TOP SECRET

3696

CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

5 October 1978

MEMORANDUM FOR: The Director of Central Intelligence

FROM : John N. McMahon
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): Problems of Road Support of Modern Offensive Operations

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". The author of this article stresses the growing importance of road troops in view of the large areas and high rates of movement involved in modern offensive operations, and offers suggestions on how road restoration and road traffic control can be improved. He discusses in detail the desired allocation of road troops during an offensive and points out the need for faster and more mobile road and bridge servicing equipment. This article appeared in Issue No. 3 (70) for 1963.

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

John N. McMahon

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

[redacted]

Intelligence Information Special Report

COUNTRY USSR

[redacted]
DATE

DATE OF INFO. Late 1963

5 October 1978

SUBJECT

MILITARY THOUGHT (USSR): Problems of Road Support of Modern Offensive Operations

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (70) for 1963 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author, General-Mayor P. Fomichev, stresses the growing importance of road troops in view of the large areas and high rates of movement involved in modern offensive operations, and offers suggestions on how road restoration and road traffic control can be improved. He discusses in detail the desired allocation of road troops during an offensive and points out the need for faster and more mobile road and bridge servicing equipment.

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]

Problems of Road Support of Modern Offensive Operations

by

General-Mayor P. FOMICHEV

Changing substantially along with the development of the means and with the change in the methods of armed warfare are the views on the organization of road support of offensive operations.

We will recall that after the Civil War there was a plan to develop in the theater of military operations a "military road" consisting of railroad and dirt road sections. The chief of the dirt road section was the deputy chief of the military road, who was to have at his disposal road restoration, convict, and worker units, as well as communications subunits. Established in 1939 to service the dirt road sections were special road maintenance regiments which were entrusted with the maintenance and repair of roads as well as the organization of road traffic control service on them.

Soon after the beginning of the Great Patriotic War, it became obvious that the railroads and the dirt road sections were no longer able to support the entire volume of military shipments. A network of independent military motor roads had to be established in the theater of military operations. In the army rear, these roads became the main transportation lines connecting the troops with the rear, and a large part of the movement of troops and transport was carried out over them. At the same time, on many axes in the interior of the country, behind fronts both on the offensive and on the defense, military motor roads had to be developed in order to back up the railroads in carrying out urgent military shipments and, sometimes, also to move troops. Therefore, during the war a special motor road service was established, and for the first time in the history of wars, road troops performed as a special branch arm.

In the postwar period, in connection with the complete motorization and mechanization of troops and the appearance of nuclear weapons, the importance of the road troops grew even

more. Under conditions in which troops employ wide maneuvering during an operation and weapons of mass destruction are used against rear installations, it is necessary to have in the operational rear a branching network of axial and lateral motor roads with developed bypass and auxiliary routes. Inventoried and utilized to the maximum degree is the entire network of motor roads available within the boundaries of the operational rear. To this end, it has now been decided to assign within the front zone of actions zones to road traffic control brigades, and within these zones, areas (to road traffic control battalions) and sectors (to companies). Thus, from a linear principle of road support whereby a road maintenance unit would prepare and service some one road, we have gone over to an area principle whereby a road large unit (unit) is charged with responsibility for road support in an assigned zone (road traffic control area).

In order to get a picture of how much the volume of road and bridge work is growing in modern operations, one has to consider the sharp increase in the depth and rates of speed at which they are carried out, the necessity of preparing a network with sufficient branches for the maximum dispersal of the movement of troops and transport, and the probable scales of destruction from the action of the enemy. The exercises and theoretical calculations carried out show that the total extent of the network of motor roads of a front by the beginning of an offensive operation may come to more than 4,000 kilometers, and by the end of the operation, 12,000 to 15,000 kilometers. During the preparation and course of the operation, over 30,000 vehicles a day will pass over the motor roads of the front. To prepare and service this network and to ensure organized and centrally controlled movement of such a quantity of transport is no easy task -- particularly under conditions where the numbers and capabilities of the road troops are extremely limited. There turns out to be a kind of contradiction between the necessity of ensuring utilization of the entire network of roads in the front zone of actions and the limited capabilities of preparing and servicing it.

How, then, in such a case, is the system of road support of a modern operation to be constructed? In the postwar period, much attention has been devoted to this problem. Theoretical positions have been tested in operational-rear services exercises and in exercises of road large units and units. Worked out in

January 1962, at a military science conference of the Rear Services of the Armed Forces was the system of road support of modern operations by which military road builders are guided at present. Serving as the basis for the system were the theoretical positions in an article by Marshal of the Soviet Union M. V. ZAKHAROV published in the Collection of Articles of the Journal "Military Thought," No. 2 (52) for 1960. It was decided that the road network must consist of main and auxiliary motor roads. The control of road transportation lines in the operational rear is now set up on the basis of the precise planning of their use, with well organized communications on them set up by the road traffic control service and with precise organization of restoration work and technical coverage on the main motor roads and, partially, on the auxiliary ones. On the main roads, the road troops concentrate the greater part of their forces and means on ensuring uninterrupted traffic at normal speeds, sufficient technical coverage, and first-priority restoration on them.

The preparation of motor roads during an offensive is the most complex task of road support, requiring of the road troops constant combat readiness, a high degree of training and organization, and great mobility. The preparation of roads consists in their restoration and the organization of road traffic control service on them.

Planned currently is the following organization of the restoration of roads. With the beginning of an offensive, each road traffic control brigade organizes in its zone restoration work with the forces of one road construction and one bridge construction battalion. The work will be carried out on an assigned axis without separation from the troop battle formations. When operating on a main axis, the brigade, as a rule, has to be reinforced by bridge or road units from the reserve of the front. For the restoration of large bridges and the organization of crossings over large water obstacles in such theaters of military operations as the Western or Southwestern, the front will be reinforced with a bridge brigade of the General Headquarters of the Supreme High Command. Since, during an offensive, it is necessary to restore daily up to 1,000 kilometers of roads and up to 3,000 linear meters of bridges in the road network of the front, the main forces and means of the restoration units must still be concentrated on the axes of the

main motor roads. The successful restoration of roads during an operation will greatly depend on the availability in the front of prepared road and bridge structures and their timely delivery to restoration areas, and on the availability among the troops of the repair means needed to ensure the uninterrupted work of the various types of equipment found in the road units.

As for the road traffic control service, during the offensive it should, in our opinion, be set up by drawing on the reserve of road traffic control subunits formed in the brigade or by gradually withdrawing the necessary forces and means from the servicing of the rear sectors of roads. In the reserve of the front, it is extremely useful to have separate road traffic control battalions for their timely reinforcement of brigades when, in the course of an offensive, the road transportation lines are extended to the maximum and for better road support of the rocket troops and work in temporary transshipment areas.

The organization of the road support of an operation to the entire depth of the theater of military operations should be included, in our opinion, among the extremely complex and crucial tasks. As we know, in peacetime, within the troops of the Soviet Army, the road large units and units are not maintained in constant readiness. The numerically small road battalions and road depots in the border military districts and groups of forces support only the deployment of the road troops and the separate measures of the military districts and groups of forces. However, with the start of war, the need arises to provide road support for the first operations carried out at rapid rates to the entire depth of the theater of military operations and for the movement of troops into the fronts from the interior of our country and the Warsaw Pact countries.

This is why one of the basic problems of the road service is raising the combat readiness of the road large units and units to the level of combat readiness of the troops and rear services that are being supported. It is not excluded that in individual cases the road traffic control large units and units will have to be deployed even earlier than the troops and the rear services. In other cases, it is more advisable to provide road support for the beginning actions of our troops by using civilian organizations and road large units and units of the Warsaw Pact countries at whose borders our troops will come into contact with

the enemy. Used partially for these purposes, and primarily for the restoration of bridges and the coverage of bottlenecks, should be the troops already belonging organizationally to the large units and formations of our troops in peacetime. Of great importance is the quality of the working out of the plan of road support for the initial period of war, the determination of the procedure for using the large units and units of road troops joining the front, and the timely preparation of theaters of military operations in respect to roads.

The role of road transportation lines in the interior of the country has also risen to a considerably greater degree. To carry out the mobilization expansion of troops and their movement to fronts, and to support the combat activity of the Strategic Rocket Forces and the Air Defense Forces of the Country, a widely developed network of motor roads over the whole territory of the country is also required.

To a considerably greater degree in a modern war than in the war of 1941 to 1945, it will be necessary to connect the interior of warring countries with fronts by road transportation lines. Therefore, for the technical coverage and restoration of motor roads in the interior of the country, there should now be prepared well in advance and organized with the start of war special contingents of civilian road organs and the corresponding cells to control them.

To ensure the linking of the active fronts with the interior of the country, road units also have to be prepared on the main axes in order to organize road traffic control service and technical coverage on the arterial motor roads.

With the start of war, besides the movement of troops and equipment, there will also be carried out over the road transportation lines a large-scale evacuation of the population from administrative and political centers in accordance with civil defense plans. The evacuation axes will frequently coincide with the movement of troops or cut across it at many road junctions. In order to avoid traffic jams and disorder on the roads and not disrupt military shipments, it is absolutely necessary to map out beforehand the measures to free the traffic on the roads and, with the start of war, to establish in the necessary places joint traffic control posts of the road troops

of the Soviet Army and the civil defense. A large role in the solution of these questions belongs to the Civil Defense Staff of the USSR.

One of the most important directions in preparing for the successful solution of the problems of road support of operations in the initial period of war is the timely and purposeful development of a network of motor roads on the territory of the Warsaw Pact countries according to coordinated overall plans providing for both the interests of the national economy and the use of the roads for the deployment of troops and the work of the rear services of a front with the start of military actions. We are convinced that on the main axes of troop actions, it is necessary to establish a single network of through highways linking the territory of our country and adjacent countries and going to the probable troop deployment lines. On the territory of the Warsaw Pact countries it is necessary to designate and prepare roads for the movement and support of the actions of certain large units. Such transportation lines will, with the start of military actions, be necessary for the quick movement of troops from the depth to the national borders and the preparation of the main roads of the front on this axis.

Deserving very close attention are the measures for increasing the survivability of the entire network of motor roads. Included primarily among them should be the construction of ring or half-ring roads around large population and transportation centers, the preparation of the minimum necessary network of roads in transshipment areas, the construction of approaches to places for laying alternate crossings over large rivers, the increase of the carrying capacity of bridges for the passage of heavy equipment, and the improvement of parallel local roads for their subsequent use as auxiliary roads.

A special matter is the timely establishment of reserves of pontoon equipment, sectional bridge and road surface assemblies, as well as military road and other technical equipment necessary both for the technical coverage of road installations on our own territory and for the support of the actions of road troops during an offensive on enemy territory. The existing factories of the construction industry, makers of reinforced concrete and metal structures, and woodworking plants must already in peacetime be prepared to produce, according to previously worked

out standard plans, bridge and road assemblies for the restoration of road structures. On the basis of a determination of the amounts and times of their production, new production procedures should be worked out at the plants to be given the assignment of manufacturing the assemblies in wartime.

Occupying an important place in the accomplishment of the tasks of road support is the proper use of the road units and large units which, as a rule, will be joining the fronts after the start of military actions. In our opinion, it is better to direct the arriving units toward carrying out first-priority works, such as the preparation and maintenance of roads in areas of probable barrier locations (crossings, passes), and then, as the number of units grows, to use them throughout the territory of the rear zone of the front (army). If, at the beginning of the operation, there is only one road traffic control brigade in the front, it can be charged with the preparation and servicing of two main and two or three auxiliary roads on the main axis, primarily from the areas of the location of the forward front bases to the mobile army bases, i.e., only at the level of motor transport to two or three armies. To other axes outside the zone of the road traffic control brigade there can be allocated only a limited number of forces and means, mainly for taking care of barrier locations.

After the arrival in the front of a second road traffic control brigade, it is advisable, in our opinion, to carve out for it a second zone, at the same transport level and parallel to the first -- which will permit an increase in the number of roads being prepared behind the armies. Subsequently, it is advisable to use any newly arriving road traffic control brigade inside a zone extending from the rear boundary of the front to the areas of the forward front bases. This will make it possible to shorten considerably the depth of the zones of the brigades operating immediately behind the troops, thereby improving the control of units and traffic on the roads. It should be noted that the division of the territory of a front into zones and areas is advisable only where there is a well developed road network. In the Far North, on desert and mountain terrain where troop combat actions are conducted along separate road axes, zones and areas must be assigned to brigades and battalions along these axes without encompassing all the territory of the front (army).

In a number of operational-rear services exercises conducted in recent years, in view of the lack of road large units and units in the front in the preparatory period and the first days of the initial operation, army road traffic control battalions were used for work in the front rear (for organizing traffic on the motor roads extending from branches of forward front bases to armies). Such a solution must be recognized as extremely undesirable. First, it drastically weakens the capabilities of the road troops of the combined-arms armies; secondly, the army road traffic control battalions are deprived of the forces and means for technical coverage and, consequently, cannot fully accomplish their task in the front rear. It is more correct to take steps well in advance in order to shorten as much as possible the times needed for the road large units and units to join the front and to organize at the road works the employment of the local population and local road organizations.

The success of road support in the initial period of war depends on how the work of motor transportation lines connecting the interior of the country with the front is organized. As is known, under modern conditions, the work of railroads may be disrupted and all traffic to the front will have to be carried out over motor roads for a rather long time. Therefore, it is necessary to prepare and develop with every front one or two military motor roads of the General Headquarters, extending from the depth of the frontline areas of the country and connecting with the main roads of the front in the area of its rear boundary.

These, in our opinion, are the basic positions in respect to the organization of the road support of a modern offensive operation of a front that is to be carried out to the entire depth of a theater of military operations. The fulfilment of these tasks will, to a great extent, be determined by the successful restoration of motor roads, the good organization of the road traffic control service and dispatcher communications on the roads, and also by the timely execution of the necessary organizational and technical measures.

In view of the many-sidedness of the tasks of the road traffic control large units and units, the underlying principle of their organization is universality. Thus, in each road traffic control battalion (company) there are subunits to perform

the simplest road and bridge work necessary to guarantee passage. This is especially important in those cases where road support of troops operating on disconnected axes is being organized.

The performance of restoration works on roads when the rates of advance are high depends to a considerable degree on the availability and condition of the technical means allocated for equipping the road troops. Under the existing situation, these means are being received by road large units and units on allocation from the national economy, and in part from the directorate of engineer equipment and supply of the engineer troops and other supply directorates of the Ministry of Defense.

Of course, for economic considerations, it is most advantageous for the technical equipping of road units to be done by the allocation of machines from the national economy. But one must not fail to take into consideration that our industry is not yet producing a sufficient number of such machines as power graders, self-propelled scrapers, truck-mounted cranes, etc. Being solved slowly is the problem of organizing the production of road and construction machines based on a chassis with pneumatic tires -- primarily powerful bulldozers, excavators, road rollers, heavy-duty cranes, powerful snow clearers, etc. But the substitution of trailer-type and slow-moving tracked machines for self-propelled machines with pneumatic tires (e.g., trailer-type graders with a tracked prime mover for power graders, tracked excavators for truck-mounted excavators, etc.) drastically reduces the capabilities of road units.

Several basic and very productive tracked road machines being received into the inventory of the road troops from the national economy will, during operations, expend a great part of their between-overhaul mileage reserve on the march and still lag considerably behind the troops. The experience of road large unit exercises confirms this quite graphically. Tracked equipment, for instance, could be moved about on heavy-duty trailers, but the latter are not being received by the road large units and units. Many special machines are allocated from the national economy without being fully equipped in the manner provided for in the equipment tables of the road units. Thus, for instance, compressors are allocated without pneumatic tools and air hoses, which completely eliminates the possibility of using them for road and bridge works.

This is why the questions of the technical equipping of the road large units and units should be given closer attention. It appears advisable to us to examine the possibilities of using, with the start of war, a quantity of the fast-moving equipment of the construction units of the Ministry of Defense and of accumulating this equipment in road units in peacetime, and -- what is especially important -- to decide the question of introducing into the national economy such equipment that would, in its operating specifications, satisfy both the national economy and the road troops.

Fully equipping the road troops with bridging means is of paramount importance. As is known, in the course of accomplishing the tasks of road support of a modern offensive operation of a front, the most labor-consuming thing is the timely restoration of bridges. In the Western Theater of Military Operations, for every 100 kilometers of road there are, on the average, 300 linear meters of large bridges that may be completely destroyed. During a front operation, road troops under the conditions of this theater will have to restore up to 28,000 linear meters of bridges.

It is planned to accomplish this task with the extensive utilization of local means, table-of-equipment floating means, and prepared assemblies of table-of-equipment sectional bridges. Planned first of all is the construction of floating bridges and ferry crossings, with the subsequent construction of low-level bridges on rigid supports, and in pre-flood periods, of high bridges. For the purpose of shortening as much as possible the time needed to construct low-level bridges, the use of local construction materials is contemplated, and for the construction of high bridges, table-of-equipment and previously prepared sectional military bridge assemblies. In order to rapidly make technical decisions on the restoration of bridges, prepared standard plans will be used.

The matter of the support of crossings over water obstacles is so important that it must be decided in accordance with a common front plan, in cooperation with and in consideration of the capabilities of the engineer, road, and, in some cases, the railroad troops of front subordination. In individual cases, especially important crossings will probably be restored by the means of the reserve of the General Headquarters of the Supreme

High Command, or the front will be reinforced through the use of these means.

Serious attention must be given to providing road troops with engineer equipment: pontoon equipment, pile drivers, generators, mobile sawing equipment, and repair workshops.

Also extensively required will be such means as spraying trucks and dosimetric equipment, combination road-watering and washing trucks, rotary snow clearers, rollers with pneumatic tires, etc.

The most important condition for raising the readiness of road troops for the fulfilment of tasks in the initial period of war consists in the radical improvement of their technical equipping. It is very important to strive for wider introduction into the national economy of more improved, mobile, highly productive, and less cumbersome road and bridge technical equipment. At the same time, there should be an intensification of the development of technical means which are necessary for road troops but which will not come from the national economy. These are primarily repair and crossing means, pile drivers, sectional track surfaces for motor roads, and means for the technical reconnaissance of roads and control of traffic. The Central Scientific Research Engineering Institute of the Ministry of Defense, which is entrusted with the development of these means, as well as of the methods of carrying out restoration work for the branch arms and services, is not performing this task effectively enough.

Considered as an example of the integrated solution of the problems of developing technical equipment should be the creation in 1956 by the railroad troops of the floating railroad bridge (NZhM-56), which allows the simultaneous movement of trains, motor transport, and heavy tanks.

Playing a positive role in matters of coordinating scientific research and experimental design work has been the Scientific and Technical Committee of the General Staff. In recent years, the duplication of work has been eliminated to a considerable extent in the development of the means for the technical equipping of road, railroad, and engineer troops, and of airfield construction and servicing units. The themes of

scientific research and experimental design work have become broader. The monitoring of this work has been intensified. However, there still occurs a certain lack of coordination in the production of table-of-equipment bridges and floating means. These jobs are carried out in the engineer and railroad troops and by the Road Service Directorate of the Central Military Transportation Directorate of the Ministry of Defense. Although the requirements on structures of the railroad, engineer, and road troops in respect to weight categories, dimensions, and rates of assembly are different, maximum uniformity of measurements is possible. Such uniformity will simplify planning, facilitate getting these structures into mass production, and lower the cost of their manufacture.

Under the conditions of modern war, where nuclear strikes will be delivered against road transportation lines directly or indirectly, the contamination of a considerable extent of road sectors by radioactive substances is inevitable. In one of our exercises, the "enemy", striving to delay the movement of strategic reserves with the use of ground nuclear bursts, created a zone of solid destruction and radioactive contamination on a territory 700 kilometers along the front and 200 kilometers in depth. In a considerable part of this area the radiation levels amounted to 100 roentgens per hour and more.

In the course of an offensive, similar nuclear barriers will very often confront our troops. The task of the road troops is to guarantee the quickest and safest negotiation of them. Therefore, road troops must be fully prepared to carry out the radioactive and chemical decontamination of roads and organize dosimetric, chemical, and bacteriological monitoring, as well as the decontamination treatment of personnel injured or contaminated on the roads. They must be equipped with a sufficient number of spraying trucks, combination road-watering and washing trucks, decontamination shower facilities, etc. The chemical troops must also be trained in the decontamination of roads.

Under conditions where serious destruction is possible on road transportation lines and the troops will have to move about over the entire network of roads, the importance of precise traffic control in the zones of the road traffic control brigades and in road traffic control areas grows considerably. This can

be achieved only in the presence of good communications and the regulation and dispatcher control of traffic precisely organized on the basis of these communications.

It is now necessary to take a new approach to the training of traffic controllers. The time is past when this specialty could be classed among the "uncomplicated" ones. Given the modern scales of traffic and the complex situation on front roads, a traffic controller must know how to conduct dosimetric, chemical, and bacteriological monitoring of the terrain; if necessary, he is obliged to make the necessary decision himself to maintain traffic flow in his sector. Therefore, traffic controllers have to be trained according to a broader program than formerly; they have to be educated into men of resolve, capable of firmly controlling traffic at their post and of acting firmly and decisively.

Also an indispensable condition of the precise organization of traffic on motor roads is the improvement of the technical means of control. It must be recognized that, in comparison with the period of the Great Patriotic War, they have changed insignificantly. However, we will be unable to do without the introduction of automatic control means on roads, the use of luminous signs and indicators for night traffic, the introduction into the equipment of control subunits of uncomplicated portable loudspeaker systems for giving commands and also portable radio sets for communications between traffic control posts. It is also necessary to have vehicles with special equipment (loudspeaker systems, sirens, blue-colored signal lamps, etc.)

The development and introduction of the above means is limited by the lack of planning and design organizations in the road service and of an industrial base for their production. It appears advisable to us that the development of such means be entrusted to the engineer troops, who have solid design and scientific research organizations.

A few words about dispatcher control of traffic. It is supposed to provide information about the condition of roads and the movement of columns, transmit instructions to column chiefs, and provide data about the radiation situation on the roads. Dispatcher posts, as the experience of exercises shows, should be located along the movement phase control lines jointly with

check-through points and traffic control posts. But dispatcher control of traffic can only be carried out if there are the necessary means of communications with a sufficient operating range. If one considers the great length of motor roads in modern operations, he will easily be convinced that obsolete and low-power radio sets such as, for instance, the RSB and RAF are not suitable for the organization of dispatcher control of traffic.

And so, precise organization of mass traffic on motor roads and efficient control of it under the conditions of a fast-changing situation depend on the equipping of road troops with means of communications and on the training of the communications operators whom the road troops have to have.

In conclusion, let us once again emphasize that raising as much as possible the combat readiness of road contingents, establishing specialized civilian organizations capable of carrying out the necessary restoration works on road transportation lines in the interior of the country, and preparing on a timely, thorough basis a network of motor roads are the main tasks for the improvement of the road service at the present time.