

Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) – Army

Executive Summary

- The Army will retain 8,585 Mine Resistant Ambush Protected (MRAP) vehicles in its enduring fleet that includes MaxxPro Dash, MaxxPro Ambulance, and MRAP All-Terrain Vehicle (M-ATV) variants.
- Early live fire testing conducted in 4QFY14 suggests that the MaxxPro Ambulance variant will meet its required level of performance; however, additional testing remains to be executed in FY15.
- The MaxxPro Dash with Independent Suspension System (ISS) and the MaxxPro Survivability Upgrade (MSU) kit installed provides protection beyond the MRAP Capabilities Production Document 1.1 requirements.

System

- The MRAP Family of Vehicles (FoV) is designed to provide increased crew protection and vehicle survivability against current battlefield threats, such as IEDs, mines, small arms fire, rocket-propelled grenades, and explosively formed penetrators. MRAPs are employed by units in current combat operations in the execution of missions previously accomplished with the High Mobility Multi-purpose Wheeled Vehicle.
- In FY14, the MRAP Joint Program Office was dissolved, and the Army and the Marine Corps became the lead Services responsible for their respective MRAP variants. In 2013, the Army defined its enduring MRAP fleet that it will retain post-transition from a Joint Program Office to an Army-led program manager. Per the Army MRAP III study, 8,585 MRAP vehicles will be retained in the Army enduring fleet:
 - MaxxPro Dash with ISS and MSU kit (2,633 vehicles),
 - MaxxPro Long Wheel Base (LWB) Ambulance with ISS (301 vehicles)
 - M-ATV with Underbelly Improvement Kit (5,651 vehicles).
- This report covers the MaxxPro Dash with MSU and the MaxxPro LWB Ambulance.
 - The Dash variant with the MSU kit is a shortened version of the MaxxPro LWB variant. The Dash variant is designed to provide improved underbody blast protection, can transport six persons, and is equipped with an ISS.
 - The MaxxPro LWB Ambulance variant is designed to transport a driver and two crewmembers (one of which is a medic) with the ability to carry a combination of two litter-bound or four ambulatory patients. This variant is equipped with an ISS.



**MaxxPro Long Wheel
Base (LWB) Ambulance**



**MaxxPro Dash with
MaxxPro Survivability
Upgrade (MSU)**

Mission

- Multi-service and special operations units equipped with the MRAP FoV 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.
- Units equipped with Dash vehicles will conduct small unit combat operations such as mounted patrols and reconnaissance.

FY14 ARMY PROGRAMS

- Units equipped with the MaxxPro LWB Ambulance variant will provide enhanced medical evacuation capabilities with protection against ballistic threats that may be encountered while transporting Soldiers during evacuation.

Major Contractor

Navistar Defense – Warrenville, Illinois

Activity

MaxxPro Dash with MSU

- The Army completed the LFT&E of the MSU-equipped Dash in 3QFY14. This testing focused on the underbody blast threat. The results from the legacy Dash LFT&E test program relative to other tested threats such as IEDs, indirect fire, and small arms, are applicable to the MSU-equipped Dash.

MaxxPro LWB Ambulance

- The Army commenced LFT&E on the MaxxPro LWB Ambulance in 4QFY14 and completed in 1QFY15. LFT&E of the MaxxPro LWB Ambulance is focused on the changes to the vehicle specific to the ambulance configuration, including the patient litter and medical equipment.
- The Army conducted all testing in accordance with DOT&E-approved test plans.

Assessment

MaxxPro Dash with MSU

- Early LFT&E of the MSU equipped Dash revealed problems with MSU kit integration that required engineering changes to the platform. Testing and

evaluation of changes to the MSU kit to address these problems is complete, and the solution will be integrated into affected vehicles during their reset.

- The MSU kit performs as intended, mitigating certain structural issues identified from combat events.
- The MSU-equipped Dash provides underbody blast protection well beyond the original MRAP Capabilities Production Document 1.1 requirements.

MaxxPro LWB Ambulance

- Testing is ongoing, but early LFT&E indicates the vehicle provides protection at its required levels. Additional testing and analysis are required before a full evaluation can be made.

Recommendations

- Status of Previous Recommendations. There was no live fire or operational testing conducted on the M-ATV in FY14; therefore, none of the FY13 recommendations apply to the vehicles tested in FY14.
- FY14 Recommendations. None.