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

Andrew Feickert, Foreign Affairs, Defense, and Trade Division

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Abstract. The Joint Light Tactical Vehicle (JLTV) is currently being developed by the Army and the Marine Corps as a successor to the 11 different versions of the High Mobility, Multi-Wheeled Vehicle (HMMWV) that have been in service since 1985. There are concerns about the affordability of JLTVs and its redundancy with other tactical wheeled vehicles.

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CRS Report for Congress

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

Andrew Feickert
Specialist in Military Ground Forces
Foreign Affairs, Defense, and Trade Division

Summary

The Joint Light Tactical Vehicle (JLTV) is currently being developed by the Army and the Marine Corps as a successor to the 11 different versions of the High Mobility, Multi-Wheeled Vehicle (HMMWV) that have been in service since 1985. There are concerns about the affordability of JLTVs and its redundancy with other tactical wheeled vehicles. This report will be updated as events warrant.

Background¹

The JLTV is an Army-led multi-service initiative to develop a family of future light tactical vehicles to replace many of the 160,000 HMMWVs used by the armed service 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. With more than 50% of the Army's total tactical wheeled vehicle fleet nearing the end of its useful life, and with the needs of the services to repair equipment and grow their forces, the JLTV, with its scalable armor protection, is intended to replace a large portion of the HMMWV fleet. DOD officials have emphasized that JLTVs are not intended to replace HMMWVs "one for one."² The Pentagon envisions HMMWVs remaining in service for many years to come; about 3,000 to 5,000 HMMWVs continue to be produced on an annual basis.

¹ Alan L. Gropman, "Combat Vehicle Sector Could be Headed for Turbulent Times," *National Defense*, April 25, 2008, and James P. Miller, "Race is On to Replace Humvee," *Chicago Tribune*, June 21, 2008.

² Kris Osborn, "DOD's JLTV Becoming an International Effort," *Defense News*, August 4, 2008.

JLTV Program³

What Is the JLTV? The JLTV program is a joint Army/Marine Corps effort to develop and produce three categories of vehicles and associated trailers. Category A JLTVs are intended for general purpose mobility and would carry a 3,500 lb. payload. Category Bs are intended to serve as infantry carriers, command and control and reconnaissance vehicles, and weapons carriers and would accommodate a 4,000 to 4,500 lb. payload. Category Cs are intended to serve as shelter carriers, prime movers, and ambulances and would carry a 5,100 lb. payload. JLTVs are to be designed with scalable armor, enhanced suspension, and drive train capability to accommodate future load carrying capacity. 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. Strategic and operational transportability by ship and aircraft are also key JLTV design requirements.

Program Structure.⁴ The JLTV is an Acquisition Category (ACAT) 1D program.⁵ The Army bears the overall responsibility for developing the JLTV through its Joint Program Office within the Army's Tank, Automotive, and Armament Command (TACOM) in Warren, Michigan. Marine participation is centered on a program office under the supervision of the Program Executive Officer Land Systems (PEO LS) Marine Corps at Quantico, Virginia.

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 Phase (TDP) 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."⁶ On February 5, 2008, an RFP for

³ Information in this section is taken from the Army Product Manager, Joint Light Tactical Vehicle website, [<http://peocscs.tacom.army.mil/pmJLTV.html>], last visited August 14, 2008, and Marine Corps PEO Land Systems Joint Light Tactical Vehicle website, [<http://www.marcorsyscom.usmc.mil/peolandssystems/jltv.aspx>], last visited August 14, 2008.

⁴ CRS Report RL34026, *Defense Acquisitions: Overview, Issues, and Options for Congress*, by Moshe Schwartz, provides an extensive discussion of the defense acquisition process.

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)."

⁶ Jason Sherman, "Pentagon Halts JLTV Competition, Directs Revised Strategy," *InsideDefense.com*, September 24, 2007.

Technology Development Phase was issued to industry.⁷ The RFP stated that 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 TDP would last 27 months. Contractors would build four test sub-configurations during the first 15 months, followed by 12 months of testing. The Army and Marines planned on issuing technology development contracts in June 2008, but in order to have sufficient funding for more than two technology development contracts, DOD requested to reprogram \$60 million in FY2008 funds.⁸ Because DOD's FY2008 Omnibus Reprogramming Request was not approved by all four defense committees before the August 2008 recess, JLTV technology development contracts may be delayed, contingent upon congressional approval of DOD's reprogramming request. On August 19, 2008, the Army and Marines announced that they anticipated awarding JLTV technology development contracts in October 2008.⁹ If the reprogramming is approved by Congress after the recess, according to DOD, a design selection for the System Development and Demonstration (SDD) phase could be made in the middle of FY2011, with a contract for the final production design being issued in FY2013.

Potential JLTV Developers.¹⁰ A number of vendors and companies have teamed together, and some claim that they have already built JLTV prototypes that meet program requirements. These companies currently include AM General (General Tactical Vehicles), BAE-Navistar, General Dynamics, Lockheed Martin-BAE, Oshkosh-Northrop Grumman, and Textron-Boeing-SAIC. A 2007 report on the Land Combat Systems Industry by the National Defense University Industrial College of the Armed Forces suggests that major defense contractors are likely interested in JLTV because vehicle requirements for high survivability and other potential technologically advanced requirements such as an Active Protection System and networking capabilities make the program economically attractive.¹¹

Program Cost and Funding.¹² DOD has not publically assigned a definitive cost to the JLTV program, suggesting that it is too early in the development process to determine an accurate cost estimate. Some defense and trade analysts suggest that the JLTV program will cost well over \$10 billion and possibly as much as \$30 to \$70 billion,

⁷ JLTV Request for Proposal, W56HZV-08-R-0210, February 5, 2008, and Marjorie Censer, "JLTV Solicitation Calls for Three Contractors: Officials Say More are Possible," *InsideDefense.com*, February 5, 2008.

⁸ Jason Sherman, "Army Seeking Funds to Ensure Three JLTV Contracts; Delay Possible," *InsideDefense.com*, July 17, 2008.

⁹ Marjorie Censer, "Army: JLTV Contracts Now Expected in October," *InsideDefense.com*, August 19, 2008.

¹⁰ Kris Osborn, "DOD's JLTV Becoming International Effort," *Defense News*, August 4, 2008.

¹¹ Spring 2007 Industry Study, Final Report, *Land Combat Systems Industry*, National Defense University Industrial College of the Armed Forces, Washington, D.C., p. 14.

¹² Jason Sherman and Daniel G. Dupont, "JLTV Price Tag Drives New Three Step Tactical Vehicle Plan for the Army," *InsideDefense.com*, August 8, 2008.

depending on the final cost of the vehicles chosen and the number of vehicles procured.¹³ The Army estimates that each JLTV will cost \$418,000, almost 70% higher than the target cost of \$250,000 per vehicle that would have enabled the Army to replace all of its HMMWV's with JLTVs. The Army's current JLTV requirement is 140,709 vehicles, and at the estimated \$418,000 per vehicle cost, the Army may be required to reduce total JLTV acquisition quantities, scale back JLTV capabilities, or find additional funds for the program. One estimate by the Center for Army Analysis suggests that it would require about \$6.7 billion per year to outfit all Army brigades over 15 years with JLTVs.

The FY2008 Budget Request for JLTV was \$82.3 million in Research, Development, Test, and Evaluation (RDT&E) funding, but Congress decreased funding to \$38.5 million because of contract award delays.¹⁴ The FY2009 Budget Request for JLTV is \$ 66.1 million (RDT&E), and the House and Senate Armed Services Committees have recommended fully funding the President's Budget Request.¹⁵

Current JLTV Topics

JLTVs Versus MRAPs.¹⁶ In late 2007, the Department of Defense (DOD) launched a major procurement initiative to replace most uparmored High Mobility, Multi-Wheeled Vehicles (HMMWVs) in Iraq with Mine-Resistant, Ambush-Protected (MRAP) vehicles by FY2009. MRAPs have been described as providing significantly more protection against IEDs than uparmored HMMWVs. DOD approved the acquisition of 15,858 MRAPs of all categories, and as of August 11, 2008, DOD accepted delivery of almost 11,300 MRAP vehicles.¹⁷ When the JLTV program first started in late 2006, the 15,858 MRAP requirement did not exist. The unforecasted procurement of significant numbers of the costly MRAPs has had an impact on the JLTV program. The Army has stated that MRAPs "fill a near-term, urgent joint service requirement for enhanced crew protection" for both the Army and Marines and that JLTVs are the long term solution for the services.¹⁸ While the services do not view the JLTV and MRAP as an "either/or" proposition, some might question the affordability and necessity of maintaining both programs given their overlapping missions and requirements.

Army-Marine Combat Tactical Wheeled Vehicle Strategy. In late November 2007, "concerned that the Pentagon's multi-billion dollar procurement plans

¹³ Andrea Shalal-Esa, "Companies Jockey for Huge U.S. Military Truck Program," *Reuters*, November 12, 2007.

¹⁴ Report 110-434, Conference Report to Accompany H.R. 3222, Department of Defense Appropriations Act for FY2008, November 6, 2007, p. 272.

¹⁵ Duncan Hunter National Defense Authorization Act for FY2009, H.Rept. 110-652, May 16, 2008 and National Defense Authorization Act for FY2009, S.Rept. 110-335, May 12, 2008.

¹⁶ For additional information on MRAPs, see CRS Report RS22707, *Mine-Resistant, Ambush Protected (MRAP) Vehicles: Background and Issues for Congress*, by Andrew Feickert.

¹⁷ Marjorie Censer, "DOD Reports More Than 11,000 MRAP Vehicles Already in Theater," *InsideDefense.com*, August 11, 2008.

¹⁸ Statement of Lieutenant General Stephen M. Speakes before the House Air and Land Forces Subcommittee on the Army Force Protection Program, January 18, 2007, pp. 1-2.

for a raft of new tactical wheeled vehicles may be laden with excessive redundancy,” the White House Office of Management and Budget (OMB) directed the Army and Marine Corps to develop and present a strategy by March 31, 2008, justifying wheeled vehicle procurement.¹⁹ Some of the issues to be addressed by the Army and Marines in this strategy were (1) what missions are envisioned for MRAPs, HMMWVs, and JLTVs? (2) to what extent do their capabilities overlap? (3) how do the Army and Marines plan to eliminate redundancies between their HMMWV, MRAP, and JLTV fleets? and (4) to what extent are the acquisition of these three wheeled vehicles meeting the identical requirement? OMB also asked the services to identify how many of each type of vehicle the Army and Marine Corps plan to procure in the near and long term and how JLTVs will be incorporated into vehicle fleets consisting of thousands of new MRAPs and HMMWVs. The Office of the Secretary of Defense (OSD), also in November 2007, called for a similar assessment from the Army and Marines to be provided by July 1, 2008. The OMB request was extended by three months in late March 2008 to July 1, 2008, in order to “synchronize” the two similar strategy reports.²⁰

The Army and Marines finalized their collaborative tactical wheeled vehicle strategy in early August 2008.²¹ A briefing on the new strategy does not appear to propose any major changes to current wheeled vehicle programs or consolidate developmental efforts for vehicles with redundant capabilities. Both the Army and Marines emphasize a mixed-fleet approach in the near term while transitioning to a fleet with scalable protection, with the JLTV being the vehicle that embodies all desired light wheeled tactical vehicle capabilities. Both services propose to eventually relegate the majority of their MRAPs to war reserves and pre-position locations. Under this proposed strategy, the Army plans to allocate about \$1 billion annually to procure new light tactical vehicles, but funding would need to be increased substantially in order to afford JLTVs in significant numbers.

International Procurement of JLTVs? U.S. defense officials have expressed an interest in international involvement in the JLTV program, and to date, Australia, Britain, and a number of unnamed non-NATO countries are discussing potential program participation with DOD.²² The Pentagon’s planned initial purchase of 60,000 JLTVs for the services could be increased if there is international participation in the program. There are concerns, however, that because of some of the advanced technologies that may be incorporated into the JLTV, it may prove to be difficult to obtain export licenses from the Department of State.²³ Some believe that Congress, too, could play a role by expressly barring the sale of advance technology JLTVs to foreign governments, as it did in the

¹⁹ Jason Sherman, “White House: Tactical Vehicle Plans May Be Excessive, Redundant,” *InsideDefense.com*, December 6, 2007.

²⁰ Jason Sherman, “OSD Extends Due Date for Tactical Wheeled Vehicle Strategy,” *InsideDefense.com*, March 27, 2008.

²¹ Jason Sherman, “Army, Marine Corps Complete New Combat Tactical Wheeled Vehicle Plan,” *InsideDefense.com*, August 11, 2008, and briefing slides, “Army and Marine Corps Tactical Wheeled Vehicle Strategy and Response to the Office of Management and Budget,” Version 21.09, July 9, 2008, obtained from *InsideDefense.com*, August 20, 2008.

²² Kris Osborn, “DOD’s JLTV Becoming International Effort,” *Defense News*, August 4, 2008.

²³ *Ibid.*

recent case of the F-22 *Raptor* aircraft.²⁴ Others suggest that export problems are not likely to arise in a light vehicle such as the JLTV, noting that HMMWVs have been sold to numerous Asian and Middle Eastern countries.²⁵ If JLTV export is permitted and countries order significant numbers of JLTVs, the per-vehicle cost could possibly decrease, thereby addressing some of the JLTV affordability concerns raised by U.S. officials.

Potential Issues for Congress

JLTV Affordability. In a recent testimony on DOD weapons programs, the Government Accountability Office (GAO) asserted that total acquisition costs for the FY2007 portfolio of major defense acquisition programs still in the System Development and Demonstration (SDD) phase increased 26% and development costs increased by 40% from first estimates.²⁶ As previously noted, while still in the Technology Development (TD) phase, the Army now estimates that each JLTV will cost \$418,000 — almost 70% higher than the target cost of \$250,000 per vehicle. In comparison with GAO's data, JLTV costs appear to be significantly higher than FY2007 program averages and could possibly increase even more as JLTV progresses through the SDD phase. JLTV's early above-average cost growth may merit greater congressional oversight.

JLTV and the Army/Marine Tactical Wheeled Vehicle Strategy. Although the Army and Marines have not widely shared their combat tactical wheeled vehicle strategy, there are indications that both services intend to continue with their current acquisition efforts without fully taking into account redundant capabilities. These efforts include the continued acquisition of HMMWVs and perhaps even an improved HMMWV (the ECV2) if JLTVs prove to be too expensive.²⁷ All services are expected to complete the acquisition of almost 16,000 MRAPs by the end of FY2009, and although these vehicles have helped to reduce IED casualties, decreasing IED attacks in Iraq and anticipated incremental large-scale troop withdrawals may drastically reduce the need for MRAPs, resulting in an unused excess of these vehicles. Some analysts say that unless the Pentagon can convincingly demonstrate that JLTVs are unique vehicles with capabilities not found in HMMWVs, ECV2s, and MRAPs, it will likely be difficult to justify a service-wide "pure fleet" of well over 100,000 JLTVs at the current estimated cost. Army and Marine plans to "mothball" a large portion of the \$23 billion-plus MRAP fleet might also prove to be contentious unless JLTVs can provide comparable or superior troop protection.

²⁴ In CRS Report RS22684, *Potential F-22 Raptor Export to Japan*, by Christopher Bolkcom and Emma Chanlett Avery, CRS notes that export of the F-22 has been denied by Congress in FY1998, FY2001, and FY2005. This provision, known as the "Obey Amendment," was debated in the 109th Congress, and a move to repeal this amendment in the FY2007 Defense Appropriations bill was blocked by the Senate.

²⁵ Kris Osborn, "DOD's JLTV Becoming International Effort," *Defense News*, August 4, 2008.

²⁶ United States Government Accountability Office (GAO) Testimony, *Defense Acquisitions: Results of Annual Assessment of DOD Weapon Programs*, GAO-08-674T, April 29, 2008, p. 2.

²⁷ Jason Sherman and Daniel G. Dupont, "JLTV Price Tag Drives New Three Step Tactical Vehicle Plan for the Army," *InsideDefense.com*, August 8, 2008.