Joint Light Tactical Vehicle (JLTV): Background and Issues for Congress

Andrew Feickert
Specialist in Military Ground Forces

January 10, 2017
Summary

The Joint Light Tactical Vehicle (JLTV) is being developed by the Army and the Marine Corps as a successor to the High Mobility, Multi-Wheeled Vehicle (HMMWV), which has been in service since 1985. On October 28, 2008, awards were made for the JLTV Technology Development (TD) Phase to three industry teams: (1) BAE Systems, (2) the team of Lockheed Martin and General Tactical Vehicle, and (3) AM General and General Dynamics Land Systems.

On January 26, 2012, the Army issued the Request for Proposal (RFP) for the JLTV’s EMD phase. Up to three EMD contracts could have been awarded, and contract award was scheduled for June 2012. The period of performance for EMD contracts was 27 months, with the overall EMD phase scheduled to last 33 months. Vendors would be required to provide 22 JLTV prototypes for testing 12 months after contract award. The target cost for the base vehicle is $250,000 excluding add-on armor and other kits.

On August 22, 2012, the Army announced the award of three firm-fixed price JLTV EMD contracts totaling approximately $185 million. The three companies awarded the EMD contracts were AM General, LLC (South Bend, IN); Lockheed Martin Corporation (Grand Prairie, TX); and Oshkosh Corporation (Oshkosh, WI).

On September 3, 2013, the Army began JLTV testing at Aberdeen Proving Grounds, MD; Yuma, AZ; and Redstone Arsenal, AL. The Army planned to select a single vendor by 2015, with the first Army brigade being equipped with JLTVs by 2018. FY2015 program plans anticipated a Milestone C (Production and Deployment Phase Approval) decision in the fourth quarter of FY2015, followed by Low Rate Initial Production (LRIP).

In June 2014, the Army issued a draft RFP for the JLTV Full-Rate Production Phase. The Secretary of Defense conducted an interim review of the JLTV program and found it is likely to meet all eight key performance parameters. Three companies who were picked in 2012 to build prototypes—Oshkosh, Lockheed Martin, and AM General—submitted their bids for the LRIP contract by the February 10, 2015 deadline.

On August 25, 2015, it was announced the Army had awarded Oshkosh a $6.7 billion low rate initial production (LRIP) contract with eight options to procure the initial 16,901 vehicles for the Army and Marines. The JLTV is to be produced in Oshkosh, WI, and deliveries are scheduled to begin in June 2016.

On September 8, 2015, it was reported Lockheed Martin would file a protest with GAO, but AM General reportedly did not file a protest with GAO. On December 15, 2015, GAO closed Lockheed Martin’s protest “without further action.”

According to DOD’s 2016 Selected Acquisition Report (SAR), the JLTV program cost estimate decreased by over 19%, or about $5.9 billion, due to revised estimates of vehicle unit costs and installation kits.

It is also reported the Army plans to use the JLTV as the interim platform for its upcoming Light Reconnaissance Vehicle (LRV) program instead of procuring a new system, and the Air Force is considering the JLTV as a replacement for its HMMWVs being used by missile launch site security units.

A potential issue for Congress includes service-specific fielding plans for the JLTV.
Contents

Background .......................................................................................................................... 1
JLTV Program ...................................................................................................................... 1
   What Is the JLTV? .............................................................................................................. 1
   Program Structure ......................................................................................................... 1
Early Program History ........................................................................................................ 2
   Technology Development Contracts Awarded .............................................................. 2
   JLTV Contracts Protested .............................................................................................. 2
   Change in Requirements, Program Schedule, and Variants .......................................... 3
   Army Issues RFP for EMD Phase .................................................................................. 3
Current Acquisition Quantities and Program Costs .......................................................... 3
Potential for Foreign Military Sales (FMS) ........................................................................ 3
Contract-Related Program Activities ................................................................................. 4
   JLTV EMD Contracts Awarded ..................................................................................... 4
   Army Releases Final RFP for JLTV Full-Rate Production ............................................. 4
   Bids Submitted for JLTV Low-Rate Initial Production (LRIP) ....................................... 5
Army Awards JLTV Contract ............................................................................................ 5
   Lockheed Martin’s JLTV Protest .................................................................................. 5
      Lockheed Martin Files Protest with the Government Accountability Office (GAO) ................................................................. 5
      Army Stops Work on the JLTV Contract ................................................................ 6
      GAO Closes Protest and Lockheed Martin Files Claim with the United States Court of Federal Claims ......................................................... 6
      United States Court of Federal Claims Denies Lockheed Martin’s Stop-Work Request ..................................................................... 6
      Lockheed Martin Withdraws JLTV Protest from United States Court of Federal Claims ................................................................. 6
   Director, Operational Test and Evaluation (DOT&E) 2015 Annual Report .................. 7
JLTV LRIP Production Begins .......................................................................................... 7
   Army JLTV Program Cost Estimate Decreases ........................................................... 8
   Delay in JLTV Initial Operating Capability (IOC) ......................................................... 8
   Army Selects JLTV to Serve as Its Interim Light Reconnaissance Vehicle (LRV) .......... 8
   Air Force to Consider JLTV Acquisition ...................................................................... 8
Potential Issues for Congress ............................................................................................ 9
   Fielding Plan for JLTVs ............................................................................................... 9

Contacts

Author Contact Information ............................................................................................... 9
Background

The JLTV is an Army-led, multi-service initiative to develop a family of future light tactical vehicles to replace many of the High Mobility, Multi-Wheeled Vehicle (HMMWVs) used by the armed services today. HMMWVs, which first entered service in 1985, were developed during the Cold War when improvised explosive devices (IEDs) and other anti-vehicle explosive devices were not a major factor in military planning. The HMMWV’s demonstrated vulnerability to IEDs and the difficulties and costs experienced in “up-armoring” HMMWVs already in the inventory have led to renewed emphasis on vehicle survivability. DOD officials have emphasized that JLTVs are not intended to replace HMMWVs “one for one.”

JLTV Program

What Is the JLTV?

The JLTV program is a joint Army/Marine Corps effort to develop and produce both vehicles and associated trailers. Originally, there were three variants, but now there are two JLTV variants: a four-passenger Combat Tactical Vehicle (CTV) and a two-passenger Combat Support Vehicle (CSV). As planned, JLTVs would be more mechanically reliable, maintainable (with on-board diagnostics), all-terrain mobile, and equipped to link into current and future tactical data nets. Survivability and strategic and operational transportability by ship and aircraft are also key JLTV design requirements.

Program Structure

The JLTV is an Acquisition Category (ACAT) 1D program. The Army bears the overall responsibility for developing the JLTV through its Joint Program Office, which reports to the Program Executive Office (PEO) for Combat Support & Combat Service Support (PEO CS&CSS) in Warren, MI, which reports to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA[AL&T]). Marine participation is centered on a program office under the supervision of the Program Executive Officer Land Systems (PEO LS) Marine Corps at Quantico, VA.

---

5 The 12th Edition of the Defense Acquisition University Glossary, July 2005, defines an ACAT 1D program as “a Major Defense Acquisition Program (MDAP) which is estimated by the Under Secretary of Defense (Acquisition, Technology, and Logistics) (USD (AT&L)) to require the eventual expenditure for Research, Development, Test, and Evaluation (RDT&E) of more than $365 million (FY2000 constant dollars) or the procurement of more than $2.19 billion (FY2000 constant dollars).”
Early Program History

In November 2006, the Joint Chief of Staff’s Joint Requirement Oversight Council (JROC) approved the JLTV program. On December 22, 2007, the Under Secretary of Defense for Acquisition, Technology, and Logistics USD (AT&L) signed an Acquisition Decision Memorandum (ADM) directing the JLTV Program to move from the Concept Refinement Phase into the Technology Development (TD) Phase of the DOD System Acquisition Process. The Army and Marines had intended to issue a Request for Proposal (RFP) for Technology Development Phase as early as October 2007. Concerned with funding adequacy, technical maturity, and shifting requirements, the Pentagon’s acquisition executive, John Young, disapproved the issuance of the RFP and directed the Army and Marines to “go back to the drawing board and develop a robust technology development phase.” On February 5, 2008, an RFP for Technology Development Phase was issued to industry. The RFP stated the government desired to award three contracts for the JLTV Technology Development Phase. The RFP stipulated that proposals would be due April 7, 2008, and the TD Phase would last 27 months. Contractors would build four test sub-configurations during the first 15 months, followed by 12 months of testing.

Technology Development Contracts Awarded

On October 28, 2008, three awards were made for the JLTV TD Phase for a total of $166 million. The three industry teams were (1) BAE Systems Land and Armaments, Ground Systems Division, Santa Clara, CA, and NAVISTAR Defense, Warrenville, IL; (2) General Tactical Vehicles, Sterling Heights, MI—a joint venture between General Dynamics Land Systems and AM General; and (3) Lockheed Martin Systems Integration, Oswego, NY, BAE Systems, Alcoa Defense, Pittsburgh, PA, and JWF Defense Systems, Johnstown, PA.

JLTV Contracts Protested

On November 7 and November 12, 2008, protests were filed with the Government Accountability Office (GAO) against the TD contract awards by the Northrop Grumman-Oshkosh team and the Textron-Boeing-SAIC team alleging there were “unintended discrepancies” in how the government rated bids in terms of the criteria of systems maturity, logistics, and costs. As a result of the protest, work on the JLTV program by the three winning teams was suspended. On February 17, 2009, GAO rejected the JLTV protests and the stop-work orders were lifted.

---

Change in Requirements, Program Schedule, and Variants

In February 2011, the JLTV Program Office announced the award of the EMD contract would be delayed until January or February 2012 because the Army changed requirements for the JLTV to have the same level of under body protection as the Mine-Resistant, Ambush Protected All-Terrain Vehicle (M-ATV). DOD had planned to award two contracts for the EMD phase, which was scheduled to last 24 months, but instead opted for a 48-month-long EMD phase before awarding Production and Deployment contracts in the second quarter of FY2016. In addition, the Category B variant was eliminated because it proved to be too heavy to meet the required weight of approximately 15,639 pounds to make it transportable by Army CH-47F and Marine Corps CH-53K helicopters. Now there will be two variants—a Combat Tactical Vehicle (CTV), which can transport four passengers and carry 3,500 pounds, and a Combat Support Vehicle (CSV), which can transport two passengers and carry 5,100 pounds.

Army Issues RFP for EMD Phase

On January 26, 2012, the Army issued the RFP for the JLTV’s EMD Phase. Industry proposals for the EMD contract were to have been filed with the Army by March 13, 2012. The RFP stipulated that up to three EMD contracts could be awarded, and contract award occurred in June 2012. These contracts would be capped at $65 million per contract. The duration of the EMD performance period would be 27 months starting with contract award. Vendors would be required to provide 22 prototypes for testing 12 months after contract award, and the target cost for the base vehicle configuration was $250,000 (FY2011 constant dollars), excluding add-on armor kits and other kits identified in the RFP.

Current Acquisition Quantities and Program Costs

According to the Government Accountability Office’s (GAO’s) March 2016 Assessments of Major Weapons Programs, for a JLTV procurement quantity of 54,408 vehicles, GAO estimates that a total of $23 billion would be required to complete the program, including $210 million for RDT&E and $22.8 billion for Procurement.

Potential for Foreign Military Sales (FMS)

Industry representatives from Oshkosh reportedly suggest that JLTV availability under FMS could come sooner than under normal circumstances. Noting that traditionally DOD does not conduct FMS until after a full rate production decision, Oshkosh suggested this practice could be modified for a mature platform such as the JLTV. In this case, Oshkosh could begin limited early foreign production in conjunction with LRIP, and potential international partners interested in

---

10 Information in this section, unless otherwise noted is taken from a briefing from the Project Manager Joint Combat Support Systems on the Joint Light Tactical Vehicle given on February 7 and 8, 2011 and Tony Bertuca, “PMs: JLTV Still Too Heavy, Changing Schedule and Losing Six-Man Variant,” InsideDefense.com, February 11, 2011.
12 Solicitation, Offer, and Award, Number W56HZV-11-R-0329, U.S. Army Contracting Command, January 26, 2012.
JLTV FMS could begin to formulate their procurement strategy with DOD and Oshkosh earlier than normal.

Reportedly, the Pentagon and the United Kingdom (U.K.) have recently discussed the FMS options for the JLTV. If approved, JLTV would reportedly be acquired as part of the U.K. Ministry of Defense’s Multi-Role Vehicle-Protected (MRV-P) program, where package one of the program would acquire a small variant for carrying troops and performing light duties; package two, a larger variant for carrying troops and for a battlefield ambulance; and package three, a light protected recovery vehicle.

Contract-Related Program Activities

JLTV EMD Contracts Awarded

On August 22, 2012, the Army announced the award of three firm-fixed price JLTV EMD contracts totaling approximately $185 million. The three companies awarded the EMD contracts were AM General, LLC (South Bend, IN); Lockheed Martin Corporation (Grand Prairie, TX); and Oshkosh Corporation (Oshkosh, WI). The period of performance was for 27 months, with each contractor receiving initial funding between $28 million to $36 million per contractor, with the balance of funding up to the full contract amount being provided in FY2013 and FY2014. In 12 months, each team was required to deliver 22 full-up prototypes and contractor support for a 14-month comprehensive government testing program, which included blast, automotive, and user evaluation testing. The overall EMD Phase was scheduled to last 33 months. According to the Army, “the EMD Phase is designed to test and prepare the next-generation vehicles for a Limited User Test, Capabilities Production Document and Milestone C procurement decision in FY 2015.”

Unsuccessful bidders, Navistar Defense, BAE Systems, and General Tactical Vehicles (a team of General Dynamics and AM General), were permitted to continue developing JLTV candidate vehicles at their own risk and expense, if they notify the government within 30 days of the EMD contract award. Reports suggest some bidders might consider continuing development of JLTV candidates for submission for production source selection.

Army Releases Final RFP for JLTV Full-Rate Production

On December 12, 2014, the Army reportedly released the final RFP for JLTV low-rate initial production and full-rate production and gave competitors until February 10, 2016, to refine and

---

15 Information in this section is from “JLTV May See First Export to UK in FMS,” Defense Industry Daily, June 23, 2016.
19 Ibid.
submit their bids. The Army—on behalf of itself and the Marines—planned to select a winner and issue a single contract award in the late summer of 2015.

The winning contractor would build approximately 17,000 JLTVs for the Army and Marines during three years of low-rate initial production, followed by five years of full-rate production. The first Army unit would be equipped with JLTVs in FY2018, and the Army’s complete acquisition of JLTVs would be completed in 2040. The Marines would begin acquiring their 5,500 JLTVs at the beginning of production and would be completed by FY2022.

Bids Submitted for JLTVC Low-Rate Initial Production (LRIP)21

It was reported that the three companies who were picked in 2012 to build prototypes—Oshkosh, Lockheed Martin, and AM General—submitted their bids for the LRIP contract by the February 10, 2015, deadline. It was also reported that none of the three competitors have said publically if they included in their proposals an option for the Army to purchase a technical data package for their vehicles. If the Army acquired the technical data package, theoretically the Army could use that data for future production runs, which could enhance competition and possibly result in better prices for the government.

Army Awards JLTVC Contract22

On August 25, 2015, it was announced the Army had awarded Oshkosh a $6.7 billion low rate initial production (LRIP) contract with eight options to procure the initial 16,901 vehicles for the Army and Marines. The JLTVC are to be produced in Oshkosh, WI.23 A full rate production decision is planned for FY2018, and plans call for the production of 49,100 JLTVs for the Army and 5,500 for the Marine Corps.

Lockheed Martin’s JLTVC Protest

Lockheed Martin Files Protest with the Government Accountability Office (GAO)24

On September 8, 2015, it was reported Lockheed Martin planned a protest with GAO, with a program spokesman stating:

> After evaluating the data provided at our debrief, Lockheed Martin has filed a protest of the award decision on the JLTVC program. We firmly believe we offered the most capable and affordable solution for the program. Lockheed Martin does not take protests lightly, but we are protesting to address our concerns regarding the evaluation of Lockheed Martin’s offer.25

---

25 Ibid.
The formal protest was later filed with GAO on September 10, 2015. Under the Federal Acquisition Regulation (FAR), all losing bidders of government contracts have the ability to protest contract awards to GAO lawyers if they believe their offer did not get fair consideration during source-selection proceedings.

AM General reportedly did not file a protest with the GAO, stating a decision to do so “would result in a distraction from the company’s current growth business areas,” which likely is a reference to the ongoing role the company plays in the upgrading and modernization of the HMMWV fleet of vehicles.

**Army Stops Work on the JLTV Contract**

On September 10, 2015, the Army reportedly issued a stop-work order to Oshkosh, with a GAO spokesman noting, “the Federal Acquisition Regulation requires contracting officers to automatically suspend performance on an awarded contract, following appropriate notification of a protest from GAO.”

**GAO Closes Protest and Lockheed Martin Files Claim with the United States Court of Federal Claims**

On December 11, 2015, Lockheed Martin informed GAO that it would file its JLTV protest instead with the United States Court of Federal Claims, and on December 15, 2015, GAO closed Lockheed Martin’s protest “without further action.” With the GAO protest dismissed, the Army lifted its stop-work order to Oshkosh on December 15, 2015.

**United States Court of Federal Claims Denies Lockheed Martin’s Stop-Work Request**

It was reported the United States Court of Federal Claims denied Lockheed Martin’s stop-work request on February 11, 2016, meaning Oshkosh may continue work associated with the JLTV contract until the court resolves the contract award dispute.

**Lockheed Martin Withdraws JLTV Protest from United States Court of Federal Claims**

On February 17, 2016, Lockheed Martin reportedly withdrew its JLTV protest in the U.S. Court of Federal Claims.

---

26 Ibid.
28 Ibid.
Director, Operational Test and Evaluation (DOT&E)\(^\text{32}\) 2015 Annual Report\(^\text{33}\)

DOT&E’s 2015 Annual Report provided additional information that likely informed the government’s decision to award the JLTV contract to Oshkosh instead of Lockheed Martin or AM General. Information from this report included the following observations:

- Based on the Limited User Test (LUT), the JLTV Family of Vehicles (FoV) provides enhanced protection and retains the up-armored HMMWV (UAH) FoV capabilities necessary for Army and Marine units to accomplish tactical and combat missions.

- Platoons equipped with the Oshkosh JLTVs accomplished 15 out of 24 missions similar to the platoon equipped with the UAHs.

- Platoons equipped with the AM General JLTVs accomplished 13 out of 24 missions. Platoons equipped with the Lockheed Martin JLTVs accomplished 12 out of 24 missions. The majority of failed platoon missions were attributed to combat losses for Oshkosh and Lockheed Martin JLTVs.

- Platoons equipped with the AM General JLTVs and the UAHs experienced less combat losses against the Opposing Force during missions.

- Platoons equipped with AM General JLTVs experienced reliability failures on nine missions that slowed the unit’s pace and degraded mission performance.

- Oshkosh JLTVs had improved mission reliability over the UAH and demonstrated 7,051 Mean Miles Between Operational Mission Failure (MMBOMF) versus its operational requirement of 2,400 MMBOMF. The UAH demonstrated 2,968 MMBOMF.

- AM General JLTVs had less mission reliability versus the UAH and demonstrated 526 MMBOMF.

- Lockheed Martin JLTVs had less mission reliability versus the UAH and demonstrated 1,271 MMBOMF.\(^\text{34}\)

JLTV LRIP Production Begins\(^\text{35}\)

On March 22, 2016, the Army reportedly placed a $243 million order with Oshkosh Defense to build 657 JLTVs, as well as 2,977 installation kits and related vehicle support LRIP items. The first JLTVs were delivered in September 2016.\(^\text{36}\)

---

\(^{32}\) “The Director, Operational Test & Evaluation (DOT&E) is the principal staff assistant and senior advisor to the Secretary of Defense (SecDef) on operational test and evaluation (OT&E) in the Department of Defense (DoD). DOT&E is responsible for issuing DoD OT&E policy and procedures; reviewing and analyzing the results of OT&E conducted for each major DoD acquisition program; providing independent assessments to SecDef, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)), and Congress; making budgetary and financial recommendations to the SecDef regarding OT&E; and overseeing major DoD acquisition programs to ensure OT&E is adequate to confirm operational effectiveness and suitability of the defense system in combat use.” [http://www.dote.osd.mil/about/mission.html](http://www.dote.osd.mil/about/mission.html).


\(^{34}\) Director, Operational Test and Evaluation FY2015 Annual Report, January 2016, pp. 125-127.


Army JLTV Program Cost Estimate Decreases

According to DOD’s 2016 Selected Acquisition Report (SAR), the JLTV program cost estimate decreased by over 19%, or about $5.9 billion, due to revised estimates of vehicle unit costs and installation kits. Based on these projected savings, Army officials reportedly suggest instead of finishing fielding in the early 2040 timeframe, fielding could be accomplished by the mid-2030s.

Delay in JLTV Initial Operating Capability (IOC)

Primarily due to program disruption resulting from the Lockheed Martin protest, the JLTV will not reach IOC in mid-2019 as originally planned. Instead, the Army anticipates a six-month delay in IOC until the end of 2019, and the Marine Corps IOC, originally expected for the fourth quarter of FY2018, will now be a year later in the first quarter of FY2020. While these delays are significantly longer than the protest period, officials from both services noted that their respected IOCs were adjusted to reflect delays in scheduled testing.

Army Selects JLTV to Serve as Its Interim Light Reconnaissance Vehicle (LRV)

The Army has reportedly decided to use the JLTV as the platform for its upcoming Light Reconnaissance Vehicle (LRV) program, instead of procuring a new system. Army officials note the JLTV is an interim solution, largely based on costs associated with developing a new system, and in the future, the Army could opt to pursue an original design for its LRV. It is not known if additional JLTVs will need to be acquired under the Army’s JLTV contract to meet LRV requirements.

Air Force to Consider JLTV Acquisition

The Air Force is reportedly considering acquiring JLTVs for its security forces that protect missile launch facilities. The Air Force stresses that no decisions have been made, and commercial off-the-shelf vehicles or a military vehicle could meet its requirements for replacing the HMMWVs it currently employs. Officials note the number of vehicles the Air Force eventually requires will be based on the procurement cost and the available mix of light and medium vehicles.

---


Potential Issues for Congress

Fielding Plan for JLTVs

A review of the Service’s Tactical Wheeled Vehicle Strategies provides little information on how the Army and Marines plan to field JLTVs to operational units. Congress might wish to review the Service’s fielding plans to insure that units involved in operations have access to JLTVs. In the Army’s case, how many JLTVs the Army plans to procure to meet their LRV requirements might also be of interest to Congress. Another issue that Congress might want to examine is the fielding breakdown between Active and Reserve Component units in both services. If the Air Force does eventually decide to acquire JLTVs, its fielding plan might also be of interest of Congress.

Author Contact Information

Andrew Feickert
Specialist in Military Ground Forces
afeickert@crs.loc.gov, 7-7673