



Russia Fielding Two New Self-Propelled Mortar Systems

OE Watch Commentary: The accompanying excerpted article from *Rossiyskaya Gazeta* discusses Russian plans to field two new self-propelled mortar systems that are intended to support motorized rifle, airborne, and alpine infantry battalions. The 2S42 Lotos self-propelled mortar consists of a 2A60 120mm turret-mounted mortar mounted on a BMD-4M airborne fighting vehicle chassis. The 2S41 Drok self-propelled mortar consists of 82mm turret-mounted mortar mounted on a Tayfun armored personnel carrier chassis. Russia already has self-propelled mortar systems in the inventory, including the 2S4 Tyulpan 240mm self-propelled mortar and the 2S23 Nona-SVK 120-mm battalion self-propelled gun, which functions as a hybrid mortar, gun, and howitzer. **End OE Watch Commentary (Bartles)**



Russian Missile Troops and Artillery Emblem.

Source: Russian government, via Wikimedia, https://commons.wikimedia.org/wiki/File:Medium_emblem_of_the_Russian_Missile_Troops_and_Artillery.svg, Public domain

“New self-propelled mortars designed for the Russian army -- the 2S42 Lotos self-propelled artillery gun and the 2S41 Drok wheeled self-propelled piece... are destined for the inventories of motorized rifle, air assault, and alpine infantry battalions.”

Source: Aleksey Petrov and Yegor Badyanov, “Выстрелил и скрылся: зачем нужны новые самоходки “Лотос” и “Дрок” (Fire and Take Cover: Why the Need for the New Self-Propelled ‘Lotos’ and ‘Drok’),” *Rossiyskaya Gazeta* Online, 22 July 2019. <https://rg.ru/2019/07/22/vystrelil-i-skrylsia-zachem-nuzhny-novye-samohodki-lotos-i-drok.html>

Fire and Take Cover: Why the Need for the New Self-Propelled Lotos and Drok

As we know, mortars are utilized as the basic means of delivering suppressive fire against enemy manpower, destroying an adversary's concealed artillery positions, and hitting his military hardware. The effectiveness of fire suppression is tied directly to the large amount of explosive, which is greater in a mortar round than in an artillery shell of comparable caliber. That said, artillery shells are more accurate than mortar munitions. Mortars constitute the main means of fire support in the inventory of subunits in many armies around the world...

Combat experience in local wars has shown, however, that mortar crews perish relatively quickly from the fragmentation effect of the more accurate artillery systems. The emergence on the arms market of mobile (self-propelled) mortar systems mounted on infantry fighting vehicle (BMP) or armored personnel carrier (BTR) chassis, which were initially greeted with skepticism, therefore proved to be a justified and proven solution in combat conditions...

Adjustments to the type of military hardware in question have been brought about by contemporary local wars and the emergence of precision weaponry. BTRs and BMPs equipped with special hatches have been replaced by turret-mounted mortars which have not only provided additional protection for the combat crew but also enabled an increased engagement range (by virtue of barrel length and a wider range of vertical guidance angles) and an expanded, 360-degree suppressive fire sector... A substantial drawback of turret-mounted mortars is the complexity of design and the high cost compared to the mortar systems obtained by installing standard mortars inside armored vehicles. Despite this, both types of self-propelled mortars are encountered in mechanized subunits in service with the world's leading armies...

New self-propelled mortars designed for the Russian army -- the 2S42 Lotos self-propelled artillery gun and the 2S41 Drok wheeled self-propelled piece -- were on display at the *Armiya-2019* forum. Both fighting vehicles are destined for the inventories of motorized rifle, air assault, and alpine infantry battalions.

Like the Nona-SVK, the Lotos turret-mounted mortar is fitted with the 2A60 120-mm artillery system mounted on a BMD-4M airborne fighting vehicle chassis. The Lotos is to replace the air-droppable 2S9 Nona-S self-propelled artillery piece inasmuch as it possesses a number of substantial advantages over it. First, it has double the ammunition carried capacity. Second, the Lotos has a modern fire control system that enables precision target engagement and is integrated with the tactical echelon's communications facilities.

The 2S41 Drok self-propelled turret-mounted mortar is mounted on a Tayfun-VDV armored vehicle fitted with an 82-mm smoothbore mortar facility standardized with the Podnos mortar (the 2B14 Podnos forms part of the Drok as an additional option that enhances the system's combat power). On top of that, the Drok is acquiring an additional automated combat module fitted with a 7.62-mm PKTM modernized Kalashnikov tank machine gun and an optoelectronic defense system to counter modern precision antitank guided missile systems.

The 2S42 Lotos and 2S41 Drok self-propelled mortars are due to enter service with the Russian Army sometime after 2020, on the completion of state trials and experimental operation in the field. Many of these vehicles' characteristics are classified at the moment, but one can be sure that the latest models of self-propelled mortars will in no way be inferior to the known foreign counterparts.