

MARINES TESTING THE CANNON USED ON ROSOMAK APCs

USMC has just carried out a series of tests of the ACV (Amphibious Combat Vehicle) platform. One of the test areas included live fire testing involving the 40 mm Mk 44/S Bushmaster II cannon. Mk 44/S offers an option to quickly change the barrels between the 30 and 40 mm calibres and it is also the dedicated gun used in case of the ZSSW-30 unmanned turret module that is expected to be integrated on the Rosomak APC and Borsuk IFV in the future.

Since advanced landing operations tactics have been implemented (and refined during the WWII), the USMC was improving and modernizing their assumptions. Two goals have been always imperative here: to carry out attacks from warships and ships that are scattered and placed away from the shore; and to scatter the attacking force simultaneously maintaining an ability to carry out coordinated and effective strikes.

As a result of the attack the Marines were to be able to create a strong point that would be independent from the harbour infrastructure that then would be used to carry out a land operation. The whole effort is still valid today, however one needs to carry out the operations within a greater territory and vast water bodies and this is even more pronounced than ever. ACV wheeled vehicle that is in its LRIP phase now (30 examples are being manufactured for the USMC) is a reflection of the aforesaid requirements.

ACVs have an ability to carry out land operations even after they cover several kilometers in the water. This ability is reinforced both by the 700 HP engine, as well as the cooling system using the seawater. As the USMC representatives claim, the ACVs will have an ability to operate in littoral waters and beyond. The land range of 600 kilometers at speed of 90 kilometers per hour is also seen as a revolutionary feature, especially when the vehicle is compared to the AAV-P7/A1 (Assault Amphibious Vehicle-P7/A1) operated now. The above means that the amphibious forces will have an ability to carry out strikes deeper than before.

The vehicles may also potentially use more armament than their predecessors. US media outlets recently announced that a 40 mm cannon is being tested on the ACV platform. The gun, over the course of the test programme, was being used against a myriad of different targets, from infantry (at longer ranges than usual), pick-up trucks, to heavier vehicles or UAVs. The cannon is to be able to hit and neutralize any of those threats. This would translate into creation of a set of better defensive abilities for the landing operations.

Northrop Grumman confirmed that ACV was being tested with the Bushmaster II Mk 44/S cannon in "stretch" configuration. The gun makes it possible to utilize the Mk 310 Programmable Air Bursting Munition (PABM) rounds. Mk 44/S is a 30 mm gun in its standard variant but it may be rapidly converted to the 40 mm calibre. ACV was tested with the "Stretch" 40 mm gun at least once, as

reported by the US media. The tests took place during a recent conference gathering the Bushmaster cannon users. ACV is using the MCT-30 turret manufactured by Kongsberg.

Poland can also be found among the Bushmaster user group (Mk 44 Bushmaster II). The weapon is being utilized on the Rosomak APC. The "Stretch" variant is used on the WB Electronics/HSW ZSSW-30 turrets that are to become the armament on the newly delivered Rosomak APCs and Borsuk IFVs.

The available data suggests that USMC has not directly defined use of the 40 mm calibre as a requirement. The US Marines however, are interested in the Mk 44/S gun and the option of utilizing programmable rounds. Potential transition to the 40 mm ammunition is also being considered. The ability to maintain and manufacture the "Stretch" gun is to be established at the Polish HSW S.A. facility, within the scope of the offset arrangements made during phase I of the Wisła programme.

The US forces are pursuing several small calibre cannon development paths in case of the combat vehicles. 25 mm Bushmaster I gun used on the Bradley IFV and LAV-25 reconnaissance vehicle is gradually reaching the end of its performance envelope, despite the continuous refinement of the ammo. The NGCV future US Army IFV may even get a 50 mm cannon. 30 mm caliber is the minimum requirement. We are speaking of a vehicle the total allowable weight of which is defined as 35 to 40 tonnes.

At the same time, 30 mm guns are also installed on the lighter Stryker APC. The US Army is also looking for a new unmanned turret that could be common for the Stryker and AMPV platforms (the latter vehicle is lighter than GCV). The very same calibre is also being tested with the "Stretch" gun (same as the one expected for Rosomak and Borsuk) on the future Marines' APC, the combat weight of which is around 30 tonnes. The above shows that the system selected to be fitted onto the Polish turret has some potential. It is still going to be developed and it also offers an option of fitting a larger calibre barrel.

Heavier 50 mm armament is to be used on the heavier non-amphibious combat vehicles. The amphibious capability has been, since the very beginning, emphasized by the Polish MoD, when it comes to wheeled APC and tracked IFV platforms. The Americans are interested in an amphibious vehicle weighing a little more than Rosomak or Borsuk in its basic variant (30 tonnes), along with the very same gun that is utilized on the Rosomak APC.

Coming back to the US amphibious APC, programmable ammunition would provide it with an ability to act against low-flying air threats. Introduction of the 40 mm gun would allow it to act against targets, armoured targets included, at greater distances.

Other advantages are to include a net-centric profile of that vehicle which would also refine the cooperation of scattered elements. The above concerns cooperation between the individual vehicles and the landing operation, as well as the fire support assets, warships, rotary- and fixed-wing aircraft included. Firing of unmanned grenade launchers that hit the target designated by the ACV's laser rangefinder has also been demonstrated in Arizona.

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