

Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV)

Executive Summary

- Army and Marine Corps units equipped with Joint Light Tactical Vehicles (JLTVs) with inherent armor demonstrated the ability to execute air assault missions.
- Based on developmental test/operational test (DT/OT), Marine Corps units equipped with JLTVs demonstrated the ability to execute amphibious assault missions.
- The JLTVs have large visual signature and their slow maneuver time from ship to shore prevents a Marine Expeditionary Unit from executing assault missions with tactical surprise, increases the time to close combat power ashore, and renders the unit vulnerable to threats. Testing showed that JLTVs are slower to load, prepare for fording, and transition to maneuver ashore than HMMWV due to their larger vehicle size, delays that occur while awaiting suspension mode, and other vehicle adjustments (e.g., tire pressure).
- In September 2014, the Army and Marines conducted the JLTV Family of Vehicles (FoV) Limited User Test (LUT) at Fort Stewart, Georgia.
- From November 2013 through October 2014, the Army conducted Engineering Manufacturing and Development (EMD) system-level ballistic testing of the JLTV designs.
- The program will begin Source Selection Board activities to down select to a single contractor in January 2015 and is expected to be completed by July 2015.
- The Milestone C Low-Rate Initial Production decision is planned for July 2015.
- The Army conducted all testing in accordance with a DOT&E-approved test plan and Test and Evaluation Master Plan (TEMP).

System

- The JLTV FoV is the Marine Corps and Army partial replacement for the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) fleet. The Services intend the JLTV to provide increased crew protection against IED and underbody attacks, improved mobility, and higher reliability than the HMMWV.
- The JLTV FoV consists of two vehicle categories: the JLTV Combat Tactical Vehicle, designed to seat four passengers; and the JLTV Combat Support Vehicle, designed to seat two passengers.
- The JLTV Combat Tactical Vehicle has a 3,500-pound payload and 3 mission package configurations:
 - Close Combat Weapons Carrier Vehicle
 - General Purpose Vehicle
 - Heavy Guns Carrier Vehicle



AM General JLTV



**Lockheed Martin
Systems JLTV**



Oshkosh Corporation JLTV

- The JLTV Combat Support Vehicle has a 5,100-pound payload and 2 configurations:
 - Utility Prime Mover
 - Shelter Carrier
- The JLTV program is using a competitive prototype acquisition strategy. During the EMD phase, the program tested vehicles from three contractors.

FY14 ARMY PROGRAMS

Mission

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

Major Contractors

- AM General – South Bend, Indiana
- Lockheed Martin Corporation – Grand Prairie, Texas
- Oshkosh Corporation – Oshkosh, Wisconsin

Activity

- In April 2014, the Army and Marine Corps units executed air assault missions during DT/OT at Aberdeen Proving Ground, Maryland, using CH-47F and CH-53E helicopters. The Marine Corps unit executed amphibious assault missions at Joint Expeditionary Base Little Creek, Fort Story, Virginia, using Landing Craft Utility ships.
- In July 2014, the Army Test and Evaluation Command (ATEC) conducted reliability, availability, and maintainability testing on all three vendors' JLTVs at Aberdeen Proving Ground and Yuma Proving Ground, Arizona. The objective of testing was to discover failure modes, implement corrective actions, and assess whether the vendors' vehicles could meet the required Mean Miles Between Hardware Mission Failure (MMBHM) prior to the Milestone C decision.
- In August 2014, the ATEC completed automotive testing on the vendors' JLTVs.
- The Marine Corps demonstrated its automotive performance requirements when outfitted with the Army's higher level of underbody protection during testing. The Marine Corps removed their separate, lower underbody protection requirement. In the future production and deployment phase, all vehicles tested will be armored to meet a single set of under-vehicle protection requirements.
- The program began developing the JLTV FoV Milestone C TEMP to reflect the T&E activities for the production and deployment phase in June 2014.
- In September 2014, the Army and Marines conducted the JLTV LUT at Fort Stewart, Georgia. When the LUT ended in November 2014, the Army test unit had completed three, 96-hour scenarios and the Marine Corps test unit had completed one, 96-hour scenario at an operational tempo consistent with the JLTV Operational Mode Summary/Mission Profile. Analysis of the JLTV LUT data is ongoing.
- The program will begin Source Selection Board activities to down select to a single contractor in January 2015 and is expected to be completed by July 2015.
- ATEC completed the EMD phase of system-level live fire testing (50 tests total across the three vendors) in October 2014.
- The Milestone C Low-Rate Initial Production decision is planned for July 2015.
- The Army conducted all testing in accordance with a DOT&E-approved test plan and TEMP.

Assessment

- Vendors' JLTVs demonstrated between 528 and 2,194 MMBHM during reliability growth testing. The vehicles were required to demonstrate 3,196 MMBHM prior to the JLTV LUT.
- Based on the DT/OT, Army and Marine Corps units equipped with the JLTVs with inherent armor can execute air assault missions. The three JLTV contractor vehicles were more difficult to rig, de-rig, and load weapons due to vehicle height and lack of vehicle handholds and footholds than HMMWV. They had limited space to carry crew, mission essential equipment, weapons, and their sustainment load because of the small interior compartment.
- Marine Corps units equipped with the JLTVs demonstrated the ability to execute amphibious assault missions during DT/OT.
- The JLTVs have large visual signature, and their slow maneuver time from ship to shore prevents a Marine Expeditionary Unit from executing assault missions with tactical surprise, increases the time to close combat power ashore, and renders the unit vulnerable to threats. Testing showed that JLTVs are slower to load, prepare for fording, and transition to maneuver ashore than HMMWV due to their larger vehicle size, delays that occur while awaiting suspension mode, and other vehicle adjustments (e.g., tire pressure).
- During DT/OT, the JLTVs demonstrated more maneuverability in soft soil and better fording capability than HMMWV. Crews have less visibility in JLTVs than HMMWV because of smaller windows, placement of mission equipment, and positioning of window panels.
- Analysis of the JLTV EMD ballistic test data is ongoing. These data will be used to make a final assessment of threshold-level force protection Key Performance Parameter for all three vendors.

Recommendations

- Status of Previous Recommendations. There were no previous recommendations for this program.
- FY14 Recommendation.
 1. The program should develop a plan to correct JLTV performance deficiencies discovered during the JLTV DT/OT and LUT before production.