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 (Text with EEA relevance) LIST OF ANNEXES

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# ANNEX I

#### GENERAL DEFINITIONS, CRITERIA FOR VEHICLE CATEGORISATION, TYPES OF VEHICLE AND TYPES OF BODYWORK INTRODUCTORY PART Definitions and general provisions

- 1. Definitions
- 1.1. 'Seating position' means any location capable of accommodating one person seated who is at least as large as:
- (a) the manikin of the 50th percentile adult male in the case of the driver;

- (b) the manikin of the 5th percentile adult female in all other cases.
- 1.2. 'Seat' means a complete structure with trim, integral or not with the vehicle body structure, which is intended to seat one person.

It includes both an individual seat and a bench seat, as well as folding seats and removable seats.

1.3. 'Goods' means primarily any movable things.

It includes products in bulk, manufactured goods, liquids, living animals, crops, indivisible loads.

- 1.4. 'Maximum mass' means the 'technically permissible maximum laden mass'.
- 2. General provisions
- 2.1. Number of seating positions
- 2.1.1. The requirements regarding the number of seating positions apply to seats that are designed for use when the vehicle is travelling on the road.
- 2.1.2. They do not apply to seats that are designed for use when the vehicle is stationary and which are clearly identified to users either by means of a pictogram or a sign with an appropriate text.
- 2.1.3. The following requirements apply for the counting of the seating positions:
- (a) each individual seat shall be counted as one seating position;
- (b) in the case of a bench seat, any space having a width of at least 400 mm measured at the seat cushion level shall be counted as one seating position.

This condition shall not prevent the manufacturer from using the general provisions referred to in point 1.1;

- (c) however, a space as referred to in point (b) shall not be counted as one seating position where:
  - (i) the bench seat includes features that prevent the bottom of the manikin from sitting in a natural way for example: the presence of a fixed console box, an unpadded area or an interior trim interrupting the nominal seating surface;
  - (ii) the design of the floor pan located immediately in front of a presumed seating position (for example the presence of a tunnel) prevents the feet of the manikin from being positioned in a natural way.
- 2.1.4. With respect to vehicles covered by UN Regulations No 66 and No 107, the dimension referred to in point 2.1.3(b) shall be aligned with the minimum space required for one person in relation to the various classes of vehicles.
- 2.1.5. When seat anchors for a removable seat are present in a vehicle, the removable seat shall be counted in the determination of the number of the seating positions.
- 2.1.6. An area intended for an occupied wheelchair shall be regarded as one seating position.
- 2.1.6.1. This provision shall be without prejudice to the requirements of paragraphs 3.6.1 and 3.7 of Annex 8 to UN Regulation No 107.
- 2.2. Maximum mass

# 2.2.1. In the case of a tractor unit for semi-trailer, the maximum mass to be considered for classifying the vehicle shall include the maximum mass of the semi-trailer borne by the fifth wheel coupling.

- 2.2.2. In the case of a motor vehicle that can tow a centre-axle trailer or a rigid drawbar trailer, the maximum mass to be considered for classifying the motor vehicle shall include the maximum mass transferred to the towing vehicle by the coupling.
- 2.2.3. In the case of a semi-trailer, a centre-axle trailer and a rigid drawbar trailer, the maximum mass to be considered for classifying the vehicle shall correspond to the maximum mass transmitted to the ground by the wheels of an axle or group of axles when coupled to the towing vehicle.
- 2.2.4. In the case of a converter dolly, the maximum mass to be considered for classifying the vehicle shall include the maximum mass of the semi-trailer borne by the fifth wheel coupling.
- 2.3. Special equipment
- 2.3.1. Vehicles fitted primarily with fixed equipment such as machinery or apparatus shall be regarded as N or O category.
- 2.4. Units
- 2.4.1. Unless otherwise stated any unit of measurement and associated symbol shall conform to Council Directive 80/181/EEC<sup>(1)</sup>.
- 3. Categorisation into vehicle categories
- 3.1. The manufacturer is responsible for the categorisation of a type of vehicle into a specific category.

For such purposes, all the relevant criteria described in this Annex shall be met.

3.2. The approval authority may request from the manufacturer appropriate additional information with the aim of demonstrating that a type of vehicle needs to be categorised as special purpose vehicle in the special group ('SG Code').

# PART A

# Criteria for vehicle categorisation

1. Vehicle categories

For the purposes of EU type-approval and national type-approval, as well as for EU individual vehicle approval and national individual vehicle approval, vehicles shall be categorised in accordance with the classification referred to in Article 4.

Approval can only be granted for the categories referred to in Article 4(1).

- 2. Vehicle subcategories
- 2.1. Off-road vehicles

'Off-road vehicle (ORV)' means a vehicle that belongs to category M or N, having specific technical features which permit its use off the normal roads.

For those categories of vehicles, the letter 'G' shall be added as suffix to the letter and numeral identifying the vehicle category.

The criteria for the subcategorisation of vehicles as ORV are specified in point 4 of this Part.

- 2.2. Special purpose vehicles (SPV)
- 2.2.1. For incomplete vehicles that are intended to fall into the SPV subcategory, the letter 'S' shall be added as suffix to the letter and numeral identifying the vehicle category.

The various types of special purpose vehicles are defined and listed in point 5.

- 2.3. Off road special purpose vehicle
- 2.3.1. 'Off road special purpose vehicle (ORV-SPV)' means a vehicle that belongs either to category M or N having the specific technical features referred to in points 2.1 and 2.2.

For those categories of vehicles, the letter 'G' shall be added as suffix to the letter and numeral identifying the vehicle category.

Moreover, for incomplete vehicles that are intended to fall into the SPV subcategory, the letter 'S' shall be added as second suffix.

- 3. Criteria for the categorisation of vehicles in category N
- 3.1. The categorisation of a type of vehicle in category N shall be based on the technical features of the vehicle as referred to in points 3.2 to 3.6.
- 3.2. As a matter of principle, the compartment(s) where all the seating positions are located, shall be completely separated from the loading area.
- 3.3. By way of derogation from the requirements of point 3.2, persons and goods may be transported in the same compartment under the condition that the loading area is provided with securing devices designed to protect persons transported against the displacement of the load during driving, including severe braking and cornering.
- 3.4. Securing devices lashing devices intended for securing the load as required in point 3.3 as well as partitioning systems, intended for vehicles up to 7,5 tonnes shall be designed in accordance with the provisions of sections 3 and 4 of international standard ISO 27956:2009 'Road vehicles Securing of cargo in delivery vans Requirements and test methods'.
- 3.4.1. The requirements referred to in point 3.4 may be verified by a statement of compliance provided by the manufacturer.
- 3.4.2. As an alternative to the requirements of point 3.4, the manufacturer may demonstrate to the satisfaction of the approval authority that the securing devices fitted show an equivalent level of protection as provided in the referred standard.
- 3.5. The number of seating positions excluding the driver's seating position shall not exceed:
- (a) 6 in the case of  $N_1$  vehicles;
- (b) 8 in the case of  $N_2$  or  $N_3$  vehicles.
- 3.6. Vehicles shall show a goods-carrying capacity equal or higher than the person-carrying capacity expressed in kg.

- 3.6.1. For such purposes, the following equations shall be satisfied in all configurations, in particular when all seating positions are occupied:
- (a) when N = 0:

 $P - M \ge 100 \text{ kg}$ 

(b) when  $0 < N \le 2$ :

 $P - (M + N \times 68) \ge 150 \text{ kg};$ 

(c) when N > 2:

 $P - (M + N \times 68) \ge N \times 68;$ 

where the letters have the following meaning:

- 'P' is the technically permissible maximum laden mass;
- 'M' is the mass in running order;
- 'N' is the number of seating positions excluding the driver's seating position.
- 3.6.2. The mass of equipment that is fitted to the vehicle in order to accommodate goods (e.g. tank, bodywork, etc.), to handle goods (e.g. crane, lift, etc.) and to secure goods (e.g. cargo securing devices) shall be included in M.
- 3.6.3. The mass of equipment that is not used for the purposes referred to in point 3.6.2 (such as a compressor, a winch, an electric power generator, broadcasting equipment, etc.) shall not be included in M for the purposes of the application of the formulae referred to in point 3.6.1.
- 3.7. The requirements referred to in points 3.2 to 3.6 shall be met for all variants and versions within the type of vehicle.
- 3.8. Criteria for the categorisation of vehicles as  $N_1$ .
- 3.8.1. A vehicle shall be categorised as  $N_1$  when all the applicable criteria are met.

When one or more of the criteria are not met, the vehicle shall be categorised as M<sub>1</sub>.

- 3.8.2. In addition to the general criteria referred to in points 3.2 to 3.6, the criteria specified in this point shall be met for the categorisation of vehicles for which the compartment where the driver is located and the load are within a single unit (i.e. bodywork 'BB').
- 3.8.2.1. The fact that a wall or a partition, complete or partial, is fitted between a seat row and the cargo area shall not rule out the obligation to meet the required criteria.
- 3.8.2.2. The criteria shall be as follows:
- (a) the loading of the goods shall be possible by a rear door, a tailgate or a side-door designed and constructed for that purposes;
- (b) in the case of a rear door or a tailgate, the loading aperture shall meet the following requirements:
  - (i) in the case the vehicle is fitted with only one row of seats or with only the driver seat, the minimum height of the loading aperture shall be at least 600 mm;

- (ii) in the case the vehicle is fitted with two or more rows of seats, the minimum height of the loading aperture shall be at least 800 mm and the aperture shall show a surface of at least 12 800 cm<sup>2</sup>;
- (c) The cargo area shall meet the following requirements:

'cargo area' means the part of the vehicle located behind the row(s) of seats or behind the driver seat when the vehicle is fitted with only one driver seat;

- (i) the loading surface of the cargo area shall be generally flat;
- (ii) where the vehicle is fitted with only one row of seats or with one seat, the minimum length of the cargo area shall be at least 40 % of the wheelbase;
- (iii) where the vehicle is fitted with two or more rows of seats, the minimum length of the cargo area shall be at least 30 % of the wheelbase.

Where the seats of the last row of seats can be easily removed from the vehicle without the use of special tools, the requirements regarding the length of the cargo area shall be met with all the seats installed in the vehicle;

- (iv) the requirements regarding the length of the cargo area shall be met when the seats of the first row or of the last row, as the case may be, are upright in their normal position for use by the vehicle occupants.
- 3.8.2.3. Specific conditions for measurement
- 3.8.2.3.1. Definitions
- (a) 'Height of the loading aperture', means the vertical distance between two horizontal planes tangent respectively to the highest point of the lower part of the doorway and the lowest point of the upper part of the doorway;
- (b) 'Surface of the loading aperture' means the greatest surface of the orthogonal projection on a vertical plane, perpendicular to the centreline of the vehicle, of the maximum aperture permitted when the rear door(s) or tailgate is (are) wide open;
- (c) 'Wheelbase', for the purposes of application of the formulae in points 3.8.2.2 and 3.8.3.1, means the distance between:
  - (i) the centreline of the front axle and the centreline of the second axle in the case of a two axle vehicle; or
  - (ii) the centreline of the front axle and the centreline of a virtual axle equally distant from the second and third axle in the case of a three axle vehicle.
- 3.8.2.3.2. Seat adjustments
- (a) The seats shall be adjusted at their rear outermost positions;
- (b) The seat back, if adjustable, shall be adjusted as to accommodate the three-dimensional H-point machine at a torso angle of 25 degrees;
- (c) The seat back, if not adjustable, shall be in the position designed by the vehicle manufacturer;
- (d) When the seat is adjustable in height, it shall be adjusted to its lowest position.
- 3.8.2.3.3. Vehicle conditions

- (a) The vehicle shall be in loaded conditions corresponding to its maximum mass;
- (b) The vehicle shall be with its wheels straight ahead.
- 3.8.2.3.4. The requirements of point 3.8.2.3.2 shall not apply when the vehicle is fitted with a wall or a partition.
- 3.8.2.3.5. Measurement of the length of the cargo area
- (a) When the vehicle is not fitted with a partition or a wall, the length shall be measured from a vertical plane tangent to the rear outermost point of the top of the seat back to the rear internal pane or door or tailgate, in closed position;
- (b) When the vehicle is fitted with a partition or a wall, the length shall be measured from a vertical plane tangent to the rear outermost point of the partition or the wall to the rear internal pane or door or tailgate, as the case may be, in closed position;
- (c) The requirements concerning the length shall be fulfilled at least along a horizontal line situated in the longitudinal vertical plane passing through the centreline of the vehicle, at the level of the load floor.
- 3.8.3. In addition to the general criteria referred to in points 3.2 to 3.6, the criteria specified in this point shall be met for the categorisation of vehicles for which the compartment where the driver is located and the load are not within a single unit (i.e. bodywork 'BE').
- 3.8.3.1. Where the vehicle is fitted with an enclosure type body, the following shall apply:
- (a) the loading of the goods shall be possible by a rear door, a tailgate or a panel or other means;
- (b) the minimum height of the loading aperture shall be at least 800 mm and the aperture shall show a surface of at least 12  $800 \text{ cm}^2$ ;
- (c) The minimum length of the cargo area shall be at least 40 % of the wheelbase.
- 3.8.3.2. Where the vehicle is fitted with an open type cargo area, only the provisions referred to in points 3.8.3.1(a) and (c) shall apply.
- 3.8.3.3. For the application of the provisions referred to in point 3.8.3, the definitions in point 3.8.2.3.1 shall apply.
- 3.8.3.4. However, the requirements concerning the length of the cargo area shall be fulfilled along a horizontal line situated in the longitudinal plane passing through the centreline of the vehicle at the level of the load floor.
- 4. Criteria for the sub-categorisation of vehicles as off-road vehicles
- 4.1.  $M_1$  or  $N_1$  vehicles shall be subcategorised as off-road vehicles if they satisfy at the same time the following conditions:
- (a) at least one front and at least one rear axle designed to be driven simultaneously irrespective of whether one powered axle can be disengaged;
- (b) at least one differential locking mechanism or a mechanism having similar effect is fitted;
- (c) they are able to climb at least a 25 % gradient as a solo vehicle;

- (d) they satisfy five out of the following six requirements:
  - (i) the approach angle shall be at least 25 degrees;
  - (ii) the departure angle shall be at least 20 degrees;
  - (iii) the ramp angle shall be at least 20 degrees;
  - (iv) the ground clearance under the front axle shall be at least 180 mm;
  - (v) the ground clearance under the rear axle shall be at least 180 mm;
  - (vi) the ground clearance between the axles shall be at least 200 mm.
- 4.2. M<sub>2</sub>, N<sub>2</sub> or M<sub>3</sub> vehicles the maximum mass of which does not exceed 12 tonnes shall be subcategorised as off-road vehicles if they satisfy either the condition set out in point (a) or the conditions set out in both points (b) and (c):
- (a) all their axles are driven simultaneously, irrespective of whether one or more powered axles can be disengaged;
- (b) (i) at least one front and at least one rear axle are designed to be driven simultaneously irrespective of whether one powered axle can be disengaged;
  - (ii) at least one differential locking mechanism or a mechanism having the same effect is fitted;
  - (iii) they are able to climb a 25 % gradient as a solo vehicle;
- (c) they satisfy at least five out of the following six requirements if their maximum mass does not exceed 7,5 tonnes and at least four if their maximum mass exceeds 7,5 tonnes:
  - (i) the approach angle shall be at least 25 degrees;
  - (ii) the departure angle shall be at least 25 degrees;
  - (iii) the ramp angle shall be at least 25 degrees;
  - (iv) the ground clearance under the front axle shall be at least 250 mm;
  - (v) the ground clearance between axles shall be at least 300 mm;
  - (vi) the ground clearance under the rear axle shall be at least 250 mm.
- 4.3. M<sub>3</sub> or N<sub>3</sub> vehicles whose maximum mass exceeds 12 tonnes shall be subcategorised as off-road vehicles if they satisfy either the condition set out in point (a) or the conditions set out in both points (b) and (c):
- (a) all their axles are driven simultaneously, irrespective of whether one or more powered axles can be disengaged;
- (b) (i) at least half of the axles (or two axles out of the three in the case of a three axle vehicle and three axles in the case of a five axle vehicle) is designed to be driven simultaneously, irrespective of whether one powered axle can be disengaged;
  - (ii) there is at least one differential locking mechanism or a mechanism having similar effect;
  - (iii) they are able to climb a 25 % gradient as solo vehicle;

- (c) they satisfy at least four out of the following six requirements:
  - (i) the approach angle shall be at least 25 degrees;
  - (ii) the departure angle shall be at least 25 degrees;
  - (iii) the ramp angle shall be at least 25 degrees;
  - (iv) the ground clearance under the front axle shall be at least 250 mm;
  - (v) the ground clearance between axles shall be at least 300 mm;
  - (vi) the ground clearance under the rear axle shall be at least 250 mm.
- 4.4. The procedure for checking compliance with the geometrical provisions referred to in this Part shall be set out in Appendix 1.
- 4.5. The requirements in points 4.1(a), 4.2(a), 4.2(b), 4.3(a), 4.3(b) on simultaneous driven axles are considered to have been fulfilled if one of the following conditions is fulfilled:
- (a) the transmission of the tractive power to all axles is performed by mechanical means only which provides traction in heavy off-road; or
- (b) each of the wheels of the axle in question is driven by an individual hydraulic or electric motor.

If the axles according to the requirements in points 4.1(a), 4.2(a), 4.2(b), 4.3(a), 4.3(b) on simultaneous driven axles are not powered by mechanical means only, the propulsion of the individual wheels shall be designed for heavy off-road operation. In such case it shall be ensured that at least 75 % of total tractive power can be transmitted to the wheel in question when the tractive conditions under the other wheels do not allow to transmit the tractive power properly via these wheels.

The auxiliary drive system according to point 4.5(b) shall not allow to disengage the tractive power automatically until the vehicle reaches 75 % of the maximum vehicle design speed or reaches 65 km/h.

	Name	Code	Definition
5.1.	Motor caravan	SA	A vehicle of category M with living accommodation space which contains the following equipment as a minimum: (a) seats and table; (b) sleeping accommodation which may be converted from the seats;

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			<ul> <li>(c) cooking facilities;</li> <li>(d) storage facilities.</li> <li>This equipment shall be rigidly fixed to the living compartment.</li> <li>However, the table may be designed to be easily removable.</li> </ul>
5.2.	Armoured vehicle	SB	A vehicle intended for the protection of conveyed persons or goods with anti-bullet armour plating.
5.3.	Ambulance	SC	A vehicle of category M intended for the transport of sick or injured persons and having special equipment for such purpose.
5.4.	Hearse	SD	A vehicle of category M intended for the transport of deceased persons and having special equipment for such purpose.
5.5.	Wheelchair accessible vehicle	SH	A vehicle of category $M_1$ constructed or converted specifically so that they accommodate one or more persons seated in their wheelchairs when travelling on the road.
5.6.	Trailer caravan	SE	A vehicle of category O as defined in term 3.2.1.3 of international standard ISO 3833:1977.
5.7.	Mobile crane	SF	A vehicle of category $N_3$ , not fitted for the carriage of goods, provided with a crane whose lifting moment is equal to or higher than 400 kNm.

5.8.	Special group	SG	A special purpose vehicle that does not enter in any of the definitions mentioned in this Part.
5.9.	Converter dolly	SJ	A vehicle of category O equipped with a fifth-wheel coupling to support a semi- trailer with a view to converting the latter into a trailer.
5.10.	Exceptional load transport trailer	SK	A vehicle of category $O_4$ intended for the transport of indivisible loads that is subject to speed and traffic restrictions because of its dimensions. Under this term are also included hydraulic modular trailers irrespective of the number of modules.
5.11.	Exceptional load transport motor vehicle	SL	A road tractor or tractor unit for semi- trailer of category $N_3$ meeting all the following conditions: (a) having more than two axles and at least half of the axles (two axles out of three in the case of a three axle vehicle and three axles out of five in the case of a five axle vehicle) designed to be driven simultaneousl irrespective

			(b) (c) (d)	of whether one powered axle can be disengaged; that is designed for towing and pushing exceptional load transport trailer of category O <sub>4</sub> ; that has a minimum engine power of 350 kW; and that can be equipped with an additional front coupling device for heavy towable masses.
5.12.	Multi-equipment carrier	SM	An off-ro of catego defined in 2.3) desig construct pulling, p carrying actuating inter-char equipmen (a)	n point gned and ed for pushing, and certain ngeable

	(c) If the veh equipped an auxilia platform, maximur shall not (a) (b)	with ary load , its n length exceed: 1,4 times of the front or rear track width of the vehicle, whichever is the larger in the case of two axle vehicles; or 2,0 times of the front or rear track width of the vehicle, whichever is the larger in the case of two axle
axles.		of vehicles having more than two

6. Remarks

- 6.1. Type-approval shall not be granted:
- (a) to converter dolly as defined in point 5.9 of this Part;
- (b) to rigid drawbar trailers as defined in point 5.4 of Part C;
- (c) to trailers in which persons may be carried when travelling on the road.
- 6.2. Point 6.1 is without prejudice to Article 42 on national small series type-approval.

# PART B

#### Criteria for types of vehicle, variants and versions

- 1. Category M<sub>1</sub>
- 1.1. Type of vehicle
- 1.1.1. A 'type of vehicle' shall consist of vehicles that have the following features in common:
- (a) the manufacturer's company name.

A change in the legal form of ownership of the company does not require that a new approval has to be granted;

(b) the design and assembly of the essential parts of the body structure in the case of a self-supporting body.

The same shall apply to vehicles the bodywork of which is bolted on or welded to a separate frame;

- 1.1.2. By way of derogation from the requirements of point 1.1.1(b), when the manufacturer uses the floor portion of the body structure as well as the essential constituent elements forming the front part of the body structure located directly in front of the windscreen bay, in the construction of different kinds of bodywork (for example a saloon and a coupe), those vehicles may be considered as belonging to the same type. Evidence thereof shall be provided by the manufacturer.
- 1.1.3. A type shall consist of at least one variant and one version.
- 1.2. Variant
- 1.2.1. A 'variant' within a type of vehicle shall group the vehicles that have the following construction features in common:
- (a) the number of lateral doors or the type of bodywork as defined in point 2 of Part C when the manufacturer uses the criterion of point 1.1.2;
- (b) the power plant with regard to the following construction features:
  - (i) the type of energy supply (internal combustion engine, electric motor or other);
  - (ii) the working principle (positive ignition, compression ignition or other);
  - (iii) the number and arrangement of cylinders in the case of internal combustion engine (L4, V6 or other);

- (c) the number of axles;
- (d) the number, and interconnection of powered axles;
- (e) the number of steered axles;
- (f) the stage of completion (e.g. complete/incomplete);
- (g) in the case of multi-stage built vehicles, the manufacturer and the type of the previous stage vehicle.
- 1.3. Version
- 1.3.1. A 'version' within a variant shall group the vehicles that have the following features in common:
- (a) the technically permissible maximum laden mass;
- (b) the engine capacity in the case of internal combustion engine;
- (c) the maximum engine power output or the maximum continuous rated power (electric motor);
- (d) the nature of the fuel (petrol, gas oil, LPG, bi-fuel or other);
- (e) the maximum number of seating positions;
- (f) drive-by sound level;
- (g) exhaust emission level (for example Euro 5, Euro 6 or other);
- (h) combined or weighted, combined CO<sub>2</sub> emissions;
- (i) electric energy consumption (weighted, combined);
- (j) combined or weighted, combined fuel consumption;

As an alternative to the criteria in points (h), (i) and (j), the vehicles grouped into a version shall have in common all tests performed for the calculation of their  $CO_2$  emissions, electric energy consumption and fuel consumption in accordance with sub-Annex 6 to Annex XXI to Commission Regulation (EU) 2017/1151<sup>(2)</sup>.

- 2. Categories M<sub>2</sub> and M<sub>3</sub>
- 2.1. Type of vehicle
- 2.1.1. A 'type of vehicle' shall consist of vehicles that have the following features in common:
- (a) the manufacturer's company name.

- (b) the category;
- (c) the following aspects of construction and design:
  - (i) the design and construction of the essential constituent elements forming the chassis;

(ii) the design and construction of the essential constituent elements forming the body structure in the case of a self-supporting body;

- (d) the number of decks (single or double);
- (e) the number of sections (rigid/articulated);
- (f) the number of axles;
- (g) the mode of energy supply (on-board or off-board);
- 2.1.2. A type of vehicle shall consist of at least one variant and one version.
- 2.2. Variant
- 2.2.1. A 'variant' within a type of vehicle shall group the vehicles that have all of the following construction features in common:
- (a) the type of bodywork as defined in point 3 of Part C;
- (b) the class or combination of classes of vehicles as defined in paragraph 2.1.1 of UN Regulation No 107 (only in the case of complete and completed vehicles);
- (c) the stage of completion (e.g. complete/incomplete/completed);
- (d) the power plant with regard to the following construction features:
  - (i) the type of energy supply (internal combustion engine, electric motor or other);
  - (ii) the working principle (positive ignition, compression ignition or other);
  - (iii) the number and arrangement of cylinders in the case of internal combustion engine (L6, V8 or other);
- (e) in the case of multi-stage built vehicles, the manufacturer and the type of the previous stage vehicle.
- 2.3. Version
- 2.3.1. A 'version' within a variant shall group the vehicles that have all the following features in common:
- (a) the technically permissible maximum laden mass;
- (b) the ability of the vehicle to tow a trailer or not;
- (c) the engine capacity in the case of internal combustion engine;
- (d) the maximum engine power output or the maximum continuous rated power (electric motor);
- (e) the nature of the fuel (petrol, gas oil, LPG, bi-fuel or other);
- (f) drive-by sound level;
- (g) exhaust emission level (for example Euro IV, Euro V or other).
- 3. Category N<sub>1</sub>
- 3.1. Type of vehicle

- 3.1.1. A 'type of vehicle' shall consist of vehicles that have the following features in common:
- (a) the manufacturer's company name.

- (b) the design and assembly of the essential parts of the body structure in the case of a self-supporting body;
- (c) the design and the construction of the essential constituent elements forming the chassis in the case of a non-self-supporting body.
- 3.1.2. By way of derogation from the requirements of point 3.1.1(b), when the manufacturer uses the floor portion of the body structure as well the essential constituent elements forming the front part of the body structure located directly in front of the windscreen bay, in the construction of different kinds of bodywork (for example a van and a chassis-cab, different wheelbases and different roof heights), those vehicles may be considered as belonging to the same type. Evidence thereof shall be provided by the manufacturer.
- 3.1.3. A type of vehicle shall consist of at least one variant and one version.
- 3.2. Variant
- 3.2.1. A 'variant' within a type of vehicle shall group the vehicles that have the following construction features in common:
- (a) the number of lateral doors or the type of bodywork as defined in point 4 of Part C (for complete and completed vehicles) when the manufacturer uses the criterion of point 3.1.2;
- (b) the stage of completion (e.g. complete/incomplete/completed);
- (c) the power plant with regard to the following construction features:
  - (i) the type of energy supply (internal combustion engine, electric motor or other);
  - (ii) the working principle (positive ignition, compression ignition or other);
  - (iii) the number and arrangement of cylinders in the case of internal combustion engine (L6, V8 or other);
- (d) the number of axles;
- (e) the number and interconnection of powered axles;
- (f) the number of steered axles.
- (g) in the case of multi-stage built vehicles, the manufacturer and the type of the previous stage vehicle.
- 3.3. Version
- 3.3.1. A 'version' within a variant shall group the vehicles that have the following features in common:

- (a) the technically permissible maximum laden mass;
- (b) the engine capacity in the case of internal combustion engine;
- (c) the maximum engine power output or maximum continuous rated power (electric motor);
- (d) the nature of the fuel (petrol, gas oil, LPG, bi-fuel or other);
- (e) the maximum number of seating positions;
- (f) drive-by sound level;
- (g) exhaust emission level (for example Euro 5, Euro 6 or other);
- (h) combined or weighted, combined  $CO_2$  emissions;
- (i) electric energy consumption (weighted, combined);
- (j) combined or weighted, combined fuel consumption;
- (k) the existence of a unique set of innovative technologies, as specified in Article 12 of Regulation (EU) No 510/2011 of the European Parliament and of the Council<sup>(3)</sup>.

As an alternative to the criteria in points (h), (i) and (j), the vehicles grouped into a version shall have in common all tests performed for the calculation of their  $CO_2$  emissions, electric energy consumption and fuel consumption in accordance with sub-Annex 6 to Annex XXI of Regulation (EU) 2017/1151.

- 4. Categories  $N_2$  and  $N_3$
- 4.1. Type of vehicle
- 4.1.1. A 'type of vehicle' shall consist of vehicles that have the following features in common:
- (a) the manufacturer's company name.

- (b) the category;
- (c) the design and construction of the chassis that are common to a single line of product;
- (d) the number of axles;
- 4.1.2. A type of vehicle shall consist of at least one variant and one version.
- 4.2. Variant
- 4.2.1. A 'variant' within a type of vehicle shall group the vehicles that have the following construction features in common:
- (a) the body structural concept or type of bodywork as defined in point 4 of Part C and in Appendix 2 (only for complete and completed vehicles);
- (b) the stage of completion (e.g. complete/incomplete/completed);
- (c) the power plant with regard to the following construction features:

- (i) the type of energy supply (internal combustion engine, electric motor or other);
- (ii) the working principle (positive ignition, compression ignition or other);
- (iii) the number and arrangement of cylinders in the case of internal combustion engine (L6, V8 or other);
- (d) the number and interconnection of powered axles;
- (e) the number of steered axles;
- (f) in the case of multi-stage built vehicles, the manufacturer and the type of the previous stage vehicle.
- 4.3. Version
- 4.3.1. A 'version' within a variant shall group the vehicles that have the following features in common:
- (a) the technically permissible maximum laden mass;
- (b) the ability or not to tow a trailer as follows:
  - (i) an unbraked trailer;
  - (ii) a trailer with an inertia (or overrun) braking system as defined in paragraph 2.12 of UN Regulation No 13;
  - (iii) a trailer with a continuous or semi-continuous braking system as defined in paragraphs 2.9 and 2.10 of UN Regulation No 13;
  - (iv) a trailer of category O<sub>4</sub> that results in a maximum mass of the combination not exceeding 44 tonnes;
  - (v) a trailer of category  $O_4$  that results in a maximum mass of the combination exceeding 44 tonnes;
- (c) the engine capacity;
- (d) the maximum engine power output;
- (e) the nature of the fuel (petrol, gas oil, LPG, bi-fuel or other);
- (f) drive-by sound level;
- (g) exhaust emission level (for example Euro IV, Euro V or other).
- 5. Categories  $O_1$  and  $O_2$
- 5.1. Type of vehicle
- 5.1.1. A 'type of vehicle' shall consist of vehicles that have the following features in common:
- (a) the manufacturer's company name.

- (b) the category;
- (c) the concept as defined in point 5 of Part C;
- (d) the following aspects of construction and design:
  - (i) the design and construction of the essential constituent elements forming the chassis;
  - (ii) the design and construction of the essential constituent elements forming the body structure in the case of a self-supporting body;
- (e) the number of axles.
- 5.1.2. A type of vehicle shall consist of at least one variant and one version.
- 5.2. Variant
- 5.2.1. A 'variant' within a type of vehicle shall group the vehicles that have the following construction features in common:
- (a) the kind of bodywork as referred to in Appendix 2 (for complete and completed vehicles);
- (b) the stage of completion (e.g. complete/incomplete/completed);
- (c) the type of braking system (e.g. unbraked/inertia/power);
- (d) in the case of multi-stage built vehicles, the manufacturer and the type of the previous stage vehicle.
- 5.3. Version
- 5.3.1. A 'version' within a variant shall group the vehicles that have the following features in common:
- (a) the technically permissible maximum laden mass;
- (b) the concept of the suspension (air, steel or rubber suspension, torsion bar or other);
- (c) the concept of the drawbar (triangle, tube or other).
- 6. Categories  $O_3$  and  $O_4$
- 6.1. Type of vehicle
- 6.1.1. A 'type of vehicle' shall consist of vehicles that have the following features in common:
- (a) the manufacturer's company name.

- (b) the category;
- (c) the concept of the trailer with relation to the definitions in point 5 of Part C;
- (d) the following aspects of construction and design:

- (i) the design and construction of the essential constituent elements forming the chassis;
- (ii) the design and construction of the essential constituent elements forming the body structure in the case of trailers with a self-supporting body;
- (e) the number of axles.
- 6.1.2. A type of vehicle shall consist of at least one variant and one version.
- 6.2. Variants
- 6.2.1. A 'variant' within a type of vehicle shall group the vehicles that have the following construction and design features in common:
- (a) the kind of bodywork as referred to in Appendix 2 (for complete and completed vehicles);
- (b) the stage of completion (e.g. complete/incomplete/completed);
- (c) the concept of the suspensions (steel, air or hydraulic suspension);
- (d) the following technical features:
  - (i) the capability or not for the chassis to be extendible;
  - (ii) the deck height (normal, low loader, semi-low loader etc.);
- (e) in the case of multi-stage built vehicles, the manufacturer and the type of the previous stage vehicle.
- 6.3. Versions
- 6.3.1. A 'version' within a variant shall group the vehicles that have the following features in common:
- (a) the technically permissible maximum laden mass;
- (b) the subdivisions or combination of subdivisions referred to in points 3.2 and 3.3 of Annex I to Directive 96/53/EC into which the axle spacing between two consecutive axles forming a group belongs;
- (c) the definition of the axles in the following respects:
  - (i) lift axles (number and position);
  - (ii) loadable axles (number and position);
  - (iii) steered axle (number and position).
- 7. Common requirements for all vehicle categories
- 7.1. When a vehicle falls into several categories because of its maximum mass or the number of seating positions or both, the manufacturer may select to use the criteria of one or the other vehicle category for the definition of the variants and the versions.
- 7.1.1. Examples:

- (a) a vehicle 'A' may be type-approved as  $N_1$  (3,5 tonnes) and  $N_2$  (4,2 tonnes) in relation to its maximum mass. In such a case, the parameters mentioned in category  $N_1$  may be used also for the vehicle that falls into category  $N_2$  (or vice-versa);
- (b) a vehicle 'B' may be type-approved as  $M_1$  and  $M_2$  in relation to the number of seating positions (7 + 1 or 10 + 1), the parameters mentioned in category  $M_1$  may be used also for the vehicle that falls into category  $M_2$  (or vice-versa).
- 7.2. A vehicle of category N may be type-approved against the provisions required for category  $M_1$  or  $M_2$ , as the case may be, when it is intended to be converted into a vehicle of that category during the next step of a multi-stage type-approval procedure.
- 7.2.1. This option shall only be permitted for incomplete vehicles.

Such vehicles shall be identified by a specific variant code given by the manufacturer of the base vehicle.

- 7.3. Type-, variant- and version designations
- 7.3.1. The manufacturer shall allocate an alphanumeric code to each type of vehicle, variant and version, made up of Roman letters and/or Arabic numerals.

The use of brackets and hyphens is permitted provided they do not replace a letter or a numeral.

- 7.3.2. The whole code shall be designated: Type-Variant-Version or 'TVV'.
- 7.3.3. The TVV shall clearly and unequivocally identify a unique combination of technical features in relation to the criteria defined in this Part.
- 7.3.4. The same manufacturer may use the same code in order to define a type of vehicle when the latter falls in two or more categories.
- 7.3.5. The same manufacturer shall not use the same code in order to define a type of vehicle for more than one type-approval within the same vehicle category.
- 7.4. Number of characters for the TVV
- 7.4.1. The number of characters shall not exceed:
- (a) 15 for the code of the type of vehicle;
- (b) 25 for the code of one variant;
- (c) 35 for the code of one version.
- 7.4.2. The complete alphanumeric 'TVV' shall not contain more than 75 characters.
- 7.4.3. When the TVV is used as a whole, a space shall be left between the type, the variant and the version.

Example of such TVV: 159AF[...space]0054[...space]977K(BE).

# PART C

# **Definitions of types of bodywork**

1. General

1.1. The type of bodywork as well as the code for bodywork shall be indicated by means of codes.

The list of codes shall apply primarily to complete and completed vehicles.

- 1.2. As regards vehicles of categories M, the type of bodywork shall consist of two letters as specified in points 2 and 3.
- 1.3. As regards vehicles of categories N and O, the type of bodywork shall consist of two letters as referred to in points 4 and 5.
- 1.4. Where necessary (especially for the types of bodywork referred to respectively in points 4.1 and 4.6 and in points 5.1 to 5.4), they shall be supplemented by two digits.
- 1.4.1. The list of digits shall be laid down in Appendix 2.
- 1.5. For special purpose vehicles, the type of bodywork to be used shall be linked to the category of the vehicle.

Ref.	Code	Name	Definition
2.1.	AA	Saloon	A vehicle defined in term 3.1.1.1 of international standard ISO 3833:1977, fitted with at least four side windows.
2.2.	AB	Hatchback	A saloon as defined in 2.1 with a hatch at the rear end of the vehicle.
2.3.	AC	Station wagon	A vehicle defined in term 3.1.1.4 of international standard ISO 3833:1977.
2.4.	AD	Coupé	A vehicle defined in term 3.1.1.5 of international standard ISO 3833:1977.
2.5.	AE	Convertible	A vehicle defined in terms No 3.1.1.6 of international standard ISO 3833:1977. However, a convertible may have no door.
2.6.	AF	Multi-purpose vehicle	A vehicle other than AG and those mentioned in AA to AE intended for

2. Vehicles belonging to category M<sub>1</sub>

the vehicle.

carrying persons and their luggage or occasionally goods, in a single compartment. 2.7. Truck station wagon AG A vehicle defined in term No 3.1.1.4.1 of international standard ISO 3833:1977. However, the luggage compartment must be completely separated from the passenger compartment. In addition, the reference point of the driver's seating position needs not to be at least at 750 mm above the surface supporting

# 3. Vehicles belonging to category M<sub>2</sub> or M<sub>3</sub>

Ref.	Code	Name	Definition
3.1.	CA	Single-deck vehicle	A vehicle where the spaces provided for persons are arranged in a single level or in a way that they do not constitute two superimposed levels;
3.2.	СВ	Double-deck vehicle	A vehicle defined in paragraph 2.1.6 of UN Regulation No 107;
3.3.	CC	Single-deck articulated vehicle	A vehicle defined in paragraph 2.1.3 of UN Regulation No 107 with a single deck;
3.4.	CD	Double-deck articulated vehicle	A vehicle defined in paragraph 2.1.3.1 of UN Regulation No 107;
3.5.	СЕ	Low-floor single- deck vehicle	A vehicle defined in paragraph 2.1.4 of UN Regulation

			No 107 with a single deck;
3.6.	CF	Low-floor double- deck vehicle	A vehicle defined in paragraph 2.1.4 of UN Regulation No 107 with a double deck;
3.7.	CG	Articulated low-floor single-deck vehicle	A vehicle that combines the technical features of points 3.3 and 3.5 of this table;
3.8.	СН	Articulated low-floor double-deck vehicle	A vehicle that combines the technical features of points 3.4 and 3.6 of this table;
3.9.	CI	Open top single deck vehicle	A vehicle with partial roof or without roof;
3.10.	СЈ	Open top double deck vehicle	A vehicle without roof over all or part of its upper deck;
3.11.	СХ	Bus chassis	An incomplete vehicle with just chassis rails or tube assembly, power train, axles, that is intended to be completed with bodywork, customised to the needs of the transport operator.

# 4. Motor vehicles of category $N_1$ , $N_2$ or $N_3$

Ref.	Code	Name	Definition
4.1.	BA	Lorry	A vehicle that is designed and constructed exclusively or principally for conveying goods. It may also tow a trailer.
4.2.	BB	Van	A lorry with the compartment where the driver is located

			and cargo area within a single unit.
4.3.	BC	Tractor unit for semi- trailer	A towing vehicle that is designed and constructed exclusively or principally to tow semi-trailers.
4.4.	BD	Road tractor	A towing vehicle that is designed and constructed exclusively to tow trailers other than semi-trailers.
4.5.	BE	Pick-up truck	A vehicle of a maximum mass not exceeding 3 500 kg in which the seating positions and the cargo area are not located in a single compartment.
4.6.	BX	Chassis-cab or chassis-cowl	An incomplete vehicle with just a cabin (complete or partial), chassis rails, power train, axles, which is intended to be completed with bodywork, customised to the needs of the transport operator.

# 5. Vehicles of category O

Ref.	Code	Name	Definition
5.1.	DA	Semi-trailer	A trailer that is designed and constructed to be coupled to a tractor unit or to a converter dolly and to impose a substantial vertical load on the towing vehicle or on the converter dolly. The coupling to be used for a vehicle

combination shall consist of a king pin and a fifth wheel. 5.2. DB Drawbar trailer A trailer having at least two axles, of which at least one is a steered axle: (a) equipped with a towing device which can move vertically (in relation to the trailer); and (b) that transmits less than 100 daN as a static vertical load to the towing vehicle. 5.3. DC Centre-axle trailer A trailer where the axle(s) is (are) positioned close to the centre of gravity of the vehicle (when uniformly loaded) so that only a small static vertical load, not exceeding 10 % of that corresponding to the maximum mass of the trailer or a load of 1 000 daN (whichever is the lesser) is transmitted to the towing vehicle. 5.4. DE Rigid drawbar trailer A trailer with one axle or one group of axles fitted with a drawbar which transmits a static load not exceeding 4 000 daN to the towing vehicle due to its construction and that

does not meet the definition of a centre-axle trailer.
The coupling to be used for a vehicle
combination shall not consist of a king pin and a fifth wheel.

# Appendix 1

Procedure for checking whether a vehicle can be categorised as off-road vehicle

- 1. General
- 1.1. For the purposes of classification of a vehicle as off-road vehicle, the procedure described in this Appendix shall apply.
- 2. Test conditions for geometric measurements
- 2.1. Vehicles belonging to category  $M_1$  or  $N_1$  shall be in unloaded conditions with a manikin of the 50th percentile male installed on the driver's seat and fitted with coolant fluid, lubricants, fuel, tools, spare-wheel (if fitted as OEM equipment).

The manikin may be replaced by a similar device having the same mass.

2.2. Vehicles other than those referred to in point 2.1 shall be loaded to their technically permissible maximum laden mass.

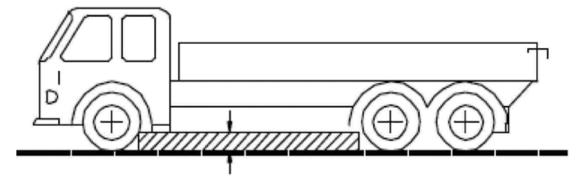
The distribution of the mass on the axles shall be the one that represents the worst case with respect to compliance with the respective criteria.

2.3. A vehicle representative of the type shall be submitted to the technical service in the conditions specified in point 2.1 or 2.2. The vehicle shall be in a stationary position with its wheels set straight ahead.

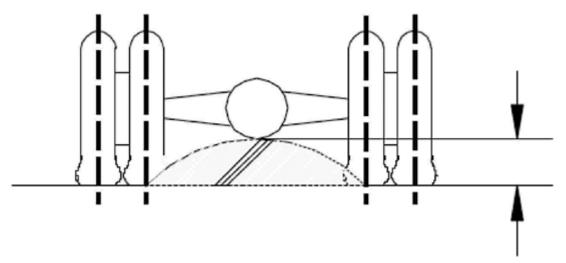
The ground on which measurements are made shall be as flat and horizontal (maximum of inclination 0,5 %) as possible.

- 3. Measurement of approach, departure and ramp angles
- 3.1. The approach angle shall be measured in accordance with paragraph 6.10 of international standard ISO 612:1978.
- 3.2. The departure angle shall be measured in accordance with paragraph 6.11 of international standard ISO 612:1978.
- 3.3. The ramp angle shall be measured in accordance with paragraph 6.9 of international standard ISO 612:1978.
- 3.4. When measuring the departure angle rear underrun protection devices which are adjustable in height may be set in the upper position.
- 3.5. The prescription in point 3.4 shall not be construed as an obligation for the base vehicle to be fitted with a rear underrun protection as original equipment. However, the base vehicle manufacturer shall inform the next stage manufacturer that the vehicle has to comply with the requirements on departure angle when fitted with a rear underrun protection.
- 4. Measurement of ground clearance
- 4.1. Ground clearance between the axles
- 4.1.1. 'Ground clearance between the axles' means the shortest distance between the ground plane and the lowest fixed point of the vehicle.

For the application of the definition, the distance between the last axle of a front group of axle and the first axle of a rear group of axle shall be considered.



- 4.1.2. No rigid part of the vehicle may project into the shaded area shown on the figure.
- 4.2. Ground clearance beneath one axle
- 4.2.1. 'Ground clearance beneath one axle' means the distance beneath the highest point of the arc of a circle passing through the centre of the tyre footprint of the wheels on one axle (the inner wheels in the case of twin tyres) and touching the lowest fixed point of the vehicle between the wheels.



- 4.2.2. Where appropriate, the measurement of ground clearance shall be conducted on each of the several axles of a group of axles.
- 5. Gradeability
- 5.1. 'Gradeability' means the ability of a vehicle to negotiate a gradient.
- 5.2. To the effect of checking the gradeability of an incomplete and a complete vehicle of category M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub> and N<sub>3</sub>, a test shall be performed.
- 5.3. The test shall be conducted by the technical service on a vehicle representative of the type to be tested.
- 5.4. At the request of the manufacturer and under the conditions specified in Annex VIII, the gradeability of a type of vehicle may be demonstrated by virtual testing.

- 6. Test conditions and pass-fail criterion
- 6.1. The conditions set out in Annex II to Commission Regulation (EU) No 1230/2012<sup>(4)</sup> shall apply.
- 6.2. The vehicle shall climb the gradient at a steady speed without any wheel slipping, longitudinally or laterally.

# Appendix 2

Digits used to supplement the codes to be used for various kinds of bodywork

01	Flat bed;
02	Drop-side;
03	Box body;
04	Conditioned body with insulated walls and equipment to maintain the
	interior temperature;
05	Conditioned body with insulated walls but without equipment to
	maintain the interior temperature;
06	Curtain-sided;
07	Swap body (interchangeable superstructure);
08	Container carrier;
09	Vehicles fitted with hook lift;
10	Tipper;
11	Tank;
12	Tank intended for transport of dangerous goods;
13	Livestock carrier;
14	Vehicle transporter;
15	Concrete mixer;
16	Concrete pump vehicle;
17	Timber;
18	Refuse collection vehicle;
19	Street sweeper, cleansing and drain clearing;
20	Compressor;
21	Boat carrier;
22	Glider carrier;
23	Vehicles for retail or display purposes;
24	Recovery vehicle;
25	Ladder vehicle;
26	Crane lorry (other than a mobile crane as defined in point 5.7 of Part A);
27	Aerial work platform vehicle;
28	Digger derrick vehicle;
29	Low floor trailer;
30	Glazing transporter;
31	Fire engine;
99	Bodywork that is not included in this list.

#### ANNEX II

# **REQUIREMENTS FOR THE PURPOSE OF EU TYPE-APPROVAL OF VEHICLES, SYSTEMS, COMPONENTS OR SEPARATE TECHNICAL UNITS**

### PART I

#### Regulatory acts for EU type-approval of vehicles produced in unlimited series

Item	Subj	Subjeckegula <b>topp</b> licability									STU		
		act refer	M <sub>1</sub> ence	<b>M</b> <sub>2</sub>	M <sub>3</sub>	N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	01	<b>O</b> <sub>2</sub>	03	<b>O</b> <sub>4</sub>	or component
1A	Sound	Regul (EU) No 540/20 of the Europ Parlia and of the Cound	)14 ean ment	X	X	X	X	X					X
2A	Emiss (Euro 5 and Euro 6) light duty vehicl access to inform	No 715/20 es/		X ( <sup>1</sup> )		X ( <sup>1</sup> )	X ( <sup>1</sup> )						X
3A	Preven of fire risks (liquid fuel tanks)	Regul	009	Х	Х	Х	X	X	X	X	X	X	
3B	under protec	t <b>ivæ</b> £661/2	009	X	X	X	X	X	X	X	X	X	X

	their No installation; rear underrun protection (RUP)										
4A	Space Regulation for (EC) mounting and 661/2009 fixing Commission rear Regulation registrated by plates No 1003/2010 <sup>b</sup>	X	X	X	X	X	X	Х	X	X	
5A	Steeringegulation equipn(Eff) No 661/2009 UN Regulation No 79	X	X	X	X	Х	X	Х	Х	X	
6A	Vehicl Regulation access (EC) and No manoe 661a 2009 (steps, Commission runnin Regulation boards (EU) and No handhol 992012°			X	X	X					
6B	Door Regulation latches(EC) and No door 661/2009 retention compoRegustation No 11			X							
7A	AudiblRegulaXion warnih@EC) device3No and 661/2009 signalsUN Regulation No 28	X	X	X	X	X					X

8A	DeviceRegulaXion for (EC) indirecNo vision 661/2009 and UN their Regulation installaNon 46	X	X	X	X	X					X
9A	Brakin Begulation of (EC) vehicleNo and 661/2009 trailersUN Regulation No 13	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X ( <sup>3</sup> )	
9B	Brakin Begulation of (EC) passen Stor cars 661/2009 UN Regulation No 13-H			X ( <sup>4</sup> )							
10A	ElectroReggilation compa(IB(I)ty No 661/2009 UN Regulation No 10	X	X	X	Х	X	X	Х	X	Х	Х
12A	InterioRegulaXon fittings(EC) No 661/2009 UN Regulation No 21										
13A	ProtectRongulation of (EC) motor No	X ( <sup>4A</sup> )	X ( <sup>4A</sup> )		X ( <sup>4A</sup> )	X ( <sup>4A</sup> )					X

13B	ProtectRagulaXion of (EC) motor No vehicless61/2009 againstUN unauthRaeigedation use No 116			X					X
14A	ProtectRagulation of (EC) the No driver 661/2009 againstUN the Regulation steeringlo mechailism in the event of impact			X					
15A	Seats, Regulation their (EC) anchor Agres and 661/2009 any UN head Regulation restraintso 17	X ( <sup>4B</sup> )	X ( <sup>4B</sup> )	X	X	X			
15B	Seats Regulation of (EC) large No passen <b>g6</b> 1/2009 vehiclesN Regulation No 80	X	X						
16A	Extern Regulation project(ECS) No 661/2009 UN Regulation No 26								X
17A	VehicleRegulaXion access (EC) and No manoe66/a2009	X	X	X	X	X			

	(reversRegulation gear) (EU) No 130/2012										
17B	Speed <b>Regulation</b> equipm(Eff) includiNgo its 661/2009 installattion No 39	X	X	X	Х	Х					
18A	Manuf <b>Actgreats</b> ion statuto(FC) plate No and 661/2009 VIN Regulation (EU) No 19/2011	X	X	X	Х	Х	X	X	Х	X	
19A	Safety Regulation belt (EC) anchor Ages, Isofix 661/2009 anchor Bess system Regulation and No Isofix 14 top tether anchorages	X	X	X	X	X					
20A	Install <b>Ricgulaxion</b> of (EC) lightingNo and 661/2009 light- UN signall <b>Ricg</b> ulation device No on 48 vehicles	Х	X	X	Х	Х	Х	Х	Х	Х	
21A	Retro-Regulation reflecti(fgC) deviceNo for 661/2009 power-UN driven Regulation vehicleNo 3 and their trailers	X	X	X	X	X	X	X	X	X	X

Front Regulaxion Х Х 22A Х Х Х Х Х Х Х Х and (EC) No rear positio661/2009 lamps, UN stop- Regulation lamps No 7 and endoutline marker lamps for motor vehicles and their trailers 22B DaytinRegulaXion Х Х Х Х Х Х runningEC) lamps No 661/2009 for power-UN driven Regulation vehiclesto 87 22C Х Х Х Х Х Side- Regulation Х Х Х Х Х marker(EC) lamps No 661/2009 for motor UN vehicleRegulation and No their 91 trailers 23A DirectiRegulaXion Х Х Х Х Х Х Х Х Х Х indicat(**EC**) for No power-661/2009 driven UN vehicleRegulation and No 6 their trailers Х Х Х Х Х Х 24A Illumination Х Х Х Х of (EC)rear-No registratedn/2009 plates of

	power-UN driven Regulation vehicleNo 4 and their trailers										
25A	Power Regulation driven (EC) vehicletso sealed-661/2009 beam UN headlattopgulation (SB) No emittingl an European asymmetrical passing beam or a driving beam or both	X	X	X	X	X					X
25B	FilameRtegulaXion lamps (EC) for No use 661/2009 in UN approvRdgulation lamp No units 37 of power- driven vehicles and their trailers	X	X	X	X	X	X	X	X	X	X
25C	Motor Regulation vehicle(EC) headlaitips equipp6d1/2009 with UN gas- Regulation dischartige light 98 sources	X	X	X	X	X					X
25D	Gas- RegulaXion dischatgeC) light	X	X	X	X	X					X

	sourcesNo for 661/2009 use UN in Regulation approvNab gas- 99 discharge lamp units of power- driven vehicles								
25E	Motor Regulation vehicle(EC) headlaitips emitting61/2009 an UN asymmetrigedation passingNo beam 112 or a driving beam or both and equipped with filament lamps and/ or LED modules	X	X	X	X	X			X
25F	AdaptiRegulation front- (EC) lightingNo system661/2009 (AFS) UN for Regulation motor No vehicle\$23	X	X	X	X	X			X
26A	Power-Regulation driven (EC) vehicleNo front 661/2009 fog UN lamps Regulation No 19	X	X	Х	Х	Х			X

27A	Towin Regulation device (EC) No 661/2009 Commission Regulation (EU) No 1005/2010 <sup>d</sup>	X	Х	X	X	X					
28A	Rear Regulation fog (EC) lamps No for 661/2009 power-UN driven Regulation vehicleNo and 38 their trailers	X	X	X	X	X	X	X	X	X	X
29A	Revers Rugulation lights (EC) for No power-661/2009 driven UN vehicle Regulation and No their 23 trailers	X	X	X	X	X	X	X	X	Х	X
30A	Parkin Regulation lamps (EC) for No power-661/2009 driven UN vehicleRegulation No 77	X	X	X	X	X					
31A	Safety Regulation belts, (EC) restrainNo system661/2009 child UN restrainRegulation systemNo and 16 Isofix child restraint systems	X	X	X	X	X					X
32A	Forwardegulation field (EC)										

	of No vision 661/2009 UN Regulation No 125										
33A	Locationegulation and (EC) identification of 661/2009 hand UN controlRegulation tell- No 121 tales and indicators	X	X	X	X	X					
34A	Winds dtegn alion defrost (Fig.) and No demist frig /2009 system Commission Regulation (EU) No 672/2010 <sup>e</sup>	( <sup>5</sup> )	(5)	( <sup>5</sup> )	( <sup>5</sup> )	(5)					
35A	Winds degulation wiper (EC) and No washer661/2009 system Commission Regulation (EU) No 1008/2010 <sup>f</sup>	( <sup>6</sup> )	(6)	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )					X
36A	Heatin Begulaxion system(EC) No 661/2009 UN Regulation No 122	X	X	X	X	X	X	Х	Х	Х	X
37A	Wheel Regulation guards(EC) No 661/2009 Commission Regulation (EU) No 1009/2010 <sup>g</sup>										

20.4		1									
38A	Head Regulation restrain(ISC) (headrests), whether 61/2009 or UN not Regulation incorpostated in 25 vehicle										
41A	seats EmissiRuegulation (Euro (EC) VI) No heavy 595/2009 duty vehicles/ access to information	X (°)	X	X ( <sup>9</sup> )	X ( <sup>9</sup> )	X					X
42A	LateralRegulation protect(EfC) of No goods 661/2009 vehicles/N Regulation No 73				X	X			X	X	X
43A	Spray Regulation supprestion systemNo 661/2009 Commission Regulation (EU) No 109/2011 <sup>h</sup>	h		X	Х	X	X	Х	Х	X	X
44A	Masse Regulation and (EC) dimensitons 661/2009 Regulation (EU) No 1230/2012										
45A	Safety Regulation glazingEC) materialko and 661/2009 their UN installalticgulation	X	X	X	X	X	X	X	Х	X	X

	on No vehicle\$3										
46A	Install <b>RiegulaX</b> ion of (EC) tyres No 661/2009 Commission Regulation (EU) No 458/2011 <sup>i</sup>	X	X	X	Х	X	Х	Х	X	Х	
46B	$\begin{array}{c c c c c c c c c c c c c c c c c c c $			X			X	Х			Х
46C	$\begin{array}{c c} Pneum Rtigulation\\ tyres (EC)\\ for No\\ commerfedal2009\\ vehicles N\\ and Regulation\\ their No\\ trailers 54\\ (Classes\\ C_2\\ and\\ C_3)\\ \end{array}$	X	X	X	X	X			X	X	X
46D	Tyre Regulation rolling(EC) sound No emissions $(EC)$ adhesion No on Regulation wet No 117 surfaces and rolling resistance (Classes $C_1$ , $C_2$ and $C_3$ )	X	X	X	X	X	X	X	X	X	X

46E	Tempo <b>Rargu</b> laXion use (EC) ( <sup>9A</sup> ) spare No unit, 661/2009 run- UN flat Regulation tyres/ No system64 and tyre pressure monitoring system			X ( <sup>9A</sup> )							X
47A	Speed Regulation limitat(difC) of No vehicless61/2009 UN Regulation No 89	X	X		X	X					X
48A	Masse Regulation and (EC) dimensNms 661/2009 Regulation (EU) No 1230/2012	X	X	X	X	X	X	X	Х	X	
49A	CommRregal ation vehicle(EC) with No regard 661/2009 to UN their Regulation externalNo projectfolns forward of the cab's rear panel			X	X	X					
50A	Mecha <b>Ricgu</b> laXion couplin(EC) ( <sup>10</sup> ) compoNents of 661/2009 combinations of Regulation vehicles	X ( <sup>10</sup> )	X	Х	X	X	X				

	No 55								
50B	Close-Regulation coupling C) device No (CCD)661/2009 fitting UN of an Regulation approv No type 102 of CCD			X ( <sup>10</sup> )	X ( <sup>10</sup> )		X ( <sup>10</sup> )	X ( <sup>10</sup> )	X
51A	Burningegulation behaviofic) of No materiatos1/2009 used UN in Regulation the No 118 interior construction of certain categories of motor vehicles		X						
52A	M <sub>2</sub> Regulation and (EC) M <sub>3</sub> No vehicles61/2009 UN Regulation No 107	X	X						
52B	Streng Regulation of (EC) the No superstored to the of UN large Regulation passen geor vehicless6	X	X						
53A	ProtectRagulaXion of (EC) ( <sup>11</sup> ) occupaNts in 661/2009 the UN event Regulation of a No 94								

	frontal collision								
54A	ProtectRagulaXion of (EC) ( <sup>12</sup> ) occupaNts in 661/2009 the UN event Regulation of No lateral 95 collision	X ( <sup>12</sup> )							
56A	Vehiclessegulation for (EC) the No carriage661/2009 of UN dangerRurgulation goods No 105	X ( <sup>13</sup> )	X ( <sup>13</sup> )	X ( <sup>13</sup> )					
57A	Front Regulation underr(IFC) protectNe device\$61/2009 (FUPD\$)N and Regulation their No installation; front underrun protection (FUP)		X	X					X
58	PedestiRagulaXion protect(EC) No 78/2009 of the European Parliament and of the Council <sup>i</sup>	X							X
59	Recyc IBbirlicyiXe 2005/64/ EC of the European Parliament and	X							

		of the Counc	2il <sup>k</sup>										
61	Air- condit system	Direct i2006g hEC of the Europ Parlia and of the Counc	40/ ean ment			X ( <sup>14</sup> )							
62	Hydro	Regulation (EC) No 79/20 of the Europ parlia: and the Counc	09 ean ment	X	X	Х	X	Х					
63	Gener Safety	aRegul (EC) No 661/2	( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	
64	Gear shift indica	(EČ) t <b>ði</b> s 661/2	009 nission ation										
65	emerg brakir	igNo n661/2	009 nission ation	X	X		X	X					
						1							

	warnihyo system661/2009 Commission Regulation (EU) No 351/2012 <sup>p</sup>	L							
67	SpecifiRegulaXion compo(feft)s for No liqueficto1/2009 petroleUN gases Regulation (LPG) No and 67 their installation on motor vehicles	X	X	X	X	X			X
68	Vehic Regulation alarm (EC) systemNo (VAS) 661/2009 UN Regulation No 97			X					X
69	ElectriRegulaXion safety (EC) No 661/2009 UN Regulation No 100	X	Х	X	X	X			
70	SpecifiRegulation compo(fefit)s for No CNG 661/2009 and UN their Regulation installation 10 on motor vehicles	X	X	X	X	X			X
71	Cab Regulation strengt(EC) No 661/2009			Х	X	X			

		UN											
		Regul No	ation										
72		29	<b>V</b> an			v							
72	system					X							
		2015/ of	758										
		the Europ	ean										
		Parlia and											
		of											
		the Cound	cil <sup>q</sup>										
a	Regulation ( motor vehicl												
	70/157/EEC	(OJ L 15	58, 27.5.2	2014, p. 1.	31).								
b	Commission for mounting (EC) No 661	g and the	fixing of	rear regis	stration p	lates on n	notor vehi	icles and	their trail	ers and ir	nplement	ing Regul	lation
	safety of mo 9.11.2010, p	tor vehic											
c	Commission vehicles with												
	European Pa their trailers												chicles,
d	Commission vehicle towing	ng devic	es and im	plementir	ig Regula	ation (EC	) No 661/	2009 of t	he Europ	ean Parlia	iment and	l of the Co	ouncil
	concerning t and separate								les, their	trailers ar	nd system	s, compoi	nents
e	Commission defrosting ar	nd demis	ting syste	ems of cer	tain moto	or vehicle	s and imp	lementin	g Regulat	tion (EC)	No 661/2	2009 of th	e
	European Pa their trailers												chicles,
f	Commission wiper and wa	asher sys	stems of c	ertain mo	tor vehic	eles and ir	nplement	ing Regul	lation (EC	Ĉ) No 661	/2009 of	the Europ	bean
	Parliament a trailers and s												eir
g	Commission guards of cer	rtain mot	or vehicl	es and im	plementi	ng Regula	tion (EC)	) No 661/	2009 of t	he Europ	ean Parlia	ament and	l of
	the Council of components										eir trailers	s and syste	ems,
h	Commission European Pa and their trai	rliament	and of th	e Counci	as regar	ds type-a	pproval re	equiremen	its for cei				
i	Commission Regulation (EU) No 458/2011 of 12 May 2011 concerning type-approval requirements for motor vehicles and their trailers with regard to the installation of their tyres and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 124, 13.5.2011, p. 11).								he hicles,				
j	Regulation ( motor vehicl EC and repea	es with r	egard to	the protec	tion of p	edestrians	and othe	r vulnera	ble road u	uary 2009 users, amo	9 on the t ending Di	ype-appro irective 20	oval of 007/46/
k	Directive 20 vehicles with L 310, 25.11	n regard	to their re										

I 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 (OJ L 161, 14.6.2006, p. 12).

Status: This is the original version (as it was originally adopted).

- **m** Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC (OJ L 35, 4.2.2009, p. 32).
- **n** Commission Regulation (EU) No 65/2012 of 24 January 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards gear shift indicators and amending Directive 2007/46/EC of the European Parliament and of the Council (OJ L 28, 31.1.2012, p. 24).
- Commission Regulation (EU) No 347/2012 of 16 April 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with respect to type-approval requirements for certain categories of motor vehicles with regard to advanced emergency braking systems (OJ L 109, 21.4.2012, p. 1).
- p Commission Regulation (EU) No 351/2012 of 23 April 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards type-approval requirements for the installation of lane departure warning systems in motor vehicles (OJ L 110, 24.4.2012, p. 18).
- **q** Regulation (EU) 2015/758 of the European Parliament and of the Council of 29 April 2015 concerning type-approval requirements for the deployment of the eCall in-vehicle system based on the 112 service and amending Directive 2007/46/EC (OJ L 123, 19.5.2015, p. 77).

#### Explanatory notes

Х

Rele

# Relevant regulatory act.

- (<sup>1</sup>) For vehicles with a reference mass not exceeding 2 610 kg. At the manufacturer's request, Regulation (EC) No 715/2007 may apply to vehicles with a reference mass not exceeding 2 840 kg.
- (<sup>2</sup>) In case of vehicles equipped with a LPG or CNG installation, a vehicle type-approval in accordance with UN Regulation No 67 or UN Regulation No 110 is required.
- (<sup>3</sup>) The fitting of an electronic stability control ('ESC') system is required in accordance with Article 12 and Article 13 of Regulation (EC) No 661/2009.
- (<sup>4</sup>) The fitting of an ESC system is required in accordance with Article 12 and Article 13 of Regulation (EC) No 661/2009.
- (<sup>4A</sup>) If fitted, the protective device shall fulfil the requirements of UN Regulation No 18.
- (<sup>4B</sup>) This Regulation applies to seats not falling within the scope of UN Regulation No 80.
- (<sup>5</sup>) Vehicles of this category shall be fitted with a suitable windscreen defrosting and demisting device.
- (<sup>6</sup>) Vehicles of this category shall be fitted with a suitable windscreen washing and wiping devices.
- (<sup>9</sup>) For vehicles with a reference mass exceeding 2 610 kg which are not type-approved (at the manufacturer's request and provided their reference mass does not exceed 2 840 kg) under Regulation (EC) No 715/2007.
- $(^{9A})$  Applies only where such vehicles are fitted with equipment covered by UN Regulation No 64. Tyre pressure monitoring system for M<sub>1</sub> vehicles applies on a compulsory basis in accordance with Article 9(2) of Regulation (EC) No 661/2009.
- $(^{10})$  Applies only to vehicles equipped with coupling(s).
- $\binom{11}{2,5}$  Applies to vehicles with a technically permissible maximum laden mass not exceeding 2,5 tonnes.

- (<sup>12</sup>) Only applicable to vehicles where the 'Seating Reference Point ("R" point)' of the lowest seat is not more than 700 mm above the ground level.
- (<sup>13</sup>) Applies only when the manufacturer applies for type-approval of vehicles intended for the transport of dangerous goods.
- $(^{14})$  Applies only for vehicles of category N<sub>1</sub>, class I as described in Annex I to Regulation (EC) No 715/2007.
- (<sup>15</sup>) Compliance with Regulation (EC) No 661/2009 is mandatory, however, type-approval under this item number is not foreseen as it represents the collection of individual items 3A, 3B, 4A, 5A, 6A, 6B, 7A, 8A, 9A, 9B, 10A, 12A, 13A, 13B, 14A, 15A, 15B, 16A, 17A, 17B, 18A, 19A, 20A, 21A, 22A, 22B, 22C, 23A, 24A, 25A, 25B, 25C, 25D, 25E, 25F, 26A, 27A, 28A, 29A, 30A, 31A, 32A, 33A, 34A, 35A, 36A, 37A, 38A, 42A, 43A, 44A, 45A, 46A, 46B, 46C, 46D, 46E, 47A, 48A, 49A, 50A, 50B, 51A, 52A, 52B, 53A, 54A, 56A, 57A and 64 to 71. The series of amendments of the UN Regulations which apply on a compulsory basis are listed in Annex IV to Regulation (EC) No 661/2009. The series of amendments adopted subsequently are accepted as an alternative.

#### Appendix 1

### Regulatory acts for EU type-approval of vehicles produced in small series pursuant to Article 41

# TABLE 1

Item	Subject	Regulatory act reference	Specific issues	Applicability and specific requirements
1A	Sound level	Regulation (EU) No 540/2014		A
2A	Emissions (Euro 5 and Euro	Regulation (EC) No 715/2007		A The vehicle shall
	6) light duty vehicles/access to information		(a) OBD	be fitted with an OBD system that fulfils the requirements of Article 4(1) and (2) of Regulation (EC) No 692/2008 (The OBD system shall be designed to record at least the malfunction of the engine management system).

### M<sub>1</sub> vehicles

		The OBD- interface shall be able to communicate with commonly available diagnostic tools.
(b)	In service conform	N/A ity
(c)	Access to informat	It is sufficient that the manufacturer provide access to repair and maintenance information in a readily accessible and prompt manner.
(d)	Power measure	(When the vehicle manufacturer uses an engine from another manufacturer) Bench test data from the engine manufacturer are accepted provided that the engine management system is identical (i.e. having at least the same electronic control unit (ECU)). Power output test may be performed on a chassis dynamometer. It shall be taken into account of the power loss in the transmission.

3A	Prevention of fire risks (liquid fuel tanks)	UN Regulation No 34	(a)	Liquid fuel tanks	В
			(b)	Installati in vehicle	B on
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58			В
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010			В
5A	Steering	Regulation (EC) No 661/2009 UN Regulation No 79			С
JA	equipment		(a)	Mechani systems	The provisions of paragraph 5 of UN Regulation No 79 shall apply. All tests prescribed in paragraph 6.2 of UN Regulation No 79 shall be performed and the requirements of paragraph 6.1 of UN Regulation No 79 shall apply.
			(b)	Complex electroni vehicle control system	All the requirements of Annex 6 of UN Regulation No 79 shall apply. Compliance with these requirements may only be checked by a technical service.

6B	Door latches and	Regulation (EC) No 661/2009		C
	door retention components	UN Regulation No 11	(a)	General requirements 5 of UN Regulation No 11)
			(b)	Only the Performanceuirements requirements (Paragraph 1.5.4 and 6 of UN Regulation Regulation No 11) Only the Paragraph 6.3 of UN UN Regulation apply.
7A	Audible warning devices and	UN Regulation	(a)	Components
	signals		(b)	Installation on vehicle
8A	Devices for indirect vision	Regulation (EC) No 661/2009 UN Regulation No 46	(a)	Components
	and their installation		(b)	B Installation on vehicle
9B	Braking of passenger cars	Regulation (EC) No 661/2009 UN Regulation No 13-H	(a)	A Design and tests requirements
			(b)	Electroni stability control (ESC) and brake assist (BAS) The fitting of BAS and ESC shall not be required. If fitted, they sha comply with th requirements o UN Regulation No 13-H.
10A	Electromagnetic compatibility	Regulation (EC) No 661/2009 UN Regulation No 10		В
12A	Interior fittings	Regulation (EC) No 661/2009		С

UN Regulation No 21	(a)	Interior arrangement
	(i)	Radii and protrusion 5.1 to 5.6 of requirements of paragraphs protrusion 5.1 to 5.6 of requirements Regulation for switches and the like, controls and general interior fittings No 21 may be waived at the request of the manufacturer. The requirements of paragraph 5.2 of UN Regulation No 21 with the exception of paragraphs 5.2.3.1, 5.2.3.2 and 5.2.4 of that Regulation shall apply.
	(ii)	Energy absorption tests absorption tests absorption tests on the upper dashboard shall only be performed when dashboart the vehicle is not fitted with at least two front airbags or two static four-point harnesses.
	(iii)	N/A Energy absorption test on the rear part of the seats
	(b)	Power- operation 5.8 of UN of windows roof- panel systems

			and partiti systen	
13B	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 116		A The provisions of paragraph 8.3.1.1.1 of UN Regulation No 116 may be applied instead of paragraph 8.3.1.1.2 of that Regulation regardless of the type of powertrain.
14A	Protection of the	Regulation (EC)		С
	driver against the steering mechanism in the event of impact	No 661/2009 UN Regulation No 12		Tests are required when the vehicle has not been tested under UN Regulation No 94 (see item 53A).
15A	Seats, their	Regulation (EC)		С
	anchorages and any head	No 661/2009 UN Regulation No 17	<ul> <li>(a) Gener requir</li> <li>(i) Specif</li> </ul>	Requirements of paragraph 5.2 of mUNS Regulation ications 7 shall apply with the exception of paragraph 5.2.3 of that Regulation.
			(ii) Streng tests for sea backre and head restrai	paragraph 6.2 UN Regulation No 17 shall apply.
			unu	The test shall kinge performed in accordance with the requirements of Annex 7 to

					UN Regulation No 17.
			(b) (i)	Head restraints Specifica	Requirements of paragraphs 5.4, 5.5, 5.6, 5.10, 9.00 and 5.12 of UN Regulation No 17 shall apply with the exception of paragraph 5.5.2 of that Regulation.
			(ii)	Strength tests on head restraints	The test prescribed in paragraph 6.4 of UN Regulation No 17 shall be performed.
			(c)	the protectio of	The requirements offAnnex 9 to UN Regulation No 26 may be waived at the request of the manufacturer.
16A	External	Regulation (EC)			С
	projections	No 661/2009 UN Regulation No 26	(a)	General specifica	The requirements of paragraph 5 of UN Regulation No 26 shall apply.
			(b)	Particula specifica	The requirements of paragraph 6 of UN Regulation No 26 shall apply.
17A	Vehicle access and manoeuvrability (reverse gear)	Regulation (EC) No 661/2009 Regulation (EU) No 130/2012			D
17B	Speedometer equipment	Regulation (EC) No 661/2009			В

	including its installation	UN Regulation No 39	
18A	Manufacturer's statutory plate and VIN	Regulation (EC) No 661/2009 Regulation (EU) No 19/2011	В
19A	Safety-belt anchorages, Isofix anchorages systems and Isofix top tether anchorages	Regulation (EC) No 661/2009 UN Regulation No 14	В
20A	Installation of lighting and light-signalling devices on vehicles	Regulation (EC) No 661/2009 UN Regulation No 48	B Daytime Running Lights (DRL) shall be fitted to a new type of vehicle.
21A	Retro-reflecting devices for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 3	X
22A	Front and rear position lamps, stop-lamps and end-outline marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 7	X
22B	Daytime running lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 87	Х
22C	Side-marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 91	X
23A	Direction indicators for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 6	X
24A	Illumination of rear-registration plates of power-	Regulation (EC) No 661/2009 UN Regulation No 4	X

driven vehicles and their trailers 25A Power-driven Regulation (EC) Х vehicle's sealed-No 661/2009 beam headlamps **UN Regulation** (SB) emitting No 31 an European asymmetrical passing beam or a driving beam or both Х 25B Filament lamps Regulation (EC) for use in No 661/2009 approved lamp UN Regulation units of power-No 37 driven vehicles and their trailers 25C Х Motor vehicle Regulation (EC) headlamps No 661/2009 equipped with UN Regulation gas-discharge No 98 light sources 25D Х Gas-discharge Regulation (EC) light sources for No 661/2009 use in approved UN Regulation gas-discharge No 99 lamp units of power-driven vehicles 25E Х Motor vehicle Regulation (EC) No 661/2009 headlamps emitting an UN Regulation asymmetrical No 112 passing beam or a driving beam or both and equipped with filament lamps and/or LED modules 25F Adaptive front-Regulation (EC) Х lighting systems No 661/2009 (AFS) for motor UN Regulation vehicles No 123 Х 26A Power-driven Regulation (EC) vehicle front fog No 661/2009 lamps UN Regulation No 19

27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU)		В
28A	Rear fog lamps for power-driven vehicles and their trailers	No 1005/2010 Regulation (EC) No 661/2009 UN Regulation No 38		X
29A	Reversing lights for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 23		X
30A	Parking lamps for power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 77		X
31A	Safety-belts, restraint systems,	Regulation (EC) No 661/2009	(a) Compon	X ents
	child restraint systems and Isofix child restraint systems	t UN Regulation No 16	(b) Installati requiren	
32A	Forward field of vision	Regulation (EC) No 661/2009 UN Regulation No 125		A
33A	Location and identification of hand controls, tell-tales and indicators	Regulation (EC) No 661/2009 UN Regulation No 121		A
34A	Windscreen	Regulation (EC)		С
	defrosting and demisting systems	No 661/2009 Regulation (EU) No 672/2010	(a) Windscr defrostir	Only point 1.1.1 Only point 1.1.1 Regulation (EU) No 672/2010 shall apply, provided that warm air flow is ducted to the whole surface of the windscreen or the latter is electrically heated on its whole surface.

			(b)	Windscr	Only point 1.2.1 Only point 1.2.1 Regulation (EU) No 672/2010 shall apply, provided that warm air flow is ducted to the whole surface of the windscreen or the latter is electrically heated on its whole surface.
35A	Windscreen	Regulation (EC)			С
	wiper and washer systems	No 661/2009 Regulation (EU) No 1008/2010	(a)	Windscr wiper system	Points 1.1 et 1.1.10 of Annex III to Regulation (EU) No 1008/2010 shall apply. Only the test described in point 2.1.10 of Annex III to Regulation (EU) No 1008/2010 shall be performed.
			(b)	Windser washer system	Point 1.2 of Ahnex III to Regulation (EU) No 1008/2010 shall apply with the exception of points 1.2.2, 1.2.3 and 1.2.5.
36A	Heating system	Regulation (EC) No 661/2009 UN Regulation No 122			C The fitting of a heating system shall not be required.
			(a)	All heating systems	The requirements of paragraphs 5.3 and 6 of UN Regulation No 122 shall apply.

			(b) LPG heating systems	The requirements of Annex 8 to UN Regulation No 122 shall apply.
37A	Wheel guards	Regulation (EC) No 661/2009 Regulation (EU) No 1009/2010		В
38A	Head restraints (headrests), whether or not incorporated in vehicle seats	Regulation (EC) No 661/2009 UN Regulation No 25		X
41A	Emissions (Euro VI) heavy duty vehicles/access to information	Regulation (EC) No 595/2009		A With the exception of the set of requirements relating to OBDs and access to information.
			Power measurement	(When the vehicle manufacturer uses an engine from another manufacturer) Bench test data from the engine manufacturer are accepted, provided that the engine management system is identical (i.e. having at least the same ECU). Power output test may be performed on a chassis dynamometer. It shall be taken into account of the power loss in the transmission.
44A	Masses and dimensions	Regulation (EC) No 661/2009		В

		Regulation (EU) No 1230/2012		The hill start test at maximum combination mass described in point 5.1 of Part A of Annex I to Regulation (EU) No 1230/2012 may be waived at the request of the manufacturer.
45A	Safety glazing materials and	Regulation (EC) No 661/2009	(a) Compon	X ents
	their installation on vehicles	UN Regulation No 43	(b) Installati	B
46A	Installation of tyres	Regulation (EC) No 661/2009 Regulation (EU) No 458/2011		B Dates for progressive application shall be those set out in Article 13 of Regulation (EC) No 661/2009.
46B	Pneumatic tyres for motor vehicles and their trailers (Class C <sub>1</sub> )	Regulation (EC) No 661/2009 UN Regulation No 30	Components	X
46D	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes $C_1$ , $C_2$ and $C_3$ )	Regulation (EC) No 661/2009 UN Regulation No 117	Components	X
46E	Temporary-use spare unit, run- flat tyres/system and tyre pressure monitoring system	Regulation (EC) No 661/2009 UN Regulation No 64	Components Fitting of a tyre-pressure monitoring system (TPMS)	X B The fitting of a TPMS shall not be required.
50A	Mechanical coupling components of combinations of vehicles	Regulation (EC) No 661/2009 UN Regulation No 55	(a) Compon (b) Installati	В
53A	Protection of occupants in the	Regulation (EC) No 661/2009		С

event of a frontal UN Regulation No 94 The requirements of 54A

Comsion	110 74		UN Regulation No 94 shall apply to vehicles fitted with front airbags. Vehicles not fitted with airbags shall fulfil the requirement of item 14A of this table.
Protection of occupants in the event of lateral collision	Regulation (EC) No 661/2009 UN Regulation No 95	Head form test	C The manufacturer shall supply the technical service with suitable information concerning a possible impact of the head of the dummy against the structure of the vehicle or the side glazing if made up of laminated glazing. When it is proven that such impact is likely to happen, the partial test using the head form test described in paragraph 3.1 of Annex 8 to UN Regulation No 95 shall be conducted and the criterion specified in paragraph 5.2.1.1 of UN Regulation No 95 shall be met. In agreement with the

					technical service, the test procedure described in Annex 4 to UN Regulation No 21 may be used as an alternative to the test of UN Regulation No 95.
58	Pedestrian protection	Regulation (EC) No 78/2009	(a)	Technica requirem applicab to vehicle	ients
			(b)	Frontal protectio systems	X n
59	Recyclability	Directive 2005/64/EC			N/A - Only Article 7 on reuse of component parts shall apply.
61	Air-conditioning systems	Directive 2006/40/EC			A
62	Hydrogen system	Regulation (EC) No 79/2009			X
63	General Safety	Regulation (EC) No 661/2009			See explanatory note ( <sup>15</sup> ) of the table in this Part with regulatory acts for EU type-approval of vehicles produced in unlimited series.
64	Gear shift indicators	Regulation (EC) No 661/2009 Regulation (EU) No 65/2012			N/A
67	Specific components	Regulation (EC) No 661/2009	(a)	Compon	X ents
	for liquefied petroleum gases (LPG) and their	UN Regulation No 67	(b)	Installati	Aon

	installation on motor vehicles				
68	Vehicle alarm systems (VAS)	Regulation (EC) No 661/2009	(a)	Compon	X ents
		UN Regulation No 97	(b)	Installati	Bon
69	Electric safety	Regulation (EC) No 661/2009 UN Regulation No 100			В
70	Specific components for	Regulation (EC) No 661/2009	(a)	Compon	X ents
	CNG and their installation on motor vehicles	UN Regulation No 110	(b)	Installati	A on
72	eCall system	Regulation (EU) 2015/758			N/A

# Explanatory notes

Х

Full application of the regulatory act as follows:

- (a) a type-approval certificate shall be issued;
- (b) tests and checks shall be conducted by the technical service or the manufacturer under the conditions laid down in Articles 67 to 81;
- (c) a test report shall be drafted in accordance with Annex III;
- (d) Conformity of Production (COP) shall be ensured.

А

Application of the regulatory act as follows:

- (a) all requirements of the regulatory act shall be fulfilled unless otherwise stated;
- (b) no type-approval certificate shall be required;
- (c) tests and checks shall be conducted by the technical service or the manufacturer under the conditions laid down in Articles 67 to 81;
- (d) a test report shall be drafted in accordance with Annex III;
- (e) COP shall be ensured.
- В

Application of the regulatory act as follows:

Same as for letter 'A' with the exception that the tests and checks may be performed by the manufacturer himself, subject to the agreement of the approval authority. C

Application of the regulatory act as follows:

- (a) only the technical requirements from the regulatory shall be fulfilled, irrespective of any transitional provision;
- (b) no type-approval certificate shall be required;
- (c) tests and checks shall be conducted by the technical service or by the manufacturer (see decisions for letter 'B');
- (d) a test report shall be drafted in accordance with Annex III;
- (e) COP shall be ensured.

Same as for decisions in letters 'B' and 'C', with the exception that a statement of compliance submitted by the manufacturer is sufficient. No test report shall be required.

The approval authority or technical service may require additional information of further evidence, if need be. N/A

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

The series of amendments of the UN Regulations to be used are listed in Annex IV to Regulation (EC) No 661/2009. The series of amendments adopted subsequently are accepted as an alternative.

#### TABLE 2

Item	Subject	Regulatory act	Specific issues	Applicability and specific requirements
1A	Sound level	Regulation (EU) No 540/2014		А
2A	Emissions (Euro	Regulation (EC)		А
	5 and Euro 6) light duty vehicles/access to information	No 715/2007	(a) OBD	The vehicle shall be fitted with an OBD system that fulfils the requirements of Article 4(1) and (2) of Regulation (EC) No 692/2008 (the OBD system shall be designed to record at least the malfunction of the engine management system).

# N<sub>1</sub> vehicles<sup>0</sup>

**a** The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

D

		The OBD- interface shall be able to communicate with commonly available diagnostic tools.
(b)	In service conform	N/A ity
(c)	Access to informat	It is sufficient that the manufacturer provides access to vehicle repair and maintenance information in a readily accessible and prompt manner.
(d)	Power measures	(When the vehicle ment manufacturer uses an engine from another manufacturer) Bench test data from the engine manufacturer are accepted provided that the engine management system is identical (i.e. having at least the same ECU). Power output test may be performed on a chassis dynamometer. It shall be taken into account of the power loss in the transmission.

a The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

3A	Prevention of fire risks (liquid fuel tanks)	Regulation (EC) No 661/2009 UN Regulation No 34	(a)	Liquid fuel tanks	В
			(b)	Installati in vehicle	B on
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58			В
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010			В
5A	Steering equipment	Regulation (EC) No 661/2009 UN Regulation No 79	(a)	Mechani systems	C The provisions of paragraph 5 of UN Regulation No 79.01 shall apply. All tests prescribed in paragraph 6.2 of UN Regulation No 79 shall be performed and the requirements of paragraph 6.1 of UN Regulation No 79 shall apply.
			(b)	Complex electroni vehicle	All the requirements of Cannex 6 of UN Regulation No.

The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix. a

control

system

Regulation No

79 shall apply.

Compliance with these requirements may only be checked by a technical service.

6B	Door latches and	Regulation (EC)			С
	door retention components	No 661/2009 UN Regulation No 11	(a)	General requirem 5 of UN Regulati No 11)	All requirements shall apply. nents (Paragraph on
			(b)	(Paragra 6 of UN	Only the Tequirements Offparagraph 0.1.5.4 and paragraph 6.3 of UN Regulation No 11 shall apply.
7A	Audible warning devices and	Regulation (EC) No 661/2009	(a)	Compon	X ents
	signals			Installati on vehicle	B
8A	Devices for indirect vision		(a)	Compon	X ents
	and their		(b)	Installati on vehicle	B on
9A	Braking of vehicles and trailers	Regulation (EC) No 661/2009 UN Regulation No 13	(a)	Design and test requirem	A
			(b)	Electron stability control (ESC)	The fitting of ESC shall not be required. If fitted, it shall comply with the requirements of UN Regulation No 13.
9B	Braking of passenger cars	Regulation (EC) No 661/2009 UN Regulation No 13-H	(a)	Design and test requirem	A
		10 13-11	(b)	ESC and brake	The fitting of BAS and ESC shall not be

**a** The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

			S	assist systems BAS)	required. If fitted, they shall comply with the requirements of UN Regulation No 13-H.
10A	Electromagnetic compatibility	Regulation (EC) No 661/2009 UN Regulation No 10			В
13B	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 116			A The provisions of paragraph 8.3.1.1.1 of UN Regulation No 116 may be applied instead of paragraph 8.3.1.1.2 of that Regulation regardless of the type of powertrain.
14A	Protection of the	Regulation (EC)			С
	driver against the steering mechanism in the event of	No 661/2009 UN Regulation No 12	i	Barrier mpact est	A test shall be required.
	impact		t t s	Body block mpact est against steering wheel	Not required if the steering wheel is fitted with an airbag.
			f	Head Form est	Not required if the steering wheel is fitted with an airbag.
15A	Seats, their anchorages and any head restraints	Regulation (EC) No 661/2009 UN Regulation No 17			В
17A	Vehicle access and manoeuvrability	Regulation (EC) No 661/2009			D

series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

	(reverse gear)	Regulation (EU) No 130/2012	
17B	Speedometer equipment including its installation	Regulation (EC) No 661/2009 UN Regulation No 39	В
18A	Manufacturer's statutory plate and VIN	Regulation (EC) No 661/2009 Regulation (EU) No 19/2011	В
19A	Safety-belt anchorages, Isofix anchorages systems and Isofix top tether anchorages	Regulation (EC) No 661/2009 UN Regulation No 14	В
20A	Installation of lighting and light-signalling devices on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 48	B DRLs shall be fitted to a new type of vehicle.
21A	Retro-reflecting devices for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 3	X
22A	Front and rear position lamps, stop-lamps and end-outline marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 7	X
22B	Daytime running lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 87	Х
22C	Side-marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 91	Х
23A	Direction indicators for power-driven	Regulation (EC) No 661/2009 UN Regulation No 6	Х

**a** The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

	vehicles and their trailers		
24A	Illumination of rear-registration plates of power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 4	X
25A	Power-driven vehicle's sealed- beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both	Regulation (EC) No 661/2009 UN Regulation No 31	X
25B	Filament lamps for use in approved lamp units of power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 37	X
25C	Motor vehicle headlamps equipped with gas-discharge light sources	Regulation (EC) No 661/2009 UN Regulation No 98	X
25D	Gas-discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 99	X
25E	Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules	Regulation (EC) No 661/2009 UN Regulation No 112	X
25F	Adaptive front- lighting systems	Regulation (EC) No 661/2009	Х

	(AFS) for motor vehicles	UN Regulation No 123		
26A	Power-driven vehicle front fog lamps	Regulation (EC) No 661/2009 UN Regulation No 19		X
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010		В
28A	Rear fog lamps for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 38		X
29A	Reversing lights for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 23		X
30A	Parking lamps for power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 77		Х
31A	Safety-belts, restraint systems, child restraint systems and Isofix child restraint systems	Regulation (EC) No 661/2009 UN Regulation No 16	<ul><li>(a) Compon</li><li>(b) Installati requirem</li></ul>	B
33A	Location and identification of hand controls, tell-tales and indicators	Regulation (EC) No 661/2009 UN Regulation No 121		A
34A	Windscreen defrosting and demisting systems	Regulation (EC) No 661/2009 Regulation (EU) No 672/2010		N/A The vehicle shall be fitted with a suitable windscreen defrosting and demisting system.
35A	Windscreen wiper and washer systems	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010		N/A The vehicle shall be fitted with a suitable windscreen

**a** The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

				wiper and washer system.
36A	Heating system	Regulation (EC) No 661/2009 UN Regulation No 122		C The fitting of a heating system shall not be required.
			(a) All heating systems	The requirements of paragraphs 5.3 and 6 of UN Regulation No 122 shall apply.
			(b) LPG heating systems	The requirements of Annex 8 to UN Regulation No 122 shall apply.
41A	Emissions (Euro VI) heavy duty vehicles/access to information	Regulation (EC) No 595/2009		A With the exception of the set of requirements relating to OBDs and access to information.
			Power measurement	(When the vehicle manufacturer uses an engine from another manufacturer) Bench test data from the engine manufacturer are accepted provided that the engine management system is identical (i.e. having at least the same ECU). Power output test may be performed on a chassis dynamometer.

**a** The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

				It shall be taken into account of the power loss in the transmission.
43A	Spray suppression systems	Regulation (EC) No 661/2009 Regulation (EU) No 109/2011		В
45A	Safety glazing materials and	Regulation (EC) No 661/2009	(a) Compon	X ents
	their installation on vehicles	UN Regulation No 43	(b) Installati	B on
46A	Installation of tyres	Regulation (EC) No 661/2009 Regulation (EU) No 458/2011		B Dates for progressive application shall be those set out in Article 13 of Regulation (EC) No 661/2009.
46B	Pneumatic tyres for motor vehicles and their trailers (Class C <sub>1</sub> )	Regulation (EC) No 661/2009 UN Regulation No 30	Components	X
46C	Pneumatic tyres for commercial vehicles and their trailers (Classes $C_2$ and $C_3$ )	Regulation (EC) No 661/2009 UN Regulation No 54	Components	X
46D	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes $C_1$ , $C_2$ and $C_3$ )	Regulation (EC) No 661/2009 UN Regulation No 117	Components	X
46E	Temporary-use	Regulation (EC)	Components	Х
	spare unit, run- flat tyres/system and tyre pressure monitoring system	No 661/2009 UN Regulation No 64	Fitting of a tyre-pressure monitoring system	B The fitting of a TPMS shall not be required.
48A	Masses and dimensions	Regulation (EC) No 661/2009		В
	otes relating to the Table 'I also apply to this Table. Th			

		Regulation (EU) No 1230/2012	Hill start test at maximum combination mass	The hill start test at maximum combination mass described in point 5.1 of Part A of Annex 1 to Regulation (EU) No 1230/2012 may be waived at the request of the manufacturer.
49A	Commercial	Regulation (EC)		С
	vehicles with regards to their external projections forward of the cab's rear panel	No 661/2009 UN Regulation No 61	(a) General specifica	The requirements of the state of the state of the state of UN Regulation No 61 shall apply.
			(b) Particula specifica	The trequirements of paragraph 6 of UN Regulation No 61 shall apply.
50A	Mechanical coupling	Regulation (EC) No 661/2009	(a) Compon	X ents
	components of combinations of vehicles	UN Regulation No 55	(b) Installat	B
54A	Protection of	Regulation (EC)	С	С
	occupants in the event of lateral collision	No 661/2009 UN Regulation No 95	Head form test	The manufacturer shall supply the technical service with suitable information concerning a possible impact of the head of the dummy against the structure of the vehicle or the side glazing, if made up

**a** The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

56A

58

Pedestrian

protection

Status: This is the original version (as it was originally adopted).

		of laminated glazing. When such impact is proven likely to happen, then the partial test using the head form test described in paragraph 3.1 of Annex 8 to UN Regulation No 95 shall be conducted and the criterion specified in paragraph 5.2.1.1 of UN Regulation No 95 shall be met. In agreement with the technical service, the test procedure described in Annex 4 to UN Regulation No 21 may be used as an alternative to the test of UN Regulation No 95 mentioned above.
Vehicles for the carriage of dangerous goods	Regulation (EC) No 661/2009 UN Regulation No 105	A

a The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

Regulation (EC)

No 78/2009

(a)

(b)

Technical N/A

requirements applicable to a vehicle

Frontal protection systems

Х

59	Recyclability	Directive 2005/64/EC			N/A Only Article 7 on reuse of component parts shall apply.
61	Air-conditioning systems	Directive 2006/40/EC			В
62	Hydrogen system	Regulation (EC) No 79/2009			Х
63	General Safety	Regulation (EC) No 661/2009			See explanatory note ( <sup>15</sup> ) of the table in this Part with regulatory acts for EU type-approval of vehicles produced in unlimited series.
67	Specific components	Regulation (EC) No 661/2009	(a)	Compon	X ents
	for liquefied petroleum gases (LPG) and their installation on motor vehicles			Installati	A on
68	Vehicle alarm systems (VAS)	Regulation (EC) No 661/2009	(a)	Compon	X ents
		UN Regulation No 97	(b)	Installati	B on
69	Electric safety	Regulation (EC) No 661/2009 UN Regulation No 100			В
70	Specific components for	Regulation (EC) No 661/2009	(a)	Compon	X ents
	CNG and their installation on motor vehicles	UN Regulation No 110	(b)	Installati	A on
71	Cab strength	Regulation (EC) No 661/2009 UN Regulation No 29			С
72	eCall System	Regulation (EU) 2015/758			N/A

a The explanatory notes relating to the Table 'Regulatory acts for EU type-approval of vehicles produced in unlimited series' of this Part also apply to this Table. The letters in this Table have the same meaning as in Table 1 of this Appendix.

# Appendix 2

### Requirements for EU individual vehicle approval pursuant to Article 44

### 1. APPLICATION

For the purpose of application of this Appendix, a vehicle is deemed to be new where:

- (a) it has never been registered previously; or
- (b) it has been registered for less than six months at the time of the application for individual vehicle approval.

A vehicle shall be considered registered where it has obtained a permanent, temporary or short-term administrative authorisation for entry into service in road traffic, involving its identification and the issuing of a registration number<sup>(6)</sup>.

## 2. ADMINISTRATIVE PROVISIONS

2.1. Categorisation of the vehicle

Vehicles shall be categorised in accordance with the criteria set out in Annex I as follows:

- (a) the actual number of seating positions shall be taken into consideration; and
- (b) the technically maximum permissible laden mass shall be the maximum mass stated by the manufacturer in the country of origin and available in his official documentation.

Where it is not possible to easily determine the vehicle category because of the design of the bodywork, the conditions set out in Annex I shall apply.

- 2.2. Application for individual vehicle approval
- (a) The applicant shall submit an application to the approval authority accompanied by all relevant documentation necessary for the operation of the approval procedure.

Where the submitted documentation is incomplete, falsified or forged the application for approval shall be rejected.

(b) Only one application for a particular vehicle may be submitted in only one Member State. The approval authority may require from the applicant a written commitment that only one application will be submitted in the Member State of the approval authority.

By a particular vehicle, it shall be understood a physical vehicle the VIN of which is clearly identified.

However, any applicant may apply for EU individual vehicle approval in another Member State in respect of another particular vehicle with technical characteristics identical or similar to the one that has been granted an EU individual vehicle approval.

(c) The model of the application form and the layout of the file shall be laid down by the approval authority.

The particulars of the vehicle requested may only consist in an appropriate selection of the information included in Annex I.

(d) The technical requirements to be complied with are those laid down in point 4.

The technical requirements shall be those applicable to vehicles belonging to a type of vehicle currently in production, in relation to the date of the submission of the application.

(e) With respect to the tests required under the regulatory acts listed in this Annex, the applicant shall supply a statement of compliance with recognised international standards or regulations. The statement in question may only be issued by the vehicle manufacturer.

'Statement of compliance' shall mean a statement issued by the office or department within the manufacturer's organisation that is duly authorised by the management to fully engage the legal responsibility of the manufacturer with respect to the design and the construction of a vehicle.

The regulatory acts for which such a statement has to be supplied shall be those referred to in point 4.

Where a statement of compliance gives rise to uncertainty, the applicant may be required to obtain from the manufacturer a piece of evidence, including a test report, in order to corroborate the manufacturer's statement.

- 2.3. Technical services entrusted with individual vehicle approvals
- (a) The technical services entrusted with individual vehicle approvals shall be of category A as referred to in Article 68(1).
- (b) By way of derogation from the requirement to demonstrate their compliance with the standards listed in Appendix 1 to Annex III, technical services shall comply with the following standards:
  - (i) EN ISO/IEC 17025:2005 when they perform tests themselves;
  - (ii) EN ISO/IEC 17020:2012 when they check compliance of the vehicle with the requirements included in this Appendix.
- (c) Where specific tests requiring specific skills have to be conducted at the request of the applicant, they shall be conducted by one of the technical services notified to the Commission at the choice of the applicant.
- 2.4. Test reports
- (a) Test reports shall be drafted in accordance with paragraph 5.10.2 of standard EN ISO/ IEC 17025:2005.
- (b) Test reports shall be drafted in one of the languages of the Union determined by the approval authority.

Where in application of point 2.3(c) a test report has been issued in a Member State other than the one entrusted with the individual vehicle approval, the approval authority may require that the applicant submits a true translation of the test report.

(c) Test reports shall include a description of the vehicle tested, including its identification. The parts that play a significant role with regard to the results of the tests shall be described and their identification number reported.

(d) At the request of an applicant, a test report delivered for a system related to a particular vehicle may be presented repeatedly either by the same or another applicant for the purposes of individual approval of another vehicle.

In such a case, the approval authority shall ensure that the technical characteristics of the vehicle are properly inspected against the test report.

Inspection of the vehicle and the documentation accompanying the test report shall demonstrate that the vehicle for which an individual approval is sought has the same characteristics as the vehicle described in the report.

- (e) Only authenticated copies of a test report may be submitted.
- (f) Test reports referred to in point (d) do not include the reports drawn up in order to grant the individual vehicle approval.
- 2.5. In the individual vehicle approval procedure each particular vehicle shall be inspected physically by the technical service.

No exemption to this principle shall be permitted.

2.6. Where the approval authority is satisfied that the vehicle meets the technical requirements specified in this Appendix and conforms to the description included in the application, it shall grant approval in accordance with Article 44.

2.7. The certificate of approval shall be drafted in accordance with Article 44.

.....

2.8. The approval authority shall keep record of all approvals granted under Article 44.

## 3. REVIEW OF THE TECHNICAL REQUIREMENTS

The list of the technical requirements included in point 4 shall be regularly reviewed in order to take account of the results of the harmonisation work in progress at the World Forum for Harmonization of Vehicle Regulations (WP.29) in Geneva and legislative developments in the third countries.

4. TECHNICAL REQUIREMENTS

Part I: Item Vehicles	Regulatory act reference	Alternative requirements
belonging 1 to category M <sub>1</sub>	Council Directive 70/157/ EEC <sup>a</sup> (Permissible sound level)	Drive-by test (a) A test shall be conducted in accordance with the 'Method A' referred to in Annex 3 to UN Regulation No 51. Limits are those specified in point 2.1 of Annex I to Directive

		(b)	70/157/EEC. 1 decibel in addition to the permitted limits shall be allowed. The test track shall comply with Annex 8 to UN Regulation No 51. A test track having different specifications may be used under the condition that
		in accord paragrap	correlation tests have been conducted by the technical service. A correction factor shall be applied if necessary. Exhaust systems containing fibrous materials need not be conditioned as prescribed in Annex 5 to UN Regulation No 51.
2A	Regulation (EC) No 715/2007 (Emissions (Euro 5 and Euro 6) light duty vehicles/access to information)	(a)	emissions A type I test shall be conducted in accordance with Annex III to Regulation (EC) No 692/2008 using the deterioration factors set out in point 1.4 of
	of 6 February 1970 on the approximation I level and the exhaust system of motor		

I.	A
	Annex VII to
	Regulation (EC)
	No 692/2008.
	The limits to be
	applied shall be
	those specified
	in Table I and
	Table II in
	Annex I to
	Regulation (EC)
	No 715/2007.
(b)	The vehicle
	shall not be
	required to
	exhibit 3 000 km
	as mentioned in
	paragraph 3.1.1
	of Annex 4 to
	UN Regulation
	No 83.
(c)	The fuel to be
	used for the
	test shall be the
	reference fuel
	as prescribed
	in Annex IX to
	Regulation (EC)
	No 692/2008. The
(d)	
	dynamometer
	shall be set up in accordance with
	the technical
	requirements
	set out in
	paragraph 3.2 of
	Annex 4 to UN
	Regulation No
	83.
(e)	The test referred
	to in point
	(a) shall not
	be conducted
	where it can be
	shown that the
	vehicle complies
	with the
	California Code
	Regulations
	referred to in
	point 2.1.1
1	<b>I</b>

		of Annex I to	
		Regulation (EC)	
	No 692/2008.		
		tive emissions	
	For petro	ol-fuelled engines,	
	the prese	ence of an	
	evaporat	e emissions	
	control s	ystem shall be	
		(e.g. a charcoal	
	canister)		
	Crankcas	se emissions	
	The pres	ence of a device	
	for recyc	ling crankcase	
	gases sha	all be required.	
	OBD	_	
	(a)	The vehicle shall	
		be fitted with an	
		OBD system.	
	(b)	OBD-interface	
		must be able to	
		communicate	
		with common	
		diagnostic tools	
		used for periodic	
		technical	
		inspections.	
	Smoke o		
	(a)	Vehicles	
		equipped with	
		a diesel-fuelled	
		engine shall	
		be tested in	
		accordance with	
		the tests methods	
		referred to in	
		Appendix 2 to	
		Annex IV to	
		Regulation (EC)	
		No 692/2008.	
	(b)	The corrected	
		value of the	
		absorption	
		coefficient	
		shall be affixed	
		conspicuously	
		and in a readily	
		accessible place.	
		ssions and fuel	
	consump		
	(a)	A test shall be	
		conducted in	
of 6 February 1970 on the approximation	on of the laws	of the Member States	

accordance with Annex XII to Regulation (EC) No 692/2008. (b) The vehicle shall not be required to exhibit 3 000 km as requested in paragraph 3.1.1 of Annex 4 to **UN Regulation** No 83. (c) Where the vehicle complies with the California Code Regulations referred to in point 2.1.1 of Annex I to Regulation (EC) No 692/2008 and therefore no test of tailpipe emissions is required to be performed, Member States shall calculate CO<sub>2</sub> emissions and fuel consumption with the formula laid down in the explanatory notes  $(^{b})$  and  $(^{c})$ . Access to information The provisions regarding access to information shall not apply. Power measurement (a) The applicant shall submit a statement from the manufacturer stating the maximum engine power output in kW

		minute. An engine power output curve providing the same information may alternatively be provided by the applicant.
(Fuel tanks — Rear protective devices)	(b) Specific I fuel tanks plastic ma The appli a stateme manufact that the fu particular VIN of w	Fuel tanks shall comply with paragraph 5 of UN Regulation No 34 with the exception of paragraphs 5.1, 5.2 and 5.12. In particular, they shall comply with paragraphs 5.9 and 5.9.1 but no dripping test shall be conducted. LPG or CNG tanks shall be type-approved in accordance with UN Regulation No 67, series of amendments 01, or UN Regulation No 110 ( <sup>a</sup> ), respectively. provisions for s made of a

		with at least one of the following: — FMVSS No 301 (Fuel system integrity); or — Annex 5 to UN Regulation 34. Rear protective device The rear part of the vehicle shall be constructed in accordance with paragraphs 8 and 9 of UN Regulation No 34.
3B	UN Regulation No 58 (Rear underrun protection)	The rear part of the vehicle shall be constructed in accordance with paragraph 2 UN Regulation No 58. It is sufficient that the requirements set out in paragraph 2.3 are fulfilled.
4A	Regulation (EU) No 1003/2010 (Rear registration plate space)	Space, inclination, angles for visibility and position of the registration plate shall comply with Regulation (EU) No 1003/2010.
5A	UN Regulation No 79 (Steering equipment)	Mechanical systems (a) The steering mechanism shall be built as to self-centre. In order to check compliance with this provision, a test shall be conducted in accordance with paragraphs 6.1.2 and 6.2.1 of UN Regulation No 79.
a Council Directive 70/157/	EEC of 6 February 1970 on the approximation	(b) The failure of the power steering equipment shall not lead to a complete loss

		of control of the vehicle. Complex electronic vehicle control system ('Drive-by wire' devices) Complex electronic control system shall be permitted only if they comply with Annex 6 to UN Regulation No 79.
6A	UN Regulation No 11 (Door latches and hinges)	Compliance with paragraph 6.1.5.4 of UN Regulation No 11.
7A	UN Regulation No 28 (Audible warning)	Components The audible warning devices are not required to be type-approved in accordance with UN Regulation No 28. However, they shall emit a continuous sound as required in paragraph 6.1.1 of UN Regulation No 28. Installation on vehicle (a) A test shall be conducted in accordance with paragraph 6.2 of UN Regulation No 28. (b) The maximum sound pressure level shall be in accordance with paragraph 6.2.7.
8A	UN Regulation No 46 (Indirect vision devices)	Components(a)The vehicle shall be fitted with the rear- view mirrors prescribed in paragraph 15.2 of UN Regulation No 46.(b)They are not required to be type-approved in

		Measur conduc ensure of visio	accordance with UN Regulation No 46. The radii of curvature of the mirrors shall not cause significant image distortions. At the discretion of the technical service, the radii of curvature shall be checked in accordance with the method described in Annex 7 to UN Regulation No 46. The radii of curvature shall not be less than those required by paragraph 6.1.2.2.4 of UN Regulation No 46.
			tion No 46.
9B	UN Regulation No 13-H (Braking)	Genera (a) (b)	l provisions The braking system shall be built in accordance with paragraph 5 of UN Regulation No 13-H. Vehicles shall
		(0) (c)	be fitted with an electronic antilock braking system acting on all wheels. The
			performances

	(d)	of the braking system shall comply with Annex III to UN Regulation No 13-H. For those purposes, road tests shall be conducted on a track the surface of which possesses high adhesion. The test on
	(e) Service t	the parking brake shall be conducted on a 18 % gradient (up and down). Only those tests mentioned under the headings 'Service brake' and 'Parking brake' below shall be conducted. In each case, the vehicle shall be in fully laden conditions. The road test referred to in point (d) shall not be conducted where the applicant can submit a statement from the manufacturer establishing that the vehicle complies either with UN Regulation No 13-H, including supplement 5, or with FMVSS No 135.
EC of 6 February 1970 on the approximation	on of the laws	of the Member States

		<ul> <li>(a) A 'Type 0' test as prescribed in paragraphs 1.4.2 and 1.4.3 of Annex 3 to UN Regulation No 13-H shall be conducted.</li> <li>(b) In addition, a 'Type I' test as prescribed in paragraph 1.5 of Annex 3 to UN Regulation No 13-H shall be conducted.</li> <li>Parking brake A test shall be conducted in accordance with paragraph 2.3 of Annex 3 to UN Regulation No 13- H.</li> </ul>
10A	UN Regulation No 10 (Radio interference (electromagnetic compatibility))	Components (a) Electrical/ electronic sub- assemblies are not required to be type- approved in accordance with UN Regulation No 10. (b) However, electric/ electronic devices retrofitted shall comply with UN Regulation No 10.
	C of 6 February 1970 on the approxima	Emitted electromagnetic radiations The applicant shall submit a statement from the manufacturer establishing that the vehicle complies with UN Regulation No 10 or with the following alternative standards:

		<ul> <li>Broadband electromagnetic radiation: CISPR 12 or SAE J551-2; or</li> <li>Narrowband electromagnetic radiation: CISPR 12 (off-board) or 25 (in-board) or SAE J551-4 and SAE J1113-41.</li> <li>Immunity tests Immunity tests</li> <li>Immunity test shall be waived.</li> </ul>
12A	UN Regulation No 21 (Interior fittings)	Interior arrangement(a)With respect to the requirements on energy absorption, the vehicle shall be deemed to comply with UN Regulation No 21 if the vehicle is fitted with at least two front airbags, one inserted into the steering wheel and the other into the dashboard.(b)Where the vehicle is fitted with only one front air bag inserted in the steering wheel, the dashboard shall be made up of energy absorbing materials.(c)The technical service shall check that there are no sharp edges in the zones defined

		Electric: (a)	in paragraphs 5.1 to 5.7 of UN Regulation No 21. al controls Power-operated windows, roof- panel systems and partitioning systems shall be tested in accordance with paragraph 5.8 of UN Regulation No 21. The sensitivity of auto-reverse systems referred to in paragraph 5.8.3 may diverge from the requirements set out in paragraph 5.8.3.1.1 of UN Regulation No 21. Electric windows which cannot be closed when the ignition is off shall be exempt from the requirements
			concerning auto- reverse systems.
13A a Council Directive 70/157/EEC	UN Regulation No 18 (Anti-theft and immobiliser)	(a)	In order to prevent unauthorised use, the vehicle shall be fitted with: — a locking device as defined in paragraph 2.3 of

		(b)	UN Regulation No 18; and — an immobiliser which meets the technical requirements of paragraph 5 of UN Regulation No 18; If, in accordance with point (a), an immobiliser has to be retrofitted, it shall be of an approved type in accordance with UN Regulations No 18, No 97, or No 116.
14A a Council Directive 70/157/EEC	UN Regulation No 12 (Protective steering)	(a)	The applicant shall submit a statement from the manufacturer establishing that the particular vehicle, the VIN of which has to be specified, complies with at least one of the following: — UN Regulation No 12; — FMVSS No 203 (Impact protection for the driver from the

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		(b)	steering control system) including FMVSS No 204 (Steering control rearward displacement); - Article 11 of JSRRV. A test in accordance with Annex 3 to UN Regulation No 12 may be conducted on a production vehicle at the request of the applicant. The test shall be conducted by a technical service that has been designated for carrying out this test. A detailed report shall be issued by that technical service to the applicant.
15A a Council Directive 70/157/EEC of	UN Regulation No 17 (Seat strength — head restraints)	adjustmen The appli a stateme manufact that the p the VIN of be specifi with at le following — Head rest	UN Regulation No 17; or FMVSS No 207 (Seating systems). raints
	l level and the exhaust system of motor		

		(a) (b)	Where the statement is based on FMVSS No 207, the head restraints shall fulfil, in addition, the requirements of paragraph 5 and Annex 4 to UN Regulation No 17. Only the tests described in
			paragraphs 5.12, 6.5, 6.6 and 6.7 of UN Regulation No 17 shall be conducted.
		(c)	In the other event, the applicant shall submit a statement from the manufacturer establishing that the particular vehicle, the VIN of which has to be specified, complies with FMVSS No 202a (Head restraints).
16A	UN Regulation No 17 (Exterior projections)	(a)	The external surface of the bodywork shall comply with the general requirements included in paragraph 5 of UN Regulation No 17.
a Council Directive 70/157/EEC		(b)	At the discretion of the technical service the provisions

			referred to in paragraphs 6.1, 6.5, 6.6, 6.7, 6.8 and 6.11 of UN Regulation No 17 shall be checked.
17A, 17B	UN Regulation No 39 (Speedometer — reverse gear)	Speedom (a)	eter equipment The dial shall comply with paragraphs 5.1 to 5.1.4 of UN Regulation No 39.
			Where the technical service wants to verify that the speedometer is calibrated with sufficient accuracy, it may require the tests prescribed in paragraph 5.2 of UN Regulation No 39 to be conducted. gear mechanism shal
18A	Regulation (EU) No 19/2011 (Statutory plates)	(b)	reverse gear. The vehicle sha be fitted with a VIN comprising a minimum of 8 and a maximum of 17 characters VIN comprising 17 characters shall fulfil the requirements set out in international standards ISO 3779:1983 and 3780:1983. VIN shall be
			located in a clearly visible

		<ul> <li>and accessible position in such a way as it cannot be obliterated or deteriorate.</li> <li>(c) Where no VIN is stamped in the chassis or in the body, a Member State may require the applicant that the VIN is retrofitted in application of its national law. In such a case, the competent authority of that Member State shall supervise the operation.</li> <li>Statutory plate The vehicle shall be fitted with an identification plate affixed by the vehicle manufacturer. No additional plate shall be requested after the approval authority has been granted.</li> </ul>
19A	UN Regulation No 14 (Seat belt anchorages)	The applicant shall submit a statement from the manufacturer establishing that the particular vehicle, the VIN of which has to be specified, complies with at least one of the following: — UN Regulation No 14; — FMVSS No 210 (Seat belt assembly anchorages); or — Article 22-3 of JSRRV.

20A	UN Regulation No 48 (Installation of lighting and light signalling devices)	(a)	The lighting installation shall meet the requirements of UN Regulation No 48, series of amendments 03, with the exception of the
		(b)	requirements of Annexes 5 and 6 to that Regulation. No exemption shall be permitted in respect of the number, the
			essential design characteristics, the electrical connections, and the colour of light emitted or retro-reflected of the lights and signalling devices referred to in items 21 to 26 and in items 28 to 30.
		(c)	Lights and signalling devices that, for the purpose of fulfilling the requirements of point (a) must b retrofitted shall bear an 'EU' type-approval mark.
		(d)	Lamps fitted with gas- discharged light source are only permitted in conjunction wit the installation of headlamp

relating to the permissible sound level and the exhaust system of motor vehicles (OJ L 42, 23.2.1970, p. 16).

cleaning device and an automatic headlamplevelling device where appropriate. (e) Headlamp dipped-beams shall be adapted to the direction of traffic legally in force in the country where the vehicle is granted approval. 21A UN Regulation No 3 Where necessary, two (Retro reflectors) additional retro reflectors bearing an 'EU' approval mark shall be added at the rear, the position of which shall comply with UN Regulation No 48. 22A UN Regulations No 7, No The requirements set out 87 and No 91 in the UN Regulations No (End-outline, front 7, No 87 and No 91 shall position (side), rearnot apply. However, the position (side), stop, side correct functioning of the lights shall be checked by marker, daytime running lamps) the technical service. 23A UN Regulation No 6 The requirements set out in UN Regulation No 6 (Direction indicators) shall not apply. However, the correct functioning of the lights shall be checked by the technical service. 24A UN Regulation No 4 The requirements set out (Rear registration plate in UN Regulation No 4 lamps) shall not apply. However, the correct functioning of the lights shall be checked by the technical service. 25C, 25E, 25F UN Regulations No 98, The illumination (a) No 112 and No 123 produced by (Headlamps (including the passing beam of the bulbs)) headlamps fitted to the vehicle

		(b)	shall be checked under paragraph 6 of UN Regulation No 112 concerning headlamps emitting an asymmetrical passing beam. The tolerances included in Annex 5 to that Regulation may be referred to for that purpose. The same requirement shall be fulfilled for the passing beam of headlamps covered by UN Regulation No 98 or No 123.
26A	UN Regulation No 19 (Front fog lamps)	The requirements set out in UN Regulation No 19 shall not apply. However, the correct functioning of the lights if fitted shall be checked by the technical service.	
27A	Regulation (EU) No 1005/2010 (Towing hooks)	The requirements set out in Regulation (EU) No 1005/2010 shall not apply.	
28A	UN Regulation No 38 (Rear fog lamps)	The requirements set out in UN Regulation No 38 shall not apply. However, the correct functioning of the lights shall be checked by the technical service.	
29A	UN Regulation No 23 (Reversing lamps)	in UN Reshall not the correct the lights	tirements set out egulation No 23 apply. However, ect functioning of s if fitted shall be by the technical

30A	UN Regulation No 77 (Parking lamps)	The requirements set out in UN Regulation No 77 shall not apply. However, the correct functioning of the lights if fitted shall be checked by the technical service.	
31A	UN Regulation No 16 (Seat belts and restraint systems)	Components (a) Seat belts shall not be required to be type- approved in accordance with UN Regulation No 16. (b) Howayar	
		(b) However, each seat belt shall bear an identification label.	
		(c) The indications on the label shal be consistent with the decision concerning seat belt anchorages (Re: entry 19).	
		Installation requirements (a) The vehicle shall be fitted with seat belts in accordance with the requirements set out in Annex XVI to UN Regulation No 16.	
		(b) Where a number of seat belts have to be retrofitted in accordance with point (a), they shall be of an approved type in accordance with UN Regulation	

32A	UN Regulation No 125 (Forward vision)	(a)	No obstruction in the 180° forward field of vision of the driver as defined in paragraph 5.1.3 of UN Regulation No 125 shall be
		(b) (c)	permitted. By derogation from point (a), the 'A pillars' and the equipment listed in paragraph 5.1.3 of UN Regulation No 125 shall not be considered as obstruction. The number of 'A pillars' shall
33A	UN Regulation No 121 (Identification of controls,	(a)	not exceed 2. The symbols including the
	tell-tales and indicators)		colour of their corresponding tell-tales the presence of which is mandatory by virtue of UN Regulation No 121 shall comply with that UN Regulation.
		(b)	Where this is not the case, the technical service shall verify that the symbols, tell-tales and
			indicators fitted to the vehicle provide the driver with comprehensible
			information about the

		operation of the controls in question.	
34A	Regulation (EU) No 672/2010 (Defrost/Demist)	The vehicle shall be equipped with adequate windscreen defrosting and windscreen demisting devices. A windscreen defrosting device which complies as a minimum with point 1.1.1 of Annex II to Regulation (EU) No 672/2010 shall be deemed 'adequate'. A windscreen demisting device which complies as a minimum with point 1.2.1 of Annex II to Regulation (EU) No 672/2010 shall be deemed 'adequate'.	
35A	Regulation (EU) No 1008/2010 (Wash/Wipe)	The vehicle shall be equipped with adequate windscreen washing and windscreen wiping devices. A windscreen washing and wiping device that complies as a minimum with the conditions set out in point 1.1.5 of Annex III to Regulation (EU) No 1008/2010 shall be deemed 'adequate'.	
36A	UN Regulation No 122 (Heating systems)	<ul> <li>(a) The passenger compartment shall be fitted with a heating system.</li> <li>(b) Combustion heaters and their installation shall comply with Annex 7 to UN Regulation No 122. In addition LPG combustion heaters and LPC</li> </ul>	

		<ul> <li>heating systems shall fulfil the requirements set out in Annex 8 to UN Regulation No 122.</li> <li>(c) Additional heating systems which are retrofitted shall comply with the requirements set out in that UN Regulation No 122.</li> </ul>	
37A	Regulation (EU) No 1009/2010 (Wheel guards)	<ul> <li>(a) The vehicle shal be designed as to protect other road users against thrown- up stones, mud, ice, snow and water and to reduce the dangers due to contact with the moving wheels.</li> <li>(b) The technical service may check that the technical requirements set out in Annex II to Regulation (EU) No 1009/2010 are complied with.</li> <li>(c) Section 3 of Annex I to that Regulation shall not apply.</li> </ul>	
38A	UN Regulation No 25 (Head restraints)	The requirements of UN Regulation No 25 shall not apply.	
44A	Regulation (EU) No 1230/2012 (Masses and dimensions)	(a) The requirements of point 1 of Part	

relating to the permissible sound level and the exhaust system of motor vehicles (OJ L 42, 23.2.1970, p. 16).

	(b)	A of Anr Regulatio No 1230, shall be f For the p of point ( masses to considere	on (EU) /2012 fulfilled. ourposes (a), the o be ed are
		the follow	wing:
			the
			mass in
			running
			order
			defined
			in point
			(4) of
			Article
			2 of
			Regulation
			(EU) No
			1230/2012
			as
			measured
			by the
			technical
			service;
			and
		_	the
			laden
			masses
			either
			stated
			by the
			vehicle
			manufacturer
			or
			shown
			on the
			manufacturer's
			plate
			including
			stickers
			or information
			available
			in the
			owner's
			manual.
			Those
			masses
ebruary 1970 on the approximation	n of the laws	of the Memb	

		<ul> <li>shall be deemed the technically permissible maximum laden masses.</li> <li>(c) No exemption shall be permitted in respect of the maximum permissible dimensions.</li> </ul>
45A	UN Regulation No 43 (Safety glazing)	Components (a) The glazing shall be made either of tempered or laminated safety glass.
		(b) Fitting of plastic glazing shall be permitted only on locations situated behind the 'B' pillar.
		(c) Glazing shall not be required to be approved under UN Regulation No 43.
		Installation
		(a) The installation requirements set out in Annex 21 to UN Regulation No 43 shall apply.
		(b) No tinted films that would reduce the regular light transmission under the required minimum shall be permitted on the windscreen and on the

		glazing located in front of the 'B' pillar.
46	Directive 92/23/EEC (Tyres)	Components Tyres shall bear an 'EC' type-approval mark including the symbol 's' (for sound). Installation (a) The dimensions load-capacity index and speed category of the tyres shall fulfil the requirements of Annex IV to Directive 92/23/ EEC.
		(b) The speed category symbol of the tyre shall be compatible with the maximum design speed of the vehicle. This requirement shall apply notwithstanding the presence of a speed limiter.
		<ul> <li>(c) The maximum speed of the vehicle shall be stated by the vehicle manufacturer. However, the technical service may assess the maximum design speed of the vehicle by using the engine maximum power output, the maximum number of revolutions per</li> </ul>

			data concerning the kinematic chain.
50A	UN Regulation No 55 (Couplings)	Separa (a)	ate technical units OEM couplings intended for towing a trailer whose maximum mass does not exceed 1 500 kg shall not be required to be type- approved under UN Regulation No 55. A coupling is deemed OEM equipment where it is described in the owner's manual or an equivalent supporting document provided to the buyer by the vehicle manufacturer. Where such coupling is approved with the vehicle, an appropriate text shall be included in the approval certificate stating that the owner is responsible for ensuring compatibility with the coupling device fitted to the
		(b)	trailer. Couplings other than those
			referred to in point (a), as well as couplings that

		are retrofitted, shall be type- approved in accordance with UN Regulation No 55. Installation on the vehicle The technical service shall check that the installation of the coupling devices comply with paragraph 6 of UN Regulation No 55.
53A	UN Regulation No 94 (Frontal impact) ( <sup>e</sup> )	<ul> <li>(a) The applicant shall submit a statement from the manufacturer establishing that the particular vehicle, of which the VIN has to be specified, complies with at least one of the following: — UN Regulation No 94; — FMVSS No 208 (Occupant crash protection) — Article 18 of JSRRV.</li> </ul>
	of 6 February 1970 on the approximati	<ul> <li>(b) A test in accordance with paragraph 5 of UN Regulation No 94 may be conducted on a production vehicle at the request of the applicant. The test shall be conducted by a technical service that has been designated for</li> </ul>

Status:	This is the	original	version	(as it <sup>.</sup>	was or	riginally	adopted).
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			carrying out this test. A detailed report shall be issued by that technical service to the applicant.
54A	UN Regulation No 95 (Side impact)	(a)	The applicant shall submit a statement from the manufacturer establishing that the particular vehicle, of which the VIN has to be specified complies with at least one of the following: — UN Regulation No 95; — FMVSS No 214 (Side impact protection) — Article 18 of JSRRV.
		(b)	A test in accordance with section 5 of UN Regulation No 95 may be conducted on a production vehicle at the request of the applicant. The test shall be conducted by a technical service that has been designated for carrying out this test. A detailed report shall be issued by that technical service to the applicant.

58	Regulation (EC) No	Brake assist
	78/2009 (Pedestrian protection)	Vehicles shall be fitted with an electronic antiloc braking system acting on all wheels. Pedestrian protection The requirements of Regulation (EC) No 78/2009 shall apply. Frontal protection system Frontal protection systems installed on the vehicle shall be type- approved in accordance with Regulation (EC) No 78/2009 and their installation shall comply with the requirements set out in point 6 of Annex I to that Regulation.
59	Directive 2005/64/EC (Recyclability)	The requirements of that Directive shall not apply.
61	Directive 2006/40/EC (Air-conditioning system)	The requirements of that Directive shall apply.
72	Regulation (EU) 2015/758 (eCall system)	The requirements of that Regulation shall not apply

**a** 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 (OJ L 42, 23.2.1970, p. 16).

Part II: Item Vehicles	Regulatory act reference	Alternative requirements
belonging <sub>2A</sub> to category N <sub>1</sub>	Regulation (EC) No 715/2007 (Emissions (Euro 5 and Euro 6) light duty vehicles / access to information)	Tailpipe emissions(a)A type 1test shall beconducted inaccordance withAnnex III toRegulation (EC)No 692/2008using thedeteriorationfactors set outin point 1.4 ofAnnex VII tothat Regulation.The emissionlimits to be

(t	applied shall be those specified in Table 1 and Table 2 of Annex I to Regulation (EC) No 715/2007. The vehicle shall not be required to exhibit 3 000 km as mentioned in paragraph 3.1.1 of Annex 4 to UN Regulation No 83.
(c	) The fuel to be used for the test shall be the reference fuel as prescribed in Annex IX to Regulation (EC)
(6	No 692/2008. The dynamometer shall be set up in accordance with the technical requirements of paragraph 3.2 of Annex 4 to UN Regulation No 83.
(e	
	No 692/2008.

a Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and of the Council (OJ L 167, 25.6.2011, p. 1).

(b)	The vehicle shall not be required to exhibit 3 000 km as requested in
(c)	paragraph 3.1.1 of Annex 4 to UN Regulation No 83. Where the vehicle complies with the
	California Code
	Regulations
	referred to in
	point 2.1.1 of Annex I to
	Commission
	Regulation (EC)
	No 692/2008
	and therefore no
	test of tailpipe
	emissions is required to be
	performed,
	Member States
	shall calculate
	CO <sub>2</sub> emissions
	and fuel
	consumption
	with the formula laid down in
	the explanatory
	notes $\binom{b}{}$ and $\binom{c}{}$ .
Access to	o information
	visions regarding
access to	information shall
not apply	
	easurement
(a)	The applicant shall submit a
	statement from
	the manufacturer
	stating the
	maximum
	engine power
	output in kW as well as the
	corresponding
	concepting

a Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and of the Council (OJ L 167, 25.6.2011, p. 1).

		(b)	regime in revolutions per minute. An engine power output curve providing the same information may alternatively be provided by the applicant.
3A	UN Regulation No 34	Fuel tar	nks
3A	UN Regulation No 34 (Fuel tanks — Rear protective devices)	(a) (b) Specific fuel tam plastic	hks Fuel tanks shall comply with paragraph 5 of UN Regulation No 34 with the exception of paragraphs 5.1, 5.2 and 5.12. In particular, they shall comply with paragraph 5.9 and 5.9.1 but no dripping test shall be conducted. LPG or CNG tanks shall be type-approved in accordance with, respectively UN Regulations No 67, series of amendments 01, or UN Regulation No 110 ( <sup>a</sup> ). c provisions for iks made of a material blicant shall submit
		a staten	nent from the
		that the	cturer establishing fuel tank on the lar vehicle, of
		which t	he VIN has to be ed, complies either

		<ul> <li>with at least one of the following:</li> <li>FMVSS No 301 (Fuel system integrity);</li> <li>Annex 5 to UN Regulation No 34.</li> <li>Rear protective device <ul> <li>(a) The rear part of the vehicle shall be constructed in accordance with paragraphs 8 and 9 of UN Regulation No 34.</li> </ul> </li> </ul>
4A	Regulation (EU) No 1003/2010 (Rear registration plate space)	Space, inclination, angles for visibility and position of the registration plate shall comply with Regulation (EU) No 1003/2010.
5A	UN Regulation No 79 (Steering effort)	Mechanical systems (a) The steering mechanism shall be built as to self-centre. In order to check compliance with this provision, a test shall be conducted in accordance with paragraphs 6.1.2 and 6.2.1 of UN Regulation No 79. (b) The failure of the power steering equipment shall not lead to a complete loss of control of the vehicle.

		Complex electronic vehicle control system ('Drive-by wire' devices) Complex electronic control system shall be permitted only if they comply with Annex 6 to UN Regulation No 79.
6A	UN Regulation No 11 (Door latches and hinges)	Compliance with paragraph 6.1.5.4 of UN Regulation No 11
7A	UN Regulation No 28 (Audible warning)	Components The audible warning devices are not required to be type-approved in accordance with UN Regulation No 28. However, they shall emit a continuous sound as required in paragraph 6.1.1 of UN Regulation No 28. Installation on vehicle (a) A test shall be conducted in accordance with paragraph 6.2 of UN Regulation No 28. (b) The maximum sound pressure level shall be in accordance with paragraph 6.2.7.
8A	UN Regulation No 46	Components
	(Indirect vision devices)	<ul> <li>(a) The vehicle shall be fitted with the rearview mirrors prescribed in paragraph 15.2 of UN Regulation No 46.</li> <li>(b) They are not</li> </ul>
	J) No 582/2011 of 25 May 2011 impleme	required to be type-approved in accordance with

		(c) Installatio Measurer conducte ensure th of vision paragrapl	UN Regulation No 46. The radii of curvature of the mirrors shall not cause significant image distortions. At the discretion of the technical service, the radii of curvature shall be checked in accordance with the method described in Appendix 1 to Annex 7 to UN Regulation No 46. The radii of curvature shall not be less than those required by paragraph 6.1.2.2.4 of UN Regulation No 46. on on vehicle ment shall be d in order to at the fields comply with h 15.2.4 of UN on No 46.
9B	UN Regulation No 13-H (Braking)	(a)	brovisions The braking system shall be built in accordance with paragraph 5 of UN Regulation No 13-H. Vehicles shall be fitted with
	La 592/2011 of 25 May 2011 implement	· •	an electronic antilock braking system acting on all wheels.

		(c) (d)	The performances of the braking system shall comply with Annex III to UN Regulation No 13-H. For these purposes, road tests shall be conducted on a track the surface of which possesses high adhesion. The test on the parking brake shall be conducted on a 18 % gradient (up and down). Only those tests mentioned under the headings 'Service brake' and 'Parking brake' below shall be
		(e)	below shall be conducted. In each case, the vehicle shall be in fully laden conditions. The road test
			referred to in point (c) shall not be conducted where the applicant can submit a
			statement from the manufacturer establishing that the vehicle complies either with UN
ion (EU) N	o 582/2011 of 25 May 2011 implement	ting and ame	Regulation No 13-H including

		supplement 5 or with FMVSS No 135. Service brake (a) A 'Type 0' test as prescribed in paragraphs 1.4.2 and 1.4.3 of Annex 3 to UN Regulation No 13-H shall be conducted. (b) In addition, a 'Type I' test as prescribed in paragraph 1.5 of Annex 3 to UN Regulation No 13-H shall be conducted. Parking brake A test shall be conducted in accordance with paragraph 2.3 of Annex 3 to UN Regulation No 13-H.
10A	UN Regulation No 10 (Radio interference (electromagnetic compatibility))	Components (a) Electrical/ electronic sub- assemblies are not required to be type- approved in accordance with UN Regulation No 10. (b) However, electric/ electronic devices retrofitted shall comply with UN Regulation No 10.
a Commission Regulation (EU) M	No 582/2011 of 25 May 2011 implemen	Emitted electromagnetic radiations The applicant shall submit a statement from the manufacturer establishing

		with U 10 or v alterna —	e vehicle complies IN Regulation No with the following trive standards: Broadband electromagnetic radiation: CISPF 12 or SAE J551-2; Narrowband electromagnetic radiation: CISPF 12 (off-board) or 25 (in-board) or SAE J551-4 and SAE J1113-41. hity tests hity test shall be
13B	UN Regulation No 116 (Anti-theft and immobiliser)	(a)	In order to prevent unauthorised use, the vehicle shall be fitted with a locking device as defined in paragraph 5.1.2 of UN Regulation No 116.
		(b)	If an immobiliser is fitted, it shall comply with the technical requirements of paragraph 8.1.1 of UN Regulation No 116.
14A	UN Regulation No 12 (Protective steering)	(a)	The applicant shall submit a statement from the manufacture establishing that the particular vehicle, the VIN

No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and of the Council (OJ L 167, 25.6.2011, p. 1).

of which has to be specified, complies with at least one of the following: UN Regulation No 12; **FMVSS** No 203 (Impact protection for the driver from the steering control system) including FMVSS No 204 (Steering control rearward displacement); Article 11 of JSRRV. (b) A test in accordance with Annex 3 to UN Regulation No 12 may be conducted on a production vehicle at the request of the applicant. The test shall be conducted by a technical service that has been designated for carrying out this test. A detailed report shall be issued by that

		technical service to the applicant.
15A	UN Regulation No 17 (Seats strength — head restraints)	<ul> <li>Seats, seat anchorages and adjustment systems</li> <li>Seats and their adjustable systems shall comply with paragraph 5.3 of UN Regulation No 17. Head restraints</li> <li>(a) Head restraints</li> <li>(a) Head restraints shall fulfil the requirements of section 5 of UN Regulation No 17 and Annex 4 to UN Regulation No 17 and Annex 4 to UN Regulation No 17.</li> <li>(b) Only the tests described in paragraphs 5.12, 6.5, 6.6 and 6.7 of UN Regulation No 17 shall be conducted.</li> </ul>
17A	UN Regulation No 39 (Speedometer — reverse gear)	<ul> <li>Speedometer equipment <ul> <li>(a) The dial shall</li> <li>comply with</li> <li>paragraphs 5.1</li> <li>to 5.1.4 of UN</li> <li>Regulation No</li> <li>39.</li> </ul> </li> <li>(b) When the <ul> <li>technical service</li> <li>has reasonable</li> <li>grounds to</li> <li>believe that the</li> <li>speedometer is</li> <li>not calibrated</li> <li>with a sufficient</li> <li>accuracy, it may</li> <li>require that the</li> <li>tests prescribed</li> <li>in paragraph</li> <li>5.2 of UN</li> <li>Regulation No</li> <li>39 be conducted.</li> </ul> </li> </ul>

		Reverse gear The gear mechanism shall include a reverse gear.
18A	Regulation (EU) No 19/2011 (Statutory plates)	VIN (a) The vehicle shall be fitted with a VIN comprising a minimum of 8 and a maximum of 17 characters. VIN comprising 17 characters shall fulfil the requirements set out in international standards ISO 3779:1983 and 3780:1983.
		(b) The VIN shall be located in a clearly visible and accessible position in such a way as it cannot be obliterated or deteriorate.
		<ul> <li>(c) Where no VIN is stamped in the chassis or in the body, a Member State may require that it is retrofitted in application of its national law. In such a case, the competent authority of that Member State shall supervise the operation.</li> </ul>
		Statutory plate The vehicle shall be fitted with an identification plate affixed by the vehicle manufacturer.

		No additional plate shall be requested after the approval has been granted.
19A	UN Regulation No 14 (Seat belt anchorages)	The applicant shall submit a statement from the manufacturer establishing that the particular vehicle, of which the VIN has to be specified, complies with at least one of the following:—UN Regulation No 14;—FMVSS No 210 (Seat 
20A	UN Regulation No 48 (Installation of lighting and light signalling devices)	(a) The lighting installation shall meet the essential requirements of UN Regulation No 48 series of amendments 03 with the exception of those of Annexes 5 and 6 to UN Regulation No 48.
		(b) No exemption shall be permitted in respect of the number, the essential design characteristics, the electrical connections, and the colour of light emitted or retro-reflected of the lights and signalling

21A

a

of the Council (OJ L 167, 25.6.2011, p. 1).

devices referred to in items 21 to 26 and in items 28 to 30. (c) Lights and signalling devices that, for the purpose of fulfilling with the requirements of point (a) must be retrofitted shall bear an 'EU' typeapproval mark. Lamps fitted (d) with gasdischarged light source are only permitted in conjunction with the installation of headlamp cleaning device and an automatic headlamplevelling device where appropriate. (e) Headlamp dipped-beams shall be adapted to the direction of traffic legally in force in the country where the vehicle is granted approval. UN Regulation No 3 Where necessary, two additional retro reflectors (Retro reflectors) bearing an 'EC' approval mark shall be added at the rear, the position of which shall comply with UN Regulation No 48. 22A UN Regulations No 7, No The requirements set out 87 and No 91 in UN Regulations No 7, Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and

	(End-outline, front position (side), rear- position (side), stop, side marker, daytime running lamps)	No 87 and No 91 shall not apply. However, the correct functioning of the lights shall be checked by the technical service.
23A	UN Regulation No 6 (Direction indicators)	The requirements set out in UN Regulation No 6 shall not apply. However, the correct functioning of the lights shall be checked by the technical service.
24A	UN Regulation No 4 (Rear registration plate lamps)	The requirements set out in UN Regulation No 4 shall not apply. However, the correct functioning of the lights shall be checked by the technical service.
25C, 25E, 25F	UN Regulations No 98, No 112 and No 123 (Headlamps (including bulbs))	<ul> <li>(a) The illumination produced by the passing beam of the headlamps fitted to the vehicle shall be checked under the provisions of paragraph 6 of UN Regulation No 112 concerning headlamps emitting an asymmetrical passing beam. The tolerances included in Annex 5 to that Regulation may be referred to for that purpose.</li> <li>(b) The same requirement shall apply to the passing beam of headlamps covered by UN Regulation No 98 or No 123.</li> </ul>

26A	UN Regulation No 19 (Front fog lamps)	The provisions of UN Regulation No 19 shall be waived. However, the correct functioning of the lights if fitted shall be checked by the technical service.	
27A	Regulation (EU) No 1005/2010 (Towing hooks)	The requirements of Regulation (EU) No 1005/2010 shall be waived.	
28A	UN Regulation No 38 (Rear fog lamps)	The provisions of UN Regulation No 38 shall be waived. However, the correct functioning of the lights shall be checked by the technical service.	
29A	UN Regulation No 23 (Reversing lamps)	The provisions of UN Regulation No 23 shall be waived. However, the correct functioning of the lights if fitted shall be checked by the technical service.	
30A	UN Regulation No 77 (Parking lamps)	The provisions of UN Regulation No 77 shall be waived. However, the correct functioning of the lights if fitted shall be checked by the technical service.	
31A	UN Regulation No 16 (Seat belts and restraint systems)	Components (a) Seat belts shall not be required to be type- approved in accordance with UN Regulation No 16.	
		(b) However, each seat belt shall bear an identification label.	
		(c) The indications on the label shall	

		Installati (a)	be consistent with the decision concerning seat belt anchorages (Re: entry 19). on requirements The vehicle shall be fitted with seat belts in accordance with the requirements set out in Annex XVI to UN Regulation No 16.
		(b)	Where a number of seat belts have to be retrofitted in accordance with point (a), they shall be of an approved type in accordance with UN Regulation No 16.
33A	UN Regulation No 121 (Identification of controls, tell-tales and indicators)	(a) (b)	The symbols including the colour of their corresponding tell-tales the presence of which is mandatory by virtue of UN Regulation No 121 shall comply with that UN Regulation. Where this is not the case, the technical service shall verify that the symbols, tell-tales and indicators fitted to the vehicle provide the driver with

comprehensible information about the operation of the controls in question. The vehicle shall be 34A Regulation (EU) No 672/2010 equipped with adequate (Defrost/Demist) windscreen defrosting and windscreen demisting devices. 35A The vehicle shall be Regulation (EU) No 1008/2010 equipped with adequate (Wash/Wipe) windscreen washing and windscreen wiping devices. 36A UN Regulation No 122 The passenger (a) (Heating systems) compartment shall be fitted with a heating system. (b) Combustion heaters and their installation shall comply with Annex 7 to UN Regulation No 122. In addition, LPG combustion heaters and LPG heating systems shall fulfil the requirements set out in Annex 8 to **UN Regulation** No 122. (c) Additional heating systems that are retrofitted shall comply with the requirements set out in UN Regulation No 122.

41A	Regulation (EC) No		pe emissions
	595/2009	(a)	A test shall be
	(Emissions (Euro VI)		conducted in
	heavy-duty vehicles –		accordance with
	OBD)		Annex III to
			Commission
			Regulation (EU)
			No 582/2011 <sup>a</sup>
			using the
			deterioration
			factors set out
			in point 3.6.1
			of Annex VI to
			Regulation (EU)
			No 582/2011.
		(b)	The limits to
			be applied shall
			be those set
			out in the table
			of Annex I to
			Regulation (EC)
			No 595/2009.
		(c)	The fuel to be
			used for the
			test shall be the
			reference fuel
			as prescribed
			in Annex IX to
			Regulation (EU
			No 582/2011.
		CO <sub>2</sub> e	missions
			O <sub>2</sub> emissions
			el consumption
			be determined in
			lance with Annex
			• Regulation (EU)
			2/2011.
		OBD	2/2011.
		(a)	The vehicle sha
			be fitted with an
			OBD system.
		(b)	The OBD-
			interface must
			be able to
			or a communicate with an exter OBD scan-to as described in Annex X to

a Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and of the Council (OJ L 167, 25.6.2011, p. 1).

Regulation (EU) No 582/2011. Requirements to ensure the correct operation of NO<sub>x</sub> control measures The vehicle shall be fitted with a system ensuring the correct operation of NO<sub>x</sub> control measures in accordance with Annex XIII to Regulation (EU) No 582/2011. Power measurement (a) The applicant shall submit a statement from the manufacturer stating the maximum engine power output in Kw as well as the corresponding regime. (b) An engine power output curve providing the same information may alternatively be provided by the applicant. UN Regulation No 43 Components 45A (a) The glazing shall be made either of tempered or laminated safety glass. Fitting of plastic (b) glazing shall be permitted only on locations situated behind the 'B' pillar. (c) Glazing shall not be required to be approved under **UN Regulation** No 43.

		Installat (a) (b)	ion The installation requirements set out in Annex 21 to UN Regulation No 43 shall apply. No tinted films that reduce the regular light transmission under the required minimum shall be permitted on the windscreen and on the glazing located in front of the 'B' pillar.
46A	Commission Regulation	Installat	ion
ΤυΛ	(EU) 458/2011 (Installation of tyres)	(b)	The dimensions, load-capacity index and speed category of the tyres shall fulfil the requirements of Commission Regulation (EU) 458/2011. The speed category symbol of the tyre shall be
			compatible with the maximum design speed of the vehicle.
		(c)	This requirement shall apply notwithstanding the presence of a speed limiter.
		(d)	The maximum speed of the vehicle shall be stated by the vehicle manufacturer.

Components Tyres shall bear a type- approval mark. Components
Components
Tyres shall bear a type- approval mark.
Components Tyres shall bear type- approval mark. The fitting of TPMS shall not be required.
<ul> <li>(a) The requirements of Annex I, Part A to Regulation (EU) No 1230/2012 shall be fulfilled. However, the requirements set out in point 5 of Part A of Annex I do not need to be fulfilled.</li> <li>(b) For the purposes</li> </ul>

masses to be considered are the following: the mass in running order as defined in point (4) of Article 2 of Regulation (EU) No 1230/2012 as measured by the technical service; and the maximum laden masses either stated by the vehicle manufacturer or shown on the manufacturer's plate, including stickers or information available in the owner's manual. Those masses shall be regarded

		(c) (d)	as the technically permissible maximum laden masses. Technical changes made by the applicant in order to decrease the maximum technically permissible laden mass of the vehicle to 3,5 tonnes or less, so that the vehicle may be granted individual vehicle approval shall not be permitted. No exemption shall be permitted in respect of the maximum permissible dimensions.
49A	UN Regulation No 61 (External projections of cabs)	(a) (b)	The general requirements set out in section 5 of UN Regulation No 17 shall be fulfilled. At the discretion of the technical service, the requirements set out in paragraphs 6.1, 6.5, 6.6, 6.7, 6.8 and 6.11 of UN Regulation No 17 shall be fulfilled.
50A	UN Regulation No 55	Separat	e technical units

 50A
 UN Regulation No 55
 Separate technical units

 a
 Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and of the Council (OJ L 167, 25.6.2011, p. 1).

<ul> <li>(Couplings)</li> <li>(a) OEM couplings intended for towing a trailer of which the maximum mass does not exceed 1 500 kg shall not be required to be type- approved under UN Regulation No 55.</li> <li>(b) A coupling is deemed OEM equipment where it is described in the owner's manual or in an equivalent supporting document provided to the buyer by the vehicle manufacturer.</li> <li>(c) Where such coupling is approved with the vehicle, an appropriat text shall be included in the approval certificate stating that the owner is responsible for ensuring compatibility with the coupling so other than those referred to in point (a), as well as couplings that are retrofitted, shall be type-</li> </ul>			
<ul> <li>equipment where it is described in the owner's manual or in an equivalent supporting document provided to the buyer by the vehicle manufacturer.</li> <li>(c) Where such coupling is approved with the vehicle, an appropriate text shall be included in the approval certificate stating that the owner is responsible for ensuring compatibility with the coupling device fitted to the trailer.</li> <li>(d) Couplings other than those referred to in point (a), as well as couplings that are retrofitted, shall be type-</li> </ul>	(Couplings)		intended for towing a trailer of which the maximum mass does not exceed 1 500 kg shall not be required to be type- approved under UN Regulation No 55. A coupling is
<ul> <li>(c) Where such coupling is approved with the vehicle, an appropriate text shall be included in the approval certificate stating that the owner is responsible for ensuring compatibility with the coupling device fitted to the trailer.</li> <li>(d) Couplings other than those referred to in point (a), as well as couplings that are retrofitted, shall be type-</li> </ul>			equipment where it is described in the owner's manual or in an equivalent supporting document provided to the buyer by the vehicle
(d) Couplings other than those referred to in point (a), as well as couplings that are retrofitted, shall be type-		(c)	Where such coupling is approved with the vehicle, an appropriate text shall be included in the approval certificate stating that the owner is responsible for ensuring compatibility with the coupling device fitted to the
approved in		(d)	Couplings other than those referred to in point (a), as well as couplings that are retrofitted,

		The tech check the of the co comply v	accordar UN Reg No 55. on on the nical serv at the inst upling de with parag	ulation vehicle vice shall allation vices graph 6
54	UN Regulation No 95 (Side impact)	(a)	establish the parti	omit a at from afacturer sing that cular of which has to fied, s with at e of the
		(b) (c)	A test in accordar section 5 UN Reg No 95 m conducts a product vehicle a request of applican The test be condu by a tech service t designat carrying test. A d	nce with 5 of ulation hay be ed on otion at the of the t. shall ucted mical hat been ed for out this

		report shall be issued by that technical service to the applicant.
56A	UN Regulation No 105 (Vehicles intended for the transport of dangerous goods)	Vehicles intended for the transport of dangerous goods shall comply with UN Regulation No 105.
58	Regulation (EC) No 78/2009 (Pedestrian protection)	Brake assist Vehicles shall be fitted with an electronic antilock braking system acting on all wheels. Pedestrian protection Until 24 February 2018, the requirements of Regulation (EC) No 78/2009 shall not apply to vehicles of which the maximum mass does not exceed 2 500 kg and until 24 August 2019 to vehicles of which the maximum mass exceeds 2 500 kg. Frontal protection systems However, frontal protection systems installed on the vehicle shall be type-approved in accordance with Regulation (EC) No 78/2009 and their installation shall comply with the requirements set out in point 6 of Annex I to that Regulation.
59	Directive 2005/64/EC (Recyclability)	The requirements of that Directive shall not apply.
61	Directive 2006/40/EC (Air-conditioning system)	The requirements of that Directive shall apply.
72	Regulation (EU) 2015/758 (eCall system)	The requirements of that Regulation shall not apply.

a Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI) and amending Annexes I and III to Directive 2007/46/EC of the European Parliament and of the Council (OJ L 167, 25.6.2011, p. 1).

Explanatory notes to Appendix 2

1. Abbreviations used in this Appendix:

'OEM' 'FMVSS	<ul> <li>original equipment provided by the manufacturer</li> <li>Federal Motor Vehicle Safety Standard of the U.S. Department of</li> </ul>
1 101 0 00	Transportation
'JSRRV	: Japan Safety Regulations for Road Vehicles
'SAE'	: Society of Automotive Engineers
'CISPR'	: Comité international spécial des perturbations radioélectriques.
2.	Remarks:
(a)	the complete LPG or CNG installation shall be checked against the UN Regulations No 67, No 110 or No 115, as appropriate;
(b)	the formula to be used for the assessment of $CO_2$ emissions shall be as follows:

Petrol engine and manual gearbox:

 $CO_2 = 0,047 \text{ m} + 0,561 \text{ p} + 56,621$ Petrol engine and automatic gearbox

 $CO_2 = 0,102 \text{ m} + 0,328 \text{ p} + 9,481$ Petrol engine and hybrid electric:

 $CO_2 = 0,116 \text{ m} - 57,147$ Diesel engine and manual gearbox:

 $CO_2 = 0,108 \text{ m} - 11,371$ Diesel engine and automatic gearbox:

 $CO_2 = 0,116 \text{ m} - 6,432$ 

Where:  $CO_2$  is the combined mass of  $CO_2$  emissions in g/km, 'm' is the mass of the vehicle in running order in kg and 'p' the maximum engine power output in kW.

Combined mass of  $CO_2$  shall be calculated with one decimal place, then rounded to the nearest whole number as follows:

- (i) if the figure following the decimal point is below 5, the total is rounded down;
- (ii) if the figure following the decimal point is equal to 5 or above 5, the total is rounded up;
- (c) the formula to be used for the assessment of fuel consumption shall be as follows:

 $CFC = CO_2 \times k^{-1}$ 

Where: CFC is the combined fuel consumption in l/100 km, CO<sub>2</sub> is the combined mass of CO<sub>2</sub> emissions in g/km after it has been rounded in accordance with the rule referred to in Remark (2 b), 'k' a coefficient equal to:

23,81 in the case of a petrol engine;

26,49 in the case of a diesel engine.

Combined fuel consumption shall be calculated with two decimal places, then rounded as follows:

(i) if the figure following the first decimal is below 5, the total is rounded down;

(ii) if the figure following the first decimal is equal to 5 or above 5, the total is rounded up.

#### PART II

#### List of UN Regulations recognised as an alternative to the Directives or Regulations referred to in Part I

Where reference is made to a separate Directive or Regulation in the table of Part I, an approval granted under the following UN Regulations which the Union has accepted as a Contracting Party to the 'Revised 1958 Agreement' by virtue of Decision 97/836/EC, or subsequent Council Decisions as referred to in Article 3(3) of that Decision, shall be considered as equivalent to an EU type-approval granted under the relevant separate Directive or Regulation.

Any further amendment to the UN Regulations listed in the following table<sup>(5)</sup> shall also be deemed to be equivalent to an EU type-approval, subject to the Decision referred to in Article 4(2) of Decision 97/836/EC.

	Subject	UN Regulation number	Series of amendments
1A <sup>a</sup>	Permissible sound level (not covering AVAS and replacement silencers)	51	03
	AVAS	138	00
	Replacement silencing systems	59	02
9B	Braking of passenger cars (ESC part)	140	00
58	Pedestrian protection (not covering brake assist)	127 (pedestrian protection)	00
	Pedestrian protection (brake assist part)	13-H (brake assist) or 139 (brake assist)	00 (Supplement 9 and above) 00
65	Advanced emergency braking system	131	01
66	Lane departure warning system	130	00

Where the separate Directive or Regulation contains installation requirements, these apply also to components and separate technical units approved in accordance with UN Regulations.

**a** The numbering of the entries in this table refers to the numbering used in the table of Part I.

#### PART III

# List of regulatory acts setting out the requirements for the purpose of EU type-approval of special purpose vehicles

# Appendix 1

#### Motor-caravans, ambulances and hearses

Item	Subject	Regulatory act reference	$M_1 \le 2$ 500 kg <sup>a</sup>	M <sub>1</sub> > 2 500 kg <sup>a</sup>	M <sub>2</sub>	<b>M</b> <sub>3</sub>
1A	Sound level	Regulation (EU) No 540/2014	Н	G+H	G+H	G+H
2	Emissions (Euro 5 and Euro 6) light duty vehicles / access to information	Regulation (EC) No 715/2007	Q ( <sup>1</sup> )	G+Q ( <sup>1</sup> )	G+Q ( <sup>1</sup> )	
3A	Prevention of fire risks (liquid fuel tanks)	Regulation (EC) No 661/2009 UN Regulation No 34	F ( <sup>2</sup> )	F ( <sup>2</sup> )	F ( <sup>2</sup> )	F ( <sup>2</sup> )
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58	X	X	X	X
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010	X	X	X	X

5A	Steering equipment	Regulation (EC) No 661/2009 UN Regulation No 79	X	G	G	G
6A	Vehicle access and manoeuvrab	Regulation (EC) No 166/1/2009 Regulation (EU) No 130/2012	X	X		
6B	Door latches and door retention components	Regulation (EC) No 661/2009 UN Regulation No 11	В	G+B		
7A	Audible warning devices and signals	Regulation (EC) No 661/2009 UN Regulation No 28	X	X	X	X
8A	Devices for indirect vision and their installation	Regulation (EC) No 661/2009 UN Regulation No 46	X	G	G	G
9A	Braking of vehicles and trailers	Regulation (EC) No 661/2009 UN Regulation No 13			G ( <sup>3</sup> )	G ( <sup>3</sup> )
9B	Braking of passenger cars	Regulation (EC) No 661/2009 UN Regulation No 13-H	X ( <sup>4</sup> )	G+A1		
10A	Electromagn		X	X	X	X

		UN Regulation No 10				
12A	Interior fittings	Regulation (EC) No 661/2009 UN Regulation No 21	С	G+C		
13A	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 18			G ( <sup>4A</sup> )	G ( <sup>4A</sup> )
13B	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 116	X	G		
14A	Protection of the driver against the steering mechanism in the event of impact	Regulation (EC) No 661/2009 UN Regulation No 12	X	G		
15A	Seats, their anchorages and any head restraints	Regulation (EC) No 661/2009 UN Regulation No 17	D	G+D	G+D ( <sup>4B</sup> )	G+D ( <sup>4B</sup> )
15B	Seats of large passenger vehicles	Regulation (EC) No 661/2009 UN Regulation No 80			X	X
16A	External projections	Regulation (EC) No 661/2009 UN Regulation No 26	X for the cab; A +Z for the remaining part	G for the cab; A +Z for the remaining part		

17A	Vehicle access and manoeuvrab	Regulation (EC) No 166/1/2009 Regulation (EU) No 130/2012	X	X	X	X
17B	Speedometer equipment including its installation	Regulation (EC) No 661/2009 UN Regulation No 39	X	X	Х	X
18A	Manufacture statutory plate and VIN	rRegulation (EC) No 661/2009 Regulation (EU) No 19/2011	X	X	Х	X
19A	Safety-belt anchorages, Isofix anchorages systems and Isofix top tether anchorages	Regulation (EC) No 661/2009 UN Regulation No 14	D	G+L	G+L	G+L
20A	Installation of lighting and light- signalling devices on vehicles	Regulation (EC) No 661/2009 UN Regulation No 48	A+N	A+G+N for the cab; A +N for the remaining part	A+G+N for the cab; A +N for the remaining part	A+G+N for the cab; A +N for the remaining part
21A	Retro- reflecting devices for power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 3	X	X	X	X
22A	Front and rear position lamps, stop-lamps and end- outline marker ally permissible maxim	Regulation (EC) No 661/2009 UN Regulation No 7	X	X	X	X

	lamps for motor vehicles and their trailers					
22B	Daytime running lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 87	X	X	X	X
22C	Side- marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 91	X	X	X	X
23A	Direction indicators for power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 6	X	X	X	X
24A	Illumination of rear- registration plates of power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 4	X	X	X	X
25A	Power- driven vehicle's sealed- beam headlamps (SB) emitting an European asymmetrica passing beam or a driving beam or both		X	X	X	X
a Technically	permissible maxim	num laden mass.				

Status: This is the original version (as it was original	y adopted).
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25B	Filament lamps for use in approved lamp units of power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 37	X	X	X	X
25C	Motor vehicle headlamps equipped with gas- discharge light sources	Regulation (EC) No 661/2009 UN Regulation No 98	X	X	X	X
25D	Gas- discharge light sources for use in approved gas- discharge lamp units of power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 99	X	X	X	X
25E	Motor vehicle headlamps emitting an asymmetrica passing beam or a driving beam or both and equipped with filament lamps and/ or LED modules	Regulation (EC) No 661/2009 UN IRegulation No 112	X	X	X	X
25F	Adaptive front- lighting Ily permissible maxir	Regulation (EC) No 661/2009	X	X	X	Х

	systems (AFS) for motor vehicles	UN Regulation No 123				
26A	Power- driven vehicle front fog lamps	Regulation (EC) No 661/2009 UN Regulation No 19	X	X	X	X
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010	E	E	E	E
28A	Rear fog lamps for power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 38	X	X	X	X
29A	Reversing lights for power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 23	X	X	X	X
30A	Parking lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 77	X	X	X	X
31A	Safety- belts, restraint systems, child restraint systems and Isofix child restraint systems	Regulation (EC) No 661/2009 UN Regulation No 16	D	G+M	G+M	G+M

32A	Forward field of vision	Regulation (EC) No 661/2009 UN Regulation No 125	X	G		
33A	Location and identification of hand controls, tell- tales and indicators	Regulation (EC) No 1661/2009 UN Regulation No 121	X	X	X	X
34A	Windscreen defrosting and demisting systems	Regulation (EC) No 661/2009 Regulation (EU) No 672/2010	X	G ( <sup>5</sup> )	(*)	(5)
35A	Windscreen wiper and washer systems	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010	X	G ( <sup>6</sup> )	( <sup>6</sup> )	(6)
36A	Heating systems	Regulation (EC) No 661/2009 UN Regulation No 122	X	X	X	X
37A	Wheel guards	Regulation (EC) No 661/2009 Regulation (EU) No 1009/2010	X	G		
38A	Head restraints (headrests), whether or not incorporated in vehicle seats	Regulation (EC) No 661/2009 UN Regulation No 25	D	G+D		

44A	Masses and dimensions	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012	X	X		
45A	Safety glazing materials and their installation on vehicles	Regulation (EC) No 661/2009 UN Regulation No 43	J	G+J	G+J	G+J
46A	Installation of tyres	Regulation (EC) No 661/2009 Regulation (EU) No 458/2011	X	G	G	G
46B	Pneumatic tyres for motor vehicles and their trailers (Class C <sub>1</sub> )	Regulation (EC) No 661/2009 UN Regulation No 30	X	G		
46C	Pneumatic tyres for commercial vehicles and their trailers (Classes C <sub>2</sub> and C <sub>3</sub> )	Regulation (EC) No 661/2009 UN Regulation No 54		G	G	G
46D	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes C <sub>1</sub> , C <sub>2</sub> and C <sub>3</sub> )	Regulation (EC) No 661/2009 UN Regulation No 117	X	G	G	G
46E	Temporary- use spare unit, run- flat tyres/	Regulation (EC) No 661/2009	X	G		

	system and tyre pressure monitoring system	UN Regulation No 64				
47A	Speed limitation of vehicles	Regulation (EC) No 661/2009 UN Regulation No 89			X	X
48A	Masses and dimensions	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012			X	X
50A	Mechanical coupling components of combination of vehicles	Regulation (EC) No 661/2009 UN sRegulation No 55	X ( <sup>10</sup> )	G ( <sup>10</sup> )	G ( <sup>10</sup> )	G ( <sup>10</sup> )
51A	Burning behaviour of materials used in the interior construction of certain categories of motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 118				G for the cab; X for the remaining part
52A	M <sub>2</sub> and M <sub>3</sub> vehicles	Regulation (EC) No 661/2009 UN Regulation No 107			A	A
52B	Strength of the superstructur of large passenger vehicles	Regulation (EC) No 661/2009 UN Regulation No 66			A	A
53A	Protection of occupants	Regulation (EC) No 661/2009	N/A	N/A		

	in the event of a frontal collision	UN Regulation No 94				
54A	Protection of occupants in the event of lateral collision	Regulation (EC) No 661/2009 UN Regulation No 95	N/A	N/A		
58	Pedestrian protection	Regulation (EC) No 78/2009	X	N/A However, any frontal protection systems supplied with the vehicle shall comply and shall be marked		
59	Recyclability	Directive 2005/64/ EC	N/A	N/A		
61	Air- conditioning system	Directive 2006/40/ EC	X	G ( <sup>14</sup> )		
62	Hydrogen system	Regulation (EC) No 79/2009	Q	G+Q	G+Q	G+Q
63	General safety	Regulation (EC) No 661/2009	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )
64	Gear shift indicators	Regulation (EC) No 661/2009 Regulation (EU) No 65/2012	X	G		
65	Advanced emergency braking system	Regulation (EC) No 661/2009 Regulation (EU) No 347/2012			N/A ( <sup>16</sup> )	N/A ( <sup>16</sup> )

66	Lane departure warning system	Regulation (EC) No 661/2009 Regulation (EU) No 351/2012			N/A ( <sup>17</sup> )	N/A ( <sup>17</sup> )
67	Specific components for liquefied petroleum gases (LPG) and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 67	X	X	X	X
68	Vehicle alarm systems (VAS)	Regulation (EC) No 661/2009 UN Regulation No 97	X	G		
69	Electrical safety	Regulation (EC) No 661/2009 UN Regulation No 100	X	X	X	X
70	Specific components for CNG and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 110	X	X	X	X
72	eCall system	Regulation (EU) 2015/758	G	G	N/A	N/A

#### Additional requirements for ambulances

The patient compartment of ambulances shall comply with the requirements of EN 1789:2007 +A1: 2010 + A2:2014 on Medical vehicles and their equipment – Road ambulances with the exception of section 6.5, list of equipment. Proof of compliance shall be provided with a test report of a technical service. If a wheelchair space is foreseen, the requirements of Appendix 3 relating to the wheelchair tie-down and occupant restraint systems shall apply.

# Appendix 2

### **Armoured vehicles**

Item	Subje	cRegula act referen	-	<b>M</b> <sub>2</sub>	M <sub>3</sub>	N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	<b>O</b> <sub>1</sub>	<b>O</b> <sub>2</sub>	03	<b>O</b> <sub>4</sub>
1A	Sound level	Regulată (EU) No 540/201		X	X	X	X	X				
2	(Euro			A ( <sup>1</sup> )		A ( <sup>1</sup> )	A ( <sup>1</sup> )					
3A	Preven of fire risks (liquid fuel tanks)	Regulati	9	X ( <sup>2</sup> )	X ( <sup>2</sup> )	X ( <sup>2</sup> )	X ( <sup>2</sup> )	X ( <sup>2</sup> )	X	X	X	X
3B	underr protect device (RUPI and	iNe \$661/200 Db)N Regulati No \$fi8n; un	9	X	X	X	A	A	X	X	X	X
4A	for mount and fixing rear registra	661/200 Regulati (EU)	9 ion	X	Х	X	Х	X	X	X	Х	X

5A	SteeringRegulation	X	X	Х	X	X	X	X	X	X
	equipm(EnC) No 661/2009 UN Regulation No 79									
6A	VehicleRegulation access (EC) and No manoetofration (steps, Regulation running(EU) boards No and 130/2012 handholds)	X	X	X	X	X				
6B	Door Regulation latches (EC) and No door 661/2009 retention comportegesulation No 11			X						
7A	AudibleRegulatAorK warningEC) devicesNo and 661/2009 signals UN Regulation No 28	A+K	A+K	A+K	A+K	A+K				
8A	Device Regulation for (EC) indirectNo vision 661/2009 and UN their Regulation installation 46	A	A	A	A	A				
9A	Brakin Regulation of (EC) vehicleNo and 661/2009 trailers UN Regulation No 13	X ( <sup>3</sup> )								

9B	Brakin Regulation of (EC) passen voic cars 661/2009 UN Regulation No 13-H			X ( <sup>4</sup> )						
10A	Electro Regulatition compat(Effl)y No 661/2009 UN Regulation No 10	X	X	X	X	X	X	X	X	X
12A	InteriorRegulatAon fittings(EC) No 661/2009 UN Regulation No 21									
13A	Protect Regulation of (EC) motor No vehicles61/2009 againstUN unauth Regulation use No 18	X ( <sup>4A</sup> )	X ( <sup>4A</sup> )		X ( <sup>4A</sup> )	X ( <sup>4A</sup> )				
13B	Protecti <b>Re</b> gulation of (EC) motor No vehicles61/2009 againstUN unauth <b>Regul</b> ation use No 116			X						
14A	Protect Regulation of the (EC) driver No against 661/2009 the UN steering Regulation mechanison in the 12 event of impact			N/A						

15A	Seats, Regulation their (EC) anchorages and 661/2009 any UN head Regulation restrainiso 17	D ( <sup>4B</sup> )	D ( <sup>4B</sup> )	D	D	D				
15B	SeatsRegulationof(EC)largeNopassenger 1/2009vehicles JNRegulationNo80	D	D							
16A	External egulation project (fifs) No 661/2009 UN Regulation No 26									
17A	VehicleRegulation access (EC) and No manoetofaballooy (reverstRegulation gear) (EU) No 130/2012	X	X	X	X	X				
17B	SpeedoRcegedation equipm(EEC) includitive its 661/2009 installation Regulation No 39	X	X	X	X	X				
18A	Manufactguelation statutoryEC) plate No and 661/2009 VIN Regulation (EU) No 19/2011	X	X	X	X	X	X	X	X	Х

19A	Safety-Regulation belt (EC) anchorations, Isofix 661/2009 anchorations system Regulation and No Isofix 14 top tether anchorages	A	A	A	A	A				
20A	Installa <b>Reg</b> ulatAonN of (EC) lightingNo and 661/2009 light- UN signalli <b>Re</b> gulation devicesNo on 48 vehicles	A+N								
21A	Retro-Regulation reflectingC) devicesNo for 661/2009 power-UN driven Regulation vehicleNo 3 and their trailers	x	x	x	X	x	x	X	x	X
22A	Front Regulation and (EC) rear No position61/2009 lamps, UN stop- Regulation lamps No 7 and end- outline marker lamps for motor vehicles and their trailers	X	X	X	X	X	X	X	X	X
22B	DaytimRegulatXon running(EC)	X	X	X	X	X				

	lamps No for 661/2009 power-UN driven Regulation vehicleNo 87									
22C	Side- Regulation marker(EC) lamps No for 661/2009 motor UN vehicleRegulation and No their 91 trailers	X	X	X	Х	X	X	X	X	X
23A	Directionegulation indicatorsC) for No power-661/2009 driven UN vehiclesRegulation and No 6 their trailers	Х	X	X	Х	X	X	X	X	X
24A	Illumin <b>Rtegu</b> latXon of (EC) rear- No registrat66h/2009 plates UN of Regulation power-No 4 driven vehicles and their trailers	X	X	X	X	X	X	X	X	X
25A	Power-Regulation driven (EC) vehicleNo sealed-661/2009 beam UN headlarRegulation (SB) No emitting1 an European asymmetrical passing beam or a driving	X	X	X	X	X				

	beam or both									
25B	Filamentegulation lamps (EC) for No use 661/2009 in UN approvertegulation lamp No units 37 of power- driven vehicles and their trailers	X	X	X	X	X	X	X	X	X
25C	Motor Regulation vehicle(EC) headlarhips equippedib1/2009 with UN gas- Regulation dischargeo light 98 sources	X	X	X	X	X				
25D	Gas- Regulation dischargeC) light No sources661/2009 for UN use Regulation in No approve9 gas- discharge lamp units of power- driven vehicles	X	X	X	X	X				
25E	Motor Regulation vehicle(EC) headlarhios emitting61/2009 an UN asymmitregalation passingNo 112 beam	X	X	X	X	X				

or a driving beam or both and equipped with filament lamps and/ or LED modules Х Х Х Х 25F Adaptivegulation Х front- (EC) lightingNo system **\$6**1/2009 (AFS) UN Regulation for motor No 123 vehicles Х Х Х Х Х 26A Power-Regulation driven (EC) vehicleNo 661/2009 front UN fog lamps Regulation No 19 27A TowingRegulatAon А А А А А device (EC) No 661/2009 Regulation (EU) No 1005/2010 Х Х Х Х Х Х Х Х Х 28A Rear Regulation fog (EC) lamps No 661/2009 for power-UN driven Regulation vehiclesNo and 38 their trailers 29A Reversinggulation Х Х Х Х Х Х Х Х Х lights (EC)

	for No power-661/2009 driven UN vehicleRegulation and No their 23 trailers							
30A	ParkingRegulatXon lamps (EC) for No power-661/2009 driven UN vehicleRegulation No 77	X	X	X	X	X		
31A	Safety-Regulation belts, (EC) restrainNo systems(61/2009 child UN restrainRegulation systemsNo and 16 Isofix child restraint systems	A	A	A	A	A		
32A	Forwar <b>R</b> egula <b>6</b> on field (EC) of No vision 661/2009 UN Regulation No 125							
33A	LocatioRegulatXon and (EC) identifiNation of 661/2009 hand UN controlRegulation tell- No 121 tales and indicators	X	X	X	X	X		
34A	WindscRægulatAon defrostiffsC) and No demistifsg1/2009 systemsRegulation (EU)	( <sup>5</sup> )	(5)	(5)	(5)	( <sup>5</sup> )		

	No 672/2010									
35A	WindscRægulatAon wiper (EC) and No washer 661/2009 systemsRegulation (EU) No 1008/2010	( <sup>6</sup> )	( <sup>6</sup> )	(6)	( <sup>6</sup> )	( <sup>6</sup> )				
36A	Heatin Regulation system (EC) No 661/2009 UN Regulation No 122	X	X	X	X	X	X	X	X	X
37A	Wheel Regulation guards (EC) No 661/2009 Regulation (EU) No 1009/2010									
38A	Head Regulation restrain(EC) (headresto), whethe661/2009 or UN not Regulation incorpolitated in 25 vehicle seats									
41A	Emissi dRegulatio(P) (Euro (EC) VI) No heavy 595/2009 duty vehicles/ access to information	X ( <sup>9</sup> )	X	X ( <sup>9</sup> )	X (°)	X				
42A	Lateral Regulation protectidEC) of No goods 661/2009 vehicleUN Regulation				X	X			X	X

		No 73									
43A	suppres				X	X	X	X	X	X	X
44A	and dimens	Regulation (EC) Nons 661/2009 Regulation (EU) No 1230/2012									
45A	glazing materia and their installa	<b>N</b> so 661/2009 UN <b>Reg</b> ulation No		N/A							
46A	of tyres	<b>Rog</b> ulat <sup>A</sup> on (EC) No 661/2009 Regulation (EU) No 458/2011		A	A	A	A	A	A	A	A
46B	tyres for motor vehicle and	Regulation No			A			A	A		
46C	tyres for	Rigulation (EC) No 6611/2009 s	A	A	A	A	A			A	A

and UN their Regulation trailers No (Classes4  $C_2$ and C<sub>3</sub>) 46D Regulation Tyre А А A А A А А А А rolling (EC) sound No emissions1/2009 adhesiobN Regulation on No 117 wet surfaces and rolling resistance (Classes C<sub>1</sub>,  $C_2$ and C<sub>3</sub>) 46E Temporargulation А (<sup>9A</sup>) use (EC) (<sup>9A</sup>) spare No 661/2009 unit, UN runflat Regulation No tyres/ system 64 and tyre pressure monitoring system Speed Regulation Х Х Х Х 47A limitation (EC) of No vehicles61/2009 UN Regulation No 89 48A MassesRegulation Х Х Х Х Х Х Х Х Х (EČ) and dimensions 661/2009 Regulation (EU)

	No 1230/2012									
49A	CommeRegulation vehicle(EC) with No regard 661/2009 to UN their Regulation externaNo projections forward of the cab's rear panel			A	A	A				
50A	Mecharikegulation couplin∉C) ( <sup>10</sup> ) componients of 661/2009 combinations of Regulation vehiclesNo 55	X ( <sup>10</sup> )	X	X	X	X				
50B	Close-Regulation couplingEC) device No (CCD);661/2009 fitting UN of an Regulation approvedo type 102 of CCD				X ( <sup>10</sup> )	X ( <sup>10</sup> )			X ( <sup>10</sup> )	X ( <sup>10</sup> )
51A	BurningRegulation behavio(EiC) of No materiate61/2009 used UN in the Regulation interiorNo 118 construction of certain categories of motor vehicles		X							
52A	M <sub>2</sub> Regulation and (EC)	A	A							

52B	M3Novehicle\$61/2009UNRegulationNo 107StrengtRegulationof the(EC)superstNotureof661/2009largeUNpassengRegulationvehicleNo66	A	A							
53A	Protect Regulation of (EC) occupation in the 661/2009 event UN of a Regulation frontal No collision4									
54A	Protect Regulation of (EC) occupative in the 661/2009 event UN of Regulation lateral No collision5			N/A						
56A	VehicleRegulation for (EC) the No carriag661/2009 of UN dangeroRusgulation goods No 105			X ( <sup>13</sup> )						
57A	Front Regulation underru(EC) protectiNo devices661/2009 (FUPDL)N and Regulation their No installation; front underrun protection (FUP)				X	X				

58	PedestrRægulatNórA protect(dFC) No 78/2009			N/A						
59	RecyclaDitetyt WA 2005/64/ EC			N/A						
61	Air- Directive conditi 2000/9/40/ system EC			X ( <sup>14</sup> )						
62	Hydrogkægulat4on system (EC) No 79/2009	A	A	A	A	A				
63	GeneraRegulatXon Safety (EC) ( <sup>15</sup> ) No 661/2009	X ( <sup>15</sup> )								
64	Gear Regulation shift (EC) indicators 661/2009 Regulation (EU) No 65/2012									
65	Advand&dgulation emerge(EC) brakingNo system 661/2009 Regulation (EU) No 347/2012	(16)	( <sup>16</sup> )		(16)	(16)				
66	Lane Regulation departu(EC) warnin No system 661/2009 Regulation (EU) No 351/2012	(17)	(17)		(17)	(17)				
67	Specifi Regulation compon <b>(Enfis)</b> for No liqueficet 1/2009 petroleumN gases Regulation	X	X	X	X	X				

(LPG) No and 67 their installation on motor vehicles Х 68 VehicleRegulation alarm (EC) systemsNo (VAS) 661/2009 UN Regulation No 97 69 Х Х Х Х Х ElectricAlegulation safety (EC) No 661/2009 UN Regulation No 100 70 SpecifiRegulatXon Х Х Х Х Х compon(Enff) for No 661/2009 CNG and UN Regulation their installation110 on motor vehicles 72 eCall Regulation N/A N/A N/A N/A N/A N/A G N/A N/A system (EU) 2015/758

## Appendix 3

## Wheelchair accessible vehicles

Item	Subject	<b>Regulatory act</b>	<b>M</b> <sub>1</sub>
1A	Sound level	Regulation (EU) No 540/2014	G+W9
2	Emissions (Euro 5 and Euro 6) light duty vehicles/access to information	Regulation (EC) No 715/2007	G+W <sub>1</sub>

3A	Prevention of fire risks (liquid fuel tanks)	Regulation (EC) No 661/2009 UN Regulation No 34	X+W <sub>2</sub>
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58	X
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010	X
5A	Steering equipment	Regulation (EC) No 661/2009 UN Regulation No 79	G
6A	Vehicle access and manoeuvrability (steps, running boards and handholds)	Regulation (EC) No 661/2009 Regulation (EU) No 130/2012	X
6B	Door latches and door retention components	Regulation (EC) No 661/2009 UN Regulation No 11	Х
7A	Audible warning devices and signals	Regulation (EC) No 661/2009 UN Regulation No 28	X
8A	Devices for indirect vision and their installation	Regulation (EC) No 661/2009 UN Regulation No 46	X
9B	Braking of passenger cars	Regulation (EC) No 661/2009 UN Regulation No 13-H	G+A <sub>1</sub>
10A	Electromagnetic compatibility	Regulation (EC) No 661/2009 UN Regulation No 10	X
12A	Interior fittings	Regulation (EC) No 661/2009 UN Regulation No 21	G+C
13B	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 116	Х
14A	Protection of the driver against the	Regulation (EC) No 661/2009	G

steering mechanism UN Regulation No 12 in the event of impact 15A Regulation (EC) No G+W<sub>3</sub> Seats, their anchorages and any 661/2009 head restraints UN Regulation No 17 16A External projections Regulation (EC) No  $G+W_4$ 661/2009 UN Regulation No 26 17A Vehicle access and Regulation (EC) No Х manoeuvrability 661/2009 (reverse gear) Regulation (EU) No 130/2012 17B Speedometer Х Regulation (EC) No equipment including 661/2009 its installation UN Regulation No 39 18A Х Manufacturer's Regulation (EC) No statutory plate and 661/2009 VIN Regulation (EU) No 19/2011 19A Safety-belt Regulation (EC) No  $X+W_5$ anchorages, Isofix 661/2009 anchorages systems UN Regulation No 14 and Isofix top tether anchorages 20A Installation of Regulation (EC) No Х lighting and light-661/2009 UN Regulation No 48 signalling devices on vehicles Regulation (EC) No Х 21A Retro-reflecting devices for power-661/2009 driven vehicles and UN Regulation No 3 their trailers 22A Front and rear Х Regulation (EC) No position lamps, 661/2009 stop-lamps and end-UN Regulation No 7 outline marker lamps for motor vehicles and their trailers Х 22B Daytime running Regulation (EC) No lamps for power-661/2009 driven vehicles UN Regulation No 87 22C Regulation (EC) No Х Side-marker lamps for motor vehicles 661/2009 and their trailers UN Regulation No 91 Х 23A Direction indicators Regulation (EC) No 661/2009 for power-driven

	vehicles and their trailers	UN Regulation No 6	
24A	Illumination of rear- registration plates of power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 4	X
25A	Power-driven vehicle's sealed- beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both	Regulation (EC) No 661/2009 UN Regulation No 31	X
25B	Filament lamps for use in approved lamp units of power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 37	X
25C	Motor vehicle headlamps equipped with gas-discharge light sources	Regulation (EC) No 661/2009 UN Regulation No 98	X
25D	Gas-discharge light sources for use in approved gas- discharge lamp units of power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 99	X
25E	Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules	Regulation (EC) No 661/2009 UN Regulation No 112	X
25F	Adaptive front- lighting systems (AFS) for motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 123	X
26A	Power-driven vehicle front fog lamps	Regulation (EC) No 661/2009 UN Regulation No 19	Х
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010	E

28A	Rear fog lamps for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 38	Х
29A	Reversing lights for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 23	X
30A	Parking lamps for power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 77	X
31A	Safety-belts, restraint systems, child restraint systems and Isofix child restraint systems	Regulation (EC) No 661/2009 UN Regulation No 16	X+W <sub>6</sub>
32A	Forward field of vision	Regulation (EC) No 661/2009 UN Regulation No 125	G
33A	Location and identification of hand controls, tell-tales and indicators	Regulation (EC) No 661/2009 UN Regulation No 121	Х
34A	Windscreen defrosting and demisting systems	Regulation (EC) No 661/2009 Regulation (EU) No 672/2010	G ( <sup>5</sup> )
35A	Windscreen wiper and washer systems	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010	G ( <sup>6</sup> )
36A	Heating systems	Regulation (EC) No 661/2009 UN Regulation No 122	X
37A	Wheel guards	Regulation (EC) No 661/2009 Regulation (EU) No 1009/2010	G
38A	Head restraints (headrests), whether or not incorporated in vehicle seats	Regulation (EC) No 661/2009 UN Regulation No 25	Х

41A	Emissions (Euro VI) heavy duty vehicles/ access to information	Regulation (EC) No 595/2009	X+W <sub>1</sub> ( <sup>9</sup> )
44A	Masses and dimensions	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012	X+W <sub>8</sub>
45A	Safety glazing materials and their installation on vehicles	Regulation (EC) No 661/2009 UN Regulation No 43	G
46A	Installation of tyres	Regulation (EC) No 661/2009 Regulation (EU) No 458/2011	X
46B	Pneumatic tyres for motor vehicles and their trailers (Class $C_1$ )	Regulation (EC) No 661/2009 UN Regulation No 30	X
46D	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes $C_1$ , $C_2$ and $C_3$ )	Regulation (EC) No 661/2009 UN Regulation No 117	X
46E	Temporary-use spare unit, run-flat tyres/ system and tyre pressure monitoring system	Regulation (EC) No 661/2009 UN Regulation No 64	G ( <sup>9A</sup> )
50A	Mechanical coupling components of combinations of vehicles	Regulation (EC) No 661/2009 UN Regulation No 55	X ( <sup>10</sup> )
53A	Protection of occupants in the event of a frontal collision	Regulation (EC) No 661/2009 UN Regulation No 94	N/A
54A	Protection of occupants in the event of lateral collision	Regulation (EC) No 661/2009 UN Regulation No 95	N/A
58	Pedestrian protection	Regulation (EC) No 78/2009	G
59	Recyclability	Directive 2005/64/EC	N/A

61	Air-conditioning systems	Directive 2006/40/EC	G
62	Hydrogen system	Regulation (EC) No 79/2009	Х
63	General Safety	Regulation (EC) No 661/2009	X ( <sup>15</sup> )
64	Gear shift indicators	Regulation (EC) No 661/2009 Regulation (EU) No 65/2012	G
67	Specific components for liquefied petroleum gases (LPG) and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 67	X
68	Vehicle alarm systems (VAS)	Regulation (EC) No 661/2009 UN Regulation No 97	Х
69	Electric safety	Regulation (EC) No 661/2009 UN Regulation No 100	Х
70	Specific components for CNG and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 110	Х
72	eCall system	Regulation (EU) 2015/758	G

Additional requirements for testing the wheelchair tie-down and occupant restraint system

The following point 2 and either point 3 or 4 shall apply.

- 1. Definitions
- 1.1. Surrogate wheelchair (SWC) means a rigid, re-usable test wheelchair, as defined in section 3 of international standard ISO 10542-1:2012.
- 1.2. Point P means a representation of the position of the wheelchair occupant's hip when seated in the SWC, as defined in section 3 of international standard ISO 10542-1:2012.
- 2. General requirements
- 2.1. Each wheelchair location shall be provided with anchorages to which a wheelchair tie-down and occupant restraint system (WTORS) shall be fitted.
- 2.2. The wheelchair occupant's lower belt anchorages shall be located in accordance with UN Regulation No 14.07, paragraph 5.4.2.2, relative to Point P on the SWC, when placed in the travelling position designated by the manufacturer. The upper actual

anchorage(s) shall be located at least 1 100 mm above the horizontal plane passing through the points of contact between the rear tyres of the SWC and the vehicle floor. That condition shall still be satisfied after the test carried out in accordance with point 3 of this Appendix.

- 2.3. An assessment shall be made of the WTORS occupant belt to ensure compliance with the UN Regulation No 16.06, paragraphs 8.2.2 to 8.2.2.4 and 8.3.1 to 8.3.4.
- 2.4. The minimum number of ISOFIX child seat anchorages need not to be provided. In the case of a multi-stage type-approval where an ISOFIX anchorage system has been affected by the conversion, either the system shall be re-tested or the anchorages shall be rendered unusable. In the latter case the ISOFIX labels shall be removed and appropriate information shall be given to the vehicle purchaser.
- 3. Static in-vehicle testing
- 3.1. Wheelchair occupant restraint anchorages
- 3.1.1. The wheelchair occupant restraint anchorages shall resist the static forces prescribed for occupant restraint anchorages in UN Regulation No 14.07, simultaneously with the static forces applied to the wheelchair tie-down anchorages as specified in point 3.2 of this Appendix.
- 3.2. Wheelchair tie-down anchorages

The wheelchair tie-down anchorages shall resist the following forces, for at least 0,2 seconds, applied via the SWC (or a suitable surrogate wheelchair having a wheelbase, seat height and tie-down attachment points in accordance with the specification for the SWC), at a height of 300 + -100 mm from the surface on which the SWC rests:

- 3.2.1. In the case of a forward-facing wheelchair, a simultaneous force, coincident with the force applied to the occupant restraint anchorages, of 24,5 kN, and
- 3.2.2. a second test applying a static force of 8,2 kN directed towards the rear of the vehicle.
- 3.2.3. In the case of a rearward-facing wheelchair, a simultaneous force, coincident with the force applied to the occupant restraint anchorages, of 8,2 kN, and
- 3.2.4. a second test applying a static force of 24,5 kN directed towards the front of the vehicle.
- 3.3. Components of the system
- 3.3.1. All components of the WTORS shall meet the relevant requirements of international standard ISO 10542-1:2012. However, the dynamic test specified in Annex A and paragraphs 5.2.2 and 5.2.3 of international standard ISO 10542-1:2012 shall be carried out on the complete WTORS using the vehicle anchorage geometry instead of the test geometry specified in Annex A of international standard ISO 10542-1:2012. This may be carried out within the vehicle structure or on a surrogate structure representative of the vehicle's WTORS anchorage geometry. The location of each anchorage shall lie within the tolerance provided for in paragraph 7.7.1 of UN Regulation No 16.06.
- 3.3.2. Where the occupant restraint part of the WTORS is approved in accordance with UN Regulation No 16.06, it shall be subject to the dynamic test of the complete WTORS specified in paragraph 3.3.1 of this Appendix but the requirements of paragraphs 5.1, 5.3 and 5.4 of international standard ISO10542-1:2012 shall be considered to have been met.
- 4. Dynamic in-vehicle testing

- 4.1. The full assembly of the WTORS system shall be tested by an in-vehicle dynamic test in accordance with paragraphs 5.2.2 and 5.2.3 and Annex A of international standard ISO 10542-1:2012, testing all components/anchorages simultaneously, using a vehicle body-in-white or representative structure.
- 4.2. The component parts of the WTORS shall meet the relevant requirements of international standard ISO 10542-1:2012, paragraphs 5.1, 5.3 and 5.4. These requirements shall be deemed to have been met in respect of the occupant restraint if it is approved in accordance with UN Regulation No 16.06.

AppendixOther special purpose vehicles(including special group, multi-equipment carrier and trailer caravans)

The exemptions provided for in this Appendix are only permitted if the manufacturer demonstrates to the satisfaction of the approval authority that the vehicle, due to the special function, cannot meet all the requirements set out in Part I of this Annex.

Item	Subje	ecRefer to regul act	re <b>M</b> £ atory	M <sub>3</sub>	N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	<b>O</b> <sub>1</sub>	<b>O</b> <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>
1A	Sound level	Regula (EU) No 540/20		Η	Η	Η	Η	Н			
2	Emiss (Euro 5 and Euro 6) light duty vehicl- access to inform	No 715/20 es/			Q +V <sub>1</sub> ( <sup>1</sup> )	Q +V <sub>1</sub> ( <sup>1</sup> )					
3A	Prever of fire risks (liquid fuel tanks)	Regula	)09	F	F	F	F	Х	Х	Х	X
3B	Rear undern protec device (RUPI and their	tNo \$661/2(	)09	X	A	A	A	X	Х	Х	X

	installa <b>tio</b> n; rear 58 underrun protection (RUP)								
4A	Space Regulation for (EC) mountingo and 661/2009 fixing Regulation rear (EU) registration plates 1003/2010	A+R							
5A	Steeringegulation equipm(Htft) No 661/2009 UN Regulation No 79	X	X	X	X	X	X	X	X
6A	VehicleRegulation access (EC) and No manoetorh2009 (steps, Regulation runningEU) boards No and 130/2012 handholds)	X	В	В	В				
6B	Door Regulation latches(EC) and No door 661/2009 retentiduIN compointageslation No 11		В						
7А	Audiblæegulaðkon warningEC) devicesNo and 661/2009 signalsUN Regulation No 28	X	X	X	X				
8A	DeviceRegulaXon for (EC) indirecNo vision 661/2009	X	X	X	X				

	and UN their Reg installa <b>bio</b> n 46	gulation								
9A	trailersUN	2) /2009	X ( <sup>3</sup> )	X ( <sup>3</sup> )	X +U <sub>1</sub> ( <sup>3</sup> )	X +U <sub>1</sub> ( <sup>3</sup> )	X	X	X ( <sup>3</sup> )	X ( <sup>3</sup> )
9B	UN	2) /2009 gulation		X ( <sup>4</sup> )						
10A	UN	îty /2009	X	X	X	X	X	X	X	X
13A	ProtectReg of (EC motor No vehicle661 againstUN unauthReg use No 18	( <sup>4A</sup> ) /2009	X ( <sup>4A</sup> )		X ( <sup>4A</sup> )	X ( <sup>4A</sup> )				
13B	ProtectReg of (EC motor No vehicle661 againstUN unauthReg use No 116	C) /2009 adation		X						
14A	ProtectReg of (EC the No driver 661 againstUN the Reg	C) /2009		X						

	steeringNo mechanli3m in the event of impact								
15A	Seats, Regulation their (EC) ( <sup>4B</sup> ) anchorages and 661/2009 any UN head Regulation restrainNso 17	D ( <sup>4B</sup> )	D	D	D				
15B	Seats Regulation of (EC) large No passenger1/2009 vehiclesJN Regulation No 80	D							
17A	VehicleRegulation access (EC) and No manoetotra/2009 (reversRegulation gear) (EU) No 130/2012	X	X	X	X				
17B	SpeedoRægutañon equipm(EC) includiñgo its 661/2009 installation Regulation No 39	X	X	X	X				
18A	Manuf <b>Regred</b> Son statutor(EC) plate No and 661/2009 VIN Regulation (EU) No 19/2011	X	X	X	X	X	X	X	X
19A	Safety-Regulation belt (EC) anchorages,	D	D	D	D				

	Isofix No anchor for the system JN and Regulation Isofix No top 14 tether anchorages								
20A	InstallaRiogulation of (EC) lightingNo and 661/2009 light- UN signalliRiggulation devicesNo on 48 vehicles	A+N							
21A	Retro- Regulation reflectitieC) devicesNo for 661/2009 power-UN driven Regulation vehicleNo 3 and their trailers	X	X	X	X	X	X	X	X
22A	Front Regulation and (EC) rear No position661/2009 lamps, UN stop- Regulation lamps No 7 and end- outline marker lamps for motor vehicles and their trailers	X	X	X	X	X	X	X	X
22B	DaytimRegulation runningEC) lamps No for 661/2009 power-UN Regulation	X	X	X	X				

	driven No vehicle87								
22C	Side- Regulation marker(EC) lamps No for 661/2009 motor UN vehicleRegulation and No their 91 trailers	X	X	X	X	X	X	X	X
23A	Directi Regulation indicatoEC) for No power-661/2009 driven UN vehicleRegulation and No 6 their trailers	X	X	X	X	X	X	X	X
24A	Illumin <b>Rtign</b> laffon of (EC) rear- No registration/2009 plates UN of Regulation power-No 4 driven vehicles and their trailers	X	X	X	X	X	X	X	X
25A	Power-Regulation driven (EC) vehicleNo sealed-661/2009 beam UN headlar <b>Rpg</b> ulation (SB) No emittinĝ1 an European asymmetrical passing beam or a driving beam or both	X	X	X	X				

25B Filamentegulation Х Х Х Х Х Х Х Х lamps (EC) for No 661/2009 use UN in approv Regulation lamp | No units 37 of powerdriven vehicles and their trailers 25C Motor Regulation Х Х Х Х vehicle(EC) headlantios equipp**6 6** 1/2009 with UN gas-Regulation discharge light 98 sources 25D Regulation Х Х Х Х GasdischargeC) light No sources661/2009 for UN Regulation use No in approv 99 gasdischarge lamp units of powerdriven vehicles 25E Motor Regulation Х Х Х Х vehicle(EC) headlantos emittin**§**61/2009 an UN asymmRtrigalation passingNo beam 112 or a driving beam

	or both and equipped with filament lamps and/ or LED modules								
25F	Adapti Regulation front- (EC) lightingNo system\$61/2009 (AFS) UN for Regulation motor No vehicle\$23	X	X	X	X				
26A	Power-Regulation driven (EC) vehicleNo front 661/2009 fog UN lamps Regulation No 19	X	X	X	X				
27A	TowingRegulation device (EC) No 661/2009 Regulation (EU) No 1005/2010	A	A	A	A				
28A	Rear Regulation fog (EC) lamps No for 661/2009 power-UN driven Regulation vehicleNo and 38 their trailers	X	X	X	Х	Х	X	X	X
29A	Revers Regulation lights (EC) for No power-661/2009 driven	X	X	X	X	X	X	X	X

vehiclebN and Regulation their No trailer\$23 ParkingRegulation Х Х Х Х 30A lamps (EC) for No power-661/2009 driven UN vehicleRegulation No 77 31A Safety-Regulation D D D D belts, (EC) restrainNo system **§**61/2009 child UN restrainRegulation systemNo and 16 Isofix child restraint systems 33A LocatioRegulation Х Х Х Х and (EC) identifi Nation 661/2009 of hand UN control Regulation tell-No 121 tales and indicators (<sup>5</sup>) 34A Windscreenulation  $(^{5})$ (<sup>5</sup>)  $(^{5})$ defrost(**E**C) and No demistice\_1/2009 systemRegulation (EU) No 672/2010 35A Windsc Regulation  $(^{6})$ <sup>(6</sup>) <sup>(6</sup>) <sup>(6</sup>) wiper (EC) and No washer661/2009 system Regulation (EU) No 1008/2010

36A	HeatingRegulaXon system{EC) No 661/2009 UN	X	X	X	X	X	X	X	X
	Regulation No 122								
38A	Head Regulation restrain(tEC) (headrests), whethe661/2009 or UN not Regulation incorpostated in 25 vehicle seats								
41A	Emissiditegulațion (Euro (EC) VI) No heavy 595/2009 duty vehicles/ access to information	) H	Н ( <sup>9</sup> )	Н ( <sup>9</sup> )	Н				
42A	LateralRegulation protect(GrC) of No goods 661/2009 vehicle&JN Regulation No 73			X	X			X	X
43A	Spray Regulation suppres(stot) system No 661/2009 Regulation (EU) No 109/2011		X	X	X	X	X	X	X
45A	Safety Regulation glazing(EC) materiaNso and 661/2009 their UN installaRegulation	J	J	J	J	J	J	J	J

	on No vehicle <del>4</del> 3							
46A	InstallaRegulaXon of (EC) tyres No 661/2009 Regulation (EU) No 458/2011	X	X	X	X	X	X	Х
46B	Pneum Regulationtyres(EC)forNomotor $661/2009$ vehiclekJNandRegulationtheirNotrailers 30(Class $C_1$ )	X			X	X		
46C	Pneum Riegulation tyres (EC) for No commeto $6ik/2009$ vehiclekJN and Regulation their No trailers 54 (Classes $C_2$ and $C_3$ )	X	X	X			X	X
46D	Tyre Regulation rolling (EC) sound No emissions]/2009 adhesions]/2009 adhesions]/2009 adhesions on Regulation wet No surface $\$17$ and rolling resistance (Classes C <sub>1</sub> , C <sub>2</sub> and C <sub>3</sub> )	X	X	X	X	X	X	X

46E	Tempo <b>Regulation</b> use (EC) spare No unit, 661/2009 run- UN flat Regulation tyres/ No system64 and tyre pressure monitoring system		X ( <sup>9A</sup> )						
47A	Speed Regulation limitati(EC) of No vehicles661/2009 UN Regulation No 89	X		X	X				
48A	MassesRegulation and (EC) dimensitions 661/2009 Regulation (EU) No 1230/2012	X	X	X	X	X	X	X	X
49A	Commetegallation vehicle(EC) with No regard 661/2009 to UN their Regulation externalNo projections forward of the cab's rear panel		X	X	X				
50A	MechanNegulation coupling C) ( <sup>10</sup> ) components of 661/2009 combinations of Regulation vehicles	X ( <sup>10</sup> )	X ( <sup>10</sup> )	X ( <sup>10</sup> )	X ( <sup>10</sup> )	X	X	X	X

	No 55							
50B	Close-Regulation couplin€C) device No (CCD),661/2009 fitting UN of an Regulation approv€tb type 102 of CCD			X ( <sup>10</sup> )	X ( <sup>10</sup> )		X ( <sup>10</sup> )	X ( <sup>10</sup> )
51A	BurningRegulation behavioEC) of No materiation in Regulation the No interior118 construction of certain categories of motor vehicles	X						
52A	$\begin{array}{c c} M_2 & Regulation \\ and & (EC) \\ M_3 & No \\ vehicle \$61/2009 \\ UN \\ Regulation \\ No \\ 107 \end{array}$	X						
52B	StrengtRegulation of (EC) the No superstfuct/a@09 of UN large Regulation passengto vehicle66	X						
54A	ProtectRegulation of (EC) occupaNos in 661/2009 the UN event Regulation of		A					

	lateral No collisio95								
56A	VehicleRegulation for (EC) the No carriag661/2009 of UN dangerOregulation goods No 105		X ( <sup>13</sup> )	X ( <sup>13</sup> )	X ( <sup>13</sup> )	X ( <sup>13</sup> )	X ( <sup>13</sup> )	X ( <sup>13</sup> )	X ( <sup>13</sup> )
57A	Front Regulation underruffEC) protectNo devices661/2009 (FUPDE)N and Regulation their No installa900n; front underrun protection (FUP)			X	X				
58	PedestrRægulation protect(@C) No 78/2009		N/A ( <sup>2</sup> )						
59	Recycl <b>ábiiletyt</b> ive 2005/64/ EC		N/A						
61	Air- Directive conditianing/40/ systemsEC		X ( <sup>14</sup> )						
62	Hydrog <b>&amp;n</b> gula <b>X</b> on system(EC) No 79/2009	X	X	X	X				
63	GeneraRegulation Safety (EC) ( <sup>15</sup> ) No 661/2009	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )	X ( <sup>15</sup> )
65	AdvandedgulañióA emerge(EQ) brakingNo system661/2009 Regulation (EU) No 347/2012	N/A		N/A	N/A				

66	Lane RegulaÑøA departutæC) warninðlo system661/2009 Regulation (EU) No 351/2012	N/A		N/A	N/A				
67	SpecifiRegulation componEx13 for No liqueficato1/2009 petroletutin gases Regulation (LPG) No and 67 their installation on motor vehicles	X	X	X	X				
68	VehicleRegulation alarm (EC) systemNo (VAS) 661/2009 UN Regulation No 97		X						
69	Electri RegulaXon safety (EC) No 661/2009 UN Regulation No 100	X	X	X	X				
70	SpecifiRegulaXon compot(Exit) for No CNG 661/2009 and UN their Regulation installaNoon on 110 motor vehicles	X	X	X	X				
72	eCall RegulaÑøA system(EU) 2015/758	N/A	G	N/A	N/A	N/A	N/A	N/A	N/A

## Appendix 5

## **Mobile cranes**

Item	Subject	Reference to regulatory act	N <sub>3</sub>
1A	Sound level	Regulation (EU) No 540/2014	T+Z <sub>1</sub>
3A	Prevention of fire risks (liquid fuel tanks)	Regulation (EC) No 661/2009 UN Regulation No 34	Х
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58	A
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010	X
5A	Steering equipment	Regulation (EC) No 661/2009 UN Regulation No 79	X Crab steering allowed
6A	Vehicle access and manoeuvrability (steps, running boards and handholds)	Regulation (EC) No 661/2009 Regulation (EU) No 130/2012	A
7A	Audible warning devices and signals	Regulation (EC) No 661/2009 UN Regulation No 28	X
8A	Devices for indirect vision and their installation	Regulation (EC) No 661/2009 UN Regulation No 46	Х
9A	Braking of vehicles and trailers	Regulation (EC) No 661/2009 UN Regulation No 13	U ( <sup>3</sup> )
10A	Electromagnetic compatibility	Regulation (EC) No 661/2009 UN Regulation No 10	Х
13A	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 18	X ( <sup>4A</sup> )

15A	Seats, their anchorages and any head restraints	Regulation (EC) No 661/2009 UN Regulation No 17	X
17A	Vehicle access and manoeuvrability (reverse gear)	Regulation (EC) No 661/2009 Regulation (EU) No 130/2012	Х
17B	Speedometer equipment including its installation	Regulation (EC) No 661/2009 UN Regulation No 39	X
18A	Manufacturer's statutory plate and VIN	Regulation (EC) No 661/2009 Regulation (EU) No 19/2011	X
19A	Safety-belt anchorages, Isofix anchorages systems and Isofix top tether anchorages	Regulation (EC) No 661/2009 UN Regulation No 14	X
20A	Installation of lighting and light- signalling devices on vehicles	Regulation (EC) No 661/2009 UN Regulation No 48	A+Y
21A	Retro-reflecting devices for power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 3	X
22A	Front and rear position lamps, stop-lamps and end- outline marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 7	X
22B	Daytime running lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 87	Х
22C	Side-marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 91	Х
23A	Direction indicators for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 6	Х
24A	Illumination of rear- registration plates of power-driven	Regulation (EC) No 661/2009 UN Regulation No 4	X

	vehicles and their trailers		
25A	Power-driven vehicle's sealed- beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both	Regulation (EC) No 661/2009 UN Regulation No 31	X
25B	Filament lamps for use in approved lamp units of power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 37	X
25C	Motor vehicle headlamps equipped with gas-discharge light sources	Regulation (EC) No 661/2009 UN Regulation No 98	X
25D	Gas-discharge light sources for use in approved gas- discharge lamp units of power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 99	X
25E	Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules	Regulation (EC) No 661/2009 UN Regulation No 112	X
25F	Adaptive front- lighting systems (AFS) for motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 123	Х
26A	Power-driven vehicle front fog lamps	Regulation (EC) No 661/2009 UN Regulation No 19	Х
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010	A
28A	Rear fog lamps for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 38	X

29A	Reversing lights for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 23	Х
30A	Parking lamps for power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 77	Х
31A	Safety-belts, restraint systems, child restraint systems and Isofix child restraint systems	Regulation (EC) No 661/2009 UN Regulation No 16	X
33A	Location and identification of hand controls, tell-tales and indicators	Regulation (EC) No 661/2009 UN Regulation No 121	Х
34A	Windscreen defrosting and demisting systems	Regulation (EC) No 661/2009 Regulation (EU) No 672/2010	( <sup>5</sup> )
35A	Windscreen wiper and washer systems	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010	( <sup>6</sup> )
36A	Heating systems	Regulation (EC) No 661/2009 UN Regulation No 122	Х
41A	Emissions (Euro VI) heavy duty vehicles/ access to information	Regulation (EC) No 595/2009	V
42A	Lateral protection of goods vehicles	Regulation (EC) No 661/2009 UN Regulation No 73	A
43A	Spray suppression systems	Regulation (EC) No 661/2009 Regulation (EU) No 109/2011	Z <sub>1</sub>
45A	Safety glazing materials and their installation on vehicles	Regulation (EC) No 661/2009 UN Regulation No 43	J
46A	Installation of tyres	Regulation (EC) No 661/2009 Regulation (EU) No 458/2011	Х

46C	Pneumatic tyres for commercial vehicles and their trailers (Classes C <sub>2</sub> and C <sub>3</sub> )	Regulation (EC) No 661/2009 UN Regulation No 54	Х
46D	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes $C_1$ , $C_2$ and $C_3$ )	Regulation (EC) No 661/2009 UN Regulation No 117	X
47A	Speed limitation of vehicles	Regulation (EC) No 661/2009 UN Regulation No 89	Х
48A	Masses and dimensions	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012	A
49A	Commercial vehicles with regard to their external projections forward of the cab's rear panel	Regulation (EC) No 661/2009 UN Regulation No 61	A
50A	Mechanical coupling components of combinations of vehicles	Regulation (EC) No 661/2009 UN Regulation No 55	X ( <sup>10</sup> )
50B	Close-coupling device (CCD); fitting of an approved type of CCD	Regulation (EC) No 661/2009 UN Regulation No 102	X ( <sup>10</sup> )
57A	Front underrun protective devices (FUPDs) and their installation; front underrun protection (FUP)	Regulation (EC) No 661/2009 UN Regulation No 93	X
62	Hydrogen system	Regulation (EC) No 79/2009	Х
63	General Safety	Regulation (EC) No 661/2009	X ( <sup>15</sup> )
65	Advanced emergency braking system	Regulation (EC) No 661/2009 Regulation (EU) No 347/2012	N/A ( <sup>16</sup> )
66	Lane departure warning system	Regulation (EC) No 661/2009	N/A ( <sup>17</sup> )

		Regulation (EU) No 351/2012	
67	Specific components for liquefied petroleum gases (LPG) and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 67	X
69	Electric safety	Regulation (EC) No 661/2009 UN Regulation No 100	X
70	Specific components for CNG and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 110	X

# Appendix 6

## **Exceptional load transport vehicles**

Item	Subject	Reference to regulatory act	N <sub>3</sub>	O <sub>4</sub>
1	Permissible sound level	Directive 70/157/EEC	Т	
3A	Prevention of fire risks (liquid fuel tanks)	Regulation (EC) No 661/2009 UN Regulation No 34	X	X
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58	A	A
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010	X	A+R
5A	Steering equipment	Regulation (EC) No 661/2009 UN Regulation No 79	X Crab steering allowed	X
6A	Vehicle access and	Regulation (EC) No 661/2009	X	

	manoeuvrability (steps, running boards and handholds)	Regulation (EU) No 130/2012		
7A	Audible warning devices and signals	Regulation (EC) No 661/2009 UN Regulation No 28	Х	
8A	Devices for indirect vision and their installation	Regulation (EC) No 661/2009 UN Regulation No 46	Х	
9A	Braking of vehicles and trailers	Regulation (EC) No 661/2009 UN Regulation No 13	U ( <sup>3</sup> )	X ( <sup>3</sup> )
10A	Electromagnetic compatibility	Regulation (EC) No 661/2009 UN Regulation No 10	X	X
13A	Protection of motor vehicles against unauthorised use	Regulation (EC) No 661/2009 UN Regulation No 18	X ( <sup>4A</sup> )	
15A	Seats, their anchorages and any head restraints	Regulation (EC) No 661/2009 UN Regulation No 17	X	
17A	Vehicle access and manoeuvrability (reverse gear)	Regulation (EC) No 661/2009 Regulation (EU) No 130/2012	Х	
17B	Speedometer equipment including its installation	Regulation (EC) No 661/2009 UN Regulation No 39	Х	
18A	Manufacturer's statutory plate and VIN	Regulation (EC) No 661/2009 Regulation (EU) No 19/2011	Х	X
19A	Safety-belt anchorages, Isofix anchorages systems and Isofix top tether anchorages	Regulation (EC) No 661/2009 UN Regulation No 14	X	

20A	Installation of lighting and light-signalling devices on vehicles	Regulation (EC) No 661/2009 UN Regulation No 48	X	A+N
21A	Retro-reflecting devices for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 3	X	X
22A	Front and rear position lamps, stop-lamps and end-outline marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 7	X	X
22B	Daytime running lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 87	X	
22C	Side-marker lamps for motor vehicles and	Regulation (EC) No 661/2009 UN Regulation	X	X

	and their trailers			
22B	Daytime running lamps for power- driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 87	X	
22C	Side-marker lamps for motor vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 91	X	X
23A	Direction indicators for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 6	X	X
24A	Illumination of rear-registration plates of power- driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 4	X	X
25A	Power-driven vehicle's sealed- beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both	Regulation (EC) No 661/2009 UN Regulation No 31	X	
25B	Filament lamps for use in approved lamp units of power-	Regulation (EC) No 661/2009 UN Regulation No 37	X	X

	driven vehicles and their trailers			
25C	Motor vehicle headlamps equipped with gas-discharge light sources	Regulation (EC) No 661/2009 UN Regulation No 98	X	
25D	Gas-discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles	Regulation (EC) No 661/2009 UN Regulation No 99	X	
25E	Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules	Regulation (EC) No 661/2009 UN Regulation No 112	X	
25F	Adaptive front- lighting systems (AFS) for motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 123	Х	
26A	Power-driven vehicle front fog lamps	Regulation (EC) No 661/2009 UN Regulation No 19	X	
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010	A	
28A	Rear fog lamps for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 38	Х	X
29A	Reversing lights for power-driven vehicles and their trailers	Regulation (EC) No 661/2009 UN Regulation No 23	X	X
30A	Parking lamps for power-driven vehicles	Regulation (EC) No 661/2009	Х	

		UN Regulation No 77		
31A	Safety-belts, restraint systems, child restraint systems and Isofix child restraint systems	Regulation (EC) No 661/2009 UN Regulation No 16	X	
33A	Location and identification of hand controls, tell-tales and indicators	Regulation (EC) No 661/2009 UN Regulation No 121	X	
34A	Windscreen defrosting and demisting systems	Regulation (EC) No 661/2009 Regulation (EU) No 672/2010	(5)	
35A	Windscreen wiper and washer systems	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010	( <sup>6</sup> )	
36A	Heating systems	Regulation (EC) No 661/2009 UN Regulation No 122	X	
41A	Emissions (Euro VI) heavy duty vehicles/access to information	Regulation (EC) No 595/2009	X ( <sup>9</sup> )	
42A	Lateral protection of goods vehicles	Regulation (EC) No 661/2009 UN Regulation No 73	X	A
43A	Spray suppression systems	Regulation (EC) No 661/2009 Regulation (EU) No 109/2011	X	A
45	Safety glazing	Directive 92/22/ EEC	X	
45A	Safety glazing materials and their installation on vehicles	Regulation (EC) No 661/2009 UN Regulation No 43	X	
46A	Installation of tyres	Regulation (EC) No 661/2009 Regulation (EU) No 458/2011	X	I

46C	Pneumatic tyres for commercial vehicles and their trailers (Classes C <sub>2</sub> and C <sub>3</sub> )	Regulation (EC) No 661/2009 UN Regulation No 54	X	I
46D	Tyre rolling sound emissions, adhesion on wet surfaces and rolling resistance (Classes $C_1$ , $C_2$ and $C_3$ )	Regulation (EC) No 661/2009 UN Regulation No 117	X	I
47A	Speed limitation of vehicles	Regulation (EC) No 661/2009 UN Regulation No 89	X	
48A	Masses and dimensions	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012	A	A
49A	Commercial vehicles with regard to their external projections forward of the cab's rear panel	Regulation (EC) No 661/2009 UN Regulation No 61	A	
50A	Mechanical coupling components of combinations of vehicles	Regulation (EC) No 661/2009 UN Regulation No 55	X ( <sup>10</sup> )	X
50B	Close-coupling device (CCD); fitting of an approved type of CCD	Regulation (EC) No 661/2009 UN Regulation No 102	X ( <sup>10</sup> )	X ( <sup>10</sup> )
56A	Vehicles for the carriage of dangerous goods	Regulation (EC) No 661/2009 UN Regulation No 105	X ( <sup>13</sup> )	X ( <sup>13</sup> )
57A	Front underrun protective devices (FUPDs) and their installation;	Regulation (EC) No 661/2009 UN Regulation No 93	A	

	front underrun protection (FUP)			
62	Hydrogen system	Regulation (EC) No 79/2009	X	
63	General Safety	Regulation (EC) No 661/2009	X ( <sup>15</sup> )	X ( <sup>15</sup> )
65	Advanced emergency braking system	Regulation (EC) No 661/2009 Regulation (EU) No 347/2012	N/A ( <sup>16</sup> )	
66	Lane departure warning system	Regulation (EC) No 661/2009 Regulation (EU) No 351/2012	N/A ( <sup>17</sup> )	
67	Specific components for liquefied petroleum gases (LPG) and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 67	X	
69	Electric safety	Regulation (EC) No 661/2009 UN Regulation No 100	X	
70	Specific components for CNG and their installation on motor vehicles	Regulation (EC) No 661/2009 UN Regulation No 110	X	

Explanatory Notes on the applicability of the requirements in this Part

Х The requirements set out in the relevant regulatory act are applicable. The series of amendments of the UN Regulations that apply on a compulsory basis are listed in Annex IV to Regulation (EC) No 661/2009. The series of amendments adopted subsequently are accepted as an alternative. Member States may grant extensions to existing type-approvals granted in accordance with the Directives repealed by Regulation (EC) 661/2009 under the conditions laid down in Article 13(14) of that Regulation. This regulatory act is not applicable to this vehicle (no requirements).

N/A

For vehicles with a reference mass not exceeding 2 610 kg. At the manufacturer's  $(^{1})$ request, Regulation (EC) No 715/2007 may apply to vehicles with a reference mass not exceeding 2 840 kg.

With regard to access to information, for other parts (e.g. living compartment) than the base vehicle, it is sufficient that the manufacturer provides access to vehicle repair and maintenance information in a readily accessible and prompt manner.

- (<sup>2</sup>) In case of vehicles equipped with a LPG or CNG installation, a vehicle type-approval in accordance with UN Regulation No 67 or UN Regulation No 110 is required.
- (<sup>3</sup>) The fitting of an ESC system is required by Article 12 and Article 13 of Regulation (EC) No 661/2009. However, in accordance with UN Regulation No 13, the fitting of an ESC system is not required for special purpose vehicles of categories M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub> and N<sub>3</sub> and for vehicles for exceptional load transport and trailers with areas for standing passengers. N<sub>1</sub> vehicles may be approved in accordance with UN Regulations No 13 or No 13-H.
- (<sup>4</sup>) The fitting of an ESC system is required by Article 12 and Article 13 of Regulation (EC) No 661/2009. Therefore, the requirements set out in Part A of Annex 9 to UN Regulation No 13-H shall be fulfilled. N<sub>1</sub> vehicles may be approved in accordance with UN Regulation No 13 or UN Regulation No 13-H.
- (<sup>4A</sup>) If fitted, the protective device shall fulfil the requirements set out in UN Regulation No 18.
- (<sup>4B</sup>) This Regulation applies to seats not falling within the scope of UN Regulation No 80. For other options, see Article 2 of Regulation (EC) No 595/2009.
- $\binom{5}{10}$  Vehicles of categories other than M<sub>1</sub> do not need to fully comply with Regulation (EU) No 672/2010 but shall be fitted with a windscreen defrosting and demisting device.
- $\binom{6}{100}$  Vehicles of categories other than M<sub>1</sub> do not need to fully comply with Regulation (EU) No 1008/2010 but shall be fitted with a windscreen washing and wiping devices.
- (<sup>8</sup>) For vehicles with a reference mass exceeding 2 610 kg and that did not benefit from the possibility offered in note (<sup>1</sup>).
- (°) For vehicles with a reference mass exceeding 2 610 kg that are not type-approved (at the manufacturer's request and provided their reference mass does not exceed 2 840 kg) under Regulation (EC) No 715/2007. For other parts than the base vehicle, it is sufficient that the manufacturer provides access to vehicle repair and maintenance information in a readily accessible and prompt manner.
- $(^{9A})$  Applies only where such vehicles are fitted with equipment covered by UN Regulation No 64. Tyre pressure monitoring system for M<sub>1</sub> vehicles applies on a compulsory basis in accordance with Article 9(2) of Regulation (EC) No 661/2009.
- $(^{10})$  Applies only to vehicles equipped with coupling(s).
- $\binom{11}{2,5}$  Applies to vehicles with a technically permissible maximum laden mass not exceeding 2,5 tonnes.
- (<sup>12</sup>) Only applicable to vehicles where the 'Seating Reference Point ("R" point)' of the lowest seat is not more than 700 mm above the ground level.
- (<sup>13</sup>) Applies only where the manufacturer applies for type-approval of vehicles intended for the transport of dangerous goods.
- (<sup>14</sup>) Applies only for vehicles of category N<sub>1</sub>, class I (reference mass  $\leq 1$  305 kg).
- (<sup>15</sup>) At the request of the manufacturer, a type-approval may be granted under this item, as an alternative to obtaining type-approvals under each individual item covered by Regulation (EC) No 661/2009.

- (<sup>16</sup>) The fitting of an advanced emergency braking system is not required for special purpose vehicles in accordance with Article 1 of Regulation (EU) No 347/2012.
- (<sup>17</sup>) The fitting of a lane departure warning system is not required for special purpose vehicles in accordance with Article 1 of Regulation (EU) No 351/2012.
- A The approval authority may only grant exemption(s) if the manufacturer demonstrates that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity.
- A<sub>1</sub> The fitting of ESC is not mandatory. In the case of multi-stage typeapprovals, where the modifications made at a particular stage are likely to affect the function of the base vehicle's ESC system, the manufacturer may either disable the system or demonstrate that the vehicle has not been rendered unsafe or unstable. This may be demonstrated, e.g., by performing rapid double lane-change manoeuvres in each direction at 80 km/h with sufficient severity to cause intervention by the ESC system. These interventions are to be well-controlled and should improve the stability of the vehicle. The technical service has the right to request further testing if deemed necessary.
- B Application limited to doors giving access to the seats designated for normal use where the vehicle is used on a public road and where the distance between the R point of the seat and the average plane of the door surface, measured perpendicular to the longitudinal medium plane of the vehicle, does not exceed 500 mm.
- C Application limited to that part of the vehicle in front of the rearmost seat designated for normal use where the vehicle is used on a public road and also limited to the head impact zone as defined in the relevant regulatory act.
- D Application limited to seats designated for normal use where the vehicle is used on a public road. Seats that are not designated for use where the vehicle is used on the public road are to be clearly identified to users either by means of a pictogram or a sign with an appropriate text. The luggage retention requirements of UN Regulation No 17 do not apply. E Front only.
- F Modification to the routing and length of the refuelling duct and repositioning of the tank inboard is permissible.
- G In case of multi-stage type-approval, requirements according to the category of the base/incomplete vehicle (e.g. the chassis of which was used to build the special purpose vehicle) may also be used.
- H Modification of exhaust system length after the last silencer not exceeding 2 m is permissible without any further test.
- I Tyres are to be type-approved in accordance with the requirements set out in UN Regulation No 54 even if the design speed of the vehicle is less than 80 km/h. The load capacity may be adjusted in relation to the maximum design speed of the trailer in agreement with the tyre manufacturer.
- J For all window glazing other than driver's cab glazing (windshield and side glasses), the material may be either of safety glass or rigid plastic glazing.
- K Additional panic alarm devices are permitted.
- L Application limited to seats designated for normal use where the vehicle is used on a public road. At least anchorages for lap belts are required in the rear seating positions. Seats that are not designated for use where the

vehicle is used on a public road are to be clearly identified to users either by means of a pictogram or a sign with an appropriate text. ISOFIX is not required on ambulances and hearses.

- M Application limited to seats designated for normal use where the vehicle is used on a public road. At least lap belts are required in all rear seating positions. Seats that are not designated for use when the vehicle is used on a public road are to be clearly identified to users either by means of a pictogram or a sign with an appropriate text. ISOFIX is not required on ambulances and hearses.
- N Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected.
- Q Modification of exhaust system length after the last silencer not exceeding 2 m is permissible without any further test. An EU typeapproval granted to the most representative base vehicle remains valid irrespective of change in the reference weight.
- R Provided that the registration plates of all Member States can be mounted and remain visible.
- S The light transmission factor is at least 60 % and the 'A' pillar obstruction angle is not more than 10 degrees.
- T Test to be performed only with the complete/completed vehicle. The vehicle can be tested in accordance with Directive 70/157/EEC. Concerning point 5.2.2.1 of Annex I to Directive 70/157/EEC, the following limit values are applicable:
  - (a) 81 dB(A) for vehicles with an engine power of less than 75 kW;
  - (b) 83 dB(A) for vehicles with an engine power of not less than 75 kW but less than 150 kW;
  - (c) 84 dB(A) for vehicles with an engine power of not less than 150 kW.
  - Test to be performed only with the complete/completed vehicle. Vehicles up to 4 axles are to comply with all the requirements laid down in the relevant regulatory acts. Derogations are admitted for vehicles having more than 4 axles, provided that:
  - (a) they are justified by the particular construction; and
  - (b) all the braking performances, related to parking, service and secondary braking laid down in the relevant regulatory act are fulfilled.
- U<sub>1</sub> ABS is not mandatory for vehicles with hydrostatic drive.
- V Alternatively, Directive 97/68/EC may also apply.

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- V<sub>1</sub> Alternatively, Directive 97/68/EC may also apply to vehicles with hydrostatic drive.
- $W_0$  Modification of exhaust system length is permitted without any further test, provided that the back pressure is similar. If a new test is required, an extra 2dB(A) above the applicable limit is allowed.
- $W_1$  Modification in the exhaust system is permitted without any further test of tailpipe emissions and  $CO_2$ /fuel consumption provided that the emission control devices, including particulate filters (if any), are not affected. If the evaporative control devices are kept as fitted by the

manufacturer of the base vehicle, no new evaporative test is required on the modified vehicle. An EU type-approval granted to the most representative base vehicle remains valid irrespective of change in the reference mass. Modification of the routing, length of the refuelling duct, fuel hoses  $W_2$ and fuel vapour pipes is permitted without further test. Re-location of the original fuel tank is permitted provided all requirements are met. However, further testing in accordance with Annex 5 to UN Regulation No 34 are not required. W<sub>3</sub> The longitudinal plane of the intended wheelchair-travelling position should be parallel to the longitudinal plane of the vehicle. Appropriate information is to be made available to the vehicle owner that, in order to withstand the forces transmitted by the tiedown mechanism during the various driving conditions, a wheelchair with a structure meeting the relevant part of ISO 7176-19:2008 is recommended. The seats of the vehicle may be adapted without further testing, provided it can be demonstrated to the technical service that their anchorages, mechanisms and head restraints provide the same level of performance. The luggage retention requirements set out in UN Regulation No 17 do not apply. Compliance with the relevant regulatory act(s) is required for the  $W_4$ boarding aids when in the resting position. Each wheelchair location is to be provided with anchorages to which a  $W_5$ wheelchair tie-down and occupant restraint system (WTORS) is to be fitted, and that complies with the additional provisions for testing the wheelchair tie-down and occupant restraint system set out in Appendix 3.  $W_6$ Each wheelchair location is to be provided with an occupant restraint belt that complies with the additional provisions for testing the wheelchair tie-down and occupant restraint system of set out in Appendix 3. When, due to the conversion, anchorage points for the safety belts need to be moved outside the tolerance provided for in paragraph 7.7.1 of UN Regulation No 16.06, the technical service is to check whether the alteration constitutes a worst case or not. If that is the case, the test provided for in paragraph 7.7.1. of UN Regulation No 16.06 is to be performed. Extension to the EU type-approval does not need to be issued. The test may be performed using components that have not undergone the conditioning test prescribed by UN Regulation No 16.06.  $W_8$ For the purposes of calculations, the mass of the wheel-chair including the user is assumed to be 160 kg. The mass is to be concentrated at the P point of the surrogate wheelchair in its travelling position declared by the manufacturer. Any limitation in the passenger capacity resulting from the use of wheelchair(s) is to be recorded in the owner's handbook, on side 2 of the EU type-approval certificate and in the certificate of conformity. Modification of the exhaust system length is permitted without the need Wg for retesting, provided that the exhaust back pressure remains similar.

Y Z	Provided that all mandatory lighting devices are installed. The requirements on the protrusion of open windows do not apply to
	the living compartment.
Z <sub>1</sub>	Mobile cranes with more than six axles are considered to be off-road vehicles $(N_3G)$ when at least three axles are driven and provided they meet the provisions of point 4.3(b)(ii) and (iii), as well as point 4.3(c) of Part A of Annex I.

#### ANNEX III

### PROCEDURES TO BE FOLLOWED WITH RESPECT TO EU TYPE-APPROVAL

- 1. Objectives and scope
- 1.1. This Annex establishes the procedures for the proper conduct of the vehicle typeapproval in accordance with Articles 26, 27 and 28.
- 1.2. It also includes:
- (a) the list of international standards which are of relevance for the designation of the technical services in accordance with Articles 68 and 70;
- (b) the description of the procedure to be followed for the assessment of the skills of technical services in accordance with Article 73;
- (c) the general requirements for the drafting of test reports by technical services.
- 2. Type-approval procedure

When receiving an application for vehicle type-approval, the approval authority shall:

- (a) verify that all EU type-approval certificates issued pursuant to the regulatory acts as listed in Annex II which are applicable for vehicle type-approval cover the type of vehicle and correspond to the prescribed requirements;
- (b) make sure that the vehicle specifications and data are included in the data in the information packages and in the EU type-approval certificates issued in accordance with the relevant regulatory acts;
- (c) when an item number is not included in the information package as provided for in any of the regulatory acts, confirm that the relevant part or characteristic conforms to the particulars in the information folder;
- (d) on a selected sample of vehicles from the type to be approved carry out or arrange to be carried out inspections of vehicle parts and systems to verify that the vehicle or vehicles are built in accordance with the relevant data contained in the authenticated information package in respect of the relevant EU type-approval certificates;
- (e) carry out or arrange to be carried out relevant installation checks in respect of separate technical units, where applicable;
- (f) carry out or arrange to be carried out necessary checks in respect of the presence of the devices provided for in explanatory notes 1 and 2 of Part I of Annex II, where applicable;

- (g) carry out or arrange to be carried out necessary checks in order to ensure that the requirements set out in explanatory note 5 of Part I of Annex II are fulfilled.
- 3. Combination of technical specifications

The number of vehicles to be submitted shall be sufficient to permit the proper check of the various combinations to be type-approved according to the following criteria:

Technicale category										
specifi	ca <b>vi</b> qns	<b>M</b> <sub>2</sub>	M <sub>3</sub>	N <sub>1</sub>	N <sub>2</sub>	N <sub>3</sub>	<b>O</b> <sub>1</sub>	<b>O</b> <sub>2</sub>	<b>O</b> <sub>3</sub>	<b>O</b> <sub>4</sub>
Engine	Х	Х	X	X	Х	Х	—	—		
Gear box	Х	Х	X	X	X	Х	_			
Number of axles	r —	Х	X	X	X	X	X	X	Х	X
Powered axles (numbe position and intercor	r,	X	X	X	X	X				
Steered axles (numbe and position	r	Х	X	X	X	X	X	Х	Х	X
Body styles	Х	Х	X	X	X	Х	X	X	Х	Х
Number of doors	rX	X	X	X	Х	Х	X	Х	Х	X
Hand of drive	Х	Х	X	X	X	Х				
Number of seats	rX	Х	X	X	X	X				
Level of equipme	X ent	Х	X	X	Х	Х				

## 4. Specific provisions

Where no approval certificates as provided for in the relevant regulatory acts are available, the approval authority shall:

- (a) arrange for the necessary tests and checks as required by each of the relevant regulatory acts;
- (b) verify that the vehicle conforms to the particulars in the information folder and that it meets the technical requirements of each of the relevant regulatory acts;
- (c) carry out or arrange to be carried out relevant installation checks in respect of separate technical units, where applicable;
- (d) carry out or arrange to be carried out necessary checks in respect of the presence of the devices provided for in explanatory notes 1 and 2 of Part I of Annex II where applicable;
- (e) carry out or arrange to be carried out necessary checks in order to ensure that the requirements set out in explanatory note 5 of Part I of Annex II are fulfilled.

## Appendix 1

Standards with which the technical services referred to in Article 68 have to comply

- 1. Activities related to testing for type-approval to be carried out in accordance with the regulatory acts listed in Annex II:
- 1.1. Category A (tests performed in own facilities): Standard EN ISO/IEC 17025:2005 on the general requirements for the competence of testing and calibration laboratories. A technical service designated for category A activities may also carry out the tests provided for in the regulatory acts for which it has been designated, in the facilities of a manufacturer or of a third party. In either case, the personnel responsible for using professional judgement for determination of conformity with the regulatory acts for which the technical service has been designated shall comply with the Standard EN ISO/IEC 17020:2012.
- 1.2. Category B (supervision of tests, which includes test preparation, where such tests are performed at the manufacturer's facilities or at the facilities of a third party): Standard EN ISO/IEC 17020:2012 on the general criteria for the operation of various types of bodies performing inspection.
  Before performing or supervising any test in the manufacturer's facilities or in the facilities of a third party, the technical service shall verify that the tests facilities and measurement devices comply with the appropriate requirements of Standard EN ISO/IEC 17025:2005.
- 2. Activities related to conformity of production
- 2.1. Category C (procedure for the initial assessment and surveillance audits of the manufacturer's quality management system):

Standard EN ISO/IEC 17021:2011 on the requirements for bodies providing audit and certification of management systems.

2.2. Category D (inspection or testing of production samples or supervision thereof):

Standard EN ISO/IEC 17020:2012 on the general criteria for the operation of various types of bodies performing inspection.

#### Appendix 2

#### Procedure for the assessment of the technical services

- 1. Objective and scope
- 1.1. This Appendix establishes the conditions in accordance with which the assessment procedure of the technical services shall be conducted by the authority, competent under Article 73 ('competent authority').
- 1.2. Those requirements shall apply to all technical services, irrespective of their legal status (independent organisation, manufacturer or approval authority acting as technical service).
- 2. Assessments

The carrying out of an assessment shall be governed by the following:

- (a) principle of independence, which is the basis for the impartiality and objectivity of the conclusions; and
- (b) an evidence-based approach, which guarantees reliable and reproducible conclusions.

Auditors shall show trust and integrity. They shall respect confidentiality and discretion.

They shall report truthfully and accurately about findings and conclusions.

- 3. Skills requirements for auditors
- 3.1. The assessments may only be conducted by auditors having the technical and administrative knowledge necessary for such purposes.
- 3.2. The auditors shall have been trained specifically for assessment activities. In addition, they shall have the specific knowledge of the technical area in which the technical service will exercise its activities.
- 3.3. Without prejudice to points 3.1 and 3.2, the assessment referred to in Article 73 shall be conducted by auditors independent of the activities for which the assessment is conducted.
- 4. Application for designation
- 4.1. A duly authorised representative of the applicant technical service shall submit a formal application to the competent authority that includes the following information:
- (a) general features of the technical service, including corporate entity, name, addresses, legal status and technical resources;
- (b) a detailed description, including curriculum vitae, of the personnel in charge of testing and of the managerial staff, setting out their educational qualifications and professional skills;
- (c) technical services which use virtual testing methods shall provide evidence of their ability to work in a Computer-Aided-x environment;
- (d) general information concerning the technical service, including its activities, its relationship in a larger corporate entity, if any, and addresses of all its physical location(s) to be covered by the scope of designation;

- (e) an agreement to fulfil the requirements for designation and the other obligations of the technical service as provided for in the relevant regulatory acts for which it is designated;
- (f) a description of the conformity assessment services that the technical service undertakes in the framework of the relevant regulatory acts and a list of the regulatory acts for which the technical service applies for designation, including limits of capability, where applicable;
- (g) a copy of the quality assurance manual of the technical service.
- 4.2. The competent authority shall review the adequacy of the information provided by the technical service.
- 4.3. The technical service shall notify to the competent authority any modifications to the information provided in accordance with point 4.1.
- 5. Resource review

The competent authority shall review its ability to carry out the assessment of the technical service, in terms of its own policy, its competence and the availability of suitable auditors and experts.

- 6. Subcontracting the assessment
- 6.1. The competent authority may subcontract parts of the assessment to another competent authority or ask for support from technical experts provided by other competent authorities. The subcontractors and experts have to be accepted by the applicant technical service.
- 6.2. The competent authority shall take into account accreditation certificates with adequate scope in order to complete its global assessment of the technical service.
- 7. Preparation for assessment
- 7.1. The competent authority shall formally appoint a joint assessment team. The competent authority shall ensure that the expertise brought to each joint assessment team is appropriate. In particular, the joint assessment team as a whole shall have both:
- (a) appropriate knowledge of the specific scope for which designation is sought; and
- (b) sufficient understanding to reliably assess the competence of the technical service to operate within its scope of designation.
- 7.2. The competent authority shall clearly define the assignment given to the joint assessment team. The task of the joint assessment team is to review the documents collected from the applicant technical service and to conduct the on-site assessment.
- 7.3. The competent authority shall agree, together with the technical service and the assigned assessment team, to the date and timetable for the assessment. However, it remains the responsibility of the competent authority to pursue a date that is in accordance with the surveillance and reassessment plan.
- 7.4. The competent authority shall ensure that the joint assessment team is provided with the appropriate criteria documents, previous assessment records, and the relevant documents and records of the technical service.
- 8. On-site assessment

The joint assessment team shall conduct the assessment of the technical service at the premises of the technical service from which one or more key activities are performed and, where relevant, shall perform eyewitness assessment at other selected locations where the technical service operates.

- 9. Analysis of findings and assessment report
- 9.1. The joint assessment team shall analyse all relevant information and evidence gathered during the document and record review and the on-site assessment. That analysis shall be sufficient to allow the team to determine the extent of competence and conformity of the technical service with the requirements for designation.
- 9.2. The competent authority's reporting procedures shall ensure that the following requirements are fulfilled.
- 9.2.1. A meeting shall take place between the joint assessment team and the technical service prior to leaving the site. At that meeting, the joint assessment team shall provide a written and/or oral report on its findings obtained from the analysis. An opportunity shall be provided for the technical service to ask questions about the findings, including non-compliance, if any, and its basis.
- 9.2.2. A written report on the outcome of the assessment shall be promptly brought to the attention of the technical service. That assessment report shall contain comments on competence and compliance, and shall identify non-compliance, if any, to be resolved in order to conform to all of the requirements for designation.
- 9.2.3. The technical service shall be invited to respond to the assessment report and to describe the specific actions taken or planned to be taken, within a specific period of time, to resolve any identified non-compliance.
- 9.3. The competent authority shall ensure that the responses of the technical service are sufficient and effective to resolve non-compliance. If the technical service responses are found to be insufficient, further information shall be requested. Additionally, evidence of effective implementation of actions taken may be requested, or a follow-up assessment may be carried out, to verify effective implementation of corrective actions.
- 9.4. The assessment report shall include at least the following:
- (a) unique identification of the technical service;
- (b) date(s) of the on-site assessment;
- (c) name(s) of the auditors(s) and/or expert(s) involved in the assessment;
- (d) unique identification of all premises assessed;
- (e) proposed scope of designation that was assessed;
- (f) a statement on the adequacy of the internal organisation and procedures adopted by the technical service supporting its competence, as determined through its fulfilment of the requirements for designation;
- (g) information on resolving all non-compliance;
- (h) a recommendation of whether the applicant should be designated or confirmed as technical service and, if so, the scope of designation.

- 10. Granting, confirming or extending a designation
- 10.1. The competent authority shall, without undue delay, make the decision on whether to grant, confirm or extend a designation on the basis of the assessment report(s) and any other relevant information.
- 10.2. The competent authority shall provide a certificate to the technical service. That certificate shall identify the following:
- (a) the identity and logo of the competent- authority;
- (b) the unique identity of the designated technical service;
- (c) the effective date of designation and the expiry date;
- (d) a brief indication of or a reference to the scope of designation (relevant regulatory acts or part of them);
- (e) a statement of conformity and a reference to this Regulation.
- 11. Reassessment and surveillance
- 11.1. Reassessment is similar to an initial assessment except that experience gained during previous assessments shall be taken into account. Surveillance on-site assessments are less comprehensive than reassessments.
- 11.2. The competent authority shall design its plan for reassessment and surveillance of each designated technical service so that representative samples of the scope of designation are assessed on a regular basis.

The interval between on-site assessments, whether reassessment or surveillance, depends on the proven stability that the technical service has reached.

- 11.3. Where, during surveillance or reassessments, non-compliance is identified, the competent authority shall define strict time limits for corrective actions to be taken.
- 11.4. Where the corrective or improvement actions have not been taken within the agreed time limit or are not deemed to be sufficient, the competent authority shall adopt appropriate measures, such as conducting a further assessment, or suspending or withdrawing the designation for one or more of the activities for which the technical service has been designated.
- 11.5. Where the competent authority decides to suspend or withdraw the designation of a technical service, it shall inform the technical service of its decision by registered mail. In any case, the competent authority shall adopt all the necessary measures to ensure the continuity of the activities already undertaken by the technical service.
- 12. Records on designated technical services
- 12.1. The competent authority shall maintain records on technical services to demonstrate that the requirements for designation, including competence, have been effectively fulfilled.
- 12.2. The competent authority shall keep the records on technical services secure to ensure confidentiality.
- 12.3. Records on technical services shall include at least the following:

- (a) relevant correspondence;
- (b) assessment records and reports;
- (c) copies of designation certificates.

#### ANNEX IV

#### **CONFORMITY OF PRODUCTION PROCEDURES**

- 1. Objectives
- 1.1. The conformity of production procedure aims to ensure that each vehicle, system, component and technical separate unit, part or equipment produced is in conformity with the approved type.
- 1.2. The conformity of production procedure shall always include the assessment of quality-assurance management systems, referred to in point 2 as the 'initial assessment', and the verification of the type-approval subject and product-related controls, referred to in point 3 as 'product conformity arrangements'.
- 2. Initial assessment
- 2.1. Before granting type-approval, the approval authority shall verify that the manufacturer has established satisfactory arrangements and procedures for ensuring that vehicles, systems, components, separate technical units or parts and equipment are produced in conformity with the approved type.
- 2.2. Guidance for conducting those assessments may be found in standard EN ISO 19011:2011 Guidelines for auditing management systems.
- 2.3. Compliance with the requirements of point 2.1 shall be verified to the satisfaction of the approval authority, as follows:

The approval authority shall be satisfied with the initial assessment and the product conformity arrangements referred to in point 3, taking into account one of the arrangements referred to in points 2.3.1 to 2.3.3, or a combination of those arrangements in full or in part as appropriate.

- 2.3.1. The initial assessment and verification of product conformity arrangements shall be carried out by the approval authority or a body designated for that purpose by the approval authority.
- 2.3.1.1. When considering the extent of the initial assessment to be carried out, the approval authority may take into account the following information:
- (a) whether the manufacturer has a certification similar to the one referred to in point 2.3.3, but which has not been qualified or recognised under that point;
- (b) in the case of a type-approval of a system, component or separate technical unit, quality system assessments that have been performed by vehicle manufacturer(s) in the premises of the manufacturer of the system, component or separate technical unit, in accordance with one or more of the industry sector specifications satisfying the requirements in the standard EN ISO 9001:2015 or ISO/TS16949:2009;
- (c) whether in one of the Member States one or more of the manufacturer's typeapprovals recently have been withdrawn, due to unsatisfactory control of conformity

of production. In that case, the initial assessment by the approval authority shall not be limited to accepting the manufacturer's quality system certification, but shall include a verification whether all necessary improvements for ensuring effective control have been implemented, so that vehicles, components, systems or separate technical units are produced in conformity with the approved type.

- 2.3.2. The initial assessment and verification of product conformity arrangements may be carried out by the approval authority of another Member State or by the body designated for that purpose by the approval authority.
- 2.3.2.1. The approval authority of that other Member State shall in that case prepare a statement of compliance, which outlines the areas and production facilities that that approval authority has covered as relevant to the product(s) to be type-approved and to the regulatory acts in accordance with which these products are to be type-approved.
- 2.3.2.2. Upon receiving a request for a statement of compliance from the approval authority of a Member State granting type-approval, the approval authority of another Member State shall immediately send that statement of compliance or inform that approval authority that is unable to provide such a statement.

(a)	Group or company	(e.g. XYZ Automotive)
(b)	Particular organisation	(e.g. regional Division)
(c)	Plants/Sites	(e.g. Engine Plant 1 (in country A) — Vehicle Plant 2 (in country B))
(d)	Vehicle/Component range	(e.g. All Category M <sub>1</sub> models)
(e)	Areas assessed	(e.g. Engine assembly, body pressing and assembly, vehicle assembly)
(f)	Documents examined	(e.g. Company and site quality manual and procedures)
(g)	Date of the assessment	(e.g. Audit conducted from dd/mm/yyyy to dd/mm/yyyy)
(h)	Planned monitoring visit	(e.g. mm/yyyy)

2.3.2.3. The statement of compliance shall include at least the following:

- 2.3.3. An approval authority may also accept the manufacturer's certification to standards EN ISO 9001:2015 or ISO/TS16949:2009 (the scope of that certification shall in that case cover the product(s) to be approved), or an equivalent certification standard as satisfying the initial assessment requirements of point 2.3., provided that conformity of production is indeed covered by the quality management system and that the manufacturer's type-approval has not been withdrawn as referred to in point 2.3.1.1.
  (c). The manufacturer shall provide details of the certification and inform the approval authority of any revisions to its validity or scope.
- 2.4. For the purpose of vehicle type-approval, the initial assessments carried out for the granting of type-approvals for systems, components and separate technical units of the vehicle need not be repeated, but shall be completed by an assessment of the locations

and activities relating to the assembly of the whole vehicle that have not been covered by the initial assessments.

- 3. Product conformity arrangements
- 3.1. Every vehicle, system, component or separate technical unit, part or item of equipment approved pursuant to a UN Regulation annexed to the Revised 1958 Agreement and to this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements of this Annex, the said UN Regulation and this Regulation.
- 3.2. Before granting a type-approval pursuant to this Regulation and to a UN Regulation annexed to the Revised 1958 Agreement, the approval authority shall verify the existence of adequate product conformity arrangements and documented control plans, to be agreed with the manufacturer for each approval, to carry out at specified intervals the tests or associated checks that are necessary to verify continued conformity with the approved type, including, where applicable, tests specified in this Regulation and the said UN Regulation.
- 3.3. The holder of the type-approval shall, in particular:
- 3.3.1. ensure the existence and application of procedures for effective control of the conformity of vehicles, systems, components, separate technical units, parts or equipment to the approved type;
- 3.3.2. have access to the testing or other appropriate equipment necessary for checking the conformity to each approved type;
- 3.3.3. ensure that the data resulting from tests or checks are recorded and that annexed documents remain available for a period of up to 10 years to be determined in agreement with the approval authority;
- 3.3.4. analyse the results of each type of test or check, in order to verify and ensure the stability of the product characteristics, making allowance for variation of an industrial production;
- 3.3.5. ensure that for each type of product, at least the checks prescribed in this Regulation and the tests prescribed in the relevant regulatory acts listed in Annex II are carried out;
- 3.3.6. ensure that any set of samples or test pieces that gives evidence of non-conformity in the type of test in question, gives rise to a further sampling and testing. All the necessary steps shall be taken to restore the production process to ensure conformity with the approved type.
- 3.4. In the case of step-by-step, mixed or multi-stage type-approvals, the approval authority that is granting a whole-vehicle type-approval may request from any approval authority that has granted type-approval of any relevant system, component or separate technical unit specific details regarding compliance with the conformity of production requirements set out in this Annex.
- 3.5. The approval authority that is granting a whole-vehicle type-approval and is not satisfied with the reported information referred to in point 3.4., and that has communicated this in writing to the relevant manufacturer and to the approval authority granting the type-approval for the system, component or separate technical unit, shall request the performance of additional conformity of production audits or checks, which shall be performed at the site of the manufacturer(s) of those systems, components or separate technical units. The results of this additional conformity of

production audits or checks shall immediately be made available to that approval authority.

- 3.6. Where points 3.4. and 3.5. apply and the approval authority granting the whole-vehicle type-approval has not been satisfied with the additional audit or check results, the manufacturer shall ensure that conformity of production is restored as soon as possible to the satisfaction of that approval authority and of the approval authority granting type-approval of the system, component or separate technical unit.
- 4. Continued verification arrangements
- 4.1. The approval authority that has granted type-approval may at any time verify the conformity control methods applied in each production facility by means of periodic audits. The manufacturer shall for that purpose allow access to that authority to the manufacturing, inspection, testing, storage and distribution sites and shall provide all necessary information with regard to the quality management system documentation and records.
- 4.1.1. The normal arrangements for such periodic audits shall be to monitor the continued effectiveness of the procedures laid down in points 2 and 3 (initial assessment and product conformity arrangements).
- 4.1.1.1. Surveillance activities carried out by the technical services (qualified or recognised as required in point 2.3.3) shall be accepted as satisfying the requirement of point 4.1.1 with regard to the procedures established at initial assessment.
- 4.1.1.2. The normal frequency of verifications by the approval authority (other than those referred to in point 4.1.1.1) shall be such as to ensure that the relevant controls applied in accordance with points 2 and 3 are reviewed at intervals based on a risk assessment methodology that complies with the international standard ISO 31000:2018 Risk Management Principles and Guidelines, and such verification shall in any case be conducted at least once every three years. This methodology shall in particular take into account any non-conformity raised by other Member States in the context of Article 54(1).
- 4.2. At every review, records of tests or checks and records of production, in particular records of those tests or checks documented as required in point 2.2, shall be made available to the inspector.
- 4.3. The inspector may select samples at random manner to be tested in the manufacturer's laboratory or in the facilities of the technical service. In such a case only physical test shall be carried out. The minimum number of samples may be determined on the basis of the results of the manufacturer's own verification.
- 4.4. The inspector who is of the opinion that the level of control is unsatisfactory, or who deems it necessary to verify the validity of the tests carried out in accordance with point 4.2, shall select samples to be sent to a technical service to perform physical tests in accordance with the requirements on conformity of production, set out in the regulatory acts listed in Annex II.
- 4.5. Where unsatisfactory results are found during an inspection or a monitoring review, the approval authority shall take all necessary steps to ensure that the manufacturer restores the conformity of production as rapidly as possible.
- 4.6. In cases where compliance with UN Regulations is required by this Regulation, the manufacturer may choose to apply this Annex as an equivalent alternative to the

conformity of production requirements in the respective UN Regulations. However, if points 4.4. or 4.5. apply, all separate conformity of production requirements in the UN Regulations have to be complied with to the satisfaction of the approval authority until it decides that conformity of production has been restored.

#### ANNEX V

#### SMALL SERIES AND END-OF-SERIES LIMITS A.SMALL SERIES QUANTITIVE ANNUAL LIMITS

1. The number of units of one type of vehicle to be registered, made available on the market or entered into service annually in the Union shall not exceed, pursuant to Article 41, the quantitive annual limits shown in the following table for the vehicle category in question:

Category	Units
M <sub>1</sub>	1 500
M <sub>2</sub> , M <sub>3</sub>	0
N <sub>1</sub>	1 500
N <sub>2</sub> , N <sub>3</sub>	0 until the date of application of the delegated acts referred to in Article 41(5). 1 500 after that date
O <sub>1</sub> , O <sub>2</sub>	0
O <sub>3</sub> , O <sub>4</sub>	0

2. The number of units of one type of vehicle to be registered, made available on the market or entered into service annually in a Member State, shall be determined by that Member State but shall not exceed, pursuant to Article 42, the quantitative annual limits shown in the following table for the vehicle category in question:

Category	Units
$M_1$	250
M <sub>2</sub> , M <sub>3</sub>	250
N <sub>1</sub>	250
N <sub>2</sub> , N <sub>3</sub>	250
$     \frac{N_2, N_3}{O_1, O_2}     \overline{O_3, O_4} $	500
O <sub>3</sub> , O <sub>4</sub>	250

#### B. END-OF-SERIES LIMITS

The maximum number of complete and completed vehicles entered into service in each Member State under the procedure 'End-of-Series' shall be restricted in one of the following ways to be chosen by the Member State:

- 1. The maximum number of vehicles of one or more types may, in the case of category  $M_1$ , not exceed 10 % and in the case of all other categories not exceed 30 % of the vehicles of all types concerned entered into service in that Member State during the previous year. Should 10 %, respectively 30 %, be less than 100 vehicles, then the Member State may allow the entry into service of a maximum of 100 vehicles.
- 2. Vehicles of any one type shall be restricted to those for which a valid certificate of conformity was issued on or after the date of manufacture of the vehicle and which remained valid for at least three months after its date of issue but subsequently lost its validity due to the entry into force of a regulatory act.

#### ANNEX VI

#### LIST OF PARTS OR EQUIPMENT THAT MAY POSE A SERIOUS RISK TO THE CORRECT FUNCTIONING OF SYSTEMS THAT ARE ESSENTIAL FOR THE SAFETY OF THE VEHICLE OR ITS ENVIRONMENTAL PERFORMANCE, THE PERFORMANCE REQUIREMENTS OF SUCH PARTS AND EQUIPMENT, THE APPROPRIATE TEST PROCEDURES, AND MARKING AND PACKAGING PROVISIONS I.Parts or equipment having a significant impact on vehicle safety

Item No	Item description	Performance requirement	Marking requirement	Packaging requirements
1	[]			
2				
3				

II. Parts or equipment having a significant impact on the environmental performance of the vehicle

Item No	Item description	Performance requirement	Marking requirement	Packaging requirements
1	[]			
2				
3				

#### ANNEX VII

#### **REGULATORY ACTS FOR WHICH A MANUFACTURER MAY BE DESIGNATED AS A TECHNICAL SERVICE**

1. Objectives and scope

- 1.1. This Annex lays down the list of the regulatory acts for which an in-house technical service of a manufacturer may be designated as a technical service in accordance with Article 72(1).
- 1.2. It also includes appropriate provisions concerning the designation of an in-house technical service of a manufacturer as technical service, to be applied in the framework of the type-approval of vehicles, components and separate technical units concerned by Part I of Annex II.
- 1.3. This Annex however does not apply to manufacturers who apply for the EU typeapproval of vehicles produced in small series, as referred to in Article 41.
- 2. Designation of an in-house technical service of a manufacturer as a technical service
- 2.1. An in-house technical service of a manufacturer designated as a technical service is a manufacturer which has been designated by the type-approval authority as a testing laboratory to carry out on its behalf the approval tests.

The expression 'to carry out tests' is not restricted to the measurement of performances, but also covers the registration of test results and the submission to the type-approval authority of a report, including the relevant conclusions.

It also covers the checking of compliance with those provisions that do not necessarily require measurement. This is the case for the assessment whether the design complies with the legislative requirements.

	Subject	<b>Regulatory act reference</b>
4A	Space for mounting and fixing rear registration plates	Regulation (EC) No 661/2009 Regulation (EU) No 1003/2010
7A	Audible warning devices and signals	Regulation (EC) No 661/2009 UN Regulation No 28
10A	Electromagnetic compatibility	Regulation (EC) No 661/2009 UN Regulation No 10
18A	Manufacturer's statutory plate and VIN	Regulation (EC) No 661/2009 Regulation (EU) No 19/2011
20A	Installation of lighting and light-signalling devices on vehicles	Regulation (EC) No 661/2009 UN Regulation No 48
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010

3. List of regulatory acts and restrictions

Location and identification of 33A Regulation (EC) No hand controls, tell-tales and 661/2009 indicators UN Regulation No 121 34A Windscreen defrosting and Regulation (EC) No 661/2009 demisting systems Regulation (EU) No 672/2010 35A Windscreen wiper and Regulation (EC) No washer systems 661/2009 Regulation (EU) No 1008/2010 36A Regulation (EC) No Heating systems 661/2009 UN Regulation No 122 Except the provisions in Annex 8 relating to LPG combustion heaters and LPG heating systems 37A Regulation (EC) No Wheel guards 661/2009 Regulation (EU) No 1009/2010 44A Masses and dimensions Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012 45A Safety glazing materials and Regulation (EC) No their installation on vehicles 661/2009 UN Regulation No 43 Restricted to the provisions included in Annex 21 46A Installation of tyres Regulation (EC) No 661/2009 Regulation (EU) No 458/2011 48A Masses and dimensions Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012 49A Commercial vehicles with Regulation (EC) No regard to their external 661/2009 projections forward of the UN Regulation No 61 cab's rear panel Mechanical coupling 50A Regulation (EC) No components of combinations 661/2009 of vehicles **UN Regulation No 55** 

		Restricted to the provisions included in Annex 5 (up to and including paragraph 8) and Annex 7
61	Air-conditioning system	Directive 2006/40/EC

#### Appendix

## Designation of an in-house technical service of a manufacturer as technical service and subcontracting

- 1. General
- 1.1. The designation and notification of an in-house technical service of a manufacturer as a technical service shall be made in accordance with Articles 68 to 81 and any subcontracting shall be done in accordance with this Appendix.
- 2. Subcontracting
- 2.1. In accordance with Article 71(1), a technical service may nominate a subcontractor for performing tests on his behalf.
- 2.2. For the purposes of this Appendix 'Subcontractor' means either a subsidiary of the technical service that has been entrusted by that technical service with testing activities inside its own organisation or a third party under contract with that technical service to perform test activities.
- 2.3. The use of the services of a subcontractor does not release the technical service from its obligation to comply with Articles 69, 70, 80 and 81, and in particular with those concerning the skills of the technical services and compliance with Standard EN ISO/ IEC 17025:2005.
- 2.4. Point 2 of Annex VII shall apply to the subcontractor.
- 3. Test report

Test reports shall be drafted in accordance with the implementing acts referred to in Article 30(3).

#### ANNEX VIII

#### CONDITIONS FOR THE USE OF VIRTUAL TESTING METHODS BY A MANUFACTURER OR A TECHNICAL SERVICE

1. Objectives and scope

This Annex lays down provisions concerning virtual testing in accordance with Article 30(7).

#### 2. List of regulatory acts

	Subject	<b>Regulatory act reference</b>	
3B	Rear underrun protective devices (RUPDs) and their installation; rear underrun protection (RUP)	Regulation (EC) No 661/2009 UN Regulation No 58	
6A	Vehicle access and manoeuvrability (steps,	Regulation (EC) No 661/2009	

	running boards and handholds)	Regulation (EU) No 130/2012
6B	Door latches and door retention components	Regulation (EC) No 661/2009 UN Regulation No 11
8A	Devices for indirect vision and their installation	Regulation (EC) No 661/2009 UN Regulation No 46
12A	Interior fittings	Regulation (EC) No 661/2009 UN Regulation No 21
16A	External projections	Regulation (EC) No 661/2009 UN Regulation No 26
20A	Installation of lighting and light-signalling devices on vehicles	Regulation (EC) No 661/2009 UN Regulation No 48
27A	Towing device	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010
32A	Forward field of vision	Regulation (EC) No 661/2009 UN Regulation No 125
35A	Windscreen wiper and washer systems	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010
37A	Wheel guards	Regulation (EC) No 661/2009 Regulation (EU) No 1009/2010
42A	Lateral protection of goods vehicles	Regulation (EC) No 661/2009 UN Regulation No 73
48A	Masses and dimensions	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012
49A	Commercial vehicles with regard to their external projections forward of the cab's rear panel	Regulation (EC) No 661/2009 UN Regulation No 61
50A	Mechanical coupling components of combinations of vehicles	Regulation (EC) No 661/2009 UN Regulation No 55

50B	Close-coupling device (CCD); fitting of an approved type of CCD	Regulation (EC) No 661/2009 UN Regulation No 102
52A	M <sub>2</sub> and M <sub>3</sub> vehicles	Regulation (EC) No 661/2009 UN Regulation No 107
52B	Strength of the superstructure of large passenger vehicles	Regulation (EC) No 661/2009 UN Regulation No 66
57A	Front underrun protective devices (FUPDs) and their installation; front underrun protection (FUP)	Regulation (EC) No 661/2009 UN Regulation No 93

#### Appendix 1

#### General conditions for the use of virtual testing methods

#### 1. Virtual test pattern

The following scheme shall be used as basis structure for describing and conducting virtual testing:

- (a) purpose;
- (b) structure model;
- (c) boundary conditions;
- (d) load assumptions;
- (e) calculation;
- (f) assessment;
- (g) documentation.
- 2. Fundamentals of computer simulation and calculation
- 2.1. Mathematical model

The mathematical model shall be supplied by the manufacturer. It shall reflect the complexity of the structure of the vehicle, system, component or separate technical unit to be tested in relation to the requirements of the relevant regulatory act and its boundary conditions.

The same provisions shall apply for testing components or separate technical units independently from the vehicle.

2.2. Validation process of the mathematical model

The mathematical model shall be validated against the actual test conditions.

To that effect a physical test shall be conducted to compare the results obtained when using the mathematical model with the results of a physical test. Comparability of the test results shall be proven. The manufacturer or the technical service shall draft a validation report and submit it to the approval authority.

Any change to the mathematical model or to the software that is likely to invalidate the validation report shall be brought to the attention of the approval authority, which may require that a new validation process is conducted.

The flow chart of the validation process is shown in Appendix 3.

2.3. Documentation

The manufacturer shall make available to the technical service and document the data and auxiliary tools used for simulation and calculation.

3. Tools and support

The manufacturer shall supply the technical service at its request with the necessary tools to conduct the virtual testing, including appropriate software, or provide that technical service access to these tools.

The manufacturer shall also provide appropriate support to the technical service.

The access and support provided by the manufacturer to a technical service does not exempt the technical service from its obligations regarding the skills of its personnel, the payment of licence rights and confidentiality.

#### Appendix 2

#### Specific conditions for the use of virtual testing methods

#### 1. List of regulatory acts

	Regulatory act reference	Annex and paragraphs	Specific conditions	
3B	Regulation (EC) No 661/2009 UN Regulation No 58	Paragraphs 2.3, 7.3. and 25.6 of UN Regulation No 58.	Dimensions and resistance to forces.	
6A	Regulation (EC) No 661/2009 Regulation (EU) No 130/2012	Annex II, Part 1 and 2 of Regulation (EU) No 130/2012.	Dimensions of steps, running boards and handholds.	
6B	Regulation (EC) No 661/2009 UN Regulation No 11	Annex 3 of UN Regulation No 11. Annex 4, paragraph 2.1. of UN Regulation No 11. Annex 5 of UN Regulation No 11.	Tensile strength tests and resistance of latches to acceleration.	
8A	Regulation (EC) No 661/2009 UN Regulation No 46	Paragraph 15.2.4. of UN Regulation No 46.	Prescribed fields of vision of rear-view mirrors.	
12A	Regulation (EC) No 661/2009 UN Regulation No 21	(a) Paragraphs 5. to 5.7. of UN Regulation No 21.	(a) Measurement of all radii of curvature and of all projections except for those requirements where a force has to be applied in order to check compliance with the provisions.	
		(b) Paragraph 2.3. of UN Regulation No 21.	(b) Determination of the head- impact zone.	
16A	Regulation (EC) No 661/2009	Paragraph 5.2.4. of UN Regulation No 26	Measurement of all radii of curvature	

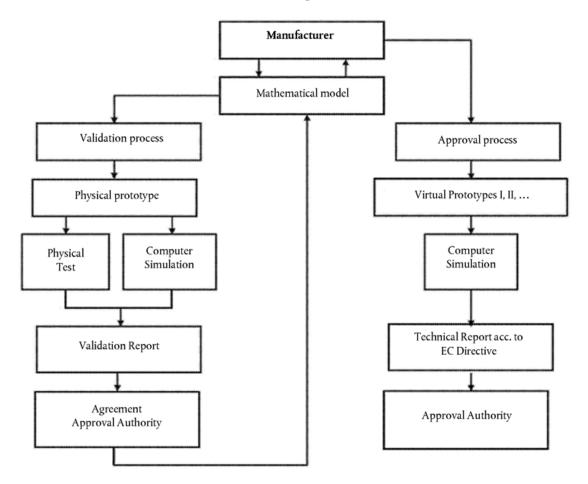
	UN Regulation No 26		aphs al ents)			
20A	Regulation (EC) No 661/2009 UN Regulation No 48	Ânnexes		The test drive provided for in paragraph 6.22.9.2.2 shall be performed on a real vehicle.		
27A	Regulation (EC) No 661/2009 Regulation (EU) No 1005/2010		, point 1.2. ation (EU) ⁄2010.			
32A	Regulation (EC) No 661/2009 UN Regulation No 125				Obstructions and field of vision.	
35A	Regulation (EC) No 661/2009 Regulation (EU) No 1008/2010	2.1		Determination of the swept area only.		
37A	Regulation (EC) No 661/2009 Regulation (EU) No 1009/2010	Annex II, point 2. of Regulation (EU) No 1009/2010.		Verification of the dimensional requirements.		
42A	Regulation (EC) No 661/2009 UN Regulation No 73	Paragraph 12.10 of UN Regulation No 73.				
48A	Regulation (EC) No 661/2009 Regulation (EU) No 1230/2012	(a)	Annex I, Part B, points 7 and 8 of Regulation (EU) No 1230/2012.	(a)	Check of compliance with the manoeuvrability requirements including manoeuvrability of vehicles fitted with lift- or loadable axles.	
		(b)	Annex I, Part C,	(b)	Measurement of the	

52A	Regulation (EC) No 661/2009 UN Regulation No 107	Annex 3 of UN Regulation No 107	Paragraph 7.4.5. (calculation method).
		(c) Annex 6, paragraph 3 of UN Regulatio No 55.	n (Strength test), 3.6.2. (Resistance to buckling) and 3.6.3. (Resistance to bending moment) only.
		(b) Annex 6, paragraph 1.1. of UN Regulatio No 55.	N mechanicals
50A	Regulation (EC) No 661/2009 UN Regulation No 55	(a) Annex 5 'Requiren for mechanic coupling devices' of UN Regulatio No 55.	al paragraphs 1 to 8 included.
49A	Regulation (EC) No 661/2009 UN Regulation No 61	Paragraphs 5 and 6 of UN Regulation N 61.	No Measurement of all radii of curvature and of all projections except for those requirements where a force has to be applied in order to check compliance with the provisions.
		points 6 and 7 of Regulatio (EU) No 1230/201	

52B	Regulation (EC) No 661/2009 UN Regulation No 66	Annex 9 of UN Regulation No 66.	Computer simulation of rollover test on complete vehicle as an equivalent approval method.
57A	Regulation (EC) No 661/2009 UN Regulation No 93	Annex 5, paragraph 3 of UN Regulation No 93.	Resistance under a horizontal force and deflection measurement.

#### Appendix 3

#### Validation process



#### ANNEX IX

#### PROCEDURES TO BE FOLLOWED DURING MULTI-STAGE TYPE-APPROVAL

#### 1. Obligations of manufacturers

- 1.1. The satisfactory operation of the multi-stage type-approval requires joint action by all the manufacturers concerned. To that end approval authorities must ensure, before granting first and subsequent stage type-approvals, that suitable arrangements exist between the relevant manufacturers for the supply and interchange of documents and information, so that the completed type of vehicle meets the technical requirements of all the relevant regulatory acts listed in Annex II. Such information must include details of relevant system, component and separate technical unit type-approvals and of vehicle parts that form part of the incomplete vehicle but have not yet been type-approved.
- 1.2. Each manufacturer involved in a multi-stage type-approval shall be responsible for the approval and conformity of production of all systems, components or separate

technical units manufactured or added by that manufacturer to the previously built stage. The manufacturer of the subsequent stage shall not be responsible for objects that have been approved in an earlier stage, except where that manufacturer modifies relevant parts to such an extent that the previously granted type-approval becomes invalid

- 2. Obligations of approval authorities
- 2.1. The approval authority shall:
- (a) verify that all EU type-approval certificates issued pursuant to the regulatory acts that are applicable for vehicle type-approval cover the type of vehicle at its state of completion and correspond to the prescribed requirements;
- ensure that all the relevant data, taking account of the state of completion of the (b) vehicle, is included in the information folder;
- by reference to the documentation ensure that the vehicle specification(s) and data (c) contained in the information folder are included in the data in the information packages and in the EU type-approval certificates issued in accordance with the relevant regulatory acts; and in the case of a completed vehicle, where an item number of the information folder is not included in the information package of any of the regulatory acts, confirm that the relevant part or characteristic conforms to the particulars in the information folder:
- (d) on a selected sample of vehicles from the type to be approved carry out or arrange to be carried out inspections of vehicle parts and systems to verify that the vehicle(s) is/are built in accordance with the relevant data contained in the authenticated information package in accordance with all relevant regulatory acts; and
- where required carry out, or arrange to be carried out, relevant installation checks for (e) separate technical units.
- 2.2. The number of vehicles to be inspected for the purposes of point 2.1 (d) shall be sufficient to permit the proper control of the various combinations to be EU typeapproved according to the state of completion of the vehicle and the following criteria:
- engine;
- gearbox;
- \_\_\_\_ powered axles (number, position, interconnection);
- steered axles (number and position);
- body styles;
- \_\_\_\_ number of doors;
- hand of drive.
- number of seats;
- level of equipment.
- 3. Applicable requirements
- 3.1. Multi-stage type-approvals shall be granted on the basis of the state of completion of the type of vehicle and shall incorporate all type-approvals granted at earlier stages.
- 3.2. For the whole-vehicle type-approval, this Regulation (in particular the requirements of Annex I and the particular regulatory acts listed in Annex II) shall apply in the same manner as if the approval would have been granted (or extended) to the manufacturer of the base vehicle.

# 3.2.1. Where a type of system, component or separate technical unit has not been modified, the system, component or separate technical unit type-approval granted in the previous stage shall remain valid until the expiration date for the first registration, as specified in the particular regulatory act.

- 3.2.2. Where a type of system has been modified at the subsequent stage of completion of the vehicle, to the extent that the system has to be retested for type-approval purposes, that retesting shall be limited to only those parts of the system that have been modified or affected by the changes.
- 3.2.3. Where a type of vehicle or a type of system has been modified by another manufacturer at the subsequent stage of completion of the vehicle, to the extent that, apart from the manufacturers name, the vehicle or system may still be considered as the same type, the requirement applying to existing types may still be applied as long as the date for first registration in the relevant regulatory act has not been reached.
- 3.2.4. The change of category of a vehicle shall lead to the application of the relevant requirements to the new category of vehicle. The EU type-approval certificates from the previous category shall be accepted provided that the vehicle complies with the same requirements as, or more stringent than, those applying to the new category.
- 3.3. Subject to the agreement of the approval authority, a whole-vehicle type-approval granted to the manufacturer of the subsequent stage of completion of the vehicle does not need to be extended or revised where an extension given at the previous stage vehicle does not affect the subsequent stage or the technical data of the vehicle. However, the type-approval number including the extension of the previous stage(s) vehicle shall be copied in the certificate of conformity of the subsequent stage vehicle.
- 3.4. Where the cargo area of a complete or completed vehicle of category N or O is modified by another manufacturer for the addition of removable fittings to store and secure the cargo (for example, load space lining, storage racks and roof racks), such items can be treated as part of the pay-mass and a type-approval is not needed, provided both of the following conditions are met:
- (a) the modifications do not affect the vehicle's type-approval in any way, other than an increase of the actual mass of the vehicle;
- (b) the added fittings can be removed without using special tools.
- 4. Identification of the vehicle
- 4.1. The VIN, prescribed by Regulation (EU) No 19/2011, shall be retained during all the subsequent stages of the type-approval to ensure the traceability of the process.
- 4.2. At the second and subsequent stages, in addition to the statutory plate prescribed by Regulation (EU) No 19/2011, each manufacturer shall affix to the vehicle an additional plate the model of which is shown in the Appendix to this Annex. This plate shall be firmly attached, in a conspicuous and readily accessible position on a part not subject to replacement in use. It shall clearly and indelibly show the following information in the order listed:
- the name of the manufacturer;
- sections 1, 3 and 4 of the EU type-approval number;
- the stage of approval;
- the VIN of the base vehicle;

- the technically permissible maximum laden mass of the vehicle where the value has changed during the current stage of approval;
- -- the technically permissible maximum laden mass of the combination (where the value has changed during the current stage of approval and where the vehicle is permitted to tow a trailer). '0' shall be used if the vehicle is not permitted to tow a trailer;
- the technically permissible maximum mass on each axle, listed in order from front to rear where the value has changed during the current stage of approval;
- in the case of a semi-trailer or centre axle trailer, the technically permissible maximum mass at the coupling point where the value has changed during the current stage of approval.

Unless otherwise provided for in point 4.1 and this point the additional plate shall comply with the requirements set out in Annex I and Annex II to Regulation (EU) No 19/2011.

#### Appendix

#### Model of the manufacturer's additional plate

The example below is given as a guide only.

MANUFACTURER'S NAME (stage 3)

e2\*201X/XX\*2609

Stage 3

WD9VD58D98D234560

1 500 kg

2 500 kg

1 – 700 kg

2 – 810 kg

#### ANNEX X

## ACCESS TO VEHICLE OBD INFORMATION AND VEHICLE REPAIR AND MAINTENANCE INFORMATION

#### 1. Introduction

This Annex lays down technical requirements for the access to vehicle OBD information and vehicle repair and maintenance information.

- 2. Access to vehicle OBD information and vehicle repair and maintenance information
- 2.1. A manufacturer shall put in place the necessary arrangements and procedures, in accordance with Article 61, to ensure that vehicle OBD information and vehicle repair and maintenance information is accessible through websites using a standardised format in a readily accessible and prompt manner, and in a manner which is non-discriminatory compared to the provisions given or access granted to authorised dealers and repairers.
- 2.2. An approval authority shall only grant type-approval after receiving from the manufacturer a certificate on access to vehicle OBD information and vehicle repair and maintenance information.
- 2.3. The certificate on access to vehicle OBD information and vehicle repair and maintenance information shall serve as the proof of compliance with Article 64.
- 2.4. The certificate on access to vehicle OBD information and vehicle repair and maintenance information shall be drawn up in accordance with the model set out in Appendix 1.
- 2.5. The vehicle OBD information and vehicle repair and maintenance information shall include the following:

- 2.5.1. an unequivocal identification of the vehicle, system, component or separate technical unit for which the manufacturer is responsible;
- 2.5.2. service handbooks, including service and maintenance records;
- 2.5.3. technical manuals;
- 2.5.4. component and diagnosis information (such as minimum and maximum theoretical values for measurements);
- 2.5.5. wiring diagrams;
- 2.5.6. diagnostic trouble codes, including manufacturer specific codes;
- 2.5.7. the software calibration identification number applicable to a type of vehicle;
- 2.5.8. information provided concerning, and delivered by means of, proprietary tools and equipment;
- 2.5.9. data record information and two-directional monitoring and test data;
- 2.5.10. standard work units or time periods for repair and maintenance tasks if they are made available to authorised dealers and repairers of the manufacturer either directly or through a third party;
- 2.5.11. in case of multi-stage type-approval, the information required under point 3, and all other information necessary to comply with the requirements set out in Article 61.
- 2.6. The manufacturer shall make available to interested parties the following information:
- 2.6.1. relevant information to enable the development of replacement components that are critical to the correct functioning of the OBD system;
- 2.6.2. information to enable the development of generic diagnostic tools.
- 2.7. For the purposes of point 2.6.1., the development of replacement components shall not be restricted by any of the following:
- 2.7.1. the unavailability of pertinent information;
- 2.7.2. the technical requirements relating to malfunction indication strategies if the OBD thresholds are exceeded or if the OBD system is unable to fulfil the basic OBD monitoring requirements of this Regulation;
- 2.7.3. specific modifications to the handling of OBD information to deal independently with vehicle operation on petrol or on gas;
- 2.7.4. the type-approval of gas-fuelled vehicles that contain a limited number of minor deficiencies.
- 2.8. For the purposes of point 2.6.2, where manufacturers use diagnostic and test tools in accordance with ISO 22900 Modular vehicle communication interface (MVCI) and ISO 22901 Open diagnostic data exchange (ODX) in their franchised networks –, the ODX files shall be accessible to independent operators via the website of the manufacturer.
- 2.9. For the purpose of vehicle OBD, diagnostics, repair and maintenance, the direct vehicle data stream shall be made available through the serial data port on the standardised data link connector specified in paragraph 6.5.1.4 of Appendix 1 of

Annex 11 to UN Regulation No 83 and paragraph 4.7.3 of Annex 9B to UN Regulation No 49.

When the vehicle is in motion, the data shall only be made available for read-only functions.

- 3. Multi-stage type-approval
- 3.1. In the case of a multi-stage type-approval, the final manufacturer shall be responsible for providing access to vehicle OBD information and vehicle repair and maintenance information regarding its own manufacturing stage(s) and the link to the previous stage(s).
- 3.2. In addition, the final manufacturer shall on its website provide independent operators with the following information:
- 3.2.1. the website address of the manufacturer(s) responsible for the previous stage(s);
- 3.2.2. the name and address of all the manufacturers responsible for the previous stage(s);
- 3.2.3. the type-approval number(s) of the previous stage(s);
- 3.2.4. the engine number.
- 3.3. Each manufacturer responsible for a particular stage or stages of type-approval shall be responsible for providing through his website access to vehicle OBD and vehicle repair and maintenance information regarding the stage(s) of type-approval for which he is responsible and the link to the previous stage(s).
- 3.4. The manufacturer responsible for a particular stage or stages of type-approval shall provide the following information to the manufacturer responsible for the next stage:
- 3.4.1. the certificate of conformity relating to the stage(s) for which he is responsible;
- 3.4.2. the certificate on access to vehicle OBD information and vehicle repair and maintenance information, including its annexes;
- 3.4.3. the type-approval number corresponding to the stage(s) for which he is responsible;
- 3.4.4. the documents referred to in points 3.4.1, 3.4.2 and 3.4.3 as provided by the manufacturer(s) involved in the previous stage(s).
- 3.5. Each manufacturer shall authorise the manufacturer responsible for the next stage to pass the documents to the manufacturers responsible for any subsequent stages and the final stage.
- 3.6. In addition, on a contractual basis, the manufacturer responsible for a particular stage or stages of type-approval shall:
- 3.6.1. provide the manufacturer responsible for the next stage with access to vehicle OBD information and vehicle repair and maintenance information and interface information corresponding to the particular stage(s) for which he is responsible;
- 3.6.2. provide, at the request of a manufacturer responsible for a subsequent stage of typeapproval, with access to vehicle OBD information and vehicle repair and maintenance information and interface information corresponding to the particular stage(s) for which he is responsible.
- 3.7. A manufacturer, including a final manufacturer, may only charge fees in accordance with Article 63 concerning the particular stage(s) for which he is responsible.

A manufacturer, including a final manufacturer, shall not charge fees for providing information relating to the website address or contact details of any other manufacturer.

- 4. Customer adaptations
- 4.1. By derogation from point 2, if the number of systems, components or separate technical units subject to a specific customer adaptation is lower than 250 units produced worldwide, repair and maintenance information for the customer adaptation shall be provided in a readily accessible and prompt manner, and in a manner which is non-discriminatory compared to the provisions given or access granted to authorised dealers and repairers.

For the servicing and reprogramming of the electronic control units relating to the customer adaptation, the manufacturer shall make the respective proprietary specialist diagnostic tool or test equipment available to independent operators as provided to authorised repairers.

The customer adaptations shall be listed on the manufacturer's repair and maintenance information website and mentioned in the certificate on access to vehicle OBD information and vehicle repair and maintenance information at the time of type-approval.

- 4.2. Manufacturers shall make the proprietary specialist diagnostic tool or test equipment to service the customer-adapted systems, components or technical units available to independent operators via sale and rent.
- 4.3. The manufacturer shall mention in the certificate on access to vehicle OBD information and vehicle repair and maintenance information, at the time of type-approval, the customer adaptations for which the obligation under point 2 to provide access to vehicle OBD information and vehicle repair and maintenance information in a standardised format is derogated from and any electronic control unit related to them.

Those customer adaptations and any electronic control unit related to them shall also be listed on the manufacturer's repair and maintenance information website.

- 5. Small volume manufacturers
- 5.1. By derogation from point 2, manufacturers whose worldwide annual production of a type of vehicle, system, component or separate technical unit subject to this Regulation is for vehicles of category M<sub>1</sub> and N<sub>1</sub> less than 1 000 vehicles or for vehicles of category M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub> and O less than 250 units, shall provide access to vehicle repair and maintenance information in a readily accessible and prompt manner, and in a manner that is non-discriminatory compared to the provisions given or access granted to authorised dealers and repairers.
- 5.2. The vehicle, system, component and separate technical unit subject to point 5.1 shall be listed on the manufacturer's repair and maintenance information website.
- 5.3. The approval authority shall inform the Commission of each type-approval granted to small volume manufacturers.
- 6. Requirements
- 6.1. Vehicle OBD information and vehicle repair and maintenance information available through websites shall follow the relevant common standard referred to in Article 61.

Those requiring the right to duplicate or republish the information shall negotiate directly with the manufacturer concerned. Information for training material shall also be available, but may be presented through other media than websites.

Information on all parts of the vehicle, with which the vehicle, as identified by the VIN and any additional criteria such as wheelbase, engine output, trim level or options, is equipped by the vehicle manufacturer and that can be replaced by spare parts offered by the vehicle manufacturer to its authorised repairers or dealers or third parties by means of reference to original equipment (OE) parts number, shall be made available, in the form of machine readable and electronically processable datasets, in a database that is easily accessible to independent operators.

This database shall comprise the VIN, OE parts numbers, OE naming of the parts, validity attributes (valid-from and valid-to dates), fitting attributes and, where applicable, structuring characteristics.

The information on the database shall be updated regularly. If this information is available to authorised dealers, the updates shall include in particular all modifications to individual vehicles after their production.

- 6.2. Access to vehicle security features used by authorised dealers and repairers shall be made available to independent operators under protection of security technology in accordance with the following requirements:
- 6.2.1. data shall be exchanged ensuring confidentiality, integrity and protection against replay;
- 6.2.2. the standard https//ssl-tls (RFC4346) shall be used;
- 6.2.3. security certificates in accordance with international standard ISO 20828 shall be used for mutual authentication of independent operators and manufacturers;
- 6.2.4. the independent operator's private key shall be protected by secure hardware.
- 6.3. The Forum on Access to Vehicle Information referred to in Article 66 shall specify the parameters for fulfilling the requirements referred to in point 6.2 in accordance with the state of the art. The independent operator shall be approved and authorised for this purpose on the basis of documents demonstrating that he pursues a legitimate business activity and has not been convicted of any relevant criminal activity.
- 6.4. Reprogramming of control units shall be conducted in accordance with either international standard ISO 22900-2 or SAE J2534 or TMC RP1210B using non-proprietary hardware.

For the validation of the compatibility of the manufacturer-specific application and the vehicle communication interfaces (VCI) complying to international standard ISO 22900-2 or SAE J2534 or TMC RP1210B, the manufacturer shall offer either a validation of independently developed VCIs or the information, and loan of any special hardware, required for a VCI manufacturer to conduct such validation himself.

The conditions of Article 63(1) shall apply to fees for such validation or information and hardware.

- 6.5. The requirements of point 6.4. shall not apply in the case of reprogramming of speed limitation devices and recording equipment.
- 6.6. All emission-related DTCs shall be consistent with Annex XI to Regulation (EC) No 692/2008 and Annex X to Regulation (EU) No 582/2011.
- 6.7. For access to any vehicle OBD information and vehicle repair and maintenance information other than that relating to secure areas of the vehicle, registration requirements for use of the manufacturer's website by an independent operator shall

require only such information as is necessary to confirm how payment for the information is to be made. For information concerning access to secure areas of the vehicle, the independent operator shall present a certificate in accordance with international standard ISO 20828 to identify himself and the organisation to which he belongs and the manufacturer shall respond with his own certificate in accordance with international standard ISO 20828 to confirm to the independent operator that he is accessing a legitimate site of the intended manufacturer. Both parties shall keep a log of any such transactions indicating the vehicles and changes made to them under this provision.

- 6.8. Manufacturers shall indicate in their repair information websites the type-approval number by model.
- 6.9. If the vehicle OBD information and vehicle repair and maintenance information that is available on a manufacturer's website does not contain specific relevant information to permit the proper design and manufacture of alternative fuels retrofit systems, any interested alternative fuels retrofit system manufacturer shall be able to obtain the information required by contacting the manufacturer directly with such a request. Contact details for that purpose shall be clearly indicated on the manufacturer's website and the information shall be provided within 30 days. It shall only be necessary to provide such information for alternative fuels retrofit components that form part of systems subject to UN Regulation No 115 or for alternative fuels retrofit components that clearly specifies the exact specification of the vehicle model for which the information is required and that specifically confirms that the information is required for the development of alternative fuels retrofit systems or components subject to UN Regulation No 115.
- 7. Requirements for type-approval
- 7.1. In order to receive a type-approval, the manufacturer shall submit the filled in certificate, the template of which is provided in Appendix 1.
- 7.2. Where the vehicle OBD information and vehicle repair and maintenance information is not available, or does not conform to the requirements of this Annex, the manufacturer shall provide that information within six months of the date of the type-approval.
- 7.3. The obligation to provide information within the period referred to in point 7.2. shall apply only if, following the type-approval, the vehicle is placed on the market.

Where the vehicle is placed on the market more than six months after the type-approval has been granted the information shall be provided on the date on which the vehicle is placed on the market.

7.4. On the basis of a completed certificate on access to vehicle OBD information and vehicle repair and maintenance information, the approval authority may presume that the manufacturer has put in place satisfactory arrangements and procedures with regard to access to vehicle OBD information and vehicle repair and maintenance information, provided that no complaint has been made and that the manufacturer provides that certificate within the period referred to in point 7.2.

#### Appendix 1

## Manufacturer's certificate on access to vehicle OBD information and vehicle repair and maintenance information

(Manufacturer): ...

(Address of the manufacturer): ...

Certifies that

it provides access to vehicle OBD information and vehicle repair and maintenance information in compliance with the provisions of:

Article 61 of Regulation (EU) 2018/858 of the European Parliament and of the Council (1) and Annex X to that Regulation

with respect to the types of vehicle, system, component or separate technical unit listed in an attachment to this certificate.

The following derogations are applied: Customer adaptations (\*) - Small volume (\*) -.

The principal website addresses through which the relevant information, which is hereby certified to be in compliance with those provisions, may be accessed, are listed in an attachment to this certificate along with the contact details of the responsible manufacturer's representative who has signed this certificate.

Where applicable: The manufacturer hereby also certifies that he has complied with the obligation of Article 62 of Regulation (EU) 2018/858 to provide the relevant information concerning previous approvals of these types of vehicle no later than six months after the date of type-approval.

Done at ... [Place]

On ... [Date]

[Signature] [Position]

Annexes:

- Annex A: Website addresses;
- Annex B: Contact details;
- Annex C: Types of vehicle, system, component or separate technical unit.

Explanatory note:

(\*) Delete where not applicable.

<sup>(&</sup>lt;sup>1</sup>) Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (OJ L 151, 14.6.2018, p. 1).

#### ANNEX A

#### WEBSITE ADDRESSES REFERRED TO IN THIS CERTIFICATE:

#### ANNEX B

## CONTACT DETAILS OF THE MANUFACTURER'S REPRESENTATIVE REFERRED TO IN THIS CERTIFICATE:

#### ANNEX C

#### TYPES OF VEHICLE, SYSTEM, COMPONENT OR SEPARATE TECHNICAL UNIT:

## Appendix 2

#### Vehicle OBD information

- 1. The vehicle manufacturer shall provide the information required in this Appendix for the purposes of enabling the manufacture of OBD-compatible replacement or service parts and diagnostic tools and test equipment.
- 2. Upon request, the following information shall be made available, on a nondiscriminatory basis, to any interested manufacturer of components, diagnostic tools or test equipment:
- 2.1. a description of the type and number of the preconditioning cycles used for the original type-approval of the vehicle;
- 2.2. a description of the type of the OBD demonstration cycle used for the original typeapproval of the vehicle for the component monitored by the OBD system;
- 2.3. a comprehensive document describing all sensed components with the strategy for fault detection and MI activation (fixed number of driving cycles or statistical method), including a list of relevant secondary sensed parameters for each component monitored by the OBD system and a list of all OBD output codes and format used (with an explanation of each code and format) associated with individual emission-related power-train components and individual non-emission related components, where monitoring of the component is used to determine MI activation. In particular, in the case of types of vehicles that use a communication link in accordance with ISO 15765-4 'Road vehicles Diagnostics on controller area network (CAN) Part 4: Requirements for emissions-related systems', a comprehensive explanation for the data given in service \$ 05 Test ID \$ 21 to FF and the data given in service \$ 06, and a comprehensive explanation for the data given in service \$ 06 Test ID \$ 00 to FF, for each OBD monitor ID supported, shall be provided.

In case other communication protocols standards are used, equivalent comprehensive explanation shall be provided.

This information may be provided in the form of a table, with the following column and row headings:

Component Fault code; Monitoring strategy; Fault detection criteria; MI activation criteria; Secondary parameters; Preconditioning Demonstration test.

Catalyst P0420 Oxygen sensor; 1 and 2 signals; Difference between sensor 1 and sensor 2 signals; 3rd cycle Engine speed; engine load; A/F mode; catalyst temperature; Two Type 1 cycles; Type 1.

3. Information required for the manufacturing of diagnostic tools

In order to facilitate the provision of generic diagnostic tools for multi-make repairers, vehicle manufacturers shall make available the information referred to in points 3.1, 3.2 and 3.3 through their repair information websites. That information shall include all diagnostic tool functions and all the links to repair information and troubleshooting instructions. The access to the information may be subject to the payment of a reasonable fee.

3.1. Communication protocol information

The following information shall be required indexed against vehicle make, model and variant, or another workable definition such as the VIN or the vehicle and systems identification:

- 3.1.1. any additional protocol information system necessary to enable complete diagnostics in addition to the standards prescribed in paragraph 4.7.3 of Annex 9B to UN Regulation No 49 and in paragraph 6.5.1.4 of Annex 11 to UN Regulation No 83, including any additional hardware or software protocol information, parameter identification, transfer functions, 'keep alive' requirements, or error conditions;
- 3.1.2. details of how to obtain and interpret all the fault codes that do not comply with the standards prescribed in paragraph 4.7.3 of Annex 9B to UN Regulation No 49 and in paragraph 6.5.1.4 of Annex 11 to UN Regulation No 83;
- 3.1.3. a list of all available live data parameters, including scaling and access information;
- 3.1.4. a list of all available functional tests, including device activation or control and the means to implement them;
- 3.1.5. details of how to obtain all component and status information, time stamps, pending DTC and freeze frames;
- 3.1.6. resetting adaptive learning parameters, variant coding and replacement component setup, and customer preferences;
- 3.1.7. Electronic control unit (ECU) identification and variant coding;
- 3.1.8. details of how to reset service lights;
- 3.1.9. location of diagnostic connector and connector details;
- 3.1.10. engine code identification.
- 3.2. Test and diagnosis of OBD monitored components

The following information shall be required:

- 3.2.1. a description of tests to confirm the functionality, at the component or in the harness;
- 3.2.2. information concerning the test procedure, including test parameters and component information;
- 3.2.3. connection details, including minimum and maximum input and output and driving and loading values;
- 3.2.4. values to be expected under certain driving conditions, including idling;
- 3.2.5. electrical values for the component in its static and dynamic states;
- 3.2.6. failure mode values for each of the scenarios;
- 3.2.7. failure mode diagnostic sequences, including fault trees and guided diagnostics elimination.
- 3.3. Data required to perform the repair

The following information shall be required:

3.3.1. ECU and component initialisation (in the event of replacements being fitted);

3.3.2. initialisation of new or replacement ECU's where relevant using pass-through (re-) programming techniques.

## ANNEX XI

#### **CORRELATION TABLE**

1. Regulation (EC) No 715/2007

Regulation (EC) No 715/2007	This Regulation
Article 1(2)	Article 86(1), point (2)
Article 3, points (14) and (15)	Article 3, points (48) and (45)
Article 6	Article 61
Article 7	Article 63
Article 8	—
Article 9	—
Article 13(2), point (e)	Article 86(1), point (5)

# 2. Regulation (EC) No 595/2009

Regulation (EC) No 595/2009	This Regulation
Article 1, second paragraph	Article 87(1), point 2
Article 3, points (11) and (13)	Article 3, points (48) and (45)
Article 6	Article 61
Article 11(2), point (e)	Article 84(3), point (a)

# 3. Directive 2007/46/EC

Directive 2007/46/EC	This Regulation
Article 1	Article 1(1)
	Article 1(2)
Article 2	Article 2
Article 3, point (1)	
Article 3, point (2)	
Article 3, point (3)	Article 3, point (1)
Article 3, point (4)	Article 3, point (3)
Article 3, point (5)	Article 3, point (2)
Article 3, point (6)	Article 3, point (6)

Article 3, point (7)	Article 3, point (8)
Article 3, point (8)	Article 3, point (9)
Article 3, point (9)	Article 3, point (10)
Article 3, point (10)	Article 3, point (11)
Article 3, point (11)	Article 3, point (16)
Article 3, point (12)	Article 3, point (17)
Article 3, point (13)	Article 3, point (15)
Article 3, point (14)	—
Article 3, point (15)	—
Article 3, point (16)	—
Article 3, point (17)	Article 3, point (32)
Article 3, point (18)	Article 3, point (24)
Article 3, point (19)	Article 3, point (25)
Article 3, point (20)	Article 3, point (26)
Article 3, point (21)	Article 3, point (27)
Article 3, point (22)	Article 3, point (28)
Article 3, point (23)	Article 3, point (18)
Article 3, point (24)	Article 3, point (19)
Article 3, point (25)	Article 3, point (20)
Article 3, point (26)	—
Article 3, point (27)	Article 3, point (40)
Article 3, point (28)	Article 3, point (41)
Article 3, point (29)	Article 3, point (36)
Article 3, point (30)	—
Article 3, point (31)	Article 3, point (38)
Article 3, point (32)	Article 3, point (54)
Article 3, point (33)	Article 3, point (4)
Article 3, point (34)	—
Article 3, point (35)	—
Article 3, point (36)	Article 3, point (5)
Article 3, points (37) to (40)	-
	Article 3, point (7)
	Article 3, points (12), (13) and (14))
	Article 3, points (21), (22) and (23)

_	Article 3, points (29), (30), (31), (33), (34) and (35)
	Article 3, point (37)
	Article 3, point (39)
	Article 3, points (42) to (53)
	Article 3, points (55) to (58)
	Article 5(2) and (3)
	Article 6(1), third subparagraph, (2) and (3)
	Article 7(2), (3) and (4)
Article 4(1)	
Article 4(2)	Article 7(1)
Article 4(3), first subparagraph	Article 6(4)
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Article 4(4)	Article 6(1), first and second subparagraphs
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- Council Directive 80/181/EEC of 20 December 1979 on the approximation of the laws of the Member States relating to units of measurement and on the repeal of Directive 71/354/EEC (OJ L 39, 15.2.1980, p. 40).
- (2) 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 (OJ L 175, 7.7.2017, p. 1).
- (3) Regulation (EU) No 510/2011 of the European Parliament and of the Council of 11 May 2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO<sub>2</sub> emissions from light-duty vehicles (OJ L 145, 31.5.2011, p. 1).
- (4) Commission Regulation (EU) No 1230/2012 of 12 December 2012 implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council with regard to type-approval requirements for masses and dimensions of motor vehicles and their trailers and amending Directive 2007/46/EC of the European Parliament and of the Council (OJ L 353, 21.12.2012, p. 31).
- (5) For subsequent amendments, see UNECE TRANS/WP.29/343.
- (6) In the absence of a registration document, the competent authority may refer to available documented evidence of date of manufacture or documented evidence of first purchase.