

~~TOP SECRET~~

3592

CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

5 January 1978

MEMORANDUM FOR: The Director of Central Intelligence
FROM : Theodore G. Shackley
Acting Deputy Director for Operations
SUBJECT : MILITARY THOUGHT (USSR): Technical Support of
Front Troops Moving Forward from the Interior

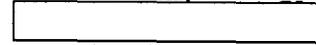
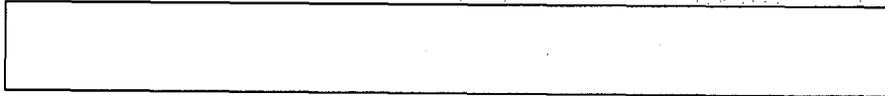
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article indicates the capabilities for armored troops to conduct marches over long distances, based on the experience of command-staff exercises of the Belorussian Military District in organizing the technical support of the movement forward of front troops. The authors focus on the need to establish adequate mileage reserves between overhauls for tanks and other tracked vehicles which need frequent changes of parts, and also examine the scheduling and forces and means needed for routine technical servicing and repair of vehicles. This article appeared in Issue No. 3 (82) for 1967.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

Theodore G. Shackley

~~TOP SECRET~~

~~TOP SECRET~~



Distribution:

The Director of Central Intelligence

The Director of Intelligence and Research
Department of State

The Joint Chiefs of Staff

The Director, Defense Intelligence Agency

The Assistant to the Chief of Staff for Intelligence
Department of the Army

Director, National Security Agency

Deputy Director of Central Intelligence

Director of the National Foreign Assessment Center

Director of Strategic Research

~~TOP SECRET~~



~~TOP SECRET~~



[REDACTED]

Intelligence Information Special Report

Page 3 of 9 Pages

COUNTRY USSR

DATE OF INFO. Late 1967

[REDACTED]
DATE 5 January 1978

SUBJECT

MILITARY THOUGHT (USSR): Technical Support of Front Troops
Moving Forward from the Interior

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (82) for 1967 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The authors of this article are General-Major of Engineer Technical Service A. Savushkin and Lieutenant Colonel V. Molodchenko. This article relates the experience acquired in command-staff exercises conducted in the Belorussian Military District in organizing the technical support of the movement forward of front troops over long distances, devoting particular attention to the problems of the movement of tank columns. The authors focus on the need to establish adequate mileage reserves between overhauls for tanks and other tracked vehicles which require frequent changes of parts, and further examine the scheduling and forces and means needed for routine technical servicing and repair of vehicles. They also mention the importance of the appropriate training of tank crews and motor vehicle drivers for the successful completion of marches and attainment of high rates of movement. End of Summary

[REDACTED] Comment:

The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970. [REDACTED]

[REDACTED]

[REDACTED]

~~TOP SECRET~~

~~TOP SECRET~~

Page 4 of 9 Pages

Technical Support of Front Troops Moving Forward from the Interior

by

General-Major of Engineer Technical Service A. SAVUSHKIN
Lieutenant Colonel V. MOLODCHENKO

Moving large formations with a great quantity of equipment forward from the interior of the country to areas of impending combat actions requires exceptionally efficient technical support.

In this article we shall attempt to share briefly the experience acquired in a series of command-staff exercises of the Belorussian Military District in organizing technical support of the movement forward of front troops. Let us mention that this training experience was partially verified in 1964-1965 during long-distance marches (1,500 to 1,800 kilometers) carried out by tank battalions.

* * *

As a rule, it was planned in all of the command-staff exercises of the military district to carry out the movement forward of the front troops, and the tank army and combined-arms army included in the front, by the combined method. The tanks, self-propelled guns, tracked armored personnel carriers, tracked artillery prime movers with artillery systems, armored recovery vehicles, and all other equipment mounted on tracked vehicles were transported by railroad, while wheeled armored personnel carriers and motor vehicles completed the march under their own power. This procedure for moving forward was retained as long as it was possible to use the railroads. With this method, the expenditure of mileage reserves between overhauls reached 500 to 600 kilometers for tanks and other tracked vehicles and 1,200 to 1,400 kilometers for wheeled armored personnel carriers and motor vehicles. Naturally, in those instances in which the enemy is able to disrupt rail shipments, the road mileage of tanks and all tracked equipment will also reach 1,400 kilometers.

This is the reason why it is very important to ensure the constant readiness of troops to make long marches over great distances, which requires good field training of personnel, excellent equipment condition,

~~TOP SECRET~~

~~TOP SECRET~~

Page 5 of 9 Pages

and constant readiness of all technical means to carry out servicing and repair tasks under field conditions.

The enormous difficulties encountered by troops in making long-distance marches are obvious to everyone. Together with those difficulties which arise from technical and climatic conditions and from all types of shifting of personnel and equipment, it must also be kept in mind that during the movement forward, up to 80 percent of the tanks and tracked armored personnel carriers will require various kinds of assistance for technical reasons alone. In connection with this, it becomes understandable what very great attention must be given to careful planning by the staffs of units, large units, and formations regarding matters of technical support of the movement forward of the troops and monitoring for precise performance of the work involved in the servicing of vehicles and their repair during the course of a march.

The total road mileage of tanks during the movement forward and during the conduct of a front offensive operation, as is well known, may reach 2,500 to 3,000 kilometers. In regard to this, one of the main matters of technical support of the movement forward of front tank units and large units is the establishment and maintenance of a high mileage reserve between overhauls for tanks with regard to the tracks and suspension. In addition, the still existing lack of uniformity in the durability of the metal tank tread, in comparison with the engine or other parts of the tank, leads to the need for frequent changes of the tracks and the gear rings of the driving sprockets during the periods between maintenance. It must also be kept in mind that the mileage reserve between overhauls for the tracks and suspension of the tanks of a combat group reaches 1,200 to 1,800 kilometers, while for tanks of a combat training group it may be up to 500 kilometers. Thus, in attempting to establish an adequate mileage reserve between overhauls for tanks, it is necessary to change worn-out tracks and drive wheel sprockets on combat training vehicles on a timely basis.

In the military district, supplies of new track links, pins, and sprockets are established at the depots of armored divisions. This provides for the changing of tracks on tanks of the combat training group. Each of the army depots has several dozen sets of tracks for the same purpose.

Experience in moving tank troops forward confirms the need to plan for changing worn-out tracks in approximately 50 percent of the tanks during the movement forward, particularly in the concentration areas, if the movement forward was carried out entirely under their own power, and on 20

~~TOP SECRET~~



to 25 percent of the tanks if they were transported over a considerable distance by railroad.

During the exercises which were carried out, track links and pins were obtained by the front transport from combat equipment depots located in the zone of advance of the front troops. This procedure substantially facilitated and accelerated the process of supporting the troops. If new sets of tracks were to be brought up by front motor transport from depots located in the deep rear, as many as 1,500 to 2,000 motor vehicles would be required for this purpose. It is therefore best to concentrate the necessary number of tracks at specified lines along the main march routes of the planned troop movement forward. This will make it possible to reduce several times the time for supplying and changing tank tracks. For example, in the exercises this work was carried out by a tank battalion in 1.5 to two hours.

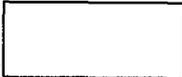
The successful completion of long marches is furthered to a great extent by the efficient organization of the technical support of the vehicles.

During the marches carried out within the military district, the main method was technical servicing No. 1, which was performed at the end of a twenty-four hour march across 200 to 250 kilometers of the distance to be covered by the tanks. Experience showed that two to three times more time was spent on performing this servicing and eliminating technical defects discovered on the march than is stipulated by existing regulations and technical conditions.

It actually takes as long as ten hours for technical servicing No. 1 and for eliminating all types of damage after a 250-kilometer march, and this allows the crews and maintenance personnel to do only those jobs which ensure the further movement of the vehicle. Therefore, when planning the technical support for moving front troops forward, additional time must be found for servicing vehicles.

Technical servicing No. 2 should be planned after the tanks have moved forward into their new concentration areas, making provision at this time for the changing of worn-out tracks. Up to an hour or an hour and a half was devoted to this in the exercises.

If the length of the march substantially exceeds 1,000 kilometers, it is advisable to carry out technical servicing No. 2 piecemeal in the areas of the next to last and last day's halts. Technical servicing No. 3 is



~~TOP SECRET~~

[REDACTED]

[REDACTED]

Page 7 of 9 Pages

carried out after covering 2,000 kilometers or in the concentration areas when preparing the equipment for the offensive operation.

Actual practice has shown that in order to assist crews, there should be set up within tank battalions, brigades for technical servicing which include skilled maintenance personnel and mechanic-drivers from the regimental repair workshop.

On the march, in order to provide technical assistance to tanks which have been left behind, to evacuate vehicles which have bogged down, and to repair and recover damaged equipment, there must be set up within the tank battalion a technical maintenance echelon for tank columns, consisting of one BTS-2 armored recovery vehicle, a technical servicing vehicle, a truck with a supply of POL, coolants, a set of spare parts, etc., and an ambulance.

In the maintenance echelon of a regimental tank column, there should be included, in addition to one or two BTS-2 armored recovery vehicles and technical servicing vehicles, TRM-A and TRM-B mobile tank repair shops, an electric gas welding workshop, and two or three trucks with spare parts and the necessary maintenance materials.

It is best that tanks which have been put out of action on the march be restored in place and only evacuated to damaged vehicle collection points in individual cases. But it is necessary to limit the amount of time that the technical maintenance means work on damaged vehicles; otherwise they may lag a long way behind the tank columns. It has been established, for example, that the technical maintenance means of a battalion may work on damaged vehicles for no longer than two hours, those of a regiment -- for up to five hours, and those of a division -- for up to ten to twelve hours.

As we know, the mobilization of front separate tank repair battalions takes place later than that of combat units. This leads to a situation wherein the repair and evacuation of equipment during the period when the front is moving forward must be carried out by field repair means only. Consequently, the problem is to plan the entire process of technical servicing very carefully, focusing attention on the fulfilment of the main tasks. For example, it is very important to allocate repair brigades to provide technical assistance to the missile units of the armies and the front. Since these units are in a state of high combat readiness and begin the movement forward in the first echelon of the front, it is useful while we are still at peace to assign commanders of stationary repair units of

[REDACTED]

~~TOP SECRET~~

~~TOP SECRET~~

Page 8 of 9 Pages

the military district to set up repair brigades and ensure their constant readiness to move forward together with missile units and large units.

In order that questions regarding the technical support of the movement forward of front missile units be worked out well and in good time, questions of cooperation are worked out in all staff training sessions and exercises in the military district between the armored and motor transport departments and the staff of the chief of the directorate of missile and artillery armament, while repair brigades allocated from the repair plants and military district motor vehicle repair facilities participate in supporting the exercises of missile units.

In the exercises which were conducted, a battalion of heavy vehicles was used to move surface-to-air missile regiments forward to new areas on a timely basis. This method of transporting front and army surface-to-air missile regiments ensured their movement out to the designated areas in time.

During the marches, especially many difficulties arose in matters of engineer reconnaissance of the tank routes and their engineer support.

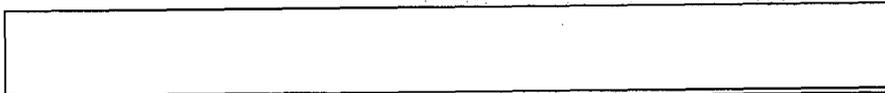
Poorly chosen and badly prepared march routes affected particularly the rate of movement of the tanks; sometimes near obstacles (roads along swamps, swampy terrain) the tanks were stopped and ways around them had to be found.

The rate of movement of tank columns on the march, especially at night, also depended to a considerable extent on the thoroughness of road support. The advance placing of traffic controllers with easily seen signalling means, the setting up of marker lights, the marking of the column's road with posts and visible signs, and the plotting of the march routes to bypass population centers -- all of this made it possible to make night marches at rates of up to 20 kilometers per hour and daytime marches up to 25 kilometers per hour. Where these measures were not taken, rates of movement at night were in the range of 12 to 14 kilometers per hour, and up to 20 kilometers per hour during daytime.

The successful completion of marches and the attainment of high rates of movement were also furthered by appropriate training of tank crews and motor vehicle drivers. Under conditions where there was a great deal of dust in the air, it proved of value for tank mechanic-drivers to use gauze face bandages to protect the respiratory organs, to use protective shields and glasses, and to bandage their hands and the control levers of the

~~TOP SECRET~~

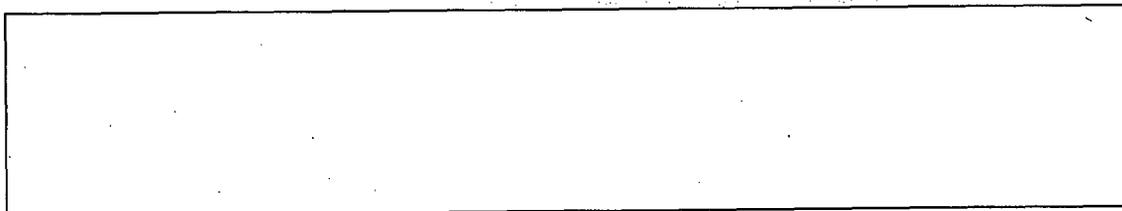
~~TOP SECRET~~



Page 9 of 9 Pages

mechanisms and the steering gears in order to prevent harm to the skin surface of fingers and palms. Also beneficial was the introduction of a system of relieving the mechanic-driver, after seven or eight hours, by the tank commander or another crew member authorized to drive.

All of this, as well as increasing rations and providing for five to six hours of sleep, made it possible to preserve the physical strength of personnel throughout the march and to maintain a high combat readiness on the part of tank units and subunits.



~~TOP SECRET~~