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# ANALYSIS OF REQUIREMENTS FOR WEIGHT AND DIMENSIONAL INDICATORS OF FREIGHT VEHICLES IN THE REPUBLIC OF UZBEKISTAN

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**Abstract**– In order to ensure the safety of highways, the permissible values of mass, axle loads and dimensions of vehicles have been established. Violations of permissible parameters - the movement of vehicles with excess of the permissible mass or axle loads (with or without cargo), leads to premature destruction of the roadway, the cost of unscheduled repairs, and a decrease in the level of road safety. In the course of business activities, it may be necessary to drive with parameters exceeding the permissible values. Vehicles performing such transportation are called heavy and (or) large-sized vehicles (HLV). The movement of vehicles and the transportation of goods in excess of the permissible parameters without special permission is an administrative offense, liability for which is provided for by law. The system of weight and dimensional control (weight control, dimensional control) is designed to detect the facts of movement of vehicles with excess of the permissible weight and (or) dimensional parameters without special permission in order to attract the owners of such vehicles to administrative responsibility and collect funds in order to compensate for the damage caused to the road. The system of weight and dimension control combines weight control and dimension control of vehicles in one whole. The list of normative and legal documents, on the basis of which the system of weight and size (weight, dimensional) control works, is given. The organization of movement on highways of large and heavy vehicles, as well as their overload on wheel axles, requires attention to ensuring the safety of roads and road safety. In this regard, in world practice, in order to prevent a reduction in the service life of road surfaces and ensure road safety, control and limitation by legislative and regulatory acts of the weight and dimensional parameters of vehicles are provided. The permitted weights of vehicles are given (with or without cargo).

**Key words**– Cargo transportation, weight and dimension control, heavy and (or) large-sized vehicles, bulky and heavy cargo, weigh-

ing, weight and dimension control post, dynamic scales, overload, special permission, highways.

## I THE SYSTEM OF WEIGHT AND DIMENSION CONTROL

In order to ensure the safety of highways, the permissible values of mass, axle loads and dimensions of vehicles have been established.[1]

Violations of permissible parameters - the movement of vehicles with excess of the permissible mass or axle loads (with or without cargo), leads to premature destruction of the roadway, the cost of unscheduled repairs, a decrease in the level of road safety.[2] [3] In the course of business activities, it may be necessary to drive with parameters exceeding the permissible values. Vehicles performing such transportation are called heavy and (or) large-sized vehicles (HLV). [1]

The passage of a heavy and (or) large-sized vehicle may be permitted by the Committee on Roads under the Ministry of Transport. [4]

The procedure for permission to travel in excess of the permissible parameters is regulated by the regulatory legal acts of the Government of the Republic of Uzbekistan and the Ministry of Transport.[5][6]

To authorize such travel, the owner of the vehicle shall submit to the Committee for Roads an application in the established form. The Committee for Roads assesses the possibility of passage, approves or denies passage. If agreed, the Committee for Roads issues the owner of the HLV with a corresponding document - a special permit (SP).[5]

The movement of vehicles and the transportation of goods in excess of the permissible parameters without special permission is an administrative offense, responsibility for which is provided for in part two of Article 1251 of the Code of the Republic of Uzbekistan on Administrative Responsibility.

ity. In addition, the Committee for Roads may collect a sum of money from the vehicle owner as compensation for the damage caused to the road and its infrastructure in court. [5]

The system of weight and dimensional control (weight control, dimensional control) is designed to detect the facts of movement of vehicles with excess of the permissible weight and (or) overall parameters without special permission in order to attract the owners of such vehicles to administrative responsibility and collect funds in order to compensate for the damage caused to the road. [7][2][3][8][9][10][11][12][13]

In general, the operation of the system of weight and dimension control of vehicles (for example, the Russian Federation) is shown in Fig.1.[11][14]



**Fig. 1:** The system of weight and dimension control of vehicles (on the example of the Russian Federation)

## II WHY DO YOU NEED A WEIGHT AND DIMENSIONAL CONTROL SYSTEM?

Weight and dimension control is a topic in which, in our country, both the Committee for Roads - an authorized body, state authorities of republican, regional and local significance, as well as freight carriers, owners of trucks, drivers.[3][12]

For the former, the most important thing is to ensure the integrity and safety of their roads, in accordance with numerous regulations, as well as to ensure road safety for all stakeholders. The second is interested in transporting cargo from one point to another as quickly as possible, with minimal costs and safely. Vehicle owners also want their cars to drive on quality, level roads. [3][15][16]

It is clear that if an overloaded truck is driving, which puts a load on the road more than it can withstand, then the road will collapse. Weight control is designed to detect such intentionally or not intentionally overloaded vehicles in order to stop them, stop their movement, force drivers and (or) owners to move part of the cargo to another vehicle, or obtain a special permit to travel. A special permit will be issued by a specialist who will take into account all the parameters of the car with the load, the characteristics of the roadbed and decide how to drive such a car most quickly and safely, without prejudice to each of the countries. For the organization of weight control, the so-called "weight control framework" is established, mobile or stationary points (posts) of weight control are organized.[17][18]

Let's consider another situation. A cargo vehicle with bulky cargo, which exceeds all permissible norms, is moving along the road, often protrudes beyond its lane, even touching the oncoming lane. Drivers of other vehicles have limited visibility; it is difficult to overtake a car with bulky cargo. A nervous emergency situation is created on the road. Reduced traffic safety. Dimensional control of vehicles is designed to check the compliance of vehicle dimensions with the standards of safe travel. Dimensional control can also be carried out by weight control frames. Dimensional control can be performed by specialists of the Committee for Roads in conjunction with inspectors from the State Traffic Safety Inspectorate.[2][19]

The system of weight and dimension control combines weight control and dimension control of vehicles in one whole.

### List of normative legal documents of the Republic of Uzbekistan, on the basis of which the system of weight and size (weight, dimensional) control works:

1. Law of the Republic of Uzbekistan dated October 2, 2007, no. Law of the Republic of Uzbekistan -117 "About automobile roads"[4];
2. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated December 26, 2011 no. 342 "On measures to organize and ensuring safety on highways in the territory of the Republic of Uzbekistan"[5];
3. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated May 28, 2020 no. 337 "On measures to introduce control of weight and dimensional parameters of vehicles", provide for a ban on the movement of heavy and large-sized vehicles on public roads[6].

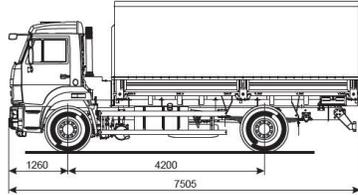
However, due to the lack of a weight and dimensional control system, road carriers manage to bypass the legal requirements.

The organization of movement on highways of large and heavy vehicles, as well as their overload on wheel axles, requires attention to ensuring the safety of roads and road safety. In this regard, in world practice, in order to prevent a reduction in the service life of road surfaces and ensure road safety, control and limitation by legislative and regulatory acts of the weight and dimensional parameters of vehicles are provided[15][16][17][18][19]. Automobile weight control is carried out by determining the vertical forces of the impact of the wheel axle (group of axles) on the roadway[20][21].

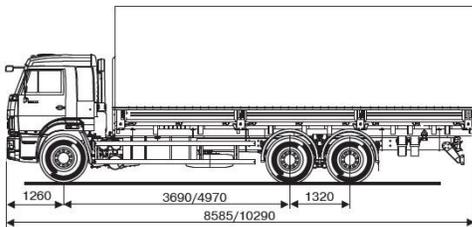
In accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 342 dated December 26, 2011, Appendix 2 "Rules for ensuring the safety of road transport when transporting bulky and heavy cargo" in which the permitted masses of vehicles are given (with or without cargo)[5]:

**Single vehicles**

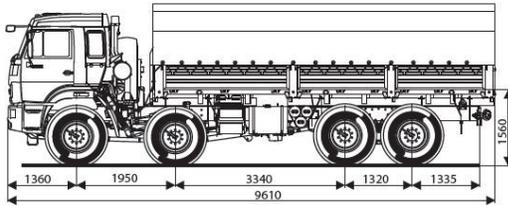
- biaxial: permitted weight 18 tons;



- triaxial: permitted weight 26 tons;

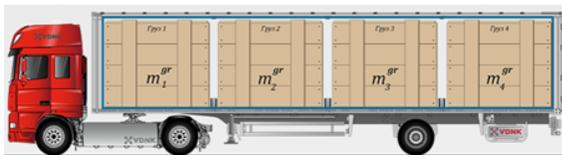


- four-axle: permitted weight 32 tons.

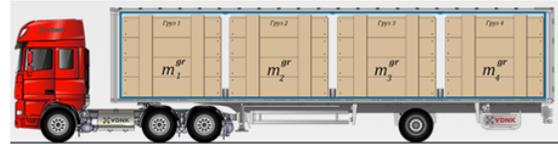
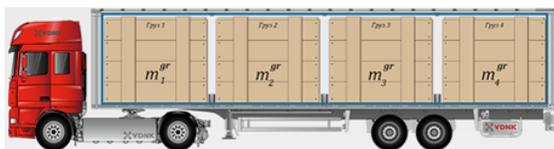


**Trailed and semitrailer automobiles**

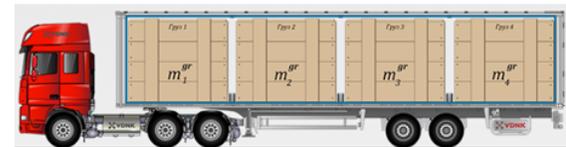
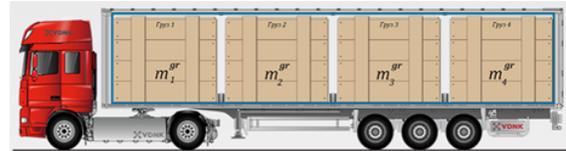
- three-axle: permitted weight 28 tons;



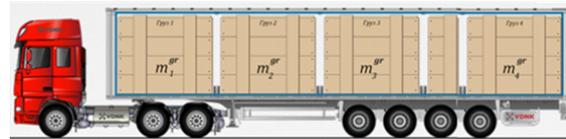
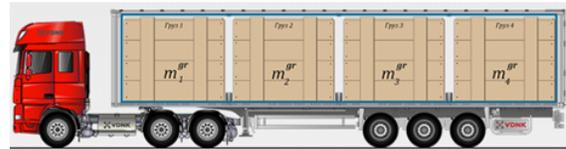
- four-axle: permitted weight 36 tons



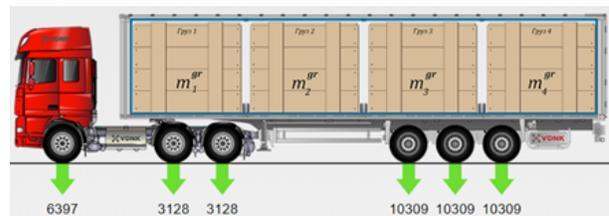
- five-axle: permitted weight 40 tons



- six and more axles: permitted weight 44 tons



Permissible axle loads of a motor vehicle, while observing the total permissible mass of a motor vehicle, must be no more than 11.5 tons on a single drive axle, and no more than 10 tons on other axles.: **Six-axle automobile (example)**



Total weight :  
 $6397 + 3128 + 3128 + 10309 + 10309 + 10309 = 43580 \text{ kg} < 44000 \text{ kg}$

Single drive axle: 3128 kg < 11500 kg

Other axles: 10309 kg > 10000 kg

According to the second part of Article 125<sup>1</sup> of the Code of the Republic of Uzbekistan On administrative responsibility for driving without a special permit with a load exceeding the norm on motor roads, it entails the imposition of a fine on citizens in the amount of ten times the basic calculation or deprivation of the right to drive a vehicle for up to six months[5][1].

In the case of transportation of indivisible goods, a heavy and (or) large-sized vehicle is issued by the Committee for Roads with a special permit[5].

Indivisible cargo - cargo that cannot be divided into several parts without causing damage to it and which cannot be transported by any other mode of transport or returned to its original state after it is divided into separate parts; reinforced concrete intermediate devices for bridges and other structures, separate technological blocks (modules); welded (riveted) bridges and other technical and industrial structures; no more than two large diameter pipes; heavy trucks; construction equipment; agricultural machinery and equipment; truck cranes; lathes; industrial transformers, furnaces, generators, prefabricated factories; furnaces, generators, prefabricated mills; tank trucks with liquid chemicals; refrigerators; containers (reactors) for breweries, sugar producers and refineries; trams; ships (boats), airplanes; sea containers; railway cars; tunnel-digging shields, starters; military equipment; perishable foodstuffs; other cargoes based on a feasibility study. (Clause 3 "Regulations on the procedure for monitoring the weight and volumetric parameters of vehicles" approved by the Resolution of the Cabinet of Ministers of Uzbekistan dated May 28, 2020 No. 337, Appendix 1.)[5][1].

### III CONCLUSION

The organization of movement on highways of large and heavy vehicles, as well as their overload on wheel axles, requires attention to ensuring the safety of roads and road safety. In this regard, in world practice, in order to prevent a reduction in the service life of road surfaces and ensure road safety, control and limitation by legislative and regulatory acts of the weight and dimensional parameters of vehicles are provided.

Legal restrictions on the weight and size parameters of vehicles in the Republic of Uzbekistan are given.

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