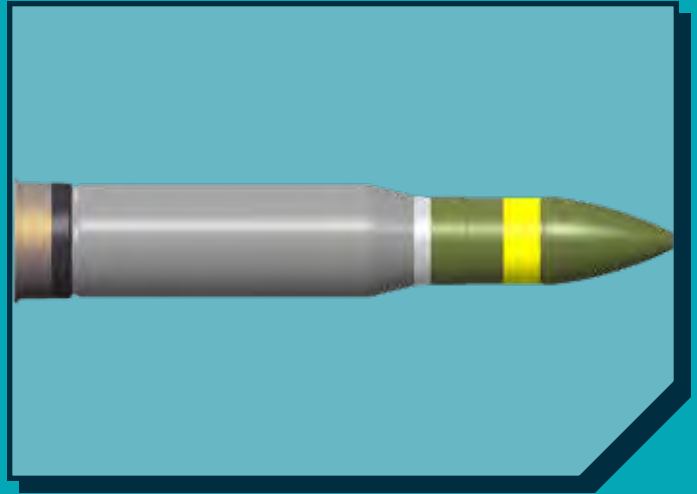


120mm Advanced Multi-Purpose (AMP), XM1147

Preliminary analysis of the 120mm Advanced Multi-Purpose (AMP) round IOT&E, completed in September 2021, indicates that the Abrams tank unit can effectively employ the 120mm AMP round to destroy or degrade intended targets at operationally realistic ranges. Preliminary analysis suggests that the AMP round is reliable and survivable in a cyber-contested environment. A final assessment will be summarized in the 120mm AMP IOT&E and LFT&E report in 3QFY22 to support the Army's full-rate production decision scheduled for 4QFY22.



System Description

The 120mm AMP round, termed XM1147, is a line of sight, full-bore multipurpose munition employed by Abrams tanks. The AMP round consolidates the capabilities of four rounds: the M830 High Explosive Anti-Tank round, M830A1 Multi-Purpose Anti-Tank round, M1028 Canister round, and M908 Obstacle Reduction round, into one round, intended to add new capabilities for breaching walls and against dismounted Anti-Tank Guided Missile (ATGM) teams at extended ranges.

Program

The 120mm AMP is an Acquisition Category III program. The program entered Milestone C in December 2020. DOT&E approved the 120mm AMP Test and Evaluation Master Plan to include the LFT&E Strategy in December 2020, and the IOT&E plan in August 2021. The Joint Program Executive expects to make a full-rate production decision in 4QFY22.

Major Contractor

Northrop Grumman Defense Systems – Minneapolis, Minnesota.

Test Adequacy

The Army Test and Evaluation Command (ATEC) conducted an IOT&E in accordance with a DOT&E-approved test plan from September 7-26, 2021 at Yuma Proving Grounds, Arizona. Testing was adequate to evaluate the 120mm AMP operational effectiveness and suitability. In FY21, ATEC continued the 120mm AMP live fire lethality testing to evaluate its lethal effects against hard targets, to include bunkers and walls, and light and heavy armored vehicle targets. Live fire lethality testing also supported the evaluation of the 120mm

AMP sensitivity to kinetic threat impact and crew vulnerability to consequent onboard, 120mm AMP energetic reaction. Live fire testing was conducted in accordance with the DOT&E-approved test plan.

Performance

Effectiveness

IOT&E data analysis is ongoing, precluding a final assessment of the 120mm AMP round operational effectiveness. Live fire testing and modeling is ongoing, precluding a final assessment of the 120mm AMP lethality. Preliminary assessments indicate that the Abrams tank unit can effectively engage and destroy or degrade intended targets with the 120mm AMP at operationally realistic ranges. Required 120mm AMP lethal effects against ATGM teams at extended ranges are dependent on the capabilities and limitations of the laser range finder and second generation forward-looking infrared sight system. Final operational effectiveness and lethality assessment will be summarized in the 120mm AMP IOT&E and LFT&E report to be published in 3QFY22.

Suitability

IOT&E data analysis is ongoing, precluding a final assessment of the 120mm AMP round operational suitability. Preliminary analysis suggests that the 120mm AMP round is reliable. Final assessment of operational suitability will be summarized in the 120mm AMP IOT&E and LFT&E report to be published in 3QFY22.

Survivability

The 120mm AMP round is survivable in a cyber-contested environment. The fuze cannot be programmed in advance, even with access to the round, and the only means for communicating with the 120mm AMP round is via the Ammunition Data Link when the round is chambered on the Abrams platform.

Recommendation

1. Recommendations will be detailed in the 120mm AMP IOT&E and LFT&E report in 3QFY22 after the completion of IOT&E and LFT&E data analysis.