollers.

Before 01.05.77: Tractors may be fitted with semi-solid rubber rings.

- (2) An approved tractor and a tractor not subject to registration may be fitted with tracks.

8.02.060 engine tools

- (1) Motor tools may be equipped with other elastic wheel coverings, tracks of similar characteristics or smooth rollers.

8.02.099 powered block wagon

- (1) Powered wheeled vehicles with a maximum speed not exceeding 15 km/h may be fitted with other elastic wheel coverings or tracks of equivalent characteristics.
- (2) Power-driven vehicle with a maximum speed not exceeding 30 km/h may be fitted with tyres designed to be at least 50 km/h at the authorised axle load, regardless of the maximum speed of the vehicle exceeding 50 km/h.
- (3) Power-driven vehicle with a maximum speed of 45 km/h may be fitted with tyres designed to be at least 70 km/h at the authorised axle load, regardless of the maximum speed of the vehicle exceeding 70 km/h.
- (4) Power-driven vehicle with a maximum speed of 60 km/h may be fitted with tyres designed to be at least 80 km/h at the authorised axle load, regardless of the maximum speed of the vehicle exceeding 80 km/h.

8.02.100 trailer

- (1) A trailer shall be fitted with tyres on all wheels.
- (2) A trailer subject to registration shall be fitted with tyres designed to be at least 100 km/h for the authorised axle load.

Before 01.04.91: A trailer may be fitted with one of the specially marked truck and vehicle tyres, designed for 80 km/h, as shown in the STRO (The Scandinavian Tire -Rim Organisation) data enhancer, even if the maximum speed of the vehicle exceeds 80 km/h.

- (3) The trailer of a large moped must be fitted with tyres designed to be at least 50 km/h.
- (4) A trailer and a trailer which is not subject to registration shall be fitted with tyres designed to be at least 40 km/h.

Before 01.11.15: Tyres shall be designed to be at least 30 km/h.

8.02.110 trailer for car

- (1) Tyres, other than retreaded tyres, shall be approved and marked in accordance with Directive 92/23/EEC or UN Regulation 30, UN Regulation 54 or UN Regulation 64.

Before 01.04.03: Does not apply to tyres produced before week 27, 2003. Before 01.01.80: Not applicable.

- (2) Retreaded tyres shall be approved and marked according to UN Regulation 108 or UN Regulation 109.

Before 01.04.03: Does not apply to tyres produced before week 27, 2003. Before 01.01.80: Not applicable.

- (3) Tyres shall be sound approved and marked in accordance with UN Regulation 117-04, with the exception of:
 - retreaded tyres;

- tyres intended for a speed of less than 80 km/h only,
- tyres with a nominal rim diameter of not more than 254 mm (10') or not less than 635 mm (25'), tyres of the T-type temporary-use spare wheel, and
- studded tyres.

Before 01.01.26: Tyres shall be sound approved and marked in accordance with UN Regulation 117-02, with the exception of:

- retreaded tyres;
- tyres intended for a speed of less than 80 km/h only,
- tyres with a nominal rim diameter of not more than 254 mm (10') or not less than 635 mm (25'),
- T-type temporary-use spare tyres; and
- studded tyres.

Before 01.07.25: Tyres may be noise-approved and marked in accordance with Directive 92/23/EEC as amended by Directive 2001/43/EC or UN Regulation No 117.

Before 01.10.11: Does not apply to tyres produced before week 40, 2011. Before 01.01.80: Not applicable.

08.02.113 hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3 shall be fitted with a tyre pressure monitoring system.

The hinge/semi-trailer shall be equipped with a communication interface for the exchange of TPMS data information between the towing vehicle and the trailer.

Before 01.01.26: Not applicable.

08.02.114 hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall meet the system requirements for the O3 trailer/semi-trailer.

8.02.120 Trader trailer

- (1) A trailer for a tractor not subject to approval may be fitted with other elastic wheel coverings, tracks of similar characteristics or smooth rollers.

8.02.130 motor tool trailer

- (1) Motor gear trailers may be fitted with other elastic wheel coverings, tracks of similar characteristics or smooth rollers.

8.2.141 Caravan

- (1) Caravans must comply with the provisions for trailer/semi-trailer for motor vehicles.

8.2.142 Other attachments subject to registration

- (1) Other attachments subject to registration must comply with the provisions applicable to motor vehicle trailers/semi-trailers.

8.2.143 towing gear subject to registration

- (1) Trailers which are not subject to registration shall comply with the provisions applicable to motor gear trailers.

8.02.150 motorcycle trailer

- (1) Motorcycle trailers shall be fitted with tyres with a pattern depth of not less than 1.0 mm.

8.02.160 trailer for large moped

- (1) The trailer of a large moped must be fitted with tyres with a pattern depth of not less than 1.0 mm.

8.02.199 block wagon

- (1) A block wagon with a maximum speed not exceeding 15 km/h may be fitted with other elastic wheel coverings, tracks of similar characteristics or smooth rollers.
- (2) A block wagon with a maximum speed not exceeding 30 km/h shall be fitted with tyres designed to be at least 50 km/h at the authorised axle load.
- (3) A block wagon with a maximum speed of 45 km/h shall be fitted with tyres designed to be at least 70 km/h at the authorised axle load.
- (4) A block wagon with a maximum speed of 60 km/h shall be fitted with tyres designed to be at least 80 km/h at the authorised axle load.
- (5) A block wagon with a maximum authorised speed exceeding 60 km/h shall comply with the requirements of a trailer subject to registration.
- (6) A block wagon authorised to be towed by a tractor only shall be fitted with tyres designed to be at least 45 km/h at the authorised axle load.

8.3 Suspension;

8.3.01 General provisions

- (1) The suspension and its attachment to the self-supporting body, chassis frame or frame shall be capable of withstanding the stresses arising during normal use and loading of the vehicle.
The ball connections and the like of the suspension shall be protected against the intrusion of dust and dirt.
- (2) The suspension shall be so designed as to allow adequate attenuation of the oscillations of the suspension resulting from the roughness of the ground.

8.3.02 Axles

- (1) The carrying capacity of the axles shall be at least equal to the maximum permissible mass on the vehicle.

8.3.03 Bogie structures

- (1) A vehicle may be fitted with an axle lift device. This may be automatic, so that the second axle of a bogie is automatically lowered when the axle load on the first axle reaches the authorised axle load.
The axle lifting device must be capable of actuating the retractable or loadable axle of the car or semi-trailer in order to increase the load on the driving axle of the vehicle under the following conditions:

- The mass on each axle of the vehicle may exceed the technically permissible maximum mass on the axles by up to 30 %, provided that it does not exceed the value specified for that purpose by the vehicle manufacturer in the particular situation.
- The retractable or loadable axle shall only be activated with a special tell-tale.
- After starting, the axle shall be automatically lowered to the ground or loaded as soon as the vehicle reaches a speed of 30 km/h.

A car may, instead of the semi-automatic system referred to above, be fitted with a manual system, provided that a warning signal at the driving position is illuminated when the axle-lift device is activated.

8.3.04 Springs

- (1) Springs shall have a carrying capacity at least equal to the permissible mass on the axle of the vehicle.

9. Body work, structure, etc.

9.1 Bodywork

9.1.01 General provisions

- (1) Bodywork – including self-supporting bodywork – shall be firmly attached to the supporting parts of the vehicle and shall be so designed that sharp edges or external projections and the like do not cause unnecessary danger to other road users.

The cranks, lifting booms and the like shall be supported and secured in such a way as to ensure that controls, hydraulic cylinders, spill drums and the like are discharged and such that the parts in question cannot, by reason of mishandling or by chance, be in a position which makes them dangerous to other road users.

9.1.02 Wheel protection

- (1) Motor vehicles and trailers for vehicles shall be fitted with screens over all wheels.
- (2) The provisions on shielding shall be fulfilled in running order of the mass. In the case of vehicles where the vertical distance between the wheel and the bodywork is adjustable, the provisions shall be met at the normal position prescribed by the vehicle manufacturer.
- (3) In the case of a vehicle with a double or triple axle, the wheels on the same side may have common protection complying with the provisions on protection in front of the centre of the front wheel and behind the centre of the rear wheel and having a continuous horizontal part above the wheels.
- (4) The prescribed protection shall be provided through the body or structure of the vehicle or by the attachment of special guards above the wheels.
- (5) Shielding shall comply with the following requirements:
 - a) Be firmly attached to the bodywork or supporting parts of the vehicle and be so designed that sharp edges or external projections and the like do not cause unnecessary danger to other road users.
 - b) Shall appear as a whole, irrespective of whether or not the guard is composed of several elements.
- (6) Shielding may be detachable and either assembled or in parts.

9.1.03 Doors

- (1) Door handles and hinges shall be designed and arranged in such a way that they do not cause unnecessary danger to other road users.

Before 01.01.50: Door handles may be approved for original construction.
- (2) A door shall be provided with a door latch capable of keeping the door closed while driving.
- (3) Door hinges shall be firmly attached to both the door and the bodywork.
- (4) When opening an automatic door, the distance between the outermost point of the door and the bodywork shall not exceed 0.45 m at any time.

9.1.020 Car

- (1) Locks in a driver's and passenger compartment door shall be automatically engaged when the door is closed and shall have both a protective and a closing position.

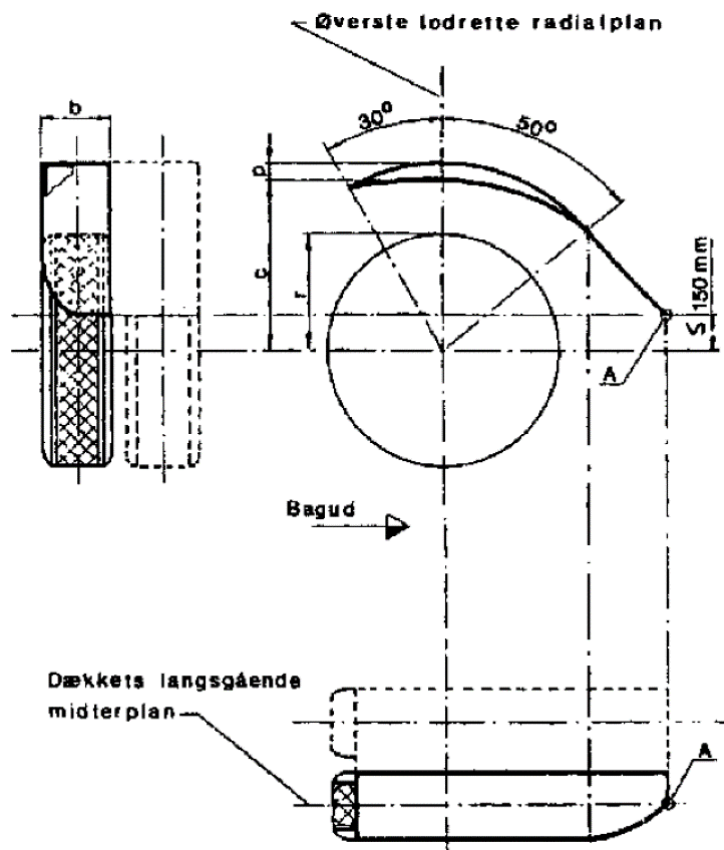
9.1.021 M1 passenger car

- (1) Wheel guards shall meet the following requirements:
 - a) Shall have a curved or U-shaped cross-section with a concave side facing downwards and inwards towards the tyre, with a cross-sectional depth of not less than 30 mm at the deepest position above the tyre tread. The cross-sectional depth shall be measured in the upper vertical radial plane passing through the centre of the wheel and may otherwise gradually decline to 0 mm at 30° forward and 50° rearward of this radial plane.
 - b) Cover the upper part of the wheel at least 30° forward and at least 50° rearward of the upper vertical radial plane passing through the centre of the wheel. The width of the tyre shall be measured in the above-mentioned radial plane, excluding moulded text and ornamental pattern, and bead and similar for the protection of the sidewall of the tyre.
 - c) Shall be so designed that the distance between the edges of the guard and the centre line of the wheel does not exceed 2,0 times the radius of the tyre within the required area of cover (from 30°

forward to 50° behind the upper vertical radial plane).

The radius of the tyre shall be measured at the centre of the tread in the upper vertical radial plane passing through the centre of the wheel.

- d) Cover the rearmost part of the wheel from a horizontal plane not more than 0.15 m above the centre of the tyre in such a way that the intersection of the edge of the wheel guard with the said horizontal plane does not lie within the longitudinal median plane of the tyre. In the case of double-mounted wheels, the longitudinal median plane of the outer tyre shall be taken into account.



(2) A passenger car M1 with a maximum authorised mass not exceeding 3.500 kg, regardless of the height of the R-point, shall comply with the constructive provisions of one of the following rules on lateral impact protection:

- a) UN Regulation 95-05.
- b) US Standard FMVSS 21,4 Section S6.
- c) Japanese Standard JSRRV, Article 18.

The requirement does not apply to small series passenger cars M1.

Before 01.01.26: A passenger car M1 with a maximum authorised mass not exceeding 3.500 kg, on which the R-point of the lowest seat in running order does not exceed 0.70 m above the ground, shall comply with the constructive provisions of one of the following lateral impact protection regulations:

- d) UN Regulation 95-05.
- e) US Standard FMVSS 21,4 Section S6.
- f) Japanese Standard JSRRV, Article 18.

The requirement does not apply to small series passenger cars M1. Before 01.07.25: A car may comply with UN Regulation 95-02.

Before 01.01.17: Cars can comply with Directive 96/27/EC. Before 01.10.03: Not applicable.

(3) A passenger car M1 with a maximum authorised mass not exceeding 2.500 kg shall comply with the constructive provisions of one of the following frontal collision protection regulations:

- a) UN Regulation 94-04.
- b) American Standard FMVSS 208.
- c) Japanese Standard JSRRV, Article 18.

The requirement does not apply to small series passenger cars M1. Before 01.07.25: A car may comply with UN Regulation 94-01.

Before 01.01.17: Cars can comply with Directive

96/79/EC. Before 01.10.03: Not applicable.

- (4) The M1 passenger car shall comply with the technical requirements for the front part (pedestrian protection) set out in UN Regulation 127-02.

The requirement does not apply to small series passenger cars M1.

Before 01.07.25: A car may comply with Regulation 78/2009/EU, Annex 1, point 3.

Before 23.02.19: A car may comply with Regulation 78/2009/EU, Annex 1, points 2 or 3.

Before 31.12.12: Not applicable.

- (5) Passenger cars M1 derived from a van N1 with a maximum authorised mass exceeding 2.500 kg and with the R point of the driver's seat located either in front of the front axle or not more than 1.10 m behind the front axle do not have to comply with the provision of point (4).
- (6) A passenger car M1 with a maximum authorised mass not exceeding 3.500 kg shall comply with the design provisions for full-width frontal impact set out in UN Regulation 137-02.
The requirement does not apply to small series passenger cars M1.
Before 01.01.26: Not applicable.
- (7) A passenger car M1 with a maximum permissible mass not exceeding 3.500 kg shall comply with the design provisions for Pole Side Impact Protection in UN Regulation 135-01.
The requirement does not apply to small series passenger cars M1.
Before 01.01.26: Not applicable.
- (8) A passenger car M1 with a maximum authorised mass not exceeding 3.500 kg shall comply with the design provisions regarding fuel system integrity and safety of electric power train using high voltage in case of rear collision in UN Regulation 153.
The requirement does not apply to small series passenger cars M1.
Before 01.01.26: Not applicable.

9.1.022 M2 passenger car

- (1) Wheel guards shall meet the following requirements:
- Shall cover the wheel over the full width of the tyre.
 - Shall have curved or U-shaped cross-section the depth of which is not less than 10 % of the width of the guard, but not less than 30 mm.
 - Cover the upper part of the wheel in the area from at least 30° forward of a vertical plane passing through the centre of the wheel to a horizontal plane not more than 0.10 m above the centre of the wheel.
 - Shall be so designed that the distance between the edge of the guard and the centre of the wheel does not exceed 2,0 times the radius of the wheel.
- (2) The rear guard shall also cover the wheel from a horizontal plane situated at least 0.05 m below the centre of the wheel. The part of the guard located below a horizontal plane situated 0.10 m above the centre of the wheel shall not comply with the provisions of (1) (b) and (d).
- (3) A motor vehicle M2 with a maximum authorised mass not exceeding 3.500 kg may be fitted with a wheel guard in accordance with the rules applicable to the M1 passenger car. However, an additional protective device (rain flap) below the centre of the wheel shall be fitted behind the rear wheel at the width of the tyre.
- (4) The M2 passenger car designed to carry more than 16 passengers shall comply with the constructive provisions of UN Regulation 66-02 on the strength of superstructure on large passenger cars.
Before 01.07.25: Passenger cars M2 may comply with UN Regulation 66. Before 01.11.14: Not applicable.
- (5) The provisions of point (4) shall not apply to a passenger car M2 authorised for regular services only if one of the following conditions is met:
- The car is an urban bus.
 - The car has standing space and space for a maximum of 22 passengers.
 - The permitted number of standing places is 20 % or more of the maximum number of passengers.

(6) The M2 passenger car designed to carry more than 12 passengers shall comply with the roll-over stability provisions of UN Regulation 107-07, Annex 3, paragraph 7.4.

Before 01.07.25: Passenger cars M2 may comply with Directive 2001/85/EC, Annex I, paragraph 7.4 or UN Regulation 107-02, Annex 3, paragraph 7.4.

Before 01.11.14: Not applicable.

9.1.023 M3 passenger car

(1) Passenger cars M3 shall be fitted with wheel guards in accordance with the rules applicable to passenger cars M2.

(2) Passenger cars M3 designed for the carriage of more than 16 passengers shall comply with the constructive provisions of UN Regulation 66-02 on the strength of superstructure on large passenger cars.

Before 01.07.25: Passenger cars M3 may comply with UN Regulation 66. Before 01.10.99: Not applicable.

(3) The provisions of point (2) shall not apply to a passenger car M3 authorised for regular services only if one of the following conditions is met:

a) The car is an urban bus.

b) The car has standing space and space for a maximum of 22 passengers.

c) The permitted number of standing places is 20 % or more of the maximum number of passengers.

(4) The provisions of point (2) do not apply to two-storey passenger cars M3.

(5) Passenger cars M3 shall comply with the provisions for passenger car M2 set out in point 9.01.022 (6) on roll-over stability.

Before 01.11.14: Not applicable.

9.1.024 Van N1

(1) Vans N1 must be fitted with wheel guards in accordance with the rules applicable to passenger cars M1.

(2) Vans N1 with enclosed goods spaces shall be provided with at least one of the following types of protection for the occupants against the displacement of the load in motion:

a) Full separation between driver's cab and load cab complying with the provisions of international standard ISO 27956: 2009, paragraphs 4.1 and 4.2.

b) Partial separation covering at least seats and head restraints in their highest position on both sides and having a maximum distance of 0.10 m between the separation and the ceiling, measured in the vertical centre line of the seat and complying with the provisions of international standard ISO 27956: 2009, paragraphs 4.1 and 4.2.

c) Attachments complying with standard ISO 27956: 2009, paragraphs 3 and 4.

Before 01.07.25: Vans N1 with enclosed spaces may be fitted with a separation between the driver's cab and the load compartment covering at least the driver's position and the separation shall reach from the floor to the ceiling.

The requirement is deemed to be satisfied if the separation covers at least the seat and the head restraint, both in its highest position. However, the distance between the separation and the ceiling, measured in the vertical centre line of the seat, shall not exceed 0.10 m.

The strength of the separation and its attachment to the vehicle shall be such as to withstand the load of moving goods in the event of a deceleration of the vehicle of 10 m/s² or to meet the strength requirements of standard ISO/DIS 27956, paragraph 4.1.

Separation shall consist of one or a combination of the following:

a) Finely meshed grill in a metal frame.

b) Metal, wood or carbon fibre plate.

c) Plate of splint-resistant plastic material. The plate shall be placed in a metal frame.

d) Laminated glass approved and marked in accordance with paragraph 10.03.020 (1). The glass

shall be placed in a metal frame.

- (3) Vans N1 shall comply with the provisions of paragraph 9.01.021 (2) relating to lateral impact protection. Before 01.10.03: Not applicable.
- (4) Vans N1 derived from a passenger car M1 with a maximum authorised mass not exceeding 2.500 kg must comply with the provisions of paragraphs 9.01.021 (4) and (5) on pedestrian protection.
- (5) Van N1 with the R point of the driver's seat located either in front of the front axle or not more than 1.10 m behind the front axle does not have to comply with the provision of paragraph (4).
- (6) Vans N1 with a maximum permissible mass exceeding 2.500 kg shall comply with the design provisions for frontal collision protection set out in UN Regulation 94-04.
The requirement does not apply to goods vehicle N1 manufactured in small series.
Before 01.01.26: Not applicable.
- (7) Vans N1 shall comply with the design provisions for full-width frontal impact set out in UN Regulation 137-02.
The requirement does not apply to goods vehicle N1 manufactured in small series.
Before 01.01.26: Not applicable.
- (8) Van N1 where the angle measured between a horizontal plane passing through the centre line of the front axle and an angular transverse plane passing through the centre line of the front axle and the R point of the driver's seat is less than 22 degrees, or the ratio between the distance from the driver's R-point to the centre of the rear axle and the centre of the front axle and the driver's R-point is less than 1,30, shall comply with the design provisions for protection in the event of a side impact against pole set out in UN Regulation 135-01.
The requirement does not apply to goods vehicle N1 manufactured in small series.
Before 01.01.26: Not applicable.

9.1.025 Truck N2

- (1) Heavy goods vehicles N2 shall be fitted with wheel guards in accordance with the M2 passenger car regulations.
- (2) Truck N2 with an enclosed load compartment shall be provided with a full separation between the driver's cab and the load compartment.
Lorries N2 with a maximum permissible mass not exceeding 7.500 kg may alternatively be fitted with separation designed to protect the occupants against the displacement of the load in motion, or the truck may be fitted with attachments. Separation and attachments shall comply with the provisions of international standard ISO 27956: 2009, paragraphs 3 and 4.
- (3) A lorry N2 designed to tow a semi-trailer may be arranged in such a way that the protective device in front of the wheel and the part of the rear wheel guards whose height above the ground is greater than the diameter of the tyre can be removed when the vehicle is coupled to a semi-trailer. The bodywork or structure of the semi-trailer shall in this case cover the wheel in the full width of the tyre when running straight.

9.1.026 Truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

9.01.030 motorcycle

- (1) Motorcycles shall be equipped with a space for mounting a rear registration plate in accordance with Regulation 44/2014/EU, Annex XIV.
Before 01.07.25: Not applicable.

9.01.040 moped

- (1) mopeds shall be equipped with a space for mounting a rear registration plate in accordance with Regulation

44/2014/EU, Annex XIV.

Before 01.07.25: Not applicable.

9.01.050 tractor

- (1) The external projections of the tractor shall not cause unnecessary danger to other road users and shall be so designed as to be clearly visible outside the period of exposure. Working equipment fitted to the tractor shall be regarded as external projections.
- (2) The tractor shall be equipped with a space for mounting a rear registration plate in accordance with Annex XIX to Regulation (EU) 2015/208.

Before 01.07.25: Not applicable.

9.01.060 engine tools

- (1) Crackling beams, excavated shovels and other external projections shall not present unnecessary danger to other road users.

9.01.100 trailer

- (1) In the case of the front wheels of a trailer controlled by rotation of the front axle around the centre of the front axle, that part of the guard whose height above the ground is greater than the diameter of the tyre and the front of the wheel may be omitted if the bodywork or structure of the vehicle covers the wheel in the full width of the tyre when in motion.

9.1.111 Hinge/semi-trailer O1

- (1) The hinge/semi-trailer O1 shall be fitted with wheel guards in accordance with the M1 passenger car regulations.

9.1.112 Hinge/semi-trailer O2

- (1) The hinge/semi-trailer O2 shall comply with the provisions applicable to the O1 trailer.

9.1.113 Hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3 shall be fitted with wheel guards in accordance with the rules applicable to heavy goods vehicles N2.

9.1.114 Hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the provisions applicable to the O3 trailer.

9.01.121 trailer for tractor subject to registration

- (1) A trailer of a tractor subject to registration shall be fitted with space for mounting a rear registration plate in accordance with Annex XIX to Regulation (EU) 2015/208.

Before 01.07.25: Not applicable.

9.1.141 Caravan

- (1) Caravans shall be fitted with wheel guards in accordance with the rules applicable to the O1 trailer.

9.1.142 Other attachments subject to registration

- (1) Other trailers subject to registration with a maximum authorised weight not exceeding 3.500 kg shall be fitted with wheel guards in accordance with the rules applicable to trailers/semi-trailers O1.
- (2) Other trailers subject to registration with a maximum authorised weight of more than 3.500 kg shall be fitted with wheel guards in accordance with the rules applicable to trailers/semi-trailers O3.

9.01.150 motorcycle trailer

- (1) Trailers for motorcycles shall be fitted with wheel guards in accordance with the rules of the trailer/semi-trailer O1.

9.01.160 trailer for large moped

- (1) The trailer of a large moped must be fitted with a wheel guard in accordance with the rules applicable to the O1 trailer.

9.01.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

9.01.340 emergency vehicle

- (1) The patient compartment in ambulances shall comply with the requirements of standard DS/EN 1789: 2020 on Rescue Vehicles and associated equipment – Ambulances with the exception of clause 6.4, equipment list.

Before 01.07.25: Ambulance shall be provided with a separation between a driver's cab and a boatroom where a laminated-glass pane may be installed in the upper part. The length of the vehicle compartment shall be such that the ambulance can accommodate a boat of 2.29 m length and a width of 0,585 m. There must be space next to the boat and above the boat to enable patient treatment during driving.

Before 01.01.71: Not applicable.

9.2 Ladder structure, etc.

9.2.01 General provisions

- (1) Platforms, etc., shall be firmly attached to the supporting parts of the vehicle and shall be so designed that sharp edges and external projections do not cause unnecessary danger to other road users.

9.2.02 Fixed ladder structure

- (1) Loading fittings, etc. shall be so designed and arranged as not to cause unnecessary danger to other road users.

9.2.03 Toppelad construction

- (1) Toppings shall be secured against sliding forward when the load platform is in a transport position.
(2) Three-way toppings shall be fitted with devices capable of retaining the load in the transport position.

9.2.04 Container structure

- (1) A container vehicle shall be fitted with container locks capable of safely retaining the container on the vehicle.

9.2.05 Swap body structure

- (1) A vehicle constructed for use with swap bodies shall be fitted with means of secure retention of the swap body on the vehicle.

9.02.025 truck N2

- (1) On truck N2, load fittings, etc., if the distance from the ground is less than 1.80 m, shall comply with the following requirements:
a) The corner buckle shall be so designed and arranged that no part of the buckle protrudes more than 20 mm outside the loading side.

- b) The buckle shall be placed on the load side.
- c) Ropes shall have rounded edges and shall not project more than 20 mm outside the loading side.
Unrecessed nuts shall not project more than 10 mm outside the loading side.
- d) Lace squares and hooks, etc., shall be shielded by lists or similar.
- e) Slide fittings shall not protrude more than 25 mm outside the sheet.
Before 01.09.70: Not applicable.

9.02.026 truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

9.02.113 hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3 shall comply with the requirements for heavy goods vehicle N2.
- (2) The loading of a semi-trailer shall not protrude over the cab of the vehicle. Before 01.04.88: Not applicable.

9.02.114 hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the provisions applicable to the O3 trailer.

9.02.150 motorcycle trailer

- (1) Motorcycle trailers shall not be designed for the carriage of passengers.

9.02.160 trailer for large moped

- (1) The trailer of a large moped must not be equipped for the carriage of passengers.

9.02.461 animal transport vehicle

- (1) Vehicles used for the transport of animals must comply with the provisions of the Order on the protection of animals during transport.

9.3 Construction with tank

9.3.01 General provisions

- (1) The tank shall be firmly attached to the vehicle and shall be so designed that sharp edges or external projections do not cause unnecessary danger to other road users.

9.03.003 bead sheets

- (1) The tank or tank compartment for the transport of liquid substances shall be divided, using bead plates, into sections of not more than 7.50 m³.
Bead plates shall be perpendicular to the longitudinal axis of the tank and shall have an area of at least 70 % of the cross-sectional area of the tank.
Before 01.04.93: The tank or tank compartment for the transport of liquid substances with a capacity of more than 6.20 m³ shall be fitted with a bulb plate for every 2.50 m tank or volume length. The bead plate shall be perpendicular to the longitudinal axis of the tank and shall have an area of at least 80 % of the cross-sectional area of the tank at that point.
Before 25.11.75: No requirements have been laid down for the area of the bead plates.
- (2) The provision of point (1) does not apply to tanks which are always used at least 80 % filled or not more than 20 % filled.
- (3) The provision of point (1) does not apply to sludge suction tanks.

9.5 Coupling devices

9.5.01 General provisions

- (1) Coupling devices shall meet the following requirements:
 - a) Shall be firmly attached to the supporting parts of the vehicle. Bolt connections shall be secured against separation.
 - b) Shall be able to withstand the stresses arising during normal use of the combination of vehicles.
 - c) Shall be fitted with a mechanical protective device to prevent the coupling from being inadvertently released.
 - d) Shall be so designed and arranged that the distance between the towing vehicle and the vehicle is immutable when the vehicle is being driven straight away.
- (2) The coupling device and the compulsory mechanical protection device shall be undamaged, including the indicator indicating whether the trailer, ball and fifth wheel couplings and the detachable coupling ball are properly locked.
- (3) The coupling device of type C50-X and G50-X may be equipped with remote indication and control devices according to the technical provisions of UN Regulation 55-01, Annex 5, paragraph 12.
- (4) The coupling part of the towing vehicle and the coupling part of the trailer shall be intended to be coupled with each other. There shall be no significant veiling between the coupling parts.
- (5) The coupling parts shall not be worn to a greater extent than that indicated by the manufacturer of the coupling part and the part shall be repaired or replaced in accordance with the manufacturer's instructions.

9.5.02 Trailer coupling

- (1) Trailer couplings shall be designed and arranged in such a way that:
 - a) the wheels of the trailer when running in turn follow the tracks of the wheels of the towing vehicle as close as possible; and
 - b) there is sufficient movement between the coupled coupling parts.

9.5.03 Ball coupling

- (1) Ball couplings shall be designed and arranged in such a way that:
 - a) the wheels of the trailer when running in turn follow the tracks of the wheels of the towing vehicle as close as possible; and
 - b) there is sufficient movement between the coupled coupling parts.

- (2) A vehicle intended for coupling with a trailer having a maximum authorised mass not exceeding 3.500 kg shall be fitted, at the coupling device, with a bracket to connect the explosive wire of the trailer to automatic braking.

The bracket shall be located not more than 0.25 m from the centre so that the bursting wire cannot become too tight or slash during rotation.

Before 01.07.25: Only applicable to non-visually connected cars.

In the case of a vehicle in a fixed combination, no details are laid down on the fittings, but the provision in paragraph 5.01.110.

- (3) the application of the towed vehicle brakes shall be fulfilled.

9.5.04 Fifth wheel coupling

- (1) Fifth wheel couplings shall be designed and arranged in such a way that the semi-trailer is sufficiently moving in relation to the towing vehicle.
- (2) The coupling part of the towing vehicle (fifth wheel) may be such that it can be displaced in the longitudinal direction of the vehicle. It shall be possible to lock the fifth wheel in each position.

9.05.020 car

- (1) The coupling device and its mountings shall comply with the design provisions of UN Regulation 55-01.

Before 01.07.25: Not applicable.

- (2) The coupling device shall be fitted in accordance with the instructions of the car manufacturer and, in the case of a passenger and van vehicle, the height of the coupling device above the road shall be such as to correspond to the requirements of UN Regulation 55.

Before 01.07.25: The rule applies only to the M1 passenger car and the N1 van. Before 01.04.93: Not applicable.

However, if the vehicle manufacturer's instructions are not followed, the maximum mass of trailer with brakes for passenger cars M1 and van N1 shall not be set at more than 90 % of the vehicle in running order, regardless of whether the vehicle manufacturer authorises a higher weight of the trailer.

9.05.030 motorcycle

- (1) The coupling device and its mountings shall comply with the structural provisions of Regulation 44/2014/EU, Annex V.

Before 01.07.25: Not applicable.

- (2) The coupling device shall be fitted in accordance with the instructions of the motorcycle manufacturer.

Before 01.07.25: In the case of a motorcycle approved before that date with a coupling device, the coupling device may be fitted in accordance with the instructions of the manufacturer of the coupling device.

9.05.032 motorcycle with sidecar

- (1) The sidecar shall be attached to the right side of the motorcycle.

Before 01.07.55: Sidecar may be attached to the left side of the motorcycle.

9.05.041 large moped

- (1) The coupling device and its mountings shall comply with the structural provisions of Regulation 44/2014/EU, Annex V.

- (2) The coupling device shall be fitted in accordance with the instructions of the moped manufacturer.

Before 01.07.25: In the case of mopeds approved before that date with a coupling device, the coupling device may be fitted in accordance with the instructions of the manufacturer of the coupling device.

9.05.050 tractor

- (1) The tractor shall be fitted with a trailer or trailer coupling device complying with the structural provisions of Regulation (EU) 2015/208, Annex XXXIV, UN Regulations 55-01 or UN Regulation 147.

Before 01.07.25: The coupling device is not required to comply with a particular UN Regulation.

- (2) The coupling device shall be fitted in accordance with the instructions of the tractor manufacturer.

Before 01.07.25: The coupling device must be so low that, having regard to the weight distribution of the tractor, the risk of steeping is minimised.

9.05.100 trailer

- (1) A trailer other than a semi-trailer may be fitted with a drawbar (drawbar). The drawbar shall meet the following conditions:

a) It shall be possible to lock and secure for each post.

b) It shall be possible to adjust such that the total length of the combination and the distance between the rear edge of the towing vehicle and the front edge of the load or structure of the trailer does not

exceed the permitted length.

- (2) A trailer may be fitted with a forcibly movable drawbar (drawbar bar) arranged in such a way as to increase the length of the drawbar and thus the distance between vehicles while driving in turn.
- (3) The coupling pin, ball coupling, coupling eye and drawbar (drawbar bar) shall comply with the design provisions of UN Regulation 55-01 and the trailer of a vehicle where the maximum authorised mass of the trailer does not exceed 3.500 kg shall comply with the coupling height requirements of UN Regulation 55-01.

Before 01.07.25: Not applicable.

9.05.113 hinge/semi-trailer O3

- (1) The length of the drawbar (drawbar bar) shall be sufficient to allow the combination of vehicles on a flat road to make a 90° rotation with a full steering scale without the vehicles coming into contact with each other.

Before 01.04.84: Not applicable.

9.05.114 hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the provisions applicable to the O3 trailer.

9.05.120 Trader trailer

- (1) The coupling pin, ball coupling, coupling eye and drawbar (drawbar) shall comply with the constructive provisions of Regulation (EU) 2015/208, Annex XXXIV, UN Regulation 55-01 or UN Regulation 147.

Before 01.07.25: Not applicable.

9.05.130 motor tool trailer

- (1) Motor gear trailers shall comply with the provisions applicable to tractor trailers.

9.05.310 non-visual coupling vehicle

- (1) A vehicle intended for non-vision coupling with a trailer having a maximum authorised mass not exceeding 3.500 kg shall be fitted with 50 mm coupling ball.

The centre of the coupling ball shall be at a height of 385 ± 35 mm above the ground for the maximum authorised mass.

Before 01.04.94: The provision concerning the height of the coupling ball above the ground does not apply to passenger cars M1 and vans N1.

- (2) A lorry intended for non-visual coupling with a semi-trailer or a trailer on a semi-trailer chassis shall be fitted with a fifth wheel fifth wheel for 2 "king pin, complying with the structural provisions of UN Regulation 55-01 for fifth wheel railings intended for the driving of a semi-trailer with forcibly controlled axles.

Before 01.07.25: The fifth wheel may comply with the constructive provisions of Directive 94/20/EC.

- (3) A lorry for non-visual coupling with a trailer O3 or O4 or a trailer on the chassis of such a trailer shall be fitted with one of the following coupling devices:

- a) 40 mm trailer coupling according to standard ISO 8755: 2001 or UN Regulation 55-01.
- b) 50 mm trailer coupling according to UN Regulation 55-01.
- c) 57 mm trailer coupling meeting the design provisions of UN Regulation 55-01.

Before 01.07.25: Trailer coupling may comply with the structural provisions of standard ISO 8755: 1986 or ISO 1102: 1986 or UN Regulation 55.

The centre of the hinge coupling shall be positioned 425 ± 75 mm, 650 ± 75 mm or 900 ± 100 mm above the ground in running order. For lorries equipped with bogie lift, the height requirement shall be met with both raised and lowered axle.

Coupling devices intended for centre-axle trailers shall have a maximum permissible vertical load of at

least 1.000 kg.

- (4) A trailer with a maximum authorised weight not exceeding 3.500 kg shall be fitted with 50 mm ball coupling.
- (5) The semi-trailer and the trailer of the semi-trailer shall bear 2 "king pin. If the semi-trailer has forcibly controlled axles, the steering shall be via a wedge as specified in UN Regulation 55-01.
- (6) Trailers O3 and O4 and trailer tools on the chassis of such a trailer shall be fitted with one of the following coupling devices:
 - a) 40 mm coupling eye according to standard ISO 8755: 2001 or UN Regulation 55-01.
 - b) 50 mm coupling eye according to UN Regulation 55-01.
 - c) 57 mm coupling eye meeting the design provisions of UN Regulation 55-01.

Before 01.07.25: Trailer coupling may comply with the structural provisions of standard ISO 8755: 1986 or ISO 1102: 1986 or UN Regulation 55.

The centre of the coupling column shall be placed, in the horizontal position and in running order, at a height of 425 ± 75 mm, 650 ± 75 mm or 900 ± 100 mm above the ground.

In the case of centre-axle trailer and centre-axle trailer, the height requirement shall be met with a horizontal chassis.

In the case of other trailers, the height requirement shall also apply to the hinge of the drawbar (parallel bolts), unless the drawbar is inclined and is marked and approved in accordance with UN Regulation 55-01.

Before 01.07.25: Carved drawbar may be marked and approved in accordance with Directive 94/20/EC.

9.6 Luggage racks, bicycle racks, etc.

9.6.01 General provisions

- (1) Luggage racks, bicycle racks, etc. shall meet the following conditions:
 - a) Shall be designed and arranged in such a way as not to cause unnecessary danger to other road users.
 - b) Shall be positioned in such a way that they do not adversely affect the driving characteristics of the vehicle during the intended use.
 - c) Shall be securely attached to the vehicle.
- (2) The rear face of the vehicle shall be fitted to the rear of the vehicle.

9.6.02 Radiator shapes, etc.

- (1) The vehicle shall not be fitted with radiator shapes, bonnet mornings or similar features which, by reason of shape, arrangement or material, present a danger to other road users.

Radiator shapes, etc., are considered dangerous if they are made of metal or other hard material and have either pointed or sharp edges or protrusions so far from the outline of the vehicle and are so designed as to be capable of providing independent and significant resistance to bodies ejected to the vehicle.

Flags, screens and similar devices shall be mounted only on or at the outer edge of shutters or pre-bumpers and shall be fitted with a bonp of an appropriate size.

Fixed stands for sack carriages in front of refuse collection vehicles and ladders or materials on the side of goods and trucks shall be constructed with rounded edges with a radius of not less than 5 mm, shall not endanger other road users and shall not increase the length or width of the vehicle beyond the applicable dimensional requirements for the vehicle type.

9.6.03 Running boards

- (1) The step board shall be so designed and arranged as not to cause unnecessary danger to other road users. Special protruding or protruding step boards shall be suitably shielded or have rounded corners or equivalent.
- The running board on the side of the vehicle shall not be considered to cause undue danger if it protrudes no

more than 0.10 m from the bodywork.

9.6.04 Tapklame signs, etc.

- (1) The warning sign and the like shall be designed and arranged in such a way as not to cause unnecessary danger to other road users.

9.6.05 Safflower grilles, etc.

- (1) Vehicles shall be fitted with bulwarks, front buoys, headlamps or the like only in accordance with the following rules:

- a) Passenger cars M1 and N1 may be fitted with a frontal protection system (frontal protection system) approved, marked and fitted in accordance with Annex XII to Regulation (EU) 2021/535.

Before 01.07.25: Bulbs, etc. may be approved, marked and fitted in accordance with Regulation 78/2009/EU.

Before 24.11.09: A passenger car M1 with a maximum authorised weight not exceeding 3.500 kg and a van N1 may be fitted with a bulb, etc., approved, marked and fitted in accordance with Directive 2005/66/EC.

Before 25.10.06: Point (c) applies to passenger car M1 and van N1.

- b) Cars other than passenger cars M1 and vans N1 may be fitted with bulbs, etc. in surreptitious plastic materials.

‘Reckless’ means that it is possible to deform/buoy or move by hand only by hand, etc.

Before 01.04.02: If the car is not e-approved, there are no special requirements for the design and location of bulbs, etc., other than the general provisions in Sections 9.01 and 9.06.

- c) A car may be fitted with a headlamp beam placed at a height of at least 2.00 m above the ground. No part of the beam shall be less than 2.00 m above the ground.

9.06.021 M1 passenger car

- (1) The tapclame sign and the like shall be located at least 0.40 m from the front edge of the roof.

Before 01.04.85: Does not apply to taxi roof lamps unless a second sign is also installed.

- (2) The provision of point (1) shall not apply to a vehicle which has the previous steering position and a height of the roof of at least 1.80 m above the ground.

9.06.024 van N1

- (1) Vans N1 must comply with the provisions for the M1 passenger car.

9.7 Exits, boarding aids, etc. in passenger car M2/M3

9.7.01 General provisions

- (1) If a car is approved and marked in accordance with UN Regulation 107, it shall be deemed to comply with all the provisions on exits, boarding aids, etc. in the present paragraph 9.07.

- (2) Exit may be a service door (door used for the normal embarkation and exit of passengers), emergency door, emergency window or escape hatch.

A door may be regarded as a service door if the door is side-hinged or top hinged.

- (3) Rear exit (rearward facing part of the vehicle) may be replaced by an escape hatch if an exit is provided on both sides of the vehicle as close as possible to the rear.

- (4) Every passenger shall have access to mandatory exits.

- (5) The provisions of paragraph 9.07 do not apply to a row of seats where a door is accessible on each side next to the row of seats.

9.7.02 Service Door

- (1) The free passage width shall be at least 0.55 m or 0.50 m measured between handrails.
Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (2) The interior handles shall be such that the door cannot be opened inadvertently.
Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (3) In the case of automatic doors, a device shall be provided immediately at the door, both externally and internally, to render the machine inoperative so that the door can be opened manually.
Before 01.04.86: Applies only to vehicles used for commercial passenger transport and the external device requirement does not apply.
 The device shall meet the following conditions:
 - a) Shall be clearly visible and located outside not more than 1.80 m above the ground and internally not less than 1.60 m above the floor. Floor means the place from which the device is operated.
Before 01.04.10: The interior device may be at least 1.50 m above the floor. Before 01.04.86: The requirement for the highest position of the device does not apply.
 - b) Shall be capable of operating regardless of the failure of the vehicle's power supply or other power supply.
 - c) Shall be clearly marked with instructions on how to operate it.
 The device may be shielded and sealed to prevent abuse.
- (4) In the case of automatic doors which cannot be directly monitored from the driver's position or from a fixed conduction dryer from which they are operated, the following shall apply:
 - a) A signalling device shall be provided at the driving position until the automatic door is fully closed.
 The signalling device shall be controlled by the actual movement of the door.
 - b) An arrangement of mirrors or television equipment shall be provided in the interior to enable the driver to monitor directly from the driver's seat all automatic doors including steps, etc.
Before 01.04.86: Applicable only to vehicles used for the commercial carriage of passengers and equipped for the carriage of more than 22 passengers.
- (5) The service door shall be located on the right-hand side or on the rear side of the vehicle.
 Additional service door in the vehicle, designed to carry not more than 12 passengers, may be located on the left side of the vehicle.
Before 01.04.93: Not applicable.
- (6) The automatic service door design and control system shall be such that passengers cannot be injured or clamped in the door when it closes.
 If the door, when closed, meets a crushing force of not more than 150 N, it shall automatically open completely. The crushing force shall be more than 150 N for a short time, but not more than 300 N.
Before 01.04.10: Not applicable.

9.7.03 Emergency door

- (1) The free passage width shall be at least 0.55 m.
Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (2) The door shall not be fitted with a sliding door or a foldable door. However, a sliding door shall be provided as an emergency door in a vehicle designed for a maximum of 22 passengers if it is demonstrated that the door can be opened without the use of tools following a frontal impact test in accordance with UN Regulation 12.
 An automatic door may be an emergency door if it can be easily opened manually, whether or not the power supply is functioning.
Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (3) The door shall open outwards and be fitted with boat exterior and interior handles. The external handle shall be located not more than 1.80 m above the ground. The interior handle shall be designed so that the door cannot be opened inadvertently.
 The determination is deemed to be fulfilled regardless of whether the door is fitted with a locking gear which prevents the door from being opened from the outside. However, the locking eye shall be

such that the door can easily be opened from the inside.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (4) The door shall be clearly marked both externally and internally by 'emergency exit' or standardised emergency exit symbol. If necessary, an operating manual shall be provided.

Before 01.04.86: Applies only to vehicles used for the commercial carriage of passengers and the requirement for external markings does not apply.

9.7.04 Emergency window

- (1) The free access aperture shall be at least 0.50 m high, at least 0.70 m wide and have an area of at least 0.40 m².

Alternatively, if an emergency window is located in the rear end of the vehicle, it may have a free aperture of not less than 0.35 m in height and not less than 1.55 m wide while the corner may be rounded to a radius of curvature not exceeding 0.25 m.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport. The window shall be at least 0.50 m high and at least 0.50 m wide.

The glass area shall be at least 0,375 m², or 0.50 m² in the case of a vehicle designed to carry more than 22 passengers. If there is only one window on the back, the glass area shall be at least 0.50 m² and 0.75 m² respectively.

For the calculation of glass areas, the reduction resulting from any corner valves shall be disregarded.

- (2) An emergency window which can be divided vertically into two emergency windows shall be considered as two exits.

- (3) The window shall be such that the glass can be easily removed without the use of tools. The provision is not considered to be fulfilled if the window can only be rolled down.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (4) The glass pane shall be made of toughened glass.

Films or tapes which are not included in the original approval of the vehicle may be fitted to an emergency window, provided that a continuous space is left without films or tape meeting the size requirements of paragraph (1). The tape must not be traced continuously beyond the outer edge of the glass.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (5) Tools shall be fitted to crush the glass in a visible position at the windows or below the ceiling.

A minimum of 1 tools shall be provided for each emergency window.

The travel manager and the like are considered to be a passenger.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (6) The window shall be clearly marked both externally and internally with 'emergency exit' or standardised emergency exit symbol. A clear operating manual shall be provided internally.

An internally mounted label is sufficient if it is visible and clearly legible from the outside.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport. The requirement for external markings does not apply if the provision in point (3) is met.

- (7) However, the requirement of paragraph (3) shall not be fulfilled if tools are provided immediately at each emergency window to break the glass. If these tools are installed under the windows, equivalent tools shall also be installed below the ceiling for each emergency window. The tool may be attached to the vehicle by wire or similar means, although the tool can be used without difficulty.

There shall be at least one tool per emergency window. The tool for crushing the glass pane may be built into the glass itself.

9.7.05 Escape hatch

- (1) Escape hatch may be a roof hatch or a floor hatch.

- (2) The free passage width shall be at least 0.50 m.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (3) The sum of the length and width of the free passage of the emergency light shall be at least 1.20 m. Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (4) Escape hatch shall be capable of being opened by simple means and without the use of tools, both from the outside and from the inside.
Before 01.04.86: Applicable only to vehicles used for commercial passenger transport. The external opening requirement does not apply.
- (5) The escape hatch shall be clearly marked both externally and internally by “emergency exit” or standardised emergency exit symbol. A clear operating manual shall also be provided.
Before 01.04.86: Not applicable.
- (6) The floor hatch shall be hinged so that it opens inwards in the passenger compartment or can be struck into the passenger compartment.
- (7) A floor hatch shall be provided with an audible warning signal to warn the driver if it is not properly closed. The lock in the floor harness and not the movement of the mudguard itself shall trigger the sound signal. The requirement does not apply if the floor harness is automatically locked when the vehicle is moving at a speed greater than 5 km/h.
- (8) When used, escape hatch shall not be separated from the vehicle in such a way as to endanger other road users.
Before 01.04.10: Not applicable.

9.7.06 Access to exits

- (1) The height from the floor to the ceiling of the vehicle shall be at least:
 - a) 1,250 m in a vehicle equipped for the carriage of no more than 12 passengers.
 - b) 1,325 m in vehicle designed to carry more than 12 passengers but not more than 22 passengers.
 - c) 1,750 m in vehicle equipped for the carriage of more than 22 passengers, but 1,650 m on the upper floor of a two-storey vehicle.

These provisions do not apply immediately to the service door or emergency door or to areas intended exclusively for seated persons or occupants of the seat concerned (row).

Furthermore, the provisions do not apply to off-road vehicles designed for the carriage of no more than 12 passengers.

Mandatory emergency exits shall not be blocked by mounting a skicase on a bus. Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (2) Access to the service door may be blocked immediately within the service door by an individual seat complying with the provisions of paragraph 10.01.022 (4).
Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (3) Access to the emergency door shall comply with the following conditions:
 - a) Not more than two seats or rows of seats shall be locked in a vehicle designed to carry no more than 12 passengers.
 - b) Not more than one single seat or double seat shall be locked immediately within the emergency door of the vehicle designed to carry more than 12 passengers.

A seat obstructing access to the emergency door shall comply with the provisions of paragraph 10.01.022 (5).

The driver’s seat shall not be considered to block access to the emergency door, whether or not it is necessary to pass between the steering wheel and the driver’s seat in order to use the emergency door.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (4) In a vehicle equipped for the carriage of more than 22 passengers, free access shall be provided for the service door and the emergency door in the width of at least 0.40 m measured at the seat height and at least 0.50 m measured at the height of 0.85 m. If access to the service door is provided along the front edge of a seat or between two front transverse seats, the clear width measured at the seat height shall

be increased by 0,125 m or 0.25 m respectively. Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (5) In a vehicle equipped for the carriage of more than 22 passengers, the aisle shall have a width of not less than 0.30 m measured at the seat height and not less than 0.40 m, measured at a height of 0.85 m. For the measurement:
- a) The area within 0,125 m in front of a seat measured from the leading edge of a seat shall be disregarded.
 - b) Adjustable seats shall be shot towards the aisle.
 - c) Folding seats shall be folded out.

Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.

- (6) In the case of a vehicle fitted exclusively with seating positions and capable of carrying more than 22 passengers, the seats on one or both sides of the centre gangway may be displaced in the lateral direction so that the width of the centreline can be reduced to a minimum walking width of 0.22 m. It is necessary that, by means of a control on each seat placed easily accessible to a person in the aisle, it is possible, even when the seat is loaded, to return to a position corresponding to a minimum walking width of 0.30 m.

9.7.07 Lift for wheelchair users

- (1) A lift in the folded position may fully or partially cover the required exit if, immediately at the exit/lift, there is both an external and internal device to disable the automation so that the lift can be manually folded away from the exit.

The device shall comply with the provisions of paragraph 9.07.002 (3) relating to the manual opening of automatic doors.

Before 01.04.86: The external device requirement does not apply.

- (2) Lift shall only be able to operate when the vehicle is stationary. When raising of the platform and before lowering is initiated a device preventing the wheelchair from rolling off shall automatically come into operation.

Before 13.02.04: Not applicable.

- (3) The platform of the lift shall be at least 0.80 m wide and not less than 1.20 m long and the lift shall be capable of operating when under load of 300 kg.

Before 13.02.04: Not applicable.

- (4) The lift control shall be clearly marked and the lowered position of the lift shall be indicated by an indicator at the driver's position.

The indicator can be active in all positions except fully displayed position.

Before 13.02.04: Not applicable.

- (5) The control shall be designed to automatically return to the switched off position if released. When this occurs, the lift's movement shall immediately stop and it shall be possible to initiate a movement in both directions.

Before 13.02.04: Not applicable.

- (6) Areas which are not visible to the person operating the lift and where the lifting device may tap or clamp objects shall be protected by a safety device.

Before 13.02.04: Not applicable.

- (7) If one of the safety devices referred to in paragraph (6) becomes operational, the lifting device's movement shall immediately stop and a movement in the opposite direction shall be initiated.

Before 13.02.04: Not applicable.

- (8) In the event of failure of a safety device, the lift shall not be operable unless it is possible to operate it safely by hand. The nature and position of the emergency control device shall be clearly indicated. In the event of a failure of the energy supply, the lift shall be operable by hand.

Before 13.02.04: Not applicable.

9.7.08 Ramp for wheelchair users

- (1) Power-operated ramp shall be able to operate only when the vehicle is stationary. Before 13.02.04: Not applicable.
- (2) The control of the ramp shall be clearly marked and, once the ramp is released, this shall be shown by an indicator at the driving position.
The indicator can be active in all positions except fully parked position. Before 13.02.04: Not applicable.
- (3) A ramp shall be at least 0.80 m wide. The slope of the ramp shall not exceed 12 % when it is laid to an edge of 0.15 m. When measuring the ramp inclination, the body may be lowered by means of a kneeling system.
Before 13.02.04: Not applicable.
- (4) The outer edges shall be rounded to a radius of not less than 2.5 mm. External corners shall be rounded to a radius of not less than 5 mm.
Before 13.02.04: Not applicable.
- (5) Ramps with a length of more than 1.20 m when ready for use shall be fitted with a device to prevent the wheelchair from running on the side.
Before 13.02.04: Not applicable.
- (6) Any ramp shall be capable of operating safely with a load of 300 kg. Before 13.02.04: Not applicable.
- (7) When power-operated ramp is deployed and pulled in, this shall be indicated by yellow flashing lights and an acoustic signal. The ramp shall be marked with clearly visible red and white reflective warning strips on the outer edges.
Before 13.02.04: Not applicable.
- (8) The horizontal installation of power-operated ramp shall be protected by a safety device.
Before 13.02.04: Not applicable.
- (9) In the case of power-operated ramp, the horizontal movement shall stop if the ramp is loaded with a mass of 15 kg.
Before 13.02.04: Not applicable.
- (10) If one of the safety devices for power-operated ramp referred to above becomes operational, the movement of the ramp shall stop immediately. In the event of a failure of the energy supply, it shall be possible to operate the ramp by hand.
Before 13.02.04: Not applicable.
- (11) When a ramp is located at a service door located within the direct field of vision of the driver, the ramp shall be capable of being operated by the driver from the driver's seat. In all other cases, the controls shall be adjacent to the ramp. They shall only be capable of being activated and deactivated by the driver from the driver's seat.
Before 13.02.04: Not applicable.

9.7.09 Kneeling system

- (1) A control which activates the lowering or raising of part or all of the bodywork in relation to the ground shall be clearly marked and under the direct control of the driver.
Before 13.02.04: Not applicable.
- (2) It shall be possible to stop the lowering or raising and to start moving in the opposite direction immediately by means of one or more controls situated within the driver's reach when seated in the driver's cab, and in the vicinity of any other device for operating the kneeling system. Before 13.02.04: Not applicable.
- (3) When a kneeling system is fitted, the following conditions shall be fulfilled:
 - a) The vehicle shall not be capable of travelling more than 5 km/h when the bodywork is in a position lower than the normal running height.
 - b) The vehicle shall not be capable of being raised or lowered when the service door cannot be activated. Before 13.02.04: Not applicable.

9.07.022 M2 passenger car

(1) Passenger cars M2 must be fitted with:

- a) A sufficient number of exits on each side for the number of persons the vehicle is designed to demand. A service or emergency door is sufficient for 30 persons and an emergency window for 20 persons. However, in the case of a vehicle equipped for the carriage of more than 22 passengers, at least two exits shall be provided on each side, respectively at the front and at the rear.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

Diesel cars with a standing space in excess of the centre gangway and having at least two service doors shall be provided with only one exit on the left-hand side.

- b) Exit back.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

- c) Two service doors or one service door and one emergency door. In the case of a vehicle equipped for the carriage of more than 22 passengers, the doors shall be located in the front and rear half of the vehicle respectively.

In the case of a car fitted for the carriage of more than 22 passengers, the provision is deemed to be fulfilled if the doors are separated in such a way that the distance between the vertical median plane of the doors is not less than 40 % of the total length of the passenger compartment.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport and equipped for the carriage of more than 12 passengers. This requirement does not apply if the provision of paragraph 9.07.004 (3) is met.

- (2) A car fitted for the carriage of no more than 12 passengers shall not be fitted with an exit on the left side if there is a door on each side off the driver's cab and the service or emergency door on the right and rear side of the passenger compartment.

In the case of a car without separation between the driver's cab and the passenger compartment, the door on the right side of the driver's cab and the door on the right side of the passenger compartment may be made up of the same door.

- (3) In the case of two-storey vehicles, each floor shall be considered as one vehicle in terms of the number and location of exits. However, the exit of the back side of the sub-sheath may be replaced by the exit on the front of the suit or the staircase to the upper side and the supplementary exit on the back or additional roof of the upper.

In the case of windcreens fitted out as an emergency window, the provision of paragraph 9.07.004 (7) shall not apply.

- (4) The aisle of the upper floor of a car in two floors shall be connected by one or more stairways to the access passage to a service door on the lower floor or to the centre gangway of the lower floor, up to a maximum distance of 3.00 m from a service door. If there are two stairways, one may walk to an emergency door on the lower floor.

- (5) Passenger cars fitted exclusively with seating positions and designed to carry more than 30 passengers on the upper floor shall be provided with two stairways.

- (6) Passenger cars fitted with both seating and standing spaces and designed to carry more than 50 passengers on the upper floor shall be fitted with two stairways.

Before 01.04.99: Not applicable.

9.07.023 M3 passenger car

- (1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

- (2) For articulated buses, the passage between the individual rigid sections is not considered as an exit.

- (3) For articulated buses, each rigid section follows the M2 passenger car rules separately.

- (4) The provision of paragraph 9.07.002 (4) (b) shall not be fulfilled for the rear part if the following conditions are met:

- a) The lower step shall be equipped with a step check to signal at the driving position when the step is

loaded by a passenger.

- b) The front edge of the door shall be fitted with a sensing list which automatically stops and controls the closing movement of the door if the complete closure of the door is prevented.

If the rearmost part is to be fitted with a service door, the door shall not comply with the provisions of paragraph 9.07.022 (1) (c).

Before 01.04.86: Articulated buses shall not be fitted with a door in the rearmost part if the determination in paragraph 9.07.004.

(3) fulfilled.

9.07.357 Sovebus

- (1) In the case of sleeping buses, the provisions for M2 and M3 passenger cars shall also be complied with when the seats are connected to berths.
- (2) However, the centreline may be less than 400 mm wide at the upper buoys if the following conditions are met:
 - a) The median width is at least 300 mm for both lower and upper buoys.
 - b) All windows off the berths are emergency windows with tools to crush the glass at each window.

9.8 Rear underrun protection (rear bumper)

9.8.01 General provisions

- (1) The RUPD shall comply with the following requirements:
 - a) Shall provide protection against underrun in the event of a rear collision with smaller vehicles.
 - b) For truck N2 with a maximum authorised mass exceeding 8.000 kg, truck N3 and trailer/semi-trailer O3 and O4 with hydraulic suspension, air-suspension or other automatic load suspension, the guard shall not be more than 0.45 m above the ground.

In the case of vehicles with a second suspension, the spray suppression shall not be more than 0.50 m above:

road.

Where an angle of clearance of up to 8° according to standard ISO 612: 1978 necessitates a larger approach,

height, this may be up to 0.55 m on the above vehicles.

In the case of other vehicles, the guard may be located up to 0.55 m above the ground.

The height shall be measured from the lower edge in running order and with bogie head lowered, if applicable.

Before 01.07.25: The guard may in all cases be located up to 0.55 m above the ground.

- c) For truck N2 with a maximum authorised mass exceeding 8.000 kg, truck N3 and trailer/semi-trailer O3 and O4, the underrun structure shall not be located more than 0.30 m from the rear of the vehicle.

In the case of other vehicles, the FUP shall be located no more than 0.40 m from the rearmost point of the vehicle. Before 01.07.25: The underrun structure shall not be more than 0.40 m from the rearmost point of the vehicle.

- d) The guard shall not be wider than the rear axle measured from the outer edge of the wheels, except for bulging of the tyre just above the running surface, or be more than 0.10 m narrower on either side.
- e) The height of the guard shall be at least 0.12 m. However, for van N1, truck N2 with a maximum permissible mass not exceeding 8.000 kg, off-road vehicle, tractor trailer and vehicle with loading rear space, the height shall be not less than 0.10 m.

Before 01.07.25: The height of the guard may in all cases be at least 0.10 m.

- (2) The RUPD and its installation shall comply with the strength requirements of one of the following sets of rules:

- a) UN Regulation 58-03 for guards mounted on cars and their trailers.
 - b) Regulation (EU) 2015/208, Annex XXVI, for guards mounted on tractor trailers and motor gear trailers. However, the spray-suppression of these vehicles may alternatively meet the strength requirements of point (a).
- Before 01.09.21: Rear underrun protection may comply with the steering requirements of UN Regulation 58-02 or Directive 70/221/EEC as amended by Directive 2006/20/EC.
- Before 11.03.10: Rear underrun protection may comply with the strength requirements of UN Regulation No 58 or Directive 70/221/EEC as amended by Directive 79/490/EEC.
- (3) The RUPD may consist of two sections located at a gap not exceeding 0.60 m or of three sections with a gap not exceeding 0.30 m each.
 - (4) The RUPD may be designed to change its position at the rear of the vehicle provided that it can be locked in the operating position.
 - (5) The RUPD may consist wholly or partly of fixed parts of the structure of the vehicle or partly of the rear wheel of the vehicle.
 - (6) However, the RUP may be wider than the rear axle if the following conditions are met:
 - a) The vehicle is fitted with a protective support on each side from the guard up to the rear wheels.
 - b) The width of the guard does not exceed the width of the other structure.
 - (7) The RUPD may consist of sections on a vehicle with a loading platform if the following conditions are met:
 - a) The horizontal distance between the guard and the individual parts of the rear lift is not more than 2.5 cm.
 - b) Each section has an effective area of at least 350 cm².
 - (8) When determining the rearmost point of the vehicle, parts (bodywork, structure, handles, brackets and the like) located at a height of more than 2.00 m above the ground (measured by running order weight with any bogie head lowered) may be disregarded.
 - (9) When determining the rearmost point of the vehicle, the foldable devices and equipment referred to in paragraph 3.02.001 (7) may be disregarded.

9.8.021 M1 passenger car

- (1) Passenger cars M1 must comply with the provisions for van N1. Before 11.03.10: Not applicable.

9.8.022 M2 passenger car

- (1) Passenger cars M2 must comply with the provisions for van N1. Before 11.03.10: Not applicable.

9.8.023 M3 passenger car

- (1) Passenger cars M3 must comply with the provisions for van N1. Before 11.03.10: Not applicable.

9.8.024 Van N1

- (1) Vans N1 shall be fitted with a RUPD unless the ground clearance below the rear of the vehicle does not exceed 0.55 m measured not more than 0.45 m from the rearmost point of the vehicle and over a width corresponding to the width of the rear axle less 0.10 m on each side.
Before 01.04.87: Not applicable if the minimum value of ground clearance below the rear of the car does not exceed 0.55 m.
Before 01.04.86: Not applicable.

9.8.025 Truck N2

- (1) Heavy goods vehicles N2 shall be equipped with rear underrun protection. Before 01.04.86: Not applicable.
- (2) A semi-trailer car is exempted from the requirement of rear underrun protection.
- (3) A car with a compression unit for renovation where the ground clearance under the refurbishment fund does not exceed 0.55 m and where there is no risk of underrun is exempted from the requirement of point (1).
- (4) In the case of a car fitted with a pit or salt spreader, the distance in paragraph 9.08.001 (1) (c) shall not be required.
- (5) In the case of a car with a passenger lift in a transport position where the ground clearance below the passenger lift does not exceed 0.55 m, the distance in paragraph 9.08.001 (1) (c) is not required.
- (6) In the case of a vehicle with a concrete gun, the distance referred to in paragraph 9.08.001 (1) (c) may be up to 0.70 m.
- (7) In the case of a car with swap bodies where the load is raised from the rear end of the vehicle, the distance referred to in paragraph 9.08.001 (1) (c) may be up to 0.70 m.
Handles, brackets and similar devices located at a height of at least 1.80 m above the ground shall not be included in the measurement of distance.

9.8.026 Truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

9.8.111 Hinge/semi-trailer O1

- (1) The hinge/semi-trailer O1 shall comply with the requirements for van N1.

9.8.112 Hinge/semi-trailer O2

- (1) The hinge/semi-trailer O2 shall comply with the requirements for van N1.

9.8.113 Hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3 shall comply with the requirements for heavy goods vehicle N2.
- (2) Dolly is exempted from the RUPD requirement.

9.8.114 Hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the requirements for heavy goods vehicle N2.
- (2) Dolly is exempted from the RUPD requirement.

9.08.120 Trader trailer

- (1) A trailer shall be equipped with a rear underrun protection if the rear, lower point of the load is more than 0.40 m behind the rear wheel.
Before 01.10.96: Not applicable.
- (2) In the case of a tractor trailer with swap bodies where the load is raised from the rear of the tractor trailer, the distance referred to in point 9.08.001 (1) (c) may be greater than 0.40 m, but not more than 0.70 m.
Handles, brackets and similar devices located at a height of at least 1.80 m above the ground may be ignored.
- (3) In the case of a tractor trailer with a width of more than 2.55 m in accordance with point 3.02.001 (4), the width of the rear underrun protection shall be between 2.35 m and 2.55 m, irrespective of the point. 9.08.001 (1) (d) whether the width in relation to the rear axle is not fulfilled.

9.08.130 motor tool trailer

- (1) Motor gear trailers shall comply with the provisions applicable to tractor trailers.

9.08.141 caravan

- (1) Caravans shall comply with the requirements for van N1.
Before 11.03.10: Not applicable.

9.08.142 other attachments subject to registration

- (1) Other attachments subject to registration must comply with the provisions applicable to van N1. Before 11.03.10: Not applicable.

9.08.200 vehicle combinations

- (1) In vehicle combinations consisting of lorries and centre-axle trailers, the lorry shall not be equipped with rear underrun protection.
- (2) The RUPD as described in paragraph 9.08.001 (4) shall be located only in the operating position of the rear vehicle combination.

9.9 Lateral protection

9.9.01 General provisions

- (1) Lateral protection shall reduce the risk that unprotected road users may enter the side of a vehicle.
- (2) Lateral protection shall consist of:
 - a) plate that is flat or shaped vertically;
 - b) horizontal bars that are at least 0.10 m high (but 0.05 m high for truck N2 and trailer O3) and with a space not exceeding 0.30 m; or
 - c) a combination of plate and rods referred to in points (a) and (b).

- (3) The surface of the sideguard shall be smooth and, as far as possible, continuous from front to rear end. Adjacent parts may overlap rearwards or downwards, or there may be a gap of not more than 25 mm in the longitudinal direction, provided that the rearmost part does not protrude from the front. All outer edges and corners shall be rounded to a radius of not less than 2.5 mm. Rounded bolt heads and the like may project up to 10 mm from the surface.
- (4) Lateral protection shall be firmly attached to the vehicle and be so designed as to withstand a horizontal static force of 1 kN applied perpendicular to any part of its outer side of a 220 mm $\pm$ 10 mm diameter piston. The printing under this load shall not exceed the following dimensions:
 - a) 30 mm on the rear 0.25 m of the side guard.
 - b) 150 mm on the rest of the side guard.
- (5) Lateral protection shall be so placed in width that the following conditions are met:
 - a) The side-guard does not increase the width of the vehicle.
 - b) The lateral protection device is not more than 0.12 m inside the outermost plane of the vehicle (overall width).
 - c) The rearmost 0.25 m of the lateral guard is not more than 30 mm from the outer surface of the rear-wheels.
- (6) The lateral protection shall be so placed in height, measured in running order, that the lower edge is not more than 0.55 m above the ground. The top edge of the side guard shall be:
 - a) at least 0.95 m above the ground,
 - b) at the level of the loading surface; or
 - c) a maximum of 0.35 m under the above fixed structure, whichever is the lower.
- (7) The front edge of the side-guard shall consist of a continuous vertical part extending over the entire height of the screen, unless it lies immediately behind other fixed parts of the vehicle. The outer and front sides shall measure at least 0.05 m rearward and shall be turned 0.10 m inwards in the case of categories N2 and O3 and at least 0.10 m rearward and turned 0.10 m inwards in the case of categories N3 and O4.
- (8) The rear edge of the side-protection device shall not be more than 0.30 m forward of the rear wheel, but 0.50 m in the case of a vehicle with a turning rear axle.
- (9) Permanently attached vehicle parts such as boxes, tanks, etc. may form part of the side guard provided that they meet the requirements for dimensions.
- (10) Mandatory lateral protection shall also be positioned between wheels where the distance between wheels exceeds 0.60 m. However, side protection may be omitted between two steered axles if the wheelbase between them does not exceed 2.10 m.
- (11) Lateral protection may be such that its position on the side of the vehicle can be changed, provided that it can be locked in the functional position.

9.09.025 truck N2

- (1) Heavy goods vehicles N2 shall be fitted with lateral protection on both sides.
Before 01.11.19: Heavy goods vehicles N2 shall be equipped with lateral protection on the right side. Before 01.04.92: Not applicable.
- (2) Semi-trailer cars are exempted from the requirement of point (1).
- (3) The front edge of the sideguard shall be no more than 0.30 m behind the front wheel or shall be adjacent to the cab or access steps at an angle of not more than 45°.

9.09.026 truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

9.09.113 hinge/semi-trailer O3

- (1) The hinge/semi-trailer O3, except dolly, shall be fitted with lateral guards on both sides. Before 01.07.20: The hinge/semi-trailer O3 shall be fitted with lateral protection only on the right side.

Before 01.04.92: Not applicable.

- (2) The front edge of the sideguard shall be positioned as follows:
 - a) Not more than 0.50 m behind the front wheel of a trailer with steering equipment.
 - b) Not more than 0.25 m behind the front edge of the platform or structure on centre-axle trailers.
 - c) Not more than 0.25 m behind the transverse median plane of the support-legs and not more than 2.70 m behind the coupling pin of a semi-trailer.
- (3) A semi-trailer which is retractable shall comply with the requirement of the front edge or rear edge as regards the longitudinal position of the side-guard in the towed condition.
- (4) In the case of an intrusive link trailer with the support leg at the front of the vehicle, the front edge of the sideguard may be located up to 2.70 m behind the king pin with the vehicle in the pushed condition.

9.09.114 hinge/semi-trailer O4

- (1) The hinge/semi-trailer O4 shall comply with the provisions applicable to the O3 trailer.

9.10 front underrun protection (pre-bumper)

9.10.001 general provisions

- (1) The front underrun protection shall comply with the following conditions:
 - a) Shall provide protection against underrun in the event of a frontal collision with smaller vehicles.
 - b) Shall be located not more than 0,445 m above the ground (measured from the lower edge in running order with bogie head lowered, if any), but not more than 0,400 m in the case of heavy goods vehicles N2 with a maximum permissible mass not exceeding 7.500 kg.
 - c) Shall not be wider than the curves and shall not be more than 0.10 m narrower on either side measured from the outside of the front deck or be more than 0.20 m narrower on either side measured from the outer edge of the cab.
 - d) Shall have a height of at least 0.10 m for truck N2 and at least 0.12 m for truck N3.
 - e) Shall be such that the ends do not face forward and exhibit a radius of curvature of not less than 2.5 mm.
 - f) Shall be so designed that its surface is bled, rounded or horizontally, and so that bolts and rivets, which are to be rounded, do not project more than 10 mm from the surface.
- (2) The front underrun protection shall comply with the design provisions of UN Regulation No 93 with regard to construction and installation.

Before 01.07.25: The guard may comply with Directive 2000/40/EC.
- (3) The front underrun protection may be such that its position at the front of the vehicle can be changed, provided that it can be locked in the functional position.

9.10.025 truck N2

- (1) Heavy goods vehicles N2 shall be equipped with front underrun protection. Before 10.08.03: Not applicable.
- (2) For off-road truck N2 the requirement of front underrun protection does not apply.

9.10.026 truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

10. Layout of the cabin, visibility, special equipment, etc.

10.1 Layout of the cabin, etc.

10.1.01 General provisions

- (1) The interior layout of the cabin shall not cause unnecessary danger to the driver and passengers.
- (2) The vehicle shall be so arranged as to enable the driver to operate the various devices of the vehicle without the driver's attention being distracted from the other traffic.

10.1.02 Seats

- (1) Seats shall be firmly attached to the vehicle.
- (2) Adjustable seats shall be capable of being automatically held in all positions in which they can be positioned. Before 01.10.99: No requirement for automatic retention.
- (3) Adjustable backrest shall be capable of being maintained in all positions in which they are placed.
- (4) All seats which can be tilted or have a recurring backrest shall be automatically held in the normal stall. The position in which the seating surface is folded is the normal position of a folding seat. Before 01.10.99: Not applicable.
- (5) The driver's seat shall be so arranged and arranged that the driver can achieve a comfortable driving position and operate the vehicle controls.

10.1.03 Head restraints

- (1) Mandatory head restraints shall comply with the constructive provisions of one of the following sets of rules:
 - a) UN Regulation 17-09.
 - b) UN Regulation 25-04.
 - c) American Standard FMVSS 202a.
 - d) Canadian standard CMVSS 202.Before 01.07.25: Mandatory head restraints may comply with UN Regulation 17-06 or US standard FMVSS 202.
Before 01.01.17: Mandatory head restraints may comply with Directive 78/932/EEC.
Before 01.10.99: Mandatory head restraints may comply with UN Regulations 25-01 or UN Regulation 17-03.

10.1.04 Wheelchair restraint systems

- (1) A vehicle used to carry a person in a wheelchair shall be fitted with a wheelchair restraint system. Before 01.04.86: Applicable only to vehicles used for commercial passenger transport.
- (2) Anchorage points for wheelchair restraint shall be firmly attached to the vehicle. Finally, the rules on the accommodation of seats set out in points 9.07.001, 9.07.006 and 10.01.023 shall apply mutatis mutandis.

10.1.05 Wheelchair space

- (1) For each wheelchair user for which the passenger compartment is intended, a special wheelchair space shall be provided which is at least 0.75 m wide and 1.30 m long. The longitudinal plane of the special area shall be parallel to the longitudinal plane of the vehicle and the floor surface of the special area shall be slip resistant. Before 13.02.04: Not applicable.
- (2) Folding seats in a wheelchair area shall not protrude into the wheelchair area when folded. Before 13.02.04: Not applicable.
- (3) A vehicle may be fitted with detachable seats in the wheelchair area if they can be easily removed. Before 13.02.04: Not applicable.

10.1.06 Door to wheelchair

- (1) The wheelchair door opening shall be at least 1.40 m high and shall have a width of at least 0.90 m or 0.80 m measured between handrails.

Before 13.02.04: Not applicable.

- (2) Devices for opening the door to a wheelchair shall be located not more than 1.30 m above the floor or ground, whether present inside or outside the vehicle.

Before 13.02.04: Not applicable.

10.1.020 Car

- (1) Side-facing seats are not permitted.

The provision does not apply to passenger cars M2 or M3 which are so designed that standing passengers can be carried.

Before 20.10.07: Not applicable.

10.1.021 M1 passenger car

- (1) A passenger car M1 shall be fitted with head restraints on the outboard seating positions of the front row of seats. However, seat head restraints specially designed for persons with disabilities shall not comply with the constructive provisions of paragraph 10.01.003 (1).

A M1 special purpose passenger car as defined in Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.04.86: Not applicable.

- (2) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 with regard to strength characteristics and attachment, etc..

However, the original installed seat may be constructed and installed in accordance with U.S. Standard FMVSS 207 or Canadian standard CMVSS 207.

However, seats specially designed for persons with disabilities shall comply only with the provision in point.

10.01.002 (1).

A M1 special purpose passenger car as defined in Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.07.25: Seat may comply with UN Regulation 17-08.

Before 01.01.17: Seat may comply with UN Regulation 17-06 or Annex II to Directive 74/408/EEC as amended by Directive 96/37/EC.

Before 20.10.07: Not applicable to folding seat. Before 01.10.99: Not applicable.

- (3) Wheelchair restraint systems shall comply with the design requirements of one of the following sets of rules:

a) Standard ISO 10542-1: 2012. The restraint system shall be clearly marked and durable with: 'ISO'.

b) Regulation (EU) 2018/858, Annex II, Appendix 3.

Before 01.07.25: Wheelchair restraint systems may comply with the design provisions of American Standard SAE J2249 and shall be clearly and indelibly marked with "SAE" or may comply with the design provisions of Annex XI, Appendix 3 to Directive 2007/46/EC.

Before 01.01.17: Wheelchair restraint systems may comply with the design provisions of Annex VII to Directive 2001/85/EC.

Wheelchair restraint systems may comply with the design provisions of standard ISO 10542 and shall be clearly marked and durable with 'ISO'.

Electric wheelchair restraint systems (docking station) shall not be marked with 'ISO' or 'SAE'.

Before 13.02.04: Not applicable.

(4) The provisions of points 10.01.005 (1), 10.01.005 (2) and 10.01.006 shall not apply to M1 passenger cars.

(5) The provision in point 10.01.020 (1) does not apply to a motor vehicle M1, which is authorised only for limousine driving. A side-facing seat shall be fitted with a head restraint.

Before 20.10.07: The head restraint is not required on a side-facing seat in limousine.

10.1.022 M2 passenger car

(1) A passenger car M2 with a maximum permissible mass not exceeding 3.500 kg shall be fitted with head restraints in the outboard seating positions of the front row of seats.

Before 01.07.25: Not applicable.

(2) No seat shall be positioned forward of the driver's seat unless the seat is so positioned that there is a need for direct forward and lateral vision from the driver's seat.

(3) If a seat is positioned in such a way that the passenger will be thrown through the car by severe braking, protective braces or rods shall be fitted in front of the seat unless the seat is provided with a seat belt. The provision is deemed to be fulfilled if the passenger is able to reach with at least one hand the handle or bench positioned at the front.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

(4) Seats shall be so arranged and arranged as to enable passengers to escape the car without difficulty.

In the case of a car fitted for the carriage of no more than 22 passengers, the provision is deemed to be met if the clear width of the passage at any height is at least 0.30 m. This dimension may be reduced by up to 30 mm if the upholstery of the seats can be easily compressed together. For the measurement, the following shall apply:

The area within 0,125 m in front of a seat, measured from the front edge of the seat, shall be disregarded. Adjustable seats shall be shot towards the aisle.

Folding seats shall be folded out.

The clear width of transverse passages may be less than 0.30 m.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

(5) The seat obstructing access to the service door shall be arranged as follows:

a) It shall be possible to release the seat.

b) It shall be possible to secure the seat in the folded position. A clear operating manual shall be provided on or at the seat.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

(6) The seat obstructing access to the emergency door shall be fitted in one of the following ways:

a) It shall be possible to tilt the seat and remain in this position.

b) The seat shall be easily removable without the use of tools.

c) It shall be possible to set the seat-back down if the car is designed for the carriage of not more than 12 passengers. A clear operating manual shall be provided on or at the seat.

Before 01.04.87: The seat obstructing access to the emergency door shall be so arranged that it can be tilted to side and remain in this position.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

(7) Forward-facing seats shall comply with the design provisions of UN Regulations 17-09 or UN Regulation 80-03 with regard to strength characteristics and attachment, etc..

However, seats specially designed for persons with disabilities shall comply only with the provision in point.

10.01.002 (1).

However, in the case of a passenger car equipped for 10 persons including the driver, the original installed seat may be constructed and installed in accordance with U.S. standard FMVSS 207 or Canadian standard CMVSS 207.

Before 01.01.17: Forward-facing seats may comply with the structural provisions of UN Regulation 80-01 or Annex III to Directive 74/408/EEC, as amended by Directive 96/37/EC, with regard to strength characteristics and attachment, etc..

Before 20.10.07: Not applicable to folding seats.

Before 01.10.01: Passenger cars M2 with a maximum authorised mass not exceeding 3.500 kg may comply with the provisions of Directive 74/408/EEC as amended by Directive 81/577/EEC.

Before 01.10.99: Not applicable.

(8) The provisions of point (6) shall not apply to a passenger car M2 where the authorised number of standing places represents 20 % or more of the maximum number of passengers and which is authorised only for regular services. If there are two floors, the number of standing seats shall be calculated in proportion to the number of approved passenger seats on the lower floor.

(9) Wheelchair restraint systems shall comply with the design provisions of UN Regulation 107-07, Annex 8.

In the case of a passenger car M2 where the permitted number of standing places represents 20 % or more of the maximum number of passengers and is approved only for regular services, wheelchair restraints are not required if the wheelchair is positioned rearward facing a wall or seat-back capable of withstanding a forward load of 250 daN, measured in accordance with paragraph 107 of Annex 07 to UN Regulation 8-3.8.5.

Before 01.07.25: Wheelchair restraint systems may comply with the design provisions of UN Regulation 107-05, Annex 8.

Before 01.01.17: Wheelchair restraint systems may comply with the design provisions of Directive 2001/85/EC Annex VII or UN Regulation 107-02 Annex 8.

Wheelchair restraint systems may comply with the design provisions of standard ISO 10542 and be clearly marked and durable with 'ISO'.

Electrical wheelchair restraint systems (docking station) shall not be marked 'ISO' or 'SAE'.

Before 13.02.04: Not applicable.

10.1.023 M3 passenger car

(1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

(2) The provision of paragraph 10.01.020 (1) does not apply to a motor vehicle M3 with a maximum permissible mass exceeding 10.000 kg, where side-facing seats are permitted to be positioned in the rear part of the vehicle so as to form an entire section with up to 10 seats. A side-facing seat shall be fitted with a head restraint.

(3) In the case of a passenger car M3 equipped for more than 22 passengers, the interior fittings of the cabin with regard to fire safety shall comply with the provisions of:

a) UN Regulation 118-04; or

b) American Standard FMVSS 302.

Before 01.01.26: In the case of a passenger car M3 equipped for more than 22 passengers, the interior fittings of the cabin with regard to fire safety shall comply with the provisions of:

a) UN Regulation 118-03; or

b) American Standard FMVSS 302.

Before 01.07.25: The arrangement of the passenger compartment may comply with the provisions of UN Regulation No 118. Before 01.01.17: The layout of the cabin may comply with the provisions of Directive 95/28/EC. Before 01.04.86: Not applicable.

(4) The provision in point (3) does not apply to urban buses.

10.1.024 Van N1

(1) Vans N1 shall be fitted with head restraints in the outboard seating positions of the front row of seats. However, seat head restraints specially designed for persons with disabilities shall not comply with the constructive provisions of paragraph 10.01.003 (1).

Before 01.04.86: Not applicable.

(2) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 with regard to strength characteristics and attachment, etc..

However, the original installed seat may be constructed and installed in accordance with U.S. Standard FMVSS 207 or Canadian standard CMVSS 207.

Before 01.07.25: Not applicable.

10.1.025 Truck N2

(1) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 with regard to strength characteristics and attachment, etc..

Before 01.07.25: Not applicable.

10.1.026 Truck N3

(1) Truck N3 shall comply with the requirements for truck N2.

10.01.031 two-wheel motorcycle

(1) A self-contained passenger seat shall be fitted with handrails or similar devices for use by the passenger.

(2) Two-wheel motorcycles shall be fitted with foot rests for the driver and any passengers.

10.01.040 moped

(1) Two-wheel mopeds shall be fitted with pedals or foot rests for the driver.

10.01.050 tractor

(1) The tractor may be fitted with a passenger seat if the driver's operation of the vehicle is not hampered by the passenger.

(2) The passenger seat shall be so designed and arranged as to enable the passenger to stay stuck while driving.

10.01.320 school vehicle

(1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

10.01.357 Sovebus

(1) The arrangement of the seat structure shall be fitted with devices which safely restrain the structure, even when the seats have been converted into berths.

(2) Safety signs shall be provided in front of berths which may prevent passengers from being ejected in the event of severe braking or collision.

(3) The upper edge of the safety sign shall have a minimum height above the uncompressed seat cushion of 0.30 m and shall cover the entire width of the berth. The gap between the upper edge of the uncompressed seat cushion and the lower edge of the safety sign shall not exceed 70 mm.

(4) The safety separation shall withstand a static forward load of at least 10 kN. The test force shall be applied at a height of 0.25 m above the horizontal plane of the uncompressed bed cushion. During the test, the safety separation shall have a horizontal deflection of not less than 0.10 m and not more than 0.30 m.

10.01.364 camping car

(1) The provisions of paragraphs 10.01.020, 10.01.021, 10.01.022 and 10.01.023 on seats apply only to seats intended for normal use in driving.

10.2 Seatbelts

10.2.01 General provisions

(1) Safety belts shall be approved and marked according to one of the following sets of rules:

- a) UN Regulation 16-07.
- b) Regulation 168/2013/EU and its implementing measures.

However, the original safety-belt may be constructed in accordance with U.S. standard FMVSS 209 or Canadian standard CMVSS 209.

However, non-mandatory belts may be approved and marked in accordance with standard 8853-2016 of the International Motor Sport Association (FIA).

Before 01.07.25: Safety-belts may be approved and marked in accordance with UN Regulation 16-06 or Directive 97/24/EC.

Before 01.01.17: Safety-belts may be approved and marked in accordance with UN Regulation 16-04 or Directive 77/541/EEC as amended by Directive 96/36/EEC.

Before 01.10.01: Passenger cars M2 with a maximum authorised mass not exceeding 3.500 kg may comply with the provisions of Directive 77/541/EEC as amended by Directive 90/628/EEC.

Before 01.10.99: Safety belts may be approved and marked in accordance with Directive 77/541/EEC as amended by 90/628/EEC.

Before 01.04.98: Safety-belts may be approved and marked in accordance with UN Regulation 16 or Directive 77/541/EEC.

Before 01.04.85: Safety-belts may be approved and marked according to standards DS 768.1 and 768.2. Before 01.04.83: Only applicable to mandatory safety belts.

(2) The seat belt of front seats shall be a three-point belt. However, where such a belt cannot or cannot easily be fitted, lap belts may be used.

Rear seat belts may be lap belts or three-point belts. Non-mandatory belts may be of the H-type.

Before 01.04.89: Non-mandatory safety belts of front seats may be lap belts. Before 01.04.83: Only applicable to mandatory safety belts.

(3) In the driver's position, the safety-belt shall be one of the following types:

- a) Fixed belt.
- b) Belt with inertial retractor.
- c) Belt with inertial tractor with multiple sensitivity.

(4) In passenger seats, the safety-belt shall be one of the following types:

- a) Fixed belt.
- b) Belt with inertial retractor.
- c) Belt with inertial tractor with multiple sensitivity.
- d) Belt with automatic retractor.

(5) Properly used safety-belts shall enable the driver to operate the general controls of the vehicle.

(6) Safety-belts shall be firmly attached to the fixed parts of the vehicle. On a vehicle equipped from the factory with belt attachment points, these shall be used to secure the safety-belt.

(7) The course of a safety-belt may be altered by the use of additional brackets if this does not interfere with the strap or brackets of the approved belt. In the case of additional attachments which carry the force, both the brackets and their attachment to the vehicle shall correspond, in terms of strength, to the original anchorage points of the safety-belt.

(8) Safety-belts may be fitted with a special energy absorbing device, pre-tensioner, lock or equivalent.

10.2.02 Safety belts for wheelchair users

- (1) A vehicle used for the carriage of a person in a wheelchair shall be fitted with a safety-belt at the wheelchair space if the safety-belt is required for the vehicle in the corresponding normal seating position. The belt shall be of the type required for the vehicle in the corresponding normal seating position.
However, fixed belts may be used if the roller belt cannot be properly positioned.
- (2) Safety-belts shall be approved and marked in accordance with the requirements of paragraph 10.02.001.
(1). However, safety-belts carried out in accordance with US standard FMVSS 209 or Canadian standard CMVSS 209 may be used even if the belt is not originally fitted.
Alternatively, a safety-belt may comply with the constructive provisions of standard ISO 10542-1: 2012, provided that the safety-belt is clearly marked and durable with 'ISO'.
Before 01.07.25: Safety-belts may comply with U.S. standard SAE J2249 provided that the safety-belt is clearly marked and durable with 'SAE'.
Before 01.07.16: Safety belts may comply with the constructive provisions of standard ISO 10542, provided that the safety-belt is clearly marked and durable with 'ISO'.
- (3) Belt anchorages shall be positioned in such a way that the safety-belt can be appropriately positioned on the wheelchair user's body.
- (4) Belt anchorages shall be firmly attached to the vehicle.
The determination shall be deemed to be fulfilled if the single belt anchorage is attached to one of the following:
- a) Metal profile in the floor structure.
 - b) Metal profile in the side wall/roof pillar.
 - c) Metal rail, bracket or similar, if firmly attached to the floor structure. Before 01.04.01: Not applicable.

10.2.020 Car

- (1) The vehicle shall be fitted with a safety-belt reminder for the seating positions of the front row of seats which comply with the design provisions of UN Regulation 16-07.
The requirement does not apply to vehicles used for the transport of disabled persons and vehicles intended for use by the armed forces, the civil defence, the fire brigade and the police.
Before 01.07.25: Not applicable.

10.2.021 M1 passenger car

- (1) Passenger cars M1 shall be fitted with the following safety-belts in all seats in forward and rearward-facing seats:
- a) Three-point belt with inertia retractor with multiple sensitivity on a forward-facing seat.
 - b) Lap belt with a fixed or automatic retractor or a double-sensitivity inertia retractor on a rearward-facing seat, or alternatively a three-point belt with a double-sensitivity inertia retractor.
- Before 20.10.07: Not applicable to folding seats.
Before 01.10.04: Lap belts are sufficient in the middle seat of the front seat if the passenger's head cannot come into contact with the windscreen as defined in Directive 74/60/EEC.
Lap belts are sufficient for the middle seating position of the rear seat.
Lap belts are sufficient for outboard forward facing rear seats if there is a passage between a seat and the nearest side wall to allow passengers to access other parts of the car. A gap between a seat and the nearest side wall shall be considered to be a passage if the distance between that side wall, with all doors closed, and a vertical longitudinal plane passing through the centreline of the seat in question is more than 0.50 m.
Inertia retractors with multiple sensitivity are not required in the middle and rear seats of the front seat.
Before 01.10.99: The provisions do not apply to rearward facing seating positions.

Before 01.04.98: The lap belt is sufficient in the forward facing rear seat position.

Lap belts shall be sufficient for the centre forward facing seating position of the front seat if the three-point belt is not or cannot easily be fitted.

Inertial tractor with multiple sensitivity is not required in the outboard seating position of the front seat.

Before 01.04.89: Passenger cars M1 shall be fitted with safety belts in front seating positions.

Before 01.07.69: Not applicable.

- (2) Passenger cars M1 shall be fitted with belt anchorages complying with the design provisions of UN Regulation 14-09 for all seats in forward and rearward-facing seats.

However, the original belt anchorage may be constructed in accordance with U.S. standard FMVSS 210, Canadian standard CMVSS 210 or Japanese standard JSRRV, Article 22-3.

However, belt anchorages for seats specially designed for persons with disabilities shall comply only with the provisions of paragraph 10.02.001 (6).

A M1 special purpose passenger car as defined in Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.07.25: Belt anchorages may comply with the design provisions of UN Regulation 14-06.

Before 01.01.17: Belt anchorages may comply with the design provisions of UN Regulation 14-04 or Directive 76/115/EEC as amended by Directive 96/38/EC. These provisions apply to forward and rearward-facing seats.

Before 20.10.07: Not applicable to folding seats.

Before 01.10.99: Belt anchorages may comply with the design provisions of UN Regulation 14-03 or Directive 76/115/EEC as amended by Directive 90/629/EEC. These provisions apply only to forward-facing seats.

Before 01.04.98: Belt anchorages may comply with the design provisions of UN Regulation No 14 or of Directive 76/115/EEC.

Before 01.04.89: Not applicable.

- (3) The side-facing seat of a passenger car M1, approved only for the operation of limousine, shall be fitted with a lap belt with a retractor. Belt anchorages shall comply with the design provisions of UN Regulation 14-09.

However, the original belt anchorage may be constructed in accordance with US standard FMVSS 210.

Before 01.07.25: Belt anchorages shall comply with the design provisions of UN Regulation 14-06.

Before 01.01.17: Belt anchorages shall comply with the design provisions of UN Regulation 14-04 or of Directive 76/115/EEC as amended by Directive 96/38/EC.

Before 20.10.07: Not applicable.

- (4) Safety-belt anchorages at the wheelchair space shall comply with the structural provisions of standard ISO 10542-1: 2012 or Annex II, Appendix 3 to Regulation (EU) 2018/858.

If the belt anchorages comply with standard ISO 10542-1: 2012, the following conditions shall be met:

- a) The total area of the strengthening plates used for mounting the safety-belt anchorages in the floor is at least 50 cm².
- b) The upper anchorage for shoulder belts is located above shoulder height.
- c) The area of the strengthening plate used for mounting the upper anchorage for shoulder belts shall be at least 25 cm².
- d) Metal reinforcement plates with a thickness of not less than 3 mm and a radius of curvature of not less than 5 mm.

Before 01.07.25: Safety-belt anchorages at the wheelchair space may comply with the constructive provisions of American Standard SAE J2249 or Annex XI or Annex XI of Directive 2007/46/EC, Annex XI, Appendix;

3. Belt anchorages meeting the American standard SAE J2249 shall also comply with the additional conditions applicable to belt anchorages complying with standard ISO 10542-1: 2012.

Before 01.01.17: Wheelchair seat belt anchorages shall comply with the constructive provisions of standard ISO 10542 or US standard SAE J2249 and shall be clearly marked and durable with: 'ISO' or 'SAE'.

Before 13.02.04: Not applicable.

- (5) A passenger car M1 with more than one row of seats shall be fitted with child restraint anchorages according to UN Regulation 145.

This requirement does not apply to ambulance, hearses and caravans, as well as to vehicles used for the transport of disabled persons and vehicles intended for use by the armed forces, civil defence, fire brigades and the police.

Before 01.07.25: Not applicable.

- (6) A passenger car M1 shall be fitted with a safety-belt reminder in seating positions behind the front row of seats complying with the design provisions of UN Regulation 16-07.

This requirement does not apply to ambulance, hearses and caravans, as well as to vehicles used for the transport of disabled persons and vehicles intended for use by the armed forces, civil defence, fire brigades and the police.

Before 01.07.25: Not applicable.

10.2.022 M2 passenger car

- (1) A passenger car M2 with a maximum authorised weight not exceeding 3.500 kg shall be fitted with the following safety-belts on all seats in forward and rearward-facing seats:

- a) Three-point belt with inertial tractor with multiple sensitivity on a forward-facing seat, or alternatively three-point belt with inertial inertia retractor with multiple sensitivity with increased reaction threshold.

Before 20.10.07: Not applicable to folding seats.

Before 01.10.01: Only seat belt in front seat required.

In addition, lap belts may be used in the front seat other than the driver's seat and the outboard passenger seat if the passenger's head cannot come into contact with the windscreen as defined in Annex II to Directive 74/60/EEC.

Before 01.04.98: Do not require a double-sensitivity inertia retractor.

Lap belts are sufficient if the passenger's head cannot come into contact with the windscreen as defined in Annex II to Directive 74/60/EEC.

Before 01.04.93: Not applicable.

- b) Lap belt with automatic retractor or multi-sensitivity inertial retractor on a rearward-facing seat, or alternatively three-point belt with inertial inertia retractor with multiple sensitivity.

Before 20.10.07: Not applicable to folding seat. Before 01.10.01: Not applicable.

- (2) A passenger car M2 with a maximum authorised weight exceeding 3.500 kg shall be fitted with the following safety-belts for all seats in forward and rearward-facing seats:

- a) Three-point belt with inertial tractor with multiple sensitivity on a forward-facing seat.

- b) Lap belt with automatic retractor or multi-sensitivity inertial retractor on a forward-facing seat, if:

- there is a forward-facing seat or other parts of the vehicle meeting the retroactivity requirements specified in UN Regulation 80-03 immediately in front of the seat in question; or
- the head of the occupant cannot come into contact with any part of the vehicle as further defined in paragraph 2.7 of UN Regulation 16-07.

- c) Lap belt with automatic retractor or multi-sensitivity inertial retractor on a rearward-facing seat, or alternatively three-point belt with inertial inertia retractor with multiple sensitivity.

Before 01.01.17: Lap belt fitted with an automatic retractor or a double-sensitivity inertia retractor may be used on a forward-facing seat if:

- there is a forward-facing seat or other parts of the vehicle which comply with the requirements of resistances listed in Annex III to Directive 74/408/EEC, as amended by Directive 96/37/EC, immediately in front of it; or
- the person's head cannot come into contact with any part of the vehicle as defined in Annex I, point 1.23 of Directive 77/541/EEC as amended by Directive 96/36/EC.

Before 20.10.07: Not applicable to folding seats.

Before 01.10.01: No belt is required in a rearward-facing position and the driver's position may be fitted with a lap belt with an automatic retractor or a double-sensitivity inertia retractor.

Before 01.04.00: Lap belts with retractor may be used in forward-facing passenger spaces. However, a three-point belt with a retractor is required if the seat is not immediately behind another forward seating position.

Before 01.10.99: Not applicable.

- (3) Passenger cars M2 shall be fitted with belt anchorages complying with the design provisions of UN Regulation 14-09 for all seats in forward and rearward-facing seats.

However, the original belt anchorage may be constructed in accordance with U.S. standard FMVSS 210, Canadian standard CMVSS 210 or Japanese standard JSRRV, Article 22-3.

However, belt anchorages for seats specially designed for persons with disabilities shall comply only with the provision of paragraph 10.02.001 (6).

Before 01.07.25: Belt anchorages may comply with the provisions of UN Regulation 14-06.

Before 01.01.17: Belt anchorages may comply with the provisions of UN Regulation 14-04 or Directive 76/115/EEC as amended by Directive 96/38/EC.

Before 20.10.07: Not applicable to folding seats.

Before 01.10.01: On a passenger car M2 with a maximum authorised mass not exceeding 3.500 kg, belt anchorages may comply with the design provisions of UN Regulation 14-03 or Directive 76/115/EEC as amended by 90/629/EEC.

A passenger car M2 with a maximum authorised mass not exceeding 3.500 kg shall not have a belt anchorage at the rear seat.

Before 01.10.99: Passenger cars M2 with a maximum authorised mass exceeding 3.500 kg shall not have belt anchorages.

Before 01.04.98: On a passenger car M2 with a maximum authorised mass not exceeding 3.500 kg, belt anchorages may comply with the design provisions of UN Regulation 14-02 or of Directive 76/115/EEC as amended by Directive 82/318/EEC.

Before 01.04.93: Not applicable.

- (4) Safety-belt anchorages at the wheelchair space shall comply with the design provisions of standard ISO 10542-1: 2012 or of UN Regulation 107-07, Annex 8.

Before 01.07.25: Belt anchorages may comply with UN Regulation 107-03.

Belt anchorages complying with the constructive provisions of U.S. Standard SAE J2249 and marked clearly and indelibly with 'SAE' shall be deemed to comply with the clause if the following conditions are met:

- The total area of the strengthening plates used for mounting the safety-belt anchorages in the floor is at least 50 cm².
- The upper anchorage for shoulder belts is located above shoulder height.
- The area of the strengthening plate used for mounting the upper anchorage for shoulder belts shall be at least 25 cm².
- Metal reinforcement plates with a thickness of not less than 3 mm and a radius of curvature of not less than 5 mm.

Before 01.01.17: Safety-belt anchorages at the wheelchair space may comply with the constructive provisions of Directive 2001/85/EC Annex VII or UN Regulation 107-02 Annex 8.

Belt anchorages which comply with the constructive provisions of standard ISO 10542 or US standard SAE J2249 and which are marked clearly and indelibly with 'ISO' or 'SAE' shall be deemed to comply with the clause if the conditions

for strengthening plates and upper anchorages, as defined in the above transitional provision.

Before 13.02.04: Not applicable.

(5) The provisions of points (1), (2), (3) and (4) shall not apply to M2 passenger cars authorised for regular services only if one of the following conditions is met:

a) The car is an urban bus.

b) The car has standing space and space for a maximum of 22 passengers.

c) The permitted number of standing places is 20 % or more of the maximum number of passengers. If there are two floors, the number of standing seats shall be calculated in proportion to the number of approved passenger seats on the lower floor.

(6) The pictogram of the safety-belt obligation shall be displayed in a visible position at each seat fitted with a safety belt and shall be in the form shown in the figure.



10.2.023 M3 passenger car

(1) Passenger cars M3 shall comply with the provisions of point 10.02.022 for passenger cars M2 with a maximum authorised mass exceeding 3.500 kg.

Before 01.10.99: Only the provision in point 10.02.022 (6) applies.

(2) The side-facing seat of the M3 passenger car covered by paragraph 10.01.023 (2) shall be fitted at least with lap belts fitted with a retractor approved in accordance with UN Regulation 16-07. Belt anchorages shall comply with the requirements of UN Regulation 14-09.

Before 01.07.25: Side-facing seats may meet the requirements of UN Regulation 16-06.

Belt anchorages may meet the requirements of UN Regulation 14-06.

Before 01.01.17: Lap belts with retractor may be approved in accordance with Directive 77/541/EEC or UN Regulation 16.

Belt anchorages may comply with the requirements of Directive 76/115/EEC or UN Regulation No 14.

Before 20.10.07: Not applicable.

10.2.024 Van N1

(1) Vans N1 shall comply with the provisions for forward-facing seats in passenger M1. However, a landscape car shall not be fitted with child restraint anchorages.

However, lap belts are sufficient in the following places:

a) Central front seat (s) if the passenger's head cannot come into contact with the windscreen as further defined in UN Regulation 21-01 Annex I.

b) Central rear seat (s).

Inertial retractor with multiple sensitivity may be an inertia retractor with increased reaction threshold.

Before 01.01.17: Lap belts are sufficient in the middle front seat (s) if the passenger's head cannot come into contact with the windscreen as defined in Directive 74/60/EEC, Annex II or UN Regulation 21 Annex I.

Before 01.04.98: Vans N1, where the distance from the centre of the steering wheel to the opposite side of the driver's cabin is greater than 1,125 m and where the apparent rearward slope is not free, shall be fitted on the driver's seat with a safety-belt fitted with inertial retractor or inertia retractor with multiple sensitivity.

10.2.025 Truck N2

(1) Trucks N2 shall be fitted with the following safety-belts on forward-facing seats:

a) Three-point belts in front seating positions or alternatively lap belts where lap belts are sufficient if the occupant's head cannot come into contact with the windscreen as further defined in UN Regulation 21-01 Annex I.

b) Three-point or lap belts in other forward and rearward-facing seating positions.

Before 01.01.17: Truck N2 shall be fitted on the driver's seat with either a three-point belt or a lap belt.

The front passenger position shall be provided with a three-point belt, or alternatively lap belt, if the passenger head cannot come into contact with the windscreen as defined in Annex I to Directive 74/60/EEC.

Before 20.10.07: Not applicable to folding seats. Before 01.04.98: Not applicable.

(2) Truck N2 shall be provided with belt anchorages complying with the design provisions of UN Regulation 14-09 in all forward and rearward-facing seating positions. The original belt anchorage may be constructed in accordance with U.S. standard FMVSS 210, Canadian standard CMVSS 210 or Japanese standard JSRRV, Article 22-3.

Before 01.07.25: Belt anchorages in all forward and rearward-facing seating positions may comply with the design provisions of UN Regulation 14-06.

Before 01.01.17: Belt anchorages in front seating positions may comply with the design provisions of UN Regulations 14-03 or 76/115/EEC as amended by Directive 90/629/EEC or Directive 96/38/EC.

Before 20.10.07: Not applicable to folding seats. Before 01.04.98: Not applicable.

10.2.026 Truck N3

(1) Truck N3 shall comply with the requirements for truck N2.

10.02.031 two-wheel motorcycle

(1) Two-wheel motorcycles fitted with safety-belts shall be approved in accordance with Regulation 168/2013/EU.

Before 01.07.25: Two-wheel motorcycles approved with a safety-belt before that date may continue to appear and be approved.

10.02.033 motor tricycle

(1) Bodywork tricycles shall be fitted with safety belts. Before 01.04.02: Not applicable.

- (2) The belt anchorages shall comply with the requirements of Regulation 3/2014/EU, Annex XII.
Before 01.07.25: Belt anchorages may satisfy the requirements of Chapter 11 of Directive 97/24/EC. Before 01.04.02: Not applicable.

10.02.040 moped

- (1) Three-wheel mopeds with bodywork of more than 270 kg in running order must comply with the requirements for tricycles.
Before 01.04.02: Not applicable.

10.02.050 tractor

- (1) Tractors equipped with roll-over protection structures (ROPS) shall be fitted with safety belts and their anchorages in accordance with Regulation 1322/2014/EU, Annexes XVIII and XIX.
Before 01.07.25: Not applicable.

10.02.340 emergency vehicle

- (1) Seats in an ambulance which are not intended for use in driving shall be clearly marked by pictogram or billboard.
Before 01.11.19: Not applicable.
- (2) An emergency vehicle shall not be fitted with a safety-belt reminder in seating positions behind the front row of seats.

10.02.364 camping car

- (1) The provisions of paragraphs 10.02.021, 10.02.022 and 10.02.023 on safety-belts and on the anchorages of safety-belts apply only to seating positions intended for normal use while driving. In the rear seat, the lap belt is sufficient and a retractor may be omitted. Belt anchorages for rearward-facing seats shall comply only with the requirement of paragraph 10.02.001 (6).
Before 01.04.93: In camping vehicles, belt anchorages in seating positions other than the front seat shall not comply with point 10.02.021 (2) but firmly attached to the fixed parts of the vehicle.
- (2) Seats of a caravan which are not intended for use in motion shall be clearly marked by means of a pictogram or a sign.
Before 01.11.19: Not applicable.
- (3) A motor caravan shall not be fitted with a safety-belt reminder for seating positions behind the front row of seats.

10.3 Vision, glazing, etc.

10.3.01 General provisions

- (1) Power-driven vehicles shall be so arranged as to require direct forward and lateral vision from the driving position.
The height of the windscreen shall be such that the driver can see inclined upwards. The height of the eye may normally be set at 0.70 m above the driver's seat in an unladen condition.
- (2) A power-driven vehicle shall be fitted with means of cleaning any windscreen.

10.3.02 Field of vision

- (1) In the driver's direct field of vision to the front and to the sides, no rear-stands that unnecessarily reduce visibility shall be provided.

A GPS shall not be considered to unduly reduce visibility if it is located at the bottom of the centre or in the bottom left corner of the windscreen as far down as possible to the dashboard. Contact between GPS and the dashboard is not required.

However, fixed P disc shall be placed at the bottom right of the windscreen and automatic payment device at the bottom of the centre of the windscreen.

In the case of heavy goods vehicles N2 and N3, all retrofitted objects (regardless of light transmittance) taking even a minor part of the direct vision through the right-hand side (-r) or the part of the windscreen lying to the right of the centre axis of the vehicle and below the 'A' point are deemed to unnecessarily reduce the visibility.

In the case of a tractor, the direct front view and the sides from the driving position shall comply with standards ISO 5721-1: 2013 and ISO 5721-2: 2014.

Before 01.07.25: The standards relating to direct forward vision and to the sides of the tractor's driving position shall not apply.

10.3.03 Glazing

(1) Glass panes or windscreens shall be made of clear safety glass. The following shall be considered as safety glasses:

- a) Laminated glass.
- b) Toughened glass.
- c) Splint-resistant plastic material.

Before 01.04.75: The safety glass requirement applies only to windscreens and windscreens and to other glazing used in commercial passenger transport vehicles.

(2) The windscreen of a power-driven vehicle shall be so constructed that objects seen through the glass pane are not distorted or obscured.

(3) The windscreen and the front side (180° field of vision) of the power-driven vehicle shall have at least 70 % light transmittance within the normal field of vision.

10.3.04 Sunscreens, solar filters, etc.

(1) External coloured sunscreen shall meet the following conditions:

- a) Shall be located above the windscreen.
- b) Shall be firmly attached.
- c) Shall not impair the driver's vision.
- d) Shall not have sharp edges, etc. which pose unnecessary danger to other road users.

(2) The internal sunscreen shall meet the following conditions:

- a) Shall be located above the windscreen.
- b) Shall be adjustable without the use of tools.
- c) It shall be possible to escape in such a way that the visibility through the windscreen is not reduced.
- d) Not be capable of covering mandatory interior rear-view mirrors.
- e) Shall be designed in such a way that it does not present undue danger to the driver or passenger.

(3) The windscreen and front side windows of a power-driven vehicle shall not have an unoriginal sun filter in the form of sprayed or adhesive film covering the glass pane in whole or in part.

However, this provision does not apply to a windscreen situated at the interior rear-view mirror in an area from the upper edge of the window opening up to a maximum of 0.10 m down and at a width not exceeding the width of the interior rear-view mirror by more than 20 mm on either side.

10.3.05 Windscreen wipers and washers

(1) Windscreen wipers shall comply with the following conditions:

- a) Shall be powered by a motor or other mechanical source of power.

- b) Clean the windscreen on an area sufficient for the driver's vision.
- (2) The windscreen wash shall wet the windscreen in such a way that the wiper can clean the glass pane.

10.3.06 Rear-view mirrors, etc. (indirect vision)

- (1) Rear-view mirrors shall meet the following conditions:
 - a) Shall give a clear image of mirror without distortion.
The colour representation shall be such that light signals can be identified in the mirror.
 - b) Shall be so positioned that the driver has adequate rearward visibility.
 - c) Shall be designed in such a way that sharp edges, etc., do not cause unnecessary danger in the event of collision or contact.
 - d) Shall be adjustable without the use of tools. Before 01.02.68: Not applicable.
 - e) Shall be flat or convex with a radius of curvature of at least 0.80 m.
Before 01.02.68: Not applicable.
- (2) The interior rear-view mirror shall meet the following conditions:
 - a) Shall be so arranged that the driver's forward and lateral visibility is not significantly reduced.
 - b) Shall be adjustable without the use of tools. Before 01.02.68: Not applicable.
- (3) The exterior rear-view mirror shall meet the following conditions:
 - a) Shall be visible through the part of the windscreen cleaned by the viscera or through the side of the windscreen. Before 01.02.68: Not applicable.
 - b) It shall be possible to fix the position of the mirror in such a way that the adjustment of the mirror is not altered while driving.
 - c) If the mirror is to be viewed through the windscreen, shall be so arranged as to give a relatively slight impact.
However, this shall not apply to an e-approved rear-view mirror meeting the following conditions:
 - The mirror is marked in Class II, III or IV.
 - The distance between the outermost point of the mirror and the outermost point of the vehicle is not more than 0.20 m, unless the distance between the lower edge of the mirror and the ground is not less than 2.00 m.
 - The Spejlbarm does not bear the 2 m label. Before 01.02.68: Not applicable.
 - d) Shall not project significantly beyond the bodywork than is necessary for the driver to have a rearward view.
The determination is deemed to be fulfilled if the projection does not exceed 0.30 m. Before 01.04.88: Not applicable.
- (4) In the case of an exterior rear-view mirror fitted to passenger cars M1 and N1 in order to ensure adequate visibility when driving a caravan, the mirror shall be so arranged as to give a relatively slight impact if the distance between the outermost point of the mirror and the outermost point of the car is less than 0.20 m and the distance between the lower edge of the mirror and the ground is less than 2.00 m.
An exterior rear-view mirror attached to the drop between the engine bonnet and the front face, where the console is not replicable, may be approved if the mirror console at the individual mounting does not project more than 45 mm above the surface of the bodywork measured perpendicular to it, unless the rear-view mirror is e- or E-approved in accordance with point (3) (c).
Before 01.08.76: Not applicable unless, after that date, the car is approved in a new wagon train combination.
- (5) Rear-view mirrors shall be designated as Class I rear-view mirror if the reflecting surface is at least 70 cm² for a flat mirror and 50 cm² for a convex mirror.

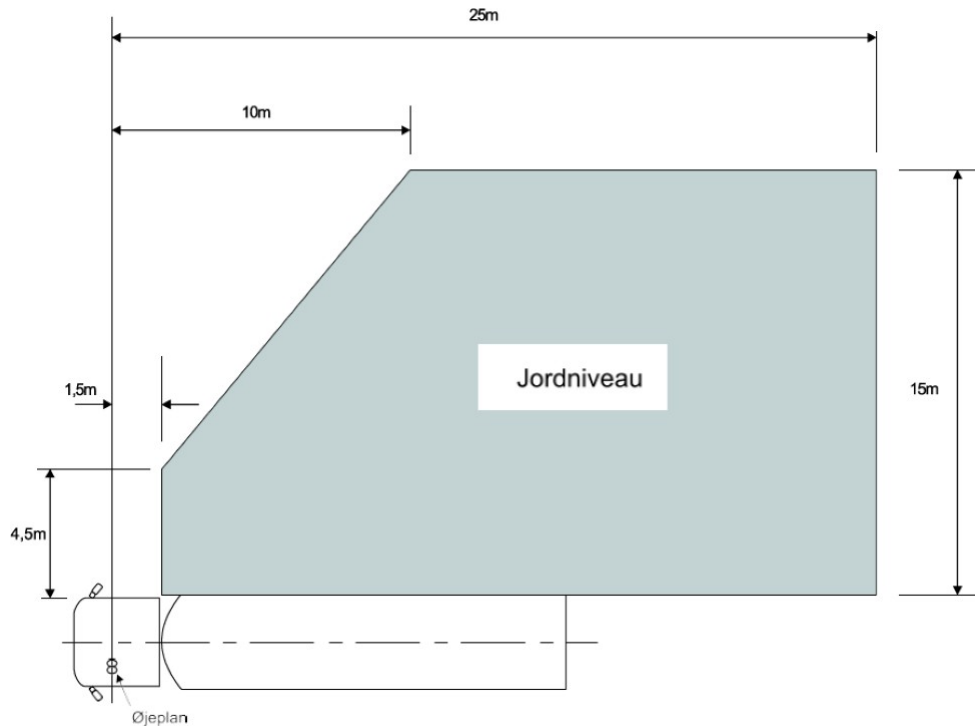
Before 01.02.68: The minimum surface requirement does not apply.

- (6) Rear-view mirrors shall be described as Class II rear-view mirrors if the reflecting surface is at least 300 cm² for a flat mirror and 200 cm² for a convex mirror.

Before 01.02.68: The minimum surface requirement does not apply.

(7) Wide-angle mirrors shall meet the following conditions:

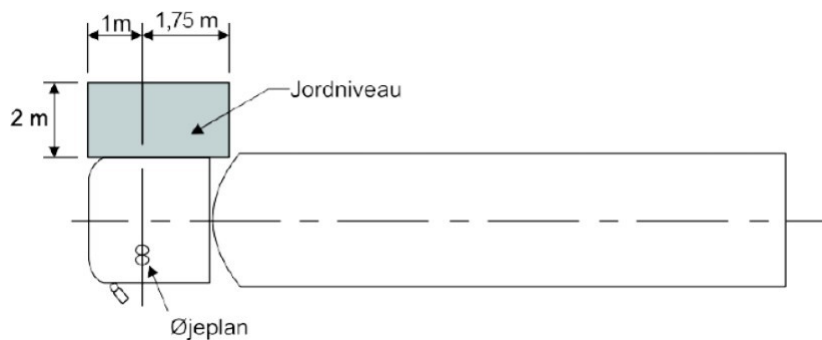
a) Shall provide at least one field of vision as shown in the figure below.



b) Shall be convex with a radius of curvature of at least 0.30 m.

(8) Close-proximity mirrors shall comply with the following conditions:

a) Shall provide at least one field of vision as shown in the figure below.

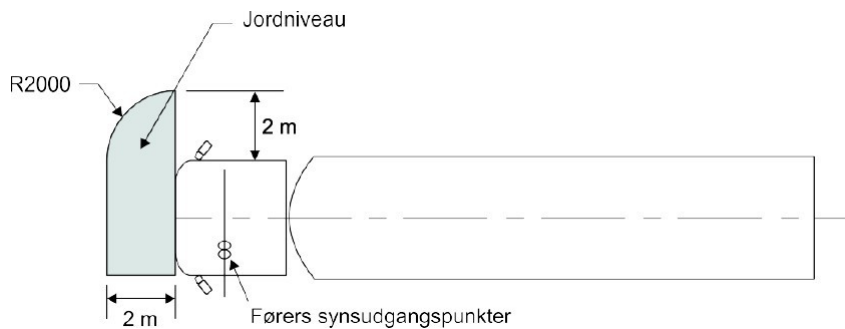


b) Shall be convex with a radius of curvature of at least 0.30 m.

c) Shall be at least 2.00 m above the ground, measured to the lower edge of the mirror at the maximum authorised mass.

(9) Front mirrors shall meet the following conditions:

a) Shall provide at least one field of vision as shown in the figure below.



- b) Shall be convex with a radius of curvature of not less than 200 mm.
- c) Does not have to comply with paragraph 10.03.006 (3) (a).
- d) May be replaced by camera/monitor indicating the field of vision in paragraph (a) and meeting the requirements of UN Regulation 46-03.

If camera and monitor are used, the monitor shall display the field of vision in (a) permanently when the vehicle's ignition is connected. However, when the vehicle is driven faster than 10 km/h or trays, the monitor may be used to display other information if approved for the purpose.

Before 01.01.17: Camera/monitor may comply with the requirements of Directive 2003/97/EC.

- (10) Mirrors of categories I, II, III, IV, V and VI may be either replaced or supplemented by other equipment to ensure indirect vision, provided that the equipment meets the following conditions:
 - a) Is approved and marked in accordance with UN Regulation 46-03.
 - b) Can display the required fields of vision without having to be set.
 - c) Does not reduce direct vision through windscreen and front side windows.

10.3.07 Blind spot system (BSIS)

- (1) The Braille System (BSIS) informs the driver of a possible collision with a bicycle running parallel to the right side of the vehicle and shall comply with the technical requirements of UN Regulation 151.

10.3.08 Initiating Information System (MOIS)

- (1) The starting information system (MOIS) informs the driver about the presence of pedestrians and cyclists in the blind spot in the nearby zone in front of the vehicle and shall comply with the technical requirements of UN Regulation 159.

10.3.020 Car

- (1) The windscreen shall be of laminated glass meeting one of the following conditions:
 - a) Is approved and marked in Class II, III or IV pursuant to UN Regulation 43.
 - b) Has been performed in accordance with US standard FMVSS 205 (ANSI Z26. (1) and marked with 'DOT' and 'AS 1' or 'AS 14'.

Before 01.01.17: Windscreens may be approved and marked in accordance with Directive 92/22/EEC. Before 01.04.75: The windscreen shall be of safety glass.

- (2) Other glass panes shall be of safety glass.

Before 01.04.75: Only applicable to vehicles used for commercial passenger transport.

- (3) Vehicles fitted with windscreens must be fitted with the following:
 - a) Windscreen wiper (s) in front of the driver's and front passenger's position.
 - b) Windscreen wash.

Before 01.02.68: Applicable only to passenger cars M2 and M3 for commercial passenger transport.

- c) Defrosting and demisting device.

Before 01.04.87: Applicable only to passenger cars M2 and M3.

Before 01.04.86: Applicable only to passenger cars M2 and M3 for commercial passenger transport.

- (4) The vehicle shall be fitted with a reversing detection device.

Before 01.01.26: Not applicable.

10.3.021 M1 passenger car

- (1) The M1 passenger car shall be fitted with the following:

- a) An interior rear-view mirror of category I, unless, by reason of the structure of the vehicle, the mirror does not provide any rearward view.
- b) An exterior rear-view mirror of category III on each side.

A M1 special purpose passenger car as defined in Regulation (EU) 2018/858, which is built in several stages and where the vehicle, upon completion, belongs to a different kind from the base vehicle, shall comply only with the requirements of the base vehicle.

Before 01.07.25: A passenger car M1 shall not be fitted with a side-mirror on the right-hand side unless the exterior rear-view mirror on the left side and the interior rear-view mirror do not provide adequate rearward visibility or the light transmittance in the rear window or in the rearmost side windows is less than 70 % or the car is the right hand drive.

- (2) Rear glazing shall be fitted with defrosting and demisting devices.

Before 01.04.87: Not applicable.

- (3) No objects which unnecessarily reduce the visibility shall be placed in the driver's rearward and inclined rearward fields. The insertion of advertisements or opaque films in the above field of vision is considered to unnecessarily reduce visibility. The installation of head restraints, sun curtain, sun film or spoiler is not considered to unduly reduce visibility.

A factory-mounted spare wheel that is slightly out of sight shall not be regarded as an unnecessary object.

10.3.022 M2 passenger car

- (1) A motor vehicle M2 shall be fitted with an exterior rear-view mirror of category II on each side.

Before 01.02.68: The minimum surface of the rear-view mirror applies only to rear-view mirrors on the right-hand side of a passenger car M2 intended for the commercial carriage of passengers and designed for the carriage of more than 19 persons.

- (2) The provision of paragraph 10.03.006 (3) (a) does not apply to right-hand exterior mirrors.

- (3) The front side windows shall be fitted with a device to prevent demisting. The provision is not deemed to be fulfilled if the side windows are only closable.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

- (4) In the case of a car designed for the carriage of more than 19 persons, mandatory rear-view mirrors on the right-hand side shall be such as to prevent or remove the dew formation or abrasion of the mirror surface automatically. The determination is deemed to be satisfied by heating the mirror surface with a power of at least 5 W per 100 cm² surface of the mirror.

Before 01.04.86: Only applicable to M2 passenger car for commercial passenger transport.

- (5) Passenger cars M2 shall be fitted with Braille System (BSIS).

Before 01.01.26: Not applicable.

- (6) M2 passenger cars must be equipped with an On-board Information System (MOIS).

Before 01.01.26: Not applicable.

10.3.023 M3 passenger car

- (1) Passenger cars M3 must comply with the provisions applicable to passenger cars M2.

- (2) In the case of an articulated bus, the exterior rear-view mirrors shall also provide such a wide field of vision that the driver can see the whole length of the side of the rear part of the articulated bus closest to the centre of rotation when driving with the minimum circle.

- (3) In the case of articulated buses of a length exceeding 18.75 m, the exterior rear-view mirrors referred to in paragraph (2) shall be supplemented by external cameras symmetrically positioned on both sides

of the rigid sections of the vehicle at least 2.00 m above the ground measured on the unladen vehicle in its normal ride position and its monitor so that the driver has full visibility from the driver's seat over the rearmost part of the vehicle. Outside cameras may be omitted from the two front sections of the vehicle.

Full vision means that on the sections where a camera is fitted there is a view to the ground along the entire side and 2.0 m from the side of the vehicle and an additional 6.0 m towards the rear of the vehicle.

- (4) Camera and monitor equipment according to paragraph (3) shall comply with the requirements of UN Regulation 46-06.

10.3.024 Van N1

- (1) Vans N1 shall be fitted with an exterior rear-view mirror of category III on each side.

10.3.025 Truck N2

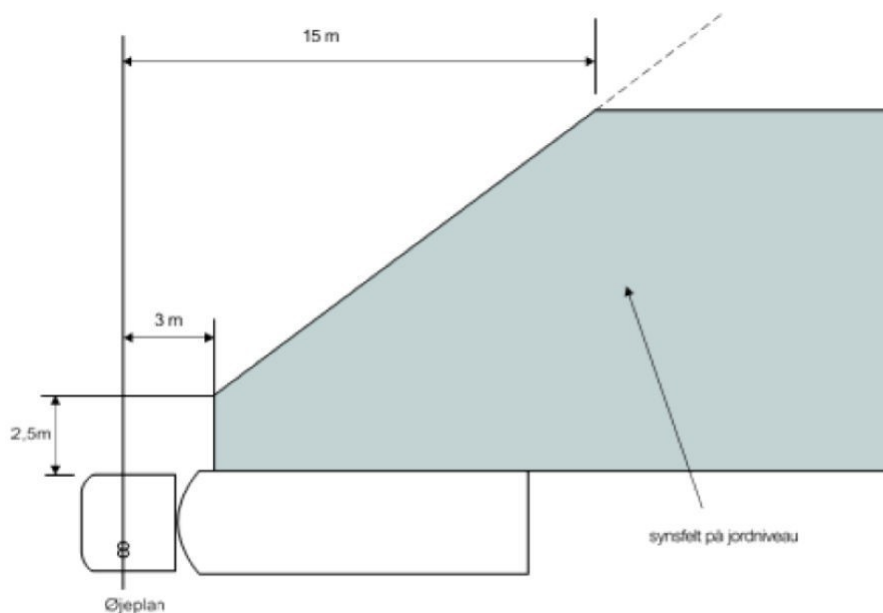
- (1) Heavy goods vehicles N2 shall be fitted with the following mirrors:

- Category II exterior rear-view mirror on either side.
- Wide-angle mirror, see paragraph 10.03.006 (7).
- Close-proximity mirror as defined in paragraph 10.03.006 (8). Close-proximity mirror is only required when it can be located at least 2.00 m above the ground. Right-hand drive lorries shall not be fitted with a close-proximity mirror.
- Front mirror (or camera) as defined in paragraph 10.03.006 (9) if the truck has a maximum permissible mass exceeding 7.500 kg and has a forward cab.

Before 26.01.07: Lorry N2 shall not be fitted with front mirrors.

Heavy goods vehicles N2 may be equipped with old wide-angle and/or close proximity mirrors provided that the lorry is also fitted with blind angle mirrors (or cameras).

Close-proximity mirror is only required when it can be located at least 2.00 m above the ground. Right-hand drive lorries shall not be fitted with a close-proximity mirror.



- (2) Truck N2 shall be equipped with Braille System (BSIS).

Before 01.01.26: Not applicable.

- (3) Heavy goods vehicle N2 shall be equipped with an Off Starting Information System (MOIS).

Before 01.01.26: Not applicable.

10.3.026 Truck N3

- (1) Truck N3 shall comply with the requirements for truck N2.

10.03.031 two-wheel motorcycle

- (1) The wind shield shall be firmly attached to a guide or frame.
- (2) A two-wheel motorcycle with a windscreen of such a height that the driver cannot see the ground from 10 m forward of the driver's seat and forward shall be provided with the following:
- a) Windscreen wiper.
 - b) Windscreen wash.
- Before 01.02.68: Not applicable.
- (3) Rear-view mirrors shall meet the following conditions:
- a) Must be convex.
 - b) Shall have a reflecting surface of at least 69 cm².
- Before 01.09.95: Not applicable.
- (4) Two-wheel motorcycles shall be fitted with a rear-view mirror on each side.
- However, motorcycles with a maximum speed not exceeding 100 km/h shall not be fitted with rear-view mirrors on the right-hand side.
- Before 01.09.95: Not applicable.

10.03.033 motor tricycle

- (1) In the case of windscreens, other windscreens and windscreen wipers and washers, the vehicle rules set out in point 10.03.020 shall apply.
- (2) The motor tricycle shall be fitted with the following mirrors:
- a) Category I exterior rear-view mirror on the left side.
 - b) Category I exterior rear-view mirror on the right-hand side or interior rear-view mirror of category I. Before 01.05.77: Does not apply to motor tricycles without a cab.

10.03.040 moped

- (1) mopeds must comply with the requirements for motorcycles.
- Before 01.11.19: Light mopeds shall comply only with the general provisions of section 10.03.

10.03.050 tractor

- (1) The front corner pillars of the protective structure shall comply with the following condition of width:

$$b \leq \frac{a}{10} + 65$$

'a' is the distance in mm measured along the horizontal line of sight from the reference point (see below) to the pillar.

'b' is the width of the bar, in millimetres, measured in a horizontal plane perpendicular to the above line of sight. The width includes door frames, window rails and other non-transparent material.

The reference point shall be 0.27 m behind the centre of the front edge of the driver's seat and 700 mm above the unladen seat in the middle position.

- (2) The windscreen shall be of laminated or toughened glass. Before 01.04.75: The windscreen shall be of safety glass.
- (3) Tractors fitted with windscreens must be fitted with windscreen wipers not powered by motor or other mechanical power source.
- (4) Tractors shall bear the following:
- a) An exterior rear-view mirror of category II on the left side.
 - b) An exterior rear-view mirror of category II on the right-hand side.

Tractors equipped with saddles and handlebars shall comply with the requirements for two-wheel motorcycles.

Before 01.07.25: The tractor must be fitted with an exterior rear-view mirror of category I on the left side and an exterior rear-view mirror of category I on the right-hand side when a working gear or coupled trailer obstructs the driver's direct rearward vision.

10.03.060 engine tools

- (1) The equipment of the engine shall be such that the driver can see the ground from 10 m in front of the driver's position and forward.
- (2) The windscreen shall be of laminated or toughened glass. Before 01.05.77: Not applicable.
- (3) Motor tools with windscreens shall be fitted with windscreen wipers which shall not be powered by the engine or other mechanical power source.
Before 01.05.77: Not applicable.
- (4) Engine gear shall be equipped with the following:
 - a) An exterior rear-view mirror of category I on the left side.
 - b) An exterior rear-view mirror of category I on the right-hand side, where the construction of the engine gear, working gear fitted or coupled to a trailer obstructs the driver's direct rearward vision.
- (5) Motor tools intended to be driven by a pedestrian shall not be fitted with rear-view mirrors.

10.03.099 powered block wagon

- (1) Power-driven articulated vehicles shall comply with the requirements for heavy goods vehicles N2.

10.03.100 trailer

- (1) The glazing of a trailer subject to registration shall be of safety glass.
Before 01.04.75: Not applicable.
- (2) Glazing which does not contribute to the driver's vision towards the rear of the towing vehicle shall not be of clear (transparent) glass or plastic material.

10.03.310 vehicles for non-visual coupling

- (1) A vehicle intended for non-visual coupling must be so arranged that it can be fitted with an exterior rear-view mirror on either side.
The mirrors shall be adjustable in such a way that, when a trailer with a maximum width is coupled, adequate rearward visibility is provided.

10.03.320 school vehicle

- (1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

10.03.340 emergency vehicle

- (1) Ambulance shall not comply with the provisions of paragraph 10.03.021 (2) and shall not be clear (transparent).
- (2) Windscreens of emergency vehicles belonging to the police or state rescue services may have been carried out in accordance with and marked according to German standard DIN-52305.

10.03.364 camping car

- (1) Motor caravans shall not comply with the provision of paragraph 10.03.021 (2).
- (2) Motor caravans shall be fitted with exterior rear-view mirrors corresponding to the base vehicle, i.e. the type of vehicle on which the vehicle is based.

10.4 Instruments

10.4.01 General provisions

- (1) Mandatory instruments, which must be readable while driving, shall be so designed and arranged as to be easily readable from the driving position.
- (2) The mandatory instrument shall be provided with illumination when the mandatory lamps of the vehicle are switched on. However, this does not apply when mandatory daytime automation is in operation. Lighting or reflections thereof shall not be liable to cause discomfort to the driver.

10.4.02 Speedometer

- (1) The speedometer shall show the speed in km/h or M.P.H. The accuracy shall be as specified in UN Regulation 39.
Before 01.07.25: No specific accuracy requirements.
- (2) A tachograph complying with the provisions of paragraphs 10.04.001 (1) and (2) and 10.04.002 (1) shall be regarded as a speedometer.

10.4.03 Odometer

- (1) The odometer shall show the vehicle's total distance travelled in kilometres or miles.

10.04.004 drowsiness and attention warning (DDAW)

- (1) the DDAW is a system to monitor driver fatigue and warn the driver through the Vehicle User Interface (HMI), which shall comply with the technical requirements of Regulation (EU) 2021/1341.

10.04.020 car

- (1) The vehicle must be fitted with a speedometer.
Before 01.05.77: Only applicable to car used for driving or renting out without driver.
- (2) The vehicle must be equipped with a odometer. Before 01.07.25: Not applicable.
- (3) A car with a maximum design speed exceeding 70 km/h shall be fitted with a driver drowsiness and attention warning (DDAW).
The requirement does not apply to passenger cars M1/varebil N1 manufactured in small series.
Before 01.01.26: Not applicable.

10.04.030 motorcycle

- (1) Motorcycles shall be fitted with a speedometer.
Before 01.04.90: Only applicable to motorcycles used for driving or renting out without operator.
- (2) Motorcycles shall be equipped with an odometer.
Before 01.07.25: Not applicable.

10.04.040 moped

- (1) mopeds must be fitted with a speedometer.
Before 01.07.02: A light moped shall not be fitted with a speedometer.
- (2) mopeds with a maximum design speed exceeding 25 km/h shall be equipped with an odometer.
Before 01.07.25: Not applicable.

10.04.050 tractor

- (1) Tractors with a maximum design speed exceeding 30 km/h shall be fitted with a speed-measuring device.

Before 01.07.25: Not applicable.

10.04.320 school vehicle

(1) School vehicles shall comply with the provisions of Annex 5 to the Order on driving licences.

10.04.330 hired vehicle

(1) Hired vehicles shall be equipped with a speed meter indicating the speed in km/h.

10.5 Anti-theft

10.5.01 General provisions

(1) The installation of non-original anti-theft devices shall not result in the weakening of the parts in which it is placed or intervened.

10.05.021 M1 passenger car

(1) A passenger car M1 shall be fitted with a protective device complying with the design provisions of UN Regulation No 116 or UN Regulation No 161.

A car that is EU type-approved as a quadricycle category L6e or L7e and is equipped with handlebars shall comply with UN Regulation 62 or, if it does not have handlebars, UN Regulation 18-02.

Before 01.07.25: Passenger cars M1 may comply with the constructive provisions of UN Regulation 18-02 or US Standard FMVSS 114.

Before 01.11.19: Passenger cars M1 may comply with the constructive provisions of Directive 74/61/EEC as amended by Directive 95/56/EEC.

Before 01.04.02: Passenger cars M1 may comply with the constructive provisions of Directive 74/61/EEC or UN Regulation No 18.

Before 01.05.77: Passenger cars M1 registered for the first time in Denmark as used before that date must be protected against unauthorised use to the extent that the new vehicle was protected from unauthorised use.

Before 01.10.72: The M1 passenger car shall be protected against unauthorised use to the extent that it was protected by the new factory.

10.05.024 van N1

(1) Vans N1, must comply with the provisions applicable to the M1 passenger car.

Before 01.07.25: Vans N1, the maximum authorised mass of which does not exceed 3.000 kg, must comply with the provisions applicable to passenger cars.

10.05.030 motorcycle

(1) Motorcycles equipped with handlebars shall be fitted with protective devices which comply with the design provisions of UN Regulation No 62.

Before 01.07.25: Not applicable.

10.05.040 moped

(1) mopeds equipped with handlebars and with a load of more than 35 kg shall be fitted with protective devices which comply with the design provisions of UN Regulation 62.

Before 01.07.25: Not applicable.

10.07 airbag

10.07.001 general provisions

- (1) The airbag shall be installed in accordance with the vehicle manufacturer's instructions.
- (2) In the case of seats, other than the driver's seat, where an airbag is fitted in front of the seat, a warning against the use of a rearward-facing seat shall be provided.

The warning marking shall consist of a symbol with additional text if necessary and shall be firmly attached and so placed that it is easily visible to a person who is required to install a rearward-facing child chair on that seat. There shall be an additional reference visible at all times if the warning marking is not visible when the door is closed.

However, warning markings shall not be required if the vehicle is fitted with a device which automatically records that rearward-facing child chairs are mounted on the seat and which also ensures that the airbag cannot be released when the rearward-facing child chair is fitted.

Before 01.01.97: Not applicable.

11. Measurement methods

11.1 Noise

11.1.01 Noise measurement method I (driving measurement)

- (1) Noise Measurement Method I are the measurement methods set out below:

- a) For car in UN Regulation 51-02 annex 3. Alternatively, the method of measurement of UN Regulation 51-03 Annex 3 and the noise limits specified in Regulation 540/2014/EU Annex III may be used.

- b) For motorcycles and mopeds in Regulation 168/2013/EU and its implementing measures.

Before 01.01.17: The measurement method for motorcycles laid down in Directive 97/24/EEC and its subsequent amendments may be used.

Before 01.04.04: The measurement method for motorcycles and large mopeds provided for in Directive 78/1015/EEC and its subsequent amendments may be used. The measurement method for light mopeds in UN Regulation 63 (annex 3, paragraphs 3.1 and 4, for mopeds with a maximum design speed not exceeding 30 km/h) may be used.

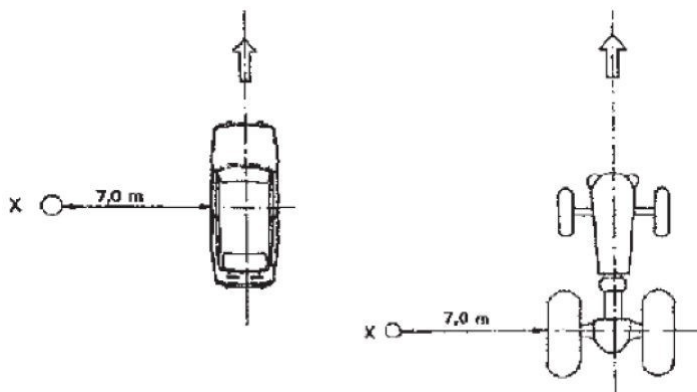
Before 01.10.90: The motorcycle measurement method provided for in Directive 78/1015/EEC may be used.

- c) For tractors in Regulation 167/2013/EU and its implementing measures.

Before 01.11.19: The measurement method laid down in point 1.4.1 of Annex VI to Directive 2009/63/EC may be used.

11.1.02 Sound measurement method II (7 m stop)

- (1) The sound pressure level shall be measured at a height of 1.2 m and at a distance of 7.0 m from the side of the vehicle.



The sound pressure level shall be measured off the centre of the vehicle, but in the case of a tractor off the rear axle.

Measured at an engine speed of 3/4 of the speed at maximum power output. In the case of diesel engines, measurements may be made at the maximum speed of the engine.

Before 01.10.82: In the case of diesel engines, measurement shall be carried out at maximum regulated engine speed.

Before 01.05.77: The sound pressure shall be measured at a distance of 7.0 m from the exhaust outlet in its direction. In the case of a vehicle type approved with an engine and an exhaust system in the same part of the vehicle, the sound pressure level in each of the four main directions shall be measured at a distance of 7.0 m from the front, rear, right and left sides.

In the case of a vehicle with a vertical exhaust system, the sound pressure level shall be measured, irrespective of the position of the engine in relation to the exhaust system, at a distance of 7.0 m from its vertical axis in the rearward or inclined rearward direction where the vehicle does not form any obstacle.

- (2) At least two measurements shall be made on each side of the vehicle. The difference between two measurements made on the same side of the vehicle shall not exceed 2 dB (A). The maximum average of the results of the measurements on the same side of the vehicle shall be taken as the sound level of the vehicle.

Before 01.05.77: Two measurements shall be made, except four in the case of main directional measurements. The sound level of the vehicle shall be taken as the average of the results of the measurements.

11.1.03 Noise measurement method III (special noise measurement method for mopeds)

- (1) For mopeds, the noise measurement method I described in section 11.01.001 shall be used.

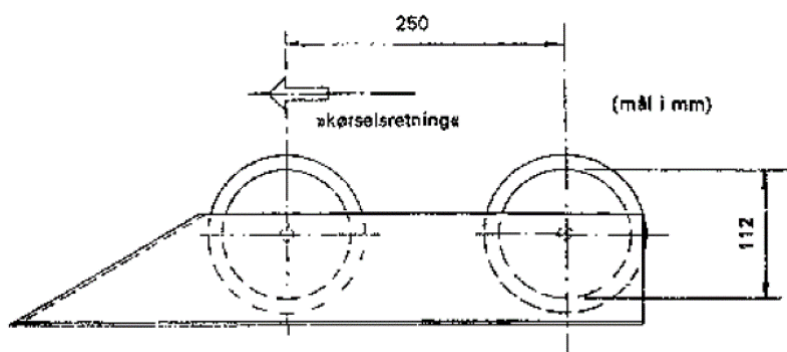
Before 01.04.04: The sound pressure level shall be measured at a height of 1.2 m and at a distance of 7.5 m from the median plane of the vehicle.

The sound pressure shall be measured with the moped's drive wheel rotating on the unbraked roller of the dynamometer with the maximum achievable speed in the highest gear.

Equal and at least two measurements shall be made on each side of the moped and the average of all sound pressure levels measured;

shall be recorded as the sound level of the vehicle.

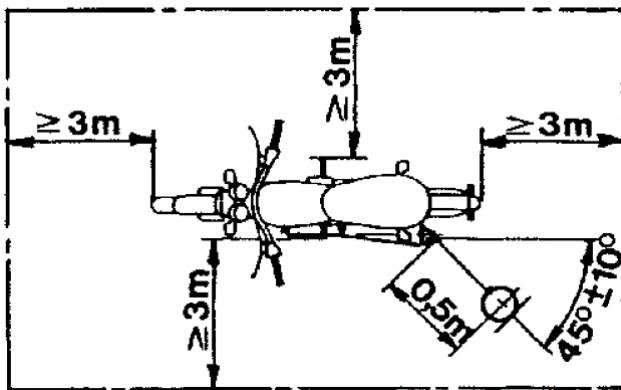
The chassis dynamometer shall be arranged in accordance with the drawing below.



11.1.04 Noise measurement method IV (close field – stopping)

- (1) The sound pressure level shall be measured at the level of the exhaust outlet but not less than 0.2 m above

the ground.



Microphone location and minimum test site.

The microphone shall be directed towards the exhaust outlet and placed at a distance of 0.5 m from it.

The axis of the microphone shall be parallel to the ground and form an outward angle of $45^\circ \pm 10^\circ$ with the direction of the exhaust orifice as shown in the figure above. If the vehicle has more than one exhaust outlet and the distance between the centres of the vehicle does not exceed 0.30 m, the sound pressure of the exhaust orifice nearest to the contour of the vehicle (in the case of a motorcycle and moped other than the handlebars) or the maximum above the ground shall be measured. If the distance between them exceeds 0.30 m, it shall be measured separately for each aperture and only the highest value shall be used.

In the case of a vehicle equipped with a vertical exhaust system, the microphone shall be positioned vertically at the top and height of the exhaust outlet at a distance of 0.5 m from the side of the vehicle closest to the exhaust outlet.

- (2) The measurement shall be carried out over a short period of time at the specified engine speed followed by the entire deceleration period to idle after the accelerator control (throttle) has moved rapidly to the idling position.
- (3) At least three measurements shall be made for each measurement point. The measurement result for each measurement shall be the maximum reading value rounded to the nearest whole number of decibels.

The sound level of the vehicle is the highest measurement result of three consecutive measurements, with no measurement result deviating by more than 2 dB (A) from one of the others.

11.1.05 Measuring location

- (1) The test site shall be smooth and horizontal with asphalt or concrete coating. The surface shall be such that the noise emitted by the tyres does not affect the measurement result.
- (2) Ambient noise, including wind noise, shall be at least 10 dB (A) lower than the sound pressure measured.

11.1.06 Measuring apparatus

- (1) The sound pressure meter shall comply with the provisions of standard DS/EN 61672-1: 2003, Class 2.

11.1.07 Measurement conditions

- (1) Noise measurement shall be carried out;
 - a) with a warm engine,
 - b) in clear and calm weather, and
 - c) with the vehicle at duty weight.

11.2 Air pollution

11.02.001 CO at idle

- (1) The measurement shall be made with warm engine and at idle speed. The method of measurement is set out in Annex I to Directive 2014/45/EU.

In the case of a vehicle with more than one exhaust outlet, the measurement shall be carried out in one of the following ways:

- a) The exit pipes are joined to an outlet.
- b) The measurement shall be carried out in each outlet pipe.

The measurement result shall be calculated as the arithmetic mean of the measurements for all the tubes.

11.02.003 CO and lambda at elevated idle

- (1) Measurements shall be made with a warm engine at more than 2.000 rpm. /min.

In the case of a vehicle with more than one exit pipe, the guidelines set out in point 11.02.001 apply.

11.02.004 dielectric opacity (free acceleration)

- (1) The measurement of opacity (light absorption coefficient) shall be carried out while the engine is accelerated at the maximum from idle speed to the regulated maximum speed. The method of measurement is set out in Annex I to Directive 2014/45/EU.

11.3 Speed

11.3.01 Speed measurement method

- (1) The maximum speed of a power-driven vehicle shall be calculated as the result of equal number of speed measurements made in both directions on the horizontal road.
- (2) Measurement methods other than those referred to in point (1) may be used if there is evidence of equivalence.

11.3.02 Measurement conditions

- (1) Speed measurement shall be performed;
- a) with a warm engine,
 - b) in calm weather, and
 - c) with the vehicle at duty weight.

11.03.040 moped

- (1) The prescribed speed limit of 30 km/h for a light moped and 45 km/h for a large moped must not be exceeded by more than 15 % and 10 % respectively.

Before 01.07.25: When measuring the speed, the prescribed speed limit for mopeds must not be exceeded by more than 20 %.

11.03.050 tractor

- (1) In the case of speed measurement, the prescribed speed limit is allowed to be exceeded by a maximum of 10 %.
- (2) The engine speed may be adjusted downwards if necessary to limit the speed to the specified speed limit. In doing so, the engine speed shall not be less than the speed at which the engine develops its maximum power.

11.03.060 engine tools

- (1) Engine tools shall comply with the provisions of the tractor.

Rebuilt vehicles

1. Definitions

1.1. Constructive change

- (1) Any modification of the steering, brakes, engine and load-bearing elements shall be regarded as a constructive change unless it is specified in this Annex that specifically specified changes are not considered to be a structural change.
- (2) A type-approved software update which is released by the vehicle manufacturer and where no physical modifications are made to the vehicle shall not be considered as a constructive change. It is a prerequisite that the software update does not result in the invalidity of the type approval and that neither engine power, peak speed nor fuel/electricity consumption is increased.
- (3) Design changes to the engine also include the inlet and exhaust system of the engine and the setting of engine parameters. If adjustments are made to setting values outside the manufacturer's declared values or tolerances, the change shall be considered as a constructive modification of the engine. However, paragraph 2.2.1.4. specifies the conditions under which modification of the intake or exhaust system is not considered a constructive change.
- (4) It shall also be regarded as a constructive modification of the steering, brakes or load-bearing elements if setting values are changed to values outside the values or tolerances declared by the manufacturer.
- (5) The replacement or modification of the gearbox or differential shall not be considered as a constructive change of the engine.

1.2. Approval

- (1) For the purposes of this Annex 2, an approval is an approval issued by a technical service authorised to carry out the tests in question.

1.3. Test Body

- (1) An examination body is an approved testing body within the meaning of the Order on the approval of testing bodies and inspection bodies in the vehicle technical field or a technical service pursuant to the Order on the designation of technical services in the vehicle technical field pursuant to certain regulations.

1.4. Reconstructed foreign vehicles already approved

- (1) In the case of imported vehicles to which amendments have been made, these changes must be documented at Danish inspection in the same way as for already registered Danish vehicles, that is to say, by presenting the original foreign approval referred to in point 1.2.

1.5. Modifications to tested vehicles

- (1) On a vehicle where driving characteristics have been tested at the time of approval, no new structural changes may subsequently be made to the steering, brakes, engine or load-bearing elements without a new report being drawn up.
However, the following changes to wheels shall not be considered as a constructive change for this purpose:
 - a) Change of section width by a maximum of 20 mm and with the same change at the front and rear.
 - b) Change of rim diameter of a maximum of one empty and with the same change at the front and rear.
 - c) Change of rim width of a maximum of one empty and with the same change at the front and rear.
 - d) Change of tyre circumference by a maximum of 2 %.

- e) Change of track gauge up to 10 mm.

2. Cars

2.1. Specific vehicle species

2.1.1. Amendments to certain vehicle types

- (1) The following vehicle types, all registered as a car on the basis of an EU type-approval, shall be subject to structural modifications to the steering, brakes, engine and load-bearing elements only if the vehicle manufacturer authorises modifications:
 - a) Quadricycles.
 - b) Tricycles with an unladen weight exceeding 400 kg.
 - c) Tractors with a maximum speed exceeding 40 km/h

2.1.2. Replica cars

- (1) Replica cars may be converted according to the rules of this Annex 2 but still have to meet the requirements for replica cars, including in terms of appearance, power, engine/gearbox principle and brakes.

2.1.3. Cars subject to type-approval

- (1) In the case of cars subject to type-approval, prior to approval during inspection of a constructive change to the steering, brakes, engine or load-bearing elements, a certificate of approval for the converted car shall be issued by the Danish Road Safety and Transport Agency.

2.2. Engine modification

- (1) Engine modification shall be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation provided by the car manufacturer with specific information on the engine changes and any necessary technical changes to the vehicle. The vehicle manufacturer's documentation shall include information that, following the modifications, the vehicle complies with the requirements of Annex 1, section 7.05 on noise and section 7.06 on air pollution for the specific vehicle, depending on the time of first registration of the vehicle.

Diesel cars shall also comply with the provisions of paragraph 2.2.1.2.1.

If the vehicle manufacturer's documentation is partially inadequate, the following shall apply:

 - i) If the vehicle manufacturer's documentation indicates only a maximum permissible power, but not the actual increased power, the current car power shall be documented by a test body.
 - ii) If no noise is reported in the vehicle manufacturer's documentation, the vehicle noise documentation shall be provided by a test body. For a car registered for the first time before 1 October 1982, the noise is checked on inspection. The standard noise figure shall not exceed the values given in Annex 1, paragraph 7.05.
 - iii) If the vehicle manufacturer's documentation does not indicate the current air pollution, the vehicle first registered on or after 1 October 1990 shall have been documented by a test body demonstrating compliance with the rules set out in Annex 1, section 7.06. Diesel cars shall also comply with the provisions of paragraph 2.2.1.2.1.
 - b) Documentation by means of approval and giving specific information on the engine modifications and any necessary technical modifications. The approval shall indicate that, following the modifications, the vehicle meets the requirements of Annex 1, section 7.05 on noise, and of Annex 1, section 7.06 on air pollution, applicable to the vehicle. This may be confirmed by additional documentation from a test body. It is sufficient if the test report contains information that neither noise nor air pollution has changed.

- For diesel vehicles there shall be additional testing of the flue gas index according to paragraph 2.2.1.2.1.
- c) Documentation from a test body which has carried out the test/check in accordance with paragraph 2.2.1.
- (2) If the change consists of bore cylinders up to the nearest oversized, the change shall not be considered a constructive change and shall not be considered to give any increase in power.

2.2.1. Engine modification check

- (1) In the event of any modification of the engine, a test body shall verify that the vehicle complies with the following requirements:
- a) Engine tuning shall not have been carried out in such a way that it is clear that the whole engine is intended to be of significantly higher engine power than that currently intended to be approved.
 - b) The original engine, if any, shall not be drowned.
 - c) The rules on technical suitability as set out in point 2.2.1.1.
 - d) The rules on air pollution, see point 2.2.1.2.
 - e) The rules on noise, see point 2.2.1.3.

2.2.1.1. Technical suitability

- (1) A test body shall verify that the vehicle is technically suitable for the increase in power in relation to the requirements of the following paragraphs of Annex 1:
- a) Section 4 on steering.
 - b) Clause 5 on brakes.
 - c) Section 8 on load-bearing elements.
- (2) Engine power shall be measured on the engine or by rolling field and with the best possible correction for air pressure, temperature and rolling resistance according to UN Regulation 85 in order to indicate the correct engine power and associated speed. A test body shall attend or conduct the test itself. In the case of unchanged engines, the manufacturer's information on the initial power of the engine shall be used. The roller field shall be calibrated and maintained according to the requirements of the roller field manufacturer.
- (3) The engine power information provided by the vehicle manufacturer shall be used as a starting point for the assessment of the engine power increase. However, if the vehicle manufacturer provides engine power according to gross worm according to US standard SAE J1349, 15 % shall be subtracted.
- (4) Replacing only the charge air cooler is not considered a constructive change.

2.2.1.1.1. Engine power increases up to 20 %

- (2) Engine power increases up to 20 % may be approved by a testing centre, without verification of technical suitability, in the following ways:
- a) In the case of the same engine, evidence shall be provided by a test body that the increase in power does not exceed 20 %.
 - b) In case of replacement to an unchanged engine from another model or label with proven power.

2.2.1.1.2. Engine power increase 21-40 %

- (1) In the case of an engine power increase of 21-40 %, in addition to control according to paragraph 2.2.1., a test apparatus shall verify that the vehicle meets one of the following requirements:
- a) The vehicle corresponds, if necessary after a modification, to an original other variant of the car model with regard to brake discs, drums, calipre, wheel cylinders and master cylinder and section width, and the engine power of the car does not exceed the engine power of the original other variant by more than 20 %.
 - b) The brakes for each axle originate from a vehicle with at least the same engine power and maximum axle load and the vehicle complies with the braking control requirements of paragraph 2.6.1.

- c) The brake discs have at least the dimensions specified in paragraph 2.2.1.1.2.1 and the vehicle complies with the braking control requirements of paragraph 2.6.1.
- d) The brakes meet the brake phase requirements of paragraph 2.2.1.1.2.2 and the vehicle complies with the braking control requirements of paragraph 2.6.1.

2.2.1.1.2.1. Control of brake drum using brake disc size check

(1) Front brake discs shall meet the following conditions:

- a) Disc diameter (in mm) shall be at least $270 + 0,3 \times \text{power in kW} + (\text{maximum axle load in kg} - 1.000) \times 0,05$.
- b) If the discs are ventilated (internal air ducts), a disc diameter of 10 mm is required.

(2) Rear brake discs shall meet the following conditions:

- a) Disc diameter (in mm) shall be at least $240 + 0,3 \times \text{power in kW} + (\text{maximum axle load in kg} - 1.000) \times 0,05$.
- b) If the discs are ventilated (internal air ducts), a disc diameter of 10 mm is required.

2.2.1.1.2.2. Control of brake drum on test track

(1) The technical service shall test the brakes by running a straight line test. The maximum vehicle shall be accelerated from standstill over a distance of 800 ± 25 m or, if achieved within 800 metres, until the vehicle has reached its peak speed. Immediately thereafter, the vehicle shall be braked at a minimum of 6 m/s^2 at standstill, without wheel lock and without activation of ABS. After a maximum of five seconds, the exercise shall be repeated. Braking, which shall not be less than 6 m/s^2 and pedal pressure, shall be recorded at

- 2. braking. The same exercise shall be repeated to make a total of 8 brake applications and at
- 8. braking shall be capable of delivering the same deceleration as for the 2. braking at a pedal pressure not more than 50 % above the pedal pressure used for 2th braking and not more than 50 daN.

(2) The minimum load on the car during the brake test shall be 150 kg. If the payload of the car exceeds 50 % of the running weight, the test shall be performed at a minimum of half the payload.

(3) The fitted brake linings shall be of a type intended for use on the road and shall not have significantly lower cold adhesion.

2.2.1.1.3. Engine power increase 41-100 %

(1) If a power-to-weight ratio of more than 20 kW/100 kg is achieved, point 2.2.1.1.4 applies. The weight is the vehicle's running ready weight.

(2) In the case of an engine power increase of 41-100 %, a test apparatus shall verify that the vehicle complies with the following:

- a) The requirements of paragraph 2.2.1.1.2. for a car with an engine power increase of 21-40 %.
- b) The requirements of paragraph 2.2.1.1.3.1. for an equivalent car or paragraph 2.2.1.1.3.2. for the checking and testing of driving characteristics.

2.2.1.1.3.1. Corresponding car

(1) If the vehicle, if necessary after modification, corresponds to an original other variant of the vehicle model with regard to brake discs, drums, calipers, wheel cylinders and master cylinder, and tyre width and suspension, and the engine power of the current car does not exceed the engine power of the original other variant by more than 20 %, then the check indicated in paragraph 2.2.1.1. may be replaced by the test body's verification that the car corresponds to the other variant on those points.

2.2.1.1.3.2. Verification and testing of driving characteristics

(1) The technical service shall verify that the vehicle has sufficient safe running characteristics compared to other powerful original cars.

The technical service shall test the driving characteristics of the car when running on dry or wet asphalt, as specified below.

- (2) The minimum load on the vehicle during the test shall be 150 kg. If the payload of a car exceeds 50 % of the weight in running order, the test shall be carried out at a minimum of half the payload.
- (3) The test shall include the following tests:
- a) Driving on uneven, asphalted road, including road with significant lateral slopes.
 - b) Driving on the road with heavy track running.
 - c) Maximum acceleration in each gear.
 - d) Gasification in turn.
 - e) Directional stability up to 90 % of the peak.
 - f) Speederslip in turn running with maximum lateral acceleration.
 - g) Double evasive manoeuvre carried out in accordance with international standard LSO 3888-1 with the following corrections:
 - i) For cars with a maximum width of 1.90 m, without mirrors, a fixed width of the three sections of each exercise of 2,30/2,50/2,70 m may be used.
 - ii) For a width exceeding 1.90 m, the vehicle-dependent method of the standard may be used to determine the width of the three sections.
 - iii) The minimum pass-through speed shall be 115 km/h for cars first registered before 1 November 2014, the minimum pass-through speed shall be 110 km/h for cars with narrower tyres than nominal 205 mm or for cars registered for the first time before 1 January 1980, the throughput shall be at least 105 km/h.
- Alternatively, double evasive manoeuvre may have been carried out to an equivalent standard.
- (4) To determine 90 % of the peak speed referred to in point (3) (e), a mathematical proxy shall be used in relation to the increased power to determine a theoretical peak speed if the car is not fully tested.

2.2.1.1.4. Engine power increase above 100 %

- (1) The weight is the vehicle's running ready weight.
- (2) In the case of an engine power increase greater than 100 % or to achieve a power/weight ratio of more than 20 kW/100 kg, a test body shall verify, in addition to the checks referred to in paragraphs 2.2.1.2. and 2.2.1.3., that the vehicle, possibly after a modification, corresponds to an original other variant of the car model in terms of brake discs, drums, calipre, wheel cylinders and master cylinder, as well as tyre width and suspension, and that the engine power of the current car does not exceed the engine power of the original other variant by more than 20 %.

2.2.1.2. Air pollution

- (1) The technical service shall verify that one of the following points is met:
- a) The limit values for air pollution set out in section 1 of Annex 7.06 are not exceeded by more than 20 %. However, the control values in paragraph 7.06.020 shall not be exceeded.
 - b) An engine of a different model or mark is used, provided that the engine in question meets the same or more recent air pollution standard than the one applicable to the vehicle. It is a prerequisite that the engine intake manifold, exhaust manifold and engine control including sensors and nozzles are transferred unchanged, that there is no change in engine control and that any catalyst or particulate filter is located no more than 20 cm further away from the engine measured along the pipe length.
 - c) The modification of the engine concerns only replacement to another charge air cooler or installation of a charge air cooler.

2.2.1.2.1. Extra checks on diesel cars

- (1) For a diesel vehicle, the technical service shall verify flue-gas values measured under full load at six constant speeds in accordance with Regulation 715/2007/EU and its implementing measures or UN Regulation 24-03. For the flue gas values, the following shall apply:
 - a) The flue gas values shall not exceed the limit values by more than 20 %.
 - b) If the car is EU type-approved, the flue gas values shall not exceed by more than 20 % the values measured at the original type-approval of the vehicle.

2.2.1.3. Noise

- (1) The technical service shall verify the following:
 - a) The vehicle complies with the noise limit values set out in Annex 1, section 7.05.
 - b) The exhaust system or intake system is not fitted with non-original flaps or similar devices which can be adjusted automatically or manually and whose purpose is to increase noise outside the measuring area. A silencer shall not be fitted with noise reduction measures which can be removed without destroying the silencer, unless the silencer corresponds to the vehicle's original silencer or is E-approved.
- (2) If the engine power increase is not more than 20 % and reference measurement has been carried out according to noise measurement method IV, the car may be approved without a new noise measurement according to Noise Measurement Method I if the reference figure from noise measurement method IV is still met with the permitted tolerance of 3 dB (A).

2.2.1.4. Conditions under which modification of intake or exhaust shall not be considered as a constructive modification of the engine;

2.2.1.4.1. Intake by car registered for the first time before 1 October 1982

- (1) Where the change in intake consists only in the modification of one or more of the following components, the change shall not be considered a constructive change and shall not be considered to provide any power increase:
 - a) Replacement to other air filter.
 - b) Replacement of original air filter box to other closed air filter box with air filter.
 - c) Replacement to a second intake manifold on a car with a carburettor.
 - d) Replacement to another carburettor with flow capacity corresponding to the original components.
 - e) Replacement to other injection systems/nozzles.

2.2.1.4.2. Emissions by car registered for the first time before 1 October 1982

- (1) If, after exhaust modification, the vehicle meets the noise limits given in Annex 1, paragraph 7.05, the change shall not be considered a constructive change and shall not be considered to give any power increase.
- (2) In addition, the attenuation of the exhaust system shall be effective at all loads and rotational speeds.
- (3) No flaps or similar devices shall be fitted in the exhaust system which can be adjusted automatically or manually. However, e-approved systems are allowed.

2.2.1.4.3. Intake by car registered for the first time on or after 1 October 1982

- (1) Where the change of intake consists only of a change of air filter or a change of the original air filter box to another closed air filter box and sensors are not moved, the change shall not be considered a constructive change and shall not be considered to provide any power increase.

2.2.1.4.4. Emissions by car registered for the first time on or after 1 October 1982

- (1) If, after exhaust modification, the vehicle continues to meet the recorded stationary value, the change shall not be considered a constructive change and shall not be considered to give any power increase.

On a car with catalytic converter and/or particulate filter, there shall be no change on the catalyst or particulate filter but only on the subsequent part of the exhaust.

- (2) In addition, the attenuation of the exhaust system shall be effective at all loads and rotational speeds.
- (3) No flaps or similar devices shall be fitted in the exhaust system which can be adjusted automatically or manually. However, e-approved systems are allowed.

2.3. Increase in speed

- (1) Modification of the top speed limiter shall be considered as a constructive modification of the engine to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body which has carried out the test/check in accordance with paragraph 2.3.1.

2.3.1. Testing

- (1) In the case of an increase in peak speed associated with a change to a peak limit resulting in an increase in peak traffic of more than 10 %, a test station shall test directional stability at at least 90 % of the new peak speed. The test shall demonstrate that the vehicle has sufficiently safe driving characteristics.
- (2) In order to determine 90 % of the peak speed, a mathematical proxy shall be used in relation to current power in order to determine a theoretical peak speed if the car is not fully tested.
- (3) For peak increases of up to 10 %, no tests shall be carried out, but evidence of the increase shall be carried out for inspection by approval of the structural change.

2.4. Changes to wheels

2.4.1. Changes that are not considered to be constructive changes

- (1) Modification of wheels shall not be considered as a constructive modification of the structural elements entailing inspection, approval and registration obligations if the following conditions are met:
 - a) The wheels comply with the load, speed code and wheel protection provisions of Annex 1, clause 8.02 and clause 9.01.
 - b) The tyre circumference deviates by a maximum of ± 5 % in nominal value.
Any difference in the circumference between front and rear decks does not exceed 5 %.
If the approval declaration/type-approval of a car contains enhanced conditions, these shall be respected.
 - c) The tyre fits the rim.
 - d) The tyre width increment on the rear wheels does not exceed that of the front wheels by more than 20 mm.
 - e) The tyre width increment on the front wheels does not exceed that of the rear wheels.
 - f) The section width is not less than the smallest with which the relevant engine variant of the vehicle is delivered originally.
 - g) The tyre profile ratio for and behind is the same if the car is supplied originally with the same tyre profile ratio for and at the rear. If the vehicle is supplied originally with a different tyre profile ratio at the front and the rear, the difference shall be maintained. However, the profile ratio on the rear wheels may be reduced by more than on the front wheels.

- h) The track gauge is not increased by more than 20 mm or reduced compared to the possible track gauges permitted by the vehicle manufacturer.
- i) If track gauge enhancers are fitted, it is of the type that centres on the hub and in the rim centre hole and which, together with the current rim, results in a total change of the track gauge not exceeding that referred to in point (h).
- j) Tyres on the same axle are of the same size and type (structure and category of use).
- k) If a passenger car M1 and a van N1 with a maximum authorised mass not exceeding 3.000 kg are fitted with tyres of different structures (radial tyres in combination with diagonal tyres) or tyres with different categories of use in a combination permitted by the vehicle manufacturer.
- l) The vehicle is not one of the following vehicles:
 - i) Quadricycle.
 - ii) Tricycle with an unladen weight exceeding 400 kg.
 - iii) Tractor with a maximum speed greater than 40 km/h

2.4.2. Changes considered as constructive changes

- (1) If one or more of the conditions of paragraph 2.4.1. are not met, the modification shall be considered as a constructive modification of the structural elements. In this case, the change shall be subject to inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving specific details of any necessary technical changes to the vehicle.
 - c) Documentation referred to in point 2.4.2.1.
- (2) In the case of vehicles subject to type-approval, approval during inspection of a constructive modification of structural elements must have been issued by the Danish Road Safety and Transport Agency on the basis of the documentation referred to in point (1) (a) or (b).

2.4.2.1. Testing

- (1) In the case of modification of wheels, a test body shall check whether the vehicle is technically fit to have the wheel modification in question.
- (2) The Examination Body shall carry out the following:
 - a) Verification of compliance with the requirements on wheels and guards as set out in Annex 1, clauses 8.02 and 9.01.
 - b) Verification of compliance with the requirements of paragraph 2.4.2.1.1.
 - c) Verification and testing of driving characteristics, see paragraph 2.2.1.1.3.2.
 - d) Verification of deceleration requirements for service and secondary braking according to Annex 1, paragraph 5.03, if the tyre circuit is increased by more than 5 %.

2.4.2.1.1. Basic requirements for wheels

- (1) The track gauge shall not be increased by more than 20 mm or reduced in relation to the possible track gauges permitted by the vehicle manufacturer.
- (2) Only track gauge enhancers centred on the hub and in the rim centre hole shall be installed which, together with the current rim, result in a total change of track gauge not exceeding that referred to in point (1).

2.5. Modifications to springs, shock absorbers and heeling stabilisers

2.5.1. Changes to springs that are not considered as constructive changes

- (1) Modification of springs with the same mounting points shall not be considered as a constructive modification of the structural elements entailing inspection, approval and registration obligations if the following conditions are met:
- a) The springs for and behind are, according to the car or spring manufacturer, intended for the current car model; and
— variant.
 - b) The springs give, when unladen, a reduction of not more than 40 mm in relation to the original car, and no unoriginal adjustment is possible for a reduction greater than 40 mm.
 - c) The springs give, when unladen, an increase of not more than 20 mm in relation to the original car and no unoriginal adjustment is possible to increase more than 20 mm.
 - d) There is no reservation on the original guaranteed total weight and axle load of the vehicle.
 - e) The springs are fitted in accordance with the instructions of the spring manufacturer.
 - f) The springs shall be tampered with in the spring dishes, even by full springing of the wheels, or so narrowly as to maintain the position safely.
 - g) The technical provisions set out in Annex 1 continue to be met.
 - h) In the case of vehicles fitted with an ALB valve, the ALB valve shall be set in such a way as to achieve the initial braking force at the new height of the vehicle in the unladen condition. In the case of a vehicle subject to type-approval, the ALB valve shall be adjusted in such a way as to provide the same braking force as before the change, both unladen and fully loaded.
 - i) The vehicle is not one of the following vehicles:
 - i) Quadricycle.
 - ii) Tricycle with an unladen weight exceeding 400 kg.
 - iii) Tractor with a maximum speed greater than 40 km/h

2.5.2. Modifications to shock absorbers which are not considered as structural changes;

- (1) Modification of shock absorbers shall not be considered as a constructive modification of the supporting elements entailing inspection, approval and registration obligations if, according to the manufacturer of the shock absorber, the shock absorbers are intended for the current car model and variant.

2.5.3. Changes to the heeling stabiliser that are not considered as constructive changes;

- (1) Modification of the heeling stabiliser shall not be considered as a constructive modification of the supporting elements entailing inspection, approval and recording obligations if, according to the heeling stabiliser manufacturer, the heeling stabilisers are intended for the current car model and variant, are unchanged in shape and the thickness does not differ by more than 3 mm from that of the original car.

2.5.4. Changes considered as constructive changes

- (1) If one or more of the items in paragraphs 2.5.1., 2.5.2. and 2.5.3. are not met, the change shall be considered as a constructive modification of the structural elements to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving specific details of any necessary technical changes to the vehicle.
 - c) Documentation referred to in point 2.5.4.1.
- (2) In the case of cars subject to type-approval, prior to approval during inspection of a constructive modification of structural elements, an approval declaration must be issued by the Danish Road Safety and Transport Agency and approval shall be made in accordance with point (1) (a) or (b).

2.5.4.1. Modification of springs, shock absorbers and heeling stabiliser

- (1) In the event of modification of springs, shock absorbers or heeling stabilisers, a test body shall check whether the vehicle is technically suitable for the modification of springs, shock absorbers and heeling stabilisers in question.
- (2) The Examination Body shall carry out the following:
 - a) Verification and testing of driving characteristics, see paragraph 2.2.1.1.3.2. and driving test X2 of clause 2.12.5. However, when replacing the heeling stabiliser, check and test only in accordance with paragraph 2.2.1.1.3.2. (3) (f) and (g).
 - b) Verification of the height of the lamps in accordance with paragraph 1 of Annex 6 and the height of the coupling device, if any, as specified in Annex 1, paragraph 9.05.
 - c) Verification of compliance with the requirements of paragraph 2.5.4.1.1.

2.5.4.1.1. Basic requirements for springs, shock absorbers and heeling stabilisers

- (1) Springs, shock absorbers and heeling stabiliser shall be installed in accordance with the instructions of the component manufacturer.
- (2) Springs shall be tampered with in the spring dishes, even by full springing of the wheels, or so narrowly that the position is maintained safely.
- (3) The replacement of springs, shock absorbers or heeling stabilisers shall not imply the need to reduce the maximum authorised axle weight or mass of the vehicle.
- (4) Any air springs shall have automatic height adjustment that becomes operational when the ignition is connected. If the system allows for different heights, the vehicle shall be tested at the lowest and highest setting.

2.6. Modification of braking system

- (1) Modification of the braking system shall be considered as a constructive modification of the brakes to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 2.6.1.
- (2) In the case of cars subject to type-approval, prior to approval during inspection of a constructive modification of brakes, a certificate of approval shall be issued by the Danish Road Safety and Transport Agency and approval shall be made in accordance with point (1) (a) or (b) or by calculating that the braking performance in Annex 1, section 5.03, is met.

2.6.1. Modification of braking system considered as structural changes

- (1) In the event of modification of the braking system, a test body shall check and test, in accordance with paragraph 2.6.1.1, whether the requirements of Annex 1, clause 5, on brakes are met.
In addition, a test body shall carry out checks in accordance with paragraphs 2.6.2. or 2.6.3. where applicable.

2.6.1.1. Checking and testing

- (1) The technical service shall verify the following:
 - a) The braking system is installed without modification of the braking components or suspension.
 - b) The braking system as a whole originates from a variant of vehicle with at least the same power and at least the same permissible front and rear axle loads.

- c) The weight distribution of the current car corresponds to the donor car. There shall be a maximum change of 100 kg in the difference between the permissible axle load for and at the rear of the donor car.

2.6.1.1.1. Alternative control and testing

- (1) If one or more of the points of paragraph 2.6.1.1. are not met, the technical service shall carry out the following:
 - a) Verify that the mounted discs or drums meet the requirements for fade stability. This shall be verified by finding one of the following:
 - i) The mounted discs or drums originate from a vehicle with at least the same power and at least the same permissible front and rear axle load.
 - ii) The size and thickness of the mounted discs are at least equal to those of the original discs or the same diameter and width of the mounted drums as the original drums.
 - iii) The size of the mounted discs is not less than that specified in paragraph 2.2.1.1.2.1.
 - iv) A brake phase test as referred to in paragraph 2.2.1.1.2.2 has been carried out.
 - b) Check that the car can decelerate at least 9 m/s^2 on dry road without wheel blockade, with a minimum of 8 m/s^2 for cars prior to 1980, or provide a better brake performance than with the vehicle's original brakes. Cars with ABS shall be capable of decelerating at least 9 m/s^2 when the ABS system controls on all wheels. The minimum load on the car during the brake test shall be 150 kg. If the loading capacity exceeds
However, 50 % of the weight in running order shall be tested at a minimum of half the payload. Pedal pressure shall not exceed 50 kg.
Alternatively, it shall be possible to achieve one of the following decelerations:
 - i) Not more than 0.5 m/s^2 less than the coefficient of adhesion μ_{glide} .
 - ii) Not more than 1.0 m/s^2 less than the coefficient of adhesion μ_{max} .
 - c) Check that the rear wheels do not lock before the front wheels at the achievable dry road deceleration.
 - d) Make a technical assessment of the adequacy of pedal migration if a circle falls.
 - e) Carry out checks if attachments follow in order to fit the calipers or brake discs. If the parts come from a brake manufacturer that also produces original car brake parts or a brake manufacturer that has sold at least 200 calipersets, no further action is required. Otherwise f) and g) below apply.
 - f) Carry out checks if special brackets are designed to fit calipers or brake discs. The testing body shall perform a calculation or technical assessment that the strength of the brackets is sufficient.
 - g) Perform a calculation or technical assessment that the strength of special brackets, including suspension close to the new attachments, is sufficient if non-original brackets are used for caliper mounting.
 - h) Check that the brakes are intended by the brake manufacturer for all-year use and not only for power-driven or rail use, if the brakes do not come from another approved vehicle model.

2.6.2. Modification of elements of the brake transmission

- (1) If pedal alarms or similar are replaced, the testing body shall carry out a calculation or technical assessment showing that the strength is sufficient, check safety, including securing joints, etc., and, where appropriate, check necessary travel.

2.6.3. Installation of ABS

- (1) When installing ABS, the technical service shall verify the use of a complete system, including wheel brakes, ABS block, wheel sensors, warning lamps, etc., from a vehicle where the braking system has been approved in accordance with UN Regulations 13 or 13-H.

The technical service shall verify the correct installation of the system and assess the correct operation on the dry road, smooth road and split-friction road as specified in UN Regulation 13-H, Annex 6.

- (2) When installing an ABS system that does not originate from a vehicle where the braking system has been approved in accordance with UN Regulations 13 or 13-H, the testing body shall test compliance with the requirements of UN Regulation 13-H, Annex 6.
- (3) When removing ABS, the technical service shall carry out checks and tests in accordance with paragraph 2.6.1.1.

2.7. Modification of suspension

- (1) Modification of suspension shall be considered as a constructive modification of the supporting elements to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes. The approval shall include both testing/checking of driving characteristics and strength of components.
 - c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 2.7.1.

2.7.1. Checking and testing

- (1) When changing the suspension, the technical service shall check and test the following:
 - a) Running characteristics as specified in paragraph 2.2.1.1.3.2, unless the geometry of the components, including distances between attachment points and articulated centres, remains unchanged.
 - b) Strength of the parts of the suspension.

One of the following options shall be used:

 - i) If the parts come from a car manufacturer or are manufactured by a component manufacturer who also manufactures original car suspension parts, the strength shall be considered sufficient if the component manufacturer declares that the component is suitable for the vehicle model in question.
 - ii) If the parts are manufactured by a component manufacturer who does not manufacture original parts for cars but has sold at least 200 suspension sets, the strength shall be considered sufficient if the component manufacturer declares that the component is suitable for the vehicle model in question.
 - iii) If the vehicle from which the suspension is derived has at least the same permissible axle load, the strength shall be considered sufficient.
 - iv) The test body shall perform a calculation or technical assessment of the strength of the attachments showing that the parts are of sufficient strength. If the attachment or area of attachment to the bodywork or chassis frame changes, the testing body shall carry out a calculation or technical assessment demonstrating that the parts have sufficient strength.
 - c) The requirements of Annex 1, paragraph 4, for steering and section 8 for load-bearing elements are met.

2.7.2. Change in gross vehicle weight/axle load

- (1) Where a vehicle model exists in several variants, the maximum authorised weight and the axle load may be increased to the maximum weight or axle load applicable to another variant, provided that brakes and load-bearing elements, including chassis/bodywork and suspension, i.e. wheels, spindles, spindles, spring legs, carrier arms, reaction arms, combustion, rear bridge and heel stabiliser, after possible replacement, correspond to the variant with the higher maximum weight or axle load.
- (2) A test body shall verify that the specific vehicle corresponds to the variant with a higher maximum weight or axle load in the case of brakes and load-bearing elements.

- (3) Increases in excess of those referred to in paragraphs (1) and (2) may be approved only if the vehicle manufacturer so permits.

2.7.3. Joints of suspension

- (1) It is not considered to be a constructive modification of the supporting elements if bushes or ball joints in suspension arms are replaced by others with increased hardness.
- (2) It shall not be considered a constructive modification of the load-bearing elements whose joints in the heeling stabiliser connections and spring or shock absorber fastenings are replaced into joints with a pure metallic connection, even if this did not occur originally.
- (3) Replacement to joints with pure metal connection in suspension arms, where this did not occur originally, shall be considered as a constructive change which shall only be approved if the vehicle manufacturer so permits.
- (4) Ball joints shall be protected against dust and dirt intrusion if they can be exposed to it.

2.8. Modification of self-supporting or co-supporting body or chassis frame

2.8.1. Changes that are not considered as constructive changes

- (1) Modification of self-supporting or co-supporting bodywork or chassis frame shall not be considered as a constructive change entailing inspection, approval and registration obligations in the following cases:
- a) When mounting a running cage or bench in a car and associated reinforcements at attachment points. Necessary holes for installation must be drilled for this purpose and the hoist arc or frame must be bolted or welded.
- b) By replacement of bolted screens and flaps/doors for other material. It shall not be demonstrated that the vehicle continues to meet the requirements for crash tests in Annex 1, paragraph 9.01, but any existing crash sensors shall continue to be installed.
- c) When installing a solar roof or ventilation flap, when the following conditions are met:
- i) A frame is placed around the cutting in the roof, the outer and internal profiles of which are clamped around the edges of the cut.
- ii) The cut in the roof is located symmetrically about the longitudinal axis of the vehicle.
- iii) The dimensions of the cut do not exceed 1.00 m and 0.50 m in the width or longitudinal direction of the vehicle.
- iv) The horizontal distance from the edges of the cut to the edges of the roof is not less than 0.15 m.
- v) There shall be no crossing or modification of original profiles or similar used to propel the bodywork.

2.8.2. Changes considered as constructive changes

- (1) If one or more of the above items are not met, the change shall be considered as a constructive modification of the structural elements to be approved by inspection on the basis of one of the following types of documentation:
- a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
- b) Documentation consisting of an approval and giving concrete details of any necessary technical changes. The approval shall include both testing/checking of driving characteristics and strength of components.
- c) Documentation from a test body which has carried out tests or checks in accordance with paragraphs 2.8.2.1, 2.8.2.3. or 2.8.2.4.
- d) Evidence that the replacement has been made to a replacement chassis frame manufactured by a component manufacturer that has manufactured at least 200 chassis frames. In doing so, the component manufacturer shall confirm that the chassis frame is suitable for the vehicle model in

question and that the wall thickness is not smaller than the original frame.

- (2) In the case of cars subject to type-approval, prior to approval during inspection of a constructive modification of structural elements, a certificate of approval shall be issued by the Road Safety and Transport Agency, unless the changes relate only to point 2.8.2.5.

2.8.2.1. Checking and testing

- (1) In case of modification of bodywork and chassis frame, a test body shall verify and test whether the requirements of Annex 1, paragraph 4, for collision proof steering, section 8 for load-bearing elements, and paragraph 9.01, for external projections, are met.

The checks and tests shall be carried out in accordance with paragraphs (2) to (5) or 2.8.2.2. However, tests shall not be carried out if the technical service can instead conclude by verification that one of the following two points is met:

- a) After modification, the car will correspond to an existing original car of the same model.
 - b) The bodywork is a non-load-bearing body and the car is not subject to the rules on collision proof steering as set out in Annex 1, paragraph 4.01.
- (2) In the case of a car converted to the cabriolet, targa, pick-up, etc., where the same reinforcements are fitted to an original version, the testing body shall verify, by testing or assessment in accordance with paragraph 1.12.3. above, that the provisions on collision proof steering equipment as defined in UN Regulation 12 continue to be met if the steering wheel and attachment are not the same and the supporting parts in the front remain unchanged.
- (3) In the case of minor changes where less significant load-bearing parts of the frame or chassis frame have been modified, the testing body shall make a calculation or technical assessment showing that the strength is sufficient. The same applies to the replacement of the original door hinges allowing the door to be opened upwards.
- (4) In the case of modifications to self-supporting bodywork or chassis frame to enable new or modified attachment points for suspension, the testing body shall make a calculation or technical assessment showing that the strength of the brackets, attachments and the area of attachment to the bodywork or chassis frame are sufficient.
- (5) In the case of modifications to self-supporting bodywork or chassis to allow for new or modified attachment points for the engine, gear and transmission, the testing body shall make a calculation or technical assessment demonstrating that the strength of the fittings, attachments and the area of attachment to the bodywork or chassis frame are sufficient.

2.8.2.2. Reinforcement of self-supporting or co-supporting body or chassis frame

- (1) The reinforcement of bodywork or chassis frames shall not lead to a risk of cracking in other parts of the structure.
- (2) The testing body shall carry out a calculation or technical assessment showing that the reinforcements do not result in an increased risk of cracking in other parts of the structure.
- However, calculation or assessment shall not be required in the case of the installation of a roll-bar or roll-bar.

2.8.2.3. Extension or abbreviation of chassis frame

- (1) Change of wheelbase and overhang is a constructive change of the supporting elements to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Evidence from a test body or builds up that the voltages of a proper steel chassis frame on a car with a technically permissible maximum laden mass exceeding 3.500 kg when fully loaded do not exceed 100 N/mm² (1.000 kp/cm²).

In the case of abbreviations, additional evidence shall be provided that the provisions of paragraph 1 (2) of Annex 5.03.020 to this Regulation are met. The ALB setting may need to be modified.

2.8.2.4. Installation of loading ladders, ladders, tippings and the like

- (1) The ladder, ladder, tipper or similar shall be fitted in accordance with the vehicle manufacturer's instructions.
- (2) Alternatively, if the car has a steel chassis frame, a test body or builder may demonstrate that the installation is such that the stresses in the chassis frame using these devices do not exceed 150 N/mm^2 (1.500 kp/cm^2).

2.8.2.5. Reinforcement of profile flanges on chassis frame

- (1) Reinforcements of profile flanges on chassis frames shall be carried out in accordance with the car manufacturer's instructions or according to the following guidelines:
 - a) The reinforcement shall consist of flat steel placed on top and lower flange and shall be welded with coupled welding on the side edges.
 - b) The flat steel must be so narrower than the flange that the weld is free from the edge and round of the flange.
 - c) The flat steel shall not end up in the same vertical cross-section unless it is at the end of the profile.
 - d) The ends of the flash stand shall be suitably positioned in relation to spring consoles and similar, and shall be tapered unless they are brought to the end of the profile.

2.9. Replacement of steering wheel

2.9.1. Replacement of steering wheel not considered as a constructive change

- (1) If the replacement of the steering wheel meets one of the following conditions, the replacement shall not be considered as a constructive change entailing inspection, approval and registration obligations:
 - a) Replacement to an E-approved steering wheel fitted directly or by means of an adaptor supplied by the steering wheel manufacturer.
 - b) An alternative steering wheel approved for a passenger car meeting the requirements of UN Regulation 12 has been replaced.
 - c) The car is not subject to the rules on collision proof steering, see Annex 1, section 4.01.It is also a condition that the following points are met:
 - d) The steering wheel does not have sharp edges and is large enough for the car to be easily controlled.
 - e) The steering wheel is of the same type as the original. A "Yoke" steering wheel shall not be fitted to a car not intended for this purpose.
- (2) If the vehicle is originally fitted with an airbag in the steering wheel, the conditions of paragraph 2.18. shall also be fulfilled.

2.9.2. Replacement of steering wheel considered as a constructive change

- (1) If one of the above points is not met, the change shall be considered as a constructive modification of the steering equipment to be approved by inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body that has tested the steering wheel in accordance with UN Regulation 12 in the case of passenger cars or vans subject to the rules on crash-proof steering, as set out in Annex 1, paragraph 4.01.

- d) Documentation from a test body that has tested the car fitted with the steering wheel in accordance with UN Regulation 79 in the case of a large passenger car or lorry in which the steering wheel is replaced to a steering wheel of smaller external diameter.

2.10. Conversion to limousine or hearses

- (1) The conversion of a car into limousine or hearses may be approved for inspection if one of the following conditions is met:
 - a) There is an authorisation in accordance with German standard Merkblatt 751. However, an increase in the maximum authorised mass in relation to the original values of the vehicle manufacturer cannot be accepted on that basis, but the maximum authorised weight may be increased to the sum of the original authorised masses on the axles.
 - b) The vehicle manufacturer has approved the conversion and any increase in the permissible axle loads and maximum authorised weights. The approval shall contain a detailed description of the conversion, including a converter, brand, model, special characteristics and any conditions.
 - c) The car is e-approved in its amended version, including by multi-stage approval.
 - d) The converter has been approved by the vehicle manufacturer in accordance with point 2.10.1.
 - e) There is documentation from a test body which has carried out tests or checks in accordance with paragraph 2.10.2.
 - f) The alternative method referred to in paragraph 2.10.1 or 2.10.2 shall be used.

2.10.1. Conversion to limousine or hearses, alternative method

- (1) The conversion of a car into limousine or hearses may be approved for inspection if the following conditions are met:
 - a) The converter company appears on a list of approved converters on the website of a US car manufacturer, or documentation is provided on inspection in the form of a written declaration from the car manufacturer that the converter has been approved by the car manufacturer for the conversion of the car manufacturer's cars into limouanges.
 - b) Information on or on the car indicates that the car is classified as "Passenger car" or "Multipurpose Passenger Vehicle (MPV)".
 - c) It appears from the sticker of the converter that the car meets the US safety requirements for passenger cars and that the requirements are met with the indicated maximum axle weights and maximum authorised weights.

2.10.2. Conversion to hearses, alternative method

- (1) In the case of conversion and, where appropriate, extension to a trolley, the technical service shall verify that the body of the car complies with the requirements of Annex 1, paragraph 8, for load-bearing elements.
- (2) The technical service shall verify that the following requirements are met:
 - a) The refurbishment of the bodywork in terms of bottom and side panels has been carried out in accordance with the B-pillar. However, the structure may be supplemented by an increased roof structure between the A and B pillars.
 - b) The original profile link between A and B pillars of the car has not changed.
 - c) The bodywork according to the B-pillar has been constructed as a closed silica room.
 - d) The maximum permissible mass on the axles has not been increased.In addition, the testing body shall have made a calculation or technical assessment showing that the strength of the extended car is sufficient and shall provide a statement that the bodywork or chassis frame is capable of withstanding the stresses arising during normal use and loading of the vehicle.
- (3) The maximum authorised weight may be increased to the sum of the authorised axle loads without new brake control and the maximum weight/axle load may be increased in accordance with clause 2.7.2.

2.11. Conversion of VW Type 1 to buggy or similar

- 1) Approval for inspection of the map VW Type 1 converted to buggy or similar shall be based on one of the following types of documentation:
 - a) Documentation from a test body which has carried out tests or checks in accordance with paragraph 2.11.1.1.
 - b) A foreign registration certificate showing that, in the case of a used imported car, the vehicle has been approved in a shortened condition more than two years ago. The wheelbase shall be between 2.00 m and 2.15 m. The wheel may be fitted with rims and motor as specified in paragraph 2.11.1. (1).

2.11.1. Car shortening the platform frame

- (1) In case of conversion of VW Type 1 to buggy or equivalent, the following points shall be verified by a test body:
 - a) That the car has been converted with other bodywork in conjunction with the shortening of the platform frame by 0,25-0.40 m.
 - b) The car is fitted with original rims or with rims with different dimensions and the following limitations:
 - i) Front rims have a width of up to 5,5 "and a thrust between the original value and 6 mm.
 - ii) Rear rims have a width of up to 10 "and a thrust between the original value and -50 mm.
 - iii) The tyre diameter has changed by not more than 5 % compared to the original installation.
 - c) The engine power does not exceed the following:
 - i) 63 kW if the car has a McPherson suspension and disc brakes in front.
 - ii) 51 kW if the car has slow-arm and disc brakes in front.
 - iii) 44 kW if the car is fitted with drum brakes in front.
- (2) The testing body shall perform a calculation or technical assessment demonstrating that the strength of the shortened platform frame and bodywork is sufficient and shall provide a statement that the platform frame and bodywork are capable of withstanding the stresses arising during normal use and loading of the vehicle.
- (3) When the bodywork is replaced by a vehicle registered for the first time on or after 1 May 1977, the technical service shall verify that the collision proof steering equipment complies with the rules set out in paragraph 2.12.3.

2.11.2. Car without shortening the platform frame

- (1) When installing another bodywork on VW Type 1, without shortening the platform frame, a test body shall verify that the vehicle complies with the requirements of paragraph 2.12.9.
- (2) When the bodywork is replaced by a vehicle registered for the first time on or after 1 May 1977, the technical service shall verify that the collision proof steering equipment complies with the rules set out in paragraph 2.12.3.

2.12. Composite car

- (1) A composite car is a vehicle assembled by components from different car models or universal components under the conditions set out below.
- (2) In the case of cars subject to type-approval, an approval certificate must have been issued by the Danish Road Safety and Transport Agency prior to approval for inspection of a composite vehicle.

2.12.1. Car where neither bodywork nor chassis frame has changed

- (1) Where the self-supporting body or chassis frame has not changed in the case of load-bearing parts, with the exception of any attachments, the car shall nevertheless be considered to be a composite vehicle if at least three of the following modifications have been made:
 - a) Front wheel suspension has been replaced by front wheel suspension from other car model or component manufacturer.

- b) Rear wheel hitch is replaced by rear wheel hitch from other car model or component manufacturer.
 - c) The steering equipment has been replaced by steering from another car model or component factory.
 - d) Engine replaced to engine with different number of cylinders or other cylinder configuration.
- (2) A test body shall verify the conformity of the composite vehicle with the technical requirements of Annex 1 depending on the year of the vehicle.
- (3) However, with regard to vehicle crash safety, running characteristics, brakes, engine power, noise, air pollution, suspension strength, bodywork or chassis frame, and safety-belt anchorages, the testing body shall verify that the vehicle complies with the relevant requirements of paragraphs 2.12.3. to 2.12.11.

2.12.2. Car with modified bodywork or chassis frame

- (1) Where the self-supporting body or chassis frame has changed in the case of load-bearing parts, the car shall be considered to be a composite vehicle if, in addition, at least two of the following modifications have been made:
- a) Front wheel suspension has been replaced by front wheel suspension from other car model or component manufacturer.
 - b) Rear wheel hitch is replaced by rear wheel hitch from other car model or component manufacturer.
 - c) Steering is replaced by steering from other car model or component manufacturer.
 - d) Engine replaced to engine with different number of cylinders or other cylinder configuration.
- (2) A test body shall verify the conformity of the composite vehicle with the technical requirements of Annex 1 depending on the year of the vehicle.
- (3) However, with regard to vehicle crash safety, running characteristics, brakes, engine power, noise, air pollution, suspension strength, bodywork or chassis frame, and safety-belt anchorages, the testing body shall verify that the vehicle complies with the relevant requirements of paragraphs 2.12.3. to 2.12.11.

2.12.3. Steering and crash protection

- (1) On a passenger car registered for the first time after 30 April 1977, the technical assessment of the conformity of the passenger car with Annex 1, paragraph 4, on collision proof steering shall be carried out by the technical service.
- The same applies to goods vehicles with a maximum authorised mass not exceeding 1.500 kg, first registered after 31 March 2002.
- (2) For the above vehicles, the technical assessment shall be carried out by the technical service on the basis of the attachment of components and the built-in possibilities of the steering equipment to deform or differ so that the steering wheel is not moved longer than indicated in UN Regulation 12.
- In addition, the technical service shall verify that the vehicle is fitted with a steering wheel approved in accordance with UN Regulation 12 or with an original steering wheel from an EU type-approved passenger car.

2.12.4. Running characteristics

- (1) The technical service shall perform a driving property test of the composite vehicle as specified in paragraph 2.2.1.1.3.2, with the exception of the accelerator slip test, which is replaced by test X3 as described in paragraph 2.12.5. In addition, the test body shall verify that the vehicle meets the requirements of tests X1 and X2 of paragraph 2.12.5.

2.12.5. Roadworthiness test

- (1) The minimum load on the vehicle during the driving tests shall be 150 kg. However, if the load capacity of a vehicle exceeds 50 % of the weight in running order, the test shall be carried out at a minimum of half the payload.
- The maximum permissible weight shall be fixed by the technical service and shall be at least

equivalent to the use of all seating positions of 75 kg and of 10 kg in luggage rooms per seating position, with a minimum of 150 kg for vans.

Test	Content	Approval criterion
X1	Circular driving: The radius 40 m shall be measured.	There shall be increasing steering thrust at increasing speed and a minimum steering rate of 7.5 m/s^2 shall be achieved.
X2	Circular operation over bump: Radius 40 m. At a velocity corresponding to wheel elevation 6 m/s^2 , drive with all wheels over a bump consisting of a board of at least 40 mm high and 150 to 250 mm wide with sides 45 degrees long and placed perpendicular to the direction of travel.	The steering impact shall be kept constant and after one second the deviation from the prescribed course shall not exceed 0.5 m.
X3	Accelerator slip circular: Radius 40 m. At a speed corresponding to a wheel acceleration of 7 m/s^2 , the accelerator pedal shall be released. The circle shall be driven in gear 2.	The steering layer shall be kept constant and, after a quarter of a circle after the accelerator slip, the lateral deviation from the prescribed circle shall not exceed 12 m.

Common to tests X1, X2 and X3: Radius and related criteria may differ with $\pm 10 \%$. Circular driving may take place on a section of the circle including at least approximately 90° to stabilise side acceleration and space for subsequent measurement.

2.12.6. Brakes

(1) The technical service shall verify that the vehicle complies with the requirements of paragraph 2.2.1.1.2.

2.12.7. Air pollution and noise

(1) The technical service shall check the compliance of the vehicle with the air pollution requirements in accordance with paragraph 2.2.1.2 and the noise referred to in paragraph 2.2.1.3.

2.12.8. Weight/power ratio

(1) The technical service shall verify that the combined vehicle does not have a power-to-weight ratio of more than $20 \text{ kW}/100 \text{ kg}$. The weight is the weight in running order including 75 kg driver.

2.12.9. Bodywork and chassis frame

(1) The testing body shall perform a calculation or technical assessment of the strength of bodywork or chassis frame.

For the calculations:

- a) For each of the following loads, any position in the supporting structure shall be at least as follows:
- i. $\rightarrow 2$ for two static loads.
 - ii. $\rightarrow 2,5$ for braking with deceleration 7.5 m/s^2 .
 - iii. $i > 2,5$ for curvature with wall elevation 7.5 m/s^2 .

- b) Material strengths shall be determined by measurements made on the most heavily loaded parts. The most heavily loaded parts shall be obtained by means of calculations or a technical assessment of the design. For simple designs, calculations may be used only to verify compliance with the requirements.
 - c) For the loads referred to in point (a), the fatigue security shall be calculated. For 2×10^6 influences, the probability of rupture shall be less than the 5 % fractile.
- (2) The testing body shall assess the rigidity of the structure during on-road testing. Self-resonance shall not occur during the test up to 90 % of the peak speed.
To determine 90 % of the peak speed, a mathematical proxy is used in relation to the increased power to determine a theoretical peak speed if the car is not fully tested.
- (3) The technical service shall declare that the bodywork or chassis frame can withstand the stresses arising during normal use and loading of the vehicle.

2.12.10. Components, including suspension, shafts, spindles and steering;

- (1) The technical service shall carry out checks on components, including suspension, axles, spindles and steering equipment in accordance with paragraphs 2.4. and 2.7.

2.12.11. Seatbelts

- (1) If the vehicle is not fitted with already tested belt anchorages and the vehicle's vintage is set at 1970 or later, the testing body shall make calculations for each anchorage point where each anchorage point is subjected to a forward force according to the following.
- a) For three-point belts:
 - i) The upper anchorage point shall be subjected to a force of 5 kN.
 - ii) The lower anchorage point shall be subjected to a force of 5 kN.
 - iii) The lock anchorage point shall be subjected to a force of 10 kN.
 - b) In the case of lap belts, any anchorage point shall be subjected to a force of 10 kN.
- In the case of common anchorage points, it shall be used for the type of belt and the force attached to the anchorage point as shown above. The force from each belt shall be applied simultaneously to the anchorage point. Common anchorage point is defined as the point where parts of two safety-belts are installed in the same anchorage point.
- (2) The technical service shall verify and assess the appropriateness of the belt anchorages position in accordance with UN Regulation No 14 in the version applicable to the vehicle according to Annex 1.

2.12.12. Determination of the vintage year

- (1) The new year of the car must be determined by the testing body.
The vintage year shall be determined on the basis of the weighted average of the year of production and shall be calculated on the basis of the following elements, the figure in brackets showing the weighting:
- a) Carrying chassis frame (3) or self-supporting body (6).
 - b) Non-carrying or co-supporting bodywork (3). Delete in case of self-supporting bodywork.
 - c) Front wheel suspension (1).
 - d) Rear wheel hitch (1).
 - e) Steering (1).
 - f) Braking system (1).
 - g) Engine (2).
- The year of the bodywork or chassis shall be set at the initial year of the body or chassis if only fittings or equivalent have been added.

Where other alterations have been made to the bodywork or chassis frame, the year shall be set at the average of the original year and the year in which the vehicle was first manufactured for inspection for approval of the change.

Within each element of points (c) to (g), the annual figure shall be the average of the main components. For components, the year of construction may be used regardless of later production dates.

For the engine, the average of the year of the block or cylinder and peak shall be calculated according to the type designations.

For suspension, it is the average of the year of the axle and oscillaries that is relevant and, for brakes, the average of the year of caliper for disc brakes or anchor plates for drum brakes is used.

For a foreign and previously approved composite car, the vintage year is set at the year in which the car was approved in the country of origin.

2.13. Modification or installation of the Electronic Stability System (ESC)

- (1) The modification or installation of the ESC shall be considered as a constructive modification of the vehicle steering equipment to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body that has tested or verified that, after a change in mode of action, the ESC system continues to comply with UN Regulations 13 or 140 relevant to the type of vehicle.
 - d) Documentation from a test body that has verified that the same vehicle model is present in a variant without ESC.
- (2) On a car registered 1st time at a time when ESC is required according to Annex 1, the system shall not be removed or disabled, either permanently or temporarily. However, if the vehicle manufacturer has fitted a function where ESC can be temporarily disabled, this is allowed.

2.14. Change of lane departure arm (LDWS)

- (1) Change of lane departure arm (LDWS) shall be considered as a constructive modification of steering equipment to be approved by inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body that has tested or verified that the LDWS system, after a change in mode of action, continues to comply with Regulation (EU) 2021/646 or UN Regulation No 130 relevant to the type of vehicle.
- (2) The lane departure arm (LDWS) shall not be permanently disabled on a vehicle registered 1st time at a time when the LDWS is required by Annex 1.

2.15. Modification or installation of emergency lane keeping system (ELKS)

- (1) Modification or installation of emergency lane-keeping system (ELKS) shall be considered as a constructive modification of the steering equipment to be approved by inspection on the basis of one of the following types of documentation:
 - a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.

- b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body that has tested or verified that the ELKS system, after modification of the mode of action, continues to comply with Regulation (EU) 2021/646 relevant to the type of vehicle.
- (2) Lane-keeping assistance (ELKS) shall not be permanently withdrawn from vehicle registered 1st time at a time when the ELKS is required according to Annex 1.

2.16. Modification or fitting of Advanced Emergency Braking System (AEBS)

- (1) Modification or fitting of Advanced Emergency Braking System (AEBS) shall be considered as a constructive modification of the brakes to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body that has tested or verified that the AEBS system, after a change in mode of action, continues to comply with UN Regulations 131 or 152 relevant to the type of vehicle.
- (2) The Advanced Emergency Braking System (AEBS) shall not be deactivated on a vehicle registered 1st time at a time when the AEBS is required according to Annex 1.
- (3) In the case of cars subject to type-approval, prior to approval during inspection of a constructive modification of brakes, a certificate of approval shall have been issued by the Danish Road Safety and Transport Agency.

2.17. Change or installation of automatic speed control (adaptive cruise control)

- (1) Modification or installation of adaptive cruise control shall be considered as a constructive modification of the engine, which shall only be approved for inspection on the basis of documentation provided by the vehicle manufacturer.

2.18. Modification of airbags

2.18.1. Vehicle required to meet the crash test requirements of Annex 1, section 9.01

- (1) Driver and passenger airbags shall not be removed or disabled unless there is evidence that the frontal impact provisions continue to be met.
 A car originally fitted with a button or key capable of disable the passenger air bag shall be deemed to comply with the provision even without a functioning passenger air bag.
 The tell-tale shall operate in such a way that, if the passenger air bag is disabled, it can continue to indicate malfunctions of the remaining airbag system.
- (2) When replacing a steering wheel with an airbag, it is sufficient that the new steering wheel also has a possibly undocumented airbag.
- (3) Side and curtain airbags shall not be removed or disabled unless there is evidence that the lateral impact provisions continue to be met.
 However, if the car is fitted with a flash cage, side and garden airbag may be removed.
- (4) Any seat cover with a side airbag shall be designed to provide a side airbag.
- (5) In case of replacement of seat by side airbag, it is sufficient that the new seat also has a possibly undocumented airbag.
- (6) A seat specially designed for a disabled person shall not be fitted with a side airbag, regardless of the original seat.

2.18.2. Vehicle not required to meet the crash test requirements of Annex 1, section 9.01

(1) Airbag must be removed.

However, if the driver rails are removed, evidence shall be provided that the steering wheel meets the technical requirements of UN Regulation 12. It is sufficient that the steering wheel is E-approved or originates from a vehicle approved according to UN Regulation 12, regardless of whether it has not been approved for that vehicle.

2.19. Installation of steering assistance on passenger cars and vans (power steering)

(1) The installation of power assistance for the steering shall be considered as a constructive modification of the steering equipment to be approved by inspection on the basis of one of the following types of documentation:

- a) Documentation from the car manufacturer giving concrete details of any necessary technical changes to the vehicle.
- b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
- c) Documentation from a test body which has carried out tests in accordance with paragraph 2.19.1.

2.19.1. Checking and testing of steering equipment

(1) The Examination Body shall carry out the following:

- a) Checking that the requirements for steering equipment, as described in Annex 1, paragraph 4.01.001, are met.
- b) Testing and testing of driving characteristics, which shall include a test with a slal of between 10 cones set at a distance of 18 m. The exercise shall be carried out at 50 km/h or at the maximum speed possible and the servo assistance shall not fluctuate or drop out during the slal cycle. The reading in the car shall be as specified in paragraph 2.12.5.
- c) Checking the strength of the incoming parts. In this respect the following applies:
 - i) If the parts come from a car manufacturer or are manufactured by a component manufacturer who also manufactures original car steering parts, the strength shall be deemed sufficient if the component manufacturer declares that the component is suitable for the vehicle model in question.
 - ii) If the parts are manufactured by a component manufacturer who does not manufacture original parts for cars but has sold at least 200 servo steering sets, the strength shall be considered sufficient if the component manufacturer declares that the component is suitable for the vehicle model in question.
 - iii) The testing body shall perform a calculation or technical assessment of the strength of component parts showing that the parts have sufficient strength.

2.20. Conversion of car to electric operation or change of electricity system

(1) The conversion of a vehicle with an internal combustion engine to electric power or the modification of the electric system of a car with an electric motor shall be regarded as a constructive change of the engine to be approved for inspection on the basis of one of the following types of documentation:

- a) Documentation from the car manufacturer giving concrete details of all the technical changes.
- b) Documentation consisting of an approval and giving concrete details of all the technical amendments.
- c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 2.20.1.

(2) For example, changing the electricity system can be a change to larger or smaller battery or other electric control, including a change in battery charging control.

(3) The rules also apply if the internal combustion engine is supplemented with an electric motor with associated batteries and techniques.

(4) Battery means an electric vehicle battery, that is to say, the battery that provides electric power for the car's propulsion.

- (5) For cars subject to type-approval, prior to approval during inspection of a constructive change of engine, a certificate of approval must have been issued by the Danish Road Safety and Transport Agency.

2.20.1. Checking and testing

(1) The Examination Body shall carry out the following:

- a) Verify that the vehicle meets the technical requirements of UN Regulation 100-03 on electrical safety.
- b) Inspect and control the powertrain components and wiring, with a focus on possible safety risks in the event of collision, and declare that the vehicle is safe at these points and that persons may not inadvertently come into contact with the live parts of the traction part.
- c) Check that batteries are placed separately from the passenger compartment and not in deformable zones. Deformable zones are defined here as the area outside the contour of the external edges of the wheels. For vehicles with load-bearing chassis frames, batteries shall be located within the chassis frame.
- d) Verify compliance with UN Regulation 10-05 relating to EMC.
- e) Conduct a professional assessment that the vehicle continues to comply with the provisions of Annex 1, paragraphs 4.01.021 and 4.01.024, on collision proof steering.
The assessment may be omitted if the engine and batteries are behind the B pillar.
- f) Verify that the vehicle still has sufficient load capacity in relation to the number of seating positions under load of 75 kg per person.
The original maximum authorised mass of the vehicle may be allowed to be increased by up to 3 %, unless the vehicle manufacturer authorises further increments.
- g) Verify that the maximum authorised weight does not exceed the maximum authorised axle weight by more than 3 % when all seats are in use, any coupling device is loaded at the permitted ball pressure and the excess weight up to the maximum authorised weight is placed in the centre of the luggage compartment.
- h) If the vehicle has regenerated during braking, the vehicle shall be fitted with anti-lock brakes (ABS) and the technical service shall verify that the vehicle complies with UN Regulations 13-11 or 13-H on ABS and regeneration, including that the system sends a signal to the stop lamps at the decelerations specified in the Regulations.
- i) Check that the energy source of the braking system can provide the energy needed for braking even during urban driving with frequent brake applications.
In the case of a vehicle equipped with a compressed air system for the brakes, the technical service shall verify that Annex 1, paragraph 5.02.003, is fulfilled.
- j) Check that the car complies with standard IEC 61851: 2020. Lademode shall be at least mode 1 and shall be fitted with a ground-conductor and a fault current switch.
- k) Check the battery management system (BMS, Battery Management System), which shall be capable of controlling charge, including from regenerative braking, within the manufacturer's specifications for the battery cells in terms of voltage and maximum temperature.
The system shall provide a protective function to monitor the battery at cell level and to disconnect the charge and load of the battery so that the battery is put in a safe condition if the battery cells are out of specification.
The battery management system shall be designed for self-safety in such a way that the system is automatically brought to a safe state by failure of the protective function. In the event of a fault, the driver of the vehicle shall be warned with a clear signal in sufficient time to enable the car to be brought to a safe position before the battery is switched off.
- l) Check that there is an easily accessible possibility to switch off the electric circuit to the car battery (s) without special tools. The interruption of the safety switch shall be close to the battery, be safe and include at least one pin of the battery. The function and method of operation shall be clearly marked on the vehicle.

- m) If, at the time of conversion, the vehicle becomes more efficient, the rules on engine modification and power increase in section 2.2 shall apply.
- (2) If a given change does not affect one or more of the areas mentioned in paragraph (1), the testing body shall provide a justification, and inspection and testing may be omitted in those areas.

3. Motorcycles

3.1. Specific vehicle species

3.1.1. Amendments to certain vehicle types

- (1) The following vehicle types shall be subject to structural modifications to the steering, brakes, engine and load-bearing elements only if modifications are permitted by the vehicle manufacturer or approved:
 - a) Two-wheeled motorcycles with sidecar.
 - b) Tricycles.
- (2) However, changes as set out in paragraphs 3.2.1.4. and 3.5.1., which are not considered as structural changes, may be made on a two-wheel motorcycle with side-car and on a three-wheel motorcycle.

3.2. Engine modification

- (1) Engine modification shall be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation supplied by the manufacturer of the motorcycle with specific information on the engine changes and any necessary technical changes to the motorcycle. The documentation of the motorcycle manufacturer shall include information that, following the modifications, the motorcycle meets the requirements of Annex 1, section 7.05 on noise and section 7.06 on air pollution for the particular motorcycle, depending on the time of first registration of the motorcycle. If the documentation provided by the motorcycle manufacturer is partially inadequate, the following shall apply:
 - i) If the documentation provided by the motorcycle manufacturer indicates only a maximum permissible power, but not the actual increased power, the evidence of the power of the current motorcycle shall be provided by a test body.
 - ii) If the documentation provided by the motorcycle manufacturer does not indicate noise, the documentation of the motorcycle noise shall be provided by a test body. However, for motorcycles first registered before 1 October 1982, the noise shall be checked by inspection. The standard noise figure shall not exceed the values given in Annex 1, paragraph 7.05.
 - iii) If the documentation provided by the motorcycle manufacturer does not indicate the current air pollution, for motorcycles first registered on or after 1 July 2004, documentation shall be drawn up by a test body demonstrating compliance with the rules set out in Annex 1, paragraph 7.06.
 - b) Documentation by means of approval and giving specific information on the engine modifications and any necessary technical modifications. The approval shall include information that, following the modifications, the motorcycle meets the requirements of Annex 1, section 7.05 on noise, and of Annex 1, section 7.06 on air pollution applicable to the motorcycle. This may be confirmed by additional documentation from a test body. It is sufficient if the test report contains information that neither noise nor air pollution has changed.
 - c) Documentation from a test body which has carried out the test/check in accordance with paragraph 3.2.1.
- (2) If the change consists of bore cylinders up to the nearest oversized, the change shall not be considered a constructive change and shall not be considered to give any increase in power.

3.2.1. Engine modification check

- (1) For any modification of the engine, a test body shall verify that the motorcycle complies with the following requirements:
 - a) Engine tuning shall not have been carried out in such a way that it is clear that the whole engine is intended to be of significantly higher engine power than that currently intended to be approved.
 - b) Any original engine shall not be drowned.
 - c) The rules on technical suitability as set out in point 3.2.1.1.
 - d) The rules on air pollution, see point 3.2.1.2.
 - e) The rules on noise, see point 3.2.1.3.

3.2.1.1. Technical suitability

- (1) A test body shall verify that the motorcycle is technically suitable for the increase in power in relation to the requirements of the following paragraphs of Annex 1:
 - a) Section 4 on steering.
 - b) Clause 5 on brakes.
 - c) Section 8 on load-bearing elements.
- (2) Engine power shall be measured on the engine or by rolling field and with the best possible correction for air pressure, temperature and rolling resistance in accordance with Regulation 134/2014/EU in order to indicate the correct engine power and associated speed. A test body shall attend or conduct the test itself. In the case of unchanged engines, the manufacturer's information on the initial power of the engine shall be used. The roller field shall be calibrated and maintained according to the requirements of the roller field manufacturer.
- (3) The engine power information provided by the engine bicycle manufacturer shall be used as a starting point for the assessment of the engine power increase. However, if the motorcycle manufacturer provides engine power according to the gross worm according to the US standard SAE J1349, 15 % shall be subtracted.
- (4) Replacing only the charge air cooler is not considered a constructive change.

3.2.1.1.1. Engine power increases up to 20 %

- (1) In the case of engine power increases up to 20 %, technical suitability shall not be checked. However, a test body shall demonstrate that the increase in power is not more than 20 %. This shall be done by measurement or verification of the installation of another unaltered engine.

3.2.1.1.2. Engine power increase 21-40 %

- (1) In the case of an engine power increase of 21-40 %, in addition to control according to paragraph 3.2.1., a test apparatus shall verify that the motorcycle meets one of the following requirements:
 - a) The motorcycle corresponds, if necessary after a modification, to an original other variant of the motorcycle model with regard to brake discs, drums, calipers, wheel cylinders and master cylinder and section width, and the engine power of the motorcycle does not exceed the engine power of the original other variant by more than 20 %.
 - b) The brakes for each axle originate from a motorcycle with at least the same engine power and maximum axle load, and the motorcycle complies with the braking control requirements of paragraph 3.6.1.
 - c) The brake discs have at least the dimensions specified in paragraph 3.2.1.1.2.1 and the motorcycle complies with the braking control requirements of paragraph 3.6.1.

3.2.1.1.2.1. Control of brake drum using brake disc size check

- (1) Brake discs shall meet the following conditions:
 - a) The front disc diameter (in mm) shall be at least 315 and there shall be two brake discs regardless of the weight and power.

b) The rear disc diameter (in mm) shall be at least $225 + (\text{maximum axle load in kg} - 200) \times 0,5$.

3.2.1.1.3. Engine power increase 41-100 %

- (1) If a power-to-weight ratio of more than 40 kW/100 kg is achieved, point 3.2.1.1.4 applies. The weight is the weight of the motorcycle ready to drive, including the driver.
- (2) For an engine power increase of 41-100 %, a test station shall verify that the motorcycle complies with the following:
 - a) The requirements of paragraph 3.2.1.1.2. for motorcycles with an engine power increase of 21-40 %.
 - b) The requirements of paragraph 3.2.1.1.3.1. for equivalent motorcycle or paragraph 3.2.1.1.3.2. for the verification and testing of driving behaviour.

3.2.1.1.3.1. Corresponding motorcycle

- (1) If the motorcycle corresponds, if necessary after modification, to an original other variant of the motorcycle model in terms of brake discs, drums, calipre, wheel cylinders and master cylinder, as well as tyre width and suspension, and the power of the current motorcycle does not exceed the engine power of the original other variant by more than 20 %, the test specified in paragraph 3.2.1.1. may be replaced by the test body's verification that the motorcycle corresponds to the other variant at those points.

3.2.1.1.3.2. Verification and testing of driving characteristics

- (1) The testing body shall verify that the motorcycle has sufficient safe running characteristics compared to other powerful original motorcycles.

The technical service shall test the driving characteristics of the motorcycle when running on dry or wet asphalt, as specified below.
- (2) The minimum load on the motorcycle during the test shall be 75 kg.
- (3) The test shall include the following tests:
 - a) Driving on uneven, asphalted roads, including those with significant lateral slopes.
 - b) Driving on the road with heavy track running.
 - c) Maximum acceleration in each gear.
 - d) Gasification in turn.
 - e) Severe lane change.
 - f) Directional stability up to 90 % of the peak.
 - g) Weaving and wobbling checks up to 130 km/h
 - h) Gasslip in turn running at a high angle of laying.
 - i) The static measured possible inclination angle without driver is at least 35 degrees to both sides.
- (4) To determine 90 % of the peak speed referred to in point (3) (e), a mathematical proxy shall be used in relation to the increased power to determine a theoretical peak speed if the motorcycle is not fully tested to the peak.

3.2.1.1.4. Engine power increase above 100 %

- (1) The weight is the weight of the motorcycle ready to drive, including the driver.
- (2) In the case of an engine power increase greater than 100 %, or to achieve a power to weight ratio greater than 40 kW/100 kg, a test body shall verify, in addition to the checks referred to in paragraphs 3.2.1.2. and 3.2.1.3., that the motorcycle, if necessary after a modification, corresponds to an original other variant of the motorcycle model in terms of brake discs, drums, calipre, wheel cylinders and master cylinder, and section width and suspension, and that the engine power of the current motorcycle does not exceed the engine power of the original other variant by more than 20 %.

3.2.1.2. Air pollution

- (1) The technical service shall verify that one of the following points is met:
- a) The limit values for air pollution set out in section 1 of Annex 7.06 are not exceeded by more than 20 %.
 - b) An engine of a different model or mark is used, provided that the engine in question meets the same or more recent air pollution standard than that applicable to the motorcycle. It is a prerequisite that the engine intake manifold, exhaust manifold and engine control including sensors and nozzles are transferred unchanged, that there is no change in engine control and that any catalyst or particulate filter is located no more than 20 cm further away from the engine measured along the pipe length.
 - c) The modification of the engine concerns only replacement to another charge air cooler or installation of a charge air cooler.

3.2.1.3. Noise

- (1) The technical service shall verify the following:
- a) The motorcycle complies with the noise limit values set out in Annex 1, section 7.05.
 - b) The exhaust system or intake system is not fitted with non-original flaps or similar devices which can be adjusted automatically or manually and whose purpose is to increase noise outside the measuring area. A silencer shall not be fitted with noise reduction measures which can be removed without destroying the silencer, unless the silencer corresponds to the original silencer of the motorcycle or is E-approved.
- (2) If the engine power increase is not more than 20 % and reference measurement has been carried out according to noise measurement method IV, the car may be approved without a new noise measurement according to Noise Measurement Method I if the reference figure from noise measurement method IV is still met with the permitted tolerance of 3 dB (A).

3.2.1.4. Conditions under which modification of intake or exhaust shall not be considered as a constructive modification of the engine;

3.2.1.4.1. Motorcycle intake first registered before 1 October 1982

- (1) Where the change in intake consists only in the modification of one or more of the following components, the change shall not be considered a constructive change and shall not be considered to provide any power increase:
- a) Replacement to other air filter.
 - b) Replacement of original air filter box to other closed air filter box with air filter.
 - c) Replacement to a second intake manifold on a motorcycle with carburettor.
 - d) Replacement to another carburettor with flow capacity corresponding to the original components.
 - e) Replacement to other injection systems/nozzles.

3.2.1.4.2. Motorcycle exhaust first registered before 1 October 1982

- (1) If, after exhaust modification, the motorcycle meets the noise limits given in Annex 1, paragraph 7.05, the change shall not be considered as a constructive change and shall not be considered to give an increase in power.
- (2) In addition, the attenuation of the exhaust system shall be effective at all loads and rotational speeds.
- (3) No flaps or similar devices shall be fitted in the exhaust system which can be adjusted automatically or manually. However, e-approved systems are allowed.

3.2.1.4.3. Intake on a motorcycle first registered on or after 1 October 1982

- (1) Where the change of intake consists only of a change of air filter or a change of the original air filter box to another closed air filter box and sensors are not moved, the change shall not be considered a constructive change and shall not be considered to provide any power increase.

3.2.1.4.4. Emissions on motorcycles first registered on or after 1 October 1982

- (1) If, after exhaust modification, the motorcycle continues to meet the recorded stationary value, the change shall not be considered as a constructive change and shall not be considered to give any power increase.

On motorcycles equipped with a catalytic converter, the catalytic converter shall not be changed but only on the subsequent part of the exhaust.

- (2) In addition, the attenuation of the exhaust system shall be effective at all loads and rotational speeds.
(3) No flaps or similar devices shall be fitted in the exhaust system which can be adjusted automatically or manually. However, e-approved systems are allowed.

3.3. Increase in speed

- (1) Modification of the top speed limiter shall be considered as a constructive modification of the engine to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary technical modifications to the motorcycle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body which has carried out the test/check in accordance with paragraph 3.3.1.

3.3.1. Testing

- (1) In the case of an increase in peak speed associated with a change to a peak limit resulting in an increase in peak traffic of more than 10 %, a test station shall test directional stability at at least 90 % of the new peak speed. The test shall demonstrate that the motorcycle has sufficiently safe driving behaviour.
- (2) In order to determine 90 % of the peak speed, a mathematical proxy shall be used in relation to current power in order to determine a theoretical peak speed if the motorcycle is not fully tested.
- (3) For peak increases of up to 10 %, no tests shall be carried out, but evidence of the increase shall be carried out for inspection by approval of the structural change.

3.4. Changes to wheels

3.4.1. Changes that are not considered to be constructive changes

- (1) Modification of wheels shall not be considered as a constructive modification of the structural elements entailing inspection, approval and registration obligations if the following conditions are met:
- a) The wheels comply with the load and speed code provisions of Annex 1, paragraph 8.02.
 - b) The tyre circumference deviates by a maximum of ± 5 % in nominal value.
Any difference in the circumference between front and rear decks does not exceed 5 %.
 - c) The tyre fits the rim.
 - d) The width of the cover is not more than 20 mm larger than the broadest original size or more than 10 mm narrower than the smallest original size.
 - e) The width of the rear deck is not more than 30 mm larger than the widest original size or more than 10 mm narrower than the narrowest original size.
 - f) The front tyre is not wider than the rear cover.

3.4.2. Changes considered as constructive changes

- (1) If one or more of the conditions of paragraph 3.4.1. are not met, the modification shall be considered as a constructive modification of the structural elements. In this case, the change shall be subject to inspection on the basis of one of the following types of documentation:
- a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary technical modifications to the motorcycle.
 - b) Documentation consisting of an approval and giving specific information on any necessary technical changes to the motorcycle.
 - c) Documentation referred to in point 3.4.2.1.

3.4.2.1. Testing

- (1) In the case of modification of wheels, a test body shall check whether the motorcycle is technically suitable for the appropriate modification of the wheels.
- (2) The Examination Body shall carry out the following:
- a) Verification of compliance with the requirements on wheels and guards as set out in Annex 1, clauses 8.02 and 9.01.
 - b) Verification and testing of driving characteristics, see paragraph 3.2.1.1.3.2.
 - c) Verification of deceleration requirements for service and secondary braking according to Annex 1, paragraph 5.03, if the tyre circuit is increased by more than 5 %.

3.5. Modifications to springs and shock absorbers

3.5.1. Changes to springs that are not considered as constructive changes

- (1) The modification of springs shall not be considered as a constructive modification of the structural elements entailing inspection, approval and registration obligations if the following conditions are met:
- a) The springs behind and behind are, according to the motorcycle or spring manufacturer, intended for the current motorcycle model and variant.
 - b) The springs shall allow, when unladen, a lowering or raising of not more than 40 mm in relation to the original motorcycle, and there is no unoriginal adjuster greater than 40 mm.
 - c) There is no reservation on the original guaranteed total weight and axle weight of the motorcycle.
 - d) The springs are fitted in accordance with the instructions of the spring manufacturer.
 - e) The springs shall be tampered with in the spring dishes, even by full springing of the wheels, or so narrowly as to maintain the position safely.
 - f) The technical provisions set out in Annex 1 continue to be met.

3.5.2. Modifications to shock absorbers which are not considered to be structural changes;

- (1) Modification of shock absorbers shall not be considered as a constructive modification of the supporting elements entailing inspection, approval and registration obligations if, according to the manufacturer of the shock absorber, the shock absorbers are intended for the current motorcycle model and variant.

3.5.3. Changes considered as constructive changes

- (1) If one or more of the items in paragraphs 3.5.1. and 3.5.2. are not met, the change shall be considered as a constructive modification of the structural elements to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary changes to the motorcycle.
 - b) Documentation consisting of an approval and giving specific information on any necessary technical changes to the motorcycle.
 - c) Documentation referred to in point 3.5.3.1.

3.5.3.1. Modification of springs or shock absorbers

- (1) In the event of modification of springs or shock absorbers, a test body shall verify whether the motorcycle is technically suitable for the corresponding modification of springs or shock absorbers.
- (2) The Examination Body shall carry out the following:
 - a) Verification and testing of driving characteristics, see paragraph 3.2.1.1.3.2.
 - b) Verification of the height of lamps in accordance with Annex 1, paragraph 6.
 - c) Verification of compliance with the requirements of paragraph 3.5.3.1.1.

3.5.3.1.1. Basic requirements for springs or shock absorbers

- (1) Springs and shock absorbers shall be fitted in accordance with the instructions of the component manufacturer.
- (2) Springs shall be tampered with in the spring dishes, even by full springing of the wheels, or so narrowly that the position is maintained safely.
- (3) The replacement of springs or shock absorbers shall not entail the need to reduce the maximum authorised axle weight or mass of the motorcycle.
- (4) Any air springs shall have automatic height adjustment that becomes operational when the ignition is connected. If the system allows for different heights, the motorcycle shall be tested at the lowest and highest setting.

3.6. Modification of braking system

- (1) Modification of the braking system shall be considered as a constructive modification of the brakes to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary technical modifications to the motorcycle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 3.6.1.

3.6.1. Modification of braking system considered as structural changes

- (1) In the event of modification of the braking system, a test body shall check and test, in accordance with paragraph 3.6.1.1, whether the requirements of Annex 1, clause 5, on brakes are met.
In addition, a test body shall carry out checks in accordance with paragraphs 3.6.2. or 3.6.3. where applicable.

3.6.1.1. Checking and testing

- (1) The technical service shall verify the following:
 - a) The braking system is installed without modification of the braking components or suspension.
 - b) The braking system as a whole derives from a variant of motorcycle having at least the same power and at least the same permissible front and rear axle loads.

3.6.1.1.1. Alternative control and testing

- (1) If one or more of the points of paragraph 3.6.1.1. are not met, the technical service shall carry out the following:
 - a) Verify that the mounted discs or drums meet the requirements for fade stability. This shall be verified by finding one of the following:

- i) The mounted discs or drums originate from a motorcycle with at least the same power and at least the same permissible front and rear axle load.
 - ii) The size and thickness of the mounted discs are at least equal to those of the original discs or the same diameter and width of the mounted drums as the original drums.
 - iii) The size of the mounted discs is not less than that specified in paragraph 3.2.1.1.2.1.
- b) Check that the motorcycle on dry road is able to decelerate at least 5 m/s² with the premixture and 3 m/s² with the rear brake, but 4 m/s² respectively 2.5 m/s² for motorcycles prior to 1980, or better than the original brakes.
- The minimum load on the motorcycle during the brake test shall be 75 kg.
Pedal pressure shall not exceed 50 kg and handgrip pressure shall not exceed 20 kg.
- c) Make a technical assessment of the adequacy of grip and pedal travel when the brakes become very hot.
 - d) Carry out checks if attachments follow in order to fit the calipers or brake discs. The checks shall consist of the following: If the parts come from a brake manufacturer that also produces original car brake parts or a brake manufacturer that has sold at least 200 calipersets, no further action is required. Otherwise (e) and (f) below.
 - e) Carry out checks if special brackets are designed to fit calipers or brake discs. The testing body shall perform a calculation or technical assessment that the strength of the brackets is sufficient.
 - f) Perform a calculation or technical assessment that the strength of special brackets, including suspension close to the new attachments, is sufficient if non-original brackets are used for caliper mounting.
 - g) Check that the brakes are intended by the brake manufacturer for all-year use and not only for running or rail if the brakes do not come from another approved motorcycle model.

3.6.2. Modification of elements of the brake transmission

- (1) If pedal alarms or similar are replaced, the testing body shall carry out a calculation or technical assessment showing that the strength is sufficient, check safety, including securing joints, etc., and, where appropriate, check necessary travel.

3.6.3. Installation of ABS

- (1) When installing ABS, the technical service shall verify the use of a complete system, including wheel brakes, ABS block, wheel sensors, warning lamps, etc., from a motorcycle where the braking system has been approved in accordance with UN Regulation 78.
The technical service shall check the correct installation of the system and assess the correct operation on dry and smooth roads.
- (2) When installing an ABS system not originating from a motorcycle where the braking system has been approved in accordance with UN Regulation 78, the testing body shall test compliance with the requirements of UN Regulation No 78 on ABS brakes.
- (3) When removing ABS, the technical service shall carry out checks and tests in accordance with paragraph; 3.6.1.1. and, where appropriate, point 3.6.1.1.1.

3.7. Change of front or bag clevis

- (1) Modification of front or bag clevis shall be considered as a constructive modification of the supporting elements to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary changes to the motorcycle.

- b) Documentation consisting of an approval and giving concrete details of any necessary technical changes. The approval shall include both testing/checking of driving characteristics and strength of components.
- c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 3.7.1.

3.7.1. Checking and testing

- (1) In the event of a change in front or bag clevis, the technical service shall carry out checks and tests of the following:
 - a) Running characteristics as specified in paragraph 3.2.1.1.3.2., if the geometry of the components has changed to exceed one or more of the following values:
 - i) The aftermath has been modified by more than $\pm 20\%$.
 - ii) The wheelbase is shortened by more than 2 cm.
 - iii) The wheelbase is extended by more than 5 cm.
 - b) Strength of the parts of the suspension.
One of the following options shall be used:
 - i) If the parts come from a motorcycle manufacturer or are manufactured by a component manufacturer who also manufactures original suspension parts for motorcycles, the strength shall be deemed sufficient if the component manufacturer declares that the component is suitable for that motorcycle model.
 - ii) If the parts are manufactured by a component manufacturer who does not manufacture original motorcycle parts but has sold at least 200 front or rear forks, the strength shall be deemed sufficient if the component manufacturer declares that the component is suitable for the motorcycle model in question.
 - iii) If the motorcycle from which the front or rear clevis originates has at least the same permissible axle load, the strength shall be considered sufficient.
 - iv) The test body shall perform a calculation or technical assessment of the strength of the attachments showing that the parts are of sufficient strength. If the attachment or area of attachment to the bodywork or chassis frame changes, the testing body shall carry out a calculation or technical assessment demonstrating that the parts have sufficient strength.
 - c) Whether the requirements of Annex 1, section 8, for load-bearing are met.
 - d) In the case of a tricycle, the check shall be carried out in accordance with paragraph 2.7.1.

3.8. Change of framework

- (1) Modification of the framework shall be considered as a constructive modification of the supporting elements to be approved by inspection on the basis of one of the following types of documentation:
 - a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary changes to the motorcycle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes. The approval shall include both testing/checking of driving characteristics and strength of components.
 - c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 3.8.1.
 - d) Evidence that the replacement has been made to a replacement frame manufactured by a component manufacturer who has manufactured at least 200 frames. In doing so, the component manufacturer shall confirm that the frame is suitable for the motorcycle model in question and that the load thickness is not less than the original frame.

3.8.1. Checking and testing

- (1) When changing the frame, a testing body shall verify and test compliance with the requirements of Annex 1, paragraph 8, concerning load-bearing elements.
- (2) The checks and tests shall be carried out in accordance with paragraph (3).
However, tests shall not be carried out if the testing body can instead conclude by verification that, following the change, the motorcycle will be equivalent to an existing original motorcycle of the same model.
- (3) The technical service shall verify that the following are met:
 - a) By cutting and replacing or adding another transverse connection to a frame located behind the attachment points for double rear springs and shock absorbers or for mono jacks; and
— damper the frame part behind the driver's seat, where the frame part has been a transverse connection, the test body shall carry out a calculation or technical assessment showing that the strength and stiffness are sufficient.
 - b) In the case of a change to a frame to enable new or modified front or rear fastening points, the testing body shall carry out a calculation or technical assessment demonstrating that the strength of the brackets and attachments and the area surrounding the attachment to the frame are sufficient.
 - c) When changing the frame to enable new or modified attachment points for the engine, gear, transmissions or auxiliary frames, the testing body shall carry out a calculation or technical assessment demonstrating that the strength of the brackets and attachments and the area of attachment to the frame are sufficient.
 - d) In the event of modification or replacement of a screw auxiliary frame carrying a seat, the testing body shall carry out a driving test with the motorcycle or make a calculation or technical assessment showing that the auxiliary temperature is sufficiently rigid to prevent adverse effects on the ability to control the motorcycle.

3.9. Mounting of sidecar on motorcycle

- (1) The installation of a sidecar shall be considered as a constructive modification of the supporting elements to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary technical modifications to the motorcycle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes. The approval shall include both testing/checking of driving characteristics and strength of components.
 - c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 3.9.1.

3.9.1. Checking and testing

- (1) When mounting a side-car, a test body shall verify that the motorcycle with side-car complies with the provisions of Annex 1, clause 4 on steering, clause 5 on brakes and clause 8 on load-bearing elements.
- (2) Clauses 4 and 8 shall be deemed to be fulfilled if a test body has made a calculation or technical assessment, as well as a test of the driving characteristics, including fluctuation conditions when driving with and without passengers up to 90 % of the top speed of the motorcycle, showing that the motorcycle strength is adequate and driving characteristics are satisfactory. Compliance with the requirements of Annex 1, paragraph 5 on brakes shall also be verified by the technical service.

3.10. Combined two-wheel motorcycle

- (1) A composite motorcycle means a motorcycle assembled by components from different motorcycle models or universal components under the following conditions.

3.10.1. Motorcycle where the frame has not changed

- (1) If the frame has not changed in the case of load-bearing parts, with the exception of any attachments, the motorcycle shall nevertheless be considered to be a complex motorcycle if at least one of the following modifications has been made:
- a) The engine has been replaced by another engine with more than 20 % power compared to the original engine.
 - b) The engine has been replaced by another engine with not more than 20 % more power than the original, and the front, rear or brakes are replaced by parts other than those corresponding to the original ones.

3.10.2. Motorcycle with modified frame

- (1) If the frame has changed, the motorcycle is considered to be a complex motorcycle.
- (2) A test body shall verify the compliance of the complex motorcycle with the technical requirements of Annex 1 depending on the year of the motorcycle.
- (3) However, with regard to the driving behaviour, brakes, engine power, noise, air pollution, strength of frame, including front and rear clevis, of the motorcycle, the technical service shall verify that the motorcycle complies with the relevant requirements of paragraphs 3.10.3. to 3.10.8.

3.10.3. Running characteristics

- (1) The technical service shall perform a driving characteristic test of the complex motorcycle as specified in paragraph 3.2.1.1.3.2.

3.10.4. Brakes

- (1) The technical service shall verify the compliance of the motorcycle with the requirements of paragraph 3.2.1.1.2.

3.10.5. Air pollution and noise

- (1) The technical service shall check whether the motorcycle complies with the requirements on air pollution as specified in paragraph 3.2.1.2 and noise as specified in paragraph 3.2.1.3.

3.10.6. Weight/power ratio

- (1) The technical service shall verify that the combined motorcycle does not have a power/weight ratio greater than 40 kW/100 kg. The weight is the weight in running order including 75 kg driver.

3.10.7. Frame

- (1) The testing body shall perform a calculation or technical assessment of the strength of the frame. For the calculations:
- a) For each of the following loads, any position in the supporting structure shall be at least as follows:
 - i) $\rightarrow 2$ for two static loads.
 - ii) $\rightarrow 2,5$ for braking with deceleration 7.5 m/s^2 achieved with braking forces equivalent to 6 m/s^2 from the front wheel and 1.5 m/s^2 from the rear wheel.
 - b) Material stresses shall be determined by measurements made on the most heavily loaded parts. The most heavily loaded parts shall be obtained by means of calculations or a technical assessment of the design. For simple designs, calculations may be used only to verify compliance with the requirements.

- c) For the loads referred to in point (a), the fatigue security shall be calculated. For 2×10^6 influences, the probability of rupture shall be less than the 5 % fractile.
- (2) The testing body shall assess the rigidity of the structure during on-road testing. Self-resonance shall not occur during the test up to 90 % of the peak speed.
To determine 90 % of the peak speed, a mathematical proxy is used in relation to the increased power to determine a theoretical peak speed if the car is not fully tested.
- (3) The technical service shall declare that the frame is capable of withstanding the stresses arising during normal use and loading of the vehicle.

3.10.8. Components, including front clevis, bag clevis, spindles and other suspension components;

- (1) The technical service shall carry out checks on components, including front clevis, rear clevis, spindles and other suspension components according to paragraphs 3.4. and 3.7.

3.10.9. Determination of the vintage year

- (1) The new vintage of the motorcycle shall be determined by the testing body.

The vintage year shall be determined on the basis of the weighted average of the year of production and shall be calculated on the basis of the following elements, the figure in brackets showing the weighting:

- a) Framework (4).
- b) Fork (1).
- c) Baggage (1).
- d) Premixtures (1).
- e) Brake brakes (1).
- f) Engine (3).
- g) Transmission (2).

The year of the framework shall be set at the initial year of the framework if only brackets or equivalent have been added.

If other conversions of the frame have been made, the year shall be set at the average of the original year and the year in which the motorcycle was first submitted for inspection for approval of the change.

Within each element of points (d) to (g), the annual figure shall be the average of the main components. For components, the year of construction may be used regardless of later production dates.

For the engine, the average of the year of the block or cylinder and peak shall be calculated according to the type designations.

For brakes, the year of caliper for disc brakes or anchor plates for drum brakes shall be averaged.

For a foreign and previously approved composite motorcycle, the year is set at the year in which the motorcycle was approved in the country of origin.

3.11. Modification of the Electronic Stability System (ESC)

- (1) Modification of the ESC shall be considered as a constructive modification of the motorcycle steering equipment to be approved by inspection on the basis of one of the following types of documentation:
 - a) Documentation from the manufacturer of the motorcycle giving specific information on any necessary technical modifications to the motorcycle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body that has verified that the same motorcycle model is present in a variant without ESC.

- (2) On motorcycles originally fitted with the ESC, the system shall not be removed or disabled, either permanently or temporarily. However, if the motorcycle manufacturer has fitted a function where the ESC can be temporarily disabled, this is permitted.

3.12. Conversion of motorcycle to electric power or power system modification

- (1) The conversion of a motor cycle with an internal combustion engine to electric power or the modification of the electric system of an electric motor motorcycle shall be regarded as a constructive change of the engine to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation supplied by the manufacturer of the motorcycle with specific information on all the technical modifications.
 - b) Documentation consisting of an approval and giving concrete details of all the technical amendments.
 - c) Documentation from a test body which has carried out tests or checks in accordance with paragraph 3.12.1.
- (2) For example, changing the electricity system can be a change to larger or smaller battery or other electric control, including a change in battery charging control.
- (3) The rules also apply if the internal combustion engine is supplemented with an electric motor with associated batteries and techniques.
- (4) Battery means the electric vehicle battery, that is to say, the battery that provides electricity for the propulsion of the motorcycle.

3.12.1. Checking and testing

- (1) The Examination Body shall carry out the following:
- a) Check that the motorcycle meets the technical requirements of Regulation 3/2014/EU, Annex IV on electrical safety.
 - b) Inspect and control the powertrain components and wiring, with a focus on possible safety risks in the event of collision, and declare that the motorcycle is safe at these points and that persons may not inadvertently come into contact with the live parts of the traction part.
 - c) Check that batteries are placed separately from the passenger compartment on closed motorcycles.
 - d) Verify compliance with UN Regulation 10-05 relating to EMC.
 - e) Verify that the load capacity of the motorcycle is still sufficient in relation to the number of seating positions under load of 75 kg per person.
The initial maximum authorised mass of the motorcycle may be allowed to be increased by up to 3 %, unless the manufacturer of the motorcycle authorises a further increase.
 - f) Verify that the maximum authorised weight of the motorcycle does not exceed by more than 3 % the maximum permissible mass on the motorcycle when all seats are in use and the excess weight up to the maximum authorised weight is placed in the luggage areas of the motorcycle.
 - g) If the motorcycle has regenerated during braking, the motorcycle shall be equipped with anti-lock brakes (ABS) and the test body shall verify that the motorcycle complies with UN Regulation 79 on ABS and regeneration, including that the system sends signals to stop lamps at the decelerations specified in this Regulation.
 - h) Check that the motorcycle meets standard IEC 61851: 2020. Lademode shall be at least mode 1 and shall be fitted with a ground-conductor and a fault current switch.
 - i) Check the battery management system (BMS, Battery Management System), which shall be capable of controlling charge, including from regenerative braking, within the manufacturer's specifications for the battery cells in terms of voltage and maximum temperature.
The system shall provide a protective function to monitor the battery at cell level and to disconnect the charge and load of the battery so that the battery is put in a safe condition if the battery cells are out of specification.

- j) If, at the time of conversion, the power of the motorcycle is greater, the rules on engine modification and power increase in section 3.2 shall apply.
- (2) If a given change does not affect one or more of the areas mentioned in paragraph (1), the testing body shall provide a justification, and inspection and testing may be omitted in those areas.

4. Mopeds

4.1. Modifications to mopeds

- (1) No structural changes shall be made to the steering, brakes, engine, transmission or supporting elements of a moped.
- (2) However, changes listed in paragraphs 3.4.1. and 3.5.1., which are not considered to be structural changes on a motorcycle, may also be carried out on a two-wheel moped. However, in the case of tyres, it is a condition that the tyre diameter is not increased.

5. Tractors

5.1. Modifications to tractors

- (1) Structural changes to the steering, brakes, engine or load-bearing elements shall be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation supplied by the tractor manufacturer giving specific details of any necessary technical modifications to the tractor.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body which has carried out tests or checks showing that all points applicable to tractors of Annex 1 continue to be met. In the case of a tractor equipped with a diesel engine, the point shall be:
 - 5.1.1.** be checked if the engine changes.
- (2) Modifications to the wheels of a tractor authorised by the tractor manufacturer shall not be considered as a structural change.
- (3) In the case of tractors not subject to registration, in the case of structural changes as referred to in point (1), the corresponding documentation for the tractor and the documentation of the check referred to in point 5.1.1 shall be provided.

5.1.1. Additional checks on diesel tractors

- (1) For a diesel tractor, the technical service shall verify flue-gas values measured under full load at six constant speeds in accordance with Regulation (EU) 2016/1628 and its implementing measures. For the flue gas values, the following shall apply:
 - a) The flue gas values shall not exceed the limit values by more than 20 %.
 - b) If the tractor is EU type-approved, the flue-gas values shall not exceed by more than 20 % the values measured at the initial type-approval of the tractor.

5.2. Tractor with a maximum speed exceeding 40 km/h

- (1) A tractor with a maximum design speed exceeding 40 km/h is considered to be a car.
- (2) A tractor which is EU type-approved with a maximum design speed exceeding 40 km/h may be considered to be a tractor if the following conditions are met:
 - a) The tractor is EU type-approved in accordance with EU Regulation 167/2013.
 - b) The maximum design speed of the tractor shall be reduced to a maximum of 40 km/h by the manufacturer or his authorised representative.

- c) The tractor must be inspected and approved by a testing centre with the modified maximum speed.

6. Engine tools

6.1. Modifications to engine gear

- (1) Structural changes to the steering, brakes, engine or load-bearing elements may be carried out provided that all the provisions of Annex 1 continue to be met.

7. Trailers

7.1. Modifications to trailers

- (1) Structural modifications to the steering, brakes or load-bearing elements shall be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the vehicle manufacturer giving specific information on any necessary technical modifications to the vehicle.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Documentation from a test body which has carried out tests or checks showing compliance with paragraphs 7.3 to 7.7.
- (2) In the case of trailers subject to type-approval, prior to approval during inspection of a constructive change to the steering, brakes or load-bearing elements, a certificate of approval for the reconstructed trailer shall be issued by the Danish Road Safety and Transport Agency.

7.2. Changes to wheels

7.2.1. Changes that are not considered to be constructive changes

- (1) Modification of wheels shall not be considered as a constructive modification of the structural elements entailing inspection, approval and registration obligations if the following conditions are met:
- a) The wheels comply with the load, speed code and wheel protection provisions of Annex 1, clause 8.02 and clause 9.01.
 - b) The tyre circumference deviates by a maximum of $\pm 5\%$ in nominal value.
If the declaration of approval of a trailer contains other conditions, these shall be respected.
 - c) The tyre fits the rim.
 - d) All tyres are of the same size.
 - e) The section width is not less than the smallest with which the appropriate weight variant of the trailer is originally supplied.
 - f) The track gauge is not increased by more than 20 mm or reduced compared to those permitted by the manufacturer of the trailer.
 - g) If track gauge enhancers are fitted, it is of the type that centres on the hub and in the rim centre hole and which, together with the current rim, results in a total change of the track gauge not exceeding that referred to in point (f).
 - h) Tyres on the same axle are of the same size and type (structure and category of use).

7.3. Electronic Stability System (ESC) installation

- (1) The installation of the ESC shall be considered as a constructive modification of the trailer steering equipment to be approved for inspection on the basis of one of the following types of documentation:
- a) Documentation from the vehicle manufacturer giving specific information on any necessary technical modifications to the trailer.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.

- c) Documentation from the manufacturer of the ESC system showing that the system is intended to be mounted on a trailer with axles, brakes, weights and dimensions as the current one.

7.4. Removal of brakes on trailer O1

- (1) The removal of brakes on a trailer O1 is a constructive change to be approved for inspection. As a minimum, brake trays and cables shall be removed and the ball coupling with built-in control arrangement shall be replaced by a fixed ball coupling.

7.5. Reinforcement of self-supporting or co-supporting body or chassis frame

- (1) The reinforcement of bodywork or chassis frames shall not lead to a risk of cracking in other parts of the structure.
- (2) The testing body shall carry out a calculation or technical assessment showing that the reinforcements do not result in an increased risk of cracking in other parts of the structure.

7.6. Change of chassis framework

- (1) Modification of drawbar, wheelbase and overhang is a constructive change of the load-bearing elements to be approved for inspection on the basis of one of the following types of documentation:
 - a) Documentation from the vehicle manufacturer giving specific information on any necessary technical modifications to the trailer.
 - b) Documentation consisting of an approval and giving concrete details of any necessary technical changes.
 - c) Evidence from a test body that the voltages of an actual steel chassis frame on a trailer with a maximum technically permissible mass exceeding 3.500 kg when the trailer is fully loaded do not exceed 100 N/mm² (1.000 kp/cm²).

7.7. Installation of loading ladders, ladders, tippings and the like

- (1) The ladder, ladder, tipper or similar shall be fitted in accordance with the vehicle manufacturer's instructions.
- (2) Alternatively, if the trailer has a steel chassis frame, a test body may prove that the installation is such that the stresses in the chassis frame using these devices do not exceed 150 N/mm² (1.500 kp/cm²).

7.8. Reinforcement of profile flanges on chassis frame

- (1) Reinforcements of profile flanges on chassis frames shall be carried out in accordance with the vehicle manufacturer's instructions or in accordance with the following guidelines:
 - a) The reinforcement shall consist of flat steel placed on top and lower flange and welded with a coupled weld on the side edges.
 - b) The flat steel must be so narrower than the flange that the weld is free from the edge and round of the flange.
 - c) The flat steel shall not end up in the same vertical cross-section unless it is at the end of the profile.
 - d) The ends of the flash stand shall be suitably positioned in relation to spring consoles and similar, and shall be tapered unless they are brought to the end of the profile.

8. Replica cars

8.1. Definition of replica-car

- (1) In this context, a replica-car is a car manufactured by a manufacturer (typically a manufacturer other than the original car manufacturer) as a confusingly similar copy of the original car, judged by a notary.
- (2) The original car which is imitated must be at least 30 years old.
- (3) This may be a car where the replica manufacturer only manufactures chassis/platform frames or self-supporting bodywork, provided that there is also a precise manufacturer's specification of the parts to be used in order to assemble the car.
- (4) In order to be approved as a replica car, the vehicle must meet the following conditions:
 - a) The concept must be the original car. Concept includes wheel drive, i.e. front wheel drive, rear-wheel drive or four-wheel drive, and position of the motor, i.e. front, central or rear, and whether the engine is on a side or transverse position.
 - b) The bodywork must be similar to the original car (but may be of other material).
 - c) The brakes shall be of the same type (discs or drums) as on the original car and at least the same size (diameter, disc ambiguity/drum width). However, it may be switched from drums to discs if, with the modified brakes, the car can perform 8 m/s^2 without wheel lock on dry road. Alternatively, the brakes may be approved in accordance with the rules set out in paragraph 2.2.1.1.2.
 - d) The engine shall be of the same type (for example R6 or V8) as the original, shall use the same propellant and the power shall not exceed by more than 20 % the original vehicle.
 - e) The gearbox shall be of the same principle as the original, i.e. manual or automatic transmission.

8.2. Technical requirements for layout and equipment

- (1) Replica cars shall comply with the rules set out in Annex 1 for vehicles of the vintage that the replica car imitates.

9. Motor vehicles designed to run

9.1. Approval of cars intended for engine running

- (1) According to the Danish Automobil Sports Unions (DASU) guidelines for participation in motor races, cars intended for motor runs must comply with certain safety provisions which may result in cars not complying with all the rules set out in Annex 1. In order to be competitive, cars may also be equipped or fitted with components, characteristics or similar features which also do not comply with the rules set out in Annex 1, in order to be competitive, inter alia, with foreign cars in competition.
- (2) Cars approved by the DASU to take part in competitions may be approved for inspection, notwithstanding the fact that they do not comply with the provisions referred to in paragraph 9.1.1.
- (3) The conditions for approval for inspection are that the car has internal pipe reinforcements (flash cages or straps), fire extinguishers and harness belts.
- (4) Cars intended for acceleration tests shall not be approved according to these rules.

9.1.1. Exemptions from technical requirements

- (1) The following items of Annex 1 shall not be met for the approval of vehicles intended for engine running:
 - a) 2.01.001 (6) on the 17 character frame number (VIN marking).
 - b) 4.01.021 (1) on collision proof steering.
 - c) 4.01.021 (2) on ESC.
 - d) 5.01.004 (1) after which the parking brake shall be mechanical.
 - e) 5.03.020 (2) on brake force distribution.
 - f) 6.02.002 (5) and 6.02.020 (2) on luminous intensity and number of main-beam headlamps

- h) 6.02.003 (1) (f) on the height of dipped-beam headlamps above the ground. However, the dipped-beam headlamps shall be at least 0.45 m above the ground.
- i) 6.04.002 (1) (f) concerning the height of direction-indicator lamps above the ground. However, direction indicators shall be at least 0.30 m above the ground.
- j) 7.02.001 (1) fuel tank. The container may be a non-metal container approved and marked in accordance with the FIA (International Motor Sport Federation) standard Appendix J.
- k) 7.05.001 (4) and 7.05.021 (1) on sound level. The sound level used in sound measurement methods IV and 3.500 rpm shall not exceed 103 dB (A).
- l) 7.06.020 (2) on air pollution. The vehicle may only be fitted with an unregulated catalyst. The idle carbon monoxide content may be up to 2.5 % by volume and there is no requirement for the lambda number.
- m) 8.02.002 (1) (d) and (3) on tyre marking and abrasion indicator.
- n) 8.02.021 (3) on tyre pressure monitoring system.
- o) 9.01.021 (2), (3) and (4) on lateral, frontal and pedestrian impact.
- p) 10.01.003 (1) and 10.01.021 (2) relating to head restraints, seats and their attachments. Instead, these may be approved and marked according to the International Motor Sport Association (FIA) standard 8862-2009.
- q) 10.02.001 (1) and (2) and 10.02.021 (1) on safety-belts.
- r) 10.02.021 (2) on belt anchorages.
- s) 10.05.021 (1) on the protection of unauthorised use. However, there shall be other anti-theft devices such as detachable buoys or lockable interruption of the petrol supply.

9.1.2. Conditions for driving the car

- (1) The car may only be used for motor runs on closed lanes or for motor races authorised by the police on a closed road, and for use during, and to and from, these events. In addition, driving to and from exhibitions where the car needs to be displayed, as well as driving for inspection, travel to and from a workshop, as well as testing after repair (maximum 20 km from owner or repairer) are allowed. Thus, the car may not be used for 'normal' private passenger transport, even though the registration certificate continues to indicate that the vehicle's use is private passenger transport.

10. Motorcycles intended for motorcycles

10.1. Approval of motorcycles intended for motorcycles

- (1) Motorcycles may, for reasons of usefulness or competitiveness, be equipped with equipment, or lack of equipment to prevent motorcycles from complying with the rules set out in Annex 1.
- (2) Motorcycles approved by the Danish Motor Union (DMU) to participate in motorcycles may be approved for inspection purposes, notwithstanding the fact that they do not comply with the provisions referred to in point 10.1.1.

10.1.1. Exemptions from technical requirements

- (1) The following items of Annex 1 shall not be met for approval for the inspection of Trial and Enuro motorcycles intended to participate in motorcycles:
 - a) 2.01.001 (6) on the 17 character frame number (VIN marking).
 - b) 6.03.031 (1) (a) on front position lamps.
 - c) 6.04.031 (2) on direction-indicator lamps.
 - d) 7.05.001 (4) and 7.05.030 (4) on sound level. The sound level used in sound measurement methods IV and 4.500 rpm shall not exceed 100 dB (A).
 - e) 7.06.031 (2) on air pollution.
 - f) 8.02.002 (1) (d) and (3) on tyre marking and abrasion indicator.
 - g) 10.02.031 (4) on mirrors.

10.1.2. Conditions for driving the motorcycle

(1) The motorcycle may only be used for motor runs on closed lanes or for a motorcycle approved by the police on a closed road, and for transport stages in such races, as well as for driving in connection with the inspection of the motorcycle. Thus, the motorcycle may not be used for 'normal' private passenger transport, even though the registration certificate continues to indicate that the vehicle's use is private passenger transport.

Overview of EU legal acts and UN Regulations to which the Order refers to Regulations

Short title	Full title
Regulation 706/2007/EU	Commission Regulation (EC) No 706/2007 of 21 June 2007 laying down, pursuant to Directive 2006/40/EC of the European Parliament and of the Council, administrative provisions for the EC type-approval of vehicles and a harmonised measurement of leakages from certain air-conditioning systems
Regulation 715/2007/EU	Council Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to repair and maintenance information
Regulation 692/2008/EU	Commission Regulation (EC) No 692/2008 of 18 July 2008 implementing and amending European Parliament and Council Regulation (EC) No 715/2007 on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information
Regulation 78/2009/EU	Council 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 Directive 2003/102/EC and Directive 2005/66/EC
Regulation 79/2009/EC	Council 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
Regulation 595/2009/EU	Council Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information and amending Regulation (EC) No 715/2007 and Directive 2007/46/EC and repealing Directive 80/1269/EEC, 2005/55/EC and 2005/78/EC
Regulation 661/2009/EU	Council 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 vehicles and systems, components and separate technical units for such vehicles
Regulation 19/2011/EU	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 European Parliament and Council Regulation (EC) No 661/2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor
Regulation 347/2012/EU	Commission Regulation (EU) No 347/2012 of 16 April 2012 implementing European Parliament and Council Regulation (EC) No 661/2009 as regards type-approval requirements for certain categories of motor vehicles with regard

	to advanced emergency braking systems
Regulation 351/2012/EU	Commission Regulation (EU) No 351/2012 of 23 April 2012 implementing European Parliament and Council Regulation (EC) No 661/2009 as regards type-approval requirements for the installation of lane departure warning systems in motor vehicles
Regulation 1230/2012/EU	Commission Regulation (EU) No 1230/2012 of 12 December 2012 on the implementation of European Parliament and Council Regulation (EC) No 661/2009 as regards type-approval requirements for masses and dimensions of motor vehicles and their trailers and amending Directive of the European Parliament and of the Council 2007/46/EC
Regulation 167/2013/EU	Council Regulation (EU) No 167/2013 of 5 February 2013, on the approval and market surveillance of agricultural and forestry vehicles
Regulation 168/2013/EU	Council Regulation (EU) No 168/2013 of 15 January 2013, on the approval and market surveillance of two- or three-wheel vehicles and quadricycles
Regulation 3/2014/EU	Commission Delegated Regulation (EU) No 3/2014 of 24 October 2013 supplementing European Parliament and Council Regulation (EU) No 168/2013 concerning vehicle functional safety requirements for the purpose of type-approval of two- or three-wheel vehicles and quadricycles
Regulation 44/2014/EU	Commission Delegated Regulation (EU) No 44/2014 of 21 November 2013 supplementing Council Regulation (EU) No 168/2013 of the European Parliament and of the Council for the with regard to vehicle construction and general requirements for the approval of two or three-wheeled vehicles and quadricycles
Regulation 134/2014/EU	Commission Delegated Regulation (EU) No 134/2014 of 16 December 2013 supplementing European Parliament and Council Regulation (EU) No 168/2013 with regard to environmental and propulsion unit performance requirements and amending Annex V for this purpose
Regulation 540/2014/EU	Council Regulation (EU) No 540/2014 of 16 April 2014, on the sound level of motor vehicles and of replacement silencing systems, and amending Directive 2007/46/EC and repealing Directive 70/157/EEC
Regulation 901/2014/EU	Commission Implementing Regulation (EU) No 901/2014 of 18 July 2014 implementing European Parliament and Council Regulation (EU) No 168/2013 as regards the administrative provisions for authorisation and market wearing of two- or three-wheel vehicles and quadricycles
Regulation 1322/2014/EU	Commission Delegated Regulation (EU) No 1322/2014 of 19 September 2014 supplementing and amending European Parliament and Council Regulation (EU) No 167/2013 with regard to vehicle construction and general requirements for approval of agricultural and forestry vehicles
Regulation (EU) 2015/68	Commission Delegated Regulation (EU) 2015/68 of 15 October 2014 supplementing European Parliament and Council Regulation (EU) No 167/2013 with regard to vehicle braking requirements for the approval of agricultural and forestry vehicles

Regulation (EU) 2015/208	Commission Delegated Regulation (EU) 2015/208 of 8 December 2014 supplementing European Parliament and Council Regulation (EU) No 167/2013 with regard to vehicle functional safety requirements for the purpose of for the approval of agricultural and forestry vehicles
Regulation (EU) 2015/504	Commission Implementing Regulation (EU) 2015/504 of 11 March 2015 implementing Council Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to the administrative requirements for the approval and market surveillance of agricultural and forestry vehicles

Regulation (EU) 2015/562	Commission Regulation (EU) 2015/562 of 8 April 2015 amending scheme (EU) No 347/2012 implementing European Parliament and Council Regulation (EC) No 661/2009 as regards type-approval requirements for certain categories of motor vehicles with regard to advanced emergency braking systems
Regulation (EU) 2016/1628	Council Regulation (EU) 2016/1628 of the European Parliament and of the Council of 14 September 2016 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulation (EU) No 1024/2012 and (EU) No 167/2013, and amending and repeal of Directive 97/68/EC
Regulation (EU) 2017/1151	Commission Regulation (EU) 2017/1151 of 1 June 2017 supplementing European Parliament and Council Regulation (EC) No 715/2007 on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information, amending Directive 2007/46/EC of the European Parliament and of the Council, Commission Regulation (EC) No 692/2008 and Commission Regulation (EU) No 1230/2012 and repealing Commission Regulation (EC) No 692/2008
Regulation (EU) 2018/858	Council 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 Regulation (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC
Regulation (EU) 2019/1242	Council Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO ₂ emission performance standards for new heavy-duty vehicles and amending European Parliament and Council Regulation (EC) No 595/2009 and (EU) 2018/956 and Council Directive 96/53/EC
Regulation (EU) 2019/2144	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 therefor for such vehicles as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending European Parliament and Council Regulation (EU) 2018/858 and repealing European Parliament and Council Regulation (EC) No 78/2009, Regulation (EC) No 79/2009 and Regulation (EC) No 661/2009 and Regulation (EC) No 631/2009 and Commission, (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

Regulation (EU) 2021/535	Commission Implementing Regulation (EU) 2021/535 of 31 March 2021 laying down rules for the application of Council Regulation (EU) 2019/2144 of the European Parliament and of the Council as regards uniform procedures and technical specifications for type-approval of vehicles and systems, components and separate technical units intended for such vehicles with regard to their general specifications and safety
Regulation (EU) 2021/646	Commission Regulation (EU) 2016/646 of 20 April 2016 amending scheme (EC) No 692/2008 as regards emissions from light passenger cars and light commercial vehicles (Euro 6)
Regulation (EU) 2021/1243	Commission Delegated Regulation (EU) 2021/1243 of 19 April 2021 supplementing European Parliament and Council Regulation (EU) 2019/2144 by laying down detailed rules concerning the alcohol interlock installation facilitation in motor vehicles and amending Annex II to that Regulation
Regulation (EU) 2021/1341	Commission Delegated Regulation (EU) 2021/1341 of 23 April 2021 supplementing European Parliament and Council Regulation (EU) 2019/2144 by laying down detailed rules concerning the specific test procedures and technical requirements for the type-approval of motor vehicles with regard to driver drowsiness and attention warning systems and amending Annex II to that Regulation
Regulation (EU) 2022/545	Commission Delegated Regulation (EU) 2022/545 of 26 January 2022 supplementing Council Regulation (EU) 2019/2144 of the European Parliament and of the Council by laying down detailed rules concerning the specific test procedures and technical requirements for the type-approval of motor vehicles with regard to the event data recorder and for the type-approval of such systems as separate technical units and amending Annex II to that Regulation;

Directives

Directive 70/157/EEC	Council Directive 70/157/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the permissible sound level and the exhaust system of motor vehicles
Directive 70/221/EEC	Council Directive 70/221/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to liquid fuel tanks and protection of motor vehicles and their trailers
Directive 70/220/EEC	Council Directive 70/220/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to measures to be taken against air pollution by gases from positive-ignition engines of vehicles
Directive 70/311/EEC	Council Directive 70/311/EEC of 8 June 1970 on the approximation of the laws of the Member States relating to the steering equipment for motor vehicles and their trailers,
Directive 71/320/EEC	Council Directive 71/320/EEC of 26 July 1971 on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and of their trailers,
Directive 72/245/EEC	Council Directive 72/245/EEC of 20 June 1972 on the approximation of the laws of the Member States relating to the suppression of radio interference produced by ignition engines of motor vehicles
Directive 74/60/EEC	Council Directive 74/60/EEC of 17 December 1973 on the approximation of the laws of the Member States relating to the interior fittings of motor vehicles

	(interior parts of the passenger compartment other than the interior rear-view mirrors, layout of controls, the roof or sliding roof, the backrest and rear part of the seats)
Directive 74/61/EEC	Council Directive 74/61/EEC of 17 December 1973 on the approximation of the laws of the Member States relating to devices to prevent the unauthorised use of motor vehicles,
Directive 74/297/EEC	Council Directive 74/297/EEC of 4 June 1974 on the approximation of the laws of the Member States relating to the interior fittings of motor vehicles (the behaviour of the steering mechanism in the event of an impact),
Directive 74/408/EEC	Council Directive 74/408/EEC of 22 July 1974 on the approximation of the laws of the Member States relating to the interior fittings of motor vehicles (Resistance of seats)
Directive 75/322/EEC	Council Directive 75/322/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to wheeled agricultural or forestry tractors
Directive 75/524/EEC	Commission Directive 75/524/EEC of 25 July 1975 adapting to technical progress Council Directive 71/320/EEC of 26 July 1971 on the approximation of the laws of the Member States relating to braking devices for certain categories of engines — powered vehicles and their trailers
Directive 76/114/EEC	Council Directive 76/114/EEC of 18 December 1975 on the approximation of the laws of the Member States relating to statutory plates and inscriptions and their location and method of attachment for motor vehicles and their trailers;
Directive 76/115/EEC	Council Directive 76/115/EEC of 18 December 1975 on the approximation of the laws of the Member States relating to anchorages for motor-vehicle safety belts,
Directive 76/757/EEC	Council Directive 76/757/EEC of 27 July 1976 on the approximation of the laws of the Member States relating to retro-reflectors for motor vehicles and their trailers,
Directive 76/758/EEC	Council Directive 76/758/EEC of 27 July 1976 on the approximation of the laws of the Member States relating to the end-outline marker lamps, front position (side) lamps, rear position (side) lamps, stop lamps, daytime running lamps and side marker lamps for motor vehicles and their trailers,
Directive 76/761/EEC	Council Directive 76/761/EEC of 27 July 1976 on the approximation of the laws of the Member States relating to motor-vehicle headlamps which function as main-beam and/or dipped-beam headlamps and to incandescent electric filament lamps for such headlamps
Directive 77/537/EEC	Council Directive 77/537/EEC of 28 June 1977 on the approximation of the laws of the Member States relating to measures to be taken against the emission of pollutants from diesel engines for propulsion of wheeled agricultural or forestry tractors
Directive 77/541/EEC	Council Directive 77/541/EEC of 28 June 1977 on the approximation of the laws of the Member States relating to safety belts and restraint systems of motor vehicles,
Directive 78/507/EEC	Commission Directive 78/507/EEC of 19 May 1978 adapting technical progress to Council Directive 76/114/EEC on the approximation of the laws of the Member States relating to statutory plates and inscriptions for motor vehicles and their trailers, and their location and method of attachment
Directive 78/932/EEC	Council Directive 78/932/EEC of 16 October 1978 on the approximation of the laws of the Member States relating to head restraints of seats of motor vehicles,

Directive 78/1015/EEC	Council Directive 78/1015/EEC of 23 November 1978 on the approximation of the laws of the Member States relating to the permissible sound level and to exhaust systems of motorcycles
Directive 79/489/EEC	Commission Directive 79/489/EEC of 18 April 1979 adapting to technical progress Council Directive 71/320/EEC on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and their trailers
Directive 79/490/EEC	Commission Directive 79/490/EEC of 18 April 1979 adapting to technical progress Council Directive 70/221/EEC on the approximation of the laws of the Member States relating to liquid fuel tanks and rear underrun protection of motor vehicles and their trailers

Directive 81/577/EEC	Council Directive 81/577/EEC of 20 July 1981 amending Council Directive 74/408/EEC on the approximation of the laws of the Member States relating to motor vehicles interior fittings (strength of seats and anchorages)
Directive 82/318/EEC	Commission Directive 82/318/EEC of 2 April 1982 adapting to technical progress Council Directive 76/115/EEC on the approximation of the laws of the Member States relating to changes in safety belts in motor vehicles
Directive 85/647/EEC	Commission Directive 85/647/EEC of 23 December 1985 adapting to technical progress Council Directive 71/320/EEC on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles, and their trailers;
Directive 88/77/EEC	Council Directive 88/77/EEC of 3 December 1987 on the approximation of legislation of the Member States relating to the measures to be taken against the emission of gaseous pollutants from diesel engines for use in vehicles
Directive 88/194/EEC	Commission Directive 88/194/EEC of 24 March 1988 adapting to technical progress Council Directive 71/320/EEC on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and their trailers
Directive 89/458/EEC	Council Directive of 18 July 1989 amending Directive 70/220/EEC on the approximation of the laws of the Member States relating to measures to be taken against air pollution by gases from motor vehicles as regards European emission standards for cars with an engine capacity of less than 1.4 litres
Directive 90/628/EEC	Commission Directive 90/628/EEC of 30 October 1990 adapting to technical progress Council Directive 77/541/EEC on the approximation of the laws of the Member States relating to safety belts and restraint systems of motor vehicles
Directive 90/629/EEC	Commission Directive 90/629/EEC of 30 October 1990 adapting to technical progress Council Directive 76/115/EEC on the approximation of the laws of the Member States relating to anchorages for motor vehicle safety belts
Directive 91/542/EEC	Council Directive 91/542/EEC of 1 October 1991 amending Directive 88/77/EEC on the approximation of the laws of the Member States relating to measures against the emission of gaseous pollutants from diesel engines for use in vehicles

Directive 91/662/EEC	Commission Directive 91/662/EEC of 6 December 1991 adapting to technical progress Council Directive 74/297/EEC as regards the steering mechanism crash behaviour
Directive 92/22/EEC	Council Directive 92/22/EEC of 31 March 1992 on safety glazing and glazing materials on motor vehicles and their trailers
Directive 92/23/EEC	Council Directive 92/23/EEC of 31 March 1992 relating to tyres for motor vehicles and trailers and to their fitting
Directive 92/24/EEC	Council Directive 92/24/EEC of 31 March 1992 relating to speed limitation devices or similar speed limitation on-board systems of certain categories of motor vehicles,
Directive 92/62/EEC	Commission Directive 92/62/EEC of 2 July 1992 adapting to technical development of Council Directive 70/311/EEC relating to the steering of motor vehicles and their trailers

Directive 93/34/EEC	Council Directive 93/34/EEC of 14 June 1993 on statutory markings for two- or three-wheel motor vehicles
Directive 93/59/EEC	Council Directive 93/59/EEC of 28 June 1993 amending Directive 70/220/EEC on the approximation of the laws of the Member States relating to measures to be taken against air pollution by emissions from motor vehicles
Directive 94/20/EC	Directive 94/20/EC of the European Parliament and of the Council of 30 May 1994 relating to the mechanical coupling devices of motor vehicles and their trailers and their devices attachment to vehicles
Directive 95/28/EC	European Parliament and Council Directive 95/28/EC of 24 October 1995 relating to the burning behaviour of materials used in the interior construction of certain classes of motor vehicles
Directive 95/54/EC	Commission Directive 95/54/EC of 31 October 1995 adapting to technical progress Council Directive 72/245/EEC on the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to motor vehicles and amending Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers
Directive 95/56/EC	Commission Directive 95/56/EC, Euratom of 8 November 1995 adapting to technical progress Council Directive 74/61/EEC as regards devices for protection against unauthorised use of motor vehicles
Directive 96/1/EC	European Parliament and Council Directive 96/1/EC of 22 January 1996 amending Directive 88/77/EEC on the approximation of the laws of the Member States relating to the measures to be taken against the emission of gaseous and particulate pollutants from diesel engines for use in vehicles
Directive 96/27/EC	European Parliament and Council Directive 96/27/EC of 20 May 1996 on the protection of occupants of motor vehicles in the event of a lateral collision and amending Directive 70/156/EEC
Directive 96/36/EEC	Commission Directive 96/36/EC of 17 June 1996 adapting to technical progress Council Directive 77/541/EEC on the approximation of the laws of the Member States relating to safety belts and restraint systems for motor vehicles

Directive 96/37/EC	Commission Directive 96/37/EC of 17 June 1996 adapting to technical progress Council Directive 74/408/EEC relating to the interior of motor vehicles equipment (strength of seats and anchorages)
Directive 96/38/EC	Commission Directive 96/38/EC of 17 June 1996 adapting to technical progress Council Directive 76/115/EEC relating to anchorages for safety belts for motor vehicles
Directive 96/44/EC	Commission Directive 96/44/EC of 1 July 1996 adapting to technical progress Council Directive 70/220/EEC on the approximation of the laws of the Member States relating to measures to be taken against air pollution by exhaust gases from positive-ignition engines
Directive 96/53/EC	Council Directive 96/53/EC of 25 July 1996 laying down the maximum permitted levels dimensions of national and international traffic and maximum authorised weights in international traffic for certain road vehicles circulating within the Community
Directive 96/69/EC	European Parliament and Council Directive 96/69/EC of 8 October 1996 amending of Directive 70/220/EEC on the approximation of the laws of the Member States relating to measures to be taken against air pollution by gases from motor vehicles

Directive 96/79/EC	European Parliament and Council Directive 96/79/EC of 16 December 1996 relating to the protection of occupants of motor vehicles in the event of a frontal collision and amending Directive 70/156/EEC
Directive 96/96/EC	Council Directive 96/96/EC of 20 December 1996 on the approximation of the laws of the Member States relating to roadworthiness tests for motor vehicles and their trailers
Directive 97/24/EC	Directive 97/24/EC of the European Parliament and of the Council of 17 June 1997 on certain components and characteristics of two or three-wheel motor vehicles
Directive 97/68/EC	Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery
Directive 98/12/EC	Commission Directive 98/12/EC of 27 January 1998 adapting to technical progress Council Directive 71/320/EEC on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and their trailers
Directive 1999/7/EC	Commission Directive 1999/7/EC of 26 January 1999 adapting to technical progress Council Directive 70/311/EEC relating to steering equipment for motor vehicles and their trailers
Directive 1999/25/EC	Commission Directive 1999/25/EC of 9 April 1999 adapting to technical progress Council Directive 93/34/EEC relating to statutory markings for two or three-wheel motor vehicles
Directive 1999/96/EC	Directive 1999/96/EC of the European Parliament and of the Council of 13 December 1999 on the approximation of the laws of the Member States relating to measures to be taken against the emission of gaseous and particulate pollutants from compression ignition engines for use in vehicles, and the emission of gaseous pollutants from positive ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles, and amending Council Directive 88/77/EEC

Directive 2000/2/EC	Commission Directive 2000/2/EC of 14 January 2000 adapting to technical progress Council Directive 75/322/EEC relating to devices for the suppression of radio interference produced by wheeled agricultural or forestry tractors and Council Directive 74/150/EEC on the approval of wheeled agricultural or forestry tractors
Directive 2000/8/EC	Directive 2000/8/EC of the European Parliament and of the Council of 20 March 2000 amending Council Directive 70/221/EEC on the approximation of the laws of the Member States relating to liquid fuel tanks and rear protective devices towards underrun of motor vehicles and their trailers
Directive 2000/25/EC	Directive 2000/25/EC of the European Parliament and of the Council of 22 May 2000 on action to be taken against the emission of gaseous and particulate pollutants by engines intended to power agricultural or forestry tractors and amending Council Directive 74/150/EEC
Directive 2000/40/EC	Directive 2000/40/EC of the European Parliament and of the Council of 26 June 2000 on the approximation of the laws of the Member States relating to the front underrun protection of motor vehicles and amending Council Directive 70/156/EEC
Directive 2001/1/EC	The Directive 2001/1/EC of the European Parliament and of the Council of 22 January 2001 amending Council Directive 70/220/EEC relating to measures to be taken against air pollution by emissions from motor vehicles

Directive 2001/27/EC	Commission Directive 2001/27/EC of 10 April 2001 adapting to technical progress Council Directive 88/77/EEC on the approximation of the laws of the Member States relating to measures to be taken against the emission of gaseous and particulate pollutants from compression-ignition engines for use in vehicles, and the emission of gaseous pollutants from positive-ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles
Directive 2001/43/EC	Directive 2001/43/EC of the European Parliament and of the Council of 27 June 2001 amending Council Directive 92/23/EEC relating to tyres for motor vehicles and their trailers and its installation;
Directive 2001/56/EC	Directive 2001/56/EC of the European Parliament and of the Council of 27 September 2001 relating to heating systems for motor vehicles and their trailers, amending Council Directive 70/156/EEC and repealing Council Directive 78/548/EEC
Directive 2001/85/EC	Directive 2001/85/EC of the European Parliament and of the Council of 20 November 2001 relating to special provisions for vehicles used for the carriage of passengers comprising more than eight seats in addition to the driver's seat, and amending Directive 70/156/EEC and 97/27/EC
Directive 2002/24/EC	Directive 2002/24/EC of the European Parliament and of the Council of 18 March 2002 relating to the type approval of two or three-wheel motor vehicles and repealing by Council Directive 92/61/EEC
Directive 2002/51/EC	Directive 2002/51/EC of the European Parliament and of the Council of 19 July 2002 on the reduction of the level of pollutant emissions from two- and three-wheel motor vehicles; and amending Directive 97/24/EC

Directive 2002/80/EC	Commission Directive 2002/80/EC of 3 October 2002 adapting to technical progress Council Directive 70/220/EEC on the approximation of the laws of the Member States relating to measures to be taken against air pollution by emissions from motor vehicles
Directive 2003/27/EC	Commission Directive 2003/27/EC of 3 April 2003 adapting to technical progress Council Directive 96/96/EC as regards the control of emissions from motor vehicle exhaust
Directive 2003/77/EC	Commission Directive 2003/77/EC of 11 August 2003 amending Directives 97/24/EC and 2002/24/EC of the European Parliament and of the Council relating to the type-approval of two- or three-wheel motor vehicles
Directive 2003/97/EC	Directive 2003/97/EC of the European Parliament and of the Council of 10 November 2003 on the approximation of the laws of the Member States relating to the type-approval of devices for indirect vision and of vehicles equipped with these devices, amending Directive 70/156/EEC and repealing Directive 71/127/EEC
Directive 2005/13/EC	Commission Directive 2005/13/EC of 21 February 2005 amending European Parliament and Council Directive 2000/25/EC concerning the emission of gaseous and particulate pollutants by engines intended to power agricultural and forestry tractors, and amending Annex I to Directive of the European Parliament and of the Council 2003/37/EC relating to the type-approval of agricultural or forestry tractors
Directive 2005/55/EC	Directive 2005/55/EC of the European Parliament and of the Council of 28 September 2005 on the approximation of the laws of the Member States relating to the measures to be taken against the emission of gaseous and particulate pollutants from compression-ignition engines for use in vehicles, and the emission of gaseous pollutants from positive-ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles;
Directive 2005/66/EC	Directive 2005/66/EC of the European Parliament and of the Council of 26 October 2005 relating to the use of frontal protection systems on motor vehicles and amending Council Directive 70/156/EEC
Directive 2005/78/EC	Commission Directive 2005/78/EC of 14 November 2005 implementing Directive 2005/55/EC of the European Parliament and of the Council on the approximation of the laws of the Member States relating to the measures to be taken against the emission of gaseous and particulate pollutants from compression-ignition engines for use in vehicles, the emission of gaseous pollutants from positive-ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles and amending Annexes I, II; III, IV and VI thereof
Directive 2006/20/EC	Commission Directive 2006/20/EC of 17 February 2006 amending, for the purposes of its adaptation to technical progress, Council Directive 70/221/EEC relating to fuel tanks and rear underrun protection of motor vehicles and their trailers
Directive 2006/40/EC	Directive 2006/40/EC of the European Parliament and of the Council of 17 May 2006 relating to emissions from air-conditioning systems in motor vehicles and amending Council Directive 70/156/EEC
Directive 2006/51/EC	Commission Directive 2006/51/EC of 6 June 2006 amending, for the purposes of adapting to technical progress, Annex I to Directive 2005/55/EC of the European Parliament and of the Council and Annexes IV and V to Directive 2005/78/EC as regards the requirements for emission control

	systems for use in vehicles, and exemptions for gas engines
Directive 2007/46/EC	Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for them vehicles
Directive 2008/74/EC	Commission Directive 2008/74/EC of 18 July 2008 amending Directive 2005/55/EC of the European Parliament and of the Council and Directive 2005/78/EC as regards type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and access to vehicle repair and maintenance information
Directive 2009/63/EC	Directive 2009/63/EC of the European Parliament and of the Council of 13 July 2009 on certain parts and characteristics of wheeled agricultural or forestry tractors
Directive 2011/72/EU	Directive 2011/72/EU of the European Parliament and of the Council of 14 September 2011 on amending Directive 2000/25/EC as regards the provisions for tractors placed on the market under the flexibility scheme
Directive 2014/45/EU	Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers and repealing of Directive 2009/40/EC
Directive (EU) 2015/719	Directive (EU) 2015/719 of the European Parliament and of the Council of 29 April 2015 amending Council Directive 96/53/EC laying down for certain road vehicles circulating within the Community the maximum authorised dimensions in national and international traffic and the maximum authorised weights in international traffic

Commission decisions

Commission Decision 2004/545/EC	2004/545/EC: Commission Decision of 8 July 2004 on the harmonisation of the 79 GHz range radio spectrum band for use by automotive short-range radar equipment in Community
Commission Decision 2005/50/EC	2005/50/EC: Commission Decision of 17 January 2005 on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community

UN Regulations

UN Regulation 1	Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam and/or a driving beam and equipped with filament lamps of categories r2 and/or HS1
UN Regulation 2	Uniform provisions concerning the approval of incandescent electric lamps for headlamps emitting an asymmetrical passing beam or a driving beam or both
UN Regulation 3	Uniform provisions concerning the approval of retro-reflecting devices for power — driven vehicles and their trailers
UN Regulation 5	Uniform provisions concerning the approval of power-driven vehicle's "sealed beam" headlamps (SB) emitting a European asymmetrical passing beam or a driving beam or both
UN Regulation 7	Uniform provisions concerning the approval of front and rear position lamps, stop-lamps and end-outline marker lamps for motor vehicles (excluding motor cycles) and their trailers
UN Regulation 8	Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (h1, h2, h3, HB3, HB4, h7, h8, h9, HIR1, HIR2 and/or h11)
UN Regulation 10	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility
UN Regulation 12	Uniform provisions concerning the approval of vehicles with regard to the protection of the driver against the steering mechanism in the event of impact
UN Regulation 13	Uniform provisions concerning the approval of vehicles of categories M, N and O with regard to braking
UN Regulation 13-H	Uniform provisions concerning the approval of passenger cars with regard to two braking
UN Regulation 14	Uniform provisions concerning the approval of vehicles with regard to safety belt Anchorages
UN Regulation 16	Uniform provisions concerning the approval of: I. Safety-belts, restraint

	systems, child restraint systems and ISOFIX child restraint systems for Occupants of Power-driven vehicles II. Vehicles equipped with safety-belts, safety-belt reminders, restraint systems, child restraint systems and i-Size Child Restraint Systems
UN Regulation 17	Uniform provisions concerning the approval of vehicles with regard to the seats; their Anchorages and any head restraints
UN Regulation 18	Uniform provisions concerning the approval of motor vehicles with regard to their protection against unauthorised use
UN Regulation 20	Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (h4 lamps)
UN Regulation 21	Uniform provisions concerning the approval of vehicles with regard to their interior fittings
UN Regulation 23	Uniform provisions concerning the approval of Reversing and Manifesting lamps for power-driven vehicles and their trailers
UN Regulation 24	Uniform provisions concerning: I. the approval of Compression ignition (C.I.) engines with regard to the emission of visible pollutants, ii. the approval of motor vehicles with regard to the installation of C.I. iii. engines of an approved type, IV. The approval of motor vehicles equipped with C.I. engines with regard to the emission of visible pollutants by the engine, v. the measurement of power of C.I. engine.
UN Regulation 25	Uniform provisions concerning the approval of head restraints (headrests), whether or not incorporated in vehicle seats
UN Regulation 27	Uniform provisions concerning the approval of advance warning triangles
UN Regulation 28	Uniform provisions concerning the approval of Audible warning devices and of motor vehicles with regard to their Audible signals
UN Regulation 30	Uniform provisions concerning the approval of pneumatic tyres for motor vehicles and their trailers
UN Regulation 31	Uniform provisions concerning the approval of power-driven vehicle -halogen sealed-beam headlamps (HSB) emitting a European asymmetrical passing beam or a driving beam or both
UN Regulation 34	Uniform provisions concerning the approval of vehicles with regard to the prevention of four risks
UN Regulation 37	Uniform provisions concerning the approval of filament lamps for use in approved LAMP units of power-driven vehicles and of their trailers
UN Regulation 39	Uniform provisions concerning the approval of vehicles with regard to the speedometer — meter and odometer equipment including its installation

UN Regulation 43	Uniform provisions concerning the approval of safety glazing materials and their installation on vehicles
UN Regulation 46	Uniform provisions concerning the approval of devices for indirect vision and of motor vehicles with regard to the installation of these devices
UN Regulation 48	Uniform provisions concerning the approval of vehicles with regard to the installation of lighting and Light-Signalling devices
UN Regulation 49	Uniform provisions concerning the measures to be taken against the emission of gaseous and particulate pollutants from compressionignition engines and positive ignition engines for use in vehicles
UN Regulation 51	Uniform provisions concerning the approval of motor vehicles having at least four heels with regard to their sound emissions
UN Regulation 54	Uniform provisions concerning the approval of pneumatic tyres for commercial vehicles and their trailers

UN Regulation 55	Uniform provisions concerning the approval of mechanical coupling components of combinations of vehicles
UN Regulation 58	Uniform provisions concerning the approval of: I. Rear underrun protective de — vices (RUPDs) II. Vehicles with regard to the installation of an RUPD of an approved type III. Vehicles with regard to their rear underrun protection (RUP)
UN Regulation 62	Anti-theft for Mopeds/Motorcycles
UN Regulation 63	Uniform provisions concerning the approval of two-wheeled Mopeds with regard to two noise
UN Regulation 64	Uniform provisions concerning the approval of vehicles with regard to their equipment which may include: a temporary-use saving unit, run-flat tyres and/or a run-flat system, and/or a tyre pressure monitoring system
UN Regulation 65	Uniform provisions concerning the approval of special warning lamps for power — driven vehicles and their trailers
UN Regulation 66	Uniform technical prescriptions concerning the approval of large passenger vehicles with regard to the strength of their superstructure
UN Regulation 67	Uniform provisions concerning the approval of: I. Specific equipment of vehicles of category M and N using liquefied petroleum gases in their propulsion system II. Vehicles of category M and N fitted with specific equipment for the use of liquefied petroleum gases in their propulsion system with regard to the installation of such equipment
UN Regulation 69	Uniform provisions concerning the approval of rear marking plates for slow- moving vehicles (by construction) and their trailers
UN Regulation 70	Uniform provisions concerning the approval of rear marking plates for heavy and Long Vehicles
UN Regulation 78	Uniform provisions concerning the approval of vehicles of categories L1, L2, L3;

	L4 and L5 with regard to braking
UN Regulation 79	Uniform provisions concerning the approval of vehicles with regard to steering equipment
UN Regulation 80	Uniform provisions concerning the approval of seats of large passenger vehicles and of these vehicles with regard to the strength of the seats and their Anchorages
UN Regulation 85	Uniform provisions concerning the approval of internal combustion engines or electric drive trains intended for the propulsion of motor vehicles of categories M and N with regard to the measurement of net power and the maximum of 30 minutes power of electric drive trains
UN Regulation 89	Uniform provisions concerning the approval of: I. Vehicles with regard to limitation of their maximum speed or their adjustable speed limitation function II. Vehicles with regard to the installation of a speed limiting device (SLD) or adjustable speed limitation device (ASLD) of an approved type III. Speed limitation devices (SLD) and adjustable speed limitation device (ASLD)
UN Regulation 93	Uniform provisions concerning the approval of: I. Front underrun protective devices (FUPDs) II. Vehicles with regard to the installation of an FUPD of an approved type III. Vehicles with regard to their front underrun protection (FUP)
UN Regulation 94	Uniform provisions concerning the approval of vehicles with regard to the protection of the Occupants in the event of a frontal collision

UN Regulation 95	Uniform provisions concerning the approval of vehicles with regard to the protection of the Occupants in the event of a lateral collision
UN Regulation 96	Uniform provisions concerning the approval of Compression ignition (C. I.) engines to be installed in agricultural and forestry tractors and in non-road mobile machinery with regard to the emissions of pollutants by the engine
UN Regulation 97	Uniform provisions concerning the approval of vehicle alarm systems (vas) and of motor vehicles with regard to their alarm systems (as)
UN Regulation 98	Uniform provisions concerning the approval of motor vehicle headlamps equipped with gas discharge light sources
UN Regulation 99	Uniform provisions concerning the approval of gas discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles
UN Regulation 100	Uniform provisions concerning the approval of vehicles with regard to specific requirements for the electric power train
UN Regulation 104	Uniform provisions concerning the approval of retro-reflective markings for vehicles of category m, n and o
UN Regulation 107	Uniform provisions concerning the approval of categories M2 and M3 vehicles with regarding their general construction
UN Regulation 108	Uniform provisions concerning the approval for the production of retreaded pneumatic tyres for motor vehicles and their trailers
UN Regulation 109	Uniform provisions concerning the approval for the production of retreaded pneumatic tyres for commercial vehicles and their trailers

UN Regulation 110	Uniform provisions concerning the approval of: I. Specific components of motor vehicles using Compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system II. Vehicles with regard to the installation of specific components of an approved type for the use of Compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system
UN Regulation 112	Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving-beam or both and equipped with filament lamps and/or light-emitting diode (LED) modules
UN Regulation 113	Uniform provisions concerning the approval of motor vehicle headlamps emitting a symmetrical passing beam or a driving beam or both and equipped with filament; gas discharge light sources or LED modules
UN Regulation 115	Uniform provisions concerning the approval of: I. Specific LPG (liquefied petroleum gases) retrofit systems to be installed in motor vehicles for the use of LPG in their propulsion system II. Specific CNG (Compressed natural gas) retrofit systems to be installed in motor vehicles for the use of CNG in their propulsion system
UN Regulation 116	Uniform technical prescriptions concerning the protection of motor vehicles against unauthorised use
UN Regulation 117	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
UN Regulation 118	Uniform technical prescriptions concerning the burning behaviour and/or the capability to repel fuel or lubricant of materials used in the construction of certain categories of motor vehicles
UN Regulation 122	Uniform technical prescriptions concerning the approval of vehicles of categories m, n and o with regard to their heating systems

UN Regulation 123	Uniform provisions concerning the approval of adaptive front-lighting systems (AFS) for motor vehicles;
UN Regulation 127	Uniform provisions concerning the approval of motor vehicles with regard to their pedestrian safety performance
UN Regulation 128	Uniform provisions concerning the approval of light emitting diode (LED) light sources for use in approved lamp units on power-driven vehicles and their trailers
UN Regulation 130	Uniform provisions concerning the approval of motor vehicles with regard to the Lane Departure Warning System (LDWS)
UN Regulation 131	Uniform provisions concerning the approval of motor vehicles with regard to the Advanced Emergency Braking Systems (AEBS)
UN Regulation 134	Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen fuelled vehicles (HFCV)
UN Regulation 135	Uniform provisions concerning the approval of vehicles with regard to their Pole Side Impact performance (PSI)

UN Regulation 137	Uniform provisions concerning the approval of passenger cars in the event of a frontal collision with focus on the restraint system
UN Regulation 139	Uniform provisions concerning the approval of passenger cars with regard to two Brake Assist Systems
UN Regulation 140	Uniform provisions concerning the approval of passenger cars with regard to two Electronic Stability Control (ESC) Systems
UN Regulation 141	Uniform provisions concerning the approval of vehicles with regard to their Tyre Pressure Monitoring Systems (TPMS)
UN Regulation 145	Uniform provisions concerning the approval of vehicles with regard to their Tyre Pressure Monitoring Systems (TPMS)
UN Regulation 147	Uniform provisions concerning the approval of mechanical coupling components of combinations of agricultural vehicles
UN Regulation 148	Uniform provisions concerning the approval of Light-Signalling devices (lamps) for power-driven vehicles and their trailers
UN Regulation 149	Uniform provisions concerning the approval of road illumination devices (lamps) and systems for power-driven vehicles
UN Regulation 151	Uniform provisions concerning the approval of motor vehicles with regard to the Blind Spot Information System for the Detection of Bicycles
UN Regulation 152	Uniform provisions concerning the approval of motor vehicles with regard to the Advanced Emergency Braking System (AEBS) for M1 and N1 vehicles
UN Regulation 153	Approval of vehicles with regard to fuel system integrity and safety of electric power trains in the event of a Rear-end collision
UN Regulation 155	Uniform provisions concerning the approval of vehicles with regard to cyber security and cyber security management system
UN Regulation 157	Automated Lane Keeping Systems (ALKS)
UN Regulation 158	Uniform provisions concerning the approval of devices for Reversing motion and motor vehicles with regard to the driver's awareness of vulnerable road users behind vehicles
UN Regulation 159	Uniform provisions concerning the approval of motor vehicles with regard to the Moving Off Information System for the Detection of Pedestrians and Cyclists
UN Regulation 160	Uniform provisions concerning the approval of motor vehicles with regard to the Event Data Recorder
UN Regulation 161	Uniform provisions concerning the protection of motor vehicles against unauthorised use and the approval of the device against unauthorised use (by means of a locking system)
UN Regulation 162	Uniform technical prescriptions concerning approval of immobilisers and approval of a vehicle with regard to its immobiliser
UN Regulation 163	Uniform provisions concerning the approval of vehicle alarm system and approval of a vehicle with regard to its vehicle alarm system