

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

Executive Summary

- The industry protest after the Army awarded the Joint Light Tactical Vehicle (JLTV) initial production contract delayed the program schedule by 6 months. The Multi-Service Operational Test and Evaluation (MOT&E) is planned for February 2018. The Army and Marine Corps Initial Operational Capability dates are scheduled for 1QFY20.
- In May 2016, the Defense Acquisition Executive delegated the Milestone Decision Authority for JLTV to the Army, designating the program Acquisition Category 1C.
- In July 2016, DOT&E approved the JLTV Milestone C Test and Evaluation Master Plan (TEMP). The TEMP approval was delayed by 10 months based on the Army decision to submit the TEMP after the JLTV low-rate initial production contract award and review of the test program budget. The Army's intent was to reduce test costs based on assessing the extent of JLTV production design changes relative to the JLTV prototype vehicles performance during Engineering Manufacture Development (EMD) testing.
- Based on the JLTV Allocation Baseline Review, the program plans to implement several design changes intended to improve JLTV performance:
 - A new piston pump that reduces suspension transition times and increases reliability
 - Larger ammunition storage racks
 - Smaller engine air filter mount to improve driver visibility
 - Replacing several aluminum parts with steel to improve reliability
 - Replacing composite armors with all-metal to eliminate the multi-hit problem with ceramic armors
 - Modified gunner restraint system to improve gunner protection during underbody blast events
- The program plans to replace:
 - The engine used in the prototype JLTVs during EMD, with a newer model. The new engine will require several design modifications to fit in the engine compartment.
 - The roof hatch on the General Purpose and Utility variants with a bolt-on cover plate that eliminates a crew egress point.

System

- The JLTV Family of Vehicles (FoV) is the Marine Corps and Army partial replacement for the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) fleet. The Services intend JLTV to provide increased crew protection against IEDs and underbody attacks, improved mobility, and higher reliability than the HMMWV.



General Purpose



Heavy Guns Carrier



Utility/Shelter Carrier



Close Combat Weapons Carrier

- 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 three mission package configurations:
 - Close Combat Weapons Carrier Vehicle
 - General Purpose Vehicle
 - Heavy Guns Carrier Vehicle
- The JLTV Combat Support Vehicle has a 5,100-pound payload and one mission package configuration:
 - Utility Prime Mover that can accept a shelter
- JLTVs are equipped with two separate armor levels: the A-kit, or base vehicle, which is intended for use in low-threat environments, and the B-kit, an add-on armor kit, for additional force protection to include enhanced small arms, fragmentation, and underbody protection in the intended deployment configuration.

Mission

- Commanders employ military units equipped with 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 Contractor

Oshkosh Corporation – Oshkosh, Wisconsin

FY16 ARMY PROGRAMS

Activity

- The industry protest after the Army awarded the contract delayed the program schedule by 6 months. The MOT&E is planned for February 2018. The Army and Marine Corps Initial Operational Capability dates are scheduled for 1QFY20.
 - The program conducted a JLTV Allocation Baseline Review in February 2016. The meeting covered details of the JLTV design changes, vendor's organization, and manufacturing processes to improve vehicle performance, simplify production, and reduce cost.
 - In May 2016, the Defense Acquisition Executive delegated the Milestone Decision Authority for JLTV to the Army, designating the program Acquisition Category 1C.
 - In July 2016, DOT&E approved the JLTV Milestone C TEMP. The Army/Marine Corps TEMP submission to OSD was delayed by 10 months based on the Army/Marine Corps decision to submit the TEMP after the JLTV low-rate initial production contract award. The goal was to reduce the test budget based on assessing the extent of JLTV production design changes relative to JLTV prototype vehicles performance during EMD.
 - The program began armor coupon live fire testing in July 2016 and ballistic cab testing in August 2016.
 - The Army received the first delivery of production JLTVs in October 2016. The initial order included 657 JLTVs and 25 trailers.
 - The Army Test and Evaluation Command (ATEC) began Reliability Qualification Testing (RQT) in January 2017 at Aberdeen Test Center, Maryland, and Yuma Proving Ground, Arizona. The objective of the RQT is to assess whether the JLTV can meet the Mean Miles Between Operational Mission Failure requirement prior to MOT&E. This testing is planned to consist of 96,000 miles on JLTVs.
 - Full-Up System-Level live fire testing, intended to evaluate crew survivability and vehicle performance against mine and IED threats, overhead artillery, rocket-propelled grenades, homemade explosives, and the performance of the Automatic Fire Extinguishing System, is scheduled to begin in January 2017 at Aberdeen Test Center.
 - The ATEC plans to conduct extreme cold weather testing beginning in February 2017 at Cold Regions Test Center in Fort Greeley, Alaska. The testing will provide information to assess the JLTV performance and reliability in extreme cold weather environments.
- Strengthen the vehicle hood and add steps and hand-holds on the side of the vehicle to support rigging/de-rigging, ingress/egress, weapon mounting, and loading task
 - Redesign the JLTV to allow access to the cargo compartment from within the cab
 - Relocate mission equipment to improve storage of additional ammunition in the cab, and redesign ammunition platforms and storage straps in the cab to better accommodate ammunition cans
 - Reduce the Essential Function Failure rate, focusing on the sub-systems with high-failure rate
 - Fix command and control failures
 - Mitigate effect of placing items under energy absorbing seats to improve occupant protection
 - Improve gunner protection during underbody blast events
 - Modify frame clip systems to improve recoverability
 - Modify cooling lines to prevent coolant intrusion into crew cab
- Based on the JLTV Allocation Baseline Review, the program intends to implement several design changes to improve JLTV performance:
 - A new piston pump that reduces suspension transition times and increases reliability
 - Larger ammunition storage racks
 - Smaller engine air filter mount that improves driver visibility
 - Replacing several aluminum parts with steel to improve reliability
 - Replacing composite armors with all-metal to eliminate multi-hit problem with ceramic armors
 - Modified gunner restraint system to improve gunner protection during underbody events
 - The program is developing and prioritizing the following Engineering Change Proposals:
 - Integration of a weight-bearing hood
 - Investigate modifying the Utility variant to support carrying troops in the rear cargo bed
 - Redesign the JLTV to fit a litter in the JLTVs
 - Replacing aluminum parts with cast iron parts and ceramic armor with metal is intended to improve the multi-hit protection capability but will increase the JLTV weight by approximately 250 pounds.
 - The engine used in the prototype JLTVs during EMD is being replaced by a newer model. The new engine will require several design modifications to fit within the JLTV engine compartment.

Assessment

- In August 2015, DOT&E's JLTV Milestone C Operational Assessment and classified Live Fire Report recommended the program develop a plan to improve the performance of the JLTV:
 - Increase the speed of suspension and tire pressure adjustments to improve vehicle responsiveness and maneuver

Recommendations

- Status of Previous Recommendations. The Army has made progress addressing the previous FY15 recommendations.
- FY16 Recommendations. None.