Order on detailed regulations on the fitting-out, equipping and use of vehicles[1)]

The following is laid down by virtue of Sections 33a(2), 35(1), 2nd sentence, 68(1) and (4), 68d(1), 68f(1), 69(2),
70(3), 83, 84(1), 85(1), 118(1)(2) and (13), 1st sentence, and 134e of the Road Traffic Act, cf. Consolidation Act No 168 of 14 February 2023, and by authorisation under Section 3(1) and (2) of Order No 373 of 9 April 2024 on the tasks, powers and appeals process of the Danish Road Traffic Authority:

Chapter 1

Scope and definitions

Section 1. *(1)* This Order shall apply to the following vehicles and associated equipment:

1) Vehicles and associated equipment approved or subject to national approval.
2) Vehicles and associated equipment not subject to approval prior to entry into service.
3) Vehicles and associated equipment specified in Section 4.

(2) Chapter 4 shall also apply to EU/EC type-approved vehicles and associated equipment.

Section 2. The following definitions apply for the purposes of this Order:

1) CoC: The document issued by the manufacturer which certifies that a produced vehicle conforms to the approved vehicle type and complies with all regulatory acts that were applicable at the time of its 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 (e-approved): An approval of a vehicle or equipment under an earlier EC Directive (EC type-approval) or a recent EU Regulation (EU type-approval).
7) E-approval (E-approved): An approval of a vehicle or equipment under a UN Regulation.
8) Regulation 167/2013/EU: Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles.
9) Regulation 168/2013/EU: Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles.
10) Regulation 2018/858/EU: Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC.

[1)] A draft of this Order has been notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification).

11) Type-approval: Notified EC/EU type-approvals, EEC type-approvals, type-approvals, and approval declarations.
12) Equipment Equipment, systems, components, separate technical units, and spare parts.

Chapter 2

General provisions

Section 3. Vehicles and equipment subject to this Order shall comply with the requirements in Annexes 1 and 2.

Section 4. Vehicles approved under one of the following directives or regulations shall comply with the provisions in Annex 1 if such vehicles have been modified (except as provided for in 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 2018/858/EU.

Chapter 3

EU type-approved vehicles and equipmentAcceptance of EU type-approved vehicles and equipment

Section 5. A vehicle and its associated equipment approved under an EC or EU directive or EU regulation cannot be refused approval on the grounds of non-compliance with national provisions on the fitting-out and equipping of vehicles.

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

Section 6. *(1)* Equipment fitted to an EU type-approved car or its trailer and subject to Regulation (EU) 2018/858, and this Regulation shall be approved under the provisions of said Regulation and the implementing acts or UN Regulations applicable under said Regulation.

(2) Equipment fitted to a car or its trailer approved under Directive 70/156/EEC or Directive 2007/46/EC shall be approved under that Directive or the UN Regulations specified therein, if the equipment is also subject to the same Directive or equivalent newer Union rules. This shall not apply to vehicles registered, approved, or in service before 1 January 1998.

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

Section 7. *(1)* Equipment fitted to an EU type-approved vehicle subject to Regulation (EU) 167/2013, and this Regulation shall be approved under the provisions of said Regulation and the implementing acts or UN Regulations applicable under said Regulation.

(2) Equipment fitted to a tractor approved under Directive 2003/37/EC shall be approved under that Directive or the UN Regulations specified therein, if the equipment is also subject to the same Directive or equivalent newer Union rules. This shall not apply to vehicles registered, approved, or in service before 1 April 2005.

Equipment fitted to an EU type-approved two- or three-wheel motor vehicle or quadricycle

Section 8. *(1)* Equipment fitted to an EU type-approved vehicle subject to Regulation (EU) 168/2013, and this Regulation shall be approved under the provisions of said Regulation and the implementing acts or UN Regulations applicable under said Regulation.

(2) Equipment fitted to a vehicle approved under Directive 2002/24/EC shall be approved under that Directive or the UN Regulations specified therein, if the equipment is also subject to the same Directive or equivalent newer Union rules. This shall not apply to vehicles registered, approved, or in service before 1 January 2004.

Exemptions from equipment type-approval requirements

Section 9. *(1)* The brake linings of large passenger cars, lorries, and trailers of category O3/O4 that are e-approved need not be E-approved if the vehicle was first registered before 1 November 2014.

(2) The brake discs or drums of passenger cars, large passenger cars, light goods vehicles, lorries, trailers of category O1/O2/O3/O4, and caravans that are e-approved need not be E-approved if the vehicle was first registered before 1 November 2016.

Section 10. *(1)* Equipment installed on vehicles older than 20 years, counted from the first registration of the vehicle, need not meet the requirements in Sections 6–8, regarding components related to brakes and exhaust.

(2) In the case of vehicles that need not be registered, the number of years specified above in (1) is counted from the date on which the vehicle was put into service.

Chapter 4

Use of vehicles Mini truck

Section 11. *(1)* Mini trucks (see Annex 1, point 1.03.061) may only be used on private property, including private roads, and to a negligible extent on public roads, including when a road is to be crossed (except as provided for in (3)).

(2) No more than one person, plus the driver, may be transported in a mini truck.

(3) The police may, with the consent of the road authority, permit an electric mini truck, which is registered in the national vehicle register and fitted with number plates, for use on pedestrian streets and pedestrian street-like areas as well as for entry to and exit from such. The permit shall specify the route to be used. Said road authority may stipulate other conditions in the permit.

(4) A mini truck used in accordance with (3) may only be coupled with one trailer or one piece of towed equipment. The trailer shall be registered in the national vehicle register.

Coupling

Section 12. *(1)* A vehicle used as motive power for a trailer shall be fitted with a coupling device (see Annex 1, section 9.05).

(2) Trailers shall be fitted with a coupling device (see Annex 1, section 9.05).

Section 13. *(1)* A passenger car or light goods vehicle may only be coupled with a trailer, without brakes or with overrun braking, if the following conditions are met (except as provided for in (2)):

1) The coupling devices are compatible with each other and the safety device is engaged.
2) The towed vehicle’s electrical system is connected to the vehicle so that the lights function properly.
3) The brakes of the trailer shall be automatically activated in the event that the coupling device breaks or otherwise decouples. This is to be done by installing a switch cable from the brakes of the trailer to a fitting or eye intended for that purpose and linked to the coupling device of the vehicle.
4) The vehicle shall be registered with a coupling device.

5) The actual total axle load of the trailer does not exceed the value specified for the weight of the trailer in the vehicle's registration basis.
6) The actual total axle load of the vehicle combination does not exceed the value specified for vehicle combinations in the vehicle's registration basis, if a value is specified.
7) The vehicle's mirrors or camera system provides necessary rearward visibility.

(2) As an alternative to (1), one may instead apply the rules on the coupling of trailers to passenger cars and light goods vehicles without being subject to a technical inspection (see the Order on the coupling without being subject to a technical inspection of cars and trailers with a maximum permissible laden weight of 3 500 kg).

Section 14. A tractor or motorised work machinery may only be coupled with one or two trailers, with one piece of towed equipment, or with one trailer and one piece of towed equipment, if the following conditions are met:
1) The coupling devices are compatible with each other and the safety device is engaged.
2) The towed vehicle's electrical system is connected to the tractor or motorised work machinery so that the lights function properly.
3) The towed vehicle's brakes are connected to the tractor or motorised work machinery so that the brakes function properly, if the towed vehicle has brakes.
4) The actual total axle load of the towed vehicle(s) does not exceed the maximum tow weight of the tractor or motorised work machinery, according to the manufacturer.
5) The total axle load of the towed vehicle(s) does not exceed the weights for which the coupling devices are designed.
6) The mirrors or camera system of the tractor or motorised work machinery provides necessary rearward visibility.

Special types of driving

Section 15. *(1)* Driving a vehicle as a step in its construction or repair or driving a new vehicle between ship, runway, and commercial premises may take place without complying with the following:
1) Provisions on headlamps, when driving during daylight hours. However, the provisions concerning the positioning of the lamps can be waived irrespective of when the drive takes place.
2) Provisions on rear position lamps, number plate lamps, and end-outline marker lamps. However, when driving outside of daylight hours, the vehicle shall have two rear position lamps.
3) Provisions on reflectors,rear marking planks, and contour markings when driving during daylight hours.
4) Provisions on direction-indicator lamps, the hazard warning signal, and stop lamps, if unambiguous signalling can be conveyed by other means.
5) Provisions on mirrors, seat belts, and screens. However, the vehicle shall be equipped with at least one mirror.
6) Provisions on tyre fitting, if the fitted tyres have a load capacity at least equivalent to the current load.

(2) In the case of trailers and semi-trailers, the service brakes requirement may also be waived if the vehicle combination is not driven at a speed greater than 30 km/h.

Section 16. Driving during daylight hours may take place without complying with the rules on the use of passing beams, front fog lamps, or dedicated daytime running lights (see Section 33a of the Road Traffic Act) in the following cases:
1) For repairs or as a step in the construction of a motor vehicle.
2) Occasional driving of motor vehicles registered for the first time before 1 January 1951.

Parking outside of daylight hours

Section 17. *(1)* When a towed vehicle is stopped or parked on a road outside of daylight hours, it shall have switched on at least two rear-facing red lamps and two forward-facing white lamps. The lamps shall comply with the respective requirements on rear position lamps and position lamps.

(2) The provision in (1) shall not apply if the road is so well-lit that the vehicle is clearly visible from a sufficiently long distance or if it is stopped or parked in a car park or other marked area for parking (see Section 36(1) of the Road Traffic Act).

Studded tyres

Section 18. *(1)* On cars, motorcycles, large mopeds, and trailers subject to registration and coupled to a car or motorcycle, studded tyres may only be used in the period of 1 November to 15 April, and only if studded tyres are on all of the other wheels of the vehicle or vehicle combination.

(2) On tractors, motorised work machinery, trailers coupled to tractors or motorised work machinery, and on towed equipment, studded tyres may only be used in the period of 1 November to 15 April, and only if studded tyres are on all wheels of the same axle.

(3) The number of studs should be approximately the same on all wheels. Twin wheels may have studded tyres on only one wheel if there is symmetry with respect to the longitudinal axis of the vehicle.

Snow plough mounts

Section 19. *(1)* Snow plough mounts and brackets must only be fitted in the period of 15 September to 15 May. When no snow plough is fitted on a vehicle during this period, the snow plough mounts and brackets shall be rounded or have protective covers.

(2) Outside of the period specified in (1.1), front snow plough mounts and brackets shall be removed from the vehicle.

(3) The provision in (2) shall not apply to a snow plough mount if protruding parts of the bracket are rounded or have protective covers.

Marking as a slow-moving vehicle

Section 20. *(1)* Tractors, that are not part of a vehicle combination, shall be marked as slow-moving vehicles.

(2) Motorised work machinery, that is not part of a vehicle combination and not pedestrian-operated, shall be marked as a slow-moving vehicle.

(3) In the following vehicle combinations, the rearmost vehicle shall be marked as a slow-moving vehicle:

1) Tractor with a coupled trailer or towed equipment.
2) Motorised work machinery with a coupled trailer or towed equipment. This does not apply to motorised work machinery that is pedestrian-operated.
3) Car with towed equipment that is not subject to registration.

(4) Other vehicles in the vehicle combinations specified in (3.1) and (3.2) may be marked as slow-moving vehicles.

(5) The marking (see (1)–(4)) shall comply with the conditions set out in Annex 1,.6.10.001.

Passengers on tractors

Section 21. Passengers may only be carried on tractors if in an enclosed cab.

Fire extinguishers

Section 22. *(1)* M2 passenger cars shall have at least one fire extinguisher located near the driver’s seat.

(2) M3 passenger cars shall have at least one fire extinguisher located near the driver’s seat.

(3) In addition to the fire extinguisher specified in (2), M3 passenger cars with two levels shall have a fire extinguisher on the upper level.

(4) Motorhomes designed for more than 9 people shall have at least one fire extinguisher.

Section 23. The required fire extinguisher shall be in an unlocked space that is appropriate and easily accessible for the driver.

Section 24. *(1)* The required fire extinguisher shall be approved, marked, and regularly checked in accordance with one of the following standards:

1) DS 2320 or later.
2) DS/EN 3 or later.

(2) Fire extinguishers, as specified in Section 22(1), (2) and (4), shall also be marked and approved as at least category 5 A, 34 B.

(3) However, for cars designed to carry more than 19 persons, the fire extinguishers specified in Section 22(1), (2) and (4) shall also be marked and approved as at least category 13 A, 89 B.

Chapter 5

Administrative provisionsDispensation

Section 25. In special cases, the Danish Road Traffic Authority may waive provisions of this Order.

Right of appeal

Section 26. *(1)* Appeals against police decisions under Section 11(3) may be lodged with the Danish Road Traffic Authority.

(2) Appeals against decisions made by the Danish Road Traffic Authority by virtue of this Order cannot be filed with the Minister for Transport or any other administrative authority (see the Order on the tasks, powers, and appeals process of the Danish Road Traffic Authority).

Technical specifications and standards

Section 27. *(1)* Technical specifications cited in this Order are not introduced in the Danish Official Journal.

(2) The concept of 'technical specifications' (see (1)) means Danish, foreign, European, or international standards, norms, and guidelines.

(3) Technical specifications and standards (see (1)) can be viewed at the Danish Road Traffic Authority or purchased from Danish Standards.

(4) Technical specifications and standards (see (1)) apply, even if they are not available in Danish.

UN Regulations

Section 28. UN Regulations referred to in this Order shall not be introduced in the Danish Official Journal.

(2) UN Regulations referred to in (1) shall apply even if they are not available in Danish.

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

Chapter 6

Penalties

Section 29. *(1)* Violations of the following are punishable by fine: 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) and Sections 21–24.

(2) Violations of the conditions for a permit under Section 11(3) are punished by fine under Section 118(1)(2) of the Road Traffic Act.

(3) Companies etc. (legal persons) may be rendered criminally liable in accordance with the provisions in Chapter 5 of the Penal Code.

Chapter 7

Entry into force

Section 30. *(1)* This Order shall enter into force on 1 July 2024.

(2) The following orders are repealed:

1) Order No 198 of 24 June 1955 on the fitting-out and equipping of vehicles.
2) Order No 154 of 20 April 1977 on the fitting-out and equipment of vehicles, etc.
3) Order of 20 April 1977 on detailed regulations on the fitting-out and equipping of vehicles (1977 Detailed Regulations).
4) Order of 28 February 1978 on detailed regulations on the fitting-out and equipping of vehicles (1978 Detailed Regulations).
5) Order of 14 February 1979 on detailed regulations on the fitting-out and equipping of vehicles (1979 Detailed Regulations).
6) Order of 24 January 1980 on detailed regulations on the fitting-out and equipping of vehicles (1980 Detailed Regulations).
7) Order of 26 January 1981 on detailed regulations on the fitting-out and equipping of vehicles (1981 Detailed Regulations).
8) Order of 9 February 1982 on detailed regulations on the fitting-out and equipping of vehicles (1982 Detailed Regulations).
9) Order of 31 January 1983 on detailed regulations on the fitting-out and equipping of vehicles (1983 Detailed Regulations).
10) Order of 30 January 1984 on detailed regulations on the fitting-out and equipping of vehicles (1984 Detailed Regulations).
11) Order of 5 March 1985 on detailed regulations on the fitting-out and equipping of vehicles (1985 Detailed Regulations).
12) Order of 28 January 1986 on detailed regulations on the fitting-out and equipping of vehicles (1986 Detailed Regulations for Vehicles).
13) Order of 12 March 1987 on detailed regulations on the fitting-out and equipping of vehicles 1987 (1987 Detailed Regulations for Vehicles).
14) Order of 4 March 1988 on detailed regulations on the fitting-out and equipping of vehicles (1988 Detailed Regulations for Vehicles).
15) Order of 7 March 1989 on detailed regulations on the fitting-out and equipping of vehicles (1989 Detailed Regulations for Vehicles).
16) Order of 9 March 1990 on detailed regulations on the fitting-out and equipping of vehicles.
17) Order of 14 March 1991 on Detailed regulations for vehicles 1991.
18) Order of 12 March 1992 on detailed regulations on the fitting-out and equipping of vehicles.
19) Order of 03 March 1993 on Detailed regulations for vehicles 1993.
20) Order of 22 March 1994 on Detailed regulations for vehicles 1994.
21) Order of 10 March 1995 on Detailed regulations for vehicles 1995.
22) Order No 530 of 29 May 1996 on the fitting-out and equipping of tractors and motorised work machinery, etc.
23) Order of 20 March 1997 on Detailed regulations for vehicles 1997.
24) Order of 15 September 1997 on Detailed regulations for vehicles 1997.
25) Order of 12 March 1998 on Detailed regulations for vehicles 1998.
26) Order of 9 March 1999 on Detailed regulations on the fitting-out and equipping of vehicles 1999
27) Order of 13 March 2000 on Detailed regulations for vehicles 2000.
28) Order of 7 March 2001 on Detailed regulations for vehicles 2001.
29) Order of 8 March 2002 on Detailed regulations for vehicles 2002.
30) Order of 3 March 2003 on Detailed regulations for vehicles 2003.
31) Order of 9 March 2004 on detailed regulations on the fitting-out and equipping of vehicles 2004.
32) Order of 4 March 2005 on detailed regulations on the fitting-out and equipping of vehicles 2005.
33) Order of 3 March 2006 on detailed regulations on the fitting-out and equipping of vehicles.
34) Order of 8 March 2007 on detailed regulations on the fitting-out and equipping of vehicles.

35) Order No 351 of 11 March 2010 on detailed regulations on the fitting-out and equipping of vehicles.
36) Order No 258 of 10 March 2011 on detailed regulations on the fitting-out and equipping of vehicles.
37) Order No 247 of 16 March 2012 on detailed regulations on the fitting-out and equipping of vehicles.
38) Order No 289 of 19 March 2013 on detailed regulations on the fitting-out and equipping of vehicles.
39) Order No 434 of 29 April 2014 on detailed regulations on the fitting-out and equipping of vehicles.
40) Order No 344 of 8 April 2016 on the classification and use of certain small motor vehicles as motorised work machinery (mini truck).
41) Order No 1595 of 15 December 2016 on Detailed regulations on the fitting-out and equipping of vehicles.
42) Order No 1050 of 17 October 2019 on Detailed regulations on the fitting-out and equipping of vehicles.
43) Order No 855 of 11 June 2020 on the fitting-out and equipment of vehicles, etc.

The Danish Road Traffic Authority, 28 May 2024

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Annex 1

Technical provisions for vehicles

1. General information on the Annex

1.1 Structure of the Annex

1.1.1 Numbering system

(1) In the Annex, the regulations are arranged by numbers, where each entry consists of three groups of numbers:
   a) 1st number group (one or two digits) denotes the main section.
   b) 2nd number group (two digits) denotes the subsection.
   c) 3rd number group (three digits) denotes the detailed regulations.

1.1.2 Main sections

(1) The Annex is broken down into 11 main sections, of which:
   a) main section 1 contains general information – including overviews of vehicle types and uses as well as definitions;
   b) main sections 2–10 contain regulations on the fitting-out and equipping of vehicles; and
   c) main section 11 contains a description of the measurement methods used in connection with some of the regulations.

(2) Main sections 2–10 are broken down by vehicle components and systems.

1.1.3 Subsections

(1) The subsections are broken down by components or systems from the associated main section which have certain common characteristics.

1.1.4 Detailed regulations

(1) The numbering of detailed regulations covers two types of detailed regulations:
   a) Numbers 001–009 indicate detailed regulations that are general in nature for components or systems contained in the subsection.
   b) Numbers 010 and up indicate specific detailed regulations applicable to one or more vehicle types or uses.

   The detailed regulations referred to in b) may contain both tightening and relaxation of the general regulations referred to in a).

1.1.5 Breakdown of detailed regulations

(1) The detailed regulations – depending on their content – are broken down by numbers and/or letters.

1.1.6 Transitional provisions

(1) Transitional provisions for the detailed regulations are indicated with an underlined date and shall apply, unless otherwise specified, to vehicles registered, approved, or put into service for the first time before the date concerned. The years in the range of 00–24 refer to the years 2000–2024, while the years in the range of 25–99 refer to the years 1925–1999.

   The concept of ‘registered, approved, or put into service’ refers to vehicles subject to registration, approval, and other vehicles, respectively.

1.2 Numbering system

1.2.1 Use of the numbering system

(1) The structure of the numbering system means that detailed regulations for a component, for example, can be found by using the number of that component.
(2) Regulations that are general in nature for that component can be found under one or more of the numbers 001–009.
(3) Regulations for a specific type of vehicle or a specific use of the vehicle can be found under the number for the associated vehicle type or use (see the overview of vehicle types and uses in Section 1.03).

1.3 Vehicle types and uses

010 – Power-driven vehicle

Vehicle powered by an engine.

Power-driven vehicles are broken down into motor vehicles (cars and motorcycles), mopeds, tractors, and motorised work machinery.

20 - Car

Motor vehicle fitted with four or more wheels or with tracks, rollers, runners, or the

like, and motor vehicle on three wheels, if the unladen weight exceeds 400 kg.

A four-wheeled vehicle, including ATVs, is considered 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, even if the quadricycle does not comply with the technical provisions for cars. The approval is valid only as long as the quadricycle technically corresponds to the approval. Therefore, no mechanical/physical alterations may subsequently be made to a quadricycle's steering, brakes, engine, or load-bearing elements.

A tractor, including ATVs, that is e-approved as a tractor with a maximum design speed exceeding 40 km/h (with associated tolerance) is considered a car.

A three-wheeled vehicle is considered a car if the unladen weight exceeds 400 kg. If the vehicle is e-approved as
a ‘power-driven tricycle’, it may be approved on the basis of the CoC, even if the vehicle does not comply with the technical provisions for cars. The approval is valid only as long as the three-wheeled vehicle technically corresponds to the approval.

‘Vehicles produced in small series’ are vehicles made by a vehicle manufacturer that makes a maximum of 1 500 cars in total 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 station wagon derived from a sedan/hatchback, is considered a light goods vehicle if the following conditions are met:

- The car is designed for a maximum of seven people, including the driver.
- The permissible weight of goods with all seats occupied and all means of operation at full capacity is at least equal to the weight of passengers (at 68 kg each).

21 - M1 passenger car

Car with a maximum of eight seats in addition to the driver's seat. There must not be any space provided for standing passengers.

22 - M2 passenger car

Car with more than eight seats in addition to the driver's seat and having a maximum permissible laden weight not exceeding 5 000 kg.

23 - M3 passenger car

Car, including articulated bus, with more than eight seats in addition to the driver's seat and having a maximum permissible laden weight exceeding 5 000 kg.

Articulated bus is defined as a car that consists of two or more rigid sections that are articulated with each other. The passenger compartments of each section are connected to each other, allowing passengers to move freely between them. The rigid sections are permanently connected to each other, such that they can only be separated by equipment normally only available in a workshop.

24 - N1 light goods vehicle

Car designed to be used for the carriage of goods and having a maximum permissible laden weight not exceeding 3 500 kg.

25 - N2 Lorry

Car designed to be used for the carriage of goods and having a maximum permissible laden weight exceeding 3 500 kg but not exceeding 12 000 kg.

26 - N3 Lorry

Car designed to be used for the carriage of goods and having a maximum permissible laden weight exceeding 12 000 kg.

30 - Motorcycle

Motor vehicle on two wheels, with or without sidecar, and motor vehicle on three wheels if the unladen weight does not exceed 400 kg.

31 - Two-wheeled motorcycle

32 - Two-wheeled motorcycle with

sidecar

033 – Tricycle

A motor vehicle with two front wheels and rear twin-wheels is considered a tricycle if the twin-wheels are not spaced more than 0.15 m from each other, are not linked to differentials, and are so fitted 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 set of twin-wheels) mounted on the same axle and at a distance between the centres of their areas of contact with the ground is up to 0.46 m. Twin-wheels are then considered to be a single wheel.

40 - Moped

Two- or three-wheeled vehicle with an internal combustion engine with maximum displacement of 50 cm^3 or with an electric motor and a maximum design speed not exceeding 45 km/h.

41 - Large moped

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

42 - Small moped

Moped with a maximum design speed of 30 km/h.

Before 1/1/2020: A mobility scooter that has an approval (TUM or K approval) issued by the Danish Road Traffic Authority, may be put into service (without registration) before that date. A mobility scooter is a three-wheeled moped designed for the carriage of a disabled invalid driver and must be designed for only one person (the driver).

Before 1/7/2006: Small mopeds are not subject to registration, but must have an approval (TUM or K approval) issued by the Danish Road Traffic Authority.

050 – Tractor

Power-driven vehicle primarily designed to pull other vehicles or machinery and made for a maximum speed of 40 km/h.

The condition of 'primarily designed to pull' means that, as per the tractor manufacturer, a tractor shall be designed to pull at least its own technical maximum permissible laden weight (the weight of the vehicle combination being at least twice the technically permissible maximum laden mass of the tractor), and that it is not fitted with a platform.

However, these two requirements do not apply to an e-approved agricultural or forestry tractor (approved for a maximum of 40 km/h with associated tolerance; see point 11.03.050) that is only used in accordance with the rules in the Act on the registration of approved tractors. However, a tractor may have a transport box suspended on the tractor's three-point linkage.

A tractor may be equipped with permanently fixed tools, such as digging and loading equipment.

060 – Motorised work machinery

Power-driven vehicle primarily designed as a tool and for speeds not exceeding 40 km/h. A power-driven vehicle that is pedestrian-operated is considered to be motorised work machinery.

The mounting of tools that can be easily removed cannot result in a tractor being considered to be motorised work machinery.

A tractor with a permanently fitted sweeper is not considered to be motorised work machinery.

061 – Mini trucks

Motorised work machinery that meets the following conditions may be considered to be a mini truck:
- The motorised work machinery has three or more wheels.
- The unladen weight of the motorised work machinery does not exceed 1 500 kg. In the case of motorised work machinery that runs on electricity, batteries are not included in the unladen weight, in this context.
- The motorised work machinery has a load platform or the like designed for the carriage of goods.
- The motorised work machinery is designed for the transport of no more than one person, in addition to the driver.

099 – Power-driven lowboy

Power-driven vehicle if the weight, axle load, dimensions, or other structural elements exclude the vehicle from registration and it is designed for the carriage of particularly heavy or bulky goods.

100 – Towed vehicle

A vehicle that is designed to be towed by another vehicle.

Towed vehicle is broken down into towed equipment, or trailer and semi-trailer primarily designed for the carriage of persons or goods.

Semi-trailer is a towed vehicle for the carriage of persons or goods that is coupled to a towing car in such a way that the towed vehicle or its load rests partially on the towing car.

A trailer for habitation with a maximum permissible laden weight exceeding 3 500 kg, built on trailer chassis or semi-trailer chassis, is considered to be a trailer or semi-trailer, respectively, and not as caravan.

A folding trailer designed for habitation (pop-up camper) is considered to be a trailer in one of the following cases:
- When folded, the top surface is designed as a load platform for the carriage of goods.
- The tent can be readily removed without the use of tools, to create a load platform for the carriage of goods.

A rootcrop trailer, designed for the transport of e.g. crops from the field and subsequent distribution in silo, is considered to be a trailer.

Asphalters are considered to be trailers when primarily used for the transport and/or heating of asphalt.

110 – Trailer/semi-trailer for cars

Including centre-axle trailers, which means a rigid drawbar trailer (A frame) with a total axle load exceeding 3 500 kg.

111 – Trailer/semi-trailer O1

Trailer/semi-trailer with a maximum permissible laden weight – but total axle load for trailers and semi-trailers with rigid drawbar – not exceeding 750 kg.

112 – Trailer/semi-trailer O2

Trailer/semi-trailer with a maximum permissible laden weight – but total axle load for trailers and semi-trailers with rigid drawbar – exceeding 750 kg but not exceeding 3 500 kg.

113 – Trailer/semi-trailer O3

Trailer/semi-trailer with a maximum permissible laden weight – but total axle load for trailers and semi-trailers with rigid drawbar – exceeding 3 500 kg but not exceeding 10 000 kg.

114 – Trailer/semi-trailer O4

Trailer/semi-trailer with a maximum permissible laden weight – but total axle load for trailers and semi-trailers with rigid drawbar – exceeding 10 000 kg.

120 – Agricultural trailer

A towed vehicle coupled to a tractor is considered to be an agricultural trailer, not semi-trailer, even if it rests partly on the tractor.

130 – Trailer for motorised work

machinery

140 – Towed equipment

Towed vehicle other than trailer or semi-trailer.

141 – Caravan

Towed equipment that has amenities for brief stays and overnight accommodations.

A trailer that is only designed for brief stays (portacabin) is not considered to be a caravan.

142 – Other towed equipment subject to registration

143 – Towed equipment not subject to registration

150 – Towed vehicle coupled to motorcycle

151 – Trailer coupled to motorcycle

153 – Towed equipment coupled to

motorcycle 160 – Trailer coupled to

large moped 199 – Lowboy

Towed vehicle if the weight, axle load, dimensions, or other structural elements exclude the vehicle from

registration and it is designed for the carriage of particularly heavy or bulky goods.

200 – Vehicle combination

300 – Special purpose vehicle

310 – Vehicle for which coupling is not

subject to a technical inspection

320 – School vehicle

330 – Rental vehicle

340 – Emergency vehicle

357 – Sleeper bus

A sleeper bus is an M2 or M3 passenger car designed such that all or some of the passenger seats can be converted to beds. A seat with a backrest that can recline up to 45 degrees is not considered to be a bed. An M2 or M3 passenger car with fixed beds for passengers is also considered to be a sleeper bus (‘nightliner’).

360 – Other special purpose vehicles

361 – Vehicle for the disabled

362 – Flatbed tow truck

363 – Vehicle specifically designed to perform roadwork

Snow removal vehicle, gravel spreader, sludge suction vehicle, vehicle with lifting platform, road stripping vehicle, cabling wagon, surfacing vehicle, TMA vehicle, and similar that are specifically designed to perform roadwork.

364 – Motorhome

A category M vehicle designed as habitation and with at least the following:
- Seats and table.
- Beds, which may be formed by rearranging or moving of the seats.
- Cooking facilities.
- Storage facilities.

All of the above shall be fixed in the living space. However, the table may be configured such that it can be easily collapsed or folded away.

The categorisation of a passenger car as M1, M2, or M3 is determined solely on the basis of the number of seats designed for use while driving.

371 – Airport vehicle

381 – Amusement park train

400 – Special transport vehicle

410 – Dangerous goods vehicle

460 – Other special transport vehicle

461 – Animal transport vehicle

1.04 Definitions

Axle load

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

Alternative fuels

Fuels or energy sources that at least partially replace fossil oil sources in the transport energy supply, potentially contribute to decarbonisation, and improve the environmental performance of the transport sector. Alternative fuels include, inter alia, 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 liquid form (liquid natural gas – (LNG)) and liquefied gas (LPG).

Automatic load-dependent brake force regulator (ALB)

A regulating device that automatically regulates the brake force/distribution according to the load of the vehicle.

Brake fade

Reduction in the braking performance of a vehicle with very hot brakes.

Braking transmission

The combination of parts between the control device and the brakes themself. If the braking force is wholly or partly derived from a source of energy independent of the driver, but controlled by the driver, the energy storage device is considered to be part of the transmission of braking.

City bus

A bus with space for standing passengers, is designed for frequent entry and exit, and can accommodate more than 22 passengers. However, a bus that is mainly fitted with seating but has space for standing passengers in aisle and/or in an area no larger than the area allocated to two double seats is not considered to be a city bus.

Chip tuning

Changes made to the electronic engine control system, including the replacement and reprogramming of the engine control system or the manipulation of signals to and from it.

Updates to the engine control system as specified by the vehicle manufacturer are not considered to be chip tuning.

Deceleration rate

The relationship between deceleration and gravitational acceleration. The deceleration rate (d0) can be determined as the ratio of total braking force to gross vehicle weight in the case of centre axle trailers, but as the ratio of total braking force to total static axle load in the case of semi-trailers.

Dolly

A rigid drawbar trailer designed to be the motive power for a semi-trailer.

Unladen weight

The weight of a vehicle with accessories normally carried by the vehicle. The weight of all means of operation, including fuel, lubricating oil and cooling water, as well as the driver, are not included in the unladen weight.

Actual gross vehicle weight

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

Dangerous goods

Substances and articles subject to the Order on road transport of dangerous goods.

Forward control

A vehicle in which the steering wheel hub is in the forward quarter of the vehicle length.

Brake operating time

The time elapsed between actuation of the control device and deceleration reaching 50 % of the demanded amount.

Before 1/5/1977: The time elapsed between actuation of the control device and deceleration reaching 50 % of the maximum achieved amount.

Folding seat

An auxiliary seat intended for occasional use and which is normally folded away. Folding seats are not included in the number of seats, when placed in a standing area.

Coupling length

For a car this is the distance from the frontmost point of the car to the centre line of the coupling device and, in for a towed vehicle this means the distance from the rearmost point of the trailer to the centre line of the coupling device, excluding the parts specified in point 3.02.001 (7).

Kerb weight

The weight of the specific vehicle with accessories normally carried by the vehicle, as well as all means of operation at full capacity and including the driver (75 kg). However, for vehicles subject to Regulation 168/2013/EU, the kerb weight does not include a driver.

Link trailer

A semi-trailer designed to be the motive power for a semi-trailer.

Zero-emission vehicle

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

Payload

Difference between maximum permissible laden weight and service weight.

R point or seating reference point

Reference point defined by the vehicle manufacturer, which corresponds to the theoretical position of the point of torso/thighs rotation for the lowest and most rearward normal driving position or position of use given by the vehicle manufacturer.

Steering axle

The steering axle of a power-driven vehicle is considered to be the axle on which there is a connection between the steering controls (steering wheel) and the wheels.

The steering axle of a towed vehicle is considered to be the axle on which there is a connection between the activation device and the wheels.

Steering transmission

The steering transmission is that part of the steering system which exists between the steering controls or activation device and the steered wheels. The power source for power steering is not considered to be part of the steering transmission.

Tank container

Means of transport designed for repeated use and designed to be lifted in a full state, and designed for liquid, gaseous, powdered or grained substances and having a capacity exceeding 0.45 m3.

Off-road vehicle

A vehicle that goes off-road as defined in Regulation (EU) 2018/858.

Permissible load

Difference between maximum permissible laden weight and unladen weight.

Maximum permissible laden weight

The maximum permissible weight of the vehicle with means of operation, driver, and load as per the registration or approval

Service weight

The weight of a vehicle with accessories normally carried by the vehicle, as well as all means of operation at full capacity and including the driver (75 kg).

In the case of a motor vehicle, the service weight is thus equal to the unladen weight, plus 75 kg and the weight of the means of operation.

Top speed

The maximum design speed of a power-driven vehicle.

If a power-driven vehicle is fitted with a speed governor, the governed speed is considered to be the top speed of the vehicle.

Road-friendly suspension

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

2. Identification and inscriptions

2.1 Identification and inscriptions

2.1.1 General provisions

(1) A vehicle, tractor, motorcycle sidecar, lowboy, or power-driven lowboy that is subject to registration shall bear the manufacturer's name or trademark as well as the vehicle type designation and chassis number. If the type designation is included as part of the chassis number, an additional separate indication of the type designation is unnecessary.
Before 1/7/1956: The requirement to indicate the type designation and chassis number does not apply to vehicles already registered in Denmark.

(2) Type designation and chassis number
a) shall be easily accessible and unambiguous,
b) shall be hammered or punched on the self-supporting body, chassis, frame, or plate welded onto such, so as to avoid obliteration or alteration of numbers and letters.
Before 1/7/1956: The chassis number (both as assigned and as an original) may be put on a plate that is riveted or screwed onto the vehicle.

(3) The 17-character chassis number (VIN) for cars and their towed vehicles that are subject to registration shall comply with the provisions of Regulation (EU) 2021/535.

Before 1/7/2024: The 17-character chassis number (VIN) may comply with the provisions of Regulation (EU) No 19/2011.
Before 1/1/2017: The chassis number may comply with the provisions of Directive 76/114/EEC as amended by Directive 78/507/EEC.
Before 1/4/2004: Not applicable.

(4) The 17-character chassis number (VIN) for motorcycles and mopeds and their towed vehicles shall comply with the provisions of Regulation (EU) 901/2014.
Before 1/1/2017: The chassis number may comply with the provisions of Directive 93/34/EEC as amended by Directive 1999/25/EC.
Before 1/4/2004: Not applicable.

(5) The 17-character chassis number (VIN) for tractors and their towed vehicles shall comply with the provisions of Regulation (EU) 2015/504.
Before 1/7/2024: Not applicable.

(6) Cars, motorcycles, mopeds, tractors, trailers/semi-trailers for cars, caravans, agricultural trailers, and other towed equipment subject to registration, as well as towed vehicles of motorcycles and mopeds shall bear a 17-character chassis number (VIN).
Before 1/7/2024: Tractors and agricultural trailers and towed vehicles of mopeds need not bear a 17-character chassis number.
Before 1/4/2004: Not applicable.

(7) The mandatory marking may only be placed
a) by the manufacturer;
b) by the manufacturer's representative;
c) by, or under the supervision of, a testing centre; or
d) by, or under the supervision of, an insurance company assessor in accordance with the relevant provisions from the Ministry of Taxation.

(8) Changes to the mandatory marking are not permitted.

(9) Vehicles shall not bear any markings which – by their shape, content, or the manner in which they are placed – may be mistaken for the mandatory marking.
However, it is permitted for there to be separate instances of a vehicle's original frame marking at two separate places on the vehicle when, pursuant to placement requirements abroad, it also appears e.g. on a plate that is visible from outside through the windscreen of the vehicle. The mandatory marking of a vehicle is considered to be the one that is hammered or punched (see point 2b).

2.01.020 Car

(1) A car shall bear a manufacturer's plate with contents as specified in Regulation (EU) 2021/535, though without an EU type-approval number if the car is not EU type-approved.
Before 1/7/2024: Not applicable.

2.01.030 Motorcycle

(1) A motorcycle shall bear a manufacturer's plate with contents as specified in Regulation (EU) 901/2014, though without an EU type-approval number if the motorcycle is not EU type-approved.
Before 1/7/2024: Not applicable.

2.01.040 Moped

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

Before 1/1/2017: The manufacturer's plate may also have the content as specified in Directive 93/34/EEC as amended by Directive 1999/25/EC.
Before 1/4/2004: Applies only to small mopeds that bear a 17-character chassis number.

(2) Mopeds shall bear markings on components of the engine, etc. in accordance with point 6 of Annex II to Regulation (EU) 44/2014.
Before 1/7/2024: Not applicable.

2.01.042 Small moped

(1) The manufacturer's plate shall contain the number of the EU type-approval for the vehicle (eX XXX).
Before 1/7/2024: The requirement for EEC type-approval only applies to EEC type-approved mopeds.
Before 1/4/2004: Applies only to mopeds that bear a 17-character chassis number.
Mopeds not bearing a 17-character chassis number shall also have the frame hammered or punched with the vehicle's EEC type-approval (DK-K- XXX) and the engine punched or embossed with the engine type number (DK-M-XXX) provided in the EEC type-approval.
Before 1/5/1977: Mopeds shall bear the approval number (TUM XXX) provided in the engine type-approval.

2.01.050 Tractor

(1) A tractor shall bear a manufacturer's plate with contents as specified in Regulation (EU) 2015/504, though without an EU type-approval number if the tractor is not EU type-approved.
Before 1/7/2024: Not applicable.

2.01.100 Trailer/semi-trailer for vehicles

(1) A trailer/semi-trailer for cars shall bear a manufacturer's plate with contents as specified in Regulation (EU) 2021/535, though without an EU type-approval number if the trailer/semi-trailer is not EU type-approved.
Before 1/7/2024: Not applicable.

2.01.120 Agricultural trailer

(1) An agricultural trailer shall bear a manufacturer's plate with contents as specified in Regulation (EU) 2015/504, though without an EU type-approval number if the agricultural trailer is not EU type-approved.
Before 1/7/2024: Not applicable.

2.01.141 Caravan

(1) A caravan shall bear a manufacturer's plate with contents as specified in Regulation (EU) 2021/535, though without an EU type-approval number if the caravan is not EU type-approved. Before 1/7/2024: Not applicable.

2.01.150 Towed vehicle coupled to motorcycle

(1) A towed vehicle coupled to motorcycle shall bear a manufacturer's plate with contents as specified in Regulation (EU) 901/2014, though without an EU type-approval number if the towed vehicle coupled to motorcycle is not EU type-approved.
Before 1/7/2024: Not applicable.

2.01.160 Trailer coupled to moped

(1) A trailer coupled to moped shall bear a manufacturer's plate with contents as specified in Regulation (EU) 901/2014, though without an EU type-approval number if the trailer is not EU type-approved.
Before 1/7/2024: Not applicable.

2.2 Inscriptions on maximum permissible laden weight, load, etc.

2.2.1 General provisions

(1) Vehicles shall not bear any inscriptions or plates which – by their shape, content, and fitting, or the manner in which they are placed – may be mistaken for the mandatory inscriptions or plates.

(2) Inscriptions shall be made with indelible paint that clearly differs from the colour of the vehicle or plate.

2.02.310 Vehicle for which coupling is not subject to a technical inspection

(1) Lorries N2 and N3 and link trailers with a movable fifth wheel coupling shall bear an inscription or plate indicating the permissible load on the coupling as well as an arrow indicating the position of the centre line for the kingpin in the fifth wheel coupling at the coupling position used to determine the permissible coupling load.

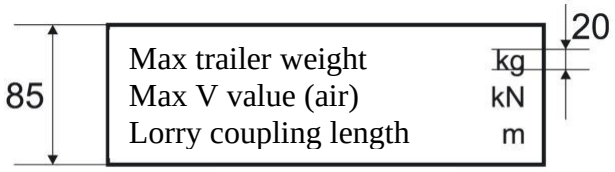
Inscription or plate shall be formatted as shown by the example in Figure 1, which shows the minimum dimensions.

Dimensions in

Figure 1.

(2) In the case of lorries for which coupling – with a trailer O3 or O4 or with towed equipment – is not subject to a technical inspection, the trailer chassis shall bear, in a clearly visible position at the rear of the vehicle, an inscription or a plate indicating the towed vehicle's maximum total laden weight and maximum V value and the coupling length of the vehicle.

An inscription or plate shall be formatted as shown by the example in Figure 2 if the vehicle has road-friendly suspension on the driving axle, and Figure 3 if the vehicle does not have road-friendly suspension on the driving axle. The figures show the minimum dimensions.



Dimensions in

Fig. 2

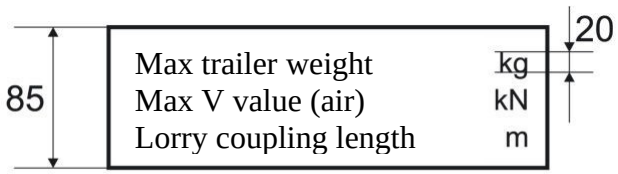


Fig. 3

Before 1/4/1996: Lorries may bear an inscription or plate indicating 'phv T' for the maximum total laden weight of the trailer and 'bil LKL' for the coupling length of the vehicle.

(3) In the case of lorries for which coupling – with a trailer O3 or O4 or with towed equipment – is not subject to a technical inspection and which is registered as several different versions, the trailer chassis, in a clearly visible position in the immediate vicinity of the coupling device, shall bear an inscription or a plate formatted as shown by the example in Figure 3 or 4 indicating the applicable and associated values of 'Max trailer weight', 'Max V value' and 'Lorry coupling length' for each version of the coupling device.

(4) For trailers O3 and O4 (other than dolly) and towed equipment, the following apply to the chassis of such:

a) The vehicle shall bear on the drawbar an inscription or plate indicating its coupling length.

Inscription or plate shall be formatted as shown by the example in Figure 4, which shows the minimum dimensions.

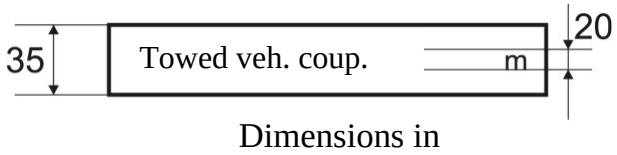


Fig. 4

Before 1/4/1996: The coupling length of the trailer may be indicated as 'PKL'.

b) On centre-axle trailers and trailers of a type of centre-axle trailer, the inscription or sign shall also indicate the V-values of the vehicle.

Inscription or plate shall be formatted as shown by the example in Figure 5, which shows the minimum dimensions.

In the case of centre-axle trailers and towed equipment in the form of centre-axle trailers for which coupling is not subject to a technical inspection, limited to couplings with air-spring vehicles, the inscription 'V value (mech.)' shall be replaced by the text 'Air-spring vehicles only'.

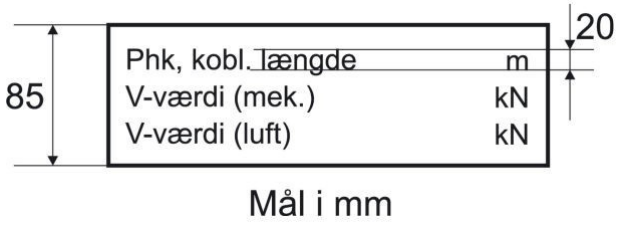


Fig. 5

c) If the drawbar is movable, an unambiguous marking, such as two opposing arrows, shall clearly indicate the drawbar position at the specified coupling length. The marking shall be on or near the inscription or plate.

2.02.362 Flatbed tow truck

(1) Each side of a flatbed tow truck shall bear an inscription indicating the maximum permissible weight that may be placed on the lifting device (lifting boom) and the maximum permissible weight of the towed vehicle. If it is a tilting boom, the inscription shall indicate a range of permissible loads at minimum and maximum tilt.

The texts shall read as follows:

- Max. suspended axle load: xxxx kg

  This is the vertical load (xxxx) on the device and expressed in kg as the maximum possible value calculated according to the rules on axle load and weight on steered wheels. A range shall be indicated if the boom can tilt.

- Towed vehicle max. weight: yyyy kg.

  This is the actual weight (yyyy) of the whole towed vehicle expressed in kg, determined on the basis of the maximum weight that the flatbed tow truck may carry (at speed down to 30 km/h).

2.3 Speed limit inscription

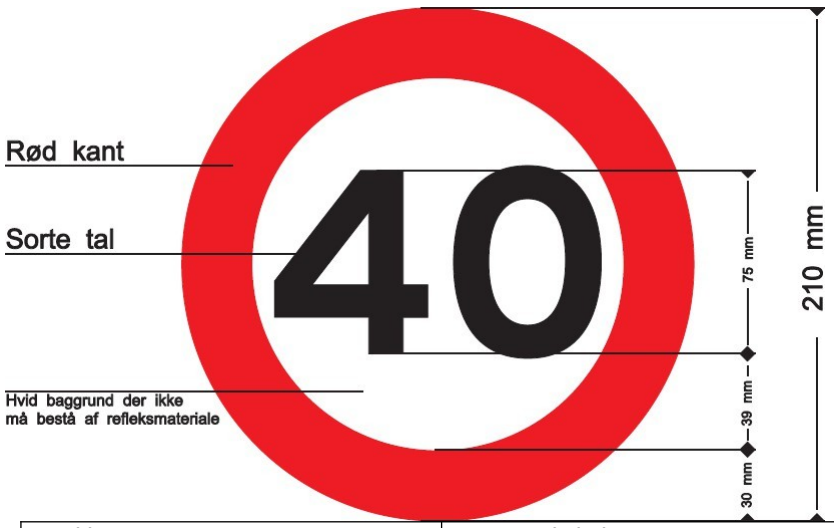
2.3.1 General provisions

(1) If the registration or approval of a vehicle stipulates a different speed limit than as laid down in Sections 2 and 43 of the Road Traffic Act, the vehicle shall bear an inscription or a sign indicating that stipulated speed limit.

Lowboys (including power-driven), mobile cranes, and large towed equipment are subject to the provisions in the Order on special transport apply.

(2) An inscription or sign shall be affixed to the rear of the vehicle.

(3) The inscription or sign shall be formatted as shown by the example below, in which the dimensions are expressed in millimetres:



Rød kant	Outer red circle
Sorte tal	Black numbers
Hvid baggrund der ikke må bestå af refleksmateriale	White background, must not be of reflective material

3. Weights and dimensions

3.1 Weights and axle loads, etc.

3.1.1 General provisions

(1) The maximum permissible axle load, maximum authorized drawbar load, and maximum permissible laden weight may not exceed those that are technically permissible as guaranteed by the vehicle manufacturer.
(2) For the purposes of the provisions on axle load and total laden weight, axles that are less than 1.00 m apart from each other are considered to be one single axle.
(3) The permissible axle load may not exceed 10 000 kg.
(4) In the case of a vehicle fitted with smooth rollers, the permissible axle load may not exceed 10 kg/mm of the width of the area of contact.
If the outer diameter of the roller is less than 0.50 m, then the permissible axle load is reduced by the ratio of the actual diameter to a diameter of 0.50 m.
(5) In the case of a vehicle that runs wholly or partly on tracks, the permissible load on a track roller may not exceed 1 500 kg.
If the width of the track is less than 0.35 m, then the permissible load is reduced by the ratio of the actual width to a width of 0.35 m.
(6) The maximum permissible laden weight may not exceed the sum of the permissible axle loads. However, in the case of semi-trailers and trailers with kingpins or rigid drawbar trailers, the maximum permissible laden weight may not exceed the sum of the permissible axle loads and the permissible coupling load.
(7) In the case of a vehicle fitted with smooth rollers, the maximum permissible laden weight may not exceed 15 000 kg plus 250 kg for each full 0.20 m by which the distance between the first and last axle of the vehicle exceeds 2.50 m.
(8) In the case of a vehicle that runs wholly or partly on tracks, the maximum permissible laden weight may not exceed 4 000 kg per m of distance between the front and rear track roller, though a maximum of 16 000 kg.

3.01.010 Power-driven vehicle

(1) A minimum of 20 % of the maximum permissible laden weight shall be rested on the front steered wheels.
(2) In the case of a power-driven vehicle with two axles, the maximum permissible laden weight may not exceed 18 000 kg.
(3) In the case of a lorry with two axles, approved without coupling device and using alternative fuels (see Article 2 of Directive 96/53/EC as amended by 2015/719/EC), the maximum permissible laden weight may be increased by the additional weight required for the alternative fuel technology, though no more than
1 000 kg. Similarly, the maximum permissible laden weight of zero-emission vehicles (see 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, though no more than 2 000 kg.
(4) In the case of a power-driven vehicle with three axles, the maximum permissible laden weight may 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) none of the vehicle’s permissible axle loads exceed 9 500 kg.
In the case of other power-driven vehicles with three axles, the maximum permissible laden weight may not exceed 24 000 kg (except as provided for in point 3.01.023 (2)).
(5) However, in the case of cars with three axles and using alternative fuels (see Article 2 of Directive 96/53/EC as amended by 2015/719/EC), the maximum permissible laden weight may be increased by the additional weight required for the alternative fuel technology, though no more than 1 000 kg. Similarly, the maximum permissible laden weight of zero-emission vehicles (see Article 2 of Directive 96/53/EC as amended by Regulation 2019/1242/EU) may be increased by the additional weight of the zero-emission technology, though no more than 2 000 kg.
(6) In the case of a power-driven vehicle with four axles, the maximum permissible laden weight may not exceed the following:

a) 36 000 kg if the distance between the front and rear axle of the vehicle is at least 6.40 m, or if the two front axles are steered and the distance between the front and rear axle of the vehicle is at least 5.50 m.
b) 34 000 kg if the two front axles are steered and the distance between the front and rear axle of the vehicle is between 5.00 m and 5.49 m.
c) 29 500 kg for other power-driven vehicles with four axles, though 34 000 kg for articulated buses.

(7) In the case of a power-driven vehicle with five or more axles, the maximum permissible laden weight may not exceed the following:
   a) 42 000 kg if the distance between the front and rear axle of the vehicle is at least 7.40 m.
   b) 40 000 kg if the distance between the front and 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 rear axle of the vehicle is between 5.50 m and 6.79 m.
   d) 32 000 kg for other power-driven vehicles with five or more axles.

(8) The permissible driving axle load may be up to 11 500 kg if the driving axle is fitted with twin-mounted tyres and road-friendly suspension.

(9) In the case of a bogie with two axles, the total permissible axle load may be up to:
   a) 19 000 kg if the wheelbase is less than 2.00 m but not less than 1.30 m and the driving axle is fitted with twin-mounted tyres, and
      i) road-friendly suspension, or
      ii) the permissible axle loads of individual axles do not exceed 9 500 kg.
   b) 18 000 kg if the wheelbase is less than 1.80 m but at least 1.30 m.
   c) 16 000 kg if the wheelbase is less than 1.30 m but at least 1.00 m.
   d) 11 500 kg if the wheelbase is less than 1.00 m.

(10) In the case of a bogie with three axles, the total permissible axle load may not exceed 27 000 kg.
   However, the total permissible axle load may exceed 22 000 kg if even just one of the wheelbases is less than 1.30 m.
   The two axles with the greatest axle load in the bogie may have a total permissible axle load corresponding to the total permissible axle load of an equivalent two-axle bogie as specified in point 8.

(11) The provisions of point 3.01.001(3) and points 2–9 above concerning permissible axle load and maximum permissible laden weight do not apply to a power-driven vehicle that is used as motive power for a lowboy.

3.01.023 M3 passenger car

(1) In the case of an M3 passenger car with two axles, the maximum permissible laden weight may not exceed 19 500 kg.

(2) In the case of an articulated bus with three axles, the maximum permissible laden weight may not exceed 28 000 kg, and in the case of an articulated bus with four or more axles, the maximum permissible laden weight may not exceed 34 000 kg.

(3) In the case of an articulated bus with three axles and using alternative fuels (see Article 2 of Directive 96/53/EC as amended by 2015/719/EC), the maximum permissible laden weight may be increased by the additional weight required for the alternative fuel technology, though no more than 1 000 kg. Similarly, the maximum permissible laden weight of zero-emission vehicles (see 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, though no more than 2 000 kg.

3.01.026 N3 Lorry

(1) In the case of N3 lorries with two axles, approved with coupling device, the maximum permissible laden weight may not exceed 20 000 kg.

3.01.030 Motorcycle

(1) A minimum of 25 % of the maximum permissible laden weight shall be rested on the front wheel(s).

3.01.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.
   Before 1/5/1977: Does not apply to small mopeds approved before that date (TUM mark).

3.01.050 Tractor

(1) A minimum of 20 % of the maximum permissible laden weight shall be rested on the steered wheels.

3.01.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors.

(2) However, the rules on weight on the steered wheels do not apply to forklifts, which comply with the Order on the design of technical equipment.

3.01.099 Power-driven lowboy

(1) The provisions of points 3.01.001(3), 5 and 8, and 3.01.010(2–10) above concerning permissible axle load and maximum permissible laden weight do not apply to power-driven lowboys.

3.01.100 Towed vehicle

(1) In the case of a trailer coupled to a car, other than a rigid drawbar trailer, the maximum permissible laden weight may not exceed 27 000 kg. The same applies to a trailer built on such a chassis and coupled to a car.

(2) However, in the case of a trailer coupled to a vehicle, other than a rigid drawbar trailer, where the trailer has four or more axles and the trailer fulfils the following conditions, the maximum permissible laden weight may be up to 32 000 kg:

a) The two front axles are steered and have a wheelbase of less than 1.80 m, or the bogie at the back has no more than two fixed axles and a total permissible axle load of no more than 70 % of the total permissible weight.

b) The trailer has anti-lock brakes (ABS).

The same applies to towed equipment built on trailer chassis and coupled to a car.

(3) In the case of semi-trailers and towed equipment (subject to registration) with a kingpin, the total permissible axle load may not exceed:

a) 24 000 kg, however,

b) 30 000 kg if the semi-trailer or towed equipment has anti-lock brakes (ABS).

(4) In the case of a bogie with two axles, the total permissible axle load may not exceed:

a) 18 000 kg if the wheelbase is less than 1.80 m but at least 1.30 m.
If the total permissible axle load exceeds 16 000 kg, the permissible axle load on an individual axle may not exceed 9 000 kg.

b) 16 000 kg if the wheelbase is less than 1.30 m but at least 1.00 m.
The permissible axle loads of individual axles may not exceed 8 000 kg.

c) 11 000 kg if the wheelbase is less than 1.00 m.
The permissible axle loads of individual axles may not exceed 8 000 kg.

(5) In the case of a bogie with three axles, the total permissible axle load may not exceed:

a) 27 000 kg, however;

b) 24 000 kg if the distance between the first and last axle of the axle group is less than 2.80 m or if the distance between any two axles is less than 1.30 m;

c) 22 000 kg if the distance between any two axles is less than 1.30 m but at least 1.00 m; and

d) 21 000 kg if the distance between any two axles is less than 1.00 m.

If the total permissible axle load of the bogie exceeds 24 000 kg, the axle load shall be equally distributed across the axles.

Before 1/8/2014: A rigid drawbar trailer may have a bogie load of 24 000 kg, even if the wheelbases are as short as 1.00 m.

(6) In the case of a bogie with four or more axles, the total permissible axle load may not exceed:

a) 30 000 kg, however;

b) 24 000 kg if the distance between any two axles is less than 1.30 m. The

total permissible axle load shall be equally distributed among the axles.
There may be no more than three fixed axles in the bogie.

3.01.150 Towed vehicle coupled to motorcycle

(1) The maximum permissible laden weight may not exceed 200 kg.

3.01.160 Trailer coupled to large moped

(1) The maximum permissible laden weight may not exceed 100 kg.

3.1.199 Lowboy

(1) The provisions of points 3.01.001(3)–(5), (7), and (8), and 3.01.100 above concerning permissible axle load and maximum permissible laden weight do not apply to lowboys.

3.1.200 Vehicle combination

(1) Permissible vehicle combination weight may not exceed the following:
   a) 56 000 kg in the case of vehicle combinations with seven or more axles and consisting of a car with a towed vehicle that is subject to registration.
   b) 53 000 kg in the case of vehicle combinations with six axles and consisting of a car with three axles and a towed vehicle that is subject to registration.
   c) 52 000 kg in the case of vehicle combinations with six axles and consisting of a car with four axles and a towed vehicle that is subject to registration.
   d) 50 000 kg in the case of other vehicle combinations with six axles, consisting of a car with a towed vehicle subject to registration.
   e) 47 000 kg in the case of vehicle combinations with five axles and consisting of a car and a towed vehicle that is subject to registration.
   f) 44 000 kg for other vehicle combinations.

(2) The maximum permissible weight of a trailer may not exceed:
   a) the technically permissible weight as guaranteed by the manufacturer of the towing vehicle; nor
   b) the technically permissible weight as guaranteed by the manufacturer of the coupling device.

(3) The permissible vehicle combination weight may not exceed the technically permissible weight as guaranteed by the manufacturer of the towing vehicle.

(4) However, where the towing vehicle is a car with a maximum permissible laden weight of less than 3 500 kg, the maximum towed vehicle weight – but, for semi-trailers and rigid drawbar trailers, the total axle load – may not exceed:
   a) 50 % of the towing vehicle's kerb weight, if the towed vehicle is not equipped with service brakes;
   b) the maximum permissible laden weight of the towing vehicle, if the towed vehicle is equipped with service brakes; and
   c) 1.5 times the maximum permissible laden weight of the towing vehicle, if the vehicle is an off-road vehicle and the towed vehicle is equipped with service brakes. The maximum weight of the towed vehicle, or total axle load, may not exceed 3 500 kg.

(5) In the case of a vehicle combination with a towed vehicle that is subject to registration and the towing vehicle is a car with a maximum permissible laden weight exceeding 3 500 kg, the maximum weight of the towed vehicle – but, for semi-trailers and rigid drawbar trailers, the total axle load – may not exceed 1.5 times the maximum permissible laden weight of the towing car.

(6) In the case of a vehicle combination with a towed vehicle that is subject to registration and towed by a car with a maximum permissible laden weight exceeding 3 500 kg, or towed by a tractor, at least 20 % of the maximum permissible laden weight shall be rested on the drive wheels of the towing vehicle. This provision can be considered to be met for vehicles fitted with a bogie with a driving axle and a liftable bogie axle, if the permissible axle load on the driving axle is at least 20 % of the maximum permissible laden weight of the vehicle combination.

(7) Lowboy vehicle combinations shall comply with the provisions of points (2) and (3).

(8) In the case of a vehicle combination that includes smooth rollers, the maximum permissible laden weight of the vehicle combination may not exceed 15 000 kg plus 250 kg for each full 0.20 m by which the distance between the first and last axle of the vehicle combination exceeds 2.50 m.
(9) In vehicle combinations of motorcycle and towed vehicle, the maximum weight of a towed vehicle may not exceed 50 % of the unladen weight of the motorcycle.
(10) In vehicle combinations of large moped and towed vehicle, the maximum weight of a towed vehicle may not exceed 50 % of the unladen weight of the moped.

3.01.320 School vehicle

(1) A school vehicle 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) A vehicle may not have a height greater than 4.00 m. Height is measured vertically from flat road level to the highest projecting part, excluding
- antennas, and
- pantographs or trolley booms in raised position.

In the case of a vehicle with liftable bogie axle, the axle is measured in the position of greatest height. Before 1/4/1987: The measurement instructions for vehicles with liftable bogie axles do not apply.

(2) A vehicle may not have a width greater than 2.55 m (except as provided for in points (3) and (4) below). The width is measured over the longest projecting parts, excluding:
a) Customs sealing devices and their protection (covers).
b) Devices for securing tarpaulins and their protection (covers) which do not project 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 with a radius of at least 2.5 mm.
Before 1/11/2014: There is no requirement on the maximum projection, in mm, of such devices.
c) Tyre failure tell-tale devices.
d) Projecting, flexible parts of wheel guards.
e) Lights and reflectors
f) Tail lifts, access ramps, and similar equipment, in running order and provided that the equipment does not project more than 10 mm from the sides of the vehicle, that its forward or rear-facing corners are rounded with a radius of at least 5 mm, and that its edges are rounded with a radius of at least 2.5 mm.
g) Mirrors and other devices for indirect vision.
h) Tyre-pressure indicators.
i) Retractable steps.
j) The deflected part of the tyre walls immediately above the point of contact with the ground.
k) Watching and detection aids, including radars.
l) Retractable lateral guidance devices on buses and coaches intended for use on guided bus systems, if not retracted.
m) Collapsible devices and equipment on lorry N2/N3, passenger car M2/M3 or trailer/semi-trailer O3/O4, specially designed to reduce drag, provided that they do not increase the loading capacity. Such devices shall be so designed that, when the vehicle is stationary, they can be collapsed such 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 capability of the vehicle to be used for intermodal transport. The width of the vehicle may not exceed 2.60 m, regardless of whether the devices are

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

Before 1/7/2024: It suffices for the devices to comply with the technical requirements of Regulation (EU) 1230/2012.

Before 1/9/2020: The projection can be 50 mm on either side and the total width up to 2.65 m.

n) Snow chains.

o) Safety railings on cars or towed vehicles designed and manufactured for the carriage of at least two other vehicles, if the safety railing is more than 2.00 m but not more than 3.70 m from the ground and does not project more than 50 mm from the outermost point on the side of the vehicle. The width of the vehicle may not exceed 2.65 m.

p) Antennas.

q) Flexible hoses included in tyre-pressure monitoring systems, provided that they do not project more than 70 mm on either side in relation to the widest dimension of the vehicle.

(3) Superstructures of conditioned vehicles may have a width of up to 2.60 m. 'Superstructures of conditioned vehicles' means a fixed or removable superstructure specially equipped for the transport of loads at a controlled temperature and the side walls, including insulation, are each at least 45 mm thick.

(4) Tractors and agricultural trailers may have a width of up to 3.00 m if the width of 2.55 m is exceeded solely by the wheel mounting and wheel guards.

(5) In the case of motorised work machinery, a working tool, or towed equipment specific to agricultural, forestry, or road work, the width of both the towing vehicle and that which is being towed may exceed 2.55 m.

(6) Towed vehicles or motorised work machinery towed by tractors as buffer tanks may have a width of up to 3.30 m.

(7) The length of a vehicle or vehicle combination is measured over the furthest projecting parts at the front and rear, excluding:

a) Windscreen wipers and washers.

b) Front and rear marking plates (signs).

c) Customs sealing devices and their protection (covers).

d) Devices for securing tarpaulins and their protection (covers).

e) Lights and reflectors

f) Mirrors and other devices for indirect vision.

g) Watching and detection aids, including radars.

h) Air intake.

i) Length stops for detachable bodies.

j) Access steps and hand-holds.

k) Ram rubbers and similar equipment.

l) Tail lifts, access ramps, and similar equipment in running order, not exceeding 0.30 m, provided that the loading capacity of the vehicle is not increased.

m) Coupling devices for motor vehicles (fixed and retractable).

n) Bull bars, etc. (frontal protection system) approved, marked, and installed in accordance with Regulation (EC) No 78/2009.

o) Bicycle racks (removable or retractable).

p) Collapsible devices and equipment on lorry N2/N3, large passenger car M2/M3, or trailer/semi-trailer O3/O4, intended to reduce drag, provided that they do not expand the loading area or increase the loading capacity. Such devices shall be installed at the rear of the vehicle and so designed that, when the vehicle is stationary, they can be collapsed such that the maximum permissible length of the vehicle is not exceeded by more than 200 mm and that they do not impair

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

Before 1/7/2024: It suffices for the devices to comply with the technical requirements of Regulation (EU) 1230/2012.

Before 1/9/2020: The devices are not required to comply with the technical requirements of Regulation (EU) 1230/2012.

q) External sun visors.

r) Trolley booms of electrically-propelled vehicles.

s) Antennas.

Vehicle combinations are measured as fully extended, corresponding to travelling in a straight line.

(8) When measuring the lengths (loading area length, etc.) referred to in points 3.02.200 (5) (a) and (b), the following shall be disregarded:

a) The loading area 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, excluding passenger cars M2 and M3, may not exceed 12.00 m.

If the front of an N2/N3 lorry cab – including all external projections, e.g. chassis, bumper, wheel guards and wheels – are in full compliance 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 may exceed 12.00 m. In such case, the cab shall be marked by the manufacturer with the following additional text below or next to the required inscriptions on the manufacturer's statutory plate, outside a clearly marked rectangle which shall enclose only the mandatory information:
'IN ACCORDANCE WITH ARTICLE 9A OF 96/53/EC'.

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

3.02.022 M2 passenger car

(1) A passenger car M2 with two axles may not exceed 13.50 m in length.

Before 9/3/2004: In the case of passenger car M2, the length can be up to 13.85 m, if in compliance with some specific requirements for tail swing. These requirements are checked during type-approval of vehicles.

(2) A passenger car M2 with more than two axles may not exceed 15.00 m in length.

(3) A passenger car M2 may not exceed 4.10 m in height.

3.02.023 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.

(2) In the case of an articulated bus, the length may be up to 18.75 m (except as provided for in point (3)).

(3) For articulated buses with three or more rigid sections, the length may exceed 18.75 m, if the vehicle meets the technical provisions in point 6.11.023(2), point 10.03.023(3)–(4), and UN Regulation 107-06.

3.02.025 N2 Lorry

(1) A lorry N2 may not exceed 4.10 m in height.

3.02.026 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

3.02.040 Moped

(1) A two-wheel moped may not exceed 1.00 m in width.

3.02.099 Power-driven lowboy

(1) The provisions in points 3.02.001 and 3.02.010 do not apply to power-driven lowboys.

3.02.110 Trailer/semi-trailer for vehicles

(1) For semi-trailers

a) the coupling length may not exceed 13.38 m, though the measurement excludes the parts specified in point 3.02.001 (7); and

b) the horizontal distance (radius) between the axis of the kingpin and any point on the front end of the semi-trailer does may not exceed 2.04 m, and no parts are excluded from this measurement.

For semi-trailers with two kingpins, the provisions apply to the furthest forward pin.

Before 15/9/1997: The measuring of semi-trailers does not include tarpaulins and tie-downs or the like used to secure them.

Before 28/11/1989: Semi-trailers with lengths exceeding those specified may continue to be used, provided that the total length of the semi-trailer does not exceed 13.60 m.

(2) For trailers, the length may not exceed 12.00 m.

Before 15/9/1997: Does not apply to trailers O3 and O4.

(3) In the case of a semi-trailer, the distance from the kingpin to the theoretical axis of rotation of the bogie may not exceed 8.15 m.

In the case of a semi-trailer with one or more axles, this includes the distance from the kingpin to the fixed axle or, respectively, the mid-point between the fixed axles.

In the case of semi-trailers where one or more axles are liftable, such axles shall also be in compliance with this provision.

In the case of an extendible semi-trailer, the provision shall be complied with in the retracted state. Before 1/4/2000: Only applicable to semi-trailer combinations for which coupling is not subject to a technical inspection.

Before 15/9/1997: Not applicable.

(4) A trailer/semi-trailer O3 or O4 for cars may not exceed 4.10 m in height.

3.02.150 Towed vehicle for motorcycle

(1) The length may not exceed 2.50 m.

(2) The width may not exceed 1.30 m.

3.02.160 Trailer coupled to large moped

(1) The length may not exceed 2.50 m.

(2) The width may not exceed 1.00 m.

3.02.199 Lowboy

(1) The provisions in point 3.02.001 do not apply to lowboys.

3.02.200 Vehicle combination

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

a) 17.88 m in the case of vehicle combinations consisting of a car and a semi-trailer.

b) 18.75 m in the case of other vehicle combinations.

(2) In the case of vehicle combinations with loader cranes that have a lifting capacity exceeding 8 tm, consisting of a lorry and coupled semi-trailer, the permissible length is increased by the length required for the installation of the loader crane, up to 0.62 m.

(3) In the case of vehicle combinations with loader cranes that have a lifting capacity exceeding 8 tm, consisting of a lorry and coupled trailer, the permissible length is increased by the length required for

the installation of the loader crane, up to 2.00 m.

(4) In the case of vehicle combinations consisting of a lorry with semi-trailer, where the lorry is a zero-emission vehicle or uses alternative fuels (see Article 2 of Directive 96/53/EC as amended by Regulation 2019/1242/EU), the permissible length is increased by the length required for the zero-emission technology or equipment necessary for use of alternative fuels, up to 0.62 m.

(5) In the case of vehicle combinations consisting of a tractor and one or two trailers, or a tractor and one trailer and one piece of towed equipment, the width of which does not exceed 3.00 m, the length may not exceed 22.00 m.

(6) In the case of vehicle combinations consisting of a tractor or motorised work machinery with one trailer, the length may not exceed 22.00 m.

(7) In the case of vehicle combinations consisting of combine harvesters or swathers and a towed vehicle with a cutting platform, the length may be up to but not exceed 25.00 if the towed vehicle
   a) has a minimum of two axles, and
   b) has forced steering on all axles.

(8) In the case of vehicle combinations consisting of a lorry and a trailer, the following applies:
   a) The maximum distance measured parallel to the longitudinal axis of the vehicle combination from the foremost external point of the loading area from behind the cab to the rearmost external point of the vehicle combination may not exceed 16.40 m. In the case of vehicle combinations with a loader crane that has a lifting capacity exceeding 8 tm, the distance can be increased by the distance required for the installation of the loader crane. However, the increase in length may not exceed 2.00 m.

      Before 15/9/1997: Does 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 external point of the loading area from behind the cab to the rearmost external point of the vehicle combination, minus the distance between the rear of the drawing vehicle and the front of the trailer may not exceed 15.65 m, except in the case of vehicle combinations specifically designed for vehicle transport.

      Before 15/9/1997: Does not apply to vehicle combinations where at least one of the vehicles was first registered before 15 September 1997, provided that the sum total of the external lengths of the lorry and the loading area of the trailer (from the rear of the cab) does not exceed 15.65 m.

(9) The distance between the rear edge of the drawing vehicle and the front edge of the loading area or structure of the trailer or towed equipment that is subject to registration may not exceed 2.00 m. In the case of towed equipment not subject to registration, the distance may not exceed 4.00 m.

(10) A towed vehicle that is subject to registration may not have a width exceeding the width of the towing car by more than 0.35 m on each side.

(11) In the case of semi-trailer combinations with five or more axles, the distance between the rear axle of the towing vehicle and the foremost semi-trailer axle shall be at least:
   a) 2.50 m; but
   b) 3.00 m if the semi-trailer has three axles and the distance between any two axles is less than 1.10 m; and
   c) 3.00 m for semi-trailer combinations with a maximum permissible laden weight exceeding 44 000 kg; and
   d) 3.50 m for semi-trailer combinations with five axles and a maximum permissible laden weight exceeding 46 000 kg; and
   e) 3.50 m for semi-trailer combinations with six axles and a maximum permissible laden weight exceeding 50 000 kg.

(12) In vehicle combinations consisting of lorries with trailers, the distance between the rear axle of the drawing vehicle and the foremost trailer axle shall be at least:
   a) 3.00 m; but
   b) 3.50 m for vehicle combinations with five axles and a maximum permissible laden weight exceeding 46 000 kg; and

c) 3.50 m for vehicle combinations with six axles and a maximum permissible laden weight exceeding 50 000 kg.

(13) In the case of vehicle combinations consisting of lorries with rigid drawbar trailers or lorries and semi-trailers, and with a maximum permissible laden weight exceeding 54 000 kg, the distance between the rear axle of the towing vehicle and the foremost trailer axle may be no less than 4.00 m.

(14) If the front of an N2/N3 lorry cab – including all external projections, e.g. chassis, bumper, wheel guards and wheels – is in full compliance with the requirements of Annex XIII to Regulation (EU) 2021/535,

and the length of the lorry's loading area does not exceed 10.5 m, the length of the vehicle combination may exceed the maximum permissible length as specified in point (1). In that case, the cab shall be marked by the manufacturer with the following additional text below or next to the required inscriptions on the manufacturer's statutory plate, outside a clearly marked rectangle which shall enclose only the mandatory information:

'IN ACCORDANCE WITH ARTICLE 9A OF 96/53/EC'.

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

(15) Lowboy vehicle combinations shall comply with the provisions of point (9).

3.02.310 Vehicle for which coupling is not subject to a technical inspection

(1) Semi-trailer combinations for which coupling is not subject to a technical inspection, as per the rules on such, are subject to the provisions of points 3.02.200 (8) (c) and (10), i.e. use of actual total laden weight.

3.02.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

3.02.363 Vehicle specifically designed to perform roadwork

(1) For a vehicle that is on standby for emergency snow clearance, the length measurement excludes the snow removal unit and its fittings.

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

(3) Vehicles on which snow ploughs are mounted, where the width of the snow plough exceeds the width of the vehicle by more than 0.30 m, shall be marked at the rear in accordance with point 6.10.02.

4. Steering equipment

4.1 Steering equipment

4.1.1 General provisions

(1) Steering equipment shall be so arranged,

a) that the vehicle can be controlled easily, safely, and quickly;

b) that it can withstand the stresses produced under normal operating conditions;

c) that when driving, it is either self-righting or indifferent to all steering angles; and

d) that the vehicle can be controlled even if any auxiliary steering fails.

Driving as mentioned under point (c) means driving at a speed of at least 10 km/h and a steering angle of less than 50 % of the maximum steering angle.

Self-righting as mentioned under point (c) means that, when driving on a flat road, the vehicle seeks a return to driving in a straight line.

Indifferent to all steering angles as mentioned under point (c) means that a change in the position of the steered wheels when driving on a flat road can only be produced by the influence hands on the steering wheel.

(2) The steering controls shall be easy to operate and its direction of motion shall correspond to the intended change in direction of the vehicle.
(3) The steering box shall be firmly attached to the load-bearing elements and all assemblies of the steering equipment shall be adequately secured.
(4) Parts which are included in the transmission of steering between the steering controls and steered wheels and which are not protected by fixed parts of the vehicle shall be in positions at least 0.15 m above the ground.
(5) Normal wear and tear must not cause significant play in the steering as a whole or in its individual parts.

4.1.2 Electronic stability control (ESC)

(1) Electronic Stability Control (ESC) is a system capable of counteracting skids and roll-overs by braking one or more wheels, and complies with UN Regulations 13 or 140.

4.1.3 Lane departure warning system (LDWS)

(1) Lane departure warning system (LDWS) means a system where an unintended lane drift triggers a warning to the driver via a light, sound, or vibration signal, and which meets the technical requirements on such in Regulation (EU) 2021/646 or UN Regulation 130.
Before 1/7/2024: LDWS may comply with Regulation (EU) 351/2012, Regulation (EU) 661/2009, or Directive 2007/46/EC.

4.1.4 Emergency Lane Keeping System (ELKS)

(1) Emergency Lane Keeping System (ELKS) is a system that helps the driver to keep the vehicle in a safe position in relation to the lane or road boundary, and which meets the technical requirements on such in Regulation (EU) 2021/646 or UN Regulation 157.

4.01.010 Power-driven vehicle

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

4.1.20 Car

(1) There need not be a mechanical connection to wheels with auxiliary steering equipment (ASE) if the vehicle complies with the provisions of UN Regulation 79-03 on auxiliary steering equipment.
Before 1/7/2024: Such cars shall comply with UN Regulation 79-01.
(2) A vehicle shall have an outside turning radius of 12.50 m and an inside turning radius of 5.30 m.
Measuring the turning radii disregards the parts mentioned in point 3.02.001 (2).
In the case of a vehicle with liftable bogie axle, both are measured with the axle lifted.
Before 15/9/1997: Only applicable to passenger car M2/M3 with a length greater than 12.00 m.
(3) When a car tangentially begins the turning radius described above in point (2), no part may cross outside the tangent by more than 0.60 m.

4.1.21 Passenger car M1

(1) Passenger car M1 shall be fitted with a protective steering that complies with the design provisions in one of the following sets of rules:
a) UN Regulation 12-04.
b) American standard FMVSS 203 and FMVSS 204.
A vehicle complying with UN Regulation 94-01 shall be considered to be in compliance with the provision.

Special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.

Before 1/1/2017: Alternatively, passenger car M1 may comply with UN Regulation 12-03, Directive 74/297/EEC as amended by Directive 91/662/EEC, or American standard FMVSS 203 and FMVSS 204. Vehicles with forward control are excluded.

Before 1/4/2002: Alternatively, passenger car M1 may comply with UN Regulation 12, Directive 74/297/EEC, or American standard FMVSS 203 and FMVSS 204. Vehicles with forward control are excluded.

Before 1/5/1977: Not applicable.

(2) An M1 passenger car shall be equipped with electronic stability control (ESC). This requirement does not apply to passenger car M1 produced in small series.
Before 1/11/2014: Not applicable.

4.1.22 M2 passenger car

(1) An M2 passenger car shall be equipped with electronic stability control (ESC). This provision does not apply to vehicles with more than three axles, articulated buses, city buses, or off-road vehicles.
Before 11/7/2015: Not applicable.

(2) An M2 passenger car shall be equipped with a lane departure warning system (LDWS). The requirement does not apply to passenger cars
a) with more than three axles,
b) approved for standing passengers (see classes A, I, and II of UN Regulation 107 on buses),
c) that are off-road, or
d) that are special purpose vehicles (see Regulation (EU) 2018/858, Part A 2.2). Before 1/11/2015: Not applicable.

4.1.23 M3 passenger car

(1) An M3 passenger car shall be equipped with electronic stability control (ESC). This provision does not apply to vehicles with more than three axles, articulated buses, city buses, or off-road vehicles.
Before 11/7/2015: Does not apply to passenger car M3 with hydraulic brakes.
Before 1/11/2014: Not applicable in the case of a maximum permissible laden weight of less than 12 000 kg.
Not applicable to approval with (at least two) standing positions for the use ‘Only approved for regular services’.
Before 1/4/2012: Not applicable in the case of a maximum permissible laden weight of less than 12 000 kg.
Not applicable to approval with (at least two) standing positions.
Before 1/7/2005: Not applicable.

(2) Passenger car M3 is subject to the lane departure warning system (LDWS) provisions in point 4.01.022 (2). Before 1/11/2015: Not applicable.

4.1.24 N1 light goods vehicle

(1) Light goods vehicle N1 with a maximum permissible laden weight not exceeding 1 500 kg shall comply with the provisions in point 4.01.021 (1) on protective steering.
Before 1/4/2002: Not applicable.

(2) Light goods vehicle N1shall be equipped with electronic stability control (ESC). This requirement does not apply to light goods vehicle N1 produced in small series.
Before 1/11/2014: Not applicable.

4.1.25 N2 Lorry

(1) An N2 lorry shall be equipped with electronic stability control (ESC). The provision does not apply to lorries
a) with more than three axles,
b) that are off-road, or
c) that are special purpose vehicles (see Regulation (EU) 2018/858, Part A 2.2).
The provision also does not apply to lorry N2, approved as motive power for semi-trailers and with a maximum permissible laden weight not exceeding 7 500 kg.
Before 11/7/2015: Does not apply to lorries with hydraulic brakes.
Before 1/11/2014: Not applicable.

(2) An N2 lorry shall be equipped with a lane departure warning system (LDWS). The provision does not apply to lorries
a) with more than three axles,
b) that are off-road, or
c) that are special purpose vehicles (see Regulation (EU) 2018/858, Part A 2.2). Before 1/11/2015: Not applicable.

4.1.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

4.1.31 Two-wheeled motorcycle

(1) Steering mechanism shall be so arranged:
a) that the full steering angle is at least 25° to each side, and
Before 1/4/1984: Not applicable.
b) that there is sufficient space for the driver's hands at any steering angle. Before 1/4/1970: Not applicable.

(2) Handlebars shall be attached directly to the forks.

4.1.32 Two-wheeled motorcycle with sidecar

(1) Two-wheel motorcycle with sidecar shall comply with the provisions for two-wheel motorcycle.

4.1.33 Tricycle

(1) Tricycle with one front wheel shall comply with the provisions for two-wheel motorcycle.
(2) Tricycle with two front wheels shall comply with the provisions for vehicle.

4.01.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.

4.01.050 Tractor

(1) A tractor may have a steering mechanism that acts
a) on the front wheels alone,
b) on the rear wheels alone, or
c) at the same time on the front and rear wheels.

(2) A tractor may have a steering mechanism with a hydraulic transmission of steering between the steering controls and the steered wheels.

(3) A tractor may be fitted with a steering mechanism with electric transmission of steering between the steering controls and the steering mechanism if the system is a two-circuit system.
The tractor shall remain steerable even upon failure of any part of the electrical system.

(4) Tractors equipped with tracks shall have a steering mechanism in accordance with Regulation (EU)

2015/208, Annexes V and XXXIII.
Before 1/7/2024: Does not apply to tractors that are not subject to registration.

4.01.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors.

4.01.099 Power-driven lowboy

(1) Power-driven lowboys with a maximum design speed of 30 km/h or less shall comply with the provisions for tractors.

(2) Other power-driven lowboys shall comply with the provisions for vehicles. However, power-driven lowboys need not comply with point 4.01.020 (2) on turning radius.

4.01.100 Towed vehicle

(1) A towed vehicle with a self-tracking axle shall comply with the provisions on tail swing in UN Regulation 79-03.
Before 1/7/2024: A towed vehicle with a self-tracking axle shall comply with the provisions on tail swing in UN Regulation 79-01.
Before 1/1/2017: Alternatively, a towed vehicle may comply with the provisions of Directive 70/311/EEC as amended by Directive 1999/7/EC.

(2) A trailer and towed equipment shall have be fitted with a steering mechanism if the distance between the front and rear axles exceeds 2.80 m. Such steering mechanism shall act on the front axle.
Before 1/5/1977: Not applicable.

(3) Semi-trailers may be fitted with a mechanically activated steering mechanism on one or more axle.

(4) Semi-trailers may be fitted with a hydraulically activated automatic steering mechanism on one or more axle. There shall be compliance with the following provisions:

a) The steering mechanism shall comply with the design provisions of UN Regulation 79-03.
Before 1/7/2024: The steering mechanism shall comply with the design provisions of UN Regulation 79-01.
Before 1/1/2017: Alternatively, the steering mechanism may comply with the provisions of Directive 70/311/EEC as amended by Directive 1999/7/EC.

b) a red tell-tale for a pressure drop in the hydraulic system shall be at the driving position in the towing lorry or at the front left corner of the semi-trailer, located at such height and at such luminance as to be clearly visible in the left side mirror of the lorry. The tell-tale, or an equivalent tell-tale, shall also activate if not all valves are properly positioned for locked or automatic steering.

c) There shall be a system (with tell-tales or similar) that enables precise manual adjustment of the axles to the straight-ahead position.

d) A system for secondary manual steering from inside or outside the driver's cab is permitted if the semi-trailer system is so designed that it automatically prevents the use of manual steering at speeds greater than 20 km/h.
The system shall also prevent the use of manual steering in the event of failures in the system, including if speed signalling is not being received in the control unit.

e) In the semi-trailer there shall be an instruction manual in Danish covering all circumstances of operation and maintenance of the steering system.

f) In proximity to the semi-trailer's inscriptions of weights, there shall be an inscription with the following text: 'Hydraulically-steered semi-trailer. See instruction manual.'

4.1.113 Trailer/semi-trailer O3

(1) An O3 trailer/semi-trailer with air suspension shall be equipped with electronic stability control (ESC). This provision does not apply to trailers/semi-trailers with more than three axles.
Before 1/11/2014: Not applicable.

4.1.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for trailer/semi-trailer O3.

4.1.199 Lowboy

(1) A lowboy may be fitted with a steering mechanism on one or more axles in accordance with the rules for towed vehicles.

Before 1/4/2000: A lowboy may be fitted with a steering mechanism on one or more axles (no specified requirements).

4.1.200 Vehicle combination

(1) A vehicle combination, where the towing vehicle is a car, shall have an outside turning radius of 12.50 m and an inside turning radius of 5.30 m, as the provisions in point 4.01.020 (2) apply mutatis mutandis.

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

Before 15/9/1997: Does not apply to vehicle combinations where at least one of the vehicles was first registered before 15 September 1997.

(2) Semi-trailer combinations in which the semi-trailer meets the requirement in point 3.02.110 (3) concerning the distance from the kingpin to the theoretical axis of rotation, are considered to be in compliance with point (1).

(3) When a vehicle combination, where the towing vehicle is a car, tangentially begins the turning radius described above in point (1), no part may cross outside the tangent by more than 0.60 m.

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

4.01.310 Vehicle for which coupling is not subject to a technical inspection

(1) Semi-trailers fitted with a mechanically or hydraulically activated steering mechanism on the rear axle(s) shall be fitted with a coupling device (2” kingpin and steering wedge) in accordance with UN Regulation 79-03.

Before 1/7/2024: Semi-trailers fitted with a mechanically or hydraulically activated steering mechanism on the rear axle(s) shall be fitted with a coupling device (2” kingpin and steering wedge) in accordance with UN Regulation 79-01.

Before 1/1/2017: Alternatively, the coupling device may comply with Directive 70/311/EEC as amended by Directive 92/62/EEC.

(2) Semi-trailers fitted with a hydraulically activated steering mechanism on the rear axle(s) shall be fitted with a red tell-tale for a pressure drop in the hydraulic system, at the front left corner of the semi-trailer, located at such height and at such luminance as to be clearly visible in the left side mirror of the lorry.

4.01.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

4.01.330 Rental vehicle

(1) A rental car may not have the steering wheel on the right side.

5. Brakes

5.1 Braking systems

5.1.1 General provisions

(1) The braking system shall be so designed that the mode of operation remains satisfactory in terms of safety during normal use and during the resulting vibrations, etc.

(2) Brake wear shall be easily compensated by means of a manual or automatic adjusting device.

(3) The braking system shall have such a reserve of travel that the prescribed performance can be achieved without immediate adjustment when the brakes get hot and when the brake linings have been worn to a certain degree.

(4) Braking surfaces of required brakes shall have a fixed mechanical connection with the wheels by means of sufficiently break-resistant parts.

5.1.2 Service brakes

(1) The service brakes shall be capable of braking and stopping the vehicle in a safe, fast, and effective manner at any speed and under all load conditions.

(2) The performance of the service brakes shall be
   a) continuously variable, and
   b) symmetrically distributed in relation to the longitudinal axis of the vehicle.

(3) The required performance of the service brakes shall be achievable upon first actuation of the control device.

(4) In the case of service brakes where the muscular force of the driver alone is insufficient to produce the prescribed secondary braking performance:
   a) The system shall have a sufficient energy reserve, even in the event of failure of the energy source, to enable the vehicle to be stopped with the prescribed secondary braking performance.
   b) The vehicle shall be fitted with an optical or audible warning device giving a signal when the energy reserve falls below 65 % of the lower threshold of normal operating range.
   Before 1/5/1968: Not applicable.
   c) It must not be possible for the auxiliary equipment of the vehicle to take energy from the braking system energy reserve when it is below 65 % of the lower threshold of normal operating range.

5.1.3 Secondary brakes

(1) The secondary brakes 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 brakes.

(2) Secondary brakes may be
   a) a separate braking system,
   b) combined with the service brakes, or
   c) combined with the parking brake.

(3) The required performance of the secondary brakes shall be achievable upon first actuation of the control device.

(4) The performance of the secondary brakes shall be continuously variable. Before 1/4/1980: Not applicable.

5.1.4 Parking brake

(1) The parking brake shall be capable of holding the vehicle stationary on inclined ground, with the active brake components being kept in the braking position by purely mechanical means.
   A parking brake designed as a spring brake, on a tank vehicle, may be fitted with additional exterior controls such that the parking brake cannot be released as long as the hatch to the control cabinet is open.
   A towed vehicle on which the parking brake is a spring brake shall be fitted with a manually operated device allowing the spring brake actuators to be ventilated so that the spring thereby immediately brakes the vehicle.

Before 1/9/1975: Towed vehicles need not be fitted with the abovementioned manually operated device. However, it shall be possible to keep the parking brake activated even when the towed vehicle is unhitched.

5.1.5 Anti-lock brakes (ABS)

(1) Anti-lock brakes (ABS) shall comply with the design provisions of UN Regulation 13-11 or UN Regulation 13-H.
However, motorcycles shall comply with the design provisions of UN Regulation 78-03.
Though vehicles with hydraulic brakes can comply with American standard FMVSS 105 or 135.
Before 1/1/2017: The ABS can comply with the design provisions of UN Regulation 13-09 or Directive 71/320/EEC as amended by Directive 98/12/EC, though UN Regulation 78-02 in the case of motorcycles.
Before 1/4/2002: The ABS can comply with the design provisions of UN Regulation 13-06 or Directive 71/320/EEC as amended by Directive 88/194/EEC, though UN Regulation 78-01 in the case of motorcycles.
Before 1/4/1992: The ABS can comply with the design provisions of UN Regulation 13-03 or Directive 71/320/EEC as amended by Directive 85/647/EC.

(2) Anti-lock brakes (ABS) on a car are broken down in UN Regulation 13-11 as follows:
a) Category 1 meets all requirements of the Regulation.
b) Category 2 need not meet specific performance requirements on roads with differing adhesion surfaces on the right and left side.
c) Category 3 need not meet specific stability and performance requirements on roads with differing adhesion surfaces on the right and left side.

(3) Anti-lock brakes (ABS) on a towed vehicle are broken down in UN Regulation 13-11 as follows:
a) Category A meets all requirements of the Regulation.
b) Category B need not meet specific performance requirements on roads with differing adhesion surfaces on the right and left side.

5.1.6 Reverse automatic braking

(1) Reverse automatic braking is a system that automatically brakes the vehicle by means of the service or parking brake when
a) the vehicle is in reverse gear and
b) a sensor on the rear of the vehicle is touched.

(2) Reverse automatic braking shall be configured such that it is not unintentionally activated during forward driving in the event of a failure in the electrical part of the system.

5.1.7 Brake assist

(1) Brake assist is a feature of the service brake system where a need for strong braking is detected on the basis of the driver's application of the brakes, and where
a) the feature helps the driver achieve maximum possible deceleration, or
b) the feature ensures full activation of the anti-lock brakes (ABS).

5.1.8 Advanced Emergency Braking System (AEBS)

(1) Advanced Emergency Braking System (AEBS) is a feature that meets the technical requirements of UN Regulation 131 or UN Regulation 152 and where an obstacle in front of the vehicle constituting an impact risk triggers
a) a warning to the driver via a light, sound, or vibration signal (impact warning phase); and
b) activation of the service brakes (secondary brakes phase).
Before 1/7/2024: AEBS may comply with Regulation (EU) 347/2012, Regulation (EU) 2015/562, or Directive 2007/46/EC.

5.1.9 Combined braking system

(1) Combined braking system is a service brakes system in which at least two brakes on different wheels are applied by actuation of a control device (a grip or a pedal).

5.1.10 Power-driven vehicle

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

5.1.20 Car

(1) A car shall have service brakes, secondary brakes, and a parking brake.
   Before 1/5/1977: A car shall have service brakes and an independent parking brake capable of stopping the vehicle in a safe and effective manner.
(2) The service brakes shall act on all the wheels of the vehicle.
   Before 1/5/1977: Does not apply to a passenger car M1 that does not have EEC type-approval. Before 1/7/1968: Not applicable.
(3) The parking brake control device shall be independent of the service brakes control device.
(4) It shall also be possible to use the parking brake while the vehicle is in motion.
(5) In the case of a car that is approved to tow a towed vehicle, if the service brakes of both are connected to each other, the car's service brakes shall be capable of braking the car with the required performance of the secondary brakes in the event of a failure in the transmission of braking between the car and the towed vehicle or in the service brakes of the towed vehicle.
(6) In the case of a vehicle that is approved to tow a trailer/semi-trailer O3 or O4, both the service brakes of the vehicle and its secondary brakes shall be capable of actuating the service brakes of the towed vehicle.
(7) The vehicle shall be fitted with a two-circuit service brakes. Before 1/4/1980: 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.
   - Vehicle with type-approved total laden weight exceeding 8 000 kg and registered as an emergency vehicle on or after 1 November 1964.
   - Passenger car M3 with a maximum permissible laden weight exceeding 8 000 kg and registered for commercial carriage of passengers.
(8) A vehicle that is approved to tow a trailer/semi-trailer O3 or O4 with anti-lock brakes (ABS) shall be fitted with a tell-tale and connector to the ABS of the towed vehicle in accordance with standard ISO 7638-1:2018 or ISO 7638-2:2018.
   Before 1/4/1993: Only applicable to vehicles approved in a new vehicle combinations on or after 1 April 1993.
(9) The service brakes shall be self-adjusting. Before 1/4/1995: Not applicable.
(10) Wear and tear of the linings of service brakes shall be easy to check from the outside or underside of the vehicle using just the tools or equipment normally supplied with the vehicle. Such may be carried out by via of appropriate inspection openings or otherwise. Alternatively, there may be an acoustic or optical tell-tale located at the driving position which warns when

   the lining needs to be replaced. Checks that require the removal of wheels are permitted only on passenger car M1 and light goods vehicle N1.
   Before 1/4/1995: Not applicable.

5.1.21 M1 passenger car

(1) Passenger car M1 shall be equipped with anti-lock brakes (ABS) of category 1.
Before 1/7/2024: Not applicable.
(2) Rear-wheel brakes on passenger car M1 need not be self-adjusting.
(3) Passenger car M1 shall be equipped with brake assist that complies with UN Regulation 13-H or UN Regulation 139.
This requirement does not apply to passenger car M1 produced in small series. Before 1/4/2012: Not applicable.

5.1.22 M2 passenger car

(1) Passenger car M2 shall be equipped with anti-lock brakes (ABS) of category 1.
Before 1/4/2001: Not applicable.
(2) Passenger car M2 may be equipped with reverse automatic braking.
(3) Passenger car M2 shall be equipped with an Advanced Emergency Braking System (AEBS) that complies with UN Regulation 131-01. The requirement does not apply to M2 passenger cars
a) with more than three axles,
b) that are approved for standing passengers (see classes A, I, and II of UN Regulation 107 on buses),
c) that are off-road, or
d) that are special purpose vehicles (see point 5 of Part A of Annex I to Regulation (EU) 2018/858).
Before 1/7/2024: The vehicle may meet approval level 2 in Annex II to Regulation (EU) 2015/562.
Before 1/11/2019: The vehicle needs only to meet approval level 1, and a vehicle that does not have both air brakes and pneumatic rear axle suspension need not have AEBS.
Before 1/11/2015: Not applicable.

5.1.23 M3 passenger car

(1) Passenger car M3 shall be equipped with anti-lock brakes (ABS) of category 1.
Before 1/4/2001: Applies only to passenger car M3 with a maximum permissible laden weight exceeding 12 000 kg, which does not have any standing area beyond the aisle, does not have two double doors, and has an actual luggage compartment.
Before 1/4/1993: Applies only to passenger car M3 with a maximum permissible laden weight exceeding 12 000 kg, which does not have any specific standing area beyond the aisle.
Before 1/4/1992: Not applicable.
(2) Passenger car M3 may be equipped with reverse automatic braking.
(3) Passenger car M3 shall comply with the provisions in point 5.01.022 (3) on AEBS. Before 1/11/2015: Not applicable.

5.1.24 N1 light goods vehicle

(1) Light goods vehicle N1 shall be equipped with anti-lock brakes (ABS) of category 1. Before 1/7/2024: Not applicable.
(2) Rear-wheel brakes on light goods vehicle N1 need not be self-adjusting.
(3) Light goods vehicle N1 shall be equipped with brake assist that complies with UN Regulation 13-H or UN Regulation 139.
This requirement does not apply to light goods vehicle N1 produced in small series.

Before 1/7/2024: A light goods vehicle derived from an M1 passenger car and with a maximum permissible laden weight not exceeding 2 500 kg shall have brake assist.

Before 1/4/2012: Not applicable.

5.1.25 N2 Lorry

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

Before 1/4/2001: In the case of a vehicle that is approved to tow a trailer/semi-trailer O3 or O4, the rear axle(s) shall be fitted with ALB if the ratio between the permissible axle load and the axle load at kerb weight is greater than 4:3. A liftable axle in a bogie need not have ALB. A car with ABS need not have ALB, either.

Before 1/10/1972: The provisions on ALB apply only to cars for which coupling is not subject to a technical inspection and cars which after said date are approved in new vehicle combinations.

(2) A lorry N2 approved to tow towed equipment trailer/semi-trailer O3 and O4 with air brakes shall have a paired cable brake coupler. The maximum pressure in the supply line shall be at least 7.0 bar and at most 8.5 bar and the maximum pressure in the control line shall be at least 6.5 bar and at most 8.5 bar. The lorry shall be fitted with a tell-tale and connector to the ABS of the towed vehicle in accordance with standard ISO 7638-1:2018 or ISO 7638-2:2018.

Before 1/4/2001: The maximum pressure in the supply line may be at least 6.5 bar.

Before 1/4/1993: Only applicable to lorries for which coupling is not subject to a technical inspection. The maximum pressure in the control line may be at least 6.0 bar. In addition, a manual brake force regulator may be installed on the control line to regulate the maximum braking power of a foreign semi-trailer if it is not equipped with ALB or ABS. The regulator is powered by the stop light circuit of the electrical connection plug.

(3) A lorry N2 shall not be fitted with a device capable of only braking the towed vehicle (roll brakes).

Before 1/4/1995: Only applicable to lorries N2 approved for coupling not subject to a technical inspection.

Before 1/4/1989: In the case of a vehicle, before this date, approved for coupling not subject to a technical inspection, any installed roll brakes must be removed (at minimum the controls must be removed).

(4) An off-road N2 lorry shall not have self-adjusting brakes.

(5) A lorry N2 may be equipped with reverse automatic braking.

(6) Lorry N2 shall be equipped with an Advanced Emergency Braking System (AEBS) that complies with UN Regulation 131-01.

The requirement does not apply to N2 lorries

a) with more than three axles,

b) that are designed as motive power for semi-trailers and with a maximum permissible laden weight not exceeding 7 500 kg,

c) that are off-road, or

d) that are special purpose vehicles (see point 5 of Part A of Annex I to Regulation (EU) 2018/858).

In the period from 15 September to 15 May, a lorry equipped with AEBS may have snow plough mounts, even if such prevents the AEBS function. While the mounts are in place, the AEBS system may be switched off according to the manufacturer’s instructions or deactivated by a switch located at the driving position.

Before 1/7/2024: The vehicle may meet approval level 2 in Annex II to Regulation (EU) 2015/562.

Before 1/11/2019: The vehicle needs only to meet approval level 1, and a vehicle that does not have both air brakes and pneumatic rear axle suspension need not have AEBS. Furthermore, a lorry with a maximum permissible laden weight not exceeding 8 000 kg need not have AEBS.

Before 1/11/2015: Not applicable.

5.1.26 N3 Lorry

(1) A lorry N3 shall comply with the system requirements for lorry N2.

Before 1/4/2001: Lorry N3 with a maximum permissible laden weight exceeding 16 000 kg and approved to tow trailer/semi-trailer O4 shall be fitted with ABS of category 1. If a lorry is approved to tow a maximum of 10 000 kg, it shall be considered to be not approved to tow trailer/semi-trailer O4.

Before 1/4/1992: Lorry N3 need not have ABS.

5.1.31 Two-wheeled motorcycle

(1) A two-wheeled motorcycle shall be fitted with service brakes divided into two independent braking systems, which at minimum each act on a different wheel.

Before 1/5/1977: The two braking systems do not need to each act on a different wheel.

(2) The following apply to the control devices for the braking systems:

a) The front wheel brake shall be hand-operated with the lever on the right side of the handlebar, or may be combined with the rear-wheel brake as specified in point (c).

b) On motorcycles with automatic clutch, the rear wheel-brake may be hand-operated with the lever on the left side of the handlebars.

c) The rear-wheel brake may be combined with the front-wheel brake. Before 1/4/1981: Not applicable.

(3) A two-wheeled motorcycle shall be equipped with ABS. However, this provision does not apply to the following motorcycles:

a) Low-performance motorcycle (displacement ≤ 125 cm^3, engine power ≤ 11 kW, and power/weight ratio ≤ 0.1 kW/kg) if the motorcycle is fitted with a combined braking system.

b) Enduro motorcycle, which is a motorcycle with seat height ≥ 900 mm, ground clearance ≥ 310 mm and overall gear ratio in the highest gear ≥ 6.0, mass in running order < 140 kg, and with no seating position for a passenger.

c) Trial motorcycle, which is motorcycle with seat height ≤ 700 mm, ground clearance ≥ 280 mm, fuel tank capacity < 4 litres, overall gear ratio in the highest gear ≥ 7.5, mass in running order < 100 kg, and with no seating position for a passenger.

Before 1/1/2017: Not applicable.

5.1.32 Two-wheeled motorcycle with sidecar

(1) A two-wheeled motorcycle with sidecar shall be fitted with service brakes divided into two independent braking systems, which at minimum each act on a different wheel.

Before 1/5/1977: The two braking systems do not need to each act on a different wheel.

(2) The performance of the service brakes need not be symmetrically distributed in relation to the longitudinal axis of the vehicle.

(3) A two-wheel motorcycle with sidecar, which is also approved with trailer, shall also be fitted with brakes on the sidecar's wheels.

5.1.33 Tricycle

(1) A tricycle shall meet the system requirements for vehicles.

5.01.040 Moped

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

If the rear-wheel brake is applied by reversing the moped's propulsion pedals, it shall be possible to achieve full braking performance by pushing the pedal downwards from a horizontal crank position.

5.01.050 Tractor

(1) A tractor shall have service brakes, secondary brakes, and a parking brake.

Before 1/10/1996: The requirement for secondary brakes does not apply.

Before 1/5/1977: A tractor shall be fitted with at least one braking device (service brakes) with which a sufficiently effective, safe and fast braking operation shall always be possible under all load conditions.

(2) The service brakes shall act on the wheels of at least one axle.

(3) The parking brake may be a locking device that blocks the tractor's transmission system (transmission lock).

5.01.060 Motorised work machinery

(1) Motorised work machinery shall meet the system requirements for tractors.

Before 1/5/1977: Motorised work machinery shall be so designed that it can be stopped sufficiently quickly and kept at a stop on incline ground, even if it is left by the operator. The requirements shall be met regardless of whether the motor of the machinery is running or stopped.

(2) Motorised work machinery that is pedestrian-operated engine shall be so designed as to automatically come to a stop if the operator releases the handle.

5.01.099 Power-driven lowboy

(1) A power-driven lowboy with a maximum permissible speed not exceeding 30 km/h shall meet the system requirements for tractors.

Before 1/5/1977: Power-driven lowboys shall meet the system requirements for vehicles.

Before 1/1/1971: Power-driven lowboys shall meet the system requirements for motorised work machinery.

(2) A power-driven lowboy with a maximum permissible speed of 45 km/h shall meet the system requirements for vehicles, excluding the requirement for anti-lock brakes (ABS).

(3) A power-driven lowboy with a maximum permissible speed of 60 km/h shall meet the system requirements for cars and shall be equipped with anti-lock brakes (ABS) of category 1.

5.1.110 Trailer/semi-trailer for vehicles

(1) A trailer/semi-trailer for cars shall be equipped with service brakes and a parking brake.

(2) The service brakes shall act on all the wheels of the vehicle.

Before 1/5/1977: Not applicable. For trailers/semi-trailers not equipped with brakes on all wheels: At least 50 % of the maximum permissible laden weight of the vehicle shall be rested on the braking wheels.

(3) The service brakes shall be configured such that the vehicle is automatically braked in the event of a break in the coupling device between the car and the trailer/semi-trailer. A a switch cable can be used for this in the case of overrun brakes.

(4) The service brakes of a semi-trailer shall be connected to the service brakes of the towing vehicle.

(5) Wear and tear of the linings of service brakes shall be easy to check from the outside or underside of the vehicle using just the tools or equipment normally supplied with the vehicle. Such may be carried out by via of appropriate inspection openings or otherwise.

Before 1/4/1995: Not applicable.

5.1.111 Trailer/semi-trailer O1

(1) A trailer/semi-trailer O1 need not be fitted with brakes.

(2) If a trailer/semi-trailer O1 is fitted with brakes, they shall comply with the provisions in the point 5.1.112 for trailer/semi-trailer O2.

5.1.112 Trailer/semi-trailer O2

(1) Service brakes on a trailer O2 shall
a) be connected to the service brakes of the towing vehicle, or
b) be overrun brakes.
However, a towed vehicle with a steered and braked front-wheel suspension shall not be fitted with overrun brakes.
If the trailer brakes are connected to the service brakes of the towing vehicle, they shall meet the requirements of UN Regulation 13 for electric brakes or air brakes.

(2) The provision in point 5.01.110 (3) need not be fulfilled in the case of a trailer O2 with one axle or with two axles that have a wheelbase of less than 1.00 m, if
a) the maximum permissible laden weight does not exceed 1 500 kg, and
b) in addition to the coupling device between the car and the trailer, there is an additional mechanical connection, which may take the form of a chain or wire which, in the event of the coupling being separated, prevents the drawbar of the trailer from touching the ground and which can maintaining a certain degree of control of the trailer.

5.1.113 Trailer/semi-trailer O3

(1) The service brakes shall be connected to the service brakes of the towing vehicle.

(2) A trailer/semi-trailer O3 shall be equipped with air brakes and a paired cable brake coupler.
Before 1/7/2024: The requirement for the brakes to be air brakes applies only to trailers/semi-trailers for which coupling is not subject to a technical inspection.
Before 1/4/1993: The requirement for a paired cable brake coupler applies only to trailers/semi-trailers for which coupling is not subject to a technical inspection.

(3) A trailer/semi-trailer O3 shall be fitted with anti-lock brakes (ABS) of category A and connector to the ABS in accordance with standard ISO 7638-1:2018 or ISO 7638-2:2018.
Before 1/10/2014: ABS does not have to be category A.
Before 1/4/2001: Not applicable. Instead, the following applied:
Axles where the ratio between the permissible axle load and the axle load at kerb weight is greater than 4:3 shall be fitted with ALB.
However, a trailer/semi-trailer O3 with ABS need not be fitted with ALB if:
- the power supply to the ABS can also be provided via the stop light connection in the ordinary connector without exceeding the limit of the stop light circuit; or
- the trailer/semi-trailer is approved only in combination with a vehicle that is fitted with a tell-tale and connector to the ABS of the towed vehicle in accordance with international standard ISO 7638-1:2018 or ISO 7638-2:2018.

The provision ensures that a trailer/semi-trailer with ABS can also be used with a vehicle that is not equipped with the specific ISO connector for ABS.
The trailer/semi-trailer O3, where the power supply to the ABS can be provided through the stop light connection, shall be fitted with a green tell-tale which lies within the field of vision of the rear-view mirror, is also visible in daylight and shall alert the driver of a failure in the power supply or the connection of sensors to the ABS.
Before 1/10/1972: A trailer/semi-trailer for which coupling is not subject to a technical inspection shall be equipped with ALB. Other trailer/semi-trailers may be fitted with a manual brake force regulator (MB) with at least two adjustment steps in addition to any release position.
Before 1/5/1968: A trailer/semi-trailer for which coupling is not subject to a technical inspection shall be equipped with ALB. Other trailer/semi-trailers need not be fitted with a brake force regulator (ALB or MB) unless the vehicle is approved in a new vehicle combination.

(4) The service brakes shall be self-adjusting. Before 1/4/1995: Not applicable.

(5) A trailer/semi-trailer O3 that is approved only in a fixed or variable combination may be fitted with reverse automatic braking.

5.1.114 Trailer/semi-trailer O4

(1) Trailers/semi-trailers O4 shall meet the system requirements for trailers/semi-trailers O3. Before 1/4/2001: A trailer/semi-trailer O4 shall also be equipped with ABS.
Before 1/4/1992: A trailer/semi-trailer O4 need not be equipped with ABS.

(2) A trailer/semi-trailer O4 that is approved only in a fixed or variable combination may be fitted with reverse automatic braking.

5.01.120 Agricultural trailer

(1) An agricultural trailer with a total permissible axle load exceeding 1 500 kg shall be fitted with service brakes and a parking brake.
Service brakes
a) shall act on at least one axle, and
b) shall be connected to the service brakes of the tractor, or may be overrun brakes in the case of agricultural trailers with a maximum permissible laden weight of up to 8 000 kg.
Before 1/7/2024: An agricultural trailer need not be fitted with service brakes or a parking brake regardless of the maximum permissible laden weight.
An agricultural trailer, regardless of the maximum permissible laden weight, may have overrun brakes.
Before 1/4/1997: The service brakes can be applied by the driver of the tractor, from the driver's seat, with at least one hand on the control device of the steering mechanism; i.e. with a separate handle.

(2) Where technically feasible, an agricultural trailer shall be equipped with an automatic load-dependent brake force regulator (ALB) or a manual brake force regulator (MB) (see Regulation (EU) 2015/68).
Before 1/7/2024: Not applicable.

5.01.130 Trailer for motorised work machinery

(1) A trailer for motorised work machinery shall meet the system requirements for agricultural trailers.

5.1.141 Caravan

(1) A caravan shall meet the system requirements for trailer/semi-trailer for vehicles.

5.1.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration shall meet the system requirements for trailer/semi-trailer for vehicles.

5.1.143 Towed equipment not subject to registration

(1) Towed equipment not subject to registration with a total laden weight exceeding 3 500 kg shall meet the system requirements for agricultural trailers.
Before 1/7/2024: At least 50 % of the actual total laden weight of the vehicle combination shall rest on the braking wheels. If these can consist only of the braking wheels of the towing vehicle together with the braking wheels of any other trailer of the vehicle combination, then the towed vehicle need not have brakes.

(2) Towed equipment not subject to registration and with a loading capacity not exceeding 10 % of the sum of the maximum permissible axle load need not be equipped with an automatic load-dependent brake force regulator (ALB), or a manual brake force regulator (MB).
Before 1/7/2024: No requirement for ALB or MB.

5.01.150 Towed vehicle for motorcycle

(1) If a towed vehicle for motorcycle is fitted with service brakes, it shall be overrun brakes.

5.01.160 Trailer coupled to large moped

(1) If a trailer coupled to large moped is fitted with service brakes, it shall be overrun brakes.

5.01.199 Lowboy

(1) A lowboy shall have service brakes and a parking brake. Before 1/1/1971: Lowboys shall meet the system requirements for motorised work machinery.

(2) Lowboys with a maximum permissible speed of 30 km/h shall meet the system requirements for agricultural trailers.
Before 1/5/1977: Lowboys shall meet the system requirements for trailer/semi-trailer for vehicles. Before 1/1/1971: Lowboys shall meet the system requirements for motorised work machinery.

(3) A lowboy with a maximum permissible speed of 45 km/h shall meet the system requirements for trailer/semi-trailer for vehicles, excluding the requirement for anti-lock brakes (ABS).

(4) Lowboys with a maximum permissible speed of 60 km/h shall meet the system requirements for trailer/semi-trailer.

5.01.200 Vehicle combination

(1) Connecting hoses between the vehicles shall be appropriately positioned such that they cannot get detached while driving.
Blanking flanges shall be available to secure onto the hoses when the towed vehicle is unhitched.

(2) In vehicle combinations with two towed vehicles, one of which is fitted with overrun brakes and of which is not fitted with any brakes, the towed vehicle without brakes shall be in the rearmost position of the vehicle combination.

5.01.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

5.01.361 Vehicle for the disabled

(1) A vehicle for the disabled with hand-operated service brakes need not comply with the provisions of point 5.01.010 (1)(a).

5.01.410 Dangerous goods vehicle

(1) A trailer coupled to a car for the carriage of dangerous goods in a tank, shall be equipped with service brakes that are connected to the service brakes of the towing vehicle.

5.2 Brake components

5.2.1 General provisions

(1) Service braking systems in which brake lining wear does not result in increased travel in the control device shall comply with one of the following provisions:

a) The service brakes shall meet the requirements in the Type II brake fade test of UN Regulation 13-11 (Annex 4, point 1.6.).

b) The available brake-shoe application travel (Sb) shall be at least
$Sb = 1.2 + 0.002 \cdot d$ 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.

Other service braking systems shall use no more than 2/3 of the possible control device travel during the required deceleration.

5.2.2 Hydraulics

(1) Hydraulic components shall be sealed.

(2) The filling points of reservoirs shall be easily accessible and the fluid levels easily checked, if necessary by means of a warning device.

(3) The components of a foot-operated system shall be capable of withstanding an activation force of 1000 N (100 kp).

(4) A vehicle with hydraulic braking transmission shall be provided with a red tell-tale that illuminates in the event of a failure at any point in the braking transmission. Alternatively, the tell-tale may illuminate if fluids in the reservoirs fall below certain levels.

Before 1/4/1980: Not applicable.

5.2.3 Compressed air systems

(1) Compressed air reservoirs shall be of such a size that, after eight full-stroke actuations of the brakes without the supply of compressed air, they can brake with at least 50 % of the required performance.

(2) The compressor shall have sufficient capacity to fill reservoirs in the braking system from an empty state to 65 % of the lower working pressure threshold in less than 3 minutes for power-driven vehicles and 6 minutes for vehicle combinations.

(3) Compressed air reservoirs shall be fitted with devices which allow for the draining of condensation without the use of tools. However, this does not apply to reservoirs vehicles fitted with an air dryer in the compressed air system.

(4) Compressed air systems shall, in addition to the pressure controller, be fitted with a suitably set safety valve, connected very near to the compressor.

(5) The required warning device for insufficient pressure in the air reservoir may be replaced by or supplemented by a manometer that can be read from the driver’s seat.

5.2.4 Inertia brakes

(1) Inertia brakes shall only be installed on rigid drawbar trailers.

(2) The inertia brakes arrangement shall have a brief inertia force before activating; at least 2 % of the total laden weight of the towed vehicle.

There shall be a device to attenuate the movement of the valve plunger.

(3) At the required braking force, the necessary inertia force shall not exceed 10 % of the total laden weight of the towed vehicle.

5.2.5 Spring brakes

(1) Spring brakes may not be used in a service braking system.

(2) During re-charging of the braking system from zero pressure, the spring brakes of a power-driven vehicle must remain fully applied until the pressure in the service braking system is sufficient to ensure the prescribed secondary braking performance of the laden vehicle, using the service braking system control.

Before 1/4/1995: Not applicable.

5.2.6 Marking of automatic load-dependent brake force regulator (ALB) or electronic braking system (EBS)

(1) In the case of a vehicle with air brakes, the braking system data shall be available (see UN Regulation 13-11, point 5.1.4.5).
Before 1/7/2024: Vehicles, other than M1 passenger cars, and trailers/semi-trailers for vehicles that have an ALB shall bear a marking enabling the alignment of the ALB to be checked.
Before 1/4/1980: Not applicable.

5.02.008 Pressure test connections

(1) On vehicles and trailer/semi-trailer for vehicles that have an automatic load-dependent brake force regulator (ALB), a pressure test connection in accordance with standard ISO 3583:1984 shall be provided in the pressure line before and after the ALB valve.
Before 1/7/2024: The pressure test connection may be in accordance with standard ISO 3583:1982.
Before 1/4/1989: Not applicable.

5.3 Performance

5.3.1 General provisions

(1) It shall be possible to meet the requirements on the performance of service brakes or an emergency brake by braking on an even, flat road with good adhesion,
a) with cold brakes at the beginning of braking (less than 100 °C on the surface of the disc or drum),
b) without any wheel locking.
Before 1/4/1980: For light goods vehicle N1 and lorry N2 and N3, the provision applies only in the case of maximum permissible laden weight. Before 1/5/1977: Not applicable.
c) without the vehicle deviating from its course,
d) without abnormal vibrations,
e) without exceeding the permissible activation force, and
Before 1/5/1977: No specific activation forces are provided. However, the interaction between the control device and the brake drum/disc shall be such that, having regard to the nature and size of the vehicle, the use of excessive amounts of force on the control device is not required in order to achieve full braking performance.
f) under all load conditions between service weight and maximum permissible laden weight.

(2) It shall be possible to meet the requirements on the performance of the parking brake by braking on a road with good adhesion,
a) with cold brakes,
b) without exceeding the permissible activation force, and
Before 1/5/1977: That which is stated in point 5.03.001 (1) (e) applies.
c) under all load conditions between unladen weight and maximum permissible laden weight.

5.3.20 Car

(1) In the event of a failure in the transmission of the service brakes, two-circuit service brakes shall be capable of giving the vehicle a deceleration of at least 30 % of the deceleration required of the service brakes at the maximum permissible laden weight.

(2) The braking forces of the service brakes shall be distributed across the axles of the vehicle in such a way that, for a given braking rate (d0) the coefficient of adhesion (μ) on any axle shall not be greater than as determined by:

$$\mu \leq 1.18 \cdot d0 + 0.082$$

The provision must be complied with for $d0 < 0.8$ and $\mu < 0.8$
This requirement need not be met for cars with anti-lock brakes (ABS) of category 1 or 2, or with ABS of category 3, acting only on the rear wheels and complying with point 5.01.005 (1).

The provision need not be met for a vehicle that meets the American standard FMVSS 135 on locking sequence.

Before 1/4/1980: The requirement applies only in the case of maximum permissible laden weight. Does not apply to passenger car M1.

Before 1/4/1978: Not applicable.

(3) The parking brake shall be capable of holding the vehicle stationary on a slope of 18 % incline.

(4) The parking brake on a vehicle approved to tow a towed vehicle, other than a lowboy, shall be capable of holding the vehicle combination stationary on a slope of 12 % incline.

In the case of vehicle combinations with a total weight exceeding 48 000 kg, it is sufficient for the requirement to be met at 48 000 kg.

Before 1/4/1995: Not applicable.

(5) The service brakes shall meet the requirements in the Type I brake fade test of UN Regulation 13-11 (Annex 4, point 1.5), UN Regulation 13-H (Annex 3, point 1.5), or the brake fade test of American standard FMVSS 135.

Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.

Before 1/4/1988: Not applicable.

(6) In the case of a car with air brakes, reference braking forces shall be available (see UN Regulation 13-11, point 5.1.4.6).

Before 1/11/2014: Not applicable.

5.3.21 M1 passenger car

(1) The service brakes shall be capable of giving the vehicle a deceleration of at least 6.4 m/s^2.

In the case of a vehicle type-approved as 'heavy quadricycle category L7e', the service brakes shall be capable of giving the vehicle a deceleration of at least 5.0 m/s^2.

Similarly, in the case of a 'light quadricycle category L6e', the service brakes shall be capable of giving the vehicle a deceleration of at least 4.4 m/s2.

Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.

Before 1/1/2017: The deceleration requirement is 5.8 m/s^2.

Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 8.4 m (two-wheel brakes: 14.0 m).

(2) The secondary brakes shall be made up of a two-circuit system capable of giving the car a deceleration of at least 2.4 m/s^2 upon failure of an individual circuit.

In the case of a vehicle type-approved as 'quadricycle', the secondary brakes may be the parking brake, and that shall be capable of giving the vehicle a deceleration of at least 2.5 m/s^2.

Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.

Before 1/1/2017: If a two-circuit system cannot give the vehicle a deceleration of at least 2.4 m/s^2, the parking brake shall be capable of being used while driving and give the vehicle a deceleration of at least 2.9 m/s^2.

Before 1/5/1977: Not applicable. Except as provided for under point 5.03.020 (3).

(3) The service brakes

a) under all load conditions between kerb weight and maximum permissible laden weight,
b) regardless of the adhesion of the road, and
c) for all decelerations up to 8.0 m/s^2, must not lock the rear wheels before the front wheels.

Does not apply to vehicles that are type-approved as 'quadricycle'.

Before 1/5/1977: Applies only to vehicles with EEC type-approval. Before 1/1/1968: Not applicable.

(4) The activation force must not exceed 500 N (50 kp) by foot operation and 400 N (40 kp) by hand operation.

Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.

Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (1) e).

5.3.22 M2 passenger car

(1) The service brakes shall be capable of giving the vehicle a deceleration of at least 5.0 m/s^2.

Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 10.9 m (two-wheel brakes: 18.2 m).

(2) The secondary brakes shall be capable of giving the vehicle a deceleration of at least 2.5 m/s^2. Before 1/5/1977: Not applicable.
Except as provided for under point 5.03.020 (3).

(3) The operating time of the service brakes must not exceed 0.5 s.

Before 1/5/1977: Not applicable.

The activation force must not exceed 700 N (70 kp) by foot operation and 600 N (60 kp) by hand operation.

Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (1) e).

5.3.23 M3 passenger car

(1) A passenger car M3 shall meet the performance requirements for passenger car M2.

5.3.24 N1 light goods vehicle

(1) The service brakes shall be capable of giving the vehicle a deceleration of at least 5.0 m/s^2.

Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 8.4 m (two-wheel brakes: 14.0 m).

(2) The secondary brakes shall be capable of giving the vehicle a deceleration of at least 2.5 m/s^2. Before 1/5/1977: Not applicable.
Except as provided for under point 5.03.020 (3).

(3) A light goods vehicle N1, where the ratio between the permissible axle load and the rear axle load at kerb weight does not exceed 1.5, or if the maximum permissible laden weight is less than 2 000 kg, shall comply with point 5.03.021 (3).

Does not apply to vehicles that are type-approved as 'quadricycle'.

Before 1/4/1993: Not applicable.

(4) The activation force must not exceed 700 N (70 kp) by foot operation and 600 N (60 kp) by hand operation.

Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (1) e).

5.3.25 N2 Lorry

(1) The service brakes shall be capable of giving the vehicle a deceleration

of at least 5.0 m/s^2. Before 1/4/1989: The deceleration shall be at least 4.4 m/s^2.
Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 10.9 m (two-wheel brakes: 18.2 m).

(2) The secondary brakes shall be capable of giving the vehicle a deceleration of at least 2.2 m/s^2. Before 1/5/1977: Not applicable.
Except as provided for under point 5.03.020 (3).

(3) The operating time of the service brakes must not exceed 0.5 s.
Before 1/5/1977: Not applicable.

(4) The activation force must not exceed 700 N (70 kp) by foot operation and 600 N (60 kp) by hand operation.
Before 1/5/1977: Not applicable.

(5) A lorry N2 approved to tow trailer/semi-trailer O3 or O4 with air brakes shall have a compatibility of braking rate and control line pressure as specified in UN Regulation 13-11, Annex 10.
Before 1/1/2017: The lorry may comply with the provisions of Annex II (addendum to point 1.1.4.2) to Directive 71/320/EEC as amended by Directive 75/524/EEC.
Before 1/4/1993: Only applicable to lorries for which coupling with a trailer is not subject to a technical inspection.

(6) The actuation time for compressed air systems in the braking system of the vehicle, including connections to the towed vehicle, shall meet the requirements of UN Regulation 13-11, Annex 6.
Before 1/1/2017: The lorry may comply with the provisions of Annex III to Directive 71/320/EEC as amended by Directive 79/489/EEC.
Before 1/4/1993: Only applicable to lorries for which coupling with a trailer is not subject to a technical inspection.

5.3.26 N3 Lorry

(1) A lorry N3 shall meet the performance requirements for lorry N2.

5.3.31 Two-wheeled motorcycle

(1) The service brakes shall be capable of giving the motorcycle a deceleration of at least 5.0 m/s^2.
Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 8.4 m.

(2) At service weight:
a) The front-wheel brake alone shall be capable of giving the motorcycle a deceleration of at least 3.9 m/s^2.
b) The rear-wheel brake alone shall be capable of giving the motorcycle a deceleration of at least 3.1 m/s^2.
Before 1/5/1977: At a speed of 30 km/h, the total braking distance of each of the braking systems may not exceed 14.0 m.

(3) The activation force must not exceed 400 N (40 kp) by foot operation and 200 N (20 kp) by hand operation.
Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (1) e).

5.3.32 Two-wheeled motorcycle with sidecar

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

5.3.33 Tricycle

(1) The service brakes shall be capable of giving the motorcycle a deceleration of at least 5.0 m/s^2.
Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 8.4 m.

(2) The secondary brakes shall be capable of giving the motorcycle a deceleration of at least 2.5 m/s^2.

(3) The parking brake shall be capable of holding the motorcycle stationary on a slope of 18 % incline. Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 14.0 m.
(4) The activation force must not exceed 400 N (40 kp) by foot operation and 200 N (20 kp) by hand operation.
Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (1) e).

5.03.040 Moped

(1) The service brakes shall be capable of giving the moped a deceleration of at least 4.4 m/s^2.
Before 1/11/2019: The service brakes of a light moped shall be capable of giving the moped a deceleration of at least 4.2 m/s^2.
(2) At service weight:
a) The front-wheel brake alone shall be capable of giving the moped a deceleration of at least 2.7 m/s^2. Before 1/11/2019: Does not apply to light mopeds.
b) The rear-wheel brake alone shall be capable of giving the moped a deceleration of at least 2.7 m/s^2.
Before 1/11/2019: In the case of light mopeds, the rear-wheel brake alone shall be capable of giving the moped a deceleration of 2.1 m/s^2.
(3) The activation force must not exceed 350 N (35 kp) by foot operation and 200 N (20 kp) by hand operation.
Before 1/11/2019: The activation force by foot operation must not exceed 400 N (40 kp).

5.03.050 Tractor

(1) The service brakes shall be capable of giving the tractor a deceleration of at least the following:
a) Tractor with a maximum speed of 30 km/h: 3.55 m/s^2.
b) Tractor with a maximum speed of 40 km/h: 5.0 m/s^2.
Before 1/7/2024: The service brakes shall be capable of giving the tractor a deceleration of 3.0 m/s^2.
Before 1/5/1977: At a speed of 30 km/h, the total braking distance may not exceed 14.0 m.
(2) The secondary brakes shall be capable of giving the tractor a deceleration of at least the following:
a) Tractor with maximum speed of 30 km/h: 1.5 m/s^2.
b) Tractor with maximum speed of 40 km/h: 2.2 m/s^2.
Before 1/7/2024: The secondary brakes shall be capable of giving the tractor a deceleration of at least 1,2 m/s^2. Before 1/10/1996: Not applicable.
(3) The operating time of the service brakes must not exceed 0.5 s.
Before 1/5/1977: Not applicable.
(4) The parking brake shall be capable of holding the tractor stationary on a slope of 18 % incline.
Before 1/7/2024: The parking brake shall be capable of holding the tractor stationary on a slope of 12 % incline.
Before 1/5/1977: Not applicable.
(5) The activation force must not exceed 600 N (60 kp) by foot operation and 400 N (40 kp) by hand operation.
Before 1/7/2024: The activation force must not exceed 700 N (70 kp) by foot operation and 600 N (60 kp) by hand operation.
Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (1) e).

5.03.060 Motorised work machinery

(1) Motorised work machinery shall meet the performance requirements for tractors. Before 1/5/1977: Not applicable. Except as provided for under point 5.01.060.

(2) However, the requirements do not apply to forklifts, which are subject to the Order on the design of technical equipment.

5.03.099 Power-driven lowboy

(1) A power-driven lowboy with a maximum permissible speed of 15 km/h shall comply with the following provisions:

a) The service brakes shall be capable of giving the lowboy a deceleration of at least 1.8 m/s^2.

b) The operating time of the service brakes must not exceed 1.2 s.

c) The parking brake shall be capable of holding the lowboy stationary on a slope of 12 % incline.

d) The activation force must not exceed 700 N (70 kp) by foot operation and 600 N (60 kp) by hand operation.

Before 1/5/1977: A power-driven lowboy shall meet the performance requirements for lorry N2. Before 1/1/1971: Not applicable. Except as provided for under point 5.01.099.

(2) A power-driven lowboy with a maximum permissible speed of 30 km/h shall meet the performance requirements for tractors.

Before 1/5/1977: A power-driven lowboy shall meet the performance requirements for lorry N2. Before 1/1/1971: Not applicable. Except as provided for under point 5.01.099.

(3) A power-driven lowboy with a maximum permissible speed of 45 km/h or 60 km/h shall meet the performance requirements for lorry N2, though the service brakes need only be capable of giving a deceleration of 4.4 m/s^2, corresponding to a braking force of 45 % of the total axle load of the lowboy.

5.03.110 Trailer/semi-trailer for vehicles

(1) The service brakes of the trailer shall be capable of giving a total braking force of at least 50 % of the total laden weight of the trailer, though 50 % of the sum of the permissible axle loads in the case of a rigid drawbar trailer. In the case of trailers with air brakes, this braking force shall be achieved at a maximum of 7.0 bar in the supply line and a maximum of 6.5 bar in the control line.

Before 1/4/1993: The provision on pressure in the supply and control line (see point 2) applies only to trailers for which coupling is not subject to a technical inspection.

Before 1/4/1989: The braking force shall be at least 45 % of the total laden weight. The provision on pressure in the supply and control line (see point 2) applies only to trailers for which coupling is not subject to a technical inspection.

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

Before 1/4/1993: The provision on pressure in the supply and control line (see point 2) does not apply.

(3) In the case of trailers other than centre-axle trailers, the brake power distribution shall comply with the provision of point 5.03.020 (2). However, this does not apply to trailers with anti-lock brakes (ABS).

(4) A trailer/semi-trailer O3 or O4 with air brakes shall have a compatibility of deceleration and control line pressure as specified in Annex 10 to UN Regulation 13-11. In the case of semi-trailers with ABS, the deceleration may exceed the permissible deceleration at pm-pressures of more than 5 bar.

Before 1/1/2017: Trailers/semi-trailers may comply with the provision of Directive 71/320/EEC as amended by Directive 98/12/EC.

Before 1/4/2004: Trailers/semi-trailers may comply with the provision of Directive 71/320/EEC as amended by Directive 75/524/EEC.

Before 1/4/1993: For trailers, the provision applies only to those for which coupling is not subject to a

technical inspection.

Semi-trailers are subject to the provision of point (3).

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

Before 1/1/2017: The towed vehicle may comply with the provision of Annex III to Directive 71/320/EEC as amended by Directive 79/489/EEC.

Before 1/4/1993: Only applicable to trailers for which coupling is not subject to a technical inspection.

(6) The parking brake shall be capable of holding the vehicle stationary on a slope of 18 % incline.

(7) The activation force for the parking brake must not exceed 600 N (60 kp).

Before 1/5/1977: Not applicable. Except as provided for under point 5.03.001 (2)(b).

(8) The service brakes shall meet the requirements in the Type III brake fade test of UN Regulation 13-11 (Annex 4, point 1.7). Though alternatively, trailer/semi-trailer O3 may meet the requirements in the Type I brake fade test of UN Regulation 13-11 (Annex 4, point 1.5).

Before 1/1/2017: Trailers/semi-trailers may meet the requirements in the Type III brake fade test of Directive 71/320/EEC as amended by Directive 98/12/EC (Annex II, point 1.6). However, trailers/semi-trailers O3 may meet the requirements in the Type I brake fade test of Directive 71/320/EEC as amended by Directive 79/489/EEC (Annex II, point 1.3).

Before 1/4/2003: Trailer/semi-trailer O4 can meet the requirements in the Type I brake fade test. Before 1/4/1988: Not applicable.

(9) In the case of a trailer/semi-trailer with air brakes, reference braking forces shall be available (see UN Regulation 13-11, point 5.1.4.6).

Before 1/11/2014: Not applicable.

5.03.120 Agricultural trailer

(1) The service brakes shall be capable of giving a total braking force of at least 35 % of the maximum permissible laden weight of the agricultural trailer, though at least 35 % of the total permissible axle load in the case of agricultural trailers that are rigid drawbar trailers.

Before 1/7/2024: The service brakes shall be capable of giving a total braking force of at least 30 % of the maximum permissible laden weight of the agricultural trailer, though at least 30 % of the total axle load in the case of agricultural trailers that are rigid drawbar trailers.

Before 1/5/1977: Not applicable. Except as provided for under point 5.03.200.

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

5.03.130 Trailer for motorised work machinery

(1) A trailer for motorised work machinery shall meet the performance requirements for agricultural trailers.

5.3.141 Caravan

(1) A caravan shall meet the performance requirements for trailer/semi-trailer for vehicles.

5.3.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration shall meet the performance requirements for trailer/semi-trailer for vehicles.

5.3.143 Towed equipment not subject to registration

(1) Towed equipment not subject to registration shall meet the performance requirements for agricultural trailers.

5.03.150 Towed vehicle for motorcycle

(1) If a towed vehicle for motorcycle is fitted with service brakes, those brakes shall be capable of giving a total braking force of at least 50 % of the total laden weight of the towed vehicle.

5.03.199 Lowboy

(1) A lowboy with a maximum permissible speed of 15 km/h shall comply with the following provisions:
   a) The service brakes shall be capable of giving a total braking force of at least 18 % of the total laden weight of the lowboy, though at least 18 % of the total axle load in the case of lowboy semi-trailers.
   b) The parking brake shall be capable of holding the lowboy stationary on a slope of 12 % incline.
   c) The activation force for the parking brake must not exceed 600 N (60 kp).
   Before 1/1/1971: Not applicable. Except as provided for under point 5.01.199.

(2) A lowboy with a maximum permissible speed of 30 km/h shall comply with the following provisions:
   a) The service brakes shall be capable of giving a total braking force of at least 30 % of the total laden weight of the lowboy, though at least 30 % of the total axle load in the case of lowboy semi-trailers.
   b) The parking brake shall be capable of holding the lowboy stationary on a slope of 12 % incline.
   c) The activation force for the parking brake must not exceed 600 N (60 kp).
   Before 1/1/1971: Not applicable. Except as provided for under point 5.01.199.

(3) A lowboy with a maximum permissible speed of 45 km/h or 60 km/h shall meet the performance requirements for trailer/semi-trailer for vehicles, though the service brakes need only be capable of giving a braking force of 45 % of the total axle load of the lowboy.

5.03.200 Vehicle combination

(1) The operating time of vehicles in a vehicle combination shall be balanced.

(2) In the case of vehicle combinations led by motorised work machinery or a tractor and which include a towed vehicle without brakes, the braking performance of the vehicle combination shall be at least 3.2 m/s² in a laden and unladen state.
   Before 1/7/2024: At least 50 % of the actual total laden weight of the vehicle combination shall rest on the braking wheels.
   Before 1/5/1977: At least 50 % of the actual total laden weight of the vehicle combination shall rest on the braking wheels. In addition, at a speed of 30 km/h, the total braking distance may not exceed 14.0 m.

6. Electrical systems, lamps, reflectors, etc.

6.1 Electrical systems

6.1.1 General provisions

(1) The accumulator shall be securely attached and placed or shielded such that it cannot be short-circuited during normal use of the vehicle.
   The accumulator shall, as far as possible, be located outside the driver's cab. If placed in the driver's cab, it shall be shielded and ventilated directly to the outside.

(2) Wires shall be well-insulated and secured such that there is no risk of short circuit or breakage during normal use of the vehicle. Where a wire penetrates a sheet of conductive material, the hole shall first be fitted with rubber grommet or the like.

(3) Electrical systems shall have fuses or other equivalent protections such as to counter the risk of fire in the vehicle due to a short circuit. When installing optional electrical equipment, fuses shall be added in the associated circuit.
   Before 1/5/1977: If the vehicle comes factory with fuses, such must be in undamaged condition and may not be removed unless the vehicle is fitted with other protective devices providing at least the same protection as the original fuses. In addition, in all cases of installing optional electrical

equipment, fuses shall be added in the associated circuit.

6.1.2 EMC

(1) EMC means electromagnetic compatibility and 'EMC relevance' means that the system/equipment may cause electromagnetic interference or that its functioning may be affected by such interference.

(2) Vehicles with electrical/electronic systems with EMC relevance and electrical/electronic equipment with EMC relevance installed on the vehicle shall comply with the provisions of the Order on radio equipment and electromagnetic conditions (except as provided for in points (3)–(5)).

Before 1/4/2003: Electrical systems, including electrical equipment, may comply with the EMC provisions applicable to the vehicle category concerned in accordance with the following:

- Order on radio and telecommunications terminal equipment and electromagnetic conditions.
- Order on requirements for electromagnetic compatibility for certain vehicles, etc.
- Order on requirements for electromagnetic compatibility for certain light vehicles.
- Order on requirements for electromagnetic compatibility for agricultural and forestry tractors.

(3) Vehicles subject to Regulation (EU) 2018/858 (vehicles and their trailers) shall meet 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 point (2).

Before 1/7/2024: The vehicle and equipment may meet the EMC requirements of UN Regulation 10-02.

Before 1/1/2017: The vehicle and equipment may meet the requirements of Directive 72/245/EEC as amended by Directive 95/54/EC.

Before 1/4/2003: The transitional provision in point (2) applies.

(4) Vehicles subject to Regulation (EU) 168/2013 (mopeds, motorcycles, and light cars) shall meet 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 point (2).

Before 1/7/2024: The vehicle and equipment may meet the EMC requirements in Chapter 8 of Directive 97/24/EC or UN Regulation 10-02.

Before 1/1/2017: The equipment may be approved in accordance with Directive 72/245/EEC as amended by Directive 95/54/EC.

Before 1/4/2003: The transitional provision in point (2) applies.

(5) Tractors subject to Regulation (EU) 167/2013 (agricultural and forestry tractors) shall meet the EMC requirements in Annex XV to Regulation (EU) 2015/208 or UN Regulation 10-05.

Equipment fitted to such tractors shall meet one of the following conditions:

a) Be approved 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 point (2).

Before 1/7/2024: The equipment may be approved in accordance with Directive 75/322/EEC as amended by Directive 2000/2/EC, or in accordance with UN Regulation 10-02.

Before 1/1/2017: The equipment may be approved in accordance with Directive 72/245/EEC as amended by Directive 95/54/EC.

Before 1/10/2008: Excluding equipment, the provision does not apply if the tractor has a positive-ignition engine (e.g. petrol engine) and before 1 October 2002 has been approved in accordance with Directive 75/322/EEC, or has a diesel engine and has been approved before 1 October 2002 in accordance with Directive 77/537/EEC.

Before 1/4/2003: The transitional provision in point (2) applies.

6.1.3 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 2/1/2022: Short-range radar can comply with the technical requirements of 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 so that mandatory position lamps, rear position lamps, side-marker lamps, and number plate lamps can be kept on without the engine running.
Before 1/4/1981: A two-wheeled motorcycle, the unladen weight of which does not exceed 120 kg, need not be equipped with an accumulator.

6.01.021 M1 passenger car

(1) Accumulators can be placed in the driver's cab without special ventilation.

6.01.024 N1 light goods vehicle

(1) A light goods vehicle N1 shall comply with the provisions for passenger car M1.

6.01.040 Moped

(1) A two-wheeled moped shall be equipped with an accumulator.
Before 1/1/2020: A mobility scooter (k-approved three-wheeled moped) does not need to be equipped with an accumulator.
Light mopeds need not have fuses or other equivalent protection.

6.01.050 Tractor

(1) A tractor shall be equipped with an electrical socket for the towed vehicle's lamps.

6.01.060 Motorised work machinery

(1) Motorised work machinery that is pedestrian-operated need not be fitted with accumulators.

6.01.100 Towed vehicle

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

6.01.120 Agricultural trailer

(1) The agricultural trailer of a tractor that is not subject to registration shall comply with the provision of point 6.01.100 (1).
Before 1/10/1996: The agricultural trailer of a tractor that is not subject to registration, instead of fixed lamps, may be provided with a removable lightboard with equivalent lamps. Lightboards shall only be used on trailers that are rearmost trailer in a vehicle combination.

6.01.130 Trailer for motorised work machinery

(1) Trailers for motorised work machinery shall comply with the provision of point 6.01.100 (1).
Before 1/10/1996: Trailers for motorised work machinery, instead of fixed lamps, may be provided with a removable lightboard with equivalent lamps. Lightboards shall only be used on trailers that are rearmost trailer in a vehicle combination.

6.01.143 Towed equipment not subject to registration

(1) Towed equipment that is not subject to registration shall comply with the provision of point 6.01.100 (1).
Before 1/10/1996: Towed equipment not subject to registration, instead of fixed lamps, may be provided with a removable lightboard with equivalent lamps. Lightboards shall only be used on towed equipment that is the rearmost towed equipment in a vehicle combination.

6.01.310 Vehicle for which coupling is not subject to a technical inspection

(1) A vehicle for which coupling is not subject to a technical inspection, with a towed vehicle with a maximum permissible laden weight not exceeding 3 500 kg, shall be equipped with 12 V power supply to the coupled towed vehicle. The connection shall be one of the following:

a) A 7-pole connector intended for 12 V (ø 36 mm) and with the electrical wiring connected according to standard ISO 1724:2003.

Before 1/7/2024: The connection can be a 7-pole connector intended for 12 V (ø 36 mm) and with the electrical wiring connected according to standard ISO 1724:1975.

b) A 13-pole connector complying with point (a) and which is also provided with positions 8–13 placed along the perimeter.

c) A 13-pole connector intended for 12 V (ø 30 mm) and with the electrical wiring connected according to standard ISO 11446-1:2012 and 11446-2:2012 or DlN norm V 72570.

(2) A lorry N2 or N3 for which coupling is not subject to a technical inspection, with trailer/semi-trailer O3 or O4 or towed equipment on the chassis of such towed vehicle, trailer shall be equipped with 24 V power supply to the coupled towed vehicle and may also be equipped with 12 V power supply. The following also apply:

a) The connection shall be marked with a voltage indication.

b) The connection to 12 V power supply follows the rules in point (1).

(3) The connection to 24 V power supply shall be one of the following:

a) A 7-pole connector (ø 39 mm) and with the electrical wiring connected according to standard ISO 1185:2003.

Before 1/7/2024: The connection to 24 V power supply can be a 7-pole connector (ø 39 mm) with the electrical wiring connected according to standard ISO 1185:1975.

b) A 15-pole connector with the electrical wiring connected according to standard ISO 12098:2020.

Before 1/7/2024: The connection to 24 V power supply can be a 15-pole connector with the electrical wiring connected according to standard ISO 12098:2004.

(4) Towed vehicles with a maximum permissible laden weight not exceeding 3 500 kg shall be equipped with 12 V electrical systems. The connection to the power supply from the towing vehicle shall correspond the specifics of point (1).

(5) Trailers/semi-trailers O3 and O4 and towed equipment on the chassis of such towed vehicles shall be equipped with a 24 V electrical system and may also be equipped with a 12 V electrical system. The connection to the power supply from the towing vehicle shall be marked with a voltage indication. The following also applies:

a) For 12 V electrical systems, the connection shall correspond the specifics of point (1).

b) For 24 V electrical systems, the connection shall correspond the specifics of point (3).

6.2 Lamps for lighting

6.2.1 General provisions

(1) A vehicle may only be fitted with mandatory or permissible lamps for lighting.

A lamp shall be considered to be present if the light source is installed, or if the lamp can be made to operate by installing a light source, installing fuses, connecting plugs, connecting wires present, or can be made to operate by a combination of one or more of these actions.

(2) Paired lamps shall be uniform, including the same design, colour, and luminous intensity. They shall also be placed symmetrically in relation to the longitudinal median plane of the vehicle and at the same height above the ground. A single main-beam headlamp, passing-beam headlamp, and front fog lamp shall be located in the longitudinal median plane of the vehicle.

It is only permissible to use a lamp (light source) for which the headlamp is intended, or with which it is e-approved or E-approved, or where the lamp is E-approved as a replacement for the lamp with

which the headlamp was originally approved.

(3) The maximum and minimum height of a headlamp above the ground is measured at service weight, excluding driver, to the upper edge and lower edge of the light-emitting surface.

The distance of a headlamp from the outermost edge of the vehicle is measured as the distance between it and the outer edge of the light-emitting surface, excluding external rear-view mirrors and side direction indicator lamps. The distance between two headlamps in a pair is measured as the distance between the points of the light-emitting surfaces nearest each other.

(4) It must only be possible to turn on the main-beam headlamps, passing-beam headlamps, front fog lamps, work lamps, and search lamps when the mandatory marker and position lamps of the vehicle are switched on.

Before 1/7/2024: Do not apply to work lamps or search lamps.

(5) Main-beam headlamps, passing-beam headlamps, and front fog lamps shall be designed and placed such that they can be adjusted correctly.

(6) Lamps for lighting may be designed such that they are covered or retracted when not in use.

6.2.2 Main-beam headlamps

(1) Main-beam headlamps 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 capable of illuminating the road at least 100 metres in front of the vehicle.

d) Shall have a minimum luminous intensity of 10 000 cd. Before 1/1/1971: Not applicable.

(2) On a vehicle with two or more main-beam headlamps, it must only be possible to switch them on simultaneously or in pairs.

(3) When switching from the main-beam to the passing-beam, all of the main-beam headlamps must be switched off simultaneously.

(4) Main-beam headlamps shall be connected to a tell-tale at the driver's position. Before 1/5/1977: Not applicable.

(5) The total luminous intensity of main-beam headlamps capable of simultaneously illuminating may not exceed 430 000 cd. Before 1/5/1977: Not applicable.

6.2.3 Passing-beam headlamps

(1) Passing-beam headlamps 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 capable of illuminating the road at least 30 metres in front of the vehicle.

d) Shall be designed as right-hand, asymmetric passing-beam.

Before 1/5/1977: Passing-beam headlamps may be designed as symmetrical passing beams.

Before 1/4/1974: Passing-beam headlamps, other than headlamps with double wire halogen lamps, may be designed as a right passing beam headlamp (beam bottom directed downwards to the right).

e) Shall be located not more than 0.40 m from the outermost point of the vehicle.

Before 1/1/1971: Passing-beam headlamps may be located more than 0.40 m from the outermost point of the vehicle, if the position lamp cannot be switched off while the passing-beam headlamp is on.

f) Shall be located not less than 0.50 m and not more than 1.20 m above the ground.

Before 1/1/1971: A passing-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 1/5/1977: Not applicable.

(2) However, on a vehicle with one passing-beam headlamp, it shall be visible at least

45° to each side. Before 1/5/1977: Not applicable.

(3) On a vehicle with two passing-beam headlamps, the distance between them shall be at least 0.60 m. Before 1/5/1977: Not applicable.

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

(5) Passing-beam headlamps shall be so adjusted that the light/dark threshold of the beam has a fall of at least 1 %, equivalent to 10 mm per m.

6.2.4 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 for illumination of the road in low-visibility weather.

d) Shall be located not more than 0.40 m from the outermost point of the vehicle. Before 1/1/1971: Not applicable.

e) Shall be located not less than 0.25 m above the ground, but not higher than the passing-beam headlamps. Before 1/5/1977: A front fog lamp may be located less than 0.25 m above the ground.

(2) Front fog lamps shall be connected in such a way that they can be switched on independently of other lamps for lighting.

(3) Front fog lamps shall be so adjusted that the glaring central beams have a fall of at least 1 %, equivalent to 10 mm per m.

6.2.5 Reversing lamps

(1) A reversing lamp shall meet the following conditions:

a) Shall emit white light.
Before 1/5/1977: A reversing lamp may emit white, yellowish, or yellow light.

b) Shall be placed at the rear of the vehicle.

c) Shall be capable of illuminating the ground behind the vehicle.

d) Shall be located not less than 0.25 m and not more than 1.20 m above the ground. Before 1/5/1977: Not applicable.

(2) The reversing lamp shall only be capable of illuminating when the ignition switch is on, and either the reverse gear is engaged or the speedometer switch is on.
A vehicle without an ignition switch shall be equipped with some other manually operated switch for the reversing lamp.

6.2.6 Search lamps

(1) The purpose of a search lamp is to illuminate areas or objects at a distance from the vehicle.

(2) A search lamp shall emit white light.
Before 1/7/2024: A search lamp may emit a yellowish (selective yellow) colour.

(3) A search lamp shall be function-marked as a main-beam headlamp, passing-beam headlamp, or fog lamp. Before 1/7/2024: A search lamp may be without function-marking.

(4) A 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 device. In such case, it shall remain switched off until it is intentionally switched on again. The provision does not apply to police patrol vehicles.
Before 1/7/2024: Not applicable.

(5) A search lamp shall be so placed that the beam of light can be moved by the driver from the driver's position relative to the vehicle.

6.2.7 Work lamps

(1) The purpose of a work lamp is to illuminate a working area near the vehicle.

(2) A work lamp shall emit white light. Before 1/7/2024: Not applicable.

(3) A work lamp shall be function-marked as a reversing lamp or a manoeuvring lamp. Before 1/7/2024: A work lamp may be without function-marking.

(4) A work lamp shall switch off automatically if the forward speed of the vehicle exceeds 15 km/h, regardless of the position of the separate control device. In such case, it shall remain switched off until it is intentionally switched on again.
Before 1/7/2024: Not applicable.

(5) A work lamp shall be so placed that the beam of light is directed downwards so that it is not glaring to other road users.

6.2.8 Manoeuvring lamps

(1) The purpose of a manoeuvring lamp is to provide supplemental lateral illumination during slow manoeuvres.

(2) A manoeuvring lamp shall emit white light.

(3) A manoeuvring lamp shall be approved and marked in accordance with UN Regulation 23 or UN Regulation 148.

(4) A manoeuvring lamp shall be connected in such a way that it cannot be switched on unless the main-beam or passing-beam is also switch on simultaneously.

(5) A 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 device. In such case, it shall remain switched off until it is intentionally switched on again.

6.02.020 Car

(1) A car shall be equipped with the following headlamps:
   a) Two main-beam headlamps.
   b) Two passing-beam headlamps.

(2) A car may be equipped with the following headlamps:
   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 1/5/1977: A car may be equipped with an even number of main-beam headlamps.
   Before 1/1/1971: A car may be fitted with an auxiliary far reaching headlamp connected to passing-beam headlamps, if the following conditions are met:
   - Only one auxiliary far reaching headlamp may be installed.
   - It shall only be possible to turn on when the passing-beam headlamps are switched on.
   - The light must not be glaring.
   - The centre of the beam, at a 10 m distance from the lamp, shall be at least 0.30 m to the right of a line passing through the centre of the lamp parallel to the median plane of the vehicle and may not be higher than the centre of the lamp.
   - The auxiliary far reaching headlamp shall be located in the centre of the vehicle or on the left side of the vehicle and not more than 1.20 m above the ground as measured to the upper edge of the light-emitting surface.
   - The lamp shall be fitted with a specific switch.
   b) Two front fog lamps.
   c) One or two reversing lamps.
   Before 1/5/1977: A car may be equipped with any number of reversing lamps.

d) One search lamp.
e) One or more work lamps.
f) One or two (one on each side) manoeuvring lamps.

(3) Headlamps may be of the adaptive (AFS) type, which shall be approved and marked in accordance with UN Regulation 123 or UN Regulation 149.

(4) Passing-beam headlamps and their lamps 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, factory passing-beam headlamps and their lamps may be made in accordance with American standard FMVSS 108 or Canadian standard CMVSS 108. The headlamps shall be marked 'DOT'.

Before 1/1/2017: Passing-beam headlamps and their lamps may comply with Directive 76/761/EEC. Before 1/5/1977: Does not apply to cars with symmetrical passing beams.
Before 1/1/1971: Not applicable.

(5) Passing-beam headlamps with gas discharge lamps shall meet the following conditions:
a) Remain on while the main beams are on.
b) Shall be fitted with a headlamp cleaning device.
c) Shall be fitted with an automatic headlamp levelling system (see point 6.02.021 (1)). The system shall operate automatically.
Points (b) and (c) apply only to gas discharge lamps with a luminous intensity exceeding 2 000 lumen.
Before 1/4/2006: Not applicable to factory gas discharge lamps made in accordance with American standard FMVSS 108 and marked 'DOT'.
All other gas discharge lamps are subject to the requirements irrespective of the initial registration date.

(6) A passing-beam headlamp with LEDs shall be provided with a headlamp cleaning device.
This point applies only to passing beams with LEDs with a luminous intensity exceeding 2 000 lumen.

6.02.021 M1 passenger car

(1) A passenger car M1 shall be fitted with a lighting adjustment system for passing-beam headlamps in accordance with UN Regulation 48-07 if loading of the vehicle results in changes greater than the values for inclination of the passing beam specified in the Regulation.
Before 1/7/2024: A passenger car M1 may be fitted with a lighting adjustment system for passing-beam headlamps in accordance with UN Regulation 48-01.

6.02.026 N3 Lorry

(1) On an off-road lorry N3, passing-beam headlamps may be positioned not more than 1.50 m above the

ground.

6.2.30 Motorcycle

(1) Motorcycles shall be fitted with the following headlamps:
  a) One main-beam headlamp.
    Two main-beam headlamps when the maximum width of the vehicle exceeds 1.30 m. Before 1/7/2024: Not applicable.
    Before 1/5/1977: The main-beam headlamp shall have a minimum luminous intensity of 5 000 cd.
  b) One passing-beam headlamp.
    Two passing-beam headlamps when the maximum width of the vehicle exceeds 1.30 m. Before 1/7/2024: Not applicable.

(2) Motorcycles can be fitted with the following headlamps:
  a) Two main-beam headlamps.
    Before 1/5/1977: A motorcycle may be equipped with more than two main-beam headlamps. The main-beam headlamp shall have a minimum luminous intensity of 5 000 cd.
    Before 1/1/1971: Luminous intensity requirements do not apply.
  b) Two passing-beam headlamps.
  c) One front fog lamp when the maximum width of the vehicle does not exceed 1.30 m.
  d) Two front fog lamps.
  e) One search lamp.
  f) One work lamp.

(3) Passing-beam headlamps need not comply with the provision of point 6.02.003 (1) (e) and may be designed as a symmetrical passing beam.

(4) On motorcycles whose engine has displacement of 100 cm^3 or less, the main-beam headlamp shall have a luminous intensity of at least 5 000 cd.
  Before 1/5/1977: On motorcycles whose engine has displacement of 100 cm^3 or less, the main-beam headlamp shall have a luminous intensity of at least 2 500 cd.
  Before 1/1/1971: Not applicable.

6.2.31 Two-wheeled motorcycle

(1) On a two-wheeled motorcycle with two passing-beam headlamps, the distance between them may not exceed 0.10 m. Before 1/5/1977: Not applicable.

(2) A passing-beam headlamp may be located next to the main-beam headlamp. The headlamps shall be placed symmetrically in relation to the longitudinal median plane of the vehicle and they may not be more than 0.10 m apart from each other.

6.2.32 Two-wheeled motorcycle with sidecar

(1) If a two-wheeled motorcycle with sidecar is fitted with two main-beam headlamps or two passing-beam headlamps, one of the following conditions shall be met:
  a) Both headlamps shall be placed on the motorcycle in accordance with the associated rules.
  b) One headlamp shall be placed on the motorcycle according the associated rules, and the other headlamp shall be positioned as close as possible to the outer edge of the sidecar. The passing-beam headlamps and, respectively, the main-beam headlamps of the motorcycle and the sidecar shall be of the same colour, but otherwise need not comply with the provisions of point 6.02.001 (2).

6.2.33 Tricycle

(1) Tricycles shall be fitted with the following headlamps:
  a) Two main-beam headlamps.
  b) Two passing-beam headlamps.

Passing-beam headlamps shall comply with the provision of point 6.02.003 (1) (e).
Before 1/9/1995: Applies only to tricycles whose width exceeds 1.30 m. Before 1/4/1990: Not applicable.

(2) A tricycle can be fitted with one or two reversing lamps.

6.02.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles, excluding the main-beam headlamp requirement.
Before 1/5/1977: Mopeds approved before that date ('TUM' mark) shall be fitted with a passing-beam headlamp capable of illuminating the ground at least 20 m in front of the vehicle without glaring.

(2) A three-wheeled moped, the width of which does not exceed 1.30 m, does not need to comply with the provisions of point 6.02.033 (1).

(3) Passing-beam headlamps need not comply with the provisions of point 6.02.003 (1) (e) and (g) or 6.02.003 (2) and may be designed as a symmetrical passing beam.

(4) Mopeds may be fitted with one main-beam headlamp. Such main-beam headlamp on a light moped need not comply with the provisions of point 6.02.002 (1) (c) and (d) or 6.02.002 (4).

6.02.050 Tractor

(1) Tractors shall be fitted with two passing-beam headlamps.
Passing-beam headlamps need not comply with the provision of point 6.02.003 (3) and may be designed as a symmetrical passing beam.

(2) Tractors can be fitted with the following headlamps:
a) Two or four main-beam headlamps. Such main-beam headlamps do not need to comply with the provisions of point 6.02.002 (1) (d).
b) Two front fog lamps.
c) One or two reversing lamps.
d) One search lamp.
e) One or more work lamps.

(3) The passing-beam headlamps on a tractor may be located up to 1.50 m above the ground and the distance between them may be less than 0.60 m.

(4) The main-beam headlamps, passing-beam headlamps, and front fog lamps of a tractor may be positioned more than 0.40 m from the outermost point of the tractor.

(5) Tractors may be fitted with an additional set of passing-beam headlamps positioned up to 2.80 m above the ground. These lamps shall be so adjusted that, at a distance of 15 m in front of the tractor, the light/dark threshold of the beam is not higher above the ground than half the distance between the upper edge of the light-emitting surface and the ground. It shall not be possible for such additional passing-beam headlamps to be switched on simultaneously with the mandatory passing-beam headlamps.

(6) On tractors, it may be possible for the search/work lamp to be switched on without the vehicle's mandatory marker lamps being switched on.

(7) If machinery or protruding equipment is blocking the tractor's mandatory passing-beam headlamps, the tractor shall be fitted with additional passing-beam headlamps in accordance with the rules in point (5).

(8) Tractors need not comply with point 6.02.007 (4) or (5).

6.02.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors, but the location dimensions

may be waived if necessitated by the structure of the vehicle.
(2) Motorised work machinery that is pedestrian-operated need not be fitted with lamps for lighting.

6.02.099 Power-driven lowboy

(1) Power-driven lowboys shall comply with the provisions for cars.
Before 1/1/1971: Power-driven lowboys shall comply with the provisions for motorised work machinery.

6.02.100 Towed vehicle

(1) Towed vehicles can be fitted with the following headlamps:
a) One or two reversing lamps.
b) One or more work lamps.

6.02.363 Vehicle specifically designed to perform roadwork

(1) In the case of a vehicle fitted with a snow removal unit that wholly or partly blocks the generally mandatory passing-beam headlamps of the vehicle, such that the vehicle is in non-compliance with the headlamp visibility requirements, an additional pair of high-positioned passing-beam headlamps shall be fitted in accordance with the following:
a) The headlamps shall be so positioned as to be capable of illuminating the ground beyond the snow removal unit from a distance of 10 m or less in front of the frontmost point of the vehicle (without snow plough, etc.).
b) The headlamps may be located up to 0.60 m from the outermost 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 threshold of the beam is not higher above the ground than half the distance between the upper edge of the light-emitting surface and the ground.
d) It shall not be possible for these headlamps to be switched on simultaneously with the generally mandatory passing-beam headlamps.
(2) In the case of a vehicle fitted with a snow removal unit that wholly or partly blocks the mandatory passing-beam headlamps of the vehicle, an additional pair of main-beam headlamps shall be fitted. If the snow removal unit blocks non-mandatory main-beam headlamps, an additional pair of main-beam headlamps may be installed.
The electrical connections of the headlamps shall be such that no more than four main-beam headlamps can be switched on at the same time.
The headlamps shall otherwise also comply with the rules for main-beam headlamps in point 6.02.002.
(3) A vehicle with mounts for a snow removal unit may be fitted with the passing-beam and main-beam headlamps (auxiliary lamps) specified in points (1) and (2).

6.3 End-outline marker lamps

6.3.1 General provisions

(1) A vehicle may only be fitted with mandatory or permissible end-outline marker lamps.
(2) Paired lamps shall be uniform, including the same colour and luminous intensity. They shall be placed symmetrically in relation to the longitudinal median plane of the vehicle and at the same height above the ground. An individual front position lamp and rear position lamp shall be located in the longitudinal median plane of the vehicle.
(3) The positions of the lamps are measured as described in point 6.02.001 (3).
(4) End-outline marker lamps shall be switched on simultaneously and it shall not be possible to switch them off while the vehicle's lamps for lighting are switched on.
Before 1/1/1971: It may be possible for the front position lamp to be switched off while the passing-beam headlamp is on if the passing-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 does not apply to number plate lamps.

6.3.2 Front position lamp

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

a) Shall emit white light.
Before 1/7/2024: However, if a front position lamp is incorporated in a main-beam or passing-beam headlamp that emits yellowish light (selective yellow), the front position lamp may be of the same colour.

b) Shall be placed at the front of the vehicle.

c) Shall be directed forward and clearly visible at least 300 m in front of the vehicle.
Before 1/1/1971: The front position lamp shall be visible at least 150 m in front of the vehicle without glaring.

d) Shall have a luminous intensity of 4 cd to 60 cd measured straight from the front. The provision on minimum luminous intensity is considered to be met if the lamp has a power consumption of 4 W and is placed in front of a parabolic reflector. Before 1/1/1971: Not applicable.

e) Shall be located not more than 0.40 m from the outermost edge of the vehicle. On a vehicle with two mandatory front position lamps, the distance between them shall be at least 0.60 m.
Before 1/5/1977: The distance between front position lamps may be less than 0.60 m.

f) Shall be located not less than 0.35 m and not more than 1.50 m above the ground. However, if necessitated by the shape of the bodywork, the front position lamp may be placed at a height of up to 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.

6.3.3 Rear position lamp

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

a) Shall indicate the presence of the vehicle and its width as seen from the rear.

b) Shall emit red light.

c) Shall be placed at the rear of the vehicle.

d) Shall be directed rearward and clearly visible at least 300 m behind the vehicle.
Before 1/1/1971: The rear position lamp shall be visible at least 150 m behind the vehicle without glaring.

e) Shall have a luminous intensity of 4 cd to 12 cd measured straight from the back.
Before 4/4/2011: The rear position lamp shall have a luminous intensity of 2 cd to 12 cd measured straight from the back. The provision on minimum luminous intensity is considered to be met if the lamp has a power consumption of 5 W.
Before 1/1/1971: Not applicable.

f) Shall be located not less than 0.35 m and not more than 1.50 m above the ground. However, if necessitated by the shape of the bodywork, the rear position lamp may be placed at a height of up to 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 not more than 0.40 m from the outermost edge of the vehicle. The distance between lamps in a pair shall be at least 0.40 m.
Before 1/11/2019: The rear position lamp on a tractor may be located up to 0.60 m from the outermost edge of the vehicle. Before 1/5/1977: The distance between lamps in a pair may be

less than 0.40 m.

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

(3) It shall not be possible for the mandatory rear position lamp to be blocked by rear doors, tailgates, or the like by more than 50 % as seen from the rear. If the mandatory rear position lamp is blocked by more than 50 %, the vehicle shall be marked with a beacon lamp and a placard shall be affixed in the cab in a visible position with the following text:

'When opening rear doors, tailgates, and the like, other road users shall be warned by a yellow beacon'.

(4) A non-mandatory rear position lamp need not comply with the provisions on positioning or angles of visibility.

6.3.4 End-outline marker lamp

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

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

a) Shall have luminous intensity as stipulated for a front position lamp or rear position lamp, respectively.

b) Shall be located not more than 0.40 m from the outermost edge of the vehicle.

c) On a vehicle with a high fixed structure, it shall be positioned as high as is compatible with the requirements for positioning in relation to the width and the symmetry of the lamps.

d) Shall be visible at least 80° outwards and at least 5° above and 20° below the horizontal. Before 1/5/1977: Not applicable.

(3) Non-mandatory end-outline marker lamp:

a) May, if forward, emit light in a yellow color.

b) Need not comply with the provisions on location and visibility angles.

c) Shall be placed symmetrically in relation to the longitudinal median plane of the vehicle.

6.3.5 Rear fog lamps

(1) Rear fog lamps shall meet the following conditions:

a) Shall emit red light.

b) Shall be placed at the rear of the vehicle and be directed to the rear.

c) Shall have a luminous intensity of 150 cd to 300 cd measured straight from the back.

d) Shall be located not less than 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 thereof.

(3) If there are two rear fog lamps, these shall be such that their reference centres are symmetrical in relation to the longitudinal median plane of the vehicle,

(4) It must only be possible to turn on the rear fog lamps if the main-beam, passing-beam, or front fog lamps, or a combination thereof, are switched on. It shall be possible to turn off the rear fog lamps independently of these other lamps.

When the rear fog lamp is switched on, operating the passing-beam/main-beam switch shall not cause it to turn off. The rear fog lamp may remain on, together with the front position lamps until they are switched off, provided that the rear fog lamp remains switched off until its control switch is reactivated.

Before 1/4/1988: It must only be possible to turn on the rear fog lamps if the main-beam headlamps, passing-beam headlamps, or front fog lamps are switched on, and shall be possible to turn off independently of these other lamps.

(5) The rear fog lamp shall have a tell-tale at the driver's position.

6.3.6 Number plate lamps

(1) The number plate lamp shall meet the following conditions:

a) Shall emit white light.

b) Shall illuminate the rearmost number plate in such a way that it is legible at least 20 m behind the vehicle.

6.3.7 Parking lamps

(1) The forward parking lamp shall emit white light and the rear parking lamp shall emit red light. A parking lamp incorporated in a side direction indicator lamp shall emit yellow light.

(2) Parking lamps shall be so positioned that there are two lamps at the front and two lamps at the rear, or one lamp on each side of the vehicle.

(3) Parking lamps shall be switched on simultaneously or on one side of the vehicle. Number plate lamps can be switched on together with parking lamps.

(4) A parking lamp shall meet the following conditions:

a) Shall have a luminous intensity of 2 cd to 60 cd measured straight from the front and between 2 cd and 30 cd measured straight from the back.
Before 1/4/1983: Not applicable.

b) Shall be located not more than 0.40 m from the outermost edge of the vehicle.

c) Shall be located not less than 0.35 m and not more than 1.50 m above the ground. However, if necessitated by the shape of the bodywork, the parking lamp may be placed at a height of up to 2.10 m above the ground.

d) Shall be visible straight from the front and back 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.

6.3.8 Side-marker lamps

(1) A side-marker lamp shall meet the following conditions:

a) Shall emit yellow light. However, the rearmost side-marker lamp may emit red light if it is grouped, combined, or incorporated with either the rear position lamp, the rear end-outline marker lamp, the rear fog lamp, or the stop lamps. The same applies if the side-marker lamp is grouped with or has part of its light-emitting surface in common with the rearmost reflector.

Before 1/7/2024: The rearmost side-marker lamp may emit red light.

b) Shall be directed to the side and clearly visible from at least 300 m without glaring.

c) Shall be located not less than 0.25 m and not more than 1.50 m above the ground. However, if necessitated by the shape of the bodywork, the side-marker lamp may be placed at a height of up to 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 luminous intensity as stipulated for a position lamp. Before 1/4/1980: Not applicable.

(2) Side-marker lamps shall be fitted such that they meet the following conditions:

a) There shall be at least one side-marker lamp on each side of the vehicle's centre third.

b) The frontmost side-marker lamp on each side shall be located no 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, though 4.00 m if so necessitated by the structure of the vehicle.

d) The rearmost side-marker lamp on each side shall be located no more than 1.00 m from the rearmost point of the vehicle.

In the case of towed vehicles, the coupling device shall be included in the length of the vehicle.

Before 1/7/2024: A non-mandatory side-marker lamp does not need to comply with the provisions of points (1) (c), (d) and (2).

6.3.9 Special end-outline marker lamps

(1) Advertising signs shall meet the following conditions:
   a) Shall emit white or yellow light (non-flashing).
   b) Shall have a maximum luminous intensity of 60 cd.
   c) May not emit light rearward.

(2) Destination signs shall meet the following conditions:
   a) Shall emit white or yellow light (non-flashing).
   b) Shall have a maximum luminous intensity of 60 cd.
   c) May not emit light rearward.

(3) A route number sign shall meet the following conditions:
   a) May have all colors.
   b) Shall have a maximum luminous intensity of 60 cd.

6.3.21 M1 passenger car

(1) Passenger car M1 shall be fitted with the following headlamps:
   a) Two front position lamps.
   b) Two rear position lamps.
   c) One or more number plate lamps.
   d) Two forward-facing and two rear-facing end-outline marker lamps if the width of the vehicle exceeds 2.10 m. Before 1/4/1990: An M1 passenger car shall be fitted with two forward-facing end-outline marker lamps if
      the width of the vehicle exceeds 2.30 m.
      Before 1/1/1971: Not applicable.
   e) Side-marker lamps, if the length of the vehicle exceeds 6.00 m.
      Before 1/4/1995: Not applicable.

(2) Passenger car M1 can be fitted with the following lamps and signs:
   a) Four rear position lamps.
      Before 1/5/1977: A passenger car M1 may be equipped with an even number of rear position lamps.
   b) One or two rear fog lamps.
   c) Parking lamps, if the width of the vehicle 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 rear-facing end-outline marker lamps if the width of the vehicle is at least 1.80 m.
      Before 1/7/2024: At least two forward-facing and rear-facing end-outline marker lamps if the width of the vehicle is at least 1.80 m.
      Before 1/5/1977: M1 passenger car may be fitted with an equal number of forward-facing and rear-facing end-outline marker lamps, regardless of the width of the vehicle.
   e) Side-marker lamps, which may flash in phase and simultaneously with the direction indicators on the same side of the vehicle.
   f) Advertising sign placed on the roof.

6.3.22 M2 passenger car

(1) A passenger car M2, if the maximum permissible laden weight does not exceed 3 500 kg, shall comply with the provisions for M1 passenger cars.

(2) A passenger car M2, if the maximum permissible laden weight exceeds 3 500 kg, shall comply with the provisions for M3 passenger cars.

6.3.23 M3 passenger car

(1) Passenger car M3 shall be fitted with the following headlamps:

a) Two front position lamps.
b) Two rear position lamps.
c) One or more number plate lamps.
d) Two forward-facing and two rear-facing end-outline marker lamps if the width of the vehicle exceeds 2.10 m. Before 1/4/1990: The requirement for forward-facing end-outline marker lamps only applies if the width of the vehicle
exceeds 2.30 m.
Rear-facing end-outline marker lamps may be replaced by rear position lamps, which need not comply with the stipulated location dimensions.
Before 1/5/1977: A passenger car M3 approved for regular services may be fitted with front position lamps that illuminate in colours other than white or yellow.
Before 1/1/1971: The requirement for front position lamps does not apply.
e) Side-marker lamps, if the length of the vehicle exceeds 6.00 m.
Before 1/4/1995: Not applicable.

(2) Passenger car M3 may be fitted with the following lamps:
a) Four or six rear position lamps.
Before 1/5/1977: A passenger car M3 may be equipped with an even 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-facing and rear-facing end-outline marker lamps.
e) Side-marker lamps, which may flash in phase and simultaneously with the direction indicators on the same side of the vehicle, if the vehicle's length exceeds 6.00 m. However, the side-marker lamps shall not be capable of flashing if the vehicle is fitted with side direction indicator lamps in accordance with point 6.04.022 (2) (b).

(3) Passenger car M3 may be fitted with advertising signs or destination signs above the windscreen.

(4) Passenger car M3 approved for regular services may have the following signs;
a) Destination sign and route number sign in front and on the sides.
b) Route number sign.

6.3.24 N1 light goods vehicle

(1) A light goods vehicle N1 shall comply with the provisions for passenger car M1.

6.3.25 N2 Lorry

(1) Lorry N2 shall comply with the provisions for passenger car M3.
However, end-outline marker lamps may be located at the foremost corners of the cab roof. Before 1/4/1978: Lorry N2 may be fitted with eight factory rear position lamps.

6.3.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

6.3.30 Motorcycle

(1) Motorcycles shall be fitted with the following headlamps:
a) A front position lamp or, alternatively, two front position lamps if the maximum width of the motorcycle exceeds 1.30 m.
Before 1/7/2024: No requirement for two front position lamps, even if the width of the motorcycle exceeds 1.30 m.
b) One rear position lamp or, alternatively, two rear position lamps if the maximum width of the motorcycle exceeds 1.30 m. Shall be located not less than 0.25 m and not more than 1.50 m above the ground.

Before 1/7/2024: No requirement for two rear position lamps, even if the width of the motorcycle exceeds 1.30 m.

c) One number plate lamp or, alternatively, two number plate lamps if the maximum width of the motorcycle exceeds 1.00 m.
Before 1/7/2024: No requirement for two number plate lamps, even if the width of the motorcycle exceeds 1.00 m.

(2) Motorcycles can be fitted with the following headlamps:
a) Two front position lamps. These may emit yellow light if they are e-approved or E-approved yellow front position lamps.
b) One or two rear fog lamps.
c) Side-marker lamps. The angle of visibility can be down to 30° to each side.

6.3.31 Two-wheeled motorcycle

(1) Front and rear position lamps need not comply with the provisions on maximum distance from the outermost edge of the vehicle or minimum distance between lamps in a pair.

6.3.32 Two-wheeled motorcycle with sidecar

(1) Two-wheel motorcycle with sidecar shall be fitted with the following front and rear position lamps:
a) Two front position lamps, one of which shall be positioned as close as possible to the outer edge of the sidecar.
b) Two rear position lamps, one of which shall be positioned as close as possible to the outer edge of the sidecar.

6.3.33 Tricycle

(1) A tricycle shall be fitted with the following front and rear position lamps:
a) Two front position lamps.
b) Two rear position lamps.
(2) A tricycle can be fitted with parking lamps.

6.03.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.
Before 1/1/2020: A mobility scooter in use before that date does not need to be fitted with a number plate lamp or front position lamp, and it is sufficient that the visibility of the rear position lamps is at least 30° to each side.

Before 1/11/2019: Mopeds need not be fitted with a number plate lamp.
On light mopeds approved or in use before that date it is sufficient that the visibility of the rear position lamp is at least 30° to each side.

(2) However, a two-wheeled moped need not be fitted with a front position lamp.

6.03.050 Tractor

(1) Tractors shall be fitted with the following headlamps:
a) Two front position lamps.
b) Two rear position lamps.
c) One or more number plate lamps if the tractor is registered.
(2) Tractors can be fitted with the following headlamps:
a) Four rear position lamps.
b) One or two rear fog lamps.
c) Two or four forward-facing and two or four rear-facing end-outline marker lamps if the width of the vehicle is at least 1.80 m.

Before 1/7/2024: At least two forward-facing and rear-facing end-outline marker lamps.

d) Parking lamps

e) Side-marker lamps.

(3) The following apply to a position lamp:

a) Need not be placed at the front of the vehicle.

b) May be positioned up to 2.50 m above the ground.
Before 1/11/2019: The position lamp may be located up to 0.60 m from the outermost edge of the vehicle.

c) Shall be visible at least 10° inwards and 80° outwards. However, the angle may be 5° (though 3° for tractors whose width does not exceed 1.40 m) if the structure of the tractor precludes compliance with 10°. Before 1/7/2024: No requirement on angle outward.
Before 1/5/1977: Position lamp need 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 1/7/2024: Shall be visible at least 10° below the horizontal.

(4) Outside of daylight hours, tools and protruding equipment, including twin tyres, shall be marked with a forward and rear end-outline marker lamp on the side(s) on which the tool,
etc. protrudes more than 0.15 m from the side of the tractor. The lamps shall indicate the width of the tool, etc. and may be placed on the tractor.

(5) If a working tool or protruding equipment blocks the tractor's mandatory end-outline marker lamps, the tool or the protruding equipment shall be provided with equivalent lamps, possibly placed on a lightboard.

6.03.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors, but the location dimensions may be waived if necessitated by the structure of the vehicle.

(2) Motorised work machinery subject to registration shall also be fitted with side-marker lamps, if the length of the vehicle exceeds 6.00 m.
Before 1/4/1995: Not applicable.

(3) Motorised work machinery that is pedestrian-operated shall be equipped with the following end-outline marker lamps outside of daylight hours.

a) Front position lamp emitting white or yellowish (selective yellow) light, placed at the front left side.

b) Rear position lamp positioned at the rear on the left side.

The lamps shall be clearly visible at a distance of at least 300 metres.

6.03.099 Power-driven lowboy

(1) A power-driven lowboy shall comply with the provisions for lorry N2.

6.03.100 Towed vehicle

(1) The following apply to a front position lamp:

a) Shall be placed ahead of the foremost axle of the vehicle.

b) Shall be located not more than 0.15 m from the outermost edge of the vehicle.
Before 1/7/2024: The visibility angle of the front position lamp inwards may be 5°. There is no requirement on visibility angle outwards.
Before 1/4/1990: The position lamp may be located not more than 0.40 m from the outermost edge of the vehicle.

c) May be positioned up to 2.10 m above the ground.

6.3.111 Trailer/semi-trailer O1

(1) Trailer/semi-trailer O1 shall be fitted with the following lamps:

a) Two front position lamps, if the width of the vehicle exceeds 1.60 m. Before 1/4/1990: Not applicable.

b) Two rear position lamps.

c) One or more number plate lamps.

d) Two forward-facing and two rear-facing end-outline marker lamps if the width of the vehicle exceeds 2.10 m.

Before 1/4/1990: Trailers with a width exceeding 1.60 m and approved for coupling without a technical inspection, shall be fitted with two forward-facing end-outline marker lamps. The requirement for rear-facing end-outline marker lamps does not apply.

e) Side-marker lamps, if the length of the vehicle exceeds 6.00 m.

Before 1/4/1995: Not applicable.

The ramp may, at the moment of loading and unloading, block mandatory lamps.

(2) Trailer/semi-trailer O1 may be fitted with the following lamps:

a) Four rear position lamps.

Before 1/5/1977: Trailer/semi-trailer O1 may be equipped with an even number of rear position lamps.

b) Two front position lamps.

c) Two or four forward-facing and two or four rear-facing end-outline marker lamps if the width of the vehicle is at least 1.80 m.

Before 1/7/2024: Trailer/semi-trailer O1 may be fitted with at least two forward-facing and rear-facing end-outline marker lamps if the width of the vehicle is at least 1.80 m.

d) Side-marker lamps.

e) One or two rear fog lamps.

6.3.112 Trailer/semi-trailer O2

(1) A trailer/semi-trailer O2 shall comply with the provisions for trailer/semi-trailer O1.

6.3.113 Trailer/semi-trailer O3

(1) Trailer/semi-trailer O3 shall be fitted with the following lamps:

a) Two front position lamps.

b) Two rear position lamps.

c) One or more number plate lamps.

d) Two forward-facing and two rear-facing end-outline marker lamps if the width of the vehicle exceeds 2.10 m.

Before 1/4/1990: A towed vehicle 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 fitted with two forward-facing end-outline marker lamps.

Rear-facing end-outline marker lamps may be replaced by rear position lamps, which need not comply with the stipulated location dimensions.

e) Side-marker lamps, if the length of the vehicle exceeds 6.00 m.
Before 1/4/1995: Not applicable.

(2) Trailer/semi-trailer O3 may be equipped with:

a) Four or six rear position lamps.
Before 1/5/1977: Trailer/semi-trailer O3 may be equipped with an even number of rear position lamps.

b) At least two forward-facing and rear-facing end-outline marker lamps.

c) Side-marker lamps, which may flash in phase and simultaneously with the direction indicators on the same side of the vehicle. However, the side-marker lamps may not flash if the trailer/semi-trailer is fitted with side direction indicator lamps according to point 6.04.110 (2) (b).

d) One or two rear fog lamps.

6.3.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for trailer/semi-trailer O3.

6.03.120 Agricultural trailer

(1) Agricultural trailers shall be fitted with the following lamps:

a) Two front position lamps, if the width of the vehicle exceeds 1.60 m.
Before 1/10/1996: Does not apply to agricultural trailers that are not subject to registration.

b) Two rear position lamps.
Before 1/10/1996: On agricultural trailers that are not subject to registration, the rear position lamps can be placed on a lightboard.

c) Two rear-facing end-outline marker lamps, if the width of the vehicle exceeds 2.10 m. Before 1/10/1996: Does not apply to agricultural trailers that are not subject to registration.

d) One or more number plate lamps if the vehicle is registered.

e) Side-marker lamps, if both the maximum permissible laden weight of the vehicle exceeds 3 500 kg and the length exceeds 4.60 m.
Before 1/7/2024: Agricultural trailers with a maximum permissible laden weight exceeding 3 500 kg shall be fitted with side-marker lamps only if the length exceeds 6.00 m.
Before 1/10/1996: Applies only to agricultural trailers that are subject to registration. Before 1/4/1995: Not applicable.

(2) An agricultural trailer may be fitted with end-outline marker lamps according to the rules for trailer/semi-trailer O1.

6.03.130 Trailer for motorised work machinery

(1) A trailer for motorised work machinery shall comply with the provisions for agricultural trailers.

6.3.141 Caravan

(1) Caravans shall comply with the provisions for trailer/semi-trailer O1.

6.3.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration shall comply with the provisions for trailer/semi-trailer O1.

6.3.143 Towed equipment not subject to registration

(1) Towed equipment not subject to registration shall comply with the provisions for agricultural trailers. However, the towed equipment need not meet the requirement on side-marker lamps in point 6.03.120 (1) (e).

6.03.150 Towed vehicle for motorcycle

(1) A towed vehicle for motorcycle shall comply with the provisions for trailer/semi-trailer O1.

6.03.160 Trailer coupled to large moped

(1) A trailer coupled to large moped shall comply with the provisions for trailer/semi-trailer O1.

6.03.199 Lowboy

(1) Lowboys with a maximum permissible laden weight not exceeding 3 500 kg shall comply with the provisions for trailer/semi-trailer O1.
(2) Lowboys with a maximum permissible laden weight exceeding 3 500 kg shall comply with the provisions for trailer/semi-trailer O3.

6.03.363 Vehicle specifically designed to perform roadwork

(1) An additional pair of front position lamps may be fitted on a vehicle with a snow removal unit and additional passing-beam headlamps in accordance with point 6.02.363 (1) or (3), which may be positioned up to the same height as said passing-beam headlamps and up to 0.60 m from the outermost edge of the vehicle.
(2) On a vehicle with a rear-mounted gravel or salt spreader, at least one pair of rear position lamps shall be visible from the rear.

6.4 Signalling lamps

6.4.1 General provisions

(1) A vehicle may only be fitted with mandatory or permissible signalling lamps.
(2) Paired lamps shall be uniform, including the same colour and luminous intensity. They shall be placed symmetrically in relation to the longitudinal median plane of the vehicle and at the same height above the ground. An individual stop lamp shall be located in the longitudinal median plane of the vehicle.
(3) The positions of the lamps are measured as described in point 6.02.001 (3).

6.4.2 Direction-indicator lamps (front, rear, and side direction-indicator lamps)

(1) Direction-indicator lamps lamp shall meet the following conditions:
a) Shall emit yellow light.
Before 3/11/1989: Alternatively, the front direction indicator may emit white light and/or the rear direction indicator may emit red light, if the car model was originally available with these colour lamps and the installed lamps correspond to the original ones.
Before 1/1/1971: On a vehicle other than car, trailer/semi-trailer for car, and caravan, the front direction indicators may emit white, yellowish, or yellow light and rear direction indicators red or yellow light.
Before 1/1/1966: The front direction indicators may emit white, yellowish, or yellow light and rear direction indicators red or yellow light.
b) Shall be clearly visible in sunlight.
c) Shall operate independently of other lamps.
Before 1/11/1989: The front direction indicators may be incorporated into the front position lamps

and emit white light, if not combined with other lamps, and the rear direction indicators may be incorporated into stop lamps or rear position lamps and flashing red.

The power consumption of the direction indicators shall be at least 3,5 times the power consumption of the front position lamps or the rear position lamps. It is a condition that the car model was originally available with these types of lamps and that the installed lamps correspond to the original ones.

Before 1/1/1971: On a vehicle other than car, trailer/semi-trailer for car, and caravan, the front direction indicators may be built into the position lamp if this is not combined with other lamps, and rear direction indicator can be incorporated into stop or rear lamp. The power consumption of the direction indicators shall be at least 3,5 times the power consumption of the front position lamps or the rear position lamps.

Before 1/1/1966: The front direction indicators may be incorporated into the front position lamps, if not combined with other lamps, and the rear direction indicators may be incorporated into stop lamps or rear position lamps. The power consumption of the direction indicators shall be at least 3,5 times the power consumption of the front position lamps or the rear position lamps.

d) Shall be located not more than 0.40 m from the outermost edge of the vehicle. The distance between the direction indicators, front or rear of the vehicle, shall be at least 0.60 m.

Before 1/1/1971: For a vehicle other than car, trailer/semi-trailer for car, and caravan, there are no requirements on minimum distance between direction indicators.

Before 1/1/1966: There are no requirements on minimum distance between direction indicators.

e) Shall be positioned not less than 0.35 m (though for side direction indicator lamps not less than 0.40 m) and not more than 1.50 m above the ground. However, if necessitated by the shape of the bodywork, front and rear direction-indicator lamps may be placed 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 1/1/1971: Only applicable to cars, trailer/semi-trailer for cars, and caravans. Before 1/1/1966: 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 lamps positioned less than 0.75 m above the ground shall not be visible below the horizontal. The front and rear direction-indicator lamps shall be visible at least 80° outwards and 45° inwards, and side direction indicator lamps between 5° and 60° to the rear.

Before 1/5/1977: A side direction indicator lamp located less than 1.20 m above the ground need not be visible below the horizontal.

A side direction indicator lamp may be visible between 10° and 60° to the rear if it is visible from a point at a distance not exceeding 0.50 m outside the rear of the vehicle and at the same height as the direction indicator.

Before 1/1/1971: For a vehicle other than car, trailer/semi-trailer for car, and caravan, front and rear direction indicators shall be visible 2.00 m from the vehicle in the middle of the front and rear ends of the vehicle, respectively, at a height of 1.00 m.

Before 1/1/1966: The front and rear direction indicators shall be visible 2.00 m from the vehicle in the middle of the front and rear ends of the vehicle, respectively, at a height of 1.00 m.

(2) Direction-indicator lamps shall be connected to a tell-tale if the lamp cannot be seen directly by the driver. The following also apply:

a) The tell-tale shall provide a light and/or sound signal.

b) The light signal shall flash, and in the event of a failure of a direction indicator, it shall be switched off, illuminated constantly, or substantially change in frequency.

c) The sound signal shall be capable of being clearly heard, and in the event of a failure of a direction indicator, it shall substantially change in frequency.

d) The tell-tale shall not indicate failures of supplementary non-mandatory direction indicators, side direction indicators, or rear direction indicators on towed vehicles behind passenger car M1 or light goods vehicle N1.

Before 1/1/1971: On a vehicle other than car, trailer/semi-trailer for car, and caravan, the tell-tale shall not indicate failures of direction indicators.

Before 1/1/1966: The tell-tale shall not indicate failures of direction indicators.

(3) The front direction indicator shall be located at such a distance from the passing-beam headlamp and the front fog lamp or have such a luminous intensity that the direction indicator is clearly visible while the passing-beam headlamp and the front fog lamp are on.

Before 1/4/1995: Not applicable.

(4) The front and side direction indicator lamps may be combined if the requirements for each of the lamps are met.

(5) Direction-indicator lamps on the same side shall illuminate simultaneously. If a vehicle is fitted on either side with two front direction indicator lamps, two side direction indicator lamps, or two or three rear direction indicator lamps, and such are placed above each other, they may flash either simultaneously or alternately (alternating direction indicators).

(6) The vertical distance between alternating direction indicators shall be at least 0.20 m.

(7) The distance from the side direction indicator lamp to the foremost point of the vehicle may not exceed 1.80 m. However, this distance may be increased to 2.50 m if necessary in relation to the visibility provision in point 6.04.002 (1) (f).

Before 1/1/1971: Only applicable to cars, trailer/semi-trailer for cars, and caravans. Before 1/1/1966: Not applicable.

(8) The flashing frequency shall be between 60 and 120 flashes per minute. States of illuminated and non-illuminated shall be clearly different.

(9) Supplementary non-mandatory direction-indicator lamps need not comply with the provisions relating to distance from the outer edge of the vehicle, height above the ground, angles of visibility, or distance from the side direction indicator lamp to the foremost point of the vehicle.

6.4.3 Stop lamps

(1) Stop lamps 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 1/7/2024: Not applicable.

(2) Stop lamps shall meet the following conditions:
- a) Shall emit red light.
  - Before 1/1/1971: On a vehicle other than car, trailer/semi-trailer for car, and caravan, stop lamps may emit red or yellow light.
  - Before 1/1/1966: Stop lamps may emit red or yellow light.
- b) Shall be directed rearward.
- c) Shall light up immediately when the service brakes are applied. Stop lamps can also be activated by using retarder or similar device.
- d) Shall have a luminous intensity of 40 cd to 100 cd measured straight from the back. The luminous intensity shall be significantly greater than the luminous intensity of the rear position lamps. The provision is deemed to be met 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 lamp and the rear position lamp are approved and marked in accordance with UN Regulation 7.
  - Before 1/1/2017: Alternatively, if both the stop lamps and rear position lamps are approved and marked in accordance with UN Regulation 7, the lamps may be approved and marked in accordance with Directive 76/758/EEC.

Before 1/4/1983: There are no requirements on minimum and maximum luminous intensity.

e) Shall be located not less than 0.35 m and not more than 1.50 m above the ground. However, if necessitated by the shape of the bodywork, the stop lamps may be placed at a height of up to 2.10 m above the ground.

Before 1/1/1971: On vehicle other than car, trailer/semi-trailer for car, and caravan, stop lamps can be placed no more than 1.50 m above the ground.

Before 1/1/1966: Stop lamps may be positioned not more than 1.50 m above the ground.

f) Shall be so positioned that the distance between lamps in a pair is at least 0.60 m. However, this distance may be reduced to 0.40 m in the case of a vehicle whose width is less than 1.30 m.

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 1/1/1971: Stop lamps shall be visible at least 30° inwards and outwards.

(3) The following apply to a third stop lamp:

a) May not be incorporated into any other lamp.

b) May be located inside or outside the vehicle. If the stop lamp is located inside the vehicle, the light emitted 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 of 25 cd to 80 cd measured straight from the back. This provision is deemed to be fulfilled if the stop lamp is approved and marked in accordance with UN Regulation 7.

Before 1/4/2000: The provision is deemed to be fulfilled if the stop lamp is approved and marked in accordance with Directive 76/758/EEC.

d) Shall be so arranged that the lower edge of the light-emitting surface is either within 0.15 m below the visible bottom edge of the rear window or at least 0.85 m above the ground. However, the lower edge of the light-emitting surface shall be above the upper edge of the light-emitting surfaces of the other stop lamps.

e) Shall be located in the longitudinal median plane of the vehicle, though if the stop lamp cannot be placed in the longitudinal median plane of the vehicle on a fixed body panel, then two stop lamps can instead be fitted on the movable body panels, including doors, as close as possible to the median plane, or one stop lamp offset not more than 0.15 m to the right or left from the median plane as measured from the median plane to the reference centre 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 1/4/2000: The following apply to non-mandatory stop lamps:

- May not be placed at the rear of the vehicle,
- Need not comply with the provisions on height above the ground or visibility angles, and
- May be located inside the rear window, in which case the effect of the glazing on the luminous intensity may be disregarded.

(4) Supplementary non-mandatory stop lamps need not comply with the provisions relating to distance from the outer edge of the vehicle, height above the ground, or angles of visibility.

(5) The emergency stop signal (signal to indicate to other road users to the rear of the vehicle that a high retardation force is being applied to the vehicle relative to the prevailing road conditions) shall meet the following requirements:

a) Shall be given by the simultaneous operation of all the stop or direction-indicator lamps.

b) Shall be activated only when the vehicle speed is above 50 km/h and the braking system is providing the emergency braking logic signal defined in UN Regulations 13 and 13-H.

c) Shall be automatically deactivated if the emergency braking logic signal as defined in UN Regulations 13 and 13-H is no longer provided or if the hazard warning signal is activated.

6.4.4 Hazard warning signal

(1) The hazard warning signal shall meet the following conditions:

a) The colour, position, visibility, and frequency of flashing shall comply with the provisions on direction-indicator lamps.

b) Shall be connected such that all mandatory direction-indicator lamps are used simultaneously. Before 1/5/1977: The hazard warning signal may be connected in one of the following ways:

- Such that the direction-indicator lamps flash at the same time.
- Such that the front direction-indicator lamps flash alternately with the rear direction-indicator lamps.
- Such that the direction-indicator lamps on the left side flash alternately with the direction-indicator lamps on the right side.

c) Shall be activated by a separate control switch and may also be connected to a device for automatic activation by severe deceleration of the vehicle, including in the event of a collision.

d) Shall be capable of operating without the ignition system of the vehicle being switched on or without the engine running.

e) Shall be connected to a flashing tell-tale, which may be the tell-tale of the direction-indicator lamps. Before 1/5/1977: A hazard warning signal shall be connected to a flashing tell-tale or sound signal or in such a way that it cannot function while driving.

6.4.5 Beacons

(1) Beacons shall meet the following conditions:

a) Shall emit yellow light.

b) 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 beacons, which together can be seen from all sides. These beacons shall be connected to the same control switch.

c) Shall flash at a frequency of 60-240 per minute.

(2) Beacons shall be approved and marked in accordance with UN Regulation 65.
Before 1/7/2024: The beacon may meet one of the following conditions:

a) May have been approved by the Ministry of Justice under a previous approval scheme.

b) May have been approved by the Swedish Transport Agency.

(»▲Org«-mærket)

(‘▲Org’ mark)

c) May have been approved by Kraftfahrt-Bundesamt, Germany.

(» ∿∿ K«-mærket)

(‘ ∿∿ K’ mark)

d) Can comply with the constructive provisions of American Standard SAE J 595 of August 1983, J 845 of January 1984, or J 1318 of April 1986, and be clearly and durably marked with ‘SAE’.

6.4.6 Emergency lamps

(1) Emergency lamps shall meet the following conditions:

a) Shall emit blue light.

b) 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 emergency lamps, which together can be seen from all sides. These beacons shall be connected to the same control switch.

c) Shall flash at a frequency of 60-240 per minute.

(2) An emergency lamp shall be approved and marked in accordance with UN Regulation 65. Before 1/7/2024: An emergency lamp may meet one of the following conditions:

a) May have been approved by the Ministry of Justice under a previous approval scheme.

b) May have been approved by the Swedish Transport Agency.

(» BI«-mærket)

(‘ BI’-marked

c) May have been approved by Kraftfahrt-Bundesamt, Germany.

(» K«-mærket)

(‘ K’ mark)

d) Can comply with the constructive provisions of American Standard SAE J 595 of August 1983, J 845 of January 1984, or J 1318 of April 1986, and be clearly and durably marked with ‘SAE’.

6.4.7 Headlamp flashing

(1) The main-beam headlamps or passing-beam headlamps may be connected in such a way that the lamps are switched on when a spring switch is activated. The other lamps of the vehicle shall not be switched on when operating the switch.

6.4.20 Car

(1) A car shall be equipped with the following signalling lamps:

a) A front direction indicator lamp, a side direction indicator lamp, and a rear direction indicator lamp on each side.

Before 3/11/1989: Trafficators may be designed as side direction indicator lamps such that they flash in the projected position. It is a condition that the car model was originally available with trafficators.

Before 1/5/1977: A car shall be equipped with an even number of front, rear, and side direction indicator lamps.

Before 1/1/1966: Factory trafficators may be designed as side direction indicator lamps such that they flash in the projected position.

b) Two stop lamps.

Before 3/11/1989: If the rear direction indicator is grouped with the stop lamp, the stop lamp may be deactivated on the flashing side. It is a condition that the car model was originally available with this function.

Before 1/1/1966: Cars shall be fitted with at least one stop lamp.

If the rear direction indicator is grouped with the stop lamp, the stop lamp may be deactivated on the flashing side.

c) Emergency stop signal.

Before 1/7/2024: Not applicable.

d) Hazard warning signal.

Before 1/4/1978: Not applicable.

(2) A car can be equipped with the following signalling lamps:

a) Three or four stop lamps.

On a car with three stop lamps, the third stop lamp shall comply with point 6.04.003 (2). Before 1/5/1977: A car may be equipped with more than four stop lamps.

b) Beacon(s).

c) Headlamp flashing.

6.4.21 M1 passenger car

(1) An M1 passenger car shall be equipped with three stop lamps. Before 1/1/2000: Not applicable.

6.4.22 M2 passenger car

(1) Passenger car M2 may be equipped with:

a) Two front direction indicator lamps on each side.
b) Passenger car M2, if the length exceeds 9.00 m, may be fitted with four side direction indicator lamps evenly distributed on each side. However, this does not apply if the vehicle is equipped with flashing side-marker lamps as described in point 6.03.023 (2) (e).
c) Two or three rear direction indicator lamps on each side.
d) Three, four, or six stop lamps.

6.4.23 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.
(2) An articulated bus shall be fitted with one side direction indicator lamp on each side, located immediately behind the articulated section.

6.04.025 N2 Lorry

(1) Lorry N2 shall comply with the provisions for passenger car M2.
Before 1/4/1978: Lorry N2 may be fitted with eight factory stop lamps.

6.04.026 N3 Lorry

(1) Lorry N3 shall comply with the provisions for passenger car M2.
Before 1/4/1978: Lorry N3 may be fitted with eight factory stop lamps.

6.4.31 Two-wheeled motorcycle

(1) A two-wheeled motorcycle shall be fitted with one stop lamp, which shall be illuminated when either the front-wheel brake or the rear-wheel brake is applied.
Before 1/10/75: There is no requirement for the stop lamp to be illuminated when actuating the front-wheel brake. Before 1/1/1971: Does not apply to two-wheeled motorcycle with an unladen weight not exceeding 120 kg.
Before 1/7/1956: Not applicable.
(2) A two-wheeled motorcycle shall be fitted with a front direction indicator lamp and a rear direction indicator lamp on each side. For these direction indicators, the following conditions apply:
a) The distance between the front direction indicator lamps shall be at least 0.24 m.
b) The distance between the rear direction indicator lamps shall be at least 0.18 m.
c) The rear direction indicator lamps may not be located more than 0.40 m in front of the rearmost point of the motorcycle.
d) The direction indicators shall be visible at least 20° inwards.
Before 1/9/1995: Applies only to motorcycles for practice driving.
Before 1/4/1983: Any tell-tale for direction indicators need not indicate failure of a direction indicator.
(3) Two-wheeled motorcycle can be equipped with:
a) Two stop lamps. These may be spaced less than 0.40 m apart. Before 01.05.77: Two-wheel motorcycle can be equipped with several stop lamps.
b) Hazard warning signal.
c) Emergency stop signal.
d) Headlamp flashing.
e) Beacon(s).
f) Six direction indicators, if the two side direction indicator lamps are fitted in accordance with all relevant requirements of UN Regulation 48 as prescribed for vehicle category M1.

6.4.32 Two-wheeled motorcycle with sidecar

(1) A two-wheeled motorcycle with sidecar shall comply with the provisions for the two-wheeled motorcycle, except that the direction indicators on the right side shall be placed on the sidecar as close as possible to its outer edge.

6.4.33 Tricycle

(1) Tricycles shall be equipped with:

a) Front direction indicator lamps and a rear direction indicator lamps according to the rules for cars.

Before 1/9/1995: A tricycle without a cab and without a carrier or box behind the driver's seat need not be fitted with direction-indicator lamps. Any rear direction indicator lamps on such vehicles may be placed in accordance with the rules for two-wheeled motorcycles.

b) Stop lamps according to the rules for cars.

Before 1/4/1981: A tricycle without a cab and without a carrier or box behind the driver's seat can be fitted with stop lamps according to the rules for two-wheeled motorcycles.

(2) Tricycles may be equipped with:

a) Side direction indicator lamps according to the rules for cars.

b) Hazard warning signal.

c) Headlamp flashing.

d) Beacon(s).

e) Emergency stop signal.

(3) The distance between the direction indicators, front or rear of the vehicle, shall be at least 0.50 m.

6.04.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.

Before 1/11/2019: Light mopeds may be fitted with the following:

a) A front direction indicator lamp and a rear direction indicator lamp on each side in accordance with the rules for two-wheeled motorcycles, though the distance between the front direction indicator lamps shall be at least 0.22 m and at least 0.14 m between the rear direction indicator lamps. The direction indicators may not be located more than 0.90 m above the ground.

The tell-tale shall not indicate failures of direction indicators.

b) One stop lamp in accordance with the rules for two-wheeled motorcycles, except that the stop lamp may not be located more than 0.90 m above the ground. The stop lamp shall not be illuminated when the front-wheel brake is applied.

Two-wheeled mopeds and three-wheeled mopeds without a cab need not be fitted with direction-indicator lamps.

If a mobility scooter is equipped with stop lamps, there shall be two stop lamps.

Before 1/5/1977: On mopeds approved before that date ('TUM' mark), the stop lamp may be positioned not less than 0.30 m and not more than 1.50 m above the ground.

6.04.050 Tractor

(1) A tractor shall be fitted with one of the following direction-indicator lamp systems:

a) A front direction indicator lamp, a side direction indicator lamp, and a rear direction indicator lamp on each side according to the rules for cars.

b) A front direction indicator lamp, a side direction indicator lamp, and a rear direction 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 may not be located behind the front edge of the rear fender or rollover protective structure.

c) A front direction indicator lamp and a rear direction indicator lamp located at the front and rear edges of the rear fender or rollover protective structure. The lamps shall be visible at least 10° inwards.

d) A grouped front and rear direction indicator lamp on either side located on the rear fender or rollover protective structure. The lamps shall be visible at least 5° inwards both forwards and rearwards.

(2) The tractor shall be fitted with a hazard

warning signal. Before 1/10/1996: Not applicable.

(3) A tractor subject to registration shall be fitted with two stop lamps.

(4) A tractor may be equipped with:
- a) Two front direction indicator lamps on each side.
- b) Two rear direction indicator lamps on each side.
- c) Stop lamps according to the rules for cars.
  Before 1/5/1977: A tractor may be fitted with an even number of stop lamps.
- d) Hazard warning signal.
- e) Beacon.
- f) Headlamp flashing.

(5) The following apply to direction-indicator lamps:
- a) May be positioned up to 1.90 m above the ground. However, if necessitated by the shape of the bodywork, direction-indicator lamps may be placed at a height of up to 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) Tractors shall be fitted with a beacon(s) when carrying tools or other protruding equipment which, in accordance with point 6.05.050 (3), shall be marked with reflectors.

(7) If a tool or protruding equipment blocks the tractor's mandatory signalling lamps, the tool or the protruding equipment shall be provided with equivalent lamps, possibly placed on a lightboard.

6.04.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors.

(2) Outside of daylight hours, motorised work machinery shall be fitted with a beacon(s) if the width of the vehicle exceeds 2.50 m.

(3) Motorised work machinery that is pedestrian-operated need not be fitted with beacons.

6.04.099 Power-driven lowboy

(1) A power-driven lowboy shall comply with the provisions for passenger car M2.

(2) A power-driven lowboy shall also be fitted with a beacon(s).

6.04.110 Trailer/semi-trailer for cars

(1) Trailers/semi-trailers for cars shall be fitted with:
- a) A rear direction indicator lamp on each side.
- b) Two stop lamps.

(2) Trailers/semi-trailers for cars may be equipped with:
- a) One or two front direction indicator lamps on each side.
- b) Trailer/semi-trailer may be fitted with three side direction indicator lamp evenly distributed on each side, if the vehicle's length exceeds 9.00 m. This point does not apply if the vehicle is equipped with side direction indicator lamps as described in point 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 the rules for cars.
  Before 1/5/1977: Trailers/semi-trailers for cars may be equipped with more than six stop lamps.
- e) Hazard warning signal.

6.04.120 Agricultural trailer

(1) Agricultural trailers shall comply with the provisions for trailers/semi-trailers for cars.
Before 1/10/1996: On agricultural trailers that are not subject to registration, signalling lamps may be placed on a lightboard.

6.04.130 Trailer for motorised work machinery

(1) Trailers for motorised work machinery shall comply with the provisions for trailers/semi-trailers for cars.
Before 1/10/1996: On a trailer for motorised work machinery, signalling lamps may be placed on a lightboard.

6.4.141 Caravan

(1) Caravans shall comply with the provisions for trailers/semi-trailers for cars.

6.4.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration shall comply with the provisions for trailer/semi-trailer for cars.
Before 1/10/1996: On towed equipment subject to registration, signalling lamps may be placed on a lightboard.

6.4.143 Towed equipment not subject to registration

(1) Towed equipment not subject to registration shall comply with the provisions for trailers/semi-trailers for cars.
Before 1/10/1996: On towed equipment not subject to registration, signalling lamps may be placed on a lightboard.

6.04.150 Towed vehicle for motorcycle

(1) Towed vehicle for motorcycle shall comply with the provisions for trailers/semi-trailers for cars.

6.04.160 Trailer coupled to large moped

(1) Trailer coupled to large moped shall comply with the requirements for trailers/semi-trailers for cars.

6.04.199 Lowboy

(1) Lowboys shall comply with the provisions for trailers/semi-trailers for cars.
Before 1/1/1971: Does not apply to lowboys whose structure does not prevent the driver from clearly giving hand signals.
(2) A lowboy shall also be fitted with a beacon(s). If so necessitated by the design of the lowboy, the beacon(s) may be placed on the towing vehicle.

6.04.200 Vehicle combination

(1) Vehicle combinations that are towed by tractors or motorised work machinery, outside of daylight hours, shall be fitted with a beacon(s) if the width of the vehicle combination exceeds 2.55 m.

6.04.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

6.04.340 Emergency vehicle

(1) An emergency vehicle shall also be fitted with emergency 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 fitted with one or more additional emergency lamps, which shall be connected to the same contact as the mandatory emergency lamp. Additional emergency lamp(s) need not comply with the provisions of point 6.04.006 (1) (b) and (2).
(4) Lightboards with emergency lamps on emergency vehicles belonging to the police or national emergency services may be removed for non-emergency driving.
(5) In addition to the blue emergency lamps, an emergency vehicle may be fitted with flashing main-

beam headlamps that flash simultaneously or alternately.

(6) Flashing main-beam headlamps of emergency vehicles shall flash at a frequency of 60–240 per minute.

(7) An emergency vehicle may be fitted with two white flashing lamps, instead of flashing main-beam headlamps, that meet the requirements in points (5) and (6) for flashing main-beam headlamps.

6.04.362 Flatbed tow truck

(1) A flatbed tow truck may also be fitted with two rear direction indicator lamps and two stop lamps behind the driver's cab and at the height of its roof.

6.04.363 Vehicle specifically designed to perform roadwork

(1) On a vehicle with a rear-mounted gravel or salt spreader, at least one pair of stop lamps shall be visible from the rear.

(2) A vehicle with a snow removal unit or rear-mounted gravel or salt spreader shall be fitted with a beacon(s).

6.5 Reflectors, etc.

6.5.1 General provisions

(1) A front reflector shall be white, a rear reflector shall be red, and a side reflector shall be yellow. However, if the rearmost side reflector is grouped with a rear lamp or reflector, it may be red.

(2) Triangular reflectors may only be placed at the rear of a towed vehicle.

(3) A mandatory reflector shall meet one of the following conditions:

a) Shall be approved and marked in class l (non-triangular) or lll (triangular) in accordance with UN Regulation 3.

b) Shall be carried made in accordance with American standard FMVSS 108 and be marked 'DOT'.
Before 1/1/2017: The mandatory reflector may be approved and marked in accordance with Directive 76/757/
EEC.
Before 1/4/1992: Mandatory reflectors may be approved by the Ministry of Justice ('JRU' mark). Front reflectors and side reflectors may consist of 'JRU' marked reflecting film with a minimum area of 100 cm² and intended for direct application to bodywork or the like.

(4) Reflectors in pairs shall be uniform, including the same size, shape, colour, and reflectivity. They shall be placed symmetrically in relation to the longitudinal median plane of the vehicle and at the same height above the ground.
A front or rear reflector shall be located in the median longitudinal plane of the vehicle.

(5) The positions of the reflectors are measured as described in point 6.02.001 (3).

(6) Reflective number plates, nationality marks, and school signs are not considered to be reflectors.

(7) Advertising signs, etc., in which reflective material is included, are considered as supplemental reflectors.

(8) Mandatory front or rear reflectors may not be blocked by doors, tailgates, or the like.

6.5.2 Front reflectors

(1) Mandatory front reflector:

a) Shall be located not more than 0.15 m from the outermost edge of the vehicle. The distance between reflectors forming a pair shall be at least 0.40 m.
Before 1/5/1977: The reflector may be located no more than 0.40 m from the outermost edge of the vehicle and the distance between reflectors may be less than 0.40 m.

b) Shall be located not less than 0.25 m and not more than 0.90 m above the ground. If so necessitated by the structure of the vehicle, the height above the ground may be increased to 1.50 m.
Before 1/5/1977: Reflectors may be positioned not 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 reflector above the ground is less than 0.75 m.

6.5.3 Rear reflectors

(1) The mandatory rear reflector shall meet the following conditions:

a) Shall be located not more than 0.40 m from the outermost edge of the vehicle. The distance between reflectors in a pair of reflectors shall be at least 0.40 m, though 0.60 m for triangular reflectors if the width of the towed vehicle is at least 1.30 m.
Before 1/7/2024: The distance between triangular reflectors may be as little as 0.40 m.
Before 1/5/1977: The distance between reflectors may be less than 0.40 m.

b) Shall be located not less than 0.25 m and not more than 0.90 m above the ground. If so necessitated by the structure of the vehicle, the height above the ground may be increased to 1.50 m.
Before 1/3/1967: Reflectors may be positioned not 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 reflector above the ground is less than 0.75 m.

6.5.4 Side reflectors

(1) The mandatory side reflector shall meet the following conditions:

a) Shall be located not less than 0.25 m and not more than 0.90 m above the ground. If so necessitated by the structure of the vehicle, the height may be increased to 1.50 m.
Before 1/5/1977: Reflectors may be positioned not 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 reflector above the ground is less than 0.75 m.

(2) The mandatory side reflectors shall be fitted such that they meet the following conditions:

a) There shall be at least one reflector on each side of the vehicle's centre third.

b) The foremost side reflector on each side shall be located no more than 3.00 m from the foremost point of the vehicle.

c) The distance between two consecutive reflectors shall not exceed 3.00 m, though 4.00 m if so necessitated by the structure of the vehicle.

d) The rearmost reflector on each side shall be located no more than 1.00 m from the rearmost point of the vehicle.

In the case of towed vehicles, the coupling device shall be included in the length of the vehicle.

Before 1/5/1977: If the length of the vehicle is not more than 6.00 m, a reflector shall be fitted on each side; on a power-driven vehicle no more than 1.00 m from its foremost point, and on a towed vehicle no more than 0.40 m from its rearmost point.

If the length of the vehicle exceeds 6.00 m, two reflectors shall be fitted on each side; on a power-driven vehicle no more than 1.00 m from its foremost point, 0.40 m from its rearmost point, and on a towed vehicle not more than 0.40 m from the front edge of the chassis, respectively 0.40 m from the rearmost point of the vehicle.

If the vehicle length exceeds 8.00 m but does not exceed 10.00 m, a reflector shall also be fitted on each side in the centre third of the vehicle.

If the length of the vehicle exceeds 10.00 m, two reflectors shall also be fitted on each side in the centre third of the vehicle and spaced at a distance of at least 2.00 m.

6.05.010 Power-driven vehicle

(1) A power-driven vehicle may be equipped with the following:

a) Additional front reflectors.

b) Additional rear reflectors.
c) Additional side reflectors.

6.05.020 Car

(1) A car shall be equipped with:
a) Two rear reflectors.
b) Side reflectors if the length of the vehicle exceeds 6.00 m.

Before 1/4/1995: Does not apply to passenger car M1. Side reflectors may be replaced by side-marker lamps.

Before 1/4/1990: Only applicable if the length of the vehicle exceeds 8.00 m or it is approved to be part of a vehicle combination.

6.5.31 Two-wheeled motorcycle

(1) A two-wheeled motorcycle shall be fitted with one rear reflector.
A two-wheeled motorcycle may be equipped 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 reflectors are yellow and the rear reflectors are red.

6.5.32 Two-wheeled motorcycle with sidecar

(1) Two-wheeled motorcycle with sidecar shall be fitted with two rear reflectors.

6.5.33 Tricycle

(1) A tricycle shall be fitted with two rear reflectors.

6.05.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.

6.05.050 Tractor

(1) A tractor shall be fitted with two rear reflectors, which may be positioned 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 brackets that could be easily damaged.
Before 1/5/1977: Reflectors may be positioned not more than 1.50 m above the ground.

(2) If the structure of the tractor precludes compliance with the provisions on the position and visibility of rear reflectors, the vehicle may be fitted with two pairs of rear reflectors in accordance with the following rules:
a) One pair shall comply with the provision on a maximum height of 0.90 m and shall have a minimum spacing of 0.40 m and an angle of visibility above the horizontal of at least 15°.
Before 1/5/1977: This pair may be positioned not more than 1.20 m above the ground, if the second pair is positioned not more than 1.80 m above the ground.
b) The second pair may be placed at a height of up to 2.10 m and shall otherwise comply with the provisions of point 6.05.003 (1) (a) and be visible at least 30° outwards and inwards and at least 15° below the horizontal.

(3) Tools and protruding equipment, including twin tyres, shall be marked with the following:
a) One front reflector and one rear reflector on the side(s) on which the tool, etc. protrudes more than 0.15 m from the side of the tractor.
b) Two front reflectors and one side reflector on each side, if the tool, etc. protrudes more than 1.00 m forward.
c) Two rear reflectors and one side reflector on each side, if the tool, etc. protrudes more than 2.00 m

rearward.
The reflectors shall be placed on the tool, etc. as near the outer edge as practicable.

(4) If a tool or protruding equipment blocks the tractor's mandatory reflectors, the tool or the protruding equipment shall be provided with equivalent reflectors, possibly placed on a lightboard.

6.05.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors.
Before 1/5/1977: The location dimensions may be waived if necessitated by the structure of the vehicle.

(2) Motorised work machinery shall also be fitted with side reflectors if the length of the vehicle exceeds 6.00 m.
Before 1/4/1995: Side reflectors may be replaced by side-marker lamps.
Before 1/4/1990: Only applicable if the length of the vehicle exceeds 8.00 m.
Before 1/5/1977: The location dimensions may be waived if necessitated by the structure of the vehicle.

(3) Motorised work machinery that is pedestrian-operated need not be fitted with reflectors.

6.05.099 Power-driven lowboy

(1) Power-driven lowboys shall comply with the provisions for cars.

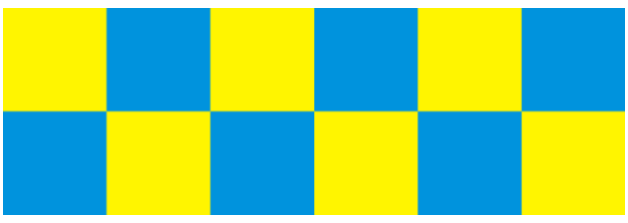
6.05.100 Towed vehicle

(1) Towed vehicles shall be fitted with the following:
a) Two front reflectors. Before 1/1/1971:
Not applicable.
b) Two rear triangular reflectors pointing upwards.
c) Side reflectors.
Before 1/4/1995: Side reflectors may be replaced by side-marker lamps.

(2) Towed vehicles may be fitted with the following:
a) Additional front reflectors.
b) Additional rear reflectors. With the exception of reflectors which are grouped with lamps or which are part of logos or similar, additional rear reflectors shall be triangular and pointing upwards.
c) Additional side reflectors.

6.05.340 Emergency vehicle

(1) An emergency vehicle may bear additional reflective markings on all sides of the vehicle. The reflective markings shall be designed in one of the following ways:
a) With red/white or red/yellow diagonal stripes at an angle of 45° ± 5° and a width of 100 mm ± 2.5 mm. The front and rear reflective markings shall be symmetrically positioned in such a way that traffic is guided to pass the vehicle.
b) With the Battenburg pattern. The colours shall be blue/yellow for police vehicles, green/yellow for ambulances and similar vehicles, and well as red/yellow for fire and rescue.



(2) An emergency vehicle may bear reflective text in the same colour as the additional reflective markings, including 'POLITI', 'ALARM 112', 'AMBULANCE', 'LÆGEVAGT', 'lNDSATSLEDER' (police, 112 emergency, ambulance, emergency doctor, commander) or relevant

equivalent.

6.05.363 Vehicle specifically designed to perform roadwork

(1) On a vehicle with a rear-mounted gravel or salt spreader, the mandatory rear reflectors shall be visible from the rear.

(2) A vehicle specifically designed to perform roadwork may bear additional reflective markings on all sides of the vehicle in accordance with the rules in points (a) to (b):

a) The reflective markings shall be made with either red/white or red/yellow diagonal stripes at an angle of 45° ± 5° and a width of 100 mm ± 2.5 mm.

b) The front and rear reflective markings shall be symmetrically positioned in such a way that traffic is guided to pass the vehicle, and shall be positioned on the sides in such a way that traffic is guided in front or away from the vehicle.

6.06 Audible warning devices

6.06.001 General provisions

(1) A vehicle may only be fitted with an audible warning device that complies with the following provisions:

a) An audible warning device shall, while activated, always give a clear sounding tone of constant strength and frequency.
Before 1/11/2019: Light mopeds can be provided with a clear bell sound. Audible warning devices may consist of several interconnected sound generators operating simultaneously.

b) The sound pressure may not exceed the following value: 118 dB(A). However, the sound pressure shall be at least 105 dB(A). Applies to audible warning devices for vehicles of categories M and N and motorcycles.
The sound pressure is measured in accordance with UN Regulation 28, point 6.2. Before 1/7/2024: Not applicable.

(2) Compressed-air audible warning devices may not be connected directly to reservoirs in the compressed air braking system. A vacuum audible warning device may not be connected to the braking system of a vehicle with vacuum brakes or vacuum-booster brakes.

(3) A vehicle may be fitted with a reverse signal that complies with the following additional requirements:

a) The reverse signal may not emit a signal that causes unnecessary inconvenience to other road users.

b) The reverse signal shall only be capable of activation when the ignition switch is on, and either the reverse gear is engaged or the speedometer switch is on.
A vehicle without an ignition switch shall be equipped with some other manually operated switch for the reverse signal.

c) A reverse signal may emit an intermittent (on/off) signal.

6.06.010 Power-driven vehicle

(1) A power-driven vehicle shall be equipped with an audible warning device: Before 1/5/1977: Does not apply to motorised work machinery:
Before 1/1/1971: Does not apply to tractors which are not subject to registration or approval.
Does not apply to power-driven lowboys:

6.06.021 M1 passenger car

(1) An M1 passenger car may not be equipped with a reverse signal. This does not apply if the car is equipped with an electric motor or an electric motor combined with an internal combustion engine as the motive force and is not simultaneously equipped with a specific audio system for uninterrupted warning sounds for pedestrians, cyclists, etc.

6.06.060 Motorised work machinery

(1) Motorised work machinery that is pedestrian-operated need not be fitted with an audible warning device.

6.06.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

6.06.340 Emergency vehicle

(1) Emergency vehicles shall be fitted with one or more sirens.

(2) Sirens shall be one of the following:

a) Two-tone (High-Low), which switches between two tones.

b) McCloud (Yelp), where the frequency increases rapidly.

c) Ulvehyl (Wail), where the frequency increases and decreases slowly.

(3) Lightboards with emergency lamps on emergency vehicles belonging to the police or national emergency services may be removed for non-emergency driving.

(4) Ambulances with a maximum permissible laden weight exceeding 3 500 kg may be equipped with a reverse signal.

6.06.364 Motorhome

(1) Motorhomes with a maximum permissible laden weight exceeding 3 500 kg may be equipped with a reverse signal.

6.7 Radio equipment, television, etc.

6.7.1 General provisions

(1) Radio and telephone equipment, etc. shall be so installed that the driver's vision is not obstructed nor operation of the vehicle impeded.

Such equipment shall be so installed that if it is intended to be operated by the driver while driving it can be operated without the need for the driver to change position significantly.

(2) The radiocommunications system call device may be connected to the vehicle's audible warning device and/or passing-beam headlamps. The connection between the radio system and the audible warning device (the passing-beam headlamps) shall be capable of being switched off by a specific switch.

(3) Television sets and the like shall meet one of the following conditions:

a) Shall be so placed that the driver cannot see the screen while driving.

b) Shall be connected in such a way that it cannot be switched on while the engine is running.

The provision does not apply to television equipment which is designed solely to supplement mandatory rear-view mirrors or for the monitoring of passenger compartments, including automatic doors.

(4) Antennae shall be placed and arranged as follows:

a) Such that no part of an antenna while driving, including during strong braking and acceleration, moves out beyond the external contour of the vehicle.

b) So it does not pose undue danger to other road users.

(5) Radio and telecommunications terminal equipment shall comply with the provisions of the Order specified in point 6.01.002 (1).

6.8 Vehicle alarm system, immobilizer, etc.

6.8.1 Vehicle alarm system

(1) A vehicle alarm system (VAS) shall, upon activation, emit a signal with one or more of the following:

a) With the vehicle's audible warning device.

b) With a specific audible warning device.
c) With the vehicle's passing-beam headlamps.
d) With some or all of the vehicle's direction-indicator lamps.

(2) The audible signal shall be automatically stopped no later than 30 seconds after activation and shall only start again when the alarm is reactivated.

(3) The light signal, which shall consist of flashing, shall automatically cease no later than 5 minutes after activation and shall only begin again when the alarm is reactivated.

(4) Activation of the alarm must not be possible while driving, or when the vehicle is otherwise in use and in operation as intended.

6.8.2 Immobilizer

(1) Mandatory immobilizers 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 1/7/2024: Immobilizers may comply with the constructive provisions of UN Regulation 97.
Before 1/1/2017: Immobilizers may comply with the constructive provisions of Directive 74/61/EEC as amended by Directive 95/56/EC.

6.08.010 Power-driven vehicle

(1) A power-driven vehicle may be fitted with a vehicle alarm system.
(2) A power-driven vehicle may be equipped with an immobilizer.

6.08.021 M1 passenger car

(1) An M1 passenger car shall be equipped with an immobilizer. Before 1/10/1998: Not applicable.

6.08.024 N1 light goods vehicle

(1) Light goods vehicle N1 shall be equipped with an immobilizer. Before 1/7/2024: Not applicable.

6.9 Distinctive markings

6.9.1 General provisions

(1) Painting to mark external projections shall be done with yellow/black stripes in accordance with standard DS/ISO 3864.
Before 1/7/2024: Painting to mark external projections may be done with yellow/black stripes in accordance with standard DS 734.

(2) Reflectors to mark external projections shall comply with the provisions in points 6.05.001 (1) (3) and (7) and the provisions on visibility angle in points 6.05.002, 6.05.003 and 6.05.004.

(3) In the case of lamps to mark external projections, the following apply:
a) The connection shall comply with the provisions of point 6.03.001 (4).
b) A forward-facing lamp shall comply with the provisions of points 6.03.002 (1) (a), (b), (c), (d), and (g) and (2).
c) A rearward-facing lamp shall comply with the provisions of points 6.03.003 (1) (a), (b), (c), (d), and (f) and (2).
d) Lamps facing to the side shall comply with the provisions of points 6.03.008 (1) (a), (b), and (d).
e) A beacon shall comply with the provisions of point 6.04.005.

f) That a specific beacon on a lifting platform need only comply with the provisions of point 6.09.002.

6.9.2 Specific beacons on tail lift

(1) Specific beacons on tail lifts shall meet the following conditions:

a) Shall emit yellow light.
b) Shall be located not more than 0.40 m from the outer corners of the tail lift.
c) Shall be directed rearward when the tail lift is in the working position.
d) Shall not be possible to turn on while the tail lift has been folded up.
e) Shall flash at a frequency of 100-240 per minute.

6.9.3 Lightboard

(1) A lightboard shall be equipped with the following:

a) Device to ensure a secure attachment.
b) Two rear position lamps.
c) Number plate lamp(s).
d) Two direction-indicator lamps.
e) Two stop lamps.
f) Two reflectors.

The lightboard shall be located not less than 0.35 m and not more than 0.90 m above the ground.

The lightboard shall dimensions such that the lamps and reflectors, with the exception of number plate lamps, are located within 0.40 m from the outermost edge of the vehicle.

The lamps of the lightboard shall be connected to the corresponding mandatory lamps at the rear of the vehicle.

Lamps and reflectors on the lightboard are not included in the number of lamps and reflectors required or permitted at the rear of the vehicle.

6.9.20 Car

(1) Parts protruding 1.00 m or more in front of the vehicle's actual bodywork in its original construction shall meet the following conditions:

a) The front, and the sides of the foremost 0.50 m, shall be painted to mark out the projections.
b) The front shall be provided with at least one lamp that emits white light forward.
c) The front of each side shall be provided with at least one lamp that emits yellow light to the sides. Before 1/4/1979: Not applicable.

(2) Parts protruding 2.00 m or more in front of the vehicle's actual bodywork in its original construction shall also be provided with a beacon at the front. The lamp shall be connected in such a way that it can be switched on without the vehicle's end-outline marker lamps being switched on.
Before 1/4/1979: Not applicable.

(3) Parts which protrude less than 1.00 m forward in front of the vehicle's actual bodywork in its original construction and parts which protrude to the rear of the vehicle in its original construction may be painted to mark external projections.

(4) Parts protruding forward in front or to the rear of the vehicle's actual bodywork in its original construction may be fitted with reflectors to mark external projections.

(5) The tail lift may be fitted with two specific beacons on tail lift.

6.9.21 M1 passenger car

(1) An M1 passenger car may be fitted with a lightboard.

6.9.22 M2 passenger car

(1) A passenger car M2 shall comply with the provisions for passenger car M1.

6.9.23 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M1.

6.9.24 N1 light goods vehicle

(1) A light goods vehicle N1 shall comply with the provisions for passenger car M1.

6.09.050 Tractor

(1) Tractors may bear distinctive markings in accordance with the rules for cars.

6.09.060 Motorised work machinery

(1) Motorised work machinery, outside of daylight hours, shall be fitted with lamps to mark protruding parts. Before 1/5/1977: A forward-facing lamp may emit white or yellowish light.
(2) Motorised work machinery may bear distinctive markings in accordance with the rules for cars.

6.09.099 Power-driven lowboy

(1) A Power-driven lowboy may bear distinctive markings in accordance with the rules for cars.

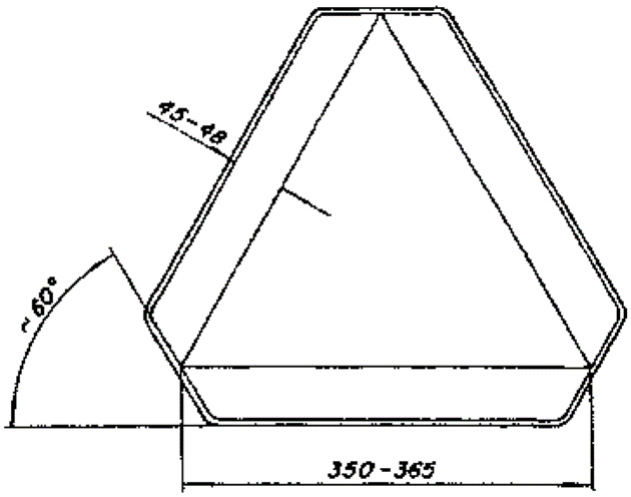
6.09.363 Vehicle specifically designed to perform roadwork

(1) A vehicle designed as a mobile roadblock may be fitted with reflective signs and yellow flashing lights in accordance with Order No 818 of 22 June 2017 on markings of road works, etc.

6.10 Marking of slow-moving vehicles

6.10.1 General provisions

(1) A vehicle may only bear mandatory or permissible markings as a slow-moving vehicle.
(2) The markings as a slow-moving vehicle shall meet the following conditions:
a) Shall consist of a red, fluorescent, equilateral triangle with a red reflective border, as shown in the example below, in which the dimensions are expressed in millimetres.



b) Shall be placed at the rear of the vehicle, pointing upwards and directed to the rear.
(3) The markings as a slow-moving vehicle shall also meet the following conditions:
a) Shall be approved and marked in accordance with UN Regulation 69.
b) Shall have been approved by the Swedish Transport Agency,
(» Lf«-mærket)

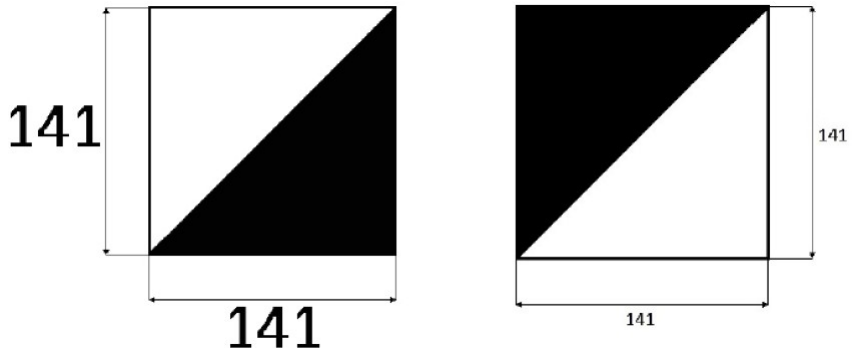
c) Must meet the technical lighting requirements for fluorescent material in UN Regulation 27 and for reflective road sign material type 4 in Order No 426 of 13 April 2023 on the use of road markings.

(4) Markings as a slow-moving vehicle may be detachable.

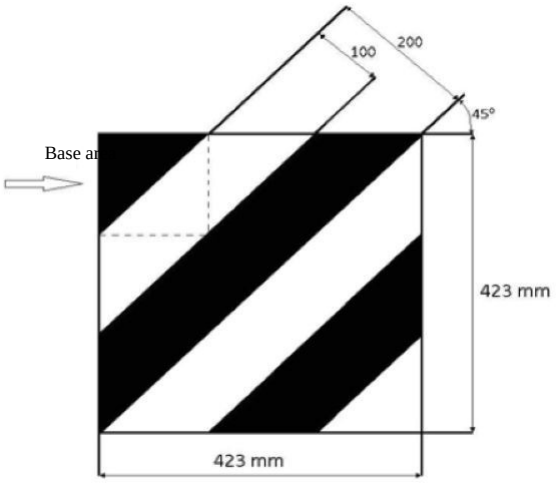
6.10.2 Distinctive markings of wide vehicles

(1) Distinctive markings of wide vehicles shall be made with angled fluorescent or reflective red/white stripes. The stripes shall be positioned at a 45° angle from the centre and outwards/downwards.

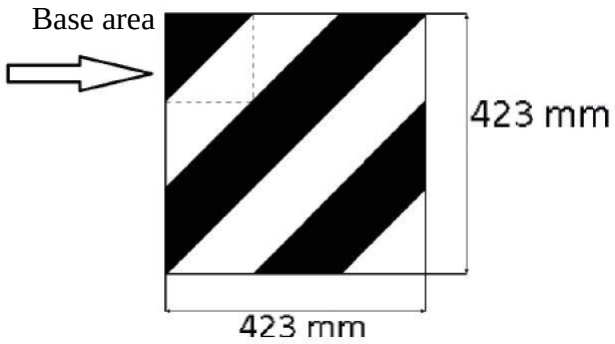
(2) The markings shall comply with the photometric requirements of UN Regulation 104, Annex 7. A base area is part of a marking with dimensions 141 x 141 mm. Base areas:



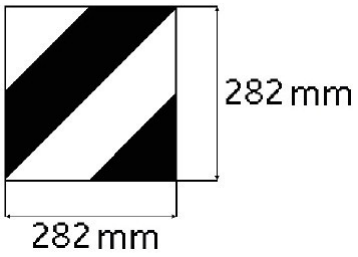
Sketch with dimensions of stripes in mm



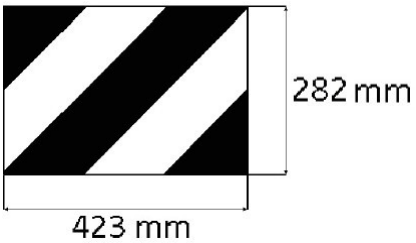
(3) The dimensions of each marking shall comply with the measures in the examples below. The figures only show the marking on one side:
Form A



Form B

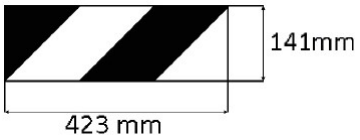


Form R, which may be mounted horizontally or vertically



Form L, which may be mounted horizontally or vertically

Form K. Two shall be mounted on each side and may be mounted horizontally or vertically



(4) Deviations from these are permissible under the following conditions:
   a) The visible area of each marking shall be 795 cm², corresponding to the area of four base areas.
   b) If necessitated by the shape of the bodywork, each marking may be divided into two parts, each comprising at least two base areas.
(5) The marking shall be located not more than 0.10 m from the outermost edge of the vehicle and shall be visible straight from the front and straight from the rear.

6.10.050 Tractor

(1) Tractors whose actual width exceeds 2.55 m shall bear on each side one or two distinctive markings as wide vehicles.
   Before 1/11/2019: Not applicable.

6.10.060 Motorised work machinery

(1) Motorised work machinery whose actual width exceeds 2.55 m shall bear on each side one or two distinctive markings as wide vehicles.
   Before 1/11/2019: Not applicable.

6.10.120 Agricultural trailer

(1) Agricultural trailers whose actual width exceeds 2.55 m shall bear on each side one or two distinctive markings as wide vehicles.
   Before 1/11/2019: Not applicable.
(2) Agricultural trailers may bear distinctive markings as wide vehicles, even if the width does not exceed 2.55 m.

6.10.130 Trailer for motorised work machinery

(1) Trailers for motorised work machinery whose actual width exceeds 2.55 m shall bear on each side one or two distinctive markings as wide vehicles.
   Before 1/11/2019: Not applicable.
(2) Trailers for motorised work machinery may bear distinctive markings as wide vehicles, even if the width does not exceed 2.55 m.

6.10.140 Towed equipment

(1) Towed equipment towed by tractors or motorised work machinery, whose actual width exceeds 2.55 m, shall bear on each side one or two distinctive markings as wide vehicles.
   Before 1/11/2019: Not applicable.
(2) Towed equipment towed by tractors or motorised work machinery may bear distinctive markings as wide vehicles, even if the width does not exceed 2.55 m.

6.11 Rear marking plates

6.11.1 General provisions

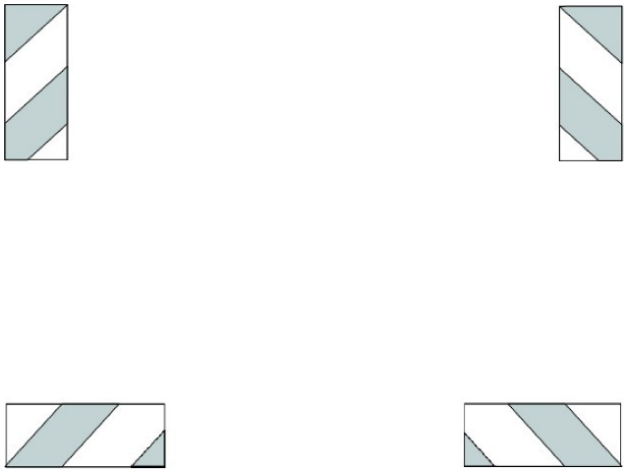
(1) Rear marking plates shall be made with diagonal stripes of alternate yellow reflective and red fluorescent material and shall be designed as shown below in models 1, 2, 3, or 4.

Model 1

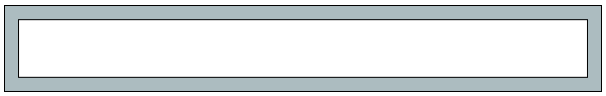
Model 2

Model 3

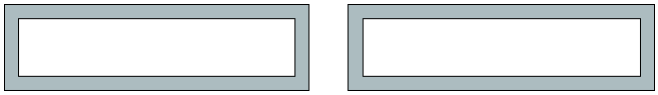
Model 4



(2) Rear marking plates on a trailer/semi-trailer for cars shall be made of yellow reflective material surrounded by a red fluorescent border and shall be designed as shown below in models 5, 6, 7, or 8 below. Model 5



Model 6



Model 7

Model 8

(3) Rear marking plates shall have the following measures in accordance with UN Regulation 70:

a) The total length of rear marking plates consisting of one, two, or four parts shall be not less than 1 130 mm and not more than 2 300 mm. The individual parts of a rear marking plate shall be of the same length.
b) The width shall be as follows:
- 140 ± 10 mm for car.
- 200 + 30 mm or -5 mm for trailer/semi-trailer for cars.
c) On rear marking plates for cars, the diagonal stripes shall have an angle of 45 ± 5° and a width of 100 ± 2.5 mm.
d) On rear marking plates on trailer/semi-trailer for cars, the fluorescent edge shall have a width of 40 ± 1 mm.

(4) Rear marking plates shall meet the following conditions:
a) Shall be placed at the rear of the vehicle and be directed to the rear.
b) Shall be placed symmetrically in relation to the longitudinal median plane of the vehicle. Parts that are paired shall be uniform.
c) Shall be located not more than 1.50 m above the ground as measured to the bottom edge, or not more than 2.10 m above the ground as measured to the upper edge.
d) Shall be approved and marked in accordance with UN Regulation 70 or meet the technical lighting requirements for fluorescent material in UN Regulation 27 and for reflective road sign material type 4 in the Order on the use of road markings.

(5) A vehicle may only bear mandatory or permissible rear marking plates.

6.11.023 M3 passenger car

(1) An articulated bus with a length of up to 18.75 shall be fitted with rear marking plates for cars. However, the requirement does not apply to articulated buses that are categorised as a city bus.
Before 1/6/2000: Articulated bus may have rear marking plates for towed vehicles.

(2) An articulated bus with a length exceeding 18.75 m, in addition to rear marking plates in accordance with point (1), shall be provided with a sign indicating the length of the bus with lettering at least 70 mm high. The length indicated is rounded up as integers in metres followed by the letter ‘m’ with a height of at least 35 mm. The sign shall be white and have a length of at least 565 mm and a height of at least 195 mm with a red fluorescent edge of at least 40 mm.

6.11.025 N2 Lorry

(1) Lorry N2 shall be fitted with rear marking plates if the maximum permissible laden weight exceeds 7 500 kg. The requirement does not apply to a lorry that is motive power for semi-trailers.

6.11.026 N3 Lorry

(1) Lorry N3 shall be equipped with rear marking plates. The requirement does not apply to a lorry that is motive power for semi-trailers.

6.11.111 Trailer/semi-trailer O1

(1) Trailer/semi-trailer O1 that is more than 8.00 m long shall be fitted with rear marking plates.
Before 1/7/2024: Not applicable.

6.11.112 Trailer/semi-trailer O2

(1) Trailer/semi-trailer O2 that is more than 8.00 m long shall be fitted with rear marking plates.
Before 1/7/2024: Not applicable.

6.11.113 Trailer/semi-trailer O3

(1) Trailer/semi-trailer O3 that is more than 8.00 m long shall be fitted with rear marking plates.

6.11.114 Trailer/semi-trailer O4

(1) Trailer/semi-trailer O4 shall be fitted with rear marking plates.

6.11.200 Vehicle combination

(1) In vehicle combinations consisting of lorries and centre-axle trailers, the car need not be fitted with rear marking plates.
(2) When the rear marking plates are mounted on the rear underrun protective device, compliance with point 6.11.001 (4) (a) is only required for the rearmost vehicle of the vehicle combination.

6.12 Daytime running lights

6.12.1 General provisions

(1) One of the following may be used as daytime running lights:
   a) Passing-beam headlamps.
   b) Front fog lamps.
   c) Daytime running lamps.
   d) Passing-beam headlamps with reduced voltage.
(2) If passing-beam headlamps or front fog lamps are used as daytime running lights, mandatory end-outline marker lamps shall be switched on at the same time.
   Before 1/4/1996: If the instrument lights are not switched on at the same time that passing beam or front fog lamps are being used as daytime running lights, then it is permissible that the front position lamps are not switched on at the same time either.
(3) If daytime running lamps or passing-beam headlamps are used as daytime running lights, the rear position lamps and other end-outline marker lamps may be switched on at the same time.
(4) Automatic daytime running lights shall turn off when the vehicle lights are switched into the passing/main-beam position.
   Before 1/4/1996: Applies only to automatic daytime running lights connected to daytime running lamps or front fog lamps.
(5) The following apply to automatic daytime running lights:
   a) Passing-beam headlamps may be connected to automatic daytime running lights.
   b) Front fog lamps shall not be connected to automatic daytime running lights.
   c) Daytime running lamps shall be connected to automatic daytime running lights.
   d) Reduced voltage passing-beam headlamps shall be connected to automatic daytime running lights.
   Before 1/4/1996: Automatic daytime running lights for all of the mentioned lamps were allowed but not required.
      When connecting the automatic daytime running lights to the passing beam, it was allowed for the main-beam headlamps to be switched on.
(6) A vehicle shall only be fitted with mandatory or permissible daytime running lights.

6.12.2 Daytime running lamps

(1) Daytime running lamps shall meet the following conditions:
   a) Shall emit white or yellowish (selective yellow) light.
   b) Shall be placed at the front of the vehicle and be directed forward.
   c) Shall be located not more than 0.40 m from the outermost edge of the vehicle.
   d) Shall be located not less than 0.25 m and not more than 1.50 m above the ground.
   e) Shall have a luminous intensity of 400 cd to 1 200 cd.
      The provision is considered to be met if the lamp has a power consumption of 15 W to 21 W and is

placed in front of a parabolic reflector.

f) Shall have an illuminating surface of at least 40 cm².

(2) Daytime running lamps in a pair shall comply with the provisions of point 6.02.001 (2).

(3) The positions of the daytime running lamps are measured as described in point 6.02.001 (3).

6.12.3 Passing-beam headlamps with reduced voltage

(1) The voltage at the lamp in a 12 V or 24 V system shall be at least 11 V or 22 V respectively at full charger voltage.

6.12.020 Car

(1) A car can be equipped with two daytime running lamps.

6.12.030 Motorcycle

(1) Motorcycles may be fitted with two daytime running lamps.

(2) Specific daytime running lights may be provided by two daytime running lamps or two daytime running lamps and a passing-beam headlamp(possibly with reduced voltage).

6.12.032 Two-wheeled motorcycle with sidecar

(1) Daytime running lamps shall be placed on the motorcycle in accordance with the rules for two-wheeled motorcycles.

6.12.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.
Before 1/11/2019: Light mopeds may be fitted with one daytime running lamp.

6.12.050 Tractor

(1) Tractors may be fitted with two daytime running lamps.

6.12.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors.

6.12.099 Power-driven lowboy

(1) Power-driven lowboys shall comply with the provisions for cars.

6.13 Contour marking

6.13.1 General provisions

(1) Contour marking shall show the horizontal and vertical dimensions of a vehicle, and shall be reflective.

(2) One of the following options may be used as contour marking:

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 marking, consisting of a conspicuity marking designed to show the horizontal dimensions (length and width) of a vehicle by a continuous line.

(3) Contour marking shall meet the following conditions:

a) Shall be approved and marked in accordance class ‘C’ in accordance with UN Regulation 104.

b) Shall be made of 50–60 mm wide reflective material.

c) Shall have at least one visible ‘E’ mark on any part of the contour marking.

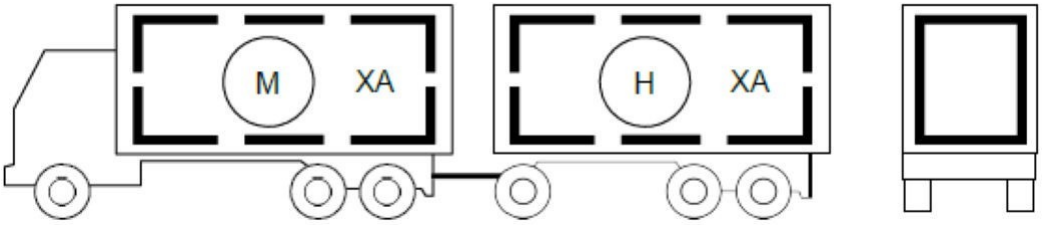
d) Shall be of yellow or white colour when affixed to the side of the vehicle and of red or yellow colour when affixed to the rear of the vehicle.

e) Shall be so arranged that, if the contiguous parts of the contour marking are interrupted, the distance between those parts shall not exceed 50 % of the length of the shortest part.

f) Shall be so arranged that the lowermost part of the contour marking is affixed not less than 0.25 m and not more than 1.50 m above the ground, though 2.50 m if so necessitated by the structure of the vehicle.

g) Shall be so arranged that the distance from each mandatory stop lamp is greater than 0.20 m.

(4) Full contour marking shall be affixed on the side and/or rear of the vehicle as close as possible to its outer edges, as shown in the example below.



(5) Partial contour marking shall meet the following conditions:

a) Shall be affixed on the side and/or rear of the vehicle as close as possible to its outer edges.

b) Shall consist of the lower horizontal part of the full contour marking and a marking in each of the upper corners with two perpendicular parts, each having a length of at least 0.25 m.

(6) Line marking shall meet the following conditions:

a) Shall be affixed on the side and/or rear of the vehicle as close as possible to the lowermost edge.

b) Shall consist of the lowermost, horizontal part of full contour marking.

c) Shall be white when affixed at the front of the vehicle.

(7) A vehicle bearing full side contour marking may bear reflective advertisements/logos (see points (8) and (9)).

(8) Advertising/logos shall meet the following conditions:

a) Shall be approved and marked in class ‘D’ or ‘E’ in accordance with UN Regulation 104, except that white reflective material used as a full-print base material in advertisements/logos without free white fields shall be marked in Class ‘D/E’.

b) Shall be made of a low-reflective material that can be in any colour.

c) Shall be affixed on the side of the vehicle.

d) Shall be affixed within the contour marking.

(9) Reflective material of class ‘D’ shall be used for reflective areas of less than 2.0 m2 and reflective materials of class ‘E’ shall be used for reflective areas of 2.0 m2 or more.

6.13.010 Power-driven vehicle

(1) A power-driven vehicle may be provided with contour marking and low-reflective multi-coloured advertisements/logos.

(2) Contour marking may not be affixed at the front of the vehicle.

6.13.021 M1 passenger car

(1) Passenger car M1 with a maximum permissible laden weight not exceeding 3 500 kg shall not have contour marking. Before 1/7/2024: Not applicable.

6.13.025 N2 Lorry

(1) Lorry N2 with a maximum permissible laden weight exceeding 7 500 kg and with a width of more than 2.10 m shall be provided with full rear contour marking.

(2) Lorry N2 with a maximum permissible laden weight exceeding 7 500 kg and a length of more than 6.00 m shall be provided with partial side contour marking.

(3) The requirements in points (1) and (2) do not apply to lorry N2 approved as motive power for semi-trailers.

(4) A line marking may be affixed instead of the mandatory contour marking if the shape, structure, construction, or operating conditions of the vehicle make it impossible to affix the mandatory contour marking.

6.13.026 N3 Lorry

(1) Lorry N3 shall comply with the provisions for N2.

6.13.030 Motorcycle

(1) Motorcycles may not be provided with contour marking.

6.13.040 Moped

(1) Mopeds may not be provided with contour marking.

6.13.100 Towed vehicle

(1) A towed vehicle may be provided with contour marking and low-reflective multi-coloured advertisements/logos.

6.13.111 Trailer/semi-trailer O1

(1) A trailer/semi-trailer O1 may not be provided with contour marking.
Before 1/7/2024: Not applicable.

6.13.113 Trailer/semi-trailer O3

(1) Trailer/semi-trailer O3 with a width of more than 2.10 m shall be provided with full rear contour marking.

(2) Trailer/semi-trailer O3 with a length of more than 6.00 m, including the drawbar of the towed vehicle shall be provided with partial side contour marking.

(3) A line marking may be affixed instead of the mandatory contour marking if the shape, structure, construction, or operating conditions of the vehicle make it impossible to affix the mandatory contour marking.

6.13.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for O3.

7. Engine, noise, air pollution, etc.

7.1.1 General provisions

(1) Engine speed and power output shall be continuously adjustable from the driver’s position. The gas pedal/handle shall not be fitted with a latch device in an activated position (must be dead man's switch).

Before 1/1/1980: A vehicle may originally be equipped with a hand speeder with a latch device, if it is easy to operate while driving.

7.1.2 Speed limitation device

(1) A mandatory speed limitation device shall comply with the constructive provisions of UN Regulation 89. Before 1/1/2017: The speed limitation device may comply with Directive 92/24/EEC.

(2) The following cars are exempt from the speed limitation device requirement:

a) Cars used by Danish Defence, the Danish Emergency Management Agency, fire departments, and similar emergency services and the police. 'Similar emergency services' only covers cars approved as emergency vehicles.

b) Cars which, as a result of their construction, cannot run faster than the speed at which the speed limitation device shall be set.

Before 1/7/2024: Cars used in connection with scientific experiments and cars used for public services in urban areas are exempt from speed limitation device requirements.

7.01.010 Power-driven vehicle

(1) A power-driven vehicle may be fitted with an automatic speed control if the control device meets the following requirements:

a) Can be manually switched on and off with a special control device at the driver's position.

b) May be disconnected by actuating the service brakes.

c) Can be operated easily and effortlessly.

7.01.022 M2 passenger car

(1) Passenger car M2 shall be fitted with a speed limitation device set in such a way that the speed cannot exceed 100 km/h.

Before 1/1/2005: Applies only to passenger car M2 with diesel engine, which according to the Danish type-approval complies with Directive 88/77/EEC on air pollution.

Before 1/10/2001: Not applicable.

(2) Fire safety in engine compartments:

a) No combustible sound-proofing material or material liable to become impregnated with fuel, lubricant or other combustible material shall be used in the engine compartment unless the material is covered by an impermeable sheet.

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 firewall shall be provided between the engine compartment or other heat sources and the rest of the vehicle. All fixtures, clamps, gaskets, etc. connected to the firewall shall be fire resistant.
Before 1/4/2010: Not applicable.

7.01.023 M3 passenger car

(1) Passenger car M3 shall be fitted with a speed limitation device set in such a way that the speed cannot exceed 100 km/h.

Before 1/10/2001: Only applicable to passenger car M3 with a total permissible weight exceeding 10 000 kg. Before 1/1/1988: Not applicable.

(2) Passenger car M3 shall comply with the provisions in point 7.01.022 (2) on fire safety in engine compartments. Before 1/4/2010: Not applicable.

7.1.25 N2 Lorry

(1) Lorry N2 shall be fitted with a speed limitation device set in such a way that the speed cannot exceed 90 km/h.
Before 1/1/2005: Applies only to lorry N2 with diesel engine, which according to the Danish type-approval complies with Directive 88/77/EEC on air pollution.
Before 1/10/2001: Not applicable.

7.1.26 N3 Lorry

(1) Lorry N3 shall be fitted with a speed limitation device set in such a way that the speed cannot exceed 90 km/h.
Before 1/1/1988: Not applicable.

7.01.040 Moped

(1) The engine power shall be limited in such a way that the maximum speed of the moped can only be increased with difficulty. The engine shall comply with the technical requirements in Annex II to Regulation (EU) 44/2014.
Before 1/7/2024: The limitation may have been made in accordance with Directive 97/24/EC, Chapter 7, on measures against tampering, or UN Resolution on the Construction of Vehicles (R.E.3), Section 8.24.

7.01.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

7.2 Fuel system

7.2.1 General provisions

(1) Fuel tanks and lines shall be made of tough and durable material that is resistant to fuel and heat. The fuel tank shall be made of non-combustible material or comply with the constructive provisions of UN Regulation 34-03, Annex 5.
Before 1/7/2024: Plastic fuel tanks may comply with the constructive provisions on fire resistance in UN Regulation 34. Other fuel tanks made of combustible material, but not plastic, may comply with the constructive provisions in UN Regulation 34, Annex 5.
Before 1/1/2017: Plastic fuel tanks may comply with the constructive provisions on fire resistance in Annex I, point 6.3.5 of Directive 70/221/EEC, as amended by Directive 2000/8/EC.
(2) Fuel tanks and lines shall be so designed, arranged, and secured that vibrations, etc., do not result in a risk of wear and tear during normal use of the vehicle.
(3) Assemblies in fuel lines, including hoses, shall be secured against unintended separation.
(4) A petrol vehicle without a feed pump between the fuel tank and the carburettor or the like shall be fitted with a shut-off valve in the fuel line immediately adjacent to the fuel tank. Before 1/5/1977: Does not apply to cars.
(5) On motor vehicles and mopeds, placed on the market for the first time during the period from 1 July 2022 to 12 April 2024, on or in the immediate vicinity of the filler cap of all fuel tanks, there shall be a marking with one or more symbols indicating the types of fuel that the vehicle can use. The symbols shall be formatted and placed in accordance with standard DS/EN 16942:2016+A1:2021.
Before 1/7/2022: The symbols may be formatted according to standard DS/EN 16942:2016. Before 12/10/2018: Not applicable.

(6) On electrically rechargeable motor vehicles and mopeds, placed on the market for the first time during the period from 1 October 2022 to 12 April 2024, in the vicinity of the vehicle's charging port and relevant connector, there shall be a marking with one or more symbols indicating the type of connector that the vehicle can use. The symbols shall be formatted and placed in accordance with standard DS/EN 17186:2019.
Before 1/10/2022: Not applicable.

7.02.022 M2 passenger car

(1) The fuel tank may not be located inside the car. The provision is deemed to be fulfilled if the tank is placed under the floor.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.
(2) It shall be ensured that any spillage during refuelling cannot end up in the car, rather it goes to the road.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.
(3) Fuel lines may not penetrate through the bodywork of the vehicle.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

7.02.023 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.

7.3 Transmission system

7.3.1 General provisions

(1) The clutch pedal/handle shall operate evenly and must not require excessive activation force. The clutch shall operate and not be able to 'slip' during full torque output from the engine.
If the clutch of a motorcycle is operated only by pedal, the pedal shall be able to remain in neutral.
(2) Transmission elements shall be shielded such that they do not pose undue danger.
(3) A Power-driven vehicle, other than a motorcycle, with an unladen weight exceeding 400 kg shall be fitted with a reverse gear or other rearward drive device.
Before 1/5/1977: Does not apply to tractors or motorised work machinery.

7.4 Exhaust System

7.4.1 General provisions

(1) The exhaust system shall be designed and installed as follows:
a) Exhaust gases must not penetrate into the driver and passenger compartments.
b) Exhaust gases may not be expelled to the right of the vehicle unless the vehicle is EU type-approved with the exhaust pointing to the right, or has a particulate filter or catalytic converter.
c) There must be no risk of ignition of combustible materials on the vehicle. The distance to material that is not heat-resistant shall be greater than 50 mm.

7.04.040 Moped

(1) Mopeds need not comply with the provisions of point 7.04.001 (1) (b).

7.5 Sound

7.5.1 General provisions

(1) A power-driven vehicle shall be so designed that it does not emit unnecessary noise.

(2) The sound level of a power-driven vehicle is measured by the following methods:

a) Sound measurement method I (vehicle in motion).

b) Sound measurement method II (7 m stationary).

c) Sound measurement method IV (close-field stationary).

Before 1/4/2004: For light mopeds, sound measurement method III (roll resistance) was used.

(3) Upon initial registration or entry into service of a car, motorcycle, moped, or tractor, the sound level shall not exceed the sound thresholds applicable to method I. In the case of a used vehicle, the sound level shall not exceed the thresholds by more than 3 dB(A).

Before 1/10/1982: Upon initial registration, a vehicle may be measured with sound measurement method II.

(4) In the case of a used vehicle, motorcycle, or moped, the sound level shall not exceed by more than 3 dB(A) the noise level at initial registration as measured with sound measurement method II or IV.

Before 1/4/2004: In the case of used light mopeds, the sound level shall not exceed the applicable sound threshold for sound measurement method III.

(5) In the case of a used tractor, the sound level shall not exceed by more than 3 dB(A) the noise level as measured with sound measurement method II or IV.

Before 1/5/1977: Not applicable.

(6) Upon entry into service of a power-driven lowboy, the sound level shall not exceed the applicable sound thresholds for sound measurement method I or II. In the case of a used power-driven lowboy, the sound level shall not exceed the thresholds by more than 3 dB(A).

(7) In the case of a used power-driven lowboy, the sound level shall not exceed by more than 3 dB(A) the noise level as measured with sound measurement method II or IV.

7.5.20 Car

(1) In the case of an off-road car with a maximum permissible laden weight exceeding 2 000 kg, the sound thresholds indicated shall be increased by:

a) 1 dB(A) for a car with engine power of less than 150 kW.

b) 2 dB(A) for a car with engine power of 150 kW or more. Before 1/10/1990: Not applicable.

7.5.21 M1 passenger car

(1) For passenger car M1, the sound threshold as measured by sound measurement method I is 75 dB(A), though 76 dB(A) for a car with a direct-injection diesel engine.

Before 1/10/1996: The following sound thresholds apply under sound measurement method I:

– 78 dB(A), though 79 dB(A) for a car with a direct-injection diesel engine.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:

– 81 dB(A).

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:

- 83 dB(A) for a car with a maximum permissible laden weight not exceeding 3 500 kg and with an engine for petrol or LPG.
- 87 dB(A) for a car with a maximum permissible laden weight not exceeding 3 500 kg and with a diesel engine.
- 87 dB(A) for a car with a maximum permissible laden weight exceeding 3 500 kg and with an engine for petrol or LPG.
- 89 dB(A) for a car with a maximum permissible laden weight exceeding 3 500 kg and with a diesel engine.

Before 1/7/1969: The sound level may not be significantly above the original sound level of the car.

(2) For passenger car M1 with engine power greater than 140 kW and a ratio of engine power to maximum permissible laden weight exceeding 75 kW/tonne, the indicated sound thresholds are increased by 1 dB(A) under the conditions laid down in Directive 70/157/EEC, as amended.
Applies only in relation to the currently applicable sound thresholds in point (1).

7.5.22 M2 passenger car

(1) For passenger car M2, the following sound thresholds apply under sound measurement method I:
a) 77 dB(A) for a car with a maximum permissible laden weight not exceeding 2 000 kg, though 78 dB(A) for a car with a direct-injection diesel engine.
b) 78 dB(A) for a car with a maximum permissible laden weight exceeding 2 000 kg but not exceeding 3 500 kg, though 78 dB(A) for a car with a direct-injection diesel engine.
c) 79 dB(A) for a car with a maximum permissible laden weight exceeding 3 500 kg, though 80 dB(A) for a car with engine power of 150 kW or more.

Before 1/10/1996: The following sound thresholds apply under sound measurement method I:
- 79 dB(A) for a car with a maximum permissible laden weight not exceeding 2 000 kg, though 80 dB(A) for a car with a direct-injection diesel engine.
- 80 dB(A) for a car with a maximum permissible laden exceeding 2 000 kg but not exceeding 3 500 kg, though 81 dB(A) for a car with a direct-injection diesel engine.
- 81 dB(A) for a car with a maximum permissible laden weight exceeding 3 500 kg, though 84 dB(A) for a car with engine power of 150 kW or more.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:
- 82 dB(A) for a car with a maximum permissible laden weight not exceeding 3 500 kg.
- 83 dB(A) for a car with a maximum permissible laden weight exceeding 3 500 kg, though 86 dB(A) for a car with engine power of 200 hp (DIN) (147 kW) or more.

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:
- 83 dB(A) for a car with a maximum permissible laden weight not exceeding 3 500 kg and with an engine for petrol or LPG.
- 87 dB(A) for a car with a maximum permissible laden weight not exceeding 3 500 kg and with a diesel engine.
- 87 dB(A) for a car with a maximum permissible laden weight exceeding 3 500 kg and with an engine for petrol or LPG.
- 89 dB(A) for a car with a total laden weight exceeding 3 500 kg and with a diesel engine. Before 1/7/1969: The sound level may not be significantly above the original sound level of the car.

7.5.23 M3 passenger car

(1) For passenger car M3, the following sound thresholds apply under sound measurement method I: 79 dB(A), though 81 dB(A) for a car with engine power of 150 kW or more. Before 1/10/1996: The following sound thresholds apply under sound measurement method I:
- 81 dB(A), though 84 dB(A) for a car with engine power of 200 hp (DIN) (147 kW) or more.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:
- 83 dB(A), though 86 dB(A) for a car with engine power of 200 hp (DIN) (147 kW) or more.

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:
- 87 dB(A) for a car with an engine for petrol or LPG.
- 89 dB(A) for a car with a diesel engine.

Before 1/7/1969: The sound level may not be significantly above the original sound level of the car.

7.5.24 N1 light goods vehicle

(1) For light goods vehicle N1, the following sound thresholds apply under sound measurement method I:

a) 77 dB(A) for a car with a maximum permissible laden weight not exceeding 2 000 kg, though 78 dB(A) for a car with a direct-injection diesel engine.

b) 78 dB(A) for a car with a maximum permissible laden weight exceeding 2 000 kg but not exceeding 3 500 kg, though 78 dB(A) for a car with a direct-injection diesel engine.

Before 1/10/1996: The following sound thresholds apply under sound measurement method I:

- 79 dB(A) for a car with a maximum permissible laden weight not exceeding 2 000 kg, though 80 dB(A) for a car with a direct-injection diesel engine.
- 80 dB(A) for a car with a maximum permissible laden exceeding 2 000 kg, though 81 dB(A) for a car with a direct-injection diesel engine.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:

– 82 dB(A).

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:

- 83 dB(A) for a car with an engine for petrol or LPG.
- 87 dB(A) for a car with a diesel engine.

Before 1/7/1969: The sound level may not be significantly above the original sound level of the car.

7.5.25 N2 Lorry

(1) For lorry N2, the following sound thresholds apply under sound measurement method I:

a) 78 dB(A) for a car with engine power of less than 75 kW.

b) 79 dB(A) for a car with engine power of 75 kW or more but less than 150 kW.

c) 81 dB(A) for a car with engine power of 150 kW or more.

Before 1/10/1996: The following sound thresholds apply under sound measurement method I:

- 82 dB(A) for a car with engine power of less than 75 kW.
- 84 dB(A) for a car with engine power of 75 kW or more but less than 150 kW.
- 85 dB(A) for a car with engine power of 150 kW or more.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:

– 87 dB(A).

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:

- 87 dB(A) for a car with an engine for petrol or LPG.
- 89 dB(A) for a car with a diesel engine.

Before 1/7/1969: The sound level may not be significantly above the original sound level of the car.

7.5.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:

- 87 dB(A), though 89 dB(A) for a car with engine power of 200 hp (DIN) (147 kW) or more.

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:

- 87 dB(A) for a car with an engine for petrol or LPG.
- 89 dB(A) for a car with a diesel engine.

Before 1/7/1969: The sound level may not be significantly above the original sound level of the car.

7.05.030 Motorcycle

(1) For motorcycles, the following sound thresholds apply under sound measurement method I:

a) 75 dB(A) for motorcycles with displacement not exceeding 80 cm^3.

b) 77 dB(A) for motorcycles with displacement exceeding 80 cm^3 but not exceeding 175 cm^3.

c) 80 dB(A) for motorcycles with displacement exceeding 175 cm^3.

Before 1/4/2004: The following sound thresholds apply under sound measurement method I:

- 77 dB(A) for motorcycles with displacement not exceeding 80 cm³.
- 79 dB(A) for motorcycles with displacement exceeding 80 cm³ but not exceeding 175 cm³.
- 82 dB(A) for motorcycles with displacement exceeding 175 cm³.

Before 1/10/1990: The following sound thresholds apply under sound measurement method I:

- 78 dB(A) for motorcycles with displacement not exceeding 80 cm³.
- 80 dB(A) for motorcycles with displacement exceeding 80 cm³ and not exceeding 125 cm³.
- 83 dB(A) for motorcycles with displacement exceeding 125 cm³ and not exceeding 350 cm³.
- 85 dB(A) for motorcycles with displacement exceeding 350 cm³ and not exceeding 500 cm³.
- 86 dB(A) for motorcycles with displacement exceeding 500 cm³.

Before 1/10/1982: The following sound thresholds apply under sound measurement method II:

- 84 dB(A) for a two-stroke motorcycle.
- 88 dB(A) for a four-stroke motorcycle.

Before 1/7/1969: The sound level may not be significantly above the original sound level of the motorcycle.

7.05.040 Moped

(1) For mopeds, the following sound thresholds apply under sound measurement method I:

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-wheeled mopeds.

Before 1/4/2004: Large mopeds shall comply with the provisions for motorcycles.

Light mopeds shall comply with one of the following sound thresholds:

Under sound measurement method I:

73 dB(A). Under sound measurement method III: 76 dB(A).

7.05.050 Tractor

(1) For tractors, the following sound thresholds apply under sound measurement method I:

a) 85 dB(A) for a tractor with a maximum permissible laden weight not exceeding 1 500 kg.

b) 89 dB(A) for a tractor with a total permissible weight exceeding 1 500 kg. Before 1/5/1977: Not applicable.

7.05.099 Power-driven lowboy

(1) A power-driven lowboy is subject to the sound thresholds under sound measurement method IV for lorry N2.

Before 1/7/2024: A power-driven lowboy may comply with the following sound thresholds under sound measurement method II:

a) 86 dB(A) for a lowboy with an engine for petrol or LPG.

b) 88 dB(A) for a lowboy with a diesel engine. Before 1/1/1971: Not applicable.

7.6 Air pollution

7.6.1 General provisions

(1) Engines shall be so designed as to not emit unnecessary smoke.

(2) Upon initial registration of a vehicle with an internal combustion engine, the vehicle shall comply

with the requirements and emission standards specified for that vehicle type.

7.6.20 Car

(1) In the case of a used car with a positive-ignition engine but not equipped with a three-way catalytic converter with a lambda probe, the carbon monoxide content of the exhaust gas at idle shall not exceed 3.5 % vol. as measured by the measurement method described in point 11.02.001.

Before 1/10/1986: The carbon monoxide content shall not exceed 4.5 % vol. Before 1/4/1984: The carbon monoxide content shall not exceed 5.5 % vol.

Not applicable to cars with displacement not exceeding 0.8 litres or, if the displacement cannot be ascertained, with engine power not exceeding 30 hp (DIN).

Before 1/1/1971: The carbon monoxide content shall not exceed 7 % vol.

The vehicle may be approved with the lowest achievable carbon monoxide value if it is documented that the vehicle came factory with a carburettor system of a type such that an excessive carbon monoxide value cannot be reduced without a risk of operational disruption.

(2) In the case of a used car with a positive-ignition engine and equipped with a three-way catalytic converter with a lambda probe, the following applies:

a) At idle, the carbon monoxide content of the exhaust gas as measured by the measurement method in point 11.02.001 shall not exceed 0.3 % vol.

Before 1/7/2002: The carbon monoxide content shall not exceed 0.5 % vol.

b) At increased idle, the carbon monoxide content of the exhaust gas as measured by the measurement method described in point 11.02.003 shall not exceed 0.2 % vol. and the lambda number shall be 1 ± 0.03 or in accordance with the manufacturer's instructions.

Before 1/7/2002: The carbon monoxide content shall not exceed 0.3 % vol.

(3) For a car with a diesel engine, the adjusted value of the exhaust gas opacity during free acceleration shall be determined and the car shall be marked accordingly in accordance with Regulation (EU) 715/2007 and its implementing regulation or UN Regulation 24-03.

Exempt from this are cars that comply with the Euro VI emission standards, for which such marking is not required.

Before 1/7/2003: Not applicable.

(4) In the case of a used car with a diesel engine, the exhaust gas opacity during free acceleration of the engine, as measured by the measurement method in point 11.02.004, shall not exceed the value determined for the car (see point (3)).

Exempt from this are cars that comply with the Euro VI emission standards, for which such marking is not required. Such cars shall comply with point (5).

(5) In the case of a used car with a diesel engine in compliance with the Euro VI emission standards, the exhaust gas opacity during free acceleration of the engine, as measured by the measurement method in point 11.02.004, shall not exceed 0.7 m-1.

Before 1/7/2003: In the case of a used car with a diesel engine, the exhaust gas opacity during free acceleration of the engine shall not exceed one of the following values, as measured by the measurement method in point 11.02.004:

- 2.5 m-1 for naturally aspirated engines.
- 3.0 m-1 for turbocharged engines.

The requirement is deemed to be met if, in one of the first five free accelerations, the registered measured value does not exceed one of the following values:

- 1.8 m-1 for naturally aspirated engines.
- 2.1 m-1 for turbocharged engines.

Before 1/1/1980: Not applicable.

7.6.21 M1 passenger car

(1) Passenger car M1 shall meet the technical requirements of one of the following sets of rules:
a) Regulation (EU) 715/2007 and its implementing measures (Euro 6).
b) Regulation (EU) 595/2009 and its implementing measures (Euro VI), or
c) California Code of Regulations, as specified in Regulation (EU) 2017/1151, and which is applicable to the most recent model year.

Before 1/9/2015: Passenger car M1 can comply with Regulation (EU) 715/2007 and its implementing measures (Euro 5).

Passenger car M1 with a diesel engine and a reference mass exceeding 2 610 kg (corresponding to a kerb weight of 2 585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro V).

Before 1/4/2011: Passenger car M1 may comply with Directive 70/220/EEC as amended by Directive 2002/80/EC (Euro 4).

Alternatively, an M1 passenger car can comply with the California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDV (Light-Duty Vehicles – passenger car designed for a maximum of 12 passengers).

Passenger car M1 with a diesel engine and a reference mass exceeding 2 610 kg (corresponding to a kerb weight of 2 585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro IV).

Before 1/1/2007: Passenger car M1 may comply with Directive 70/220/EEC as amended by Directive 2001/1/EEC (Euro 3).

Passenger car M1 with a diesel engine and a maximum permissible laden weight exceeding 2 500 kg may comply with Directive 88/77/EC as amended by Directive 2001/27/EC (Euro III).

Before 1/1/2001: Passenger car M1 may comply with Directive 70/220/EEC as amended by Directive 96/44/EEC (Euro 2).

Passenger car M1 with a diesel engine and a maximum permissible laden weight exceeding 2 500 kg may comply with Directive 88/77/EC as amended by Directive 96/1/EC (Euro II).

Before 1/1/1996: Passenger car M1 may comply with Directive 70/220/EEC as amended by Directive 89/458/EEC (Euro 1).

Before 1/1/1993: A passenger car M1 with an engine with displacement of not less than 1 400 cm^3 and not more than 2 000 cm^3 is not subject to the requirement.

Before 1/10/1990: Not applicable.

7.6.22 M2 passenger car

(1) Passenger car M2 is subject to the provisions in point 7.06.021 (1) for M1 passenger cars.

7.6.23 M3 passenger car

(1) Passenger car M3 shall meet the technical requirements in Regulation (EU) 595/2009 and its implementing measures as amended (Euro VI).

Before 1/1/2014: An M3 passenger car with a diesel engine can comply with Directive 2005/55/EC (Euro V or EEV). For passenger car M3 with a petrol engine, there is no requirement to comply with a specific Euro standard. The car need only comply with the general provision in point 7.06.001 (1).

Before 1/10/2009: An M3 passenger car with a diesel engine may comply with Directive 2005/55/EC (B1), Directive 2005/78/EC, or Directive 2006/51/EC (Euro IV).

Before 1/10/2006: An M3 passenger car with a diesel engine may comply with Directive 1999/96/EC or Directive 2001/27/EC (Euro III).

Lorry N2 with a maximum permissible laden weight not exceeding 3 860 kg can comply with 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 laden weight not exceeding 8 500 lb, equivalent to 3 860 kg).

Alternatively, an N2 lorry can comply with the California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDV (Light-Duty Vehicles – passenger car designed for a maximum of 12 passengers).

Before 1/10/2001: An M3 passenger car with a diesel engine may comply with Directive 91/542/EEC (B), Directive 96/1/EC, or Directive 96/69/EC (Euro II).

Before 1/10/1996: An M3 passenger car with a diesel engine may comply with Directive 91/542/EEC (A), Directive 93/59/EEC, or Directive 96/44/EC (Euro I).

Before 1/10/1993: An M3 passenger car with a diesel engine may comply with Directive 88/77/EEC or UN Regulation 49-01 (Euro 0).

Before 1/10/1990: Not applicable.

7.6.24 N1 light goods vehicle

(1) Light goods vehicle N1 shall meet the technical requirements of one of the following sets of rules:

a) Regulation (EU) 715/2007 and its implementing measures (Euro 6).

b) Regulation (EU) 595/2009 and its implementing measures (Euro VI).

c) California Code of Regulations, as specified in Regulation (EU) 2017/1151, and which is applicable to the most recent model year.

Before 1/1/2017: Light goods vehicle N1 can comply with Regulation (EU) 715/2007 and its implementing measures (Euro 5).

Light goods vehicle N1 with a diesel engine and a reference mass exceeding 2 610 kg (corresponding to a kerb weight of 2 585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro V).

Before 1/4/2011: Light goods vehicle N1 can comply with Directive 70/220/EEC as amended by Directive 2002/80/EC (Euro 4).

Alternatively, a light goods vehicle N2 can comply with the California Exhaust and Evaporative Emission Standard LEV II (2004 standard) level LEV (Low Emission Vehicle) or better for category LDV (Light-Duty Truck with a maximum permissible laden weight not exceeding 8 500 lb, equivalent to 3 860 kg).

Alternatively, a light goods vehicle N1 can comply with the 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 laden weight exceeding 8 500 lb and not exceeding 14 000 lb, equivalent to 6 300 kg).

Light goods vehicle N1 with a diesel engine and a reference mass exceeding 2 610 kg (corresponding to a kerb weight of 2 585 kg) may comply with Directive 2005/55/EC as amended by Directive 2008/74/EC (Euro IV).

Before 1/1/2007: Light goods vehicle N1 can comply with Directive 70/220/EEC as amended by Directive 2001/1/EC (Euro 3).

Light goods vehicle N1 with a diesel engine and a maximum permissible laden weight exceeding 2 500 kg may comply with Directive 88/77/EC as amended by Directive 2001/27/EC (Euro III).

Before 1/1/2002: Light goods vehicle N1 can comply with Directive 70/220/EEC as amended by Directive 96/44/EC (Euro 2).

Light goods vehicle N1 with a diesel engine and a maximum permissible laden weight exceeding 2 500 kg may comply with Directive 88/77/EC as amended by Directive 96/1/EC (Euro II).

Before 1/1/1997: Light goods vehicle N1 can comply with Directive 70/220/EEC as amended by 89/458/EEC (Euro 1). Before 1/10/1994: A light goods vehicle N1 with a loading capacity exceeding 685 kg is not subject to the requirement.

Before 1/10/1990: Not applicable.

7.6.25 N2 Lorry

(1) Lorry N2 shall meet the technical requirements of one of the following sets of rules:

a) Regulation (EU) 715/2007 and its implementing measures (Euro 6).
b) Regulation (EU) 595/2009 and its implementing measures (Euro VI).

Before 1/7/2024: Lorry N2 with a maximum permissible laden weight not exceeding 5 000 kg may comply with the provisions of point 7.06.024.

Lorry N2 with a maximum permissible laden weight exceeding 5 000 kg may comply with the provisions of point 7.06.023.

7.6.26 N3 Lorry

(1) Lorry N3 shall meet the technical requirements in point 7.06.023 for passenger car M3.

7.6.31 Two-wheeled motorcycle

(1) Two-wheeled motorcycles shall meet the technical requirements in Regulation (EU) 168/2013 and its implementing measures (Euro 5).

Before 1/1/2021: Two-wheeled motorcycles may comply with Regulation (EU) 168/2013 (Euro 4).

Before 1/1/2017: Two-wheeled motorcycles may comply with Directive 97/24/EC as amended by Directive 2003/77/EC and shall comply with the limit values 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 1/1/2008: Two-wheeled motorcycles may comply with Directive 97/24/EC as amended by 2002/51/EC and shall comply with the limit values 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 1/7/2005: Does not apply to trial or 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 volume: 4 litres.
- Minimum overall gear ratio in highest gear (primary ratio x gear ratio x final drive 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 drive ratio): 6.0.

Before 1/7/2004: Not applicable.

7.6.32 Two-wheeled motorcycle with sidecar

(1) A two-wheeled motorcycle with sidecar is subject to the provisions of point 7.06.031 for two-wheeled motorcycles.

7.6.33 Tricycle

(1) A tricycle is subject to the provisions of point 7.06.031 on two-wheeled motorcycles.

Before 1/1/2017: Tricycles may meet the technical requirements of Directive 97/24/EC as amended by 2002/51/EC and shall comply with the limit values 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 1/7/2004: Not applicable.

7.06.040 Moped

(1) Mopeds shall meet the technical requirements in Regulation (EU) 168/2013 and its implementing measures (Euro 5).

Before 1/1/2021: Mopeds may comply with Regulation (EU) 168/2013 and its implementing measures (Euro 4).

Before 1/1/2018: Mopeds may comply with Directive 97/24/EC or Regulation (EU) 168/2013 and its implementing measures (Euro 2).

Before 1/7/2004: Not applicable.

7.06.050 Tractor

(1) For tractors, the engine shall be approved and marked in accordance with Annex III to Regulation (EU) 2016/1628.

However, there are no requirements on petrol engines with less than 56 kW engine power.

Before 1/7/2024: Diesel engines may be approved and marked in accordance with Stage IV of Directive 2000/25/EC as amended by Directive 2005/13/EC. However, there are no requirements on diesel engines with less than 19 kW engine power, and no requirements on for petrol engines regardless of engine 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 stage lower, provided that the tractor is approved under the flexibility scheme described in Directive 2011/72/EU.

Approval under the flexibility scheme may be granted to tractor manufacturers for a limited number of engines which meet only the preceding stage of limit values.

Tractors approved under the flexibility scheme shall be labelled with the following text:

'TRACTOR NO: xxx (sequence of tractors) OF yyy (total number of tractors in respective power range) WITH ENGINE NO zzz WITH TYPE-APPROVAL (Directive 2000/25/EC) NO www' and the engine shall be labelled with the following text: 'Engine placed on the market under the flexibility scheme'.

The texts shall be in Danish or another Community language.

Before 1/10/2016: 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 on diesel engines with less than 19 kW engine power, and no requirements on for petrol engines regardless of engine power.

Alternatively, the engine may be approved and marked in accordance with Stage III B of Directive 97/68/EC (on non-road mobile machinery).

Before 1/1/2015: 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 on diesel engines with less than 19 kW engine power, and no requirements on for petrol engines regardless of engine power.

Alternatively, the engine may be approved and marked in accordance with Stage III A of Directive 97/68/EC (on non-road mobile machinery).

Before 1/1/2010: Diesel engines may be approved and marked in accordance with Stage II of Directive 2000/25/EC. However, there are no requirements on diesel engines with less than 37 kW engine power, and no requirements on for petrol engines regardless of engine power.

Alternatively, the engine may be approved and marked according to one of the following set of rules:

- Stage 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 of lorries and buses).
- UN Regulation 49-03 (on air pollution from diesel engines of lorries and buses).
- UN Regulation 96-01 Stage B (on air pollution from diesel engines of tractors).

Before 1/7/2005: Diesel engines may be approved and marked in accordance with Stage I of Directive 2000/25/EC. However, there are no requirements on diesel engines with less than 37 kW engine power, and no requirements on for petrol engines regardless of engine power.

Alternatively, the engine may be approved and marked in accordance with Stage I of Directive 97/68/EC (on non-road mobile machinery).

Alternatively, an engine with engine power of 129 kW or less may be approved and marked according to one of the following set 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 of lorries and buses).

- UN Regulation 49-02 (on air pollution from diesel engines of lorries and buses).
- UN Regulation 96 (on air pollution from diesel engines of tractors).

Before 1/7/2002: No requirements

7.06.060 Motorised work machinery

(1) For motorised work machinery with diesel engines, the engine shall be approved and marked in accordance with Regulation (EU) 2016/1628.

Before 1/7/2024: For motorised work machinery with diesel engines, the engine may be approved and marked in accordance with the Order on the limiting air pollution from non-road mobile machinery.

7.7 Heating systems, etc.

7.7.1 General provisions

(1) Heating systems shall be configured such that there will not be any carbon monoxide within the interior of the bodywork. Heating surfaces and lines in the heating system, while in operation, shall not reach temperatures exceeding 100 °C.
Parts of the heating system reaching temperatures above 80 °C shall be shielded from contact.

(2) Heating air blown into the driver and passenger compartments shall not be heated directly by the exhaust system of the vehicle.

(3) Heating systems that burn petrol or oil shall be approved in accordance with UN Regulation 122.

Before 1/7/2024: Heating systems may be approved in accordance with Directive 2001/56/EC, approved by the Swedish Civil Contingencies Agency (‘B’ or ‘SB’ mark), approved by the Statens Provningsanstalt i Sverige (‘SP’ mark), or approved by Kraftfahrt-Bundesamt in Germany.

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Before 1/4/1992: Heating systems may be approved by the Ministry of Justice.

(4) Heating systems that burn LPG shall be approved and marked in accordance with UN Regulation 122.

Before 1/7/2024: Heating systems may be approved in accordance with Directive 2001/56/EC or Section C of ‘Gasreglementet’ (Danish gas regulations) (‘CE’ or ‘DG’ mark).

Before 1/4/1984: Systems that run on LPG shall not be approved unless connected to an LPG fuel tank that powers the car.

(5) Heating systems that run on LPG and are connected to an LPG fuel tank that powers the car shall have fitted, between the fuel tank and the evaporator of the heating system, a solenoid valve that shuts off the heating system fuel line when not in use. The solenoid valve shall be configured such that any overpressure from the evaporator is returned to the fuel line.

(6) Heating systems shall be installed as follows:

a) Lines, etc. to the combustion chamber shall be airtight and separated from the driver, passenger, and load spaces.

b) It shall not be possible to draw in air that contains carbon monoxide.

c) The exhaust pipe for combustion products shall terminate outside the bodywork or be connected to the engine exhaust system.

d) Lines and surfaces that reach a temperature of more than 90 °C shall be at least 50 mm away from any combustible material.

7.7.2 Air conditioning systems

(1) A factory air conditioning system with fluorinated greenhouse gases in an EC type-approved passenger car M1 or light goods vehicle N1 of class I (reference mass not exceeding 1 305 kg, corresponding to a kerb weight not exceeding 1 280 kg) shall meet the technical requirements of Directive 2006/40/EC as implemented by Regulation (EC) 706/2007 and shall comply with the provisions of point (a) below.

Retrofitted air conditioners with fluorinated greenhouse gases in such a car shall be approved and marked in accordance with Directive 2006/40/EC as implemented by Regulation (EC) 706/2007 and shall comply with the provisions of point (a) below.

The provisions for retrofitted climate control apply regardless of the date of initial registration.

The fluorinated greenhouse gases shall have a global warming potential (GWP) of not more than 150.

Before 1/1/2017: Original and retrofitted climate control with fluorinated greenhouse gases shall meet the technical requirements in point (1). The fluorinated greenhouse gases may have a global warming potential (GWP) of more than 150.

Before 21/6/2009: The requirements apply only when retrofitted.

7.8 Electrical safety of electric vehicles

7.08.020 Car

(1) A car with an electric powertrain shall comply with the provisions of UN Regulation 100-02. Before 1/7/2024: A car can comply with UN Regulation 100-01.

Before 1/1/2017: Not applicable.

7.08.030 Motorcycle

(1) A motorcycle with an electric powertrain shall comply with the provisions of Annex IV to Regulation (EU) 3/2014. Before 1/7/2024: Not applicable.

7.08.040 Moped

(1) A moped with an electric powertrain shall comply with the provisions in Annex IV to Regulation (EU) 3/2014. Before 1/7/2024: Not applicable.

7.9 LPG fuel system

7.9.1 General provisions

(1) No part of the fuel system shall be beyond the outline of the vehicle, with the exception of the filling point, which shall not project more than 10 mm from its mounting.

(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 installed such that there is any metal-to-metal contact, with the exception of the mounting points.

(3) The fuel tank shall not be located closer to the ground than 200 mm, unless it is adequately protected.

(4) If the fuel tank is installed inside the vehicle, it shall be fitted with vented to outside the vehicle. It shall not vent to a wheel well or be directed toward a heat source, such as the exhaust.

(5) No part of the fuel system shall be closer than 100 mm to the exhaust or equivalent heat source, unless adequately shielded from heat.

Before 1/4/1984: Does not apply to vehicles put into service after conversion to LPG before that date.

7.9.2 Compressed methane gas (CNG or CBG)

(1) Factory systems for compressed methane gas (CNG, compressed natural gas or CBG, compressed biogas) shall comply with the provisions of UN Regulation 110-03.
Before 1/7/2024: The system may comply with UN Regulation 110.
(2) Retrofitted compressed methane gas systems shall comply with the provisions of UN Regulation 115.

7.9.3 Liquefied methane gas (LNG or LBG)

(1) Liquefied methane gas (LNG, liquefied natural gas or LBG, liquefied biogas) vehicles shall comply with the provisions of UN Regulation 110-01.

7.9.4 LPG

(1) Factory LPG systems (automotive, bottle, or LPG gas) shall comply with the provisions of one of the following set of rules:
a) UN Regulation 67-03.
b) American standard FMVSS 301 and FMVSS 303.
c) Canadian standard CMVSS 301.1.
Before 1/7/2024: A factory LPG system may comply with UN Regulation 67-01.
(2) A vehicle with a retrofitted LPG system shall comply with the provisions of UN Regulation 115.

7.9.5 Retrofitted LPG and CNG systems

(1) Retrofitted systems shall comply with the provisions of one of the following set of rules:
a) UN Regulation 115.
b) American standard FMVSS 303 and FMVSS 304.
c) Canadian standard CMVSS 301.2.

7.10. Hydrogen safety and hydrogen system material qualification requirements

7.10.020 Car

(1) Cars that run on hydrogen shall comply with the provisions of UN Regulation 134 on hydrogen safety and Regulation (EU) 2021/535, Annex XIV, on material qualification requirements.
(2) Alternatively to point (1), the car shall comply with one of the following sets of rules:
a) The material requirements in Regulation (EC) 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

8.1.1 General provisions

(1) A self-supporting body, chassis, and frame shall be capable of withstanding the stresses that occur from normal use and loads.
(2) A self-supporting body, chassis, and frame shall not be deformed or otherwise damaged or corroded to such an extent that the vehicle poses a risk to road safety.

8.01.023 M3 passenger car

(1) Articulated bus:

a) The articulated section shall be designed such that the individual rigid sections of the articulated bus will not be separated if a part of the articulated section gets detached.

b) The articulated section shall be so designed and shielded that there is no risk to passengers.

8.2 Wheels

8.2.1 General provisions

(1) Tyres, rims, and wheel bearings, etc. shall be undamaged.

8.2.2 Tyres

(1) Tyres

a) Shall have a load carry capacity at least equivalent to the permissible axle load of the vehicle and at minimum designed for the maximum speed of the vehicle.

b) Shall be dimensioned and designed to fit the rim.

c) Shall be clearly and durably marked with size designation and the name or trademark of the manufacturer and/or retreader.
Before 1/4/1991: Not applicable.

d) On a vehicle with a maximum permissible speed exceeding 30 km/h, tyres shall be clearly and durably marked with the load carry capacity and speed indications.
Before 1/4/1991: Not applicable.

(2) On a vehicle with a maximum permissible speed exceeding 40 km/h, the tread depth shall be at least

a) 1.6 mm for a vehicle with a maximum permissible laden weight not exceeding 3 500 kg, and

b) 1.0 mm for a vehicle with a total permissible laden weight exceeding 3 500 kg.

The tread depth is measured in the main pattern, meaning the wide grooves in the central zone of the tread, which covers approximately three quarters of the tread width.

(3) Tyres, where there is a requirement for a minimum tread depth of 1.6 mm, shall have tyre wear indicators (TWI).
Tyre wear indicators shall provide a visual warning when the tread depth of the main pattern is reduced to 1.6 mm.
Tyre wear indicators shall be located in transverse rows of the main tread pattern.
Before 1/4/1991: Not applicable.

(4) The inflation pressure shall be as stipulated by the vehicle manufacturer.

(5) Tyres of the same dimensions and type, except for temporary use tyres, shall be used on the same axle.

(6) Tyres are divided into types depending on the structure and the use category:

a) Structure:
- Radial tyres.
- Cross-ply tyres.

b) Use category:
- Ordinary tyre (without ‘M+S’ marking).
- Off-road and winter tyres (with ‘M+S’ marking).
- Winter tyres for demanding snow conditions (with ‘M+S’ marking and alpine symbol ‘three mountain peaks and one snowflake’).
- Temporary use tyres (emergency spare wheel).

8.2.3 Rims

(1) Rims shall be designed for a load equal to the permissible axle load of the vehicle.
(2) Hub, wheel, and wing nuts shall not extend beyond the outer tyre surface, or be covered by hubcaps or similar. However, a cap of plastic material on wheel bolts/nuts and which can show whether the bolt/nut has loosened, may project up to 20 mm beyond the outer tyre surface or hubcap cap or similar.
Before 1/5/1977: Factory hub caps and guard rings shall be present. Wing nuts shall not extend beyond the outer tyre edge.

(3) There shall be no protruding parts, such as hubcaps, if the design of such can endanger other road users.

8.2.4 Tyre-pressure monitoring system

(1) The system shall meet the technical requirements of UN Regulation 141-01 for 'Tyre Pressure Monitoring System (TPMS)', 'Tyre Pressure Refill System (TPRS)', or 'Central Tyre Inflation System (CTIS)'. Before 1/7/2024: TPMS need not meet comply with a specific UN Regulation.

8.02.010 Power-driven vehicle

(1) A power-driven vehicle shall have wheels with tyres.

8.2.20 Car

(1) A car may be fitted with off-road and winter tyres designed for at least 160 km/h (speed marking at least Q), whether or not the top speed of the car exceeds 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 1/4/2003: Not applicable to tyres produced before week 27 of 2003. Before 1/1/1980: Not applicable.
(3) Retreaded tyres shall be approved and marked in accordance with UN Regulation 108 or UN Regulation 109.
Before 1/4/2003: Not applicable to tyres produced before week 27 of 2003. Before 1/1/1980: Not applicable.
(4) Tyres shall be sound-approved and marked in accordance with UN Regulation 117-02, with the exception of
- retreaded tyres,
- tyres designed only for speeds below 80 km/h,
- tyres with a nominal rim diameter of not more than 254 mm (10") or 635 mm or more (25''),
- T-type tyres as spare wheels for temporary use, and studded tyres.

Before 1/7/2024: Tyres may be noise-approved and marked in accordance with Directive 92/23/EEC as amended by Directive 2001/43/EC or UN Regulation 117.
Before 1/10/2011: Not applicable to tyres produced before week 40 of 2011. Before 1/1/1980: Not applicable.

8.2.21 M1 passenger car

(1) An M1 passenger car shall be fitted with tyres with a tread depth of at least 1.6 mm, irrespective of the maximum permissible laden weight.
(2) An M1 passenger car shall be equipped with a tyre pressure monitoring system. This requirement does not apply to passenger car M1 produced in small series.
The requirement does not apply to special purpose cars (see Regulation (EU) 2018/858) which are constructed in several stages and where the base vehicle is not a passenger car M1.

8.2.22 M2 passenger car

(1) Passenger car M2 with a maximum permissible laden weight exceeding 3 500 kg may be fitted with tyres designed for at least 120 km/h, whether or not the top speed of the car exceeds 120 km/h.
Before 1/4/1991: Passenger car M2 may be fitted with lorry tyres designed for at least 100 km/h, whether or not the top speed of the car exceeds 100 km/h.

(2) Light goods vehicle tyres and lorry tyres on a passenger car M2 may, at permissible axle loads, be loaded with up to 15 % more than the load indicated as the load carry capacity on the tyre, if
a) the car is a city bus approved only for regular services, or
b) the car has seating and space for standing for a maximum of 22 passengers and the car is approved only for regular services.

8.2.23 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.
Before 1/4/1991: Passenger car M3 may be fitted with one of the specially marked lorry tyres designed for 80 km/h, as shown in the STRO (The Scandinavian Tire & Rim Organization) data books, whether or not the top speed of the car exceeds 80 km/h.

8.2.25 N2 Lorry

(1) A lorry N2 may be fitted with tyres designed for at least 100 km/h, whether or not the top speed of the car exceeds 100 km/h.
Before 1/4/1991: A lorry N2 may be fitted with one of the specially marked lorry tyres designed for 80 km/h, whether or not the top speed of the car exceeds 80 km/h.

8.2.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

(2) For lorry N3 intended as motive power for lowboys, when utilising axle loads up to that which is the generally permissible, the car shall comply with the rules for lorries. If exceeding the axle load generally applicable to cars, the car shall comply with the rules for power-driven lowboys, in terms of load/speed.

8.02.030 Motorcycle

(1) A motorcycle shall be fitted with tyres with a tread depth of at least 1.0 mm.

8.02.040 Moped

(1) A moped shall be fitted with tyres with a tread depth of at least 1.0 mm.
Before 1/5/1977: For mopeds approved before that date (‘TUM’ mark), there are not any established minimum dimensions for tyre tread depth.

8.02.050 Tractor

(1) Tractors not subject to approval or registration may be fitted with other elastic wheel coverings, tracks with equivalent properties, or smooth rollers.
Before 1/5/1977: Tractors may be fitted with semi-pneumatic rubber tyres.

(2) Approved tractors and tractors not subject to registration may be fitted with tracks.

8.02.060 Motorised work machinery

(1) Motorised work machinery may be fitted with other elastic wheel coverings, tracks with equivalent properties, or smooth rollers.

8.02.099 Power-driven lowboy

(1) A power-driven lowboy with a maximum permissible speed not exceeding 15 km/h may be fitted with other elastic wheel coverings or tracks with equivalent properties.

(2) A power-driven lowboy with a maximum permissible speed not exceeding 30 km/h may be fitted with tyres designed for at least 50 km/h with the permissible axle load, whether or not the top speed of the vehicle exceeds 50 km/h.

(3) A power-driven lowboy with a maximum permissible speed not exceeding 45 km/h may be fitted with tyres designed for at least 70 km/h with the permissible axle load, whether or not the top speed of the vehicle exceeds 70 km/h.

(4) A power-driven lowboy with a maximum permissible speed not exceeding 60 km/h may be fitted with tyres designed for at least 80 km/h with the permissible axle load, whether or not the top speed of the vehicle exceeds 80 km/h.

8.02.100 Towed vehicle

(1) Towed vehicles shall be fitted with tyres on all wheels.

(2) A towed vehicle that is subject to registration shall be fitted with tyres designed for at least 100 km/h with the permissible axle load.

Before 1/4/1991: Towed vehicles may be fitted with one of the specially marked lorry and towed vehicle tyres designed for 80 km/h, as shown in the STRO (The Scandinavian Tire & Rim Organization) data books, whether or not the top speed of the car exceeds 80 km/h.

(3) A trailer coupled to large moped shall be fitted with tyres designed for at least 50 km/h.

(4) Towed vehicles not subject to registration, and agricultural trailers, shall be fitted with tyres designed for at least 40 km/h.

Before 1/11/2015: The tyres shall be designed for at least 30 km/h.

8.02.110 Trailer/semi-trailer for vehicles

(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 1/4/2003: Not applicable to tyres produced before week 27 of 2003. Before 1/1/1980: Not applicable.

(2) Retreaded tyres shall be approved and marked in accordance with UN Regulation 108 or UN Regulation 109.

Before 1/4/2003: Not applicable to tyres produced before week 27 of 2003. Before 1/1/1980: Not applicable.

(3) Tyres shall be sound-approved and marked in accordance with UN Regulation 117-02, with the exception of

- retreaded tyres,
- tyres designed only for speeds below 80 km/h,
- tyres with a nominal rim diameter of not more than 254 mm (10") or 635 mm or more (25’’),
- T-type tyres as spare wheels for temporary use, and
- studded tyres.

Before 1/7/2024: Tyres may be noise-approved and marked in accordance with Directive 92/23/EEC as amended by Directive 2001/43/EC or UN Regulation 117.

Before 1/10/2011: Not applicable to tyres produced before week 40 of 2011. Before 1/1/1980: Not applicable.

8.02.120 Agricultural trailer

(1) The agricultural trailer of a tractor that is not subject to approval may be fitted with other elastic wheel coverings, tracks with equivalent properties, or smooth rollers.

8.02.130 Trailer for motorised work machinery

(1) A trailer for motorised work machinery may be fitted with other elastic wheel coverings, tracks with equivalent properties, or smooth rollers.

8.2.141 Caravan

(1) Caravans shall comply with the provisions for trailers/semi-trailers for cars.

8.2.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration shall comply with the provisions for trailer/semi-trailer for cars.

8.2.143 Towed equipment not subject to registration

(1) Towed equipment not subject to registration shall comply with the provisions for trailers for motorised work machinery.

8.02.150 Towed vehicle for motorcycle

(1) A towed vehicle coupled to a motorcycle shall be fitted with tyres with a tread depth of at least 1.0 mm.

8.02.160 Trailer coupled to large moped

(1) A trailer coupled to a large moped shall be fitted with tyres with a tread depth of at least 1.0 mm.

8.02.199 Lowboy

(1) Lowboys with a maximum permissible speed not exceeding 15 km/h may be fitted with other elastic wheel coverings, tracks with equivalent properties, or smooth rollers.
(2) A lowboy with a maximum permissible speed not exceeding 30 km/h may be fitted with tyres designed for at least 50 km/h with the permissible axle load.
(3) A lowboy with a maximum permissible speed of 45 km/h may be fitted with tyres designed for at least 70 km/h with the permissible axle load.
(4) A lowboy with a maximum permissible speed of 60 km/h may be fitted with tyres designed for at least 80 km/h with the permissible axle load.
(5) A lowboy with a maximum permissible speed exceeding 60 km/h shall comply with the rules for towed vehicles that are subject to approval.
(6) A lowboy that is only approved to be towed by a tractor shall be fitted with tyres designed for at least 45 km/h with the permissible axle load.

8.3 Wheel suspension

8.3.1 General provisions

(1) Wheel suspension and its attachment to a self-supporting body, chassis, or frame shall be capable of withstanding the stresses that occur from normal use and loads.
The wheel suspension’s ball and socket joints and the like shall be protected against the ingress of foreign matter.
(2) Wheel suspensions shall be so designed as to adequately attenuate the oscillations occurring in the suspension which result from the unevenness of the road surface.

8.3.2 Axles

(1) Axles shall have a load carrying capacity at least equivalent to the permissible axle load of the vehicle.

8.3.3 Bogie designs

(1) A vehicle may be fitted with an axle lift device. This may be automatic, so that the second axle in a bogie is automatically lowered when the axle load on the first axle reaches the permissible axle load.
The axle lift device shall be capable of actuating the liftable or loadable axle of a car or semi-trailer to increase the axle load on the driving axle of the car, under the following conditions:
- The axle load on each axle of the car may exceed the technically permissible axle load by up to 30 %, provided that it does not exceed the value set by the car manufacturer for this purpose in the specific situation.
- The liftable or loadable axle shall be actuated only by a specific control device.
- After starting, the axle shall be automatically lowered to the ground or loaded as soon as the car reaches a speed of 30 km/h.

A car may be fitted with a manual system instead of the somewhat automatic system described above, provided that there is a tell-tale at the driver's position which lights up when the axle-lift device is activated.

8.3.4 Springs

(1) Springs shall have a load carrying capacity at least equivalent to the permissible axle load of the vehicle.

9. Bodywork, structure, etc.

9.1 Bodywork

9.1.1 General provisions

(1) Bodywork – including self-supporting body – shall be securely attached to the vehicle's load-bearing elements and shall be so designed that sharp edges or projections and the like do not cause undue danger to other road users.
Crane arms, lifting beams, and the like shall be so supported and secured that controls, hydraulic cylinders, winch drums, and the like are relieved and such that the parts in question cannot, due to faulty operation or incidentally, assume such a position that makes them dangerous for other road users.

9.1.2 Wheel guards

(1) Cars and their towed vehicles shall be fitted with wheel guards over all wheels.
(2) The provisions on wheel guards shall be complied with at kerb weight. In the case of vehicles where the vertical distance between wheels and bodywork is adjustable, the provisions shall be met at the standard position prescribed by the vehicle manufacturer.
(3) On a vehicle with a double or triple axle, the wheels on the same side may have one single wheel guard which, in ahead of the centre of the front wheel and behind the centre of the rearmost wheel, complies with the provisions on wheel guards and which has an uninterrupted horizontal part above the wheels.
(4) The prescribed wheel guards shall be provided through the vehicle bodywork or structure or by the installation of special guards above the wheels.
(5) Wheel guards shall meet the following requirements:
a) Shall be securely attached to the vehicle bodywork or load-bearing elements and be so designed that sharp edges or projections and the like do not cause undue danger to other road users.
b) Shall appear as a whole, even if the wheel guard is composed of several elements.
(6) Wheel guards may be removable and either assembled or in parts.

9.1.3 Doors

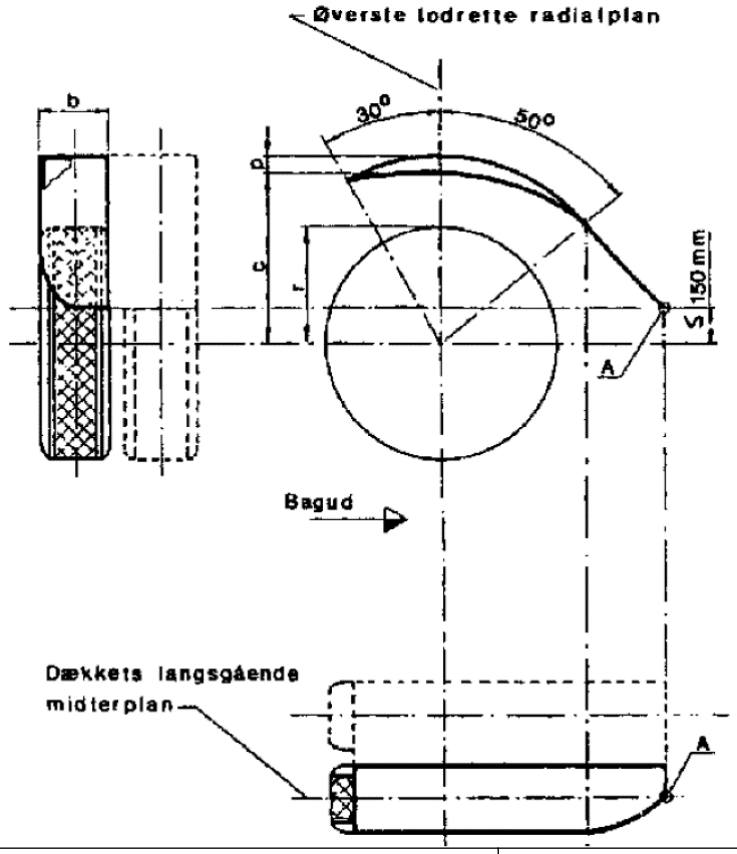
(1) Door handles and hinges shall be designed and configured such that they do not cause undue danger to other road users.
Before 1/1/1950: Door handles can be approved in their original design.
(2) Doors shall be fitted with a door lock that can keep the door closed while driving.
(3) Door hinges shall be securely attached to both door and 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.

9.1.20 Car

(1) Locks in doors to driver and passenger compartments shall automatically engage when the door is closed and shall have both an intermediate position and a closed position.

9.1.21 M1 passenger car

(1) Wheel guards shall meet the following requirements:
a) Shall have vaulted or U-shaped transverse section if the concave side faces downward and inward towards the tyre, with a transverse depth of at least 30 mm at the deepest position above the tyre tread. The transverse depth is measured in the upper vertical radial plane through the centre of the wheel and may otherwise gradually decrease to 0 mm at 30° forward and 50° rearward of this radial plane.
b) Over the tyre width, shall cover the upper part of the wheel at least 30° forward and at least 50° rearward of the upper vertical radial plane through the centre of the wheel. The width of the tyre is measured on said radial plane, but disregarding embedded text and ornamental patterns as well as bead and the like for the protection of the tyre sidewall.
c) Shall be so designed that the distance from the edges of the wheel guard to the centre line of the wheel does not exceed 2.0 times the radius of the tyre within the required coverage range (from 30° forward to 50° rearward behind the upper vertical radial plane).
The radius of the tyre shall be measured at the centre of the tread on the upper vertical radial plane through the centre of the wheel.
d) Shall cover the rearmost part of the wheel from a horizontal plane situated not more than 0.15 m above the centre of the tyre such that the intersection of the edge of the wheel guard with said horizontal plane is not within the longitudinal median plane of the tyre. In the case of twin-mounted wheels, the median longitudinal plane of the outer tyre is included.



Øverste lodrette radialplan	Upper vertical radial plane
Bagud	Rearward
Dækkets langsgående midterplan	Longitudinal median plane of the tyre

(2) Passenger car M1 with a maximum permissible laden weight not exceeding 3 500 kg, on which the R point of the lowest seat at kerb weight is not more than 0.70 m above the ground shall comply with the constructive provisions of one of the following sets of rules on side impact protection:
a) UN Regulation 95-05.
b) American standard FMVSS 21.4, Section S6.
c) Japanese standard JSRRV, Article 18.
This requirement does not apply to passenger car M1 produced in small series. Before 1/7/2024: A car can comply with UN Regulation 95-02.
Before 1/1/2017: A car can comply with Directive 96/27/EC. Before 1/10/2003: Not applicable.

(3) Passenger car M1 with a maximum permissible laden weight not exceeding 2 500 kg shall comply with the constructive provisions of one of the following sets of rules on frontal impact protection:
a) UN Regulation 94-04.
b) American standard FMVSS 208.
c) Japanese standard JSRRV, Article 18.
This requirement does not apply to passenger car M1 produced in small series. Before 1/7/2024: A car can comply with UN Regulation 94-01.
Before 1/1/2017: A car can comply with Directive 96/79/EC. Before 1/10/2003: Not applicable.

(4) Passenger car M1 shall meet the technical requirements for the front end (Pedestrian protection) of UN Regulation 127-02.
This requirement does not apply to passenger car M1 produced in small series.
Before 1/7/2024: Cars can comply with Regulation (EU) 78/2009, Annex 1, point 3.

Before 23/2/2019: Cars can comply with Regulation (EU) 78/2009, Annex 1, point 2 or 3.

Before 31/12/2012: Not applicable.

(5) An M1 passenger car derived from an N1 light goods vehicle with a maximum permissible laden weight 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 need not comply with the provision of point (4).

9.1.22 M2 passenger car

(1) Wheel guards shall meet the following requirements:

a) Shall cover the wheel to the full width of the tyre.

b) Shall have vaulted or U-shaped transverse section if the depth is at least 10 % of the width of the wheel guard, but at least 30 mm.

c) Shall cover the upper part of the wheel from at least 30° forward of a vertical plane passing through the centre of the wheel to a horizontal plane situated not more than 0.10 m above the centre of the wheel.

d) Shall be so designed that the distance from the edge of the wheel guard to the centre of the wheel does not exceed 2.0 times the radius of the wheel

(2) Wheel guards behind rear wheels 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 wheel guard placed below a horizontal plane situated 0.10 m above the centre of the wheel need not comply with the provisions of points (1) (b) and (d).

(3) A passenger car M2 with a maximum permissible laden weight not exceeding 3 500 kg may be fitted with wheel guards in accordance with the rules for M1 passenger cars. However, behind rear wheels, mud flaps shall be fitted at the width of the tyre down to 0.05 m below the centre of the wheel.

(4) A passenger car M2 designed for the carriage of more than 16 passengers shall comply with the constructive provisions of UN Regulation 66-02 on the strength of the superstructures of large passenger cars.

Before 1/7/2024: An M2 passenger car may comply with UN Regulation 66. Before 1/11/2014: Not applicable.

(5) The provisions of point (4) do not apply to an M2 passenger car that is approved only for regular services if one of the following conditions is met:

a) The car is a city bus.

b) The car has seating and space for standing for a maximum of 22 passengers.

c) The permissible number of standing spaces is 20 % or more of the maximum permissible number of passengers.

(6) An M2 passenger car designed for the carriage of more than 12 passengers shall comply with the provisions on rollover stability in UN Regulation 107-07, Annex 3, point 7.4.

Before 1/7/2024: Passenger car M2 may comply with Directive 2001/85/EC, Annex I, point 7.4 or UN Regulation 107-02, Annex 3, point 7.4.

Before 1/11/2014: Not applicable.

9.1.23 M3 passenger car

(1) A passenger car M3 shall be fitted with wheel guards in accordance with the rules for M2 passenger cars.

(2) A passenger car 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 the superstructures of large passenger cars.

Before 1/7/2024: An M3 passenger car may comply with UN Regulation 66. Before 1/10/1999: Not applicable.

(3) The provisions of point (2) do not apply to an M3 passenger car that is approved only for regular services if one of the following conditions is met:

a) The car is a city bus.

b) The car has seating and space for standing for a maximum of 22 passengers.
c) The permissible number of standing spaces is 20 % or more of the maximum permissible number of passengers.

(4) The provisions in point (2) do not apply to M3 passenger cars with two levels.

(5) A passenger car M3 shall comply with the provisions for passenger car M2 in point 9.01.022 (6) on rollover stability.

Before 1/11/2014: Not applicable.

9.1.24 N1 light goods vehicle

(1) A light goods vehicle N1 shall be fitted with wheel guards in accordance with the rules for M1 passenger cars.

(2) A light goods vehicle N1 with an enclosed load space shall be provided with full separation between the cab and the load space.

Alternatively, the car may be provided with separation designed to protect the driver and passengers from displacement of the load while driving, or the car may be provided cargo securing devices. Separation and cargo securing devices shall comply with the provisions of international standard ISO 27956:2009, points 3 and 4.

Before 1/7/2024: A light goods vehicle N1 with an enclosed load space may be provided with separation between the cab and the load space, at least for the driver's position, and the separation shall extend from floor to roof.

The requirement is deemed to be met if the separation covers at least the seat and headrest restraint, both in the highest position. However, there shall be no more than 0.10 m distance between the separation and the roof lining as measured on the vertical centre line of the seat.

The strength of the separation and its attachment to the vehicle shall be such that it can withstand the load of forward-sliding goods during deceleration of the vehicle at 10 m/s^2, or meet the strength requirements according to standard ISO/DIS 27956, point 4.1.

Separation shall consist of one of the following or a combination of them:

a) Small-mesh wire grille in a metal frame.
b) Sheet of metal, wood, or carbon fiber.
c) Sheet of shatter-proof plastic material. The sheet shall be placed in a metal frame.
d) Laminated glass approved and marked in accordance with point 10.03.020 (1). The glass shall be placed in a metal frame.

(3) Light goods vehicle N1 shall comply with the provisions of point 9.01.021 (2) on lateral impact protection. Before 1/10/2003: Not applicable.

(4) An N1 light goods vehicle derived from an M1 passenger car and with a maximum permissible laden weight not exceeding 2 500 kg shall comply with the provisions in points 9.01.021 (4) and (5) on pedestrian protection.

(5) An N1 light goods vehicle 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 need not comply with the provision of point (4).

9.1.25 N2 Lorry

(1) A lorry N2 shall be fitted with wheel guards in accordance with the rules for M2 passenger cars.

(2) A lorry N2 with an enclosed load space shall be provided with full separation between the cab and the load space.

Alternatively, an N2 Lorry with a maximum permissible laden weight not exceeding 7 500 kg may be provided with separation designed to protect the driver and passengers from displacement of the load while driving, or the lorry may be provided cargo securing devices. Separation and cargo securing devices shall comply with the provisions of international standard ISO 27956:2009, points 3 and 4.

(3) An N2 Lorry designed to tow semi-trailers may be so arranged that the wheelguard forward of the

wheel and the part of the rear wheelguards whose height above the ground is greater than the diameter of the tyre may be removed when the vehicle is coupled to a semi-trailer. In such case, the body or structure of the semi-trailer shall then cover the full width of the tyre while travelling straight ahead.

9.1.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

9.01.030 Motorcycle

(1) Motorcycles shall have a space for the mounting of a rear number plate in accordance with Annex XIV to Regulation (EU) 44/2014.
Before 1/7/2024: Not applicable.

9.01.040 Moped

(1) Mopeds shall have a space for the mounting of a rear number plate in accordance with Annex XIV to Regulation (EU) 44/2014.
Before 1/7/2024: Not applicable.

9.01.050 Tractor

(1) The protruding parts of a tractor may not pose undue danger to other road users and shall be so designed as to be clearly visible during daylight hours. Tools mounted on a tractor are regarded as protruding parts.

(2) Tractors shall have a space for the mounting of a rear number plate in accordance with Annex XIX to Regulation (EU) 2015/208.
Before 1/7/2024: Not applicable.

9.01.060 Motorised work machinery

(1) Catheads, dippers, and other protruding parts may not pose undue danger to other road users.

9.01.100 Towed vehicle

(1) In the case towed vehicles where the front wheels are steered by turning the front axle around its centre, the part of the wheelguard whose height above the ground is greater than the diameter of the tyre, and the wheelguard forward of the wheel may be omitted if the body or structure of the vehicle covers the full width of the tyre while travelling straight ahead.

9.1.111 Trailer/semi-trailer O1

(1) Trailers/semi-trailers O1 shall be fitted with wheel guards in accordance with the rules for passenger car M1.

9.1.112 Trailer/semi-trailer O2

(1) A trailer/semi-trailer O2 shall comply with the provisions for trailer/semi-trailer O1.

9.1.113 Trailer/semi-trailer O3

(1) Trailers/semi-trailers O3 shall be fitted with wheel guards in accordance with the rules for lorry N2.

9.1.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for trailer/semi-trailer O3.

9.01.121 Agricultural trailer of a tractor that is subject to registration

(1) An agricultural trailer of a tractor that is subject to registration shall have a space for the mounting of a rear number plate in accordance with Annex XIX to Regulation (EU) 2015/208.
Before 1/7/2024: Not applicable.

9.1.141 Caravan

(1) Caravans shall be fitted with wheel guards in accordance with the rules for trailer/semi-trailer O1.

9.1.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration with a maximum permissible laden weight not exceeding 3 500 kg shall be fitted with wheel guards in accordance with the rules for trailer/semi-trailer O1.
(2) Other towed equipment subject to registration with a maximum permissible laden weight exceeding 3 500 kg shall be fitted with wheel guards in accordance with the rules for trailer/semi-trailer O3.

9.01.150 Towed vehicle for motorcycle

(1) Towed vehicle for motorcycle shall be fitted with wheel guards in accordance with the rules for trailer/semi-trailer O1.

9.01.160 Trailer coupled to large moped

(1) Trailer coupled to large moped shall be fitted with wheel guards in accordance with the rules for trailer/semi-trailer O1.

9.01.320 School vehicle

(1) A school vehicle 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 meet the requirements of standard DS/EN 1789:2020 on medical vehicles and their equipment – Ambulances, with the exception of point 6.5 List of equipment.
Before 1/7/2024: An ambulance shall be provided with a separation between the driver's cab and the stretcher space, where a laminated glass pane may be fitted in the upper part. The length of the stretcher space shall be such that the ambulance can accommodate a stretcher with a length of 2.29 m and a width of 0.585 m. There shall be space next to and above the stretcher so that treatment of the patient is possible during driving.
Before 1/1/1971: Not applicable.

9.2 Body structures with a platform, etc.

9.2.1 General provisions

(1) Platforms, etc. shall be securely attached to the vehicle’s load-bearing elements and shall be so designed that sharp edges and protruding parts do not cause undue danger to other road users.

9.2.2 Body structures with a fixed platform

(1) Platform brackets, etc. shall be designed and configured such that they do not cause undue danger to other road users.

9.2.3 Body structures with a tipper

(1) Tippers shall be secured against sliding forward when the tipper is in the transport position.
(2) Three-way tippers shall be fitted with devices capable of keeping the tipper secured in the transport position.

9.2.4 Body structures with a container

(1) Vehicles with body structures for the transport of containers shall be fitted with container locks that can securely keep the container on the vehicle.

9.2.5 Body structures for swap bodies

(1) Vehicles with body structures for the transport of swap bodies shall be fitted with devices that can securely keep the swap body on the vehicle.

9.02.025 N2 Lorry

(1) Platform brackets, etc. on an N2 lorry, if the distance above the ground is less than 1.80 m, shall meet the following requirements:
   a) Corner brackets shall be so designed and placed that no part of a bracket protrudes more than 20 mm from the platform side.
   b) Side brackets shall be recessed into the side of the platform.
   c) Assemblies (strap hinges) shall have rounded edges and may not protrude more than 20 mm from the platform side. Nuts that are not sunken shall not protrude more than 10 mm from the platform side.
   d) Tie-downs and hooks, etc. shall be kept behind boards or similar.
   e) Clamps for straps on tarpaulin covers may not protrude more than 25 mm outside the tarpaulin. Before 1/9/1970: Not applicable.

9.02.026 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

9.02.113 Trailer/semi-trailer O3

(1) A trailer/semi-trailer O3 shall comply with the provisions for N2 lorries.
(2) The platform on a semi-trailer may not extend over the cab of the vehicle. Before 1/4/1988: Not applicable.

9.02.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for trailer/semi-trailer O3.

9.02.150 Towed vehicle for motorcycle

(1) Towed vehicle for motorcycle may not be designed for the carriage of passengers.

9.02.160 Trailer coupled to large moped

(1) Trailer coupled to large moped may not be designed for the carriage of passengers.

9.02.461 Animal transport vehicle

(1) An animal transport vehicle shall comply with the provisions of the Order on the on the protection of animals during transport.

9.3 Body structures with a tank

9.3.1 General provisions

(1) Tanks shall be securely attached to the vehicle and shall be so designed that sharp edges or protruding parts do not cause undue danger to other road users.

9.03.003 Baffle plates

(1) Tanks or tank spaces for the transport of liquid substances shall be divided into sections, not exceeding 7.50 m³, by means of baffle plates.

Baffle plates shall be positioned perpendicular to the longitudinal axis of the tank and shall have a minimum area of 70 % of the transverse area of the tank.

Before 1/4/1993: Tanks or tank spaces for the transport of liquid substances, with a volume of more than 6.20 m³, shall be fitted with a baffle plate for every 2.50 m of tank or space length. Baffle plates shall be positioned perpendicular to the longitudinal axis of the tank and shall have a minimum area of 80 % of the transverse area of the tank at the spot concerned.

Before 25/11/1975: There are no established requirements on the area of a baffle plate.

(2) The provision of point (1) does not apply to tanks which are always used at least 80 % full or not more than 20 % filled.

(3) The provision of point (1) does not apply to sludge vacuum tanks.

9.5 Coupling devices

9.5.1 General provisions

(1) The coupling device shall meet the following requirements:

a) Shall be securely attached to the vehicle's load-bearing elements. Bolt connections shall be secured against separation.

b) Shall be capable of withstanding the stresses that occur from normal use of the vehicle combination.

c) Shall be fitted with a mechanical protective device to prevent the coupling from being unintentionally released.

d) Shall be so designed and configured that the distance between the towing vehicle and the towed vehicle is unchanged while driving straight forward.

(2) The coupling device and the mandatory mechanical protective device, including the indicator that shows whether the trailer, tow hitch coupler, hitch, and the detachable coupling ball are properly locked, shall be undamaged.

(3) Coupling devices of types C50-X and G50-X may be fitted with remote indication and remote control devices according to the technical provisions of UN Regulation 55-01, Annex 5, point 12.

(4) The coupling part of the towing vehicle and the coupling part of the towed vehicle shall be intended for interconnection. There shall be no significant play between the coupling parts.

(5) The coupling parts shall not be worn-out to a greater extent than indicated by the manufacturer of the coupling part, otherwise the part shall be repaired or replaced in accordance with the manufacturer's instructions.

9.5.2 Trailer coupling

(1) Trailer coupling shall be configured such that,

a) while cornering, the wheels of the towed vehicle follow the tracks of the wheels of the towing vehicle as close as possible; and

b) the interconnected coupling parts have sufficient mobility between themselves.

9.5.3 Ball coupling

(1) Ball coupling shall be configured such that,

a) while cornering, the wheels of the towed vehicle follow the tracks of the wheels of the towing vehicle as close as possible; and

b) the interconnected coupling parts have sufficient mobility between themselves.

(2) A car coupling with a towed vehicle with a maximum permissible laden weight not exceeding 3 500 kg shall have a coupling device that is equipped with fittings to connect the towed vehicle's

switch cable for automatic braking.

The fitting shall be positioned not more than 0.25 m from the centre so that the switch cable cannot get too taught or loose during turning.

Before 1/7/2024: Only applicable to cars for which coupling is not subject to a technical inspection.

In the case of a car in a fixed vehicle combination, there are no detailed rules on the fittings, but the provision in point 5.01.110

(3) on activation of the brakes of the towed vehicle trailer shall be complied with.

9.5.4 Fifth wheel coupling

(1) Fifth wheel coupling shall be configured such that the fifth wheel trailer has sufficient movement in relation to the towing vehicle.

(2) The coupling part of the towing vehicle (fifth wheel) may be so configured that it can be moved in the longitudinal direction of the vehicle. The fifth wheel shall be capable of being locked in the individual positions.

9.05.020 Car

(1) The coupling device and mounting brackets shall comply with the design provisions of UN Regulation 55-01.

Before 1/7/2024: Not applicable.

(2) The coupling device shall be mounted according to the vehicle manufacturer's instructions and, in the case of passenger cars and light goods vehicles, such that the height of the coupling device above the road is in line with the requirements of UN Regulation 55.

Before 1/7/2024: Only applicable to passenger car M1 and light goods vehicle N1. Before 1/4/1993: Not applicable.

However, if the vehicle manufacturer's instructions have not been followed, the maximum weight of the towed vehicle with brakes and towed by a passenger car M1 or light goods vehicle N1 cannot not be set at more than 90 % of the car's kerb weight, even if the car manufacturer allows for a greater weight of trailer.

9.05.030 Motorcycle

(1) The coupling device and mounting brackets shall comply with the design provisions of Annex V to Regulation (EU) 44/2014.

Before 1/7/2024: Not applicable.

(2) The coupling device shall be fitted in accordance with the instructions of the motorcycle manufacturer.

Before 1/7/2024: In the case of motorcycles approved with coupling device before that date, the coupling device may be fitted according to 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 1/7/1955: The sidecar may be attached to the left side of the motorcycle.

9.05.041 Large moped

(1) The coupling device and mounting brackets shall comply with the design provisions of Annex V to Regulation (EU) 44/2014.

(2) The coupling device shall be fitted in accordance with the instructions of the moped manufacturer.

Before 1/7/2024: In the case of mopeds approved with coupling device before that date, the coupling device may be fitted according to the instructions of the manufacturer of the coupling device.

9.05.050 Tractor

(1) A tractor shall be fitted with a coupling device for trailers or trailers or towed equipment that complies with the design provisions of Annex XXXIV to Regulation (EU) 2015/208, UN Regulation 55-01, or UN Regulation 147.

Before 1/7/2024: There is no requirement for the coupling device to comply with any specific UN Regulation.

(2) The coupling device shall be fitted according to the tractor manufacturer's instructions.

Before 1/7/2024: The coupling device shall be positioned so low that, taking into account the weight distribution of the tractor, there is a minimum risk of it tipping back.

9.05.100 Towed vehicle

(1) Towed vehicles, other than semi-trailers, may be fitted with an extendible drawbar (A-frame). The drawbar shall meet the following conditions:

a) Shall be capable of being latched and locked in the individual positions.

b) It shall be possible to adjust such that the vehicle combination's total length and the distance between the rear edge of the towing vehicle and the front edge of the platform or body structure of the towed vehicle do not exceed the permissible lengths and distance.

(2) The trailer may be fitted with a forced steering extendible drawbar (A-frame) which is so configured that the length of the drawbar and thus the distance between the vehicles are increased during cornering.

(3) The kingpin, ball coupling, hitch eye, and drawbar (A frame) shall comply with the design provisions of UN Regulation 55-01, and a car with towed vehicle, where the towed vehicle has a maximum permissible laden weight not exceeding 3 500 kg shall meet the requirements on the height of the coupling device in UN Regulation 55-01.

Before 1/7/2024: Not applicable.

9.05.113 Trailer/semi-trailer O3

(1) The drawbar (A frame) shall be of sufficient length to allow the vehicle combination on a flat road to perform a 90° turn with full steering angle without the vehicles hitting each other.

Before 1/4/1984: Not applicable.

9.05.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for trailer/semi-trailer O3.

9.05.120 Agricultural trailer

(1) The kingpin, coupling head, hitch eye, and drawbar (A frame) shall comply with the design provisions of Annex XXXIV to Regulation (EU) 2015/208, UN Regulation 55-01, or UN Regulation 147.

Before 1/7/2024: Not applicable.

9.05.130 Trailer for motorised work machinery

(1) A trailer for motorised work machinery shall comply with the provisions for agricultural trailers.

9.05.310 Vehicle for which coupling is not subject to a technical inspection

(1) A car for which coupling is not subject to a technical inspection, with a towed vehicle with a maximum permissible laden weight not exceeding 3 500 kg, shall be equipped with a 50 mm coupling ball.

The centre of the coupling ball, at the maximum permissible laden weight, shall be placed at a height of 385 ± 35 mm above the ground.

Before 1/4/1994: The provision on the height of the coupling ball above the ground does not apply to

passenger car M1 or light goods vehicle N1.

(2) A lorry for which coupling – with a semi-trailer or towed equipment on a trailer chassis – is not subject to a technical inspection, shall be equipped with a fifth wheel for a 2" kingpin that complies with the constructive provisions of UN Regulation 55-01 for fifth wheels intended for use with a semi-trailer with forced-steering axles.

Before 1/4/2024: A fifth wheel can comply with the design provisions of Directive 94/20/EC.

(3) A lorry for which coupling – with a trailer O3 or O4 or towed equipment on a chassis of such trailer – is not subject to a technical inspection, shall be equipped with one of the following coupling devices:

a) 40 mm drawbar coupling according to standard ISO 8755:2001 or UN Regulation 55-01.

b) 50 mm drawbar coupling according to UN Regulation 55-01.

c) 57 mm drawbar coupling that complies with the design provisions of UN Regulation 55-01.

Before 1/7/2024: Drawbar coupling can meet the design requirements of standard ISO 8755:1986 or ISO 1102:1986 or UN Regulation 55.

The centre of the drawbar coupling shall, at kerb weight, be 425 ± 75 mm, 650 ± 75 mm, or 900 ± 100 mm above the ground. For lorries equipped with bogie lifts, the height requirement shall be met with both raised and lowered axles.

The coupling device intended for centre-axle trailers shall have a permissible vertical load of at least 1 000 kg.

(4) Towed vehicles with a maximum permissible laden weight not exceeding 3 500 kg shall be equipped with a 50 mm coupling head.

(5) Semi-trailers and towed equipment on semi-trailer chassis shall be fitted with a 2” kingpin. If the semi-trailer has forced-steering axles, the steering shall be carried out via a wedge as specified in UN Regulation 55-01.

(6) Trailer O3 and O4 and towed equipment on a chassis of such trailer shall be equipped with one of the following coupling devices:

a) 40 mm hitch eye according to standard ISO 8755:2001 or UN Regulation 55-01.

b) 50 mm hitch eye according to UN Regulation 55-01.

c) 57 mm hitch eye that complies with the design provisions of UN Regulation 55-01.

Before 1/7/2024: Drawbar coupling can meet the design requirements of standard ISO 8755:1986 or ISO 1102:1986 or UN Regulation 55.

The centre of the hitch eye shall, in a horizontal position and at kerb weight, be 425 ± 75 mm, 650 ± 75 mm, or 900 ± 100 mm above the ground.

For centre-axle trailers and towed equipment in the form of centre-axle trailers, the height requirement shall be met with a horizontal chassis.

For other trailers, the height requirement also applies to the drawbar hinge (parallel bolts), unless the drawbar is curved and is marked and approved in accordance with UN Regulation 55-01.

Before 1/7/2024: Curved drawbars may be marked and approved in accordance with Directive 94/20/EC.

9.6 Luggage racks, bicycle racks, etc.

9.6.1 General provisions

(1) Luggage racks, bicycle rack, etc. shall meet the following conditions:

a) Shall be designed and configured such that they do not cause undue danger to other road users.

b) Shall be positioned such that when used as intended they do not adversely affect the handling characteristics of the vehicle.

c) Shall be securely attached to the vehicle.

(2) A luggage ladder shall be placed on the rear of the vehicle.

9.6.2 Hood ornaments, etc.

(1) Vehicles may not be fitted with radiator mascots, hood ornaments, or the like which, due to shape,

method of attachment, or material, endanger other road users.

Hood ornaments, etc. are considered dangerous if they are made of metal or other hard material and either have spikes or sharp edges or protrude so much from the outline of the vehicle and are so constructed that they can constitute independent and substantial resistance to bodies that impact against the vehicle.

Flags, pennants, etc. may only be placed on or at the outer edge of the front quarter-panel or front bumper and shall be fitted with a knob of appropriate size.

Fixed racks for hand trucks on the front of trash trucks and ladder racks or materials on the side of light goods vehicles and lorries shall be made with rounded edges with at least 5 mm of rounding radius and may not pose a danger to other road users and may not increase the length or width of the vehicle beyond the applicable dimensional requirements of the vehicle type.

9.6.3 Running boards

(1) Running boards shall be designed and configured such that they do not cause undue danger to other road users.

Particularly projecting or protruding running boards shall be fitted with appropriate guards or have rounded corners or similar.

Side running boards are not considered to cause undue danger if they do not project more than 0.10 m from the bodywork.

9.6.4 Roof advertising signs, etc.

(1) Roof advertising signs and the like shall be designed and configured such that they do not cause undue danger to other road users.

9.6.5 Bull bars, etc.

(1) A car may only be equipped with bull bars, grill guards, light bars or similar in accordance with the following rules:

a) Passenger car M1 and light goods vehicle N1 may be fitted with bull bars, etc. (frontal protection system) that are approved, marked, and installed in accordance with Annex XII to Regulation (EC) 2021/535.

Before 1/7/2024: Bull bars, etc. can be approved, marked, and installed in accordance with Regulation (EC) No 78/2009.

Before 24/11/2009: A passenger car M1 with a maximum permissible laden weight not exceeding 3 500 kg and a light goods vehicle N1 may be fitted with safari grilles etc. that are approved, marked, and installed in accordance with Directive 2005/66/EC.

Before 25/10/2006: Passenger car M1 and light goods vehicle N1 are subject to point (c).

b) Cars other than passenger cars M1 and light goods vehicle N1 may be fitted with bull bars, etc. of malleable plastic material.

‘Malleable’ meaning that it is possible by hand to deform/bend or move the bull bar, etc.

Before 1/4/2002: If the car is not e-approved, there are no specific requirements on the design and placement of bull bars, etc. beyond the general provisions in sections 9.01 and 9.06.

c) A car may be fitted with a light bar placed at a height of at least 2.00 m above the ground. No part of the light bar may be lower than 2.00 m above the ground.

9.06.021 M1 passenger car

(1) Roof advertising signs and the like shall be placed at least 0.40 m from the front edge of the roof.

Before 1/4/1985: Does not apply to roof lamps on taxis, unless other signs are also mounted.

(2) The provision of point (1) does not apply to cars that have forward control and a roof height of at least 1.80 m above the ground.

9.06.024 N1 light goods vehicle

(1) A light goods vehicle N1 shall comply with the provisions for passenger car M1.

9.7 Exits, boarding aids, etc. in passenger car M2/M3

9.7.1 General provisions

(1) If a car is approved and marked in accordance with UN Regulation 107, it is considered to be in compliance with all provisions on exits, boarding aids, etc. in the present point 9.07.

(2) The exit may be the service door (door used for normal passenger entry and exit), emergency door, emergency window, or emergency hatch.
A door can be considered as a service door if the door is side-hinged or top-hinged.

(3) Exit in the rear (the rearward-facing part of the vehicle) may be replaced by an emergency hatch if there are exits on both sides of the vehicle as close to the rear as possible.

(4) Every passenger shall have access to the mandatory exits.

(5) The provisions of point 9.07 do not apply to a row of seats where there is access to a door on each side of the row of seats.

9.7.2 Service door

(1) The free passage width shall be not less than 0.55 m, though 0.50 m measured between handrails. Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(2) Interior handles shall be such that the door cannot be opened inadvertently. Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(3) In the case of automatic doors, a device shall be provided adjacent, both on the exterior and interior, to turn off the automatic system so that the door can be opened manually.
Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers, and the exterior device requirement does not apply.
The device shall meet the following conditions:
a) Shall be clearly visible and on the exterior placed not more than 1.80 m above the ground and interior at least 1.60 m above the floor. ‘Floor’ meaning the spot from which the device is operated.
Before 1/4/2010: The interior device may be placed at least 1.50 m above the floor.
Before 1/4/1986: The requirement for the highest positioning of the device does not apply.
b) Shall be capable of functioning regardless of whether the vehicle’s electrical system or other energy supply is failing.
c) Shall be clearly marked with instructions on how to operate it.
The device may be shielded and sealed to prevent misuse.

(4) In the case of automatic doors which cannot be directly monitored from the driver’s position or fixed conductor position from which the doors are operated, the following shall apply:
a) A signalling device shall be provided at the driver’s position, giving a signal 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 configured on the interior so that the driver can monitor all of the automatic doors, including steps, etc. directly from the driver’s seat.
Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers and designed for the carriage of more than 22 passengers.

(5) The service door shall be located on the right side or rear of the vehicle.
Additional service doors on a vehicle designed for the carriage of no more than 12 passengers may be located on the left side of the vehicle.
Before 1/4/1993: Not applicable.

(6) The design and control system of the automatic service door shall be such that passengers cannot be injured or trapped in the door when it closes.

If the door while closing encounters a clamping force of not more than 150 N, it shall automatically re-open completely. The clamping force may momentarily exceed 150 N, but not more than 300 N.

Before 1/4/2010: Not applicable.

9.7.3 Emergency door

(1) The free passage width shall be not less than 0.55 m.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(2) The door may not be designed as a sliding door or a folding door. However, a sliding door may be provided as an emergency door in a vehicle intended for a maximum of 22 passengers if it is demonstrated that the door can be opened without the use of tools following a frontal collision test in accordance with UN Regulation 12.

An automatic door can be the emergency door if it can be easily opened manually, regardless of whether the energy supply is working.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(3) The door shall open outwards and be fitted with both exterior and interior handles. The exterior handle shall be positioned not more than 1.80 m above the ground. The interior handle shall be designed such that the door cannot be opened inadvertently.

The provision is considered to be fulfilled regardless of whether the door is fitted with a lock that prevents the door from being opened from the outside. However, the lock shall be such that the door can be opened from the inside without difficulty.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(4) The door shall be clearly marked both on the exterior and interior with ‘emergency exit’ or standardised emergency exit symbol. If necessary, an operating manual shall be provided.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers, and the exterior marking requirement does not apply.

9.7.4 Emergency window

(1) The free passage opening shall be at least 0.50 m high, at least 0.70 m wide, and shall have an area of at least 0.40 m².

Alternatively, if an emergency window is located on the rear end of the vehicle, it may have a free passage opening of not less than 0.35 m in height and at least 1.55 m in width, while the corners may be rounded to not more than 0.25 m of rounding radius.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers. 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, but not less than 0.50 m² in the case of a vehicle designed for the carriage of more than 22 passengers. If there is only one window on the rear, the glass area shall be at least 0.50 m² respectively 0.75 m².

For the purposes of calculating glass areas, any reduction resulting from corner roundings are disregarded.

(2) An emergency window which can be divided into two emergency windows by vertical division is considered to be two exits.

(3) The window shall be so arranged that the glass can be removed in a simple way without the use of tools. The provision is not considered to be fulfilled if the window can merely be rolled down.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(4) The pane shall be made of tempered glass.

An emergency window may not be filmed or taped, unless film or tape is included in the e-approval.

However, up to 25 % of the area of an emergency window may be taped in the form of a Tempo 100 sticker(s), emergency exit symbol text, logo tape, advertising tape, or similar if the remaining free contiguous area meets the size requirement set out in point (1). The tape may not extend uncut

beyond the outer edge of the glass.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(5) A tool to break the glass shall be placed in a visible position by the windows or near the ceiling. At least one tool shall be provided for each emergency window.

Tour guides and the like are considered to be passengers.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(6) The window shall be clearly marked both on the exterior and interior with 'emergency exit' or standardised emergency exit symbol. A clear operating manual shall be provided on the inside.

Interior affixed stickers are sufficient if they are visible and clearly legible from the outside.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers. The requirement for exterior marking does not apply if the provision of point (3) is fulfilled.

(7) However, the provisions of point (3) need not be fulfilled if there are tools for breaking the glass adjacent to each emergency window. If these tools are placed under the windows, the equivalent tools shall also be provided near the ceiling at each emergency window. The tool can be attached to the vehicle by wire or similar, but such that the tool can be used without difficulty.

At least one tool shall be provided for each emergency window. The tool for breaking the pane can be built-into the glass itself.

9.7.5 Emergency hatch

(1) An emergency hatch can be roof hatch or floor hatch.

(2) The free passage width shall be not less than 0.50 m.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(3) The sum of the length and width of the free passage of the emergency hatch shall be at least 1.20 m. Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(4) The emergency hatch shall be able to be opened in a simple way and without the use of tools, both from the outside and from the inside.

Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers. The requirement to open from the outside does not apply.

(5) The emergency hatch shall be clearly marked both on the exterior and interior with 'emergency exit' or standardised emergency exit symbol. A clear operating manual shall also be provided.

Before 1/4/1986: Not applicable.

(6) The floor hatch shall be hinged so that it opens inwards into the passenger compartment, or can be pulled up and into the passenger compartment.

(7) The floor hatch shall be provided with an audible signal that warns the driver if it is not properly closed. The lock of the floor hatch, and not movement of the latch itself, shall trigger the audible signal. The requirement does not apply if the floor hatch is automatically locked when the vehicle is in motion at a speed greater than 5 km/h.

(8) An emergency hatch intended to be pulled out may not, when used, become separated from the vehicle such that it endangers other road users.

Before 1/4/2010: Not applicable.

9.7.6 Access to exits

(1) The height from floor to roof in the vehicle shall be at least:

a) 1.250 m in a vehicle designed for the carriage of no more than 12 passengers.

b) 1.325 m in a vehicle designed for the carriage of more than 12 passengers but not more than 22 passengers.

c) 1.750 m in a vehicle designed for the carriage of more than 22 passengers, though 1.650 m on the top level of a vehicle with two levels.

The provisions do not apply in the immediately vicinity of a service door or emergency door or to areas intended exclusively for seated persons or occupants of those seats(row).

The provisions also do not apply to off-road cars designed for the carriage of no more than 12 passengers.

Mandatory emergency exits may not be blocked when mounting a ski box on a bus. Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(2) Access to the service door, in the immediately vicinity of the service door, may be blocked by a single seat that complies with the provisions of point 10.01.022 (4).
Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(3) Access to emergency doors shall meet the following conditions:
a) May be blocked by no more than two seats or rows of seats in a vehicle designed for the carriage of no more than 12 passengers.
b) May be blocked by no more than one single or one double seat in the immediately vicinity of the service door in a vehicle designed for the carriage of more than 12 passengers.
The seat that blocks access to the emergency door shall comply with the provisions of point 10.01.022 (5).
The driver's seat is not considered as blocking access to an 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 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(4) In a vehicle designed for the carriage of more than 22 passengers, free access in a width of at least 0.40 m measured at seat height and at least 0.50 m measured at a height of 0.85 m shall be provided to the service and emergency doors. In the case of access to the service door along the front edge of a seat or between two transverse seats facing each other, the free width measured at seat height shall be increased by 0.125 m, respectively, 0.25 m. Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(5) In a vehicle designed for the carriage of more than 22 passengers, the aisle shall have a width of at least 0.30 m, measured at seat height, and at least 0.40 m measured at a height of 0.85 m. The following apply when measuring:
a) The area within 0.125 m in front of a seat, measured from its front edge, is disregarded.
b) Shiftable seats shall be shifted out towards the aisle.
c) Folding seats shall be folded.
Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.

(6) In the case of a vehicle fitted solely with seats and capable of carrying more than 22 passengers, the seats on one or both sides of the aisle may be laterally shifted such that the width of the aisle can be reduced to a minimum aisle width of 0.22 m. It is a condition that, by means of a control on each seat, which is easily accessible to a person standing in the aisle, it shall be possible – even when the seat is loaded – to return the seat to a position corresponding to a minimum aisle width of 0.30 m.

9.7.7 Lift for wheelchair users

(1) A lift in the folded position may fully or partially block the mandatory exit if adjacent to the exit/lift, both on the exterior and interior, there is a device to turn off the automatic system so that the lift can be manually folded away from the exit.
The device shall comply with the provisions of point 9.07.002 (3) on devices for the manual opening of automatic doors.
Before 1/4/1986: The requirement on an exterior device does not apply.

(2) Lifts shall only be operable when the vehicle is stationary. When lifting and lowering the platform, a device that prevents the wheelchair from rolling off shall activate automatically.
Before 13/2/2004: Not applicable.

(3) The platform of the lift shall be at least 0.80 m wide and at least 1.20 m long and the lift shall be capable of operating when loaded with 300 kg.
Before 13/2/2004: Not applicable.

(4) The lift control device 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 for fully folded up.
Before 13/2/2004: Not applicable.

(5) The control device shall be designed to automatically switch off if it is dropped. When this happens, the movement of the lift shall immediately stop and it shall be possible to initiate movement in either direction.
Before 13/2/2004: Not applicable.

(6) Areas which are not visible to the person operating the lift and where the lifting device may grab or pinch objects shall be protected by a safety device.
Before 13/2/2004: Not applicable.

(7) If one of the safety devices specified in point (6) activates, the movement of the lifting device shall immediately stop and a movement in the opposite direction shall be initiated.
Before 13/2/2004: Not applicable.

(8) In the event of a failure of a safety device, the lift shall not be operable, unless it is possible to operate it safely by hand. The nature and location of the emergency control device shall be clearly indicated. In the event of a failure of the energy supply, the lift shall be capable of being operated by hand.
Before 13/2/2004: Not applicable.

9.7.8 Ramp for wheelchair users

(1) Power-operated lifts shall only be operable when the vehicle is stationary.
Before 13/2/2004: Not applicable.

(2) The ramp control device shall be clearly marked and, once the ramp is laid out, such shall be shown by an indicator at the driver's position.
The indicator can be active in all positions except the fully parked position.
Before 13/2/2004: Not applicable.

(3) A ramp shall be at least 0.80 m wide. The slope of the ramp may not exceed 12 % when laid to a curb with a height of 0.15 m. When measuring the slope of the ramp, the body may be lowered with a kneeling system.
Before 13/2/2004: Not applicable.

(4) Exterior edges shall be rounded to a radius of at least 2.5 mm. Exterior corners shall be rounded to a radius of at least 5 mm.
Before 13/2/2004: Not applicable.

(5) Ramps of more than 1.20 m in length when ready for use shall be fitted with a device to prevent the wheelchair from rolling off the side.
Before 13/2/2004: Not applicable.

(6) The ramp shall be capable of being used safely at a load of 300 kg.
Before 13/2/2004: Not applicable.

(7) While a power-operated ramp is being laid out and pulled in, it shall be indicated by yellow flashers and an acoustic signal. The ramp shall be marked with clearly visible red and white reflective hazard warning stripes on the outer edges.
Before 13/2/2004: Not applicable.

(8) Horizontal installation of a power-operated ramp shall be protected by a safety device.
Before 13/2/2004: Not applicable.

(9) In the case of a power-operated ramp, the horizontal movement shall stop if the ramp is loaded with a mass of 15 kg.
Before 13/2/2004: Not applicable.

(10) If any of the abovementioned safety devices for a power-operated ramp are activated, the movement of the lift shall immediately stop. In the event of a failure of the energy supply, the ramp shall be capable of being operated by hand.

Before 13/2/2004: Not applicable.

(11) When a ramp is located at a service door located within the driver's direct field of vision, the ramp shall be capable of being operated by the driver from the driver's seat. In all other cases, the control devices shall be located near the ramp. They shall only be capable of being activated and deactivated by the driver from the driver's seat.
Before 13/2/2004: Not applicable.

9.7.9 Kneeling system

(1) A control device that actuates 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 13/2/2004: Not applicable.

(2) It shall be possible for the lowering or raising to be stopped and movement in the opposite direction immediately initiated by means of one or more control devices located within the driver's reach when seated in the cab, and in the vicinity of any other device that operates the kneeling system. Before 13/2/2004: Not applicable.

(3) When a kneeling system is installed, the following conditions shall be met:
a) The vehicle shall not be able to travel more than 5 km/h when the bodywork is in a position lower than the normal driving height.
b) The vehicle shall not be capable of being raised or lowered when the service door cannot be activated. Before 13/2/2004: Not applicable.

9.07.022 M2 passenger car

(1) Passenger car M2 shall be equipped with:
a) A sufficient number of exits on each side for the number of occupants the vehicle is designed to carry. A service or emergency door shall be sufficient for 30 persons and an emergency window for 20 persons. For car designed for the carriage of more than 22 passengers, however, there shall be at least two exits on each side, placed respectively front and rear.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.
Diesel cars with a standing area in addition to the aisle and with at least two service doors shall be provided with only one exit on the left side.
b) Exit in the back.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.
c) Two service doors or one service door and one emergency door. In the case of a car designed for the carriage of more than 22 passengers, the doors shall be placed in the front and rear half of the vehicle, respectively.
In the case of a car designed 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 1/4/1986: Applies only to M2 passenger cars for commercial carriage of passengers and designed for the carriage of more than 12 passengers. The requirement does not apply if the provision of point 9.07.004 (3) is met.

(2) A car designed for the carriage of no more than 12 passengers need not be fitted with an exit on the left side, if there is a door on either side next to the driver's cab and service or emergency doors on the right side and rear of the passenger compartment.
In the case of a car without separation between the 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 consist of the same door.

(3) For a car with two levels, each level is considered to be one vehicle in terms of the number and location of exits. However, the exit in the rear of the lower level may be replaced by the exit at the front or the staircase of the lower level to the upper level and additional exit at the rear of the upper

level or additional roof hatch.
In the case of a windscreen designed as an emergency window, the provision of point 9.07.004 (7) does not apply.

(4) The aisle on the top level of a car with two levels shall be connected by one or more staircases to the access passage to a service door on the lower level or to the aisle on the lower level at a distance not exceeding 3.00 m from a service door. If there are two stairs, one can go to an emergency door on the lower level.

(5) Passenger cars fitted solely with seats and designed for the carriage of more than 30 passengers on the upper level shall be fitted with two staircases.

(6) A passenger car with both seating and standing spaces and designed for the carriage of more than 50 passengers on the upper level shall be fitted with two staircases.
Before 1/4/1999: Not applicable.

9.07.023 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.

(2) In articulated buses, the passage between the individual rigid sections is not regarded as being an exit.

(3) In articulated buses, the individual rigid sections shall each comply individually with the regulations governing passenger cars M2.

(4) The provision of point 9.07.002 (4) (b) need not be fulfilled for the rearmost part if the following conditions are met:
a) The lowermost step shall be provided with a device that gives a signal at the driver's position when the step is loaded by a passenger.
b) The front edge of the door shall be fitted with a sensor strip which automatically stops and overrides the door's closing motion if the complete closure of the door is prevented.
If the rearmost part is to be fitted with a service door, that door shall not comply with the provisions of point 9.07.022 (1) (c).
Before 1/4/1986: An articulated bus need not be fitted with a door in the rearmost part if the provision of point 9.07.004 (3) is fulfilled.

9.07.357 Sleeper bus

(1) For a sleeper bus, the provisions for passenger cars M2 and M3 shall also be met when the seats have been converted into beds.

(2) However, the aisle may be less than 400 mm wide at the upper bunks if the following conditions are met:
a) The width of the aisle is at least 300 mm at both the lower and upper bunks.
b) All windows next to the bunks are emergency windows with tools for breaking the glass placed at each window.

9.8 Rear underrun protection (rear bumper)

9.8.1 General provisions

(1) The rear underrun protection shall meet the following requirements:
a) Shall provide underrun protection in the event of rear collisions with smaller vehicles.
b) In the case of lorry N2 with a maximum permissible laden weight exceeding 8 000 kg, lorry N3 and trailer/semi-trailer O3 and O4 with hydraulic suspension, air suspension, or other automatic levelling according to the load, the underrun protection may not be placed higher than 0.45 m above the ground.
In the case of the above vehicles with other suspensions, the underrun protection may not be placed higher than 0.50 m above the ground.

If a clearance angle of up to 8° according to standard ISO 612:1978 necessitates a greater height, it may be up to 0.55 m for the above vehicles.

For other vehicles, the underrun protection may be positioned up to 0.55 m above the ground. The height is measured from the bottom edge at kerb weight and with any bogie lift lowered.

Before 1/7/2024: In all cases, the underrun protection may be positioned up to 0.55 m above the ground.

c) In the case of lorry N2 with a maximum permissible laden weight exceeding 8 000 kg, lorry N3 and trailer/semi-trailer O3 and O4, the underrun device may not be more than 0.30 m from the rearmost point of the vehicle.

For other vehicles, the underrun protection shall be located not more than 0.40 m from the rearmost point of the vehicle. Before 1/7/2024: The underrun protection structure shall not be situated more than 0.40 m from the rearmost point of the vehicle.

d) The underrun protection may not be wider than the rear axle as measured from the outer edge of the wheels, except for bulging of the tyre just above the road surface, or be more than 0.10 m narrower on either side.

e) The underrun protection shall have a height of at least 0.12 m. However, for light goods vehicle N1, lorry N2 with a maximum permissible laden weight not exceeding 8 000 kg, off-road vehicle, agricultural trailer, and a vehicle with tail lift, the height shall be at least 0.10 m.

Before 1/7/2024: In all cases, the underrun protection may be positioned at least 0.10 m above the ground.

(2) The rear underrun protection and its installation shall meet the strength requirements of one of the following sets of rules:

a) UN Regulation 58-03 on underrun devices on cars and their trailers.

b) Regulation (EU) 2015/208, Annex XXVI, on underrun protection mounted on agricultural trailers and trailers for motorised work machinery. However, the underrun protection on these vehicles may alternatively meet the strength requirements of point (a).

Before 1/9/2021: Rear underrun protection may meet the strength requirements of UN Regulation 58-02 or Directive 70/221/EEC as amended by Directive 2006/20/EC.

Before 11/3/2010: Rear underrun protection may meet the strength requirements of UN Regulation 58 or Directive 70/221/EEC as amended by Directive 79/490/EEC.

(3) Rear underrun protection may consist of two sections, spaced not more than 0.60 m from each other, or of three sections spaced not more than 0.30 m from each other.

(4) The rear underrun protection may be made so that its position at the rear of the vehicle can be changed, provided that it can be locked in the operating position.

(5) Rear underrun protection may consist wholly or partly of fixed parts of the structure of the vehicle, or partly of the rear wheels of the vehicle.

(6) However, the rear underrun protection may be wider than the rear axle, if the following conditions are met:

a) The vehicle is fitted with anti-roll bars on each side from the underrun protection to the rear wheels.

b) The width of the underrun protection does not exceed the width of the rest of the structure.

(7) The rear underrun protection may consist of sections, on a vehicle with a tail lift, provided that the following conditions are met:

a) The horizontal distance between the underrun protection and the individual parts of the tail lift is not more than 2.5 cm.

b) Each section has an effective area of at least 350 cm².

(8) In determining the rearmost point of the vehicle, parts (bodywork, structure, handles, fittings, etc.) located at a height of more than 2.00 m above the ground (as measured at kerb weight with and bogie lifts lowered), may be disregarded.

(9) In determining the rearmost point of the vehicle, the collapsible devices and equipment specified in point 3.02.001 (7) may be disregarded.

9.8.21 M1 passenger car

(1) A passenger car M1 shall comply with the provisions for light goods vehicle N1. Before 11/3/2010: Not applicable.

9.8.22 M2 passenger car

(1) A passenger car M2 shall comply with the provisions for light goods vehicle N1. Before 11/3/2010: Not applicable.

9.8.23 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for light goods vehicle N1. Before 11/3/2010: Not applicable.

9.8.24 N1 light goods vehicle

(1) Light goods vehicle N1 shall be fitted with a rear underrun protection, unless the ground clearance below the rear of the vehicle does not exceed 0.55 m, as measured not more than 0.45 m from the rearmost point of the car and over a width equal to the width of the rear axle less 0.10 m on each side.
Before 1/4/1987: Not applicable if the minimum ground clearance value at the rear end of the car does not exceed 0.55 m.
Before 1/4/1986: Not applicable.

9.8.25 N2 Lorry

(1) Lorry N2 shall be equipped with a rear underrun protection. Before 1/4/1986: Not applicable.
(2) Cars for semi-trailers are exempt from the rear underrun protection requirement.
(3) Cars with trash compaction units, where the ground clearance of the trash container does not exceed 0.55 m and where there is no risk of underrun, are exempted from the requirement in point (1).
(4) In the case of a car with a rear gravel or salt spreader, there is no requirement for the distance in point 9.08.001 (1) (c).
(5) In the case of a car with a lifting platform in a transport position where the ground clearance below the lifting platform does not exceed 0.55 m, there is no requirement for distance in point 9.08.001 (1) (c).
(6) In the case of a car with a truck mixer, the distance specified in point 9.08.001 (1) (c) may be up to 0.70 m.
(7) In the case of a car with a swap body, where the platform is raised from the rear end of the car, the distance in point 9.08.001 (1) (c) may be up to 0.70 m.
Handles, fittings, and the like located at a height of at least 1.80 m above the ground are not included in the measurement of distance.

9.8.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

9.8.111 Trailer/semi-trailer O1

(1) A trailer/semi-trailer O1 shall comply with the provisions for N1 light goods vehicle.

9.8.112 Trailer/semi-trailer O2

(1) A trailer/semi-trailer O2 shall comply with the provisions for N1 light goods vehicle.

9.8.113 Trailer/semi-trailer O3

(1) A trailer/semi-trailer O3 shall comply with the provisions for N2 lorries.

(2) Dollies are exempt from the rear underrun protection requirement.

9.8.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for N2 lorries.
(2) Dollies are exempt from the rear underrun protection requirement.

9.08.120 Agricultural trailer

(1) Agricultural trailers shall be fitted with a rear underrun protection if the rearmost and lowest point of the platform is more than 0.40 m behind the rear wheel.
Before 1/10/1996: Not applicable.
(2) In the case of an agricultural trailer with a swap body, where the platform is raised from the rear end of the agricultural trailer, the distance in point 9.08.001 (1) (c) may be greater than 0.40 m, though not more than 0.70 m.
In this context, handles, fittings, and the like may be disregarded if placed at a height of at least 1.80 m above the ground.
(3) In the case of an agricultural trailer with a width greater than 2.55 m as per point 3.02.001 (4), the rear underrun protection shall have a width of between 2.35 m and 2.55 m, even if there is non-compliance with point 9.08.001 (1) (d) on width relative to the rear axle.

9.08.130 Trailer for motorised work machinery

(1) A trailer for motorised work machinery shall comply with the provisions for agricultural trailers.

9.08.141 Caravan

(1) A caravans shall comply with the provisions for light goods vehicle N1. Before 11/3/2010: Not applicable.

9.08.142 Other towed equipment subject to registration

(1) Other towed equipment subject to registration shall comply with the provisions for trailer/semi-trailer N1. Before 11/3/2010: Not applicable.

9.08.200 Vehicle combination

(1) In vehicle combinations consisting of lorries and centre-axle trailers, the lorry need not be fitted with rear underrun protection
(2) The rear underrun protection, as described in point 9.08.001 (4), shall only be placed in the operating position on the rearmost vehicle of the vehicle combination.

9.9 Sideguard

9.9.1 General provisions

(1) Sideguards shall reduce the risk of unprotected road users falling under the side of a vehicle.
(2) Sideguards shall consist of:
a) plate, flat or profiled vertically;
b) horizontal bars at least 0.10 m high (but 0.05 m high for lorry N2 and trailer/semi-trailer O3) and with spacing of not more than 0.30 m; or
c) a combination of plates and bars as referred to in points (a) and (b).
(3) The surface of the sideguard shall be smooth and, as far as possible, uninterrupted from the front to the rear. Adjoining parts may overlap to the rear or downwards, or there may be a maximum longitudinal gap of 25 mm, provided that the rearmost part does not protrude relative to the foremost. All exterior edges and corners shall be rounded with a radius of at least 2.5 mm. Rounded bolt heads

and the like may project up to 10 mm from the surface.

(4) The sideguard shall be firmly attached to the vehicle and be so designed as to withstand a horizontal static force of 1 kN exerted perpendicular to any part of its outer side by a stamp with a diameter of 220 mm ± 10 mm. The impression under this load may not exceed the following dimensions:
   a) 30 mm on the rearmost 0.25 m of the sideguard.
   b) 150 mm on the rest of the sideguard.

(5) Sideguards shall be arranged in such a way that the following conditions are met:
   a) The sideguard does not increase the width of the vehicle.
   b) The sideguard is not more than 0.12 m within the outermost plane of the vehicle (maximum width).
   c) The rearmost 0.25 m of the sideguard is not more than 30 mm within the outer surface of the rear wheels.

(6) The sideguard shall be positioned in such a way that the lower edge is not more than 0.55 m above the ground, measured at kerb weight. The upper edge of the sideguard shall be
   a) at least 0.95 m above the ground,
   b) at the height of the load platform, or
   c) not more than 0.35 m below a fixed structure, whichever measure is lower.

(7) The front edge of the sideguard shall consist of a continuous vertical part extending over the entire height of the sideguard, unless it is immediately behind other fixed parts of the vehicle. The outermost and foremost sides shall measure at least 0.05 m rearward and be rotated 0.10 m inwards for classes N2 and O3, and at least 0.10 m rearward and be rotated 0.10 m inwards for classes N3 and O4.

(8) The rear edge of the sideguard shall not be more than 0.30 m in front of the rear wheel, though 0.50 m in the case of a vehicle with a pivoted rear axle.

(9) Permanently attached vehicle parts, e.g. boxes, tanks, etc., may form part of the sideguard, provided that they meet the requirements for dimensions.

(10) The mandatory sideguard shall also be placed between wheels with more than 0.60 m between them. However, the sideguard may be omitted between two steered axles if the wheelbase does not exceed 2.10 m.

(11) The sideguard may be such that its position on the side of the vehicle may be changed, provided that it can be locked in the position of operation.

9.09.025 N2 Lorry

(1) Lorry N2 shall be equipped with sideguards on both sides.
   Before 1/11/2019: Lorry N2 shall be equipped with sideguards on the right side. Before 1/4/1992: Not applicable.

(2) Cars for semi-trailers are exempt from the requirement in point (1).

(3) The front edge of the sideguard shall be positioned not more than 0.30 m behind the front wheel or shall end adjacent to the cab or entry steps at an angle of not more than 45°.

9.09.026 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

9.09.113 Trailer/semi-trailer O3

(1) Trailers/semi-trailers O3, other than dollies, shall be fitted with sideguards on both sides. Before 1/7/2020: Trailers/semi-trailers O3 shall only be equipped with sideguards on the right side.

Before 1/4/1992: 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 a steering mechanism.
   b) Not more than 0.25 m behind the front edge of a platform or structure on a centre-axle trailer.
   c) Not more than 0.25 m behind the median transverse plane of the landing gear and not more than 2.70 m behind the kingpin of a semi-trailer.

(3) Extendible semi-trailers shall meet the requirement on the front or rear edge in terms of the longitudinal position of the sideguard, in the extended state.

(4) The front edge of the sideguard may, on an extendible link trailer with landing gear at the front end of the vehicle, be positioned up to 2.70 m behind the kingpin with the vehicle in the unextended state.

9.09.114 Trailer/semi-trailer O4

(1) A trailer/semi-trailer O4 shall comply with the provisions for trailer/semi-trailer O3.

9.10 Front underrun protection (front bumper)

9.10.001 General provisions

(1) The front underrun protection shall comply with the following conditions:
   a) Shall provide underrun protection in the event of frontal collisions with smaller vehicles.
   b) Shall be located not more than 0.445 m above the ground (as measured from the bottom edge at kerb weight with any bogie lift lowered), though only 0.400 m for lorry N2 with a maximum permissible laden weight not exceeding 7 500 kg.
   c) May not be wider than the front bumper and shall not be more than 0.10 m narrower on each side as measured from the outer side of the foremost tyre or more than 0.20 m narrower on either side as measured from the outermost edge of the cab's running boards.
   d) Shall have a height of at least 0.10 m for lorry N2 and at least 0.12 m for lorry N3.
   e) Shall be so designed that the end pieces do not face forward, and have a rounding radius of not less than 2.5 mm.
   f) Shall be designed in such a way that its surface appears smoothly rounded or horizontally curved and in such a way that bolts and rivets, which are to be rounded, do not protrude more than 10 mm from the surface.

(2) The front underrun protection shall comply with the design provisions of UN Regulation 93 as regards design and installation.
   Before 1/7/2024: The front underrun protection may comply with Directive 2000/40/EC.

(3) The front underrun protection may be made so that its position at the front rear of the vehicle can be changed, provided that it can be locked in the operating position.

9.10.025 N2 Lorry

(1) Lorry N2 shall be equipped with front underrun protection. Before 10/8/2003: Not applicable.

(2) For off-road lorry N2, the requirement for front underrun protection does not apply.

9.10.026 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

10. Interior cab fitting-out, visibility, special equipment, etc.

10.1 Interior cab fitting-out, etc.

10.1.1 General provisions

(1) The fitting-out of the cab shall not cause undue danger to the occupants.
(2) The vehicle shall be so arranged that the driver can operate the various apparatus of the vehicle, without the driver's attention being diverted from the rest of the traffic.

10.1.2 Seats

(1) Seats shall be securely attached to the vehicle.
(2) Shiftable seats shall be capable of being automatically retained in all positions in which they can be placed. Before 1/10/1999: No requirement on automatic retention.
(3) Adjustable backrests shall be capable of being retained in all positions in which they are placed.
(4) All seats that can be tilted or have fold-down backrests shall be automatically retained in the normal position. The normal position for a fold-down seat is the position in which the seating surface is in the driving position.
Before 1/10/1999: Not applicable.
(5) The driver's seat shall be so arranged and placed as to enable the driver to achieve a comfortable driving position and to operate the vehicle's controls.

10.1.3 Head restraints

(1) A mandatory head restraint shall comply with the design 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 1/7/2024: The mandatory head restraint may comply with UN Regulation 17-06 or American standard FMVSS 202.
Before 1/1/2017: The mandatory head restraint may comply with Directive 78/932/EEC.
Before 1/10/1999: The mandatory head restraint may comply with UN Regulation 25-01 or UN Regulation 17-03.

10.1.4 Wheelchair restraints

(1) A vehicle used for the carriage of persons in a wheelchair shall be fitted with a securing device to restrain wheelchairs.
Before 1/4/1986: Applies only to vehicles for commercial carriage of passengers.
(2) Anchorages for wheelchair restraints shall be securely attached to the vehicle. In addition, the rules on the placement of seats in points 9.07.001, 9.07.006, and 10.01.023 apply mutatis mutandis.

10.1.5 Wheelchair space

(1) For each wheelchair user for whom the passenger compartment is intended, a specific wheelchair space of at least 0.75 m wide and 1.30 m long shall be provided. The longitudinal axis of the wheelchair space shall be parallel to the longitudinal axis of the vehicle, and the floor of the wheelchair space shall have a non-slip surfacing.
Before 13/2/2004: Not applicable.
(2) Folding seats in a wheelchair space shall not project into the wheelchair space when folded up. Before 13/2/2004: Not applicable.
(3) A vehicle may be fitted with detachable seats in the wheelchair space if they can be easily removed.
Before 13/2/2004: Not applicable.

10.1.6 Wheelchair door

(1) The wheelchair door opening shall be at least 1.40 m high and shall have a width of at least 0.90 m, but 0.80 m measured between handrails.
Before 13/2/2004: Not applicable.
(2) Wheelchair door opening devices shall be located not more than 1.30 m above the floor or ground, whether inside or outside the vehicle.
Before 13/2/2004: Not applicable.

10.1.20 Car

(1) Side-facing seats are not allowed.
The provision does not apply to passenger car M2 or M3 that are so arranged as to accommodate standing passengers.
Before 20/10/2007: Not applicable.

10.1.21 M1 passenger car

(1) M1 passenger cars shall be fitted with head restraints on the outermost seating positions of the front row of seats. However, the head restraint of the seat specially designed for persons with disabilities need not meet comply with the design provisions of point 10.01.003 (1).
Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.
Before 1/4/1986: Not applicable.
(2) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 in terms of strength characteristics and attachment, etc.
However, a factory seat may be made and mounted in accordance with American standard FMVSS 207 or Canadian standard CMVSS 207.
However, seats specially designed for persons with disabilities need only comply with the provision of point 10.01.002 (1).

Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.
Before 1/7/2024: Seats may comply with UN Regulation 17-08.
Before 1/1/2017: Seats may comply with UN Regulation 17-06 or Annex II to Directive 74/408/EEC as amended by Directive 96/37/EEC.
Before 20/10/2007: Does not apply to folding seats. Before 1/10/1999: Not applicable.
(3) Wheelchair restraints shall comply with the design provisions of one of the following sets of rules:
a) Standard ISO 10542-1:2012. The restraint device shall be clearly and durably marked with 'ISO'.
b) Regulation (EU) 2018/858, Annex II, Appendix 3.
Before 1/7/2024: A wheelchair restraint may comply with the design provisions of American standard SAE J2249 and shall be clearly and durably marked with 'SAE' or capable of meeting the design provisions of Annex XI, Appendix 3 to Directive 2007/46/EC.
Before 1/1/2017: Wheelchair restraints may comply with the design provisions of Annex VII to Directive 2001/85/EC.
Wheelchair restraints may comply with the design provisions of standard ISO 10542 and shall be clearly and durably marked with 'ISO'.

Restraints for electric wheelchairs (docking station) need not be marked with ‘ISO’ or ‘SAE’.
Before 13/2/2004: Not applicable.

(4) The provisions of points 10.01.005 (1), 10.01.005 (2), and 10.01.006 do not apply to passenger car M1.

(5) The provision of point 10.01.020 (1) does not apply to a passenger car M1 that is approved only for limousine services. A side-facing seat shall be provided with a head restraint.
Before 20/10/2007: Head restraint requirements do not apply to side-facing seats in limousines.

10.1.22 M2 passenger car

(1) M2 passenger cars with a maximum permissible laden weight not exceeding 3 500 kg shall be fitted with head restraints on the outermost seating positions of the front row of seats.
Before 1/7/2024: Not applicable.

(2) No seat may be located further ahead than the driver’s seat, unless the seat is positioned in such a way as necessitated for a direct view to the front and to the sides from the driver’s seat.

(3) If a seat is so arranged that the passenger will be hurled through the vehicle upon severe braking, the protective braces or handles shall be provided in front of the seat, unless the seating position is fitted with a seat belt. The provision is deemed to be fulfilled if the passenger can reach the handle or brace at an angle in front of them with at least one hand.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

(4) The seats shall be so arranged and placed as to enable passengers to leave the vehicle without difficulty.
In a car designed for the carriage of no more than 22 passengers, the provision is deemed to be met if the free passage width at any height is not less than 0.30 m. This dimension may be reduced by up to 30 mm if the upholstery of the seats can be easily pushed in. For the purposes of measurements, the following apply:
The area within 0.125 m in front of a seat, measured from its front edge, is disregarded. Shiftable seats shall be shifted out towards the aisle.
Folding seats shall be folded.
The free width of transverse aisles may be less than 0.30 m.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

(5) A seat that blocks access to a service door shall be arranged as follows:
a) The seat shall be holdable.
b) The seat shall be securely restrained in the folded position. Clear operating instructions shall be provided on or at the seat.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

(6) A seat that blocks access to an emergency door shall be arranged in one of the following ways:
a) It shall be possible to tilt the seat aside and remain in that position.
b) It shall be possible to easily remove the seat without the use of tools.
c) It shall be possible to for the seat-back to be laid down if the car is designed for the carriage of no more than 12 passengers. Clear operating instructions shall be provided on or at the seat.
Before 1/4/1987: A seat that blocks access to an emergency door shall be so arranged that it can be tilted aside and remain in that position.
Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

(7) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 or UN Regulation 80-03 in terms of strength characteristics and attachment, etc.
However, seats specially designed for persons with disabilities need only comply with the provision of point 10.01.002 (1).

However, in the case of passenger cars designed for 10 people including the driver, a factory seat may be made and mounted in accordance with American standard FMVSS 207 or Canadian standard CMVSS 207.

Before 1/1/2017: Forward-facing seats, in terms of strength characteristics and attachment, etc., may comply with the design provisions of UN Regulation 80-01 or Annex III to Directive 74/408/EEC as amended by Directive 96/37/EEC.

Before 20/10/2007: Does not apply to folding seats.

Before 1/10/2001: Passenger car M2 with a maximum permissible laden weight not exceeding 3 500 kg may comply with the provisions of Directive 74/408/EEC as amended by Directive 81/577/EEC.

Before 1/10/1999: Not applicable.

(8) The provisions of point (6) do not apply to passenger car M2, where the permissible number of standing spaces is 20 % or more of the maximum permissible number of passengers, and which is approved only for regular services. If there are two levels, the number of standing spaces is calculated in relation to the number of approved passenger seats on the lower level.

(9) Wheelchair restraints shall comply with the design provisions of UN Regulation 107-07, Annex 8.

In the case of passenger car M2, where the permissible number of standing spaces is 20 % or more of the maximum permissible number of passengers, and which is approved only for regular services, wheelchair restraints are not required if the wheelchair is positioned facing rearward with it's back against a wall or backrest capable of withstanding a forward load of 250 daN measured in accordance with UN Regulation 107-07, Annex 8, point 3.8.5.

Before 1/7/2024: Wheelchair restraints may comply with the design provisions of UN Regulation 107-05, Annex 8.

Before 1/1/2017: Wheelchair restraints may comply with the design provisions of Annex VII to Directive 2001/85/EC or UN Regulation 107-02, Annex 8.

Wheelchair restraints may comply with the design provisions in standard ISO 10542 and be clearly and durably marked with 'ISO'.

Restraints for electric wheelchairs (docking station) need not be marked with 'ISO' or 'SAE'.

Before 13/2/2004: Not applicable.

10.1.23 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.

(2) The provision in point 10.01.020 (1) does not apply to passenger car M3 with a maximum permissible laden weight exceeding 10 000 kg, where side-facing seats are allowed to be placed in the rear of the vehicle to form an entire section with up to 10 seats. A side-facing seat shall be provided with a head restraint.

(3) The fitting-out of the cab, with regard to fire safety, shall comply with the provisions of

a) UN Regulation 118-03, or

b) American standard FMVSS 302.

Before 1/7/2024: The fitting-out of the cab may comply with the provisions of UN Regulation 118. Before 1/1/2017: The fitting-out of the cab may comply with the provisions of Directive 95/28/EC. Before 1/4/1986: Not applicable.

(4) The provision in point (3) does not apply to city buses.

10.1.24 N1 light goods vehicle

(1) N1 light goods vehicles shall be fitted with head restraints on the outermost seating positions of the front row of seats. However, the head restraint of the seat specially designed for persons with disabilities need not meet comply with the design provisions of point 10.01.003 (1).

Before 1/4/1986: Not applicable.

(2) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 in terms of strength characteristics and attachment, etc.
However, a factory seat may be made and mounted in accordance with American standard FMVSS 207 or Canadian standard CMVSS 207.
Before 1/7/2024: Not applicable.

10.1.25 N2 Lorry

(1) Forward-facing seats shall comply with the design provisions of UN Regulation 17-09 in terms of strength characteristics and attachment, etc.
Before 1/7/2024: Not applicable.

10.1.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

10.01.031 Two-wheeled motorcycle

(1) An independent passenger seat shall be fitted with a handrail or similar for use by the passenger.
(2) A the two-wheeled motorcycle shall be equipped with foot rests for the driver and any passenger.

10.01.040 Moped

(1) A the two-wheeled moped shall be equipped with pedals or foot rests for the driver.

10.01.050 Tractor

(1) A 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 hold on while in motion.

10.01.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

10.01.357 Sleeper bus

(1) The structure of the seat design shall be fitted with devices which securely restrain the structure, even when the seats have been converted into beds.
(2) Safety barriers shall be provided in front of beds to prevent the hurling of passengers in the event of severe braking or collision.
(3) The upper edge of the safety barrier shall be at least 0.30 m above the uncompressed seat cushion and shall cover the entire width of the bed. The gap between the upper edge of the non-compressed seat cushion and the lower edge of the safety barrier shall not exceed 70 mm.
(4) The safety barrier shall be able to 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. The safety barrier when tested shall have a horizontal deformation of not less than 0.10 m and not more than 0.30 m.

10.01.364 Motorhome

(1) The provisions of points 10.01.020, 10.01.021, 10.01.022, and 10.01.023 on seats only apply to seats intended for normal use while driving.

10.2 Seat belts

10.2.1 General provisions

(1) Seat belts shall be approved and marked in accordance with one of the following sets of rules:
a) UN Regulation 16-07.
b) Regulation (EU) 168/2013 and its implementing measures.
However, a factory seat belt may be made in accordance with American standard FMVSS 209 or Canadian standard CMVSS 209.
However, a non-mandated harness may be approved and marked in accordance with Fédération Internationale de l'Automobile (FIA) Standard 8853-2016.
Before 1/7/2024: Seat belts may be approved and marked in accordance with UN Regulation 16-06 or Directive 97/24/EC.
Before 1/1/2017: Seat 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 1/10/2001: Passenger car M2 with a maximum permissible laden weight not exceeding 3 500 kg may comply with the provisions of Directive 77/541/EEC as amended by Directive 90/628/EEC.
Before 1/10/1999: Seat belts may be approved and marked in accordance with Directive 77/541/EEC as amended by 90/628/EEC.
Before 1/4/1998: Seat belts may be approved and marked in accordance with UN Regulation 16 or Directive 77/541/EC.
Before 1/4/1985: Seat belts may be approved and marked in accordance with standard DS 768.1 and 768.2. Before 1/4/1983: Applies only to mandatory seat belts.

(2) Seat belts on front seats shall be three-point belts. However, where such a seat belt cannot be fit, or is difficult to fit, a lap belt may be used.
Seat belts on rear seats may be lap belts or three-point belts. Non-mandatory belts may be of the H-type.
Before 1/4/1989: Non-mandatory seat belts on front seats can be lap belts.
Before 1/4/1983: Applies only to mandatory seat belts.

(3) In the driver’s position, a seat belt shall be one of the following types:
a) Static seat belt.
b) Inertia with retractor.
c) Double-action inertia retractor.

(4) In passenger seats, seat belts shall be one of the following types:
a) Static seat belt.
b) Inertia with retractor.
c) Double-action inertia retractor.
d) Automatic retractor.

(5) The proper use of seat belts shall enable the driver to operate the general controls of the vehicle.

(6) Seat belts shall be securely attached to the fixed parts of the vehicle. In the case of a vehicle fitted from the factory with seat belt fastening points, these shall be used to secure the seat belt.

(7) The course of a seat belt may be altered by the use of additional fittings, provided that there is no interference with the strap or fittings of the approved belt. In the case of additional fittings which transfer forces, both the fittings and their attachment to the vehicle, in terms of strength, shall correspond to the original anchorage points of the seat belt.

(8) Seat belts may be fitted with a special energy-absorbing device, preloading device, belt lock, or equivalent.

10.2.2 Seat belts for wheelchair users

(1) A vehicle used for the carriage of persons in wheelchairs shall be fitted with a seat belt at the wheelchair space, if the seat belt is required for the vehicle in the corresponding regular seat. The seat belt shall be of the type required for the vehicle in a corresponding normal seat.
However, static seat belts may be used if retractor seat belts cannot be fitted appropriately.

(2) Seat belts shall be approved and marked in accordance with the requirements of point 10.02.001 (1). However, seat belts made in accordance with US standard FMVSS 209 or Canadian standard CMVSS 209 may be used, even if the seat belt is not original.
Alternatively, seat belts may comply with the design provisions of standard ISO 10542-1:2012, provided that the seat belt is clearly and durably marked with 'ISO'.
Before 1/7/2024: Seat belts may meet American standard SAE J2249, provided that the seat belt is clearly and durably marked with 'SAE'.
Before 1/7/2016: Seat belts may comply with the design provisions of standard ISO 10542, provided that the seat belt is clearly and durably marked with 'ISO'.

(3) Seat belt anchorages shall be positioned in such a way that the seat belt can be appropriately placed on the body of the wheelchair user.

(4) Seat belt anchorages shall be securely attached to the vehicle.
The provision is deemed to be fulfilled if the individual seat belt anchorage is attached to one of the following:
a) Metal profile of the floor structure.
b) Metal profile of the side wall/roof post.
c) Rail, fittings, or similar made of metal, if these are firmly attached to the floor structure.
Before 1/4/2001: Not applicable.

10.2.20 Car

(1) A car shall be fitted with a seat-belt reminder in the seating positions of the front row of seats complying with the design provisions of UN Regulation 16-07.
The requirement does not apply to vehicles used for the transport of disabled persons, or vehicles intended for use by Danish Defence, civil defence, fire departments, or police.
Before 1/7/2024: Not applicable.

10.2.21 M1 passenger car

(1) An M1 passenger car shall be fitted, in all seats in forward and rearward facing seats, with the following seat belts:
a) Three-point belt with double-action inertia retractor on forward-facing seats.
b) Lap belt with static or automatic retractor or double-action inertia retractor on rear-facing seats, or alternatively three-point belt with double-action inertia retractor.
Before 20/10/2007: Does not apply to folding seats.
Before 1/10/2004: Lap belts are sufficient in the centre seating position of the front seat if the passenger's head cannot come into contact with the windscreen as defined in Directive 74/60/EEC.
A lap belt is sufficient in the centre seat of the rear seat.
Lap belts are sufficient in the outer forward-facing rear seats if there is a passage between a seat and the nearest side wall to allow passengers access to other parts of the vehicle. A gap between a seat and the nearest side wall is considered to be a passage if the distance between that side wall, with all doors closed, and a vertical longitudinal plane passing through the centre line of the seat in question, is more than 0.50 m.
There is no requirement for a double-action inertia retractor for the centre seat of the front seat or the rear seating positions.
Before 1/10/1999: The provisions do not apply to rear-facing seats.

Before 1/4/1998: Lap belts are sufficient in front-facing rear seats.

A lap belt is adequate in the centre front-facing seating position of the front seat, if a three-point belt cannot be placed or is difficult to place.

There is no requirement for a double-action inertia retractor for the outer seats of the front seating positions.

Before 1/4/1989: Passenger car M1 shall be fitted with seat belts in the front seat seating positions. Before 1/7/1969: Not applicable.

(2) An M1 passenger car shall, in all seats in forward and rearward- facing seats, be fitted with seat belt anchorages complying with the design provisions of UN Regulation 14-09.

However, a factory seat belt anchorage may be made in accordance with American standard FMVSS 210, Canadian standard CMVSS 210, or Japanese standard JSRRV, Article 22-3.

However, seat belt anchorages specially designed for persons with disabilities need only comply with the provisions of point 10.02.001 (6).

Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need only meet the requirements on the base vehicle.

Before 1/7/2024: Seat belt anchorages may comply with the design provisions of UN Regulation 14-06.

Before 1/1/2017: Seat belt anchorages can comply with the design provisions of UN Regulation 14-04 or Directive 76/115/EEC as amended by Directive 96/38/EC. The provisions apply to forward and rear-facing seats.

Before 20/10/2007: Does not apply to folding seats.

Before 1/10/1999: Seat belt anchorages can comply with the design provisions of UN Regulation 14-03 or Directive 76/115/EEC as amended by Directive 90/629/EEC. The provisions apply only to forward-facing seats.

Before 1/4/1998: Seat belt anchorages can comply with the design provisions of UN Regulation 14 or Directive 76/115/EEC.

Before 1/4/1989: Not applicable.

(3) A side-facing seat of passenger car M1, which is approved only for limousine service, shall be fitted with at least a lap belt with a retractor. Seat belt anchorages shall comply with the design provisions of UN Regulation 14-09.

However, a factory seat belt anchorage may be made in accordance with American standard FMVSS 210.

Before 1/7/2024: Seat belt anchorages shall comply with the design provisions of UN Regulation 14-06.

Before 1/1/2017: Seat belt anchorages shall comply with the design provisions of UN Regulation 14-04 or Directive 76/115/EEC as amended by Directive 96/38/EC.

Before 20/10/2007: Not applicable.

(4) Seat belt anchorages at the wheelchair space shall comply with the design provisions of standard ISO 10542-1:2012 or Regulation (EU) 2018/858, Annex II, Appendix 3.

If the seat belt anchorages comply with standard ISO 10542-1:2012, it is a prerequisite that the following conditions are met:

a) The total area of the reinforcement plates used for mounting the seat belt anchorages to the floor pan is not less than 50 cm^2.

b) Upper anchorage for shoulder belt is placed above shoulder height.

c) The area of the reinforcement plate used for mounting the upper anchorage for the shoulder belt is not less than 25 cm^2.

d) Reinforcement plates are of metal and have a minimum thickness of 3 mm and a radius of rounding of at least
5 mm.

Before 1/7/2024: Seat belt anchorages at the wheelchair space may comply with the design provisions of American standard SAE J2249 or in Annex XI, or in Annex XI, Appendix 3 to Directive 2007/46/EC.

Seat belt anchorages complying with US standard SAE J2249 shall also meet the additional conditions applicable to seat belt anchorages complying with standard ISO 10542-1:2012.

Before 1/1/2017: Seat belt anchorages in wheelchair space shall comply with the design provisions of standard ISO 10542 or American standard SAE J2249 and be clearly and durably marked with 'ISO' or 'SAE'.

Before 13/2/2004: Not applicable.

(5) A passenger car M1 with more than one row of seats shall be fitted with child restraint system anchorages in accordance with UN Regulation 145.

The requirement does not apply to ambulances, hearses, or caravans, nor vehicles used for the transport of disabled persons, or vehicles intended for use by Danish Defence, civil defence, fire departments, or police.

Before 1/7/2024: Not applicable.

(6) An M1 passenger car shall be fitted with a seat-belt reminder in seating positions behind the front row of seats, complying with the design provisions of UN Regulation 16-07.

The requirement does not apply to ambulances, hearses, or caravans, nor vehicles used for the transport of disabled persons, or vehicles intended for use by Danish Defence, civil defence, fire departments, or police.

Before 1/7/2024: Not applicable.

10.2.22 M2 passenger car

(1) An M2 passenger car with a maximum permissible laden weight not exceeding 3 500 kg shall be fitted, in all seats in forward and rearward facing seats, with the following seat belts:

a) Three-point belt with double-action inertia retractor on forward-facing seats, or alternatively three-point belt with double-action inertia retractor with higher response threshold.

Before 20/10/2007: Does not apply to folding seats.

Before 1/10/2001: Only requirement for seat belt in front seat.

In addition, in the front seat other than the driver's seat and the outer passenger seat, lap belts may be used if the passenger's head cannot come into contact with the windscreen as defined in Annex II to Directive 74/60/EEC.

Before 1/4/1998: No requirement for double-action 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 1/4/1993: Not applicable.

b) Lap belt with automatic retractor or double-action inertia retractor on rear-facing seats, or alternatively three-point belt with double-action inertia retractor.

Before 20/10/2007: Does not apply to folding seats. Before 1/10/2001: Not applicable.

(2) An M2 passenger car with a maximum permissible laden weight exceeding 3 500 kg shall be fitted, in all seats in forward and rearward facing seats, with the following seat belts:

a) Three-point belt with double-action inertia retractor on forward-facing seats.

b) Lap belt with automatic retractor or double-action inertia retractor on forward-facing seats, if

- there is a forward-facing seat or other vehicle parts immediately in front of that seat that meets the yield requirements as specified in UN Regulation 80-03; or
- the occupant's head cannot come into contact with any parts of the vehicle as defined in point 2.7 of UN Regulation 16-07.

c) Lap belt with automatic retractor or double-action inertia retractor on rear-facing seats, or alternatively three-point belt with double-action inertia retractor.

Before 1/1/2017: Lap belt with automatic retractor or double-action inertia retractor may be used on forward-facing seats, if

- there is a forward-facing seat or other vehicle parts immediately in front of that seat that meets the yield requirements as specified in Annex III to Directive 74/408/EEC as amended by Directive 96/37/EC, or
- the occupant's head cannot come into contact with any parts of the vehicle as defined in Annex I, point 1.23, to Directive 77/541/EEC as amended by Directive 96/36/EC.

Before 20/10/2007: Does not apply to folding seats.

Before 1/10/2001: No seat belt required in rear-facing seats and the driver's seat may be fitted with a lap belt or automatic retractor or double-action inertia retractor.

Before 1/4/2000: Lap belt with retractor can be used in forward-facing passenger seats. However, a three-point seat belt with retractor is required if the seat is not immediately behind the second forward-facing seating position.

Before 1/10/1999: Not applicable.

(3) An M2 passenger car shall, in all seats in forward and rearward- facing seats, be fitted with seat belt anchorages complying with the design provisions of UN Regulation 14-09.

However, a factory seat belt anchorage may be made in accordance with American standard FMVSS 210, Canadian standard CMVSS 210, or Japanese standard JSRRV, Article 22-3.

However, seat belt anchorages specially designed for persons with disabilities need only comply with the provisions of point 10.02.001 (6).

Before 1/7/2024: Seat belt anchorages may comply with the provisions of UN Regulation 14-06.

Before 1/1/2017: Seat belt anchorages can comply with the provisions of UN Regulation 14-04 or Directive 76/115/EEC as amended by Directive 96/38/EC.

Before 20/10/2007: Does not apply to folding seats.

Before 1/10/2001: On passenger car M2 with a maximum permissible laden weight not exceeding 3 500 kg, seat belt anchorages may comply with the design provisions of UN Regulation 14-03 or Directive 76/115/EEC as amended by 90/629/EEC.

Passenger car M2 with a maximum permissible laden weight not exceeding 3 500 kg need not have a belt anchorage at the rear seat.

Before 1/10/1999: Passenger car M2 with a maximum permissible laden weight exceeding 3 500 kg need not have seat belt anchorages.

Before 1/4/1998: On passenger car M2 with a maximum permissible laden weight not exceeding 3 500 kg, seat belt anchorages may comply with the design provisions of UN Regulation 14-02 or Directive 76/115/EEC as amended by Directive 82/318/EEC.

Before 1/4/1993: Not applicable.

(4) Seat belt anchorages at the wheelchair space shall comply with the design provisions of standard ISO 10542-1:2012 or UN Regulation 107-07 Annex 8.

Before 1/7/2024: Seat belt anchorages may comply with UN Regulation 107-03.

Seat belt anchorages complying with the design provisions of American standard SAE J2249 and clearly and durably marked with 'SAE' are deemed to comply with the provision if the following conditions are met:

- The total area of the reinforcement plates used for mounting the seat belt anchorages to the floor pan is not less than 50 cm^2.
- Upper anchorage for shoulder belt is placed above shoulder height.
- The area of the reinforcement plate used for mounting the upper anchorage for the shoulder belt is not less than 25 cm^2.
- Reinforcement plates are of metal and have a minimum thickness of 3 mm and a radius of rounding of at least 5 mm.

Before 1/1/2017: Seat belt anchorages at the wheelchair space may comply with the design provisions of Annex VII to Directive 2001/85/EC or UN Regulation 107-02, Annex 8.

Seat belt anchorages complying with the design provisions of standard ISO 10542 or American standard SAE J2249 and are clearly and durably marked with 'ISO' or 'SAE' are deemed to comply with the provision if the conditions

for reinforcement plates and upper anchorages are met, as defined in the above transitional provision.

Before 13/2/2004: Not applicable.

(5) The provisions of points (1), (2), (3), and (4) do not apply to an M2 passenger car that is approved only for regular services if one of the following conditions is met:

a) The car is a city bus.

b) The car has seating and space for standing for a maximum of 22 passengers.

c) The permissible number of standing spaces is 20 % or more of the maximum permissible number of passengers. If there are two levels, the number of standing spaces is calculated in relation to the number of approved passenger seats on the lower level.

(6) This seat belt pictogram shall be clearly displayed at each seating position fitted with a seat belt and shall be designed as shown in the figure.

10.2.23 M3 passenger car

(1) Passenger car M3 shall comply with the provisions of point 10.02.022 for passenger car M2 with a maximum permissible laden weight exceeding 3 500 kg.

Before 1/10/1999: Only the provision in point 10.02.022 (6) applies.

(2) The side-facing seat in a passenger car M3 subject to point 10.01.023 (3) shall be fitted with at least lap belts with retractors approved in accordance with UN Regulation 16-07. Seat belt anchorages shall comply with the requirements of UN Regulation 14-09.

Before 1/7/2024: A side-facing seat may meet the requirements of UN Regulation 16-06.

Seat belt anchorages may meet the requirements of UN Regulation 14-06.

Before 1/1/2017: Lap belts fitted with a retractor may be approved in accordance with Directive 77/541/EEC or UN Regulation 16.

Seat belt anchorages may meet the requirements of Directive 76/115/EEC or UN Regulation 14.

Before 20/10/2007: Not applicable.

10.2.24 N1 light goods vehicle

(1) Light goods vehicle N1 shall comply with provisions for forward-facing seats in passenger car M1.

However, a crew car need not be fitted with anchorages for a child restraint system.

However, lap belts are sufficient in the following places:

a) The middle front seat(s), if the passenger's head cannot come into contact with the windscreen as defined in UN Regulation 21-01, Annex I.

b) Middle rear seat(s).

A double-action inertia retractor may be an inertia retractor with higher response threshold.

Before 1/1/2017: 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 Annex II to Directive 74/60/EEC or UN Regulation 21, Annex I.

Before 1/4/1998: Light goods vehicle Van N1, where the distance from the centre of the steering wheel to the opposite side of the driver's compartment is greater than 1.125 m, and where the oblique view to the rear is not unobstructed, the driver's seat shall be fitted with a seat belt with inertia retractor or a double-action inertia retractor.

10.2.25 N2 Lorry

(1) A lorry N2 shall be fitted with the following seat belts on forward-facing seats:

a) Three-point belt in front seating positions or alternatively lap belts where lap belts are sufficient if the passenger's head cannot come into contact with the windscreen as defined in UN Regulation 21-01, Annex I.

b) Three-point belt or lap belt in other forward-facing and rear-facing seating positions.

Before 1/1/2017: Lorry N2 shall be fitted, on the driver's seat, with either a three-point belt or a lap belt. The front passenger seat shall be fitted with three-point belts, or alternatively lap belts, if the passenger's heads cannot come into contact with the windscreen as defined in Annex I to Directive 74/60/EEC.

Before 20/10/2007: Does not apply to folding seats. Before 1/4/1998: Not applicable.

(2) An N2 lorry shall, in all forward and rearward- facing seats, be fitted with seat belt anchorages complying with the design provisions of UN Regulation 14-09. A factory seat belt anchorage may be made in accordance with American standard FMVSS 210, Canadian standard CMVSS 210, or Japanese standard JSRRV, Article 22-3.

Before 1/7/2024: Seat belt anchorages, in all forward and rearward- facing seats, may comply with the design provisions of UN Regulation 14-06.

Before 1/1/2017: Belt anchorages for front seats may comply with the design provisions of UN Regulation 14-03 or Directive 76/115/EEC as amended by Directive 90/629/EEC or Directive 96/38/EC.

Before 20/10/2007: Does not apply to folding seats. Before 1/4/1998: Not applicable.

10.2.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

10.02.031 Two-wheeled motorcycle

(1) Two-wheeled motorcycles fitted with seat belts shall be approved in accordance with Regulation (EU) 168/2013.

Before 1/7/2024: Two-wheeled motorcycles approved with seat belts before that date may continue to be inspected and approved.

10.02.033 Tricycle

(1) A tricycle with bodywork shall be fitted with seat belts. Before 1/4/2002: Not applicable.

(2) The seat belt anchorages shall meet the requirements of Annex XII to Regulation (EU) 3/2014.
Before 1/7/2024: Seat belt anchorages may meet the requirements of Chapter 11 of Directive 97/24/EC. Before 1/4/2002: Not applicable.

10.02.040 Moped

(1) Three-wheeled mopeds with bodywork, the kerb weight of which exceeds 270 kg, shall comply with the provisions for tricycles.
Before 1/4/2002: Not applicable.

10.02.050 Tractor

(1) A tractor equipped with a roll-over protective structure (ROPS) shall be fitted with seat belts and associated anchorages in accordance with Regulation (EU) 1322/2014, Annexes XVIII and XIX.
Before 1/7/2024: Not applicable.

10.02.340 Emergency vehicle

(1) Seats in an ambulance which are not intended for use while driving shall be clearly marked by pictogram or sign.
Before 1/11/2019: Not applicable.
(2) An emergency vehicle need not be fitted with a seat-belt reminder in seating positions behind the front row of seats.

10.02.364 Motorhome

(1) The provisions of points 10.02.021, 10.02.022, and 10.02.023 concerning seat belts and seat belt anchorages apply only to seating positions intended for normal use while driving.
In the back seat, a lap belt is sufficient and the retractor can be omitted.
Seat belt anchorages for rear-facing seats need only comply with the provision of point 10.02.001 (6).
Before 1/4/1993: In a caravan, seat belt anchorages at seating positions other than the front seat need not comply with point 10.02.021 (2) but shall be firmly attached to the fixed parts of the vehicle.

(2) Seats in a motorhome which are not intended for use while driving shall be clearly marked by pictogram or sign.
Before 1/11/2019: Not applicable.
(3) A motorhome need not be fitted with a seat-belt reminder in seating positions behind the front row of seats.

10.3 Visibility, panes, etc.

10.3.1 General provisions

(1) A power-driven vehicle shall be so arranged that from the driver's position there is the necessary, direct visibility forward and to the sides.
The windscreen shall be of such height that the driver can look obliquely upwards. Eye height can normally be set at 0.70 m above the driver's seat in an unloaded state.
(2) A power-driven vehicle shall be fitted with devices to clean the windscreen, where relevant.

10.3.2 Field of vision

(1) There shall be nothing placed in the driver's direct field of vision forward and to the sides which unnecessarily reduces visibility.

A GPS is not considered to unnecessarily reduce visibility if it is located at the bottom of the middle or in the lower left corner of the windscreen, as far down toward the dashboard as possible. There is no requirement for the GPS and dashboard to be in physical contact.

However, fixed parking discs shall be located at the bottom right of the windscreen and an automatic payment device at the bottom middle of the windscreen.

For lorries N2 and N3, all retrofitted objects (regardless of light transmission) that take even a minor part of the direct visibility through the right side window(s) or the part of the windscreen located to the right of the car's centre axis and below the A-point are considered to unnecessarily reduce visibility.

For tractors, the direct visibility forward and to the sides from the driving position shall comply with standards ISO 5721-1:2013 and ISO 5721-2:2014.

Before 1/7/2024: The standards on direct visibility forward and to the sides from the driving position do not apply to tractors.

10.3.3 Panes

(1) Panes and windscreens shall be made of clear safety glass. The following shall be considered as safety glass:
   a) Laminated glass.
   b) Tempered glass.
   c) Shatter-proof plastic material.

   Before 1/4/1975: The requirement for safety glass applies only to windscreens and other window panes in vehicles for commercial carriage of passengers.

(2) The windscreen of a power-driven vehicle shall be such that objects seen through the pane do not appear distorted or unclear.

(3) The windscreen and front side window (180° field of vision) of a power-driven vehicle shall have at least 70 % light transmission within the normal field of vision.

10.3.4 Sun visors, sunscreens, etc.

(1) Exterior, coloured sun visors shall meet the following conditions:
   a) Shall be placed above the windscreen.
   b) Shall be firmly attached.
   c) May not impair the driver's visibility.
   d) May not have sharp edges, etc., which present undue danger to other road users.

(2) Interior, coloured sun visors shall meet the following conditions:
   a) Shall be placed above the windscreen.
   b) Shall be adjustable without the use of tools.
   c) Shall be capable of being folded away so that visibility through the windscreen is not reduced.
   d) May not be able to cover the mandatory interior rear-view mirror.
   e) Shall be so designed that it does not pose undue danger to the driver or passengers.

(3) The windscreen and front side windows of a power-driven vehicle may not be fitted with non-factory solar filters in the form of sprayed or adhesive film that covers the pane in whole or in part.

   However, this provision does not apply to the windscreen at the interior rear-view mirror in an area from the upper edge of the mirror and not more than 0.10 m down and in a width not exceeding the width of the interior rear-view mirror by more than 20 mm on either side.

10.3.5 Windscreen wipers and washers

(1) A windscreen wiper shall meet the following conditions:
   a) Shall be powered by the engine or other mechanical power source.

b) Shall clean the windscreen in an area that gives the driver sufficient visibility.

(2) The windscreen washer shall wet the windscreen in such a way that the wiper can clean it.

10.3.6 Rear-view mirrors, etc. (indirect visibility)

(1) Rear-view mirrors shall meet the following conditions:

a) Shall provide a clear reflection without distortion.
The colour rendering shall be such that light signals can be identified in the mirror.

b) Shall be positioned in such a way that the driver has the mandatory rear visibility.

c) Shall be made in such a way that sharp edges, etc. do not cause undue danger in the event of collision or contact.

d) Shall be adjustable without using tools.
Before 1/2/1968: Not applicable.

e) Shall be flat or convex with a radius of curvature of at least 0.80 m.
Before 1/2/1968: Not applicable.

(2) The interior rear-view mirror shall meet the following conditions:

a) Shall be positioned in such a way that the driver's forward and side visibility is not significantly reduced.

b) Shall be adjustable without the use of tools. Before 1/2/1968: Not applicable.

(3) The exterior rear-view mirror shall meet the following conditions:

a) Shall be visible through the wiper-cleaned part of the windscreen or through the side window. Before 1/2/1968: Not applicable.

b) Shall be capable of being fastened in such a way that the position of the mirror does not change while driving.

c) If the mirror is to be viewed through the windscreen, it shall be so arranged that it gives way, under a relatively light impact.
However, this does not apply to e-approved or E-approved rear-view mirrors that meet the following conditions:
- The mirror is marked 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 at least 2.00 m.
- The mirror arm is not marked '2 m'. Before 1/2/1968: Not applicable.

d) May not project significantly beyond the bodywork more than necessary such that the driver has the mandatory rear visibility.
The provision is deemed to be fulfilled if the projection does not exceed 0.30 m. Before 1/4/1988: Not applicable.

(4) In the case of exterior rear-view mirrors fitted to passenger car M1 and light goods vehicle N1 to ensure sufficient visibility when driving with a caravan, the mirror shall be so arranged that it gives way under a relatively light impact if the distance between the outermost point of the mirror and the outermost point of the car is more than 0.20 m and the distance between the lower edge of the mirror and the road surface is less than 2.00 m.
An exterior rear-view mirror fixed in the seam between the hood and the front fender, of which the mount is rigid, may be approved if, when fitted, the mirror mount does not project more than 45 mm above the body surface as measured perpendicular to it, unless the rear-view mirror is e-approved or E approved, as specified in point (3) (c) above.
Before 1/8/1976: Does not apply unless after that date the vehicle is approved in a new vehicle combination.

(5) A rear-view mirror is designated 'category I rear-view mirror' if the reflecting surface is at least

70 cm^2 for a flat mirror, and 50 cm^2 for a convex mirror.

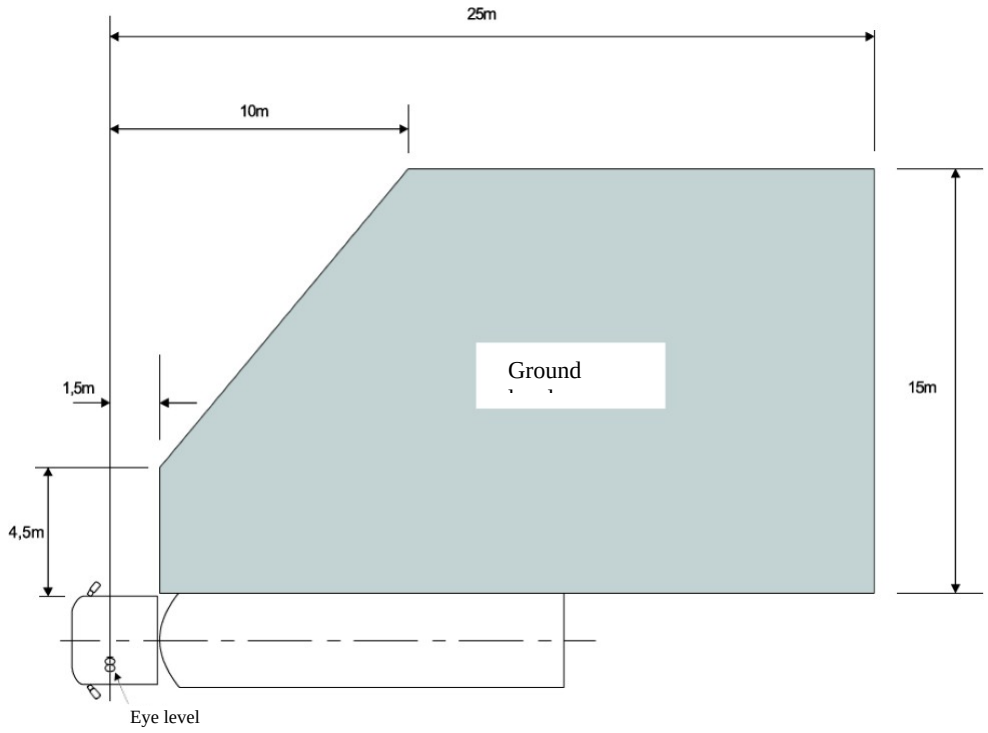
Before 1/2/1968: The minimum surface requirement does not apply.

(6) A rear-view mirror is designated ‘category II rear-view mirror’ if the reflecting surface is at least 300 cm^2 for a flat mirror, and 200 cm^2 for a convex mirror.

Before 1/2/1968: The minimum surface requirement does not apply.

(7) Wide-angle mirrors shall meet the following conditions:

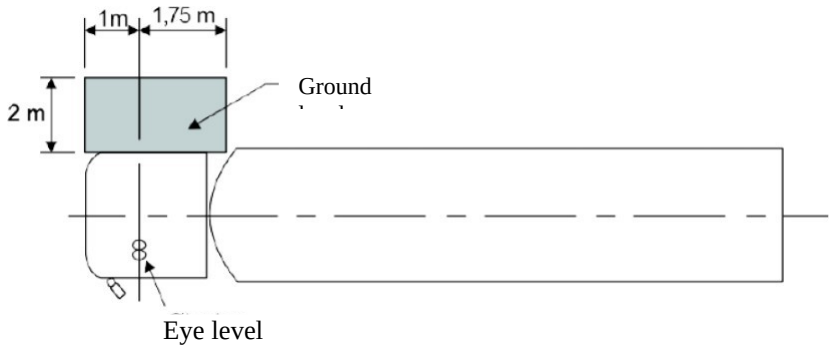
a) Shall provide at least a field of vision as shown in the figure below.



b) Shall be convex with a radius of curvature of at least 0.30 m.

(8) Near-zone mirrors shall meet the following conditions:

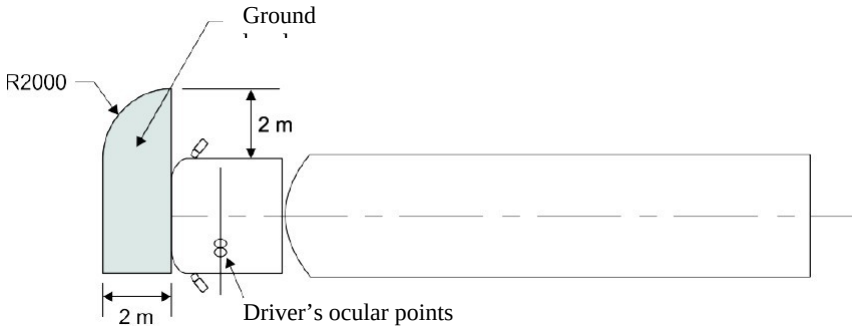
a) Shall provide at least a field of vision as shown in the figure below.



b) Shall be convex with a radius of curvature of at least 0.30 m.

c) Shall be located at least 2.00 m above the ground, measured to the lower edge of the mirror at maximum permissible laden weight.

(9) Front mirrors shall meet the following conditions:
a) Shall provide at least a field of vision as shown in the figure below.



b) Shall be convex with a radius of curvature of at least 200 mm.
c) Need not comply with point 10.03.006 (3) (a).
d) May be replaced by a camera/monitor showing the field of vision in point (a) and complying with the requirements of UN Regulation 46-03.
If camera and monitor are used, the monitor shall display the field of vision in point (a) permanently when the vehicle ignition is switched on. However, when the vehicle is travelling faster than 10 km/h or reversing, the monitor may be used to display other information, if so approved.
Before 1/1/2017: The camera/monitor may meet the requirements of Directive 2003/97/EC.

(10) Mirrors of categories I, II, III, IV, V, and VI may each be replaced or supplemented by other equipment to ensure indirect visibility, 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 needing to be adjusted.
c) Does not reduce direct visibility through windscreen and front side windows.

10.3.20 Car

(1) The windscreen shall be of laminated glass that meets one of the following conditions:
a) Is approved and marked in classes II, III, or IV in accordance with UN Regulation 43.
b) Is made in accordance with American standard FMVSS 205 (ANSI Z26. 1) and marked with 'DOT' and 'AS 1' or 'AS 14'.
Before 1/1/2017: Windscreens may be approved and marked in accordance with Directive 92/22/EEC. Before 1/4/1975: The windscreen shall be of safety glass.

(2) Other panes shall be of safety glass.
Before 1/4/1975: Applies only to vehicles for commercial carriage of passengers.

(3) A car with a windscreen shall be equipped with the following:
a) Windscreen wiper(s) in front of the driver's position and space for front-seat passengers.
b) Windscreen washer.
Before 1/2/1968: Applies only to passenger car M2 and M3 for commercial carriage of passengers.
c) Defrosting and demisting device.
Before 1/4/1987: Applies only to passenger cars M2 and M3.
Before 1/4/1986: Applies only to passenger car M2 and M3 for commercial use

10.3.21 M1 passenger car

(1) Passenger car M1 shall be fitted with the following:
a) An interior rear-view mirror of category I, unless, due to the structure of the vehicle, the mirror does not provide rear visibility.
b) A category I exterior rear-view mirror on each side.
Passenger car M1 as special purpose vehicles (see Regulation (EU) 2018/858) which are constructed in several stages and where, upon completion, the vehicle is a type other than the base vehicle, need

only meet the requirements on the base vehicle.

Before 1/7/2024: An M1 passenger car need not be fitted with a rear-view mirror on the right-hand side, unless the exterior rear-view mirror on the left and the interior rear-view mirror do not provide sufficient visibility to the rear, or the light transmittance in the rear window or in the rear side windows is less than 70 % or the car is right-hand drive.

(2) The rear window shall be fitted with a defrosting and demisting device. Before 1/4/1987: Not applicable.

(3) There shall be nothing placed in the driver's rear oblique field of vision which unnecessarily reduces visibility. The installation of advertisements or opaque films in the above field of vision is considered to unnecessarily reduce the visibility. The mounting of head restraint, sun curtain, tint, or spoiler is not considered to unnecessarily reduce the visibility.

a factory-mounted spare wheel that takes a little of the visibility is not considered an unnecessary object.

10.3.22 M2 passenger car

(1) An M2 passenger car shall be fitted with a category II exterior rear-view mirror on each side.

Before 1/2/1968: The requirement on 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 commercial carriage of passengers and designed for the carriage of more than 19 persons.

(2) The provision of point 10.03.006 (3) (a) does not apply to the exterior mirror on the right-hand side.

(3) The front side windows shall be fitted with a device to prevent misting. The provision is not deemed to be fulfilled if the side windows are simply openable.

Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

(4) On a car designed for the carriage of more than 19 persons, the mandatory rear-view mirror on the right side shall be so arranged that misting or precipitation on the mirror surface is prevented or removed automatically. This provision is deemed to be fulfilled by heating the mirror surface with power of at least 5 W per 100 cm^2 of mirror surface.

Before 1/4/1986: Applies only to passenger car M2 for commercial carriage of passengers.

10.3.23 M3 passenger car

(1) A passenger car M3 shall comply with the provisions for passenger car M2.

(2) In addition, in the case of articulated buses, the exterior rear-view mirrors shall provide such a wide field of vision that when performing the smallest turning circle, the driver can see the entire length of the side of the rearmost part of the articulated vehicle nearest to the centre of rotation.

(3) On articulated buses with lengths that exceed 18.75 m, the exterior rear-view mirrors pursuant to point (2) shall be supplemented with exterior cameras symmetrically arranged on both sides of the vehicle's rigid sections at least 2.00 m above the road surface, measured on the unloaded vehicle in normal driving position, with associated monitors so that the driver has full visibility of the rearmost part of the vehicle from the driver's seat. Exterior cameras can be omitted on the vehicle's two front sections.

Full field of vision means that for the sections where a camera is fitted there is visibility to the ground all the way along the side and 2.0 m out from the side of the vehicle and a further 6.0 m behind the rearmost point of the vehicle.

(4) Camera and monitoring equipment as per point (3) shall meet the requirements of UN Regulation 46-06.

10.3.24 N1 light goods vehicle

(1) An N1 light goods vehicle shall be fitted with a category I exterior rear-view mirror on each side.

10.3.25 N2 Lorry

(1) Lorry N2 shall be fitted with the following mirrors:

a) A category II exterior rear-view mirror on each side.

b) Wide-angle mirror, see point 10.03.006 (7).

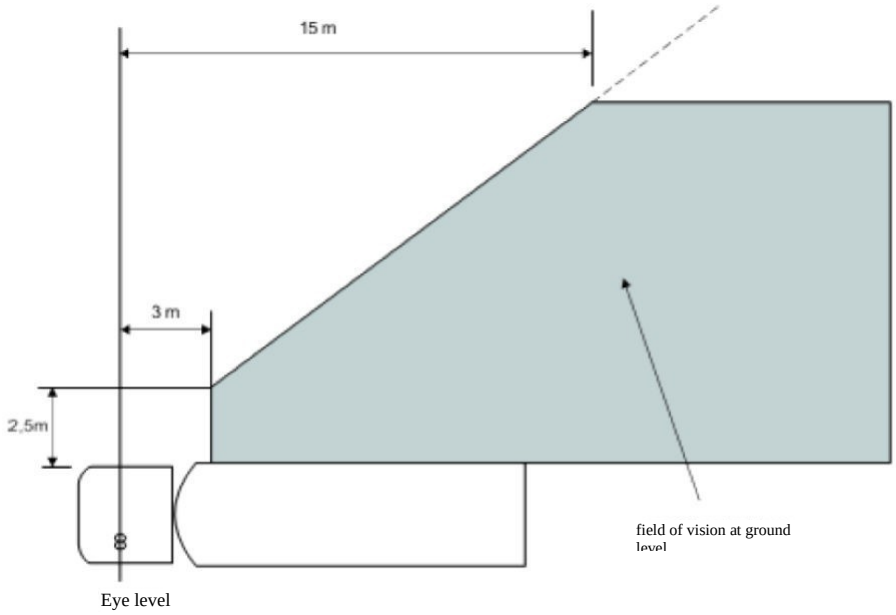
c) Near-zone mirror, see point 10.03.006 (8). Near-zone mirror is only required when it can be positioned at least 2.00 m above the ground. A right-hand drive lorry need not be fitted with a near-zone mirror.

d) Front mirror (or camera) (see point 10.03.006 (9)), if the lorry has a maximum permissible laden weight exceeding 7 500 kg and is of the cab-over-engine design.

Before 26/1/2007: Lorry N2 need not be fitted with a front mirror.

Lorry N2 may be fitted with an old wide-angle mirror and/or old near-zone mirror, provided that the lorry is also equipped with a blind spot mirror (or camera).

Near-zone mirror is only required when it can be positioned at least 2.00 m above the ground. A right-hand drive lorry need not be fitted with a near-zone mirror.



10.3.26 N3 Lorry

(1) A lorry N3 shall comply with the provisions for lorry N2.

10.03.031 Two-wheeled motorcycle

(1) Windscreen shall be firmly attached to handlebar or frame.

(2) A two-wheeled motorcycle with windscreen of such height that the driver cannot see the ground from 10 m in front of the driver's seat and forwards shall be provided with the following:

a) Windscreen wiper.

b) Windscreen washer.

Before 1/2/1968: Not applicable.

(3) Rear-view mirrors shall meet the following conditions:

a) Shall be convex.

b) Shall have a reflecting surface of at least 69 cm^2.

Before 1/9/1995: Not applicable.

(4) A two-wheeled motorcycle shall be fitted with a rear-view mirror on each side.
However, motorcycles with a maximum speed not exceeding 100 km/h need not be fitted with a rear-view mirror on the right side.
Before 1/9/1995: Not applicable.

10.03.033 Tricycle

(1) Windscreen, other windows, as well as windscreen wiper and windscreen washer are subject to the rules for cars in point 10.03.020.

(2) Tricycles shall be equipped with the following mirrors:
a) Exterior rear-view mirror of category I on the left side.
b) Category I exterior rear-view mirror on the right side or category I interior rear-view mirror. Before 1/5/1977: Does not apply to tricycles without cab.

10.03.040 Moped

(1) Mopeds shall comply with the provisions for motorcycles.
Before 1/11/2019: Light mopeds need only comply with the general provisions of section 10.03.

10.03.050 Tractor

(1) The front corner poles of the rollover protective structure shall meet the following width condition:

$$b \leq \frac{a}{10} + 65$$

'a' is the distance in millimetres measured along the horizontal line of sight from the reference point (see below) to the pole.
'b' is the width of the post in millimetres measured in a horizontal plane perpendicular to the above-mentioned line of sight. The width includes door frames, window stripping, and other opaque material.
The reference point is 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) Windscreens shall be laminated or tempered glass. Before 1/4/1975: The windscreen shall be of safety glass.

(3) A tractor with windscreen shall be fitted with a windscreen wiper, which need not be powered by an engine or other mechanical power source.

(4) Tractors shall be equipped with the following:
a) A category II exterior rear-view mirror on the left side.
b) A category II exterior rear-view mirror on the right side.
Tractors equipped with straddle seat and handlebars shall meet the requirements for two-wheeled motorcycles.
Before 1/7/2024: Tractors shall be fitted with a category I exterior rear-view mirror on the left side and a category I exterior rear-view mirror on the right side when mounted tools or a coupled towed vehicle obstructs the driver's direct view to the rear.

10.03.060 Motorised work machinery

(1) Motorised work machinery shall be so arranged that the driver can see the ground from 10 m in front of the driver's position and forwards.

(2) Windscreens shall be laminated or tempered glass. Before 1/5/1977: Not applicable.

(3) Motorised work machinery with a windscreen shall be fitted with a windscreen wiper, which need not be powered by an engine or other mechanical power source.
Before 1/5/1977: Not applicable.

(4) Motorised work machinery shall be equipped with the following:
   a) A category I exterior rear-view mirror on the left side.
   b) An exterior rear-view mirror of category I on the right side when the structure of the motorised work machinery, mounted tools, or a coupled towed vehicle obstructs the driver's direct view to the rear.
(5) Motorised work machinery that is pedestrian-operated need not be fitted with rear-view mirrors.

10.03.099 Power-driven lowboy
(1) A power-driven lowboy shall comply with the provisions for lorry N2.

10.03.100 Towed vehicle
(1) Panes on a towed vehicle that is subject to registration shall be of safety glass. Before 1/4/1975: Not applicable.
(2) Panes that do not contribute to the driver's visibility to the rear from the towing vehicle need not be clear (transparent) glass or plastic material.

10.03.310 Vehicles for which coupling is not subject to a technical inspection
(1) A car for which coupling is not subject to a technical inspection shall be so arranged that it can be fitted with an exterior rear-view mirror on each side.
   The mirrors shall be capable of being adjusted in such a way that when coupled with a towed vehicle of maximum permissible width, sufficient visibility to the rear is obtained.

10.03.320 School vehicle
(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

10.03.340 Emergency vehicle
(1) Ambulances need not comply with the provisions of point 10.03.021 (2) and the panes concerned need not be clear (transparent).

10.03.364 Motorhome
(1) Motorhomes need not comply with the provision of point 10.03.021 (2) (b).
(2) Motorhomes shall be fitted with exterior rear-view mirrors corresponding to the base vehicle, i.e. the type of vehicle on which the car (motorhome) is based.

10.4 Instruments

10.4.1 General provisions
(1) Mandatory instruments, which shall be readable while driving, shall be so designed and placed arranged that they can be read from the driver's seat without difficulty.
(2) The mandatory instruments shall be provided with lighting when the mandatory lamps of the vehicle are on. However, this does not apply when mandatory automatic daytime running lights are in operation. Illumination or reflections from this shall be of nuisance to the driver.

10.4.2 Speedometer
(1) Speedometers shall show the speed in km/h or m.p.h. The accuracy shall be as specified in UN Regulation 39.
   Before 1/7/2024: No specific requirements on accuracy.

(2) Tachograph complying with the provisions of points 10.04.001 (1) and (2) and 10.04.002 (1) shall be regarded as speedometers.

10.4.3 Odometer

(1) The odometer shall show the total distance travelled by the vehicle in km or miles.

10.04.020 Car

(1) Cars shall be equipped with a speedometer.
Before 1/5/1977: Applies only to cars for practice driving or rental without a driver.
(2) Cars shall be equipped with an odometer.
Before 1/7/2024: Not applicable.

10.04.030 Motorcycle

(1) Motorcycles shall be equipped with a speedometer.
Before 1/4/1990: Applies only to motorcycles for practice driving or rental without a driver.
(2) Motorcycles shall be equipped with an odometer.
Before 1/7/2024: Not applicable.

10.04.040 Moped

(1) Mopeds shall be equipped with a speedometer.
Before 1/7/2002: A light moped need not be equipped with a speedometer.
(2) A moped with a maximum design speed exceeding 25 km/h shall be equipped with an odometer.
Before 1/7/2024: Not applicable.

10.04.050 Tractor

(1) A tractor with a maximum design speed exceeding 30 km/h shall be equipped with a speedometer.
Before 1/7/2024: Not applicable.

10.04.320 School vehicle

(1) A school vehicle shall comply with the provisions of Annex 5 to the Order on driving licences.

10.04.330 Rental vehicle

(1) The rental vehicle shall be equipped with a speedometer indicating the speed in km/h.

10.5 Anti-theft device

10.5.1 General provisions

(1) The installation of non-original anti-theft devices shall not result in weakening of the parts in which it is placed or to which it is engaged.

10.05.021 M1 passenger car

(1) Passenger car M1 shall be fitted with anti-theft devices complying with the design provisions of UN Regulation 116 or UN Regulation 161.

A car that is EU-type-approved as quadricycle L6e or L7e and equipped with handlebars shall comply with UN Regulation 62 or – if it has no handlebars – UN Regulation 18-02.

Before 1/7/2024: Passenger car M1 can comply with the design provisions of UN Regulation 18-02 or American standard FMVSS 114.

Before 1/11/2019: M1 passenger cars may comply with the design provisions of Directive 74/61/EEC as amended by Directive 95/56/EC.

Before 1/4/2002: Passenger car M1 may comply with the design provisions of Directive 74/61/EEC or UN Regulation 18.

Before 1/5/1977: A passenger car M1, which was first registered in Denmark as a used car before this date, shall have anti-theft devices to the same extent as when new from the factory.

Before 1/10/1972: A passenger car M1 shall have anti-theft devices to the same extent as when new from the factory.

10.05.024 N1 light goods vehicle

(1) Light goods vehicle N1 shall comply with the provisions for passenger car M1.

Before 1/7/2024: A light goods vehicle N1, if the maximum permissible laden weight does not exceed 3 500 kg, shall comply with the provisions for passenger cars.

10.05.030 Motorcycle

(1) Motorcycles with handlebars shall be fitted with anti-theft devices complying with the design provisions of UN Regulation 62.

Before 1/7/2024: Not applicable.

10.05.040 Moped

(1) Mopeds with handlebars and a kerb weight exceeding 35 kg shall be fitted with anti-theft devices complying with the design provisions of UN Regulation 62.

Before 1/7/2024: Not applicable.

10.07 Airbag

10.07.001 General provisions

(1) Airbags shall be installed according to the vehicle manufacturer’s instructions.

(2) In the case of seats, other than the driver’s seat, where an airbag is installed in front of the seat, there shall be a warning against the use of a rearward-facing child seat.

The warning shall consist of a symbol and possibly additional text, and shall be firmly attached and affixed in such a way that it is easily visible to a person who is going to place a rearward-facing child seat on that seat. There shall be an additional reference which is visible at all times if the warning is not visible when the door is closed.

However, a warning is not required if the vehicle is fitted with a device which automatically detects that a rearward-facing child seat is placed on the seat and which also ensures that the airbag cannot be deployed while the rear-facing child seat is present.

Before 1/1/1997: Not applicable.

11. Measurement methods

11.1 Sound

11.1.1 Sound measurement method I (vehicle in motion).

(1) Sound measurement method I includes the measurement methods laid down in the following:

a) For cars, in UN Regulation 51-02, Annex 3. Alternatively, the measurement method set out in UN Regulation 51-03, Annex 3, and the sound thresholds set out in Annex III to Regulation (EU) 540/2014 may be used.

b) For motorcycles and mopeds, in Regulation (EU) 168/2013 and its implementing measures.

Before 1/1/2017: The measurement method for motorcycles laid down in Directive 97/24/EEC, as amended, may be used.

Before 1/4/2004: The measurement method for motorcycles and large mopeds laid down in Directive 78/1015/EEC, as amended, may be used. The measurement method for light mopeds in UN Regulation 63 (annex 3, points 3.1 and 4 for mopeds with a maximum design speed not exceeding 30 km/h) may be used.

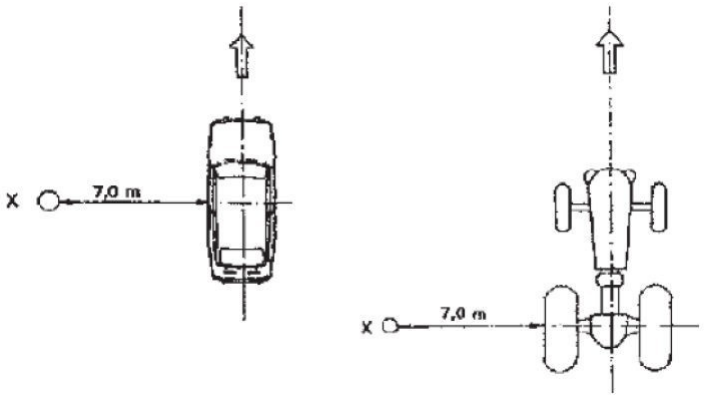
Before 1/10/1990: The measurement method for motorcycles laid down in Directive 78/1015/EEC may be used.

c) For tractors, in Regulation (EU) 168/2013 and its implementing measures.

Before 1/11/2019: The measurement method set out in point 1.4.1 of Annex VI to Directive 2009/63/EC may be used.

11.1.2 Sound measurement method II (7 m stationary).

(1) The sound pressure is 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 is measured from the centre of the vehicle, though, in the case of a tractor, next to the rear axle.

Measurements taken at an RPM of 3/4 of the RPM at maximum power output. For diesel engines, it can be measured at maximum rated RPM.

Before 1/10/1982: For diesel engines, it is measured at maximum rated RPM.

Before 1/5/1977: The sound pressure is measured at a distance of 7.0 m, facing the exhaust outlet. For non-EEC-type-approved vehicles with engine and exhaust system located in the same part of the vehicle, the sound pressure is measured in each of the four main directions at a distance of 7.0 m from the front, back, right, and left sides.

In the case of a vehicle with a vertical exhaust system, the sound pressure is measured, irrespective of the position of the engine relative to the exhaust system, at a distance of 7.0 m from its vertical axis in the direction toward the rear or obliquely to the rear where the vehicle does not constitute an obstacle.

(2) At least two measurements are made on each side of the vehicle. The difference between two measurements made on the same side of the vehicle may not exceed 2 dB (A). The vehicle's sound

level is the highest average of the measurement results from the same side of the vehicle.

Before 1/5/1977: Two measurements shall be made, but four shall be made if measurements are made in the main directions. The sound level of the vehicle is the average of the measurement results.

11.1.3 Noise measurement method III (specific noise measurement method for mopeds)

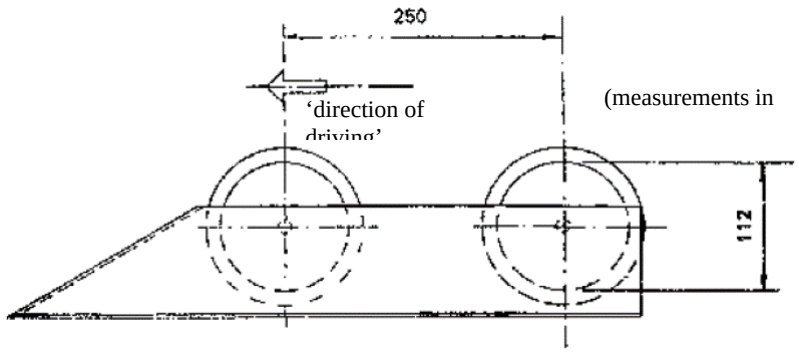
(1) For mopeds, noise measurement method I is used (see point 11.01.001).

Before 1/4/2004: The sound pressure is 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 is measured with the moped's drive wheel rotating on the unbraked rollers of the dynamometer with the highest possible speed in the highest gear.

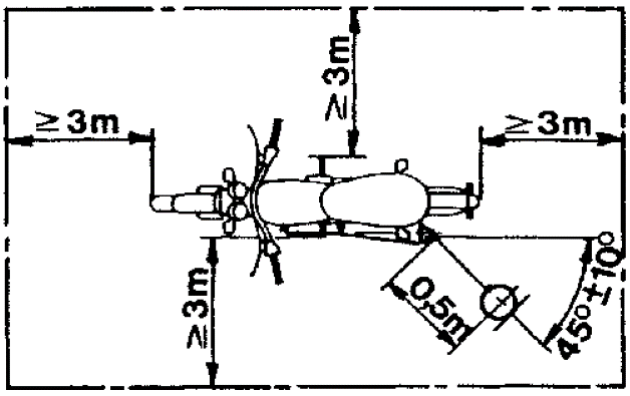
An equal number, and at least two measurements, are made on each side of the moped and the average of all sound pressure measured is registered as the sound level of the vehicle.

The dynamometer shall be arranged as shown in the drawing below.



11.1.4 Sound measurement method IV (close-field stationary)

(1) The sound pressure is measured at the height of the exhaust outlet, but not less than 0.2 m above the ground.



Microphone position and minimum measurement spots.

The microphone is directed at the exhaust outlet and placed at a distance of 0.5 m. The axis of the microphone shall be parallel to the ground and form an angle outward of 45° ± 10° to the direction of the exhaust outlet, as shown in the figure above. If the vehicle has several exhaust outlets and the distance between their centres does not exceed 0.30 m, the sound pressure is measured from the

exhaust outlet nearest to the contour of the vehicle (excluding handlebars in the case of motorcycles and mopeds) or highest above the ground. If the distance between them exceeds 0.30 m, each is measured separately and only the greater value is used.

In the case of a vehicle with a vertical exhaust system, the microphone is positioned vertically along and at the height of the exhaust outlet at a distance of 0.5 m from the side of the vehicle nearest to the exhaust outlet.

(2) The measurement is made over a short period of time at the specified RPM followed by the entire deceleration period to idle, after the gas pedal (throttle) is quickly released to the idling position.

(3) At least three measurements are made at each measuring point. The registered measurement result for each individual spot is the maximum reading rounded to the nearest whole decibel.

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 any of the others.

11.1.5 Test site

(1) The test site shall be an even and horizontal surface of asphalt or concrete. The surface shall be such that the noise emitted by the tyres does not affect the measurement result.

(2) Ambient sounds, including wind, shall be at least 10 dB(A) lower than the measured sound pressure.

11.1.6 Measuring instrument:

(1) The sound level meter shall comply with the provisions of standard DS/EN 61672-1:2003, Class 2.

Before 1/7/2024: The sound level meter may comply with the provisions of Communication No 179 of the International Electrotechnical Commission.

11.1.7 Measurement conditions

(1) Sound measurements shall be carried out

a) with the engine at in-service temperature,

b) in clear and quiet weather, and

c) with the vehicle at service weight.

11.2 Air pollution

11.01.001 CO at idle

(1) The measurement is taken with the engine at in-service temperature and idling speed. The measurement method is specified in Annex I to Directive 2014/45/EU.

On a vehicle with more than one exhaust system outlet, the measurement is carried out in one of the following ways:

a) The outlet pipes are joined into one.

b) The measurement is carried out on each pipe.

The registered measurement result is the arithmetic mean of the measurements of all pipes.

11.02.003 CO and lambda at increased idle

(1) The measurements are taken with the engine at in-service temperature and over 2 000 RPM.

On a vehicle with more than one exhaust pipe, the guidelines in point 11.02.001 apply.

11.02.004 Diesel exhaust opacity (free acceleration)

(1) The measurement of exhaust opacity density (light absorption coefficient) shall be carried out with maximum acceleration from idle speed to the maximum rated RPM. The measurement method is specified in Annex I to Directive 2014/45/EU.

11.3 Speed

11.3.1 Speed measurement method

(1) The maximum speed of a power-driven vehicle is calculated as the result of equal numbers of speed measurements made in both directions on a horizontal road.

(2) Other measurement methods than that specified in point (1) may be used if there is evidence of equivalence.

11.3.2 Measurement conditions

(1) Speed measurements shall be carried out

a) with the engine at in-service temperature,

b) in clear weather, and

c) with the vehicle at service weight.

11.03.040 Moped

(1) When measuring speed, the prescribed speed limit of 30 km/h for a light moped and 45 km/h for a large moped shall not be exceeded by more than 15 % and 10 % respectively.

Before 1/7/2024: For speed measurements, the specified speed limits for mopeds shall not be exceeded by more than 20 %.

11.03.050 Tractor

(1) For speed measurements, the specified speed limits may be exceeded by not more than 10 %.

(2) A minor downward adjustment of the engine RPM may be made if necessary to restrict the speed to the specified speed limit. The engine RPM may then not be lower than the RPM at which the engine delivers its maximum power.

11.03.060 Motorised work machinery

(1) Motorised work machinery shall comply with the provisions for tractors.

Annex 2

Converted vehicles

1. Definitions

1.1. Structural change

(1) Any change in steering mechanisms, brakes, engine, or load-bearing elements is considered a structural change, unless it is specified in this Annex that specific changes are not considered as structural changes.

(2) A type-approved software update released by the vehicle manufacturer and in which no physical changes are made to the vehicle is not considered a structural change. It is a prerequisite that the software update does not result in the invalidation of type-approval and that neither engine power nor top speed nor fuel/electricity consumption is increased.

(3) Structural changes to the engine also include the engine intake and exhaust systems as well as the setting of engine parameters. If adjustments are made to set values outside the values or tolerances specified by the manufacturer, the change shall be considered a structural change of the engine. However, point 2.2.1.4. specifies conditions under which changes to the intake or exhaust system are not considered as structural changes.

(4) It is also considered a structural change to the steering, brakes, or load-bearing elements if setting values are changed to values outside the values or tolerances specified by the manufacturer.

(5) Replacement or changes to gearboxes or differentials is not considered as a structural change of the engine.

1.2. Approval

(1) For the purposes of this Annex 2, 'approval' means an approval issued by a technical service authorised to carry out the tests in question.

1.3. Testing body

(1) A testing body means an approved testing body within the meaning of the Order on approval of motor vehicle testing and inspection bodies, or a technical service within the meaning of the Order on the designation of motor vehicle technical services pursuant to certain Regulations.

1.4. Rebuilt foreign vehicles, already approved

(1) For imported vehicles on which changes have been made, such changes shall be documented by Danish inspections in the same way as for already registered Danish vehicles, i.e. by presenting the original, foreign approval, as mentioned in point 1.2.

1.5. Changes to tested vehicles

(1) On a vehicle where roadworthiness has been tested in connection with the approval, no new structural changes to steering, brakes, engine, or load-bearing elements shall subsequently be made without a new report being drawn up.

However, the following wheel changes are not considered as structural changes in this respect:

a) Change in the section width of 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 inch, and with the same change at the front and rear.

c) Change of rim width of a maximum of one inch, 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 of max. 10 mm.

2. Cars

2.1. Specific vehicle types

2.1.1. Changes to certain vehicle types

(1) On the following vehicle types, all registered as cars on the basis of an EU type-approval, structural changes to the steering, brakes, engine, and supporting elements may only be made if the vehicle manufacturer allows modifications:
a) Quadricycles.
b) Three-wheeled motorcycles with an unladen weight exceeding 400 kg.
c) Tractors with a top speed of more than 40 km/h.

2.1.2. Replica cars

(1) Replica cars may be rebuilt according to the rules of this Annex 2, but still have to meet the requirements for replica cars, including in terms of appearance, power, principle of engine/gearbox, and brakes.

2.1.3. Cars subject to type-approval

(1) For cars subject to type-approval, prior to approval in the inspection of a structural change to steering equipment, brakes, engine, or load-bearing elements, the converted car shall have been issued a certificate of approval from the Danish Road Traffic Authority.

2.2. Changes to engine

(1) Engine changes shall be approved by inspection on the basis of one of the following types of documentation:
a) Documentation from the car manufacturer with specific information on the engine changes and any necessary technical changes to the car. The car manufacturer's documentation shall include information that the car, after the changes, meets the requirements of Annex 1, section 7.05 on sound and section 7.06 on air pollution for the specific car, depending on the initial registration date of the car.
Diesel cars shall also comply with the provision of point 2.2.1.2.1.
If the car manufacturer's documentation is partially inadequate, the following applies:
i) If the car manufacturer's documentation provides only a maximum permissible power, but not the actual increased power, documentation of the actual car's power shall be provided by a testing body.
ii) If no information on sound is stated in the car manufacturer's documentation, the car's sound documentation shall be provided by a testing body. However, in the case of a car registered for the first time before
1 October 1982, sound is checked by inspection. The stationary sound value may not exceed the values set out in Annex 1, section 7.05.
iii) If the car manufacturer's documentation does not indicate anything on actual air pollution, a car registered for the first time on or after 1 October 1990 shall be subject to obtaining documentation from a testing body demonstrating compliance with the rules set out in Annex 1, section 7.06. Diesel cars shall also comply with the provision of point 2.2.1.2.1.
b) Documentation by means of an approval and with specific information on the engine changes and any necessary technical changes. The approval shall include information that the car, after the changes, meets the requirements of Annex 1, section 7.05 on sound, and in Annex 1, section 7.06 on air pollution as applicable to the car. This may potentially be confirmed by supplementary

documentation from a testing body. It is sufficient if the test report indicates that neither sound nor air pollution has changed.

In the case of a diesel car, there shall be additional testing of the exhaust gas value in relation to point 2.2.1.2.1.

c) Documentation from a testing body that has carried out tests/checks in accordance with point 2.2.1.

(2) If the change consists of boring cylinders up to the nearest over-dimension, the change is not considered a structural change and is not considered to produce any power gain.

2.2.1. Checking changes to engines

(1) Upon any change to the engine, a testing body shall verify that the car still complies with the following requirements:
   a) Engine tuning may not be carried out in such a way that it is clear that the whole engine is designed for significantly greater engine power than the one for which approval is sought.
   b) The original engine, if relevant, may not be throttled.
   c) The technical suitability rules, see point 2.2.1.1.
   d) The rules on air pollution, see point 2.2.1.2.
   e) The rules on sound, see point 2.2.1.3.

2.2.1.1. Technical suitability

(1) A testing body shall verify that the car is technically suitable for the power gain in relation to the requirements of the following sections of Annex 1:
   a) Section 4 on steering.
   b) Section 5 on brakes.
   c) Section 8 on load-bearing elements.

(2) The engine power shall be measured on the engine or by dynamometer and with the best possible correction for air pressure, temperature, and rolling resistance (see UN Regulation 85) so that correct engine power and associated RPM can be indicated. A testing body shall attend or carry out the test itself. For unchanged engines, the manufacturer's information on the engine's original power shall be made use of. The dynamometer shall be calibrated and maintained according to the instructions of the dynamometer manufacturer.

(3) The information on engine power provided by the car manufacturer shall be used as a starting point for assessing the engine power increase. However, if the car manufacturer declares the engine power according to the American standard SAE J1349, 15 % shall be deducted.

(4) Replacement of an intercooler is not considered a structural change.

2.2.1.1.1. Engine power increases up to 20 %

(1) For engine power increases up to 20 %, technical suitability need not be checked. However, a testing body shall demonstrate that the power gain is no more than 20 %. This is done by measurement or verification of the installation by comparison to other unaltered engines.

2.2.1.1.2. Engine power increase 21–40 %

(1) In the case of an engine power gain of 21–40 %, a testing body shall verify, in addition to the checks referred to in point 2.2.1., that the car meets one of the following requirements:
   a) The car corresponds, potentially after a change, to an original other variant of the car model in terms of brake discs, drums, callipers, 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 come from a car with at least the same engine power and permissible axle load and the car complies with the brake check requirements of point 2.6.1.
   c) The brake discs have at least the dimensions specified in point 2.2.1.1.2.1. and the car complies with

the brake check requirements of point 2.6.1.

d) The brakes meet the requirements on brake fade in point 2.2.1.1.2.2. and the car meets the brake check requirements of point 2.6.1.

2.2.1.1.2.1. Control of brake fade by means of brake disc size control

(1) Front brake discs shall meet the following conditions:

a) Disc diameter (in mm) shall be a minimum of 270 + 0.3 x power in kW + (permissible axle load in kg – 1,000) x 0.05.

b) If the discs are ventilated (internal air ducts), the necessary disc diameter is 10 mm smaller.

(2) Rear brake discs shall meet the following conditions:

a) Disc diameter (in mm) shall be a minimum of 240 + 0.3 x power in kW + (permissible axle load in kg – 1,000) x 0.05.

b) If the discs are ventilated (internal air ducts), the necessary disc diameter is 10 mm smaller.

2.2.1.1.2.2. Control of brake fade on test track

(1) The testing body shall carry out tests of the brakes in a straight line test. The car shall be accelerated at a maximum from standstill over a distance of 800 ± 25 m, or until the car has reached its top speed, if it is achieved within 800 metres. Immediately after that, the car shall be braked at at least 6 m/s^2 until stationary, without wheel-locking and without activation of ABS. After no more than five seconds, the exercise is repeated. Braking, which shall be at least 6 m/s^2, and pedal pressure shall be noted in the 2nd braking. The same exercise shall be repeated so that a total of 8 decelerations are done and in the 8th deceleration the car shall be able to achieve the same deceleration as in the second deceleration at a pedal pressure not more than 50 % above the pedal pressure applied in the second deceleration and not more than 50 daN.

(2) The load in the car during the brake test shall be at least 150 kg. If the payload of the car exceeds 50 % of the kerb weight, the test shall be carried out with at minimum half payload.

(3) The mounted brake linings shall be of a type intended for use on the road and shall not have significantly lower friction in cold condition.

2.2.1.1.3. Engine power increase 41–100 %

(1) If a power/weight ratio of more than 20 kW/100 kg is achieved, point 2.2.1.1.4. applies.
The weight is the car's kerb weight.

(2) In the case of an engine power gain of 41–100 %, a testing body shall verify that the car meets one of the following requirements:

a) The requirements of point 2.2.1.1.2. for a car with an engine power gain of 21-40 %.

b) The requirements of point 2.2.1.1.3.1. on equivalent vehicle or point 2.2.1.1.3.2. on checking and testing of roadworthiness.

2.2.1.1.3.1. Similar car

(1) If the car corresponds, potentially after a change, to an original other variant of the car model in terms of brake discs, drums, callipers, wheel cylinders, and master cylinder and section width and suspension, and the engine power of the car does not exceed the engine power of the original other variant by more than 20 %, the check indicated in point 2.2.1.1. may be replaced by the testing body's verification that the car corresponds to the other variant on these points.

2.2.1.1.3.2. Roadworthiness checking and testing

(1) The testing body shall verify that the car has sufficiently safe handling compared to other powerful original cars.
The testing body shall carry out tests of the car's handling on dry or wet asphalt, as indicated below.

(2) The load in the car during the test shall be at least 150 kg. If the payload of the car exceeds 50 % of the kerb weight, the test shall be carried out with at minimum half payload.

(3) The testing shall include the following tests:

a) Driving on uneven, paved roads, including roads with significant lateral slopes.

b) Driving on a road with heavy rutting.

c) Maximum acceleration in each gear.

d) Gassing while turning.

e) Directional stability at up to 90 % of top speed.

f) Accelerator slippage, driving with maximum possible lateral acceleration.

g) Double evasive manoeuvre carried out in accordance with international standard ISO 3888-1 with the following corrections:

i) For a car with a width not exceeding 1.90 m, without mirrors, testing can use a fixed width of the three sections of each exercise of 2.30/2.50/2.70 m.

ii) For a width exceeding 1.90 m, the car-dependent method of the standard may be used for determining the width of the three sections.

iii) The pass-through speed shall be at least 115 km/h. For cars registered for the first time before 1 November 2014, the minimum pass-through speed shall be 110 km/h. For cars with narrower tyres than nominally 205 mm or cars first registered before 1 January 1980, the pass-through speed shall be at least 105 km/h.

Double evasive manoeuvre may alternatively be carried out according to a similar standard.

(4) In order to determine 90 % of the top speed as mentioned in point (3) (e), a mathematical projection shall be used in relation to the increased power to determine a theoretical top speed if the car is not tested completely to the top speed.

2.2.1.1.4. Engine power increase over 100 %

(1) The weight is the car's kerb weight.

(2) In the case of an engine power gain of more than 100 %, or when a power/weight ratio of more than 20 kW/100 kg is achieved, in addition to checking in accordance with points 2.2.1.2. and 2.2.1.3., a testing body shall verify if the car corresponds, potentially after a change, to an original other variant of the car model in terms of brake discs, drums, callipers, wheel cylinders, and master cylinder and section width and suspension, and the engine power of the car does not exceed the engine power of the original other variant by more than 20 %.

2.2.1.2. Air pollution

(1) The testing body shall verify that one of the following points is met:

a) The limit values for air pollution set out in Annex 1, section 7.06 are not exceeded by more than 20 %. However, the control values in point 7.06.020 may not be exceeded.

b) The use of an engine from a different model or make, provided that the engine in question meets the same or more recent air pollution standard than that applicable to the car. It is a condition that the engine intake manifold, exhaust manifold and engine control system including sensors and nozzles have been swapped unchanged, that there is no change in the engine control system, and that any catalytic converter or particulate filter is located no more than 20 cm further from the as engine measured along the pipe length.

c) The engine change relates only to the replacement with another intercooler or to the installation of an intercooler.

2.2.1.2.1. Additional control of diesel cars

(1) For a diesel car, the testing body shall verify exhaust gas values measured under full load at six constant RPM according to Regulation (EU) 715/2007 and its implementing measures or UN Regulation 24-03. The following apply to the exhaust gas values:
   a) The exhaust gas values shall not exceed the limit values by more than 20 %.
   b) If the car is EU type-approved, the exhaust gas values shall not exceed by more than 20 % the values measured at the original type-approval of the car.

2.2.1.3. Sound

(1) The testing body shall verify the following:
   a) The car complies with the limit values on sound in Annex 1, section 7.05.
   b) The exhaust system or intake system is not fitted with aftermarket clappers or similar, which can be adjusted automatically or manually, and whose purpose is to be able to increase sound beyond the measuring range. A silencer shall not be provided with an insert to reduce sound and which can be removed without the silencer being destroyed, unless the silencer corresponds to the original silencer of the car or is E-approved.
(2) If the engine power increase is not more than 20 % and a reference measurement has been made according to Sound Measurement Method IV, the car may be approved without a new sound measurement according to Sound Measurement Method I, if the reference figure from Sound Measurement Method IV is still met with the permissible tolerance of 3 dB(A).

2.2.1.4. Conditions under which a change to the intake or exhaust is not considered a structural change of the engine

2.2.1.4.1. Intake of a car registered for the first time before 1 October 1982

(1) If the change of intake consists only in the modification of one or more of the following components, the change is not considered a structural change and is not considered to produce any power gain.
   a) Replacement with other air filter.
   b) Replacement of original air filter box with other closed air filter box with air filter.
   c) Replacement with other intake manifold on car with carburettor.
   d) Replacement with other carburettor with flow capacity corresponding to the original components.
   e) Replacement with other injection systems/nozzles.

2.2.1.4.2. Exhaust of a car registered for the first time before 1 October 1982

(1) If, after modification of the exhaust, the car meets the sound thresholds set out in Annex 1, point 7.05, the change is not considered a structural change and is not considered to produce any power gain.
(2) The exhaust system attenuation shall also be effective at all loads and RPM.
(3) The exhaust system shall not be fitted with clappers or similar devices that can be adjusted automatically or manually. However, E-approved systems are allowed.

2.2.1.4.3. Intake on a car registered for the first time on or after 1 October 1982

(1) If the change of intake consists only of changing the air filter or changing the original air filter box to another closed air filter box, and sensors are not moved, the change is not considered a structural change and is not considered to produce any power gain.

2.2.1.4.4. Exhaust on car registered for the first time on 1 October 1982

(1) If, after changes to the exhaust, the car still meets the registered stationary sound value, the change is not considered a structural change and is not considered to produce any power gain.

In a car with a catalytic converter and/or particulate filter, there shall be no change in the catalytic converter or particulate filter, but only on the subsequent part of the exhaust.

(2) The exhaust system attenuation shall also be effective at all loads and RPM.

(3) The exhaust system shall not be fitted with clappers or similar devices that can be adjusted automatically or manually. However, E-approved systems are allowed.

2.3. Top speed increase

(1) Modification of the top speed limiter shall be considered as a structural change to the engine that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests/checks in accordance with point 2.3.1.

2.3.1. Testing

(1) In the case of a top speed increase by a change to a top speed limiter resulting in an increase in the top speed of more than 10 %, a testing body shall carry out a directional stability test at at least 90 % of the new top speed. The test shall demonstrate that the vehicle has sufficiently safe handling.

(2) In order to determine 90 % of the top speed, a mathematical projection shall be used in relation to the actual power to determine a theoretical top speed if the car is not tested completely to the top speed.

(3) In the case of top speed increases of up to 10 %, no tests shall be carried out, but documentation of the increase shall be brought along to inspection for approving the structural change.

2.4. Wheel changes

2.4.1. Changes that are not considered to be structural changes

(1) Changes to wheels shall not be considered as a structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration, if the following conditions are met:

a) The wheels comply with the load, speed code, and wheel guard provisions in Annex 1, sections 8.02 and 9.01.

b) The tyre circumference deviates by a maximum of ± 5 % in nominal value.
Any difference in the changed circumference of front and rear tyres does not exceed 5 %.
If a vehicle’s approval declaration/type-approval contains enhanced conditions, these shall be respected.

c) The tyre fits the rim.

d) The tyre width increase on the rear wheels does not exceed the tyre width increase on the front wheels by more than 20 mm.

e) The tyre width increase on the front wheels does not exceed the tyre width increase on the rear wheels.

f) The section width is not less than the smallest with which the respective engine variant of the car was originally supplied.

g) The tyre profile ratio at the front and rear is the same, if the car was delivered originally with the same tyre profile ratio at the front and rear. If the car was originally delivered with a difference in tyre profile ratio at the front and rear, that difference shall be retained. However, the profile ratio of the rear wheels may be reduced by more size than on the front wheels.

h) The track gauge is not increased by more than 20 mm or reduced in relation to the possible track gauges permitted by the car manufacturer.

i) If track gauge amplifiers are installed, it is of the type that centers on the hub and in the centre hole of the rim and which, together with the current rim, produces a total change of 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 passenger car M1 or light goods vehicle N1 with a maximum permissible laden weight not exceeding 3 000 kg are fitted with tyres of different structures (radial tyres in combination with cross-ply tyres) or with tyres with different use categories (winter tyres for demanding winter conditions in combination with ordinary tyres or in combination with off-road and winter tyres), this is a combination permitted by the car manufacturer.

l) The car is not one of the following vehicles:

i) Quadricycle.

ii) Three-wheeled motorcycle with an unladen weight exceeding 400 kg.

iii) Tractor with a top speed of more than 40 km/h.

2.4.2. Changes that are considered to be structural changes

(1) If one or more of the conditions set out in point 2.4.1. are not met, the change shall be considered as a structural change of the load-bearing elements. If that case, the change shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes to the car.

c) Documentation as mentioned in point 2.4.2.1.

(2) For cars subject to type-approval, prior to approval by inspection of a structural change to load-bearing elements, a declaration of approval shall be issued by the Danish Road Traffic Authority, and approval shall be made on the basis of the documentation referred to in point (1) (a) or (b).

2.4.2.1. Testing

(1) In the event of a change of wheels, a testing body shall check whether the vehicle is technically suitable for the wheel change concerned.

(2) The testing body shall carry out the following:

a) Verification of compliance with the requirements on wheels and wheel guards referred to in Annex 1, sections 8.02 and 9.01.

b) Check whether the requirements of point 2.4.2.1.1. are met.

c) Roadworthiness checking and testing, see point 2.2.1.1.3.2.

d) Verification of deceleration requirements for service brakes and secondary brakes in accordance with Annex 1, section 5.03, if the circumference of the tyre is increased by more than 5 %.

2.4.2.1.1. Basic requirements for wheels

(1) The track gauge is not increased by more than 20 mm or reduced in relation to the possible track gauges permitted by the car manufacturer.

(2) The only track gauge amplifiers that may be installed are the type that centers on the hub and in the centre hole of the rim and which, together with the current rim, produces a total change of track gauge not exceeding that referred to in point (1).

2.5. Changes to springs, shock absorbers, and stabilisers

2.5.1. Changes to springs not considered as structural changes

(1) Changes to springs shall not be considered as a structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration, if the following conditions are met:

a) The front and rear springs are, according to the car or spring manufacturer, designed for the current car model and
variant.

b) The springs in unladen condition give a lowering of not more than 40 mm compared to the original car, and there is no aftermarket adjustment option for lowering more than 40 mm.

c) The springs in unladen condition give a raising of not more than 20 mm compared to the original car, and there is no aftermarket adjustment option for raising more than 20 mm.

d) There are no stipulated conditions for the car's original guaranteed total laden weight and axle load.

e) The springs are mounted according to the instructions of the spring manufacturer.

f) The springs sit fully in the spring retainers, even at full suspension of the wheels, or are so confined that the position is securely maintained.

g) The technical provisions set out in Annex 1 continue to be fulfilled.

h) For vehicles equipped with an ALB valve, the ALB valve is set in such a way as to achieve the initial braking force at the new height of the car in the unladen condition. For cars subject to type-approval, the ALB valve shall be adjusted so as to give the same braking force as before the change, both unladen and with full load.

i) The car is not one of the following vehicles:

i) Quadricycle.

ii) Three-wheeled motorcycle with an unladen weight exceeding 400 kg.

iii) Tractor with a top speed of more than 40 km/h.

2.5.2. Changes to shock absorbers not considered as structural changes

(1) Changes to shock absorbers shall not be considered as structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration if, according to the shock absorber manufacturer, the shock absorbers are intended for the current model and variant of the vehicle.

2.5.3. Changes to stabilisers not considered as structural changes

(1) Changes to stabilisers shall not be considered as structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration if, according to the stabiliser manufacturer, the stabilisers are intended for the current model and variant of the vehicle, 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 that are considered to be structural changes

(1) If one or more of the conditions set out in points 2.5.1., 2.5.2. and 2.5.3 are not met, the change shall be considered as a structural change of the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes to the car.

c) Documentation as mentioned in point 2.5.4.1.

(2) For cars subject to type-approval, prior to approval by inspection of a structural change to load-bearing elements, a declaration of approval shall be issued by the Danish Road Traffic Authority, and approval shall be made in accordance with point (1) (a) or (b).

2.5.4.1. Changes to springs, shock absorbers, and stabilisers

(1) In the event of changes to springs, shock absorbers, and stabilisers, a testing body shall check whether the vehicle is technically suitable for the changes to springs, shock absorbers, and stabilisers concerned.

(2) The testing body shall carry out the following:

a) Roadworthiness checking and testing, see point 2.2.1.1.3.2. and driving test X2 of point 2.12.5. However, in case of a replacement stabiliser, checking and testing only in accordance with point 2.2.1.1.3.2. (3) (f) and (g).

b) Checking the height of the lamps in accordance with Annex 1, section 6, and the height of the coupling device, if any, see Annex 1, point 9.05.

c) Check whether the requirements of point 2.5.4.1.1. are met.

2.5.4.1.1. Basic requirements for springs, shock absorbers, and stabilisers

(1) Springs, shock absorbers, and stabilisers shall be installed as instructed by the component manufacturer.

(2) Springs shall sit fully in the spring retainers, even at full suspension of the wheels, or are so confined that the position is securely maintained.

(3) The replacement of springs, shock absorbers, or stabilisers shall not necessitate reductions to the car's permissible axle load or total laden weight.

(4) Air springs, if any, shall have automatic height adjustment that activated when the ignition is switched on. If the system allows for different heights, the car shall be tested at the lowest and highest settings.

2.6. Changes to the braking system

(1) Changes to the braking system shall be considered as a structural change to the brakes that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks in accordance with point 2.6.1.

(2) For cars subject to type-approval, prior to approval by inspection of a structural change to brakes, a declaration of approval shall be issued by the Danish Road Traffic Authority, and approval shall be made in accordance with point (1) (a) or (b) or when calculating that the braking performance in Annex 1, point 5.03 is met.

2.6.1. Changes to the braking system that are considered to be structural changes

(1) Upon changes to the braking system, a testing body shall carry out checks and tests (see point 2.6.1.1.) of compliance with the requirements on brakes in Annex 1, Section 5.

In addition, a testing body shall carry out checks in accordance with points 2.6.2. or 2.6.3., where relevant.

2.6.1.1. Checking and testing

(1) The testing body shall verify the following:

a) That the braking system is installed without changes to the brake components or suspensions.

b) That the braking system as a whole originates from a variant of cars having at least the same power and at least the same permissible front and rear axle loads.

c) That the weight distribution of the current car corresponds to the donor car. There may be a maximum change of 100 kg in the difference between the permissible axle loads of the front and rear compared to the donor car.

2.6.1.1.1. Alternative checking and testing

(1) If one or more of the points of 2.6.1.1. are not met, the testing body shall carry out the following:

a) Check that the mounted discs or drums meet the requirements for brake fade stability. This shall be checked by establishing one of the following:

i) That the mounted discs or drums come from a car that has at least the same power and at least the same permissible front and rear axle loads.

ii) That the mounted discs have at least the same diameter and thickness as the original discs or that the mounted drums have at least the same diameter and width as the original drums.

iii) That the mounted discs have at least the diameter specified in point 2.2.1.1.2.1.

iv) That brake fade tests have been carried out as mentioned in point 2.2.1.1.2.2.

b) Check that the car can decelerate at least 9 m/s^2 on dry roads without wheel lock, but at least 8 m/s^2 for cars from before 1980, or provide better braking performance than with the car's original brakes. Cars with ABS shall be able to decelerate at least 9 m/s^2 when the ABS system acts on all wheels. The load in the car during the brake test shall be at least 150 kg. If the loading capacity exceeds

50 % of the kerb weight, the test shall be carried out at minimum half payload.

Pedal pressure shall not exceed 50 kg.

Alternatively, one of the following decelerations shall be achieved:

i) Not more than 0.5 m/s2 less than the coefficient of adhesion µglide.

ii) Not more than 1.0 m/s2 less than the coefficient of adhesion µmax.

c) Check that the rear wheels do not lock before the front wheels at the achievable deceleration on dry road.

d) Make a technical assessment of whether pedal travel is sufficient if a circuit fails.

e) Carry out checks if fittings are included to mount the callipers or brake discs. If the parts come from a brake manufacturer who also manufactures original brake parts for cars, or a brake manufacturer who has sold at least 200 calliper sets, no further action shall be required. Otherwise, (f) and g) below apply.

f) Carry out checks if special fittings brackets are made to mount the callipers or brake discs. The testing body shall carry out a calculation or technical assessment of the adequacy of the strength of the fittings.

g) Perform a calculation or technical assessment that the strength of special fittings, including the suspension near the new fittings, is sufficient if non-original fittings are used to mount the callipers.

h) Check that the brakes are intended by the brake manufacturer for all-year use and not only for motor racing or track use, if the brakes do not come from another approved car model.

2.6.2. Changes to elements of the braking transmission

(1) If pedal arms or similar are replaced, the testing body shall carry out a calculation or technical assessment showing that the strength is adequate, check safety, including securing of assemblies, etc., and carry out checks on necessary travel, if relevant.

2.6.3. Installation of ABS

(1) When installing the ABS, the testing body shall verify that a complete system, including wheel brakes, ABS lock, wheel sensors, warning lights, etc., is being used from a car where the braking system has been approved in accordance with UN Regulation 13 or 13-H.

The testing body shall check the correct installation of the system and assess the correct performance on dry, slippery, and split-adhesion roads in accordance with UN Regulation 13-H, Annex 6.

(2) When installing an ABS system not originating from a car where the braking system has been approved in accordance with UN Regulation 13 or 13-H, the testing body shall test whether the requirements of UN Regulation 13-H, Annex 6 are met.

(3) When removing ABS, the testing body shall carry out checks and tests in accordance with point 2.6.1.1.

2.7. Changes to suspension

(1) Changes to the suspension shall be considered as a structural change to the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes. The approval shall include both testing/checking of the roadworthiness and strength of components.

c) Documentation from a testing body that has carried out tests or checks in accordance with point 2.7.1.

2.7.1. Checking and testing

(1) Upon changes to suspension, the testing body shall carry out checks and tests of the following:

a) Roadworthiness as specified in point 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 wheel suspension parts for cars, the strength shall be considered sufficient if the component manufacturer indicates that the component is suitable for the car model in question.

ii) If the parts are manufactured by a component manufacturer that 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 indicates that the component is suitable for the car model in question.

iii) If the car from which the suspension originates has at least the same permissible axle load, the strength shall be considered sufficient.

iv) The testing body shall carry out a calculation or technical assessment of the strength of the fittings showing that the parts have sufficient strength. If the attachment or the area around the attachment to the bodywork or chassis frame is changed, the testing body shall carry out a calculation or technical assessment showing that the parts have sufficient strength.

c) Whether the requirements of Annex 1, Section 4 on steering equipment and Section 8 on load-bearing elements are met.

2.7.2. Changes to total laden weight/axle load

(1) If a car model is available in several variants, the maximum permissible laden weight and axle load may be increased to the total laden weight or axle load applicable to another variant, provided that brakes and supporting elements, including chassis/body, as well as suspensions, i.e. wheels, springs, spindles, struts, carrier arms, trailing links, front axle, rear axle, and stabiliser, after possible replacement, correspond to the variant with the larger total laden weight and axle load respectively.

(2) A testing body shall verify that the car in question corresponds to the variant with a higher total laden weight or axle load in respect of brakes and load-bearing elements.

(3) Increases beyond those referred to in points (1) and (2) may only be approved if so allowed by the vehicle manufacturer.

2.7.3. Suspension links

(1) It is not considered to be a structural change to the load-bearing elements if bushings or ball joints in arms for suspension are replaced for others with increased hardness.

(2) It is not considered to be a structural change to the load-bearing elements if links in stabiliser connections and spring or shock absorber fittings are replaced with links of a pure metal compound, even if such did exist originally.

(3) Replacement for pure metal joints in arms for suspension of wheels, where this did not exist originally, shall be considered as a structural change which may only be approved if so allowed by the vehicle manufacturer.

(4) Ball joints shall be protected from the ingress of foreign matter, if they can be exposed to such.

2.8. Changes to self-supporting body or body on frame or chassis frame

2.8.1. Changes not considered as structural changes

(1) Changes to self-supporting body or body on frame or chassis frame shall not be considered as a structural change entailing the obligation of inspection, approval, and registration, in the following cases:

a) When mounting a roll cage or roll bars in the car and associated reinforcements at fixing points. In this connection, the necessary holes must be drilled for the installation and the roll cage or roll bar must be bolted or welded.

b) When replacing bolt-on screens and valves/doors for other material. It need not be documented that the car continues to meet the requirements for crash tests in Annex 1, Section 9.01, but any existing crash sensors shall remain installed.

c) When installing a sunroof or ventilation damper, where the following conditions are met:

i) A frame is placed around the cut-out in the roof, if the exterior and interior profiles are clamped around the edges of the cut-out.

ii) The cut-out in the roof is located symmetrically around the longitudinal axis of the car.

iii) The dimensions of the cut-out do not exceed 1.00 m and 0.50 m in the car’s width and longitudinal direction respectively.

iv) The horizontal distance from the edges of the cut-out to the edges of the roof is not less than 0.15 m.

v) There shall be no cutting or modification of original profiles and the like that serve to stiffen the bodywork.

2.8.2. Changes that are considered to be structural changes

(1) If one or more of the above points are not met, the change shall be considered as a structural change of the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes. The approval shall include both testing/checking of the roadworthiness and strength of components.

c) Documentation from a testing body that has carried out tests or checks in accordance with points 2.8.2.1, 2.8.2.3. or 2.8.2.4.

d) Documentation that the replacement has been made for a replacement chassis frame manufactured by a component manufacturer who has manufactured at least 200 chassis frames. In this respect, the component manufacturer shall confirm that the chassis frame is suitable for the vehicle model in

question and that the wall thickness is not less than the original frame.

(2) For cars subject to type-approval, prior to approval by inspection of a structural change to load-bearing elements, a declaration of approval shall be issued by the Danish Road Traffic Authority, unless the changes only involve point 2.8.2.5.

2.8.2.1. Checking and testing

(1) When modifying the bodywork and chassis frame, a testing body shall carry out checks and tests for compliance with the requirements of Annex 1, Section 4, relating to protective steering, Section 8 on load-bearing elements, and point 9.01 on protruding parts.

The checks and tests shall be carried out in accordance with points (2) to (5) or 2.8.2.2. However, tests need not be carried out if the testing body can instead conclude, by means of an checking, that one of the following two points is met:

a) Following the changes, the car will correspond to an existing, original car of the same model.

b) The bodywork is a non-carrying body and the car is not subject to the rules on protective steering (see Annex 1, section 4.01).

(2) In the case of a car changed to convertible, targa, pick-up, etc., where the same reinforcements are fitted as in an original version, the testing body shall, by testing or assessment in accordance with point 1.12.3., check for continued compliance with the provisions on protective steering as set out in UN Regulation 12 if the steering wheel and attachment are not the same and the load-bearing parts in the front end are unchanged.

(3) In the case of minor changes where minor load-bearing parts of the body or chassis frame are modified, the testing body shall carry out a calculation or technical assessment demonstrating that the strength is sufficient. The same applies when replacing the original door hinges that allow a door to be opened upwards.

(4) In the case of changes to the self-supporting body or chassis frame to enable new or changed attachment points for suspensions, the testing body shall carry out a calculation or technical assessment showing that the strength of the fittings, attachments and the area around the attachment to the bodywork or chassis frame is sufficient.

(5) In the case of changes to the self-supporting body or chassis to enable new or changed attachment points for engine, gears, and transmission, the testing body shall carry out a calculation or technical assessment showing that the strength of the fittings, attachments and the area around the attachment to the bodywork or chassis frame is sufficient.

2.8.2.2. Reinforcement of self-supporting body or body on frame or chassis frame

(1) Reinforcement of the bodywork or chassis frame 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 is not required when installing a roll cage or roll bar.

2.8.2.3. Extension or shortening of chassis frame

(1) Changes to the wheelbase and overhang shall be considered as a structural change to the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body confirming that the tensions in an actual steel chassis frame on a car with a technical total permissible laden weight exceeding 3 500 kg, when the car is under full

load, do not exceed 100 N/mm^2 (1 000 kp/cm^2).

In the case of shortening, additional documentation shall be provided on compliance with the provisions of Annex 1, point 5.03.020 (2) on braking power distribution. The ALB setting may need to be changed.

2.8.2.4. Mounting of loader cranes, tail lifts, tippers, and the like

(1) Loader cranes, tail lifts, tippers, and the like shall be installed in accordance with the vehicle manufacturer's instructions.

(2) Alternatively, if the car has a steel chassis frame, a testing body may demonstrate that the installation has been made in such a way that, when using these devices, the tensions in the chassis frame 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 vehicle manufacturer's instructions or in accordance with the following guidelines:

a) The reinforcement shall consist of flat steel placed on the upper and lower flange and shall be welded with interrupted welded seams on the side edges.

b) The flat steel shall be so narrower than the flange that the weld is free from the edge and rounding of the flange.

c) The flat steel shall not end in the same cross-sectional area unless it has been brought to the end of the profile.

d) The ends of the flat steel shall be appropriately positioned in relation to spring brackets and the like and shall be tapered, unless they are led to the end of the profile.

2.9. Replacement of steering wheel

2.9.1. Replacement of steering wheel, that is not considered a structural change

(1) If the replacement of the steering wheel meets one of the following conditions, the replacement shall not be considered as a structural change entailing the obligation of inspection, approval, and registration:

a) A replacement has been made to an E-approved steering wheel installed directly or by means of an adapter supplied by the steering wheel manufacturer.

b) A replacement has been made to an alternative steering wheel that is approved for a passenger car complying with the requirements of UN Regulation 12.

c) The car is not subject to the rules on protective steering (see Annex 1, section 4.01). In addition, it is 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 steered.

e) The steering wheel is of the same type as the original. A 'Yoke' steering wheel may not be installed in a car not intended for such.

(2) If the car is originally fitted with an airbag in the steering wheel, the conditions of point 2.18. shall also be met.

2.9.2. Replacement of steering wheel, that is considered a structural change

(1) If none of the above points are met, the change shall be considered as a structural change of the steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical

changes.

c) Documentation from a testing body that has carried out testing of the steering wheel in accordance with UN Regulation 12, in the case of a passenger car or light goods vehicle subject to the rules on protective steering, as set out in Annex 1, section 4.01.

d) Documentation from a testing body that has carried out testing of the car fitted with the steering wheel in accordance with UN Regulation 79, in the case of a large passenger car or lorry, where the steering wheel is replaced by a steering wheel with a smaller outer diameter.

2.10. Conversion to limousine or hearse

(1) Conversion of a car to a limousine or hearse may be approved by inspection if one of the following conditions is met:

a) There is already an approval according to German standard Merkblatt 751. However, an increase in the permissible axle load compared to the original values from the car manufacturer cannot be accepted on the basis of this, but the maximum permissible laden weight may be increased to the sum of the original permissible axle loads.

b) The car manufacturer has approved the conversion and a potential increase in the permissible axle load and maximum permissible laden weight. The approval shall contain a detailed description of the conversion, including the conversion company, the make, model, special characteristics, and any conditions.

c) The car is e-approved in the changed version, including when approved in several steps.

d) The conversion company has been approved by the car manufacturer in accordance with point 2.10.1.

e) There is already documentation from a testing body that has carried out tests or checks in accordance with point 2.10.2.

f) The alternative method referred to in point 2.10.1 or 2.10.2 is used.

2.10.1. Conversion to limousine or hearse, alternative method

(1) Conversion of a car to a limousine or hearse may be approved by inspection the following conditions are met:

a) The conversion company appears on a list of approved conversion companies on a U.S. car manufacturer’s website, or documentation is presented at inspection in the form of a written statement from the car manufacturer that the conversion company has been approved by the car manufacturer for the conversion of the car manufacturer’s cars into limousines.

b) It appears from information about, or on, the car that the car is classified as ‘Passenger car’ or ‘Multipurpose Passenger Vehicle (MPV)’.

c) It appears from the sticker on the car from the conversion company that the car meets US safety requirements for passenger cars and that the requirements are met with the stated permissible axle loads and the stated maximum permissible laden weight.

2.10.2. Conversion to hearse, alternative method

(1) In the case of conversion and, potentially, extension to a hearse, the testing body shall check whether the bodywork of the car complies with the requirements of Annex 1, Section 8, on load-bearing elements.

(2) The testing body shall verify that the following requirements are met:

a) The conversion of the bodywork with regard to the bottom and side panels is carried out behind the B-pillar. However, the structure may be supplemented by an elevated roof structure between the A and B pillars.

b) The car’s original profile connection between the A and B pillars has not changed.

c) The bodywork behind the B-pillar is made as an enclosed coffin space.

d) The permissible axle load has not been increased.

In addition, the testing body shall have carried out a calculation or technical assessment demonstrating

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 that occur during normal use and loads on the car.

(3) The maximum permissible laden weight may be increased to the sum of permissible axle loads without rechecking of brakes and total laden weight/axle load in accordance with section 2.7.2.

2.11. Conversion of VW Type 1 to buggy or similar

1) Approval by inspection of shortened VW Type 1 converted to buggy or similar shall be based on one of the following types of documentation:
   a) Documentation from a testing body that has carried out tests or checks in accordance with point 2.11.1.1.
   b) A foreign registration certificate showing that more than two years ago the car was approved in a shortened state, in the case of an imported used car. The wheelbase shall be between 2.00 m and 2.15 m. The car may be fitted with rims and engine as specified in point 2.11.1. (1).

2.11.1. Car with shortened platform frame

(1) When converting a VW Type 1 to buggy or similar, a testing body shall check the following points:
   a) That the car has been rebuilt with other bodywork in conjunction with the shortening of the platform frame by 0.25–0.40 m.
   b) That the car is fitted with original rims or rims with differing dimensions and the following limitations:
      i) Front rims have a width of up to 5.5" and an offset between the original value and 6 mm.
      ii) Rear rims have a width of up to 10" and an offset between the original value and -50 mm.
      iii) The diameter of the tyres has been changed by no more than 5 % compared to the originals.
   c) The engine power does not exceed the following:
      i) 63 kW if the car has McPherson suspension and disc brakes in front.
      ii) 51 kW if the car has long swing arms and disc brakes in front.
      iii) 44 kW if the car has drum brakes in front.

(2) The testing body shall carry out a calculation or technical assessment showing that the strength of the shortened platform frame and bodywork is sufficient and shall declare that the platform frame and bodywork can withstand the stresses that occur during normal use and loads on the car.

(3) When the bodywork is replaced on a vehicle registered for the first time on or after 1 May 1977, the testing body shall verify that the protective steering complies with the rules in point 2.12.3.

2.11.2. Car without shortening of the platform frame

(1) When installing other bodywork on VW Type 1, without shortening the platform frame, a testing body shall verify that the car complies with the requirements in point 2.12.9.

(2) When the bodywork is replaced on a vehicle registered for the first time on or after 1 May 1977, the testing body shall verify that the protective steering complies with the rules in point 2.12.3.

2.12. Composite car

(1) A composite car means a car that is assembled of components from different car models or universal components, under the conditions set out below.

(2) For cars subject to type-approval, prior to approval by inspection of a composite car, a declaration of approval shall be issued by the Danish Road Traffic Authority.

2.12.1. Car, unchanged bodywork and chassis frame

(1) If the self-supporting body or chassis frame is unchanged in respect of load-bearing parts, except for any fittings, the car is nevertheless considered a composite car if at least three of the following changes have been made:
   a) Front suspension is replaced with front suspension from other car model or component manufacturer.

b) Rear suspension is replaced with rear suspension from other car model or component manufacturer.
c) The steering mechanism is replaced with a steering mechanism from other car model or component manufacturer.
d) The engine is replaced with an engine with different number of cylinders or other cylinder configuration.

(2) A testing body shall check whether the composite car complies with the technical requirements set out in Annex 1, depending on the model year of the car.

(3) However, with regard to the vehicle's impact safety, roadworthiness, brakes, engine power, sound, air pollution, suspension strength, body, or chassis frame, and seat belt anchorages, the testing body shall verify that the car complies with the relevant requirements of points 2.12.3–2.12.11.

2.12.2. Car, changed bodywork or chassis frame

(1) If the self-supporting body or chassis frame is changed in respect of load-bearing parts, the car is considered a composite car if at least two of the following changes have also been made:
a) Front suspension is replaced with front suspension from other car model or component manufacturer.
b) Rear suspension is replaced with rear suspension from other car model or component manufacturer.
c) The steering mechanism is replaced with a steering mechanism from other car model or component manufacturer.
d) The engine is replaced with an engine with different number of cylinders or other cylinder configuration.

(2) A testing body shall check whether the composite car complies with the technical requirements set out in Annex 1, depending on the model year of the car.

(3) However, with regard to the vehicle's impact safety, roadworthiness, brakes, engine power, sound, air pollution, suspension strength, body, or chassis frame, and seat belt anchorages, the testing body shall verify that the car complies with the relevant requirements of points 2.12.3–2.12.11.

2.12.3. Steering mechanism and protective steering

(1) On a passenger car registered for the first time after 30 April 1977, the testing body shall carry out a technical assessment of whether the passenger car complies with Annex 1, Section 4, on protective steering.
The same applies to light goods vehicles with a maximum permissible laden weight not exceeding 1 500 kg and registered for the first time after 31 March 2002.

(2) The testing body shall carry out the technical assessment of the above-mentioned cars on the basis of the attachment of components and the inherent possibilities of the steering mechanism deforming or separating itself such that the steering wheel is not moved further than specified in UN Regulation 12.
In addition, the testing body 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. Roadworthiness

(1) The testing body shall carry out a roadworthiness test of the composite car as specified in point 2.2.1.1.3.2., except for test of accelerator slippage, which is replaced by test X3, see point 2.12.5. In addition, the testing body shall verify that the vehicle meets the requirements of tests X1 and X2 in point 2.12.5.

2.12.5. Roadworthiness test

(1) The load in the car during road tests shall be at least 150 kg. If the loading capacity of the car exceeds 50 % of the kerb weight, the test shall be carried out with at minimum half payload.
The maximum permissible laden weight shall be determined by the testing body and shall be at least equivalent to the utilisation of all seating positions with 75 kg, plus 10 kg in the luggage compartment per seat, though at least 150 kg for light goods vehicles.

Test	Content	Approval criteria

X1	Circle driving: Radius of 40 m. Steering angle and lateral acceleration measured.	There shall be increasing steering angle at increasing speeds and a lateral acceleration of at least 7.5 m/s shall be achieved[2].
X2	Circle driving over bumps: Radius 40 m. With a speed equivalent to lateral acceleration 6 m/s^2 runs with all wheels over a bump consisting of a board at least 40 mm high and 150–250 mm wide with 45 degree chamfered sides, placed perpendicularly to the direction of travel.	The steering angle shall be kept constant and, after one second of driving, deviation from the fixed course shall not exceed 0.5 m.
X3	Circle driving with accelerator slippage: Radius of 40 m. At a speed corresponding to a lateral acceleration of 7 m/s^2 release the accelerator. The circle shall be driven in 2nd gear.	The steering angle is kept constant and after a quarter of the circle drive after accelerator slippage, the lateral deviation from the specified circular course shall not exceed 12 m.

Common to tests X1, X2 and X3: Radius and associated criteria may differ by ± 10 %.
Circle driving can be done on a section of circle, including at least approximately 90° for stabilisation of lateral acceleration and space for subsequent measurement.

2.12.6. Brakes

(1) The testing body shall check whether the vehicle complies with the requirements of point 2.2.1.1.2.

2.12.7. Air pollution and sound

(1) The testing body shall check whether the car complies with the requirements concerning air pollution (see 2.2.1.2) and sound (see point 2.2.1.3).

2.12.8. Weight to power ratio

(1) The testing body shall verify that the composite car does not have a power to weight ratio exceeding 20 kW/100 kg. The weight is the kerb weight including a 75 kg driver.

2.12.9. Bodywork and chassis frame

(1) The testing body shall carry out a calculation or technical assessment of the strength of the bodywork or chassis frame.
For the calculations, the following shall apply:
a) Deformation resistance (γ) at any point on the load-bearing structure, for each of the following loads, shall be at least the following:
i. $\gamma > 2$ for two times static load.
ii. $\gamma > 2{,}5$ for braking with deceleration 7.5 m/s^2.
iii. $\gamma > 2{,}5$ for cornering with lateral acceleration of 7.5 m/s^2.
b) Material tensions (σ) shall be determined by measurements made on the most loaded parts. The most loaded parts shall be determined by means of calculations or a technical assessment of the

structure. For simple structures, calculations alone can be used to verify compliance with the requirements.

c) For the loads referred to in point (a), the fatigue resistance is calculated. For $2x10^6$ stresses the failure probability shall be below the 5 % percentile.

(2) The testing body shall assess the rigidity of the structure in connection with the road test. There shall be no tendency to self-resonance when testing up to 90 % of the top speed.

In order to determine 90 % of the top speed, a mathematical projection shall be used in relation to the increased power to determine a theoretical top speed if the car is not tested completely to the top speed.

(3) The testing body shall declare that the bodywork or chassis frame is capable of withstanding the stresses that occur from normal use and loads of the car.

2.12.10. Components, including suspensions, axles, spindles, and steering mechanism

(1) The testing authority shall carry out checks on components, including suspensions, axles, spindles, and steering mechanism in accordance with points 2.4. and 2.7.

2.12.11. Seat belts

(1) If the vehicle is not equipped with already-tested seat belt anchorages and the year of the car is established as 1970 or later, the testing body shall make calculations for each anchorage point at which the individual anchorage point is subjected to a forward force according to the following.

a) For three-point seat 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 belt lock anchorage point shall be subjected to a force of 10 kN.

b) For lap belts, each anchorage point shall be subjected to a force of 10 kN.

At common anchorage points, the force used on the anchorage point is as shown above for the relevant belt type. The force from each belt is applied simultaneously to the anchorage point. Common anchorage point is defined as the point at which parts of two seat belts are attached to the same anchorage point.

(2) The testing body shall check and assess whether the position of the belt anchorages is appropriate (see UN Regulation 14) for the version applicable (see Annex 1) to the car.

2.12.12. Determination of the model year

(1) The car's new model year shall be determined by the testing body.

The model year is determined on the basis of the weighted average of the year of production and is calculated on the basis of the following elements, where the figure in brackets shows the weighting:

a) Load-bearing chassis frame (3) or self-supporting body (6).

b) Non load-carrying or body on frame (3). Omit if self-supporting body.

c) Front suspension (1).

d) Rear suspension (1).

e) Steering mechanism (1).

f) Braking system (1).

g) Engine (2).

The year of the bodywork or chassis frame is determined by the original year of the bodywork or chassis frame, if only fittings or similar have been added.

If other conversions have been made to the bodywork or chassis frame, the year shall be determined as the average of the original year and the year in which the car was first presented for inspection for approval of the change.

Within each element referred to in points (c)–(g), the year is established as the average of the most important components. For components, the build year may be used regardless of later production dates.

For the engine, the average of the year of the engine block or cylinders and cylinder head is calculated according to the type designations.

For suspensions, the average of the year of axle and swing arms, that are relevant, and for brakes the average of the years of disc brake callipers or drum brake anchor plates that are used.

For a foreign, and previously approved composite car, the year is established as the year in which the car was approved in the home country.

2.13. Changes or installation of electronic stability control (ESC)

(1) Changes or installation of ESC shall be considered as a structural change to the car's steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks that, following a change of mode of operation, the ESC system still complies with UN Regulation 13 or 140, whichever is relevant for the type of vehicle.

d) Documentation from a testing body which has verified that the same car model exists in a variant without ESC.

(2) On a car registered for the first time on a date when the ESC was a requirement according to Annex 1, the system may not be removed or disabled, neither permanently nor temporarily. However, if the car manufacturer has installed a function where the ESC can be temporarily deactivated, this is permitted.

2.14. Changes to lane departure warning system (LDWS)

(1) Changes to lane departure warning system (LDWS) shall be considered as a structural change to the steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks that, following a change of mode of operation, the LDWS system still complies with Directive 2021/646/EU or UN Regulation 130, whichever is relevant for the type of vehicle.

(2) The lane departure warning system (LDWS) may not be permanently deactivated on a car registered for the first time on a date when the LDWS was a requirement according to Annex 1.

2.15. Changes to or installation of emergency lane keeping system (ELKS)

(1) Changes or installation of emergency lane keeping system (ELKS) shall be considered as a structural change to the steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks that, following a change of mode of operation, the ELKS system still complies with Regulation (EU) 2021/646, which is relevant for the type of vehicle.

(2) The emergency lane keeping system (ELKS) may not be permanently deactivated on a car registered for the first time on a date when the ELKS was a requirement according to Annex 1.

2.16. Changes or installation of Advanced Emergency Braking System (AEBS)

(1) Changes or installation of Advanced Emergency Braking System (AEBS) shall be considered as a structural change to the brakes that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks that, following a change of mode of operation, the AEBS system still complies with UN Regulation 131 or 152, whichever is relevant for the type of vehicle.

(2) The Advanced Emergency Braking System (AEBS) may not be deactivated on a car registered for the first time on a date when the AEBS was a requirement according to Annex 1.

(3) For cars subject to type-approval, prior to approval by inspection of a structural change to brakes, a declaration of approval shall be issued by the Danish Road Traffic Authority.

2.17. Change or installation of automatic speed control (adaptive cruise control)

(1) Changes or installation of adaptive cruise control shall be considered as a structural change to the engine, which may only be approved by inspection on the basis of documentation provided by the vehicle manufacturer.

2.18. Changes to airbags

2.18.1. Car that shall meet the crash test requirement in Annex 1, point 9.01

(1) Driver and passenger airbags shall not be removed or disabled unless there is documentation of continued compliance with the frontal impact provisions.

A car originally equipped with a button or keyhole to render the passenger airbag inoperative is considered to comply with the provision, even without a functioning passenger airbag.

A tell-tale shall operate in such a way that if the passenger airbag is deactivated, the tell-tale can still indicate faults in the remaining airbag system.

(2) When replacing an airbag steering wheel, it is sufficient that the new steering wheel also has an undocumented airbag.

(3) Side and curtain airbags shall not be removed or disabled unless there is documentation of continued compliance with the side impact provisions.

However, if the car is fitted with a roll cage, the side and curtain airbags may be removed.

(4) Any seat cover on seats with a side airbag shall be designed for side airbags.

(5) When replacing a seat with a side airbag, it is sufficient that the new seat also has an undocumented airbag.

(6) Seats specially designed for persons with disabilities shall not be fitted with a side airbag, irrespective of the original seat.

2.18.2. Car that need not meet the crash test requirement in Annex 1, section 9.01

(1) Airbag may be removed.

However, if the driver airbag is removed, there shall be documentation that the steering wheel meets the technical requirements of UN Regulation 12. It shall be sufficient that the steering wheel is E-approved or originates from a car approved in accordance with UN Regulation 12, irrespective of whether it is not approved for the vehicle concerned.

2.19. Installation of power steering on passenger cars and light goods vehicles

(1) The installation of power steering shall be considered as a structural change to the steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on any necessary technical changes to the car.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests in accordance with point 2.19.1.

2.19.1. Checking and testing of steering mechanism

(1) The testing body shall carry out the following:

a) Verification of compliance with the requirements on steering mechanisms (Annex 1, point 4.01.001.

b) Roadworthiness checking and testing that shall include a slalom test with 10 cones spaced at 18 m. The exercise shall be carried out at 50 km/h or at the maximum speed, and the power steering shall not shudder or fade out during slalom course. The load in the car shall be as specified in point 2.12.5.

c) Checking the strength of the constituent parts. For this purpose, the following apply:

i) If the parts come from a car manufacturer or are manufactured by a component manufacturer who also manufactures original steering parts for cars, the strength shall be considered sufficient if the component manufacturer indicates that the component is suitable for the car model in question.

ii) If the parts are manufactured by a component manufacturer that does not manufacture original parts for cars but has sold at least 200 power steering kits, the strength shall be considered sufficient if the component manufacturer indicates that the component is suitable for the car model in question.

iii) The testing body shall carry out a calculation or technical assessment of the strength of the components showing that the parts have sufficient strength.

2.20. Conversion of car to electric power or changes to electrical system

(1) Conversion of an internal combustion engine car to electric power or changes to the electrical system of a car with an electric motor shall be considered as a structural change to the engine to be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the car manufacturer with specific information on all the technical changes.

b) Documentation consisting of an approval and giving specific information on all the technical changes.

c) Documentation from a testing body that has carried out tests or checks in accordance with point 2.20.1.

(2) A change to the electrical system may be, for example, a change to a larger or smaller battery or other electrical control, including a change in charge management of the batteries.

(3) The rules also apply if the internal combustion engine is supplemented by an electric motor with associated batteries and technology.

(4) ‘Battery’ means a traction battery, i.e. the battery that provides electricity to propel the vehicle.

(5) For cars subject to type-approval, prior to approval by inspection of a structural change to the engine, a declaration of approval shall be issued by the Danish Road Traffic Authority.

2.20.1. Checking and testing

(1) The testing body shall carry out the following:

a) Check that the car meets the technical requirements of UN Regulation 100-02 on electrical safety.

b) Inspect and check the powertrain components and cabling, focusing on possible safety risks in the event of a collision, and declare that the vehicle is safe in these terms, and that people cannot inadvertently come into contact with the live parts belonging to the traction parts.

c) Check that batteries are located separately from the passenger compartment and not in deformable zones. Deformable zones are defined here as the area outside the outline, as seen from above, which is made up of the outer edges of the wheels. For cars with a load-bearing chassis frame, the batteries shall be located within the chassis frame.

d) Verify compliance with UN Regulation 10-05 relating to EMC.

e) Carry out a professional assessment that the vehicle continues to comply with the provisions of Annex 1, points 4.01.021 and 4.01.024, on protective steering.
The assessment may be omitted if the engine and batteries are behind the B-pillar.

f) Check that the car still has sufficient loading capacity in relation to the number of seating positions at a load of 75 kg per person.
The car's original maximum permissible laden weight may be increased by up to 3 %, unless the car manufacturer allows further increase.

g) Check that at the maximum permissible laden weight the car's permissible axle load is not exceeded by more than 3 % when all seats are in use, any coupling device is loaded with the permissible hitch pressure, and excess weight up to the maximum permissible laden weight is placed in the middle of the boot.

h) If the car has regeneration during braking, the car shall be fitted with anti-lock brakes (ABS) and the testing body shall verify that the vehicle complies with UN Regulations 13-11 or 13-H relating to 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 necessary energy for braking even in urban driving with frequent braking.
In the case of a car with air brakes, the testing body shall verify compliance with Annex 1, point 5.02.003.

j) Check that the car complies with standard IEC 61854:2020. Charge mode shall be at least Mode 1 and a ground conductor and fault current switch shall be fitted.

k) Check the battery management system (BMS), which shall be able to control charging, even from regenerative braking, within the manufacturer's specifications for the battery cells in terms of voltage and maximum temperature.
The system shall be provided with a protective function that monitors the battery at the cellular level and which interrupts the charge and load of the battery so that the battery is brought into a safe state if the battery cells fall outside the specifications.
The battery management system shall be intrinsically safe such that the system is automatically brought into a safe state in the event of failure of the protective function. In the event of failure, the driver of the vehicle shall be alerted with a clear signal in sufficient time to enable the vehicle to be brought to a road-safe location before disconnecting the battery.

l) Check that there is an easily accessible way, without special tools, to disconnect the electrical circuit to the car's battery(s). Disconnection with the safety switch shall be close to the battery, safe, and include at least one pole of the battery. The function and method of operation shall be clearly indicated on the car.

m) If the car at the time of conversion has greater power, the rules on changes to the engine and power increase in section 2.2 shall apply.

(2) If a given change does not affect one or more areas referred to in point (1), the testing body shall substantiate, and checking and testing may thus be omitted for the areas concerned.

3. Motorcycles

3.1. Specific vehicle types

3.1.1. Changes to certain vehicle types

(1) On the following vehicle types, structural changes to the steering, brakes, engine, and supporting elements may only be made if the vehicle manufacturer allows modifications, or there is an approval:
a) Two-wheeled motorcycles with sidecar.
b) Three-wheeled motorcycles.

(2) However, changes as specified in sections 3.2.1.4. and 3.5.1. which are not considered as structural changes may be made on a two-wheeled motorcycle with sidecar and on a three-wheeled motorcycle.

3.2. Changes to engine

(1) Engine changes shall be approved by inspection on the basis of one of the following types of documentation:
a) Documentation from the motorcycle manufacturer with specific information on the engine changes and any necessary technical changes to the motorcycle. The motorcycle manufacturer's documentation shall include information that the motorcycle, after the changes, meets the requirements of Annex 1, section 7.05 on sound and section 7.06 on air pollution for the specific motorcycle, depending on the initial registration date of the motorcycle.
If the motorcycle manufacturer's documentation is partially inadequate, the following applies:
i) If the motorcycle manufacturer's documentation provides only a maximum permissible power, but not the actual increased power, documentation of the actual motorcycle's power shall be provided by a testing body.
ii) If no information on sound is stated in the motorcycle manufacturer's documentation, the motorcycle's sound documentation shall be provided by a testing body. However, in the case of a motorcycle registered for the first time before 1 October 1982, sound is checked by inspection. The stationary sound value may not exceed the values set out in Annex 1, section 7.05.
iii) If the motorcycle manufacturer's documentation does not indicate anything on actual air pollution, a motorcycle registered for the first time on or after 1 July 2004 shall be subject to obtaining documentation from a testing body demonstrating compliance with the rules set out in Annex 1, section 7.06.
b) Documentation by means of an approval and with specific information on the engine changes and any necessary technical changes. The approval shall include information that the motorcycle, after the changes, meets the requirements of Annex 1, section 7.05 on sound, and in Annex 1, section 7.06 on air pollution as applicable to the motorcycle. This may potentially be confirmed by supplementary documentation from a testing body. It is sufficient if the test report indicates that neither sound nor air pollution has changed.
c) Documentation from a testing body that has carried out tests/checks in accordance with point 3.2.1.

(2) If the change consists of boring cylinders up to the nearest over-dimension, the change is not considered a structural change and is not considered to produce any power gain.

3.2.1. Checking changes to engines

(1) Upon any change to the engine, a testing body shall verify that the motorcycle still complies with the following requirements:
   a) Engine tuning may not be carried out in such a way that it is clear that the whole engine is designed for significantly greater engine power than the one for which approval is sought.
   b) The original engine, if relevant, may not be throttled.
   c) The technical suitability rules, see point 3.2.1.1.
   d) The rules on air pollution, see point 3.2.1.2.
   e) The rules on sound, see point 3.2.1.3.

3.2.1.1. Technical suitability

(1) A testing body shall verify that the motorcycle is technically suitable for the power gain in relation to the requirements of the following sections of Annex 1:
   a) Section 4 on steering.
   b) Section 5 on brakes.
   c) Section 8 on load-bearing elements.

(2) The engine power shall be measured on the engine or by dynamometer and with the best possible correction for air pressure, temperature, and rolling resistance (see Regulation (EU) 134/2014) so that correct engine power and associated RPM can be indicated. A testing body shall attend or carry out the test itself. For unchanged engines, the manufacturer's information on the engine's original power shall be made use of. The dynamometer shall be calibrated and maintained according to the instructions of the dynamometer manufacturer.

(3) The information on engine power provided by the motorcycle manufacturer is used as a starting point for assessing the engine power increase. However, if the motorcycle manufacturer declares the engine power according to the American standard SAE J1349, 15 % shall be deducted.

(4) Replacement of an intercooler is not considered a structural change.

3.2.1.1.1. Engine power increases up to 20 %

(1) For engine power increases up to 20 %, technical suitability need not be checked. However, a testing body shall demonstrate that the power gain is no more than 20 %. This is done by measurement or verification of the installation by comparison to other unaltered engines.

3.2.1.1.2. Engine power increase 21–40 %

(1) In the case of an engine power gain of 21–40 %, a testing body shall verify, in addition to the checks referred to in point 3.2.1., that the motorcycle meets one of the following requirements:
   a) The motorcycle corresponds, potentially after a change, to an original other variant of the motorcycle model in terms of brake discs, drums, callipers, 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 come from a motorcycle with at least the same engine power and permissible axle load and the motorcycle complies with the brake check requirements of point 3.6.1.
   c) The brake discs have at least the dimensions specified in point 3.2.1.1.2.1. and the motorcycle complies with the brake check requirements of point 3.6.1.

3.2.1.1.2.1. Control of brake fade by means of brake disc size control

(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 weight and power.
   b) Rear disc diameter (in mm) shall be a minimum of 225 + (permissible axle load in kg – 200) x 0.5.

3.2.1.1.3. Engine power increase 41–100 %

(1) If a power/weight ratio of more than 40 kW/100 kg is achieved, point 3.2.1.1.4. applies.
The weight is the motorcycle's kerb weight.

(2) In the case of an engine power gain of 41–100 %, a testing body shall verify that the motorcycle meets one of the following requirements:
a) The requirements of point 3.2.1.1.2. for a motorcycle with an engine power gain of 21-40 %.
b) The requirements of point 3.2.1.1.3.1. on equivalent motorcycle or point 3.2.1.1.3.2. on checking and testing of roadworthiness.

3.2.1.1.3.1. Similar motorcycle

(1) If the motorcycle corresponds, potentially after a change, to an original other variant of the motorcycle model in terms of brake discs, drums, callipers, wheel cylinders, and master cylinder and section width and suspension, and the engine power of the motorcycle does not exceed the engine power of the original other variant by more than 20 %, the check indicated in point 3.2.1.1. may be replaced by the testing body's verification that the motorcycle corresponds to the other variant on these points.

3.2.1.1.3.2. Roadworthiness checking and testing

(1) The testing body shall verify that the motorcycle has sufficiently safe handling compared to other powerful original motorcycle.
The testing body shall carry out tests of the motorcycle's handling on dry or wet asphalt, as indicated below.

(2) The load on the motorcycle during the testing shall be at least 75 kg.

(3) The testing shall include the following tests:
a) Driving on uneven, paved roads, including roads with significant lateral slopes.
b) Driving on a road with heavy rutting.
c) Maximum acceleration in each gear.
d) Gassing while turning.
e) Sudden lane shift.
f) Directional stability at up to 90 % of top speed.
g) Control of weaving and wobbling up to 130 km/h.
h) Throttle slippage in corners, driving at great large angle of lean.
i) The statically measured possible angle of lean without driver is at least 35 degrees to both sides.

(4) In order to determine 90 % of the top speed as mentioned in point (3) (e), a mathematical projection shall be used in relation to the increased power to determine a theoretical top speed if the motorcycle is not tested completely to the top speed.

3.2.1.1.4. Engine power increase over 100 %

(1) The weight is the motorcycle's kerb weight.

(2) In the case of an engine power gain of more than 100 %, or when a power/weight ratio of more than 40 kW/100 kg is achieved, in addition to checking in accordance with points 3.2.1.2. and 3.2.1.3., a testing body shall verify if the motorcycle corresponds, potentially after a change, to an original other variant of the motorcycle model in terms of brake discs, drums, callipers, wheel cylinders, and master cylinder and section width and suspension, and the engine power of the motorcycle does not exceed the engine power of the original other variant by more than 20 %.

3.2.1.2. Air pollution

(1) The testing body shall verify that one of the following points is met:
a) The limit values for air pollution set out in Annex 1, section 7.06 are not exceeded by more than 20 %.
b) The use of an engine from a different model or make, provided that the engine in question meets the same or more recent air pollution standard than that applicable to the motorcycle. It is a condition that the engine intake manifold, exhaust manifold and engine control system including sensors and nozzles have been swapped unchanged, that there is no change in the engine control system, and that any catalytic converter or particulate filter is located no more than 20 cm further from the as engine measured along the pipe length.
c) The engine change relates only to the replacement with another intercooler or to the installation of an intercooler.

3.2.1.3. Sound

(1) The testing body shall verify the following:
a) The motorcycle complies with the limit values on sound in Annex 1, section 7.05.
b) The exhaust system or intake system is not fitted with aftermarket clappers or similar, which can be adjusted automatically or manually, and whose purpose is to be able to increase sound beyond the measuring range. A silencer shall not be provided with an insert to reduce sound and which can be removed without the silencer being destroyed, 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 a reference measurement has been made according to Sound Measurement Method IV, the car may be approved without a new sound measurement according to Sound Measurement Method I, if the reference figure from Sound Measurement Method IV is still met with the permissible tolerance of 3 dB(A).

3.2.1.4. Conditions under which a change to the intake or exhaust is not considered a structural change of the engine

3.2.1.4.1. Intake of a motorcycle registered for the first time before 1 October 1982

(1) If the change of intake consists only in the modification of one or more of the following components, the change is not considered a structural change and is not considered to produce any power gain.
a) Replacement with other air filter.
b) Replacement of original air filter box with other closed air filter box with air filter.
c) Replacement of other intake manifold on motorcycle with carburettor.
d) Replacement with other carburettor with flow capacity corresponding to the original components.
e) Replacement with other injection systems/nozzles.

3.2.1.4.2. Exhaust of a motorcycle registered for the first time before 1 October 1982

(1) If, after modification of the exhaust, the motorcycle meets the sound thresholds set out in Annex 1, point 7.05, the change is not considered a structural change and is not considered to produce any power gain.
(2) The exhaust system attenuation shall also be effective at all loads and RPM.
(3) The exhaust system shall not be fitted with clappers or similar devices that can be adjusted automatically or manually. However, E-approved systems are allowed.

3.2.1.4.3. Intake on a motorcycle registered for the first time on or after 1 October 1982

(1) If the change of intake consists only of changing the air filter or changing the original air filter box to another closed air filter box, and sensors are not moved, the change is not considered a structural change and is not considered to produce any power gain.

3.2.1.4.4. Exhaust on a motorcycle registered for the first time on or after 1 October 1982

(1) If, after changes to the exhaust, the motorcycle still meets the registered stationary sound value, the change is not considered a structural change and is not considered to produce any power gain.
On a motorcycle with a catalytic converter, there shall be no change in the catalytic converter, but only on the subsequent part of the exhaust.

(2) The exhaust system attenuation shall also be effective at all loads and RPM.

(3) The exhaust system shall not be fitted with clappers or similar devices that can be adjusted automatically or manually. However, E-approved systems are allowed.

3.3. Top speed increase

(1) Modification of the top speed limiter shall be considered as a structural change to the engine that shall be approved by inspection on the basis of one of the following types of documentation:
a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.
b) Documentation by means of an approval and with specific information on any necessary technical changes.
c) Documentation from a testing body that has carried out tests/checks in accordance with point 3.3.1.

3.3.1. Testing

(1) In the case of a top speed increase by a change to a top speed limiter resulting in an increase in the top speed of more than 10 %, a testing body shall carry out a directional stability test at at least 90 % of the new top speed. The test shall demonstrate that the motorcycle has sufficiently safe handling.

(2) In order to determine 90 % of the top speed, a mathematical projection shall be used in relation to the actual power to determine a theoretical top speed if the motorcycle is not tested completely to the top speed.

(3) In the case of top speed increases of up to 10 %, no tests shall be carried out, but documentation of the increase shall be brought along to inspection for approving the structural change.

3.4. Wheel changes

3.4.1. Changes that are not considered to be structural changes

(1) Changes to wheels shall not be considered as a structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration, if the following conditions are met:
a) The wheels comply with the load and speed code provisions in Annex 1, section 8.02.
b) The tyre circumference deviates by a maximum of ± 5 % in nominal value.
Any difference in the changed circumference of front and rear tyres does not exceed 5 %.
c) The tyre fits the rim.
d) The front tyre width is not more than 20 mm larger than the widest original size or more than 10 mm narrower than the narrowest original size.
e) The rear tyre width 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 no wider than the rear tyre.

3.4.2. Changes that are considered to be structural changes

(1) If one or more of the conditions set out in point 3.4.1. are not met, the change shall be considered as a structural change of the load-bearing elements. If that case, the change shall be approved by inspection on the basis of one of the following types of documentation:
   a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.
   b) Documentation by means of an approval and with specific information on any necessary technical changes to the motorcycle.
   c) Documentation as mentioned in point 3.4.2.1.

3.4.2.1. Testing

(1) In the event of a change of wheels, a testing body shall check whether the motorcycle is technically suitable for the wheel change concerned.
(2) The testing body shall carry out the following:
   a) Verification of compliance with the requirements on wheels and wheel guards referred to in Annex 1, sections 8.02 and 9.01.
   b) Roadworthiness checking and testing, see point 3.2.1.1.3.2.
   c) Verification of deceleration requirements for service brakes and secondary brakes in accordance with Annex 1, section 5.03, if the circumference of the tyre is increased by more than 5 %.

3.5. Changes to springs and shock absorbers

3.5.1. Changes to springs not considered as structural changes

(1) Changes to springs shall not be considered as a structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration, if the following conditions are met:
   a) The front and rear springs are, according to the motorcycle or spring manufacturer, designed for the current motorcycle model and variant.
   b) The springs in unladen condition give a lowering or lifting of not more than 40 mm compared to the original motorcycle, and there is no aftermarket adjustment option for lowering more than 40 mm.
   c) There are no stipulated conditions for the motorcycle’s original guaranteed total laden weight and axle load.
   d) The springs are mounted according to the instructions of the spring manufacturer.
   e) The springs sit fully in the spring retainers, even at full suspension of the wheels, or are so confined that the position is securely maintained.
   f) The technical provisions set out in Annex 1 continue to be fulfilled.

3.5.2. Changes to shock absorbers not considered as structural changes

(1) Changes to shock absorbers shall not be considered as structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration if, according to the shock absorber manufacturer, the shock absorbers are intended for the current model and variant of the motorcycle.

3.5.3. Changes that are considered to be structural changes

(1) If one or more of the conditions set out in points 3.5.1. and 3.5.2 are not met, the change shall be considered as a structural change of the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:
   a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.
   b) Documentation by means of an approval and with specific information on any necessary technical changes to the motorcycle.
   c) Documentation as mentioned in point 3.5.3.1.

3.5.3.1. Change of springs or shock absorbers

(1) In the event of changes to springs or shock absorbers, a testing body shall check whether the motorcycle is technically suitable for the changes to springs or shock absorbers concerned.

(2) The testing body shall carry out the following:

a) Roadworthiness checking and testing, see point 3.2.1.1.3.2.

b) Checking the height of lamps (see Annex 1, Section 6).

c) Check whether the requirements of point 3.5.3.1.1. are met.

3.5.3.1.1. Basic requirements for springs or shock absorbers

(1) Springs and shock absorbers shall be installed as instructed by the component manufacturer.

(2) Springs shall sit fully in the spring retainers, even at full suspension of the wheels, or are so confined that the position is securely maintained.

(3) The replacement of shock absorbers shall not necessitate reductions to the motorcycle's permissible axle load or total laden weight.

(4) Air springs, if any, shall have automatic height adjustment that activated when the ignition is switched on. If the system allows for different heights, the motorcycle shall be tested at the lowest and highest settings.

3.6. Changes to the braking system

(1) Changes to the braking system shall be considered as a structural change to the brakes that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks in accordance with point 3.6.1.

3.6.1. Changes to the braking system that are considered to be structural changes

(1) Upon changes to the braking system, a testing body shall carry out checks and tests (see point 3.6.1.1.) of compliance with the requirements on brakes in Annex 1, Section 5.
In addition, a testing body shall carry out checks in accordance with points 3.6.2. or 3.6.3., where relevant.

3.6.1.1. Checking and testing

(1) The testing body shall verify the following:

a) That the braking system is installed without changes to the brake components or suspensions.

b) That the braking system as a whole originates from a variant of motorcycles having at least the same power and at least the same permissible front and rear axle loads.

3.6.1.1.1. Alternative checking and testing

(1) If one or more of the points of 3.6.1.1. are not met, the testing body shall carry out the following:

a) Check that the mounted discs or drums meet the requirements for brake fade stability. This shall be checked by establishing one of the following:

i) That the mounted discs or drums come from a motorcycle that has at least the same power and at least the same permissible front and rear axle loads.
ii) That the mounted discs have at least the same diameter and thickness as the original discs or that the mounted drums have at least the same diameter and width as the original drums.
iii) That the mounted discs have at least the diameter specified in point 3.2.1.1.2.1.

b) Check that the motorcycle on dry road can decelerate at least 5 m/s^2 with the front brake and 3 m/s^2 with the rear brake, though 4 m/s^2 and 2.5 m/s^2, respectively, for motorcycles from before 1980, or better than with the original brakes.
The load on the motorcycle during the brake testing shall be at least 75 kg.
Pedal pressure shall not exceed 50 kg and hand grip pressure shall not exceed 20 kg.

c) Make a technical assessment of whether grip and pedal travel is sufficient when the brakes have gotten very hot.

d) Carry out checks if fittings are included to mount the callipers or brake discs. The checks consist of the following: If the parts come from a brake manufacturer who also manufactures original brake parts for cars, or a brake manufacturer who has sold at least 200 calliper sets, no further action shall be required. Otherwise, (e) and (f) below apply.

e) Carry out checks if special fittings brackets are made to mount the callipers or brake discs. The testing body shall carry out a calculation or technical assessment of the adequacy of the strength of the fittings.

f) Perform a calculation or technical assessment that the strength of special fittings, including the suspension near the new fittings, is sufficient if non-original fittings are used to mount the callipers.

g) Check that the brakes are intended by the brake manufacturer for all-year use and not only for motor racing or track use, if the brakes do not come from another approved motorcycle model.

3.6.2. Changes to elements of the braking transmission

(1) If pedal arms or similar are replaced, the testing body shall carry out a calculation or technical assessment showing that the strength is adequate, check safety, including securing of assemblies, etc., and carry out checks on necessary travel, if relevant.

3.6.3. Installation of ABS

(1) When installing the ABS, the testing body shall verify that a complete system, including wheel brakes, ABS lock, wheel sensors, warning lights, etc., is being used from a motorcycle where the braking system has been approved in accordance with UN Regulation 78.
The testing body shall check the correct installation of the system and assess the correct performance on dry and slippery 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 for compliance with the requirements of UN Regulation 78, regarding ABS.

(3) When removing ABS, the testing body shall carry out checks and tests in accordance with point 3.6.1.1. and potentially point 3.6.1.1.1.

3.7. Changes to front or rear fork

(1) Changes to the front or rear fork shall be considered as a structural change to the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.

b) Documentation by means of an approval and with specific information on any necessary technical changes. The approval shall include both testing/checking of the roadworthiness and strength of components.
c) Documentation from a testing body that has carried out tests or checks in accordance with point 3.7.1.

3.7.1. Checking and testing

(1) Upon changes to the front or rear fork, the testing body shall carry out checks and tests of the following:
a) The roadworthiness as specified in point 3.2.1.1.3.2. if the geometry of the components has been changed to exceed one or more of the following values:
i) The caster length has been changed by more than ±20 %.
ii) The wheelbase has been shortened by more than 2 cm.
iii) The wheelbase has been 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 wheel suspension parts for motorcycles, the strength shall be considered sufficient if the component manufacturer indicates that the component is suitable for the motorcycle model in question.
ii) If the parts are manufactured by a component manufacturer that does not manufacture original parts for motorcycles but has sold at least 200 front and rear forks, the strength shall be considered sufficient if the component manufacturer indicates that the component is suitable for the motorcycle model in question.
iii) If the motorcycle from which the front or rear forks originates has at least the same permissible axle load, the strength shall be considered sufficient.
iv) The testing body shall carry out a calculation or technical assessment of the strength of the fittings showing that the parts have sufficient strength. If the attachment or the area around the attachment to the bodywork or chassis frame is changed, the testing body shall carry out a calculation or technical assessment showing that the parts have sufficient strength.
c) Whether the requirements of Annex 1, Section 8 on load-bearing elements are met.
d) In the case of a three-wheeled motorcycle, the check shall be carried out in accordance with point 2.7.1.

3.8. Change to frame

(1) Changes to the frame shall be considered as a structural change to the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:
a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.
b) Documentation by means of an approval and with specific information on any necessary technical changes. The approval shall include both testing/checking of the roadworthiness and strength of components.
c) Documentation from a testing body that has carried out tests or checks in accordance with point 3.8.1.
d) Documentation that the replacement has been made for a replacement frame manufactured by a component manufacturer who has manufactured at least 200 frames. In this respect, the component manufacturer shall confirm that the frame is suitable for the motorcycle model in question and that the wall thickness is not less than the original frame.

3.8.1. Checking and testing

(1) Upon changes to the frame, a testing body shall carry out checks and tests of compliance with the requirements on load-bearing elements in Annex 1, Section 8.

(2) The checks and tests shall be carried out in accordance with point (3).

However, tests need not be carried out if the testing body can instead conclude, by means of an checking, that after the change, the motorcycle will correspond to an existing original motorcycle of the same model.

(3) The testing body shall verify that the following are met:

a) In the case of cut-off and replacement or addition of another transverse connection to a frame part placed behind the attachment points for dual rear springs and shock absorbers or for the mono-spring and

damper frame part behind the driver's seat, where the frame part has constituted a transverse connection, the testing body shall carry out a calculation or technical assessment showing that the strength and rigidity are sufficient.

b) In the case of changes to a frame to enable new or changed attachment points for front or rear forks, the testing body shall carry out a calculation or technical assessment showing that the strength of the fittings and attachments and the area around the attachment to the frame is sufficient.

c) In the case of changes to the frame to enable new or changed attachment points for engine, gears, transmission, or sub-frame, the testing body shall carry out a calculation or technical assessment showing that the strength of the fittings and attachments and the area around the attachment to the frame is sufficient.

d) When changing or replacing a bolt-on sub-frame that bears a seat, the testing body shall carry out a road test with the motorcycle or make a calculation or technical assessment showing that the sub-frame is sufficiently rigid to avoid adversely affecting the ability to steer the motorcycle.

3.9. Mounting of sidecars on motorcycles

(1) The mounting of a sidecar shall be considered as a structural change to the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.

b) Documentation by means of an approval and with specific information on any necessary technical changes. The approval shall include both testing/checking of the roadworthiness and strength of components.

c) Documentation from a testing body that has carried out tests or checks in accordance with point 3.9.1.

3.9.1. Checking and testing

(1) When mounting a sidecar, a testing body shall verify that the motorcycle with a sidecar complies with the provisions of Annex 1, section 4 on steering equipment, section 5 on brakes, and section 8 on load-bearing elements.

(2) Sections 4 and 8 shall be deemed to be met if a testing body has carried out a calculation or technical assessment as well as a roadworthiness test, including vibration rates when driving with and without passengers at up to 90 % of the top speed of the motorcycle showing that the strength of the motorcycle is sufficient and that it is of satisfactory roadworthiness. Compliance with the requirements of Annex 1, section 5 on brakes shall also be checked by the testing body.

3.10. Composite two-wheeled motorcycle

(1) A composite motorcycle means a motorcycle that is assembled of components from different motorcycle models or universal components, under the conditions set out below.

3.10.1. Motorcycle where the frame has not changed

(1) If the frame is unchanged in respect of load-bearing parts, except for any fittings, the motorcycle is nevertheless considered a composite motorcycle if at least one of the following changes have been made:

a) The engine was replaced with another engine with more than 20 % more power compared to the original.

b) The engine was replaced with another engine with not more than 20 % more power than the original, and the front fork, rear fork, or brakes have been replaced with non-original parts.

3.10.2. Motorcycle with changed frame

(1) If the frame is changed, the motorcycle is considered a composite motorcycle.

(2) A testing body shall check whether the composite motorcycle complies with the technical requirements set out in Annex 1, depending on the model year of the motorcycle.

(3) However, with regard to the motorcycle's roadworthiness, brakes, engine power, sound, air pollution, strength of frame, including front and rear forks, the testing body shall verify that the motorcycle complies with the relevant requirements of points 3.10.3–3.10.8.

3.10.3. Roadworthiness

(1) The testing body shall carry out a roadworthiness test of the composite motorcycle as specified in point 3.2.1.1.3.2.

3.10.4. Brakes

(1) The testing body shall check whether the motorcycle complies with the requirements of point 3.2.1.1.2.

3.10.5. Air pollution and sound

(1) The testing body shall check whether the motorcycle complies with the requirements concerning air pollution (see 3.2.1.2) and sound (see point 3.2.1.3).

3.10.6. Weight to power ratio

(1) The testing body shall verify that the composite motorcycle does not have a power to weight ratio exceeding 40 kW/100 kg. The weight is the kerb weight including a 75 kg driver.

3.10.7. Frame

(1) The testing body shall carry out a calculation or technical assessment of the strength of the frame. For the calculations, the following shall apply:

a) Deformation resistance (γ) at any point on the load-bearing structure, for each of the following loads, shall be at least the following:

i) $\gamma > 2$ for two times static load.

ii) $\gamma > 2{,}5$ for braking with deceleration of 7.5 m/s^2 achieved with a braking force equivalent to 6 m/s^2 from the front wheel and 1.5 m/s^2 from the rear wheel.

b) Material tensions (σ) shall be determined by measurements made on the most loaded parts. The most loaded parts shall be determined by means of calculations or a technical assessment of the structure. For simple structures, calculations alone can be used to verify compliance with the requirements.

c) For the loads referred to in point (a), the fatigue resistance is calculated. For $2x10^6$ stresses the failure probability shall be below the 5 % percentile.

(2) The testing body shall assess the rigidity of the structure in connection with the road test. There shall be no tendency to self-resonance when testing up to 90 % of the top speed.

In order to determine 90 % of the top speed, a mathematical projection shall be used in relation to the increased power to determine a theoretical top speed if the car is not tested completely to the top speed.

(3) The testing body shall declare that the frame is capable of withstanding the stresses that occur from normal use and loads of the car.

3.10.8. Components, including front fork, rear fork, spindles, and other suspension parts

(1) The testing body shall carry out checks on components, including front fork, rear fork, spindles, and other suspension parts in accordance with points 3.4. and 3.7.

3.10.9. Determination of the model year

(1) The motorcycle's new model year shall be determined by the testing body.

The model year is determined on the basis of the weighted average of the year of production and is calculated on the basis of the following elements, where the figure in brackets shows the weighting:

a) Frame (4).

b) Front fork (1).

c) Rear fork (1).

d) Front brakes (1).

e) Rear brakes (1).

f) Engine (3).

g) Transmission (2).

The year of the frame is determined as the original year of the frame, if only fittings or similar have been added.

If other conversions have been made to the frame, the year shall be determined as the average of the original year and the year in which the motorcycle was first presented for inspection for approval of the change.

Within each element referred to in points (d)–(g), the year is established as the average of the most important components. For components, the build year may be used regardless of later production dates.

For the engine, the average of the year of the engine block or cylinders and cylinder head is calculated according to the type designations.

For brakes, the average of the years of disc brake callipers or drum brake anchor plates that are used is calculated.

For a foreign, and previously approved composite motorcycle, the year is established as the year in which the motorcycle was approved in the home country.

3.11. Changes to Electronic Stability System (ESC)

(1) Changes to ESC shall be considered as a structural change to the motorcycle's steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the motorcycle manufacturer with specific information on any necessary technical changes to the motorcycle.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body which has verified that the same motorcycle model exists in a variant without ESC.

(2) On a motorcycle originally fitted with ESC, the system may not be removed or disabled, neither permanently nor temporarily. However, if the motorcycle manufacturer has installed a function where the ESC can be temporarily deactivated, this is permitted.

3.12. Conversion of motorcycle to electric power or changes to electrical system

(1) Conversion of an internal combustion engine motorcycle to electric power or changes to the electrical system of a motorcycle with an electric motor shall be considered as a structural change to the engine to be approved by inspection on the basis of one of the following types of documentation:
   a) Documentation from the motorcycle manufacturer with specific information on all the technical changes.
   b) Documentation consisting of an approval and giving specific information on all the technical changes.
   c) Documentation from a testing body that has carried out tests or checks in accordance with point 3.12.1.

(2) A change to the electrical system may be, for example, a change to a larger or smaller battery or other electrical control, including a change in charge management of the batteries.

(3) The rules also apply if the internal combustion engine is supplemented by an electric motor with associated batteries and technology.

(4) 'Battery' means a traction battery, i.e. the battery that provides electricity to propel the motorcycle.

3.12.1. Checking and testing

(1) The testing body shall carry out the following:
   a) Check that the motorcycle meets the technical requirements set out in Annex IV of Regulation (EU) 3/2014 on electrical safety.
   b) Inspect and check the powertrain components and cabling, focusing on possible safety risks in the event of a collision, and declare that the motorcycle is safe in these terms, and that people cannot inadvertently come into contact with the live parts belonging to the traction parts.
   c) Check that batteries are located separately from the passenger compartment on enclosed motorcycles.
   d) Verify compliance with UN Regulation 10-05 relating to EMC.
   e) Check that the motorcycle still has sufficient loading capacity in relation to the number of seating positions at a load of 75 kg per person.
      The motorcycle's original maximum permissible laden weight may be increased by up to 3 %, unless the motorcycle manufacturer allows further increase.
   f) Check that at the maximum permissible laden weight the motorcycle's permissible axle load is not exceeded by more than 3 % when all seats are in use and excess weight up to the maximum permissible laden weight is placed on the motorcycle's baggage spaces.
   g) If the motorcycle has regeneration during braking, the motorcycle shall be fitted with anti-lock brakes (ABS) and the testing body shall verify that the motorcycle complies with UN Regulation 79 relating to ABS and regeneration, including that the system sends a signal to the stop lamps at the decelerations specified in the Regulation.
   h) Check that the motorcycle complies with standard IEC 61854:2020. Charge mode shall be at least Mode 1 and a ground conductor and fault current switch shall be fitted.
   i) Check the battery management system (BMS), which shall be able to control charging, even from regenerative braking, within the manufacturer's specifications for the battery cells in terms of voltage and maximum temperature.
      The system shall be provided with a protective function that monitors the battery at the cellular level and which interrupts the charge and load of the battery so that the battery is brought into a safe state if the battery cells fall outside the specifications.

j) If the motorcycle at the time of conversion has greater power, the rules on changes to the engine and power increase in section 3.2 shall apply.

(2) If a given change does not affect one or more areas referred to in point (1), the testing body shall substantiate, and checking and testing may thus be omitted for the areas concerned.

4. Mopeds

4.1. Changes on mopeds

(1) No structural changes may be made to the steering, brakes, engine, transmission, or load-bearing elements of a moped.

(2) However, changes as specified in sections 3.4.1. and 3.5.1, which are not considered as structural changes on a motorcycle may also be made on a two-wheeled moped. However, as regards tyres, it is a condition that the diameter of the tyres is not increased.

5. Tractors

5.1. Changes to tractors

(1) Structural changes to steering, brakes, engine, or load-bearing elements shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the tractor manufacturer with specific information on any necessary technical changes to the tractor.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that has carried out tests or checks showing continued compliance with all of the points applicable to tractors in Annex 1. In the case of tractors with diesel engines, point 5.1.1. shall

5.1.1. checked if the engine is changed.

(2) Changes to the wheels of a tractor, authorised by the tractor manufacturer, shall not be considered as structural changes.

(3) In the case of tractors that are not subject to registration, upon structural changes specified in point (1), corresponding documentation for the tractor as well as documentation of the checks specified in point 5.1.1. shall be available.

5.1.1. Additional checks of diesel tractors

(1) For a diesel tractor, the testing body shall verify exhaust gas values measured under full load at six constant RPM according to Regulation (EU) 2016/1628 and its implementing measures. The following apply to the exhaust gas values:

a) The exhaust gas values shall not exceed the limit values by more than 20 %.

b) If the tractor is EU type-approved, the exhaust gas values shall not exceed by more than 20 % the values measured at the original 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 a car and cannot change category to tractor by reducing the top speed to 40 km/h.

6. Motorised work machinery

6.1. Changes to motorised work machinery

(1) Structural changes to steering, brakes, engine, or load-bearing elements may be made if compliance is maintained with all of the provisions in Annex 1.

7. Towed vehicles

7.1. Changes to towed vehicles

(1) Structural changes to steering, brakes, or load-bearing elements shall be approved by inspection on the basis of one of the following types of documentation:
   a) Documentation from the towed vehicle manufacturer with specific information on any necessary technical changes to the vehicle.
   b) Documentation by means of an approval and with specific information on any necessary technical changes.
   c) Documentation from a testing body that has carried out tests or checks that show compliance with points 7.3–7.7.

(2) For towed vehicles subject to type-approval, prior to approval in the inspection of a structural change to steering equipment, brakes, or load-bearing elements, the converted towed vehicle shall have been issued a certificate of approval from the Danish Road Traffic Authority.

7.2. Wheel changes

7.2.1. Changes that are not considered to be structural changes

(1) Changes to wheels shall not be considered as a structural changes of the load-bearing elements entailing the obligation of inspection, approval, and registration, if the following conditions are met:
   a) The wheels comply with the load, speed code, and wheel guard provisions in Annex 1, sections 8.02 and 9.01.
   b) The tyre circumference deviates by a maximum of ± 5 % in nominal value.
      If the towed vehicle’s declaration of approval contains other conditions, these shall be respected.
   c) The tyre fits the rim.
   d) All tires are of the same size.
   e) The section width is not less than the minimum with which the respective weight variant of the towed vehicle was originally provided.
   f) The track gauge is not increased by more than 20 mm or reduced in relation to the possible track gauges permitted by the towed vehicle manufacturer.
   g) If track gauge amplifiers are installed, it is of the type that centers on the hub and in the centre hole of the rim and which, together with the current rim, produces a total change of 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. Installation of Electronic stability control (ESC)

(1) Installation of ESC shall be considered as a structural change to the towed vehicle's steering mechanism that shall be approved by inspection on the basis of one of the following types of documentation:
   a) Documentation from the towed vehicle manufacturer with specific information on any necessary technical changes to the towed vehicle.
   b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from the producer of the ESC system stating that the system is intended to be installed on towed vehicles with axles, brakes, weights, and dimensions as the towed vehicle concerned.

7.4. Removal of brakes from trailer O1

(1) Removal of brakes from a trailer O1 is a structural change that shall be approved by inspection. As a minimum, brake shoes and cables shall be removed and the coupling head with built-in inertia arrangement shall be replaced by a fixed coupling head.

7.5. Reinforcement of self-supporting body or body on frame or chassis frame

(1) Reinforcement of the bodywork or chassis frame 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. Changes to chassis frame

(1) Changes to the drawbar, wheelbase, and overhang shall be considered as a structural change to the load-bearing elements that shall be approved by inspection on the basis of one of the following types of documentation:

a) Documentation from the towed vehicle manufacturer with specific information on any necessary technical changes to the towed vehicle.

b) Documentation by means of an approval and with specific information on any necessary technical changes.

c) Documentation from a testing body that the tensions in an actual steel chassis frame on a towed vehicle with a technical total permissible laden weight exceeding 3 500 kg, when the towed vehicle is under full load, do not exceed 100 N/mm^2 (1 000 kp/cm^2).

7.7. Mounting of loader cranes, tail lifts, tippers, and the like

(1) Loader cranes, tail lifts, tippers, and the like shall be installed in accordance with the vehicle manufacturer’s instructions.

(2) Alternatively, if the towed vehicle has a steel chassis frame, a testing body may demonstrate that the installation has been made in such a way that, when using these devices, the tensions in the chassis frame do not exceed 150 N/mm^2 (1 500 kp/cm^2).

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 towed vehicle manufacturer’s instructions or in accordance with the following guidelines:

a) The reinforcement shall consist of flat steel placed on the upper and lower flange and shall be welded with interrupted welded seams on the side edges.

b) The flat steel shall be so narrower than the flange that the weld is free from the edge and rounding of the flange.

c) The flat steel shall not end in the same cross-sectional area unless it has been brought to the end of the profile.

d) The ends of the flat steel shall be appropriately positioned in relation to spring brackets and the like and shall be tapered, unless they are led to the end of the profile.

8. Replica cars

8.1. Definition of replica car (kit car)

(1) In this context, a replica car (kit car) means a car made by a manufacturer (typically other than the original car manufacturer) as a visually identical copy of the original car, to the untrained eye.
(2) The original car that is imitated must be at least 30 years old.
(3) This may be a car where the replica manufacturer only makes a chassis frame/platform frame or self-supporting body if there are also precise manufacturer's specifications available for the parts to be used in order to be able to assemble the whole car.
(4) In order to be approved as a replica car, the car shall meet the following conditions:
   a) The concept shall be like the original car. Concept includes wheel drive, i.e. front-wheel drive, rear-wheel drive, or all-wheel drive, and positioning the engine, i.e. front, mid, or rear, as well as whether the engine is longitudinal or transverse.
   b) The bodywork shall resemble 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 thickness/drum width). However, drums can be switched to discs if the vehicle with the changed brakes can perform 8 m/s^2 without wheel locking on dry road. Alternatively, the brakes may be approved in accordance with the rules set out in point 2.2.1.1.2.
   d) The engine shall be of the same type (e.g. R6 or V8) as the original, use the same propellant, and the power output shall not be more than 20 % higher than the original car.
   e) The gearbox shall be of the same principle as the original, i.e. manual or automatic.

8.2. Technical requirements for fitting-out and equipment

(1) Replica cars shall comply with the rules set out in Annex 1 for cars of the model year that the replica car is mimicking.

9. Cars intended for motor racing

9.1. Approval of cars intended for motor racing

(1) According to the Danish Automobile Sports Federation (DASU) guidelines for participation in motor racing, cars intended for motor racing shall comply with certain safety provisions, which may result in the cars not complying with all of the rules set out in Annex 1. In order to be competitive against e.g. foreign cars, in a competition, the cars may also be equipped or fitted with components, characteristics, or the like that also do not comply with the rules set out in Annex 1.
(2) Cars approved by DASU to participate in competitions may be approved by inspection, even if they do not comply with the provisions referred to in point 9.1.1.
(3) Conditions for approval by inspection are that the car has interior reinforcements (roll cage or roll bar), fire extinguisher, and 5-point harness.
(4) Cars intended for acceleration tests may not be approved in accordance with these rules.

9.1.1. Exemptions from technical requirements

(1) The following points of Annex 1 need not be met for approval by inspection of cars intended for motor racing.
   a) 2.01.001 (6) on 17-character chassis number (VIN).
   b) 4.01.021 (1) on protective steering.
   c) 4.01.021 (2) on ESC.
   d) 5.01.004 (1), under which the parking brake shall be mechanical.
   e) 5.03.020 (2) on braking power 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 passing-beam headlamps above the ground. However, the dipped-beam headlamps shall be located at least 0.45 m above the ground.
i) 6.04.002 (1) f) on the height of direction-indicator lamps above the ground. However, direction-indicator lamps shall be positioned at least 0.30 m above the ground.
j) 7.02.001 (1) on fuel tanks. The fuel tank may be a non-metallic container approved and marked in accordance with the FIA (Fédération Internationale de l'Automobile) standard Appendix J.
k) 7.05.001 (4) and 7.05.021 (1) on sound levels. The sound level in sound measurement method IV and at 3 500 RPM shall not exceed 103 dB(A).
l) 7.06.020 (2) on air pollution. The car can get by with an unregulated catalytic converter. The carbon monoxide content at idle can be up to 2.5 vol.% and there is no requirement for the lambda number.
m) 8.02.002 (1) (d) and (3) on tyre marking tyre wear indicators.
n) 8.02.021 (3) on tyre pressure monitoring system.
o) 9.01.021 (2), (3), and (4) on side impact, frontal collision, and pedestrian friendliness.
p) 10.01.003 (1) and 10.01.021 (2) relating to head restraints, seats and seat attachments. These may instead be approved and marked in accordance with Fédération Internationale de l'Automobile (FIA) Standard 8862-2009.
q) 10.02.001 (1) and (2) and 10.02.021 (1) on seat belts.
r) 10.02.021 (2) on seat belt anchorages.
s) 10.05.021 (1) on anti-theft devices. However, there shall also be other anti-theft devices in the form of e.g. removable braces or fuel line kill switches.

9.1.2. Conditions for driving the car

(1) The car may only be used for motor racing on closed tracks or for a police-approved motor race on a blocked road, and for driving to and from these events. In addition, driving is allowed to and from exhibitions where the car is to be displayed, as well as driving in connection with inspections, driving to and from the workshop, as well as testing after repair (maximum 20 km from the owner or repairer). Thus, the car may not be used for ‘ordinary’ private passenger transport, regardless of the registration certificate that the vehicle’s use is private passenger transport.

10. Motorcycles intended for motor racing

10.1. Approval of motorcycles intended for motor racing

(1) Motorcycles may, for reasons of usefulness or competitiveness, be equipped with equipment, or lack equipment, which precludes a motorcycle from being in compliance with the rules set out in Annex 1.
(2) Motorcycles approved by Dansk Motor Union (DMU) to participate in motor racing may be approved by inspection, even if they do not comply with the provisions referred to in point 10.1.1.

10.1.1. Exemptions from technical requirements

(1) The following points of Annex 1 need not be met for the approval by inspection of trial and enduro motorcycles intended to participate in motor racing:
a) 2.01.001 (6) on 17-character chassis number (VIN).
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 levels. The sound level in sound measurement method IV and at 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 tyre wear indicators.
g) 10.02.031 (4) on mirrors.

10.1.2. Conditions for driving the motorcycle

(1) The motorcycle may only be used for motor racing on closed tracks or for a police-approved motor race on a blocked road, and for driving to and from such races, as well as for driving in connection with inspections of the motorcycle. Thus, the motorcycle may not be used for ‘ordinary’ private passenger transport, regardless of the registration certificate that the vehicle’s use is private passenger transport.

Annex 3

List of Union acts and UN Regulations to which the Order refers

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 test for measuring leakages from certain air conditioning systems
Regulation 715/2007/EU	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 vehicle repair and maintenance information
Regulation 78/2009/EU	Regulation (EC) 78/2009 of the European Parliament and of the Council of 14 January 2009 on the type-approval of motor vehicles with regard to the protection of pedestrians and other vulnerable road users, amending Directive 2007/46/EC and repealing Directives 2003/102/EC and 2005/66/EC
Regulation 79/2009/EC	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	Regulation (EC) 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) 715/2007 and Directive 2007/46/EC and repealing Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC
Regulation 661/2009/EU	Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor
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 Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor
Regulation 347/2012/EU	Commission Regulation (EU) No 347/2012 of 16 April 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with respect to type-approval requirements for certain categories of motor vehicles with regard to advanced emergency braking systems

Regulation 351/2012/EU	Commission Regulation (EU) No 351/2012 of 23 April 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards type-approval requirements for the installation of lane departure warning systems in motor vehicles
Regulation 1230/2012/EU	Commission Regulation (EU) No 1230/2012 of 12 December 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with regard to type-approval requirements for masses and dimensions of motor vehicles and their trailers and amending Directive 2007/46/EC
Regulation 167/2013/EU	Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles
Regulation 168/2013/EU	Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 n 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 Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to vehicle functional safety requirements for the 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 Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the vehicle construction and general requirements for the approval of two- or three-wheel vehicles and quadricycles
Regulation 134/2014/EU	Commission Delegated Regulation (EU) No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof
Regulation 540/2014/EU	Regulation (EU) No 540/2014 of the European Parliament and of the Council 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 Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the administrative requirements for the approval and market surveillance 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 Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to vehicle construction and general requirements for the approval of agricultural and forestry vehicles
Regulation 2015/68/EU	Commission Delegated Regulation (EU) 2015/68 of 15 October 2014 supplementing Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to vehicle braking requirements for the approval of agricultural and forestry vehicles

Regulation 2015/208/EU	Commission Delegated Regulation (EU) 2015/208 of 8 December 2014 supplementing Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to vehicle functional safety requirements for the approval of agricultural and forestry vehicles
Regulation 2015/504/EU	Commission Implementing Regulation (EU) 2015/504 of 11 March 2015 implementing 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 2015/562/EU	Commission Regulation (EU) 2015/562 of 8 April 2015 amending Regulation (EU) No 347/2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with respect to type-approval requirements for certain categories of motor vehicles with regard to advanced emergency braking systems
Regulation 2016/1628/EU	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 Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC
Regulation 2017/1151/ EU	Commission Regulation (EU) 2017/1151 of 1 June 2017 supplementing Regulation (EC) No 715/2007 of the European Parliament and of the Council 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 2018/858/EU	Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC
Regulation 2019/1242/EU	Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO2 emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC
Regulation 2019/2144/EU	Regulation (EU) 2019/2144 of the European Parliament and of the Council of 27 November 2019 on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858 of the European Parliament and of the Council and repealing Regulations (EC) No 78/2009, (EC)

	No 79/2009 and (EC) No 661/2009 of the European Parliament and of the Council and Commission Regulations (EC) No 631/2009, (EU) No 406/2010, (EU) No 672/2010, (EU) No 1003/2010, (EU) No 1005/2010, (EU) No 1008/2010, (EU) No 1009/2010, (EU) No 19/2011, (EU) No 109/2011, (EU) No 458/2011, (EU) No 65/2012, (EU) No 130/2012, (EU) No 347/2012, (EU) No 351/2012, (EU) No 1230/2012 and (EU) 2015/166
Regulation 2021/535/EU	Commission Implementing Regulation (EU) 2021/535 of 31 March 2021 laying down rules for the application of Regulation (EU) 2019/2144 of the European Parliament and of the Council as regards uniform procedures and technical specifications for the type-approval of vehicles, and of systems, components and separate technical units intended for such vehicles, as regards their general construction characteristics and safety

Regulation 2021/646/EU	Commission Regulation (EU) 2016/646 of 20 April 2016 amending Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6)
Regulation 2021/1243/EU	Commission Delegated Regulation (EU) 2021/1243 of 19 April 2021 supplementing Regulation (EU) 2019/2144 of the European Parliament and of the Council by laying down detailed rules concerning the alcohol interlock installation facilitation in motor vehicles and amending Annex II to that Regulation
Regulation 2022/545/EU	Commission Delegated Regulation (EU) 2022/545 of 26 January 2022 supplementing 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 their event data recorder and for the type-approval of those 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 rear protective devices for 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 motor 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 spark-ignition engines fitted to 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 unauthorized 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 (strength of seats and of their anchorages)

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 No 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 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 for motor vehicles and their trailers, and their location and method of attachment
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 reflex 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 end-outline marker lamps, front position (side) lamps, rear position (side) lamps and stop 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 the measures to be taken against the emission of pollutants from diesel engines for use in 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 to technical progress 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 on the permissible sound level and exhaust system 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 the 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 the interior fittings of motor vehicles (strength of seats and of their 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 anchorages for motor-vehicle safety belts
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 the laws 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 89/458/EEC of 18 July 1989 amending with regard to European emission standards for cars below 1.4 litres, 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 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 the measures to be taken 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 in respect of the behaviour of the steering wheel and column in an impact
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 their 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 progress Council Directive 70/311/EEC relating to steering equipment for 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 attachment to those vehicles
Directive 95/28/EC	Directive 95/28/EC of the European Parliament and of the Council of 24 October 1995 relating to the burning behaviour of materials used in the interior construction of certain categories of motor vehicle

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 relating to devices to prevent the unauthorized use of motor vehicles
Directive 96/1/EC	Directive 96/1/EC of the European Parliament and of the Council 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	Directive 96/27/EC of the European Parliament and of the Council of 20 May 1996 on the protection of occupants of motor vehicles in the event of a side impact 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 relating to safety belts and restraint systems of 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 fittings of motor vehicles (strength of seats and of their 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 motor vehicle safety belts
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 emissions from motor vehicles
Directive 96/53/EC	Council Directive 96/53/EC of 25 July 1996 laying down for certain road vehicles circulating within the Community the maximum authorized dimensions in national and international traffic and the maximum authorized weights in international traffic
Directive 96/69/EC	Directive 96/69/EC of the European Parliament and of the Council of 8 October 1996 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 96/79/EC	Directive 96/79/EC of the European Parliament and of the Council of 16 December 1996 on the protection of occupants of motor vehicles in the event of a frontal impact 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 the 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 on 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 the suppression of radio interference produced by spark-ignition engines fitted to wheeled agricultural or forestry tractors and Council Directive 74/150/EEC relating to the type-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 underrun protection 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	Directive 2001/1/EC of the European Parliament and of the Council of 22 January 2001 amending Council Directive 70/220/EEC concerning 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 to their fitting
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 Directives 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 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 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 on adapting to technical progress Council Directive 96/96/EC as regards the testing of exhaust emissions from motor vehicles
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 Directive 2000/25/EC of the European Parliament and of the Council concerning the emission of gaseous and particulate pollutants by engines intended to power agricultural or forestry tractors, and amending Annex I to Directive 2003/37/EC of the European Parliament and of the Council concerning 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, and 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 thereto
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 concerning 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 requirements for the emission control monitoring system 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 such vehicles (Framework Directive)
Directive 2008/74/EC	Commission Directive 2008/74/EC of 18 July 2008 amending, as regards the 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 2005/55/EC of the European Parliament and of the Council and Directive 2005/78/EC

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 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 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 radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the 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 (except 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 electromag- netic compatibility
UN Regulation 12	Uniform provisions concerning the approval of vehicles with regard to the protec- tion 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 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 po- wer-driven vehicles II. Vehicles equipped with safety-belts, safety-belt reminders, restraint systems, child restraint systems and ISOFIX 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 unauthorized 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 interi- or fittings
UN Regulation 23	Uniform provisions concerning the approval of reversing and manoeuvring lamps for power-driven vehicles and their trailers
UN Regulation 24	Uniform provisions concerning: i. the approval of compression ignition (c.i.) eng- ines 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’s 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 preven- tion of fire 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 speedo-

	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 installa- tion 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 wheels 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 noise
UN Regulation 64	Uniform provisions concerning the approval of vehicles with regard to their equipment which may include: a temporary-use spare 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 vehic- les 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-mo-ving 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 30 minutes power of electric drive trains
UN Regulation 89	Uniform provisions concerning the approval of: I. Vehicles with regard to limitati- on of their maximum speed or their adjustable speed limitation function II. Vehic- les 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 devi- ces (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 protec- tion of the occupants in the event of a frontal collision
UN Regulation 95	Uniform provisions concerning the approval of vehicles with regard to the protec- tion of the occupants in the event of a lateral collision
UN Regulation 96	Uniform provisions concerning the approval of compression ignition (C. I.) eng- ines 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 vehic- les of category m, n and o
UN Regulation 107	Uniform provisions concerning the approval of category M2 and M3 vehicles with regard to their general construction

UN Regulation 108	Uniform provisions concerning the approval for the production of retreaded pneu- matic tyres for motor vehicles and their trailers
UN Regulation 109	Uniform provisions concerning the approval for the production of retreaded pneu- matic 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 fila- ment 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 petrole- um 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 aga- inst unauthorized 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 capa- bility 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 hydrogenfuelled vehicles (HFCV)
UN Regulation 139	Uniform provisions concerning the approval of passenger cars with regard to Brake Assist Systems
UN Regulation 140	Uniform provisions concerning the approval of passenger cars with regard to 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 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 157	Automated Lane Keeping Systems (ALKS)
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 unauthori- zed use and the approval of the device against unauthorized use (by mean of a locking system)
UN Regulation 162	Uniform technical prescriptions concerning approval of immobilizers and approval of a vehicle with regard to its immobilizer
UN Regulation 163	Uniform provisions concerning the approval of vehicle alarm system and approval of a vehicle with regard to its vehicle alarm system