

Armored Tactical Vehicles – Army

Executive Summary

- DOT&E delivered the Family of Medium Tactical Vehicles (FMTV) LFT&E Report to Congress in October 2011.
- DOT&E provided an Operational Assessment to support the re-procurement decision of the Oshkosh FMTV. A transportation unit can accomplish line and local haul convoy missions using the Oshkosh FMTV in the same manner as the fielded FMTV.
- The Army is developing a Modernized Expanded Capacity Vehicle (MECV) High Mobility Multi-purpose Wheeled Vehicle (HMMWV) survivability test series to determine available enhanced protection capabilities. In a parallel effort, the Marine Corps is exploring a HMMWV sustainment modification initiative to restore lost reliability and mobility capabilities due to armoring vehicles.
- Emerging Heavy Equipment Transporter (HET) underbody test results indicate that the HET Underbody Improvement Kit (UIK) increases crew protection against under-vehicle threats.

System

FMTV

- The FMTV re-procurement is the fourth stage of FMTV progression. These vehicles consist of the following light and medium variants intended to operate on- and off-road:
 - The Light Medium Tactical Vehicle (LMTV) transports a 5,000-pound payload and a 12,000-pound towed load.
 - The Medium Tactical Vehicle (MTV) transports a 10,000-pound payload and a 21,000-pound towed load.

HMMWV

- The HMMWV is a general purpose tactical wheeled vehicle with light and heavy variants.
 - The Light Variant includes the light utility, weapon carrier, and ambulance with a required minimum payload of 2,600 pounds.
 - The Heavy Variant includes the heavy shelter carrier, light and heavy howitzer towing variant, and ambulance with a required minimum payload of 4,550 pounds.
- The MECV HMMWV effort is intended to identify improved underbody crew protection, scalable armor, and the ability to regain automotive performance.

HET

- The M1070 HET is an eight-wheeled tractor used to transport the M1 main battle tank and other large equipment weighing up to 70 tons to and from the battlefield.
- The HET UIK is designed to provide improved underbody blast protection to the fielded HETs. The vehicle seats were modified in conjunction with the UIK development.



FMTV
(Family of Medium Tactical Vehicles)



HMMWV
(High Mobility Multi-purpose Wheeled Vehicle)



HET
(Heavy Equipment Transporter)

Mission

FMTV

- The Army employs the FMTV to provide multi-purpose transportation and unit mobility vehicles in maneuver, maneuver support, and sustainment units.

HMMWV

- The HMMWV provides highly mobile light tactical wheeled transport for command and control, troops and light cargo, medical evacuation, and weapon platforms to division and below units. This vehicle is employed throughout the battlefield and operates in off-road and cross-country environments.

HET

- The M1070 HET is used to transport, deploy, recover, and evacuate combat-loaded tanks and other large tracked and wheeled vehicles.

Major Contractors

FMTV & HET

- Oshkosh Corporation – Oshkosh, Wisconsin

HMMWV

- AM General – South Bend, Indiana

ARMY PROGRAMS

Activity

FMTV

- The Army completed the Production Verification Testing (PVT) of the Oshkosh FMTV Wrecker at Aberdeen Proving Ground, Maryland. The purpose of the PVT was to ensure that performance, reliability, and maintainability met the requirements for the vehicle.
- The Army Test and Evaluation Command completed the FMTV Developmental/Operational Test (DT/OT) at Aberdeen Proving Ground in June 2011 in accordance with the DOT&E-approved test plan.
- DOT&E delivered the FMTV LFT&E Report to Congress in October 2011.
- DOT&E provided an Operational Assessment in October 2011 to support the re-procurement decision of the FMTV by Oshkosh.

HMMWV

- In February 2012, the Army Test and Evaluation Command (ATEC) completed developmental testing and a user evaluation of the M997A3 HMMWV Ambulance at Aberdeen Proving Ground, Maryland, to support the procurement of 500 vehicles for the Army National Guard.
- The Army is developing an MECV HMMWV survivability test series to determine available enhanced protection capabilities. In a parallel effort, the Marine Corps is exploring a HMMWV sustainment modification initiative to restore lost reliability and mobility capabilities due to armoring vehicles.

HET

- ATEC conducted four system-level underbody blast tests against the HET UIK at the Aberdeen Test Center, Aberdeen, Maryland. The results compare the blast protection of the base and up-armored HET.
- The M1070 HET Live Fire test series included threats above Mine Resistant Ambush Protected All-Terrain Vehicle levels.
- The program procured 55 HET UIKs in August 2011.

Assessment

FMTV

- Based on DT/OT results, a transportation unit can accomplish line and local haul convoy missions using the Oshkosh FMTV in the same manner as the fielded FMTV.
- During PVT, the Oshkosh FMTV Wrecker demonstrated 8,000 Mean Miles Between Hardware Mission Failure (MMBHM) versus its operational requirement of 5,000 MMBHMF. The Wrecker is capable of recovering and towing wheeled vehicles such as the HMMWV, 5-ton truck series, and FMTV vehicles over a variety of terrain and surfaces.

HMMWV

- Contractor results from the ballistic tests on the potential MECV designs demonstrated that improvements in survivability are feasible. The Army will retest these designs during the MECV HMMWV survivability test series.
- The M997A3 HMMWV Ambulance contributes to the accomplishment of the medical ground evacuation mission in support of Homeland Defense and Homeland Security operations based on the results of developmental testing and user evaluation. The medical crews effectively collected, provided en-route treatment, and transferred patients from simulated points of injury to a treatment facility utilizing the Ambulance. The M997A3 HMMWV Ambulance demonstrated a Mean Miles Between Operational Mission Failure of 3,053 miles during DT/OT versus the 1,637 miles requirement.

HET

- Emerging underbody test results indicate that the M1070 HET UIK increases crew protection against under-vehicle strikes.

Recommendations

- Status of Previous Recommendations. The Army addressed all previous recommendations.
- FY12 Recommendations. None.