

APPROVED

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TECHNICAL REGULATIONS CUSTOMS UNION

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safety of wheeled vehicles

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Foreword

This technical regulation was developed on the basis of the Agreement on common principles and rules of technical regulation in the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation (hereinafter - the member states of the Customs Union) dated November 18, 2010 No.

Technical regulation in relation to wheeled transport means is carried out in order to ensure socially acceptable level of safety, as well as performing states - members of the Customs Union of its obligations arising from participation in international agreements in the field of safety of wheeled transport vehicles.

The requirements of this technical regulation are harmonized with the requirements of the United Nations Economic Commission for Europe Regulations (UNECE Regulations) adopted on the basis of "Agreement on the adoption of uniform technical prescriptions for wheeled transport means, items of equipment and parts which can be fitted and or used on wheeled transport means, and on the conditions of mutual recognition of official statements issued on the of these prescriptions", concluded in Geneva on March 20 1958 (hereinafter the 1958 Agreement), Global Technical Regulations adopted basis of the

"Agreement on the introduction of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be fitted and / or used on wheeled transport vehicles", concluded in Geneva on 25 June 1998 (hereinafter - the Agreement in 1998), and prescriptions taken on the basis of the "Agreement on the Acceptance of Uniform Conditions for Periodic Technical Inspections of Wheeled Vehicles and on the Mutual Recognition of Such Inspections", concluded in Vienna on November 13, 1997 (hereinafter - the 1997 Agreement).

The technical regulations contain: definitions of the terms used; rules for handling on the market or the entry into operation of objects of technical regulation; safety requirements; procedures for assessing of types of vehicles (chassis), single vehicles the conformity vehicles, in operation, types of vehicle components; requirements for labeling of products a single sign -treatment products on the market states - members of the Customs Union; protective clause;

final provisions on the application of documents certifying compliance, received before the entry into force of the technical regulation.

Applications include:

list of objects of technical regulation;

requirements for the types produced in the circulation transport means (chassis);

requirements for single vehicles put into circulation;

Dimensional and weight restrictions in force in respect of the transport means;

requirements for labeling;

requirements to

the transport means located in use;

requirements in respect of the individual changes made to the design of the transport means;

requirements for the types of vehicle components; subdivision of vehicles into types and modifications; list of documents submitted by the applicant in order to assess

compliance;

a list of the main issues studied when analyzing the state of production, the rules and procedure for checking production conditions;

forms of documents certifying compliance;

forms and schemes of confirmation of conformity and recommendations for their selection.

I. General Provisions

1. The present technical regulations in order to protect the life and health of the person, property, protection of the surrounding environment and the prevention actions introducing to mislead consumers, establishes requirements f or wheeled transport means in accordance with paragraph 16, regardless of

where they are manufactured, when they release into circulation and being in operation in the common customs territory of the Customs Union.

2. For objects technical regulation, on which extends the action of the technical regulations, are:

wheeled transport means categories L, M, N and O, are intended for operation on automobile roads general use (hereinafter transport means), but also chassis;

components of transport means, providing impact on the safety of vehicles.

Objects of technical regulation are installed in accordance with Appendix No. 1.

- 3. The action of this technical regulations do not apply in transport means:
- 1) having a maximum speed provided by their design, no more than 25 km/h;
 - 2) intended exclusively for participation in sports competitions;
- 3) categories L and M_{\perp} , from the date of issue of which 30 or more years have passed, as well as categories M₂, M₃ and N, not intended for commercial transportation of passengers and goods, from the date of issue of which 50 or more years have passed, with original engine, body and, available, frame, preserved or restored to its original condition;
- 4) imported into the common customs territory of the Customs Union, for a period not exceeding 6 months and placed under customs regimes that do not provide for the possibility of alienation;
- 5) imported into the common customs territory of the Customs Union as personal property by individuals who are participants in national state programs to assist the voluntary resettlement of persons living abroad, or recognized in the established manner as refugees or forced migrants;
- 6) belonging to the diplomatic and consular missions, international (intergovernmental) organizatio ns, enjoying privileges and immunities in accordance with the generally recognized principles and norms of international law, as well as employees of these offices (organizations) and members of their families;
 - 7) off road heavy vehicles.
- 4. The action of the present technical regulations do not apply to components intended only for bundling transport means, indicated in subparagraphs 1) and 2), 4) and 5) paragraph 3.

5. Member States of the Customs Union may decide on non-proliferation in its territory of its provisions on the transport means, provided by the state defense order.

II. Definitions

6. For the purposes of this technical regulation, the concepts established by the Agreement on common principles and rules of technical regulation in the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation of November 18, 2010 are used, as well as terms that mean the following:

"automatic (emergency) braking" - braking of the trailer, performed by the braking system without the driver's control in the event of a rupture of the brake lines of the brake drive;

"road train" - a vehicle formed by an automobile and a semi -trailer or trailer (s) towed by it;

"antilock braking system" - the braking system of the transport means with automatic regulation in the process of braking the degree of slip of the wheels of the transport means in the direction of rotation;

"vehicle base " - the distance between the wheel centers of the axles at the maximum mass of the vehicle (for a semitrailer - the distance between the axis of the king pin and the first axis from the king pin);

"base vehicle means" - released in circulation a vehicle which a whole or its primary components in the form of a body or chassis were used for the creation of other transport means;

"vehicle safety" - a condition characterized by a combination of design parameters and technical condition of a vehicle, ensuring the inadmissibility or minimization of the risk of harm to the life or health of citizens, property of individuals and legal entities, state or municipal property, the environment;

"blocking the wheel" - stopping the rolling of the wheel when it moves along the supporting surface;

"armor protection" - a set of armor barriers designed to fully or partially neutralize the impact of weapons;

"armor resistance" - the resistance of armor protection to the effects of means of destruction of a given type;

"splash guard" is a flexible splash guard installed behind the wheel to deflect water and reduce the risk of dropping small objects caught by the tire;

"ventilation" - provision of air exchange in the cabin and passenger compartment of the vehicle;

"off-road heavy transport means" - the mechanical transport means, by design and purpose is specially designed for the transportation of bulky and (or) heavy goods mainly outside public motor road use, in which one of the parameters exceeds the permissible norms established by the legislation for the passage of motor roads of general use, and the mass falling on at least one axis exceeds 10 tons;

"making changes in the design of the vehicle means" - an exception provided or installation not provided for construction of a specific transport agent component parts and items of equipment made after the release of the transport means in the circulation and influence on the safety of road traffic;

"external light devices" - devices for road illumination, state registration plate, as well as light signaling devices;

"Recovery matching" - a complex of measures taken in the manufacture in that case, when allowed the of products not complying with the requirements of the present technical regulation;

"harmful matter" -

contained in air, impurities, providing adverse effects on the health of man-oxide, carbon dioxide, nitrogen oxide, nitrogen, hydrocarbons aliphatic limits, f ormaldehyde and dispersed particles;

"time of switching the braking system" - the interval of time from the start of deceleration to the time, in which deceleration of the transport means receives a steady value during inspections in road conditions or until the moment at which the braking force at at checkout stands takes the maximum value or occurs lock wheel transport means on the stand rollers;

"auxiliary brake system" - durable (noncontact) brake system, intended to reduce energonagruzhennosti brake braking system of the transport vehicle;

"emissions" - harmful substances emitted into the atmospheric air contained in the exhaust gases of internal combustion engines and vehicle fuel vapors, which are carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NO x), dispersed particles;

"sliding axis" - axis, which may be by a device discharge axis elevated above the supporting surface during the time normal conditions of transport operating means;

"release into circulation" - permission for interested parties to use and dispose of a vehicle (chassis) or a batch of components without restrictions on the common customs territory of the Customs Union;

"hybrid vehicle means" - for transport means, having at least two different energy converters (engines) and two different (on-board) energy storage systems for the purpose of driving a movement of the transport means;

"mud cover" - rigid or semi-rigid components of the system of protection against splashing intended for reflection water discharged tires durin g movement made completely or partially as a single piece with the body or other parts of the vehicle (cab, the lower part of the loading platform and etc.);

"internal combustion engine" - a heat engine in which the chemical energy of the fuel burning in the working cavity is converted into mechanical work;

"positive ignition engine" means an internal combustion engine in which ignition of the working mixture is initiated by an electric spark;

"defect" - each individual non-conformity of the product with the established requirements;

"diesel" - an internal combustion engine operating on the principle of compression ignition;

"dispersed particles" - any substance collected on special filter material after dilution of exhaust gas clean filtered air at a temperature of not more than 52 °C;

"a document identifying the transport means (chassis)," - the document produced by the authorized body of the State - a member of the Customs Union on each transport means (chassis) and contains information (owner) vehicle (the about the owner of the chassis), the environmental class transport means (chassis) and on a document certifying the compliance vehicle (chassis) with requirements of the the of this technical regulation;

"singular transport vehicle" - transport means:

- produced in the states - members of the Customs Union:

in conditions of serial production, in the construction of which in the individual order were made changes to the issue in the appeal; or

outside serial production on an individual basis from an assembly kit; or

resulting from individual technical creativity;

or

released into circulation from among previously delivered software

state defense order;

- imported into the common customs territory of the Customs Union: by an individual for his own needs; or

previously has participated in the Road Traffic in the states, not being members of the Customs Union, with the proviso that from the moment of production of transport means has been more than three years;

"replacement (emergency) braking system" - the braking system, designed to reduce the speed of the transport means at the outlet of the system of the service braking system;

"zone, purified from icing" - zone of the outer surface of the windshield or rear window, having a dry surface or a surface coated with a melted or partially melted frost, which can be removed from the outer surface wiper (this area does not include the glass surface coated with dry unmelted frost);

"identification" - the establishment of the identity of the factory marking, available on the transport vehicle (chassis) and its components, and the data contained in the submitted by the applicant

documentation or in certifying the conformity of documents held without disassembly transport means (chassis) or its compon ents;

"manufacturer" - a person who manufactures a vehicle (chassis) or its components with the intention of releasing them into circulation for sale or for their own use;

"innovative vehicle" - a vehicle in which new design solutions are applied that qualitatively change its main performance indicators, and which can not be evaluated in accordance with this technical regulation;

"light source" one or more elements for generating electromagnetic radiation in
the optical region of the spectrum, which can be used in assembly with one or
more transparent shells and
a base for mechanical fastening and electrical connection. The light source is als
o the outermost element of the light guide;

"Reference axis" - a line passing through the axis of symmetry of the lamp bulb of the light device, or a line perpendicular to a plane tangent to the surface of the light instrument at its geometric center, which determines the orientation direction of light emission;

"category of the vehicle means" - a classification characteristic of the transport means used in order to establish in the present technical regulation requirements;

" protection class " - an indicator of armor resistance;

"light source class" - a characteristic of the physical principle of light emission: incandescent lamp (class 0); lamp bulbs with bulb halogen containing gases filling (class H), the discharge lamp (class D), a light emitting diode (Class LED);

"Commercial transport" - transport of passengers or cargo wheeled transport means, associated with the implementation of business activities, in accordance with the legislation of the states - members of the Customs Union;

"complete vehicle means" -

transport means, suitable for operation in accordance with its purpose;

"Components of the transport means" - composite part design of the transport means, provided on the assembly manufacturing transport means and (or) in an interchangeable

(spare) parts for transport means, which are in operation;

"air conditioning" - the provision of controlled cooling of air in the vehicle's habitable space to or below the ambient temperature;

"control tests" - periodic tests in order to confirm the stability of the characteristics of the manufactured vehicles and vehicle components, in relation to the types of which the conformity assessment with the requirements of this technical regulation was carried out;

"Contour marking" - a series of reflective strips, designed for application in such a way that they indicate the outlines of the transport means of the side and rear.

"headlamp corrector" - a device for manually adjusting from the driver's seat or in automatic mode of the angle of inclination of the light beam of the dipped and (or) main beam headlamp, depending on the vehicle load, and (or) the road profile and (or) visibility conditions;

"a small party transport means (chassis)" - set in , depending on the category of transport means (chassis) number of transport means (chassis) of the same type, including all modifications. The maximum volume of a small batch for categories L_1 - L_7 , M_1 , O_1 - O_2 is 150 pieces, for categories M_2 , N_1 - N_3 , O_3 - O_4 - 100 pieces, for category M_3 - 50 pieces;

"brand" - the designation used by the manufacturer of the product , placed on the product or its packaging;

"mass transport means to curb the state" - defined by the manufacturer of the complete weight of the vehicle with a driver without a load. Weight includes at least 90% fuel;

"intercity communication" - transportation of passengers by buses, carried out outside the boundaries of the settlement at a distance of more than 50 km;

"model year" - defined by the manufacturer of the time period during which it does not introduce any significant changes in the design produced by the transport means, and which may not coincide with the calendar year of beginning, end and duration, but may exceed 730 days;

"modification" - variant construction, characterized by other embodiments belonging to the same type;

"unfinished production of transport means" - transport means, which requires completion of its operation;

"neutral position of the steering wheel (steered wheels)" - the position of the steering wheel (steered wheels), corresponding to the rectilinear movement of the vehicle in the absence of disturbing influences;

"blind areas" - invisible areas that limit forward visibility, created by opaque elements of the cab structure, indoor and outdoor equipment;

"non-compliance" - failure to comply with an established requirement; "visibility" - a property of the vehicle structure,

characterizing the objective possibility and conditions of perception by the driver of visual information necessary for safe and effective driving;

"habitable space" - the interior of a vehicle used to accommodate the driver (crew) and passengers;

"type approval" - a form of assessing the conformity of a vehicle (chassis) with the requirements of this technical regulation established in relation to the type of vehicle (chassis);

"type approval of a vehicle" - a document certifying the conformity of the vehicles put into circulation, classified as one type, with the requirements of this technical regulation;

"chassis type approval" - a document certifying the conformity of the chassis put into circulation, classified as one type, with the requirements of this technical regulation;

"identification marks" - a graphic representation of information about departmental affiliation and (or) functional purpose of a vehicle (coats of arms, emblems, logos, etc.);

"optical axis of the headlamp checking and adjusting device" means the line passing through the center of the lens on the screen integrated into the headlamp checking and adjusting device;

"optical center (reference center)" - designation on the diffuser of the point of intersection of its outer surface with the reference axis of the light device;

"Body Control" - a constructive element of the transport means on which acts a driver for change in the functioning of the transport means or its parts;

"original components" - components supplied to the vehicle assembly plant;

"Reference axis": the line of intersection of planes passing through the optical center of the fixture parallel to the longitudinal center plane of the vehicle and the bearing surface;

"folding seat" - an additional seat, which is intended for occasional use and normally is in the folded state;

"heating" - adjustable elevation and maintenance of a predetermined level, the temperature in an inhabited area;

"gear number steering control" - the ratio of the angle of rotation of the steering wheel to the average angle of rotation driven wheels;

"leakage" - the appearance of liquid on the surface and in the joints of parts of the sealed systems of the vehicle, perceived by touch;

"airbag" - a bag made of elastic material filled with gas when a pyrotechnic gas generator is triggered;

"a representative of the manufacturer" - a legal person registered in the established order in the State - a member of the Customs Union, which is determined by the manufacturer on the basis of an agreement with them for the implementation of the action on its behalf in the assessment of conformity and placing products on the single customs territory of the Customs Union, as well as for laying joint responsibility with the manufacturer for non-compliance of products with the requirements of this technical regulation;

"light" - the time period during which the strength of light flashes special light signal exceeds 10% of the maximum power of light;

"longitudinal center (median) plane of the vehicle" - a plane perpendicular to the plane of the bearing surface and passing through the middle of the track of the vehicle;

"transparent part of the front and side windows" - a part of the glass of the front and side windows, free from opaque structural elements, having a light transmission of at least 70%;

"performance" - a state at which the transport means or its components can perform their functions in accordance with the operational documentation;

"service braking system" - a braking system designed to reduce the speed and (or) stop a vehicle;

"axle unloaded" - an axle, the load on which can be changed without detaching the axle from the supporting surface by means of an axle unloading device;

"permissible maximum mass" - the maximum mass of a vehicle established by this technical regulation or other regulatory legal acts, depending on the design features;

"diffuser" - the outermost element of the fixture that transmits light through the illuminating surface;

"industrial assembly mode" - a method of organizing production created with the participation of a manufacturer of complete vehicles or their components, based on an investment agreement approved by the authorized government body in the prescribed manner;

"steering gear" - a mechanism that converts the rotation of the steering wheel into translational movement of the steering gear, causing the steering wheels to turn;

"steering gear" - a system of rods and levers connecting the steering wheels of the car with the steering mechanism;

"homing axis" - axis, pivotally anchored in its central part in such a way that it can describe an arc in the horizontal plane (for purposes of this technical regulation axis, equipped driven wheels, as is self-administered axis);

"self-aligning wheels" - wheels not driven into operation system of the steering control of the transport means, but which may be rotated for account friction in the zone of contact of the tire with the supporting surface;

"self-propelled chassis" - the chassis of a vehicle of category N, equipped with a cab and an engine, which can temporarily participate in road traffic with restrictions;

"assembly kit" - a group of component parts supplied by the manufacturer of the transport means to another manufacturer for final assembly of transport equipment;

"light module" - a light-emitting part of a vehicle lighting and lightsignaling device, consisting of optical, mechanical and electrical elements, desi gned to form or amplify a light beam from a light source;

"certificate of safety design of transport means" - a document certifying the compliance of the unit transport means produced in the treatment requirements of the present technical regulation;

"air-water separator" - a component that forms part of the outer sidewall and / or mudguard that can allow air to pass through while reducing splashing water;

"certification test" - test a representative sample (s) of the vehicle or vehicle component means on the basis of the results which is the conclusion of compliance requirements of this technical regulations type of transport means or type component transport means combining modifications ar e included in the technical description, the sending by the applicant under conducting certification tests;

"splash guard system" means devices designed to protect against splashing water emitted by the tires of a moving vehicle;

"exhaust gas neutralization system" - a set of components that reduce emissions of pollutants with exhaust gases during engine operation;

"System washing" - the system, consisting of devices for storing a liquid and feeding it to the outer surface of the glass, as well as bodies of control for driving the action and stop device;

"cleaning system" - a system consisting of a device for cleaning the outer surface of the glass, as well as additional devices and organs control for actuating the action and stop device;

"vehicle speed" - the linear speed of the center of mass of the vehicle;

"message on the official approval of the type" - the document issued on the basis of the Agreement in 1958, confirming the compliance of the transport means or its component requirements of Regulation ECE UN;

"articulated transport vehicle" transport means which consists of two or more rigid sections hingedly jointed e ach to other, the separation of which is feasible only with a special equipment;

"specialized passenger transport vehicle" - vehicle category M_2G or M_3G , manufactured chassis terrain vehicle category N_1G , N_2G or N_3G ;

"specialized transport means" - for transport means, intended for transport of certain types of goods (petroleum products, edible liquids, liquefied hydrocarbon gases, foods and so on);

"special transport means" transport agent designed to perform specific functions, for which required special equipment (cranes, fire engines, cars, equipped with ski lifts with working platforms, Car hauler and so on);

"stabilization of steering" - a property of steering, which consists in the independent return of the steered wheels and the steering wheel removed from the neutral position to this position after the effort is removed from the steering wheel when the vehicle is moving;

"degree of cleaning of the regulatory area" - the ratio of the surface area of the regulatory area, cleaned by the wiper blades, to the total surface area of the corresponding regulatory area, expressed as a percentage;

"front window pillars" - cab roof supports with adjoining opaque door elements, seals or an opaque strip along the edges of the glasses to be glued (the middle front window pillar may not be a support for the cab roof);

"parking brake system" - a brake system designed to keep the vehicle stationary;

"total backlash in steering" - the angle of rotation of the steering wheel from the position corresponding to the beginning of the rotation of the steered wheels in one direction to the position corresponding to the beginning of their rotation in the opposite direction from the position corresponding to the straight-line movement of the vehicle;

"technical service" means an authorized testing organization for the type approval of a vehicle under the 1958 Agreement;

"Technical examination of the design of transport facilities" - the analysis of the vehicle structure and the technical documentation to it without carrying out tests:

"technically permissible maximum mass" - the maximum mass of a vehicle with equipment, passengers and cargo established by the manufacturer, due to its design and specified characteristics;

"technically permissible maximum mass of a road train" the maximum total mass of the tractor and the semi-trailer towed by it or the trailer (trailers) with equipment, passengers and cargo set by the manufacturer;

"technically permissible maximum mass per axle (group of axles)" the mass corresponding to the maximum permissible static vertical load transmitted by the axle (group of axles) to the supporting surface, due to the design of the axle (group of axles) and the vehicle, established by its manufacturer;

"technically permissible maximum load on the fifth wheel" the value corresponding to the maximum permissible static vertical load transmitted by the semi-trailer to the tractor through the fifth wheel, set by the manufacturer of the tractor for the tractor, and by the manufacturer of the semitrailer for the semitrailer;

"technically permissible maximum load on the towing device" - the value corresponding to the maximum permissible static vertical load on the towing device (excluding the load from the mass of the towing device of a vehicle of categories M and N), due to the design of the vehicle and (or) the towing device, installed by the vehicle manufacturer;

"technical inspection" - checking the technical condition of a vehicle in operation;

"vehicle maintenance" - a set of works regulated by the manufacturer, carried out at a specified frequency to maintain the performance of a vehicle or its components during operation, in order to reduce the risk of failures and malfunctions;

"technical description" - a description of technical characteristics and basic parameters prepared by the manufacturer (applicant) identifying the design of the vehicle (component) declared for assessing compliance with the requirements of this technical regulation;

"technical condition" - a set of properties subject to change during operation and parameters of a vehicle established by regulatory documents, which determines the possibility of its intended use;

"type of vehicle (chassis, component)" - vehicles (chassis, components) with common design features recorded in the technical description, manufactured by one manufacturer;

"braking" - the process of creating and changing artificial resistance to the movement of a vehicle;

"braking force" - the reaction of the bearing surface to the vehicle wheel , causing the wheel and (or) the vehicle to slow down;

"braking system" - the combination of parts of the vehicle, intended for its braking when exposed to body control brake system;

"brake drive" - a set of parts of the brake control intended for the controlled transfer of energy from its source to the brake mechanisms for the purpose of braking;

"stopping distance" - the distance traveled by the vehicle from the beginning to the end of braking;

"vehicle" - a device on wheels of categories L, M, N, O, intended for the transport of people, goods or equipment installed on it;

"angle adjustment of the light beam headlamp dipped beam or the fog lights of the vehicle" - the angle between the inclined plane containing the flat top (left) border of a light beam passing beam headlamp or fog lamp, and the horizontal plane passing through the optical center of the headlamp;

"specific power per unit mass" - the ratio of the maximum useful engine power to the technically permissible maximum mass of the vehicle, in kW/t;

"driven wheel" - wheels, driven into action the steering control of the vehicle means:

"level of emissions" - limit values of the emission, which represents the maximum allowable mass emissions into the atmosphere based on one produced by the transport means and engine internal combustion operation or run;

"steady deceleration" - the average deceleration value over the deceleration time from the end of the deceleration increase period to the beginning of its decrease at the end of deceleration;

"sustainability of the transport means at braking" - the ability of the transport means to move when braking in the limits established corridor movement;

"Spatter reducing device" is a component of the anti-splatter system, which can be configured as an energy absorbing device or as an air-water separator;

"device discharge axis" - a device adapted to reduce or increase the load on the axis (axis) in dependence on the traffic conditions of the vehicle in order to reduce wear of tires in the case when the transport means is loaded partially, and (or) to increase the pickup transport conditions vehicles (vehicles) on a slippery road by increasing the load on the driving axle;

"DR, DC, DCR type headlamps" - headlamps with gas-discharge light sources of class D for high-beam DR-beam and low-beam DC-light and dual-mode (low -beam and high -beam) DCR-lights;

"HR type headlamp, HC, HCR" - lights with halogen light sources Class H distal HR-light and low HC-beam and dual-mode (near and far) HCR-light;

"type R, C, CR headlamps" - headlamps with light sources in the form of incandescent lamps of class 0 high -beam R-light and low -beam C-light and dual-mode (low -beam and high -beam) CR-lights;

"type B and type F3 headlamps" - fog lamps with different photometric characteristics and markings on the headlamp; "windscreen washer nozzle" - a device that directs

bathing the fluid on the windshield glass;

"cold braking mechanism" - a braking mechanism, the temperature of which, measured on the friction surface of the brake drum or brake disc, is less than $100 \,^{\circ}$ C;

"color scheme" - a graphic representation of the arrangement, configuration and compositional relationship of the main color, decorative stripes, identification marks and information inscripti ons applied to the outer surface of the vehicle;

"loop wiper" - a direct and a reverse stroke of the brush wiper;

"chassis" - device for wheeled course, not equipped, and (or) the cabin, and (or) the engine and (or) the body, is not designed for operation in a transport means;

"spike skid" - a solid profiled rod, consisting of a body and a wear member and mounted in ledge tread winter tires to improve traction tires with icy or snowy road surface;

"ecological class" - a classification code characterizing the design of a vehicle or an internal combustion engine, depending on the level of emissions, as well as the level of requirements for on -board diagnostics systems;

"operation" - the stage of the life cycle of a vehicle at which it is used for its intended purpose, from the moment of its state registration to disposal;

"energy absorbing device" - component forming part coir housing, and (or) of the outer sidewall, and (or) a mudguard, absorbing the energy of the water and reducing spattering;

"hybrid vehicle power plant " - a combination of an internal combustion engine, an electric motor, a generator (engine and generator functions can be performed by one electric machine), an energy storage device, electric converters and a control system;

"braking efficiency" - a property that characterizes the ability of the braking system to create the necessary artificial longitudinal resistance to the movement of the vehicle.

III. Terms of reference on the market or entry into operation

7. Transport means and their components are admitted to circulation on the market during their under present technical regulation, which is confirmed by their label single sign

circulation of products on the market in accordance with Section VI of this technical regulation.

The date of issue in the handling of the transport means (chassis) is the date of execution of a document identifying a transport means (chassis).

8. The documents certifying compliance with the requirements of this technical regulation upon release into circulation are:

for transport means, assessment of compliance which was held in the form of approval of the type - approval of the type of transport means;

for chassis - chassis type approval;

for individual transport means - evidence of the safety design of the transport means;

for vehicle components - a declaration of conformity or a certificate of conformity.

Documents certifying compliance with the requirements of this technical regulation, in the structure of their registration number, have a single designation confirming their validity in the single customs territory of the Customs Union, as well as the distinctive designation of the state in which they were issued.

9. The documents furnished by the results of evaluation of conformity of products, carried out in the established present technical regulations of the order in one of the states - members of the Customs Union, there are in all the states - members of the Customs Union.

IV. Safety requirements

- 10. It is forbidden to manufacture transport means of the former in the use of the components for the exception of transport means, produced for personal use.
- 11. It prohibited to install vehicles of is on categories M₁ and N₁ structures protruding forward relative to the bumper line corresponding to the outer contour of the projection of the vehicle the horizontal plane onto of the supporting surface, made of steel or other materials with similar strength ch aracteristics. This requirement does not apply to structures provided the standard equipment of the transport

means and (or) that have passed the conformity assessment in accordance with the established procedure, as well—as on metal grilles weighing less—than 0.5 kg, designed to protect only—the headlights, and the state registration plate and its fastening elements.

- 12. It is not allowed in the composition of air conditioners and refrigeration equipment, used in the transport means, the presence of ozone-depleting substances and materials, the list of which is approved by the Commission of the Customs Union.
- 13. The design produced in the circulation of transport means for the transport of dangerous goods, or commercial transportation of passengers, as well as of operational services should provide the opportunity to install (regular seat installation, mounting, power supply) equipment of satellite navigation GLONASS or GLONASS together with GPS.

Equipment specified equipment transport means is carried out in accordance with the procedure established by normative legal acts of the states - members of the Customs Union.

14. The design produced in the circulation transport means of categories M2 and M3, performing commercial transportation of passengers, categories N2 and N3, performing commercial transportation of goods, must provide for the possibility of equipment (established place installation, fixing the power supply) technical means of control for compliance drivers modes of motion, labor and rest (tachographs).

Equipment specified equipment transport means is carried out in accordance with the procedure established by normative legal acts of the states - members of the Customs Union.

The requirements of this paragraph does not apply in respect of the transport means specified in Article 2 of the European Agreement concerning the work of crews of transport means, producing international road transport (AETR).

15. The operation of the interface (the set of elements, providing the possibility of interaction of the user with the electronic systems, including obtaining a user visual and voice information and the introduction of their management teams) produced in the circulation of transport means (chassis), and also the application to them of information and warning labels are carried out on Russian language.

The said requirement is used when carrying out estimation of compliance in the form approved type in respect of:

displayed on information screens (displays) or voice warning messages about malfunctions of vehicle systems , danger to life a

nd health of people, as well as activation of individual vehicle security systems;

inscriptions on the plates ¹ and labels ¹ on the transport vehicle, informing about the transport means and its systems.

When the condition of the corresponding transfer and (or) explanations in the manual (instructions) for operation of the transport means of the above requirement does not apply in respect of:

messages of information screens (displays) of audio, video, game and other multimedia systems;

abbreviations:

inscriptions applied to the controls and structural elements of the vehicle; units of measure;

names of firms, brand names of vehicles, systems and vehicle components used on them;

marks the official statements type specified mandatory requirements of Regulation ECE UN and Global Technical Regulations.

messages and inscriptions specially designed for employees of service stations.

- 16. The implementation of safety requirements is ensured by the implementation of
- the UNECE Regulations, Global Technical Regulations, directly the provisions of this technical regulation in accordance with:
- 1), paragraphs 11-15 and applications N_2 2 and 3 in respect of types produced in the circulation transport means (chassis);
- 2) Clauses 11-15 and Appendices No. 4 and 8 in relation to single vehicles put into circulation;
- 3) Appendix No. 5 in relation to the overall and weight restrictions of the vehicles put into circulation;

¹Except for the requirements specified in Appendix No. 7

of this technical regulation

- 4) application N_{\odot} 6 in respect produced in the treatment of special and specialized transport means with regard to their functional purposes;
- 5) Clauses 11-14 and Appendix No. 8 in relation to vehicles in operation ;

6) the application number 9 - with regard to in-service transport means in the case of making changes in their structure.

In the case of innovative vehicles, safety requirements are established by the decision of the authorized body for technical regulation of the State - a member of the Customs Union, in which the conformity assessment is carried out. Before the introduction of these new requirements in the technical regulations of other states - members of the Customs Union shall have the right not to recognize in its territory the approval of the type of vehicle funds and the approval of the type of chassis, issued on the basis of confirmation of compliance with the specified requirements.

- 17. Transport means of categories M and N and the engine combustion for their environmental divided into classes in accordance with the application N_{Ω} 1.
- 18. Each transport means has an individual identification number. Requirements for the identification of vehicles (chassis) put into circulation are established by Appendix No. 7 to this technical regulation.

Requirements to the content identification number does not apply to individual transport means imported to the single customs territory of the Customs Union, as well as on the vehicles put into circulation before the entry into force of the technical regulations.

19. It is forbidden to release into circulation of transport means with a right-hand position of the steering control of categories M 2 and M 3.

In the Republic of Belarus and the Republic of Kazakhstan is prohibited to release into circulation of transport means with a right-hand position of the steering control, relating to other categories.

20. Components released into circulation as replacement (spare) parts for vehicles in service, when installed on a vehicle, do not reduce its safety level in relation to the level at the time the vehicle was put into circulation.

The list of requirements for the types of vehicle components is set in Appendix No. 10 to this technical regulation.

Components manufactured in the circulation as a replacement (spare) parts for being in the operation of transport means, provided on the assembly line production of transport means deemed appropriate requirement paragraph first of this paragraph in the case of conformity of the vehicle means the requirements of the present technical regulations.

- 21. The requirements imposed to the components being replaceable (spare) parts to vehicles, the production of which terminated on the stored level in force at the moment of closure manufacture of such transport means.
- 22. In the case of application of the technical regulations for vehicles (chassis) and their components, supplied for emergency needs and the state defense order, the list of requirements to them and forms of conformity assessment established state customer of the state a member of the Customs Union.

V. Conformity assessment

- 1. Check the requirements to the types manufactured in the circulation of transport means (chassis)
- 23. Verification of compliance with the requirements for the types of vehicles (chassis) put into circulation is carried out in the form of type approval. The subdivision of vehicles into types and modifications for the purpose of conformity assessment is carried out in accordance with Appendix No. 11 to this technical regulation.

Verification of compliance with the requirements for the types of chassis manufactured in the Member States of the Customs Union is carried out in cases where it is provided for:

- 1) the release of the self-propelled chassis in circulation and (or) the movement of the chassis to its progress on the road roads of general use to place further completion;
- 2) subsequent distribution of responsibility for the execution of the individual requirements of the Technical Regulations between manufacturer chassis and the manufacturer of the complete transport means on the basis of the contract between them. In case if such a distribution of responsibility is not provided, the responsibility for

fulfillment of the requirements of this technical regulation is assigned to the manufacturer of the complete vehicle .

Verification of compliance with the requirements for the types of chassis imported into the common customs territory of the Customs Union is carried out regardless of the purpose of their subsequent use.

The specifics of checking the fulfillment of the requirements for the types of vehicles (chassis) supplied under the state defense order are established by the state customer of the member states of the Customs Union.

24. Check the requirements to the types of vehicles (chassis) is carried out accredited bodies for certification, included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union and the statement by the State - a member of the Customs Union for carrying out the approval type (hereinafter - authorities on certification).

Necessary tests conducted testing laboratory competence which corresponds to the requirements of the standard ISO 17025, included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union (hereinafter - accredited test laboratories).

25. If the vehicles (chassis) are manufactured in a single customs territory of the Customs Union and the applicant when carrying out approved type may be registered in accordance with the legislation of the State - a member of the Customs Union and a resident of that State the manufacturer, which has been assigned an international identification code of the manufacturer of the transport means , or an official representative of the manufacturer, acting on his behalf.

The manufacturer, not being a resident of a Member State of the Customs Union shall appoint in each state members of Customs Union, its representative, the carrier together with the manufacturer responsible for ensuring compliance of the released product, the last approval of the type of requirements of technical regulations. A representative of the manufacturer is a legal person registered in accordance with the legislation of the states members of the Customs Union and which is a resident.

All representatives of the manufacturer specified in the approval of the type of transport means (approval of the type of chassis).

Applicant during carrying out approval type imported to a single customs area Customs Union transport means (chassis) can be one of the above-mentioned representatives of the foreign manufacturer, having powers from manufacturer to assess its compliance with the production requirements of the present regulations.

The manufacturer, not being resident in the State - a member of the Customs Union, which

produces transport means different brands and (or) categories shall be entitled to appoint different representatives of the manufacturer for each combination of marks and (or) category, are the applicants when carrying out assessment of conformity. At the same time, the appointment of different representatives of the manufacturer for vehicles of different brands, but of the same category, having

the same international manufacturer's identification code, is not allowed.

A

manufacturer producing transport means different brands registered for other m anufacturer has the right to appoint a representative who may be the applicant for each brand. Such a representative can be a legal entity - the official representative of the manufacturer - the owner of this brand.

- 26. In event manufacturer's representative the of a office, spent working on the evaluation of conformity, stops the action of certifying compliance requirements with the of the present technical regulations of the documents that specify the powers were terminated the representative of the manufacturer.
- 27. The prerequisites for issuing vehicle type approval (chassis type approval) are positive results of the manufacturer's production analysis carried out by the certification body, confirming:

availability of organizational and technical measures to ensure the stability of product characteristics or production process parameters;

availability of plans for periodic inspections and tests of manufactured products to confirm their compliance with the requirements of this technical regulation;

the presence of regulations concerning operation of transport means, as well as their pre-training, technical maintenance and repair;

availability of measures to restore the conformity of manufactured and, if necessary - are in the operation of transport means (chassis), the requirements of the technical regulations in the case of discrepancies found during inspections or tests of vehicles (chassis).

a vehicle If in the production of the products another manufacturer were used. the obligations of each manufacturer can be divided between them on the basis an agreement (protocol) on mutual obligations. In the absence of such an agreement (protocol), the manufacturer of the final product is responsible for the product with compliance of the requirements of this technical regulation in full.

- 28. Type approval is carried out in the following order:
- 1) submission of an application to the certification body, which sets out the name and details of the applicant, type of transport means, information on previously issued approvals such as transport means (hereinafter the application). For a vehicle type, one application is submitted to one certification body. The documents are attached to the application according to the list in accordance with Appendix No. 12 to this technical regulation;

- 2) the certification body makes a decision on the application within 15 days, concludes an agreement (contract) with the applicant for the performance of work. The decision reflects: the possibility of recognition and the sufficiency of documents; the need for testing in order to obtain missing evidence; the need and timing of an inspection of production conditions;
- 3) carrying out identification submitted sample transport means (chassis) accredited testing laboratory of the certification test, design of protocols for each of which is attached compiled by the manufacturer and certified by an accredited testing laboratory technical description;
- 4) analysis of the manufacturer's production in accordance with clause 27;
- 5) registration by certification body the of declarations of conformity, issuance of certificates of conformity of the vehicle to individual requirements provided for in Appendices No. 2, 3 and 6 to this technical regulation and their issuance to the applicant;
- 6) preparation of the certification authority to enter into the possibility of registration of approved type of transport means (approved type chassis) on the basis of the implementation of paragraph 3) 5) of this paragraph if the condition of conformity of the transport means (chassis) the requirements of the technical regulations in force at the time of registration of certifying compliance with the document;
- 7) registration of the vehicle type approval by the certification body (chassis type approval);
- 8) the approval and registration of approval of the type of transport means (approval type chassis) by the authorized body of state management of the state a member of the Customs Union;
- 9) the implementation body for the certification of control over the compliance of transport means the requirements of the technical regulations for the duration of the approval of the vehicle type funds (approved chassis type).
- 29. The body of certification offers the applicant all information regarding rules, procedures and requirements related to the conduct of assessment of conformity.
- 30. Minutes of the tests and measurements are the basis for the registration of certificates of compliance in over two years to the date of registration.

The approval of the vehicle type (type approval chassis) entered number of said certificate, if otherwise not provided paragraphs 35, 36 and 39.

31. An accredited testing laboratory, based on the decision of the certification body, examines the technical descriptions submitted by the applicant, identifies vehicle samples and tests them, draws test reports, organizes their registration and accounting. When you turn in the application of several modifications of the transport means (chassis) tests are carried out in respect of modifications to the transport means, as a rule, with the expected worst-case performance. The test report reflects the possibility of extending their results to other vehicle modifications included in the application.

Tests carried out in accordance with the UNECE Global technical regulations, and in case of their absence - in accordance with the standards included in of standards containing rules and methods of researches (tests) and measurements, in

that those rules of selection of samples needed for the application and performance requirements of technical regulations of the security of wheeled transport means and of Customs Union on the assessment (confirmation) of conformity of production. In the absence of these standards. the rules and methods of research and measurements, approved by the decision of the Commission of the Customs Union, are applied.

32. The applicant performs training sample transport means for carrying out tests of modifications consistent with an accredited testing laboratory.

At the end of the tests, the samples are returned to the applicant.

Accredited test laboratory for the results of conducted tests and technical expertise provided by the documents are designed to identify and report the test results of the complete transport means and transmits it to the body of certification.

Registration of the identification protocol and test results of the complete vehicle is mandatory when conducting tests for the purpose of issuing vehicle type approval (chassis type approval), except for those issued in accordance with paragraphs 35, 59 and 65 of this technical regulation.

The protocol of identification and test results of the complete vehicle is subject to review by the certification body if no more than two years have passed from the moment of its issuance to the date of review .

The protocols of the accredited testing laboratory, as well as the documentation that served as the basis for their registration, are stored in the testing laboratory for at least 5 years.

33. The certification body analyzes the state of production in accordance with paragraph 27 and Appendix No. 13.

The following can be considered as evidentiary materials confirming the existence of conditions in production that ensure the constancy of the production of products with a level of characteristics and indicators that meet the requirements of this technical regulation: certificate of conformity of the manufacturer's quality management system in relation to the production of products subject

to

conformity assessment;

documents confirming the compliance of production with the requirements of Appendix 2 to the 1958 Agreement;

a description of the production conditions prepared by the applicant, provided for by Appendix No. 13 to this technical regulation;

document of the certification body on the results of previously carried out inspections of production conditions .

The order and timing verification of conditions of production Body for certification agrees with the applicant.

If there is in the manufacturer's certificate of compliance with the system of quality management, issued by the certification body, included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union, check the conditions of production is not carried out.

Check the conditions of production of transport means (chassis), the manufacturers of which are not registered in the country - member of the 1958 Agreement, is mandatory before the design approval of the type of transport means (approved chassis type).

The results of the analysis of production conditions are drawn up in a conclusion.

- 34. Manufacturers of products registered in the territory of a state that is a contracting party to the 1958 Agreement, when assessing the conformity of a vehicle (chassis) related to a type of vehicle (chassis) that has not previously passed the assessment of compliance with the requirements of this technical regulation, have the right to apply the procedures, provided paragraph 35 of this technical regulations.
- 35. With respect to the requirements stipulated application N_2 2 to present technical regulations, and in the case of specific and specialized transport means also envisaged application N_2 6 as evidentiary material may be represented by the declaration of compliance, taken by the

schemes declaration 3d, 4d, 6d or 7d (for vehicles of categories M₂ and M₃, scheme 7d is not applied). A description of the declaration schemes is given in Appendix No. 19 to this technical regulation.

When submitting declarations of conformity necessarily agreement with the certification body of the monitoring plan tests for the purposes of verification of conformity issued by the transport means.

Authority for the certification shall have the right to send submitted by the applicant protocols tests and measurements, on the basis of which were decorated with the declaration of conformity, in an accredited testing laboratory for carrying out a technical examination.

Making protocol identification and the results of tests of the complete vehicle means not is mandatory at registration approval of the type of transport means (approved type chassis) on the basis of the points at the condition that the applicant submitted confirming that the documents in full, and all they recognized authority on certification in an evidentiary material s.

On the basis of the above mentioned evidentiary material drawn approved type of transport means (approved type chassis), in which shall be entered information about these declarations of conformity, with a validity of up to one year or by a small batch of vehicles (chassis) with no expiration limit approval of the type of transport means (chassis type approval).

The procedure for assessing the conformity of the vehicle (chassis) type specified in this paragraph is applied once. Subsequent conformity assessment of this type of vehicle (chassis) is carried out on a general basis.

In case where the manufacturer transport means has an international identification code of the manufacturer, in the third position which is used figure 9, or Annual Program Product transport means (chassis) of limit volume of the manufacturer does not exceed the small batches, be repeated use of said procedures in this paragraph. New approval type transport means (chassis) in a small batch transport means (chassis) of the same type is issued after release in treatment of all transport means (chassis), made small batch in accordance with previously received approval type transport mea ns (chassis).

36. When assessing compliance types of transport means, produced in the operation of industrial assembly in an evidentiary material permitted representation approval s type transport means (approvals type chassis) transport means (chassis) - analogues made in conditions other

production, subject to the submission of documents confirming the consent of the manufacturer of vehicles (chassis) - analogues.

The vehicle type approval (chassis type approval) contains information about the vehicle type approval (chassis type approval) of vehicles (chassis) - analogs.

In such a case, the term action of the primary approved type of transport means, issued to transport means, produced in the operation of industrial assembly is 1 year.

Authority for certification in depending on the degree of compliance technological process, adopted at the with the assembly production, and technology manufacturing, employed by manufacturer of transportation equipment - analogues, may request additional evidentiary materials confirming compliance established by this Technical Regulations requirements and based on the results of control tests of transport means, evaluation the conformity of which was previously carried out in a different production environment. Such tests may be carried out at participation of representatives of authority of certification or accredited test laboratory at the manufacturers of transport means produced in the mode of industrial assembly.

As for one year after
the registration approval type transport means (approval type chassis) instead sp
ecified in the first paragraph of this item of evidentiary material
shall be presented evidential materials confirming matching of
transport means, produced in the operation of
industrial assembly requirements of the Technical Regulations.

- 37. When assessing the conformity of types of transport means supplied by the state defense order, in an evidentiary materials presented results of tests and measurements, independently conducted by the manufacturer in the process of creating a transport means, either of acceptance (state) tests.
- 38. When assessing the compliance of transport means, produced on the base or on the chassis of other transport means, the applicant submitted evidentiary materials, confirming compliance with the restrictions established by the manufacturer of the base vehicle (chassis) with respect to the possibilities of its completion.

39. When assessing the conformity of types of transport means, produced on the chassis of base or on the other transport means, previously passed the approval of the type, the applicant can submit documents proving that between the manufacturer of transport means and the manufacturer of the base vehicle means (chassis) demarcated the responsibility for ensuring the safety of the claimed Vehicle. In this case, the certification body uses issued on the basic transport means (chassis) operating at the time of their release into circulation of approval of a vehicle type (approval type chassis) as an evidentiary materials in parts of the requirements of security, the implementation of which is provided by the manufacturer of base vehicle means (chassis). With this in relation to these requirements, for transport means, produced on the base or on of the other transport means may be used level requirements matching which was confirmed when evaluating the base vehicle (chassis).

of 40. As result studying all a the necessary evidentiary material body of certification prepares the conclusion about the possibility of registration or on refusal in registration of the approval of the type reasoned justification of transport means (approved type chassis), containing a for the adequacy submitted evidentiary materials for assessment of compliance type of transport means (chassis), and also the conclusion about the possibility of distributing the results of the tests carried out on modifications of vehicles (chassis) included in the application.

On the basis of the conclusion about the possibility of registration of the approval of the type of transport means (approved type chassis) body of certification prepares the approval of the type of transport means (approval chassis type).

For each type of transport means (such as chassis) one environmental class in states member Customs Union simultaneously not can operate two and more approva ls type transport means (approvals type chassis) designed on the basis of the technical regulations for excluding re approval type transport means (chassi s type approval) issued during the validity of the vehicle type approval

means (chassis type approval) for a small batch of vehicles (chassis) of the same type.

41. Form approval of the type of transport means provided for application number 14 to the present technical regulations. The chassis type approval form is provided by Appendix 15 to this technical regulation.

The approval of the vehicle type (type approval chassis), made out on a small batch can be made the identification number of transport means (chassis).

absence of the possibility to identify In the the transport means (chassis), included in a small batch approval type transport means (approval type chassis), made out on the small party is not issued to the applicant and remain deposited in the for certification. Body of certification is keeping the number the single customs territory of of manufactured (imported to the Customs Union), transport means (chassis), and on the basis of the appeal of the applicant provides certified copies of the approval of the type of the vehicle (type-approval of the chassis), which set out the identification number of the vehicle (the chassis).

In the type approval of a chassis, issued for a self-propelled chassis, a record is made about the possibility of moving the self-propelled chassis on public roads, if it has been confirmed that it meets the requirements of paragraphs 11-13, 23, 36, 38, 39-41, 69, 107, 109, 110 Appendix No. 2 to this technical regulation.

42. The maximum term of the action approved type of transport means (approval type chassis) 3 years, for the exception of the cases stipulated by paragraphs 35 and 36 of the Technical Regulations and paragraphs of the second and the fourth of this item.

The validity of the vehicle type approval (chassis type approval), including those issued for a small batch of vehicles (chassis), as well as the certificate of compliance with the requirements of this technical regulation in relation to emissions, is limited to the date of expiry of the requirements of the corresponding environmental class.

The validity period of certificates of conformity of a vehicle to separate requirements of Appendix 2 does not exceed 4 years, except for the cases provided for in paragraph two of this clause.

Time action approval type transport means manufactured using the outstanding base vehicle (chassis) manufactured by another manufacturer, in the case of use on the basis of item 39 of the present technical level regulation requirements below current, limited to one year from the date of entry into force requirements, matching which has not been confirmed. The validity of the approval of the vehicle type funds, drawn up on a small batch

of transport means, not limited to, for the exception of the cases provided for by paragraph second of this paragraph.

body of certification is approved 43. The by the type of transport means (approval type chassis) for consideration and approval by the authorized body of state management of the state - a member of the Customs Union, which has the right to designate in the established order of a competent organization that performs functions of technical secretariat for checking the correctness and validity of registration the of the of transport means (approved type chassis). The approval type said organization must not be accredited as a certification body that assesses the conformity of a vehicle (chassis) in the form of type approvals.

In case of detection of violations of the approval of the type of transport means (approval type chassis) is returned to the body of certification.

- 44. The authorized body of state administration of the State a member of the Customs Union shall register and maintain a register of vehicle type approvals (chassis type approvals), as well as certificates of conformity.
- 45. The body of the certification issue applicant approval type transport means (approval type chassis).

Documents that served as the basis for the design approval of the type of transport means (approved type chassis), are stored in the body of certification is not less than 5 years from the date of registration of the approval of the type of transport means (approved type chassis).

46. The certification body exercises control over the conformity of the objects, in respect of which the conformity assessment was carried out to the requirements of this technical regulation, at the production stage.

On behalf of the certification body and in accordance with the procedure established by it, an accredited testing laboratory participates in the control.

47. Control can be planned and unscheduled.

The periodicity of the planned control in respect of each type of vehicle (component) is set not more often 1 time in 2 years.

Unscheduled control is carried out in the cases, if the authority of the certification or the authorized body of state administration of state - a member of the Customs Union receives messages organs of state control (supervision), a body of public administration or the consumers of non-compliance with the requirements of technical regulations.

48. The process monitoring can be analyzed stroke control tests transport means with latching substitutions of

components with a limited period of service and periodic assessment conservation parameters structure in the course of operation.

- 49. Monitoring is carried out by approved authority for certification plan checking, in fact including, if ne cessary, at the suppliers.
- 50. The manufacturer of products and the applicant (if he is not a manufacturer) provide the necessary conditions for carrying out control, in fact including unimpeded access to the inspectors of persons to the facilities inspection according to plan inspections.

The manufacturer's evasion from the implementation of this paragraph may serve as a basis for the decision of the certification body to terminate the validity of documents certifying compliance with the requirements of technical regulations.

- 51. During the control, the following are analyzed:
- 1) the results of state control (supervision) of products released into circulation;
- 2) the effectiveness of the corrective actions taken, developed by the manufacturer, based on the results of previous checks of the production or control conditions;
- 3) the results of the assessment of conformity of products in the event of entering into its structure changes affect on the parameters of the security;
- 4) identification data of product samples for compliance with the approved technical specifications;
- 5) the scope and results of tests carried out to confirm the conformity of products to the requirements of technical regulations;
- 6) Results of tests for confirmation of persistence in the process operating parameters checked when assessing compliance;
- 7) the results of product quality control at the stages of the technological process, determining its compliance with the requirements of technical regulations;
- 8) information about the claims to the quality of the product, in fact including data about the identified faults and malfunctions, obtained in the result of technical maintenance and repair.
- 52. In the course of control at the manufacturer (seller) of the product, its identification is carried out, product samples can be tested in the manufacturer's laboratory or in an accredited testing laboratory.

The test is usually a modification with the expected worst-case test results.

- 53. If the results of the identification of products is assessed as not the conformity corresponding to the types passed assessment procedure, or on the out in the basis of the carried course of verification tests like no corresponding requirements of technical regulations established facts discrepancies are documented, and the manufacturer issued an order to eliminate the detected nonconformity.
 - 54. The results of the control are documented in an act.

The control results are recognized as positive if it is established that:

the products correspond to the types that have passed the conformity assessment procedure;

the appropriate documents (records of technical control, results of control tests, etc.) are presented, confirming the provision of continuous compliance of products with the requirements of technical regulations.

Positive results of product control serve as the basis for maintaining the validity period (and the case of vehicles also for renewal) in of documents certifying compliance with requirements the of technical regulations.

The control results are considered negative if it is established that:

not eliminated mismatch approval type transport means (approval type ch assis) or certificates matching to the components identified with the previously conducted inspection conditions of production or control, and if corrective action is not given the desired result;

without coordination with the Authority for certification in the technical documentation (design, technological, operational) or in the design of products changes, which led to its mismatch types, passed the procedure of assessment of conformity;

control tests were not carried out in the required volume.

If it is necessary to carry out corrective measures, the act must contain appropriate recommendations.

The negative results of the control of the manufacturer or the rejection of his conduct may be the basis for termination of authority of the certification activities of documents certifying compliance with the requirements of the present technical regulations.

55. Based on the results of the control, the manufacturer develops a plan of necessary corrective measures to eliminate the identified inconsistencies with specific terms for its implementation and, within 10 days from the date of transfer to the manufacturer of the issued certificate, submits such a plan to the certification body.

The certification body examines the submitted plan and, if necessary, sends its comments to the manufacturer, and also determines the procedure for checking the implementation of these measures.

At the end of the deadlines set in the plan of necessary corrective actions to eliminate nonconformities agreed with the certification body, the manufacturer submits a certificate of the corrective and preventive actions taken with an assessment of their effectiveness.

56. When receiving body for certification of the negative results of the control, as well as other information about the non-conformity of production requirements of

the technical regulation authority for certification in 30-day term directs the manufacturer and its authorized representative a notice about the need to restore compliance and advice, including with respect to withdrawal products released into circulation.

Upon receipt of this notification, the manufacturer of the products must, within 10 days, send to the certification body a program of corrective actions to restore compliance.

The certification body, within 10 days, coordinates the specified program and monitors its implementation.

57. In the case of recognition of the authority of certification adopted measures insufficient, it is 30 days after the manufacturer or its authorized representative written notice suspend or terminate the certificates of conformity, of what informs the manufacturer and its official representative, the Technical Secretariat and the organs of state control (supervision) ...

The authorized state body of state control - a member of the Customs Union on the basis of the decision authority for the certification of the termination of action of certificates of compliance will invalidate the approval of the type of transport means (approval type chassis) through registration notice of the cancellation of the document on the form provided by the application number 16 to the present technical regulations.

On termination of the action approved type of transport means (approved type chassis) body of certification in the 10-day period shall notify the manufacturer or its official representative, as well as state control authorities (supervision).

Information about the cancellation of the document certifying compliance with the present technical regulations, published in the official printed edition of the authorized body of state management of the state - a member of the Customs Union.

The authorized body of state administration of the State - a member of the Customs Union shall register and maintain a unified register of notifications on the termination of the document certifying compliance with this technical regulation.

- 58. Approval type in the case of termination of the previously granted approval type transport means (approval type chassis) is carried out on common grounds in the manner prescribed by the present technical regulation.
- 59. The holder of the approval of the type of transport means (approved type chassis) in the period of its activities shall be obliged to inform the authority of the certification about all planned changes in the design of transport means (chassis).

On the basis of the assessment of these changes in the body of the certification takes a decision on the possibility of conservation actions issued approvals type of transport means (approvals type chassis), or about the need to extend the approval of the vehicle type funds (approved type chassis) on modifications to the introduced changes in its structure. The decision to design a protocol of identification and the results of tests of the complete vehicle means when propagation takes authority for certification.

60. In case of a positive result considering all the submitted evidentiary material. certification body prepares a conclusion containing the reasoned justification of the sufficiency of submitted evidentiary materials for dissemination actions approved type of transport means (such as the approval of the chassis), as well as separate certificates of conformity on the basis of which draws up new versions of documents ... In the case of confirmation of the applicant conformity of new modifications of the requirements in force at the date of registration of the approval of the type of transport means (approved type chassis), the period of action common approval of the type of transport means (approved chassis type) limit the validity of the original type approval of the transport means (approved type chassis).

If confirmed, the applicant meets all the modifications of the requirements established on the date of registration of common approved type of transport means (approved type chassis), the period of action common approval of the type of transport means (approved type chassis), established in accordance with para graph 42.

At the end of the registration number of the document, the distribution code is entered, consisting of the letter "P" and the serial number of the distribution.

61. Amendment of a vehicle type approval (approval of the type of chassis) in case of detection of inaccuracies when his registration is carried out on the initiative of the authority of the certification, drew up the original document, or upon the request of the holder approval by type of vehicle (chassis type approval) in accordance with the procedure provided for clauses 59 and 60 of this technical regulation. The costs of preparing a new version of the document are borne by the party that made the inaccuracies.

At the end of the registration number of the document, the correction code is entered, consisting of the letter "I" and the serial number of the correction.

62. Renewals action approved type of transport means (approved type chassis) to a new life is made on the basis of the application in the case of matching the type of transport means (chassis) to the list of requirements in force at the time of registration of a new type-approval of the transport means (approved type chassis).

To prolong the action of approval of type of transport means (such as the approval of the chassis), the applicant shall submit to the certification body that apply for the original document, an application with the application the following documents and information:

letter of no change or a list of changes made to the design of the transport means (chassis) that is not been confirmed in the manner provided by paragraphs 59 - 60 of the present technical regulations;

copies of protocols (summary of results) of periodic (control) tests, periodic measurements of parameters recorded in assessing the conformity of a vehicle (chassis) with the requirements of this technical regulation, carried out by the manufacturer during the validity of the vehicle type approval (chassis type approval);

description of the changes of the vehicle production process (chassis) for the time of action approved type of transport means (approved type chassis), if any, have taken place, or a letter of their absence:

information on the corrective actions at the initiative of the manufacturer and the body for certification or letter of their absence;

information about claims to the quality of the transport means (chassis), received in during the period of action approved type of transport means (such as the approval of the chassis), and in the process of implementation of measures

to eliminate identified inconsistencies requirements of the technical regulations or letter of their absence;

if necessary, a list of new modifications transport means (chassis) which serves to extend further action approval type transport means (approval type chassis), with corre sponding technical description and application of evidentiary material.

63. The body of certification also examines:

copies of previously issued approvals such as transport means (chassis type approvals);

conclusion on the results of the analysis of the state of production before the issuance of the previous vehicle type approval (chassis type approval) or certificates of conformity;

acts on the results of monitoring of products in respect of which carried out assessment of conformity with technical regulations and inspection tests, which were carried out during the time of action approved type of transport means (approved chassis type).

- 64. The body of the certification, on the basis of the analysis of the submitted documents, can come to the conclusion that compliance with the product requirements of the technical regulations is maintained, or to require the submission of additional evidentiary materials.
- 65. In the of recognition case of the presented evidentiary materials sufficient authority for certification prepares conclusion, containing justification for the extension of the term of action of the type approval of the vehicle (type-approval of the chassis), as well as separate certificates of conformity renews for the next term and, if necessary, extend them to new versions. and it draws up new documents on its basis.

At the end of the vehicle type approval registration number (chassis type approval), an extension code is entered, consisting of the letter "P" and the extension serial number.

The decision to design a protocol of identification and the results of tests of the complete vehicle means when the extension period of action approved type of transport means (approved chassis type), as well as separate certificates of conformity takes the certification body.

Extension of the term of action approved type of vehicle funds and the approval of the type of gear carried for a period not exceeding three years. Extension of the term of action approved type of transport means (approved type chassis) with confirmation by the applicant of compliance requirements, established on the date of registration of the approval

of the type of transport means (approved type chassis) with a new period of action,

can be carried out repeatedly.

66. Action approved type of transport means (approved type chassis) apply only to the transport means (chassis)

released into circulation during the period of its validity, as well as for vehicles that have passed tests in order to assess compliance with the requirements of this technical regulation, regardless of the period of their subsequent implementation.

The type approval of a vehicle (chassis type approval) issued for a small batch of vehicles (chassis) applies only to vehicles (chassis) included in the specified batch.

67. Action approved type of transport means (approved chassis type), as well as separate certificates of conformity can be prematurely terminated on the basis of the appropriate treatment of the applicant to the certification body.

2. Check the performance requirements for a single transport means before their release into circulation

68. Check the performance requirements for a single transport means before their release into the circulation carried out an accredited test laboratory, included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union, after the identification of each of the transport means in the form of technical expertise structures of the necessary tests and measurements.

Check undergo only complete transport means.

69. In an applicant performs a manufacturer of transport means or his authorized representative acting on his behalf, any perso n who carries out the import of transport means on the single customs territory of the Customs Union, or his representative.

When checking transport means made in the state

- a member of the Customs Union in the conditions of mass production, in the construction of which is in agreement with the vehicle manufacturer's agent in the individual order made changes to the issue in an appeal, the representative of the manufacturer shall be appointed a person

who has carried out the introduction of these changes in the structure of the transport means.

When checking a vehicle released into circulation from among those previously delivered under a state defense order,

the applicant is a person who carries out the issue in the handling of the transport means.

- 70. Conformity assessment of a single vehicle is carried out in the following order:
- 1) submission of the application and the attached documents, provided for by Appendix No. 12 to this technical regulation, to an accredited testing laboratory;
 - 2) adoption of decision on the application in within three working days;
 - 3) identification of a single vehicle;
 - 4) verification of compliance with requirements provided for in paragraphs 11-

14 and Appendices Nos. 4-6, paragraph 4 of Appendix 7 through technical examination of the design and, if necessary, tests;

- 5) preparation of the protocol of technical examination of the vehicle design;
- 6) registration of a safety certificate for the construction of a vehicle and its transfer to the applicant.

An accredited testing laboratory provides the applicant with all the necessary information regarding the rules, procedures and requirements associated with conducting conformity assessment.

The accredited testing laboratory will agree with the applicant the timing of the conformity assessment .

In an evidentiary materials confirming compliance with a single vehicle means the requirements specified applications number 4 - 6 to the present technical regulation, are the records of tests conducted in an accredited testing laboratory.

Accredited testing laboratory conducts inspection of the transport means with the aim of identifying, in that number, according to the identification number, the technical expertise of the construction of the transport means, in that among other things, the necessary tests and measurements, and on their results registered in the minutes.

If a single vehicle of the type to which the acts approved by the type of transport means, the certificate of the security structure of the transport means is made on the basis of the said approved vehicle type funds.

When submitting the applicant posts on the official approval of the type of transport means, provided for the Rules

UNECE UN № 10 - 12, 14, 16 - 18, 21, 26, 34, 39, 46, 48, 58, 73 and 107, technical expertise for the relevant sections of Appendix No. 4 to this technical regulation is not carried out.

Based on the results of the study of all the necessary evidentiary materials, the accredited testing laboratory issues to the applicant a certificate of the safety of the vehicle structure, in which, if necessary, notes on the restriction of the use of the vehicle are entered. The form of this document is provided by Appendix No. 17 to this technical regulation.

In the case of inconsistencies money transport means the requirements of the technical regulations it can be brought into correspondence and represented in accredited test laboratory for reuse of test performance requirements.

Documentation, which has relation to the verification of performance requirements is stored in the archive accredited test laboratory not less than five years.

71. The states - members of the Customs Union shall register and maintain the register of certificates on the safety of the structure of the vehicle.

3. Checking the fulfillment of requirements to transport facilities, located in the operation

- 72. Check the performance requirements to the transport means, located in the operation, carried out in respect of each vehicle registered in the established order in the State a member of the Customs Union in the form of technical inspection, as well as state control (supervision) of road safety movement.
- 73. The procedure and the amount of the audit fulfill the requirements to transport facilities, located in the operation, determined by the national legislation of the countries members of the Customs Union.
- 74. K located in the operating transport means not applicable requirements of this technical regulation to the presence of subject verification element structure which does not have

are provided on the transport vehicle at the time of its release in the circulation.

4. Checking the fulfillment of requirements to vehicles in operation in case of changes in their design

75. Check the performance requirements to the transport means, which are in operation, in the case of making changes in their design implemented in the form of a preliminary technical examination of the design for the possibility of amendment and the subsequent security check design and technical inspection of the transport means with amended to design changes.

In the course of pre-certified technical expertise in the fact that after the introduction of changes in the structure of the transport means to continue its compliance with the requirements of the technical regulations in force at the time of issuance of the transport means in the circulation.

During the test, vehicle safety design certified to the fact that after the introduction of changes in the structure of the transport means its security meets the requirements of the present technical regulations.

- 76. The objects of inspection are a transport means, released into circulation, and the past state registration in which the altered design parameters or components for excluding the cases referred to in paragraph 77.
 - 77. Vehicles are not subject to inspection in the following cases:
- 1) when mounted on vehicle components, intended for this transport means and passed conformity assessment in the composition of this vehicle, which is confirmed by the documentation of the component manufacturer;

provided by the manufacturer of the transport means in the operational documentation;

2) when making serial changes to the design on the basis of the design documentation developed and agreed in the established manner, if on its basis the conformity assessment of the changes made was carried out.

78. Introduction of changes in the structure of the transport means and the subsequent verification of compliance with the requirements of the technical regulations implemented by permission and under the control of government authority units in the security of road traffic on the place of registration accounting of the transport means in accordance with the

procedure established by normative legal acts of the State - a member of the Customs Union.

- 79. According to the results of consideration of submitted documents the state control in the territorial division of the body of field road traffic prepares, registers and issue the applicant a certificate of conformity vehicle with the amended design in its amended safety form provided number requirements on the by the application the technical regulations, or refuses to its issuance with an indication the reasons.
- 80. The number of the certificate of conformity of the vehicle with the changes made to its design to safety requirements is entered by a subdivision of the state administration body in the field of road safety in the document identifying the vehicle. In the document also made all the special mark on the restriction of the use of transport means, contained in the certificate of conformity of the vehicle with amended in its structure changes in the requirements of security.

The presence in the specified document number certificate of conformity of the transport means with amended to design changes with safety requirements is a prerequisite for permission to further exploitation of the transport means with the introduced into the design changes.

5. Verification of compliance with requirements to the types of vehicle components before their release into circulation

81. The purpose of verification of compliance is a witness to the fact that all manufactured components related to the type declared for the confirmation of conformity, meet the requirements provided for by paragraph 20 of the Technical Regulations.

Confirmation of conformity carried out by accredited bodies for certification, included in the Unified Register of bodies of certification and test laboratories (centers) of the Customs

union, in relation to components supplied as replaceable (spare) parts for being in the operation of transport means.

Confirmation of conformity is not carried out in relation to:

1) components supplied to the assembly plant of vehicles (except for components, the confirmation of the conformity of which as separate elements is provided for by the UNECE Regulations);

- 2) components, the former in use;
- 3) the reconstructed components for excluding tire with retreaded tread.

Confirmation of conformity is carried out in the form of declaration of conformity or mandatory certification.

Confirmation of conformity carried out by the Rules ECE UN Global Technical Regulations, and in case of their absence by the standards included in the List of Standards, as a result of which, on a voluntary basis, compliance with the requirements of technical regulations of the Customs Union "On the safety of wheeled transport means."

Permitted forms and schemes of conformity confirmation, depending on the types of components, are provided in Appendix No. 10. Description of conformity confirmation schemes and recommendations for their selection are provided in Appendix No. 19 to this technical regulation.

Submitted for confirmation of the respective components can be manufactured by the technical documentation of the manufacturer corresponding transport means or the manufacturer's components.

82. The applicant is the component manufacturer or his authorized representative his behalf. In acting case on an application for confirmation of conformity of components manufactured outside the common customs territory of the Customs Union. the applicant may be an importer or a company organized outside the Member States of the Customs Union as a wholesale warehouse for the sale of components. Purchases wholesale warehouse directly from manufacturers components must be confirmed documented. Of authority from the manufacturer to the importer or the wholesale warehouse is required.

The applicant, who is the manufacturer of replacement (spare) parts or his authorized representative, has the right to choose any form and scheme of conformity confirmation from among those provided for

specific components (Appendix No. 10 to this technical regulation) or more complex in comparison with those provided, in agreement with the certification body.

In case if you and the applicant, and the manufacturer natural or legal persons who do not are residents of one of the States - a member of the Customs Union, they are not entitled to declare conformity, but thev have the right apply for mandatory certification of replacement (spare) parts. Body for certification takes a decision on carrying out mandatory certification of a particular scheme certification of the numbers provided for specific components (app No 10 this technical regulations).

83. Declaration of Conformity in depending on the schemes declaration made by the applicant by means of the adoption of the declaration of conformity on the basis of their own evidence and (or) the evidence obtained with the participation of a third party (accredited testing laboratory, authority for certification).

Own evidence is formed by the applicant in the form of a set of technical documentation. The kit may include:

basic design documents related to the component as a whole (technical specifications, technical description, general arrangement drawings, specification);

manual or instructions for use;

a list of UNECE Regulations, Global Technical Regulations, standards that were used to verify compliance with the requirements of this technical regulation;

certificate of conformity of the quality management system of the component manufacturer (if any). The scope of the quality management system certification should include the products subject to conformity assessment;

the results of design calculations, inspections, test reports confirming the compliance of product safety indicators with the requirements of this technical regulation;

previously obtained certificates of conformity of products to international and (or) national requirements.

Protocol Test standard sample should comprise characteristics of products, the description of the type of product directly or in the form of a reference to the technical conditions or other similar

document, as well as a conclusion on the conformity of the sample to the technical documentation for which it was made.

The applicant has the right to invite representatives of the certification body and (or) an accredited testing laboratory to participate in the research and testing .

- 84. If the selected scheme for the declaration of conformity provides for the certification of the manufacturer's quality management system, the applicant submits a certificate of conformity of the quality management system issued by a certification body accredited in the prescribed manner.
- 85. The applicant takes the declaration of conformity, in which points to the full compliance with the production requirements of the present technical regulations.

The validity period of the declaration of conformity can not exceed 4 years. For a batch of products, the validity period of the declaration of conformity is not established, but it cannot exceed the shelf life of the products. In case of registration of the declaration of conformity for batch components, it applies only to a specific party, the amount of which is specified in the declaration of conformity and defined document delivery.

Registration of the declaration of conformity in the unified register of declarations of conformity is the basis for the release into circulation of products, the conformity of which it confirms.

- 86. Confirmation of the binding component in the form of certification provided by the application N_2 19 to present technical regulations, may include in themselves in dependence on the circuit:
 - 1) identification of the sample (s) of the components;
- 2) by performing the requirements of the technical regulations for product samples which are representative for the type of component;
- 3) confirmation of the fact that at the Issuing production company uses methods of production and control, allowing to ensure compliance with the requirements of the technical regulations and the types of past compliance confirmation, products intended for release into circulation on the single customs territory of the Customs Union;
 - 4) registration of the certificate of conformity and its transfer to the applicant;
- 5) the supervision of the certification of certified types of components, if it is provided for the scheme certification.
- 87. The composition of the documents submitted by the applicant in the body of certification in order to confirm compliance, provided the application number 12 to these Technical Regulations.

The certification body provides the applicant with all information regarding

the rules, procedures and requirements related to the attestation of conformity.

88. The certification body examines the application for confirmation of the conformity of the types of vehicle components and decides on the possibility of certification. The reason for failure in carrying out certification can be the provision in the body of the certification set documents are not in full volume.

Organ of certification based submitted by the applicant evidentiary material of according production requirements of the Technical Regulations takes a decision on carrying out the certification of a

particular scheme of certifications from the number provided for specific components.

The absence of evidentiary materials confirming the conformity the product to any of the requirements established by the technical regulation in relation this product does not prevent the application from being submitted and is taken account by into the certification body when deciding on the application.

- 89. Following consideration of the documents submitted by the applicant authority on certification sends the applicant a decision, in which reflected:
- 1) the sufficiency of the submitted documents to confirm compliance with the requirements of this technical regulation;
- 2) the applied scheme and the necessary conditions for the confirmation of conformity;
 - 3) the possibility of recognizing the evidence presented by the applicant;
 - 4) the need for testing in order to obtain missing evidence.
- 90. If the carrying out of tests in order to obtain the missing evidentiary materials deemed necessary authority for certification agree with the applicant and accredited testing laboratory of the terms and conditions of their implementation and inform the applicant of the need for the submission of additional technical information.

Said information necessary for conducting a certification test in order to confirm compliance requirements of the technical rules, represented by the applicant as a technical description of a vehicle type component means (chassis) in accordance with the technical requirements of the present regulations, and documents containing techniques tests.

91. Test model sample (standard sample) component transport means (ch assis) are conducted in an accredited testing laboratory on behalf body certification.

Tests conducted on samples of the component transport means (chassis) design and composition which are the same as the moment components into circulation. The applicant provides such a number of product samples, which is necessary to carry out the conformity confirmation procedure provided for by the UNECE Regulations, Global Technical Regulations, international or national standards containing, inter alia, sampling rules. Unless otherwise specified by these documents, the selection of samples of components for testing is carried out by representative of a certification body, a an accredited testing laboratory or other competent organization representing

a third party in relation to the manufacturer and purchaser product. Sampling is carried the presence out in of the applicant by random sampling. When the selection of the samples for carrying out tests in accredited test laboratory carried out their identification and drawn sampling act containing their identification features. The sampling certificate is signed by the applicant.

Tests can be carried out by representatives of accredited test laboratory at the manufacturer and (or) the purchaser of the product with the use of means testing, certified (attorneys) in the established order.

After the test result, in any of their accredited testing laboratory prepares protocols testing, and transmits them to the certification body.

Tested sample components or other materials (photographs, videos etc.), Confirming the holding tests and obtained results are stored in an accredited test laboratory in during the period of action of certificates of compliance.

Documentation, which has relation to the conduct of tests stored in the archive accredited test laboratory not less than 5 years.

92. In the

case if it provides circuitry certification authority for certification conducts anal ysis condition of production in accordance with paragraph 27 of this Technical Regulations.

The list of the main issues studied in the course of the analysis of the state of production, and the procedure for checking the conditions of production are provided by Appendix No. 13 to this technical regulation.

The following can be considered as evidentiary materials confirming the existence of conditions in production that ensure the constant release of products with characteristics and indicators that meet the requirements of this technical regulation: a certificate

of conformity of the manufacturer's quality management system . Scope of quality management system certification

should include products subject to confirmation of conformity; a document on the verification of the production conditions previously carried out authority for certification.

The results of the analysis of the state of production are drawn up in a conclusion.

The results of the analysis of the state of production are taken into account when establishing the frequency and developing a control plan for objects of conformity confirmation .

93. If the certification scheme provides for the certification of the manufacturer's quality management system, the applicant in the application for certification indicates a standard or other document for compliance with which the manufacturer's quality management system will be certified.

The manufacturer's quality management system must ensure that the manufactured products comply with the technical documentation and the requirements of this technical regulation. The applicant must fulfill the requirements arising from the provisions of the certified quality management system and maintain its proper functioning .

The certification of the manufacturer's quality management system is carried out by the quality management system certification body, which, upon positive certification results, issues a certificate of conformity of the quality management system.

Certification of the quality management system is not carried out if the applicant has submitted an existing certificate of conformity of the quality management system issued by a certification body for quality management systems, accredited in the prescribed manner.

94. Based on all the necessary evidentiary materials, the certification body prepares an opinion on the possibility of issuing a certificate of conformity to the applicant for the declared types of products and draws up a certificate of conformity.

The certificate of conformity may be an application containing a list of specific products and (or) its component parts, on which it is distributed.

If in an application to conduct certification included several types of components, representing a diverse products from different manufacturers are allowed to issue a common certificate of conformity specifying in the application list of products which are covered by a certificate of conformity and its manufacturers after each item or after a number of items related for products produced by one and the same manufacturer.

The certificate of conformity on manufactured products, in addition to the manufacturer, can be issued by the seller of the purchased products on the basis of a contract, when there is at Seller documents from the manufacturer certifying the origin of products.

The validity period of the certificate of conformity does not exceed 4 years. In the case of the issuance of the certificate of conformity to a

particular batch of product life of its action is not set, and its effect applies only to the specified party. In this case, the certificate of conformity indicates the distinctive features of the batch products of identification numbers, information about the supply contract or others. If in the contract delivery is not stipulated the number and types of specific products, the period of action of the certificate of established in accordance with the conformity may be contract delivery, but no more than at 1 year.

The validity of the certificate of conformity may be ahead of schedule terminated on the basis of the applicant's corresponding appeal to the certification body .

Information about the issued certificates of conformity and the termination of the issued certificates of conformity are transferred to the register of certificates of conformity.

95. The certification body monitors the conformity of the components, in respect of which was carried out confirmation of conformity of the requirements of the technical regulations, if such control is provided scheme of certification, on production of manufactured products intended for release into circulation in the single customs territory of the Customs Union, to obtain the objective evidence that the manufacturer:

ensures the compliance of vehicle components (chassis) with the requirements of this technical regulation and the issued certificates of conformity;

independently or with the involvement of an accredited testing laboratory periodically and in sufficient volume conducts inspections and tests of manufactured vehicle components (chassis) to confirm their compliance with the requirements of this technical regulation;

provides registration audit results or tests and the availability for the body for the certification of relevant documents;

analyzes the results of the checks or tests in order to ensure the stability characteristics of components of the transport means (chassis) with taking into account deviations allowable in terms of industrial production;

provides in the case of detection of discrepancies found during any inspection or test on any sample specimens, conducting new sampling patterns and repetition of the corresponding test or tests, as well as the adoption of all necessary measures for the restoration of conformity issued in the circulation of components of transport means (chassis).

Control over the conformity of components, in respect of which the conformity was confirmed with the requirements of this technical regulation, is carried out in the manner prescribed by paragraphs 47-54, 56 and 57.

body of certification can extend 96. The the action of the previously issued certificate of conformity to the next period through the issuance of new certificate. The a certificate a basis for issuing the examination of conformity for a new period is the results the submitted documentation, control test reports, the results of the analysis of the state of production, as well as other documents drawn up based on the results of certification and control over

certified types of components. When certifying products for a new period, the decision on the choice of the mandatory certification scheme and the scope of work is made by the certification body on the basis of the accumulated information about the certified products and the state of their production.

97. The vehicle manufacturer (chassis) or the official manufacturer's representative in charge of the requirements specified in Paragraph 26 of the Technical Regulations, has the right to obtain a certificate of conformity to the original and delivered by the official suppliers of the manufacturer of the transport means (chassis) components based on the positive results of the approval of the type of transport means (chassis).

On components supplied as replacement (replacement) parts for aftersales service transport means can be issued a certificate of conformity on the basis of the approval of the type of transport means (chassis) under the following conditions:

the identity of the components supplied to the assembly line production of transport means and components supplied for after-sales service of vehicles;

presentation letter of of the the manufacturer of the transport means, confirming that the manufacturer of the components supplied in as spare parts is a supplier of components for transport means (chassis), or the declaration of manufacturer of components or his authorized dealer for the supply of them on assembly production of transport means (chassis), on which granted approval type transport means (a pproval type chassis) or evidentiary material certifying that the components supplied in as replacement parts, identical components are deliv ered or shipped to the assembly respective transport means (chassis).

The decision on the applicability of the evidentiary materials submitted for the approval of the type of vehicle (chassis), in respect of verification of conformity of individual groups of replacement (spare) parts in each particular case takes the body for certification.

98. In case of termination of the production of a vehicle and, accordingly, the expiration of the validity of the type approval of the vehicle, an application for a certificate may be submitted

conformity for components supplied as replacement (spare) parts with a validity period not exceeding four years. Certificate of compliance can be executed in accordance with the level of requirements in force at the end of manufacture of the vehicle, when the condition of a positive result of the analysis condition monitoring manufacturer transport means components for certification are filed application.

If the certification of replacement (spare) parts for transport means (chassis), production (release in ci rculation) which is terminated (discontinued) and for which the approval of the type of transport means (type approval of the chassis) has been issued, the certification body can use in order to confirm compliance with rules ECE UN Global technical regulations, as well as documents in the of standardization, in the result of the application of which on a voluntary basis, ensure compliance with the requirements technical regulation, to obtain evidentiary materials confirming compliance with transport means and components of the vehicle (chassis) requirements in force at the time of the end production (release into circulation) of a vehicle (chassis).

Vi. Marking with a single mark of product circulation on the market

- 99. The graphic representation of a single mark of product circulation on the market is established by the Decision of the Commission of the Customs Union.
- 100. The single sign products market of the on are labeled vehicles (chassis) on which decorated the approval of the type of transport means (approval type chassis), as well as components of vehicles decorated conformity that are certificates or declarations of compliance requirements of the present technical regulations. Marking is carried out in any convenient way, providing a clear image and excluding abrasion.
- marking vehicles 101. When (chassis), a single sign of product Customs circulation the market of the Union member on states must be located on the manufacturer's plate or on a separate plate

(sticker). Location labels (labels) is indicated in the approval of the type of transport means (approval of the type of chassis).

102. When labeling components single sign -treatment products on market states - members of the Customs Union should be applied directly on of production (if it is technically possible) and or label (if such exists), as well packaging and the as the accompanying technical documentation. A single sign of product circulation on the market of **Customs** Union member states should the be applied, if possible, next to the manufacturer's trademark. Labeling of components approval marks "E" or "e" (. Figure 1) is equivalent to marking a single sign -treatment products on the market states - members of the Customs Union. When available on the components of labeling marks the official approval

"E" or "e" marking of such components with a single mark of circulation on the market of the Member States of the Customs Union is not required.

Fig. 1. Sample marking

Note: 1. The signs "E" and "e" are approval marks . Instead of dots indicated by the distinguishing number of the country, which gave a message about the official approval of the type of vehicle or component of the Rules of the UNECE or EU Directives. The approval number is indicated in accordance with the requirements of the UNECE Regulations and EU Directives.

Vii. Safeguard clause

103. States - members of the Customs Union, guided by the protection of their legitimate interests, taking measures for prevent access to its market for the requirements of the products not meeting present technical regulations. In these purposes the state - members of the Customs Union in accordance with its national legislation exercise the state control (supervision) of the located in the circulation transport means (chassis) and the components of the transport means (chassis), which are the objects of regulation of the present technical regulations.

The measures specified in the first paragraph of this clause may include restriction or prohibition of the release into circulation, or forced withdrawal from the market of products that do not meet the requirements of this technical regulation.

- 104. State control (monitoring) is carried out before the transmission of the vehicle (chassis) or vehicle components means the end consumer through arbitrary validation matching properties and characteristics of the selected random manner sample individual requirements stipulated section V of the Technical Regulations.
- 105. Released in circulation transport means (chassis), which has the approval of the type of vehicle (chassis type approval), is considered to be not relevant requirements of the technical regulations in the following cases:
- 1) at least one characteristic of said vehicle or chassis (at least one of its components), in relation to which the set requirements, does not correspond to the level of the requirements specified in the approval of the type of transport means (Approval type chassis);
- 2) the structural parameters and the characteristics of the transport means (chassis) differ from fixed in endorsement type vehicle (type approval chassis). The exceptions are the changes introduced in the design of transport means (chassis), on which the applicant has informed the authority of certification and in respect of which the certification body decision was made to preserving actions issued documents certifying compliance with the requirements of the present technical regulations.

- 106. The components of vehicles released into circulation, for which there are certificates of conformity or declarations of conformity, are considered not to comply with the requirements of this technical regulation in the following cases:
- 1) at least one characteristic of the component for which the requirements are established does not correspond to the level of requirements specified in the certificate of conformity or declaration of conformity;
- 2) the design parameters and characteristics of the component differ from those recorded in the certificate of conformity or declaration of conformity. The exception is deviations that are within the tolerance from the nominal values, if such are provided for by individual requirements of this technical regulation.
- 107. At unsatisfactory results of verification authority of state control (supervision) of the State a member of the Customs Union to the 10-day period notify about this:

manufacturer of products;

the applicant (if the applicant was an official representative of the manufacturer);

the certification body that issued the documents certifying compliance with the requirements of this technical regulation.

Upon receipt

of notifications, these persons take actions in accordance with clauses 55 and 56 of this technical regulation.

These persons shall notify the state control (supervision) body in accordance with the established procedure about their actions and measures taken to restore the conformity of products .

- 108. The state control (supervision) body of the State a member of the Customs Union has the right to apply to the court with a claim for the forced recall of a specific batch of vehicles (components).
- 109. The state that has applied the safeguard clause and carried out the withdrawal from the market of products that do not meet the requirements of this technical regulation, as soon as possible notify other member states of the Customs Union of such withdrawal.

VIII. Final provisions

110. This technical regulation enters into force simultaneously in all states - members of the Customs Union.

- 111. The states members of the Customs Union provide free access of interested persons to the registers of documents certifying compliance with the requirements of this technical regulation in electronic digital form.
- 112. From the moment of introduction in action of the present technical regulations of the national technical regulations states members of the Customs Union shall not apply to objects of regulation of the present technical regulations.
- 113. From the date of entry into force of the technical regulations is mandatory to specify the manufacturer in the production of documentation on the transport means of the data needed to conduct inspections of the transport means, provided for the application number 8.

APPENDIX No. 1
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

PERECHENL

objects of technical regulation, which are subject to the technical regulations of the Customs Union
"On the safety of wheeled vehicles"

- 1. Transport means
- 1.1. Classification of vehicles by category

Table 1

№ p/p

one.

1.1.

Category L - motor-tools, including mopeds, motorbikes,

mokiki, in fact including:

Category L_1 - Two-wheeled vehicles, the maximum design speed of which does not exceed 50 km/h, and characterized by:

- in the case of an internal combustion engine, with a displacement of the engine not exceeding 50 cm³, or
- in the case of an electric motor, the rated maximum power in continuous load mode not exceeding 4 kW.

Category L_2 - Three - wheeled vehicles with any wheel arrangement, the maximum design speed of which does not exceed 50 km/h, and characterized by:

- in the case of an internal combustion engine with positive ignition, a displacement of the engine not exceeding 50 cm³, or
- in the case of a different type of internal combustion engine maximum effective power not exceeding 4 kW, or
- in the case of an electric motor, the rated maximum power in continuous load mode not exceeding 4 kW.

№ p / p

1.2.

Motorcycles, scooters, tricycles, in fact including:

Category L_3 - Two-wheeled transport means, the working volume of which the engine (in the case of an internal combustion engine) is greater than 50 cm 3 (or) the maximum design speed (at any engine) exceeds 50 km/h.

Category L_4 - Three - wheeled vehicles with wheels asymmetrical in relation to the median longitudinal plane, the engine displacement of which (in the case of an internal combustion engine) exceeds 50 cm 3 and (or) the maximum design speed (for any engine) exceeds 50 km/h ...

Category L_5 - Three - wheeled vehicles with wheels symmetrical with respect to the median longitudinal plane of the vehicle, the engine displacement of which (in the case of an internal combustion engine) exceeds 50 cm 3 and (or) the maximum design speed (with any engine) exceeds 50 km / h

1.3. Quadricycles, in fact including:

Category L_6 - Four- transport means, the mass of which no load is not greater than 350 kg , without taking into account the mass of the batteries (in the case of an electric vehicle means), maximum constructive speed not exceeding 50 km/h, and characterized by:

- in the case of an internal combustion engine with positive ignition, a displacement of the engine not exceeding 50 cm ³, or
- in case the engine of internal combustion of another type the maximum efficient engine power not exceeding 4 kW, or
- in the case of the motor the nominal maximum power of the engine in a mode long load not exceeding 4 kW.

Category L_7 - Four-wheel vehicles other than vehicles category L_6 , whose mass without load does not exceed 400 kg (550 kg for transport means, intended for the transportation of goods) without taking into account the mass of the batteries (in the case of an electric vehicle means) and a maximum effective engine power does not exceed 15 kW.

№ p / p

2.

Category M - Transportation means, having not less than four wheels and used for the carriage of passengers

2.1. Category M₁- transport means used for transportation of passengers and having, in addition to the driver's seat, not more than eight seats passenger cars.

2.2. Buses, trolley

buses, specialized passenger transport means and their chassis, in fact including:

Category M_2 - transport means used for transportation of passengers, which have, in addition to the seat of the driver, more than eight seats, technically permissible maximum weight of which does not exceed 5 m.

Category M_3 - transport means used for transportation of passengers, which have, in addition to the seat of the driver, more than eight seats, the technically permissible maximum mass of which exceeds 5 tons

Transportation means of categories M 2 and M 3 capacity of not more

The 22 passengers in addition to the driver are subdivided into class A, intended for the carriage of standing and seated passengers, and class B, intended for the carriage of only seated passengers. Transportation means of categories M 2 and M 3 a capacity over 22 passengers other than the driver are classified into class I, having a dedicated area for standing passengers and providing a fast shift passengers, class II, intended for transportation advantageously s eated passengers and having the possibility to transport standing passengers in the passageway and / or on an area not exceeding the area of a double passenger seat, and class III, intended for the carriage of exclusively seated passengers.

№ p/p

3.

Category of N - transport means used for transportation of goods - automobiles , trucks and their chassis, in fact including:

Category N_1 - transport means, intended for transportation of goods, having technically permissible maximum weight of no more than 3.5 m.

Category N₂- transport means, intended for transportation of goods, having technically permissible maximum weight of over 3.5 m but not more than 12 m.

Category N_3 - transport means, intended for transportation of goods, having technically permissible maximum weight of more than 12 m.

4. Category O - trailers (semi) to the transport means

of categories L, M, N, in fact including: (Remark AIH)

Category O₁- trailers, technically permissible maximum weight of which is not more than 0.75 m.

Category O₂- Trailers, the technically permissible maximum mass of which is over 0.75 tons, but not more than 3.5 tons.

Category O₃- Trailers, the technically permissible maximum mass of which is over 3.5 tons, but not more than 10 tons.

Category O₄- trailers, technically permissible maximum weight which is more than 10 m.

Notes:

1. Transport means having not more than eight seats for seats, excluding the driver's seat for the transport of passengers and goods, belongs to the category:

M $_{\scriptscriptstyle \rm I}$, if the product of the number of passengers provided for by the design by the conventional mass of one passenger (68 kg) exceeds the estimated mass of the cargo transported simultaneously with the passengers; N if this condition is not met.

A vehicle intended for the carriage of passengers and goods, which, in addition to the driver's seat, has more than eight seats, belongs to category M.

2. In the case of semi-trailers and trailers with a centrally located axle (s), under the technically permissible maximum mass, the static vertical load transmitted to the ground by the axle or axles of the maximum loaded semi-trailer coupled to the tractor and the trailer with a centrally located axle (s) is assumed.

3. For the purposes of paragraph 1.1 of the application equipment and installations, which are on special transport vehicles (cranes, transport facilities, equipped with ski lifts with a working platform Car hauler, etc.) are assimilated to goods.

1.2. Off - road vehicles (category G)

- 1.2.1. To transport means enhanced permeability (category G), can be attributed craft categories M and N, if they satisfy the following requirements:
- 1.2.1.1. Craft category N₁, technically permissible maximum weight of no more than 2 m, and craft category M₁ believe transport means enhanced permeability, if they have:
- 1.2.1.1.1. At least one front axle and one rear axle construction which ensures their simultaneous drive, including transport means, in which the drive to one axle can be switched off;
- 1.2.1.1.2. Although to a mechanism for locking the differential or a mechanism having a similar effect, and
 - 1.2.1.1.3. If they (in the case of a single vehicle) can climb 30%.
- 1.2.1.1.4. They also must meet at least five of the six listed below requirements:
 - 1.2.1.1.4.1. The angle of entry must be at least 25
 - $^{\circ}$; 1.2.1.1.4.2. The departure angle must be at least 2 0 $^{\circ}$;
- 1.2.1.1.4.3. The longitudinal angle of permeability must be at least 20 $^{\circ};$
- 1.2.1.1.4.4. The ground clearance under the front axle must not be less than 180 mm;
- 1.2.1.1.4.5. The ground clearance under the rear axle must be at least 180 mm;
- 1.2.1.1.4.6. The center-to-center ground clearance must be at least 200 mm.
- 1.2.1.2. Craft N_1 technically category permissible maximum weight which than 2 is more t, or transportation means categories N₂, M₂ or M₃, technically permissible ma ximum weight which is not more than 12 m, according to road vehicles either if designed driven thev are he to simultaneously all wheels, including transport means, in which drive one axis

can be disabled, either if they meet the following requirements:

- 1.2.1.2.1. At least one front axle and one rear axle are simultaneous drive, including and transport means, in which drive one axis can be disengaged;
- 1.2.1.2.2. There are, of at least one mechanism for locking the differential or a mechanism similar to the action;
- 1.2.1.2.3. Transportation means (in the case of a single transport means) can overcome the rise of 25%.
- 1.2.1.3. Transportation means category M $_3$, technically permissible maxi mum weight which is more than 12 m, and transport means category N $_3$ (with the exception of truck tractors) they find road vehicles, if they are simultaneously drive all the wheels, including vehicles which drive one axis can be disabled, or if the following requirements are met:
 - 1.2.1.3.1. According to at least half axles is driven;
- 1.2.1.3.2. There are, of at least one mechanism for locking the differential or a mechanism similar to the action;
- 1.2.1.3.3. Transportation means (in the case of a single transport means) may overcome the lift 25%;
- 1.2.1.3.4. Met, on at least four of the six following requirements:
 - 1.2.1.3.4.1. The angle of entry must be at least 25
 - °; 1.2.1.3.4.2. The departure angle must be at least 2 5 °;
- 1.2.1.3.4.3. The longitudinal angle of permeability must be at least 25 °:
- 1.2.1.3.4.4. The ground clearance under the front axle must be at least 250 mm;
- 1.2.1.3.4.5. The center-to-center ground clearance must be at least 300 mm;
- 1.2.1.3.4.6. The ground clearance under the rear axle must be at least 250 mm.
- 1.2.2. Special and specialized transport means made on the of (chassis) transport funds category the G, belong to the category of the G, if they satisfy the requirements of subparagraph 1 above.

1.2.3. When designating a category of off - road vehicles, the letter G must be combined with the letters M or N (eg N $_{1}$ G).

Notes:

- 1. In carrying out verification in order assigning transport means to the G categories craft category N $_{\scriptscriptstyle 1}$, technically permissible maximum weight which is not more—than 2—m, and transport means category M $_{\scriptscriptstyle 1}$ must be in running order condition, i.e., filled with coolant , lubricant, fuel, equipped with a tool and a spare wheel, the standard driver's weight should also be taken into account, taken equal to 75 kg. The rest of the vehicles must be loaded to the technically permissible maximum mass established by the manufacturer.
- 2. The ability of the vehicle to overcome the rise of the set value (25% or 30%) is confirmed by the calculation method; however, the technical services may require the submission of a vehicle of the appropriate type for the actual test.
- 3. When measuring the angle of entry and exit angle, as well as the longitudinal angle of passability, protective devices are not taken into account.
- 4. The following definitions relating to the angle of entry and the angle of the congress, as well as longitudinal angle terrain and road clearance:

angle of entry - according to ISO 612, clause 6.10 (see Figure 1); angle Congress - by standard ISO 612, paragraph 6.11 (see. Figure 2); cross-country angle - according to ISO 612, clause 6.9 (see Figure 3); center ground clearance - the shortest distance between the reference plane and the lowest point of

the vehicle, located on its rigid element. Multi-axle bogies are considered as one axle (see figure 4);

ground clearance under one axle - the distance between the top point of the circular arc passing through the centers of the tire contact spots of one axle (in the case of twin tires - tires of the inner wheels of the axle) and touching the lowest point of the vehicle, rigidly fixed between the wheels, and the reference plane (see Figure 5). Neither one rigid part of the transport means do not should be, completely or partially, in the hatched area (see. Figure 5).

Figure 1. Angle of entry

Figure 2. The angle of exit

Figure 3. Longitudinal angle of permeability

Figure 4. Center-to-center ground clearance

Figure 5. Ground clearance under one axle

1.3. Special and specialized means of transport in respect of which imposed additional requirements security

Table 2

- 1. Concrete pumps
- 2. Concrete mixer trucks
- 3. Auto asphalt distributors
- 4. Truck cranes and vehicles equipped with manipulator cranes
- 5. Timber trucks
- 6. Automobile emergency medical aid
- 7. dump trucks and trailers (semi) dump
- 8. Auto cement trucks
- 9. Tow trucks
- 10. Medical complexes on the chassis of vehicles
- 11. Fire trucks
- 12. Vehicles for emergency services and police (police)
- 13. Vehicles for public utilities and road maintenance
- 14. Vehicles for servicing oil and gas wells
- 15. Vehicles for the transportation of cash proceeds and valuable goods
- 16. Transport means for transportation of children in age from 6 to 16 years

- 17. Vehicles for the carriage of goods using a dismantling trailer
- 18. Transport means for transport of petroleum products
- 19. Transport means for transportation of food liquids
- 20. Vehicles for the transportation of liquefied hydrocarbon gases at a pressure of up to 1.8 MPa
- 21. Vehicle operational service for the transport of persons are in custody
- 22. Vehicles equipped with work platform lifts
- 23. Vehicles trucks for transportation of food products

1.4. Subdivision of vehicles of categories M and N and internal combustion engines for such vehicles for environmental classes

The levels of emissions and requirements to ensure fulfillment of emission levels set for different classes of environmental transport means and the engine combustion:

Table 3

| Environmental cal cl | Categories and | Technical |
|----------------------|-----------------------|---------------------|
| | subgroups of vehicles | requirements for |
| | and | the transport means |
| | internal combustion | and |
| | engines | internal combustion |
| | | engines |

0 M₁, M₂, N₁, N₂ (in accordance with the scope of UNECE Regulation No. 8 3) with gasoline and gas engines

UNECE Regulation No. 83-02 (emission level A)

M $_{\mbox{\tiny 1 with a}}$ maximum mass over 3.5 t, M $_{\mbox{\tiny 2}}$, M $_{\mbox{\tiny 3}}$, N $_{\mbox{\tiny 1}}$, N $_{\mbox{\tiny 2}}$, N $_{\mbox{\tiny 3}}$ s diesels

Rules ECE UN number 49-01

| Environmental cal cl | Categories and | Technical |
|----------------------|-------------------------|---------------------|
| | subgroups of vehicles a | requirements for |
| | nd | the transport means |
| | Engine internal combus | and |
| | tion | internal combustion |
| | | engines |

 $M_{1 \text{ with a}}$ maximum mass over 3.5 t, M_{2} , M_{3} , N_{2} , N_{3} with gasoline engines

CO - 85 g / kWh, HC - 5 g / kWh, NO _x - 17 g / kWh (9-mode test cycle)

diesel engines intended for installation on vehicles of categories M $_{\mbox{\tiny 1 with}}$ a maximum mass over 3.5 t, M $_{\mbox{\tiny 2}}$, M $_{\mbox{\tiny 3}}$, N $_{\mbox{\tiny 1}}$, N $_{\mbox{\tiny 2}}$, N $_{\mbox{\tiny 3}}$

Rules ECE UN number 49-01

gasoline engines intended for installation on vehicles of categories M $_{\rm 1}$ $_{\rm with\,a}$ maximum mass over 3.5 t, M $_{\rm 2}$, M $_{\rm 3}$, N $_{\rm 2}$, N $_{\rm 3}$

1 M₁, M₂, N₁, N₂(in accordance with the scope of UNECE Regulation No. 83) with gasoline and gas engines and diesels

CO - 85 g / kWh, HC - 5 g / kWh, NO $_x$ - 17 g / kWh (9-mode test cycle)

UNECE Regulation No. 83-02 (emission levels B, C, respectively)

 $M_{_{1\,\text{with a}}}$ maximum mass over 3.5 t, M $_{_{2}}$, M $_{_{3}}$, N $_{_{1}}$, N $_{_{2}}$, N $_{_{3}}$ s gas engines and diesels

UNECE Regulation No. 49-02 (emission level A)

 $M_{1 \text{ with a}}$ maximum mass over 3.5 t, M_{2} , M_{3} , N_{2} , N_{3} with gasoline engines

CO - 72 g / kWh, HC - 4 g / kWh, $NO_x - 14 g / kWh$ (9-mode test cycle)

diesel engines and gas engines intended for installation on vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_1$, N $_2$, N $_3$

UNECE Regulation No. 49-02 (emission level A)

| Environmental cal cl | Categories and | Technical |
|----------------------|-------------------------|---------------------|
| | subgroups of vehicles a | requirements for |
| | nd | the transport means |
| | Engine internal combus | and |
| | tion | internal combustion |
| | | engines |

gasoline engines intended for installation on vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$

 $2\ M_{\scriptscriptstyle 1}, M_{\scriptscriptstyle 2}, N_{\scriptscriptstyle 1}, N_{\scriptscriptstyle 2} (in accordance with the scope of the Rules$

CO - 72 g / kWh, HC - 4 g / kWh, NO $_x$ - 14 g / kWh (9-mode test cycle)

UNECE Regulation No. 83-04 (emission levels B, C, D

ECE UN number 83) with petrol, respectively) and gas engines and diesels

M $_{1\,\text{with a}}$ maximum mass over 3.5 t, M $_{2}$, M $_{3}$, N $_{1}$, N $_{2}$, N $_{3}$ s gas engines and diesels

UNECE Regulation No. 49-02 (emission level B)

 $M_{1 \text{ with a}}$ maximum mass over 3.5 t, M_{2} , M_{z} , N_{2} , N_{3} with gasoline engines

SB - 55 g / kWh, HC - 2.4 g / kWh, NO $_x$ - 10 g / kWh (for tests of ECE Regulation No 49- 04 (test cycle ESC))

diesel engines and gas engines intended for installation on vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_1$, N $_2$, N $_3$

UNECE Regulation No. 49-02 (emission level B)

gasoline engines intended for installation on vehicles of categories M $_{\rm 1}$ $_{\rm with\,a}$ maximum mass over 3.5 t, M $_{\rm 2}$, M $_{\rm 3}$, N $_{\rm 2}$, N $_{\rm 3}$

SB - 55 g / kWh, HC - 2.4 g / kWh, NO $_x$ - 10 g / kWh (for tests of ECE Regulation No 49- 04 (test cycle ESC))

| Environmental cal cl | Categories and | Technical |
|----------------------|-------------------------|---------------------|
| | subgroups of vehicles a | requirements for |
| ass | nd | the transport means |
| | Engine internal combus | and |
| | tion | internal combustion |
| | | engines |

3 M $_{\scriptscriptstyle 1},$ M $_{\scriptscriptstyle 2},$ N $_{\scriptscriptstyle 1},$ N $_{\scriptscriptstyle 2}(in$ accordance with the scope of UNECE Regulation No. 83) with gasoline and gas engines and diesels

UNECE Regulation No. 83-05 (emission level A)

M $_{1\,\text{with a}}$ maximum mass over 3.5 t, M $_{2}$, M $_{3}$, N $_{1}$, N $_{2}$, N $_{3}$ s gas engines and diesels

UNECE Regulation No. 49-04 (emission level A)

M $_1G$ and M $_2G$ with a maximum mass over 3.5 t, M $_3G$, N $_2G$, N $_3G$ with diesel engines

 $M_{\,{}^{1}\,\text{with}\,{}^{3}}$ maximum mass over 3.5 t, M $_{2}$, M $_{3}$, N $_{2}$, N $_{3}\,\text{with gasoline engines}$

Rules ECE UN number 96-01

Clause 12 of Appendix No. 3 to this technical regulation

diesel engines and gas engines intended for installation on vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_1$, N $_2$, N $_3$

diesel engines intended for installation in transport means of categories M ₁G and M ₂G weight exceeding 3.5 m, M ₃G, N ₂G, N ₃G

Rules ECE UN number 96-01

| Environmental cal cl | Categories and subgroups of vehicles a nd | Technical requirements for the transport means |
|----------------------|---|--|
| | Engine internal combus | and |
| | tion | internal combustion |
| | | engines |

gasoline engines intended for installation on vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$

4 M₁, M₂, N₁, N₂ (in accordance with the scope of UNECE Regulation No. 83) with positive ignition and diesel engines

Clause 12 of Appendix No. 3 to this technical regulation

UNECE Regulation No. 83-05 (emission level B)

M $_{1\,\text{with a}}$ maximum mass over 3.5 t, M $_{2}$, M $_{3}$, N $_{1}$, N $_{2}$, N $_{3}$ s gas engines and diesels

UNECE Regulation number 49-05 (emissions B1, level of requirements in relation to on-board diagnostics, the durability and serviceability, NOx control - "C")

M $_1$ G and M $_2$ G maximum mass of over 3.5 m, M $_3$ G, N $_2$ G, N $_3$ G with drive on all the wheels, in particular, with switchable drive one of the axles with diesels

 $M_{\rm 1\,with\,a}$ maximum mass over 3.5 t, M $_{\rm 2}$, M $_{\rm 3}$, N $_{\rm 2}$, N $_{\rm 3}$ with gasoline engines

Rules ECE UN number 96-02

Clause 12 of Appendix No. 3 to this technical regulation

| Environmental cal cl | Categories and | Technical |
|----------------------|-------------------------|---------------------|
| | subgroups of vehicles a | requirements for |
| ass | nd | the transport means |
| | Engine internal combus | and |
| | tion | internal combustion |
| | | engines |

diesel engines and gas engines intended for installation on vehicles of categories M $_1$ with $_3$ maximum mass over 3.5 t, M $_2$, M $_3$, N $_1$, N $_2$, N $_3$

UNECE Regulation number 49-05 (emissions B1, level of requirements in relation to on-board diagnostics, the durability and serviceability, NOx control - "C")

diesel engines designed for installation on vehicles of categories M ₁G and M ₂G with a maximum mass over 3.5 t, M ₃G, N ₂G, N ₃G, s all-wheel drive, including with a switchable drive of one of the axles

gasoline engines intended for installation on vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$

M, N hybrid (according to the field of application Rules ECE UN number 49) and engines intended for installation on such transport means

Rules ECE UN number 96-02

Clause 12 of Appendix No. 3 to this technical regulation

Clause 13 of Appendix No. 3 to this technical regulation

5 M 1, M 2, N 1, N 2(in accordance with the area of application of Rules UNECE № 83-06) with motors with forced ignition and diesel engines

Rules ECE UN number 83-06,

| Environmental cal cl | Categories and | Technical |
|----------------------|-------------------------|---------------------|
| | subgroups of vehicles a | requirements for |
| ass | nd | the transport means |
| | Engine internal combus | and |
| | tion | internal combustion |
| | | engines |

 $M_{\ 1\,\text{with}\,\text{a}}$ maximum mass over 3.5 t, M $_2$, M $_3$, N $_1$, N $_2$, N $_3s$ gas engines and diesels

UNECE Regulation No. 49-05 (emission level B2, C, level of requirements regarding on-board diagnostics, durability, NOx monitoring - "G", "K")

diesel engines and gas engines intended for installation on vehicles of categories M $_{1\,\text{with a}}$ maximum mass over 3.5 t, M $_{2}$, M $_{3}$, N $_{1}$, N $_{2}$, N $_{3}$

M, N hybrid (according to the field of application Rules ECE UN number 49) and engines intended for installation on such transport means

UNECE Regulation No. 49-05 (emission level B2, C, level of requirements regarding on-board diagnostics, durability, NOx monitoring - "G", "K")

Clause 13 of Appendix No. 3 to this technical regulation

2. Components of vehicles

Table 4

No.

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- 1. Engines with positive ignition
- 2. Engines with ignition from compression
- 3. Equipment for supplying the engine with gaseous fuel (compressed natural gas CNG, liquefied petroleum gas LPG (or liquefied

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petroleum gas - LPG ) , liquefied natural gas - LNG, fuel dimethyl ether - DME ():
- gas cylinder ;
- cylinder auxiliary equipment ;
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- gas reducing equipment;
- heat exchange devices;
- gas mixing devices;
- gas metering devices;
- solenoid valves;
- consumable filling and control and measuring equipment;
- gas filter;
- flexible hoses;
- fuel lines;
- electronic control units
- 4. Exhaust gas neutralization, including, removable catalysts (except the systems neutralization on urea)
- 5. Replaceable engine exhaust systems, incl. mufflers and resonators
- 6. Fuel tanks, flood neck and cork of fuel tanks
- 7. Pads with lining assemblies for disc and drum brakes, friction linings for drum and disc brakes
- 8. Hydraulic brake drive devices: master brake cylinders, disc brake calipers, wheel brake cylinders of drum brakes, brake force regulators, vacuum and hydraulic (complete with master brake cylinders) and hydraulic vacuum and pneumohydraulic boosters, control and signaling devices
- 9. Tubes and hoses, incl. coiled hoses (including with the use of material based on polyamides 11 and 12) of hydraulic systems of the brake drive, clutch and steering drive
- 10. The brake mechanism in the collection

- 11. Parts and assemblies of mechanical drives of the brake system: adjusting devices of brake mechanisms, parts of the drive of the parking brake system (including cables with lugs assembled)
- 12. Brake discs and drums
- 13. Devices of the pneumatic brake drive: units

air preparation (anti-freezers, moisture separators, pressure regulators), protective equipment of the pneumatic drive, condensate drain valves, control devices (brake valves, accelerating valves, trailer brake control valves, air distributors), brake adjustment devices (brake force regulators, pressure limiting valves in the pneumatic drive front axle), connecting heads, signaling and control devices (pneumo-electric sensors, control output valves)

- 14. Pneumatic brake chambers (including with a spring brake), pneumatic brake cylinders
- 15. Compressors
- 16. Units and car steering parts: steering wheels, steering gears, power steering, hydraulic pumps, valves and power steering cylinders amplifiers, speakers, steering, bevel gears, steering shafts, steering rods, steering gear and intermediate arm supports, pivots pivot pins
- 17. Handlebars of motorcycle type
- 18. Hinges ball suspension and steering control
- 19. Wheels of vehicles
- 20. Tires pneumatic for passenger cars and their trailers
- 21. Pneumatic Tires for light trucks and commercial vehicles and their trailers, buses and trolleybu ses
- 22. Pneumatic tires for motorcycles, scooters, quads and mopeds
- 23. Pneumatic spare wheel tires for temporary use

- 24. Retreated pneumatic tires for cars and their trailers
- 25. Coupling devices (towing, fifth wheel and towing)
- 26. Hydraulic tipping mechanisms of dump trucks:
 - single- acting telescopic hydraulic cylinders;
 - hydraulic valve with manual and remote control

 $N_{\underline{0}}$

p

/ p

- 27. Hydraulic mechanisms for tipping cabins of vehicles:
 - hydraulic cylinders of the hydraulic cab tipping mechanism;
 - pumps of the hydraulic cab tipping mechanism
- 28. Sleeves of the hydraulic booster of a steering and a dump truck platform tipper
- 29. Bumpers, protective arches for motorcycles
- 30. Rear and side protection devices for trucks and trailers
- 31. Seats of cars
- 32. Head restraints seats
- 33. Belts Safety
- 34. Pillows Safety
- 35. The retaining devices for children
- 36. Safety glasses
- 37. Mirrors Rear type
- 38. Windscreen wipers and spare parts for them (gear motors, brushes)
- 39. Headlamp cleaners and spare parts for them (gearmotors)
- 40. Headlights automobile low and high beam
- 41. Incandescent lamps for headlights and lanterns
- 42. Reflective devices (reflectors)
- 43. Lanterns of illumination of the rear registration plate
- 44. Direction indicators
- 45. Parking and outline lights, braking signals
- 46. Fog lights

- 47. Devices for lighting and light signaling of motorcycles and quadricycles
- 48. Lanterns rear running transport means
- 49. Halogen headlights HSB
- 50. Rear fog lights
- 51. Headlights for mopeds
- 52. Headlights for motorcycles
- 53. Warning lights
- 54. Lights for motorcycles with halogen lamps HS
- 55. Headlights low and high beam for mopeds

- 56. Parking lights
- 57. Headlights for mopeds with HS2 halogen lamps
- 58. Daytime running lights
- 59. Side marker lights
- 60. Headlights with gas-discharge light sources
- 61. Gas-discharge light sources
- 62. Sound signaling devices
- 63. Speedometers, their gauges and instrument combinations, including speedometers
- 64. Speed limiting devices
- 65. Technical means of monitoring compliance by drivers with traffic, work and rest regimes (tachographs)
- 66. Alarm systems, anti-theft and security devices for vehicles
- 67. The rear identification signs slow transportation means
- 68. Rear identification plates for vehicles of great length and carrying capacity
- 69. Reflective markings for vehicles of great length and carrying capacity
- 70. Warning triangles (emergency stop signs)

- 71. Accumulator starter batteries
- 72. Wiring harness
- 73. High-voltage wires of the ignition system
- 74. Pointers and sensors of emergency conditions
- 75. Turbochargers
- 76. Details of the cylinder group, the timing mechanism, crank shafts, inserts bearings, connecting rods
- 77. Fuel injection systems of engines with positive ignition and their replaceable elements
- 78. Air cleaners for internal combustion engines and their replaceable elements
- 79. Oil cleaning filters and their replaceable elements
- 80. Filters for cleaning diesel fuel and their replaceable elements
- 81. Filters for cleaning fuel of engines with positive ignition and their replaceable elements

- 82. High pressure fuel pumps, fuel priming pumps, plunger pairs, injectors and injector nozzles for diesel engines
- 83. Heat exchangers and thermostats
- 84. Pumps for liquid cooling systems
- 85. Clutches and their parts (discs, cylinders, hoses)
- 86. Cardan drives, drive shafts, joints of unequal and equal angular speeds
- 87. Bridges leading to the differential in the assembly, the half-line
- 88. Elastic suspension elements (leaf springs, springs, suspension torsion bars, anti-roll bars, pneumatic elastic elements)
- 89. Damping elements of the suspension (shock absorbers, shock absorber struts and cartridges of shock absorber struts) and steering drive

- 90. Details of the guide vane suspension (arms, rocket-propelled rods, their fingers, rubber mounts, bearings, sleeve bearings, guides travel suspension)
- 91. Caps (including decorative) hubs. Wheel fastening elements. Loads balancing wheels.
- 92. Products of the ignition system for engines with positive ignition (distributors, sensors distributors, ignition coils, ignition modules, electronic switches, controllers, sensors, breakers).
- 93. Spark plugs; candle bulbs
- 94. Electric generators, rectifier units, electric motors (fan drives, petrol pumps, windscreen washers, windows, heaters, mirror controls, door locks)
- 95. Starters, drives and starter relays
- 96. Switching, protective and installation equipment for power supply circuits for start-up, ignition, external light and sound devices, windshield wipers, fuel supply systems, detachable connections
- 97. Decorative details of the body and bumper, radiator grilles, visors and headlight rims

- 98. Handles (external and internal) and door hinges on the side surfaces of the body, external buttons for side opening of doors and trunk
- 99. Door locks
- 100. Protective rubber and rubber-metal parts (caps, covers, sealing rings, cuffs for the hydraulic drive of brakes and clutches, covers for steering joints, suspension, cardan shafts)
- 101. Seals for cylinder heads, manifolds, gas equipment, sealing rings
- 102. Clutches for disengaging clutches, wheel hubs, half-axles of wheels, including those with assembled bearings; bearings for disengagement clutches, wheel hubs, wheel axle shafts
- 103. Air-liquid heaters; integral coolers, heater-coolers

- 104. Independent air and liquid heaters-heaters of automatic operation, operating from the on-board network of vehicles on liquid or gaseous fuel, including preheaters
- 105. Jacks hydraulic, mechanical
- 106. Chains, chain tensioners for internal combustion engines
- 107. Fan V-belts and poly- V- ribbed belts for car engines, toothed belts of the gas distribution mechanism of car engines
- 108. The diaphragm and the diaphragm rubber-Belleville for transport means
- 109. Protective helmets for drivers and passengers of motorcycles and mopeds
- 110. Luggage carriers are automobile
- 111. Systems of partitions to protect passengers when baggage is shifted
- 112. Materials for finishing the interior and seats of vehicles of category M ₃ classes II and III
- 113. Antennas external radio, television, Systems of satellite navigation
- 114. Adaptive system front lighting

- 115. Devices for reducing splashing from under the wheels
- 116. Anti-skid studs

APPENDIX No. 2 to the technical regulations of the Customs Union

"On the safety of wheeled vehicles funds" (T R CU 018/2011)

PERECHENL

the requirements imposed on the type produced in the circulation transport means (chassis)

- 1. List of requirements imposed on the type produced in the circulation transport means (chassis), is provided in the table.
- 2. The requirements are applied in accordance with the scope and subject to the transitional provisions set out in the UNECE Regulations (Global Technical Regulations).
- 3. Requirements are introduced from January 1 of the year indicated in the table. If the date of entry into force is not specified, then the requirements are valid from the date of entry into force of this technical regulation. If the Rules ECE UN (Global Technical Regulation) provided a later date of administration requirements than the deadlines set out in the table, then apply the terms of administration requirements established by the Rules of the ECE UN (Global Technical Regulations).
- 4. The date closure action requirements (if it is installed) is December 31 of the year shown in the table.
- 5. Allowed an alternative application of higher level requirements earlier than the deadlines established in the list of requirements.
- 6. When assessing the conformity of vehicles (chassis) belonging to a type that has not previously passed the assessment of compliance with this technical regulation or in accordance with the national procedures of the Member States of the Customs Union, as well as when extending previously issued vehicle (chassis) type approvals with taking into account paragraph 5 of article 65 of this Regulation or their distribution, taking into account paragraph 2 of paragraph 60 of the present regulations apply rules ECE United Nations to set out in amendments to the level of the table in the version in force at the time of registration approval such as the transport means (chassis) in the registry, with the view of their transition provisions.

When distributing previously issued type approvals for a vehicle (chassis), taking into account paragraph 1 of paragraph 60 of this Regulation, the level

of requirements is determined at the time of registration of the initial documents, with the exception of requirements for emissions.

- 7. If in an evidentiary material on the requirements of the application number 2 is a message of type approval of the transport means of the Rules ECE UN, the presentation of copies of messages on the official approval in respect of certain types of components subject to these UNECE Regulations and referred to in the report of the the official approval of the type of transport means, not necessarily.
- 8. Assessment of compliance with the requirements specified in the table is carried out in the form of mandatory certification.

Table

| № p / p | Elements and property objects of technical regulation ation to which requirements are blished | in rel | Applicabi y of categor s of transport eans | rie | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|---|--------|---|----------|---|--------------|
| | adlights low and gh beam | M, N | T, L | Ru 02 | iles ECE UN number 1- | twenty) |
| 2. | Reflectors | M, N | , O, L | Ru 02 | iles ECE UN number 3- | |
| the | Devices for umination of e rear gistration plate | M, N | T, O | Ru 00 | iles ECE UN number 4- | |
| 4. | Direction indicators | M, N | , O, L | Rt 01 | iles ECE UN number 6- | |

| Parking lights, brake signals | M, N, O, L | Rules ECE UN number 7- 02 | four) |
|-------------------------------|------------|------------------------------|---------|
| Headlights low and high beam | M, N, L | Rules ECE UN number 8-05 | twenty) |

| № p / p | of technical regulation in rel | | of c | olicabilit y ategorie s of asport m eans | Documents, compliance with which ensure s the fulfillment of the | N ot e |
|-----------------------|---|---|----------------|---|--|----------------------|
| | | | | | requirement (period of their application) | |
| 7. | External noise | L ₂ , L ₅ , L ₆ , L ₆ | | Rules EC 9-06 | CE UN number | |
| so of rac an | sistance to external urces electromagnetic diation d electromagnetic com tibility | M, N, L | O, | Rules EC 10-03 | E UN number | |
| 9. | Door locks and hinges | M 1, N | 1 | Rules EC | CE UN number | 4), 16), 3 3) |
| | | M 1, N | 1 | Rules EC | CE UN number | 2), 4), 16) , 33) |
| stee | ring anti-pinch control | M 1, N | 1 | Rules EC | CE UN number | 16), 22) |
| | ciency of king systems | M 1, N | ſ ₁ | Rules EC | CE UN number | 24) |

| Elements and property objects p of technical regular ation to which requirement blished | ation in rel | of | plicabilit y categorie s of nsport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|--|--|--------|---|---|--------------|
| | M ₂ , M ₃ , O | , N, | UNECE Regulation 13- 10 (until 2 | | |
| | M ₂ , M ₃ , O | , N, | UNECE Regulation 13- 11 (from | | 35) |
| Places of fastening belts s afety | M, N, L | s, L 7 | Rules EC -07 | E UN number 14 | 4), 18 |
| Equipping vehicles with restraint systems | M, N, L | s, L 7 | Rules EC -06 | E UN number 16 | 4), 18 |
| Strength of seats and their anchorage s | $M_{1}, M_{2}, M_{3}, N_{1}, N_{2}, N_{3}$ | | Rules EC /08 | E UN number 17 | 16), 1 9) |
| Protection of the vehicle from unaut horized | | 5, L 7 | Rules EC -02 | E UN number 18 | four) |

use of

M $_2$, M $_3$, N $_2$, N $_3$, L $_6$, L $_7$ Terms ECE UN number 18-03 2), 4)

| № p / p | Elements and objet of technical regarding ation which requires blish | ects gulation in rel n to ments are esta | of ca | licabilit y ategorie s of sport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---------------|--|--|---------|---|---|--------------|
| Fron | nt fog lights | M, N, L_3, L L_7 | 4, L 5, | Rules E 9/03, | CCE UN number 1 | 4), 2 0) |
| | dlights low high beam | M, N, L | | Rules E 0-03 | CCE UN number 2 | twent y) |
| | ry safety nternal equ ent | M 1 | | Rules E 1-01 | CCE UN number 2 | 2), 1 6) |
| r | | | | UNECE Regulat 21- 01 (since) | ion No. | sixte en) |
| 19. hts | Reversing lig | M, N, O | | Rules E 3-00 | CCE UN number 2 | |
| 20. | Emissions | L_6, L_7, M, N | J (wit | Rules E 4-03 | CCE UN number 2 | 91 |

diesels)

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---|---|--------------|
|----------------------|--|---|---|--------------|

21. headrests of seats M $_{\scriptscriptstyle 1}$, M $_{\scriptscriptstyle 2}(technically$ permissible maximum weight up to 3.5 t), N $_{\scriptscriptstyle 1}$

Rules ECE UN number 25.4 11)

- 22. Injury safety of external protrusions
- $M_{\,{\scriptscriptstyle 1}} Terms$ of ECE UN number 26.3 4), 16)

23. Equipping with audible warning devices

M, N, L
$$_3$$
, L $_4$, L $_5$, L $_6$, L $_7$

Rules ECE UN number 28-00

- 24. The protective properties of the cabins N Rules ECE UN number 02/29
- 25. Equipment tires M, N, O, L $_{\rm 6}$, L $_{\rm 7}$ Terms ECE UN number 30-02 20)

- 26. Headlights low and high beam
- M, of N rules ECE UN number 31-02 of 20)

27. Fire safety M $_{\scriptscriptstyle 1}$ UNECE

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| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---|---|--------------|
|----------------------|--|---|---|--------------|

M, N, O Rules UNECE UN number 34-02 2)

M, N, O UNECE

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- 28. Arrangement of control pedals
- M₁Terms of ECE UN number 35-00 of 16)

- 29. General safety requirements for vehicles with a capacity of more than 22 passengers
- M₂, M₃Regulations ECE UN number 36-03 8), 27)

30. Rear fog lights M, N, O, L $_3$, L $_4$, L $_5$, L $_7$

Rules ECE UN number 38-00 4)

31. Speed measuring mechanisms

M, N, L $_{\mbox{\tiny 3}}$, L $_{\mbox{\tiny 4}}$, L $_{\mbox{\tiny 5}}$, L $_{\mbox{\tiny 7}} Terms$ ECE UN number 39-00 4)

32. Emissions L $_{\mbox{\tiny 3}}$, L $_{\mbox{\tiny 4}}$, L $_{\mbox{\tiny 5}}$, L $_{\mbox{\tiny 6}}$, L $_{\mbox{\tiny 7}}$ Terms ECE UN number 40-01

| <u>№</u> p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---|---|--------------|
| 33. Outside noise | | L_3 | Rules ECE UN nu mber 41-03 | |
| 34. | Equipping with safe | M, N, O, L | Rules ECE UN nu mber 43-00 | 3), 4 |
| | glasses | | 111001 43-00 | , |
| 35. | Headlamp cleaning devices | M, N | Rules ECE UN nu mber 45-01 | 20), 26) |
| _ | ipping with devices indirect vision | M , N , L $_{6}$, L $_{7}$ | Rules ECE UN nu mber 46-02 | |
| 37. | Emissions | L 1, L 2 | Rules ECE UN nu mber 47-00 | |

| Equipping with lighting de | M, N, O | Rules ECE UN nu | 17), |
|----------------------------|---------|-----------------|-------|
| vices and light | | mber 48-03 | 31) |
| alarms | | Rules ECE UN nu | 2), 1 |
| | | mber 48-04 | 7), 3 |
| | | | 1) |

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---|---|--------------|
|----------------------|--|---|---|--------------|

gas engines and diesel engines (in accordance with the scope of UNECE Regulation No. 49)

Rules ECE UN number 49-05 (level of emissions B1, level requirements for on-board diagnostics, durability and production suitability control NOx - "C") (ecological class 4) (until 2015) 29) (from 2015 to 2016) 28)

Rules ECE UN number 49-05

(emission level B2, C, level of requirements for onboard diagnostics, durability, NOx monitoring - "G", "K") (environmental class 5) (since 2016) 29) (since 2017) 28)

| № p / p | Elements and propertion objects of technical regulation ation to which requirements are blished | in rel | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---|---|-------------------|---|---|-----------------|
| Front and rear L parking lights, brake signals, direction indicators, devices for illumination of the rear registration plate | | L | Rules er 50- | ECE UN numb 00 | |
| 41. | Outside noise | M, N | Rules er 51- | ECE UN numb 02 | 6), 14), 34) |
| ts fo | eral safety requiremen or vehicles with a acity of no more a 22 passengers | M_{2} , M_{3} | Rules er 52- | ECE UN numb | 9), 27) |
| ng a | ipping with lighti and at signaling devic | L 3 | Rules er 53- | ECE UN numb 01 | |
| 44. | Equipping with tires | M, N | , Rules | ECE UN numb | twenty) |

O er 54-00

| № p / p | Elements and property objects of technical regulation ation to which requirements are blished | in rel | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---------------|---|--------------------|---|---|--------------|
| _ | ipping h coupling de es | M, N | I, O | Rules ECE UN number 55 -01 | 5 twenty |
| | dlights low and h beam | L 1, 1 | L_2, L_6 | Rules ECE UN number 56 -01 | twenty) |
| | dlights low and h beam | L 3, 1 | L 4, L 5, L 7 | Rules ECE UN number 57-02 | 7 twenty |
| rea dev | ipping with r protective ices of vehicles the carriage of | N ₂ , 2 | N 3, O 3, O | Rules ECE UN number 58-02 | 31) |
| moj | rerning bodies of peds and two-eeled motorcycles | L 1, 1 | 3 | Rules ECE UN number 60 -00 |) |

| <u>№</u> p / p | Elements and proposition objects of technical regular ation to which requirement blished | tion in rel | Applica y of categ s of transpo eans | gorie rt m | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---------------------------------|---|---------------|---|------------------|
| | ıma safety of ernal protrusions | N | | Rule er 61 | es ECE UN numb | |
| of a | ection vehicle from uthorized use | L_1, L_2, I L_4, L_5 | L 3, | Rule er 62 | es ECE UN numb 2-00 | |
| 52. | Outside noise | $L_{\scriptscriptstyle 1}$ | | Rule er 63 | s ECE UN numb | |
| tire | ipping with s temporary use | M_1, N_1 | | | s ECE UN numb | twent y) |
| moi | em for nitoring the ssure of in tires | M ₁ | | No. | ulation 64- since 2 | 2), 20) , 25) |
| Spec ligh | cial warning hts | M, N, L | | Rule er 65 | es ECE UN numb 5-00 | twent y) |
| the | ngth of upper part of body structur | M 2, M 3 (classes d III) | B, II an | Rule er 66 | es ECE UN numb 5-02 | |

| Elements and propert objects p of technical regulation ation to which requirements a blished | n in rel | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---|----------|---|---|--------------|
| Vehicles and power M, I systems on liquefied petroleum gas (LPG) | | N | Rules ECE UN number 6 7-01 | |
| Headlights low and high beam | L 3, | L 4, L 5, L 7 | Rules ECE UN number 7 2-01 | twenty |
| Equipping with lateral protective devices of vehicles for the carriage of goods | N 2, | , N 3, O 3, O | Rules ECE UN number 7 3-00 | 31) |
| Equipping with lightin g and light signaling device s | Lı | | Rules ECE UN number 7 4-01 | |
| 61. Equipping with tires | L | | Rules ECE UN number 7 5-00 | twenty |

| № objectp of technical reduction/ p ationwhich require | properties of ects egulation in rel n to ments are esta hed | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---|--|---|---|--------------|
| Headlights low and high beam | L_1, L_2, L | Rules ECE -01 | E UN number 76 | twenty) |
| 63. Parking lights | M, N | Rules ECF -00 | E UN number 77 | twenty) |
| Efficiency of braking systems | L | Rules ECE UN number 78 -03 | | |
| 65. The steering control | M, N, O | Rules ECF -01 | E UN number 79 | four) |
| Strength of seats and their anchorages | M ₂ , M ₃ | Rules ECF -01 | E UN number 80 | 5), 19) |
| Equipping with devices for indirect v ision | L 1-L 5 | Rules ECF -00 | E UN number 81 | |
| Headlights low and high beam | L_1, L_2, L | Rules ECF -01 | E UN number 82 | twenty) |

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---------------|--|---|---|--------------|
|---------------|--|---|---|--------------|

69. Emissions M $_1$, M $_2$, N $_1$, N $_2$

motors with forced ignition and diesel engines (in accordance with the area of application of Rules ECE UN №

Rules ECE UN number 83-05 (emissions Bed and) (environmental class 4) (2015 y.) 29) (from 2015 to 2016) 28)

Rules ECE UN number 83-06 (environmental class 5)

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---|---|--------------|
|----------------------|--|---|---|--------------|

73. Side marker lights M, N, O Rules ECE UN number 91-00

74. Equipping with front protective devices of vehicles for the carriage of goods

N $_{\mbox{\tiny 2}}$, N $_{\mbox{\tiny 3}}Rules$ ECE UN number 93-00

75. Protection of the driver and passengers in a frontal collision

 $M_{\scriptscriptstyle \perp} Terms$ of ECE UN number 94-01 1), 16), 22)

76. Protection of the driver and passengers in a side collision

M₁Terms of ECE UN number 95-02 1), 16), 22)

77. Emissions M $_1G$ with a maximum mass over 3.5 t, M $_2G$, M $_3G$, N $_2G$, N $_3G$ with diesel engines

UNECE Regulation No. 96-02 (environmental class 4) (2015) 29), 30) (from 2015 to 2016) 28), 30)

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (| N ot e |
|----------------------|--|---|--|--------------|
|----------------------|--|---|--|--------------|

| | | period of their application) | |
|---|---|------------------------------------|----------------------|
| Headlights low and high beam | M, N, L ₃ | Rules ECE UN nu mber 98-00 | twen ty) |
| Electrical safety of battery electric vehicles | M, N | Rules ECE UN nu mber 100-00 | |
| Fuel consumption and carbon dioxide emissions. Consumption of electricity and reserve of vehicles with electric drive | M_1, N_1 | Rules ECE UN nu mber 101-01 | 2), 1 6), 2 2) |
| Equipment shortened coup ling devices | N_2 , N_3 , O_4 | Rules ECE UN nu mber 102-00 | twen ty) |
| 82. Reflective markings | N ₂ , N ₃ , O ₃ , O ₄ | Rules ECE UN nu mber 104-00 | |

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their | N ot e |
|----------------------|--|---|--|--------------|
|----------------------|--|---|--|--------------|

| | | application) |
|---|---|---|
| General requirements for safety in passenger transport facilities | M_2 , M_3 | Rules ECE UN number 107 2), 10) -03 |
| Compressed natural gas (CNG) ve hicles and power systems | M, N | Rules ECE UN number 110 -00 |
| Headlights low and high beam | M, N | Rules ECE UN number 112 twenty) -00, |
| Headlights low and high beam | L | Rules ECE UN number 113 twenty) -00 |
| Protection of a vehicle from unauthorized use | M ₁ , N ₁ | Rules ECE UN number 116 2), 13), 16), -00 21) |
| 88. The level of noise from rolling res | M, N, ti O | Rules ECE UN numbe 36) r 117-02, Stage 1 (up to 2016) |

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (| N ot e |
|---------------|--|---|--|--------------|
|---------------|--|---|--|--------------|

| | | period of their application) | |
|--|--------------------------------------|--|----------------|
| | M, N, O | Rules ECE UN num ber 117- 02, Stage 2 (from 20 17) | 36) |
| Wet grip | M_1, N_1, O_1, O | Rules ECE UN number 1 17-02 | 36) |
| 90. Resistance to rolling tire | M, N, O | Rules ECE UN num ber 117- 02, stage 1 (from 20 17) | |
| Fire-fighting properties of the interior | M ₃ (classes II a nd III) | Rules ECE UN number 1 18-00 UNECE Regulatio n No. 118- 00 (since 2016) | 2) |
| 92. Corner lights | $\mathbf{M}_{_{1}}$ | Rules ECE UN number 1 19-00 | twent y) |
| Controls transport means - | M, N, L $_6$, L $_7$ | Rules ECE UN number 1 21-00 | 2), 4), 16) |

identification

UNECE Regulation No. 121-00 (from 2016)

4), 16)

| № obp of technical r/ p atiwhich requir | d properties of jects regulation in rel on to ements are esta shed | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|--|---|---|---|------------------|
| 94. Heating system | ms M, N | Rules ECE U | N number 122-00 | |
| 95. Adaptive systems of the front | M, N em | Rules ECE U | twent y) | |
| lighting 96. Forward visib y | ilit M 1 | Rules ECE U | N number 125-00 | 7), 16), 23) |
| 97. Locks and hims of doors | ige N ₂ , N ₃ | Global Techn | nical Regulation No. 1 | 2) |
| . Ensuring the protection of pedestrians | $\mathbf{M}_{\scriptscriptstyle 1},\mathbf{N}_{\scriptscriptstyle 1}$ | Global Techn No. 9 (since 2 | nical Regulation 2016) | 2), 15 |
| . Equipping wit h lighting and light signalin g devices | L 2, L 4, L 5, L 6, L 7 | Clause 1 of Appendix cal regulation | No. 3 to this techni | 17) |
| 100. Internal noise | M, N | Clause 2 of Appendix cal regulation | No. 3 to this techni | |

| № p / p | of technical regulation in rel | | Applic y of cate s o transpe ear | egorie of ort m | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------|--|-------------------------------------|---|---|---|--------------|
| harm subst | content of aful (polluting) tances in the air e inhabited transport facilities means | M, N | | | e 3 pendix No. 3 to this ical regulation | |
| 102. | Resilience | M, N, | , O | | e 4 pendix No. 3 to this ical regulation | 12), 16) |
| 103. | 3. Forward visibility M ₂ , I, N | | of App | | e 5 pendix No. 3 to this ical regulation | 7), 2 3) |
| | lation, heating a r conditioning | M, N | | | e 6 of Appendix to this technical ation | |
| wind | ms for cleaning the Ishield from icing Fogging | $\mathbf{M}_{\scriptscriptstyle 1}$ | | Clause 7 of Appendix No. 3 to this technical regulation | | sixte en) |

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|---------------|--|---|---|--------------|
|---------------|--|---|---|--------------|

106. Screen wipers and washers

M₁Clause 8 of Appendix No. 3 to this technical regulation sixteen)

107. Protection against splashing from under the wheels

N, O Clause 9 of Appendix No. 3 to this technical regulation

2), 32)

M₁Clause 10 of Appendix No. 3 to this technical regulation

2), 16)

108. Industrial radio interference from trolleybuses

M₃(trolleybuses) Clause 11 of Appendix No. 3 to this technical regulations

109. Emissions M $_{1 \text{ with a}}$ maximum mass over 3.5 t, M $_{2}$, M $_{3}$, N $_{2}$, N $_{3}$ with gasoline engines

Clause 12 of Appendix No. 3 to this technical regulation (environmental class 4)

110. Emissions M, N hybrid (in accordance with

Clause 13 of Appendix No. 3 to this technical regulation (environmental class 4)

| № p / p | Elements and properties of objects of technical regulation in relation to which requirements are established | Applicabilit y of categorie s of transport m eans | Documents, compliance with which ensure s the fulfillment of the requirement (period of their application) | N ot e |
|----------------------|--|---|---|--------------|
|----------------------|--|---|---|--------------|

area of application of the Regulation ECE UN number 49)

(2015 y.) 29) (from 2015 to 2016) 28)

Clause 13 of Appendix No. 3 to this technical regulation (environmental class 5)

| (since 2016) 29) |
|--|
| (since 2017) 28) |
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| |
| 111. The weight restrictions in force in respect of the transport means |
| M, N, O Clause 14 |
| of Appendix No. 3 to this technical |
| regulation |
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| 112. Additional requirements for vehicles intended for persons with reduced mobility opportunities |
| |
| M ₁ , N ₁ Clause 15 |
| of Appendix No. 3 to this technical regulation |
| regulation |
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| <u>Notes</u> : |

- 1) The requirements apply to the types of transport means, the application to the assessment of conformity which was submitted for the first time after January 4 2008 city of
- 2) The requirements apply to the types of vehicles (chassis) that have not passed the assessment of compliance with this technical regulation or at the national level in the member states of the Customs Union before the introduction of the requirements.
 - 3) Requirements for quadricycles apply in the case of glasses.
- 4) The requirements do not apply in respect of quadricycles from the motorcycle landing.
- 5) As an alternative for vehicles of category M $_{2,}$ $_{it}$ $_{is}$ permitted to apply UNECE Regulation No. 17.
- 6) Regulations ECE UN number 51-02 are used in wording , without taking into account a supplement 5.
- 7) The requirements do not apply to the transport means with the body, the production of which was commenced before 1 January 1977 city of
- 8) In respect of specialized passenger transport means buses of category M_2G and M_3G , buses for funeral services, as well as transport means of categories M_2 and M_3 with a reduced number of seats the requirements of paragraphs 5.1, 5.3, 5.6.1.1, 5.7 .5-5.7.8, 5.10 UNECE Regulation No. 36-03 does not apply, while the "vehicle type approval" records the restriction of the use of such vehicles for the commercial transport of passengers.
- 9) In respect of specialized passenger transport means buses of category M $_2$ G and M $_3$ G, buses for funeral services, as well as transport means of categories M $_2$ and M $_3$ with a reduced number of seating places the requirements of paragraphs 5.1, 5.3, 5.6.1.1, 5.6 .3.1, 5.7.1.1-5.7.1.7, 5.7.5-5.7.8, 5.9, 5.10 of UNECE Regulation number 52-01 do not apply in this case in the "approval of the type of vehicle means" is a record of the restriction of the use of such transport means for commercial transportation of passengers.
- 10) In respect of specialized passenger transport means buses of category M_2G and M_3G , buses for funeral services, as well as transport means of categories M_2 and M_3 with a reduced number of seats the requirements of paragraphs 7.2, 7.6.1.1, 7.6.3.1, 7.7.1.1-7.7.1.7, 7.7.5-7.7.8, 7.11, 7.12 of annex 3 to UNECE Regulation number 107 shall not apply at this in the "approval of the type of vehicle means" is a record of the restriction of the use of such transport means for commercial transportation of passengers.

11) In an evidentiary materials received any

in respect of the seats, if the past were tested together with the head restraints.

- 12) When assessing compliance with recognized messages on the official approval of a type of vehicle provided by ECE Regulation UN number 111.
- 13) When submitting posts on the official approval of the type of transport means, provided the Rules ECE UN number 116, a message on the official approval of the type of transport means, provided UNECE Regulation number 18, to represent not required.
- 14) For all-wheel drive vehicles of categories M $_2$ G, M $_3$ G, N $_2$ G and N $_3$ G, when measured while driving, it is allowed to exceed the limit values by 3 dB (A).
- 15) Rules of ECE UN in relation to the protection of pedestrians after their entry into force are applied alternatively GTP number 9.
- 16) for vehicles, homes, ambulances and -hearses vehicles category M_1 , M_2 , M_3 level imposed requirements must comply with the level of requirements to the underlying transport means.
- 17) optional devices for lighting and light signaling when available on the transport vehicle must comply with the established requirements of the Regulations of the UNECE.
- 18) transport means of categories M_1 , N_2 , as well as M_2 and M_3 classes III and B are equipped with straps of safety. The rest of the vehicles of categories M_2 , M_3 are equipped with seat belts if they are used for the carriage of passengers in intercity traffic.
 - 19) requirements are used in depending on the type of seat.
 - 20) is applied in the case of installation on the transport vehicle.
- 21) When assessing compliance with recognized messages on the official approval of a type of vehicle provided by ECE Regulation UN number 97.
- 22) The requirements do not apply to the transport means, equipped with armored protection, compliance with which regulatory technical requirements is confirmed in the established order.
- 23) The requirements do not apply in relation to the transport of funds intended for the transportation of cash revenue and valuable cargo.
- 24) In respect of transport means, relating to the type, does not have passed the evaluation of compliance with this technical regulation or at the national level in the countries - members of the Customs Union to

the introduction of this requirement, equipping with electronic stability control systems and emergency braking assistance is mandatory. Allowed evaluation

of compliance of transport funds category N 1 of the Rules of ECE UN number 13-11.

From January 1 2016 city of necessary equipment of transport means, not falling under the effect of paragraph first of the notes, antilock brake systems, when this equipment such transport means electronic systems control the stability and aid in emergency braking optional.

- 25) It is obligatory to equip with tire pressure monitoring systems of vehicle types that have not passed the assessment of compliance with this technical regulation, as well as at the national level in the member states of the Customs Union before the introduction of the requirements.
- 26) Mandatory application is regulated by the UNECE Regulations No. 48.
- 27) allowed the alternative use of the Rules ECE UN number 107-03 Rules ECE UN number 36-03 and 52-01.
- 28) requirements applies in respect of the transport means, produced with the use of the issued in circulation basic transport means or chassis manufactured by other manufacturers.
- 29) requirements apply in relation to all transport means, in addition to transport means on which are distributed the notes 2) and 28).
- 30) The requirements apply to vehicles with a drive to all-wheel drive, in particular, with switchable drive one of the axles.
- 31) Exceptions are allowed for special transport means, if a special purpose hampers the delivery requirements in full. However, the applicant provides the certification authority sufficient evidence in respect of the fact that due to the special target destination requirements not can be performed in a full screen.
- 32) For vehicles of categories N_1 , N_2 with a technically permissible maximum mass of not more than 7.5 t, O_1 and O_2 , the requirements of paragraph 10 of Appendix No. 3 to this technical regulation may alternatively be applied .
- 33) The requirements relating to sliding doors operate with January 1 2016 Nov.
- 34) In evaluating the maximum position compliance should be obtained when carrying out measurements on a procedure prescribed rules UNECE UN number 85-00 (with the additions of 1-5), it should be

confirmed the message on the official approval of the type or declaration of conformity adopted by the scheme declaration 3d, details of which are given in the "approval of the type of transport means." The description of the declaration scheme is given in Appendix No. 19 of this technical regulation.

- 35) For transportation funds category N $_{\scriptscriptstyle \perp}$, relating to the type, does not have passed the evaluation of compliance with this technical regulation or at the national level in the countries members of the Customs Union to the introduction of this requirement, equipped with electronic control systems, the stability necessary. In relation to the other transport means category N $_{\scriptscriptstyle \perp}$ the requirement for mandatory carriage of electronic systems control the stability of effect from 1 January 2016 city of
- 36) As evidence, it is allowed to submit a test report according to European Union Directive 92/23 / EEC as amended by Directives 2001/43 / EC and 2005/11 / EC. In order to identify the tires produced in the treatment room messages about official approval of the type of the said Directive shall be made in the documents certifying compliance with the requirements of the present technical regulations.

APPENDIX No. 3 to the technical regulations of the Customs Union "On the safety of wheeled vehicles funds" (TR CU 018/2011)

Technical requirements in respect of individual elements and properties of objects of technical regulation to assess the conformity of types of vehicles (chassis)

- 1. Requirements for three- and four-wheeled motor vehicles in relation to the number, location, characteristics and actions of lighting and light signaling devices
- 1.1. Lighting and light-signaling devices must be installed in such a way that, under normal operating conditions and the vibration to which they may be subjected, they maintain the characteristics prescribed in paragraph 1 of this annex and that the vehicle meets the requirements of paragraph 1 of this annex.

- 1.2. Lights driving beam, low beam and fog should be installed in such a way that can be had to adjust the direction of light rays.
- 1.3. Initial axis of all installed on the transport vehicle lighting and light signaling devices must be parallel to the reference plane of the transport means to the road. Also, the for side reflective devices, these axes must be perpendicular to the median longitudinal plane of the vehicle, and for all the other signaling devices parallel to it.

Each direction is allowed a tolerance of \pm 3 $^{\text{on}}$. In addition, the specific installation specifications, if provided by the manufacturer of the lighting and light- signaling devices , must be complied with .

1.4. The height and the orientation of the lamps is checked on the transport means in the curb state placed on a flat and horizontal surface; wherein the mean longitudinal plane of the vehicle should be positioned vertically, and the steering control should be in position for movement directly. The pressure of air in tires must meet prescribed by the manufacturer.

- 1.5. Lights of the same pair, having the same purpose, must:
- 1.5.1. mounted on the transport vehicle symmetrically on respect to the median longitudinal plane;
- 1.5.2. be symmetrical with respect to each other with respect to the median longitudinal plane;
 - 1.5.3. satisfy one and the same colorimetric requirements;
 - 1.5.4. have practically the same photometric characteristics.
- 1.6. If otherwise not specified below in this section are different on purpose lights may be independent or grouped, combined, or combined in one and the same apparatus under the condition that each of the lights responds applicable to his requirements.
- 1.7. No fire is not should be flashing, for the exception of lights direction indicators and alarm signal.
- 1.8. No red light shall be visible from the front and no white light from the rear, except for the reversing lamp .
- 1.9. The electrical connections must be such that the front and rear marker lamps and lamp lighting adjustable registration mar k may be included and off simultaneously.
- 1.10. Functional electric circuit should be such that the lights and lamp can be lights and front driving fog switched only in that case, if included as lights, described paragraph in condition 1.9. However, this is not mandatory for the lights far or near light, if their light signals intended for repeated and short-

| | TP TC 018/2011 |
|--|---------------------------------|
| term inclusion and turn off the term variable inclusion of near and far light. 1.11. Light control signals 1.11.1. Each indicator light must be cleated and the control signal switching control signal functioning. 1.12. Colors of lights Lights, headlights, direction indicators, reflection indicated in table 1.1. | ng may be replaced by a |
| | Table 1.1. |
| - lights far and near light lamp lighting the front marker light | rear registration plate and the |
| white | |

- direction indicator, emergency signal, lateral non-triangular reflective device

amber

- signal braking rear dimensional fire, a rear non-triangular reflector device, the rear fog light

red

- front fog lamp white or yellow selective, less saturated

Note: The definitions of the color of the lights must be in accordance with Annex 5 of the Convention on Road Traffic (1968).

- 1.13. Three-wheeled mopeds and quadricycles of categories L 2 and L 6 must be equipped with the following lighting and light signaling devices in the following number:
 - low beam headlamp 1 or 2;
- front and rear parking lights 1 or 2 each. If the overall width of the vehicle is more than 1,300 mm, two position lamps are required;
- rear reflector of non triangular shape 1 or 2. If the overall width of the vehicle is more than 1000 mm, two rear reflectors are required;
 - pedal reflector, if there are pedals 4;
- brake signal 1 or 2. If the overall width of the vehicle is more than 1300 mm, two brake signals are required;
- direction indicator for three-wheeled mopeds with a closed body 2 on each side.
- 1.14. They can also be equipped with the following lighting and light signaling devices in the following quantity:
 - high beam headlamp 1 or 2;
- direction indicator for three-wheeled mopeds with an open body 2 on each side;
 - license plate illumination lantern 1;

- side reflectors of non triangular shape 1 or 2 on each side;
- an emergency signal.
- 1.15. Installation

of any other lighting and light signaling devices, with the exception of those specified in paragraphs. 1.13 and 1.14 is prohibited.

- 1.16. Motorcycles with a sidecar of category L 4 must be equipped with the following lighting and light signaling devices in the following number:
 - high beam headlamp 1 or 2;
 - low beam headlamp 1 or 2;
 - pointer rotation for 2 on each side;
 - brake signal 2 or 3 (one of which is located on the side trailer);
- front and rear parking lights 2 or 3 each (one of each is located on the side trailer);
 - license plate illumination lantern 1;
 - rear non triangular reflectors 2.
- 1.17. They can also be equipped with the following lighting and light signaling devices in the following quantity:
 - front fog lamp 1 or 2;
 - rear fog lamp 1 or 2;
 - an emergency signal;
 - the side reflectors than triangular form by 1 or 2 with each side.
 - 1.18. Installation

of any other lighting and light signaling devices, with the exception of those specified in paragraphs. 1.16 and 1.17 is prohibited.

- 1.19. Tricycles and quadricycles of categories L $_{5}$ and L $_{7}$ must be equipped with the following lighting and light signaling devices in the following quantity:
- main beam headlamp 1 or 2. If the overall width of the vehicle is more than 1300 mm, then it is required to install two main beam headlamps;
- headlamp dipped beam 1 or 2. If the overall width of the transport means more than 1300 mm, it is required to install two lights passing light;
- direction indicator 2 on each side. It allowed the presence of one of the side indicator turning on each side;
- braking signal 1 or 2. If the overall width of the vehicle is more than 1300 mm, then it is required to install two braking signals;

- front and rear parking lights 1 or 2 each. If the overall width of the vehicle is more than 1300 mm, then it is required to install two of each side lamp;
 - license plate illumination lantern 1;
- rear non-triangular reflectors 1 or 2. If the overall width of the transport means exceeds 1000 mm, it requires two rear reflector non triangular shape;
 - an emergency signal.
- 1.20. They can also be equipped with the following lighting and light signaling devices in the following quantity:
 - front fog lamp 1 or 2;
 - rear fog lamp 1 or 2;
 - a lantern adjustable stroke 1 or 2;
 - side reflectors of non-triangular shape 1 or 2 on each side.
 - 1.21. Installation

of any other lighting and light signaling devices, with the exception of those specified in paragraphs. 1.19 and 1.20 is prohibited.

- 1.22. At three and four motor-means may be mounted device lighting and light signaling, as the respective item 1 of the present application, so and meet the requirements of the respective Regulation UNECE UN for transport means of categories M_{\perp} and N_{\perp} .
- 1.23. The lights on the transport vehicle must be fitted in such a way that the replacement sources of light was produced without the use of tools, except for instruments which are supplied by the manufacturer together with the transport means.
- 1.24. The placement of lighting and light signaling devices should ensure their necessary visibility.
 - 2. Requirements for vehicles in relation to their internal noise
- 2.1. Acceptable levels of internal noise transport means, measured at the movement shown in Table 2.1.

- 1. Vehicles of category M₁s 79 wagon or half-hood body layout
- 2. Vehicles of category M₁s 77 body layout, except as specified in paragraph 1
- 3. Transport means of categories M₂ and 79 M₃ with the location of the engine body or its greater part in the front half of the vehicle relative to a vertical plane perpendicular to the axis of motion and passing through its geometric center at the driver's workplace and in the passenger compartment
- 4. Transport means of categories M₂ and 77 M₃, except as noted in paragraph 3 in the working place of the driver
- 5. Transport means of categories M $_2$ and 79 M $_3$, with the exception of those specified in clause 3, related to classes II, III and B in the passenger compartment
- 6. Transportation means of categories M 2 and 81 M 3, with the exception of those specified in clause 3, belonging to classes I and A
 - in the passenger compartment
- 7. Semitrailers (category O), 79 intended for the carriage of passengers
- 8. Transport means category N 179 technically permissible maximum weight no more than 2 t
- 9. Transport means category N₁, 81 except for those specified in clause 8

- 10. Transportation means categories of N 2 and 78 N 3 under presence of a sleeping space in the cab
- 11. Transportation means categories of N 2 and 81 N 3, with the exception of those specified in paragraph 10
- 12. Quadricycles (categories L $_{6}$, L $_{7}$) from 86 closed body
- Notes: 1. For the four-wheel drive vehicles means increased cross-category M₁G not exceed the permissible sound level is not more than 2 dB A.
 - 2. For a four-wheel drive transport means increased patency of categories M₂G, M₃G, N₁G, N₂G, N₃G not exceed the permissible level of sound is not more than 1 dB A.
 - 3. For vehicles of category M with a technically permissible maximum mass of up to 2 t and a power density per unit of mass of more than 75 kW / t in acceleration mode, the permissible sound levels may be exceeded by no more than 4 dB A. For vehicles of category M s with a specific power per unit mass of more than 110 kW / t, permissible sound levels are established only for a test mode of driving at a constant speed.

Levels

of sound measured during acceleration, in case of admissible exceeding values in Table 2.1, specified in the accompanying documentation on transport means , provided to the customer (e.g., in "Manual Operation"). Transport means, in respect of which used this paragraph, can not be used for public use (eg, in a taxi), which is also indicated in the accompanying documentation on the transport means provided by the buyer.

- 4. For special vehicle (car, purpose a house, armored transport means a car for funeral services, vehicle care and others.), Made on the basis of the transport means of category M, the sound level must not exceed the permissible levels set for the base vehicle funds. For the same transport means, produced on the basis of transport means category N, the level of the sound does not have to exceed 79 dB A.
- 5. For specialized passenger transport means in the case when the cabin (working place of the driver), and passenger space structurally separated Desktop driver's seat, the norms of paragraphs 10 or 11, for the passenger area the rules of paragraph 3 of table 2.1.
- 2.2. When the expiration air of the brake system Pneumodevices after actuation sound level in the cabin (passenger room) of the transport means do not have to exceed 70 dB A.
- 2.3. When the system of heating and ventilation power sum system sound level and sound level in the cabin (passenger room) during the categories vehicles M , and motion of of \mathbf{M}_{3} . in particular, M₂G and M₃G, not should exceed acceptable levels, given vehicles levels sound system of 2.1. In categories of other heating and ventilation does not have to exceed the allowable levels listed in Table 2.1.
- 2.4. When checking the level of internal noise in a vehicle, carried out during the control of objects of conformity assessment, it is allowed to exceed the permissible sound levels established for a particular type of vehicle by no more than 1 dB A.
 - 3. to vehicles requirements in regard to the content of harmful (polluting) substances in air inhabited premises

Nomenclature harmful (polluting) substances subject to verification, depending on installed in the transport means type engine and the fuel used. The content of harmful (polluting) substances in the air of the habitable space transport means not should exceed the limit concentrations shown in Table 3.1.

Table 3.1.

| Harmful (polluting) substance | Maximum concentration of harmful (polluting) substances in the air of the vehicle's habita ble space, mg/m³ | Types of engines for vehicles in relat ion to which it is carried out check |
|---|---|---|
| carbon monoxide CO | 5.0 | 1, 2, 3, 4, 5 |
| nitrogen dioxide NO 2 | 0 | 1, 2, 3, 4, 5 |
| nitric oxide NO | 0,4 | 1, 2, 3, 4, 5 |
| methane CH 4 | fift | 3, 5 |
| saturated hydrocarbons C C $_7$ H $_{16}$ | ₂ H ₆ - fift | 1, 2, 3 |
| formaldehyde CH 2O | 0.03 | 35 3, 4, 5 |

Notes: Types of engines indicated in table 3.1:

- 1 engines with forced ignition, running on gasoline;
- 2 -

engines with forced ignition, running on liquefied petrol eum gas (LPG);

3 -

motors with forced ignition, operating on compressed n atural gas (CNG);

- 4 engines with compression ignition (diesels);
- 5 -

engines with ignition by compression, running on mixe d fuel (diesel fuel and CNG).

4. The requirements for vehicles in respect of sustainability

Note: The requirements of clause 4 of this annex do not apply to:

- on the transport means category O, intended for transport of indivisible loads weighing 20 m and more;

- for vehicles with a maximum design speed of less than $40\ km\ /\ h;$
- on transport means equipped with electronic system of control of stability and with the type approval of the Regulations of the UNECE number 13 (including Annex 21) or number 13H (including Annex 9)
- 4.1. Requirements to stabilize the steering control for the transport means of categories M and N.
- 4.1.1. The angle of rotation of the steering wheel after his release does not have to be increased.
- 4.1.2. The steered wheels and steering wheel must automatically return to the neutral position.
- 4.1.3. The maximum value of the angle of rotation of the steering wheel, not reached the neutral position to within 6 seconds after its release, not should exceed 30% of the magnitude of the angle of rotation of the steering wheel corresponding to the movement of the vehicle along a circle of radius 50 m.
- 4.1.4. The process of returning the steering wheel to neutral should not be hesitant. When carrying out the test check may be a transition of the steering wheel through the neutral position.
- 4.2. Requirements for the lateral static stability of the vehicle during rollover tests on the stand for vehicles of categories M, N, O (in relation to category M₁- only for vehicles of category G only in relation to subparagraph 4.2.1, in relation to categories M₂ and M₃- only before the entry into force of UNECE Regulation No. 107. For semi-trailers, the requirements apply when they are in a road train).
- 4.2.1. The angle of static stability $\alpha\square_{cy}$ is understood as the angle the inclination of the supporting surface α of η columping platform relative to the horizontal plane, at which all wheels of one side of a single vehicle or all wheels of one side of one of the links of a semitrailer train are detached from the supporting surface of the platform. The value of the angle $\alpha\square_{cy}$, obtained as a result of the tests, must be at least the standard value $\alpha\square_n$, depending on

from the coefficient q softhe lateral stability of the vehicle and determined by the following formulas:

$$\alpha \square_n = (-2.4 + 42.4q_s), \text{ degree, at } 0.55 \le \square q_s \le \square 1.0 \text{ (4.1)}$$
 $\alpha \square_n = (15 + 25 \text{ q}_s), \text{ degree, for } q_s > \square 1.0 \text{ (4.2)}$
 $\alpha \square_n > 21^o, \text{ for } q_s < 0.55 \text{ (4.3)}$

4.2.2. Under the angle of heel sprung mass $\phi \square$ mean angle between the bearing surface of the tipping platform and the transverse axis of the sprung mass through the center of mass transport means, resulting in a result of inclination of the transport means for the tipping platform.

The roll angle of the sprung masses $\phi \square is$ determined at the angle of inclination

platform, at which there is separation of all the wheels of one side of a single transport means or all of the wheels of one of the units of trains from the support surface. The maximum allowable value of the angle $\varphi\Box$ the center of mass of the vehicle resulting from tests not be exceed values $\varphi\Box_n$, dependent on the coefficient of lateral stability q and defined by the following formulas:

$$\phi \Box_n = (10.8\text{-}4.3 \text{q}_s), \text{ degree, for q}_s \le 1.0 (4.4.)$$

 $\phi \Box_n = 6.5 \text{ degrees, with q}_s > 1.0. (4.5.)$

Notes:

1. The coefficient of lateral stability, \mathbf{q}_s , is determined by the formula:

Where:

$$q_{s} = \frac{0.5b}{}$$

(4.6)

b - track, reduced to the cross- section of the vehicle in a plane passing through its center of mass (see Figure 4.1), mm;

h is the height of the center of mass above the supporting surface, mm.

The semitrailer track gauge is calculated as the average between the midpoints of the outer wheels of the rear axle (bogie) of the tractor and the midpoints of the outer wheels of the axle (bogie) of the semitrailer.

2. The height of the center of mass is determined by the formula:

Where:

$$h = \frac{0.5b - h_{_{kn}} * tg \; \alpha \square_{_{su}} - \Delta}{+ \; h_{_{kn}}} tg \; \alpha \; * \; cos \; \phi + sin \; \phi$$

(4.7)

 $h_{\mbox{\tiny kp}}$ - the height of the roll axis above the supporting surface in the cross section passing through the center of mass, mm;

 Δ is the lateral displacement of the center of mass, determined from the results of measurements of the lateral deformation of the tires, mm;

 $\alpha \square_{su}$ - the angle of inclination of the supporting surface during overturning

vehicle;

 ϕ is the roll angle of the sprung masses.

In the absence of precise data, the value of h $_{\mbox{\tiny kp}} can$ be taken equal to the static radius of the vehicle wheel .

Figure 4.1. Schemes for determining the size of the reduced track " b "

5. The requirements for vehicles in respect of their front visibility

Notes: - The requirements of paragraph 5 of this application does not apply to the transport means for the

Communal facilities and content roads with righthand position of the steering control;

- Speakers forward for the size of the length of the transport means of the special equipment of cranes, transport means, equipped with lifts work platforms, concrete truck is not taken into account when carrying out conformity assessment of the requirements of paragraph 5 of this application.

- 5.1. Forward visibility is characterized (see figure 5.1):
- the size and location of regulatory zones A and B on the outer surface of the front window;
 - the degree of cleaning of regulatory zones A and B;
- blind areas created by the pillars of the front window;
 - blind areas in the regulatory field of view P.

Legend: 1 - the border of the transparent part of the left side window, 2 - the left side pillar of the front window, 3 - the front window cleaning contour, 4 - the border of the regulatory zone A, 5 - the border of the regulatory zone B, 6 - the border of the transparent part of the front window, 7 - right side pillar of the front window, 8 - the border of the transparent part of the right side window, 9 - traces from the planes that are the boundaries of the standard field of view P.

Figure 5.1. The location of the normative zones A and B of the front window and the normative field of view P

- 5.2. Requirements for the size and location of regulatory zones A and B on the outer surface of the front window.
- 5.2.1. The dimensions and location of regulatory zones A and B are determined by the angles in accordance with table 5.1.

- 5.2.2. The area of the regulatory zone B can be reduced, subject to the fulfillment of the reservations set out in paragraph 2.4 of Annex 18 to Regulation No. 43.
- 5.2.3. For transport means wagon layout category M_2G and category N_1G cab over the engine, put on a production of up to 1 January 2005 it may be the distance between the boundaries of the transparent part of the front window and the regulatory area B of less than 25 mm. In this case, zone B at no point should go beyond the border of the transparent zone of the front window.
- 5.3. Requirements for the degree of purification of regulatory zones A and B are established in accordance with Table 5.2.
 - 5.4. Requirements for blind areas created by front window pillars .
- 5.4.1. The number of side posts should be no more than two. For transport means, not belonging to the category M_{\perp} , allowed the existence of the middle rack.
- 5.4.2. The angular values of the blind areas are set in accordance with Table 5.3.

Table 5.1.

| Category transport me | Vehicle layout by engine loc ation | Zon | ıgle, ne | degree ot less | S, | |
|-----------------------|------------------------------------|-----|-------------|-------------------|---------------|-------------------|
| ans | | e | u p | dow n | to th e | to the righ |
| | | | | | lef t | _ |

 M_{2}

 \mathbf{M}_{3}

| Category transport mea V | | Vehicle layout by locati on | | | igle, | , | | |
|--------------------------|------|--------------------------------|---------------|---------------|--------|----------------------|---------|------------------------|
| ns | | engino | e | Zor | u p | dow n | | to the righ t |
| | | В | 10 | 21 (8) |) | 22 | + | - |
| Waş | gon | BUT B | nine 10 | fifteer 21 | | twenty 22 | tv + | venty |
| Bon | net | BUT B | 3 7 | one five | | 13 17 | tv + | venty |
| Semi-N 1 | hood | BUT B | five eight | 2 6 | | fourteen eighteen | tv | venty |

With a cabin above

A 5 2 14 (13) * 20

 N_2

 N_3

Notes: The values set for the transport means of the category M₁, are used for the purposes of paragraphs 7.2.1,

7.2.2 and 8.2.3 of this appendix;

+ - the right border of the regulatory zone B is symmetrical to the left border relative to the median longitudinal plane of the vehicle;

* - values listed in parentheses apply to the transport means, put on production before 1 January 2005 city of

** - the value applies to vehicles with a bonnet configuration with a split windshield and side dividing struts.

Table 5.2.

| Front window des | Purification degree,%, not less, | | |
|------------------|----------------------------------|------|--|
| | according to regulatory zones | | |
| • | BUT | В | |
| ıgn | Category transport means | | |
| | $M_1, M_2, N M_3, N_2,$ | N M, | |
| | 1 3 | N | |

Without middle rack 98 (84) * 100 80 (70) *

| Front window des ign | Degree of purification, %, not less, by | |
|----------------------|---|---|
| | regulatory zones | |
| | BUT | } |
| | Category transport means | |
| | $M_1, M_2, N \mid M_3, N_2, N \mid M$ | • |
| | 1 3 N | 1 |

With middle pillar 97 100 70

Reclining window frame

84 84 70

Note: The values set for the transport means of the category M₁, are used for the purposes of paragraph 8.1.1 of this Annex;

*

values listed in parentheses, used to transport tools cate gory M $_2 wagon$ layout and category N $_1 with$ a cab over the engine, put on a production of up to 1 January 2005 city of

Table 5.3.

| gory transport means | Angles formed by racks, degrees, not more | |
|----------------------|---|---------|
| | side | average |

 M_2, N_1

- Note: * the value indicated in brackets apply to the transport means a category M 2 wagon layout and category N 1 with a cab over the engine, put on production before 1 January 2005 city of
 - 5.5. The boundaries of the normative field of view P are characterized by the following location.
 - 5.5.1. The normative field of view P is in front of the plane parallel to X(ZY) and passing through points V_1 and V_2 (see Figure 5.2.).

From points V_1 and V_2 , traces of the indicated plane are applied to the side windows (walls of the cabin), limiting the normative field of view P in the front 180 ° sector.

Figure 5.2. - The location of the planes that are the boundaries of the normative field of view P

5.5.2. From above, the normative field of view P is limited by a horizontal plane passing through point V_{I} .

From point V_{I} , a trace of a horizontal plane is applied to the windows and pillars of the front window, limiting the normative field of

view P from above, until it intersects with the traces limiting the normative field of view P in the front 180 ° sector.

5.5.3. From below, the normative field of view P is limited by three planes passing through point V2 and inclined downward to a horizontal plane parallel to Z(XY) at an angle α .

The first plane is perpendicular to the Y (XZ) plane and tilts forward. The second plane is perpendicular to the X (ZY) plane and

It passes under an inclination to the left. The third plane is perpendicular to the X(ZY) plane and tilts to the right.

The values of the angles α for different categories of vehicles are shown in Table 5.4.

Table 5.4.

| Category transport means | ons layouts engines on transport means | α, degrees |
|--------------------------|--|------------|
| | | |

 M_2

 M_3

 $N_{\ 1}\, Semi\text{-hood}$ and with a cab above engine 5

 N_{26}

All options

 N_38

- Note. The value indicated in brackets is only for vehicles of categories M 3 with a half-hood configuration. This value is valid for the type of transport means, first issued in circulation before 1 January 2005 city of
 - 5.6. Requirements for blind areas in the regulatory field of view P.
 - 5.6.1. In the regulatory field of view P there should be no blind areas, with the exception of those created:
 - middle and side pillars of the front window;
 - dividing struts of side windows;
 - frames of ventilation vents;
 - rear- view mirrors;
 - parts of windscreen wipers;
 - external radio antennas;
 - the steering wheel and a combination of devices when the condition that the upper point of the steering wheel or bar devices are not flagged in the zone A;
 - conductors of radio antennas not exceeding in width the following values: conductors embedded in glass 0.5 mm, conductors applied to glass 1.0 mm. In this case, the regulatory region A should be held not more than three of said above conductors radio antennas, and the width of each of them does not should exceed 0.5 mm;
 - wire heating elements for defrosting and drying the front window, usually zigzag or sinusoidal, if their maximum width does not exceed 0.03 mm, and the maximum density of wires passing vertically is 8 pcs / sq. centimeters passing horizontally 5 pcs / sq. centimeters.
 - 5.6.2. For vehicles of categories M $_3$, N $_3$, the presence of side dividing struts of the front window is allowed in the amount of no more than two.
 - 5.6.3. For vehicles of category M $_3$ of awagon layout, it is allowed to enter the regulatory field of view P:
 - bodywork elements of design with adjoining to them the scope of wings doors, located to the right side of the course of movement, if applied at the right side window trace plane limiting the

normative field of view P in the front 180-degree sector, enters into the light opening sash, or by at least there is one more light opening located in the immediate vicinity of the trace of the indicated plane. In all cases the angular values neprosmatrivaemye zones formed by these elements of construction, not have to exceed 7°;

- opaque elements of structure in the area of viewing through a side window located on the right side in the direction of movement, with the proviso that the reduction of the area of the desired field of view through the right window is not greater than 20% for the transport means, set in production until January 1, 2003 10 % for the transport of funds raised on the production, starting from 1 January 2003 g .;
- opaque structural elements in the field of view through the side window located on the right side in the direction of travel, provided that the reduction in the area of the required field of view through the right window does not exceed: 20% for vehicles that have received the first "Vehicle Type Approval "up to 1 January 2003, or

equipped with a class V rear-view mirror providing a lateral field of view on the right, and 10% for other vehicles.

- 5.6.4. In neprosmatrivaemye zone created by the elements of the structure, indicated above in paragraphs 5.6.1-5.6.3, allowed entering other cells designs with the proviso that neprosmatrivaemye zone does not increase.
- 5.6.5. The regulatory field survey P permitted ingress technical means, located inside cabins, while fulfilling the following conditions:
- hardware design should allow the driver without difficulty, not being distracted from the management to release from their regulatory field review P;
- fastening points of technical means should not be in the normative zones A, B and the normative field of view P.

6. Requirements to transport facilities with regard to ventilation, heating and air conditioning of habitable premises

6.1. Each vehicle is equipped with a ventilation system and heating system (s) for the cab and the passenger compartment.

When the presence in the structure of the transport means of the system condition and performance of its requirements, requirements to

the ventilation system is not allowed to equip the vehicle is a separate system of ventilation.

- It allowed to equip the transport means of the system control climate, performing the functions of systems of ventilation, heating and air conditioning.
 - 6.2. Requirements to the system of ventilation
- 6.2.1. The ventilation system with independent operation or operation in the composition system of heating and conditioning should ensure inflow of fresh (outer) air into the cabin and the passenger compartment of the calculation for one person:
- not less $\,$ than 30 $\,$ m $^{_{3}/}$ $\,$ h (with the exception of passenger space buses belonging to Class I in accordance with Regulation ECE UN

 N_{2} 107, with the separated cab driver);

- not less than 7 m 3 / h in the passenger room buses, belonging to the class I according to UNECE Regulation No 107 with the separated cab driver.
- 6.2.2. At ambient temperatures above 17 °C supplied to the cabin and the passenger compartment air to be heated is not more than 2 °C relative to the temperature of the environment.
- 6.2.3. Speed air streams at the outlet of the system of ventilation does not have to exceed 12 m/s.
 - 6.2.4. The ventilation system must provide:
- air mobility in the cabin and in the passenger compartment in the area of the driver's head and belt is 0.5-1.5 m/s;
- difference between the ambient temperature and temperature in the cabin and the passenger area, in the zone of the head driver (passenger) at a temperature of ambient air 25 $^{\circ}$ C is not more than 3 $^{\circ}$ C.
 - 6.3. Requirements to system of heating
- 6.3.1. The heating system should provide air mobility in the cab in the area of the driver's head and waist no more than 0.6 m / s.
- 6.3.2. The temperature of the internal surfaces of the cab, the heated source of heat, not should exceed:
- plus 45 $^{\circ}$ C when the heating system is operating (in this case, the temperature of the outer surfaces of the air ducts can be increased to 70 $^{\circ}$ C)
 - plus 35 °C with the heating system turned off .
- 6.3.3. The temperature of air at the outlet of the heater is not should exceed $80 \, ^{\circ}$ C.
 - 6.4. Requirements for the air conditioning system (if any)

- 6.4.1. The rate of air flow at the outlet of the system C should not exceed 12 m/s, and the air temperature must be not lower than $0 \, ^{\circ}$ C.
- 6.4.2. The speed of air in the area of the head of the driver (passenger) when the system C is not should not exceed 0.5 m/s.
- 6.4.3. The temperature of the outer surfaces of air ducts for cold air must be at least 15 °C.
- 6.4.4. The relative humidity in the habitable area should not exceed 60 percent.

7. to vehicle category M Requirements, concerning systems cle

Requirements 1 concerning systems clean windshield glass from ici ng and demisting

- 7.1. Requirements for the system of cleaning the windshield from icing When the system is operating, its efficiency is determined by the zone of the windshield
- glass, purified after start of the engine, from icing, formed on the vehicle is placed in the cooling chamber, in for not less than 10 hours from the inoperative engine when a temperature of minus 18 ± 3 °C.
- 7.1.1. 20 minutes after start of the test the regulatory zone A, whose dimensions for the category of vehicles M₁ mounted in accordance with item 5 of this application, it should be cleared to 80%;
- 7.1.2. After 25 minutes after start of the test the purified surface of the windscreen on the passenger side to be comparable with a similar surface on the side of the driver:
- 7.1.3. 40 minutes after the start of the test, the normative zone B, the dimensions of which for the category of vehicles M_{\perp} are established in accordance with paragraph 5 of this annex, must be cleared by 95%.
 - 7.2. Requirements for the system of cleaning the windshield from fogging When the system is operating, its efficiency is determined by the zone of the windshield
- glass, purified after start of the engine, by misting, formed in connection with the use of the steam generator, the transport means, located in the climate chamber, equipped to maintain a temperature of minus 3 \pm 1 °C in during all tests.
- 7.2.1. Within 10 minutes after the start of the test, the normative zone A, the dimensions of which for the category of vehicles M_{\perp} are established in accordance with paragraph 5 of this annex, must be defogged by 90%;

7.2.2. Within 10 minutes after the start of the test, the normative zone B, the dimensions of which for the category of vehicles M $_{1 \text{ are}}$ established in accordance with paragraph 5 of this annex, must be de-fogged by 80%.

8. Requirements for vehicles of category M₁ in relation to windshield wipers and washers

- 8.1. Requirements for the windshield cleaning system.
- 8.1.1. Requirements for zone cleaning windshield glass mounted in par agraph 5 of the present application.
- 8.1.2. The mechanism of the wiper must provide not less than two working frequencies of motion after the preliminary work on the wet surface in over 20 minutes while fulfilling the following requirements:

the first frequency is not less than 45 cycles / min;

second frequency - not less than 10 and not more than 55 cycles / min;

the difference between the highest and one of the lowest frequencies of movement must be at least 15 cycles / min;

intermittent operation of the system can be used to meet the requirements, provided that one of the frequencies is not less than 45 cycles / min, and the other frequency obtained by interrupting the main frequency is not less than 10 cycles / min.

- 8.1.3. When exposed to the air stream moving at a rate equal to 80% of the maximum speed of the transport means, but not exceeding $160 \, \mathrm{km}$ / h, and when the maximum operating frequency, the efficiency of the system operation should continue.
- 8.1.4. When the system is clean off with the help of body control, brush should automatically return to its original position.
- 8.1.5. The system must withstand a forced stop in for 15 seconds. It allowed the use of automatic fuses, provided that to return to the operating status does not need to impacts nor to any other organs of governance for except body control wiper.
- 8.1.6. The design and method of attachment of the brush should provide the ability to remove the brush from the surface of the windshield for manual cleaning. These requirements do not apply to devices that are in the rest position are in the windshield area, which is closed by parts of the transport means (such as a hood, panel instruments and so on).
- 8.1.7. The system must work in within 2 minutes with dry wind glass and the temperature of the ambient air minus 18 \pm 3 $^{\circ}C$ after soaking vehicle at such temperature for at least 4 hours . The wiper must be operated under the conditions specified in

- 4 for electrically driven systems, and the control should be in the position corresponding to the maximum frequency. At the same time, there are no requirements related to the cleaning zone.
 - 8.2. Requirements to the system of washing the windshield glass
- 8.2.1. System washing the windshield glass must withstand mode when the nozzles are blocked, and the system operates after their release.
- 8.2.2. The performance of the system should not deteriorate at an ambient temperature from minus 18 \pm 3 $^{\circ}C$ to plus 80 \pm 3 $^{\circ}C.$
- 8.2.3. The system shall be capable of delivering sufficient fluid to clean 60% of regulatory area A in accordance with paragraph 5 of this annex after 10 complete cycles of automatic wiper operation at maximum frequency.
- 8.2.4. Checking the implementation of the requirements of paragraphs 8.2.1-8.2.3 shall be carried out on one, and that the sample system.
- 8.2.5. Tank for washer fluid should be a capacity of not less than 1 liter.
 - 9. Requirements to transport media categories N and O in relation to protection from splashing out of the wheels

Notes: - The requirements of paragraph 9 of this annex do not apply to vehicles of category G;

The requirements of paragraph of this annex relating to devices for reducing spraying d o not apply to vehicles of categories N₁, N₂with a technically permissible maximum mass of not more than 7.5 t, O₁ and O₂, chassis with a cab, as well as vehicles the design of which does means. not allow implementing the function of protection against splashing from under the wheels. However, if such transport means are equipped with devices for reducing spattering claim item 9 of the present application should be executed in full screen.

9.1. General Requirements

9.1.1. Transport means should be equipped with a system of protection against splashing, consisting of

the mudguard covers, mudguards and outer sidewalls and including the last assessment

matching device to reduce spatter. If the vehicle is equipped with one or more retractable axles, the splash guard must cover all wheels in any axle position . If the transport means is equipped with a self-governing axis of the system of protection from spraying should conform to the requirements applicable to the axes with controlled wheels, if the system of protection from spraying rotates together with the axle; in the opposite case - the requirements applicable to the axes with unmanageable wheels.

- 9.1.2. If unmanaged wheels distance between the longitudinal plane tangent to the outer side surface of the tire for excluding its deformed portions near the support surface, and the inner edge of the outer sidewall not be greater than 75 mm (Figure 9.1). If the radial distance from the wheel axis to the inner edge of the outer sidewall is less than the radius of the tire *R* installed on the vehicle, the distance shall not exceed 100 mm. In case of controlled and selfaligning wheels distance not should exceed 100 mm (Figure 9.2 (a)).
- 9.1.3. The average value of the percentage of retained water when tested in special installations with devices to reduce spatter should be:
 - for an energy absorbing device not less than 70%;
 - for a device of the "air water" separator type not less than 85%.
- 9.2. The requirements for system protection by spraying with energy-absorbing device for axles with controlled, self-aligning and unguided wheels (figures 9.2 and 9.3)
- 9.2.1. Mud casing should cover the area directly in front of the tire (or tires) above it and behind it.
- 9.2.2. On the inner side of the rear casing part coir should be installed device for reducing spattering. This device must cove r the inside of the mud guard up to the line where it intersects with a plane passing through the wheel axis at an angle of at least 30° to the horizontal.

a - dust cover; j - outer sidewall; c is the distance between the side surface of the tire and the outer sidewall;

q is the width of the dust cover together with the outer sidewall; b is the width of the tire; t is the width of the twin tires.

Figure 9.1 - Layout of the dust cover and outer sidewall

- 9.2.4. The depth of the outer sidewall must be at least 45 mm at all points from the vertical line through the center of the wheel to the rear of the sidewall. The depth of the outer sidewall in the direction from the indicated line towards the front part can be gradually reduced.
- 9.2.5. No gaps are allowed in the outer sidewall or between the outer sidewall and other parts of the casing through which splashing can occur .
 - a) Location of the dust cover and outer sidewall

b) Location of the mudguard and energy absorbing device

j - outer sidewall, θ - the angle between the horizontal (OY) and a plane passing through the axle of the wheel (OZ) T is the length of the dust cover. R_v , R - see figure 9.3

Figure 9.2 - Schematic of a splash guard system for single axles

a) The location of the mud guards and outer sidewalls

b) Location of splash guards and devices to reduce splashing

 $d \le 300$ mm - distance between tires installed on adjacent axles; j - outer sidewall; θ is the angle between the horizontal (O - Y) and the plane passing through the wheel axis (O - Z);

U is the height of the sidewall edges; W is the distance between the lower extreme points of the sidewall edges; T is the length of the dust cover; R - the radius of the tire mounted on the transport means; R_V - distance along the radius from the wheel axis to the most distant point of the inner edge of the outer sidewall

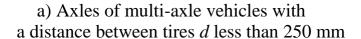
Figure 9.3 - Diagram of a splash guard system for multi-axle vehicle axles

9.2.6. The width of the portion of a mudguard, located inside Mudguard casing must be not less than the width of the tread of the tire.

- 9.2.7. The mudguard should be located in a plane close to vertical.
- 9.2.8. The maximum height of the lower edge of the mudguard is not should exceed 200 mm from the level of the supporting surface of the tire. This height can be increased up to 300 mm for the last axle if the clearance between the wheel arch and the wheel is minimal.
- 9.2.9. The distance between the splash guard and the rear edge of the tire, measured horizontally, should be no more than 300 mm.
- 9.2.10. For axes multiaxial transport means, in which the distance between the tire axial group of less than 250 mm, mud flaps, must be set only for the last group of wheels axis. If the distance between the tires is 250 mm or more, a mudguard must be installed behind each wheel.
- 9.2.11. The lower edge of the mudguard should not deviate by more than 100 mm in a direction opposite the direction of movement, under the action of force of 3 H at every 100 mm width mudguard, applied in a point located in the middle of the mudguard and spaced at 50 mm from the lower edge.
- 9.2.12. On the inner surface of the mudguard must be installed device for reducing spattering.
- 9.2.13. Between Mudguard casing and mudguard not allowed gaps thro ugh which can occur spatter.
- 9.3. Requirements for an anti splash system with an energy absorbing device for axles with non steer or caster wheels that are covered by the body or the lower part of the loading dock (figure 9.4).
- 9.3.1. The mud guard must cover the area directly above the tire or tires. Its front and rear edges must reach, for at least to a horizontal plane tangent to the top surface of the tire or tires. The trailing edge may be bounded by the plane of the splash guard, which should extend to the top of the splash guard (or equivalent).
- 9.3.2. The inner surface of the rear casing part coir must be equipped with a device for reducing spattering.
- 9.3.3. For single axes and axes multiaxial vehicles in which the distance between the tires is not less than 250 mm, the outer sidewall should cover the surface bounded by:

in front - by a vertical plane tangential to the front of the tire, from below - by a horizontal plane tangential to the top of the tire, behind - by the plane of the mudguard.

9.3.4. In the case of multi-axle vehicle axles, the outer sidewall must be located above each wheel.



b) Single axles and axles of multi-axle vehicles with a distance between tires *d* not less than 250 mm

Figure 9.4 - Diagram of a splash protection system with energy absorbing devices for axles with fixed and caster wheels

9.3.5. No gaps are allowed between the outer sidewall and the inner part of the dust cover , through which splashing can occur .

9.3.6. For axes multiaxial transport means, in which the distance between the tires is less than 250 mm, the outer sidewall should be continuous and limited to: the front - a

vertical plane tangent to the front surface of the tires of the first axle, rearplane mudguard.

- 9.3.7. An energy absorbing device must be installed on the entire inner surface of the outer sidewall, the height of which must be at least 100 mm.
- 9.3.8. Mudguard must be located on the rear edge of the mud a housing and meet the requirements of paragraphs 9.2.6 9.2.13.
- 9.4. Requirements for a system of protection against splashing with a device of the type "airwater" separator for axles with steered, caster and non steered wheels (Figure 9.5)
- 9.4.1. The dust cover shall comply with the requirements of paragraph 9.3.1.
- 9.4.2. At the lower edge of the outer sidewall must be installed device type separator "air water".
- 9.4.3. The depth of the outer sidewall must be at least 45 mm at all points from the vertical line through the center of the wheel to the rear of the sidewall. The depth of the outer sidewall in the direction from the indicated line towards the front part can be gradually reduced.
- 9.4.4. No gaps are allowed in the outer sidewall or between the outer sidewall and the casing through which splashing can occur .
- 9.4.5. Mudguard must comply, for at least the requirements of paragraphs 9.3.6, 9.3.7, 9.3.10 and 9.3.13.
- 9.4.6. Apparatus for reducing splashing, the average content of delayed water which in percentage must match item 9.2.3, must be installed on the lower edge of a mudguard, wherein the width of the device must be not less than the width of the mudguard. The lower edge of the device for reducing spattering should be located not more than 200 mm from the supporting surface of the tire. The splash reduction device must be at least 100 mm from the bottom edge of the splash guard.

a) Single axis and the multiaxial vehicle when a distance between the tires over 300 mm

b) Axles multiaxial transport means when the distance between the tires d is not more than 300 mm

j - outer sidewall; θ is the angle between the horizontal (O - Y) and the plane passing through the axle of the wheels (O - Z); S - air-water separator; T is the length of the dust cover; V - mudguard;

R - the radius of the tire mounted on the transport means; R_{v} - distance along the radius from the wheel axis to the most distant point of the inner edge of the outer sidewall ;

 $d \le 300$ mm - distance between tires installed on adjacent axles. For d ≥ 250 mm, a splash guard must be installed between the tires .

Figure 9.5 - Diagram of a splash protection system with an air-water separator

- 9.4.7. Except for the lower portion which includes a device for reducing spattering mudguard should not deviate by more than at 100 mm in a direction opposite the direction of movement.
- 9.4.8. The splash guard must be no more than 200 mm, measured horizontally, from the rear edge of the tire.
 - 10. Requirements for vehicles of category M₁ in relation to protection against splashing from under the wheels
 - 10.1. General Requirements
- 10.1.1. The vehicle must be equipped with a system to protect against splashing.
- 10.1.2. System of protection from spraying should be designed in such a way as to protect as far as possible, other road users from water emissions, as well as mud, ice, snow and stones from under the wheels of the vehicle and lower for participants of road traffic hazard which can be caused by contact with moving wheels.
 - 10.2. Special Requirements
- 10.2.1. For the transport means, located in the equipped condition, with one passenger in the front seat and the wheels mounted for movement along a straight line, the device protection must meet the listed below requirements.
- 10.2.1.1. The area formed by radial planes arranged at an angle of 30 degrees in the direction of motion of the forward stroke, and 50 degree in direction of travel backwards relative to the center of rotation of the wheels, the overall width of the device of protection is to be, on at least sufficient to close an overall width of the wheel a bus with taking into account the limits of the combination tire / wheel set by the manufacturer. In the case of twin wheels, the total width of both wheels with tires must be taken into account.

When determining the tire width, markings and trademarks, protective flanges and ribs on the side surfaces of the tires are not taken into account.

10.2.1.2. The rear portion of device protection shall end not above a horizontal plane located at a distance of 150 mm above the wheel axis of rotation. The intersection of the edge protector of this plane should be located outside the central longitudinal plane of the wheel with the tire or in the case of twin wheels - outside the central longitudinal plane of the wheel with the tire.

- 10.2.1.3. The contour and position of the device protection must be such that the distance between the device and the tire was minimally possible, in particular in the range area defined by the planes described in paragraph 10.2.1.1.
- 10.2.1.4. In case if the transport means is a suspension bracket, adjustable for height, outlined above requirements should be performed when the transport means is in the position prescribed by the manufacturer of the transport means.
- 10.2.2. Protection devices can be composed of various components to ensure that there are no gaps between or within individual parts of the device when assembled .
- 10.2.3. Protective devices must be firmly attached. However, they can be removed both parts, so and whole.
 - 11. Requirements for the electromagnetic compatibility of trolleybuses Quasi peak values of the radio interference field

strength in decibels relative to 1 μV / m generated by trolleybuses should not exceed the values specified in table 11.1.

Table 11.1.

| Modes of operation | | Tension, dB |
|--------------------|-----------------|-------------|
| | frequencies, f, | |
| | MHz | |

Stationary E = $50 - 10.4 \lg (f / 0.15) *$

- Note: * When driving contact points of rigid attachment of the wires in the band 0.15 0.5 MHz allowed excess tension not more than to 10 dB.
 - 12. Requirements for the emissions of vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$ with gasoline

engines

The emission levels for the individual environmental classes are set in accordance with Table 12.1:

Table 12.1

3 CO - 20 g / kWh, HC - 1.1 g / kWh, NO x - 7 g / kWh (when tested according to UNECE Regulation No. 49-04 (ESC test cycle))

4 CO - 4 g / kWh, HC - 0.55 g / kWh, NO x - 2 g / kWh (when tested according to UNECE Regulation No. 49-05 (ESC test cycle))

13. Requirements for emissions of hybrid vehicles with a test mass of more than 2610 kg and installed on them power plants

Note: In relation to emissions of transport means with a reference mass not exceeding 2610 kg are intended requirements of UNECE Regulation number 83.

13.1. Emissions of

hybrid vehicles resources and their power plants must comply with the limit values specified in table 13.1 for individual environmental classes in the tests of power plants in the collection of method ECE Regulation UN number 49-05 with the use of cycle ETC.

Table 13.1

| Ecologists- | Emission and smoke limit values | | | | |
|-------------|---------------------------------|-------|---------|---------|-------|
| Ic class | CO | NMHC | CH 4g / | NO x | PM |
| | g/kWh | g/kWh | kWh | g / kWh | g/kWh |

4 4.0 0.55 1.1 1) 3.5 0.03 2)

5 4.0 0.55 1.1 1) 2.0 0.03 2)

Notes: 1) Only for engines fueled by compressed natural gas (CNG);

²⁾ only to engines operating on diesel fuel; ³⁾ For diesel engines only.

13.2. Transport means and mounted on their energy installation must c omply with the requirements for onboard diagnostics and reliability in accordance with the Regulation ECE UN number 49-05.

14. The weight limitations applicable to the transport means

- 14.1. The load attributable to lead or leading axle vehicle category N (single and combination vehicle), loaded to the technically permissible maximum mass does not exceed the technically permissible maximum load on the axis (the axis).
- 14.2. In the case when a vehicle of category N is loaded to the technically permissible maximum mass, then with the technically permissible maximum load on its rear axle (axle group), the mass on the steered axle or axles must be at least 20% of the technically permissible maximum mass. of this vehicle .
- 14.3. The mass of a trailer intended for towing by a vehicle of category M₁must not exceed the technically permissible mass established by the manufacturer of the towing vehicle, and:
- if a trailer is operating the brake system: technically permissible maximum mass of the towing vehicle, or for the transport means category M_1G_- 1,5-fold value technically permissible maximum mass of the towing vehicle means, and, in all cases, 3,500 kg;
- if the trailer does not have working brakes: half of the mass of the towing vehicle the means to curb the state and, in all cases, 750 kg.
- 14.4. The weight of the trailer, intended for towing transport means of categories M 2 and M 3 are not should exceed 3500 kg.

- 14.5. Maximum load, attributable to the drawbar device the transport means of categories M and N, designed to tow a trailer with central axis:
- if the technically permissible maximum mass of the trailer exceeds 3500 kg, there must be at least 10% of its technically permissible maximum mass or 1000 kg (the lower value is chosen);
- with $\,$ the technically permissible maximum mass $\,$ of the trailer not exceeding 3500 $\,$ kg, $\,$ there must be at $\,$ least 4% of its technically permissible maximum mass or 25 $\,$ kg (the $\,$ lower value is chosen).

15. Additional requirements for vehicles of categories M and N designed for people with disabilities physical capabilities

- 15.1. Transportation means intended for persons with limited physical abilities, have automatic transmission, anti-lock braking system and adapted organs control.
- 15.2. In relation to the transport of funds intended for persons with limited physical abilities, apply all the requirements of the technical regulations for the appropriate vehicle category. The specifics of applying the requirements for the effectiveness of braking systems are established in paragraph 15.3.
- 15.3. When checking the effectiveness of the working and spare brake systems on manual effort organ braking control system should be at least 65 N and no more than 275 N, wherein the body working stroke control must be in the direction from the driver.

When excess quantities efforts to manually body control conducted ad ditional tests with the initial rate of inhibition of less than 80 km / h, and the determined maximum initial rate to a predetermined braking efficiency, in which the force on the manual control body does not exceed 275 N. This speed must be advised by the manufacturer as a the maximum permitted speed of the vehicle.

The guide on the operation of transport means entered a warning about the inadmissibility of exceeding the maximum allowed speed in connection with the possible increase in efforts to

body control working brake system, which can be not realized the driver with limited physical capabilities.

- 15.4. Bodies
- of management, adapted for persons with limited physical abilities:
- 15.4.1. Should provide easy access to the vehicle interior and to the driver's workplace;
- 15.4.2. Should be adjustable for individual adaptation to a specific driver;
 - 15.4.3. Must comply with the requirements of the UNECE Regulations

Number 12-03 and 21-01 in respect to the risk of injury;

- 15.4.4. You do not need to interfere with each other while simultaneously manipulating several authorities control during the commission of control actions;
- 15.4.5. Should not interfere with the ability to drive a vehicle using the standard controls (if any);
- 15.4.6. You do not need to degrade the availability and ease of use of other management bodies of the transport vehicle.
- 15.5. The working stroke of the controls should ensure that the driver's working posture remains unchanged when performing control actions.
- 15.6. Drive bodies Management must ensure reliable transmission and a smooth change efforts without backlashes, jamming and jerks and the trajectory of the movement organs of management without significant deformation elements and links the drives.
- 15.7. The force on the manual authority control speed of movement of the transport means do not should be greater than 35 N.

APPENDIX No. 4 to the technical regulations of the Customs Union "On the safety of wheeled vehicles funds" (TR CU 018/2011)

Requirements for single vehicles put into circulation

Note: The terminology of the

present application corresponds Regulation ECE UN № 10 - 12, 14, 16, -18, 21, 26, 34, 39, 46, 48, 58, 73 and 107.

- 1. Requirements for general safety
- 1.1. Requirements for devices to prevent unauthorized use (antitheft devices)
- 1.1.1. Vehicle categories M, N, L 6 and L 7 on a permanent basis equipped with anti-theft devices systems to prevent unauthorized actuation of the motor by conventional means or the use of another source of energy main motor of the transport means in the combination of at least a single system, which:
 - locks the steering;
 - blocks the transmission mechanism or;
 - blocks the gear shifting mechanism.
- 1.1.2. The anti theft device must be designed in such a way that it must be disabled in order to:
 - 1.1.2.1. starting the engine with a conventional drive and
 - 1.1.2.2. Control transport means driving or moving the transport means forward with the help of its own rod.
- 1.1.3. The fulfillment of the requirements of paragraph 1.1.2.1 must be ensured through one operation carried out with one key.
- 1.1.4. The use of the servo is only allowed to turn on and / or turn off the device to prevent unauthorized use. Operation of this device must be provided with the help of any suitable means, not requiring power.
- 1.1.5. The anti-theft device acting on the steering must inhibit the steering . Prior to start of the engine operation of the steering control should be restored in full screen.
- 1.1.6. An anti theft device acting on the transmission drive must prevent the driving wheels of the vehicle from rotating .
- 1.1.7. An anti theft device acting on the gearshift mechanism must prevent gear shifting in the following positions:
- 1.1.7.1. The automatic boxes transmissions, in which is provided "Parking" position, blocking should be carried out only in "Parking" position; additional blocking is allowed in the neutral position and (or) in the reverse position.

- 1.1.7.2. The automatic boxes transmissions, in which not provided "Parking" position, blocking should be allowed only in the neutral position and (or) in the reverse position .
- 1.1.8. Anti-theft device should be such that at the time of movement of the transport means exclude the possibility of accidental blocking.
- 1.1.9. Protective devices preventing release of the brakes of the transport means, is not permitted.

1.2. The requirements to the system heating

- 1.2.1. The living space of each vehicle is equipped with a heating system.
- 1.2.2. Autonomous from the engine system of heating must be switched off automatically and the supply of fuel should break off within five seconds after the engine of the transport means. If before it was included manual control device, the system heating can continue to function.
- 1.2.3. Parts of the body and any other elements, which are located far away from the heater, warm air systems of the vehicle interior must be placed so that had been eliminated the possibility obtaining injury or damage to property, in contact with them or protected from excessive heating and possible contamination of the fuel or oil.
- 1.2.4. Exhaust pipe system release exhaust gas heater must be located in such a manner that was excluded possibility ingress of exhaust gases into the

transport means through fans, vents the system heating or open windows.

- 1.2.5. Air to the chamber of combustion of the heating device does not have to come from the passenger cabin of the transport means.
- 1.2.6. The air heated by a heating device, has to come from clean areas where there is no likelihood of contamination of the exhaust gases emitted by vehicles engine or a fuel with a heating device.

1.3. Requirements for lighting and light signaling devices

1.3.1. Lighting and light signaling devices must be operable, and their mode of operation must comply with the requirements of this technical regulation. In the transport means of categories M, N, O and L application devices lighting and light signaling i s governed Table 1.3.1.

To the existence of the requirements of external light devices on transport vehicles

Table 1.3.1

| Name of external lighting devic es | Radiation c olor | Number of devices on the transtailor means | The presence of devices on the transport means in dependence on the categories |
|------------------------------------|------------------|--|--|
|------------------------------------|------------------|--|--|

Headlamp driving light White 2 or 4

1 or 2

Mandatory for categories M, N.

Mandatory for L categories

Forbidden for categories O.

| Name of external lighting devic es | Radiation c olor | Numb of devi- on the trai tailo mean | the presence of devices on the transport means in dependence on the categories |
|------------------------------------|------------------|---|--|
| The headlamp dipped beam | White | 2 | Mandatory for categories M, N. |
| | 1 | 1 or 2 | Mandatory for |

TP TC 018/2011

| | | | categories L_3 , L_4 , L_5 , L_7 . |
|--------------------------|-----------------|---------------------|--|
| | | | Forbidden for categories O. |
| Front fog lamp | White or yellow | 2 | Optional for categories M, N. |
| | yenow | 1 or 2 | Optional for categories L_3 , L_4 , L_5 , L_7 . |
| | | | Forbidden for categories O. |
| Lantern back stroke | White | 1 or 2 ¹ | Mandatory for categories M, N, O ₂ , O ₃ , O ₄ . Optional for categories O ₁ , L ₅ , L ₇ |
| Indicators Front turning | Autogel- th | 2 | Mandatory for categories M, N, L ₃ , L ₄ , L ₅ , L ₆ (with a closed body), L ₇ . Optional for |
| | | | categories L ₁ , L ₂ , L ₆ (with open body). Forbidden for categories O |

| Name of external lighting devic es Radiation c of device olor the traited mean | devices on the transport means in dependence on the categories |
|---|--|
|---|--|

Rear Autogel- 2 Required

th

| | Side | Autogel- th | 2 | Mandatory for categories M, N. Forbidden for categories O |
|-------------------|----------------|------------------|-----------|---|
| Emergency alarm | | Avtozhel - th | | Mandatory for categories M, N, O, L |
| Signal braking | Main | Red | 2 | Mandatory for categories M, N |
| | | | 1 or 2 | Mandatory for |
| | | | 2 | categories L |
| | Additiona 1 | Red | 1 or 2 | Mandatory for |

tel (central)

categories M $_{\mbox{\tiny I}}$, N $^{\mbox{\tiny 5}}Optional$ for other categories of vehicles (except for category L)

Front side light

White 2

1 or 2

Mandatory for categories M, N. Mandatory for categories O with a width of more than 1.6 m.

Optionally for categories O width of not more than 1.6 m.

Mandatory for L categories

| Name of external lighting devic es | Radiation c olor | Number of devices on the transtailor means | The presence of devices on the transport means in dependence on the categories |
|------------------------------------|---------------------|--|--|
|------------------------------------|---------------------|--|--|

Rear marker light red 2 Required

Rear fog lamp ⁴

Red 1 or 2 Required for

categories M, N, O. Optional for categories L $_{\mbox{\tiny 3}},$ L $_{\mbox{\tiny 4}},$ L $_{\mbox{\tiny 5}},$ L $_{\mbox{\tiny 7}}$

Parking light anterior Nij White 2 each front and back, or Optional for vehicles up to 6 m in length and Rear Red at one with each width up to 2 m and is prohibited on lateral howl Auto yellow 6 parties the other transport means Side marker light

Avtozhel- th or Red 7

At least two on each side.

Be sure to transport media length more than 6 m, with the exception of the truck without a body. Besides addition, the transport means categories M_1 and N_1 with a length of less than 6 m, if they do not meet the requirements for the geometric visibility of front and rear parking lamps, side marker lamps shall be used.

| Name of external light | ting devic | Radiation c olor | Number of devices on the transtailor means | The presence of devices on the transport means in dependence on the categories |
|------------------------|----------------|---------------------|--|---|
| Contour the fire | Before- niy | White | 2 | lanterns. Optional for other categories transport means. Mandatory on transport means width |
| | Rear | Red | 2 | more than 2.1 m. Optional for transport means width from 1.8 to 2.1 m and for freight cars without body |

Lamp of illumination of the rear state registration plate

White Not

regulated by 8

Required

Daytime running light White 2 Optional for

categories M,
N. Mandatory
for categories
M,
N, issued after
January 1,
2016. Prohibit
ed
for categories
O.

| Name of external lighting devic es | Radiation c olor | Number of devices on the transtailor means | The presence of devices on the transport means in dependence on the categories |
|------------------------------------|---------------------|--|--|
|------------------------------------|---------------------|--|--|

Front reflector , non - triangular

White 2 required for vehicles of categories O and transport vehicles with retractable headlights.

Optional for other vehicles (except category L)

Lateral svetootrazha- yuschee device other than triangular shapes

before- it

Yellow At least two each side to the transport GOVERNMENTAL means a length more than 6 m.

Mandatory for vehicles of categories O and vehicles of categories M and N longer than 6 m.
Optional for other vehicles

1 or 2 Required for categories L $_{\mbox{\tiny l}}$ and L $_{\mbox{\tiny 3}}$

Side Yellow or red 9

Allowed one (front or back) for the transport GOVERNMENTAL means a length of less than 6 m

Rear Red 1 or 2 Required for

categories L_1 and L_3

| Name of external lighting devic es | Radiation c olor | Number of devices on the transtailor means | The presence of devices on the transport means in dependence on the categories |
|------------------------------------|---------------------|--|--|
|------------------------------------|---------------------|--|--|

Rear svetootrazha- yuschee device

Non-triangular shape

Treu- golnoy form

Red 2 required for the vehicle categories M, N and L. Optionally for vehicle categories O when grouping with other rear devices luminous signaling

ory for vehicles of categories O Prohibited for vehicles of categories M and N

Adaptive front lighting system

White 2 Optional for vehicles of categories M and N Prohibited for vehicles of categories O

Lantern corner White 2 Optional for

vehicles of categories M and N

Outline marking

Side ³White or yellow

One or more elements

Prohibited for vehicles of category M $_{\mbox{\tiny I}},$ O $_{\mbox{\tiny I}}.$

| Name of external lighting devic es | Radiation c olor | Number of devices on the transtailor means | The presence of devices on the transport means in dependence on the categories |
|------------------------------------|---------------------|--|--|
|------------------------------------|---------------------|--|--|

Rear 4Red or yellow

Optional for categories M₂, M₃, N₁, N₂with a technically permissible maximum mass up to 7.5 tons, O₂. Mandatory for category N₂with a technically permissible maximum mass of 7.5 tons or more, N₃(except for truck tractors and chassis), O₃, O₄

Notes: 1One device is mandatory and one optional for vehicles of category M₁ and vehicles of other categories with a length not exceeding 6 m. Two devices are mandatory for vehicles of all categories except category M₁ and with a length exceeding 6 m.

²Emergency alarm is an all simultaneously flashing pointer rotation.

³ is obligatory for the transport means with the overall length of more than 6 m.

⁴ is obligatory for the transport means with the overall width of more than 2.1 m.

⁵Except for vehicles of category N ₁ with an open load compartment or without a body.

⁶When combined with side direction indicators and side marker lamps.

⁷When grouped, combined or combined with a rear position lamp, an outline lamp, a rear fog lamp or a brake light, or if it shares a light-emitting surface in part with the rear reflective device.

8 The number of lamps for illumination of the rear registration plate must be sufficient to illuminate its entire surface.
9 When grouping or having a common lightemitting surface with a rear position lamp,

emitting surface with a rear position lamp, a rear outline lamp, a rear fog lamp, a brake signal or a red side- marker lamp.

ed side marker ramp.

- 1.3.2. No light red color does not have to be emitted in a forward direction and no white light, except for the light from the reversing lamp, be emitted in the backward direction. This requirement does not apply to devices lighting ustanavliva- emye for internal illumination of the transport means.
- 1.3.3. Turning on and off the front and rear marker lights, outline lights. side any, marker lights, if any, and the rear state registration plate lamp must be carried out by a common governing body. This requirement is not applicable when the use of the front and rear marker lamps, while also the side marker lamps as parking lights.
- 1.3.4. Turning range far and near light and front fog lamps should be carried out only if also included lights referred to in paragraph 1.3.3. This requirement does not apply to high-beam and dipped-beam headlamps when the flashing of these headlamps is used to give short warning light signals.
- 1.3.5. It is imperative to have operable, visible by the driver, control light signals for switching on for high beam headlights, front fog lights, direction indicators, front and rear parking lights, rear fog lights. The requirements of this subparagraph in respect of the front and rear position lamps are considered to be fulfilled if at the same time with them is included lighting combinations of instruments.
- 1.3.6. Simultaneous or pairwise switching on of the main headlights is allowed. When switching high beam beam. all high beam headlamps must be switched off at the same time.
- 1.3.7. Adaptive systems front lights, operate low beam function. regardless of the light source, the lights passing light from the source of light grade LED, and also lights

low beam and fog from any class of light sources having a luminous flux of 2,000 lumens must be equipped with automatic correction device adjusting the angle of inclination of the headlights.

Lights passing light having a source of light with a nominal luminous flux over 2000 lumens must be equipped with a workable device faroochistki.

Note: Replaceable gas discharge light sources of categories D1R, D2R, D3R, D4R, D1S, D2S, D3S, D4S and halogen incandescent lamps of categories H9, H9B, HIR1 have a nominal luminous flux of more than 2000 lumens.

- 1.3.8. The marking of the main beam, dipped beam and fog lamps and the classes of the light sources installed in them must correspond. In that case, when the detected introduction of changes in the design of lamps, including the change in the sources of light in the headlights, the provisions of section 9 of the annex number 9 to the present technical regulations.
 - 1.3.9. Requirements for the placement of low beam headlamps:

Height: above the supporting surface - minimum 500 mm, maximum 1200 mm. For vehicles of category $N_{\,_3}G$, the maximum height may be increased to 1500 mm.

- 1.3.10. Requirements for the placement of front fog lamps (except for vehicles of categories L_1 - L_4 , L_6):
- 1.3.10.1. Width: the point of the visible surface ¹⁰ in the direction of the original axis, which in the greatest degree removed from the middle longitudinal plane of the transport means, should be at a distance of not more than 400 mm from the edge width of the transport means.
- 1.3.10.2. Height: minimum: not less than 250 mm above the ground; maximum: for vehicles of category M_{\perp} and N_{\perp} not more than 800 mm above the supporting surface; for all other categories of vehicles means the maximum height is not provided.
- 1.3.10.3. Neither one of the points on the visible surface does not needs to be above most high point of the visible surface of the headlamp dipped beam.
- 1.3.11. Requirements for the placement of direction indicators and alarm:

If installed, optional pointers rotation, then they must be symmetrical and to be on the greatest possible distance on the vertical, which allowed the contour of the body, but not less than 600 mm above the mandatory lamps.

- 1.3.12. Requirements for placing signals braking:
- 1.3.12.1. Width: For vehicles of categories M₁, N₁, L₂, L₄-L₇: the point of the visible surface in the direction of the reference axis, which in the greatest degree removed from the middle longitudinal plane of the transport means, should be at a distance of not more than 400 mm from the edge of the overall width of the vehicle;

for vehicles of categories L $_2$, L $_5$ -L $_7$ in the case of installing one brake light, its reference axis must lie in the median longitudinal plane of the vehicle, for vehicles of category L $_4$ - if a third brake light is installed , then it must be installed symmetrically a br

ake signal installed on the motorcycle relative to the motorcycle 's median longitudinal plane;

for all other categories of vehicles is the point of the visible surface in the direction of the reference axis which is the least distant from the central longitudinal plane of the vehicle must be at least 600 mm from the extreme outer edge of the transport means. This distance may be reduced to 400 mm if the overall width of the vehicle is less than 1300 mm.

1.3.12.2. In height: above the supporting surface between 350 mm and 1500 mm (maximum 2100 mm if compliance with the specified requirement is impossible due the shape of the body, if optional lights to are not installed). If optional lamps are installed, then they must be placed symmetrically on how you can more distance on the vertical, which is of the bodywork, but not less than 600 mm above the mandatory lamps (except transport means categories L).

For vehicles of categories L_1 - L_3 , L_5 - L_7 - not less than 250 mm and not more than 1500 mm above the supporting surface;

for vehicles of category L $_{\mbox{\tiny 4-}}$ not less than 250 mm, not more 1200 mm above the supporting surface.

1.3.12.3. Additional brake lights must be installed no more than 150 mm from the bottom edge of the outer surface or

rear window cover, and not less than 850 mm from the level of the supporting surface.

- 1.3.12.4. It is allowed to shift the optical center of the additional braking signal to the left or to the right of the median longitudinal plane at a distance of not more than 150 mm, or install two additional braking signals , which in this case should be located as close as possible to the median longitudinal plane, one device on each side of this plane ...
 - 1.3.13. Requirements for the placement of rear fog lamps:
- 1.3.13.1. According width: if there is only one rear fog lamp, it must be on the left side of the median longitudinal plane of the vehicle with respect to the direction of movement, or on this plane.
- 1.3.13.2. Height above the supporting surface minimum 250 mm, maximum 1000 mm. For vehicles of category N $_3$ G, the maximum height can be increased to 1200 mm.

1.4. Additional requirements for the general safety of passenger vehicles of categories M 2 and M 3

Notes:

- 1. All checks and measurements are made to curb the transport vehicle in normal working condition, located on a flat horizontal surface. If transport means kneeling system is fitted, it must be adjusted in such a way that the transport means were at the level of its normal ride height.
 - 2. In relation to transport means, not intended for commercial use, th specialized passenger transport means category M₂G and M₃G, buses for funeral services, as vehicles of well as categories M₂ and M₃ increased comfort with a reduced number of seating places the requirements of subparagraphs 1.4.5, 1.4.6.2-1.4.6.3, 1.4.7, 1.4.19, 1.4.20, 1.4.21.1-1.4.21.2, 1.4.21.3.2-1.4.21.3.4 of this annex do not apply.

- 1.4.1. Fire protection.
- 1.4.1.1. The engine compartment is not allowed to use any flammable soundproofing material or material impregnated with fuel, lubricating oil, or other combustible substance, if it is not covered with a hermetic layer.
- 1.4.1.2. It must be provided measures precaution against the accumulation of fuel, lubricating oil or any other combustible substance in any place the engine compartment for the account corresponding to structural features or by creating drainage holes.
- 1.4.1.3. Between the engine compartment or any other source a device intended for the absorption of of heat (such as energy liberated when moving the vehicle down a long descent means, for example retarder, device heating the or to cabin, except any device, heated liquid system of cooling the motor) and the remaining part transport means must be placed a partition of refractory material. All fasteners, clamps, spacers, etc. used for the partition must be fire resistant.

- 1.4.1.4. The presence of any flammable materials in the range of 100 mm from a system issue, or other significant source of heat should be allowed only in that case, if these materials are properly manner reserved. To prevent ingress of lubrication or contact other combustible materials with the exhaust system or other significant sources of heat must be provided adequate protection. For purposes of this paragraph flammable material is considered, which is not designed to withstand the high temperatures that are possible in the place of its use.
- 1.4.1.5. (does not apply to double-deck vehicles). It should be installation provided of more fire for the one or extinguishers, one of which should be near from the seat of the driver. In of placing fire extinguishers in the case a lockable box or behind easily broken glass, the places of their storage must be clearly marked and the possibility of their unhindered removal in an emergency should be ensured.
 - 1.4.2. Electrical equipment and wiring
- 1.4.2.1. All wires must be securely isolated, and all cables and electrical equipment shall withstand the effects of temperature and humidity, which they are exposed. All wires must be securely protected and firmly attached, to preclud e the possibility of breakage, abrasion or wear.
- 1.4.2.2. All electrical cables shall arranged in such a be not in contact neither with any fuel way that no part is line or any other part of the system of release and is not subjected to excessive heat, unless proper special insulation and protection.
 - 1.4.3. Rechargeable batteries
- 1.4.3.1. All rechargeable batteries must be well secured and easily accessible.
- 1.4.3.2. Branch, wherein the battery compartment must be separated from the passenger compartment and the driver's compartment and appropriate manner be ventilated outer air.
- 1.4.3.3. The poles of the battery must be protected against the risk of short circuits.
 - 1.4.4. Kits Medical first aid (road):
- It must be provided space for the installation of one or several kits first aid (automobile). First aid kits can be protected against theft or vandalism (for example, by placing them in a lockable box or behind easily shattered glass), provided that

the storage locations of the items are clearly identified and the means are provided for their unhindered retrieval in an emergency .

- 1.4.5. Number of exits (does not apply to double-deck vehicles)
- 1.4.5.1. The minimum number of doors in a vehicle must be two: either two service doors or one service door and one emergency door. The minimum number of service doors should be in accordance with Table 1.3.

Table 1.3.

| Number of passengers | Number of service doors | | |
|----------------------|-------------------------|----------|-----------------|
| | Class I and A | Class II | Class III and B |
| | | | |
| 9 - 45 | one | one | one |
| 46 - 70 | 2 | one | one |
| | | | |
| | | | |
| | | | |
| | | | |
| 71 - 100 | 3 | 2 | one |
| > 100 | four | 3 | one |

- 1.4.5.2. The minimum number of service doors in each rigid section of an articulated vehicle shall be one; an exception is the front section of a class I articulated bus, where the minimum number of doors must be two. Service doors equipped with a mechanized system drive, do not need to be seen in as replacement doors, if they can not be easily opened by hand.
- 1.4.5.3. The minimum number of exits should be such that the total number of exits in a separate compartment corresponds to table 1.4. Emergency hatches can be considered only in a one of the aforementioned emergency exits.

Table 1.4.

The number of passengers and crew members who can be in each compartment

Minimum total number of outputs

2
3
four
five
6
7
eight
nine
10
eleven

- 1.4.5.4. For the purpose of determining the minimum number and location of exits, each rigid section of an articulated vehicle should be treated as a separate vehicle. For the purposes of determining the number of emergency exits, the toilet and kitchen are not considered separate compartments. The number of passengers must be determined for each rigid section.
- 1.4.5.5. A double service door is considered as two doors, and a double or combination window is considered as two emergency windows.

- 1.4.5.6. If the driver's compartment is not connected to the passenger compartment by a walkway, the following conditions must be met:
- 1.4.5.6.1. Separation of the driver must be equipped with two outputs, which do not need to be located on one and of the same lateral wall; If one of the exits is a window, then it must satisfy the requirements imposed to spare windows and set out in paragraphs 1.4.7.1 and 1.4.12.
- 1.4.5.6.2. On the side of the driver, it is allowed to install one or two seats for additional passengers; in this case the doors are the exits. The driver's door is regarded as the emergency door for the occupants of those seats, provided that the driver's seat, steering wheel, the engine housing, the gear lever, the lever hand brake and etc. do not make it difficult to exit. The door provided for the aforementioned persons is considered as an emergency door for the driver.
- 1.4.5.7. If a separation of the driver and any places adjacent to it are accessible from the rest of the passenger compartment by means of a passageway, the external output of the separation of the driver is not required.

This does not preclude the presence of a door or other barrier between the driver's seat and the passenger compartment, provided that this barrier can be quickly removed by the driver in an emergency. The driver's door in a compartment closed this barrier is not considered in an exit for passengers.

1.4.5.8. In addition to emergency doors and windows, vehicles of Classes II, III and B must have escape hatches. They can also be equipped with vehicles of classes I and A. The minimum number of hatches must correspond to table 1.5.

Table 1.5

no more than 50 1 more than 50 2

1.4.6. Exit locations (does not apply to double-deck vehicles)

Note: Vehicles with a capacity of no more than 22 passengers may meet either the requirements of paragraph 1.4.6 or the requirements of paragraph 1.4.21.

1.4.6.1. The service door (s) must (should) be located on the right side of the vehicle, and in the case of two or more doors, at least one of them must be in the front half of the vehicle. This does not exclude the presence of a door in the rear face of a vehicle intended for use by passengers in wheelchair wheelchair.

1.4.6.2. According

to at least one emergency exit should be located respectively in the rear or in the front end part of the transport means. For vehicles of class I and for vehicles in which the rear section is completely separated from the passenger compartment, this requirement is deemed to be fulfilled if an escape hatch is installed .

1.4.6.3. When the presence of the emergency hatches, they must be placed in the following way: if there is only one hatch, then it should be installed in the middle third of the vehicle; if there are two hatches, the distance between the nearest edges of the openings, measured along a line parallel to the longitudinal axis of the vehicle, must be at least 2 meters.

1.4.7. Minimum sizes of outlets

1.4.7.1. For the different types of outlets, the minimum dimensions given in table 1.6 must be observed .

Table 1.6

| | | | Class I | Class II and III | Notes (edit) |
|------------------|--------------------------------|------------|--|---------------------|--|
| | | Height (mm | 1 800 | 1 650 | - |
| rvice door | rvice door loor openin g | | single door: 650 Double door: 1 200 | | This dimension can be reduced by 100 mm if the measuremen t is taken at handrail level |
| Spare door | | Height (mm | 1 25 0 | | - |
| | | Width (mm) | 550 | | |
| Spare windo w | Area (sq. Mm) | | 400 000 | | A rectangle must fit into this hole 500 x 700 mm |

| | | | Class I | Class II and III | Notes (edit) |
|--|----------------|--|---------|------------------|--|
| A spare window located at the rear end of the vehicle, unless a spare is provided by the manufacturer windows with the above minimum dimensions. | | A rectangle 350 mm high and 1,550 mm wide must fit into the emergency window opening. The corners of this rectangle may be rounded, with the radius of curvature not exceeding 250 mm. | | | |
| ergency hatc h | Hatch openin g | Area (sq. mm | 4 | .00 0 00 | This hole should fit a rectangle wit h dimensions 500 x 700 mm |

1.4.8. Technical requirements for all service doors

1.4.8.1. Each overhead door must be easily opened from the inside and the outside of the transport means, when the transport means is in a stationary state (this condition is not a must for moving the transport means). However, this requirement should not be construed as excl the possibility of locking the doors from uding the outside, provided that the door can always be opened from the inside.

- 1.4.8.2. Each openable and closable manually single overhead door is hung on hinges or pivots, should be installed in such a way that when its contact in the open position with a stationary object at the time of movement ahead of the vehicle is moved in the direction of closing. If a manually opened and closed service door is equipped with an English lock, then it must be of the two position type.
- 1.4.8.3. The inside of a service door shall not have any device designed to close the inside steps when the door is in the closed position. This does not exclude the presence of steps in the niche when the door is in the closed position, a door control mechanism and other equipment mounted on the inside of the door and not part of the floor on which you can stand. This mechanism and equipment must not pose a hazard to passengers.
- 1.4.8.4. If direct vision is insufficient, optical or other devices must be installed to allow the driver

from his seat to see the passengers are in the immediate vicinity of the outside of each service door, not being automatic. In the case of a service door in the rear end of the transport means with a capacity of not more than 22 passengers this requirement is satisfied if the driver is able to detect the presence of an object height of 1.3 m, located at a distance of 1 m behind the vehicle funds.

- 1.4.8.5. If the service door is adjacent to the door of a toilet or other internal compartment, then such a service door must be equipped with a device to prevent its unintentional opening. However, this requirement does not should be used, if the door is locked automatically when the vehicle driving means at a speed exceeding $5\,\mathrm{km}/\mathrm{h}$.
 - 1.4.9. Additional technical requirements for automatic service doors

The opening mechanisms of each automatic service door shall be operated and deactivated only by the driver from his seat. Actuation and deactivation can be either direct, by means of a switch, or indirect, for example, by opening and closing the front service door.

- 1.4.10. Closing automatic service doors
- 1.4.10.1. After the automatic service door has opened, it must close again automatically after a certain period of time. If during this period of time to the transport means includes or from it exits passenger, device security (e.g., the contact panel in the floor of the light barrier, extending in the same direction) should provide a sufficient interval of time before closing the door.
- 1.4.10.2. If a passenger enters the vehicle or out of it at the time of closing the door, the process of closing shall be interrupted automatically and the door shall return to the open position.
- 1.4.10.3. After disabling the driver mechanism of automatic overhead doors open the closed in accordance with paragraphs 1.4.10.1 and 1.4.10.2.
 - 1.4.11. Requirements for spare doors
- 1.4.11.1. Replacement doors should easily be opened from the inside and the outside, when the transport means is in a fixed state. However, this requirement should not be construed as

precluding the possibility of locking the door from outside, provided that it always can be opened from the inside with the help of the usual mechanism of opening the door.

- 1.4.11.2. Spare doors used in as such, do not need to have a mechanical actuator, except for those cases when , after activation and return to the normal position of the mechanism of management, the door does not close again until the driver does not include a mechanism for their closing. They also need not be of a sliding type, except on vehicles with a maximum capacity of 22 passengers.
- 1.4.11.3. Hinged emergency doors fitted the side of the to hinged front part and open transport means must be outwards. Door restraining belts, chains or other restraining devices are allowed as long as they do not prevent the doors from opening freely at an angle of at least ° and allow them to remain in this position. If there are sufficient funds to provide free access to the spare door requirement in respect of the minimum angle of 100 not applicable.
- 1.4.11.4. Replacement doors should be equipped with a device which prevents their unintentional opening. However, this requirement does not apply if replacement door closes automatically when the movement of the transport means with a speed of more than 5 km/h.
- 1.4.11.5. All replacement doors should be equipped with an audible device, warning the driver of the fact that they are closed tightly. The warning device shall be operated by movement of the latch or handle the door, and not the movement itself doors.
 - 1.4.12. Requirements for spare windows
 - 1.4.12.1. Any hinged or hinged emergency window must open outward

1.4.12.2. Any emergency window must:

- 1.4.12.2.1. Or easily and quickly opened from inside and outside the transport means with the help of the respective devices,
- 1.4.12.2.2. Or have an easily breakable safety glass. The latter provision excludes the possibility of using laminated glass or glass made of plastic material. A device must be installed near each emergency window, easily accessible to persons in the vehicle, so that each window can be broken .

1.4.12.3. Every emergency window that can be locked from the outside must be designed in such a way that it can be opened from the inside of the vehicle at any time.

- 1.4.12.4. Spare Hinged box with loops laid horizontally at the upper edge, must be equipped with an appropriate mechanism to hold it in the fully open position. Every hinged emergency window shall be opened and closed in such a way as not to impede the free access into the transport means or exit from it.
 - 1.4.13. Requirements for escape hatches
- 1. 4.13.1. Every escape hatch shall be opened and closed in such a way that does not impede the free access into the transport vehicle or exit from it.
- 1.4.13.2. Spare hatches in the roof must be folding, hinged or made of easily breakable safety glass.

Emergency floor hatches must be protected against unintentional activation. However, this requirement does not apply if the floor hatch is locked automatically when the movement of the transport means with a speed of more than $5\ km/h$.

- 1.4.13.3. Hatches flip-type should not be completely separated from the transport means at the opening, so that the door does not represent any danger to other road users. Hinged hatches in the floor must only open into the interior of the passenger compartment.
- 1.4.13.4. Escape hatches should be easy to open or remove from both the inside and the outside. In the case of readily-breakable hatch near him must be installed unit is easily accessible for those who are in the transport vehicle, with the fact that the hatch can be had split.
 - 1.4.14. Lettering
- 1.4.14.1. From the inside and outside of the vehicle, each emergency exit must be marked with the inscription "Emergency exit", supplemented, if necessary, with the corresponding international designation. The inscription is carried out on the Russian language and can be duplicated official language of the state a member of the Customs Union.
- 1.4.14.2. Emergency control mechanisms for service doors and all emergency exits from the inside and outside of the vehicle shall be identified as such with an appropriate sign or clear

the inscription on the Russian language, which can be duplicated on the state language of the state - a member of the Customs Union.

1.4.14.3. On each mechanism of emergency management spare outputs or near each of them there shall be clear instructions on how to use them in the Russian language, which can be duplicated on the state language of the state - a member of the Customs Union.

- 1.4.15. Internal layout
- 1.4.15.1. The

internal layout should provide passengers with access to service doors, emerg ency doors, emergency windows, escape hatches in the roof, emergency hatches in the floor.

- 1.4.15.2. Sex passages providing access, must have prevents sliding su rface.
 - 1.4.16. Communication with the driver.

On transport vehicles of classes I of, II of and A should be provided for the device, allowing passengers to transfer the driver signal for stopping the transport funds. Elements of the management of all such communication devices shall have protruding buttons, which in the transport vehicles of Class I and A must be at a height of not more than 1200 mm from the level of the floor and have a contrasting coloring. These elements

- of control should be distributed evenly on the entire vehicle.
- 1.4.17. The electric light inside the passenger compartment must provide artificial interior lighting:
- 1.4.17.1. All passenger compartments, crew compartments, toilets and articulated vehicle swing section;
 - 1.4.17.2. All the steps;
- 1.4.17.3. Approaches to all exits and the area adjacent to the service door (service doors);
- 1.4.17.4. Internal designations and inscriptions and internal control me chanisms for all outputs;
 - 1.4.17.5. All places where there are any obstacles.
 - 1.4.18. Rotary section of articulated vehicles means:
- 1.4.18.1. If articulated transport means to curb state is on a flat horizontal surface, between the floor of any of its rigid sections and hollow rotating pad or element that it replaces, n ot should be naked gap width which would exceed:
- 1.4.18.1.1. 10 mm when all wheels of the vehicle are on the same plane, or
- 1.4.18.1.2. 20 mm, when the wheels of the axle adjacent to the pivot section are on a surface located 150 mm above the surface on which the wheels of the other axles rest.
- 1.4.18.2. The difference between the floor level of rigid sections and the floor level of the rotating platform, measured at the junction, should not exceed:

1.4.18.2.1. 20 mm under conditions described above in paragraph 1.4.18.1.1,

or

- 1.4.18.2.2. 30 mm under conditions described above in paragraph 1.4.18.1.2.
- 1.4.18.3. On articulated vehicles means shall be

means are provided to prevent passengers from accessing any section of the turning section, where:

- 1.4.18.3.1. There is an open gap in the floor, the size of which does not comply with the requirements of paragraph 1.4.18.1.1.
 - 1.4.18.3.2. The floor does not support the mass of passengers.
 - 1.4.19. Handrails and support for hands
- 1.4.19.1. The cross section of the rail and the supports for the hands must be such that the passenger can easily grasp them and hold tight. The length of each handrail should be not less than 100 mm, so that on it could accommodate a hand.
- 1.4.19.2. The free space between handrails or handholds and the adjacent ceiling or walls of the vehicle must be at least 40 mm. However, in the case of the door handrail or handrail at the seat or in the access passage of a vehicle class II, III or B is allowed minimum free space to 35 mm.
- 1.4.19.3. The surface of every handrail, arm supports or racks should be a contrasting color and be non-slip.
 - 1.4.19.4. Handrails and support for the hands at the office door.

Door apertures shall be fitted with handrails and / or supports for the arms to both sides. For double doors, this requirement can be met if one B-pillar or handrail is installed .

1.4.20. Fencing of openings for steps

If a seated passenger can be thrown forward into the staircase as a result of sudden braking, an appropriate guard shall be provided. This guardrail must be installed at a height of at least 800 mm from the floor where the passenger's feet are located, and extend from the wall of the vehicle into the interior of the passenger compartment at least

than 100 mm beyond the longitudinal center line of the seating position where the occupant is endangered or before the first step is raised, the smaller of the two distances being taken .

1.4.21. Special requirements for the transport means of a capacity not exceeding 22 passengers

1.4.21.1. Minimum sizes of outlets

For outlets of different types , the dimensions indicated in table 1.7 must be observed .

1.4.21.2. Transport means with a capacity of not more than 22 passengers shall meet the requirements of table 1.7 of the application in respect of replacement windows and emergency hatches and the minimum requirements for service doors and replacement windows, given in Table 1.8.

Table 1.7

| Aperture | Dimensions | Notes (edit) | | |
|----------|------------|--------------|--|--|
| | (edit) | | | |

Service door Entrance height:

Class

A 1650 mm

In 1500 mm

The height of the service door opening is measured as the vertical distance along the vertical plane of the horizontal projections of the midpoint of the door opening and the top surface of the bottom step.

The height of the opening height of the opening the service door

must correspond to table. 1.6. The upper corners may be rounded, wherein the rounding radius should be no more than 150 mm.

Width: Single door: 650 mm Double door: 1200 mm

For Class B vehicles in which the height of the service door opening is 1400 - 1500 mm, the minimum width of the single door opening shall be 750 mm. For all vehicles width of any service door can be reduced by 100 mm when the measurement is made at the level of the handrail, and 250 mm when it is required in the case of projecting

| Aperture | Dimensions | Notes (edit) | | |
|----------|------------|--------------|--|--|
| | (edit) | | | |

wheel arches, a mechanism for activating automatic or remote door control or tilting the windshield.

Emergency Door Height:

1250 mm Width: 550 mm

The width may be reduced to 300 mm if required in the case of protruding wheel arches, provided that the width is 550 mm at a minimum height of

400 mm above the lowest part of the doorway. The upper corners may be rounded to a radius of curvature does not have to exceed 150 mm.

4000 sq. cm

A 500 mm by 700 mm rectangle must fit into this hole.

Table 1.8

| Aperture | Dimensions | Notes (edit) |
|----------|------------|--------------|
| | (edit) | |

Service door Opening height: 1110 mm

This dimension can be reduced if the radius of curvature in the corners of the opening does not exceed 150 mm.

Width: Single door:

650 mm Double door: 1 200 mm

This dimension can be reduced if the radius of curvature in the corners of the opening does not exceed 150 mm. The width can be reduced by 100 mm if the measurement is taken at the level of the handrails, and 250 mm, if required in the case of protruding wheel arches, automatic or remote door control mechanisms, or windscreen tilting.

| Aperture | Dimensions | Notes (edit) |
|----------|------------|--------------|
| | (edit) | |

Emergency door Height: 1000 mm Width can be reduced to

Width: 550 mm

300 mm if required in the case of protruding wheel arches, provided the width is 550 mm at a minimum height of 400 mm above the lowest part of the door opening. The upper corners can be rounded, and the radius of the rounding must not exceed 150 mm.

1.4.21.3. Outlets location:

- 1.4.21.3.1. The service door (s) must (should) be located on the right side of the vehicle or at the rear end of the vehicle.
- 1.4.21.3.2. Outputs must be positioned in such a way that on each side of the vehicle has at least one output.
- 1.4.21.3.3. In the front half and the rear half space for the passengers should be provided on at least on one output.
- 1.4.21.3.4. When no emergency hatch, on at least one an outlet must be provided either at the rear end or at the front end of the vehicle .
 - 1.4.22. Special requirements for double decker transport means
- 1.4.22.1. There must be provided a place for the installation of two fire extinguishers, one of which must be in the vicinity of the seat of the driver, and the other on the top floor.
 - 1.4.22.2. Number of outputs:
- 1.4.22.2.1. On the lower floor of each double-decker transport means must be provided for the two doors. The minimum number of service doors must correspond to that specified in Table 1.9.

Table 1.9

| | The number of service doors in double- | | | |
|---------------|--|-------------------|--|--|
| Number | decker transport vehicle | | | |
| of passengers | Classes I and A | Classes III and B | | |

9 - 45 1 1 1

| | The number of service doors in double- | | | | |
|---------------|--|----------|-------------------|--|--|
| Number | decker transport vehicle | | | | |
| of passengers | Classes I and A | Class II | Classes III and B | | |
| | | | | | |
| 46 - 70 | 2 | one | one | | |
| 71 - 100 | 2 | 2 | one | | |
| more than 100 | four | 3 | one | | |

1.4.22.2.2. The minimum number of emergency exits should be such that the total number of exits corresponds to the values indicated in Table 1.4, and the number of exits for each separate floor and each separate compartment is determined separately. For the purpose of determining the number of emergency exits, the toilet and kitchen

are not considered separate compartments. Emergency hatches can be considered only in a one of the abovementioned replacement outputs.

1.4.22.2.3. In addition to emergency doors and skylights on the upper deck of vehicles of Class II and Class III, escape hatches must be provided. They also may be equipped with transportation means of the class I. In this case, the minimum number of manholes must meet specified in Table 1.5, with the proviso that said number of passengers located on the top floor.

1.4.22.2.4. Each staircase between floors is viewed as an exit from the upper floor.

1.4.22.2.5. All persons located on the lower floor, in an emergency, should be able to leave the vehicle without having to enter the upper floor.

1.4.22.2.6. The main passage on the upper floor must be connected to the passage to the service door or to the main passage on the lower floor using one or more intermediate stairs located at a distance of less than 3 m from the service door:

1.4.22.2.6.1. Class I and Class II vehicles must have two ladders or at least one ladder leading to the lower aisle and one ladder leading to an emergency exit if more than 50 passengers are carried on the upper floor;

1.4.22.2.6.2. In Class III vehicles should have two staircases, or for at least one staircase leading to the lower passage, and a staircase leading to an emergency exit, if on the top floor is carried over 30 passengers.

1.4.22.3. Outlets location:

- 1.4.22.3.1. The outputs on each floor should be positioned in such a way that their number from both sides of the transport means were virtually identical.
- 1.4.22.3.2. On the upper floor, on at least one emergency exit should be located, respectively, either in the back, or in front of the end part of the transport means.
 - 1.4.22.4. Handrails and supports for interfloor stairs:

All intercommunication staircases to both sides should be equipped with handrails or supports for the hands, which are set at a height of 800-1110 mm from the surface of each step.

- 1.4.22.5. Fence openings to the stairs and Unshielded seat
- 1.4.22.5.1. On the top floor of a double-deck vehicle, the opening of the inter-storey staircase must be protected by a fence at least 800 mm high from the floor. The lower edge of the fence should be at a height of not more than 100 mm from the floor.
- 1.4.22.5.2. Windshield glass in front of the passengers occupying the front seat on the upper floor, must be equipped with a guardrail of the packing material. The top edge of this guardrail should be located vertically at a height of 800-900 mm from the floor where the passenger's feet are .
 - 1.4.22.5.3. The rise of each step and staircase must be closed.
- 1.4.23. Requirements for additional marking for vehicles of categories M $_2$ and M $_3$.
- 1.4.23.1. Vehicles of categories M_2 and M_3 have to have a clear marking, well visible from inside and deposited near the front door in the form of characters or pictograms not less than 15 mm in height and numbers not height less than 25 mm, to which should be indicated:
- 1.4.23.1.1. The maximum number of seated passengers that can be carried in a vehicle;
- 1.4.23.1.2. The corresponding event the maximum number of standing passengers that may be carried in the transport unit;
- 1.4.23.2. In case if the construction of transport facilities allows to change the number of places for seating, a space designed for standing passengers or number of

transported wheelchair accessible, the requirement of apply to

paragraph 1.4.23.1

respect of each configuration with the maximum number of places for seating and a corresponding number of wheelchair wheelchairs and standing passengers.

- 2. Requirements for active safety
- 2.1. Requirements for braking systems
- 2.1.1. The vehicle is equipped with braking systems capable of performing the following braking functions:
 - 2.1.1.1. Service brake system:
- 2.1.1.1. It is acting on all wheels of a body control (except for vehicles of categories L_1 L_4);
- 2.1.1.1.2. Under the influence of the driver on the control from his seat at the location of both hands of the driver on the body of the steering control slows down the movement of transport funds, up to a full stop like when moving forward, so and in reverse.
 - 2.1.1.2. The spare braking system is capable of:
- 2.1.1.2.1. For vehicles with four or more wheels act on the braking mechanisms by means of at least half of the dual-circuit service brake system on at least two wheels (on each side of the vehicle) in the event of a failure in the service brake system or brake booster systems;
- 2.1.1.2.2. For transport means with three wheels act on the brakes by means of a circuit system with separated circuits or through the impact of the driver sitting in his seat, at least one hand on the steering wheel, on the parking management body brake.
 - 2.1.1.3. Parking brake system:
 - 2.1.1.3.1. Inhibits all wheels on at least one of the axes;
- 2.1.1.3.2. It has a control body that, when activated, is able to maintain the braked state of the vehicle only mechanically .
- 2.1.2. The braking forces on the wheels should not be generated if the brake controls are not engaged.
- 2.1.3. Of the service and replacement of brake systems adequate reduction or increase ensures smooth, in the brake force (deceleration transport facilities) while decreasing or increa sing, respectively, the efforts of the impact on the body control the brake system.

2.1.4. In the transport means, having four wheels and more, the hydraulic brake system is equipped with a red alarm indicator, which is activated by a signal from sensor pressure

informing about a malfunction of any part of the hydraulic brake system associated with a brake fluid leak.

- 2.1.5. Management and control bodies.
- 2.1.5.1. Service brake system:
- 2.1.5.1.1. Applicable foot body control (pedal), which moves without interference when the foot in a natural position. This requirement does not apply to the transport means, intended for the management of persons, physical capabilities which do not allow to carry out the management of transport means with the help of the feet, and transport facilities category L.
- 2.1.5.1.1.1. When the pedal is pressed all the way, there should be a gap between the pedal and the floor.
- 2.1.5.1.1.2. When you release the pedal must fully return to its original position.
- 2.1.5.1.2. In the service braking system, compensation adjustment is provided in connection with the wear of the friction material of the brake linings. Such adjustment should be carried out automatically on all axles of vehicles with four or more wheels.
- 2.1.5.1.3. If there are separate controls for the service and emergency braking systems, the simultaneous actuation of both controls should not result in the simultaneous deactivation of the service and emergency braking systems .
 - 2.1.5.2. Parking brake system
- 2.1.5.2.1. The parking brake system is equipped with body control, is not dependent on the body of the control of the working brake system.

This requirement does not apply to vehicles of categories L_1 and L_3 .

Authority control of the parking brake system is equipped with operable locking mechanism.

- 2.1.5.2.2. The parking brake system provides manual or automatic compensating adjustment in connection with the wear of the friction material, brake linings.
- 2.1.6. Vehicles of categories M_2 , M_3 , N_2 , N_3 , O_3 and O_4 with a number of axes is not more than four are equipped with antilock brake systems (ABS).

2.1.7. In order to ensure periodic technical checks of the brake systems, it is possible to check the wear of the lining

service brakes of the vehicle the using only the tools or devices normally supplied with it, for example, using the appropriate inspection holes or in some other way. Alternatively, acoustic optical devices warning the driver at his working place on the need replacement linings. As a visual warning signal can be used yellow warning signal.

- 2.2. Requirements for tires and wheels
- 2.2.1. Each mounted on a transport vehicle bus:
- 2.2.1.1. Has a molded marking with at least one of the conformity marks "E", "e" or "DOT".

A sample marking is shown in figure 2.1.

2.2.1.2. Has molded markings designate the size of the tire, the

index bearing capacity and index search speed.

DOT

Figure 2.1. Sample marking

Note: 1. The signs "E" and "e" are approval marks. Instead of dots indicated by the distinguishing number of the country, which gave a message about the official approval of the type of vehicle or component of the Rules of the UNECE or EU Directives and the number of official approval.

2.3. Requirements for means of ensuring visibility

2.3.1. The driver who will drive the vehicle must be able to freely see the road ahead of him, as well as have a view to the right and left of the vehicle.

2.3.2. The vehicle is equipped with a permanently built -in system capable of clearing the windshield from icing and fogging.

A system used for cleaning glass heated air should have a fan and the supply air to the windshield glass via a nozzle.

- 2.3.3. Transport means is equipped with at least one wiper and at least one nozzle washer windshield glass.
- 2.3.4. Each of the brushes windshield wiper after shutdown automatically return to the starting position, is located on the border of the cleaning zone or below it.

2.4. Requirements for speedometers

- 2.4.1. On each transport facility categories of L, M and N have a speedometer.
 - 2.4.2 The speedometer readings are visible at any time of the day.
- 2.4.3. The speed of the vehicle, as indicated by the speedometer, must not be less than its actual speed.

3. Requirements for passive safety

3.1. Requirements for injury safety of steering of vehicles of categories M $_1$, N $_1$, L $_6$ and L $_7$ (with automobile

layout)

- 3.1.1. The steering wheel must not catch on or catch any part of the driver's clothing or jewelry during normal driving .
- 3.1.2. The bolts used for fastening the steering wheel to the hub, in that case, if they are outside recessed flush with the surface.
- 3.1.3. Uncoated metal needles can be used in the case, if they have a set radius of curvature.
 - 3.2. Requirements to the belts of safety and places of their attachment
- 3.2.1. Seats of vehicles of categories M_1 , M_2 and M_3 of classes II, III and B, categories N, L 6 and L 7 (with an automobile arrangement), with the exception of seats intended for use

exclusively in the stationary transport vehicle equipped with safety belts.

In the case of seats, able to pivot or be mounted in other directions necessary equipment straps of safety seats, only established in the direction intended for use during movement of the transport means.

- 3.2.2. Minimum requirements to the types of belts of security for different types of seats and categories of transport means are shown in Table 3.1.
 - 3.2.3. With belt safety is not permitted to use retractors:
 - 3.2.3.1. Which does not have a controller length elongated strap;
- 3.2.3.2. Which require the bringing into effect of hand tools to produce the desired length of the strap and which is automatically locked when reaching the user desired length.
- 3.2.4. Belts with fastening at three points and the drawing-in device have at least one retractor for a diagonal strap.

Minimum requirements to the types of belts safety

Table 3.1.

| Category transport- Foot agent | in the direction of travel | | | | Seats, raspolozhen- nye |
|-----------------------------------|----------------------------|-------|----------|-------|----------------------------|
| | Side | seats | Center s | eats | against direction |
| | Front | Other | Front | Other | movement |

| M ₁ L ₆ and L ₇ (with automobile layout) | Ar4m | Br3 or Ar4m ● | Br3 or Ar4m ● | Br3 or Ar4m ● | В |
|--|------------------|------------------|------------------|------------------|-----|
| M $_{2} \le 3.5 t$ | Ar4m | Br3 or Ar4m ● | Br3 or Ar4m ● | Br3 or Ar4m ● | Br3 |
| $M_2 > 3.5 t$ and M_3 | Br3 or Ar4m ● | Br3 or Ar4m ● | Br3 or Ar4m ● | Br3 or Ar4m ● | Br3 |

N 1 Ar4m Ar4m or

Br4m Ø

A or B * B B

N and N A or B * B A or B * B B

Notes: A: belt (waist and diagonal) with attachment at three points.

B: belt (waist) with fastening at two points.

R: a retractor device for partial or complete retraction of the webbing belt safety.

3: - The retractor device, which allows you to receive the desired length of the strap and which, when the buckle is closed, automatically adjusts its length for the user. No further removal of the webbing from the device is possible without user

intervention (automatic locking retractor).

4: - Retractor device which during normal conditions of movement do not restrict the freedom of motion of the user. Such apparatus comprises a device for length adjustment, which automatically adjusts the strap in dependence on the body member, and a locking mechanism actuated in an emergency by the action of the

deceleration of the transport means, or a combination of the deceleration of the transport means, the movement of the belt or any other automatic device (emergency locking retractor device).

m: Emergency -locking retractor device with a multilevel sensitivity.

- belts with attachment in two points may be applied only to those seats, at which:
- there is a seat directly in front, or
- none of the elements of the vehicle can be in the "home zone" when the vehicle is moving. Under the "initial zone" means

the space between two vertical longitudinal planes, disposed a tadistance of 400 mm each from the other symmetrically point H, is determined by rotating the model head diameter 165 mm, from vertical to horizontal position (simulated torso during the forward movement). This model is mounted at the H-point and 127 mm in front of the H-point, and the distance from the pivot to the top of the headform is 840 mm.

Ø For outboard seats, with the exception of front seats, of category N₁vehicles, it is allowed to install a lap belt if a passage is provided between the seat and the nearest side wall of the vehicle to provide passengers with access to other parts of space between the vehicle. The a seat and a side wall is considered to be a passage if, with all doors closed, the between this side wall distance and the vertical longitudinal plane passing through the center the relevant seat, measured at point R perpendicular the median longitudinal plane of the vehicle, is more than 500 mm.

* Allowed the waist belt, if the windshield glass is not located in the "source area" in accordance with the definition in paragraph above, the designated mark "•", and for categories N₂ and N₃ as in the case of a seat of the driver.

3.2.5. Except in the case specified in paragraph 3.2.6, for each of the passenger seats, equipped with a pillow of safety, provide a

sign warning against use on it the child restraint installed against the direction of movement. Warning label in the form of pictograms, which may include explanatory text, securely attached and pla ced in such a way that it could see a person who intends to install on this seat child restraining device, positioned against the direction of movement. An example of a pictogram is shown in Figure 3.1. Warning sign must be visible in all cases, including those at the closed door.

Colors:

- pictogram red;
- seat, child seat and contour line of pillows of safety black;
- the words «Air Bag» («cushion security"), as well as drawing cushions security white.

Figure 3.1. Example pictogram

- 3.2.6. The requirements of paragraph 3.2.5 shall not apply if the transport means is equipped with a sensor mechanism, which automatically detects the presence of the child restraint installed against the direction of movement, and does not allow operation of a pillow of safety when there is a children's restraint system.
 - 3.2.7. Seat belts are installed in such a way that:
- 3.2.7.1. There was practically no possibility of slipping off the shoulder of a correctly worn belt as a result of the driver or passenger being displaced forward;
- 3.2.7.2. There was virtually no possibility of damage to the belt strap when it came into contact with sharp, hard structural elements of the vehicle or the seat of child restraint systems and ISOFIX child restraint systems .

- 3.2.8. Design and installation of belts of security allow to buckle them anytime. If the seat assembly or theft seat and / or backrest seat can be folded to provide access to the rear part of the transport means or the compartment, their cargo or luggage after tilting and subsequent installation in the normal position provided for safety belts must be available or easily extracted from - under the seat or because of it by the user without assistance.
- 3.2.9. The device serves for opening the buckle, it is clearly visible and easily accessible for the user and is constructed in such a way as to prevent the possibility of unexpected or accidental opening.
- 3.2.10. Buckle is located in such a place, so it was easily accessible to a rescuer in that case, if you need to urgently release of the vehicle means the driver or passenger.
- 3.2.11. Buckle is set in such a way that, both in the open and under the weight of the user load, it could it open a simple movement as the left, so and the right hand in the same direction.
- 3.2.12. Put on a belt or regulated automatically, or has such a structure to the device manual adjustment was

easily accessible for a seated user and comfortable and easy to use. In addition, the user must be in a position to tighten the belt one hand, having adjusted it for their complexion and a position in which is the seat of the transport means.

- 3.2.13. Each seat is equipped with attachment locations belt safety, appropriate type used belts.
- 3.2.14. If access to the front and rear of the system using double-wing door design, the design of fastening of the belt is not should prevent the free entry to the transport means and the exit from it.
- 3.2.15. The attachment points are not located on thin and / or flat panels with insufficient stiffness and reinforcement, or in thinwalled pipes.
- 3.2.16. If the visual inspection of places of fastening belt safety is not observed gaps in the weld seam, visible fusions.
- 3.2.17. The bolts used in the construction of the anchorage points of the seat belts must be of grade 8.8 or better. Such bolts are marked designation 8.8 or 12.9 on hexagonal head, however bolts 7/16 "UNF for fastening of safety belts (anodized coating), not marked these designations can be seen in as bolts equivalent strength. Bolt thread diameter is not less than M8.

- 3.3.1. The seats are securely attached to the chassis or other parts of the vehicle.
- 3.3.2. In the transport means, equipped with mechanisms for the longitudinal adjustment positions cushion and the angle of inclination of the backrest of the seat or the seat movement mechanism (for embarkation and disembarkation of passengers), these mechanisms must be operable. After the termination of regulation or use, these mechanisms are automatically blocked.
- 3.3.3. Head restraints are installed on each front outboard seat of vehicles of categories M_{\perp} , M_{\perp} (technically permissible maximum mass not exceeding 3.5 tons) and N_{\perp} .
 - 3.4. Requirements for injury safety of the internal equipment of vehicles of category M $_1$, L $_6$ and L $_7$ (with a closed body)

3.4.1. The surfaces of the inner volume of the passenger compartment of the vehicle must not have sharp edges.

Note: A sharp edge is considered to be an edge of hard material that has a radius of curvature less than 2.5 mm, with the exception of protrusions on the surface that are not more than 3.2 mm high. In this case, the requirement for a minimum radius of curvature does not apply, provided that the height of the protrusion is not more than half of its width and its edges are blunt.

3.4.2. Facial surface carcass seat, behind which is disposed the seat, designed for normal use in time of movement of transport means in an upper and rear portion are covered by a non-rigid upholstery material.

Note:

A non-rigid upholstery material is one that has the ability to be pushed through by pressing a finger and returns to its original state after removal of the load, and when compressed, retains the ability to protect against direct contact with the surface it covers.

3.4.3. Shelves for things or similar interior elements do not have brackets or fastening parts with protruding edges and, if they have parts protruding into the interior of the vehicle, then such parts have a height

of at least 25 mm, with edges rounded with radii of at least 3.2 mm, and covered with non-rigid upholstery .

- 3.4.4. The inner surface of the body and the elements installed on it (for example, handrails, lamps, sun visors) located in front and above the seated driver and passengers, which may come into contact with a sphere with a diameter of 165 mm, in the case of protruding parts made of hard material, satisfy the following requirements:
- 3.4.4.1. The width of the protruding portions is not less than the magnitude of protrusion;
- 3.4.4.2. If these are roof elements, the radius of curvature of the edges is not less than 5 mm;
- 3.4.4.3. In case if it is installed on the roof of the components, the radii of curvature of the contacting edges do not have to be less than 3.2 mm;
- 3.4.4.4. Any rib laths and roof frames except for the front of the glazed surfaces and door frames made of rigid material, do not project downward more than 19 mm.
- 3.4.5. Requirements paragraph 3.4.4 apply, in that among other things, for vehicles with roof device opening, the including opening and closing, are in the position "closed", but does not apply to the transport means with the folding soft roof in terms of parts foldable coated upholstery nonrigid material, and elements top the folding roof frame.
 - 3.5. Requirements for doors, locks and door hinges of vehicles of categories M $_1$, N, L $_6$ and L $_7$ (with a closed body)
- 3.5.1. All doors open up access to transport means, have the opportunity to reliably fixed locks in the closed state.
- 3.5.2. The door locks mechanisms for the entry and exit of the driver and passengers have two locking positions : intermediate and final.
- 3.5.3. Mechanisms for locks of doors, fixed on hinges, not open or in an intermediate, either in the final positions of lock when force is applied, equal to 300 N.
 - 3.6. Requirements for the safety of external protrusions of vehicles of categories M $_{\mbox{\tiny 1}}$, N , L $_{\mbox{\tiny 6}}$ and L $_{\mbox{\tiny 7}}$

- 3.6.1. The outer surface area of the body located between the line sex and height of 2 m from the road surface, not available elements constructions that could grab (hook) or would have increased the risk or degree of severity of injury to any person who may come into contact with the transport means.
- 3.6.2. Emblems and other decorative objects protruding more than 10 mm, including any substrate, above the surface to which they are attached, have the ability to deflect or break off when a force of 100 N is applied to them, and in a deflected or broken state do not protrude above the surface, to to which they are attached by more than 10 mm.
- 3.6.3. Wheels, wheel nuts or bolts, hub caps, and wheel caps do not have any sharp or cutting edges protruding from the surface of the wheel rim.
 - 3.6.4. The wheels do not have wing nuts.
- 3.6.5. The wheels do not protrude beyond the outer contour of the body in terms of, for the exception of tires, hubcaps wheels and nuts of fastening of wheels.
- 3.6.6. Side air deflectors or gutter trough in the event that they are not bent toward the body, so that their edges can not come into contact with a ball of 100 mm diameter, have a radius of curvature of the edges of at least 1 mm.
- 3.6.7. The ends of the bumpers are bent towards the body so that a ball with a diameter of 100 mm cannot come into contact with them, and the distance between the edge of the bumper and the body does not exceed 20 mm. Alternatively, the ends of the bumper can be recessed into recesses in the body or have a common surface with the body.
- 3.6.8. Drawbars and winches (if equipped) do not protrude from the front surface of the bumper. Allowed to winch advocated the front surface of the bumper, when it is closed the corresponding protective element having a radius of curvature of at least 2.5 mm.
- 3.6.9. For transport means category M $_1$, N $_1$, L $_6$ and L $_7$ do not protrude beyond the outer surface of the door handles and the boot more than to 40 mm, other protruding elements more than on 30 mm.
- 3.6.10. For category N $_2$ and N $_3$ do not project beyond the outer surface of the cab button door more than in 30 mm handrail and the handle mounting hood more than to 70 mm, other projecting members more than on 50 mm.

- 3.6.11. The open ends of the rotary handles rotating parallel to the plane of the door should be bent towards the surface of the body.
- 3.6.12. Swivel handles that pivot outward in any direction but not parallel to the plane of the door are shielded or recessed in the closed position. The end of the handle is directed either backward or downward.
- 3.6.13. Glass windows that open outward with respect to the outer surface of the vehicle, when opened, do not have edges directed forward, and also do not protrude beyond the edge of the overall width of the vehicle.

- 3.6.14. Headbands and sunshields range not act on relative to the most projecting point of the surface of the glass lights more than on 30 mm (measured from the horizontal contact point sphere diameter 100 mm simultaneously with the glass lights and a rim (visor) lamps).
- 3.6.15. Mounts for the jack not protrude beyond the vertical projection line of the floor located directly above them, more than on 10 mm.
- 3.6.16. Exhaust pipes protruding more than 10 mm beyond the vertical projection of the floor line located directly above them, end with a nozzle or a rounded edge with a radius of curvature of at least 2.5 mm.
 - 3.6.17. The edges of steps and steps should be rounded.
- 3.6.18. The radius of curvature of the outwardly protruding edges of the side air fairings, rain shields and anti-mud deflectors of windows is not less than 1 mm.
 - 3.7. Requirements for rear and side protective devices
- 3.7.1. In vehicles of categories N_2 , N_3 (except for tractors), G_3 and G_4 are set side and rear protective devices to prevent ingress of a car under the transport means in the event of a traffic accident.

It

allowed no rear protective devices on transport vehicles, structural features w hich do not allow to perform the installation of appropriate devices.

Allowed installation side protective devices with deviations from the established requirements on vehicles, structural features and appointment which does not allow a full extent to fulfill relevant requirements.

- 3.7.2. Rear protective device width should be less than the width of the rear axle and no shorter than its more than at 100 mm from each side.
 - 3.7.3. Height adjustable protective device should be not less than

100 mm.

- 3.7.4. The ends of the rear guard must not be bent back.
- 3.7.5. The rear surface of the rear protective device must defend against rear dimension of transport means is not more than to 400 mm.
- 3.7.6. The edges of the rear guard are rounded off with a radius of at least 2.5 mm.

- 3.7.7. The distance from the supporting surface to the lower rear edge of the protective devices on all its length not exceed 550 mm.
- 3.7.8. Lateral protective device not must act for the dimensions of the transport width means.
- 3.7.9. The outer surface of the side guard should be spaced from the vehicle dimensions the inside is lateral of than to 120 mm. The rear portion on the over not less than 250 mm in the outer surface side of the protective device should be spaced from the outside of the outer rear edge of the tire into not more than 30 mm (excluding deflection tire in the lower part of the weight of the transport means).

Bolts, rivets and other parts of fastening may serve to distance of 10 mm from the outer surface. All edges are rounded off with a radius of at least 2.5 mm.

- 3.7.10. If the lateral protective device consists of horizontal profiles, the distance between them must be no more than 300 mm, and their height must be at least:
 - 3.7.10.1. 50 mm for vehicles of categories N $_2$ and O $_3$;
 - 3.7.10.2. 100 mm for vehicles of categories N $_3$ and O $_4$.
- 3.7.11. The front end of the lateral protective device is horizontally spaced:
- 3.7.11.1. For trucks, no more than 300 mm from the rear tread surface of the front tire. If there is a cabin in the specified area, then no more than 100 mm from the rear surface of the cabin;
- 3.7.11.2. For trailers not more than 500 mm from the rear tread surface of the front tire;
- 3.7.11.3. For semi-trailers no more than 250 mm from the supports and no more than 2.7 m from the center of the kingpin.
- 3.7.12. The rear end of the side protector is horizontally spaced no more than 300 mm from the front tread surface of the rear tire.
- 3.7.13. The distance from the supporting surface to the lower edge side of the protective device in all its over not exceed 550 mm.

3.7.14. Permanently attached to the back of the transport means of the spare wheel, a container for batteries, fuel tanks, receivers brake systems and other components can be considered as a part of the side guard, if they meet the above specified requirements for its dimensional characteristics.

3.7.15. The side guard can not be used to secure air and hydraulic lines.

3.8. Requirements for fire safety

- 3.8.1. Fuel that may spill when filling the fuel tank (s) does not go to the exhaust system, but is discharged to the ground.
- 3.8.2. The fuel tank (s) is not located in the passenger compartment or other compartment that is its integral part, and does not constitute any of its surface (floor, wall, partition). The passenger compartment is separated from the fuel tank (s) by a partition. The septum can be pierced proviso that arranged in they are a manner that when normal conditions of operation of the fuel from the tank (tanks) not may freely flow into the passenger room, or other room, which is its integral part.
- 3.8.3. The fuel filler neck is not located in the passenger compartment, in the luggage compartment or in the engine compartment and is equipped with a cap to prevent fuel from spilling out .
 - 3.8.4. Cover filler neck attached to the fuel filler pipe.
- 3.8.5. Prescriptions of clause 3.8.4. It is also deemed to be met when taken measures to prevent leakage of excess vapor and fuel in the absence of the filler neck.

This can be achieved with the help of one of the following measures:

- 3.8.5.1. Use a non-removable lid filler neck of the fuel tank opening and closing automatically;
- 3.8.5.2. Use element design does not allow leakage of fuel vapors and excess in the absence of the filler neck;
- 3.8.5.3. Taking any other measure giving the same result. Examples may include, inter alia, the use of a cover for a rope of, the lid fitted with a chain or the lid to open which uses the same key, that and to lock the ignition of the vehicle. In the latter case, the key must be removed from the lock cover filler neck only in the locked position.
- 3.8.6. The seal between the lid and the filling pipe is firmly fixed. In the closed position, the lid fits snugly against the seal and the filling pipe.

- 3.8.7. Next to the fuel tank (tanks) not there no protruding parts, sharp edges and the like, so that the fuel tank (tanks) has been protected in the event of a frontal or side collision of transport means.
- 3.8.8. The components of the fuel system are protected by parts of the chassis or body from contact with possible obstacles on the ground. Such protection is not required if the components located at the bottom of the vehicle are located in relation to the ground above the part of the chassis or bodywork located in front of them.
 - 4. Requirements for environmental safety.

4.1. Emission requirements for vehicles of categories M and N

Transport means is considered to be the appropriate requirements of the technical regulations and environmental class 4 when performing, as a minimum, the following conditions:

4.1.1. Year of manufacture (model year) of the vehicle - not earlier than 2007 year

Note: The transport means more early years of release (model year) is considered to be the relevant requirements of the technical regulations and environmental class 4 at the presence of posts on the official approval of the type or the certificate of conformity issued by the State - a member of the Customs Union on the basis of the results of tests on the Rules ECE UN, said in Table 3 of Appendix No. of this technical regulation.

- 4.1.2. For vehicles of categories M $_{\scriptscriptstyle 1\ with\ a}$ total mass of not more than 3.5 tons and N $_{\scriptscriptstyle 1}\text{-}$ the presence of an on-board diagnostics system (in relation to environmental indicators) in a working condition is mandatory .
- 4.1.3. For vehicles of categories M₁total mass of more than 3.5 m, M₂, M₃, N₂, N₃, 2008 and later years of production from diesel and 2010 and more recent years of manufacture with gas engines obligatory presence in the OBD workable condition.

4.1.4. Equipped with devices and systems for reducing toxicity in good condition, at least:

vehicles of categories $M_{\perp \text{ with a}}$ gross weight of up to 3.5 t and N_{\perp} with engines with positive ignition - a catalytic converter;

vehicles of categories M $_{1 \text{ with a}}$ total mass of up to 3.5 t and N $_{1}$ with diesel engines - an exhaust gas recirculation system and (or) a catalytic converter and (or) a particle filter;

Vehicle categories M₁total mass of more than 3.5 m, M₂M₃, N₂, N₃with diesel - exhaust gas recirculation system and a particulate filter (catalytic converter) or a catalytic converter and a particle filter or a selective catalytic converter the oxides of nitrogen (with the use of a solution of urea);

vehicles of all categories with gasoline engines - a hydrocarbon trap from the gas tank (absorber).

- 4.1.5. System board diagnostics (if present) confirms the completeness and efficiency of systems providing level of emissions.
- 4.1.6. No changes have been made to the fuel system, exhaust system and systems that provide the appropriate level of emissions .

APPENDIX No. 5

to the technical regulations of the Customs Union "On the safety of wheeled vehicles funds" (TR CU 018/2011)

Dimensions and weight restrictions, applicable in respect of the transport means

1. Requirements for the dimensions of vehicles

12 m;

1.1. Maximum length is not to be greater than: single transport means of categories M₁, N and O (trailer) -

single biaxial transport means of categories M 2 and M 3-

13.5 m;

single transport means of categories M $_2$ and M $_3$ with the number of axes of a two - 15 m;

road trains consisting of a tractor and a trailer (semi-trailer) - 20 m; an articulated transport means of categories M $_2$ and M $_3$ - 18.75 m.

The length measurement does not include the following devices mounted on the vehicle:

windshield cleaning and washer devices;

plates front and rear registration marks and design elements for the installation of state registration of marks;

customs sealing and elements of its protection; tent

fastening devices and their protection

elements; lighting and light signaling devices;

exterior mirrors and other devices for indirect

visibility; auxiliary means of observation;

air intake devices for the intake system of the internal combustion engine;

locking devices for demountable

bodies; footrests and handrails;

Elastic buffering device or similar equipment;

lifting platforms, ramps and similar equipment in the driving position, which do not increase the overall dimensions by more than 300 mm, provided that the carrying capacity of the vehicle is not increased;

coupling and towing devices of vehicles; exhaust pipes;

removable spoilers;

pantographs transportation means with power from the contact

networks;

outdoor sun visors.

1.2. The maximum width of a vehicle of categories M, N, O not

must exceed 2.55 m. For isothermal body transport means is permitted maximum width of 2.6 m.

When measuring the width, the following devices mounted on the vehicle are not taken into account:

customs sealing and elements of its protection; tent

fastening devices and their protection

elements; device control pressure in the tires;

protruding flexible parts of the splash guard system from under the wheels;

For vehicles category M₃input position ramp in for movement, lifting platforms and similar equipment in position for movement with the proviso that these devices do not protrude more than on 10 mm beyond surface the side of the vehicle and the angular edge ramp, directed forward and backward, have radii of curvature of at least 5 mm; radii of curvatures remaining edges must at this be no less than 2.5 mm;

exterior mirrors and other devices for indirect

visibility; auxiliary means of observation;

retractable footpegs;

lighting and light signaling devices;

the deforming portion of the tire sidewalls directly above the point of contact with the surface.

1.3. The maximum height of the transport means of categories M, N, O not should exceed 4 m.

When measuring the height is not taken into account the following devices are mounted on a transport vehicle:

antennas;

pantographs or pantographs in the raised position.

For the transport means with the lift axle should take into account the effect of the device.

- 2. Requirements for the weight parameters of vehicles of categories M $_3$, N $_3$ and O
- 2.1. Maximum mass transportation means not should exceed the allowed values given in Table 1.

Vehicle category, total number of axles Single:

Categories M₃, N₃:

Table 1.

Permitted maximum weight, t

- 2 18
- 3 (except for articulated buses of category M $_{\mbox{\tiny 3}})$ 25
- 3 (articulated buses of category M $_{3}$) 28
- 4 (with two controlled axes) 32

Road trains:

- 3 28
- 4 36
- 5 and more 40

2.2. Maximum mass falling on the axle (group of axles) transport means, should not exceed the permitted values, given in table 2.

Distance between close axes, m

Table 2.

Permissible maximum mass, per axle (group of axles), t

More than 2 11.5 (10)

From 1.65 to 2 (inclusive) 10.5 (9)

From 1.35 to 1.65 (inclusive) 9 (8)

From 1 to 1.35 (inclusive) 8 (7)

Up to 17 (6)

Note: The values indicated in parentheses are the maximum permissible for the movement without clearance a special permit for motor roads, design, construction and reconstruction of which were carried out under the regulatory axial load transport means 10 kN.

- 2.3. The vertical static load on the driving device of the car from the coupling loops uniaxial trailer (trailer-dissolution) to curb state not should be more than 490 N. When the vertical static load of the trailer coupling loops 490 H front supporting rack must be equipped with a mechanism lifting-lowering, providing setting the coupling loop to position the tow hitch (uncoupling) of the trailer to the towing vehicle.
- 3. The procedure for registration of approval of the type of transport means or evidence of safety design of the transport means at the inconsistency of the measured parameters of the requirements of the application.
- 3.1. If the overall size of the transport means exceed the values specified in paragraph 1 of this Annex, the approval of the type of transport means or evidence of safety design of the transport means is a record about the need to design a special permit for the movement of the vehicle on the territory of the states members of the Customs Union.
- 3.2. If technically permissible maximum mass transport means, or technicall y permissible maximum weight trains, or technically permissible maximum weigh t, attributable to the axis (group axes) is greater than the value specified in paragraphs 2.1 and 2.2 of this application, the approval of a vehicle or the certificate of security design of the transport means is a record about to design a special permit for movement of the need the states - members of the transport means on the territory of Customs Union, in the event of actual exceeding transport means established by the present technical regulations of weight restrictions.

APPENDIX No. 6
to the technical
regulations of
the Customs Union
"On the safety of
wheeled vehicles funds"
(TR CU 018/2011)

ADDITIONAL REQUIREMENTS

to specialized and special transport means

Section 1. Requirements for certain types of vehicles

1.1. Requirements for concrete pumps

- 1.1.1. The design of the concrete pump must comply with the requirements of paragraph 2.1 of this appendix.
- 1.1.2. Signal colors and safety signs must comply with paragraph 2.3 of this appendix.
 - 1.1.3. Rotating parts must be guarded.
- 1.1.4. The hydraulic system of the concrete pump must have a locking device to prevent the distribution boom from falling and the outriggers from sinking .
 - 1.1.5. The feed hopper must have a grate.

1.2. Requirements for concrete mixer trucks

- 1.2.1. The design of concrete mixer trucks must comply with the requirements of paragraph 2.1 of this annex.
- 1.2.2. Noise characteristics in the working area of the mixer truck operator must comply with paragraph 3.3 of this appendix.
- 1.2.3. Signal colors and safety signs must comply with paragraph 2.3 of this appendix.
 - 1.2.4. Moving parts must be guarded.
- 1.2.5. The design of the control levers and the forces applied to them must comply with paragraph 2.1.3 of this annex.
- 1.2.6. The exhaust system of the engine must provide quenching sparks to release exhaust gases into the atmosphere, the jet of exhaust gases does not should be directed to the operator.

1.3. Requirements for asphalt distributors

- 1.3.1. The design of the auto aspirator must meet the requirements of paragraphs 2.1 and 2.3 of this appendix.
 - 1.3.2. The auto aspirator must be equipped with:
 - 1.3.2.1. Two fire extinguishers;
- 1.3.2.2. Signal colors and safety signs must comply with paragraph 2.3 of this appendix. The warning sign must be labeled "CAUTION! HOT BITUMEN!" The inscription is carried out in the Russian language and can be duplicated on the state language of the state a member of the Customs Union.
- 1.3.3. Noise characteristics at the workplace of the driver- operator and in the working area must comply with paragraph 3.3 of this appendix.
 - 1.4. Requirements for truck cranes and vehicles equipped with loader cranes
- 1.4.1. The design of vehicles equipped with lifting equipment must comply with the requirements of paragraph 3.1 of this annex.

1.5. Requirements for timber trucks

- 1.5.1. Timber trucks must have devices (fences, etc.) that prevent the transported timber from moving to the cab while the road train is in motion .
- 1.5.2. Racks of bunks of timber haulage road trains must be equipped with locks opening from the opposite side of the unloading.

When transporting assortments, the bunk racks must be equipped with linking devices, which must be used from the ground.

1.5.3. Logging trains, intended for the removal of wood in whips (trees with crown), must be provided with

Accession binding devices a device for strapping carts between conics.

- 1.5.4. Timber road trains equipped with manipulators for loading and unloading timber must have outriggers.
- 1.5.5. The tractor of the timber road train must be equipped with retractable rear lights, which provide the required illumination of the loaded carriage during the dark time of the day along its entire height and length in accordance with the normative and technical documentation.

- 1.5.6. Forestry trailer must be fitted with a device to ensure the visibility of the rear part of the cart in the dark time of day.
- 1.5.7. The workplace of the driver of a self-loading timber lorry train, located on the manipulator column, must have a protective guard for the legs and arms, as well as protection from atmospheric precipitation and wind.
- 1.5.8. Timber heavy-duty road trains (single and multiple) must be equipped with identification signs of the vehicle composition in accordance with the Road Traffic Regulations . Logging of a multiple-trains additionally be equipped with a flashing beacon yellow color, installed in the cab of the tractor.
 - 1.6. Requirements for vehicles of emergency medical aid
 - 1.6.1. Ambulances are classified into the following classes:
- Class A: a vehicle designed to transport patients, presumably not emergency patients, accompanied by medical personnel;
- Class B: Vehicles designed to carry out medical activities emergency medical assistance forces medical (medical assistant) teams, transport and monitoring the state of patients in the prehospital stage;
- class C (reanimobile): a car designed for medical emergency medical services by the resuscitation team, transportation and monitoring of the condition of patients at the prehospital stage.
- 1.6.2. Requirements of UNECE Regulations Nos. 52 and 107 for motor vehicles ambulance services do not apply except for the requirements established in paragraph 1.6.4 of this annex.
- 1.6.3. Automobile emergency medical assistance must meet the requirements of paragraph 2.4 of this application.
- 1.6.4. The angle of the lateral stability of the vehicle emergency medical assistance to the technically permissible maximum weight shall be not less than 28 $^{\circ}$ with a check on the Rules of the UNECE No 107.
- 1.6.5. Automobile emergency medical assistance must be equipped with front fog lamps.
- 1.6.6. Additional external lighting for ambulance vehicles should include lamps above the doors of the medical compartment to illuminate

the surrounding area, providing illumination of at least 30 lux within a radius of 2 m from the doorway .

- 1.6.7. To facilitate starting the engine at subzero temperatures, ambulances must be equipped with a pre- heater.
 - 1.6.8. Requirements for electrical equipment
- 1.6.8.1. The location of the storage batteries should provide the ability to control the level and density of the electrolyte without dismantling them. Batteries and all connections to them must be free from any possibility of short circuits.
- 1.6.8.2. For ambulances of classes B and C electrical equipment must have a reserve power, intended to re-start the engine.
- 1.6.8.3. Do not install in the medical saloon car emergency medical assistance rechargeable batteries, do not have a system of removing vapor and not isolated from the main room.
- 1.6.8.4. Batteries and generator must meet the requirements of table 1.6.1.

Table 1.6.1.

| Name | Value for a class car | | | |
|---|-----------------------|------|------|--|
| parameter | BUT | IN | FROM | |
| Total capacity of rechargeable batteries not less, Ah | 54 | 110 | 130 | |
| Generator power, W | 700 | 1200 | 1500 | |

- 1.6.8.5. In ambulances classes B and C with outer side must be installed electric socket on voltage DC power 12 V $(24\ V)$ or the onboard input to an AC voltage of 220 V (240) to allow charging the battery (batteries) and other devices.
- 1.6.8.6. If the plug connector is designed to power 220/240 V, the contact pin sockets should:
 - 1.6.8.6.1. Stay in front of the car from the driver's side;
- 1.6.8.6.2. Or provide automatic disconnection , subject to electrical and mechanical safety.
- 1.6.8.7. An electrical circuit with a voltage of 220/240 V must be protected by a circuit breaker for a rated leakage current of

not more than 30 mA or an isolation transformer. If the chain is protected by only one safety switch, then close on the plug connections need to put the marking with the following inscription: "WARNING! USE ONLY A SPECIAL SOCKET". The inscription is made in Russian and can be duplicated in the state language of the State - a member of the Customs Union.

- 1.6.8.8. It shall be engine start blocking vehicle in the time of connection of the external supply cable.
- 1.6.8.9. All electrical circuits in the medical compartment of vehicles must have their own easily accessible fuses or switches. Fuses or clearly marked to identify switches must be of each electrical circuit. There must be at least two electrical circuits so that if one of them is damaged, the lighting or medical equipment does not turn off completely. Electrical cables must be sized SO that the permissible operating current passing through them exceeds the permissible current of fuses or circuit breakers.
- 1.6.8.10. Electric wires must be laid in such a way that the possibility of their destruction from mechanical vibrations is excluded. They should not be located in the boxes provided for laying gas pipelines or cross them.
- 1.6.8.11. For electrical systems with different voltages, connectors must be provided corresponding to their voltages, which could not be confused.
- 1.6.8.12. For a stationary car, the generator must provide a constant electrical power of at least 40% of that given in Table 1.6.1.
- 1.6.8.13. Electrical vehicle emergency medical aid must consist of at least four separate components of the following :

the main system for the base vehicle;

power supply of special medical stationary equipment;

power supply of the medical

salon; power supply of communication

facilities.

With the exception of the main system, each component of the electrical equipment must be closed on itself (not have a "mass" in the form of a car body).

- 1.6.9. Equipment cockpit car emergency medical aid
- 1.6.9.1. The cab must be equipped with a control panel for the delivery of special light and sound signals.

- 1.6.9.2. The cab of cars of classes B and C must be equipped with a loudspeaker system for external transmission of speech.
 - 1.6.9.3. The cab must be equipped with a search light

(portable rechargeable flashlight).

- 1.6.10. Cars emergency medical assistance must be made in protection categories and placement for use in macro-regions with a moderate climate at a temperature of ambient air from minus $40\,^{\circ}\text{C}$ to plus $40\,^{\circ}\text{C}$, relative humidity 90% at + 27 °C, dust content of the air to 0.1 / m ³ and in areas located at an altitude of 3000 m above sea level, with a corresponding change in traction and dynamic qualities.
 - 1.6.11. Requirements for materials
- 1.6.11.1. The materials used for the trim panels interior, should be bright tones. The ends of the furniture panels should have a contrasting color.
- 1.6.11.2. The metal parts in the passenger compartment must be made of corrosion-resistant materials or protected from corrosion by protective and decorative coatings.
- 1.6.11.3. Built-in salon furniture must be made of materials that are safe in sanitary and epidemiological terms.
- 1.6.11.4. Covering materials for work chairs, seats, patient mattress must be approved for use in medical devices.
- 1.6.11.5. Wrinkles and wrinkles in the skin-tight on the outer surfaces are not allowed.
- 1.6.11.6. All materials and coatings used in medical cabin must be resistant to detergent-
- disinfectant agents, recommended for disinfection treatment surfaces.
- 1.6.12. The cab driver must be sustained dimensions in accordance wit h a pattern 1.6.1. and table 1.6.2.

Figure 1.6.1. Dimensions, which must be sustained in the cockpit

Table 1.6.2.

| Siza nama | Value, mm, for class cars | | |
|-----------|---------------------------|---------|--|
| Size name | BUT | B and C | |

Minimum width W

The minimum distance of vertically between the lower steering wheel rim and the upper front edge of the cushion seat D

The ergonomic clearance set by the manufacturer of the base vehicle must not be reduced

700

150

Minimum horizontal distance between the lower edge of the steering wheel and the backrest of the driver's seat S

Minimum distance between the inner headliner and the driver's seat cushion in a line tilted back 8° from the vertical H $_{\perp}$

400

950

- 1.6.13. Cab driver should be additionally equipped with a handrail, located in the lower corner of the windshield glass or over doors.
- 1.6.14. The driver's cab must be separated from the medical compartment by a partition. Partition requirements :
- 1.6.14.1. Partition between the medical compartment and the cabin the driver must be equipped with:

for cars of classes A and B - with a sliding window or doorway; for a class C car - a doorway.

- 1.6.14.2. The door opening should provide fixation of the door in the open and closed positions. The dimensions of the door opening in the wall must be no less than: 450 mm width; 1500 mm height.
- 1.6.14.3. The window area must be at least 0.1 m². The window should provide visual contact and the ability to communicate directly with

the driver. The design of the windows should exclude the possibility of their involuntary opening. Windows must be closed by sliding

a curtain or similar device to prevent light from entering the medical compartment.

- 1.6.14.4. The partition must comply with the requirements of UNECE Regulation No. 29 (test C).
- 1.6.14.5. The surface of the walls above the plane of the stretcher (including cabinets and drawers), with the exception of the window (s), must have soft sheathing.
- 1.6.15. The medical compartment should be equipped with rear and side exterior doors.
- 1.6.16. Openings doors must be equipped with seals which protect from penetration into the water, and have minimum dimensions according to Table 1.6.3. The design of the door openings should take into account the dimensions of the stretcher.

Table 1.6.3.

| Opening type | Dimension value, mm for a class car | | | | |
|--------------|-------------------------------------|------|------|--|--|
| Opening type | BUT | IN | FROM | | |
| | | | | | |
| Side: | | | | | |
| - height | 800 | 1200 | 1400 | | |
| - width | 600 | 660 | 660 | | |
| Rear: | | | | | |
| - height | 750 | 1200 | 1700 | | |
| - width | 900 | 1050 | 1050 | | |

- 1.6.17. Requirements for external openings of the medical compartment
- 1.6.17.1. External doors of the medical compartment must be equipped with safety devices that meet the requirements:
 - 1.6.17.1.1. Open and close without a key from the inside and outside; 1.6.17.1.2. Open from the inside without a key if the doors are closed

with a key outside;

- 1.6.17.1.3. Locked and unlocked with a key from the outside;
- 1.6.17.1.4. Open from the outside with a key if the doors are locked from the inside.

Note: The key can be mechanical or non-mechanical with a central lock.

- 1.6.17.2. If at the time the motion is not all the doors completely closed, the driver of this is to prevent an acoustic or optical signal.
- 1.6.17.3. The rear hinged door must consist of two leaves that open at an angle of at least 150 °, with reliable fixation when opening at 90 ° and in the maximum opening position .
- 1.6.17.4. The rear lift-up door must open upwards to a level not lower than the upper edge of the door opening with reliable fixation at a height. The dimensions of the loading area should be in accordance with Figure 1.6.2 and Table 1.6.4.
- 1.6.17.5. The side door of the passenger compartment can be hinged or sliding and must have a locking device that fixes it in the open and closed positions. A window must be provided in the door structure.
- 1.6.17.6. The maximum force of opening (closing) the door should be not more than 120 N. When the loading cabin altitude of over 400 mm is required footboard opening the rear door. The footrests must have an antislip surface and withstand a load of at least 2000 N.

Figure 1.6.2. The height of the back door in the open position

Table 1.6.4.

| The minimum height of the rear door in the open position H ₂ , mm ¹⁾ |
|--|
| Maximum angle of inclination of stretcher during loading 2) |
| 1800 |
| 16° |
| |
| |
| |
| |
| Stretcher loading height: - distance between the middle of the stretcher handles and the road level when loading or unloading a patient lying on the stretcher, mm, not more |
| - the maximum height of the floor of the medical compartment, if a stretcher is installed on it, or platforms for stretchers above the road level when the |

vehicle is loaded corresponding to the equipped state, plus

unsecured equipment, mm, not more

825

750

- ¹⁾Distance from road level to the lowest point of the fully raised rear door of the vehicle of the technically permissible maximum mass.
- ²⁾ The angle of loading should be as small as possible.
- 1.6.17.7. The medical salon must have at least two windows: on both sides or on one side and at the back.
- 1.6.17.8. The exterior doors of the medical compartment must have windows. Windows can be installed on the side panels of the medical compartment. Windows in the outer doors of the saloon and on the side panels must be matt in the lower part by 2/3 of the height. At least one window located on the side panel or in the side door must be sliding.
- 1.6.18. The roof, side walls and doors of cars emergency medical assistance to the inside should be covered upholstery.

The edges of the upholstery panels to be processed and (or) are sealed in such a way that under these do not fell into the water. Floor covering

It should be made of anti-slip anti-static materials to seal places of joints, allowing "deck" sink. If the floor has a shape prevents draining of water, that should be provided on at least an opening to its drain (closable).

The edges of the exposed surfaces of the shelves shall be rounded in accordance with UNECE Regulation No. 21.

- 1.6.19. If the cabin is equipped with fixed-stretcher chair, the width of the free space at the level of the elbow must be at least 600 mm and from back -to-ceiling at least 920 mm.
- 1.6.20. Equipment for technical maintenance of the car should be positioned so that it is available without penetration into the medical facilities.
- 1.6.21. The inner lining is fully equipped medical compartment must be carried out so that the risk of injury was minimal.
- 1.6.22. Peeling and sagging of the ceiling panels from the base is not allowed. The protrusion of fastening elements and special overlays intended for fastening ceiling panels is allowed, not more than 5 mm in accordance with UNECE Regulation No. 21.
- 1.6.23. Ceiling medical salon car emergency medical aid classes
 B and C shall be equipped with
 a hatch, providing natural illumination and ventilation of the

cabin. Glazing hatch should correspond Regulation UNECE UN № 43. Construct ceiling hatch should be provided an opportunity to the cabin, and in its dimensions should fit into a emergency exit from the rectangle measuring 500 to 700 mm, and the area of the opening should be not less than 0.4 sq. meters. Locking and locking devices of the hatch must ensure opening the cover with of a tilt forward, backward, full opening from of the hatch the outside cover in emergency situations and fixing it in intermediate positions. The force of opening (closing) the hatch cover should be no more than 120 N.

1.6.24. Peeling and sagging of the side panels from the base is not allowed.

1.6.25. The protrusion of fastening elements and special overlays intended for fastening side panels is allowed, not more than 5 mm in accordance with UNECE Regulation No. 21.

1.6.26. Additional insulation floor, ceiling, side panels and doors of the car interior medical emergency medical assistance must ensure at all closed doors and windows, off system o f heating, air-conditioning and ventilation decrease the temperature in the control points in over 30 minutes (according to Table 1.6.5) at an initial temperature control points plus 20 ± 2 °C and temperature of external air minus 25 °C.

Table 1.6.5.

| | Temperature reduction for cars Emergency medical aid class | | | |
|---|--|----------------|------|--|
| The control point | BUT | IN | FROM | |
| | About C | , no more than | on | |
| At a height of 0.1 m above the surface of the main stretcher, installed in the lowest position, in the center of the stretcher | 10 | five | five | |
| At a height of 0.1 m above the surface of the seats of the seats | 10 | five | five | |

On the floor surface in the 10 five five center of the medical salon

- 1.6.27. The design of the door seals, window, hatch should be provided protection of medical saloon car emergency medical assistance from penetration of dust and moisture.
- 1.6.28. Automobile emergency medical aid classes B and C shall be equipped with a filtering installation.
- 1.6.29. Internal dimensions of the medical compartment, depending on the class of the ambulance vehicle, must comply with Table 1.6.6.
- 1.6.30. The vehicle emergency medical care class for installing a stretcher or medical trolley and two seat structure must be provided extending along the entire length of the stretcher (medical trolley) with at least one side with a working zone width is not less than 240 mm.
- 1.6.31. In ambulances classes В and C should be provided an opportunity to work personnel with side head end of the stretcher (medical trolley) with a working area of at least 750 mm from the view of the open door opening, the possibility of access to the patient for medical manipulations the on left and right along the entire length stretcher with a working area width of at least 240 mm.

Table 1.6.6.

| | Parameter value for ambulances medical assistance class | | | |
|--|---|-------------|-------------|--|
| Parameter name | BUT | IN | FROM | |
| | mm | , not less | | |
| Length (from the rear of the interior of the cabin to the bulkhead at the leve of the stretcher) | 220 | 0 250 | 0 3050 | |
| Width (at a height of 800 mm from the floor surface) | 140 | 0 160 | 0 1700 | |
| Height (from floor to ceiling in working areas) | 125 | 0 160 | 0 1760 | |
| 1.6.32. Minimum number | ſ | for seating | ng must 230 | |

of seats correspond to table 1.6.7.

Table 1.6.7.

| Parameter name | Parameter value for cars of emergency medical aid class | | |
|---|---|-----|------|
| | BUT | IN | FROM |
| The minimum number of places for seating Number of places located: | one | 2 | 2 |
| - on the side of the stretcher; | one | - | - |
| - side stretchers from the front portion to two -thirds the length of the stretcher | - | one | one |

| Parameter name | Parameter value for Car emergency medical aid cl | | |
|----------------|--|----|------|
| | BUT | IN | FROM |

The number of seats located at the head of the stretcher

- 1 1

1.6.33. The ambulances of classes B and C of the working chair in the head end of the stretcher should have the possibility of rotation with fixing it

while driving in the provisions of the direction of movement and against the motion. The seat must have reclining armrests and seat belts .

- 1.6.34. The work seat on the port side must have a convertible back and seat belts .
- 1.6.35. The work seat on the starboard side must have straps security. If a folding seat is used on the starboard side, which provides the installation and fixation of additional stretchers, the installation of a seat belt is not regulated. In the case of seats, arranged sideways to the direction of movement, the installation of safety belts is not regulated.
- 1.6.36. The seats must be at least 420 mm wide, at least 330 mm deep, and at least 420 mm above the floor. Backrest height without headrest not less than 520 mm. The thickness of the pillows is at least 50 mm.
- 1.6.37. The air temperature in the medical compartment must comply with Table 1.6.8.

Table 1.6.8.

| | Parameter value for | | |
|-------------------|---------------------------------|--------------|------|
| | Car emergency medical aid class | | |
| The control point | | | |
| | BUT | IN | FROM |
| | | °C, not less | |

At a height of 0.1 m above the surface of the main stretcher, installed in the lowest position, in the center of the stretcher

20 20 20

| | | Parameter value for Car emergency medical aid class | | |
|-------------------|-----|---|---|--|
| The control point | BUT | BUT IN FROM | | |
| | | °C, not less | - | |

At a height of 0.1 m above the surface of the seats of the seats

twenty

twenty

twenty

On the floor surface in the center of the medical salon

fifteen

fifteen

fifteen

- 1.6.38. Time achieve specified in Table
- 1.6.8 temperatures in medical cabin not should be more than 30 minutes at an initial temperature of minus 25 $^{\circ}C$ and 60 minutes at an initial temperature of minus 40 $^{\circ}C$.
- 1.6.39. Medical salons car emergency medical care in classes B and C must be equipped with system of conditioning, providing reduction in the temperature of air in the center of the passenger compartment at a distance of 1 m from the floor at $10\,^{\circ}$ C for relation to the ambient temperature. The time to reach a given reduction of the temperature at the initial temperature plus $40\,^{\circ}$ C not more than 30 minutes.
- 1.6.40. The medical cabin when parked vehicle emergency medical ass istance must be provided with not less than twenty times the exchange of air for one hour, the rate of air flow should be not more than $0.25 \, \text{m} / \text{s}$ in the winter and $0.5 \, \text{m} / \text{s}$ in the summer while at a height of $0.1 \, \text{m}$ in the head portion above the surface of the stretcher and at a height of $0.7 \, \text{m}$ above the surfaces of the seat of armchairs.
- 1.6.41. Medical interior car emergency medical care classes B and C must be equipped with an auxiliary heater, operating independently of the basic vehicle heating system, or a system of heating, working in conjunction with autonomous engine heater.

The thermostatic adjustment of the heating system must provide oscillation temperature not more than + 5 $^{\circ}$ C .

The heating system must comply with these requirements even if ventilation is switched off and the system is switched to air circulation in the medical compartment.

- 1.6.42. If anesthetic gases and vapors are used in the ambulance vehicle, an exhaust hood must be provided in accordance with the established requirements.
- 1.6.43. Illumination of workplaces of the medical compartment must comply with Table 1.6.9.

Table 1.6.9.

| The control point | Illumination for the class of the ambulance car, lux, not less | | | Light source |
|-------------------|--|--|--|--------------|
| | BUT IN FROM | | | |

| Total 50 illumination 100 | 100 200 | 100 200 | Incandescent lamps Fluorescent lamps |
|------------------------------|------------|------------|--------------------------------------|
| Manipulation 100 fields 200 | 150 300 | 150 300 | Incandescent lamps Fluorescent lamps |
| Surface 100 stretcher 200 | 150 300 | 150 300 | Incandescent lamps Fluorescent lamps |

- 1.6.44. In medical salons car emergency medical using classes B and C, there must be an additional lamp providing an illumination of at least 1000 lux, a diameter of the light spot on the surface of the stretcher at least 200 mm.
- 1.6.45. Ambulance side door steps must have local lighting to ensure that the footboard surface is illuminated at least 30 lux.
- 1.6.46. The control panel for control and monitoring of heating and ventilation parameters of the interior lighting should be located in a convenient (accessible) place. Buttons, switches, light indicators should be accessible and visible to control modes and control the set parameters.
 - 1.6.47. The salon must be provided with fire extinguishing equipment.
- 1.6.48. The car emergency medical assistance must be a system of brackets, designed for attachment to the maximum possible height of the receiving platform stretcher two infusion systems for intravenous infusion fluids. Infusion systems

They must be arranged in such a way that they can be was to attach to both ends of the platform. Brackets must withstand a force not less than 50 N and fix two infusion system independently one from the other.

- 1.6.49. Stretchers and chairs litter need to be equipped with devices for their fixation in the car emergency medical care.
- 1.6.50. The patient must be secured by means of devices located on a stretcher (chairs, stretchers) or vehicle emergency medical assistance.
- 1.6.51. All items inside the cabin must not have sharp edges or endanger the safety of people in the cabin.

- 1.6.52. The securing devices must support the equipment when accelerating or decelerating 10 g in the longitudinal, transverse and vertical directions in the direction of the vehicle.
- 1.6.53. Terminal devices and electrical connectors should not be used as fasteners or parts of fasteners .
- 1.6.54. The place for the gas installation or gas pipelines must be provided with ventilation.
- 1.6.55. Compliance of gas cylinders with safety requirements must be confirmed by a document issued by the competent authorities of the Member States of the Customs Union.
- 1.6.56. Cylinders with oxygen should be placed in a vertical position in the rear compartment in a cabinet with their reliable fixation to the bearing elements of the body on a distance of not less than 0.5 m from the heating systems, they must be easily accessible for their replacement, management and control.
 - 1.6.57. Requirements for the main stretcher
- 1.6.57.1. For vehicles emergency medical assistance Class With the height of the main stretcher over the level surface of the floor should be adjusted from 400 to 650 mm.
- 1.6.57.2. The main stretcher on the receiving device should have a rigid bed to accommodate resuscitation .
- 1.6.57.3. The receiving device should provide the ability to displace the stretcher in the longitudinal and transverse directions, ensuring reliable fixation of positions.
- 1.6.57.4. The design of the receiving device should ensure the ease and reliability of fixing and detaching the stretcher. Fixing elements of the stretcher must exclude the occurrence of additional noise when driving vehicles emergency medical care.
 - 1.6.58. Requirements for built-in furniture
 - 1.6.58.1. Built-

in cabin furniture (cabinets, shelves, mezzanines, shelves) must be securely at tached to the body's load-bearing elements. It should have fastening elements for portable products that ensure ease and convenience of fixing and unlocking the placed products in a time of no more than 15 s.

1.6.58.2. Pull-out drawers should be fixed in the open and closed positions.

- 1.6.58.3. Doors of cabinets and shelves should close smoothly, without jamming. Spontaneous their open ing during movement of the vehicle emergency medical assistance is not permitted. Open shelves must have sides with a height of at least 30 mm.
- 1.6.59. Completeness complete cars to medical equipment and related equipment specified medical requirements, must be confirmed by the conclusion, issued by the competent bodies of the states members of the Customs Union.

1.7. Requirements for dump trucks

1.7.1. The hydraulic equipment of dump trucks must comply with the requirements of subparagraphs 2.2.13 and 2.2.14 of this appendix.

1.8. Requirements for cement trucks

- 1.8.1. The design of a cement truck must comply with the requirements of paragraph 2.1 of this appendix.
- 1.8.2. Compliance with the cement trucks tanks and cargo hatches, designed to work under the pressure of more than 0.07 MPa, the requirements of safety must be confirmed by a document issued by the competent bodies of the states members of the Customs Union.
 - 1.8.3. The cement truck must be equipped with:
- 1.8.3.1. A ladder and a fenced platform for servicing the loading hatches of the tank;
- 1.8.3.2. A device for relieving pressure in the tank, interlocked with a shut off device that does not allow the opening of the loading hatch in the presence of pressure in the tank;
 - 1.8.3.3. Safety valve in the pneumatic unloading system;
 - 1.8.3.4. Crane for emergency termination of unloading;
 - 1.8.3.5. Pointer pressure in the tank;
 - 1.8.3.6. Loading hatch allowing for repair work in the tank.
- 1.8.4. Signal colors and safety signs must comply with paragraph 2.3 of this appendix.
- 1.8.5. The level of concentration of oil of mineral and cement dust in the air of the working zone during unloading does not have to exceed $5 6 \text{ mg} / \text{m}^3$.

- 1.8.5. Noise characteristics at the working place of the operator must comply with paragraph 3.3 of this application.
- 1.8.6. Efforts to organs control pneumatic discharge must comply with paragraph 2.1.3 of the application.

1.9. Requirements for tow trucks

- 1.9.1. Tow trucks should be equipped with orange flashing beacons . Rotating beacons must comply with the requirements of UNECE Regulation No. 65-00.
- 1.9.2. Hydraulic car hauler, in the case of its installation must meet the requirements of paragraph 2.2 of this application.

1.10. Requirements for medical complexes on the chassis of vehicles

- 1.10.1. Requirements for color
- 1.10.1.1. In medical systems, made in passenger cars and buses (except buses with hood), retained the main color painting, applied by their manufacturers.
- 1.10.1.2. In medical systems, mounted on truck cars, semitrailers, trailers, buses with the hood and in the habitable containers medical appointments color and dimensions of the elements used in tsvetograficheskih schemes, as well as the content of the information labels are established states members of the Customs Union.

On the right and left sides of the transport funds deposited the same at sight, color, size and placement tsvetograficheskie scheme.

1.10.2. Installation of additional external sound and light signals on medical complexes is not allowed.

1.11. Requirements for fire trucks

- 1.11.1. The angle of lateral static stability of a fire engine with a technically permissible maximum mass must be at least 30 $^{\circ}$.
- 1.11.2. The layout and fastening of fire equipment on the roof of the fire vehicle must ensure the preservation of the living space of the cabin crew rollover.

- 1.11.3. The connection of the pumping unit control system to the brake receivers of the base chassis must not cause the pressure in the brake drive to drop below 80% of the minimum pressure regulation limit even with the compressor off , and also ca use the spring energy accumulators to turn on .
- 1.11.4. Large sized equipment (manual ladders, suction hoses, etc.) may be placed on the roof of a fire engine, while equipment placed on the roof should not impair the visibility parameters of the base chassis. The arrangement of the fire monitor on the roof should exclude the possibility of fire extinguishing agents getting onto the windshield at the beginning and at the end of their supply. If necessary, a protective visor should be installed above the windshield. Shade does not have to reduce the visibility from the place of the driver.
- 1.11.5. Fire fighting vehicles must be equipped with safety footboards and handrails if the height of the bottom of the cabin door opening is more than 400 mm from the level of the supporting surface.
- 1.11.6. Pad on the roof and open platform, designed to work should be fence on the perimeter of a height not less than 100 mm and the coating prevents sliding.
- 1.11.7. Stairs for lifting on the roof or pad must have degree of width not less than 150 mm, a depth of not less than 180 mm. The distance between the steps must be 300 mm. The steps of the stairs must have a surface that provides a stable position.

the feet of the climber. If there are two or more steps, handrails or brackets should be installed.

- 1.11.8. Fire trucks must be equipped with a system for removing exhaust gases from the operator's work area. Exhaust pipe fire motor vehicle exhaust systems are not should be directed in the direction of the operator, located in organs control operation of a vehicle fire.
 - 1.11.9. Requirements for cabin crew
- 1.11.9.1. The width of the working space for the driver must be at least 800 mm, the width of the seats for each person sitting next to the driver must be at least 450 mm.
- 1.11.9.2. With the transverse arrangement of the seats, the first row from the second must be fenced off by a partition with a safety handrail. The partition should not interfere with visual and speech contact of the combat crew. The distance between the partition and the second row seats is at least 350 mm.

- 1.11.9.3. Doors should open in the direction of the vehicle and have locking devices with external and internal control handles.
- 1.11.9.4. Internal locks must have a device that excludes the possibility of their involuntary opening in motion by a combat crew sitting in the vehicle. The handles of the locking mechanisms must be shaped to prevent injury.
- 1.11.9.5. Durability design cockpit crew should be similar to the strength of the cab base vehicle in respect of which was confirmed by matching Regulation ECE UN №29.
- 1.11.9.6. The equipment in the cabin crew must be taken so that no sharp corners and edges that can cause injury combat calculation. Mounting hardware should exclude the possibility of its spontaneous movement during the time of movement.
- 1.11.9.7. The cabin crew must be equipped with a heater, ensuring the maintenance of the temperature in the cabin during the cold period of the year is not below 15 °C in all the range of the conditions of operation.
- 1.11.10. When the special units of the fire car level of sound at the working place of the operator must comply with paragraph 3.3 of this application.
- 1.11.11. The design of the pump installation fire vehicle should exclude the possibility entering foamer in tap network when the fire vehicle from the hydrant.
 - 1.11.12. Requirements for governing bodies
- 1.11.12.1. The requirements of paragraph 2.1.3 of this annex must be met .
- 1.11.12.2. Near each authority control should be marking that defines its purpose and status. Marking should not be located on removable parts if these parts are to be dismantled during operational use of the fire truck.
- 1.11.12.3. Controls specific components of fire vehicle handles for opening doors, hatches vessels, car door crew compartments and other elements must be capable of capturing their hands on the means of individual protection of hands.
- 1.11.13. Fire trucks should be equipped with fog lights and search lights at the front and rear of the vehicle. The control of the headlight-seeker should be carried out from the cab from the rightmost place.

- 1.11.14. Requirements for the color-graphic scheme of a fire engine, special light and sound signals in accordance with paragraph 2.4 of this Appendix.
 - 1.11.15. Safety requirements for electrical equipment
- 1.11.15.1. The construction of electric power plants fire vehicle, and also the electrical connection must ensure the safety of service personnel from injury of electric current.
- 1.11.15.2. To indicate the state of switching on stationary and portable receivers of electricity, the presence of voltage, and other actions established for specific types of electrical equipment, warning signals, inscriptions and plates should be used.
- 1.11.15.3. The electrical wiring must be firmly fixed to exclude the possibility of its breakage, chafing, and also protected from the effects of temperature factors of fire, water spills and from atmospheric precipitation.
- 1.11.15.4. Inputs, conductors, connectors must be marked. Conductor marking should be done at both ends of each conductor.
- 1.11.15.5. Housings items of electrical equipment, intended for different frequency voltage and current must have a distinctive color, and connectors structurally differ from those to exclude mutual inclusion.
- 1.11.15.6. Electrical power supply circuit of additional items of electrical equipment must be fitted with a fuse or automatic switch.
- 1.11.15.7. Fire trucks must be equipped with a battery switch (disconnect switch) for the base chassis.
- 1.11.15.8. All metal non-current-carrying parts of electrical equipment that may be under dangerous voltage due to damage to the insulation must be electrically connected to the power supply case, as well as to the chassis of the fire truck.
- 1.11.15.9. Insulation resistance of power electrical equipment a fire truck with separate disconnected power circuits with a rated voltage of 230 and 400 V between themselves and in relation to the body must be at least 0.5 megohm in a temperate climate.
- 1.11.16. On fire the car must be provided an opportunity to connect the protective ground. Contact surface device grounding should be anti-corrosive coating with high conductivity. The location of the grounding clamp must be electrically connected (metallization jumpers are installed, providing a transition resistance at the contact points of not more than 2000 μ Ohm) with all metal elements of

the fire truck structure (fire superstructure, water-foam communications and the base chassis of the car). Grounding must be carried out with the help of bare copper stranded wire section is not less than 10 sq. millimeters, equipped with a special device for fastening to grounding structures.

- 1.11.17. Firefighting vehicles must be equipped with means of individual protection of the personal composition of the defeat of electric shock.
 - 1.11.18. Fire safety requirements
- 1.11.18.1. The materials used in the construction of a fire engine must meet the requirements of fire resistance.
- 1.11.18.2. The design of a fire engine should provide for the possibility of installing a thermal protection system for the crew cabin, main units, fuel tanks, fuel lines from the action of increased heat fluxes.
- 1.11.18.3. Fuel tanks fire vehicles with petrol engines and jellied mout h of a fuel tank fire vehicle with a diesel engine must be outside the cockpit crew. The fuel tank and its filler neck must not protrude beyond the dimensions of the fire truck body.
- 1.11.18.4. The placement of additional fuel lines should ensure their protection from abrasive, corrosive and shock effect s. Extra fuel must be the compensators to prevent their damage in case of occurrence of deformation of the frame fire engine.
- 1.11.18.5. The design of the exhaust pipe of a fire engine with a diesel engine must provide for the installation of a spark arrestor on it .
- 1.11.18.6. Fire safety of electric power installations of a fire fighting vehicle must be ensured .
- 1.11.18.7. Firefighting vehicles must be equipped with not less than two fire extinguishers. Their attachment points should be located in easily accessible areas where the equipment of the fire truck is located. In this one of them must be in the vicinity of the seat of the driver, and the second in the body (compartments) fire engine.
- 1.11.19. The surfaces of pipelines and assemblies of a fire engine, exposed to cooling from a low-temperature extinguishing agent and accessible to touch during the operator's work, must be insulated.
- 1.11.20. Doors open during parking, installed outriggers, extensions of lighting masts that increase the overall dimensions of the vehicle in length or width must be equipped

with reflective elements or other signaling devices indicating the dimensions of the fire truck.

- 1.11.21. On the combination of devices in the driver should be lights, signals the opening doors, installation of remote towers, lifting lighting masts and other conditions, hindering the movement of the fire car.
- 1.11.22. Inside the tank for the water or other liquid fire extinguishing agent should be arranged transverse breakwaters (partitions, spongy filler and the like) that provide damping of oscillations of liquid when moving vehicle. The of the partition shall be 95% of the cross - sectional area of the tank. Breakwaters should divide the tank into communicating compartments with a volume of not more than 1500 liters each. If the width of the tank is more than 80% of the track size of the rear outer tires, the installation of a longitudinal breakwater is mandatory.
 - 1.11.23. Fire trucks must be equipped with two wheel chocks.
 - 1.11.24. Requirements for lighting masts
- 1.11.24.1. Regardless of the type of drive, the mast must have a brake that fixes it at a given height.
- 1.11.24.2. The design of the mast should allow its operation without guy wires at wind speeds up to 10 m/s.
- 1.11.25. Requirements for safety to the fire vehicles, equipped with an arrow or a set of knees (fire motor ladder, forklift truck fire crank, fire penopodemnik).
- 1.11.25.1. Firefighting vehicles equipped with an arrow or a set of tribes, should have static and dynamic stability, providing an opportunity to safely conduct rescue work and extinguishing of fires, in which:
- 1.11.25.1.1. When installing them on a surface with a slope of up to 6° inclusive:
- 1.11.25.1.2. When working with devices for supplying fire extinguishing agents;
 - 1.11.25.1.3. With wind speed at the top of the stairs

(cradles) no more than 10 m/s.

- 1.11.25.2. Fire trucks equipped with a boom or knee set must have interlocks excluding:
- 1.11.25.2.1. Possibility of movement of the boom (set of knees) with unblocked springs and raised supports;

- 1.11.25.2.2. Possibility of movement of the boom (set of knees) outside the working field;
- 1.11.25.2.3. Lifting of supports in the working position of the boom (set of knees);
- 1.11.25.2.4. Spontaneous extension of the supports while the vehicle is in motion;
- 1.11.25.2.5. The movement of the boom when the elevator car moves along it or when it is not in the extreme lower position;
- 1.11.25.2.6. Further movement of the boom (set of knees) after installing them in the transport position;
- 1.11.25.2.7. Vehicle movement when the power take -off is on, the springs are locked, the legs are extended and the boom is raised (knee set);
- 1.11.25.2.8. The movement of the boom (set of knees), cradle when the extreme points of the structure (frontal impact limiters) come into contact with an obstacle;
- 1.11.25.2.9. The movement of the boom (set of knees) when the lifting capacity is exceeded by more than 10%.
- 1.11.25.3. Fire fighting vehicles equipped with a boom or a set of knees must have an emergency drive to bring the boom, a set of knees into the transport position in the event of a failure of the drive of the main power unit or the chassis engine.
- 1.11.25.4. The speed of movement of the top of a ladder or hoist should automatically slow down when the limit values of the safety field or the end positions of the actuators of the motion drives are reached .
- 1.11.25.5. Ladder, articulated car lifter must be equipped with indicators (control devices):
- 1.11.25.5.1. Heights of lifting and departure of an arrow, a set of knees, a cradle, an elevator car;
 - 1.11.25.5.2. The angle of inclination of the lower

knee of the boom; 1.11.25.5.3. The

transverse angle of inclination of the boom.

- 1.11.25.6. Pointers (control devices) are listed in the listing 1.11.25.5.1, should be arranged in a single block, well visible to the working place of the operator, and to have the error indication is not more than 5%.
- 1.11.25.7. Sound, light alarm of the ladder, cranked car lifter, located on the control panels, should notify:

- 1.11.25.7.1. About the approach of an arrow, a set of knees, a cradle, an elevator car to the border of the working field of movement;
 - 1.11.25.7.2. About overload arrows, cradle, cabin lift;
 - 1.11.25.7.3. On the moment of operation of the frontal impact limiter; 1.11.25.7.4. On the moment of separation of the support from the ground or lining; 1.11.25.7.5. About the moment of alignment of the axes (for a ladder); 1.11.25.7.6. About the moment of combining the steps (for an auto-ladder).
- 1.11.25.8. Ladders, forklift truck must have cranked leveling system that provides a cradle floor levelness when any of its position and horizontal steps ladder located along the boom (if present). In this case, the deviation from the horizontal plane of the cradle floor should be no more than 3 $^{\circ}$, and the steps no more than 2 $^{\circ}$.
- 1.11.25.9. The cradles of the auto ladder. the cranked autolifter must have a guard formed by two rows of handrails at a height of (1.1 \pm 0.1) and (0.5 \pm 0.1) m. Around the perimeter of the cradle floor, there must be a continuous fence (plinth) with a height of at least 0.1 m. The elements of the cradle fencing (handrails) must withstand concentrated load in different directions of at least 1300 N.
- 1.11.25.10. The elevator car must have a mesh fence around the perimeter with a height of at least 1.5 m.
- 1.11.25.11. The cradle lifts crankshaft and cabin elevator ladders must be equipped with one or more single-wing doors with lock, openable from the inside and outside (APC cradle hinged handrail can be provided). In this case, the width of the passage must be at least 500 mm.
- 1.11.25.12. The controls for all movements of the cradle of the cranked car lifter on the control panel must be self-returning, exclude the possibility of their spontaneous activation and have a designation of the included movements of the mechanisms.
- 1.11.25.13. Control panels for fire trucks equipped with a boom or a set of knees must have devices for turning on the sound signal and emergency stop of the maneuver being performed without turning off the vehicle engine.
- 1.11.25.14. A ladder, an articulated car lift must be equipped with intercoms that provide two way loudspeaker communication between the main control panel and the cradle.

1.12. Requirements for vehicles for emergency services and for the police (police)

1.12.1. Vehicles for emergency rescue services and for the police (police) must comply with the requirements of paragraph 2.4 of this annex.

1.13. To vehicle requirements for municipal management and content roads

- 1.13.1. Composite part of a special equipment (in fact including wires, cables, connecting fittings, pipes and so on) must be performed with such calculation, to exclude the possibility of accidental damage.
- 1.13.2. Lifting and overturning parts of special equipment must be equipped with stops for fixing them in the raised position and (or) devices that prevent their spontaneous overturning and sharp lowering.
- 1.13.3. The control panel for special equipment should not be located in the area of operation of the special equipment.
- 1.13.4. The control panel for the working bodies of the special equipment must be located so that the operator can see the entire working platform.
- 1.13.5. Load gripping devices of special equipment must ensure the capture of loads, excluding their spontaneous displacement or overturning.
- 1.13.6. Agencies control effect at that same time or not a specified sequence may lead to emergency situations or damage to equipment, must mutually blocked.

Blocking is not to be distributed to the organs of management employees to stop the equipment or any of its elements.

1.13.7. Efforts attached to the levers of the control special equipment, in dependence on the method of displacement and the frequency of use, must conform to the values listed in Table 1.13.1.

Table 1.13.1.

| Efforts N no more | |
|---------------------|---------------------|
| Elioto, it, no more | Efforts, N, no more |

| Lever movement method | Frequency of use, times per shift | | |
|-----------------------------------|-----------------------------------|--------|-------------|
| | 240-17 | 16-5 | less than 5 |
| Mainly with your fingers | 10 | 10 | thirty |
| Mainly with a brush | fifteen | twenty | 40 |
| Mainly with a hand with a forearm | 25 | thirty | 60 |
| With the whole hand | 40 | 60 | 150 |
| With two hands | 90 | 90 | 200 |

- 1.13.8. The force exerted on the two arms to the handle lever of a manual drive pipe fittings at the time of locking of the locking body (or breakaway when opening) not be greater than 450 N.
- 1.13.9. Noise characteristics at the working place of the operator must comply with paragraph 3.3 of this annex.
- 1.13.10. Elements of the design of technological equipment, projecting with the motion of an overall width of the transport means more than to 0.4 m on the left and (or) the right from the outer edge of the marker lights, or protruding beyond the overall length of the transport means more than to 1.0 m in front and (or) behind, painted in stripes. Color color bands alternating red and white (yellow) strip of the same width from 30 to 100 mm, the angle of inclination of 45 $^{\circ}$ \pm 5 outwards and downwards.

In addition, such structural elements are marked with reflectors of class IA according to UNECE Regulation No. 3, or clearance lamps with an illuminating surface directed forward and backward, or retroreflective marking according to UNECE Regulation No. 104.

- 1.13.11. Technological signs should be placed in places visible from the control room .
- 1.13.12. Bodies of management and control should be denoted by symbols indicating the purpose of the body. In the absence of the corresponding symbol, the use of inscriptions is allowed .
- 1.13.13. Data plates can be installed on any units and units of equipment, but must be on all safety devices.
- 1.13.14. On vehicles whose maximum speed on the technical specifications and (or) in the performance of technological operations below the permitted rules of road traffic, it should be established identification sign restrictions speed in accordance with

the provisions on the admission of transport funds to the operation and responsibilities of the officers officials of ensuring the safety of road traffic ... If the speed of movement of the vehicle when the following technological operations of transport, the sign limit speed when performing these operations must be installed from the front.

Additional information on the maximum speed should be indicated in the operating documentation.

1.13.15. An increase in the height of the dipped - beam headlamps up to a maximum of 3250 mm is allowed if compliance with this size according to UNECE Regulation No. 48 is impossible due to the design of the technological equipment. The dipped-

beam headlamps shall be adjusted so that the intersection of the plane containing the left-hand side of the light edge of the dippedbeam headlamp and the horizontal support surface of the machine coincides with the same headlamp line established in accordance with UNECE Regulation No. 48.

- 1.13.16. An increase in the distance from the front end of the machine to the side repeaters of direction indicators is allowed up to a maximum of 3500 mm, if compliance with this dimension according to UNECE Regulation No. 48 is impossible due to the design of the technological equipment installed in front of the machine.
- 1.13.17. Machines designed to perform cleaning work on the road, equipped with a special light signal (flashing beacons) yellow or orange color.

The number and location of flashing beacons must ensure their visibility at an angle 360 $^{\circ}$ in a horizontal plane passing through the center of the source radiation beam.

1.13.18. Illuminates the work area when the technological equipment in the dark time of with additional lights illuminate the work area.

- 1.13.19. When the presence of the hydraulic equipment, it must comply with the requirements of paragraph 3.1 of this application.
 - 1.14. Requirements for vehicles intended for servicing oil and gas wells

- 1.14.1. Mechanical transmissions (chain, cardan, gear, etc.), couplings, pulleys and other rotating and moving elements of equipment must have firmly fixed metal barriers.
- 1.14.2. Enclosures for equipment subject to frequent inspection, should be quick, or opening, to which a structure must be provided for the handle, brackets and other special devices providing quick and safe removal and installation of fences.

Opening guards should be provided with devices that securely hold the guards in the open position.

- 1.14.3. In use in an enclosure of the metal mesh in the rim diameter of the wire mesh should be not less than 2.0 mm.
- 1.14.4. Hole sizes of metal mesh, grating, etc. You do not need to exceed the values specified in Table 1.14.1.
- 1.14.5. The design of the plant control systems on the transport base for the repair of oil and gas wells must be provided:
 - 1.14.5.1. Tower (mast) extension limiter;
 - 1.14.5.2. Travel block (hook block) lifting limiter.

Table 1.14.1.

Up to 35 6 From 35 to 150 20 From 150 to 350 30

1.14.5.3. Load limiter. It is allowed not to install the capacity limiter if the capacity of the installation

limited by the maximum torque of the hoist motor;

- 1.14.5.4. Blocking of individual positions of levers and control handles ;
- 1.14.5.5. Blocking to prevent the tower (mast) from falling in the event of a break in the hoses or pipelines of the tower lifting hydraulic system .
- 1.14.6. The control system should be equipped with a warning alarm. The sound level of the signal in the working area should be 92-112 dB A.
- 1.14.7. Signal colors and safety signs must comply with the requirements of paragraph 2.3 of this appendix.

1.15. Requirements for vehicles intended for cash transportation funds and valuable goods

- 1.15.1. The general protection class of a vehicle for armor resistance is determined by the minimum protection class of its crew quarters.
 - 1.15.2. Protection classes for armor resistance:
- 1.15.2.1 The classes of protection of the passenger spaces of the vehicle for armor resistance, including its constituent elements (body, doors, loopholes) , must be for vehicles of categories M $_{\text{l}}$ and N $_{\text{l}}$ not lower than 2, categories N $_{\text{l}}$ and N $_{\text{l}}$ not below the 3rd.
- 1.15.2.2. For the roof area of a vehicle of category M $_1$ and N $_1$, the 1st protection class is allowed, for categories N $_2$ and N $_3$ the 2nd protection class. The protection class of the armored glass must correspond to the class of the corresponding armor protection zone of the vehicle.
- 1.15.2.3. The protection class of premises for the transport of valuable goods for armor resistance must be at least 1.
- 1.15.3. The vehicle must be equipped with loopholes for conducting effective defensive fire during the shooting of the standard-issue weapon.
- It allowed the hidden placement of loopholes in the transport vehicle and the presence of falshboynits on the outer surface of the body. When this armor protection transport means should not be reduced.
- 1.15.4. The vehicle must be equipped with additional door locks that can only be opened from the inside.
- 1.15.5. The battery must be located outside the passenger spaces of the vehicle and have armor protection with a class not lower than that established for passenger spaces.
 - 1.15.6. The vehicle must have places to accommodate:
 - 1.15.6.1. Kits Medical first aid (automotive);
 - 1.15.6.2. Emergency stop sign;
 - 1.15.6.3. Fire extinguisher:
- 1.15.6.3.1. For vehicles of category M $_{\scriptscriptstyle 1}$, N $_{\scriptscriptstyle 1}$ one fire extinguisher with a capacity of at least 2 liters in the area accessible from the driver's workplace ;
- 1.15.6.3.2. For category N $_2$, N $_3$ at least two fire extinguishers, one of which is a capacity of at least 2 n in an area within reach from the

working space of the driver, and another (others) the total capacity of not less than 5 l - in the passenger room.

- 1.15.7. All items of equipment, including elements of body armor, in the area of possible impact for the driver and crew members must be injury-free, that is, they must not protrude more than 10 mm above the supporting surface and must have a rounding radius of at least 3.2 mm, or must be covered energy absorbing linings.
- 1.15.8. All elements on the roof of the passenger compartment (stiffeners, brackets for lampshades, etc.) must not protrude downward in relation to the roof surface by more than 20 mm and must have a radius of rounding of the edges of at least 5 mm, or must be covered with energy-absorbing linings.
- 1.15.9. Cargo carried in the passenger area should be securely fastened, do not have a traumatic projections and does not create interference to the driver and crew members in the process of movement.
- 1.15.10. A vehicle that has compartments isolated from the cockpit (cabin) for crew accommodation must have at least three emergency exits for each compartment. In an emergency exits are used overhead doors, emergency hatch in the roof, replacement door with side opposite the service door.
- 1.15.11. For vehicles of categories N_2 and N_3 sliding roof cover for placement crew is required. Escape hatch dimensions :

opening area of at least 2700 sq. centimeters;

a rectangle of size must fit into the hatch opening 45x59 cm;

the dimensions of the clear rectangle that fit into the emergency door opening must be at least 65x100 cm.

- 1.15.12. Transport means must be equipped with an emergency switch, providing off mass terminal battery with the working place of the driver.
- 1.15.13. The fuel tank of the transport means must be in explosion-proof version or should be provided for its armor protection to the class of protection not lower than in the passenger room.

The

fuel tank must be specially protected against possible deformation in a collision and overturning. In case of leakage of the tank when the vehicle is positioned on wheels on a slope of up to 30 $^{\circ}$, a device must be provided to ensure free flow of fuel onto the supporting surface.

- 1.15.14. The general requirements for visibility from the driver's seat for vehicles of category N $_{\scriptscriptstyle 1}$ $_{\scriptscriptstyle of}$ wagon layout, given in section 5 of Appendix 3 to this technical regulation, apply , subject to the reservations set forth in this paragraph.
- 1.15.14.1. The corners of the blind areas created by the body struts should be, no more than:
 - 4° created by the middle rack;
 - 11 $^{\circ}$ created by the main side stand.
 - 1.15.14.2. In zone A and B do not should be neprosmatrivaemye zones.

This requirement does not apply to the center and side splitter pillars of the windscreen (with a split windshield), the steering wheel, wiper parts, rear-view mirrors and the outdoor antenna.

- 1.15.14.3. The visibility zone at 90 $^{\circ}$ to the right, left, and 4 $^{\circ}$ downwardly through the side window cab not be neprosmatrivaemye zones.
- 1.15.14.4. The degree of cleaning of the regulatory zones of the windshield A and B must correspond to the values given in table 1.15.1.
- 1.15.15. On a vehicle, the outside rearview mirrors must be adjusted from the inside with the doors closed .
- 1.15.16. In vehicles for the transport of cash proceeds and valuable goods, application engines, use as a fuel or a liquefied compressed gas, and benzogazovuyu mixture is not allowed.

Table 1.15.1.

Zone windshield glass

84 65 80 70

1.15.17. Compartment motor transport means must be equipped with the installation of fire fighting with the remote drive switching from the place of the driver. Extinguishing agent coming into compartment motor during the installation fire fighting, and the products of combustion do not have to get into

the habitable room. To extinguish the compartments of gasoline engines, fire extinguishing installations must be used that ensure explosion safety when triggered in a combustible vapor-gas environment (gasoline vapor with air).

1.15.18. Fire detectors should be installed in areas most at risk of occurrence of a fire:

in the engine compartment;

in places of concentration of electrical equipment; in the places where autonomous heaters are installed .

1.15.19. In the design of passenger space transport means (cushions and backrests of seats, protective frames, head

restraints, interior ceiling, side panel cabin and doors, finishing the combination of instruments and the like) should be used materials:

having a burning rate of 100 mm / min or less; burners that did not ignite in 30 seconds from the flame; extinguished without burning out before the beginning of the measuring base.

- 1.16. Requirements for vehicles to transport children in the age from 6 to 16 years
- 1.16.1. General Requirements
- 1.16.1.1. Transportation means (buses) for carriage of children must meet the general requirements of safety to the transport means of categories M $_2$ and M $_3$ with the light of the requirements of this paragraph.
- 1.16.1.2. A bus with a maximum design speed exceeding 60 km / h must be equipped with a speed limiting device that meets the requirements of UNECE Regulation No. 89.
- 1.16.1.3. Front and back of the bus should be installed markings "Transporting children" in accordance with applicable in the states members of the Customs Union Rules of road traffic.
- 1.16.1.4. On the outer side sides of the body, as well as on the front and back along the axis of symmetry of the bus, contrasting inscriptions "CHILDREN" must be applied in straight capital letters with a height of at least 25 cm and a thickness of at least 1/10 of its height. The markings shall be on Russian language and can be duplicated on the state language of the state a member of the Customs Union.

In the immediate vicinity of the indicated inscriptions (at a distance of at least $\frac{1}{2}$ of their height), no designations or inscriptions should be applied.

- 1.16.1.5. The body of the bus must be painted yellow.
- 1.16.1.6. The bus must be equipped with a device providing the automatic supply audio signal when the motion of the rear swing.
- 1.16.1.7. Elements of all external devices for indirect vision installed on the bus must be electrically heated.
- 1.16.1.8. Manufacturer bus must be provided periodicity inspection, ad justment and maintenance of service mechanisms, units and components that determine the safety of operation of the bus (steering, brakes, tires, fire extinguishers, mechanisms etc.), Reduced escape route. twice by comparison with the basis the bus on on of which a bus for transporting children made. The corresponding indication must be made in the operating documentation for the bus.
 - 1.16.2. Requirements for planning
 - 1.16.2.1. The bus should only have seating.
- 1.16.2.2. Seat, designed for children must be turned forward in the direction of the bus.
- 1.16.2.3. Each transverse row of seats intended for children shall be provided with a signal button "Request to stop".

Signal buttons should be installed on the inner side of the bus under the lower edge of the window.

- 1.16.2.4. The driver's workplace should not have any blank partitions separating it from the passenger compartment.
- 1.16.2.5. The driver's workplace must be equipped with: 1.16.2.5.1. sound and light signals about the need stops switched on from places where children are accommodated;
 - 1.16.2.5.2. indoor and outdoor car loudspeaker installation.
- 1.16.2.6. The driver, who is on his seat, must be able to control the children entry process into the bus and out of it in the area of the level of the road up to the surface of the floor of the bus. If direct visibility is insufficient, then devices (a "video cameramonitor" system, a system of mirrors, other optical devices) should be installed to allow such control.
- 1.16.2.7. When the presence of vents of the side windows of the passenger space of the height of respect to the total height of the window is

not to be greater than 25%. The vents should be located at the top of the window.

- 1.16.2.8. The bus must be provided compartment in the rear part and (or) the shelf above the windows or other space to accommodate manual luggage and (or) Luggage calculated by rate not less than 0.1 m² and not less than 20 dm³ per seat passenger.
- 1.16.2.9. For versions of the bus design, intended, in that among other things, for the transportation of children with violation of musculoskeletal motor functions in the bus it should be provided a special place for accommodation not less than two wheelchair in folded state. This space can be combined with a compartment for storing luggage.
- 1.16.2.10. The luggage compartment has to be equipped with devices preventing the displacement of luggage and wheelchairs in the folded state while driving the bus.
- 1.16.2.11. Dividing the luggage compartment has to withstand a static load of 200 N to 100 kg weight of luggage and (or) kresel- suitable.
- 1.16.2.12. The bus passenger room in the presence of shelves for hand luggage shelves above windows width should be at least 30 cm, and the height of the free space above them no less than 20 cm. Shelves

must be inclined towards the walls of the buses to which they are adjacent. The slope, measured from a horizontal surface, must be at least 10° .

- 1.16.2.13. The design of the shelves should prevent hand luggage from falling from them when bus is moving.
- 1.16.2.14. The bus must be equipped with two kits first aid (motor vehicle).
- 1.16.2.15. The bus must be provided space for installing at least two fire extinguishers, wherein one of the locations should be near the seat of the driver.
 - 1.16.3. Requirements for seats (see. Figure 1.16.1)
- 1.16.3.1. For seats, arranged in one direction, the distance between the front surface of the back seat and the rear surface of the backrest front located seat measured on the horizontal in the range from the horizontal plane, the tangent of the surface of the cushion seat to the horizontal plane situated at a height of 55 cm above the portion of the floor for seated child's legs (H) must be at least 60 cm.
- 1.16.3.2. The width of the single seat cushion (2F) must be at least 32 cm.

- 1.16.3.3. The width of the free space (G) for single seats measured from each side of the median vertical plane of the seats for seating on horizontally along the back seat at the height of 20 to 60 cm above the uncompressed pillow seats, must be not less than 17 cm.
- 1.16.3.4 width cushion two- and multi inseparable seat—should—be determined taking into account the values of F and G, indicated in paragraphs 1.16.3.2, and 1.16.3.3.
 - 1.16.3.5. The seat cushion depth (K) must be at least 35 cm.
- 1.16.3.6. The height of the cushion seat in an uncompressed state with respect to the level of the floor (I), on which are arranged feet seated child, should be such that the height of the horizontal plane tangent to the surface of the cushion seat, above this portion was from 35 to 40 cm.
- 1.16.3.7. The seat facing the partition must have a clear space in front of it in accordance with the requirements of UNECE Regulation Nos. 36, 52 or 107.
- 1.16.3.8. The edge of the seat that faces the aisle must have an armrest or grab bar. The height location of the armrest or the grip of the seat cushion (B) must be 18 ± 2 cm.
- 1.16.3.9. The bus should be provided not less than one seat for an adult passenger accompanying children. These seats must meet the requirements of UNECE Regulations $N_{\mathbb{C}}N_{\mathbb{C}} = 36$ or 107 for buses Class I or Regulation ECE UN $N_{\mathbb{C}}N_{\mathbb{C}} = 36$ and 107 for buses Class A.

The seating arrangement should allow adult passengers to supervise children while the bus is in motion .

- 1.16.3.10. Seats for the transportation of children must comply with Regulation ECE UN number
- 17 or have strength properties, allowing withstand test load:
- 1.16.3.10.1.1180 N applied to the seat-back 0.75 m above the reference surface. The displacement of the center point of application of the load should be at least 100 mm and not more than 400 mm;
- 1.16.3.10.2.3140 N applied to the seat-back at a height of 0.45 m above the reference surface. The displacement of the center point of application of the load must be at least 50 mm.

- 1.16.3.11. The configuration of the seat cushion and backrest, as well as the material of their upholstery, must comply with UNECE Regulation No. 21.
- 1.16.3.12. The seats for children are equipped with child restraint systems. These systems include safety belts types ZS or ZSr4m in accordance with UNECE Regulation number 16. It is also allowed to use special protective seats, meet UNECE Regulation number 44. On vehicles manufactured before December 31, 2013, may be used as restraint systems of lap belts of type B or Br in conjunction with adjustment and fastening devices . Strength places fastening belts securit y must meet the Regulation ECE UN №14, and used belts Safety Rules of the UNECE number 16.

Figure 1.16.1. Dimensions and location of the seats

1.16.4. Requirements for providing entry and exit

1.16.4.1. Buses with a total number of passengers (including accompanying persons) no more than 22 people must have one service door, and buses with a total number of passengers (including accompanying persons) over 22 people must have a t least two service doors intended for entry and exit.

- 1.16.4.2. Door (or one of the doors) must be located in the immediate vicinity of the working space of the driver.
- 1.16.4.3. The bus must be equipped with a device that prevents the start of movement when the service doors are open or not completely closed .
- 1.16.4.4. The bus must be equipped with lighting of service door openings, allowing the driver to see the entrance and exit of children to (from) the bus (s) at any time of the day.
 - 1.16.4.5. For a service door for children to enter and exit:
- 1.16.4.5.1. The height of the first step of the level of the road must be not more than 25 cm. To provide said height in case of necessity, must be installed retractable stair (mounting step), meeting the requirements of ECE Regulation $N_{\mathbb{C}}N_{\mathbb{C}}$ 36, 52 or 107, or used system is lowering and (or) the slope of the floor;
- 1.16.4.5.2. The height of subsequent steps should be no more than 20 cm;
 - 1.16.4.5.3. The depth of the steps must be at least 20 cm.
 - 1.16.4.6. Grab

bars or handles in aisles overhead doors, intended for output of children:

- 1.16.4.6.1. Walkways should be equipped with handrails or handles on both sides.
- 1.16.4.6.2. Handrails or handles should be positioned so that the child can hold onto them when standing in the road at the service door or on any step.
- 1.16.4.6.3. The height location of the handrail or handles should be from 60 to 110 cm from the road surface or from the surface of each stair.
- 1.16.4.6.4. The depth of the location (horizontally) of handrails or handles for a child standing on the road, in relation to the outer edge of the first step, should not exceed 30 cm.
- 1.16.4.6.5. Depth locations (on the horizontal) handholds or handles for a child standing on a step, not should exceed 30 cm by relation to the edge of this same step.
- 1.16.4.7. In the case of regular transport of children with disorders of locomotor functions and moving in wheelchairs, in the side or rear side of the bus should be provided for a door, having a size of opening of not less than 150 cm height and 90 cm in width, used for access to the bus children in wheelchairs.

- 1.16.4.8. Devices, providing access to the bus and the safety of transportation of children with disorders of locomotor functions, moving in wheelchairs, must meet the requirements of the Regulations of the UNECE number 107.
 - 1.17. Requirements for vehicles for transporting goods with the use of a trailer-dissolution
- 1.17.1. Transport means for the transport of goods with the use of a trailer-dissolution must have:
- 1.17.1.1. Special devices for secure fastening of the transported cargo;
- 1.17.1.2. Serviceable traction rope connecting the tractor with the dismantling when driving with a load;
 - 1.17.1.3. A protective shield installed at the rear of the cab.
 - 1.18. Requirements for vehicles for the transportation of petroleum products
- 1.18.1. Tank trucks should not be installed on transport vehicles with the engine running on gas.
- 1.18.2. The design of a tank truck, trailer (semitrailer) a tank should ensure the safety of the operation of the service personnel. The operational documentation should be given inform ation about the measures of explosion-fire during operation, for the prevention and fire fighting methods, the safe conduct of the work inside the tank, regulation and repair of tankers.
- 1.18.3. The equipment and controls of the system intended for refueling equipment with filtered oil product with simultaneous measurement of the dispensed volume must be located in a special technological compartment, the walls of which must be made of non-combustible materials and have a fire resistance limit of at least 0.5 hours. With the end location of the compartment (behind the tank), the fire resistance limit of at least 0.5 hours is provided only for the wall located on the side of the tank. The bottom of the tank can be used as a wall.
 - 1.18.4. Protection against accumulation of static electricity
- 1.18.4.1. In order to avoid the accumulation of static electricity, the equipment of a tanker truck, trailer (semi-trailer) tanks are made of

materials with a specific volumetric electrical resistance of not more than 10 ⁵Ohm-m.

1.18.4.2. Protection from static electricity transport means must comply with the requirements of the rules of protection against static electricity in the industries of chemical, petrochemical and petroleum industries.

Each tank truck, be electrically connected to the vessel grounding chain with long, providing at the unloaded tanker contact with the ground segment is not less 200 mm, and a grounding cable with a clamping pin at the end for burying into the ground or connecting to the ground loop.

1.18.4.3. Metallic and electrically conductive non-metallic equipment, pipelines of a tanker truck, trailer (semitrailer) -

tanks must have a continuous electrical circuit throughout their entire length with respect to the grounding bolt. The resistance of individual sections of the circuit should be no more than 10 ohms. When measuring loop resistance sleeves must be docked and be in the unfolded state.

- 1.18.4.4. If antistatic sleeves are used on a tank truck, trailer (semitrailer) tank, then the method for checking the resistance of the chain must correspond to the method established in the technical documentation for a specific type of sleeves. In this case, the resistance of the chain should not be more than permissible according to the technical documentation for a particular type of hose.
- 1.18.4.5. The resistance of the grounding device of a tanker truck, trailer (semi-trailer) -
- tank together with a grounding loop should be no more than 100 ohms.
- 1.18.5. The tank truck must have two dry powder fire extinguishers with a capacity of at least 5 liters each.

Trailer tank and tank semitrailer must have a powder extinguisher capacity of not less than 5 liters.

- 1.18.6. At the request of the consumer (customer), the vehicle must be equipped with a modular fire extinguishing system for the engine of the base vehicle, equipped with a remote control of the starting drive. Extinguishing agents not to be exposed in the cabin of the driver when the modular installation of fire-fighting.
- 1.18.7. On a tanker, trailer (trailer), the tank must be provided space for placing two characters "Danger", the sign "Restriction speed", the flashing lamp red color or warning triangle, felt mat, containers for sand mass not less than 25 kg.
 - 1.18.8. On the sides and at the back of a tank truck, a trailer

- (semitrailer) the tank must have the inscription "OGNEOPASNO". The inscription is carried out in the Russian language and can be duplicated on the state language of the state a member of the Customs Union. The color of the lettering must ensure its clear visibility.
- 1.18.9. The tank truck must be equipped with an orange flashing light .
- 1.18.10. Electrical wiring located in the area of the tank and the compartment with technological equipment, as well as in contact with them,

must be mounted in the shell ensures its protection from damage and falling transported oil.

Electrical wiring should be laid in places protected from mechanical stress. Wire connections must be covered.

- 1.18.11. Electrical equipment, installed in a compartment of process equipment and organs control this equipment must be explosion-protected, and the wiring must be laid in a metal sheath, or must be provided measures for insulation of electrical equipment from contact with process equipment.
- 1.18.12. On the road tanker, trailer (semitrailer) the tank there must be a plate with the warning inscription: "When filling (emptying) fuel, the tank must be grounded." The inscription is made in Russian and can be duplicated in the state language of the State a member of the Customs Union.
- 1.18.13. The design of a tank truck, a trailer (semi-trailer) a tank should provide for the protection of its equipment from overturning in case of overturning, in which the release of oil or its vapors into the environment may occur.
- 1.18.14. Each compartment of a tank truck, trailer (semi-trailer) tank should be equipped with a bottom valve with the ability to control it outside the tank.
- 1.18.14.1. The bottom valve control shall be designed to prevent any accidental opening by impact or unexpected action. Bottom valve must remain in the closed state when damaged external control.
- 1.18.14.2. In order to avoid the loss of the contents of the tank in the event of damage to the external loading and unloading devices, the bottom valve and its location must be protected from the danger of being knocked down by external influences or be designed to withstand this effect.
- 1.18.15. The filling restrictor assemblies located inside the tank must be intrinsically safe.
 - 1.18.16. The requirements for respiratory devices

1.18.16.1. Moving parts of the respiratory devices must be made of materials not cause formation of sparks with

mechanical shocks and traffic jolts, or must be adequately covered.

- 1.18.16.2. Breathing devices should be equipped with fire fuses or filters that act as a dust collector and fire safety device .
- 1.18.16.3. Design of the respiratory device must be provided with intensity filling (draining) oil in the tank in accordance with Table 1.18.1.

| | | | | | Table 1.18.1. | |
|---|--------|-------|-----|-----|---------------|-----|
| Conditional diameter passage D_y , mm | 40 | fifty | 65 | 80 | 100 | 125 |
| Throughput ability at <i>P</i> ₀ , m ³ /h, not less | thirty | 60 | 120 | 180 | 240 | 300 |

- 1.18.16.4. Breathing devices, the design of which provides for the possibility of reconfiguring them during operation, must have a device for locking the regulating elements, which, after adjustment, must be sealed. The seals must not interfere with the operation of the breathing device.
- 1.18.16.5. The presence of shut off elements at the inlet and outlet of the breathing devices, partially or completely blocking the passage sections during operation, is not allowed.
- 1.18.16.6. Breathing devices should be located in places accessible for inspection.
- 1.18.17. Construct node seal should be provided sealing caps under positive pressure, at which the tank test for strength.
- 1.18.18. Mass removable lid -manway hatch not should be more than 30 kg, the hatch with special equipment is used as in a manhole, not more than 70 kg.
- 1.18.19. The design of vehicles must meet the requirements of paragraph 2.5 of this annex.
- 1.18.20. Additional requirements to transport means intended for filling fuel air ships (aviatoplivozapravschikam).
 - 1.18.20.1. The overall dimensions of aircraft refuellers should not be

exceed:

in height -

4 m; in width -

3.5 m.

- 1.18.20.2. The radius of rotation aviatoplivozapravschikov not have to exceed 15 m.
- 1.18.20.3. Most low point design aviatoplivozapravschika (with filled t ank) should be at a distance of not less than 0.2 m above the supporting surface.
- 1.18.20.4. The height location of the center of mass is fully loaded aviatoplivozapravschikav should not exceed 95% of the track base of the vehicle.
- 1.18.20.5. Diesels of aircraft refueling vehicles are equipped with protection against contact with the components and assemblies of aircraft fuel engines and anti- water crystallization liquids additives.
- 1.18.20.6. Location air intake system of the engine should exclude the possibility entering into it flammable concentrations jet fuel vapor from the vent valves of tanks as well as aviation fuel and protivovodokristallizatsionnyh liquids additives at their straits and leaks during fueling the aircraft or in the event of damage to the dispensing hoses and other components of process equipment ...
- 1.18.20.7. The distance between the driver's cabin of the aircraft fueling vehicle and the front wall of the technological compartment (if it is located between the tank and the cabin) must be at least 150 mm.
- 1.18.20.8. The presence of electric cigarette lighters and ashtrays in the cockpit of the aircraft refueling tanker is not allowed.
- 1.18.20.9. Passage of the fuel piping, hoses, pneumatic and hydraulic systems on or near a source of heat is not permitted. In the case of impossibility of performing this requirement between the conduit (hose) and the heat source should install the heat shield.
- 1.18.20.10. For a tank with an elliptical and suitcase -like cross-section, the radii of curvature of the side surfaces of the walls should not exceed 3500 mm, and the radii of curvature of the surface of the walls above and below 5500 mm. The rectangular shape of the cross section of the tank is not allowed.

the tank (partitions or breakwaters) should be no more than 1750 mm; Occupancy compartment between adjacent internal reinforcing elements must be not more than 7500 kub.dm.

1.18.20.12. The closed area of partitions (breakwaters) should be at least 70% of the tank cross -section at the place of their installation. The of partitions (breakwaters) not should prevent the filling (emptying) of the of stripping its inner surface at the tank, and also the possibility technical service. For this purpose, each partition (top and bottom) must provided with openings for moving aviation fuel, as well as a technological manhole with a size of at least 600 mm, the shape of which must ensure the free and safe movement of personnel in work clothes from compartment to compartment. The tank must be equipped ladder or staples for descent in it when carrying out operations of technical maintenance and cleaning of the inner surface. The permissible load on the steps of the ladder or the bracket must be at least 120 daN.

1.18.20.13. The tank and the device its attachment to the transport vehicle with its filling of aviation fuel to the nominal level must withstand the load, equal to:

twice the mass of the tank and aviation fuel - in the direction of travel; the total mass of the tank and aviation fuel - in the direction perpendicular to the direction of movement;

twice the mass of the tank and aviation fuel - in the vertical direction from top to bottom;

the total mass of the tank and aviation fuel - in the vertical direction from bottom to top.

- 1.18.20.14. To ensure protection against damage caused by side impacts or overturning, tanks with a radius of curvature of the side walls of more than 2.0 m, as well as a suitcase-like section, must have additional protection on the side surfaces of the tank with a width of at least 30% of the height of the tank cross -section .
- 1.18.20.15. The full capacity of the tank should provide for the possibility of increasing the volume of aviation fuel due to thermal expansion of at least 2% of its nominal capacity.
 - 1.18.20.16. Requirements for hatches:
 - 1.18.20.16.1. In Depending on the capacity of the tanks must be

provided:

for tanks with a nominal capacity of not more than 15,000 dm ³- at least one hatch;

for tanks with a nominal capacity of not more than 40,000 dm ³- at least two hatches;

for tanks with a nominal capacity of over 40,000 dm³- at least three hatches.

- 1.18.20.16.2. The hatch diameter must be at least 600 mm.
- 1.18.20.16.3. One of the hatches (inspection) must be equipped with a hinged cover of a smaller diameter with a device that allows it to be opened without the use of tools.
 - 1.18.20.16.4. The tightness of manhole covers must be ensured. 1.18.20.16.5. Equipment placed on the covers of hatches, must

be protected in the event of the tank tipping over.

- 1.18.20.17. The design of the tank should ensure complete drainage of aviation fuel by gravity through the drainage device.
- 1.18.20.18. The tank must withstand an internal pressure equal to the filling (emptying) pressure to which the breathing device is adjusted, but not less than 0.015 MPa. The capacity of the breathing device must correspond to the maximum allowable filling (emptying) rate.
- 1.18.20.19. The design of the respiratory device should ensure the tightness of the tank and to exclude the possibility expiration of aviation fuel from its rollover.
- 1.18.20.20. The tank should be equipped with an emergency ventilation device with an internal overpressure limiting to 0.036 MPa.
- 1.18.20.21. The tank must have an indicator (indicator) of the level of aviation fuel, which provides visual control of its filling or emptying. The location of the aviation fuel gauge should be convenient for the operator to see .
- 1.18.20.22. The tank should be equipped with a bottom valve for filling it with a third-party pump with bottom filling and a device for limiting the filling of the tank.
- 1.18.20.23. Aviation fuel should be dispensed from the tank through the drain bottom valve, the location of which should ensure the minimum remaining aviation fuel that can not be removed by the pump.

1.19. Requirements for vehicles intended for the transport of food liquids

- 1.19.1. The tank can be with one or more compartments. Each compartment must have at least one hatch and one drain . If there are several compartments, they should be separated from one another by vertical noninsulated partitions.
- 1.19.2. The compliance of tanks operating under pressure over 70 kPa (0.7 kgf / cm²) with safety requirements must be confirmed by a document issued by the competent authorities of the Member States of the Customs Union.
- 1.19.3. Electrical wires, relating itself to the tank, and the place of their connection must be protected from mechanical damage.
- 1.19.4. The design of tanks should provide convenient safe sanitization of internal and external surfaces without people staying inside the tanks.
- 1.19.5. Tanks must be equipped with hatch service platforms, stationary or folding handrails in the service area, have ladders or steps for climbing to the service platforms. The supporting surface of the service platforms, steps must exclude slipping. The handrails from the platform level should be at a height of 800-1000 mm. The height of the side of the platform is not less than 25 mm.
- 1.19.6. Pressure on the valve and the clamping lever manhole covers and caps nadlyukovyh compartments should be no more than 98 N, the effort for their opening no more than 147 N.
- 1.19.7. The air ducts of tanks filled with a vacuum must have a safety valve and a non-return valve.
- 1.19.8. Power chain management means automation of the tank should be carried out by the battery of the transport means.
- 1.19.9. When filling or emptying a tank with food liquids, devices must be used to prevent the accumulation of electrostatic charges.

Tanks for the transportation of alcoholcontaining liquids must be equipped with a device to prevent the accumulation of electrostatic charges during transportation.

1.19.10. Materials (polymeric, synthetic, steel alloys, and others), intended for use in contact with food products and environments not need to give in contact with them,

solutions and the air environment of substances in quantities harmful to human health, exceeding of migration the maximum permissible amounts permissible or concentrations in the water and air environment, as well as create compounds carcinogenic, and other long that mutagenic can cause term effects. These materials are subject to appropriate hygienic assessment when carrying out sanitary-chemical research.

- 1.19.11. Isothermal tanks intended for the carriage of liquid foodstuffs walls, for partitions between thermal insulating except the tank compartments, allowing to limit heat exchange between the inner and outer surfaces of the tank, shall be classified depending on the total heat transfer coefficient and the thickness of the walls of the tank on the basis the provisions the Agreement on International Transport perishable foodstuffs and on the special equipment intended for this transport (ATP), signed in Geneva on 1, 1970, and must comply with September requirements the of this Agreement.
- 1.19.12. The total heat transfer coefficient of the thermal insulating walls of the tank should not exceed 0.7 W / $(m^2 \cdot K)$.
- 1.19.13. In confirmation of the isothermal properties , tests of a standard sample are carried out; The manufacturer of the transport means produces a declaration of conformity, certifying that the manufactured insulated transport means correspond to the tested samples. On the basis of these documents, the competent authority of the state party to the ATP Agreement issues a Certificate of Compliance with the established norms of the ATP Agreement.
 - 1.20. Requirements for vehicles intended for the carriage of liquefied hydrocarbon gases at pressures up to 1.8 MPa
- 1.20.1. The compliance of the vessels of tank trucks with safety requirements must be confirmed by a document issued by the state control (supervision) body of the State a member of the Customs Union.
- 1.20.2. All road tankers be controls must available for manual control and convenient to work in the process of exploitation. All valves must be easy to open and close (with one hand) by handwheel, ensuring complete the tightness. At this moment, attached to them, do not have to exceed 4.9 Nm.
- 1.20.3. Bodies of management must exclude the possibility of spontaneous switching control under the influence of the transport shaking and should have a clear explanatory labels.
- 1.20.4. Plugs must be installed on the unions during transportation and storage of gas .

- 1.20.5. The shut-off valves should be closed with protective covers, which ensure the possibility of sealing them during the transportation and storage of gas in tank trucks.
- 1.20.6. Each vessel must be equipped with at least two safety valves to prevent the pressure in the vessel from increasing over the established rate.
- 1.20.7. Drain and fill pipelines should have devices to relieve pressure from the hoses before disconnecting them into a purge plug.

Each vessel must have at least two devices.

- 1.20.8. To prevent spontaneous movement of tank trucks when parked, the design of tank trucks should be provided with wheel chocks, as well as locks for the working position of the support devices.
- 1.20.9. To prevent the fall front of the tank truck during a failure of the fifth-wheel coupling apparatus of the tractor in the instant start movement on the front support tankers must be installed safety chain or hawser.
 - 1.20.10. Ensuring electrical safety
 - 1.20.10.1. All tanker equipment must be grounded.
- 1.20.10.2. The fittings of the rubber-fabric hoses must be interconnected by a soldered metal jumper, which ensures the closure of the electrical circuit.
- 1.20.10.3. Each tank truck must have a grounding chain electrically conductively connected to the vessel with a length that, when the tanker is unloaded, a section of at least 200 mm in contact with the ground, and a ground cable with a pin-clamp at the end for burying into the ground or connecting to the grounding loop.
- 1.20.11. The design of tank trucks must comply with the requirements of paragraph 2.5 of this annex.
- 1.20.12. Fire extinguishers should be installed outside the cab driver bracket locks should provide reliable fastening of fire extinguishers and quick removal of if necessary.
- 1.20.13. In order to prevent the heating of gas in tank trucks above the design temperature under the influence of solar radiation, the outer surface of the vessel should be painted with silver enamel.
- 1.20.14. The conformity of the distinctive color of the reinforcement to the safety requirements must be confirmed by a document issued by the state body for environmental and technological supervision.

1.20.15. On both sides of the vessel, from the front bottom seam to the rear bottom seam, distinctive red stripes, 200 mm wide, shall be applied downward from the longitudinal axis of the vessel.

Above the distinctive stripes, the black inscriptions "PROPANE - FIRE DANGEROUS" should be applied .

At the rear bottom of the vessel should be applied to the inscription

"FIRE DANGEROUS".

The inscriptions are made in Russian and can be duplicated in the state language of the state - members of the Customs Union.

- 1.21. Requirements for operational and service vehicles for the transportation of persons in custody
- 1.21.1. The requirements of UNECE Regulations Nos. 14, 16, 36, 52 and 107 do not apply to the working cabin .
- 1.21.2. Working cabin transport means of categories M $_2$ and M $_3$ must have emergency exits through the emergency ventilation hatch room convoy and emergency hatch in common chamber (at an amount landing seats 6 and more).
 - 1.21.2.1. The hatch opening must be at least 470 x 500 mm.
- 1.21.2.2. The installation location of the emergency hatch is no more than 500 mm from the chamber door .
- 1.21.2.3. Emergency door must withstand, with preservation of efficiency, static force directed vertically upwards, not less than 5000 N in for 5 minutes.
- 1.21.2.4. The emergency ventilation hatch must open from the inside and outside.
 - 1.21.2.5. The escape hatch must only be opened from the outside.
 - 1.21.2.6. When you open the hatches must be folded out on hinges.
- 1.21.2.7. On the outer and inner surfaces of the emergency ventilation hatch and the outer surface of the emergency hatch, symbols and inscriptions explaining the opening procedure must be applied . Opening the hatch should be carried out without the use of tools.
 - 1.21.2.8. It should be provided for filling the emergency hatches.
- 1.21.3. Exhaust pipe system release the exhaust gases of vehicles of categories M $_2$ and M $_3$ based vehicles N categories or chassis to be outputted for the edge of the body (from either side) to 40-50 mm.

- 1.21.4. Transport facilities must be equipped with:
- 1.21.4.1. Fire extinguishers one in the area accessible from the driver's workplace with a capacity of at least 2 liters, the other (others) in the convoy room, with a total capacity of at least 5 liters;
 - 1.21.4.2. First aid kits (automobile) 2 pcs.;
 - 1.21.4.3. Wheel chocks;
 - 1.21.4.4. Emergency stop sign.
 - 1.22. Requirements for vehicles equipped with work platform lifts
 - 1.22.1. Lifts must be equipped with the following safety devices:
 - 1.22.1.1. Overload device for the hoist;
- 1.22.1.2. Tracking system for orientation of the cradle in a vertical position;
- 1.22.1.3. Limiting the service area, if necessary, limiting strength or stability;
- 1.22.1.4. Locking system for lifting and swinging the boom when the lift is not placed on the supports;
- 1.22.1.5. A device for blocking the lifting of the supports when the boom is in working position;
- 1.22.1.6. System of emergency lowering of the cradle in case of failure of the hydraulic system or engine of the vehicle;
- 1.22.1.7. Device, which prevents remote support lift from the spontaneous extension of time movement the lift;
 - 1.22.1.8. Pointer of the angle of inclination of the lift;
- 1.22.1.9. System emergency stop of the engine and button sound signal from each control panel;
 - 1.22.1.10. Anemometer (for lifts with a lifting height of 36 m).
- 1.22.2. The hydraulic equipment of the hoists must comply with the requirements of paragraph 3.1 of this appendix and must provide automatic stop and fixation of mechanisms in the event of a pipe break or a sudden loss of pressure.
- 1.22.3. The parts of the lift protruding beyond the dimension along the length of the base vehicle (front and rear parts of the boom, cradle, etc.) must have lighting devices and
- a protective color in accordance with paragraph 2.3 of this Appendix and the "Rules of the Road".

- 1.22.4. Lift cradles must have handrails 1000 mm high. The upper surface the handrail should be comfortable to grip with of hand and lined with a low - heat conducting material. By perimeter railing on the stack must be continuous sheathing of not less than 100 mm. Between the casing and a handrail on a 500 height of mm from the deck should be more enclosing strip on around the perimeter fence. The cradle entrance opening must be protected by a removable guard or a lockable door.
- 1.22.5. The sound pressure level at the workplace at the control panel should not exceed the values specified in paragraph 3.3 of this Appendix.
- 1.22.6. On the lower knee of the lift, the carrying capacity of the cradle in kg must be indicated.

1.23. Requirements for vehicles - vans for the transportation of food products

- 1.23.1. The box body must be watertight.
- 1.23.2. The structure of the box body and the materials used for its construction should allow for easy and safe sanitization.
- 1.23.3. The box body must be equipped with steps and handrails to ensure the safe lifting of service personnel inside the box body. The supporting surface of the steps must be non-slip.
- 1.23.4. Materials (polymeric, synthetic, steel alloys, and others), intended for use in contact with food products and environments them, an he given in contact with air environment substance in amounts harmful to health, human exceeding the allowable amount of migration or the , as well maximum allowable concentration air as create compounds that can cause carcinogenic, mutagenic and other longsubject effects. These materials are to appropriate hygienic assessment when carrying out sanitarychemical research.
- 1.23.5. Isothermal vans, consisting of a heat-insulating walls, including the doors, floor and roof, allowing to limit the heat transfer between the inner and outer surface of the body, are classified in dependence on the possibility of maintaining the temperature of the air inside the wagon (in fact including, increased or reduced by comparison with

the temperature of the external environment) and the overall coefficient of heat transfer on the basis of the provisions of the Agreement on the international carriage of perishable food products, and a special transport means, intended for those carriage (ATP), done at Geneva on 1 September 1970, and must meet the standards of this Agreement.

- 1.23.6. The coefficient of heat transfer with insulating walls of the wagon not have to exceed $0.7 \text{ W} / (\text{m}^2 \cdot \text{K})$.
- 1.23.7. In confirmation of the isothermal properties, a type sample is tested in an accredited testing laboratory; The manufacturer of the transport means on the basis of the above tests receives a declaration of conformity, certifying that the manufactured insulated transport means correspond to the tested sample, and registers it in the accredited body on certification.

Section 2. Requirements for the set of types of vehicles

2.1. Requirements for machines for construction, road and earthmoving

2.1.1. General Requirements

- 2.1.1.1. Car must be painted in a contrasting color compared to the background of environmental protection. The color of the machine is determined by the manufacturer of the machine.
- 2.1.1.2. The structural elements of machines that may pose a hazard during operation, maintenance or transportation must be marked with a signal color. Signal colors and safety signs must comply with paragraph 2.3 of this appendix.
- 2.1.1.3. Machines whose operation without taking special safety measures may lead to an emergency situation or pose a danger to workers must be affixed with the necessary warning notices.
- 2.1.1.4. Machines must be equipped with safety and interlocking devices that protect them from overloads and exclude incompatible simultaneous movement of mechanisms. In as such devices may be used in coupling the limiting points, end switches, limiters duty etc.
- 2.1.1.5. The design of machines should exclude spontaneous loosening or disconnection of fasteners of assembly units and parts, as well as exclude

the movement of moving parts beyond the limits provided for by the design, if this can lead to the creation of a dangerous situation.

The design of the counterweights of the machines must exclude the possibility of their displacement and fall.

- 2.1.1.6. Assembly units and machine parts that can spontaneously move during loading, transportation and unloading must have fixation means or be easily removable.
- 2.1.1.7. Each machine must be completed with operational documentation containing requirements (rules) preventing the occurrence

of dangerous situations during transportation, installation (dismantling) and o peration.

2.1.2. Requirements for power plants, working bodies, pneumatic and hydraulic drives

2.1.2.1. The engine must be started directly from the workplace and the operator's cab. It is allowed to start outside the cab if there are devices that turn off the transmission and exclude the reverse motion of the rotating elements.

Machines must be equipped with a device that prevents the engine from starting when the gear is engaged.

- 2.1.2.2. Engines must be equipped with an emergency stop device in case of an emergency .
- 2.1.2.3. The access of unauthorized persons to the power units of the machines must be protected by one of the following devices:
- 2.1.2.3.1. Device, which can be opened only with a tool or key;
 - 2.1.2.3.2. Unlocking device from inside the operator's cab .
- 2.1.2.4. The exhaust system of the engine must be able to extinguish sparks before the exhaust gases escape to the atmosphere.

The exhaust jet must not be directed towards the operator or combustible materials. In the joints of the exhaust system, the breakthrough of gases and sparks is not allowed.

2.1.2.5. The drives of the working bodies shall be provided by the device, which allows to disable the working bodies of the engine. The design of the device should exclude the possibility of spontaneous switching on and off.

- 2.1.2.6. In machines, during the operation of which there is a danger of ejection of the processed material, the working bodies or the working area must be covered with special protective devices (covers).
- 2.1.2.7. Hydraulic drives and other hydraulic devices of machines must comply with paragraph 3.1 of this appendix.
- 2.1.2.8. Parts and assembly units of pneumatic and hydraulic systems should be located in places that exclude the possibility of their mechanical damage, or protected, if necessary, with special protective devices.
- 2.1.2.9. The design of pneumatic and hydraulic systems and working bodies shall ensure the safety of personnel in the event of damage.

2.1.3. Requirements for governing bodies

2.1.3.1. Distance from the handle lever control (in all positions) to the elements of the working space between the handles and levers, driven in movement by brush, should be not less than 50 mm; for driven in motion with your fingers - not less than 25 mm.

The minimum length of the free part of the lever together with the handle in any position must be at least 50 mm if it is operated by fingers, and at least 100 mm if it is operated with a hand.

2.1.3.2. The dimensions, shape and angle of inclination of the support surface of the pedal must ensure a stable position of the operator's foot . The angle of rotation from the longitudinal axis of the back support platforms pedal actuated foot legs, should not exceed 15 °. The pedals must have a surface which prevents slip and easy to clean.

Pedal width should be, mm, not less:

40, if the force of pressing the pedal is not more than 60 N; 60, if the force of pressing the pedal is more than 60 N.

The clearance between the adjacent pedals should be, mm, not less: 20, if the force of pressing the pedal is not more

than 60 N; 50, if the force of pressing the pedal is more than 60 N.

- 2.1.3.3. Efforts on the governing bodies should be:
- 2.1.3.3.1. On bodies management working equipment used in each operating cycle, not more than: $60 \, \text{N}$ for arms, flywheels control and hand wheels, $120 \, \text{H}$ for the pedals;

- 2.1.3.3.2. On controls used no more than five times per shift, no more than 200 N for levers, control flywheels and steering wheels, 300 N for pedals;
- 2.1.3.3.3. On the flywheels of the manual drive of pipeline fittings at the moment of locking the shut-off element (or starting when opening) no more than 450 N.
- 2.1.3.4. Bodies of management should return to neutral position immediately after the cessation of exposure to the operator, if only the control of the machine or its working equipment does not require otherwise.
- 2.1.3.5. Controls, which simultaneously effects on or not in the prescribed sequence may lead to emergency situations or damage to the machine, must be mutually locked.

Blocking is not to be distributed to the organs of management employees to stop the machine or any item of equipment.

- 2.1.3.6. The design of the controls should exclude their spontaneous activation.
- 2.1.3.7. Elements bodies management, with which the contact arm of the operator or the staff should be made of a material having a thermal conductivity less than 0.2 W / $(m \cdot K)$, or they must have a coating of such a material thickness of not less than 0.5 mm.

2.1.4. Requirements for the operator's workplace, cab and its equipment

- 2.1.4.1. The permanent workplace of the operator of self-propelled machines must be equipped with a seat with a backrest.
 - 2.1.4.2. The seat must have dimensions, mm, not less

than: 400 - width;

380 - depth;

- 350 the height of the front edge of the seat cushion from the floor.
- 2.1.4.3. Seat cushion covers should be made of softened, breathable, non-toxic material.
- 2.1.4.4. The design of the seat must provide adjustment in the longitudinal and vertical directions, as well as the change in the angle of inclination of the backrest.
- 2.1.4.5. For machines with a reversing fasting control must be ensured turn back at 180 ° to lock it in the working position.
- 2.1.4.6. With the working place of the operator must be provided with the possibility of observation of the

working equipment at its main technological and transport positions, but also the working area of the machine.

When it is impossible to provide visual control authorities operating the equipment they need to be equipped with markers or signposts position viewable from the working place of the operator.

2.1.4.7. The control panel should be located in a place convenient for observation from the operator's workplace.

When there is no cockpit panel control devices must be closed removable (convertible) shield, equipped with a locking device preventing access to them foreign entities on an unguarded parking lot.

- 2.1.4.8. Floor in front of the working area (cabin), if the machine does not provide the pedal control must be tilted stoppers or the support site for the legs under the angle of 25 $^{\circ}$ 40 $^{\circ}$. Their dimensions should ensure a stable position of the operator's leg .
- 2.1.4.9. The doors of the cabins of cars must have locks that can be locked with a key and a lock to keep them in the extreme open position. It is allowed to install a lock on one door if there is an internal lock on the other door.
- 2.1.4.10. Emergency hatches (if their presence) must have internal constipation and opened without using a tool.
- 2.1.4.11. Cabins must have skylights on at least three sides. For the glazing of the cab, glass must be used in accordance with UNECE Regulation No. 43.
 - 2.1.4.12. Opening windows must be fixed in the desired position.
- 2.1.4.13. During the time of work open windows and doors do not have to speak for the machine dimensions.
- 2.1.4.14. In Windscreen glass booths must be sunvisor and windshield wiper with an independent drive.

Visibility through the windshield must be ensured over the entire operating temperature range .

- 2.1.4.15. The cabins of cars must be equipped with a rear mirror. species.
 - 2.1.4.16. Cabins of cars must be equipped with shades

internal lighting with autonomous activation.

Illumination at the level of the control panel and instrument panel from the interior lighting of the cab must be at least 5 lux.

2.1.4.17. Self-propelled machinery must be a place for the medicine chest first aid (automotive).

Removal and removal of the first aid kit should be carried out without the use of tools.

If there is a cab, a place for a first aid kit should be located inside the cab.

2.1.5. Requirements for microclimate parameters in car cabins

- 2.1.5.1. Cockpit cars must have thermal insulation and be equipped with means of normalization of microclimate in warm and cold time of the year. In the cab the operator when it closed doors must be provided with the required ventilation, which can be used in the supply air fan or air conditioning, windows that open, and open the hatches, in that those intended for the emergency exit. When using opening windows and hatches, they must be fixed in the desired position.
- 2.1.5.2. The requirements of paragraph 6 of Appendix No. 3 must be met of this technical regulation.

2.1.6. Requirements for electrical equipment, lighting and signaling

- 2.1.6.1. Wiring in places of transition through sharp corners and edges of parts, as well as hinge joints, must have additional insulation from mechanical damage.
- 2.1.6.2. Installation and fastening of electrical wiring must exclude the possibility of damage to its insulation.
- 2.1.6.3. The electrical system must have a device to disconnect the storage battery.
- 2.1.6.4. When using the machine in technological mode, the external lighting devices installed on it must provide illumination of the working bodies and the working area at a distance of 20 m.
- 2.1.6.5. Self-propelled wheeled vehicles moving on public roads at a speed of 20 km / h or more and having a width of more than 2.55 m, as well as vehicles designed to perform work on the carriageway of highways, must be equipped with special light signals (flashing beacons) of yellow or orange.

The number and location of flashing beacons must ensure their visibility at an angle 360 ° in a horizontal plane passing through the center of the source radiation beam.

2.1.6.6. On self-propelled machinery must be installed a sound alarm, Incorporated with the working place of the operator.

2.1.7. Fire safety

- 2.1.7.1. The elements of noise and heat insulation, the interior upholstery and the floor of the cab must be made of fireresistant material, which has a linear velocity of flame front propagation of no more than 250 mm / min.
- 2.1.7.2. On self-propelled machines, in an easily accessible place, a device for mounting a fire extinguisher should be provided, the design of which should ensure its removal without the use of tools.

2.2. Requirements for labor protection and ergonomics

- 2.2.1. The controls and systems of specialized bodies must comply with the requirements of paragraph 3.2 of this annex.
- 2.2.2. Controls, the impact on which simultaneously or not in the established sequence may lead to an emergency or damage to equipment, must be interlocked.

Blocking is not to be distributed to the organs of management employees to stop the equipment or any of its elements.

- 2.2.3. The design of the control should exclude the possibility of its movement from the installed position due to vibration of the machine.
- 2.2.4. Authorities control elements designs discontinuous action after c essation of exposure to them should return to neutral position to within not more than 1 s. If an abrupt stop could lead to an emergency or damage to the machine, this value can be increased up to 2 s.
- 2.2.5. Agencies management and control signaling device specialized body must be located separately from the bodies of the control and control and signaling devices to control directly the vehicle.
- 2.2.6. Emergency controls must be distinguishable from other controls without visual control .
- 2.2.7. To indicate the modes of operation of mechanisms that can create a danger to people in the

vicinity, warning or emergency light and (or) acoustic signals should be used .

2.2.8. Lighting devices must be located so that they do not blind the operator even under the most unfavorable conditions.

equipment, and the reflected light does not have to interfere with the observation of the operation of the equipment with the working of the operator seat.

- 2.2.9. The fence at any point must withstand a concentrated force of 1000 N directed to the source of danger. A safe distance from the source of danger, even if the fence is elasticly deformed, must be observed. The force of the same magnitude, but in the opposite direction, should not cause plastic deformation of the fence.
- 2.2.10. If it is required to drive mechanisms when the car is moving, then the controls must be located in the driver's cab, and they must be outside the coverage area associated with driving the car itself.
- 2.2.11. If the machine is driven from a stationary vehicle, the control station must be located so that the operator can see the entire work platform.
- 2.2.12. Noise characteristics on post management should comply with paragraph 3.3 of this application.
- 2.2.13. The hydraulic drive must have an oil tank (hydraulic fluid tank) equipped with a filler opening with a filter, an air pressure equalizing valve, a level indicator, and a magnetic filter.
- 2.2.14. Tanks, in which, during operation, an excess pressure exceeding 0.07 MPa may occur, must be equipped with a safety valve, as well as a device that excludes the possibility of opening the filling or cleaning holes of the tank in the presence of excess pressure in it. The pressure in the tank should be indicated near the filler port.
- 2.2.15. Safety valves and output connections of the pneumatic must be located so that exiting from them the air of any right, nor a reflected not been sent to the operator. Safety devices must not freeze at low temperatures. Allowed
- to use only automatic defrosting device.
- 2.2.16. Air cylinders and pneumatic system assemblies must meet the requirements for pressure vessels .
- 2.2.17. Using the pneumatic brake the vehicle to drive auxiliary equipment is allowed only in that case,

- if it is ensured that, in any mode of operation of the auxiliary equipment, such a pressure and amount of air in the pneumatic system of the brakes is maintained, which is sufficient to brake the vehicle with the effectiveness of emergency braking.
- 2.2.18. Single acting hydraulic cylinders, in which upward movement is carried out due to the pressure in the system, and downward movement is due to the mass of the raised element, must have a control valve that, in any mode, ensures the lowering speed of any point of the raised element not exceeding $0.3~\mathrm{m/s}$...

To prevent critical cases, an automatic valve should be installed to prevent spontaneous fluid flow from the hydraulic cylinder.

- 2.2.19. Double acting hydraulic cylinders should be used if the position is secured in both directions.
- 2.2.20. With pneumatic equipment, only mechanical position fixation must be used.

2.3. Requirements for signal colors, safety signs and signal markings

- 2.3.1. Signal colors, safety signs and signal markings are used to ensure an unambiguous understanding of certain requirements related to safety, preservation of human life and health, reduction of material damage, without the use of words or with their minimum number.
 - 2.3.2. To prevent dangerous situations, it is necessary:
- 2.3.2.1. Designate types of danger, dangerous places and possible dangerous situations with signal colors, safety signs and signal markings;
- 2.3.2.2. Designate with the help of safety signs the location of personal safety equipment and means that help to reduce possible material damage in case of fire, accidents or other emergencies.
- 2.3.3. Painting of units and elements of equipment, machines, mechanisms, etc. paints and varnishes of signal colors and the application of signal markings on them should carry them out

manufacturer. In case of need additional staining and applying a signal marking on the equipment, machines, mechanisms and the like are in operation, holds the organization operate this equipment, machines, mechanisms.

Placement (installation) of safety signs on equipment, machines, mech anisms must be carried out by the manufacturer. If necessary, additional placement (installation) of characters safety on equipment, machines, mechanisms are in operation, h olds the operating their organization.

- 2.3.4. The following signal colors must be used: red, yellow, green, of color graphic blue. To enhance the visual perception images of safety signs and signal markings, signal colors should be used in combination with contrasting colors white or black. Contrasting colors should used be for graphic symbols and explanatory inscriptions.
 - 2.4. Requirements for color-graphic schemes, identification marks, inscriptions, special light and sound signals transport means operative services
- 2.4.1. The requirements of this paragraph apply to the transport means of operational services:

ambulance; fire department; law enforcement and security bodies; military automobile inspection (VAI); emergency rescue.

As part of the requirements to a special light (flashing beacon blue color) and audio signals requirements of this paragraph shall also apply to the transport means of the ministries, departments and organizations on the list approved by the governments of states - members of the Customs Union, to which, when there is no tsvetograficheskih schemes may establish special light and sound signals.

- 2.4.2. Requirements for color schemes
- 2.4.2.1. Composition of color schemes
- 2.4.2.1.1. Tsvetograficheskie scheme outer surfaces transport means op erative services consist of the following elements:

the main color of the outer surfaces of the vehicle; decorative stripes;

information labels; identification marks

.

- 2.4.2.1.2. On the right and left sides of the vehicle is applied to the same on the mind, color, size and placement tsvetograficheskie scheme.
- 2.4.2.2. The colors and sizes of elements used in color-graphic schemes, as well as the content of information labels are established by the member states of the Customs Union.
- 2.4.2.3. Images and colors of coats of arms and emblems must comply with the requirements of state regulatory legal acts on the procedure for their application, description and image.
 - 2.4.3. Requirements for special light and sound signals
 - 2.4.3.1. Equipment signals
- 2.4.3.1.1. Vehicles operative and special services are equipped with special light and sound signals in accordance with the procedure established in the states members of the Customs Union .
- 2.4.3.1.2. The rotating beacon is installed on the roof (cab roof) of the vehicle or above it. In this case, the angle of visibility of the special light signal in the horizontal plane passing through the center of the light emitting source should be equal to 360° .
- 2.4.3.1.3. It is not allowed to install rotating beacons in other places of the vehicle. Methods for installing the flashing beacon must ensure the reliability of its fastening in all modes of movement and braking of the vehicle.

Notes: 1. It is allowed to install more than one rotating beacon on one vehicle.

2. For transport means on the chassis of freight cars, as well as transport means, accompanying columns transport means, is allowed a reduction of the angle of visibility flashing beacon to 180 °, with the proviso visibility it with hand front part of the transport means.

2.4.3.1.4. It allowed the use of flashing beacons structurally united in one body with the emitter sound special sound signal when provided to ensure compliance of each device in the individual requirements of the

present document. Such combined devices have to be installed on the roof of the transport means and actuated in operation with the help of a block management.

- 2.4.3.1.5. Installation of emitters of sound of special sound signals in the engine compartment of the front of the vehicle is allowed.
- 2.4.3.1.6. When installing control units for devices for supplying special light and sound signals in the passenger compartment (cabin) of the vehicle, the requirements of UNECE Regulation No. 21 must be met .
- 2.4.3.1.7. For all sound modes audible warning device the maximum level of sound measured at the distance of 7 m from the transport means, when applying a special sound signal should be not less than 98 dB A and not more
- than 112 dB A when conducting tests in accordance with the Rules of UNECE № 28 (part 2).
 - 2.4.3.2. Requirements for light signals
- 2.4.3.2.1. Flashing beacons of all types of operational services vehicles must be blue. Additionally, with flashing beacons blue color can be used beacons of red color.
- 2.4.3.2.2. Rotating beacons must comply with requirements of UNECE Regulation No. 65-00.
 - 2.4.3.3. Requirements for special sound signals
- 2.4.3.3.1. The special sound signal must be clearly audible and recognizable. The spectral composition of the special audio signal should include in itself one or several dominant harmonic components which vary in time in frequency or amplitude. Changes in these harmonic components should be in the frequency range 150 2000 Hz.
- 2.4.3.3.2. The duration of the cycle of changes in the fundamental harmonic components of a special sound signal should be 0.5 ... 6 s.
- 2.4.3.3.3. The maximum level of sound at a distance of 2 m from the transmitter signal on the axis perpendicular to the plane of its outlet opening at the supplying special audio signal should be not less than 110 dB A and not more than 125 dB A.
- 2.4.3.3.4. Determination of indicators for paragraphs 2.4.3.3.1-2.4.3.3.3 carried out in accordance with the Rules of ECE UN № 28 (part 1).
- 2.4.3.3.5. If a special audible signal device has several sound modes, then each sound mo

de must meet the requirements of paragraphs 2.4.3.3.1-2.4.3.3.3. If there is a special sound signal of the "short-term siren" or "Air Horn" type, the requirements of paragraph 2.4.3.1.7 of this Appendix are met.

2.5. Requirements for vehicles for the transport of dangerous goods

- 2.5.1. The design of transport means for the transport of dangerous goods must comply with the Regulations of the UNECE number 105-04.
- 2.5.2. In support of the requirements for the construction and equipment of the transport means, provided by the Head of 9.3.-9.8. Part 9 of Annex B to the European Agreement on International Road Transport of (ADR), done at Geneva September Dangerous Goods on 1957, conducted tests of model samples in an accredited testing laboratory; The vehicle manufacturer, on the basis of the above tests, accepts a declaration of conformity, certifying the tested model, and registers it with produced correspond to an accredited certification body.

Section 3: Requirements for special equipment and special transport means

3.1. Requirements for volumetric hydraulic drives

3.1.1. Hydraulic drives must be equipped with devices that protect the hydraulic system from overloading pressure above the maximum, reduce pressure pulsations, compensate for changes

the volume of the working fluid when the temperature changes and diagnostics of the technical condition.

- 3.1.2. Hydraulic actuators and hydraulic devices must be durable at a pressure not less than the maximum or 1.25 of the nominal, if the maximum pressure is not set.
- 3.1.3. Fixed couplings, outer walls, welded and threaded connections of hydraulic devices must be tight in the pressure range from minimum to maximum.

Air leakage into the hydraulic system is not allowed.

- 3.1.4. The construction materials and coatings used must be compatible with each other and with the working fluid.
- 3.1.5. In the event of a dangerous situation should automatically be full off the hydraulic drive (hydraulics) of the source of energy, should automatically be neutralizing accumulated in the hydraulic drive (hydraulic) energy during stopping, should be observed lack of self, and switch the type of work should be locked.
- 3.1.6. To fix the output links of the hydraulic motors in a given position, hydraulic locks or other fixing devices must be installed.
- 3.1.7. Intentional or unintentional mechanical movements involving hydraulic devices must not lead to situations that threaten people.

If necessary, fencing of open moving parts is made with painting of hazardous parts and installation of safety signs.

- 3.1.8. If a danger is created the pressure drops. interlocks must be provided to prevent dangerous behavior the machine (machine). In this case, such hydraulic devices as clamping, braking, etc. should not be switched off.
- 3.1.9. The hydraulic actuators (hydraulic) with multiple sources of hydraulic power must be schematics lock precluding occurrence of dangerous factors in case of shutdown of one of the sources of energy (one of the pumps) or occurring at different their inclusion.
- 3.1.10. All hydraulic devices, the hydraulic system and the hydraulic drive must not cause danger when the parameters of the energy supplying the hydraulic system are reduced, when the power supply or control is turned on and off. When turned on, all control devices must be in

the initial position, which does not provide the supply of hydraulic energy to the working element, and upon shutdown must return to its original position.

- 3.1.11. The design of hydraulic control devices should provide for the exclusion of spontaneous activation of the hydraulic drive, hydraulic system or hydraulic device under the action of their own weight of their elements or vibration, or accelerations caused and associated with the functioning of hydraulic drives (hydraulic systems) as part of a machine (unit).
- 3.1.12. Controlled manually gidroustroystva should be located on the machine (unit), so that the action for the operator have been safe, but gidroustroystva protected from unintentional inclusion and off.
- 3.1.13. If several hydraulic devices with automatic or manual control are interconnected, and if the failure of one of them could cause danger, then interlocks or other safety measures (interlocks) must be provided. If this is

feasible, then the lock must interrupt all work steps with the proviso that such an interruption itself does not result in a hazard.

- 3.1.14. The locking devices do not need to impact directly on the contours of the control hydraulic drive (hydraulics).
- 3.1.15. The design of the hydraulic device should provide for the exclusion of spontaneous or deliberate changes in the position of fasteners and connections, control and adjustment elements during transportation and operation.
- 3.1.16. Design regulatory gidroustroystv should be provided to ensure a reliable fixing and the possibility of sealing or blocking regulatory elements integrated lock to prevent tampering or accidental activation.

3.2. Production equipment safety requirements

- 3.2.1. Production equipment should ensure the safety of workers during installation (dismantling), entering into operation and oper ation of both in the case of stand-alone use, and as a part of technological systems in compliance with the requirements (conditions, rules), provided operational documentation.
- 3.2.2. Each processing facility and autonomously used manufacturing equipment must be staffed operational documentation containing requirements (rules), to prevent the occurrence of dangerous situations when assembling (disassembling) input in operation and exploitation.
- 3.2.3. Production equipment must meet the requirements of safety in during the entire period of operation at fulfilling customer requirements, established in the operational documentation.
- 3.2.4. The materials of construction of production equipment must not have a dangerous and harmful effect on the human body *in* all specified operating modes and envisaged operating conditions, as well as create fire and explosion hazardous situations.
- 3.2.5. The design of production equipment must exclude, in all envisaged modes of operation, loads on parts and assembly units that can cause destruction, posing a danger to workers.

If the occurrence of loads is possible that leads to dangerous for the working destruction of individual parts or assembly units, then the production equipment should be equipped with devices that prevent the occurrence of destructive loads, and such parts and assembly units should be fenced or located so that their crumbling parts do not create traumatic situations.

- 3.2.6. The design of the production equipment and its individual parts must exclude the possibility of their falling, overturning and spontaneous displacement under all envisage d conditions of operation and installation (dismantling). If, due to the shape of the production equipment, the distribution of the masses of its individual (or) the conditions of installation (dismantling), the necessary stability cannot be achieved, then the means and methods of securing must be provided, about which the operating documentation must contain the relevant requirements.
- 3.2.7. The design of production equipment should exclude the fall or ejection of objects posing a danger to workers, as well as the release of lubricating, cooling and other working fluids.
- 3.2.8. The moving part of the production equipment, are possible source of traumatic, they should be shielded or located so as to exclude the possibility of touching to him running.

If the functional purpose of moving parts, hazardous, does not allow the use of barriers or other means, excluding the possibility of touching working to moving parts, the design of the production equipment should provide an alarm, warning of starting equipment, as well as the use of warning colors and signs of security.

In the vicinity of moving parts, which are outside the field of sight of the operator, must be installed authorities emergency stop control (inhibition), if in a dangerous zone, created by the moving parts, can be employed.

- 3.2.9. The design of clamping, gripping, lifting and loading devices or their drives should exclude the possibility of a hazard in the event of a complete or partial spontaneous interruption of the power supply , and also exclude a spontaneous change in the state of these devices when the power supply is restored .
- 3.2.10. The structural elements of production equipment should not have sharp corners, edges, burrs and surfaces with irreg ularities that pose a risk of injury to workers, if their presence is not determined by the functional purpose of these elements. In the latter case, protective measures for workers should be provided .

- 3.2.11. Parts of production equipment (in fact including hydraulic piping, steam, pneumatic, pressure relief valves, cables and others.), Mechanical damage which may cause the occurrence of danger, should be protected enclosures or arranged so as to prevent their accidental damage to operating or by means of technical service.
- 3.2.12. The design of production equipment should exclude spontaneous loosening or disconnect ion of fasteners of assembly units and parts, as well as exclude the movement of moving parts beyond the limits provided for by the design, if this could lead to the creation of a hazardous situation.
- 3.2.13. The production equipment must be fire and explosion proof under the specified operating conditions .
- 3.2.14. The design of industrial equipment driven to effect electrical energy must include device (means) for providing electrical safety.

Production equipment must be designed in such a way as to exclude the accumulation of static electricity charges in an amount that is dangerous for the worker, and to exclude the possibility of fire and explosion.

- 3.2.15. Production equipment, acting with the help of non-electrical energy needs to be done in such a way that all hazards caused by these kinds of energy are excluded.
- 3.2.16. The design of production equipment and (or) its placement should exclude contact of its combustible parts with fire and explosive substances, if such contact can cause a fire or explosion, and also exclude the possibility of contact of the worker with hot or overcooled parts or being in the immediate vicinity of such parts, if this may entail for an injury, overheating or overcooling working.
- 3.2.17. The design of production equipment should exclude the danger caused by splashing of hot processed and (or) materials and substances used during operation .
- 3.2.18. The design of the working space, its dimensions and mutual arrangement of the elements (organs control means display information, and other auxiliary equipment.) Should ensure safety when using the manufacturing equipment according to purpose, technical maintenance, repair and cleaning, as well as meet ergonomic requirements.

If for protection from the adverse effects of hazardous and harmful production factors in the composition of the working space includes the cabin, its construction must provide the necessary protective functions, including the creation of optimal microclimate conditions, ease of implementation of the working operations and an optimal overview of the production equipment and the surrounding area.

3.2.19. The system management should provide a reliable and secure its operation in all the stipulated conditions

operation of production equipment and under all external influences provided for by the operating conditions. The control system must exclude the creation of dangerous situations due to the violation by the working (working) of the sequence of control actions.

Workplaces should have inscriptions, diagrams and other means of information about the necessary sequence of control actions.

- 3.2.20. The control system of production equipment should include emergency braking and emergency stop (shutdown) means, if their use can reduce or prevent the hazard.
- 3.2.21. The control system should include means of automatic normalization of the operating mode or means of automatic shutdown if a violation of the operating mode can cause a dangerous situation.

The system management should include a means of alarm and other means of information, warnings about violations of the functioning of the production equipment, leading to the occurrence of dangerous situations.

- 3.2.22. The control system of the technological complex should exclude the occurrence of danger as a result of the joint functioning of all units of production equipment included in the technological complex, as well as in the event of failure of any of its units.
- 3.2.23. The panel central control of the technological complex must be equipped with an alarm. a mnemonic diagram or other means of displaying information about violations of the normal functioning of the technological complex, emergency shutdown (shutdown) means of individual units of the complex.
- 3.2.24. The command devices of the control system (hereinafter referred to as the controls) must be:
- 3.2.24.1. Easily accessible and freely distinguishable, in necessary case s, marked with inscriptions, symbols or other means;

3.2.24.2. Constructed and placed so that ruled involuntary their movement and provides a reliable, confident and unequivocal manipulation, in that number when using operating funds of individual protection;

- 3.2.24.3. Arranged for the required movement forces, sequence and frequency of use, and the importance of functions;
- 3.2.24.4. They are made so that their shape, size and contact surfaces with the worker correspond to the method of gripping (fingers, brush) or pressing (finger, palm, foot).
- 3.2.25. Start of production equipment in operation, as well as restarting after a stop, regardless of its causes must be possible only through the manipulation of body control start.

This requirement does not apply to the re- launch of production equipment operating in automatic mode, if the re- start after a stop provided by this regime.

If the system control has several bodies of management, carrying out commissioning of the production equipment or its individual parts, and violation of the sequence of their use may lead to the creation of dangerous situations, the system of governance should include the device, excluding the creation of such situations.

- 3.2.26. The emergency stop control, after being switched on, must remain in the stop position until it is returned to its original position in operation. Body control emergency stop should be red in color, different shape and size from the other organs of management.
- 3.2.27. If the control system has a switch for operating modes of production equipment, each position of the switch must correspond to only one mode and be reliably fixed in each of the positions if the lack of latching could lead to a dangerous situation.

If in some modes of operation increased protection of workers is required, then the switch in such positions should:

- 3.2.27.1. Block the possibility of automatic control;
- 3.2.27.2. To carry out the movement of the structural elements only with constant application forces working to the body control movement;
- 3.2.27.3. Stop the operation of the associated equipment if its operation may cause additional danger;
- 3.2.27.4. Exclude the functioning of parts of production equipment that are not involved in the implementation of the selected mode;

- 3.2.27.5. Reduce the speed of moving parts of production equipment involved in the implementation of the selected mode.
- 3.2.28. Full or partial cessation of power supply and its subsequent recovery, as well as damage to the control circuit power supply does not have to lead to the occurrence of dangerous situations.
- 3.2.29. The design means protection should provide an opportunity to monitor the implementation of its purpose to start and (or) in the course of operation of the production equipment.
- 3.2.30. Means of protection should fulfill its purpose continuously in the course of operation of the production equipment or at the event a hazardous situation.
- 3.2.31. Action protection products should not be terminated earlier than the end effect corresponding to the dangerous and harmful production factors.
- 3.2.32. Failure of one of the protective equipment or its element should not lead to the termination of the normal functioning of other protective equipment.
- 3.2.33. Production equipment, in the composition of which includes remedies requiring their inclusion before the start of production equipment and (or) off after the end of its operation, should have a device, ensure such consistency.
- 3.2.34. The design and location of the means of protection does not need to limit the technological possibilities of the production equipment and should provide ease of operation and maintenance services.
- 3.2.35. The shape, size, strength and rigidity of the protective fence, its location relative to the protected parts of the production equipment must exclude the impact on the operating protected parts and possible emissions.
 - 3.2.36. The design of the guardrail should:
- 3.2.36.1. Eliminating the possibility of inadvertent displacement of position, providing protection of working;
- 3.2.36.2. Allow it to be moved from a position that protects the worker only with a tool, or block the operation of production equipment,

if the protective fence is in a position that does not ensure the performance of its protective functions;

- 3.2.36.3. Ensure the ability of workers to perform the prescribed actions, including monitoring the operation of the protected parts of the production equipment, if necessary;
 - 3.2.36.4. Do not create additional hazardous situations.
- 3.2.37. Signaling devices, warning about the danger must be made and arranged so that their signals were well distingu ishable and can be heard in the production environment of all persons, which would be threatened.
- 3.2.38. Parts of production equipment that pose a hazard must be painted in signal colors and marked with the appropriate safety sign in accordance with paragraph 2.3 of this appendix.
- 3.2.39. If it is necessary to use lifting equipment during installation, transportation, storage and repair on production equipment and its individual parts, the places for connecting the lifting equipment and the weight to be lifted must be indicated.
- 3.2.40. The connection points for lifting equipment should be selected taking into account the center of gravity of the equipment (its parts) so as to exclude the possibility of damage to the equipment during lifting and moving and to provide a convenient and safe approach to them.
- 3.2.41. The design of production equipment and its parts must ensure that they can be securely fastened to a vehicle or in a packaging container.
- 3.2.42. Assembly units of production equipment, which can spontaneously move during loading (unloading), transportation and storage, must have devices for fixing them in a certain position.
- 3.2.43. Manufacturing equipment and its parts, the movement of which is provided for by hand, must be equipped with devices for moving or have a shape that is convenient for gripping by hand.
 - 3.3. Noise requirements at the workplace of the operator of special and specialized vehicles
 - 3.3.1. The nature of the noise
- 3.3.1.1. By the nature of the spectrum, noise is divided into: broadband with a continuous spectrum of width more than one octaves;

tonal, in the spectrum of which there are pronounced discrete tones. Tonal noise character for practical purposes (for monitoring of the parameters on the working field) is set by measuring in one-third octave bands of excess sound pressure level in the audio band above the adjacent not less than 10 dB.

3.3.1.2. In terms of time characteristics, noise is divided into: constant, the sound level of which over an eight - hour working day

(working shift) varies in time is not more than to 5 dB And when dimensions in a temporary characteristic "slow" sound level meter:

unstable, the sound level of which over an eight - hour working day (work shift) changes in time by more than 5 dB A when measured on the time characteristic of a "slow" sound level meter.

3.3.1.3. Intermittent noise is classified into:

fluctuating in time, the sound level of which is continuously changing in time;

intermittent, level of sound which is stepwise changed (at 5 dB A and more), wherein the duration of the level remains constant, is 1 to and greater;

pulse, consisting of one or more audio signals, each lasting less than 1 second, at this level of sound measured in dB AI and dB A respectively at temporal characteristics "Pulse" and "slow" sound level meter, characterized by not less than at 7 dB.

- 3.3.2. The characteristics and acceptable levels of noise at working places
- 3.3.2.1. Characteristic DC noise at working places are the levels of sound pressure L in dB in octave bands with geometric mean frequencies 31.5; 63; 125; 250; 500; 1000; 2000; 4000; 8000 Hz.
- 3.3.2.2. Allowable sound pressure levels in octave frequency bands and sound levels at workplaces should be taken:
- 3.3.2.2.1. For broadband constant and non-constant (except impulse) noise according to table 3.3.1;

3.3.2.2.2. For tonal and impulse noise - 5 dB less than the values indicated in Table 3.3.1.

Table 3.3.1.

| und pressure levels, dB, in octave bands with geometri | Sound levels, dB |
|--|------------------|
| c mean frequencies, Hz | |

| 31.5 | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | A |
|------|----|-----|-----|-----|------|------|------|------|----|
| 107 | 95 | 87 | 82 | 78 | 75 | 73 | 71 | 69 | 80 |

3.3.2.3. Noise characteristics of machines or limit values of noise characteristics must be indicated in the passport for them, manual (instructions) for operation or other accompanying documentation.

3.4. Safety valves for vessel requirements, working under pressure

Note: The requirements of paragraph 3.4 of this annex do not apply to gas fuel supply systems for engines, which are established by UNECE Regulations Nos. 67 and 110.

- 3.4.1. The vessels are subject to protection by safety valves, in which the operating pressure may be exceeded from the supply source, chemical reaction, heating by heaters, solar radiation, in the event of a fire near the vessel, etc.
- 3.4.2. The number of valves, their dimensions and throughput should be chosen so that a pressure cannot be created in the vessel in excess of the design pressure by more than 0.05 MPa $(0.5 \text{ kg} / \text{cm}^2)$ for vessels with a pressure of up to 0.3 MPa $(3 \text{ kgf} / \text{cm}^2)$, by 15% for vessels with pressure above 0.3 to 6.0 MPa (from 3 to 60 kgf / cm 2) and by 10% for vessels with pressure above 6.0 MPa $(60 \text{ kgf} / \text{cm}^2)$.

When the valves are in operation, the pressure in the vessel may be exceeded by no more than 25% of the calculated one.

- 3.4.3. The construction and materials of the elements of valves and their auxiliary devices must ensure reliable functioning of the valve in the working conditions.
- 3.4.4. The design of the valve must ensure free movement of the moving valve elements and exclude the possibility of their ejection.
- 3.4.5. The design of valves and their auxiliary devices must exclude the possibility of an arbitrary change their adjustment.
- 3.4.6. The design of the valve must exclude the possibility of inadmissible impacts during opening and closing.
- 3.4.7. Valves should be located in places that are accessible for convenient and safe service and repair.

When the location of the valve, requiring regular maintenance at height more than 1,8 m, shall be provided for the device for easy maintenance.

- 3.4.8. Valves on vertical vessels should be installed on the upper bottom, and on horizontal vessels on the upper generatrix in the zone of the gas (vapor) phase. The valves should be installed in places that exclude the formation of stagnant zones.
- 3.4.9. The installation of shut-off valves between the vessel and the valve, as well as behind the valve, is not allowed, except for vessels with fire and explosive substances and substances of the 1st and 2nd hazard classes, as well as for vessels operating at cryogenic temperatures. For such valves, a valve system consisting of a service valve and a reserve valve should be provided.
- 3.4.10. Work and backup valve must be equal throughput capacity, pro viding full protection of the container from excess pressure over the permissible. To ensure audit and repair valves before and after them must be set breaking armature with a blocking device, precluding the possibility of simultaneous closing shutoff valves for the working and backup valve, wherein the passage cross section in the node switch in any situation should be not less than the passage cross section mounted valve.
- 3.4.11. The valves are not allowed to be used to regulate the pressure in a vessel or group of vessels.
 - 3.4.12. Lever-

weight valves may only be installed on stationary vessels.

3.4.13. The design of the cargo and the valve spring should be a device for verifying operation of the valve action in working condition by the forced opening it in time

work of the vessel. Forced opening must be ensured at a pressure equal to 80% of the set pressure .

Allowed to set valves without devices for forced opening, if it is unacceptable for the working properties of the medium (harmful, explosive and t. D.) Or at conditions of the working process. In this case, check valves should be carried out periodically in the terms established by the technological regulations, but not less one times in 6 months. Provided that the possibility of freezing, sticking, polymerization or clogging of the valve by the working medium is excluded.

3.4.14. Valve springs must be protected from impermissible heating (c ooling) and direct action of the working medium, if it has a harmful effect on the spring material.

- 3.4.15. Weight load and the length of the arm lever-cargo valve determined on the basis of the fact that the load is at the end of the lever.
 - 3.4.16. The

valves and their auxiliary devices must be designed so that when failure of any managed or regulatory body or upon termination of power feeding to the valve control was maintained the function of protection of the vessel against excess pressure by duplicating or other actions.

- 3.4.17. The design of the valve should provide for the possibility of manual or remote control.
- 3.4.18. Valves powered by electricity must be supplied with two independent power supplies. The electrical circuits which disconnect power causes pulse o pens valve permitted a source of power.
- 3.4.19. If the authority management is pulsed valve, the diameter of the conditional pass this valve should be not less than 15 mm.
- 3.4.20. The inner diameter of the impulse lines (inlet and outlet) must be at least 20 mm and not less than the diameter of the outlet connection of valve. Impulse control lines must be able the impulse and reliably. It is prohibited the condensate to install shut off devices on these lines. It is allowed to set a switching device, if at any position of the unit impulse line will remain open.
- 3.4.21. Working environment used to control valves, not to be subjected to freezing, coking, polymerization and have a corrosive impact on the material valve.
- 3.4.22. The design of the valve should provide its closing under pressure of not less than 95% of the pressure adjustment.
- 3.4.23. The valve must be equipped with at least two independently operating control circuits, which must be designed so that if one of the control circuits fails, the other circuit will ensure reliable operation of the valve.
- 3.4.24. Valves should be installed on branch pipes or pipelines directly connected to the vessel.

When the installation on a pipe (duct) several valves the cross-sectional area of pipe (piping) must be at least 1.25 times the total cross-sectional area of valves installed on it.

- 3.4.25. Falling pressure before valve in the highest throughput capacity not be greater than 3% of the pressure adjustment.
- 3.4.26. The valve piping must be provided with the necessary compensation for thermal expansion. The fastening of the valve body and piping must be sized taking into account the static loads and dynamic forces that occur when the valve is actuated .
- 3.4.27. Supply pipelines should be designed with a slope along their entire length towards the vessel. In supply pipelines, sharp changes in wall temperature (thermal shocks) should be avoided when the valves are triggered.
- 3.4.28. The inner diameter of the supply pipe should be not less than the greatest internal diameter of the supply pipe of the valve.
- 3.4.29. The internal diameter and length of the supply piping are calculated based on the largest flow capacity of the valve.
- 3.4.30. The inner diameter of the discharge pipe should be not less than the greatest internal diameter of the output nozzle valve.
- 3.4.31. The inner diameter and length of the outlet pipeline are calculated so that at a flow rate equal to the maximum throughput of the valve, the back pressure in its outlet pipe does not exceed the maximum allowable back pressure.
- 3.4.32. The connecting pipelines of the valves must be protected from freezing of the working medium in them .
- 3.4.33. The selection of the working medium from the branch pipes (and in the sections of the connecting pipelines from the vessel to the valves), on which the valves are installed, is not allowed.

APPENDIX No. 7 to the technical regulations of the Customs Union

"On the safety of wheeled vehicles funds" (TR CU 018/2011)

TREBOVANIZ

to identify the transport means

- 1. Requirements for labeling transport means (chassis) identification number
 - 1.1. For each vehicle (chassis), the manufacturer shall be applied to the identification number that is unique within, at least, 30 years.
 - 1.2. The content of the identification number of the transport means (chassis).
 - 1.2.1. The identification number includes 17 signs, in an which can be arabic numerals f rom 0 to 9 and the letters of the Latin alphabet, for excluding the letters I, O and Q.
 - 1.2.2. The first three positions of the identification number must contain the manufacturer's international identification code . Accountin g and control of the assignment of the international manufacturer's identification code is within the competence of the International Organization for Standardization *.

Note:

* At the present time, the responsibility of the International Organization for Standardization on the international public organization - Society of Automotive Engineers (Society of Automotive Engineers) USA, which establishes the individual identification codes for different regions and countries.

Assignment of international identification codes of manufacturers carried out by the competent authority of the country, on the territory of which the manufacturer is registered as the person carrying out economic activity.

If the manufacturer produces less than 500 vehicles funds (chassis) in third position identification number the year to the by figure 9. In this case, the 12th, 13th and 14th marks the identification number as assigned by competent authority of the country, on the territory of which the the manufacturer is registered as a legal entity.

- 1.2.3. Identification number positions from 4 to 9 inclusive are used to encode the main features of the vehicle. The choice of characters for coding and their sequence is determined by the manufacturer.
- 1.2.4. At the 10th position of the identification number, the manufacturer can indicate the year of manufacture or model year of the vehicle (chassis), or use this position at his own discretion. Codes for the year of manufacture or model year must be assigned in accordance with table 1.

Codes for designation of the year of manufacture (model year)

Table 1

| Year | Year code |
|----------|------------|----------|------------|----------|------------|----------|------------|
| release | release | release | release | release | release | release | release |
| (model- | (model- | (model- | (model- | (model- | (model- | (model- | (model- |
| ny year) | Foot year) |
| | | | | | | | |
| 2001 | one | 2011 | В | 2021 | M | 2031 | one |
| 2002 | 2 | 2012 | C | 2022 | N | 2032 | 2 |
| 2003 | 3 | 2013 | D | 2023 | P | 2033 | 3 |
| 2004 | four | 2014 | E | 2024 | R | 2034 | four |
| 2005 | five | 2015 | F | 2025 | S | 2035 | five |
| 2006 | 6 | 2016 | G | 2026 | T | 2036 | 6 |
| 2007 | 7 | 2017 | Н | 2027 | V | 2037 | 7 |
| 2008 | eight | 2018 | J | 2028 | W | 2038 | eight |
| 2009 | nine | 2019 | K | 2029 | X | 2039 | nine |
| 2010 | A | 2020 | L | 2030 | Y | 2040 | A |

- 1.2.5. At the 11th position of the identification number, the manufacturer can indicate the code of the assembly plant or use this position at its discretion.
- 1.2.6. Position identification number to the 12 th of 17 th inclusive are used by the manufacturer for prostanovki serial

numbers of a specific vehicle (chassis), taking into account the requirements of paragraph 3 of paragraph 1.2.2 of this Appendix.

- 1.2.7. Positions of the identification number from 15 to 17 inclusive are filled in only with Arabic numerals.
- 1.3. Formation of identification numbers of the transport means in special cases.
- 1.3.1. The manufacturer, which is a legal person formed in accordance with the legislation of the states -Customs Union, using for the members of the production of transport means purchased chassis or basic transport means other manufact urer, produces and applies to such vehicles means new identification number, different from the ID numbers of purchased chassis. Previously assigned identification number the chassis (base transport means) must be saved on the transport vehicle.
- 1.3.2. The manufacturer of a vehicle, which is the result of individual technical creativity, puts on it an identification number assigned by an authorized body of a member state of the Customs Union.
- 1.4. The application of the manufacturer identification number on the transport means (chassis).
- 1.4.1. The identification number is applied in at least one place on the frame or body part that is not easily removable.
- 1.4.2. The identification number must be applied clearly, in a way that ensures its durability and excludes easy alteration of its signs. The identification number is applied without spaces between characters.
- 1.4.3. The height of the identification number signs must be at least 7 mm for vehicles (chassis) of categories M, N, O and at least 4 mm for vehicles of category L.
 - 1.4.4. It is allowed to put an identification number in one or two lines.

In the case of applying an identification number in two lines, characters from 1 to 9 inclusive are located on the first line; characters 10 through 17 inclusive are located on the second line. At the beginning and end of the lines must be affixed separator, which is set by the manufacturer of transport means (chassis) (e.g., mark "*").

- 1.4.5. The identification number of possibilities, should be applied to the right side, in the front half of the transport means (chassis) to an easily accessible for reading spot.
- 1.5. Note the identification numbers in the documents on transport means (chassis).

- 1.5.1. The identification number indicated in the documents for the vehicle (chassis) must be located in one line without spaces and separators.
- 2. Requirements for the plates of the manufacturer of vehicles (chassis), the conformity assessment of which is carried out in the form of type approval
 - 2.1. Manufacturer's plate must be placed in an easy to read location the vehicle (chassis) not be replaced in the course of operation, and not should be removable without the use of special tools. For vehicles of category L, it is allowed to place an additional plate based on the possibilities of the layout of the vehicle.

Tablet manufacturer should be a rectangular shape with dimensions allow to place, in the general case, the following information on Russian and (or) a foreign language:

- 1) the name of the manufacturer;
- 2) vehicle identification number;
- 3) the technically permissible maximum mass of the transport means;
- 4) the technically permissible maximum mass of the road train, if the vehicle can be used to tow a trailer (semitrailer);
- 5) technically permissible maximum weight, attributable to each of the axes of the transport means, starting with the front axle;
- 6) technically permissible maximum load on the fifth wheel (indicated for a semitrailer);
- 7) number of approved type of transport means (approved type chassis). Permission is not specified codes spread, extension and correction of approval of type of transport means (approved type chassis).

If the technically permissible maximum mass indicated in accordance with subp aragraphs 3), 4) and 5) of this paragraph exceeds the corresponding permissible maximum mass (Appendix No. 5 to

this technical regulation), then the mass values are indicated in two columns: technically permissible maximum mass - in the left column; permissible maximum weight - in the right column.

For vehicles of category L, it is allowed to indicate only the information contained in subparagraphs 1) and 7).

For the chassis, only the information contained in subparagraphs 1), 2) and 7) is indicated.

- 2.2. The information contained in subparagraphs 1) 7) of paragraph 2.1 may, at the choice of the manufacturer, be partially located on an additional plate (sticker) located below or to the side of the main plate. This additional plate can also be placed a single sign -treatment products on the market states members of the Customs Union.
- 2.3. The plates referred to in paragraphs 2.1 and 2.2 can be made in the form of stickers, which must be destroyed when trying to remove them mechanically.
- 2.4. Information on the manufacturer's plate (s) must be applied clearly and in a way that excludes abrasion. For vehicles (chassis) of categories M, N, O, the identification number on the manufacturer's plate (s) must be in a font of at least 4 mm in size. For vehicles of category L, the identification number on the manufacturer's plate (s) must be in a font of at least 3 mm.
- 2.5. In case if the information on the label of the manufacturer presented in a foreign language, a translation must be given in the manual (instruction) of operation.
 - 3. Labeling Requirements components of vehicles manufactured in the circulation in an interchangeable (replacement) portions
- 3.1. Vehicle components released into circulation as replaceable (spare) parts must contain in their labeling : name or trade mark of the manufacturer;

information about specific design characteristics affect on security (if any); sign official statements "E" or "e" or single sign -

treatment products on the market states - members of the Customs Union.

- 4. Ensuring the possibility of identification of vehicles by state registration plates
- 4.1. On each transport vehicle of categories M and N shall be provided for the installation location of the front and rear of one of the state registration mark set sizes.

Each vehicle of categories L and O must be provided with places for the installation of one rear state registration plate of established dimensions.

- 4.2. The place for the installation of the state registration plate must be surface flat vertical and must be located in such a way as to exclude obstruction of the state registration plate by the structural elements of the vehicle. At the same time, state registration plates should not reduce the angles of the front and rear overhangs of the vehicle, close external light and signal devices, protrude beyond the side clearance of the vehicle.
- 4.3. The place where the rear state registration plate is installed must ensure that the following conditions are met:
- 4.3.1. The state registration plate must be installed along the axis of symmetry of the vehicle or to the left of it in the direction of movement of the vehicle.
- 4.3.2. State registration mark should be set perpendicular to the longitudinal plane of symmetry of the transport means $\pm \Box 3$ ° and perpendicular to the supporting plane of the transport means $\pm \Box 5$ °.

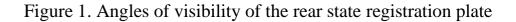
However, if the construction of the transport means do not allow to set the state registration mark perpendicular to the reference plane of the transport means, then to the state of registration marks, the height of the upper edge of which from the supporting surface is not more than 1200 mm, allowed increasing deviation from the vertical plane to 30 $^{\circ}$, if the surface on which the state registration plate is installed , facing up and 15 $^{\circ}$, if this surface is facing down.

4.3.3. For located in the equipped state of the transport means of the height from the reference plane of the lower edge of the state registration plate for vehicles, other than those of the category of L, should be not less than 300 mm, for the transport of funds

category L, it must be at least 200 mm, and the height of its upper edge must be no more than 1200 mm.

However, if the design of the vehicle does not allow providing the height of the state registration plate indicated in the first paragraph of this paragraph, it is allowed to place it in such a way that the height of its upper edge as little as possible exceeds the size of 1200 mm.

4.3.4. The state registration plate must be visible in a space bounded by four planes forming angles of visibility not less than: upward - 15° , downward - 0° , left and right - 30° (Figure 1).



4.3.5. There must be provided an opportunity to read back the state of the registration plate from a distance of not less than 20 m in a dark time of day when the condition of its illumination regular flashlights, provided the design of the transport means for this purpose.

This requirement does not apply on the line, pointing to state affiliation, and "transit", but also on the image of the state of the flag State - a member of the Customs Union.

APPENDIX No. 8
to the technical
regulations of
the Customs Union
"On the safety of
wheeled vehicles funds"
(TR CU 018/2011)

TREBOVANIZ

to transport facilities, located in the operation

1. Requirements for braking systems

- 1.1. The action of the service and reserve braking systems when acting on the brake system control must be adequate for the driver of the vehicle.
- 1.2. To check the working braking system, the braking performance and stability of the vehicle during braking are assessed. To check the spare, parking and auxiliary braking systems, the braking efficiency is assessed by the highest values of the braking forces. The scope of checking brake systems on roller stands or in road conditions according to tables 1.1 and 1.2.
- 1.3. Operating the braking system of the transport means should provide performance standards effectiveness of braking on the stands according to Table 1.3 or in road conditions according to Table 1.4. Initial braking velocity during inspections in road conditions 40 km / h. Mass transport means when inspections are not must exceed technically permissible maximum weight.
- 1.4. When checking on stands, the relative difference in the braking forces of the axle wheels (as a percentage of the maximum value) is allowed for the axles of a vehicle with disc wheel brakes not more than 20 percent and for axles with drum wheel brakes not more than 25 percent.
- 1.5. In road conditions, when braking $$\rm with$ the service braking system with an initial braking speed of 40 km $^{\prime}$ h , the vehicle should not leave any part of the standard traffic corridor with a width of 3 m.
- 1.6. Emergency brake system equipped with an independent from other brake systems, body control, shall ensure compliance with

Regulatory performance efficiency of inhibition of transport means for the stand according to the table 1.3, or in road conditions according to Table 1.4 at an initial speed of braking 40 km / h.

Using indicators of braking efficiency and sustainability of the transport means at braking when checks on the roller stands

Table 1.1

| | Braking system | | | | | | | |
|----|--|-----------------|----------------------|--------------------|-----|----------|--|--|
| | | W | Vorking | | | | | |
| In | Without AE with ABS, wi shutdowns above stand s | ith a threshold | With ABS with a cut- | | | G | | |
| d | | Ustoy- | | Ustoy- | par | S | | |
| i | Effective ti | bility trans t | Effective tiv | | e n | to | | |
| c | V- | ailor means | - | eans when decelera | aya | ya | | |
| a | Nosta dece | when | Nosta decel | tion | | - | | |
| t | leration zhe | deceleratio | eration zhen | genii | | n ia | | |
| 0 | niya | n zhenii | iya | | | ig ht | | |
| r | · | | j | | | III | | |
| n | | | | | | | | |
| a | | | | | | | | |
| m | | | | | | | | |
| e | | | | | | | | |

Specific braking force

+---++

| The relative difference in the braking forces of the axle wheels |
|--|
| -+ |
| |
| |
| |
| |
| Blocking the wheels of the vehicle on casters or automatic shutdown of the stand due to slipping of the wheels on the rollers ** |
| +++ |
| |
| |
| NT. 4 |

Note:

- *For a tractor unit and a trailer or semi-trailer, the indicator is calculated separately.
- ** Used only instead of the specific braking force indicator

The use of indicators of braking performance and stability of the transport means during braking when inspections to road conditions,

Table 1.2

| Braking s | ystem |
|-----------|-------|
|-----------|-------|

| | | V | Vorkin | ıg | | | | | |
|---|--|--|--------|--|---|---------------------------------|------------------------|-----------------------|--|
| | without | | | with ABS | | | | | |
| Indic ator na me | Effectivene ss tiv- Nosta dece leration zh eniya | Ustoy- bility trans t means when eration genii | decel | Effectivene ss tiv- Nosta dece leration zh eniya | Usto bility ailor n wh decel on zh | trans t neans en erati | spar e n ay a | S t o y a - n i g h t | Limin ary m oga- Tel n aya |
| Brakin | ng distance | + | - | + | - | + | | - | - |
| Sustain | ned decelerati | on * + | - | + | - | + | | - | + |
| Time trigger brake | ring system * | + | - | + | - | + | | - | - |
| Corrid mover | | - | + | - | + | - | | - | - |
| The sle the roa on whi the vehicle eld sta ry | nd ich e is h | - | - | - | - | - | | + | - |

^{*}Used together only instead of index "brake path".

The "+" sign means that the corresponding indicator should be used when assessing the braking performance or stability of the vehicle during braking, the "-" sign - the indicator should not be used.

Standards for the efficiency of vehicle braking during inspections on roller stands

Table 1.3

| | | Specific bi | aking forc |
|--------------------|--|-------------|--------------|
| Category transport | Effort on | e γ | \Box_{t} , |
| means | the control body R _P , N, not less for: | | |
| | no more | working | spare |
| | | brake s | brake s |
| | | ystem | ystem |

 \mathbf{M}_{1}

M₂, M₃
N₁
N₂, N₃
O₁, O₂
(trailers with inertia l brake) O₂
, O₃, O₄
(trailers excluding those equipp ed with

an overrun br ake)
O₂, O₃, O₄
(trailers
with center a
xle and semitrailers, excl
uding
those equipp
ed with
an overrun br
ake)

Notes:

* For axles of vehicles in the brake drive of which a brake force regulator is installed .

** For a transport means with a manual body control backup brake system.

tandards vehicle braking performance during inspections in road conditions

Table 1.4

| | | | | | 1 a | 010 1.4 |
|--|--|-------|---|---|----------------------|--|
| Category transport- Foot age nt | Effort on the cont rol elemen t R , N, no more | of to | ng distance ransport cans S 1, no more: Spare hydr ochloric tor - synchrotro n- sys- Topics | Steady-decelers s², not Rabo-whos e torsync hrotro n-sys-Topic s | ation $j_{set.,m}$ / | Time sra baty- Bani bra ke syste m τ□ _{wed} , s, no m ore |
| M 1 | 490 | 16.6 | 5 - | 4.9 | - | 0.6 |
| M_{1} * | 490 | 19.8 | 3 - | 3.9 | - | 0.6 |
| M_2, M_3 | 686 (589 **) | 18.6 | 30.6 | 4.9 | 2.4 | 0.8 |
| N_{1} | 686 (589 | 16.6 | б - | 4.9 | - | 0.6 309 |

$$L_{_{1}}***L_{_{2}}***L_{_{3}}***L_{_{4}}***$$

- -

--

_ _

3.6 3.6

 $L_{4}***L_{5}, L_{6}, L_{7}$

41.2 - 2.5 -

41.2 5.0 2.5 -

Notes:

- * For a vehicle with a trailer without a braking system.
- ** For a transport means with a manual body control backup brake system.
- *** For vehicle categories L₁-L₄numerator given force on footswitch body control braking path and steady deceler ation during braking, the front brakes; in

the denominator of the specified stress on manual body control, braking path and steady de celeration when braking, the rear brake.

- 1.7. The service braking system of trailers with a pneumatic brake drive in the emergency (automatic) braking mode must be operable.
- 1.8. The parking brake system is considered to be operational if the following requirements are met:
 - 1.8.1. For a vehicle with a technically permissible maximum mass:
 - 1.8.1.1. Or the value of the specific braking force is not less than 0.16;
- 1.8.1.2. Or securing the transport means on a supporting surface with a slope of $16 \pm 1\%$;
- 1.8.2. For a vehicle in running order, if the vehicle has not been checked for the technically permissible maximum mass:
- 1.8.2.1. Or the calculated specific braking force equal to the lesser of the two values: 0.15 ratio of the technically permissible maximum mass to the mass of the vehicle when checked, or 0.6 ratio of the vehicle's curb mass per axle (s) affected by the parking braking system, to the mass of the vehicle in running order;
- 1.8.2.2. Or stationary state of the vehicle on a surface with a slope of (23 \pm 1)% for a vehicle of categories M $_1$ M $_3$ and (31 \pm 1)% for categories N $_1$ N $_3$;
- 1.8.2.3. Or steady-state deceleration of not less than 2.2 m $_{\rm S}$ 2 when braking in road conditions with an initial speed of 20 km $_{\rm S}$ h of a vehicle of categories M $_2$ and M $_3$, equipped with a parking brake system with a drive on spring chambers, separate with a drive of the spare brake system, in which at least 0.37 of the vehicle curb weight falls on the axle (s) equipped with a parking brake system or at least 2.9 m $_{\rm S}$ 2

- for a vehicle of category N, for which at least 0.49 of the vehicle curb weight falls on the axle (s) equipped with a parking brake system with the specified drive.

1.8.3. The

locking mechanism (or latching function) of the parking brake control is functional.

- 1.9. The force applied to the body of the control of the parking brake system for actuating it in effect not be more than:
 - 1.9.1. In the case of a manual organ of management:
 - 392 N for a vehicle of category M₁;
 - 589 N for a vehicle of other categories.
 - 1.9.2. In the case of the foot body of management:
 - 490 N for a vehicle of category M₁;
 - 688 N for a vehicle of other categories.
- 1.10. The auxiliary braking system, with the exception of the engine retarder, when checked in road conditions at a speed of (30 ± 5) km / h must ensure a steady deceleration of at least 0.5 m / s 2 for a vehicle with a technically permissible maximum mass and 0.8 m / s 2 for a vehicle in running order, taking into account the mass of the driver (except for vehicles of category L).

For vehicles of category L with a technically permissible maximum mass and in curb condition , taking into account the driver's mass when checking in road conditions at a speed of (40 ± 5) , the steady-state deceleration must be at least 2.5 m/s^2 .

- 1.11. Not allowed:
- 1.11.1. Compressed air leaks from brake chambers;
- 1.11.2. Violations of the tightness of pipelines or connections in the hydraulic brake drive and leakage of brake fluid;
 - 1.11.3. Corrosion threatening loss of tightness or destruction;
- 1.11.4. The bends, visible abrasion and other mechanical damage to the brake pipe;
- 1.11.5. The presence of parts with cracks or permanent deformation in the brake drive;
- 1.11.6. Violation of the integrity of the brake force regulator on a vehicle equipped with this device;
- 1.11.7. Swelling of hoses under pressure and the presence of cracks and visible abrasion points on them;
- 1.11.8. Dismantling the brake force regulator provided for in the vehicle operating documentation .

- 1.12. The means of signaling and monitoring of brake systems, pressure gauges of the pneumatic and pneumohydraulic brake drive, the device for fixing the control of the parking brake system must be operational.
- 1.13. The flexible brake hoses conveying pressure of the compressed air or brake fluid wheel brake mechanisms shall be connected each to other without additional transitional elements. The location and length of flexible brake hoses must ensure the tightness of the joints, taking the maximum deformations of into account the elastic suspension elements and the angles of rotation of the vehicle wheels.
- 1.14. The location and length of the connecting hoses of the pneumatic brake drive of road trains must exclude their damage during mutual movements of the tractor and the trailer (semitrailer).
 - 1.15. Requirements for ABS (if any):
- 1.15.1. ABS should be in the bundled and serviceable condition. There should be no visible damage, unreliable fastening, detachment of the ABS elements.
- 1.15.2. The indicator light for monitoring the operating state of the ABS must be in working condition, turn on when the ABS is activated after turning on the ignition and turn off no later than when the vehicle speed reaches $10\ km/h$.
- 1.15.3. Transport means equipped with brakes, when braking a curb state (with account of mass of the driver) from the initial speed is not less than 40 km / h must move to within the corridor movement rectilinearly without skidding.
- 1.16. At the transport means with pneumatic braking systems Muffler noise expiration of compressed air from the brake system must be tightly secured and functional.

2. Requirements to the steering control

2.1. The change in effort when turning the steering wheel should be smooth over the entire range of its steering angle. The inoperability of the vehicle's power steering (if available on the vehicle) is not allowed. Banned the dismantling of the amplifier of the steering control, provided by the manufacturer in the operational documentation of the transport means.

- 2.2. Spontaneous rotation of the steering wheel with the amplifier of the steering control from a neutral position when running the engine, contrary to the wishes and expectations of the driver, is not permitted.
- 2.3. The total backlash in the steering must not exceed the limit values set by the vehicle manufacturer, and in the absence of the specified data, the following limit values:

transport means category M $_1$ and started on the basis of units of transport means of categories M $_2$, N $_1$ and N $_2$, but also craft categories L $_6$ and L $_7$ with the car layout - 10 $^\circ$;

transport means of categories M $_2$ and M $_3$ - 20 $^\circ$; transport means categories of N - 25 $^\circ$.

- 2.4. Damage and missing fastening parts of the steering column and steering housing are not allowed. Threaded connections must be tightene d and secured in the manner prescribed by the vehicle manufacturer. Backlash in joints of levers pivot pins and hinges of steering drafts is not allowed. The device for fixing the position of the steering column with an adjustable position of the steering wheel must be functional.
- 2.5. The use of parts with traces of permanent deformation, cracks and other defects in the steering mechanism and steering drive is not allowed.
- 2.6. Leakage of working fluid in the hydraulic system of the power steering is not allowed.
 - 3. Requirements for lighting and light signaling devices
- 3.1. The number, location, destination, mode of operation, the color of the lights of external lighting devices and light alarm on the vehicle shall be as specified by the manufacturer in the operational documentation of the transport means, when this light beam headlights dipped beam must meet the conditions of right-hand traffic.

The class of the light source installed in the lighting and light signaling specified devices of the vehicle correspond to that must the manufacturer in the operational documentation, taking into account the factory configuration of this vehicle or, in case of changes in the design of specified the vehicle. the documentation for in the lighting devices installed instead of those provided for by the design ...

External lighting devices must be in good working order.

3.2. Changing the color of the lights, the mode of work, places of location, destination, replacement, installation of additional and disassembly provided by the manufacturer in the operational documentation of external light devices is permitted only in accordance with section 1.3 of Annex № 4 to this Technical Regulation and table 3.1 of this annex, as well as in the performance of the requirements of Section 9 of Appendix No. 9 to this technical regulation.

On transport means, taken from production, allowed the replacement of lighting devices to use on transport vehicles of other types.

Requirements for additional optional lighting devices

Table 3.1

| Name | number | | |
|------------|----------------|-----------|-------------------------|
| external | instruments on | Color | Additional Requirements |
| light | transport | radiation | Additional Requirements |
| appliances | means | | |

Spotlight or searchlight- finder

1 White allowed the presence, if they are provided for by the design of the vehicle

Headlights distant Sveta White

Allowed for transport means of category N₃. If a on transport means there are already four headlights high beam then additional two headlights can only be used in the day time for

the submission of short-term warning lights signals.

| Name | number | | |
|------------|----------------|-----------|-------------------------|
| external | instruments on | Color | Additional Dequirements |
| light | transport | radiation | Additional Requirements |
| appliances | means | | |

Lights rear travel

2 White Allowed on transport

means, the length of which exceeds 6 m, except for vehicles of category M $_{1}$. Must be installed symmetrically to the axle of the vehicle

Rear parking lights

2 Red Allowed on transport

means of categories M $_2$, M $_3$, N $_2$, N $_3$, O $_3$ and O $_4$. Shall be installed symmetrically to the axle of the vehicle, as close as possible to the overall width of the vehicle and not less than 600 mm above the mandatory parking lights

Braking signals

1 central when it is installed is not mandatory, 2 side when the absence of the central

Red Must be directed

directly back. Must be located at least 600 mm above the mandatory brake lights .

Emergency braking signals ¹

The flashing frequency (4 ± 1) Hz must be ensured

| Name external light | number instruments on transport | Color radiation | Additional Requirements |
|---------------------------|---------------------------------|-----------------|-------------------------|
| appliances | means | radiation | |

Side direction indicators (repeaters)

Any number of Auto

Must be connected so that they work synchronously with the rest of the direction indicators.

Rear direction indicators

On 2 Avtozhel- th

Allowed to transport media categories M₂, M₃, N₂, N₃, O₂, O₃, O₄. Must be located at least 600 mm above the mandatory direction indicators.

External illumination

Any number White Allowed on transport

of categories M and N, and may be included in the standing vehicle with the engine turned off when you open the driver's door, passenger and luggage compartments. External lighting must be such that it cannot be confused with other lights in the vehicle.

| Name external | number instruments on | Color | |
|------------------|-----------------------|-----------|-------------------------|
| light | transport | radiation | Additional Requirements |
| appliances | means | | |

Rear svetootrazha- guides device

Any number, if they do not reduce effektivno-STI mandatory devices.

Red not need to have a

triangular shape for vehicles of categories M and N. Shall be triangular for category O vehicles. The outer edge of the apparent surface must not be more than 400 mm from the outer edge of the vehicle.

Side svetootrazha- guides device

Any number, if they do not reduce effektivno-STI mandatory devices.

Avtozhel- th

The outer border of the visible surface must be at least 250 mm and not higher

900 mm from the supporting surface (1500 mm if the distance of 900 mm cannot be maintained due to design features)

Notes: 'signals emergency braking represent an all simultaneously flashing pointers ro tation and signals braking.

- 3.3. No fire does not have to be blinking, for excluding lights pointers rotation lights emergency signaling lights Emergency Brake and side marker lights amber color used in conjunction with a pointer rotation.
- 3.4. No light red color does not have to be emitted in a forward direction and no white light, except for the light from the reversing lamp, shall be emitted in the backward direction. This requirement does not apply to devices lighting ustanavliva- emye for internal illumination of the transport means.
- 3.5. Indicator lights for switching on high beam headlights, front fog lights, direction indicators, front and rear

parking lights, rear fog lights must be functional.

3.6. The absence, destruction and contamination of the diffusers of external light devices and the installation of optical elements not provided for by the design of the light device (including colorless or colored optical parts and films) are not allowed.

This requirement does not apply to optical elements designed to correct the light beam of headlights in order to bring it in line with the requirements of this technical regulation. In such a case, the requirements of Section 9 of Appendix No. 9 to this technical regulation apply .

- 3.7. Damage and delamination of reflective markings is not allowed.
- 3.8. Requirements to the headlights of near and far light and fog:
- 3.8.1. Form, color and size of the lights should be the same, but the location symmetrical.
- 3.8.2. The headlights must be used sources of light, corresponding to the type of light module, specified by the manufacturer in the production of documentation on the transport means.

In case the installation source of light, not the corresponding specified in the documentation of the vehicle on the

class, or requiring installation (use) of additional elements with respect to the original design lights or requires making changes to the electrical circuitry of the transport means, verified implementation of this technical regulations concerning making changes to the design of the vehicle.

When checking should be guided by the marking in accordance with Regulation ECE UN, applicable in respect of the lights, and the information in the instruction manual for the transport means, and the certificate of conformity of the vehicle with amended in its structure changes in the requirements of security.

Not allowed use in the headlights of transport means of replaceable light sources which do not have approval mark, either with no relevant set by the manufacturer in the operating documentation class source light socket, power, color temperat ure, as well as adapters with base

a light source of one class to another when the light source is installed in the light module.

When used in lighting devices of the vehicle replaceable light sources classes 0 and H (incandescent bulbs, including halogen), they should comply with Regulation ECE UN number 37.

If class D replaceable light sources (gas-discharge lamps) are used in vehicle lighting devices, they must comply with UNECE Regulation No. 99, including the type of cap, according to the designations:

"DxR" (where x is a number from 1 to 4) in headlights with a light module without a lens;

"DxS" (where x is a number from 1 to 4) in headlamps with a light module with lens.

3.8.3. The absence or inoperability of the headlamp cleaning devices and the automatic headlight tilt angle correction device provided for the vehicle or installed when making changes to the design of the vehicle are not allowed .

Note: In compliance with the Rules of ECE UN № 48 devices farochistki completed headlamp dipped beam, having nominal luminous flux more than 2,000 a source of light with a lumens. Automatic correcting device of the angle of inclination range equipped with the adaptive system of front lighting, operating function dipped beam, independently from the used light source, the low beam headlamp with sources of light grade LED, and also lights passing light and fog light sources of any class, having a nominal luminous flux more 2000 lumens. Replaceable gas discharge light sources of categories D1R, D2R, D3R, D4R, D1S, D2S, D3S, D4S and

halogen incandescent lamps of categories H9, H9B, HIR1 have a nominal luminous flux of more than 2000 lumens.

3.8.4. The angle of inclination of the plane (Figure 3.1), containing the left (from the vehicle) of the upper cut-off beam boundary, called angle adjustment dipped beam type C, HC, DC, CR, HCR, DCR should be in the range \pm 0,2% in the vertical direction from

normative values of the angle adjustment of the operational documentation and (or) indicated on the transport vehicle. In the absence of data on the standard value of the adjustment angle on the vehicle and in the operational documentation , the headlights of types C, HC, DC, CR, HCR, DCR must be adjusted in accordance with the indicated values of the angle $\alpha\Box$ adjusting the dipped headlights in Figure 3.1, a or b and in table 3.2.

Standards angle $\alpha\Box$ adjustment specified in dependence of the height H installation of the optical center of the headlamp above the plane of the working platform.

The right section of the trail of the cut-off line of the passing beam of headlights of types C, HC, DC, CR, HCR, DCR on the screen can be inclined or broken.

- 3.8.5. The angular deviation in the horizontal direction of the point of intersection of the left horizontal and right inclined sections of the cut-off border of the light beam of types C, HC, DC, CR, HCR, DCR from the vertical plane passing through the reference axis should be no more than \pm 0.2%.
- 3.8.6. The luminous intensity of each of the headlights in the "dipped beam" mode, measured in the vertical plane passing through the reference axis, should be no more than 750 cd in the direction 34 ' \Box up from the position of the left side of the cut-off line and not less than 1600 cd in the direction 52 ' \Box down from the position of the left side of the cut-off line.

By force headlamp in the "dipped beam" is carried out after adjusting the position of the light beam passing the light in accordance with paragraph 3.8.4. At discrepancy power beam set standards, carried retransmission adjustment to within \pm 0,1% in the

vertical direction from the $\,$ nominal value of $\,$ the $\,$ angle of the $\,$ table 3.2 , and re- measurement of the force of light.

3.8.7. The maximum power of the light of all lights, which can be switched on simultaneously in the "high beam", must not exceed 300 000 cd.

Force light range type R, HR, DR is measured in the direction of the optical axis of the headlight after conducting the adjustment in accordance with the present paragraph.

Headlamps of types R, HR, DR must be adjusted so that the center of the light beam lies on the headlamp reference axis (point 7 in Figure 3.1, a an d b).

a) for the "low beam" mode with an inclined right section of the cut-off line

b) for the "low beam" mode with a broken right section of the cut-off line

1 - reference axis; 2 - horizontal (left) part of the cut-off line; 3 inclined (right) of the cut-off line; 4 part vertical plane passing through the reference axis; 5 plane parallel the plane of to the working platform on which the vehicle is installed; 6 the plane of the matte screen; α is the angle of inclination the light beam to the horizontal plane; L is the distance from the optical center of the headlamp to the screen; 7 - the position of the control point for measuring the luminous intensity in the "dipped beam" mode in the direction the line located in the same vertical plane with the reference axis at an angle 34 'above the horizontal part of the cut-off border of the dipped- beam beam; 8 position control points for measuring the light intensity in the "dipped" in the direction of line situated in a vertical plane with the optical axis of device for checking and regulating range, and directed at an angle of 52 ' below the horizontal portion of the cut-off boundary of the light beam passing light; H is the distance from the projection of optical center of the headlamp to the plane the working platform.

Figure 3.1. The circuit arrangement of the vehicle at the post test light headlights, form the cut-off boundaries and accommodation control points on the screen:

Geometric figures position the cut-off beam passing light of headlights on the matte screen in the dependence from the height of the headlights

Table 3.2

| Distance from the optical center of the | Angle adjustment low beam headlights α | | |
|--|--|---------|--|
| headlamp to the plane of the platform H mm | ang. min | percent | |
| Up to 600 | 34 | 1.00 | |
| From 600 to 700 | 45 | 1.30 | |
| From 700 to 800 | 52 | 1.50 | |
| From 800 to 900 | 60 | 1.76 | |
| From 900 to 1000 | 69 | 2.00 | |
| From 1000 to 1200 | 75 | 2.20 | |
| From 1200 to 1500 | 100 | 2.90 | |

3.8.8. Fog lights must be adjusted in accordance with the instructions of the manufacturer of the transport means in the production of documentation , or if they are not available or are not available, then the cutoff should lie below the line H in accordance with Table 3.3. However, in all cases, the angle adjustment $\alpha\Box$ light fog lights type B does not have to be less than the angle adjusting headlamp dipped beam.

Geometric indicators of the location of the cut-off line of the fog lamp beam on a matte screen, depending on the height of the headlights

Table 3.3

| Headlight typ | Distance from | the | Light adjustment angle |
|---------------|-------------------|--------|------------------------|
| Headingin typ | optical center of | of the | fog lamp α |

| е | headlamp to the p the working platfor H, mm | lane of rm | ang. min. | Percent |
|----|---|------------|------------|--------------------|
| IN | - | u | p to 52 | up to 1.5 |
| F3 | No more than 800 | fron | n 34 to 85 | from 1.0 to 2.5 |
| F3 | Over 800 | from | 52 to 104 | from 1.5 to 3.0 |

- 3.9. Lights back stroke should be included when you turn on the transfer of a backing and work in constant mode.
 - 3.10. Requirements for direction indicators and hazard warning lights.
- 3.10.1. Direction indicators should be flashing. The flashing frequency should be within 1.5 \pm 0.5 Hz (90 \pm 30 flashes per minute).
- 3.10.2. The hazard signaling shall ensure that all direction indicators are flashed simultaneously at the frequency specified in paragraph 3.10.1.
- 3.10.3. All the direction indicators located on the same side of the transport means, should be switched and off with one and the same device and work synchronously.
 - 3.11. Requirements for brake signals.
- 3.11.1. Braking signals (main and additional) should be switched on when the controls of the working or emergency braking systems are affected and provide radiation in a constant mode.
- 3.11.2. It is not permissible to combine the central auxiliary brake light with other lamps.
 - 3.12. Requirements for rear fog lamps.
- 3.12.1. The inclusion of rear fog lamps should be provided only when the main beam or dipped beam headlamps or fog lamps are on and must provide radiation in a constant mode.
- 3.12.2. The rear fog lamps can remain on as long as the side lamps are not off.
- 3.12.3. Rear fog lamps shall not be activated at the impact on the pedal is operating the brake system.
- 3.13. Parking lights located on one side of the vehicle must be switched on independently of any other lights and also regardless of the position of the ignition switch.
 - 3.14. The side lights and edge lights must operate continuously .

- 3.15. Daytime running lights, if any are installed, should be included automatically when switch the ignition is in a position which does exclude the possibility of the engine, but they can be switched off at finding lever automatic box transmission in position "Parking", or give n in the action of the parking brake system or to the beginning of the transport means after each start of movement of the the hand. Daytime running lights are switched off automatically when you turn on lights, in fact including, front fog lights, for the exception of those cases when the flashing lights used to supply short-term warning light signals.
- 3.16. Lamp of illumination of the rear state registration the sign must be included together with the parking lights and work in constant mode.

4. Requirements to ensure visibility

- 4.1. The vehicle must be fitted with glass provided by the manufacturer.
- 4.2. Not permitted the presence of additional items or surfaces that limit visibility from the driver's seat (except for mirrors Rear kind of parts for windshield wipers, exterior and deposited or embedded in the glass of radio antennas,

heating elements for defrosting and dehumidifying the windshield).

4.3. The light transmittance of the windshield glass and glass, through which is provided a front visibility for the driver should be not less than 70%.

This requirement does not apply to the rear windows of vehicles of category $M_{\,\scriptscriptstyle 1}$, provided that the vehicle is equipped with exterior mirrors that meet the requirements of this annex.

In the upper part of the windshield, it is allowed to have a light-shielding strip made in the mass of the glass, or to mount a light-shielding strip of a transparent colored film: on vehicles of categories M_1 , M_2 and N_1 , as well as L_6 and L_7 (with a closed body) - width of not more than 140 mm, and on the transport means of categories M_3 , N_2 and N_3 -width not exceeding the minimum distance between the upper edge of the windshield glass and the upper boundary of its wiper cleaning zone. If tinted glass is applied, the width of the shading strip shall be as specified by the vehicle manufacturer. The light transmission of the light protection strip is not standardized.

- 4.4. Painted in weight and toned wind glass does not have to distort the correct perception of white, yellow, red, green and blue colors.
- 4.5. It is not allowed to use glass, the coating of which creates a mirror effect.
- 4.6. On the side and rear windows of vehicles of category M₃ class III allowed the presence of curtains.
- 4.7. The presence of cracks on the windshields of vehicles in the area of cleaning half of the glass with a wiper located on the driver's side is not allowed.
- 4.8. Screen wipers and washers must be functional. It is not allowed to dismantle the wipers and washers provided by the manufacturer in the operational documentation of the vehicle.
- 4.9. Washers should be able to supply fluid to the glass cleaning areas .
 - 4.10. The vehicle must be equipped with sun visors.
- 4.11. The vehicle must be equipped with rear-view mirrors in accordance with table 4.1.
- 4.12. Transportation means, having at least four wheels, a body which wholly or partially covers the driver, must be equipped with:
- 4.12.1. Alternatively, the interior rearview mirror and the class I outer rearview mirror of class II or class III, which are installed on a transport vehicle with a side of the driver;
- 4.12.2. Either two class II or class III exterior mirrors, one on each side of the vehicle.

Requirements for the presence of rear- view mirrors on transport means

Table 4.1.

| Category transp ort- Foot agent | irror characteris tic | Mirror cl ass | Number and location of mirrors on transport mea ns | The prese nce of a mir ror |
|------------------------------------|--------------------------|------------------|--|----------------------------|
|------------------------------------|--------------------------|------------------|--|----------------------------|

 L_1 - L_5

Outside L

the main

One Left Required One Right Allowed.

With maximum constructive

| Category transpo rt- Foot agent | irror characterist ic | Mirror cl ass | The number and locatio n of mirrors on the transpo rt means | The presen ce of a mirr or |
|------------------------------------|--------------------------|------------------|---|----------------------------|
|------------------------------------|--------------------------|------------------|---|----------------------------|

the main

(or II) One on the right

Mandatory for

insufficient review through internal

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mirror, in the rest cases allowed

| | Outdoor wide-angle | IV | One on the right one left | Allowed |
|-------------------------|-------------------------|------|-----------------------------------|----------|
| | Outdoor side view | V * | One on the right one left | Allowed |
| | Outdoor forward view | VI * | One in front | Allowed |
| M 2, M 3 | Outdoor main | II | One to the right, one to the left | Required |
| | Internal | I | One inside | Allowed |
| | Outdoor wide-angle | IV | One on the right one left | Allowed |
| | Outdoor side view | V * | One on the right one left | Allowed |
| | Outdoor forward view | VI * | One in front | Allowed |
| N ₂ (no more | Outdoor main | II | One to the right, one to the left | Required |
| 7.5 tons) | Internal | I | One inside | Allowed |

| Category tr | - I | Mirr ass | or cl | The number and locatio n of mirrors on the transpo rt means | The presen ce of a mirr or |
|---------------------|-------------------------|-------------|-------|---|--|
| | Outdoor wide-angle | IV | | on the right one left | Allowed |
| | Outdoor side view | V * | rig | e on the ht one left | Allowed |
| | Outdoor forward view | VI * | (| One in front | Allowed |
| N ₂ (St. | Outdoor main | II | rig | e to the ght, one to e left | Required |
| 7.5 tons), N_3 | Outdoor wide angle | IV | One o | on the right | Required |
| | Outdoor side view | V * | One o | on the right | Required |
| | Outdoor forward view | VI * | (| One in front | Mandatory for transport funds from in front of him location organs management ** |
| | Internal | I | | One inside | Allowed |
| | Outdoor side view | V * | C | One left | Allowed |

Notes:

* Mirror must be located on height not less 2 m from the level of the supporting surface. The mirror should not be installed on vehicles whose cab is 1 ocated at such a height that this requirement cannot be complied with.

** By "front location bodies Control" refers to an arrangement in which more than half the length of the engine is for the most remote front point base windshield glass, and the hub of the steering wheel - in front quarter length of the transport means.

Classes of rear- view mirrors:

L - main external rear-

view mirrors of small size, flat or spherical, intended fo r installation on vehicles of category L, which do not have a body of a partially or completely enclosed type;

I - interior rear- view mirrors, flat or spherical;

II - main external rear-view mirrors of large size, spherical;

III - main external rear-

view mirrors of small size, flat or spherical (a smaller r adius of curvature is allowed than for class II mirrors);

IV - wide-angle external rear-view mirrors, spherical;

V - spherical external side-view mirrors; VI - spherical front- view mirrors .

4.13. Rear-

view mirrors must be fixed so that they can not be displaced arbitrarily while the vehicle is in motion.

5. Requirements for tires and wheels

- 5.1. Vehicles must be fitted with tires according to the operational documentation manufacturers of transport vehicles.
 - 5.2. Each tire fitted to a vehicle must:

- **5.2.1.** In terms of dimensions, comply with the recommendations of the operational documentation of the vehicle and the dimension of the wheel on which it is mounted .
- 5.2.2. By category rate specified in the applied on the tire labeling meet or exceed maximum constructive speed transport means ac cording to Table 5.1 (in Regulation UNECE N_2 30 and N_2 54).

Identify the category of tires in the marking speed and the corresponding maximum permitted speed of the transport means

Table 5.1

| Speed category designation | Maximum allowable speed, km/h | |
|----------------------------|-------------------------------|--|
| F | 80 | |
| G | 90 | |
| J | 100 | |
| K | 110 | |
| L | 120 | |
| M | 130 | |
| N | 140 | |
| P | 150 | |
| Q | 160 | |
| R | 170 | |
| S | 180 | |
| T | 190 | |
| U | 200 | |
| Н | 210 | |
| V | 240 | |
| W | 270 | |
| Y | 300 | |

5.2.3. With regard to the actual maximum mass per tire, do not exceed the value corresponding to the load capacity index indicated in the marking on the tire in accordance with table 5.2 (according to UNECE Regulations No. 30 or No. 54).

esignations of the tire bearing capacity indices and the corresponding values of the mass per tire

Table 5.2

| Carrier index | Maximum | Carrier index | Maximum |
|---------------|-----------------|---------------|-----------------|
| ability | permissible | ability | permissible |
| tires | weight, | tires | weight, |
| | attributable to | | attributable to |
| | tire, kg | | tire, kg |
| 0 | 45 | 101 | 825 |
| one | 46.2 | 102 | 850 |
| 2 | 47.5 | 103 | 875 |
| 3 | 48.7 | 104 | 900 |
| four | fifty | 105 | 925 |
| five | 51.5 | 106 | 950 |
| 6 | 53 | 107 | 975 |
| 7 | 54.5 | 108 | 1000 |
| eight | 56 | 109 | 1030 |
| nine | 58 | 110 | 1060 |
| 10 | 60 | 111 | 1090 |
| eleven | 61.5 | 112 | 1120 |
| 12 | 63 | 113 | 1150 |
| 13 | 65 | 114 | 1180 |
| fourteen | 67 | 115 | 1215 |
| fifteen | 69 | 116 | 1250 |
| sixteen | 71 | 117 | 1285 |
| 17 | 73 | 118 | 1320 |
| eighteen | 75 | 119 | 1360 |
| nineteen | 77.5 | 120 | 1400 |
| twenty | 80 | 121 | 1450 |
| 21 | 82.5 | 122 | 1500 |
| 22 | 85 | 123 | 1550 |
| 23 | 87.5 | 124 | 1600 |
| 24 | 90 | 125 | 1650 |
| 25 | 92.5 | 126 | 1700 |
| 26 | 95 | 127 | 1750 |
| 27 | 97.5 | 128 | 1800 |
| 28 | 100 | 129 | 1850 |
| 29 | 103 | 130 | 1900 |
| thirty | 106 | 131 | 1950 |
| 31 | 109 | 132 | 2000 |
| 32 | 112 | 133 | 2060 |

| Carrier index | Maximum | Carrier index | Maximum |
|---------------|-----------------|---------------|-----------------|
| ability | permissible | ability | permissible |
| tires | weight, | tires | weight, |
| | attributable to | | attributable to |
| | tire, kg | | tire, kg |
| 33 | 115 | 134 | 2120 |
| 34 | 118 | 135 | 2180 |
| 35 | 121 | 136 | 2240 |
| 36 | 125 | 137 | 2300 |
| 37 | 128 | 138 | 2360 |
| 38 | 132 | 139 | 2430 |
| 39 | 136 | 140 | 2500 |
| 40 | 140 | 141 | 2575 |
| 41 | 145 | 142 | 2650 |
| 42 | 150 | 143 | 2725 |
| 43 | 155 | 144 | 2800 |
| 44 | 160 | 145 | 2900 |
| 45 | 165 | 146 | 3000 |
| 46 | 170 | 147 | 3075 |
| 47 | 175 | 148 | 3150 |
| 48 | 180 | 149 | 3250 |
| 49 | 185 | 150 | 3350 |
| fifty | 190 | 151 | 3450 |
| 51 | 195 | 152 | 3550 |
| 52 | 200 | 153 | 3650 |
| 53 | 206 | 154 | 3750 |
| 54 | 212 | 155 | 3875 |
| 55 | 218 | 156 | 4000 |
| 56 | 224 | 157 | 4125 |
| 57 | 230 | 158 | 4250 |
| 58 | 236 | 159 | 4375 |
| 59 | 243 | 160 | 4500 |
| 60 | 250 | 161 | 4625 |
| 61 | 257 | 162 | 4750 |
| 62 | 265 | 163 | 4875 |
| 63 | 272 | 164 | 5000 |
| 64 | 280 | 165 | 5150 |
| 65 | 290 | 166 | 5300 |
| 66 | 300 | 167 | 5450 |
| 67 | 307 | 168 | 5600 |
| | | | 22.5 |

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| 68 | 315 | 169 | 5800 |
|----|-----|-----|------|
| 69 | 325 | 170 | 6000 |
| 70 | 335 | 171 | 6150 |

| Carrier index | Maximum | Carrier index | Maximum |
|---------------|-----------------|---------------|-----------------|
| ability | permissible | ability | permissible |
| tires | weight, | tires | weight, |
| | attributable to | | attributable to |
| | tire, kg | | tire, kg |
| 71 | 345 | 172 | 6300 |
| 72 | 355 | 173 | 6500 |
| 73 | 365 | 174 | 6700 |
| 74 | 375 | 175 | 6900 |
| 75 | 387 | 176 | 7100 |
| 76 | 400 | 177 | 7300 |
| 77 | 412 | 178 | 7500 |
| 78 | 425 | 179 | 7750 |
| 79 | 437 | 180 | 8000 |
| 80 | 450 | 181 | 8250 |
| 81 | 462 | 182 | 8500 |
| 82 | 475 | 183 | 8750 |
| 83 | 487 | 184 | 9000 |
| 84 | 500 | 185 | 9250 |
| 85 | 515 | 186 | 9500 |
| 86 | 530 | 187 | 9750 |
| 87 | 545 | 188 | 10000 |
| 88 | 560 | 189 | 10300 |
| 89 | 580 | 190 | 10600 |
| 90 | 600 | 191 | 10900 |
| 91 | 615 | 192 | 11200 |
| 92 | 630 | 193 | 11500 |
| 93 | 650 | 194 | 11800 |
| 94 | 670 | 195 | 12150 |
| 95 | 690 | 196 | 12500 |
| 96 | 710 | 197 | 12850 |
| 97 | 730 | 198 | 13200 |
| 98 | 750 | 199 | 13600 |
| 99 | 775 | 200 | 14000 |
| 100 | 800 | | |

Note:

For speeds above 210 $\,$ km $\,$ / h rate maximum mass attributable should correspond R egulation N_2 30 UNECE.

- 5.3. Dual wheel should be set in such a manner that the valve opening in the discs are aligned to provide the possibility of measuring the pressure of air and , pump tires.
 - 5.4. Spiked tires, if used, must be fitted to all wheels of the vehicle.
- 5.5. Prohibited the exploitation of transport means of complete tires with spikes snow in summer (June, July, August).
- It prohibited the exploitation of transport means, not manned winter tires to satisfy the requirements of paragraph 5.6.3 of this annex in the winter (December, January, February). Winter tires are installed on all wheels of the vehicle.

Dates prohibition of operation may be changed in the direction of increasing the regional bodies of the state control of states - members of the Customs Union.

- 5.6. The tire is considered to be unsuitable for operation at:
- 5.6.1. The appearance of one wear indicator (a protrusion along the bottom of the tread groove, designed to visually determine the degree of its wear, the depth of which corresponds to the minimum permissible depth of the tire tread pattern);
- 5.6.2. Remaining depth of the tire tread pattern (in the absence of wear indicators) no more than:

for vehicles of categories L - 0.8 mm;

for vehicles of categories N $_2$, N $_3$, O $_3$, O $_4$ - 1.0 mm; for vehicles of categories M $_1$, N $_1$, O $_1$, O $_2$ - 1.6 mm; for vehicles of categories M $_2$, M $_3$ - 2.0 mm.

5.6.3. Residual depth pattern tread winter tires designed for operation in icy or snowy road surface, marked with the sign in the form of mountain peaks with three peaks and snowflakes inside it (figure 5.1) and also marked signs "M + S», «M & S», « M S " (in the absence of wear indicators) during operation on the specified surface - no more than 4.0 mm;

Figure 5.1. The marking to be applied on the winter tire

- 5.6.4. Replacement of spools with plugs, plugs and other devices;
- 5.6.5. Available local damage tire (breakdowns, the through and non-through cuts, etc.), which expose the cord, as well as bundles in a frame, a belt bead (distention), the local detachment of the tread, the sidewall and the sealing layer.
 - 5.7. Not allowed:
- 5.7.1. The absence of at least one bolt or nut for fastening discs and wheel rims;
- 5.7.2. The presence of cracks on the disks and rims of the wheels, traces of their elimination by welding;
- 5.7.3. Visible violations of the shape and size of the mounting holes in the wheel rims;
- 5.7.4. Installation on one axis of the transport means of tires of different dimensions, the structure (radial, diagonal, chamber, tubeless) with different categories of velocity indices carrier abilities drawings tread winter and non-winter, new and recovered, new and with recessed pattern of the tread.

Note:

The requirements of paragraph 5.7.4. Shall not apply in the case of a temporary installation of a spare tire on a vehicle .

- 5.8. Application of retreaded tires
- 5.8.1. The use of tires retreaded by applying a new tread is not allowed on the front axle of vehicles.
- 5.8.2. In cases not provided for by paragraph 5.8.1, on the transport means may be used tires recovered in accordance with the following requirements of Regulation ECE UN number 108 and No. 109 for the production of retreaded tires:

- 5.8.2.1. Repeated restoration of tires with previously already recovers protector of Regulation ECE UN numb er 108 not permitted.
- 5.8.2.2. Retreading tires over seven years old is not allowed under UNECE Regulation No. 108.
 - 5.8.2.3. Retread must be indicated in the marking of a retreaded tire.
- 5.8.2.4. On the bus with the restored protector besides marking must be clearly affixed international sign of official approval, consisting of a circle, in which the specified letter "E" followed by the distinguishing number of the country which granted approval under UNECE Regulation No. 108 or No. 109 and the approval number .
- 5.8.2.5. The labeling of tires with retreaded tread is not permitted to specify the categories of speed and load index, a high, than to restore.
- 5.8.3. On the rear axle of vehicles category M, the center axis vehicles category M a middle and rear axles transport means category N, on all axes of transport means category O permitted the use of tires with repaired local damage, and in the case of tires having a marked «Regroovable» , also with a pattern tread depth by cutting in accordance with the documentation of the manufacturer of tires.

6. Requirements for coupling devices

- fifth wheel coupling 6.1. The of semitrailer tractors must close automatically after hitching. Manual and automatic lock fifth wheel device should prevent spontaneous disengagement of the tractor and the semitrailer. Deformations, ruptures, cracks and other visible damage to the coupling kingpin, kingpin seat, base plate, draw hook, ball of the towing hitch, cracks, destruction, including local ones, the absence of coupling parts and their fastenings are not allowed.
- 6.2. Single-axle trailers (except for dismantling) and trailers not equipped with a service braking system must be equipped with safety devices (chains, cables) that must be functional. Length of safety chains

(ropes) must prevent contact of the drawbar eyelet with the road surface and at the same time provide trailer control in case of breakage (breakdown) of the towing hitch.

- 6.3. Trailer (except for uniaxial and dissolution) must be equipped with a device supporting the coupling loop drawbar in position facilitates coupling and uncoupling of the towing vehicle.
- 6.4. Deformations of the hitching eye or drawbar of the trailer, grossly violating their position relative to the longitudinal central plane of symmetry of the trailer, breaks, cracks and other visible damage to the hitching eye or drawbar of the trailer are not allowed.
- 6.5. It is not allowed to loosen the bolted connections and fix the fastening of the drawbar to the trailer, the hitching eye to the drawbar, the king pin and the nuts of the jet rods.

Nut axle drawbar should be wrapped up failure and zashplintovat.

Nut mounting coupling loop of the drawbar must be wrapped up before the failure, and fixed the castle washer and nut.

Retaining washer kingpin must fix wrapped up failure nut.

- 6.6. Longitudinal backlash is not allowed in backlash-free towing couplers with a traction fork for a tractor coupled to a trailer .
- 6.7. Traction device of passenger cars must provide gapless coupling. Spontaneous uncoupling is not allowed.
 - 6.8. Requirements for the dimensional characteristics the coupling devices:
- 6.8.1. The diameter of the coupling pin coupling devices of semi-trailers technically permissible maximum weight to 40 m should be in the range from the nominal, equal to 50.9 mm, up to the maximum allowable, constituting 48.3 mm, and the largest inner diameter of the working surfaces of the jaws of the coupling device from 50,8 mm to 55 mm respectively.
- 6.8.2. The diameter of the coupling pin coupling devices with wedge lock semitrailers with technically permissible maximum weight to 55 m should be in the range from the nominal, equal to 50 mm, up to the maximum allowable, constituting 49 mm, a semi with a technically permissible maximum weight of more than 55 m between nominal, equal to 89.1 mm, up to the maximum allowable, equal to 86.6 mm.
- 6.8.3. The diameter of the throat of the traction hook trailer coupling system "hook- loop" tractor, measured in the longitudinal plane, should be in the minimum, constituting 48.0 mm, up to the maximum allowable, equal to 53.0

of

mm, and the smallest diameter of the section bar coupling loop - 43.9 mm, up to 36 mm, respectively.

- 6.8.4. The diameter of the pin size 40 mm gapless tyagovo-couplings with traction fork truck must be within the nominal, constituting 40 mm to the minimum allowable, equal to 36.2 mm, and the diameter of pin size of 50 mm in the range from the nominal, constituting 50 mm to the minimum allowable equal to 47.2 mm. Diameter replaceable insert size 40 mm drawbar trailer should be in the range of nominal 40 mm, up to the maximum allowable, equal to 41.6 mm, and a removable insert size 50 mm in the range from the nominal, constituting 50 mm, up to the maximum allowable, equal 51.6 mm.
- 6.8.5. The diameter of the ball of the towing device of passenger cars must be in the range from the nominal, equal to 50.0 mm, to the minimum allowable, equal to 49.6 mm.
 - 7. Requirements for restraining systems of passive safety
- 7.1. Space for seating in transport facilities, construction of which provides for a safety belt, they should be equipped in accordance with the requirements of normative legal acts in force at the time of issuance of the transport means in the circulation.

However, the provisions of paragraph first of this paragraph does not cover the transport means of categories M 2 and M 3, which are equipped with belts of security, if used for the transportation of passengers in long-distance communication.

Not allowed the dismantling of belts security, provided the vehicle structure, or to bring them into a state in which it is impossible to use them for other purposes.

- 7.2. Installed on the transport means belts safety not need to have the following defects:
 - 7.2.1. A tear on the strap, visible to the naked eye;
- 7.2.2. The lock does not fix the "tongue" of the strap or does not throw it out after pressing the button of the locking device;
- 7.2.3. The strap is not drawn or are not drawn into the retractor device (coil);
- 7.2.4. When abrupt pulling the webbing belt with an emergency locking retractor is not ensured termination (blocking) of its extraction from the retractor device (coil).

- 7.3. Installation of airbags that are not provided by the manufacturer in the vehicle operating documentation is not allowed.
- 7.4. Dismantling of the head restraints provided for by the vehicle design is not allowed .
 - 8. Requirements for rear and side protective devices
- 8.1. Dismantling or changing the location of the rear and side protective devices provided by the manufacturer is not permitted.
 - 9. Requirements for the engine and its systems
 - 9.1. Requirements in respect of emission
- 9.1.1. The content of the oxide of carbon (CO) in the exhaust gases of vehicles with petrol and gas engines mode idle stroke at the minimum and increased frequencies of rotation of the crank shaft of the engine not be greater than the values established by the manufacturer for the purposes

of assessing compliance type transport means to its release into circulation, a nd in the absence of such data, it should not exceed the values indicated in Table 9.1.

Table 9.1.

| Categories and equipment of vehicles | Rotation frequency he crank shaft of the | CO, volumetric share, percent |
|--------------------------------------|--|-------------------------------|
| | engine | |

M and N, are not equipped with systems neutralization of exhaust gases

minimum 3.5

increased 2.0

M and N, environmental grade 2 and below equipped with systems of neutralization of exhaust gases

minimum 0.5

increased 0.3

| Categories and equipment of vehicles | Rotation frequency he crank shaft of the engine | CO, volumetric share, percent |
|--------------------------------------|---|-------------------------------|
|--------------------------------------|---|-------------------------------|

M and N, environmental class 3 and higher systems equipped neutralization of exhaust gases

minimum 0.3

increased 0.2

L, are not equipped with systems neutralization of exhaust gases

minimum 4.5

- 9.1.2. Requirements paragraph 9.1.1 must be performed at a frequency of rotation of the crank shaft of the engine, established by the manufacturer of the vehicle. In the absence of manufacturer information about the magnitude of the increased frequency of rotation check is performed at the frequency of rotation of the crank shaft of the engine is not less than 2000 min ⁻¹ (except vehicle categories L) and 1500 min ⁻¹ (y vehicles categories L).
- 9.1.3. In the conditions established in paragraph 9.1.2, the value of the air excess factor for a vehicle environmental class 3 and higher at elevated frequency of rotation of the crank shaft of the engine must be in the limits set by the manufacturer for the purposes of assessing compliance type transport means before its release in the circulation. In the absence of such data, verification is not carried out.
- 9.2. Smokiness of the exhaust gases of vehicles with diesel engines in free acceleration shall not exceed the values the mode of coefficient of absorption of light, indicated in the documents certifying the conformity transport means Regulation UNECE UN № 24-03, either the values indicated on the sign of the official approval deposited on the motor the vehicle manufacturer vehicle or , or established by operational documentation. In the of the absence above mentioned information, the opacity of the exhaust gases do not should exceed the following values:
 - 9.2.1. For engines of environmental class 3 and

below: 2.5 m⁻¹ for naturally aspirated engines;

- 3.0 m⁻¹ for engines with supercharging.
- 9.2.2. for engines of ecological class 4 and higher 1.5 m^{-1} .
- 9.3. When checking compliance with the requirements of paragraphs 9.1 and 9.2, the mileage of the vehicle must be at least 3000 km. If the mileage is lower, the check is not carried out.
- 9.4. Absence and visible damage to the elements of the system control and management engine and system of reducing the emission (electronic unit controls the engine, an oxygen sensor, the catalytic converter system is ventilating the crankcase of the engine, the system recirculating exhaust gases, the system capture vapors of fuel and others) is not allowed.

- 9.5. Indications placed on the combination of devices signaling means controlling the engine and its systems must comply with is working properly as the engine and its systems. On vehicles equipped with on-board diagnostics system, this system must be COMPLETE and buildable, but also have missing codes of malfunctions of systems to ensure the security of the transport means, the stored system -board diagnostics.
- 9.6. The power supply and exhaust systems of vehicles must be complete and sealed. Leakage and dropping fuel of are not allowed. Sucking the engine power system in the air and (or) the leakage of exhaust gas bypassing the exhaust system allowed. Systems trapping vapor fuel, recirculating exhaust gases and crankc ase ventilation provided by the manufacturer in the production of documentation transport means, should have are complete and tight.
- 9.7. Fuel tank shut-off devices and fuel shut-off devices must be functional. The fuel tank caps must be fixed in the closed position; damage to the sealing elements of the caps is not allowed. The absence, damage or loosening of fastening parts of the power supply system elements is not allowed.
- 9.8. System supply of compressed gas transport assets, its location and the installation must meet the following requirements:
- 9.8.1. On each gas cylinder should be available passport, designed by the manufacturer.
- 9.8.2. Each gas cylinder installed in a vehicle must be clearly marked in a permanently indelible manner with at least the following information: serial number;

the designation "LPG" or "CNG".

9.8.3. Gas

balloon equipment to transport means in specially authorized organizations u ndergoes periodic tests with periodicity coinciding with the periodicity of examination of cylinders, cylinders and installed by the manufacturer specified in the certificate for the container (s). According to the results of periodic tests specially authorized organizations draw up a certificate of carrying out periodic tests of LPG equipment installed on the transport vehicle.

9.8.4. Making changes in the structure and completeness of the set of gas-cylinder equipment during operation is not allowed. Changes made during the repair of LPG equipment (replacement of a reducer or cylinder) are drawn up by specially authorized organizations

with a certificate of compliance of LPG equipment with safety requirements .

9.8.5. The uniform forms of documents mentioned in clauses 9.8.1, 9.8.3 and 9.8.4 above for the member states of the Customs Union are established by the decision of the Commission of the Customs Union. These documents are presented when carrying out checks of technical condition of transport funds.

9.8.6. Not allowed:

9.8.6.1. The use of gas cylinders with the expired period of their periodical examination.

9.8.6.2. Violations of fastening components of gas equipment.

9.8.6.3. Gas leaks from the elements of gas cylinder equipment and in the places of their connections.

9.9. The level of noise release exhaust gases transport means, measured at a distance of 0.5 m from the exhaust outlet at 45 °+ 10 ° to the axis vehicle on the is stationary with the engine at idle course at maintaining a constant target rate of rotation of the crank shaft of the engine and a mode slowing its rotation from the target frequency to the idle stroke, no must exceed more than to 5 frequency of the dBA values set by the vehicle manufacturer, and in the absence of these data - values listed in table 9.2.

The target speed of the engine crankshaft is: 75% of the frequency of rotation, the respective maximum power engine, for transport means with a frequency of rotation

the crankshaft of the engine, corresponding to the maximum power, not higher than 5000 min ⁻¹;

3750 min ⁻¹ for the transport means with the frequency of rotation of the crank shaft of the engine, corresponding to maximum power, over 5000 min ⁻¹, but less than 7500 min ⁻¹;

50% of the frequency of rotation of the crank shaft of the engine for vehicles with a frequency of rotation of the crankshaft of the engine 7500 min ⁻¹ and above.

If the internal combustion engine can not achieve specified rotational speed of the crankshaft, the target frequency is received to 5% below the maximum possible for the fixed transport means.

For the transport means, in which the engine is an internal combustion not can operate when the transport means is fixedly, check is performed.

Limiting noise levels release engine transport means

Table 9.2.

 $M_1, N_1, L 96$

 M_2 , N_2 98

 $M_3, N_3 100$

9.10. Not allowed the introduction of changes in the structure of the system of release of the fulfilled gases.

10. Requirements for other structural elements

10.1. Indications sensors onboard (built-in) means of control and diagnostics on transport vehicles, equipped with such means must conform to good state of the vehicle. At the same time, on- board control and diagnostics means must be complete and intact, their visible damage is not allowed.

- 10.2. Locks of the body or cab doors, locks of the sides of the cargo platform, locks of the necks of the tanks, adjustment mechanisms and fixing devices for the driver's and passengers' seats, the device for heating and blowing the windshield, the anti-theft device provided by the vehicle manufacturer must be operational.
- 10.3. Locks the side hinged doors of the transport means must be fixed in two positions of locking: intermediate and final, if it is provided by the manufacturer of the transport means in the operational documentation.
- 10.4. The vehicle must be equipped with an audible warning device in good working order. Audible signal device should at a reduction in the action body it controls emit a continuous and monotonous sound, an acoustic spectrum which does not have to undergo significant changes.
- 10.5. Dismantling and inoperability of speed measuring devices (speedometers), as well as technical means

of monitoring the observance

by drivers of traffic, work and rest regimes (if their installation is provided for by this technical regulation) are not allowed.

- 10.6. Attenuation tightening screw joints and the destruction of parts suspension and gimbal transfer transport means is not permitted.
- 10.7. Pressure on the control output regulator level floor of the transport means with pneumatic suspension, manufactured after January 1, 1997, shall be as specified by the manufacturer in the maintenance documentation.
- 10.8. Deformations due to damage or change the design of the front and rear bumpers transport means of categories M and N, at which the radius of curvature of the protruding outward portions of the bumper (except for the parts made of non-metallic elastic materials) of less than 5 mm, is not permitted.
- 10.9. Visible destruction, short circuits and traces of breakdown of the insulation of electrical wires are not allowed.
- 10.10. Spare wheel, rechargeable battery, the seat must be securely fastened to the ground, provided by the manufacturer in the operational documentation of the transport means.
- 10.11. On transport vehicles, equipped with mechanisms of longitudinal adjustment of the position cushion and the angle of inclination of the backrest

seat or a mechanism for moving the driver's seat (for boarding and disembarking passengers), these mechanisms must be operational. After the termination of regulation or use, these mechanisms should be automatically blocked.

- 10.12. The spare wheel carrier must be functional.
- 10.13. Dismantling of the semitrailer support device is not allowed. Locks for the transport position of the supports must be functional.
- 10.14. Dropping oils and working fluids of the box transmission, onboard reducers rear axle, the clutch, the rechargeable battery systems of cooling and conditioning air and further mounted on of hydraulic devices are not permitted.
- 10.15. The weakening of the shock absorbers due to the absence, damage or through corrosion of their fastening parts is not allowed.

- 10.16. Cracks and destruction of the suspension bracket cheeks, as well as racks or frames of the boards and devices for securing loads are not allowed.
- 10.17. Absence provided by the manufacturer in the operational documentation of the transport means of the elements of the system of protection from spraying out of the wheels is not allowed.
- 10.18. It is forbidden to misuse the equipment of transport means with special sound and light signal devices, the application of color on tsvetograficheskim schemes established for the transport means of operational services.
 - 10.19. In relation to the transport of funds category L is not allowed:
- 10.19.1. Inoperability or absence of the motorcycle steering damper provided by the manufacturer in the operational documentation of the vehicle;
- 10.19.2. Absence provided by the manufacturer in the operational documentation of the transport means of the footrests or handles for passengers on the saddle;
- 10.19.3. The absence of safety arcs provided by the manufacturer in the operational documentation of the vehicle or bringing them to a state in which it is impossible to use them for their intended purpose;
- 10.19.4. The presence of backlash in the joints of the frame motorcycle with the frame side of the trailer.

11. Requirements for completeness of vehicles

- 11.1. Transportation means categories L 5, L 6, L 7, M and N are equipped with a warning triangle, formed in accordance with UNECE Regulation № 27.
- 11.2. Transportation means categories L 5, L 6, L 7, M and N are equipped with first aid kit (automotive), and transport of category M 3 classes II and III three first-aid kits (vehicle). These kits are equipped with suitable for use articles of medical appointments and other means. Arbitrary variation complete kits or u se of products of medical appointments and other agents to damaged markings and expired period of use is not allowed.
- 11.3. Vehicles of categories M_3 , N_2 , N_3 , equipped with not less than two underride stops, corresponding to the diameter of the wheels of the transport means.

- 11.4. Regardless of the availability of automatic systems extinguishing transport means category M₁ equipped with not less than one extinguisher capacity of at least 1 liter, the categories M₂, M₃ and N are transport means of equipped with no less than one extinguisher capacity of at least 2 liters. The fire extinguisher is located in an easily accessible place. In the transport means of categories M₂ and M₃ extinguisher placed nearby from working places driver. In the case of a double-deck vehicle, there must be an additional fire extinguisher on the top floor. Fire extinguishers be sealed, and to them must be specified period of end use, which at the time of verification should not be completed.
- 11.5. Fire extinguishers and first aid kits first aid (automobile) in transport vehicles, equipped with devices for their attachment, securely fastened to the ground, provided the design of the transport means.
- 11.6. Transportation means of categories M, N and O, maximum constructive speed which does not exceed $40\ km$ / h, equipped with

identification sign of a low-speed transport means made in accordance with the Rules of the ECE UN number 69.

11.7. Articulated transport means M categories, transport means category

N $_3$, except tractor, towing trailers, and transport means category O, the length of which exceeds 8 m, equipped with identification sign transport means a large length and carrying capacity, made in accordance with ECE Regulation UN N_2 70.

11.8. Vehicles of categories M₂ and M₃ using liquefied petroleum gas (LPG) or compressed natural gas (CNG) as fuel are marked with the identification marks provided for by UNECE Regulations Nos. 67 and 110, in the form of a green diamond with a white border colors. In the middle of the sign there are letters: "LPG" or "KNG" (Figure 11.1). The horizontal diagonal of the rhombus is 110-150 mm, the vertical diagonal of the rhombus is 80-110 mm, the width of the border is 4-6 mm, the height of the letters the letters is more than 25 mm, the width of is more 4 mm. Identification marks are located at the front and rear, as well as on the starboard side of the vehicle outside the doors.

Figure 11.1. Model of an identification plate for vehicles of categories M 2 and M 3 using liquefied petroleum gas (LPG) or compressed natural gas (CNG) as fuel

12. to ensure the possibility of identifying the requirements of transport means

- 12.1. Identification number, applied to
 the transport means must comply with specified in
 the registration documents to this transport means.
- 12.2. State registration plates must be installed on the vehicle in the places provided for by its design, in compliance with the requirements of subparagraph 4.4 of Appendix No. 7 to this technical regulation.
- 12.3. For fastening state registration plates, bolts or screws with heads having the color of the mark field or light galvanized coatings must be used.

Also permitted mounting state registration signs with the help of frames.

Bolts, screws, frames should not obstruct the letters, numbers, edging, other inscriptions, as well as the image of the state flag of the State - a member of the Customs Union, available on the state registration plate.

It is not allowed to cover the state registration plate with organic glass or other materials.

Additional holes are not allowed on the state registration plate for attaching it to the vehicle or for other purposes. In the event of a mismatch in the coordinates of the state registration plate bore holes with the coordinates of the vehicle bore holes, transitional structural elements must be provided to ensure the fulfillment of paragraphs 4.2 - 4.4 of Appendix No. 7 to this technical regulation.

12.4. When making changes in the structure of the transport means, requiring registration under the present technical regulations of the certificate of conformity of the transport means with amended to design changes the requirements of security, it should be executed such certificate.

13. Additional requirements to transport means of categories M 2 and M 3

- 13.1. Emergency switch doors and signal requirements stop, emergency exits and apparatus align them in the action devices internal lighting compartment, the drive control doors and signaling their work must be functional.
- 13.2. Emergency exits must be marked and equipped with tablets according to the rules of their use.
- 13.3. Emergency exit actuation parts (handles, shackles, handles, etc.) must be clearly marked as intended for use in an emergency .
- 13.4. It is not allowed to equip the cabin with additional structural elements or create other obstacles that limit free access to emergency exits.
- 13.5. The handrails must be secured in the places provided for by the design of the vehicle.
- 13.6. Pull-through corrosion or destruction of the floor of the passenger compartment is not allowed.
- 13.7. Installation of additional seats for passengers that are not provided for by the design of the vehicle is not allowed.
- 13.8. The front and rear of the bus for transporting children must be equipped with identification signs "Carriage of children" in accordance with the Traffic Regulations of the Member States of the Customs Union .
- 13.9. On the outer sides of the body, as well as in front and behind along the axis of symmetry of the bus for transporting children, contrasting inscriptions "CHILDREN" must be applied in straight capital letters with a height of at least 25 cm and a thickness of at least 1/10 of its height. The markings shall be in the Russian language and can be duplicated on the state language of the States members of the Customs Union.

The presence of other designations or inscriptions close to the indicated inscriptions (at a distance of at least ½ of their height) is not allowed.

13.10. The body of the bus for transporting children must be painted yellow .

14. Additional requirements for special transport means operative services

- 14.1. Equipment transport means operational services with special light and (or) sound signaling devices, the application of color on special tsvetograficheskim schemes must comply with the requirements of Annex N = 6 to the present technical regulations and without the appropriate authorization is not allowed.
- 14.2. On the outer surfaces of vehicles of operational services, inscriptions and drawings of advertising content are not allowed.
- 14.3. Special light and (or) sound signaling devices must be functional.

15. Additional requirements for specialized transport m eans

- 15.1. Looseness of fastening of special equipment, tightening of bolted joints, cracks, damage to fastening parts, side members, platform or tank, ruptures and cracks in welds are not allowed.
- 15.2. Cables for the forced closing of the side walls of the dump truck platform, in winches and lifting devices of a specialized vehicle, in control systems for the rotation of semitrailer bogies; lashing ropes, chains and ropes with hooks attached to them must be functional. The presence of dangling strands and wires in the cables is not allowed. Cracks and damage to the chain links are not allowed.
- 15.3. The locking system of the pivoting device of a semi-trailer farm vehicle equipped with a cable pivoting device of the undercarriage must be operable.
- 15.4. Drips and dropping of the additional fuel system in a part of the special equipment avtobitumovozov, concrete mixers and other specialized transport means equipped with such a system is not permitted.
- 15.5. Leaks and losses of solution through leaks in the slide gates of the working vessel or connections of the hydraulic mixing device and the hopper are not allowed.

- 15.6. The absence or inoperability of mechanical locks for the transport (closed) position of the platform of dump vehicles, with the exception of dump trucks with rear unloading, manufactured before January 1, 1996, is not allowed.
- 15.7. The absence or inoperability of devices (hooks, brackets, etc.) for fastening the awning in the working position above the platform of dump trucks for the transportation of bulk cargo and a sealing device to eliminate gaps in the joints of the sides and the floor of the platform are not allowed.
- 15.8. Elements of the design of technological equipment, projecting with the motion of an overall width of the transport means more than to 0.4 m on the left and (or) the right from the outer edge of the marker lights, or protruding beyond the overall length of the transport means more than 1.0 m, front (or) at the back must be painted in stripes.
 - 16. Additional requirements for special transport facilities for the municipal sector and the content of the road
- 16.1. Elements of the design of technological equipment, projecting with the motion of an overall width of the transport means more than to 0.4 m on the left and (or) the right from the outer edge of the marker lights, or protruding beyond the overall length of the transport means more than 1.0 m, front (or) at the back must be painted in stripes.

Color color bands - alternating red and white (yellow) strip of the same width from 30 to 100 mm, the angle of inclination of 45 $^{\circ}$ \pm 5 outwards and downwards.

16.2. Machines designed to perform cleaning work on the roads, must be equipped with special light signal (flashing light) yellow or orange color.

The number and location of flashing beacons must ensure their visibility at an angle 360 ° in a horizontal plane passing through the center of the source radiation beam.

16.3. Structural elements of technological equipment protruding, when the machine is moving beyond the overall width by more than 0.4 m to the left and (or) right of the outer edge of the parking lights, or protruding beyond the overall length of the vehicle by more than 1.0 m in front and (or) behind, should be marked

retroreflectors of class IA according to UNECE Regulation No. 3, or clearance lamps with an illuminating surface directed forward and backward, or retroreflective marking according to UNECE Regulation No. 104.

- 16.4. Asphalt distributors must have a readable warning sign that reads "CAUTION! HOT BITUMEN! "The inscription is made in Russian and can be duplicated in the state language of the State a member of the Customs Union.
- 16.5. Self-propelled wheeled vehicles moving on public roads at a speed of 20 km/h or more and having a width of more than 2.55 m, as well as vehicles intended for work on the carriageway of highways, must be equipped with special light signals (flashing beacons) of yellow or orange.

The number and location of flashing beacons must ensure their visibility at an angle 360 $^{\circ}$ in a horizontal plane passing through the center of the source radiation beam.

- 17. Additional requirements for vehicles for the transport of goods with the use of a trailer-dissolution
- 17.1. Damage or inoperability of winches, clamps and other load securing mechanisms is not allowed.
- 17.2. Slack rope cross connectors lesovoznyh pritsepa- dissolution of more than 100 mm is not allowed unless otherwise stated value by the manufacturer of the transport means in the production of documentation.
- 17.3. Violations of fastening and fixing the transport position of the drawbar of the dismantling trailer from displacement and turning when placing the dismantling trailer on the tractor are not allowed.
- 17.4. Capacity stands conic violations mounting racks conic cross connectors, chains and cable racks conic not allowed.

18. Additional requirements for tow trucks

- 18.1. Destruction of eyelets for additional lashing with ropes (ropes) transported cars and machines are not allowed.
- 18.2. Supporting devices and fasteners for fastening supports in the transport position must be functional.

18.3. Destruction of the safety board and stops for fixing the transported vehicles on the platform of the tow truck is not allowed.

19. Additional requirements to the transport means with lifting devices

- 19.1. Devices (locks) for retention in the transport position of the wheels of container equipment on the floor of the platform in a body of specialized transport facilities should be operational.
- 19.2. Panelists for the dimension of the length of the base of the transport means portion lift (front and rear of the boom, a cradle and al.) Must be provided with lighting devices and the signal color in accordance with paragraph 2.3 of Annex N_{\odot} 6 to this technical regulations and rules road traffic state member Customs union.

20. Additional requirements for vehicles for the transport of dangerous goods

20.1. At around the perimeter of the tank to tank trucks and trailers (semi) - tanks for transport means for transport of removable tanks and transport vehicles - batteries should be installed side or rear protective device.

Rear protective device is not needed on vehicles with a tank-dump truck with discharge through a rear wall for the transport of powdery or granular goods at the proviso perform functions protection housing tank back valve housing.

- 20.2. The distance between the rear wall of the tank and the rear of the protective device (from the extreme rear point of the tank wall or from the protruding reinforcement in contact with the cargo being transported) must be at least 100 mm.
- 20.3. Installation of additional fuel tanks on a vehicle for the transport of dangerous goods, which are not provided by the manufacturer of the vehicle, is prohibited.

20.4. Application in the cabin of the driver fuel heating appliances (in fact including, operating on gaseous fuels)

and their placement in the cargo compartments of the transport means is prohibited.

- 20.5. As awning, allowed it is use an tearresistant, waterproof and hardly flammable material. Tent should be taut, overlapping the side of the body from all sides not less than 200 mm and retained locking devices.
- 20.6. Trailers for the transport of dangerous goods must have a service braking system with an automatic braking function .
- 20.7. Vehicles must be equipped with portable fire extinguishers with a quantity and capacity of at least the following values:
- 20.7.1. Vehicles with a technically permissible maximum mass of more than 7.5 tons at least one fire extinguisher with a capacity of at least 12 kg or two fire extinguishers with a capacity of at least 6 kg each;
- 20.7.2. Transportation means technically permissible maximum weight of 3.5 m to 7.5 m not less than one extinguisher minimum total capacity of 8 kg or two extinguishers, of which one capacitance not less than 6 kg;
- 20.7.3. Vehicles with a technically permissible maximum mass up to 3.5 tons inclusive with one or more fire extinguishers with a total capacity of at least 4 kg;
- **20.7.4.** Transport means for transportation of limited amount of dangerous goods in packages one extinguisher capacity not less than 2 kg, is suitable to extinguish a fire in the engine or cab of the transport means;
- **20.7.5.** Tankers for transportation and filling of oil not less than two extinguishers capacity of not less than 6 kg each, one of which must be placed on tanker trailers (polupritsepetank);
- 20.7.6. When the presence on a transport vehicle system of automatic fire extinguishing of the engine is allowed the use of the portable fire extinguisher is not adapted for extinguishing a fire in the engine.
- 20.8. A vehicle for the transport of dangerous goods is completed with:
- 20.8.1. Not less than two chocks for each transport means (unit trains), the dimensions of which correspond to the diameter of the wheels;
 - 20.8.2. Two emergency stop signs;
 - 20.8.3. By means of neutralization of transported dangerous goods;
 - 20.8.4. A set of hand tools for emergency vehicle repair;
- 20.8.5. Two self- powered lanterns with flashing or continuous orange lights;

- 20.8.6. A shovel and a supply of sand for extinguishing a fire;
- 20.8.7. Bright colored clothing for each crew member;
- 20.8.8. Pocket lights for each crew member;
- 20.8.9. In accordance with the prescriptions of the emergency card and the conditions for transportation by means of neutralizing the transported dangerous goods, personal protection of crew members and personnel accompanying the cargo;
- 20.8.10. Special means to ensure the security, referred to in the emergency card.
- 20.9. The electrical circuits on vehicles for the transport of dangerous goods (except chains battery a system of cold starting and stopping the engine; Rechargeable battery alternator; generator -
- block fusible fuses or circuit breakers; Rechargeable Battery the starter motor; Rechargeable battery the housing system incorporating wear resistant brake system ; Rechargeable battery electric mechanism for lift axle bogie balance) should be protected by fuses industrial manufacture or circuit breakers.
- 20.10. The vehicle must be protected elements from accidental actuation, as well as marking the switch to disconnect the rechargeable battery from the electrical equipment of the transport means.
 - 20.11. Nominal voltage electrical not be more than 24 V.
- 20.12. The resistance of the grounding device together with the ground loop must be no more than 100 ohms.
- 20.13. Bodies of vehicles, tank trucks, trailers and semi trailers tanks permanently engaged in the transport of dangerous goods must be painted in the prescribed for these goods

identification colors and are provided with appropriate inscriptions in accordance with Appendix No. 6 to this technical regulation.

- 20.14. Not allowed:
- 20.14.1. The use for the transport of dangerous goods transport agents with more than one trailer or semi-trailer in its composition;
- 20.14.2. Completing the vehicle with fire extinguishers, the extinguishing compositions of which emit toxic gases;
- 20.14.3. Destruction of panels and planks body slit and breaks in the closed and covered tarpaulin bodies;
- 20.14.4. Heating during operation, disruption of fastening and dismantling of protective elements on a vehicle for the transport of flammable and explosive substances and products;

- 20.14.5. Changing the place for the outlet of the exhaust pipe with a silencer provided for by the design of the vehicle;
 - 20.14.6. Removing the removable spark arrestor from the exhaust pipe;
- 20.14.7. Changing the location of the fuel tank, reducing its distance from the battery, engine, electrical wires or exhaust pipe with a silencer;
- 20.14.8. Removing the protective impermeable partition between the fuel tank and the storage battery;
- 20.14.9. Changing the placement of the fuel tank and other components of the power supply system, which creates the possibility of fuel getting not on the ground, but on the transported cargo, parts of electrical equipment or the engine exhaust system;
- 20.14.10. Dismantling the protective casing under the bottom and from the sides of the fuel tank;
- 20.14.11. Dismantling or loosening the attachment of the protective screen between the tank or the cargo and the units located behind the rear wall of the cabin that heat up during operation (engine, transmission, retarder);
- 20.14.12. Installation of wooden parts on the vehicle without fire-resistant impregnation and installation of elements of the inner body skin without such impregnation or from materials that cause sparks;
- 20.14.13. Dismantling or inoperative state of door locks and awnings on the side bodies;
- 20.14.14. Dismantling, inoperative condition, changing the location or limiting the visibility of a special light

signal device with yellow (orange) emission on the roof or above the roof of the vehicle;

- 20.14.15. Dismantling or inoperable switch to disconnect the rechargeable battery from the electrical equipment of the transport means, as well as its drive direct or remote from the cab driver and the outside of the transport means;
- 20.14.16. Introduction of rechargeable batteries, located outside the engine compartment space of the engine, of the ventilated compartment with insulating inner walls;
- 20.14.17. Application of incandescent lamps with screw caps on a vehicle;

- 20.14.18. The use of electrical connectors between a towing vehicle and a trailer (semitrailer), not provided with protection against accidental disconnections;
- 20.14.19. Replacement on the transport vehicle apparatuses electrical in dust-proof and explosion-proof execution on devices in the insecure execution;
- 20.14.20. Replacement devices Electrical in explosionproof performance in the compartment of technological equipment and in its remote control at the equipment in less secure implementation;
- 20.14.21. Laying electrical wiring outside the metal shell, external electrical wiring inside the body or in violation of measures to isolate electrical equipment from contact with technological equipment;
- 20.14.22. Heating of electrical wires, violation of their insulation, fastening, damage or removal of protection parts;
- 20.14.23. Dismantling of protective nets and grids around the lamp bulb inside the body of the transport means or the laying of external wirings inside the body;
- 20.14.24. Violation of conductivity connected to the chassis (vessel frame) grounding chain, providing at the unloaded transport vehicle contact with the ground conductor (metallic chain) of length not less than 200 mm, and the ground cable with pin-clamp on the end of burial in the ground or connected to the grounding circuit;
- 20.14.25. Dismantling or inoperative condition of pipeline protection e lements and auxiliary equipment installed

in the upper part of the tank, from damage in the event of a tanker tipping over;

20.14.26. Removal or damage to brackets for attaching hazard information tables located at the front (bumper) and rear of the vehicle.

21. Additional requirements to transport facilities - tanks

- 21.1. The locking device of the loading hatch of the tank should be fixed in the closed and open positions.
 - 21.2. Not allowed:

- 21.2.1. Damage caps loading hatches, their constipation and details of the seal;
- 21.2.2. Lack of grounding devices on tanks for transporting food liquids;
- 21.2.3. Leaks in the connections of pipelines and fittings, leaks through the seals of pumps, valves, gate valves, gaskets of threaded connections, plugs and end seals, leaks and losses of transported liquids (materials) through leaks in the connections of the tank and hoses.
- 22. Additional requirements for transport means tanks for transportation and refueling of petroleum products
 - 22.1. To ensure electrical safety during operation, all units of the special equipment of the tank must be grounded.
 - 22.2. The resistance of the electrical circuit formed by the electrically conductive coating between the adapter and the sleeve lock should be no more than 1 Ohm. On tanks equipped with antistatic sleeves, the resistance of the specified circuit should not exceed that specified in the operational documentation. The resistance of individual sections of the circuit should be no more than 10 ohms.
 - 22.3. The resistance of each of the units of electrical circuits' frame chassis pin "," tank-frame chassis, "" chassis frame fork contacts wire grounding " not be greater than 10 ohms.
 - 22.4. The fittings of the rubber-fabric hoses must be connected to each other by a soldered metal jumper, which ensures the closure of the electrical circuit.
 - 22.5. The tank should be equipped with a sign with a warning inscription: "When filling (emptying) fuel, the tanker must be grounded."
 - 22.6. The inscription "Flammable" on the sides and back of the vessel must be legible. The inscriptions are made in Russian and can be duplicated in the state language of the State a member of the Customs Union.
 - 22.7. On the tank must be placed two signs "Danger" sign "Limit Speed" flashing lights of red color or sign emergency stop, felted, container for sand mass not less than 25 kg.
 - 22.8. The tank truck must be equipped with an orange flashing light.
 - 22.9. Not allowed:

- 22.9.1. Dismantling or inoperative condition of the clamps for connecting the grounding wire, cables and other elements of protection of the tanker from static electricity, provided by the vehicle manufacturer;
- 22.9.2. Disorders circuit conductivity to bolt grounding formed by a metallic and electrically conductive non-metallic hardware, in fact including conduits tank;
- 22.9.3. Removal or destruction of the protective sheath of electrical wiring in contact with or located in the area of the tank and the compartment with technological equipment;
- 22.9.4. Dismantling or destruction of protection elements of the points of connection and contacts of electrical wires;
- 22.9.5. Absence of a dispensing sleeves plugs to prevent leakage of fuel.
- 23. Additional requirements for transport means tanks for transportation and filling of liquefied hydrocarbon gases
 - 23.1. On both sides of the vessel from the seam of the front bottom to seam back plate should be coated strip distinctive red color in width 200 mm downwardly from the longitudinal axis of the vessel.
 - 23.2. The inscription "Flammable" on the back bottom of the vessel and the inscription black color "Propane −□flammable" on the distinctive stripes must be legible. The inscriptions are made in Russian and can be duplicated in the state language of the State a member of the Customs Union.
 - 23.3. The outer surface of the vessel should be painted with silvery enamel.
 - 23.4. Not allowed:
 - 23.4.1. Absence of plugs on fittings during transportation and storage of gas;
 - 23.4.2. The absence or inoperative condition of protective casings that provide the possibility of sealing the shut-off valves during the transportation and storage of gas in tank trucks.

24. Additional requirements to transport facilities - vans

- 24.1. Not allowed:
- 24.1.1. Spontaneous opening of doors after unlocking van transport means, mounted on a horizontal platform;
- 24.1.2. Disorders operability mechanisms fixing doors, ramps, stairways door in the open and closed (transport) positions;
- 24.1.3. Absence or damage to devices (stops, belts, hooks for hanging carcasses, removable or folding partitions, etc.) to prevent the cargo from shifting during transportation;
- 24.1.4. Removing or damage removable and stationary baffles of the body, in fact those, equipped with rings for binding animals, and also devices their fixation in the transport position;
- 24.1.5. Violations of performance hatches or mechanisms closing the hatches in the roof of the van.
- 25. Additional requirements for transport means vans with places for transporting people

25.1. Not allowed:

- 25.1.1. Dismantling or destruction of walls, separating the compartment for the passengers from the cargo compartment of the van;
- 25.1.2. Changes in the location and damage to seats or their anchorages in the passenger compartment;
- 25.1.3. The absence or non-functional chime open doors or connection compartment for passengers with cabin trans port means;
 - 25.1.4. Difficulty opening the door compartment for passengers.
 - 26. Additional requirements for vehicles for the transport of food
 - 26.1. Not allowed:
- 26.1.1. Dismantling, destruction or inoperable state of the security elements from contamination dispensing hoses, vent pipes, equipment tank (pump, control devices, means controls) and also the pollution seats joining of pipelines for pumping the product;
- 26.1.2. Destruction insulation caps and necks hatches insulated tanks with heat insulating coating.

27. Additional requirements for trolleybuses

- 27.1. The tension springs of the pantograph must be adjusted so that the pressing force of the pantograph at a height of the overhead wire suspension of 5.8 m is 120-140 N.
 - 27.2. The difference in the length of the rods of the susceptor not must exceed
- 100 mm.
 - 27.3. The strength of the current leakage has not should exceed 3 mA.
 - 27.4. Not allowed:
- 27.4.1. Defects of pantographs causing the pantograph heads to come off the contact wires;
- 27.4.2. The presence of cracks, causing it to bend and through burnthrough on the bars;
- 27.4.3. Jamming in the hinges of the pantographs when moving the rods in the horizontal or vertical planes;
 - 27.4.4. Malfunction of the heads of the pantographs;
- 27.4.5. Fault devices protecting against falling head susceptor at failure with the rod, if it is envisaged structure;
- 27.4.6. Malfunction or improper regulation system limitations lifting and lowering the boom;
 - 27.4.7. Defects of pantographs, rings and insulators;
- 27.4.8. Damage or absence of an electrically insulating walkway on the roof;
 - 27.4.9. Installation of non-standard contact inserts;
 - 27.4.10. Fault shtangouloviteley when their presence;
- 27.4.11. Disruption of the operation of traction motors, auxiliary electrical machines, ballasts and protective equip ment, auxiliary circuits, battery;
 - 27.4.12. Lack of sealing of restrictive protection devices;
- 27.4.13. Unavailability of measuring and control instruments electrical equipment;
 - 04/27/14. Stuck start pedal.

APPENDIX No. 9
to the technical
regulations of
the Customs Union
"On the safety of
wheeled vehicles funds"
(TR CU 018/2011)

Requirements for individual changes made to the design of the vehicle

Changes in the structure of the transport means

1. Change the type of the body, associated with the installation on the chassis of the transport means of the standard dump and airborne bodies, tanks, kuzovovvans (in fact including containers), awning,

passed the conformity assessment as part of this type of vehicle, as well as the installation of the specified types of bodies instead of each other.

Technical requirements,

which must be performed when making changes to the design of the vehicle

1.1. Maximum weight and its distribution on the axes and sides, as well as a change of coordinates the center of mass does not have to exceed the limits set by the manufacturer of the transport means.

- 1.2. Overall width not should exceed 2.55 m (for isothermal body transport means is allowed a maximum width 2.6 m) and a height of 4.0 m.
- 1.3. Body (tank) should be securely fastened to the frame of the transport means of fastening elements, the same for the design, number and material of the elements fastening body or tank of the transport means, made in serial production, the same or greater technically permissible maximum weight.
- 1.4. The location and installation of rear external lighting devices and lighting devices for the rear state registration plate must comply with UNECE Regulations No. 48.

Changes in the structure of the transport means

2. Installation on commercial vehicles more fuel tanks, in respect of which was carried out assessment of conformity in the composition of the type of transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

2.1. Additional fuel tanks must be installed in the places provided by the vehicle manufacturer and secured with fasteners that are similar in design, number and used materials of the vehicle fasteners.

3. Installation instead of side and dump bodies and tanks

semitrailer coupling device, in respect of which it was carried out assessment of conformity in the composition of the type of transport means

- 3.1. In the type of transport means should be included modifications equipped saddle coupling devic es. When making changes in the design of the vehicle, these devices are used.
- 3.2. Seat device must be fixed fastening elements, the same for the design, number and the applicable materials fastening elements of the transport means.
- 3.3. Location tractor unit relative to the rear axle must match its arrangement to produced semitrailer tractors the same type and providing relative rotation of the tractor and the semitrailer around the axis of the pivot in the horizontal plane is not less than at 90 degrees in each direction.
- 3.4. Location location and installation of the rear exterior lighting appliances and lighting back the state registration plate of the transport means must comply with Regulation ECE UN number 48.
- 3.5. On the tractor, detachable connections must be installed to connect the electrical equipment and braking systems of the semitrailer.

Changes in the structure of the transport means

4. Installing on freight cars lifting boards, winches and hydraulic lifts for self - loading and unloading goods, in respect of which was carried out assessment of conformity in the composition of the type of transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

4.1. Maximum weight and its distribution on the axes and sides, as well as a change of coordinates the center of mass does not have to exceed the limits set by the manufacturer of the transport means.

- 4.2. Overall width not should exceed $2.55~\mathrm{m}$ (for isothermal body transport means is allowed a maximum width 2.6 m) and a height of 4.0 m.
- 4.3. Tail lifts, winches, and hydraulic lifters must be securely attached with standard hardware.
- 4.4. The boom of the hydraulic lift must be securely fixed against displacement when the vehicle is moving .
- 4.5. The tail lift must not have traumatic projections (the requirements of UNECE Regulation No. 61 apply).
- 4.6. The winch must not protrude beyond the front plane of the front bumper. It is allowed to protrude the winch if it is covered with a protective element when the vehicle is moving .
- 4.7. The location and installation of rear external lighting devices and lighting devices for the rear state registration plate must comply with UNECE Regulations No. 48.

- 5. Installation on cars (in fact those in the cabin passenger car) and trailers, special non-removable equipment in respect of which was carried out assessment of conformity in
- 5.1. Maximum weight and its distribution on the axes and sides, as well as a change of coordinates the center of mass does not have to exceed the limits set by the manufacturer of the transport means.
- 5.2. Overall width of the transport means do not should exceed 2.55 m (for isothermal body transport means

Changes in the structure of the transport means

part of the type of transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

a maximum width of 2.6 m is allowed) and a height of 4.0 m.

- 5.3. Non removable equipment should be securely held in place with standard fasteners .
- 5.4. Special equipment installed in the cabin of the car, bus, not should have traumatic projections (must comply with Regulation ECE UN number 21).
- 5.5. In a passenger car, special equipment should not be installed in the area where the controls are located and should not obstruct the rear window.
- 5.6. The location and installation of rear external lighting devices and lighting devices for the rear state registration plate must comply with UNECE Regulation No. 48.

- 6. Installation of bunk bunkers instead of boards on flatbed trucks and flatbed two-axle trailers
- 6.1. The overall width of the vehicle should not exceed 2.55 m, and the height of 4.0 m.
 - 6.2. The bunks must be securely fastened with standard fasteners.

- 7. Installation on the chassis of freight cars vans, in respect of which was carried out assessment of conformity in the composition of the type of transport means for the placement of workshops, transportation mail, industrial and food products
- 7.1. Maximum weight and its distribution on the axes and sides, as well as a change of coordinates the center of mass does not have to exceed the limits set by the manufacturer of the transport means.
- 7.2. The overall width of the box body must be no more than the width of the side body of the vehicle, but no more than 2.55 m (for insulated vehicle bodies, a maximum width of 2.6 m is allowed). The overall height of the van is not

Changes in the structure of the transport means

(with the exception of kuzovov- vans specially designed for the transport of persons)

Technical requirements,

which must be performed when making changes to the design of the vehicle

must be more than 4.0 m from the road surface .

- 7.3. Body-Box must securely fastened to the frame of the car fixing elements similar by design, number and material fastening elements onboard the body of the car, made in terms of serial production, the same or greater technically permissible maximum weight.
- 7.4. The door of the van should be located at the rear or to the right in the direction of the vehicle. The swinging side door of the van should open from left to right in the direction of the vehicle. The side door steps must not protrude beyond the side clearance of the vehicle.

- 7.5. When using the handle side of the door swing type (rotatable in the plane of the door) the open end of the handle must be directed "backwards" along the course of movement of the car and is bent by the direction
- "To the door"; itself handle should be mounted in such a manner that it is rotated in a plane parallel to the door and turned outwards. In the closed position, the end of the handle should be in a recess or in a guard. When using the handles of the side doors, pivoting outward in any direction, not parallel the door plane, the open end of the handle should be directed

"Back" in the direction of the vehicle, or down. In the closed position, the end of the handle should be in a recess or in a guard . The van side door handle can protrude no more than 40 mm above the door surface .

Changes in the structure of the transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

- 7.6. The van door hinges can protrude no more than 30 mm above the door surface .
- 7.7. Workshop equipment must be securely fastened. On the outer surface of the wagon not should be traumatic projections (applicable requirements of the ECE Regulations N_{2} 61).
- 7.8. The driver's cab should be equipped on both sides with standard rearview mirrors.

- 8. Installation of equipment for supplying the engine with gaseous fuel (compressed natural gas CNG, liquefied petroleum gas
- CIS) and dismantling of such equipment
- 8.1. On the transport means can be installed only gas powered equipment, the type of which has been certified according to ECE Regulation №115 for the corresponding family of transport means.

Installation of LPG equipment should not lead to a decrease in the ecological class of the vehicle.

- 8.2. Placing and installing the equipment for feeding the engine with gaseous fuel must be carried out in accordance with the Rules of ECE UN №№ 36, 52, 66 and 115.
- 8.3. Lateral static stability of vehicles of categories M 2 and M 3 must be ensured in accordance with the requirements of subparagraph 4.2 of Appendix No. 3 to this technical regulation in the case of installing gas cylinders on the roof. In this case, an increase in the overall height of the vehicle is allowed.
- 8.4. Manufacturer of work on introduction of changes in the structure of the transport means must submit:
 - certified by the manufacturer, or

Changes in the structure of the transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

by the supplier or the seller of the copies of the conformity certificates

- for individual items of equipment according to UNECE Regulations Nos. 67 or 110;
- for the type of gas cylinder system as a whole for the respective family of vehicles according to UNECE Regulation No. 115;
- a declaration of the manufacturer of work on making changes to the design of the vehicle on the performance of work in accordance with

the established rules, checking the tightness and pressure testing of the power system, on conducting periodic tests of equipment for supplying the engine with gaseous fuel and on the compliance with the maximum permissible content of carbon monoxide (CO) in the spent vehicle gases to the requirements of Appendix No. 8 to this technical regulation.

Note:

In relation to transport means environmental classes 0, 1 and 2 apply UNECE Regulation number 115, including Appendix 1, in respect of transport means other environmental classes are applied rules of the ECE UN number 115, including supplements 1 - 4.

- 9. Replacement (installation) Devices lighting and light- signaling, or making changes in their structure, including the reclassification of the sources of light in the headlights
- 9.1. On lighting and light- signaling, intended to be installed on a vehicle shall be issued a message on the official approval of the Rules ECE UN, used in relation to the devices of lighting and light- signaling and sources of light in them, or the conclusion of an accredited testing laboratory for compliance specified

Changes in the structure of the transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

Rules ECE UN.

9.2. If necessary, replacement envisaged structure of the transport means of the source light on the source light of the same class with different photometric characteristics of any particular class, such replacement can be performed only in conjunction with the light module, corresponding to the replaced source light or lights in the assembly.

Installation of non - standard light modules is not allowed if the illuminating surface of the diffuser in the zone of the light beam of the non-standard light module has optical elements participating in the formation of the light beam .

In the case of changing the class source of light is necessary to conclude accredited testing laboratory on line Regulation UNECE UN, applicable in respect of the respective types of washers and light sources photometric lights with replaced sources of light and lighting modules.

- 9.3. In case of installation of optical elements are intended for correcting the beam range in order to bring it in compliance with the requirements of the Technical Regulations of the confirmation matching is performed by checking the photometric parameters headlamp according to the requirements of Regulation UNECE UN, applicable in respect of the data range.
- 9.4. When installing on a vehicle lighting and light signaling devices not provided for by its design, as well as changing the design of headlights (changing the class of the light source in them)

Changes in the structure of the transport means

Technical requirements,

which must be performed when making changes to the design of the vehicle

must meet (taking into account the category of vehicle) the requirements of UNECE Regulations Nos. 48, 53, 74, paragraph 1 of the annex No. 3 to this technical regulation.

- 10. Conversion of transportation funds to provide opportunities management persons with limited physical abilities
- 10.1. The requirements of paragraph 15 of Appendix No. 3 to this technical regulation are met .

APPENDIX No. 10

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PERECHENL requirements for the types of vehicle components

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1. Engines with positive ignition

2c Emission level:

For environmental class 0:

UNECE Regulation No. 83-02 (emission level A) for gasoline and gas engines for vehicles of categories M $_1$, M $_2$, N $_1$,

N₂(in accordance with the scope of UNECE Regulation No. 8 3);

CO - 85 g / kWh, HC - 5 g / kWh, NO $_x$ - 17 g / kWh (9-mode test cycle) for gasoline engines of vehicles of categories M $_1$ with a maximum mass over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$;

For environmental class 1:

UNECE Regulation No. 83-02 (emission levels B and D) for gasoline and gas engines for vehicles of categories M_1 , M_2 , N_1 ,

N₂(in accordance with the scope of UNECE Regulation No. 8 3);

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Terms ECE UN number 49-02 (level emission A) for gas engines of transportation means of categories M₁ maximum weight of over 3.5 m, M₂, M₃, N₂, N₃;

CO - 72 g / kWh, HC - 4 g / kWh, NO $_x$ - 14 g / kWh (9-mode test cycle) for gasoline engines of vehicles of categories M $_1$ with $_a$ maximum mass over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$;

For environmental class 2: UNECE Regulation No. 83-04 (emission levels B and D) for gasoline and gas engines for vehicles of categories M₁, M₂, N₁, N₂(in accordance with the s cope of UNECE Regulation No. 83);

Terms ECE UN number 49-02 (level emissions B) for g as engines of transportation means of categories M₁ maximum wei ght of over 3.5 m, M₂, M₃, N₂, N₃;

CO - 55 g / kWh, HC - 2.4 g / kWh, NO $_x$ - 10 g / kWh (ESC test cycle according to UNECE Regulation No. 49-04) for gasoline engines of vehicles of categories M $_1$ maximum weight over 3.5 t, M $_2$, M $_3$, N $_2$, N $_3$;

For environmental class 3: UNECE Regulation No. 83-05 (emission level A) for gasoline and gas engines for vehicles of categories M₁, M₂, N₁, N₂(in accordance with the s cope of UNECE Regulation No. 83);

Terms ECE UN number
4904 (level emission A) for ga
s engines for vehicles of
categories M₁a maximum
mass of over 3.5 m, M₂,
M₃, N₂, N₃;
CO - 20 g / kWh, HC 1.1 g / kWh, NO_x - 7 g /
kWh (test

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ESC cycle according to UNECE Regulation No. 49-04) for gasoline engines of vehicles of categories M₁

with a maximum mass over 3.5 t, M₂, M₃, N₂, N₃;

For environmental class 4: UNECE Regulation No. 83-05 (emission level B) for gasoline and gas engines for vehicles of categories M₁, M₂, N₁, N₂(in accordance with the s cope of UNECE Regulation No. 83);

UNECE Regulations № 49-05 (B1 emissions, as well as the level of requirements in relation to the

onboard diagnostics, durability and production suitability control NOx -

"C") for gas engines for vehicles of categories M₁a maximum mass of over 3.5 m, M₂, M₃, N₂, N₃;

CO - 4 g / kWh, HC - 0,55 g / kWh, NO $_x$ - 2 g / kWh (trial cycle ESC by UNECE Regulation N_2 49-05) for gasoline engine vehicles of categories M_1 maximum weight over 3.5 t, M_2 , M_3 , N_2 , N_3 ;

For environmental class 5: UNECE Regulations № 83-06 (emissions of Table 1) for the motors with forced igniti on for transport means of categories M₁, M₂, N₁, N₂(in accordance with the scope of Regulation UNECE UN number 83-06);

UNECE Regulation No. 49-05 (B2, C emission levels, as well as the level of requirements for on - board diagnostics, durability and serviceability, NOx monitoring - "G", "K") for gas engines for vehicles of c ategories M₁ with a maximum mass

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over 3.5 t, M_2 , M_3 , N_2 , N_3 .

2. Compression ignition engines

Reserve reliable engine start temperature should be: no device facilitating start-up not higher than -20 ° C; with a start- up aid not higher than -30 °C. The maximum engine noise level should be no more than: for vehicles with a total weight of up to 3.5 tons inclusive - 101 dB A; for vehicles with GVW over 3.5 tons -92 dB A

2c Emission level:

For environmental class 0:

Terms ECE UN number 24-03 and rules ECE UN № 49-01 for diesel engines for vehicles of categories M₁a maximum mass of over 3.5 m, M₂, M₃, N₂, N₃;

For environmental class 1:

UNECE Regulation No. 24-03 and UNECE Regulation No. 83-02 (emission level C) for diesel engines for vehicles of categories M_1 , M_2 , N_1 , N_2 (in accordance with the scope of UNECE Regulation No. 83);

UNECE Regulation No. 24-03 and UNECE Regulation No. 49-02 (emission level A) for diesel engines of vehicles of categories M₁ with a maximum mass over 3.5 t, M₂, M₃, N₂, N₃;

For environmental class 2:

UNECE Regulation No. 24-03 and UNECE Regulation No. 83-04 (emission level C) for diesel engines for vehicles of categories M_1 , M_2 , N_1 , N_2 (in accordance with the scope of UNECE Regulation No. 83);

Rules ECE UN number 24-03 and Regulations ECE UN number 49-02 (level

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emissions B) for diesel engines of vehicles of categories M₁ with a maximum mass of over $3.5 t, M_2, M_3, N_2, N_3;$ For environmental class 3: UNECE Regulation No. 24-03 and UNECE Regulation No. 83-05 (emission level A) diesel engines for vehicles of categories \mathbf{M}_{1} , N₁, N₂(in accordance with t

he scope of UNECE Regulation No. 83); UNECE Regulation No. 24-03 and **UNECE** Regulation No. 49-04 (emission level A) for diese engines for vehicles of categ ories M a maximum mass over $3.5 t, M_2, M_3, N_2, N_3;$ Terms ECE UN number 24-03 and rules ECE UN № 96-01 for diesel engines for vehicles of categories M₁G maximum mass of over 3.5 m, M₂G, M₃G, N₂G, N₃G; For environmental class 4: UNECE Regulation No. 24-03 and **UNECE** No. Regulation 83-05 (emission level B) for diesel engines for vehicles categories M_1 , M_2 , N₁, N₂(in accordance with t he scope of UNECE Regulation No. 83); UNECE Regulation No. 24-03 and UNECE Regulation 49-04 No. (B1 emission level for diese engines for vehicles of categ ories M₁ a maximum mass over $3.5 t, M_2, M_3, N_2, N_3;$ UNECE Regulation No. 24-03 and UNECE Regulation No. 49-05 (emission level B1, as well the level as of requirements for on board diagnostics, durability operational and

suitability, NOx control "C") for diesel
engines for vehicles of categ
ory M₁ maximum weighing
over 3.5 t, M₂, M₃, N₂,
N₃;

Rules ECE UN number 24

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03 and Regulations ECE UN number 96-02 for

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diesel engines for vehicles of categories M₁G with a maximum mass over 3.5 t, M₂G, M₃G, N₂G, N₃G with all-wheel drive, including with a disconnected drive of one of the axles;

Item 13 № application 3 of this technical regulations for motors intended for hybrid vehicles means (in accordance with the area of application of Rules ECE UN № 49);

For environmental class 5: UNECE Regulation No. 24-03 and UNECE Regulation No. 83-06 (emission level according to Table 1) for diesel engines for vehicles of categories M₁, M₂, N₁, N₂

(in accordance with the scop e of the UNECE Regulation No. 83-06); UNECE Regulation No. 24-03 and **UNECE** Regulation 49-05 No. (emission levels B2, C, as well as the level of requirements for on board diagnostics, durability and serviceability, NOx monitori ng - "G", "K") for diesel engines for vehicles categories \mathbf{M}_{1} a maximum mass over $3.5 t, M_2, M_3, N_2, N_3$. Item 13 № application 3 of this technical regulations for motors inten ded for hybrid vehicles mea ns (in accordance with the area of application of Rules ECE UN № 49). The limiting temperature of a reliable engine start should be: without electric torch devices not higher than -10 °□C; with the help of electric torch devices - not higher than -22 ° \square C. The maximum engine noise lev el should be no more than 96 dB A.

3. Equipment for the 1s, 2s Rules ECE UN №№ 67-01, 110-00 and 115-00.

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- consumable filling and control and measuring equipment;
- gas filter;
- flexible hoses;
- fuel lines;
- electronic control units
- 4. Systems for neutralization of exhaust gases, including replaceable catalytic converters (excluding systems neutralization on the basis of urea)
- 5. Replaceable engine exhaust systems, incl. mufflers and resonators

10c, 11c Rules ECE UN number 103-00.

Alternatively: Rules ECE UN number 83-05 or 83-06.

10c, 11c Rules ECE UN number 59-00 (transport means categories M, of N).

Alternatively: Rules ECE UN number 51-02. Rules ECE UN number 92-00 (transport facilities category L). Alternatively: Rules ECE UN number 9-06, 41-03, 63-01.

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- 6. Fuel tanks, filling ports and plug the fuel tanks
- 7. Pads with lining assemblies for disc and drum brakes, friction linings for drum and disc brakes
- 3d, 11c Rules ECE UN N_{\odot} 34-01 or 34-02 (transport means a category M₁).

Rules ECE UN None 36-03, 52-01 and 107-03 (transport means categories M 2 and M 3).

2c, 11c Rules ECE UN number 90-02.

Alternatively:

Terms ECE UN number 13-10 or 13-11 (transport means of categories M $_{2}$, M $_{3}$, N).

Rules ECE UN number 13H-00 (transport means of categories M $_{\scriptscriptstyle \perp}$ and N $_{\scriptscriptstyle \perp}$).

8. Devices of the hydraulic brake drive: master brake cylinders , disc brake calipers

mechanisms, wheel brake cylinders of drum brakes , brake force regulators , vacuum and

Rules ECE UN № 03 (transport facilities category L).

78-02 or 78-

be provided: indicators of output parameters;

tightness of seals at a pressure of at least 20 MPa; body strength at a pressure of at least 25 MPa;

durability under cyclic loading of 150,000 cycles with pulsating pressure from 0 to 7.0 MPa at a temperature of 70 \pm 015 °0C.

In addition, vacuum and hydraulic vacuum amplifiers must have tightness and strength at a vacuum in a vacuum chamber of 0.075 ± 0.005 MPa.

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ould

hydraulic (complete with master brake cylinders) and hydraulic vacuum and pneumohydraulic boosters, control and signaling devices

- 9. Tubes and hoses, incl. coiled hoses (including with the use of material based on polyamides 11 and 12) of hydraulic systems of the brake drive, clutch and steering drive
- 10. Brake assemblies
- 11. Parts and assemblies of mechanical drives of the brake system: brake adjusting devices

10s, 11s Should be provided:

tightness and strength of pipes and hoses assembled with connection elements ;

durability under cyclic loading of 150,000 cycles by pulsating pressure;

resistance to the effects of salts, oils, battery acid alcohols - for pipes and hoses of twisted material based on polyamide 11 and 12.

c must be ensured the effectiveness of braking and durability in accordance with the Rules of ECE UN №№ 13-10 or 13-11 and 13N-00.

s During bench tests, parts and assemblies of mechanical drives of the brake system must withstand without destruction and residual deformations a load three times greater than the maximum load arising during their operation in the drive.

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arrangements, parts actuator of the parking brake system (including the cables with lugs to complete)

12. Brake discs and drums

13. Apparatus

pneumatic

brake drive: air preparation units (anti- freezers, moisture separators, pressure regulators), pneumatic drive safety equipment, condensate drain valves,

10c, 11c Rules ECE UN number 90-02

Alternatively:

Terms ECE UN number 13-10 or 13-11 (transport means of categories M $_{\mbox{\tiny 2}},$

 $M_3, N);$

Rules ECE UN number 13H-00 (transport means of categories M 1 and

 N_1);

Rules ECE UN number 78-02 or 78-

03 (transport facilities category L).

nould be provided: indicators of output parameters;

tightness of seals at a pressure of 0.8 MPa; durability under cyclic loading.

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control apparatus (brake valves, relay valves, control valves brakes of the trailer, diffusers), adjusting devices inhibition (controls braking forces, valves limit the pressure in the pneumatic actuator of the front axle), a head connection, the device alarm and control (sensors pneumoelectric, control valves O)

14. Pneumatic brake chambers (including with a spring brake), pneumatic brake cylinders

10s, 11s Should be provided:

the maximum possible force on the rod of the chamber (cylinder) for a given dimension of the effective area of the diaphragm (piston) at a pressure in the actuator of 0.6 MPa;

tightness of seals at a pressure of 0.8 MPa; durability under cyclic loading;

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temperature resistance.

15. Compressors 10s, 11s The following must be provided:

performance indicators, power consum ption,

tightness and release of engine oils into the pneumatic system.

16. Nodes and parts of car steering: steering wheels, steering mechanisms, steering boosters, hydraulic pumps, valves and actuators steering amplifiers, the steering column control, angular gear units, steering shafts, steering arms, the intermediate supports a steering actuator, and levers, pivots pivot pins

10s, 11s Should be provided:

reliable connection and absence of harmful contacts between parts when installed on vehicles;

compliance of vehicles with the requirements of the UNECE Regulations

No. 79;

the ability to adjust the mechanical backlash in the steering mechanism;

transfer load to 2.5 times greater than the calculated maximum;

preserving operability of the steering control when failure of the amplifier;

no cracks at the bend of the steering rods when they are bent at an angle

90 °□:

moments of resistance to rotation and swinging of steering gear fingers no more than:

0.3 daNm for vehicles of categories M $_{\scriptscriptstyle 1}$ and N $_{\scriptscriptstyle 1}$;

0.7 daN for vehicles of categories M $_2$, M $_3$, N $_2$ and N $_3$; absence of backlash not due

to functional requirements in movable joints at neutral steering position

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- 17. Handlebars of motorcycle type
- 18. Hinges ball suspension and steering control

wheels:

fluid supply by the power steering pumps at a pressure of the maximum in order provide to steering wheel rotation speed of 1.5 s⁻¹ for a vehicle with a load of up to 1.2 t on the steering axle and 1 s⁻¹ for a vehicle with a greater load;

performance in terms of environmental protection, protection against penetration of dust and moisture, the electric strength of the insulation for Electrobooster steering;

with Regulation ECE UN number compliance 12 for the wheel steering and injury prevention steering column.

10c, 11c Rules ECE UN number 60-00.

following must be ensured: strength of ball joints;

> the geometrical dimensions of the ball pin of the hinge; connecting and overall dimensions of the hinge; for the ball

pin:

impact strength;

surface layer hardness;

pulling force of the ball pin from the hinge housing;

squeezing force to the side of rolling, if the joint is rolled or closed with a plug with a retaining ring;

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19. Wheels of vehicles

20. Pneumatic tires for cars and their trailers

residual deformation of the liner when loading its axial force (only for ball joints with polymer inserts).

The swing angles of the ball pins of the steering joints should ensure unhindered rotation of the steered wheels when the suspension deflects within the working stroke.

The angles of the swing ball fingers suspension must provide an unobstructed deflection of the suspension in the range of its full course is based on the rotation of the wheels.

Ball joints must not have any backlash.

2c, 11c Rules ECE UN number 124-00

Strength must be ensured under cyclic (bending moment, radial force) loading. For wheels made of light alloys, additional strength under shock loading must be ensured.

On the wheel must be applied to the marking.

1c, 2c (*) Regulations ECE UN №№ 30-02, 117-01 or 117-02

Requirements for winter tires designed to be equipped with anti-skid studs :

the tire must be adapted for the installation of antiskid studs , and

the manufacturer should recommend studs designed for installation on this type of tire along the length of the stud and the diameter of the upper (support) flange;

lug stud for outside tread - 1.2 + 0.3 mm.

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21. pneumatic tires for light trucks and commercial vehicles and their trailers, buses and trolleybuses

The maximum number of studs per running meter of requirement the tread is 60 pcs. The applies tires manufactured after January 1, 2016 city of permissible use of tires with lots of spikes, if the results of the tests carried out by an independent accredited test laboratory, confirm that these tires do not cause more wear and tear of road coverage than respective set requirement for the the tires, the number of studs, and at the same time the adhesion properties are not deteriorated.

1c, 2c (*) Regulations ECE UN №№ 54-00, 117-01 or 117-02

Requirements for winter tires designed to be equipped with anti-skid studs :

the tire must be adapted for the installation of antiskid studs, and

the manufacturer should recommend studs designed for installation on this type of tire along the length of the stud and the diameter of the upper (support) flange;

lug stud for outside tread for light truck tires -

1.7 + 0.3 mm, for truck tire - 2.5 + 0.3 mm.

The maximum number of studs per running meter of the tread is 60 pcs. The requirement applies to tires manufactured after January 1, 2016 city of permissible use of tires with lots of spikes, if the results of the tests carried out by an independent accredited test laboratory, confirm that these tires do not cause more wear and tear of road coverage than the tires, the respective set requirement for the number of thorns, and at the same time not

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- 22. Pneumatic tires for motorcycles, scooters, quads and mopeds
- 23. Pneumatic spare wheel tires for temporary use
- 24. Retreated pneumatic tires for cars and their trailers
- 25. Coupling devices (towing, fifth wheel and towing)
- 26. Hydraulic tipping mechanisms of dump trucks:

adhesion properties deteriorate.

1c, 2c (*) Regulations ECE UN number 75-00.

3d, 11c (*) Regulations ECE UN number 64-00 or 64-02.

- (*) Regulations ECE UN №№ 108-00 or 109-00 in depending on the type of tire.
 - 1c, 2c Rules ECE UN number 55-01.

Clause 6 of Appendix No. 8 to this technical regulation.

6d, 10s, 11s Clause 3.1 of Appendix No. 6 to this technical regulation.

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- single- acting telescopic hydraulic cylinders;
- hydraulic valve with manual and remote control
- 27. Hydraulic mechanisms for tipping cabins of vehicles:
 - hydraulic cylinders of the hydraulic cab tipping mechanism;
 - pumps of the hydraulic cab tipping mechanism
- 28. Hoses of the hydraulic booster of a steering and a tipper

6d, 10s, 11s The design should provide for:

devices that securely fix the cab in the raised position; the transition of the center of mass of the cabin through the dead center at full tilting the cab; reliable automatic fixation of the cab in the transport position.

The force on the handle of the pump not be greater than 25 daN.

10s, 11s Should be provided:

functionality in the range of temperatures of ambient air from minus $50\,^{\circ}\text{C}$ to plus $50\,^{\circ}\text{C}$ and a for 48 hours at a temperature of up to

dump truck platforms

minus 60 °C for areas with cold climates;

oil flow when a temperature of minus 50 °C and + 80 °C and a pressure from 4.4 MPa to 9.0 MPa (with account type sleeve);

change in the outer diameter of the sleeve during bending at the minimum permissible bending radius of no more than 10% of the actual outer diameter of the sleeve before bending;

strength due rubber layers sleeves with braided not less than 13.0 N / cm;

resistance to prolonged exposure to direct sunlight and atmospheric ozone;

the temperature limit of the fragility of rubber is not higher than minus 50 °C;

tightness;

strength under

load; resistance to thermal aging;

resistance to prolonged exposure to working environments; minimum permissible bending radii in working position; strength indicators of rubbers used for manufacturing

sleeves.

On each sleeve on the entire length must be applied to color, resistant to working environments and atmospheric precipitation dy e marking strip:

white - for sleeves with combined threads; red - braided with cotton threads; yellow - with a metal braid.

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- 29. Bumpers, protective arches for motorcycles
- 30. Rear and side protection devices for trucks and trailers

The text of the marking strip must contain the following data: inner diameter of the sleeve; maximum working pressure; date of manufacture and b atch number; name or trade mark of the manufacturer.

6d, 11c Rules ECE UN №№ 26.02 or 26.03, 42-00 and 61-00.

1c, 2c Rules ECE UN №№ 58-01 or 58-02 and 73-00 or 73-01.

31. Seats Car 10c, 11c Rules ECE UN number 17-05 or 08/17 (transport means

categories M₁, M₂, N₁).
Rules ECE UN number 80-01 or 80-02 (transport means categori es M₂,
M₃).

Terms ECE UN number 11800 (transport means categor y M₃ classes II and III).

Appendix No.
6 to this technical regulat ion, paragraph 1.16.3.12 (seats for the carriage of children for vehicles according to paragraph 1.16 of the specified annex).

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- 32. Head restraints of seats 10c, 11c Rules ECE UN number 4.25
- 33. Belts Safety 10c, 11c (*) Regulations ECE UN number 16-04 or 16-06
- 34. Pillows Safety 1s, 2s (*) Regulations ECE UN number 114-00

35. The retaining devices for children

1c, 2c (*) Regulations ECE UN number 44-04

36. Glass safe 10c, 11c (*) Regulations ECE UN number 43-00

37. Mirrors adjustable type 10c, 11c (*) Terms ECE UN number 46-01 or 46-02 (transport means of categories M, N, L $_6$, L $_7$).

Rules ECE UN number 81

-

00 (transport means categ ories L 1-

38. Windscreen wipers and spare parts for them (gear motors, brushes)

L 5).

3d, 11s Clause 8 of Appendix No. 3 to this technical regulation.

The degree of protection of electric motors and geared motors against the penetration of foreign bodies and water and the dielectric strength of the insulation must be ensured.

The rubber band should provide:

resistance

to

washer

fluid; aging resistance;

mechanical strength;

the performance of the brush in the temperature range from minus 45 °C to plus 85 °C.

| No n/ | The components of | Form and scheme | Requirements or name of |
|----------|---------------------|-----------------------------------|--|
| p / p | the transport means | confirmation of conformit y | the document containing the requirements |

During the operation of the brushes, the rubber should not stain o r mechanically damage the g lass surface in the contact zo ne.

| 39 | Headlamp | 3d, 1 | Rules ECE UN number 45- | |
|----|--------------------|-------|-------------------------|------------|
| | cleaners and | 1s | 01 | |
| | spare parts for th | | The degree | electric |
| | em | | of protection must be | motors and |
| | | | ensured | |

(geared motors)

- 40. Headlights automobile low and high beam
- 41. Incandescent lamps for headlights and lanterns
- 42. Reflective devices (reflectors)
- 43. Lanterns of illumination of the rear registration plate

motor gearboxes from penetration of foreign bodies and water and dielectric strength of insulation.

1c (*) Regulations ECE UN №№ 1-02, 8-05, 20-03, 112-01 (in depending on the type of lamps)

10c, 11c (*) Regulations ECE UN number 37-03

10c, 11c (*) Regulations ECE UN number 3-02

10c, 11c (*) Regulations ECE UN number 4-00

44. Direction of rotation 10c, 11c (*) Regulations ECE UN number 6-01

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45. Parking and outline lights, braking signals

10c, 11c (*) Regulations ECE UN number 7-02

46. Fog lights 10c, 11c (*) Regulations ECE UN number 04/19

- 47. Devices for lighting and light signaling of motorcycles and quadricycles
- 48. Reversing light transport means
- 49. Halogen headlights HSB
- 50. Rear fog lights

10c, 11c (*) Regulations ECE UN number 50-00

10c, 11c (*) Regulations ECE UN number 23-00

10c, 11c (*) Regulations ECE UN number 31-02

10c, 11c (*) Regulations ECE UN number 38-00

- 51. Lights for mopeds 10c, 11c (*) Regulations ECE UN number 56-01
- 52. Lights for motorcycles 10c, 11c (*) Regulations ECE UN number 57-02

| <u>№</u> p / p | The components of the transport means | Form and scheme confirmation of conformit | Requirements or name of the document containing the requirements |
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53. Warning lights 10c, 11c (*) Regulations ECE UN number 65-00

- 54. Lights for motorcycles with halogen lamps HS
- 55. Headlights low and high beam for mopeds

10c, 11c (*) of the Rules of ECE UN number 72-01

10c, 11c (*) Regulations ECE UN number 76-01

56. The parking lights 10c, 11c (*) Regulations ECE UN number 77-00

- 57. Headlights for mopeds with HS2 halogen lamps
- 10c, 11c (*) Regulations ECE UN number 82-01

58. Daytime running lights 10c, 11c (*) Regulations ECE UN number 87-00

- 59. Side marker lights
- 60. Headlights with gas-discharge light sources
- 10c, 11c (*) Regulations ECE UN number 91-00

10c, 11c (*) Regulations ECE UN number 98-01

| <u>№</u> p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 61. Gas-discharge light sources
- 62. Sound signaling devices
- 63. Speedometers, their gauges and instrument combinations, including speedometers
- 64. Speed limiting devices

65. Technical means of monitoring compliance by drivers with traffic, work and rest regimes (tachographs)

10c, 11c (*) Regulations ECE UN number 99-00

10c, 11c (*) Regulations ECE UN number 28-00

10s, 11s Should be provided:

the accuracy

of measurement in accordance with Regulation ECE UN number 39-00:

vibration and shock resistance;

protection against dust and moisture penetration.

10c, 11c (*) Regulations ECE UN number 89-00.

10s, 11s Should be provided:

indications: the speed of movement, the distance traveled, the current time, the signal about exceeding the set speed, the signal about violations in the operation of the tachograph;

registration: speed of movement, distance traveled, time of driving a vehicle, time spent at the workplace and time of other work, time of breaks in work and rest, cases of access to registration data, interruptions in power supply lasting more than 100 milliseconds, interruptions in the supply of pulses from the sensor movement.

| <u>№</u> p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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66. System alarm signaling antitheft and security device for the transport means

- 67. Rear marking signs slow transportation means
- 68. Rear identification plates for vehicles of great length and carrying capacity
- 69. Reflective markings for vehicles of great length and carrying capacity
- 10c, 11c Rules ECE UN №№ 18-02 or 03/18, 97-01 and 116-00

(transportation means of categories M₁, N₁).

Rules ECE UN number 62-00 (transport means categories L $_{\scriptscriptstyle 1}$ -L $_{\scriptscriptstyle 5}$).

In regard to additional mechanical antitheft devices, on which not subject to the requirements of Regulation ECE UN: should ensure that performance after 2500 cycles of opening and closing, the hardness of the fixing elements of the materials is not less than $48\ HRC_E$.

- 3d, 11c Rules ECE UN number 69-01
- 3d, 11c Rules ECE UN number 70-01
- 10c, 11c (*) Regulations ECE UN number 104-00

| <u>№</u> p / | The components of | Form and scheme confirmation | Requirements or name of the document containing |
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| p | the | of conformit | the requirements |
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| | transport means | У | |
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- 70. Warning triangles (emergency stop signs)
- 71. Accumulator starter batteries
- 3d, 11c (*) Regulations ECE UN number 27.3
- 6d, 11s Should be provided:

prevention of electrolyte leakage when the battery is tilted at an angle

45°;

tightness at low and high pressure; marking informing about the design parameters of the battery; resistance to the perception of a set intermittent discha rge.

72. Wiring harness 3d, 11c should be provided:

vibration resistance; resistance to the effects of fuels and oils.

73. High-voltage wires of the ignition system

74. Pointers and sensors of emergency conditions

10s, 11s Should be provided:

the ability to transmit high voltage pulses in existing working conditions;

force of connection with the terminals of the ignition coil and distributor; dielectric strength of insulation.

3d, 11s Should be provided:

performance in environmental conditions; dielectric strength of insulation; protection against dust and moisture penetration .

| № p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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75. Turbochargers 11c must be ensured the preservation of health at

maximum stated frequency of rotation of the rotor of the turbocharger, and the maximum declared gas temper ature in front of the turbine.

76. Details

cylinder-piston groups, timing gear, crankshafts, bearing shells, connecting rods

77. Fuel injection systems of engines with positive ignition and their replaceable elements

11c The properties

of the material used , its microstructure and hardness, runout, surface roughness a nd geometric dimensions of engine parts must be ensured .

1c The emission level provided ensured.

for

by this technical

regulation must be

78. Air cleaners for internal combustion engines and their replaceable elements

10s, 11s Should be provided:

tightness at joints, seals; aerodynamic resistance no more than 4.0 kPa; the average dust transmission coefficient is not more than 1%.

| <u>№</u> p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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79. Oil cleaning filters and their replaceable elements

80. Filters for cleaning diesel fuel and their replaceable elements

81. Filters for cleaning fuel of engines with positive ignition and their replaceable elements

10s, 11s Should be provided:

tightness at the joints, the seals when the oil pressure exceeds the nominal operating pressure in the system, the lubrication of the engine to 2 times; elimination of leakage and ignition of engine oil;

initial hydraulic resistance of filters and filtering elements is not more than 0.03 MPa;

efficiency of cleaning oil from contaminating impurity is not less than 25%.

he following must be

ensured: tightness at the joints;

elimination of fuel leakage and ignition; efficiency of cleaning the fuel from contaminating impurity is not less than 70%.

of cleaning the

10s, 11s Should be provided:

leak in locations compounds seals with pressure air to exceed the operating pressure in the system, the power of the engine to 2 times;

elimination of fuel leakage and ignition;

initial hydraulic resistance of filters and filtering elements is not more than 2.45 kPa;

efficiency

fuel from contaminating impurity is not less than 40%.

| № p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 82. Fuel pumps high-pressure fuel feed pumps, plunger couples nozzles and spray nozzles for diesel engines
- 83. Heat exchangers and thermostats

10s, 11s Must ensure the operation of a diesel engine on diesel fuels, motor gasoline, jet fuels and mixtures of these fuels.

Operating characteristics and their deviations from the set values must conform to the established requirements and to ensure trouble-free operation and fulfillment of environmental requirements to the engine, for which they are intended.

10s, 11s Should be provided:

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tightness of radiators of engine cooling systems and interior heating under the influence of internal static pressure of 0.15 MPa.

thermal and hydraulic efficiency of heat exchangers of charge air cooling systems is not lower than 0.85 and 0.96, respectively;

efficiency of thermostats;

tightness of heat exchangers of charge air cooling systems when exposed to internal static pressure exceeding

the engine boost pressure by 0.05 MPa;

tightness of heat

exchangers of lubrication systems when exposed to internal static pressure, which is three times higher than the rated working pressure in the engine lubrication system;

preserving integrity and operability after conducting the test for resistance to external influences:

to a cyclical change in internal pressure; to external vibration effects;

| № p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 84. Pumps for liquid cooling systems
- 85. Clutches and their parts (discs, cylinders, hoses)

86. Cardan drives, drive shafts, joints of unequal and equal angular speeds

to cyclic heat exposure; to external static impact (torsion); to corrosive effects; to low temperature exposure.

10s, 11s Should be provided:

leak in locations compounds seals; f unctional indicators.

10s, 11s Should be provided:

required safety factors of adhesion;
permissible imbalance of the driving and driven clutch
discs; minimum withdrawal pressure disc from
the flywheel when turned off
clutch;

permissible face runout of the driven clutch discs; permissible deviation from the alignment of the axes of the shafts of the units connected by the clutch.

10s, 11s Should be provided:

permissible imbalance of the propeller shaft; margin of critical frequency of rotation of the propeller shaft

(determined by calculation or experimentally);
functionally required maximum angles in joints
of equal and unequal angular velocities;
absence
of permanent deformations and destruction upon impact

| № p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 87. Driving axles with differential, assy, half-shafts
- 88. Elastic suspension elements (leaf springs , springs, suspension torsion bars, anti roll bars , pneumatic springs)
- 89. Damping elements of the suspension (shock absorbers, shock absorber struts and cartridges of shock absorber struts) and steering drive

maximum torsional moments in elements of cardan transmission, drive shafts, hinges of equal and unequal angular velocities.

11c Should be provided:

perception of acting loads without destruction of gear elements and axle housing (safety factor); absence of unacceptable deformations of the axle housing .

he characteristics of the elastic suspension elements must ensure that the requirements for stability and controllability of the vehicle are met .

Should be provided:

performance at maximum dynamic loads; stability of characteristics of elastic suspension elements; absence of harmful contacts within the full travel of the suspension; tightness and stability of pneumatic elastic elements.

the requirements for stability and controllability of the vehicle are met.

Stroke rod should provide the full course of the suspension and the maximum angle of rotation of controlled wheel.

Should be provided: damping characteristics;

| <i>N</i> <u>o</u> p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 90. Details of the suspension guide vane (levers, reaction rods, their pins, rubber-metal hinges, bearings and support bushings, suspension travel stops)
- 91. Caps (including decorative) of hubs. Wheel fastening elements . Balancing wheel weights.

temperature charac teristics; tightness; work without knocking and jamming.

Ic The elasticity of rubber-metal hinges and the strength of their connection with the metal frame must ensure that the requirements for stability and controllability of the vehicle are met.

Should be provided:

reliability of fastening of elastic and damping elements; the absence of harmful contacts in the range of full stroke suspension.

10c, 11c Rules ECE UN number 2.26 or 3.26, and 61-00.

Should be provided:

the accuracy of alignment of the wheels;

preservation torque tightening fasteners compounds in the process of operation of the transport means;

reliability and the ability to easily monitor the state of the fastening The design of the balancing load must ensure: safe connection of the load to the wheel; contact with the outer flange of the rim wheel is not less than two points.

| № p / p | The components of the transport means | Form and scheme confirmation of conformit | Requirements or name of the document containing the requirements |
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92. Products of the ignition system for engines

with positive ignition (distributors, sensors - distributors, ignition coils, ignition modules, electronic switches, controllers, sensors, breakers)

93. Spark plugs , glow plugs

10s, 11s Should be provided: uninterrupted sparking; electromagnetic compatibility;

performance in environmental conditions; vibration and shock resistance; operability when voltage changes; dielectric strength of insulation.

6d, 11s Should be provided:

for spark plugs :
uninterrupted sparking at
a given gas pressure ; strength when applying mecha
nical loads; thermal strength;
electrical resista
nce; for glow pl
ugs:
temperature char
acteristic; vibrati
on resistance;
no gas leakage through the joints of the spark plug parts with
a difference

| № p / p | The components of the transport means | Form and scheme confirmation of conformit | Requirements or name of the document containing the requirements |
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electric, rectifier units, electric motors (fan drives, gasoline pumps, windscreen washers, window lifters, heaters, mirror controls, door locks)

- 95. Starters, drives and starter relays
- 96. Switching, protective and installation equipment for power supply circuits for start-up, ignition, external light and sound

pressures 4 ± 0.5 MPa.

6d, 11s Should be provided:

performance in environmental conditions; operability when voltage changes; electromagnetic compatibility; vibration and shock resistance; protection against dust and moisture penetration; dielectric stren gth of insulation.

ould be provided: vibration and shock resistance;

protection against dust and moisture penetration; dielectric stren gth of insulation.

6d, 11s Should be provided:

performance in environmental conditions; protection against dust and moisture penetration; dielectric strength of insulation; mechanical strength; br eakout forc e .

| № p / p | The components of the transport means | Form and scheme confirmation of conformit | Requirements or name of the document containing the requirements |
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devices, wipers, fuel supply systems, detachable connections

- 97. Decorative details of the body and bumper, radiator grilles, visors and headlight rims
- 98. Handles (external and internal) and door hinges on the side surfaces of the body, external side opening buttons doors and trunks

3d, 11c Rules ECE UN number 26.2 or 26.3 and 61-00

 $10c,\,11c$ Rules ECE UN number 11-02 or $11\text{-}03,\,26.2$ or 26.3 and 61-00

99. Locks doors 10c, 11c Rules ECE UN number 11-02 or 11-03.

- 100. Protective rubber and rubber- metal parts (caps, covers, sealing rings,
- 6d, 7d, 11s Should be provided:

tightness of internal cavities of movable and fixed elements;

no negative impact of atmospheric and road factors on the compacted components;

| <u>№</u> p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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seals for the hydraulic drive of brakes and clutches, covers for steering joints, suspension, propeller shafts)

- 101. Seals for cylinder heads, manifolds, gas equipment, sealing rings
- 102. Clutches for disengaging clutches, wheel hubs, wheel axle shafts, incl. complete with bearings; bearing sleeves off clutch, the hubs of the wheels, the semi-axes of the wheels
- 103. Air-liquid heaters,

resistance to prolonged exposure to working environments; for rubber-metal parts, the bond strength of the rubber with the reinforcement metal is at least 2.5 MPa.

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Metal fittings used for the outer parts of protective caps, covers and cuffs must be protected with an anti - corrosion coating.

6e, 11c The tightness of the joints of the parts to be joined must be ensured.

ould be provided: efficiency of the seal;

tightness for closed bearings; minim um axial play; reliability.

6d, 11c Thermal and technical characteristics must be provided .

| <u>№</u> p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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integral coolers, heaters-coolers

104. Independent air and liquid heaters - heaters of automatic operation, powered by the on-board network of vehicles running on liquid or gaseous fuels, including pre- heaters

105. Jacks

hydraulic, mechanical 106. Chains, chain tensioners for internal combustion engines

6d, 1c, 11c Rules ECE UN number 122-00

Thermal and technical characteristics must be ensured.

6d, 10s, 11s The following must be provided:

3-fold safety factor for pressure and stability; reliable fixation of the plunger head relative to the places for installing the jack on the vehicle.

c Chains and tensioning devices must withstand a load of at least 1600 daN without destruction and permanent deformations.

| № p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 107. Fan V- belts and poly- V ribbed belts for car engines, toothed belts gas distribution mechanism of car engines
- 108. The diaphragm and the diaphragm rubber- Belleville for transport means
- 109. Protective helmets for drivers and passengers of motorcycles and mopeds
- 110. Trunks automobile

11c The following must be ensured: breaking strength;

belts must be individually marked, informing about the main design parameters and version .

3d, 11s Should be provided:

absence

of surface defects, determined organoleptically, and shape distor tions in a free state;

strength due rubber with cloth is not less

than 2.5 kN/m; hardness;

breakin

g streng

th; frost

resistan

ce.

10c, 11c (*) Regulations ECE UN number 22-05

10c, 11c Rules ECE UN number 26/02 or 03/26

| № p / p | The components of the transport means | Form and scheme confirmation of conformit y | Requirements or name of the document containing the requirements |
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- 111. Systems of partitions to protect passengers when baggage is shifted
- 112. Materials for finishing the interior and seats of vehicles of category M 3 classes II and III
- 113. Antennas for outdoor radio, television, satellite navigation systems
- 114. Adaptive front lighting systems
- 115. Devices for reducing splashing from under the wheels
- 116. Thorns anti-skid
- 10c, 11c Rules ECE UN number 126-00
- 10c, 11c Rules ECE UN number 118-00
- 10c, 11c Rules ECE UN number 26/02 or 03/26
- 10c, 11c (*) Regulations ECE UN number 123-00

10c, 11c Clause 9 of Appendix No. 3 to this technical regulation.

Stud weight, no more: 1.6 g - for passenger tires, 2.8 g - for light truck tires, 3.5 g - for truck tires. Demand

| № p / p | The components of the transport means | Form and scheme confirmation of conformit | Requirements or name of the document containing the requirements |
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applies to the spikes, designed for com plete buses manufactured after January 1, 2016 is allowed to use spikes a mass if the results of the tests, conducted an independent accredited test laboratory, confirm that the tires with such spikes do not cause greater wear on the surface than tires spikes corresponding to the weight of the above requirement spike and when it does not deteriorate grip propertie S.

Notes:

1. In the column "Form and scheme of conformity confirmation" "d" means the declaration of conformity, "c" means certification, the figure denotes the number of the conformity confirmation scheme for mass-produced products. (*) means that a certificate of conformity is issued only on the basis of a communication of type approval

according to UNECE Regulations. To confirm the conformity of batches of products for which the conformity confirmation forms "d" and "c" are provided, schemes 4d and 3c or 9c, respectively, should be used. Conformity confirmation schemes and recommendations for their selection are given in Appendix No. 19 to this technical regulation.

- 2. In case of application for the of verification of purposes compliance requirements of the present technical regulations of other documents, other than those in the list of standards, as a result of which, on a voluntary basis ensures compliance with the requirements of technical regulations of the the safety of wheeled transport means", conducted the Customs Union "On examination of documents used for purposes the examination. of conformity confirmation. If, according the results of to the compliance of requirements below it is established that with the level that established by the standards included in the specified list has been confirmed, then the applicant must provide evidence that the type of component also meets the requirements of the standards included in the specified list.
- 3. Confirmation of conformity of components is not carried out in the case of their delivery to the assembly plant of vehicles.

- 4. The terms of application of the requirements for the level of emissions from internal combustion engines for various environmental classes correspond to the terms established in Appendix No. 2 to this technical regulation. These terms do not apply in respect of engines supplied in order to repair transport means, which are in operation in the common customs territory of the Customs Union, as well as installation on vehicles not intended for release into circulation on the territory of these states.
- 5. As evidence in accordance with UNECE Regulations Nos. 117-01 and 117-02, it is allowed to submit a test report under European Union Directive 92/23 / EEC as amended by Directives 2001/43 / EC and 2005/11 / EC. In order to identify tires circulation. the numbers of in messages type on approval under this Directive are entered in the documents certifying compliance with the requirements of this technical regulation.
- 6. Regarding pad and lining assemblies for disc and drum brakes and friction linings for drum and disc brakes supplied for aftermarket vehicles, the requirements of paragraph 5.1.1.3 of UNECE Regulation No. 13, paragraph 5.1.1.3 of UNECE Regulation No. 13H, paragraph 5.4 of UNECE Regulation No. 78, paragraph 5.1 (d) of UNECE Regulation No. 90 apply optionally.

APPENDIX No. 11
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

Subdivision of vehicles into types and modifications

- 1. For the purposes of evaluating compliance in the form of approval of the type of vehicles belong to the same type if, taking into account categories, they do not differ in respect of the manufacturer, as well as the criteria laid down in this Annex.
 - 1.1. In relation to category M₁:
 - 1.1.1. Significant design features:
 - 1.1.1.1. Chassis (obvious and fundamental differences);
- 1.1.1.2. Power plant (engine internal combustion or combined plant (hybrid transport means) / motor).
 - 1.2. In relation to categories M $_2$ and M $_3$:
 - 1.2.1. Category;
 - 1.2.2. Significant design features :
- 1.2.2.1. Chassis / structural body shell, single / double deck, single / articulated (obvious and fundamental differences);
 - 1.2.2.2. Number of axles;
- 1.2.2.3. Power plant (engine internal combustion or combined plant (hybrid transport means) / motor).
 - 1.3. In relation to categories N_1 , N_2 , N_3 :
 - 1.3.1. Category;
 - 1.3.2. Significant design features :
- 1.3.2.1. Chassis / structural base structure (obvious and fundamental differences);
 - 1.3.2.2. Number of axles;

- 1.3.2.3. Power plant (engine internal combustion or combined plant (hybrid transport means) / motor).
 - 1.4. In relation to categories O₁, O₂, O₃, O₄:
 - 1.4.1. Category;
 - 1.4.2. Significant design features:
- 1.4.3. Chassis / structural body base (obvious and fundamental differences);
 - 1.4.3.1. Number of axles;
 - 1.4.3.2. Trailer with a drawbar / trailer / trailer with central axis;
- 1.4.3.3. Type of braking system (e.g. trailer without brakes / overrun brake / braking system with external energy supply).
 - 1.5. In relation to categories L_1 , L_2 , L_3 , L_4 , L_5 , L_6 , L_7 :
 - 1.5.1. Category;
- 1.5.2. Chassis, frame, supporting base or structure on which the main units and assemblies are fixed;
- 1.5.3. Power plant (engine internal combustion or combined plant (hybrid transport means) / motor).
- 2. Vehicles of the same type are assigned to the same modification if they do not differ in respect of the following specified criteria:
 - 2.1. In relation to category M_{\perp} :
 - 2.1.1. Environmental class:
 - 2.1.2. Body type;
 - 2.1.3. Power plant:
- 2.1.3.1. Working principle engine internal combustion (forced ignition / ignition by compression, a four / two-stroke);
- 2.1.3.2. The number and arrangement of cylinders of the internal combustion engine;
 - 2.1.3.3. Maximum power (difference in power is not more than 30%);
- 2.1.3.4. The working volume of the internal combustion engine (the difference is not more than 20%);
 - 2.1.4. Driving axles (number, location, connection);
 - 2.1.5. Steering axes (number, location).
 - 2.2. In relation to categories M $_2$ and M $_3$:
 - 2.2.1. Environmental class:

- 2.2.2. Class transport means (item 2.2 in Table 1 Application № 1 to this technical regulation) only for complete vehicles;
 - 2.2.3. Completion degree (complete / unfinished);
 - 2.2.4. Power plant:
- 2.2.4.1. Working principle engine internal combustion (forced ignition / ig nition by compression, a four / two-stroke);
- 2.2.4.2. The number and arrangement of cylinders of the internal combustion engine;
 - 2.2.4.3. Maximum power (the difference is not more than 50%);
- 2.2.4.4. The working volume of the internal combustion engine (the difference is not more than 50%);
 - 2.2.4.5. Location (front, middle, back);
- 2.2.5. Technically permissible maximum weight (difference no more than 20%);
 - 2.2.6. Driving axles (number, location, connection);
 - 2.2.7. Steering axes (number, location).
 - 2.3. In relation to categories N_1 , N_2 , N_3 :
 - 2.3.1. Environmental class;
- 2.3.2. Body type / loading space design (for example, on-board platform, van, tipper body, fifth wheel coupling, tank, insulated body, specialized equipment) only for a complete vehicle;
 - 2.3.3. Completion degree (complete / unfinished);
 - 2.3.4. Power plant:
- 2.3.4.1. Working principle engine internal combustion (forced ignition / ignition by compression, a four / two-stroke);
- 2.3.4.2. The number and arrangement of cylinders of the internal combustion engine;
 - 2.3.4.3. Maximum power (the difference is not more than 50%);
- 2.3.4.4. The working volume of the internal combustion engine (the difference is not more than 50%);
- 2.3.5. Technically permissible maximum weight (difference no more than 20%);
 - 2.3.6. Driving axles (number, location, connection);
 - 2.3.7. Steering axes (number, location).
 - 2.4. In relation to categories O_1 , O_2 , O_3 , O_4 :
- 2.4.1. The extent of completion (e.g.: complete / unfinished);

- 2.4.2. Body type / loading space design (for example, on-board platform, van, caravan, tipper body, insulated body, tank, specialized equi pment);
- 2.4.3. Technically permissible maximum weight (difference no more than 20%);
 - 2.4.4. Steering axes (number, location).
 - 2.5. In relation to categories L_1 , L_2 , L_3 , L_4 , L_5 , L_6 , L_7 :
 - 2.5.1. Body shape, body (basic characteristics);
 - 2.5.2. Mass transport means to curb state

(the difference is not more than 20%);

- 2.5.3. Technically permissible maximum weight (difference no more than 20%);
- 2.5.4. The working volume of the internal combustion engine (the difference is not more than 30%);
 - 2.5.5. Frame design (obvious and fundamental differences);
- 2.5.6. Power plant (internal combustion engine / electric motor / others);
- 2.5.7. The number and arrangement of cylinders of the internal combustion engine;
- 2.5.8. Maximum engine power (difference no more than thirty%);
 - 2.5.9. Type box transmission (with manual control, automatic).
 - 3. Modification of the transport means can be subdivided

manufacturer on the version (version), consisting of authorized manufacturer parameter combinations, from among those contained in the general technical specification of type of transport means, supplied to the documents certifying the conformity of the requirements of the Technical Regulations.

In this case:

3.1. In relation to category M₁:

For each version, there can be only one value for each of the following parameters:

3.1.1. Technically permissible maximum weight;

- 3.1.2. Work volume engine internal combustion engines;
- 3.1.3. Maximum engine power;
- 3.1.4. The type of gearbox and the number of its stages;

- 3.1.5. The number of places for seating.
- 3.2. In relation to categories L_1 , L_2 , L_3 , L_4 , L_5 , L_6 , L_7 :

Variable values of the following parameters are not can be combined in the framework of one version:

- 3.2.1. Mass transport means in the equipped condition;
- 3.2.2. Technically permissible maximum weight;
- 3.2.3. Power plant power;
- 3.2.4. The working volume of the cylinders of an internal combustion engine.
- 3.3. In relation to the rest of the categories of vehicles, the requirements for the subdivision of modifications by version (equipment) have not been established.

APPENDIX No. 12 to the technical regulations of the Customs Union "On the safety of wheeled vehicles funds" (T R CU 018/2011)

PERECHENL

documents submitted by the applicant in order to assess the conformity of the types of vehicles (chassis), single vehicles and vehicle components requirements of technical regulations "On the safety of wheeled vehicles funds"

Note:

The documents submitted by the applicant must be in Russian or have an authentic translation into Russian. They can also be translated into the state language of the state, in which the supplied application on carrying out assessment of conformity. Documents in the English or French language, issued on the basis of the Rules ECE UN (in the framework of the Geneva Agreement in 1958) or equivalent EU Directives, translated into Russian language is not required.

- 1. The conformity assessment in the form of typeapproval in respect of the transport means
- 1.1. With the purpose of obtaining the approval of the type of transport means the applicant is in on the organ of certification:
- 1.1.1. General technical description of the type of transport means into a volume sufficient for registration approval type transport means (form approved type transport means shown in Annex N_2 14 to Technical Regulations) including required for vehicle identification general type designs, as well as a list of components (devices light and sound signaling belts safety glass, tire mirror), having a marking, with indication of the markings (numbers official approval).

Documents submitted in two copies, with indication of the date of their preparation, the names and positions of the signatory of the person;

1.1.2. available on the date of filing the application the evidentiary materials confirming compliance with product requirements of the present technical regulations.

As evidentiary purposes in order to confirm compliance type transport means (chassis) requirements of paragraphs 11 - 16 of the present application, and technical regulation N_2 7 appears declaration of compliance, adopted by Scheme declaration 1d, with the application description vehicle marking means. The description of the declaration scheme is given in Appendix No. 19 of this technical regulation.

Evidence material according to Appendix No. 5 to this technical regulation is the general technical description of the vehicle according to paragraph 1.1.1 of this Appendix.

As an evidentiary materials to confirm compliance with the type of transport means (chassis) requirements of applications N_2N_2 , 3 and 6 of this technical regulation, the authority for certification shall be submitted:

- 1.1.2.1. issued by the authorities for certification, included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union, the certificates of conformity;
- 1.1.2.2. issued accredited testing laboratory protocols certification tests tra nsport means in relation to the individual requirements of the list of applications N_2 2 to this technical regulation and (or) the protocol identification and the results of testing of the complete transport means.

These protocols must be accompanied by certified accredited test laboratory technical descriptions of the type of transport means in relation to the individual requirements of the

of applications № 2 to present technical regulations. Technical descriptions are made by the applicant in accordance with the requirements of UNECE Regulations, the global technical regulations or standards included in the list of standards containing rules and methods of researches (tests) and measurements, in that those rules of selection of samples needed for the application and performance requirements

technical regulations of the Customs Union "On the safety of wheeled transport means" and the implementation of evaluation (confirmation) of conformity of products,

or provide abbreviated names.

For the purposes of this sub-test reports are recognized, issued by testing laboratories accredited by the states - members of the Customs Union, or stated in a technical services participating States Agreement 1958 year;

1.1.2.3. in the case of special and specialized vehicles - the protocols of identification certification tests issued vehicle and an accredited testing laboratory in relation the applicable requirements to of Appendix No. 6 to this technical regulation, as well as other evidentiary materials provided for by the specified annex. These reports should be accompanied by decorated in accordance with the requirements of paragraph second paragraph 1.1.2.2 The technical descriptions of the type of vehicle in the part that deals with the equipment under test to match the requirements of the application number 6.

In an evidentiary materials also allowed the submission of documents certifying compliance with the established in the transport vehicle working equipment requirements of technical regulations of the Customs Union "On the safety of machinery and equipment."

In the case of special and specialized vehicles, evidentiary materials are documents certifying compliance with the requirements of this technical regulation of basic vehicles or chassis (vehicle type approval, chassis type approval, certificates of conformity), certified by their manufacturers or certification bodies.

1.1.2.4. in the case of the chassis - issued by an accredited testing laboratory protocols of certification tests in relation to the individual requirements of the of the list application number 2 of the complete vehicle chassis to the of the same or test reports incomplete manufacture of transport means (if its design allows you

to carry out such tests in accordance with established methods) and (or) its components.

These protocols must be accompanied by technical descriptions of the vehicle type, drawn up in accordance with the requirements of the second paragraph of clause 1.1.2.2;

- 1.1.2.5. type approval messages in relation to UNECE Regulations issued in countries party to the 1958 Agreement. With regard to the requirements for which such messages are submitted, the documents provided for in clauses 1.1.2.2 and 1.1.2.4 are not provided;
- 1.1.2.6. when assessing the compliance of transport means, produced on the or on the chassis of base other transport means - the of transport means or the approval of the type approval of chassis, designed according to of the type the basic transport means or the base chassis - to that extent, in a design of the base of the transport means (chassis) is not different from the design of the transport means made on their basis.

In relation to the individual requirements of the list of the application number 2, as in the case of special and specialized transport means in relation to used with taking into account the specifics of the use of transport funds requirements application number 6 to the present technical regulations - can be submitted certificates issued by other certification bodies.

Note:

When the presence of messages on the official approval of the type of transport means of Regulation ECE UN presentation copies of messages on the official approval in respect of certain types of components falling under the effect of these Rules ECE UN and mentioned in the report of the official approval of the type of transport means, not necessarily.

1.1.3. certificate of conformity of the quality management system applied by the manufacturer. In the absence of such a certificate, a description of the production conditions is provided in an amount that provides the possibility of analyzing documents in accordance with Appendix No. 13 to the technical regulation, and a plan for monitoring the compliance of products with the requirements of technical regulations, indicating the volume and frequency of inspections and control tests, the number of samples tested, as well as the location of inspections;

- 1.1.4. a document on the assignment in the prescribed manner of the international identification code of the vehicle manufacturer (for vehicles manufactured in the common customs territory of the Customs Union);
 - 1.1.5. manual (instruction) for the operation of the vehicle;
- 1.1.6. for vehicles supplied under a state defense order the results of tests and measurements independently carried out by the manufacturer in the process of creating a vehicle, or the results of acceptance (state) tests carried out in an accredited testing laboratory, as well as documents confirming the fulfillment of special requirements established by government customers ...
- 1.2. The applicant, not being the manufacturer of the product, shall submit to the certification body of the agreement between the manufacturer and the applicant about granting the manufacturer authority to the applicant to conduct assessment of conformity and of solidarity with the manufacturer's responsibility to ensure the safety of products in the states members of the Customs Union in accordance with its requirements.
- 1.3. In the case of assessment of compliance with transport means made on the basis of chassis and vehicles, purchased from a third-party, in addition to the documents listed in paragraph 1.1 of this application, in the body of the certification shall be submitted:
- 1) a document confirming the approval of the change (preservation) of the trademark and commercial name of the vehicle at the current stage of production;
- 2) a detailed description of all changes and additions made to the design of the base vehicle (chassis);
- 3) a document in which the mutual obligations of both manufacturers on the circulation of technical documentation between them are agreed (obligations on mutual notification, on changes, etc.);
- 4) document (the separation list), in which the two manufacturers agreed on their responsibility for ensuring compliance with each requirement of safety, the incoming in the nomenclature of the application number 2 to the technical regulations, as well as consolidation of their respective control tests transport means;

5) certified in the prescribed manner a copy of the documents certifying conformity of the chassis or the transport means purchased from a third-party manufacturer, the requirements of technical regulations;

- 6) in the case of expiry of the approved vehicle type funds (approved type chassis), issued on the basic transport equipment (chassis) copies of documents identifying the transport means (chassis), the base vehicle (chassis).
- 1.4. In the course of conformity assessment carried out for the first time in relation to a vehicle type, the assembly of which is carried out only from assembly kits in the industrial assembly mode, in relation to structural analogs of which, manufactured under conditions of another production, a conformity assessment was previously carried out, in addition to the documents listed in paragraph 1.1 of this applications are presented:
- 1) documents confirming the origin of the components supplied to the assembly plant;
- 2) a document certifying the receipt by the manufacturer of vehicles manufactured in the industrial assembly mode on the unified customs territory of the Customs Union of design, technological and other technical documentation in the amount ensuring that the manufactured products comply with the relevant requirements of the technical regulations;
- 3) letter of a foreign manufacturer of transport means of the absence of structural changes in the transport means, the production of which will take place in the states members of the Customs Union of respect to the transport means, let out a foreign manufacturer a party to the agreement on industrial assembly;
- 4) permit foreign manufacturer party agreement on industrial assembly to use for the evaluation of compliance of transport vehicles made in the mode of industrial assembly, evidentiary material obtained by the foreign manufacturer;
- 5) documents confirming the agreement of manufacturers participants of the agreement on industrial assembly about the change (or preserving) the trade mark and commercial name of the transport means, produced in the mode of industrial assembly;
- 6) documents in which the established mutual obligations of manufacturers participants of the agreement on industrial assembly on handling the technical documentation (the obligations of mutual notification of the introduced changes, the possibility of transmission of the documentation of the third party and so on).
 - 2. Conformity assessment in the form of typeapproval in relation to the chassis

- 2.1. In order to obtain approval of the chassis type, the applicant submits to the certification body :
- 1) a general technical description of the object in respect of which the conformity assessment is being carried out, in an amount sufficient to issue the type approval of the chassis, including the drawings necessary for its identification. Documents submitted in two copies, with indication of the date of their preparation, name and position of the signatory of the person;
- 2) the evidence available on the date of filing the application confirming the compliance of the chassis with the requirements of the technical regulations;
- 3) certificate of conformity of the quality management system applied by the manufacturer. In the absence of such a certificate, the applicant submits a description of the production conditions in a volume that provides the possibility of analyzing documents in accordance with Appendix No. 13 to the technical regulation and a plan for monitoring the conformity of manufactured products to the requirements of the technical regulation, indicating the volume and frequency of inspections and control tests, the number of samples tested, as well as the location of inspections;
- 4) a document on the assignment in the prescribed manner of an international identification code to a vehicle manufacturer (for chassis manufactured in the common customs territory of the Customs Union);
- 5) a declaration of conformity of the chassis marking with the requirements of Appendix No. 7 to the technical regulation, and a description of the chassis marking in accordance with the "chassis type approval" form (Appendix No. 15 to the technical regulation).

Note:

When the presence of messages on the official approval of the type of transport means of Regulation ECE UN presentation copies of messages on the official approval in respect of certain types of components falling under the effect of these Rules ECE UN and mentioned in the report of the official approval of the type of transport means, not necessarily.

- 2.2. An applicant who is not a manufacturer of the product shall submit a letter from the manufacturer in accordance with paragraph 1.2 of this annex.
 - 3. Evaluation of compliance in the form of technical design expertise money transport means

- 3.1. In order to obtain a safety certificate for the construction of a vehicle, the applicant submits to an accredited testing laboratory:
- 1) application to conduct assessment of conformity of the form, established by an accredited test laboratory, which must include: name of the applicant, the information necessary for the conclusion with it of the contract on carrying out work on the evaluation of conformity, the name and type of the vehicle identification number of the transport means , the name of the vehicle manufacturer;
 - 2) an identity document of the applicant;
- 3) a document confirming the right of ownership or use and (or) disposal of the vehicle;
- 4) for the transport of funds, which are the result of individual technical creativity, document of assignment of identification of the transport numbers means;
- 5) general technical description of the transport means in volume, sufficient for registration of a certificate of safety design of the transport means in accordance with the form shown in Annex N_2 17 to the technical regulations;
- 6) evidentiary materials (if any) that confirm compliance with the requirements of technical regulations.

Such materials can be: copies of certificates for components;

design or other technical documentation on which the products are manufactured;

drawings of original parts and flow charts of their production or corresponding sketch documentation;

in the case of special and specialized transport means

- Protocols of vehicle identification and certification tests issued by an accredited testing laboratory in relation to the applicable requirements of Appendix No. 6 to this technical regulation, as well as other evidentiary materials provided for by this annex.
- 3.2. When assessing the conformity of the transport means, manufactured with the use of the transport means, compliance with which the technical regulations had previously been confirmed, further provided:
- 1) a technical description containing a list of changes made to the design of the base vehicle;

- 2) design or other technical documentation for variable elements of the vehicle structure;
- 3) document Harmonization originals holder design with the design documentation for the basic transport means, confirming the possibility of constructive use of the base vehicle in a new development or conclusion manufacturer of the base vehicle on the possibility of its use for the changed design (if any);
- 4) a copy approval type transport means on the base for transport means (if available).
 - 4. Confirmation of conformity of vehicle components in the form of mandatory certification
- 4.1. For carrying out mandatory certification of the applicant may submit as agreed in the certification body:
- 1) application to conduct certification on a form established by the certification body. which must include: of applicant, the name information necessary for the conclusion with it of the contract on carrying out of works on certification, the name of the product, as well as information about confirming compliance products previously issued documents the the requirements of technical regulations;
- 2) a general technical description of the type of vehicle component, containing the name and address of the manufacturer of the components, a list of vehicles for installation on which the components are intended, information about the marking, the purpose of the components, a description of the action of the components (if necessary), other information that the applicant deems necessary cite in the general technical description;
- 3) the evidence available on the date of filing the application confirming the compliance of the product with the mandatory technical requirements, including the results of design calculations, performed inspections, test reports.

In an evidentiary materials confirming compliance with the requirements of the components of the application number 10 to the present technical regulations, in the body for certification may be submitted:

- 1) reports of certification tests issued by accredited testing laboratories;
- 2) Posts of type approval in accordance with Regulation ECE UN, issued in member countries of the Agreement 1958 year;
- 3) other evidentiary materials confirming compliance with foreign national or international technical regulations, if the certification

body conducting the confirmation of conformity has established the equivalence of such regulations to the requirements of this technical regulation. In this should be confirmed by testing laboratory competence, issuing protocols tests used in an evidentiary material.

- 4) certificate of conformity of the quality management system applied by the manufacturer. In the absence of such a certificate, the applicant submits a description of the production conditions in a volume that ensures the possibility of analyzing documents in accordance with Appendix No. 13 to the technical regulation;
- 5) manual (instruction) for operation (if any), drawings, specifications, other documents containing requirements for components;
- 6) a list of used national standards used to ensure the compliance of components with the requirements of technical regulations;
- 7) copies of the manufacturer's normative documents governing the methods of ensuring and controlling the compliance of the manufactured products with the requirements of technical regulations, indicating the volume and frequency of inspections, the number of tested samples, as well as the location of inspections;
- 8) protocols of control tests, reports of production analysis and other documents based on the results of mandatory certification and control of certified products (when certifying products for a new period);
- 9) Declaration suppliers importer, confirming that the components supplied in a replaceable (replacement) portions coming from a warehouse, located under the control of the manufacturer of the transport means (chassis), to which is given approval type transport means (approval type chassis) with the application confirming documents ...
- 4.2. The applicant, not being a manufacturer of products, is also a letter of the manufacturer in the body of the certification, confirming:
- 1) The powers of the applicant to conduct work on the assessment of conformity;
- 2) the manufacturer's obligations to comply with the provisions of the technical regulations concerning him .
- 4.3. The manufacturer of a vehicle (chassis) to obtain a certificate of conformity for components based on the results of the conformity assessment of a vehicle (chassis) submits to the certification body:
- 1) an application for holding the appropriate certification procedure in the form prescribed by the certification body, which should be indicated: name of applicant, the information necessary for the conclusion with it of the contract on carrying out of works on certification;

- 2) a list of components supplied in as replacement parts;
- 3) a list of types of transport means with the indicating numbers approvals type transport means (approvals type chassis), to which are components supplied;
- 4) a list of countries of origin of these spare parts at the time of application;
 - 5) copies of vehicle type approvals (chassis type approvals);
- 6) document (an vehicle manufacturer (chassis)), confirming that the same components of the vehicle are supplied as spare parts, and as components for assembly of the transport means (chassis).
- 4.4. Manufactured components for obtaining the certificate of conformity to the components that are supplied as spare parts, on the basis of the results of evaluation of conformity of the transport means (chassis) is in the certification authority:
- 1) a letter of the manufacturer of the transport means of confirming that the manufacturer of spare parts is a supplier of components for the assembly of vehicles (chassis) or the declaration of the manufacturer of spare parts, or its official dealer, confirming their delivery to the assembly of a particular transport means (chassis);
- 2) a list of components, supplied in a replaceable (replacement) part, with an indication of their type and the applicability of a transport means, on which issued approval type transport means (approval chassi s type);
- 3) copies of vehicle type approvals (chassis type approvals), certified by the certification body that issued them.

APPENDIX No. 13
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

PERECHENL

the main issues studied in the analysis of the state of production, the rules and procedure for checking production conditions

1. Analysis of the state of production

1.1. Analysis of the documentation submitted by the applicant

The analysis is carried out on the documentation attached to the application for product conformity assessment .

During the analysis of documents, the following is assessed:

- 1) the effectiveness of the manufacturer's management structure with respect to the performance of quality management systems and product conformity;
- 2) allocation of management responsibilities in relation to quality assurance and product conformity;
- 3) the availability of documented technological processes in relation to the involved production equipment;
- 4) the sufficiency of the nomenclature of documented procedures to ensure compliance with mandatory requirements in the development, production and modernization of products;
- 5) the existence of documented methods and procedures that ensure the regular submission to the manufacturer's governing bodies of information on the results of the functioning of quality management systems and ensuring the conformity of products to types that have passed the conformity assessment procedure and the requirements of technical regulations;
- 6) the adequacy of the procedures of control (test) perform mandatory requirements to products, in fact including performance limitations set note 24) to the list of requirements established in Annex number 2;
- 7) the existence of procedures for the development and control of the implementation of corrective actions.
 - 1.2. Checking production conditions

A typical production inspection plan should generally include an examination of the following issues:

- 1) the organization of the manufacturer's work (management structure, responsibility and authority of management and executors);
 - 2) management of product development and conformity assessment;
- 3) ensuring the quality of products in the production process, including availability;
- 4) ensure conformity of manufactured in handling product types passed the procedure of assessment of conformity of the requirements of technical regulations;
 - 5) organization of final (acceptance) control of products;
 - 6) registration of quality data;
 - 7) implementation of corrective action procedures;
- 8) availability of access to equipment to check the compliance of products with the requirements of this technical regulation;
 - 9) organization of a system of metrological support of production;
- 10) the procedure for marking products with a conformity mark (a unified mark of product circulation on the market of the Member States of the Customs Union);
- 11) organization of informing consumers about the frequency of replacement of components with a limited working resource and providing the sold products with appropriate spare parts.

2. Rules and procedure for checking production conditions

- 2.1. This procedure is applied when assessing the conformity of products to the requirements of this technical regulation in order to check on-site the presence and sufficiency of the actions provided by the manufacturer to ensure the constant compliance of products with the requirements of this technical regulation.
- 2.2. The production conditions are checked by the certification body . By his decision, the audit may involve

specialists from other competent organizations. The certification body may entrust the organization and conduct of inspection of production conditions on its own behalf to another competent organization accredited to carry out similar activities.

2.3. Verification of the production conditions of specific products is carried out according to a specially developed or standard plan for a group of similar products, approved by the certification body. When conducting an inspection, the list and depth of study of issues should be adjusted taking into

account the individual characteristics of the manufacturer being inspected (type and volume of production, volumes and method of organizing the supply of components, other activities, etc.).

2.4. The manufacturer and the applicant (if he is not the manufacturer) provide the necessary conditions for carrying out verification of conditions of production, including unhindered access of the inspectors to facilities inspection, as well as to the documentation, which is carried out by the manufacturer in order to meet the requirements of this technical regulation.

A manufacturer's failure to comply with this paragraph may serve as the basis for a decision to suspend or terminate the conformity assessment procedure .

- 2.5. Manufacturer of products takes part in the implementation of the necessary measures for checking the conditions of the production companies, attracted to them for the implementation of technological operations, as well as suppliers of components, if the authority of the certification made the decision on the need to check the conditions of production in these organizations.
- 2.6. The results of checking production conditions are drawn up in an act, which gives estimates for all items of the work plan, on the basis of which a conclusion is made on one of the following options:
- 1) The manufacturer at the inspected production has the necessary conditions for the release of products in accordance with the established requirements.
- 2) The manufacturer at the inspected production basically has the conditions for the release of products in accordance with the established requirements.

In this case, recommendations are given to eliminate the noted minor inconsistencies.

3) The manufacturer at the inspected production does not have the necessary conditions for the release of products in accordance with the established requirements (negative conclusion).

In this case, conditions are formulated, the fulfillment of which is necessary to obtain a positive conclusion.

Negative results of the conducted audit are grounds for suspending the execution of documents certifying compliance with the requirements of this technical regulation, until the implementation of the planned corrective measures.

2.7. The results of checking the production conditions are taken into account when establishing the frequency and features of the control program of

the certification body for the objects in relation to which the assessment of compliance with the requirements of this technical regulation is conducted .

2.8. If the certification body is at the same time an organization that certifies the quality management system of a manufacturer of products, issues related to ensuring the conformity of products are studied in the process of certification or supervision of the certified quality management system .

APPENDIX No. 14
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

(the form)

Customs union

APPROVAL OF THE TYPE OF TRANSPORT MEANS

(account number of the form)

No. _____
Term action with on

CERTIFICATION BODY: (full and abbreviated name, address, number, end of period action certificate

accreditation) TRANSPORT ME

ANS

BRAND
COMMERCIAL NAME TYPE
BASIC TRANSPORT MEANS / CHASSIS only when

using
a parent vehicle /
chassis
from another man
ufacturer

MODIFICATIONS CATEGO RY ENVIRONMENTAL CLASS APPLICANT AND IT S ADDRESS

MANUFACTURER AND ITS ADDRESS MANUFACTURER'S REPRESENTATIVE AND ITS ADDRESS

ASSEMBLY PLANT AND ITS ADDRESS SUPPLIER OF ASSEMBLY KITS AND ITS ADDRESS

only when applying the procedure provided for in paragraph 36 of the technical regulation

meet the requirements of the technical regulations of the Customs Union "On the safety of wheeled vehicles . "

The of this APPROVAL OF THE TYPE OF VEHICLE applies to mass-produced products / batch of vehicles in the number of pieces. from identification numbers (VIN) from to

This APPROVAL TYPE OF TRANSPORT MEANS without applications are not valid.

Appendix No. 1. General characteristics of the vehicle Appendix No. 2 List of documents that served as the basis for

Your TYPE APPROVAL OF TRANSPORT MEANS

Appendix No. 3 Description of vehicle markings Appendix No.

4 General view of the vehicle on ... pages

ADDITIONAL INFORMATION (if necessary it is a record of the compulsory registration of special permits for movement of the transport means on the territory of the states - members of the Customs Union, specified limitations on the use on roads of general use, possibility to use for commercial passenger transport, etc.)

| | Head of th | ne certification body | | |
|----------------|------------------|--------------------------------------|-----------------|-------------------|
| | | | signature | initials, surname |
| | Date of registra | ntion " " | | |
| | APPROVAL OF | THE TYPE OF TRANSF | PORT MEANS APPR | ROVED. |
| | | | | |
| | | | | |
| | An entry was ma | de in the register for No | o. from | |
| | | | | |
| | | | | |
| | Head (Deputy H | (ead) | | |
| | Name | e of the authorized body of state ma | nagement | |
| | | | | |
| | | | | |
| nature initial | , surname | | | |

Appendix No. 1 to the APPROVAL OF THE TYPE OF VEHICLE

GENERAL FEATURES OF TRANSPORT MEANS

Number and arrangement of wheels (only for vehicles of category L) Number of axles / wheels (only for vehicles of category O)

Wheel formula / driving wheels (except for vehicles of category O)
The circuit arrangement of the transport means (with the exception of the transport means category O)

Engine location

Body type / number of doors (only for vehicles of category M)

Execution of the boot space (only for the transport means of categories N and O)

Appointment (only for special and specialized transport means)

Number of places for seating (only for the transport means of categories M and L, for the transport of funds category M₁- with the distribution of the rows)

Passenger capacity (only for vehicles of categories M₂ and M₃)

The total volume

of luggage compartments (only for vehicles of category M₃ class III)

Cab (only for vehicles of category N) Frame (only for vehicles of category L) Overall dimensions, mm

- length
- width
- height (for container ships -

loading, maximum permissible)

Base, mm

 $\label{transport} Track\ front\ /\ rear\ wheels\ (for\ the\ exception\ of\ single\ transport\ means\ category\ L),\ mm$

Mass transport means to curb state kg

Technically permissible maximum vehicle weight, kg

Technically permissible maximum weight, attributable to each of the axes of the transport means, starting with the front axle, kg Technically permissible maximum mass of a road train (only for vehicles of categories N), kg

Maximum trailer weight, kg

- trailer without braking system
- trailer with braking system

Technically permissible maximum fifth wheel load, daN

Description of the hybrid vehicle: provided or not provided for recharging from an external source; prescribed modes of operation (transfer) only engine internal combustion engine, the electric motor alone, combined (brief description of the mode of operation)

Ignition

system (type) Distributor
(mark) Switch (mark)
Ignition coil (module) (marking)
Candles (marking)

System release and neutralization of the fulfilled gases

Neutralizers (marking) - 1 stage

- Stage

2 Silencers (marking) - Stage 1

- 2nd stage

- stage 3

Filter the solid particles

Electric car electric motor

(brand, type)

Working voltage, V

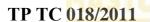
Maximum 30-minute power, kW

(direct or alternating current, in the case of alternating current - synchronous or asynchronous, the number of phases)

Apparatus accumulation of energy (only for EVs

and hybrid vehicles) (battery, capacitor, flywheel / generator) Battery (brand, type) Electrochemical pair Number of cells Weight, kg, Operating voltage, V Capacity, Ah

Location **Condenser** (brand, type) Energy capacity, J **Flywheel** / **generator** (brand, type)



Transmission (type and description

of transmission scheme)

cription of each electric machine: main function (motor or generator), direct or alternating current, in the case of alternating current - synchronous or asynchronous, number of phases)

Maximum 30-minute power, kW Clutch (brand, type) Box Gear (brand, type) number of gears and gear ratios Transfer case (type) number of gears and gear ratios Final drive (type)

- gear number
- gear ratio of the intermediate gear

(only for vehicles of category L)

Suspension

Front (description)
Rear (description)
Steering Control (description)

- steering gear (type) **Brake systems** Working (description) Spare (description) Parking (description) Auxiliary (wear-resistant) (description)

| Head of the certification body | |
|--------------------------------|-----------------------------|
| | signature initials, surname |

Note on filling:

Details of labeling components can not be

specified in general technical description protocol identification and the results of testing of the complete transport means and application N_2 1 approval vehicle type or type approval chassis if they are not contained in the evidentiary materials for individual requirements application N_2 2 of the present technical regulation.

Appendix No. 2 to the APPROVAL OF THE VEHICLE TYPE

The list of documents that served as the basis for issuing the APPROVAL OF THE TYPE OF VEHICLE

| Object elements technical regulation in respect of which set requirements security | Name and the origin of the document, confirming conformity | ocument number and date of issue |
|--|--|-------------------------------------|
| | | |

| Head of the certification | body_ | |
|---------------------------|-------|-----------------------------|
| | | signature initials, surname |

Note on filling:

For UNECE Regulations $N_{2}N_{2}$ 30, 54, 75, 88, 117 in the protocol identification and results of testing of the complete transport facilities and in Appendix 2 approval number of the vehicle type (type-approval of the chassis) is a note of the following content: "allowed the installation of tires, the respective criteria the dimensions, the

minimum allowable index load, minimum speed category and have excellent from these confirming compliance documents, when available on tire labeling of R egulation ECE UN

Number 30 or 54, as well as by the Regulations ECE UN number 117 under the condition of in the body of the certification information of the specified label."

Appendix No. 3 to the APPROVAL OF THE VEHICLE TYPE

DESCRIPTION OF VEHICLE LABELING

| 1. | Place the location and shape of a single sign -treatment on the market states - |
|----|---|
| | members of the Customs Union: |

- 2. Place location signs Manufacturer:
- 3. Place location identification numbers:
- 4. Structure and content of identification number (s) transport means:

| one | 2 | 3 | four | five | 6 | 7 | eight | nine | 10 | eleven | 12 | 13 | fourteen | fifteen | sixteen | 17 |
|-----|---|---|------|------|---|---|-------|------|----|--------|----|----|----------|---------|---------|----|
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | i |

| Head of the certification body | y |
|--------------------------------|-----------------------------|
| | signature initials, surname |

Note:

The typographic form of the document form is approved by the decision of the Commission of the Customs Union.

APPENDIX No. 15 to the technical regulations of the Customs Union

"On the safety of wheeled vehicles funds" (T R CU 018/2011)

(the form)

Customs union

CHASSIS TYPE APPROVAL

| | (account number of the form) |
|------------------------|---|
| No | |
| Term action with on _ | |
| BODY ON CERTIFICATION: | |
| | (full and abbreviated name, address, number |
| | the end of the term of action of the certificate of |

accreditation)

CHASSIS

BRAND COMMERCIAL NAME TYPE

MODIFICATIONS CATEGO RY ECOLOGICAL CLASS

MANUFACTURING OPTION (specify from

the following: chassis with a cabin and engine, bus chassis without a body for frame buses , bus chassis without a body for frame buses , cargo chassis without a cabin for

the manufacture of vehicles with a special cabin, cargo chassis with

a partially assembled cabin (

without rear wall), chassis with a front part of a cabin for the manufacture of car-houses, the front part of a chassis without a cabin for the manufacture of carhouses, trailer

chassis) APPLICANT AND ITS ADDRESS

MANUFACTURER AND ITS ADDRESS MANUFACTURER'S REPRESENTATIVE AND ITS ADDRESS ASSEMBLY PLANT AND ITS ADDRESS SUPPLIER OF ASSEMBLY KITS AND ITS ADDRESS

(only when applying the procedure provided for in paragraph 36 of the technical regulation)

| meet the requirements of technical regulations of | |
|--|-----------------------|
| the safety of wheeled transport means" of | on the list |
| of requirements in accordance with Annex № | 2 to |
| the present ENDORSEMENT chassis type. | |
| The effect of this CHASSIS TYPE APPROVAL approach of unfinished vehicles (chassis) in the third that the control of the contro | - |
| pcs. with identification numbers (VIN) from to | D |
| This CHASSIS TYPE APPROVAL without attachm | nents is not valid. |
| Appendix No. 1 General characteristics of the chassis | |
| ix No. 2 List of documents that served as the basis for registration of | f |
| the CHASSIS TYPE APPROVAL | |
| Appendix No. 3 Description of chassis | |
| markings Appendix No. 4 General view of | |
| the chassis on pages | |
| ADDITIONAL INFORMATION (if necessary specification of movement of their progress, the proads of general use, etc.). | • |
| Head of the certification body | |
| signat | ure initials, surname |
| Date of registration " " | |
| APPROVAL OF TYPE CHASSIS APPROVED. | |
| | |
| | |
| An entry was made in the register for No. from | |
| Head (Deputy Head) | |

Name of the authorized body of state management

signature initials, surname

Appendix № 1 to type approval

CHASSIS GENERAL CHARACTERISTICS CHASS

IS

Number of axles / wheels (only for vehicles of category O)

Wheel formula / driving wheels (except for vehicles of category O)
The circuit arrangement of the transport means (with the exception of the transport means category O)

Engine location

Type Body / number of doors (only for the transport means of categories M and O)

Cab (only for vehicles of categories N)

Overall dimensions, mm

- length
- width

-

Base he

ight, m

m

Track front / rear wheels, mm

Weight of the chassis in running order, kg

Technically permissible maximum vehicle weight, kg

Technically permissible maximum weight, attributable to each of the axes of the transport means, starting with the front axle, kg

Description of the hybrid vehicle: provided or not provided for recharging from an external source; prescribed modes of operation (transfer) only engine internal combustion engine, the electric motor alone, combined (brief description of the mode of operation)

Fuel system (type) Carburetor (type, marking) Control unit (marking) High pressure pump (type, marking) Injectors (type, marking)
A blower (type, labeling) Air filter (type marking) mufflers noise inlet (labeling)

- 1 step
- 2nd stage
- stage 3

Ignition

system (type) Distributor
(mark) Switch (mark)
Ignition coil (module) (marking)
Candles (marking)

System release and neutralization of the fulfilled gases

Neutralizers (marking) - 1 stage

- Stage

2 Silencers (marking) - Stage 1

- 2nd stage

- stage 3

Filter the solid particles

Electric car electric motor

(brand, type)

Working voltage, V Maximum 30-minute power, kW

(direct or alternating current, in the case of alternating current - synchronous or asynchronous, the number of phases)

and hybrid vehicles) (battery, capacitor, flywheel / generator)

Battery (brand,
type) Electrochemical
pair Number of
cells Weight, kg,
Operating voltage,
V Capacity, Ah
Location Condenser (brand,
type) Energy capacity, J Flywheel /
generator (brand, type)
nex 7 to Regulation ECE UN number 101)

of transmission scheme)

cription of each electric machine: main function (motor or generator), direct or alternating current, in the case of alternating current - synchronous or asynchronous, number of phases)

Working voltage, V
Maximum 30-minute power, kW Clutch (brand, type)
Box Gear (brand, type)
number of gears and gear ratios Transfer case (type)
number of gears and gear ratios Final drive (type)

- gear number
- gear ratio of the intermediate gear

(only for vehicles of category L)

Suspension Front (description)

Rear (description) **Steering Control** (description)

- steering gear (type)

| Head of the certification body | |
|--------------------------------|-----------------------------|
| | signature initials, surname |

Note on filling:

Details of labeling components can not be specified in general technical description protocol identification and the results of testing of the complete transport means and application N_2 1 approval vehicle type or type approval chassis if they are not contained in the evidentiary materials for individual requirements application N_2 2 of the present technical regulation.

List of documents that served as the basis for registration of the CHASSIS TYPE APPROVAL

| Object element | Name and | |
|--|---|----------------------------------|
| technical regulation in respect of which set requirements security | the origin of the document, confirming conformity | ocument number and date of issue |
| | | |
| | | |

| Head of the certification body | | |
|--------------------------------|-------|------------------------|
| | signa | ture initials, surname |

Note on filling:

For UNECE Regulations N
otin N
otin 30, 54, 75, 88, 117 in the protocol identification and results of testing of the complete transport facilities and in Appendix 2 approval number of the vehicle type (type-approval of the chassis) is a note of the following content: "allowed the installation of tires, the respective criteria the dimensions, the

minimum allowable index load, minimum speed category and have excellent from these confirming compliance documents, when available on tire labeling of R egulation ECE UN

Number 30 or 54, as well as by the Regulations ECE UN number 117 under the condition of in the body of the certification information of the specified label."

Appendix № 3 to type approval

CHASSIS DESCRIPTION LABELING OF CHASSIS

- 1. Place the location and shape of a single sign -treatment on the market states members of the Customs Union:
- 2. Place location signs Manufacturer:

- 3. Place location identification numbers:
- 4. Structure and content of chassis identification number (s):

| on | e | 2 | 3 | four | five | 6 | 7 | eight | nine | 10 | eleven | 12 | 13 | fourteen | fifteen | sixteen | 17 |
|----|---|---|---|------|------|---|---|-------|------|----|--------|----|----|----------|---------|---------|----|
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| Head of the certification body | |
|--------------------------------|----------------------------|
| | signature initials, surnam |

Note:

The typographic form of the document form is approved by the decision of the Commission of the Customs Union.

APPENDIX No. 16
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

(the form)

Customs union

NOTICE OF CANCELLATION OF DOCUMENT OF CONFORMITY TECHNICAL REGULATIONS OF THE CUSTOMS UNION

"On SAFETY WHEEL MOTOR VEHICLES"

(account number of the form)

| (type of document certifying compliance) | |
|---|------------|
| No | |
| Term action with on | |
| BODY ON CERTIFICATION: (full and abbreviated name, address, numlend of the term of action of the certificate of accreditation) | per of the |
| In connection with | |
| (description of the reasons for cancellation of the document) | |
| (type of document certifying compliance) | |
| FOR TRANSPORT AND EQUIPMENT (CHASSIS) | |

BRAND COMMERCIAL NAME TYPE

| with " " d. CANCELED | |
|--|-----------------------------|
| Head of the certification body | signature initials, surname |
| Date of registration " " | |
| An entry was made in the register for No. from | m |
| Head (Deputy Head) | |
| | |
| | |
| Name of the authorized body of state managen | nent |
| signature initials, surname | |

Note:

The typographic form of the document form is approved by the decision of the Commission of the Customs Union.

APPENDIX No. 17
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

(the form)

Customs union

CERTIFICATE OF SAFETY CONSTRUCTION TRANSPORT MEANS

| | (account number of the form) |
|--------------|--|
| No. | |
| Testing labo | ratory |
| | (full and abbreviated name, address, number |
| | the end of the term of action of the certificate of accreditation) |

TRANSPORT MEANS

GENERAL FEATURES OF TRANSPORT MEANS

TP TC 018/2011

Number of seats front / rear (for category $M_{\scriptscriptstyle \perp}$)

Loading space execution (for category N)

Cab (for category N) Passenger

capacity (for categories M $_2$, M $_3$)

The total volume of luggage compartments

(for category M₃ class III) Number of seats (for categories M₂, M₃,

L) Frame (for category L)

Number of axles / wheels

(for category O)

Mass transport means to curb state kg

Technically permissible maximum vehicle weight, kg

Overall dimensions, mm

- length
- width
- Base height, mm

Track front / rear mm **Description hybrid vehicle means**

Engine internal combustion (Brand,

a type)

- number and arrangement of cylinders
- working volume of cylinders, cm $^{\scriptscriptstyle 3}$
- the degree of compression

Recharging from an external source is provided or not; prescribed modes of operation (transfer) only engine internal combustion engine, the electric motor alone, combined (a brief description of the mode of operation)

```
- maximum power, kW
(min -1)
Fuel
Power system (type)
System ignition (type)
Release and neutralization system of exhaust gases
Electric vehicle electric motor (brand,
a type)
```

Working voltage, V
Maximum 30-minute power, kW **Power storage device** (for electric vehicles and hybrid vehicles means)

(direct or alternating current, in the case of alternating current - synchronous or asynchronous, the number of phases)

(battery, capacitor, flywheel / generator)

Transmission (type and description

of transmission scheme)

| cription of | each electric machine: main function (motor or generator), direct or alternating current, in the case of alternating current - synchronous or asynchronous, number of phases) Working voltage, V Maximum 30-minute power, kW Clutch (brand, type) Box Gear (brand, type) Suspension (type) - front - back Steering control (make, type) Braking systems (type) - working - spare - parking Tires (size designation) |
|-------------|---|
| | meet the requirements of the technical regulations of the Customs Union "On the safety of wheeled vehicles ." |
| | ADDITIONAL INFORMATION (possibility of use on public roads without any restrictions or limitations due to excess ratios of dimensions and the axial masses, the possibility of use in a route of the transport means, etc.). |
| | Date of registration " " 20 y |
| | Testing laboratory manager signature initials, surname |
| | Note: The typographic form of the document form is approved by the decision of the Commission of the |

Customs Union.

495

APPENDIX No. 18
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

(the form)

Customs union

CERTIFICATE OF CONFORMITY OF THE VEHICLE WITH IMPROVED SAFETY REQUIREMENTS

00 AA № 000000

TERRITORIAL DEPARTMENT OF AUTHORITY OF THE STATE ADMINISTRATION The SPHERE SAFETY OF ROAD TRAFFIC

(name, address)

TRANSPORT MEANS

GENERAL FEATURES OF TRANSPORT MEANS (after making changes to the design)

Axle / wheel drive circuit layout transport means Type Body / number of doors (for category M₁) Number of seats front / rear (for category M₁) Boot space execution (for category N) Cab (for category N) Passenger capacity (for categories M 2 $, M_3)$ The total volume of luggage compartments (for category M 3 class III) Number of seats (for categories M₂, M₃, L) Frame (for category L) Number of axles / wheels

(for category O) Vehicle curb weight, kg Technically permissible maximum vehicle weight, kg Overall dimensions, mm

- lengthwidth

Base he ight, m

m

```
Track front / rear wheels, mm

Engine (brand, type)

- number and arrangement
of cylinders

- working volume of cylinders, cm <sup>3</sup>

- the degree of compression

- maximum power, kW

(min <sup>-1</sup>)

- maximum torque, Nm (min <sup>-1</sup>)

Fuel

Power system (type)

System ignition (type)
```

Release and neutralization system of exhaust gases

Transmission (type) Clutch (brand, type) Gearbox (brand, type) **Suspension** (type)

- front
- back

Steering control (make, type) **Braking systems** (type)

- working
- spare
- parking

Tires (designation)

Additional equipment

transport means

| In accordance with the conclusion of | " " 20 cit | <u>y of number</u> . | , issued |
|--------------------------------------|------------|----------------------|----------|
| by | _ | | |

(name of the legal entity that issued the opinion on the possibility and procedure for making changes to the vehicle design)

(legal address)

In the construction of the vehicle by the manufacturer of works

patronymic or the name of the legal entity that made changes to the design of the vehicle)

(address of the place of residence or legal address)

the following changes have been made:

(changes in the design are described in detail (type and brand of installed components, installation method, etc.; the new purpose (specialization) of the vehicle) is indicated)

Transport means with amended to design changes corresponds to the requirements of technical regulations of the Customs Union "On the safety of wheeled transport means."

INFORMATION (possibility of use on public roads without any restrictions or limitations due to excess ratios of dimensions and the axial masses, the possibility of use in a route of the transport means, and others).

| | Date of registration " " 20 y |
|--|--|
| Head of the territorial subdivision the state administration body in safety road traffic | |
| | signature initials, surname |
| *Note: The vehicle category Traffic . | y is indicated by the 1968 Convention on Road |
| Note: The typographic for decision of the ComCustoms Union. | rm of the document form is approved by the nmission of the |

APPENDIX No. 19
to the technical regulations of
the Customs Union
"On the safety of
wheeled vehicles funds" (T
R CU 018/2011)

Forms and schemes for confirming compliance with the requirements of technical regulations "On the safety of wheeled vehicles" and recommendations for their choice

Declaration of conformity schemes

1d Applicant:

Provides his own evidence of compliance. Accepts a declaration of conformity for mass-produced products and registers it on a notification basis.

3d Accredited testing laboratory (center):

Conducts tests of a type sample of products. Applicant:
Provides his own evidence of compliance. Accepts a declaration of conformity for massproduced products and registers it on a notification basis.

4d Accredited testing laboratory (center): Conducts random tests of a batch of manufactured products.

Applicant:

Accepts a declaration of conformity for a batch of products and registers it on a notification basis.

6e Certification body for quality management systems: Certifies the manufacturer's quality management system. Accredited testing laboratory (center):

Conducts tests of a type sample of products. Applicant:
Provides his own evidence of compliance. Accepts a declaration of conformity for massproduced products and registers it on a notification basis.

Quality Management System Certification Body: Carries out inspection control of the manufacturer's quality management s ystem.

7e Quality Management System Certification Body: Certifies the manufacturer's quality management system. Applicant:

Conducts product sample tests.

Accepts a declaration of conformity for massproduced products and registers it on a notification basis. Quality Management System Certification Body: Carries out inspection control of the manufacturer's quality management s ystem.

Description of conformity declaration schemes and recommendations for their application

1. Scheme 1e

Scheme 1d is applied by the manufacturer in order to confirm compliance type transport means (chassis) requirements of paragraphs 11 - 15 of the present technical regulations and application N_2 7.

Scheme 1e includes the following steps:

formation by the applicant of evidentiary materials;

acceptance by the applicant of the declaration of conformity and its registration according to the principle of notification .

2. Scheme 3d

It is recommended to use the 3D scheme when it is difficult for the manufacturer himself to ensure that reliable tests of a type sample are carried out, and the characteristics of the product are of great importance for ensuring safety.

The 3d scheme includes the following actions:

testing of a type sample in an accredited testing laboratory;

acceptance by the applicant of the declaration of conformity and its registration according to the notification principle;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union.

3. Scheme 4e

Scheme 4d is recommended to be used for products, the degree of potential hazard of which is quite high.

Circuit 4d is recommended to be used in those cases when the performance of security products are not sensitive to the change of production factors.

Scheme 4d is also used in the case when the seller accepts the declaration of conformity, who is unable to collect his own evidence of the conformity of the product to the requirements of the technical regulation.

Scheme 4e includes the following steps:

conducting tests typical sample of the batch of products in accredited test lab and issuing protocol tests the applicant;

acceptance by the applicant of the declaration of conformity and its registration according to the notification principle;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union.

4. Scheme 6d

Scheme 6d is recommended to be used when the manufacturer himself finds it difficult to ensure the conduct of reliable tests of a type sample, and the characteristics of the product are of great importance for ensuring safety.

At the same time, scheme 6d is recommended to be used in cases where the design (design) of a component is recognized as simple, and the sensitivity of product safety indicators to changes in production and (or) operational factors is high.

Scheme 6e includes the following steps:

testing of a type sample in an accredited testing laboratory;

conducting certification systems management quality of the manufacturer's product authority for certification;

acceptance by the applicant of the declaration of conformity and its registration according to the notification principle;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union;

control of the manufacturer's quality management system by the certification body .

5. Scheme 7d

Scheme 7d is recommended to be used for products, the degree of potential hazard of which is quite high.

Driving 7d can be recommended for confirmation of compliance of complex products in those cases when the performance of security products sensitive to changes in the production and (or) operational factors.

Scheme 7e includes the following steps:

type tests carried out by the applicant or another organization on his behalf;

conducting certification systems management quality product manufacturer, authority for certification;

acceptance by the applicant of the declaration of conformity and its registration according to the notification principle;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union;

control of the manufacturer's quality management system by the certification body .

Mandatory certification schemes

1c Accredited testing laboratory (center):

Conducts tests of a type sample of products. Accredited Product Certification Body: Conducts an analysis of the state of production.

Issues to the applicant a certificate of conformity for mass-produced products.

Carries out inspection control of certified products.

2c Accredited testing laboratory (center):

Conducts tests of a type sample of

products. Accredited body for certification of quality management systems:

Carries

out certification of the manufacturer's quality management system

Issues a certificate for the quality management system to the applicant .

The accredited body for certification of products: Gives the applicant a certificate of conformity on serially manufactured products.

Carries out inspection control of certified products.

3c Accredited testing laboratory (center):

Conducts tests of a type sample of products. The accredited body for certification of products: Gives the applicant a certificate of conformity to the party products.

9c Applicant:

Provides his own proof of product conformity.

Notified Body for certification of products: Conducts analysis of technical documentation provided by the applicant.

Issues a certificate of conformity to the applicant for a batch of limited volume products .

10c Accredited testing laboratory (center):

Conducts tests of a type sample of products. Notified Body for certification of products: Performs analysis of the production Issues to the applicant a certificate of conformity for massproduced products

11c Accredited Testing Laboratory (Center):

Conducts tests of a type sample of products. The accredited body for certification of products: Gives the applicant a certificate of conformity on serially manufactured products.

Carries out inspection control of certified products.

Description of mandatory certification schemes and recommendations for their application

1. Scheme 1c

Scheme 1c is used for mass- produced products, the real sample size of which does not allow the certification body during the validity period of the certificate of conformity to conduct an objective assessment of the manufacturer's ability to ensure the consistency of production with the level of indicators confirmed by certification tests.

Scheme 1c includes the following steps:

submission by the applicant in the body of the certification application to conduct certification with the application of the necessary technical documentation;

consideration of the application by the certification body and making a decision on it;

testing of a typical sample of a component by an accredited testing laboratory;

holding body for the certification analysis state production;

generalization of test results and analysis of the state of production and issuance of a certificate of conformity to the applicant for serially produced products;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union; inspection control of certified products by a certification body.

2. Scheme 2c

Scheme 2c is used for mass-produced products as the preferred one and to the greatest extent meeting the tasks of ensuring product safety and the stability of its performance during production.

Scheme 2c includes the following steps:

submission by the applicant in the body of the certification application to conduct certification with the application of the necessary technical documentation;

consideration of the application by the certification body and making a decision on it;

testing of a typical sample of a component by an accredited testing laboratory;

manufacturer's quality management system certification;

analysis

of test results and certification of the manufacturer's quality management system and issuance of a certificate of conformity to the applicant for serially produced products;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union;

inspection control of certified products and the manufacturer's quality management system by the certification body (s) .

3. Scheme 3c

Scheme 3c is used for a batch of domestic and imported products that do not have a certificate of conformity for the manufacturer's quality management system .

Scheme 3c includes the following steps:

submission by the applicant to the certification body of an application for certification with the attachment of the necessary technical documentation;

consideration of the application by the certification body and making a decision on it;

testing of a typical sample of a component by an accredited testing laboratory;

analysis of test results and issuance to the applicant of a certificate of conformity for a batch of products;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union.

4. Scheme 9c

Scheme 9c is used for a batch of limited volume products supplied from a foreign manufacturer.

Scheme 9c includes the following steps:

the applicant files the certification application authority to carry out certification with the application of necessary technical documentation, part of which is in the obligatory order include evidence of conformity with technical regulations: Information about the conducted studies, records of tests, carried out by the manufacturer or an accredited testing laboratory, and other documents, directly or indirectly confirming the conformity of products to the established requirements;

consideration of the application by the certification body and making a decision on it;

analysis of technical documentation submitted by the applicant; drawing up an opinion based on the analysis of technical

documentation and issuance to the applicant of a certificate of conformity for a batch of products of limited volume;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union.

5. Scheme 10c

10c scheme is used for serial production, when the certification body does not have enough reliable information about possible manufacturer in during the period of action of the certificate of conformity, to ensure consistency of release of products with

the level of indicators confirmed by tests. When using this scheme, the certificate of conformity is issued for one year.

Scheme 10c includes the following steps:

submission by the applicant to the certification body of an application for certification with the attachment of the necessary technical documentation;

consideration of the application by the certification body and making a decision on it :

testing of a typical sample of a component by an accredited testing laboratory;

holding body for the certification analysis state production;

generalization of test results and analysis of the state of production and issuance of a certificate of conformity to the applicant for serially produced products;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union.

6. Scheme 11c

Scheme 11c is used for mass- produced products, the real sample size of which allows the certification body, during the validity period of the certificate of conformity, to conduct an objective assessment of the manufacturer's ability to ensure the consistency of product output with the level of indicators confirmed by certification tests.

Scheme 11c includes the following steps:

submission by the applicant to the certification body of an application for certification with the attachment of the necessary technical documentation;

consideration of the application by the certification body and making a decision on it;

testing of a typical sample of a component by an accredited testing laboratory;

analysis of test results and issuance of a certificate of conformity to the applicant for serially produced products;

if necessary - labeling manufacturer product single sign - treatment products on the market states - members of the Customs Union;

inspection control of certified products by a certification body.