

# Technical Requirements Document 1 (TRD 1)

## basic Individual Vehicle Approval (bIVA) for M1 and N1 category vehicles

A basic IVA vehicle is a vehicle which is a -

- (a) a left hand drive vehicle;
- (b) a personally imported vehicle;
- (c) an amateur built vehicle;
- (d) a vehicle manufactured in very low volume;
- (e) a vehicle manufactured using parts of a registered vehicle;
- (f) a rebuilt vehicle;
- (g) a motor caravan as defined in Annex II.A of the 1970 Directive;
- (h) an ambulance as defined in Annex II.A of the 1970 Directive;
- (i) a hearse as defined in Annex II.A of the 1970 Directive; or
- (j) an armoured vehicle as defined in Annex II.A of the 1970 Directive.

**The above vehicles are as defined in schedule 2 to car SVA (SI 2001 No. 25 as amended by SI 2004 No. 623)**

### **Multi-purpose vehicles**

In the case of a multi-purpose vehicle it is necessary to determine the category to which the vehicle belongs. This shall be determined as follows:

- by means of the calculation method in Annex II, part C to Directive 2007/46/EC; or
- at the request of the manufacturer, a vehicle with at least 4 seats and a load area not exceeding 40% of the length of the vehicle may be classed as an M1 vehicle for the purpose of these technical provisions.

**“Motor-caravan”, “Ambulance”, or “Hearse”** has the same meaning as vehicles to which Directive 2007/46/EC, Annex XI, Appendix 1 applies.

**“Armoured vehicle”** has the same meaning as vehicles to which Directive 2007/46/EC, Annex XI, Appendix 2 applies.

**“Wheelchair accessible vehicle”** has the same meaning as vehicles to which Directive 2007/46/EC, Annex XI, Appendix 3 applies.

**“Other special purpose vehicle”** has the same meaning as vehicles to which Directive 2007/46/EC, Annex XI, Appendix 4 applies.

## Section 1

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>1. Noise</b>	<p><b>1.</b> The vehicle shall be fitted with an exhaust system including a silencer such that the exhaust gases shall not escape into the atmosphere without first passing through the silencer.</p> <p><b>2.</b> When -</p> <p>(a) the vehicle is held stationary on a level surface such that there is an unobstructed area not less than 3 metres wide all around the vehicle; and</p> <p>(b) the engine by which the vehicle is propelled is run at a constant rotational speed of <math>3/4 S</math>,</p> <p>the noise measured at 0.5 metres from the exhaust outlet at 45 degrees to the axis of the outlet pipe in a horizontal plane, shall not exceed 101db(A).</p>	<p>For the purposes of this item -</p> <p>"S" means the rotational speed at which maximum power is produced.</p>	<p>Paragraph 1 shall only apply to vehicles fitted with an internal combustion engine as part of the propulsion system for the vehicle.</p>
<b>2. Emissions (Light Duty Vehicles)</b>	<p><b>1.</b> The vehicle shall not emit any avoidable smoke or avoidable visible vapour.</p> <p><b>2.</b> When the engine by which the vehicle is propelled is running without load at a <b>normal idling speed</b>, the carbon monoxide content of the exhaust emissions from the engine</p>	<p>For the purposes of this item -</p> <p>"effective date" means the date of manufacture of the vehicle, except that in the case of a vehicle which for the time being meets the</p>	<p>1. Does not apply to N1 vehicles approved to item 41.</p> <p>2. For the purposes of this item, a vehicle that can be fuelled with both petrol and gaseous fuel, shall be regarded as a vehicle that can only be fuelled with a gaseous</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>shall not exceed -</p> <p>(a) if the vehicle has an <b>effective date</b> before 1st August 1986, 4.5%; or</p> <p>(b) if the vehicle has an <b>effective date</b> on or after 1st August 1986 and not being a vehicle to which sub-paragraph (c) or (d) below applies, 3.5%; or</p> <p>(c) if the vehicle is of a description mentioned in the Annex to <b>the emissions publication</b> and is either -</p> <p>(i) a <b>passenger car</b> having an <b>effective date</b> on or after 1st August 1992; or</p> <p>(ii) any other vehicle having four or more wheels and an <b>effective date</b> on or after 1st August 1994, the <b>relevant percentage</b>; or</p> <p>(d) if the vehicle is not of a description mentioned in the Annex to <b>the emissions publication</b> and is either -</p> <p>(i) a <b>passenger car</b> having an <b>effective date</b> on or after 1st August 1995; or</p>	<p>requirements of Schedule 2 (c), (e) or (f) to these Regulations [Schedule 2 means Schedule 2 to SI2001/25 as amended], it shall mean the 1st January immediately preceding the date of manufacture of the engine by which it is propelled, if that date is earlier;</p> <p>"the emissions publication" means the emission publication as defined in sub-paragraph 7(b) of Schedule 7B of the Construction and Use Regulations;</p> <p>"a fast idling speed" means -</p> <p>(a) in the case of a vehicle of a description mentioned in the Annex to <b>the emissions publication</b>, a rotational speed between the minimum and</p>	<p>fuel, so long as:</p> <p>a) the petrol system is fitted for emergency purposes only; and</p> <p>b) the petrol tank cannot contain more than 15 litres of petrol.</p> <p>3. Paragraphs 2, 3 and 4 shall not apply to -</p> <p>(a) vehicles not propelled by a spark ignition engine;</p> <p>(b) vehicles having an <b>effective date</b> before 1st August 1975; and</p> <p>(c) vehicles having an <b>effective date</b> before 1st August 1987 and propelled by a <b>rotary piston engine</b>.</p> <p>Paragraphs 2(a) and (b) and shall not apply to vehicles propelled by a 2-stroke engine.</p> <p>Paragraph 2(c) shall not apply to:</p> <p>(i) a <b>passenger car</b> having an <b>effective date</b> on or after 1st August 1992 and before 1st August 1995;</p> <p>(ii) any other vehicle</p>

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	<p>(ii) any other vehicle having four or more wheels and an <b>effective date</b> on or after 1st August 1997,</p> <p>0.5% of the total exhaust emissions from the engine by volume.</p> <p><b>3.</b> If the engine by which the vehicle is propelled is run without a load at a rotational speed of 2,000 revolutions per minute, the hydrocarbon content of the exhaust emission from the engine shall not exceed 0.12% if the vehicle either -</p> <p>(a) has not more than three wheels; or</p> <p>(b) is a vehicle to which paragraph 2(a) or (b) applies;</p> <p><b>4.</b> If the vehicle is one to which paragraph 2(c) or (d) applies and the engine by which it is propelled is run without a load at a <b>fast idling speed</b> -</p> <p>(a) the carbon monoxide content of the exhaust emissions from the engine shall not exceed</p>	<p>maximum limits shown against that description of vehicle in columns 3(e) and (f) respectively of that Annex; or</p> <p>(b) in any other case, a rotational speed of between 2,500 and 3,000 revolutions per minute;</p> <p>"the lambda value" means the ratio by mass of air to petrol vapour in the mixture entering the combustion chambers divided by 14.7;</p> <p>"a normal idling speed" means in the case of a vehicle of a description mentioned in the Annex to <b>the emissions publication</b>, a rotational speed between the minimum and maximum limits shown against that description of vehicle in columns 2(b) and 2(c)</p>	<p>having four or more wheels and an <b>effective date</b> on or after 1st August 1994 and before 1st August 1997;</p> <p>if the <b>passenger car</b> or other vehicle was not on the <b>effective date</b>, equipped with a catalyst exhaust emissions system, in which case paragraph 2(b) will apply.</p> <p>Paragraphs 2(c) and 2(d) shall not apply to vehicles having an effective date before 1st January 1999 which are either -</p> <p>(i) fuelled solely by either liquid petroleum gas or natural gas, or</p> <p>(ii) bi-fuelled vehicles when controlled to operate on either of those gases.</p> <p>Paragraphs 3 and 4(b) shall not apply to vehicles fuelled solely by natural gas or to bi-fuelled vehicles when controlled to operate on natural gas.</p> <p>Paragraph 4(c) shall not apply to vehicles fuelled</p>

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	<p>0.3% of the total exhaust emissions from the engine by volume;</p> <p>(b) the hydrocarbon content of the exhaust emissions from the engine shall not exceed 0.02% of the total exhaust emissions from the engine by volume; and</p> <p><b>(c) the lambda value shall be between the relevant limits.</b></p>	<p>respectively of that Annex;</p> <p>"passenger car" means a motor vehicle which -</p> <p>(a) is constructed or adapted for use for the carriage of passengers and is not a goods vehicle;</p> <p>(b) has no more than five seats in addition to the driver's seat;</p> <p>(c) has a weight not exceeding 2,500 kg maximum gross; and</p> <p>(d) has four or more wheels;</p> <p>"the relevant limits" means -</p> <p>(a) in the case of a vehicle of a description mentioned in the Annex to [the emissions publication,] the minimum and maximum limits</p>	<p>by liquid petroleum gas or natural gas.</p> <p>If the vehicle has been adapted from a base vehicle of another category the technical requirements applicable to the base vehicle may apply.</p>

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		<p>shown against that description of vehicle in columns 3(c) and 3(d) respectively of that Annex; or</p> <p>(b) in any other case, 0.97 and 1.03;</p> <p>"the relevant percentage" means in the case of a vehicle of a description mentioned in the Annex to <b>the emissions publication</b>, the percentage shown against that description of vehicle in column 2(a) of that Annex; and</p> <p>"rotary piston engine" means an engine in which the torque is provided by means of one or more rotary pistons and not by any reciprocating piston; and any rotary piston engine shall be deemed to be a four-stroke engine.</p>	

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>3.</b> <b>Fuel Tanks/ Rear Protective Devices</b>	<p>1. The fuel system, including the fuel tank, shall be so designed, constructed and fitted as to withstand the forces, vibration and corrosive environment to which it is likely to be subject. It shall also be so fitted as to avoid the risk of damage, such as abrasion, due to fouling of other parts, and to minimise the risk of fire in the event of any leakage of fuel.</p> <p>2. Plastic fuel tanks shall comply with the requirements of paragraphs 5 and 6 of Annex I 70/221/EEC as last amended by directive 2006/20/EC</p> <p>3. Vehicles (except those not fitted for fuels liquid at normal ambient conditions) must comply with the requirements of paragraphs 5.1.2. and 5.1.3 of Directive 70/220/EEC as amended by 2001/100/EC.</p> <p>4. For vehicles using gaseous fuels:  Regulations 67.01 and 115 for LPG.  Regulation 110.00 and 115 for CNG.</p>		
<b>4.</b> <b>Rear Registra-</b>	Space shall be provided for a registration plate meeting the requirements of the		

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<b>tion Plate Space</b>	Display of Registration Marks Regulations 2001		
<b>5. Steering Effort</b>	<p>1. The technical provisions of: paragraphs 4 and 5 of Annex I to Directive 70/311/EEC as last amended by 1999/7/EC</p> <p>Or</p> <p>2. Paragraphs 5 and 6 of UNECE Regulation 79.01</p> <p>Or</p> <p>3. In the case of a <b>Manual or Power Assisted System</b>, a test to ensure no obvious defect or undue stiffness is evident.</p>	<b>Manual or Power Assisted System</b> means: a system that will operate in the event of failure of any power supply or assistance.	<p>1. Where a vehicle is constructed using a base vehicle of a different category the provisions applicable to the base vehicle category at its maximum mass may apply.</p> <p>2. Directive 70/311/EEC, Annex I, paragraphs 4.1.1.2 and 4.2.1.1.2. shall not apply to a steering control system designed to meet the needs of a driver with a physical disability.</p>
<b>6. Door latches and Hinges</b>	<p>1. All doors, provided on the vehicle for the entry and exit of occupants, shall be designed so as to allow easy and safe use. Doors fitted to the side of a vehicle shall have both intermediate and fully latched positions. However, latching in an intermediate position is not required if a safety-bolt with an audible warning device is provided as specified in paragraph 2(b) below. Door latches shall be designed to prevent the doors from opening accidentally.</p> <p>2. Where hinges are used on doors fitted to the side of a vehicle, other than folding doors, the hinges shall be</p>	<p>For the purposes of this item,</p> <p>"longitudinal plane" means a vertical plane parallel to the longitudinal axis of a vehicle.</p>	<p>1. Column 2, Paragraph 3 shall not apply to doors which do not give direct access to a seat designed for normal use while a vehicle is travelling on a road. This includes any door, for which the <b>longitudinal plane</b> passing through the extreme inboard projecting point of such a door is more than 300mm distant from the <b>longitudinal plane</b> passing through the nearest edge of such a seat. For the purpose of this provision the seating position of a wheelchair is considered to be a seat.</p>

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	<p>fitted at the front edge of the door. However, they may be fitted at the top or rear edge if either –</p> <p>(a) a device is fitted which automatically closes the door at least to the intermediate latched position if it is unlatched when the vehicle is moving in the forward direction; or</p> <p>(b) a safety-bolt is fitted to prevent such unlatching and an audible or visual warning device is provided which activates an audible warning if the vehicle is driven without the bolt in place.</p> <p>3. On hinged doors, the latch and striker assembly shall be capable of withstanding any load which is likely to be applied in the course of normal driving (ie excluding crash impacts) in both the intermediate and fully latched positions. However if a safety-bolt with an audible warning device is provided as specified in paragraph 2(b) above, the requirement need be met only with the bolt in place.</p>		<p>2. The latching requirements in paragraphs 1 and 3 shall not apply to any power-operated door if the force applied by the power actuator is sufficient to keep the door completely closed even when any load is applied as described in paragraph 3.</p> <p>3. This item shall not apply to doors meeting the technical requirements specified in paragraphs 7.6.4 to 7.6.6 or in paragraph 7.6.7 of Annex I to Directive 2001/85/EC.</p>
<b>7. Audible</b>	The vehicle shall be fitted with an audible warning device which when operated	For the purposes of this item an <b>“audible warning</b>	

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<b>Warning</b>	emits a continuous uniform sound capable of giving audible warning of the approach or position of the vehicle to which it is fitted.	<b>device</b> ” is a device not being a bell, gong or siren.	
<b>8. Indirect Vision</b>	The essential technical provisions of Directive 2003/97/EC. Or UNECE Regulation 46.02		<p>1. Directive 2003/97/EC, Annex II, paragraph 1.4 shall not apply.</p> <p>2. In the case of a <b>passenger car</b> where the longitudinal plane of the exterior bodywork on either side of the vehicle adjacent to the driver’s position on which an exterior rear view mirror may be mounted is more than 150mm inwards from a longitudinal plane passing through the outer edge of the rear tyre(s) on that side of the vehicle the following may apply: Directive 2003/97/EC, Annex III, paragraphs 5.3.1 and 5.3.2, in the second paragraph in each case, for 1m shall be substituted 2.125m and for 4m Shall be substituted 10m.</p> <p>3. Field of view requirements do not apply to optional mirrors.</p>
<b>9. Braking</b>	<b>1.</b> The vehicle shall comply with the requirements of paragraph 2.1 and 2.2 of Annex 1 of Directive 71/320/EEC as	For the purpose of this item -  "anti-lock device" has the	1. Column 2 shall not apply to a vehicle that complies with UNECE Regulation 13.05 or 13H.00.

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>last amended by Directive 85/647/EEC; but in the application of that Annex (as so amended) for these purposes -</p> <p>(a) the second sentence of paragraph 2.2.1.2.4 shall not apply;</p> <p>(b) paragraph 2.2.1.4.2 shall not apply in relation to a vehicle which is fitted with a <b>braking device</b> having a split-circuit <b>transmission</b> which enables braking of not less than one wheel on each side of the vehicle, in the event of failure in a part of the <b>transmission</b> of the <b>service braking</b>; and</p> <p>(c) paragraph 2.2.1.5.1 shall apply as if for the last sentence there were substituted the words "This condition must be met by automatic means".</p> <p><b>2.</b> If the vehicle is equipped with an <b>anti-lock device</b> it shall comply with paragraph 2.2.1.23 of 71/320/EEC as last amended by Directive 88/194/EEC.</p> <p><b>3.</b> The vehicle shall comply with the requirements of paragraphs</p>	<p>same meaning as in Directive 71/320/EEC as last amended by Directive 88/194/EEC.</p> <p>"brake efficiency" means <b>maximum total brake force</b> expressed as a percentage of the maximum gross weight;</p> <p>"braking device", "control", "transmission", "service braking", "secondary braking" and "parking braking", have the same meaning as in Directive 71/320/EEC as last amended by Directive 85/647/EEC;</p> <p>"in running order" means -</p> <p>(a) with all fluids (such as oils and engine coolant) necessary for the vehicle to be driven, with the fuel tanks full, and having a</p>	<p>2. The requirements in paragraph 1 for the driver to be able to operate the service braking system while keeping both hands on the steering control, and the secondary braking system while keeping at least one hand on the steering control, shall not apply to a disabled person's vehicle, so long as the vehicle is adapted for a disabled driver to enable him to control the steering at all times while operating either braking system.</p> <p>3. Paragraph 5(b) shall have effect (in the case of a vehicle having a secondary brake operated by a means other than a foot control) as if for "50kg" and "70kg" respectively there were substituted "40kg" and "60kg".</p> <p>4. Paragraph 7 shall not apply to a vehicle if the brakes acting on its rear wheels are fitted with an <b>anti-lock device</b> and were so fitted at the time of its manufacture except that this exemption shall not apply to:</p> <p>(i) an amateur-built vehicle,</p>

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	<p>2.2.1.11.1 and 2.2.1.11.2 of Directive 71/320/EEC as last amended by Directive 91/422/EEC.</p> <p><b>4. The secondary braking and service braking shall have the same control.</b></p> <p><b>5. The brake efficiency shall be not less than -</b></p> <p>(a) for the <b>service braking</b></p> <p>(i) in the case of a passenger vehicle, 60%; or</p> <p>(ii) in the case of a goods vehicle, 50%</p> <p>(b) for the <b>secondary braking</b> in the case when the <b>servo-assistance</b> provided for the service braking (if any) fails and a force is applied to the <b>control</b></p> <p>(i) in the case of a passenger vehicle, 25% when the force applied is 50kg; or</p> <p>(ii) in the case of a goods vehicle, 25% when the force applied is 70kg.</p> <p>(c) 18% for the <b>parking braking</b>.</p>	<p>spare wheel and a tool-kit;</p> <p>(b) carrying a driver weighing 68kg; but</p> <p>(c) not otherwise carrying any load or passengers.</p> <p>"lateral brake distribution", in relation to an axle, means the ratio (expressed as a percentage) of the lower to the higher of the braking forces transmitted by the tyres to the road surface for two wheels, on opposite sides of the vehicle on the same axle;</p> <p>"longitudinal brake distribution" means the ratio of the braking forces transmitted by the tyres to the road surface through the front and rear wheels respectively when the vehicle is <b>in running order</b> and being braked on a level surface;</p>	<p>(ii) a vehicle manufactured using parts of a registered vehicle, and (iii) a rebuilt vehicle.</p> <p>5. The requirements according to the category of the base or incomplete vehicle based on maximum mass may apply.</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p><b>6. The lateral brake distribution</b> for the <b>service braking</b> shall -</p> <p>(a) in relation to each steering axle; and</p> <p>(b) for all values of <b>total braking force</b> and vehicle speed, be not less than 70%.</p> <p><b>7. The longitudinal brake distribution</b> for the <b>service braking</b> shall, for all values of <b>total braking force</b>, vehicle speed and adjustment settings (if any), be greater than the ratio of the vertical forces transmitted to the road through the front and rear wheels respectively when the vehicle is in running order and being braked on a level surface.</p> <p><b>8. The capacity of the braking device</b> to absorb and dissipate energy shall be sufficient to ensure that all the required aspects of braking performance can be maintained under all normal operating conditions of the vehicle, including long hill descents, taking account of the vehicle's speed capability, weight and weight distribution.</p> <p>9. Braking reaction time</p>	<p>"maximum total brake force" means the <b>total braking force</b> when the brakes are fully applied;</p> <p>"servo-assistance" means an energy supply which supplements the muscular energy of the driver;</p> <p>"total braking force" means the total of the braking forces transmitted by the tyres to the road surface when the brakes are applied.</p>	

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	shall comply with the requirements of paragraph 2.3 of Annex II to Directive 71/320/EEC as amended by Directive 98/12/EC.		
<b>10. Electro-magnetic Compatibility</b>	The vehicle shall comply with the requirements of paragraph 6.1 of Annex 1 to Directive 72/245/EEC as amended by Directive 89/491/EEC, or of paragraph 6.1 of ECE Regulation 10.01.		
<b>11. Diesel Smoke</b>	If the vehicle has an <b>effective date</b> on or after 1 August 1979, when the engine by which it is propelled is subject to the <b>free-acceleration</b> test, the <b>coefficient of absorption</b> of the exhaust emissions from the engine immediately after leaving the exhaust shall not exceed - (a) if the engine of the vehicle is turbo-charged, 3.0 per metre, or (b) in any other case, 2.5 per metre.	For the purposes of this item - "co-efficient of absorption" shall be construed in accordance with paragraph 3.5 of Annex VII to Directive 72/306; "effective date" has the same meaning as in item 2; and "free acceleration" has the same meaning as in Annex II to Directive 77/143/EEC as last amended by Directive 92/55/EEC.	This item shall apply only to vehicles propelled by a compression ignition engine.
<b>12. Interior Fittings</b>	<b>1.</b> No surface (other than a surface of a window) of the vehicle interior which	For the purposes of this item -	1. Does not apply to a goods vehicle of category N1.

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>can be contacted by a sphere of 165mm diameter and which is within the <b>specified zone</b>, shall include any fittings (eg controls and instruments) or design features which have any dangerous roughness or <b>sharp edges</b>.</p> <p>2. Switches and other controls mounted on the instrument panel which project by more than 9.5mm from the surface of the panel, can be contacted by a sphere of 165mm diameter and which are within the <b>specified zone</b>, shall be so constructed and mounted that they would either retract into the surface of the panel or become detached from the panel when a horizontal force of 40kg is applied to them.</p> <p>3. The lower edge of the instrument panel which is within the <b>specified zone</b> shall be rounded to a radius of curvature of not less than 19mm, or if it is covered with <b>non-rigid material</b>, not less than 5mm.</p> <p>4. The rearward and upward-facing parts of seat frames behind which there is a <b>designated seating position</b>, and which are within the head impact zone</p>	<p>"air bag" means a flexible bag fitted to a vehicle and designed to be filled with gas under pressure in order to protect the driver or a front seat passenger in the event of a collision involving the front of the vehicle;</p> <p>"designated seating position" means a position where there is a seat designed for normal use while the vehicle is travelling on the road;</p> <p>"head impact zone" has the same meaning as in Directive 74/60/EEC;</p> <p>"non-rigid material" means a material which has a hardness of less than 50 shore A;</p> <p>"rigid material" means a material which has a hardness of no less than 50 shore A;</p>	<p>2. This item shall not apply to any area inside a <b>Motor caravan, Ambulance, or Hearse</b>, which is not inside the <b>head impact zone</b> for any <b>designated seating position</b> for use during vehicle travel.</p> <p>3. An <b>Armoured</b> vehicle shall be exempted from any requirement of this item if it can be demonstrated to the satisfaction of the Secretary of State that it is impossible for the vehicle to comply due to its <b>special purpose</b>.</p> <p>4. Paragraph 1 shall not apply to:</p> <p>(a) the edges of any interior fitting (if there is a gap of less than 20 mm wide between the edges);</p> <p>(b) any heating or ventilation grill element; or</p> <p>(c) any control mounted on the heating or ventilation grill element area; so long as they are blunted.</p> <p>5. Paragraph 1 shall not</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>shall be both covered with <b>non-rigid material</b> and have a radius of curvature of not less than 5mm.</p> <p>5. The handbrake control in the fully released position and the gear-lever control in any forward gear position shall not have any radius of curvature of less than 3.2mm on surfaces which can be contacted by a sphere of 165mm diameter.</p> <p>6. Shelves and other similar items fitted below the level of the highest part of the instrument panel shall be so constructed that their supports have no protruding edges and that all parts facing into the vehicle present a surface not less than 25mm high with edges rounded to a radius of curvature of not less than 3.2mm. This surface shall also be covered with <b>non-rigid material</b>.</p> <p>7. On that part of the inner surface of the roof which is situated above or forward of the occupants and can be contacted by a sphere of 165mm diameter, the width of projecting parts made of <b>rigid material</b>, shall not be less than the length of their projection from the surface and their</p>	<p>"sharp edge" means an edge of <b>rigid material</b> having a radius of curvature of less than 2.5mm, except in the case of projections of less than 3.2mm from the panel. In this case, the minimum radius of curvature shall not apply provided that the height of the projection is not more than half its width and its edges are blunted;</p> <p>"special purpose" has the same meaning as in item 6;</p> <p>"specified zone" means the zone which -</p> <p>(a) is forward of the transverse plane of the torso reference line of the manikin as defined in paragraph 2.5 and appendix 1 of Annex 3 to Directive 77/649/EEC as last amended by Directive</p>	<p>apply to foot pedal controls.</p> <p>6. Paragraphs 1 and 2 shall not apply to any switches, controls or associated equipment designed for the use by a disabled driver and fitted in the driver's position so long as any edges are blunted.</p> <p>7. For the purpose of this item the seating position of a wheelchair shall be considered to be a seat.</p> <p>8. Paragraph 5 shall not apply to -</p> <p>(a) any floor-mounted hand-brake control if, in the fully released position, no part of the control is in the <b>specified zone</b>; or</p> <p>(b) any hand-brake control mounted on or under the instrument panel, if in the fully released position, there is no possibility of the occupants of the vehicle contacting it in the event of a frontal impact.</p> <p>10. Paragraph 7 shall not apply to parts covered with a <b>non-rigid material</b>; to the hood-</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	edges shall have a radius of curvature of not less than 5mm. Roof sticks or ribs made of <b>rigid material</b> with the exception of the header rail of the glazed surfaces and door frames, shall not project downwards by more than 19mm.	90/630/EEC with the manikin positioned in the rearmost <b>designated seating position</b> ;  (b) is above the horizontal plane passing through the point 150mm above the lowest part of the top of the front seat cushions; and  (c) is outside the areas defined by paragraphs 2.3.1, 2.3.2 and 2.3.3 of Annex I to Directive 74/60/EEC as last amended by Directive 78/632/EEC.	frames of convertible vehicles; or to hood or tonneau cover press studs so long as they are blunted. For opening roofs, the requirements shall apply to parts, including devices for opening, closing and adjusting the roof, with the roof in the closed position.  11. Paragraph 1 (in so far as it relates to the surface of an instrument panel) and paragraph 2 shall not apply to any vehicle if:  (a) it is fitted with <b>air bags</b> for the protection of the driver and the front seat passenger; and  (b) those <b>air bags</b> were fitted at the time the vehicle was manufactured, except that this exemption shall not apply to: (i) an amateur-built vehicle, (ii) a vehicle manufactured in very low volume, (iii) a vehicle manufactured using parts of a registered vehicle, and (iv) a rebuilt vehicle.
<b>13. Anti-Theft</b>	1. The technical provisions of: Directive 74/61/EEC as		1. Does not apply to an alarm system if an alarm

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>and Immobiliser</b>	<p>last amended by Directive 95/56/EC.</p> <p>Or</p> <p>2. UNECE Regulations 18.02, 97.00 and 116 as applicable.</p> <p>Or</p> <p>3. The vehicle shall be fitted with some form of anti-theft device, that is to say, a mechanical, electrical or electronic immobiliser or a combination of these (in addition to any key operated switch normally used to start the engine) that prevents the vehicle being driven or moved under its own power. Such device(s) shall comply with the following:</p> <p>(a) No anti-theft device shall operate on the braking system.</p> <p>(b) If any anti-theft device is, or incorporates, any mechanical device that acts upon a system that affects the control of the vehicle (eg the steering control) -</p> <p>(i) it shall not be possible to start the engine in the normal way until every such mechanical device has been deactivated,</p> <p>(ii) it shall not be possible to activate any such mechanical device while the engine is</p>		<p>system is not fitted.</p> <p>2. Does not apply to an immobiliser if an immobiliser is not fitted.</p> <p>3. Immobilisers and alarm systems, other than a panic alarm fitted in accordance with paragraph 5 of column 2, must be approved as part of the base vehicle or as a Separate Technical Unit.</p> <p>4. In the case of an Immobiliser or Alarm system, other than a panic alarm fitted in accordance with paragraph 5 of column 2, an approval or test report for the device and a completed installation certificate is required.</p> <p>5. The requirements according to the category of the base or incomplete vehicle based on maximum mass may apply.</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>running, and</p> <p>(iii) the action of activating any such mechanical device shall be distinct and separate from that of stopping the engine.</p> <p>4. Any alarm system or immobiliser fitted to a vehicle shall comply with paragraph 1 or 2 as applicable.</p> <p>5. Optional panic alarm not forming part of an alarm system under paragraphs 1 or 2 shall comply with the following:</p> <p>(a) The alarm signal shall be audible and in addition may include optical alarm devices, or be a radio alarm, or any combination of the above.</p> <p>(b) The technical requirements of Directive 74/61/EEC as last amended by Directive 95/56/EC, Annex VI, Part II, paragraphs 8.2 to 8.8, 9.1.2 to 9.2.1, 9.2.3 to 9.4, 9.6, 9.9 to 9.10, and 9.11.2 to 11. inclusive.</p> <p>(c) unsetting the panic alarm shall immediately cut the alarm signal.</p> <p>(d) any reference to “alarm” or “AS” shall be taken to mean “panic alarm”.</p>		

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<p><b>14. Protective Steering</b></p>	<p><b>1.</b> No part of the <b>steering control</b> surface directed towards the driver which can be contacted by a sphere of 165mm in diameter shall present any roughness or sharp edges with a radius of curvature of less than 2.5mm.</p> <p><b>2.</b> The <b>steering control</b> shall be designed, constructed and fitted so as not to embody components or accessories, including the horn control and other assemblies, capable of catching in the driver's clothing or jewellery in normal driving movements.</p> <p><b>3.</b> The <b>steering control</b> and column assembly as fitted to the vehicle or the <b>steering control</b> itself shall offer a degree of protection to the driver in the event of a frontal impact by absorbing energy. This requirement shall be treated as met if either -</p> <p>(a) the vehicle complies with the requirements of paragraph 5.2 of Annex 1 of Directive 74/297/EEC; or</p> <p>(b) the steering control complies with the requirements of paragraphs 5.2, 5.4.3, 5.4.4 and 5.4.5 of</p>	<p>For the purposes of this item -</p> <p>"driver's air bag" means a flexible bag fitted to a vehicle and designed to be filled with gas under pressure in order to protect the driver in the event of a collision involving the front end of the vehicle.</p> <p>"steering control" has the same meaning as in Directive 74/297/EEC.</p>	<p>1. This item shall not apply to -</p> <p>(a) <b>Ambulances, Motor caravans, or Hearses</b> (in each case) if the vehicle has been derived from a goods vehicle having a maximum gross weight of not less than 1,500 kg;</p> <p>(b) <b>Armoured</b> vehicles; and</p> <p>(c) a vehicle which complies with the technical requirements of Directive 96/79/EC.</p> <p>2. Paragraph 1 shall not apply to any vehicle if:</p> <p>(a) it is fitted with a <b>driver's air bag</b>;</p> <p>(b) the <b>driver's air bag</b> was fitted and approved at the time the base vehicle was manufactured; and</p> <p>(c) all parts of the <b>steering control</b> are blunted. except that this exemption shall not apply to:</p> <p>(i) an amateur built vehicle;</p> <p>(ii) a vehicle manufactured in very low volume;</p> <p>(iii) a vehicle</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>Directive 74/297/EEC as last amended by Directive 91/662/EEC.</p> <p><b>4.</b> The vehicle shall comply with the requirements of paragraph 5.1 of Annex 1 of Directive 74/297/EEC.</p>		<p>manufactured using parts of a registered vehicle; and</p> <p>(iv) a rebuilt vehicle.</p> <p>3. If a vehicle had been adapted for a disabled person to drive the vehicle, then the requirements of this item shall not apply to the vehicle insofar as the adaptation prevents the vehicle from complying with any of the requirements of this item except that this shall not apply where such adaptations can easily be removed, if necessary with the use of tools, and in which case evidence of compliance before the vehicle was adapted is required.</p>
<p><b>15.</b> <b>Seat Strength</b></p>	<p>1. The technical provisions of: Directive 74/408/EEC as last amended by Directive 2005/39/EC Or UNECE Regulation 17.06.</p> <p>2. The installation of side facing seats shall be prohibited except that this shall not apply to <b>Ambulances.</b></p>		<p>1. In the case of a <b>Motor-caravan, Ambulance, or Hearse,</b> the requirements according to the category of the base or incomplete vehicle based on maximum mass may apply.</p> <p>2. In the case of a <b>Motor-caravan, Ambulance, or Hearse:</b></p> <p>(a) the requirements in column 2 do not apply to seats intended for use solely</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>while the vehicle is stationary; and</p> <p>(b) Any seats which are not for use when travelling on a road must be clearly identified to users by means of a pictogram or a sign with appropriate text.</p> <p>3. This item does not apply to the anchorages of any seat designed for a disabled person, so long as such a seat is securely attached to the vehicle.</p> <p>4. In the case of a <b>wheelchair accessible vehicle</b>:</p> <p>(a) a wheelchair location shall be considered a seating position but the requirements in column 2, paragraph 1, do not apply to the wheelchair.</p> <p>(b) For each wheelchair sufficient space shall be provided. The longitudinal plane of the special area shall be parallel to the longitudinal plane of the vehicle.</p> <p>5. The tests specified in Appendix 1 and Appendix 2 of Annex II</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			to directive 74/408/EEC shall not apply to a seat designed to provide a comparable level of safety.
<p><b>16. Exterior projections</b></p>	<p><b>1.</b> The essential technical provisions of Directive 74/483/EEC as amended by Directive 2007/15/EC paragraphs 5, 6.2, 6.5.1, 6.11 and 6.14. And <b>2.</b> Handles, hinges, push buttons and fuel tank filler caps shall not project more than 40 mm from the <b>external surface</b> unless they cannot under any circumstance project beyond the <b>extreme outer edge</b> of the vehicle, in which case they may project by up to 50 mm from the <b>external surface</b>. All handles shall be enclosed in a protective surround or be recessed, unless they cannot in any circumstances project beyond the <b>extreme outer edge</b> of the vehicle.</p> <p><b>3.</b> The open ends of door handles which rotate parallel to the plane of the door shall be turned back towards the plane of the door. Such open ends shall be directed rearwards unless the handles cannot under any circumstances project beyond the <b>extreme outer edge</b> of the vehicle and at</p>	<p>For the purposes of this item -</p> <p>"extreme outer edge" and "external surface" have same meaning as given in Directive 74/483/EEC</p>	<p>1. Does not apply to goods vehicles of category N1.</p> <p>2. The technical requirements applicable to the base or incomplete vehicle may apply to the cab.</p> <p>3. Those parts of a <b>Motor caravan, Ambulance or Hearse</b>, other than the driver's cab, shall be exempted from any requirement of this item if it can be demonstrated to the satisfaction of the Approval Authority that it is impossible for the vehicle to comply due to its special purpose.</p> <p>4. An <b>Armoured</b> vehicle shall be exempted from any requirement of this item if it can be demonstrated to the satisfaction of the Approval Authority that it is impossible for the vehicle to comply due to its special purpose.</p> <p>5. Badges and other features of mass</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>least one of the following requirements is met -</p> <p>(a) the open end of the handle is shielded to the front by a protective surround, or</p> <p>(b) the open end of the handle is recessed into the vehicle bodywork, or</p> <p>(c) the gap measured laterally between the open end of the handle and the vehicle body is no more than 2 mm when the handle is in its normal position with the door latched.</p> <p>4. The open ends of handles, which pivot outwards in any direction, shall face either rearwards or downwards, unless they have an independent return mechanism and cannot project more than 15 mm from the <b>external surface</b> should the return mechanism fail.</p>		<p>produced vehicles that cannot reasonably be removed or modified provided that such projections are blunted.</p> <p>except that this exemption shall not apply to:</p> <p>(i) an amateur-built vehicle,</p> <p>(ii) a vehicle manufactured in very low volume,</p> <p>(iii) a vehicle manufactured using parts of a registered vehicle, and</p> <p>(iv) a rebuilt vehicle.</p> <p>6. Hood or tonneau cover press studs fitted to a convertible vehicle so long as they are blunted.</p>
<p><b>17.</b> <b>Speedometer and Reverse Gear</b></p>	<p>The technical provisions of: Directive 75/443/EEC as last amended by Directive 97/39/EC, Annex I and Annex II, paragraph 4 Or UNECE Regulation 39.00</p>		<p>Annex II paragraphs 4.3 and 4.4 to Directive 75/443/EEC shall not apply if the following requirements are met:</p> <p><b>1.</b> For all true speeds up to the design speed of the vehicle, the true speed shall not exceed the indicated speed.</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>2. For all true speeds of between 25 mph and 70 mph (or the <b>maximum speed</b> if lower), the difference between the indicated speed and the true speed shall not exceed -</p> <p><math>V/10 + 6.25</math> mph where  <math>V</math> = the true speed.</p>
<p><b>18. Plates (statutory)</b></p>	<p>1. The technical provisions of: Directive 76/114/EEC as last amended by Directive 78/507/EEC.</p> <p>2. Where the vehicle is the subject of a multi-stage build a plate is required on completion of each stage as appropriate.</p>	<p><b>“mass produced”</b> means vehicles of the same type produced in numbers exceeding 200 per annum worldwide.</p>	<p>1. In the case of M1 vehicles paragraphs 2.1.4 to 2.1.7 of the Annex to Directive 76/114/EEC shall not apply.</p> <p>2. Where a vehicle it is <b>“mass produced”</b> the following may apply:</p> <p>(a) the information on the plate required in column 2 may be on separate plates provided that the plates are fitted as close as possible to each other in a clearly visible position and every plate is marked with the vehicle identification number; and</p> <p>(b) the vehicle identification number may be marked in characters not less than 4mm in height.</p>
<p><b>19. Seat Belt Anchorages</b></p>	<p>The technical provisions of: Directive 76/115/EEC as last amended by Directive</p>		<p>1. In the case of a <b>Motor-caravan, Ambulance, or Hearse,</b></p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	2005/41/EC Or UNECE Regulation 14 .04		<p>with a maximum mass equal to or exceeding 2500kg the requirements according to the category of the base or incomplete vehicle or of the corresponding N category vehicle based on maximum mass may apply.</p> <p>2. In the case of a <b>Motor-caravan, Ambulance, Hearse, or Other special purpose vehicle:</b></p> <p>(a) the requirements in column 2 do not apply to seats intended for use solely while the vehicle is stationary; and</p> <p>(b) Any seats which are not for use when travelling on a road must be clearly identified to users by means of a pictogram or a sign with appropriate text.</p> <p>3. In the case of a <b>Motor-caravan, Ambulance, or Hearse,</b> at least anchorages for lap belts are required for all rear seating positions.</p> <p>4. In the case of <b>Armoured</b> vehicles exemption from any requirement of this item</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>is permitted if it can be demonstrated to the satisfaction of the Approval Authority that it is impossible for the vehicle to comply due to its special purpose.</p> <p>5. In the case of a <b>wheelchair accessible vehicle</b>:</p> <p>(a) Each wheelchair location shall be fitted with an integrated restraint system which consists of a restraint system for the wheelchair and a restraint system for the wheelchair user.</p> <p>(b) Anchorages for restraint systems shall resist forces as prescribed in Directive 76/115/EEC and in Standard ISO 10542-1: 2001.</p> <p>(c) Webbing and hardware intended to secure the wheelchair (tie-down mechanisms) shall meet the requirements of Directive 77/541/EEC and of the relevant part of Standard ISO 10542.</p> <p>(d) Tests shall be performed by the technical service which has been appointed for testing</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>and checking in accordance with the Directives referred to above. The criteria are those included in these Directives.</p> <p>Tests shall be performed with the surrogate wheelchair described in Standard ISO 10542.</p> <p>6. As an alternative to the requirements in paragraph 5 above a wheelchair tie-down and occupant restraint system may comply with Section 2.</p> <p>7. Tests need not be performed provided that the vehicle is designed to meet the strength characteristics equivalent to those needed to satisfy the requirements of this item.</p>
<p><b>20</b> <b>Installation of Lighting and Light Signalling Devices</b></p>	<p>The essential technical provisions of: Annex II to Directive 76/756/EEC as last amended by 97/28/EC Or UNECE Regulation 48.01</p>	<p><b>"special purpose"</b> means a vehicle to which Annex XI to Directive 2007/46/EC applies.</p>	<p>1. Paragraphs 6.2.6.2 and 6.2.6.3 of UNECE Regulation 48.01 (Headlamp levelling) shall not apply except where dipped beam headlamps with light sources having an objective luminous flux which exceed 2000 lumen are fitted.</p> <p>2. The requirements relating to S3 devices in</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>paragraph 6.7 of UNECE Regulation 48.01 shall not apply.</p> <p>3. In the case of a rear direction indicator which is one of a number of lamps having a common housing and fitted to a left-hand drive vehicle, paragraph 6.5.4.1 of UNECE regulation 48 shall apply as if for "400 mm" there were substituted "480 mm".</p> <p>4. Exemption from one or more of the technical requirements is permitted for a special purpose vehicle where the special purpose makes it impossible to fully comply provided that all mandatory devices are installed and geometric visibility is unaffected.</p> <p>5. For vehicles with a maximum mass equal to or exceeding 2500kg the requirements according to the category of the base or incomplete vehicle or of the corresponding N category vehicle based on maximum mass may apply to the cab.</p> <p>6. In the case of <b>Armoured</b> vehicles</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			exemption from any requirement of this item is permitted if it can be demonstrated to the satisfaction of the Approval Authority that it is impossible for the vehicle to comply due to its special purpose and provided that all mandatory lighting devices are installed and that the geometric visibility is not affect.
<b>21. Retro Reflectors and Rear Marker Plates</b>	Directive 76/757/EEC as last amended by Directive 97/29/EC Or UNECE Regulation 3.02	"standard mark" means a mark which, when applied to a lamp, reflector or device, indicates compliance with the requirements of a particular instrument; and a reference to the instrument to which a standard mark relates shall be construed accordingly.	This item, in so far as it requires any reflector or device to bear a particular <b>standard mark</b> (or one of two or more <b>standard marks</b> ), shall not apply if it meets the standards as to <b>coefficient of luminous intensity</b> , of the instrument to which the <b>standard mark</b> (or as the case may be one of those <b>standard marks</b> ) relates.
<b>22. End-outline, Front-Position (side), Rear-Position (side), Stop, Side Marker,</b>	Directive 76/758/EEC as last amended by Directive 97/30/EC Or For End-Outline, Front-Position (side), Rear-Position (side), and Stop lamps UNECE Regulation 7.02 For Daytime Running	"standard mark" means a mark which, when applied to a lamp, reflector or device, indicates compliance with the requirements of a particular instrument; and a reference to the	This item, in so far as it requires any lamp (not being a filament lamp) or device to bear a particular <b>standard mark</b> (or one of two or more <b>standard marks</b> ), shall not apply if the lamp or device meets the requirements as to intensity if it could

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>Daytime Running Lamps</b>	Lamps UNECE Regulation 87.00  For Side Marker lamps, UNECE Regulation 91.00	instrument to which a standard mark relates shall be construed accordingly.	comply with this item without bearing any <b>standard mark</b> .
<b>23. Direction Indicators</b>	Directive 76/759/EEC as last amended by Directive 99/15/EC Or UNECE Regulation 6.01	As item 22	As item 22
<b>24. Rear registration Plate Lamps</b>	Directive 76/760/EEC as last amended by Directive 97/31/EC Or UNECE Regulation 4.00	As item 22	As item 22
<b>25. Head-lamps (including bulbs)</b>	Directive 76/761/EEC as last amended by Directive 99/17/EC Or Equivalent UNECE Regulations 1.01, 5.02, 8.04, 20.02, 31.02, 98.00, 112, and 123 for headlamps, And UNECE Regulations 2, 37.03 and 99.00 for all lamps (bulbs).	As item 22	As item 22
<b>25A. Cornering Lamps [Where fitted]</b>	UNECE Regulation 119	As item 22	As item 22
<b>26. Front Fog Lamps [Where fitted]</b>	Directive 76/762/EEC as last amended by Directive 99/18/EC Or UNECE Regulation 19.02	As item 22	As item 22

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>28. Rear fog Lamps</b>	Directive 77/538/EEC as last amended by Directive 99/14/EC Or UNECE Regulation 38.00	As item 22	As item 22
<b>29. Reversing Lamps</b>	Directive 77/539/EEC as last amended by Directive 97/32/EC Or UNECE Regulation 23.00	As item 22	As item 22
<b>30. Parking Lamps [Where fitted]</b>	Directive 77/540/EEC as last amended by Directive 99/16/EC Or UNECE Regulation 77.00	As item 22	As item 22
<b>31. Seat Belts</b>	The technical provisions of: Directive 77/541/EEC EEC as last amended by Directive 2005/40/EC Or UNECE Regulation 16.04 Or A harness belt marked BS3254:1960	For the purposes of this item -  "adult belt" means a <b>seat belt</b> for an adult not being a <b>disabled person's belt</b> ;  "harness belt" means an <b>adult belt</b> which is a harness belt comprising a <b>lap belt</b> and shoulder straps;	1. In the case of a <b>Motor-caravan, Ambulance, or Hearse</b> , with a maximum mass equal to or exceeding 2500kg the requirements according to the category of the base or incomplete vehicle or of the corresponding N category vehicle based on maximum mass may apply.  2. In the case of a <b>Motor-caravan, Ambulance, Hearse, or other special purpose vehicle</b> : (a) the requirements in column 2 do not apply to seats intended for use solely while the vehicle is

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>stationary; and  <b>(b)</b> any seats which are not for use when travelling on a road must be clearly identified to users by means of a pictogram or a sign with appropriate text.</p> <p>3. In the case of a <b>Motor-caravan, Ambulance, or Hearse</b>, at least lap belts are required for all rear seating positions.</p> <p>3. In the case of <b>armoured vehicles</b> exemption from any requirement of this item is permitted if it can be demonstrated to the satisfaction of the Approval Authority that it is impossible for the vehicle to comply due to its special purpose.</p> <p>4. This item shall not apply to an <b>adult belt</b> fitted to a vehicle, if the belt provides a level of safety equivalent to that provided by an <b>adult belt</b> which complies with the requirements of column 2.</p> <p>5. Seat belts which have been specially designed or adapted for use by an</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>adult or young person suffering from some physical defect or disability and intended for use solely by such person are exempt. [Note: Seat belt anchorages for such belts shall satisfy the requirements of item 19.]</p> <p>5. In the case of a <b>wheelchair accessible vehicle</b> when, due to the conversion, anchorage points for the safety belts need to be moved outside the tolerance provided for in point 2.7.8.1. of Annex I to Directive 77/541/EEC, the technical service shall check whether the alteration constitutes a worst case or not. If that is the case, the test provided for in Annex VII to Directive 77/541/EEC shall be performed. Extension to the EC type-approval does not need to be issued. This does not apply to a seat that is a wheelchair.</p>
<b>32. Forward vision</b>	The driver shall have a clear and un-obscured view of the road ahead and to the side (180° forward).		Does not apply to a goods vehicle of category N1.
<b>33. Identifica-</b>	The technical provisions of: paragraph 5 of Annex I to		Instead of complying with column 2 it is

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>tion of Controls, Tell-tails and Indicators</b>	Directive 78/316/EEC as last amended by Directive 93/91/EC Or Paragraph 5 of UNECE Regulation 121.		sufficient for controls to be clearly identified so as to avoid confusion.
<b>34. Defrost/ Demist</b>	Vehicles shall be fitted with adequate defrosting and demisting devices.		
<b>35. Wash/ Wipe</b>	Vehicles shall be fitted with adequate washing and wiping devices.		
<b>36. Heating Systems (if fitted)</b>	The technical provisions of: Directive 2001/56/EC, paragraph 3 of Annex II excluding paragraph 3.1.		
<b>37. Wheel guards</b>	The technical provisions of: Directive 78/549/EEC - 94/78/EC, paragraph 1 of Annex I.		<p>1. Does not apply to a goods vehicle of category N1.</p> <p>2. Paragraph 3 of annex I to directive 78/549/EEC shall not apply.</p> <p>3. The requirements according to the category of the base or incomplete vehicle or of the corresponding N category vehicle based on maximum mass may apply.</p>
<b>38. Head Restraints</b>	The technical provisions of Directive 78/932/EEC		<p>1. Does not apply to a goods vehicle of category N1.</p> <p>2. Does not apply to head restraints which comply with item 15.</p> <p>3. In the case of a</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p><b>Motor-caravan, Ambulance, or Hearse,</b> with a maximum mass equal to or exceeding 2500kg the requirements according to the category of the base or incomplete vehicle or of the corresponding N category vehicle based on maximum mass may apply.</p> <p><b>4. In the case of a Motor-caravan, Ambulance, Hearse, or other special purpose vehicle:</b></p> <p>(a) the requirements in column 2 do not apply to seats intended for use solely while the vehicle is stationary; and</p> <p>(b) any seats which are not for use when travelling on a road must be clearly identified to users by means of a pictogram or a sign with appropriate text.</p> <p><b>5.</b> Does not apply to a seat which is a wheelchair.</p>
<b>40. Engine power</b>	An engine power and maximum power speed shall be determined for each vehicle.		
<b>41.</b>	The technical provisions of:		1. Does not apply to

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
<b>Diesel Emissions (Heavy Duty Vehicles)</b>	<p><b>1. Vehicles manufactured on or after 1<sup>st</sup> October 1996:</b>  Directive 88/77/EEC as amended by Directive 91/542/EEC  Line B limits  Or  UNECE Regulation 49.021.</p> <p><b>2. Vehicles manufactured on or after 1<sup>st</sup> October 2001:</b>  Directive 88/77/EEC as amended by Directive</p> <p><b>3. Vehicles manufactured on or after 1<sup>st</sup> October 2006:</b>  Directive 88/77/EEC as amended by Directive 99/96/EC  Row B1 limit values  Or  UNECE Regulation 49.03</p> <p><b>4. Vehicles manufactured on or after 1<sup>st</sup> October 2009:</b>  Directive 88/77/EEC as amended by Directive 99/96/EC  Row B2 limit values  Or  UNECE Regulation 49.04  99/96/EC</p> <p><b>5. Vehicles manufactured on or after 1<sup>st</sup> September 2014:</b>  Directive 88/77/EEC as amended by 2001/27/EC</p>		<p>vehicles approved to item 2 or, in the case of a compression ignition engine, to item 11.</p> <p>2. If the vehicle has been adapted from a base vehicle of another category the technical requirements applicable to the base vehicle may apply.</p> <p>3. Modification of exhaust system length after the last silencer is permissible without any further test.</p> <p>4. In the case of <b>Armoured vehicles</b> exemption from any requirement of this item is permitted if it can be demonstrated to the satisfaction of the Approval Authority that it is impossible for the vehicle to comply due to its special purpose.</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	(and 2005/55/EC as amended by Regulation (EC) No. 715/2007) Or UNECE Regulation 49.04 Row A limit values Or UNECE Regulation 49.02		
<b>44. Masses &amp; dimensions (cars)</b>	The essential technical requirements of 92/21/EEC as amended by 95/48/EC		<p>1. Does not apply to a goods vehicle of category N1.</p> <p>2. For <b>Motor-caravans</b>, for paragraph 3.1.1.2 of Annex II to Directive 92/21, 2500mm shall read 2600mm.</p> <p>3. Paragraphs 3.1.1.3 and 3.3.3 of Annex II to Directive 92/21/EEC shall not apply.</p> <p>4. In the case of <b>wheelchair accessible vehicles</b>:</p> <ul style="list-style-type: none"> <li>a) For the purposes of calculations, the mass of the wheelchair including the user shall be assumed to be 100 kg. The mass shall be concentrated at the H point of the three dimensional Machine.</li> <li>b) The technical service shall also consider the possibility to use</li> </ul>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>electric wheelchair(s), the mass of which, including the user, is assumed to be 250 kg.</p> <p>Any limitation in the passenger capacity resulting from the use of electric wheelchair(s) shall be recorded in the approval certificate.</p>
<p><b>45.</b> <b>Safety glass</b></p>	<p>The technical provisions of: Directive 92/22/EEC as last amended by Directive 2001/92/EC, Annex IIB and the installation requirements of Annex III.</p> <p>Or</p> <p>Windscreen and windows to side of driver must be safety glass (e/E marked or BS marked) all other glass must be safety glazing (ie will not shatter - may be plastic). A minimum light transmission of 70% is required for all windows (60% if armoured).</p>		<p>Directive 92/22/EEC, Annex III, paragraph 2.1.1 and 2.1.2 and UNECE Regulation 43, Annex 21, paragraph 4.1.2 and 4.1.3. do not apply provided that driver's forward vision is not distorted and that light transmission of at least 70% is maintained (60% in the case of <b>Armoured</b> vehicles).</p>
<p><b>46.</b> <b>Tyres</b></p>	<p><b>Component:</b> The provisions of Directive 92/23/EEC as amended by Directive 2005/11/EC And In the case of a temporary use spare wheel UNECE Regulation 64 Or UNECE Regulation 30 or 54 as appropriate</p>		<p>The requirements of column 2 shall not apply to a tyre fitted to a vehicle, if the tyre provides a level of safety equivalent to a tyre that meets the requirements of column 2 which refer to the "component" element.</p>

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p><b>Vehicle Installation:</b> The technical provisions of Annex IV to Directive 92/23/EEC as amended by Directive 2005/11/EC</p>		
<b>48. Masses and Dimensions</b>	The technical provisions of: Directive 97/27/EC as amended, paragraph 7 of Annex I.		<p>1. Does not apply to a passenger vehicle of category M1.</p> <p>2. Directive 97/27/EC, Annex I, paragraphs 7.5, 7.9, 7.10 and 7.11 shall not apply.</p>
<b>49. External Projection of Cabs</b>	The essential technical provisions of: sections 3 and 4 of Annex I to Directive 92/114/EEC Or UNECE Regulation 61.		<p>Does not apply to a passenger vehicle of category M1.</p> <p>Badges and other features of mass produced vehicles that cannot reasonably be removed or modified provided that such projections are blunted.</p>
<b>50. Couplings [where fitted]</b>	<p>Coupling device: The technical provisions of: Annex VII to Directive 94/20/EC Or UNECE Regulation 55</p> <p>Installation: Securely attached to structural parts of the vehicle and in such a position to allow the safe functioning and operation of the coupling.</p>		<p>1. For the purpose of Directive 94/20/EC, Annex VII, paragraph 1.1, vehicles fitted with Class A couplings shall be assumed to tow a mass of 3,500kg.</p> <p>2. In the case of a <b>motor caravan, ambulance or hearse</b> with a maximum mass equal to or exceeding 2500kg the requirements according to the category of the base or incomplete</p>

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
			<p>vehicle or of the corresponding N category vehicle based on maximum mass may apply.</p> <p>3. Couplings fitted as original equipment to mass produced vehicles which are compatible with trailer coupling devices complying with requirements of column 2.</p>
<b>60. Frontal Protection Systems (Bull-bars) [Where fitted]</b>	Directive 2005/66/EC.		
<b>General Construction</b>	<p>1. All aspects of the design and construction of the vehicle and its equipment which are not covered by other subject matters in this Schedule, shall be such that no danger is caused or likely to be caused to any person in the vehicle or on a road.</p> <p>2. In particular, under all normal conditions likely to be encountered while the vehicle is being driven on a road, including when the vehicle is loaded to its maximum gross weight and the axle weight of any one axle equals its maximum</p>		

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>permitted axle weight -</p> <p>(a) it shall be possible to control the vehicle safely, taking account of the vehicle's speed and acceleration capabilities;</p> <p>(b) it shall at all times be possible for the driver, while controlling the vehicle, to have a full view of the road and traffic ahead of the vehicle;</p> <p>(c) the clearance between any of the following parts of the vehicle, namely the tyres, wheels, other rotating components associated with the transmission of engine power or braking, moveable parts of the steering mechanism and fixed parts shall be sufficient to ensure no risk of fouling and the wheels and wheel fixings shall be compatible;</p> <p>(d) the vehicle structure (chassis or integral chassis-body), shall be so designed and constructed as to withstand the forces and vibration to which it is likely to be subject;</p> <p>(e) all entries and exits provided for the vehicle occupants (other than doors) shall be so designed as to allow easy and safe use;</p>		

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<i>Item and subject</i>	<i>Requirement</i>	<i>Definitions and supplementary provisions</i>	<i>Exemptions and modifications</i>
	<p>(f) all aperture covers (other than doors) including tail gates, boot and bonnet lids, shall be capable of being securely latched in the fully closed position;</p> <p>(g) the steering, suspension, axles and wheels shall be so designed, constructed and fitted as to withstand the forces and vibration to which they are likely to be subject;</p> <p>(h) the electrical system, including the battery, electrical components and wires, shall be securely attached to the vehicle. In particular, the maximum distance between attachments of wires, except those contained within hollow components, shall be 300 mm and wires shall be so fitted and protected as to avoid the risk of damage to insulation, such as abrasion. All components shall be so constructed and fitted as to minimise the risk of corrosion and fire.</p>		

## Section 2 PART A

### 1. Wheelchair space

Any wheelchair space shall be fitted with the following:

- (a) a four point wheelchair tie-down system suitable for general wheelchair application;
- (b) a wheelchair user restraint system comprising a minimum of three anchorage points to provide a pelvic and upper torso restraint system.

### 2. Wheelchair tie-down and occupant restraint devices

All wheelchair tie-downs and occupant restraint devices shall comply with ISO 10542 and marked accordingly.

### 3. Location and geometry of anchorages

The geometry of the wheelchair tie-down and occupant restraint system anchorages and webbing shall comply with ISO 10542. A surrogate wheelchair as defined in ISO 10542 or equivalent shall be used for this purpose.

### 4. Testing of restraint system anchorages

A static test shall be conducted on the anchorage points for both the wheelchair tie-downs and occupant restraints in accordance with the following requirements:

- (a) The tests shall be conducted on a vehicle or a representative section of a vehicle structure including any vehicle fittings that are likely to contribute to the strength or rigidity of the structure;
- (b) The forces specified in 5 below shall be applied by means of a surrogate wheelchair as defined in ISO 10542, or equivalent, with attachment points for the front and rear tie-downs and reproducing the geometry of the wheelchair tie-down system;
- (c) The forces specified in 6 below shall be applied by means of a traction device specified in paragraph 5.3.4 of Annex I to Directive 76/115/EEC as last amended by Directive 96/38/EC and supported on the surrogate wheelchair defined in (b) above;
- (d) The forces in (b) and (c) above shall be applied to the simultaneously in the forward direction at an angle of  $10^\circ \pm 5^\circ$  above the horizontal plane. The force in (b) shall be applied at a height of not less than 200 mm and not more than 300 mm measured vertically above the floor of the wheelchair space;
- (e) The force in 5(b) shall be applied in the rearward direction at an angle of  $10^\circ \pm 5^\circ$  above the horizontal plane at a height of not less than 200 mm and not more than 300 mm measured vertically above the floor of the wheelchair space;
- (f) All forces shall be applied as rapidly as possible through the central vertical axis of the wheelchair and wheelchair space; and

- (g) All forces shall be maintained for a period of not less than 0.2 seconds;

For test purposes the components comprising the wheelchair tie-down and occupant restraint devices may be replaced with components suitable for test purposes having a similar function.

#### **5. Forces applied to a wheelchair tie-down system**

- (a) The force applied to the surrogate wheelchair in the forward direction 24.50 kN
- (b) The force applied to the surrogate wheelchair in the rearward direction 12.25 kN

#### **6. Forces applied to an occupant restraint system**

The forces shall be those specified in paragraph 5.4 of Annex I to Directive 76/115/EEC as amended by Directive 96/38/EC

#### **7. Anchorage system performance**

The anchorages shall meet the test performance requirements if the following conditions are met:

- (a) No part of the system shall have failed, or become detached during the test;
- (b) No part of the anchorage system shall be deformed to such an extent that sharp edges or protrusion may cause injury.

#### **8. Transitional provisions**

In the case of a vehicle type for which evidence of a test is provided, and that test was conducted on or before 29<sup>th</sup> April 2009 the following shall apply:

- (a) in paragraph 5(a) for 24.50 kN shall be substituted 22.25 kN;
- (b) in paragraph 5(b) for 12.25 kN shall be substituted 11.00 kN;

### **PART B**

#### **9. Alternative provisions**

Instead of complying with Part A an alternative wheelchair tie-down system or docking system may be fitted. Evidence that the system offers an equivalent level of safety shall be submitted to the Approving Authority.