

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

Executive Summary

- The Army Test and Evaluation Command (ATEC) completed the IOT&E for the Mine Resistant Ambush Protected (MRAP) All Terrain Vehicle (M-ATV) at Yuma Proving Ground, Arizona, in December 2009.
- ATEC completed the majority of the Live Fire testing documented in the M-ATV Operational Test Agency Test Plan by March 2010.
- DOT&E provided the M-ATV Live Fire and Operational Test and Evaluation Report to Congress and the Secretary of Defense in June 2010. DOT&E assessed the M-ATV as operationally effective, operationally suitable, and survivable for armored tactical mobility and transport to units in support of Operation Enduring Freedom missions.
- The Special Operations Force (SOF) M-ATV variant IOT&E is planned for November 2010.

System

- The M-ATV is the smallest vehicle of the MRAP family of vehicles. The M-ATV is designed to have the current MRAP level of protection and mobility similar to the High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The vehicle will support combat and stability operations in highly restricted rural, mountainous, and urban terrain with off-road movement conducted greater than 50 percent of the time.
- The M-ATV is designed to improve vehicle and crew survivability over the up-armored HMMWV. The M-ATV has the capability to add protection against attacks by Explosively Formed Penetrators (EFPs) and Rocket-Propelled Grenades (RPGs) to support mounted patrols, reconnaissance, security, and convoy protection.
- The M-ATV is designed to transport five persons and incorporates current Service command and control and counter-IED systems. The M-ATV includes gun mounts with gunner protection kits capable of mounting a variety of weapons systems such as the M240B medium machine gun,



Base MATV



Special Operations Forces MATV

the M2 .50 caliber heavy machine gun, and the Mk 19 grenade launcher.

- Oshkosh Defense has been awarded a production delivery order for 10,000 M-ATV vehicles.
- The U.S. Special Operations Command (USSOCOM) required modifications to the base M-ATV vehicle to support SOF missions. These vehicles are referred to as the SOF M-ATV variants. The modifications included an additional fifth seat position, protection for the cargo area, rear area access, and some other improvements for human factors.

Mission

- Units equipped with the M-ATV vehicle 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.

Major Contractor

Oshkosh Defense – Oshkosh, Wisconsin

Activity

- ATEC completed the IOT&E for the M-ATV at Yuma Proving Ground, Arizona, in December 2009.
- In March 2010, the Marine Corps Operational Test and Evaluation Activity completed M-ATV high-altitude testing at Camp Navajo, Arizona.
- The MRAP program has procured 421 SOF M-ATV variants for Special Operations Command.
- Live Fire testing of the SOF M-ATV variant commenced in 3QFY10.
- USSOCOM began the SOF M-ATV variant IOT&E in November 2010 at Yuma Proving Ground, Arizona.

Assessment

- The M-ATV is operationally effective, operationally suitable, and survivable for armored tactical mobility and transport to units in support of Operation Enduring Freedom missions.
- The M-ATV successfully demonstrated off-road mobility comparable to the up-armored HMMWV with Fragmentation Kit 5 in operational testing.
- The off-road mobility and maneuver capability of the M-ATV enables units to be less predictable in their movement, continue operations under armor protection, and conduct a greater variety of mounted maneuvers than possible with current MRAPs.
- The M-ATV has very limited room for the crew to egress the vehicle due to the location of mission command, control, and communication equipment on the center console.
- Based on results of the M-ATV high-altitude testing, vehicle mobility in soft soils can be a risk on unimproved trails and

roads through mountainous terrain, especially when operating at the edge of the road, or should the trails give way. As a result, M-ATVs can roll over under these conditions.

- The SOF M-ATV variant Endurance Testing is ongoing at Yuma Proving Grounds, Arizona. The M-ATV has accumulated 586 operational miles of the planned 3,000 miles.
- Results from the SOF M-ATV variant automotive testing indicate the vehicle has comparable performance to the Baseline M-ATV.

Recommendations

- Status of Previous Recommendations. The MRAP program continues to address all previous recommendations.
- FY10 Recommendations. None.