

Mine Resistant Ambush Protected All Terrain Vehicle (MRAP-ATV)

Executive Summary

- The Mine Resistant Ambush Protected (MRAP) Vehicle program intends to procure 6,644 MRAP-All Terrain Vehicles (M-ATV) to support Operation Enduring Freedom (OEF).
- The scheduled delivery of M-ATV variants to the First Unit Equipped is October 2009. Prior to fielding the first quantities of MRAPs, the M-ATV Test and Evaluation will provide limited information concerning safety, survivability, automotive performance, and reliability.
- Prior to fielding, the M-ATV will have accumulated 2,000 reliability miles during developmental testing.
- The M-ATV developmental testing will accumulate an additional 24,000 miles of operations over terrain analogous to OEF.
- The M-ATV IOT&E is planned for December 2009.
- M-ATV Live Fire testing and vulnerability analysis is ongoing.



System

- The M-ATV is the smallest of the MRAP family of vehicles. The M-ATV is designed to have mobility similar to the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) with the current MRAP level of protection. The vehicle will support combat and stability operations in highly restricted rural, mountainous, and urban terrain with off-road movement conducted 50 percent of the time.
- The M-ATV vehicle is designed to transport five persons with a 25,000-pound curb weight, a width of 96 inches, and a turning diameter of 54 feet curb to curb.
- The M-ATV is designed to improve vehicle and crew survivability over the up-armored HMMWV. M-ATV has the capability to add protection against attacks by Explosively Formed Penetrators (EFP) and Rocket-Propelled Grenades (RPG) to support mounted patrols, reconnaissance, security, and convoy protection.
- M-ATV incorporates current Service command and control and counter-IED systems. M-ATV includes gun mounts with gunner protection kits capable of mounting a variety

of weapons systems such as the M240B medium machine gun, the M2 .50 caliber heavy machine gun, and the MK-19 grenade launcher.

- Oshkosh Defense has been awarded a production delivery order for M-ATV.

Mission

- Units equipped with the M-ATV vehicle will conduct mounted patrols, convoy patrols, convoy protection, reconnaissance, and communications as well as command and control missions to support combat and stability operations in highly restricted rural, mountainous, and urban terrain. The M-ATV is reconfigurable to meet mission requirements.
- M-ATV vehicles support multi-Service missions and are fielded to units based upon priorities established by the operational commander.

Prime Contractor

- Oshkosh Defense, Oshkosh, Wisconsin

Activity

- As a result of a Joint Universal Operational Need Statement CC-0326, the Office of the Secretary of Defense requested the Navy procure a new MRAP combat vehicle with the same level of protection of existing MRAP vehicles and incorporating an all-terrain mobility capability, improved vehicle capability at high altitude, and EFP and RPG protection capability to support OEF.
- In June 2009, after source selection testing, the Navy awarded Oshkosh Defense a production delivery order for 2,244 vehicles with approval to provide up to 5,244.
- Due to changes in threat, mission, and other factors, the Joint Requirements Oversight Council approved an adjustment in the M-ATV requirement to 6,644 in September 2009.

DOD PROGRAMS

- The M-ATV developmental testing is ongoing at Aberdeen Proving Ground, Maryland, and Yuma Proving Ground, Arizona.
- M-ATV High Altitude testing at Flagstaff, Arizona, is scheduled for 2QFY10.
- The M-ATV First Unit Equipped is scheduled for October 2009.
- The M-ATV IOT&E was executed in December 2009 at Yuma Proving Ground, Arizona.
- DOT&E assisted with the development of the M-ATV vulnerability test and evaluation program to support the development of the M-ATV source selection test plan. This involvement assured testing was conducted adequately and allowed maximum use of data collected in subsequent M-ATV vulnerability evaluations.
- M-ATV LFT&E is planned to begin in early FY10.
- The reliability, availability, and maintainability testing of the M-ATV during development testing will accumulate 24,000 miles of operations analogous to OEF terrain.
- DOT&E will evaluate the effectiveness, suitability, and survivability of the M-ATV based on the M-ATV IOT&E scheduled for December 2009. This evaluation will examine the capability of the M-ATV to provide all terrain mobility while providing the same level of protection to crew as provided by the current MRAP vehicles.
- M-ATV vulnerability analysis is ongoing.

Recommendations

Assessment

- The M-ATV test and evaluation events will provide limited information concerning safety, survivability, and automotive performance prior to initial fielding of the M-ATV to OEF in October 2009.
 - The M-ATV endurance testing is ongoing at Yuma Proving Ground, Arizona. The M-ATV has accumulated 2,000 miles of operations relevant to reliability testing.
1. The MRAP program should implement fixes and upgrades to the M-ATV as a result of operational deficiencies found during the M-ATV IOT&E and address any operational issues of integrating the M-ATV into Army and Marine Corps units.
 2. The Army should conduct the Test and Evaluation Master Plan-required MRAP Family of Vehicle FOT&E and LFT&E to validate M-ATV Engineering Change Proposals and upgrades intended to provide improved operational capabilities and crew protection.