

Joint Lightweight Tactical Vehicle (JLTV)

Executive Summary

- Joint Lightweight Tactical Vehicle (JLTV) prototype vehicles built by three vendors have completed the Technology Development (TD) phase. These TD vendors may be selected to participate in the Engineering and Manufacturing Development phase.
- The JLTV Milestone B decision is planned for 3QFY12.
- During TD testing, all vendor vehicles experienced difficulty with mobility in soft soil due to vehicle weight and other vehicle design factors. In the TD, the reliability of vendor vehicles demonstrated between 71 to 902 Mean Miles Between Operational Mission Failure (MMBOMF) versus the required 3,600 MMBOMF.
- The Army increased the underbody threat requirement during TD to be equivalent to the protection provided by the all terrain version of the Mine Resistant Ambush Protected (MRAP) vehicle. The ability to achieve the increased level of protection while also satisfying other JLTV requirements is not known.

System

- The JLTV Family of Vehicles (FoV) is the Marine and Army partial replacement for the High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The program intends JLTV to provide increased crew protection against IED attacks, improved mobility, and higher reliability than the HMMWV.
- The JLTV FoV consists of two vehicle categories. The JLTV Combat Tactical Vehicle (CTV) is designed to seat four passengers. The JLTV Combat Support Vehicle is designed to seat two passengers.
- The JLTV Combat Tactical Vehicle (CTV) has a 3,500-pound payload and five variants:
 - Close Combat Weapons Vehicle
 - Special Purpose Vehicle
 - Command and Control on the Move Vehicle
 - General Purpose Vehicle
 - Heavy Guns Carrier Vehicle
- The JLTV Combat Support Vehicle Variant has a 5,100-pound payload and two variants:
 - Utility Prime Mover
 - Shelter Carrier
- The JLTV program initiated a competitive prototyping approach before procuring vehicles in order to reduce risks in the integration of the technology, improve design, reduce cost, and gain knowledge of prototype capabilities.



JLTV
Notional Combat Tactical Vehicle



JLTV
Notional Combat Support Vehicle

Mission

- Military units will employ JLTV as a light tactical wheeled vehicle to support all types of military operations. JLTVs will be used by airborne, air assault, light, Stryker, and heavy forces as reconnaissance, maneuver, maneuver sustainment, and command and control platforms.
- Small ground combat units will employ JLTV in combat patrols, raids, long-range reconnaissance, and convoy escort.

Major Contractors

Technical Phase

- BAE Ground Systems – Santa Clara, California
- Lockheed Martin Systems – Owego, New York
- General Dynamics Land Systems – Sterling Heights, Michigan

ARMY PROGRAMS

Activity

- Three vendor JLTV prototype vehicles have completed the TD phase of program. These TD vendors may or may not participate in the next program phase. The JLTV Engineering Manufacturing Design phase will be an open competition to selected vendors to produce prototypes.
 - JLTV vendors vehicles conducted endurance testing at Montegetta Proving Ground, Australia, and Aberdeen Test Center, Maryland, to demonstrate reliability and maintainability.
 - The program completed a JLTV User Demo in March 2011 at Aberdeen Proving Ground, Maryland. The User Demo focused on the suitability of JLTV to conduct crew and individual mission tasks.
 - The program completed TD ballistic testing in June 2011 at Aberdeen Proving Ground, Maryland, to assess the capability of the JLTV to meet Force Protection requirements.
 - The JLTV Milestone B decision is planned for 3QFY12.
- The JLTV vehicle-unique safety problems limited execution of the JLTV User Demo to assess ingress/egress, coupling and uncoupling of the trailer and vehicles, and performing the gunner drills.
 - The JLTV payload deficiencies affected Soldier and Marine employment of the vehicle in the JLTV User Demonstration. Lack of adequate storage space for ammunition, restricted visibility due to small windows, positioning of window panels, and uncomfortable seats with poor seating arrangements were common problems between vendor prototypes and variants.
 - Based on ballistic testing, the TD Force Protection requirements are achievable.
 - The Army increased the underbody threat requirement during TD to be equivalent to the protection provided by the all terrain version of the MRAP vehicle. The ability to achieve the increased level of protection while also satisfying other JLTV requirements is not known.

Assessment

- During TD testing, all vendor vehicles experienced difficulty with mobility in soft soil due to vehicle weight and other vehicle design factors. In the TD, the reliability of vendor vehicles demonstrated between 71 to 902 Mean Miles Between Operational Mission Failure (MMBOMF) versus the required 3,600 MMBOMF.
- All three JLTV vendor vehicles had problems demonstrating functionality of government furnished command, control, and communication equipment in vehicles.

Recommendations

- Status of Previous Recommendations. The Army addressed all previous recommendations.
- FY11 Recommendations. The program should:
 1. Capitalize on the lessons learned from the JLTV TD testing to update the Engineering and Manufacturing Development Reliability, Availability, and Maintainability Growth Plan.
 2. Submit a Test and Evaluation Master Plan to support the Milestone B decision in 3QFY12.