

A Comparative Study on the Action Training of Foreign Maintenance Support Teams

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Abstract: As military training continues to move closer to actual combat, equipment is frequently used, the equipment damage rate increases, and the difficulty and importance of maintenance and support tasks have also increased. This paper makes an in-depth analysis of the characteristics, status quo and corresponding countermeasures of equipment maintenance support under the current actual combat conditions. Under the conditions of actual combat, equipment maintenance support is characterized by diversified maintenance support, increased difficulty due to high-tech equipment technology, and complex battlefield living environment of equipment maintenance support forces. At the same time, the level of development of new equipment has advanced by leaps and bounds, and the level of our army's equipment maintenance and development has not kept pace with the speed of equipment upgrading, and this has become a major factor restricting the development of equipment and affecting the combat effectiveness of the troops. The purpose of this paper is to accurately grasp, scientifically understand, and solve the outstanding practical problems restricting the development of actual combat training for military equipment support, and to promote the construction of actual combat training for equipment support in our army.

1. Introduction

The definition of "actual combat training" in the "Military Language of the Chinese People's Liberation Army" is: training conducted in an environment and conditions similar to actual combat. This definition restricts the environment and conditions of training. In his book "Research on Actual Combat Training," Wu Yanan proceeded from the essence of training and defined "actual combat training" as a military practice with the fundamental purpose of shortening the gap between training and combat to the greatest extent and improving the actual combat capability of the troops in carrying out future combat tasks by creating a training environment that is highly close to the actual combat level, strictly following the training content and training standards that meet the requirements of actual combat, and flexibly using various training methods and methods that are "close to actual combat, similar to actual combat, simulated in actual combat, and in line with actual combat." This definition restricts and describes the environment, conditions, contents, standards, methods, methods, and results and objectives of training, and is conducive to understanding the essential characteristics and connotations of actual combat training.

2. Principles and requirements for actual combat training in equipment support

Actual combat training for equipment support refers to the training conducted by equipment support detachments in an environment and conditions similar to actual combat. Actual combat training in equipment support is an important part of military training for troops, the main way to improve the overall quality of equipment support personnel, an objective requirement for adapting to the development of weapons and equipment and the adjustment of the system, a basic practical activity and central work of equipment support detachments in peacetime, and a fundamental way

to improve and generate equipment support capabilities.

2.1. The principle of equipment support and actual combat training

The principle of actual combat training for equipment support is to have an overall understanding of ideological concepts, training methods, training objectives, and so on, and reflects the overall law of actual combat training. In order to improve the level of actual combat training, enhance the efficiency of actual combat training, and achieve the goal of actual combat training, the four main principles of equipment support and actual combat training are clearly defined.

The first is the principle of approximating actual combat. This principle is determined by the essential connotation of actual combat training, and is the most basic principle of actual combat training for equipment support. It requires that in the whole process of training, the actual combat training of equipment support must be guided by specific typical combat tasks, with the goal of improving the equipment support capability of equipment support units, and with winning a local war under the conditions of informationization as the criterion, centering on the combat mission to optimize the training content and topics, create a training environment and conditions close to actual combat, and organize and implement the training.

The second is the principle of being difficult and strict. It is often said that "sweating more in peacetime leads to less blood in wartime". The principle of being difficult and strict requires that in the course of actual combat training, we should establish the idea of "training for war," take the requirements of actual combat as the standard, carry out training in strict accordance with the military training program and other regulations, and persist in not lowering the training standards and not relaxing the training conditions

We should loosen up the key points and difficulties, not evade difficult and complicated situations, and truly train the equipment support detachments in the equipment support skills they will need on the battlefields of the future.

The third is the principle of flexible training. Under the conditions of informationization in the future, operations will be full of changes and uncertainties, the opportunity for equipment support will be fleeting, and rigidity and dogma will not only be taboos on the battlefield, but also the key points that need to be avoided in actual combat training. Therefore, flexible training is an important principle of equipment support training in actual combat. To implement this basic principle, it is necessary to scientifically design, meticulously organize, focus on actual combat, highlight key points, encourage competition, fully mobilize the enthusiasm and creativity of all quarters, and achieve results and tangible results in the implementation of actual combat training in equipment support and the formation of equipment support capabilities.

Fourth, the principle of comprehensive inspection. In objectively evaluating and testing the quality of actual combat training with equipment support, it is necessary to comprehensively consider the influence of various factors and adhere to the principle of comprehensive inspection. It is necessary to combine the process test with the result test, and pay attention not only to the results of work and the results of troop support, but also to the process of forming results. It is necessary to combine quality with efficiency, pay attention to the training results, but also consider the training benefits, and directly link the training input, environmental conditions and inspection and evaluation results; It is necessary to integrate the current test with the historical analysis, pay attention to the level of actual combat training, and also take into account the increase in the quality of actual combat training, and conduct a comprehensive test.

2.2. Requirements for equipment support and actual combat training

First, it is necessary to correctly establish the concept of actual combat training for equipment support. At present, the international situation is grim and complicated, and war may break out at any time. In equipment support training, it is necessary to firmly establish the spiritual orientation of "being able to fight and win wars," always stand on the high plane of safeguarding national sovereignty, focus on the missions and tasks that dare to fight and win, make strategic preparations for military struggles, and persist in carrying out actual combat training throughout the troops' support training.

Second, it is necessary to scientifically build a content system for actual combat training in equipment support. Whether the content of the equipment support training is set in line with the needs of the actual combat support, whether it can adapt to the changes in the equipment support mode under the conditions of informatization, and whether the content is set scientifically and rationally directly affects the results of the equipment support training. When setting up the content of equipment support training in actual combat, it is necessary to pay special attention to structural description, hierarchical distinction, and modular integration, so as to effectively enhance the effectiveness of our army's equipment support training in actual combat.

Third, it is necessary to innovate the environmental conditions for equipment support and actual combat training. Efforts should be made to solve the problem of the serious lack of actual combat means in the equipment support detachments, and to improve the primitive training methods and methods of "raising flags, shouting passwords, and circling in circles." In terms of scene layout, the necessary training conditions for actual combat scenarios, enemy threats, and situation display should be constructed; In terms of training implementation, necessary auxiliary training means should be designed to enhance the command, coordination, and handling capabilities of squad (group) commanders in battlefield operations.

3. The current situation of the operational training of foreign support teams

3.1. The current situation of actual combat training in US military equipment support operations

The US military's equipment support training is integrated into logistics training. Since the 80 s of the 20 th century, the US military has paid attention to drawing on war experience, actively carried out training and research, and the content and form of training have become closer to actual combat, and the level of actual combat training has been continuously improved, which is prominently manifested in the following characteristics.

3.1.1. Emphasize joint training

The U.S. military attaches great importance to joint training for joint combat missions. The US military believes that under the conditions of informationization, whether it is a large-scale theater war or a small-scale emergency combat operation, it is a joint operation or a joint operation. In the "2020 Joint Vision," the US military clearly put forward the concept of stepping up the implementation of joint training. Joint training has accounted for 70 to 80 percent of the US military's existing military training, and the joint military exercises in which various services and arms participate account for more than 70 percent of the total number of various military exercises. When organizing equipment support training, the US military requires that equipment support personnel of infantry, armored troops, artillery, engineers, and chemical defense units be pooled for joint training, so as to give full play to the advantages of the combined army in terms of training resources, personnel, and venues, realize "intensive" training, and improve the quality of training.

3.1.2. Emphasize simulation training

In order to realistically display the battlefield environment, equipment, and malfunction situations, and to enable personnel to train in a real-life environment, the US military attaches great importance to the use of simulation and virtual reality and other training methods, and has developed a powerful "three-in-one" training and task drill system of networked real troops, virtual troops, and deductions, so as to provide advanced technical means for the training of equipment support personnel and enable the trainees to master the contents, procedures, methods, and requirements of equipment support. At present, the US military has established a simulation training system at the strategic, campaign, and tactical levels. For example, the "Combat Service Support Simulation Training System" is used for training division logistics support, army logistics support, theater army headquarters, theater army and its subordinate battalion-level detachments. With the development of computer network technology, the US military took the lead in putting forward the

concept of "remote maintenance" and put it into practice, using computer networks to conduct remote equipment maintenance training.

3.1.3. Emphasize real-life base training

Relying on modern military training bases, the US military has comprehensively integrated all combat units and operational elements of various services and arms, and carried out various exercises and training courses in scenarios similar to actual combat, which can quickly and effectively enhance the ability of the participating troops to familiarize themselves with the battlefield environment. Therefore, the US military spared no expense in building real-life training grounds at various training bases to provide as realistic a training environment as possible for the troops. For example, on the eve of the Iraq War, in view of Iraq's geographical environment, the US military set up a simulated battlefield environment at US military bases in Kuwait and Qatar, and combined training and exercises to carry out battlefield equipment maintenance, rescue and repair, and material and equipment supply exercises^[1].

3.1.4. Emphasizing "training with war"

The US military believes that the practice of war is the most direct and effective means for the troops to improve their support capability, and that no realistic training environment in peacetime can achieve the results of actual combat. The US military has vigorously advocated the concept of training like a war and fighting a war like training, emphasizing the need to sharpen and temper its actual combat ability in the course of war, integrating combat training, and replacing training with war, thus interpreting a modern model of learning war in the course of war. For example, the US military's "precision support," "real-time support," and "perception and response support" support modes have been trained and tested in several local wars in which the US military has participated in this century.

3.2. The current situation of the actual combat training of the Russian army's equipment support operations

When summing up the lessons of the 2008 Russo-Georgian war, the Russian army found that the fundamental reason for the defeat in the war was the low level of training and backward training methods in peacetime. Since then, the Russian army has begun a training reform oriented to actual combat, emphasizing that all training must be based on the needs of actual combat, and constantly strengthening the combat capability of the troops in the context of information-based warfare.

3.2.1. Pay attention to theoretical innovation

In 2010, the new edition of the "Military Doctrine of the Russian Federation" stressed: "The military should attach importance to dealing with information-based warfare, and the actual combat training of the Russian army must be based on combat missions, and it must first clearly study the future combat style and operational guidance." In terms of operational guidance, it is emphasized that we should actively prepare for armed conflicts on the border, local wars over energy, and wars against terrorism^[2]. In terms of combat styles, the application of new combat styles such as air-space defense, non-contact operations, and information warfare is emphasized. In terms of combat operations, emphasis was placed on strengthening operational preparations for the air force as the main body to resist the enemy's attack from the air and space. This new operational theory has provided a strong impetus for the Russian military to organize mission-based equipment support training in actual combat.

3.2.2. Strengthen joint training

The Russian military believes that future operations will be joint operations, and joint operations must be conducted in joint training. As early as 2008, the Russian army established a priority position for inter-service joint training, and after the establishment of the four major military regions, the Russian army adjusted the joint operations of all services and arms in various strategic directions to the focus of training, established a normalized strategic and campaign-level cross-

service joint exercise and training mechanism, and actively promoted inter-service tactical-level joint training between services. In 2013, the Russian Ministry of Defense further advanced the basic tactical level of joint training to the battalion level.

3.2.3. Pay attention to actual combat drills

The basic principles of the Russian army's actual combat drills are: training is carried out according to the tasks undertaken by the theater and the pre-formulated plan for resisting the enemy's invasion; In accordance with the combat mission of the detachment and the requirements of the combat doctrine issued by the Ministry of Defense, it is organized and implemented in an environment close to actual combat. In recent years, in accordance with the stipulation that large-scale cross-service and arms exercises in strategic directions should be held at least once a year, the Russian military has successively held strategic exercises such as "Vostok 2014," "Central 2015," "Caucasus 2016," and "Western 2017." In terms of equipment support training, the Russian army uses various exercise opportunities to familiarize itself with the battlefield environment; According to the content of the exercise, we set up equipment support training topics and contents that meet the requirements of actual combat and are conducive to improving combat effectiveness, and organized actual combat support exercises, thus achieving good results in actual combat training^[3].

3.2.4. Innovate the cross-regional drill mode

In order to promote the real connection between training and actual combat, the Russian army has strictly followed the needs of future wars and continuously improved the training mode with actual combat as the standard. The Russian Ministry of Defense has formulated a new set of training methods to send troops to predetermined directions or unfamiliar areas through air delivery and railway transportation to conduct joint exercises in actual combat, so as to enhance the combat capability of troops at all levels to adapt to the new battlefield environment. In this kind of cross-regional exercise, the Russian military particularly emphasized the rapidity of force projection, the complexity of the regional environment, and the confrontational nature of combat operations. Long-range mobile delivery has also posed severe challenges to the troops' equipment support capability, and has realized the training of mobile support capabilities of support forces at all levels, effectively improving the quality of training.

3.2.5. Develop a simulation training model

The Russian army's simulation training occupies an important position in actual combat training, and the unique realism and actual combat nature of simulation training can enable participants to experience and learn war in a virtual environment, understand and grasp war in a virtual environment, and achieve the generation of combat effectiveness with the greatest cost-effectiveness ratio. The Russian army proposed in the "Concept of a Comprehensive Special Outline for the Development of Teaching and Training Equipment for the Armed Forces Before 2020": "It is planned to allocate 32 billion rubles for scientific research and procurement of training equipment, make extensive use of simulation and network technology, develop and introduce simulation systems, and implement joint simulation and network training." The Russian military is also paying more and more attention to simulated equipment support training, with the aim of greatly improving the quality and efficiency of equipment support training, shortening training time, and saving training resources^[4].

4. Conclusion

Actual combat training is a key way to enhance the combat effectiveness of the armed forces, and is of great significance to ensuring that the troops can fight and win wars^[5]. The armed forces of all countries attach great importance to actual combat training, insist on designing training based on actual combat, organizing training according to the requirements of actual combat, and testing training with actual combat standards.

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