# FEATURES OF TRANSPORTATION OF MILITARY MACHINERY BY ROAD TRANSPORT

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## Abstract

Transportation of heavy military machinery can be carried out by wheeled special vehicles subject to certain conditions and rules.

Features of military equipment transportation by road transport is presented in this work

Keywords: military machinery, transportation, road transport, road surface, route, column of vehicles.

### Introduction

The transportation of military equipment is the delivery of combat vehicles (tanks, armored personnel carriers (APCs), infantry fighting vehicles (IFVs), etc.) to the place of deployment or repair, which does not use its own mover [1].

Since military equipment is not designed to travel on public highways, even if it is self-propelled, it is necessary to use different means of transport.

Depending on the purpose of transportation and the end point of the route, the following types of transport can be chosen: air transport, sea transport, railway transport, road transport [2].

# Main part

Military equipment is in demand even in peacetime, as it is often used in various exercises and military activities. Countries that do not have their own military production prefer to order military equipment from other countries, and the transportation of military equipment requires compliance with special conditions. The process of transporting military equipment will be more labor-intensive than equipment used in peaceful conditions.

Transportation of any military equipment, whether it be tanks or various other types of special military equipment, carried out subject to certain conditions, without which transportation is not possible. The most important condition for the transportation of military equipment is the use of special vehicles, which must be suitable in size to the transported units.

Heavy wheeled (fig. 1, a) and tracked military vehicles (fig. 1, b) are transported on specialized platforms. These platforms are designed for heavy weight, equipped with special fasteners and brackets for reliable fixation of the load. The main functional purpose of the platforms is the rapid transportation of military equipment to its destination with minimal damage to the roadway.



Fig. 1. Transportation on specialized platforms of heavy tracked (a) and wheeled (b) military vehicles

Most often, a small amount of equipment is delivered by special vehicles, including models such as infantry fighting vehicles, airborne combat vehicles, armored personnel carriers, tanks, artillery and howitzer systems, and much more. Transportation routes on low platforms should be laid taking into

account the characteristics of the terrain - the quality of the road surface, the relief, the width of the carriageway, the presence of objects that impede passage (cables and wires, bridges and bridge spans, billboards, billboards, etc.). Routes are recommended to be laid away from big cities in coordination with law enforcement and licensing organizations. Technically, the transportation of military cargo has its own characteristics. First of all, transportation is controlled not only by police officers, but also by specialized military services, whose task is to ensure the integrity and safety of machinery. Such cargo must be guarded by dedicated vehicles and armed personnel.

Transportation on heavy road trains, which are transport complexes consisting of wheeled tractors and heavy trailers (trailers), is used not only in the deep rear of friendly troops, but also when moving them under their own power in anticipation of entering into battle, especially if the purpose of the march is to enter an area remote from the line of contact between the parties.

Tanks are transported on heavy road trains. If there is a sufficient number of road trains, they can transport engineering and other equipment with a short range and low speed. The transportation of tanks and other equipment on trailers is carried out, as a rule, by one column, which is included in the main forces of the marching unit, or goes to the designated area on its own. The latter can take place only when transporting equipment deep in the rear of friendly troops.

For loading onto heavy road trains, a tank subunit and subunits with military equipment are assigned loading areas. The loading area is chosen in such a way as to provide good camouflage from aerial observation and ease of approach to it, there are natural shelters and roads leading to the main route. In addition to the main one, an alternate loading area is planned in case the use of the main area becomes impossible due to aviation operations and the infliction of a nuclear or chemical attack by the enemy.

The route along which the trailer column moves is chosen taking into account the carrying capacity of the bridges, bypassing large settlements, road junctions and other possible objects of an enemy nuclear strike, as well as gorges and other bottlenecks where the column can be subjected to enemy air strikes. To protect the column from the enemy's high-precision weapons, the route of movement must be chosen along the folds of the terrain, through forests, to hide behind enemy radar reconnaissance with masks and smoke screens. When choosing a route, the ability of road trains to overcome steep ascents, descents and turns is taken into account. In winter, the columns of heavy road trains include cars with mounted bulldozer equipment for clearing roads from snow.

If the route is in good condition, a trailer column can reach speeds of up to 45...50 km/h. However, due to the difficulty of driving a trailer when transporting heavy equipment (a trailer with equipment skids when driving fast), it is not advisable to develop a column speed of more than 30 km/h. On descents, the speed should not exceed 40 km/h; railway crossings are overcome at a speed of no more than 15 km/h. Distances between trailers can reach 50 m; they increase as they go up and down.

Unloading should be carried out, if possible, on a flat section of the road, stopping the road trains before approaching the obstacle at the distances established for movement or reducing them to 20...25 m. Re-loading of tanks on trailers is carried out after entering the paved road.

## Conclusion

Military machinery is not designed for movement on public highways, even if it is self-propelled, it is necessary to use different vehicles for its transportation.

The transportation of military machinery on heavy trucks is used not only in the deep rear of the troops, but also when moving them at their own pace in anticipation of entering the battle, especially if the goal of the march is to reach an area far from the line of combat contact of the parties.

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#### Особливості перевезення військової техніки автомобільним транспортом

#### Анотація

*Транспортування важкої військової техніки може здійснюватися колісним спецтранспортом з дотриманням певних умов та правил.* 

В даній роботі представлено особливості перевезення військової техніки автомобільним транспортом.

**Ключові слова:** військова техніка, перевезення, автомобільний транспорт, дорожне покриття, маршрут, колона транспортних засобів.

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