

## Armored Tactical Vehicles – Naval

### Executive Summary

- The Logistics Vehicle System Replacement (LVSr) family of vehicles provides adequate armor protection to the crews against the likely threats while still maintaining mission capability.
- The Marine Corps is continuing development and testing of other armored protection upgrades.

### System

- The Marine Corps is adding armored protection to tactical wheeled and tracked vehicles to improve crew survivability in the urban and non-linear battlefields of Iraq and Afghanistan.
- The armor is intended to reduce crew susceptibility to small arms fire, mines, IEDs, and rocket-propelled grenades. Development includes redesigned crew cab structures with the capability to accept attachable armor that can be installed as the tactical situation demands.
- The Marine Corps Armored Tactical Vehicle Programs include the following:
  - The LVSr is a family of heavy trucks capable of transporting 18 tons off-road and 22.5 tons on-road. The Marine Corps designed an armor protection kit and completed testing in FY09.
  - The Medium Tactical Vehicle Replacement (MTVR) is a family of medium trucks capable of transporting 7 tons off-road and 12 tons on-road. The Marine Corps continues to design armor protection kits and began testing in FY09.
  - The Joint Assault Bridge (JAB) is based upon the M1A1 Abrams chassis and will provide an assault crossing capability to counter both natural and man-made gaps up to 18.3 meters (60 feet) long. The Marine Corps is in the planning and development stage of up-arming the JAB.

### Mission

The Marine Corps employs truck systems as multi-purpose transportation and unit mobility vehicles in combat, combat

### Activity

- The Marine Corps completed LVSr live fire testing on the cargo variant in October 2008. The LVSr wrecker and tractor variants incorporate the same cargo variant armor design and do not require additional live fire testing.
- DOT&E submitted the LVSr LFT&E Report to Congress in December 2008.
- DOT&E approved the MTVR Live Fire strategy and evaluation plan in July 2009.
- The Marine Corps reviewed MTVR live fire data from FY07 and decided to conduct additional exploitation, full-up and



MTVR

LVSr



JAB

support, and combat service support units. The increased threat to tactical vehicles has created a need for augmented and flexible mission-based ballistic protection.

- The LVSr is the heavy lift transport capability within all elements of the Marine Air Ground Task Force, which includes transporting bulk fuel and water, ammunition, cargo, tactical bridging, containers, combat engineer vehicles, and heavy wrecker capability.
- The MTVR is the prime mover for the howitzer, fuel and water assets, troops, and a wide variety of equipment.
- The JAB is a rapidly employable, short-gap, assault crossing bridge to project combat power ashore and maintain the initiative of the maneuver element.

### Prime Contractors

- LVSr and MTVR: Oshkosh, Wisconsin
- JAB: General Dynamics Land Systems, Sterling Heights, Michigan

system-level tests on the reducible height armor package, and troop carrier upgrades.

- The Marine Corps completed MTVR exploitation testing in July 2009 and is considering design improvements to increase crew survivability. Two full-up system-level test events were completed in September 2009 and the six remaining system-level test events are planned for September through December 2009.

# NAVY PROGRAMS

- The Marine Corps completed JAB ballistic exploitation testing in July 2009 on a prototype JAB armor system mounted to an M1A1 hull.

## **Assessment**

- As stated in the December 2008 LVSR LFT&E Report to Congress, the LVSR family of vehicles provides adequate armor protection to the crews against the likely threats while still maintaining mission capability.
- JAB-unique components performed as expected during exploitation testing and demonstrated the ability to provide

adequate protection to the crew compartment as well as the launcher mechanism components.

## **Recommendations**

- Status of Previous Recommendations. The Marine Corps satisfactorily addressed all previous recommendations.
- FY09 Recommendation.
  1. Additional LVSR and MTRV live fire testing will be required if armor upgrades or design changes are developed for any of the currently tested vehicles.