2008 Tactical Wheeled Vehicles Conference (TWV)

Monterey, California
3–5 February 2008

Agenda

**Monday, 4 February 2008**

**Session 1**

TWV: During and Post OIF by Mr. Anthony Melita
Tactical Wheeled Vehicles Conference by GEN Benjamin S. Griffin
Briefing
Video
Army Wheeled Vehicle Fleet From the G-4 Foxhole by MG Vincent Boles
The 21st Century Army Reserve by LTG Jack Stultz

**Session 2**

The Army –Transforming while at War by LTG Stephen Speakes
Depot Panel
Part I
Part II
by Ms. Janet Bean, Col. Douglas Evans, Col. Scott Kidd, and Dr. John R. Gray
Mitigating Future Uncertainties by Leveraging Strategic Partnerships by Col. Scott Dalke
Marine Corps Ground Combat Tactical Vehicle Strategy by Brigadier General Larry Nicholson
PEO Land Systems Marine Corps by Col. Bill Taylor
Joint Program Office Mine Resistant Ambush Protected Vehicles by Mr. Paul Mann

**Tuesday, 5 February 2008**

**Session 3**

Meeting the Challenges of Today and Tomorrow by BG James Chambers, BG John R. Bartley, and Col. John “Steve” Myers
Briefing
Video

The Army Truck Team

PM Heavy Tactical Vehicles by LTC Allen Johnson

PM Light Tactical Vehicles by LTC Sam Homsy

“Thanks You for Making Such a Great Workhorse” M1078A1 LMTV by LTC Alfred Grein
2008
TACTICAL WHEELED VEHICLES
CONFERENCE

HIGHLIGHTS:

Meet and hear from key DoD, Army & Marine Corps leaders.

- **Keynote Address:**
  Mr. Anthony Melita,
  Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&L)/A&T/PSA/LW&M)

- **United States Army Materiel Command (AMC):**
  GEN Benjamin S. Griffin, USA
  Commanding General Army Materiel Command

- **BGen Michael M. Brogan,**
  USMC
  Commander
  MARCORSYSCOM

- **Plus a presentation and overview of the MRAP Program by the Joint Program Manager**

This year’s conference will highlight the actions to implement the Army’s recently announced Tactical Wheeled Vehicles Transformation Strategy.

FEBRUARY 3 - 5, 2008
WWW.NDIA.ORG/METINGS/8530
MONTEREY CONFERENCE CENTER, MONTEREY, CA
EVENT #8530
This year’s Tactical Wheeled Vehicle (TWV) Conference will highlight the actions being taken to implement the Army’s recently announced new TWV Transformation Strategy. The strategy was developed and resourced by an Army TWV Board of Directors made up of key Army leaders and decision makers in the Pentagon, the PEO CS/CSS and the Chief of Transportation. The intent of this strategy is to ensure the Army and the other services will have a balanced and viable TWV fleet through FY ‘18 and beyond. This Conference will address the procurement of new vehicles while conducting the cyclic refurbishment of existing vehicles. Other topics will include the status of the ongoing ACTD’s intended to modernize the current fleet, and how the Army intends to provide for the spiral insertion of new technologies to support these efforts.

This is the only annual conference held that is specific to the military’s Tactical Wheeled Vehicle community. It has historically brought Department of Defense representatives, prime contractors, subcontractors, and their suppliers together to discuss present and future wheeled vehicle requirements for all services. It has afforded an atmosphere for open discussions between the customers and the suppliers based on the needs of the military users. This is the only conference held specifically for the military’s Tactical Wheeled Vehicle community.

The information presented is valuable to program managers, engineers, planners and marketers. In addition, open discussions will be invaluable to DoD planners and program managers. This year’s theme is: “TWV: DURING AND POST-OIF.”
TACTICAL WHEELED VEHICLES DIVISION:
Mission/Objective/Purpose

Division Objectives

The primary objective of the Tactical Wheeled Vehicle Division of NDIA is to enhance the security of the United States by promoting communications and interaction between defense industry, government and military in the area of automotive activities.

The specific charter of the Tactical Wheeled Vehicle Division is to conduct conferences in technology areas directly related to automotive research, design, development, test and production. Such conferences are intended to present advanced technology and provide for an exchange of information and an interchange of views between defense industry, government and military representatives. The effective cooperation between these three groups is vital to our defense effort in the tactical wheeled vehicle area. Each group brings unique inputs to such conferences. No one group can function at maximum effectiveness without the other two.

Specific Objectives:

► To serve as an effective communications vehicle for the exchange of views and information between government and industry on matters of common concern.
► To foster mutual understanding and effective working relationships between government and industry in order to achieve a sound body of government policy and procedures which will serve both the security objectives of the United States as well as the commercial interests of its industry.
► To provide government with industry advice on government policies, practices and procedures and industry’s needs and problems within the Division’s purview.

Mission Responsibility:

To promote national exchanges between the Defense Department, government agencies and industry, of information relating to the design, development, acquisition and support of vehicles and vehicle systems employed in land and amphibious military operations.

2008 Tactical Wheeled Vehicles Conference Committee:

Conference Chair:
Mr. Gary Tull,
Vice President, Government Operations,
AM General Corporation,
and Chairman, Tactical Wheeled Vehicle Division, NDIA

Session II Chairman:
Mr. Jack Reidy,
President & CEO,
Defense Products Marketing, Inc.

Session III Chairman:
Mr. Tom Bagwell (SES),
Deputy Program Executive Officer, Combat Support & Combat Service Support (DPEO CS&CSS), U.S. Army

Session I Chairman:
Mr. Bruce Harrison,
Vice President, Product Support, BAE Systems,
and Vice Chairman, Tactical Wheeled Vehicle Division, NDIA
SUNDAY, FEBRUARY 3, 2008

7:30 A.M. - 1:00 P.M.  9th Annual NDIA TWV Golf Scramble
Check-in & Continental Breakfast
Bayonet Golf Course, Seaside, California
Golf Chair: Chuck Prikopa

8:30 A.M.  shotgun start

2:00 P.M. - 7:00 P.M.  Registration Check-in
The DeAnza Ballroom Foyer
The Portola Plaza Hotel at Monterey Bay

2:30 P.M. - 7:00 P.M.  Welcome Reception and Super Bowl Party
(final whistle)
The DeAnza Ballroom I and II

ANNUAL SUPER BOWL PARTY
SUPER BOWL XLII
SUNDAY FEB. 3, 2008

Super Bowl XLII - University of Phoenix Stadium
Sunday Feb. 3, 2008
Glendale Stadium, AZ
2:30 p.m. - 6:30 p.m. (final whistle)*
The De Anza Ballroom
The Portola Plaza Hotel Monterey

Kickoff time 3:18 p.m. (PST) / 6:18 p.m. EST

A spouse and/or guest of a registered attendee, may attend the Super Bowl Party at an additional cost of $90.00.

Due to fire code regulations, space is limited. Based on the overwhelming response and attendance in previous years, there is a strong possibility that late on-site spouse/guest registrations will not be accepted.

The “Spouse/guest ticket” fee(s) do not include attendance at any of the other conference food functions: continental breakfasts, coffee breaks, and/or lunch, or conference attendance.
MONDAY, FEBRUARY 4, 2008

7:00 A.M. - 8:00 A.M.  Continental Breakfast
Serra Ballroom
The Monterey Conference Center

7:00 A.M. - 5:00 P.M.  Registration Check-in Continues
Serra Ballroom
The Monterey Conference Center

8:00 A.M. - 8:10 A.M.  Conference Overview & Welcome
Serra Ballroom
The Monterey Conference Center

Mr. Gary Tull
Vice President, Government Operations,
AM General Corporation and
Chairman, Tactical Wheeled Vehicle Division,
NDIA

8:10 A.M. - 8:15 A.M.  NDIA Welcome
Serra Ballroom
The Monterey Conference Center

Lieutenant General Lawrence P. Farrell, USAF (Ret.)
President & CEO
NDIA

8:15 A.M. - 8:45 A.M.  Keynote Address
Mr. Anthony Melita
Office of the Under Secretary of Defense for
Acquisition, Technology and Logistics
(OUSD(AT&L)/A&T/PSA/LW&M)
MONDAY, FEBRUARY 4, 2008 (CONTINUED)

Session I:
Chairman: Mr. Bruce Harrison, Vice President, Product Support, BAE Systems and Vice Chairman, Tactical Wheeled Vehicle Division, NDIA
Serra Ballroom
The Monterey Conference Center

8:45 a.m. - 9:15 a.m.
United States Army Materiel Command (AMC)
General Benjamin S. Griffin, USA
Commanding General, Army Materiel Command

9:15 a.m. - 9:45 a.m.
Office of the Deputy Chief of Staff, Army G-4
Major General Vincent Boles, USA
Assistant Deputy Chief of Staff, G4 (Operations)
Headquarters, U.S. Army

9:45 a.m. - 10:15 a.m.
U.S. Army Reserve
Lieutenant General Jack C. Stultz, USA
Chief, Army Reserve/
Commanding Officer,
United States Army Reserve Command

10:15 a.m. - 11:00 a.m.
Coffee Break
Serra Ballroom Foyer

Session II
Chairman: Mr. Jack Reidy,
President & CEO, Defense Products Marketing, Inc.
Serra Ballroom
The Monterey Conference Center

11:00 a.m. - 11:45 a.m.
Office of the Deputy Chief of Staff, G-8,
Headquarters, Department of the Army
Lieutenant General Stephen M. Speakes, USA
Deputy Chief of Staff, G-8

11:45 a.m. - 12:45 p.m.
Lunch
The DeAnza Ballroom I & II
The Portola Plaza Hotel at Monterey Bay
Monday, February 4, 2008 (Continued)

Session II (continued)
Chairman: Mr. Jack Reidy

12:45 p.m. – 2:00 p.m.  Depot Panel
Panel Chair: Major General William M. Lenears, USA
Commanding General,
U.S. Army TACOM Life Cycle Management Command

Panel Members:
• Ms. Janet Bean,
  Executive Director, Integrated Logistics Support Center
  (ILSC), U.S. Army TACOM Life Cycle Management Command
• COL Douglas Evans, USA
  Commander, Red River Army Depot (RRAD), U.S. Army TA-
  COM Life Cycle Management Command
• COL Scott Kidd, USA
  Project Manager, Tactical Vehicles, Program Executive
  Office, Combat Support & Combat Service Support (PEO
  CS&CSS)
• Dr. John R. Gray
  Deputy to the Commander, Letterkenny Army Depot (LEAD),
  U.S. Army AMCOM Life Cycle Management Command

2:00 p.m. – 2:30 p.m.  USMC Maintenance Center Barstow
COL Scott Dalke, USMC
Commander

2:30 p.m. – 3:00 p.m.  Coffee Break
Serra Ballroom Foyer

3:00 p.m. – 3:30 p.m.  USMC/MCCDC
Brigadier General Larry Nicholson, USMC
Deputy Commanding General,
Marine Corps Combat Development Command

3:30 p.m. – 4:00 p.m.  USMC/MARCORSYSCOM
Brigadier General Michael M. Brogan, USMC
Commander, MARCORSYSCOM

4:00 p.m. – 4:30 p.m.  USMC PEO
COL Bill Taylor, USMC
Program Executive Officer, Land Systems
MONDAY, FEBRUARY 4, 2008 (CONTINUED)

Session II (continued)
Chairman: Mr. Jack Reidy

4:30 p.m. – 5:15 p.m. Joint MRAP Presentation
- Mr. Paul Mann, USMC
  Joint MRAP Program Manager
- COL Kevin Peterson, USA
  Deputy Joint MRAP Program Manager

5:15 p.m. – 6:30 p.m. Annual Conference Reception
The DeAnza Ballroom I and II
The Portola Plaza Hotel at Monterey Bay
Evening on Own - Enjoy Monterey!

SPouse/Guest Activities

Annual Conference Reception, Monday, February 4
A spouse and/or guest of a registered attendee, may attend the Annual Conference Reception.

5:15 p.m. - 6:30 p.m. (additional cost of $45.00)
A spouse and/or guest of a registered attendee may attend the Annual Conference Reception at an additional cost of $45.00.

The “Spouse/guest ticket” fee(s) do not include attendance at any of the other conference food functions: continental breakfasts, coffee breaks, and/or lunch, or conference attendance.
TUESDAY, FEBRUARY 5, 2008

7:00 A.M. - 8:30 A.M. Continental Breakfast
Serra Ballroom Foyer
The Monterey Conference Center

7:00 A.M. - 12:00 Noon Registration Check-in continues
Serra Ballroom Foyer
The Monterey Conference Center

Session III
Chairman: Mr. Tom Bagwell (SES),
Deputy Program Executive Officer
Combat Support & Combat Service Support (DPEO CS&CSS),
U.S. Army
Serra Ballroom
The Monterey Conference Center

8:30 A.M. - 9:10 A.M. Meeting the Challenges of Today and Tomorrow
• Brigadier General (P) James Chambers, USA
Commanding General/Commandant
U.S. Army Transportation Center and School
• Brigadier General John R. Bartley, USA
Program Executive Officer for Combat Support &
Combat Services Support (PEO CS&CSS)

9:10 A.M. - 10:00 A.M. Overview - PM TV & JCSS

(9:10 - 9:30)
COL Scott Kidd, USA
Project Manager for Tactical Vehicles

(9:30 - 10:00)
COL John “Steve” Myers, USA
Project Manager for Joint Combat Support Systems
LtCol Ruben Garza, USMC
Product Manager (USMC)
Joint Light Tactical Vehicles
TUESDAY, FEBRUARY 5, 2008 (CONTINUED)

10:00 A.M. – 10:15 A.M.  Mr. Gary Tull  
Conference close-out

10:15 A.M. – 10:45 A.M.  Coffee Break  
Serra Ballroom Foyer  
(Serra Ballroom will be reconfigured into two rooms)

10:45 A.M. – 12:25 P.M.  PM Breakout Sessions  
- will follow on from Overview –  
PM TV presentations  
Attendees can remain in same ballroom as briefers will rotate

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<th>Group 2 – Serra (B)</th>
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<td>Mr. Jim Satchfield,</td>
<td>LTC Lewis Johnson, USA</td>
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– Adjourn until February 2, 2009 –
The National Defense Industrial Association
wishes to acknowledge the following
Super Bowl Party Sponsors:

Allison Transmission

AM General

Arvin Meritor, Inc.

BAE Systems

Caterpillar, Inc.

Ceradyne, Inc.

Cummins Inc.

Daimler Trucks North America LLC

Defense Products Marketing, Inc.

Detroit Diesel Corporation

DRS Technologies, Inc.

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Freightliner LLC
Lockheed Martin JLTV Team
Mack Trucks
Nevada Automotive Test Center
(Hodges Transportation, Inc.)
Oshkosh Truck Corporation

Thank-you for your generous support!
The National Defense Industrial Association wishes to acknowledge the following Golf Tournament Hole, Prize, and Super Bowl Party Giveaway Sponsors:

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Allison Transmission

AM General

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BAE Systems

Bodycote Testing Group

Burtek, Inc.

CAT

Caterpillar, Inc.

Custom Manufacturing Solutions, Inc.

Coorstek

EnerSys - Hawker Batteries

Force Protection Industries, Inc.
General Kinetics Engineering Corporation

International Truck & Engine Corporation

Lockheed Martin

Lord Corporation

Mack Trucks, Inc./Volvo

Miltope Corporation

Omega Training Group

PPG Industries, Inc.

Premier Professional Systems, Inc.

Productive Resources

SCS/Frigette

Telephonics Corporation

VT Miltope

Whitney, Bradley & Brown, Inc.  
(Hampton, Virginia Office)

Thank-you for your generous support!
The Tactical Wheeled Vehicles Division of NDIA thanks you for attending & we look forward to seeing you again next year.

The National Defense Industrial Association (NDIA) thanks you for your participation in this year’s conference, and wishes you a safe trip home.
NDIA 2008
Tactical Wheeled Vehicle (TWV) Conference
Session III – Meeting the Challenges of Today and Tomorrow
United States Army
Transportation Center and School

BG(P) James E. Chambers
Commanding General USATC&S
Chief of Transportation
5 February 2008

Spearhead of Logistics!

Distribution Statement A: Approved for public release; distribution is unlimited
### Light Tactical Vehicle Strategy

#### HMMWV

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#### Joint Light Tactical Vehicle (JLTV)

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**FTTS ACTD demonstrators**

**USMC CTV demonstrator**

Total HMMWV
- AAO: 152,528
- OH: 133,353
- GTA: 19,175

**JLTV ACAT 1D Program**
### Medium Tactical Vehicle Strategy

**ACAT 1C Program**

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**Army Acquisition Objective - AAO**

**On Hand - OH**

**Grow The Army – GTA**

Low Signature Armored Cab – LSAC

MTTCS – Multipurpose Troop Transport Carrier System

MTTS – Medium Troop Transport System

Continuous Capability Improvements
Heavy Tactical Vehicle Strategy

M915A3

Production based on FY08/09 supplemental funding

Identifying Next Generation Line Haul Capability in process

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M915
AAO: 6,043
OH: 6,355
GTA: 8,738

Continuous Capability Improvements
# Heavy Tactical Vehicle Strategy

### HEMTT A4

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### Production based on FY08/09 supplemental funding

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Army Acquisition Objective - AAO  
On Hand - OH  
Grow The Army - GTA
Tactical Wheeled Vehicle Training

Simulators Save Lives

HMMWV Egress Assistance Trainer

Motion-based Driver Trainer

55 TOTAL
37 FIELDED
34 CONUS
3 USAREUR

29 TOTAL
IN THEATER

72 TOTAL
52 FLW
20 FT BLISS

FY08-13 POM
21 Sys FY08
Fielding FY09

• 2 USARPAC
• 1 USAREUR
• 1 FT HOOD
• 1 ARCENT

Virtual Combat Convoy Trainer (VCTT) • 2 FLW

Reconfigurable Vehicle Tactical trainer
Expedited Modernization Initiative Process


MARKET RESEARCH – NOT SOURCE SELECTION

EMIP: 14-18 Apr 08 (3rd Port, Fort Eustis, VA)
JOHN R. BARTLEY
Brigadier General, USA
Program Executive Officer,
Combat Support & Combat Service Support

NDIA 2008
Tactical Wheeled Vehicle (TWV) Conference

Distribution Statement A: Approved for public release: distribution is unlimited
◆ Our Goal
◆ Our Focus
◆ Our Challenges
◆ Our Approach
◆ Our Need
◆ Our Strategy for Future Acquisitions
Our Goal

- Design, Develop, Field, and **Sustain** – at a Reasonable Cost

- We Provide the Platform and Total System Integration – Everything Else is Developed by Others

Overcoming the Challenges of Today’s Rapidly Changing Requirements Requires Strong Partnership Between Government and Industry
Our Focus

Is to be Prepared for...

◆ Changes in Threat
  - Small Arms
  - Mines
  - IEDs/EFPs

◆ Changes in Technology
  - Ability to Keep Step with Technology Advances
  - The Army is serious about designing with Future Growth in Mind - Headroom - Improve Capability, Survivability, Network Communication and Reduce Burden on Soldier and Operating Costs

◆ Changes in Mission
  - Type of Conflict
  - Type of Unit
  - Homeland Defense
Our Challenges

Joint Environment
- Army
- USMC
- Navy
- USAF

Processes
- Requirements
- Funding
- Provisioning

Mixed Tactical Vehicle Fleet
- Old
- Used
- New

Ensure Consistency with Army’s Tactical Wheeled Vehicle Modernization Strategy

Equipping our Joint Warfighters with the World’s Best Capability, Today and Tomorrow
Our Need

Current Experiences Drive a Need for Refined Capability:

◆ Survivability
  ● Fire Suppression:
    • Passenger
    • Engine
    • Fuel Tank
    • Tire
    • Outer Shell
  ● Energy Dissipation
Our Approach

Scalable C4I
Adaptable Levels of Protection
  - Crew
  - Vehicle
  - Payload/Cargo
Commonality/Family
  - System Design
  - Repair Parts/Sources of Supply
  - Tools
  - Maintenance Procedures
  - Training
  - SWaP – Do More with Less

Ideally with No Impact on:
  - Payload
  - Performance
  - Protection

Balance Improvements and Design Changes Across the three P’s
Our Strategy for Future Acquisitions

A Kit / B Kit Development
Plug and Play Capability
Modularity
Flexibility
Common/Commercial Standards vs Unique
- USB
- Light Socket
- Electrical Outlet in a Room
- Cigarette Lighter in a Car

Giving the Commander in the Field the Ability to Adapt to Changes...to Mission...to Threat...to Technology!
◆ It’s All About Effective Integration

◆ Design From the Beginning to Accommodate Change in Threat, Mission & Technology

◆ Change Quickly

◆ SWaP is a Finite Resource, Considered in the Beginning with Growth in Mind

Stand on Each Other's Shoulders to Reach Higher and Achieve More Together To Meet the Challenges of Today’s Rapidly Changing Requirements
PM Tactical Vehicles ~ The Army Truck Team!

MISSION
The lifecycle management of light, medium and heavy tactical vehicles enabling the Modular, Joint and Expeditionary Ground Force

OTHER SIGNIFICANT PROCUREMENT EFFORTS
- Safety Enhancements
- Add-on-Armor/GPK

= $1.5B

Project Manager
COL Scott R. Kidd
Deputy PM Acquisition: Tony Shaw
Deputy PM Logistics: Cesare Gaglio

PRODUCT MANAGERS
- Light Tactical Vehicles
  - LTC Samuel Homsy
- Medium Tactical Vehicles
  - LTC Alfred Grein
- Armored Security Vehicle
  - LTC Moorhouse
- Heavy Tactical Vehicles
  - LTC Allen Johnson

DIVISION CHIEFS
- Business Management
  - Mike Scharra
- Acquisition Logistics
  - Ray McMillen
- Engineering
  - Joe Keusch
- PAT&E
  - Larry McNamara

Distribution Statement A: Approved for public release: distribution is unlimited
AoA Surge

Production

Berry Amendment
Specialty Metals

GWOT Support

Modularity/ Grow the Army

Full spectrum support to the War Fight & Modularity
### Light Tactical Vehicles
- 29 variants
- 161K systems fielded
- @ 65-80 HMMWVs / Day
- HMMWV Family of Vehicles
- UAH Safety Enhancements
- HEAT Trainer (UFR)

### Family of Medium Tactical Vehicles
- 17 variants
- 33K systems fielded
- @ 800 / Month
- High-Mobility Artillery Rocket System (HIMARS)
- M935/M809 Series 5 Ton Trucks

### Heavy Tactical Vehicles
- 33 variants
- Over 29K systems fielded
- @ 700 / Month
- Heavy Expanded Mobility Tactical Truck (HEMTT)
- Palletized Load System (PLS)
- M915 Family of Vehicles
- Heavy Expanded Mobility Trailer (HEMAT)
- Heavy Equipment Transport Systems (HETS)
- Container Handling Unit (CHU)

### Armored Security Vehicle
- 2 variants
- Approx 800 systems fielded
- @ 48 / Month (post Katrina)
- M1200 Armored Knight

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**The Army's Largest Major Item Producer**

**Big Business, Lots going on daily!**
## TWV Current Fleet Status – OIF

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th># IN OIF</th>
<th>AVG AGE</th>
<th>EUL* Yrs</th>
<th>Annual Peacetime Mileage</th>
<th>Annual OIF/OEF Mileage</th>
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<tr>
<td>Up-Armored HMMWVs (M1114, M1151/52, M1165)</td>
<td>25,378</td>
<td>2.8</td>
<td>15</td>
<td>1,651</td>
<td>10,502</td>
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<td>Non-Armored HMMWVs</td>
<td>1,135</td>
<td>14.4</td>
<td>15</td>
<td>2,035</td>
<td>3,755</td>
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<td>AoA HMMWVs (AoA Kits being removed in RECAP)</td>
<td>1,135</td>
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<tr>
<td>FMTV 2.5 Ton LMTV</td>
<td>4,200</td>
<td>7.2</td>
<td>20</td>
<td>1,930</td>
<td>1,628</td>
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<tr>
<td>FMTV 5 Ton MTV</td>
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<tr>
<td>M809, 5 Ton Series Truck, Manual Transmission</td>
<td>37</td>
<td>32.2</td>
<td>20</td>
<td>900</td>
<td>N/A</td>
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<tr>
<td>M939, 5 Ton Series Truck</td>
<td>987</td>
<td>18.7</td>
<td>20</td>
<td>1,387</td>
<td>959</td>
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<tr>
<td>M35, 2.5 Ton Series Truck</td>
<td>121</td>
<td>34.4</td>
<td>20</td>
<td>989</td>
<td>N/A</td>
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<tr>
<td>HEMTT</td>
<td>1,567</td>
<td>17.3</td>
<td>20</td>
<td>1,700</td>
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<tr>
<td>Palletized Load System (PLS)</td>
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<td>10.5</td>
<td>20</td>
<td>1,617</td>
<td>1,760</td>
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<tr>
<td>HETS (M1070)</td>
<td>566</td>
<td>10.3</td>
<td>20</td>
<td>1,184</td>
<td>12,039</td>
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<tr>
<td>M915, Line Haul Tractor (M915 FOV)</td>
<td>1,086</td>
<td>12.4</td>
<td>20</td>
<td>3,794</td>
<td>20,211</td>
</tr>
</tbody>
</table>

* Largest Delta from Peacetime to Wartime OPTEMPO

**BL: A Legendary fleet doing well despite duty cycle, in an extremely hostile environment**

**How can you help reduce O&S now and in the future?**
GWOT Support:

- Executing Objective Gunner Protection Kit w/ MNF-I Mods (To date, 10,460 kits Installed in AOR) on TWVs, demand continues to grow!

- Completed Frag Kit (FK) 5 for UAH Systems, enhancing Soldier protection against IED events and other threats (To date, 14,545 Installed in AOR). Developing Frag Kit 6 for limited application.

- Safety Enhancements Program “Build-out”, integrated most into current UAH production baseline. Over 90K “eaches” delivered to the AOR.

- Other Key efforts underway:
  - ECM – Mission Module deconfliction
  - 400 amp alternator upgrade kit
  - Casualty Evacuation (CASEVAC) kit integration, External Fuel Tank Protection
  - ASV Frag Kit, Turret Bolt upgrades
  - Intensive management of tires, AC parts, M1151 & ASV Spares, other ‘consumables’ that result from a period of protracted war
  - TWV Surge for MTV/HTV Armored Systems
  - New load range E tire for LTV Fleet

*M984 HEMTT WRECKER – “Getting it Done”!*
ASV: Significant Events for FY08

- Maintaining $\geq 90\%$ OR
- Continuing production @ 48/Month
- Performing RESET Pilot program (RRAD)
- Conducting CONUS Training
  - Camp Shelby (mobilization site)
  - Fort Dix (mobilization site)
  - Fort Leonard Wood (Crewman’s Course – Mar 08)
- Applying Retrofits in theater
  - Frag Kit 1
  - Frag Kit 2
  - Turret Bolt
  - Firing Switch
  - Parking Brake Interlock

From the Balkans to Baghdad, ASV is a Force Multiplier.
“The Long War” = Opportunities for you to help us… in the areas of:

- **Space Management**
  - Space management both under the hood and in crew compartment an issue. Smaller footprints for components, accessories and modules are desirable.

- **More Demand on existing Power Distribution Infrastructure (not readily able to accept higher output demand).**
  - Wiring, circuit breakers, switches sized for lower output legacy alternators, we’re going to 400!
  - Replacement wiring harnesses need to be able to achieve desired higher demand

- **Thermal Management in hostile environment**
  - Heat reduction in crew compartment and in automotive components continues to be a challenge

- **Operation & Support Cost Reduction opportunities**
  - Frame and Suspension components longevity an issue
  - Filters/Oils/Brakes
  - Ballistic glass, armor components

*Did I say we’re a $10B Business?*
Colonel Kidd,

We want to thank you for all the support you’ve given us. We cannot even begin to explain the positive impact every person in your organization has had on the war fighters here. In the past months, we have traveled approximately 4 million miles in harm’s way. The Armor upgrades you and your group provide for us combined with LTC Caires’ and SFC Mortons’ work on distribution make it safer to conduct combat operations.

We brought 120 soldiers with us from 1-221 Cavalry from the Great State of Nevada. Every one of these Soldiers is a volunteer. We all came directly from a 2 year deployment at the National Training Center directly to the Iraq Theater of Operations. When you spend three years with soldiers you worry every time they go into harms way. Your Armor program helps to mitigate so many of the risks we face on a daily basis.

SGT Orozco’s gunner (the Soldier you met at Navistar) is SPC P. He is a 22 year old college student from Nevada and he volunteered for this deployment after NTC. He was on a mission as a gunner in Iraq with one of your new turrets. His turret took a direct hit from an EFP and he walked away with zero injuries. Yes, I said zero! That has not been the fact with Soldiers with the previous turrets.

SPC P just came in my office and dropped off a Harley shirt for me from Ireland. He just returned from R and R leave. He said that this leave had significant meaning because he knows that had it not been for that turret he would not be with us today.

On behalf of the United States Cavalry, the 11th ACR, 1st Squadron 221st Cavalry, myself and most of all SPC P, we thank you for all your hard work. Please let you staff know how much we appreciate them.

Keep up the great work! It is appreciated.

Robert S Brown
SGM, USA
Joint Combat Support Systems

MISSION
Develop and Acquire Joint Combat Support Systems for Expeditionary Forces

VISION
Support the Joint Warfighter across the spectrum of conflict

Project Manager
COL John S. Myers
Deputy PM Acquisition: Mr. Dennis Mazurek
Deputy PM Technology: Mr. Joel Wagner

PRODUCT MANAGERS
- Sets, Kits and Outfits
  - LTC Brian Tachias
- Joint Light Tactical Vehicle
  - LTC Wolfgang Petermann
  - LtCol Ruben Garza (USMC)

PRODUCT DIRECTORS
- Test, Measurement & Diagnostics Equipment
  - Mr. Steve Lingar

PRODUCT OFFICE
- Horizontal Technology Insertion
  - Mr. Jim Loughridge

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Equipping Our Joint Warfighters with the World’s Best Capability... Today & Tomorrow
Product Director – Test, Measurement and Diagnostic Equipment (PD TMDE)

http://pmtmde.redstone.army.mil/

- General Purpose Electronic Test Equipment (GPETE)
- Calibration Sets (CALSETS)
- Maintenance Support Device (MSD)
- Portable Radar Test Set
- Wireless Diagnostic Sensors (WDS)

Equipping Our Joint Warfighters with the World’s Best Capability... Today & Tomorrow
Product Manager - Sets, Kits, Outfits and Tools (PM SKOT)

http://pmskot.army.mil

Tool Kit
Carpenter, Squad Box (CTK-S)

Standard Automotive Tool Set (SATS)

General Mechanics Tool Kit (GMTK)

Shop Equipment Contact Maintenance (SECM)

Carpenters, Tool Kits (CTK)

Forward Repair System (FRS)
Horizontal Technology Insertion (HTI)


Expedited Modernization Initiative Procedure (EMIP)
Component Technology Demonstrations

MARKET RESEARCH – NOT SOURCE SELECTION
Expedited Modernization Initiative Procedure (EMIP) - What is It?

◆ What is EMIP?
  ● Multi-phased, continuous process designed to improve Current / Future Tactical Wheeled Vehicle Fleet
  ● Identify & leverage Industry’s investment in advanced technologies
  ● Provide both the Government & Contractors a single point of contact

◆ Qualification
  ● Technology Readiness Level (TRL) 7: actual system completed/qualified thru test & demonstration (no R&D)
  ● Available for production within 6 months
  ● Technologies new to Army (not already demonstrated in its current configuration)

◆ Submit Technology Application Ideas (TAIs) and Demo Plan in MS Word format to PM TWV mailbox
  ● TruckTech@conus.army.mil


- Market Education not Source Selection
**Key Participants**

- **User**
  - Represents the Soldier
  - Training and Doctrine Command (TRADOC)
  - TRADOC Capability Manager-Transportation (TCM-T)
  - Located in Ft. Monroe, VA (Ft. Eustis, VA)

- **Other Organizations**
  - HQDA
  - Trainers
  - Testers
  - Other PMs
  - Other agencies

- **Research & Development**
  - Does automotive R&D work for the Army
  - TARDEC (Tank-automotive Research, Development & Engineering Center)
  - Interfaces with other DoD Labs and Industry
  - Focus is mainly R&D
  - Located in Warren, MI

- **PEO CS&CSS / PMs**
  - Acquisition office responsible for about 80% of the Army’s equipment
  - Three O-6 (COL) Level Project Managers
  - PM Tactical Vehicles (PM TV)
    - PM LTV (O-5/LTC level)
    - PM MTV (O-5/LTC level)
    - PM HTV (O-5/LTC level)
  - PM Joint Combat Support Systems (PM JCSS) Located in Warren, MI
  - PM Force Projection (PM FP)
    - Located in Warren, MI

- **Logisticians**
  - Tank-automotive and Armaments Command (TACOM) Life Cycle Management Command (LCMC)
  - Sustainer for Army’s equipment
  - Located in Warren, MI

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**EMIP IPT**

- Diverse viewpoints represented through IPT process

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**Equipping Our Joint Warfighters with the World’s Best Capability... Today & Tomorrow**
Next EMIP: 14-18 Apr 08 (Fort Eustis, VA)

Demonstration Capabilities
- Four Separate Sets of Demonstrations per Day (Mon-Fri)
- Vehicle Interior & Tire Fire Suppressions
- Vehicle Systems (static & dynamic (Ride))
- Communications
- Live Fire
- Watercraft, Rail Car, Helicopter

EMIP IPT Approved Demonstrations
- Live Tire Fire Suppression Demonstrations (2 Hand Held & 2 Systems)
- Manual Impact Wrenching technology (no air or power used)
- High volume-low pressure water/air alternating pulse cleaning system for Internal Combustion Engine (ICE) cooling system cavities.
- High efficiency over-pressurized compressor to deliver cooler, pressurized, oxygen-rich air to engine turbo charger. Potential for increased fuel efficiency.

General Attendance (Invited)
- Military (All Services)
- VIP’s (Civilian, Military, Congress)
  - Civilian Leaders (SES’s)
  - PEO’s and PM’s
  - Representatives & Senators (HAC & SAC)
PM Joint Light Tactical Vehicles (PM JLTV)

http://contracting.tacom.army.mil/majorsys/jltv/jltv.htm
## The Balanced Solution – JLTV Family of Vehicles and Trailers

### Payload Category A

**Battlespace Awareness**

Mission Area

- Payload: 3,500 lbs
- Performance: Exceed HMMWV
- Transport: 1x EAT* CH/MH 47/ CH53
  2x IAT** C130

**Sub-Configurations**

- General Purpose Mobility (JLTV-A-GP) (4 Seat) - Army/USMC

### Payload Category B

**Force Application**

Mission Area

- Payload: 4000 / 4500 lbs
- Performance: Exceed HMMWV
- Transport: 1x EAT* CH 47/53
  1x IAT** C130

**Sub-Configurations**

- Infantry Carrier, Fire Team - USMC***
- Infantry Carrier, Fire Team - Army*** (JLTV-B-IC) (6 Seat)
- Reconnaissance, Scout (6 Seat) - Army
- Reconnaissance, Knight (6 Seat) - Army
- Command & Control On The Move (JLTV-B-C2OTM) (4 Seat) - Army/USMC
- Heavy Guns Carrier (MP, Patrol, Escort) (4 Seat+ Gunner) - Army/USMC
- Close Combat Weapons Carrier (4 Seat) - Army/USMC
- Utility (2 Seat) – USMC
- Ambulance (3 Seat+2 Litter) - Army/USMC

### Payload Category C

**Focused Logistics**

Mission Area

- Payload: 5,100 lbs
- Performance: Exceed HMMWV
- Transport: 1x EAT* CH 47/53
  2x IAT** C130

**Sub-Configurations**

- Shelter Carrier / Utility / Prime Mover (JLTV-C-UTL) (2 Seat) - Army/USMC
- Ambulance (3 Seat+4 Litter) - Army/USMC

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* EAT: External Air Transport
** IAT: Internal Air Transport
*** USMC & Army JLTV-B-ICs may be the same vehicle

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**ONR CTV Demonstrator Vehicle**

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**Trailers** for each payload category to have similar payload and mobility as prime movers.
DAE Concerns:
- Firm requirements
- Maturity of technology to meet the requirements
- Funding adequacy

DAE Guiding principles - programs will not enter SDD unless:
- Demonstrated high probability of delivering systems on time and within budget
- Programs are fully funded
- Additional guidance:
  - Competitive prototyping and testing demonstrating achievable levels of the requirements
  - Analysis of options to sustain a competitive environment in tech development, SDD and production phases
  - Maximized commonality of high cost components across the vehicle variants
  - An SDD phase that includes entrance and exit criteria with demonstrated technology and manufacturing and integration readiness
  - Work with Joint Staff to define appropriate levels of protection from threats and incorporate lessons learned from OIF/OEF

JLTV Directed to a MS A review as soon as practical
Outcomes from JLTV DAB - 5 Dec 07

- Approval to enter Acquisition Process at MS A
- Approval to release RFP for Technology Development (TD)
  - Multiple Contract Awards
  - Full and Open Competition
- Approval of TD Exit Criteria
- Army designated as Lead Service
- Designation of JLTV as Pre-MDAP
- Program documents to be approved within 90 days
- Services directed to fund SDD Phase
# Joint Light Tactical Vehicle Technology Development Schedule

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<thead>
<tr>
<th>FY2008</th>
<th>FY2009</th>
<th>FY2010</th>
<th>FY2011</th>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Release RFP</td>
<td>TD Ktr Award</td>
<td>Proposals Due</td>
<td>IBR</td>
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<td>Preproposal Conference</td>
<td>SOW</td>
<td>SRR</td>
<td>TD PDR</td>
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<tr>
<td>Design/Fab</td>
<td>TD CDR</td>
<td>TRR</td>
<td>Armor Coupon Testing</td>
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<tr>
<td>Ballistic Hull Testing</td>
<td>System Test</td>
<td>Performance Testing</td>
<td>End of Test</td>
</tr>
<tr>
<td>CDD Refinement for SDD</td>
<td>Final CDD Staffing</td>
<td>Dates for Reviews are notional; Actual dates will be set at Contract Award</td>
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</tbody>
</table>

**Milestones**
- Armor Coupon Testing
- Ballistic Hull Testing
- System Test
- Performance Testing
- End of Test
- Prototype Live Fire
- Reliability & Maintainability Demonstration
- Use Evaluation
- Test Report
- Initial CDD Staffing
- Final CDD Staffing
- Dates for Reviews are notional; Actual dates will be set at Contract Award

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**Equipping Our Joint Warfighters with the World’s Best Capability… Today & Tomorrow**

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[37]
ONR (NATC) – Combat Tactical Vehicle (CTV) Technology Demonstrator (TD)

Survivability & Force Protection
- 6 Marine/Soldier cab
- Monocoque Aluminum-based V-Shaped Lower Hull with Integrated Armor/Structure
- Modular Armor Kit
- Blast-Mitigating Seats
- Air Conditioning w/ Modular NBC
- Automatic Fire Suppression
- Accepts Multiple Weapons Stations

Network Centricity
- Integrated communications suite

Sustainability
- Limited on-board diagnostics
- 10Kw on the Move & 30Kw Stationary Integrated, exportable AC power

Transportability
- 96” w x 220” l  Operational Ht = ~ 86 inches & Reducible Ht = 76.4 inches
- CH53/CH47 EAT & C130 Transportable
- MPS & Amphibious shipping
- Demonstrator curb weight = 15,600 lbs

Mobility
- 322 Hp Detroit Diesel 926
- 6-Speed Twin Disc Transmission with Integral Transfer Case
- SLA Independent w/ 3-Position Ride Height Adjustment & 24” Wheel Travel
- Central Tire Inflation Systems (CTIS)
- Anti-Lock Braking System (ABS) w/ Integrated Stability Control

Payload
- 6000 lb payload with integral armor

Operational Range
- 400 miles

Equipping Our Joint Warfighters with the World’s Best Capability... Today & Tomorrow
CTVTD LUE Overall Summary

◆ Marines: 22 Oct – 02 Nov (497 Miles)
  ● 7 Infantry / Combat Engineer / MT Operator & Maintenance
  ● 2 MT Operator / MT Maintenance

◆ Army: 05 – 16 Nov (595 Miles)
  ● 6 Infantry / Tank Crew
  ● 1 Maintenance Chief

◆ Air Force/Navy: 26 – 30 Nov (248 Miles)
  ● 4 Airman-Air Security Personnel
  ● 3 Seabees-Equip Operator / Maintainer

◆ CTVTD operated at 21,850 lbs plus 6-Man Crew
  ● Primary Road ~ 75 miles
  ● Secondary Road ~ 245 miles
  ● Trails ~ 480 miles
  ● Cross-country ~ 540 miles
  ● CTVTD average off road speed
    • 10 to 15 mph faster than HMMWV

◆ M1114 w/o payload & 2-man crew
  ● Power steering pump failure at ~300 miles
  ● Frame failure at ~340 miles

◆ Replacement M998 w/o payload & 3-man crew
  ● Failed rear lower control arms at ~1250 miles

Equipping Our Joint Warfighters with the World’s Best Capability... Today & Tomorrow
LUE Participants’ Comments

**POSITIVES**

- Size, Power, & Mobility
- Ability to accomplish range of missions
- Inherent Protection
- Quickly adapted to vehicle features & capabilities (relative to HMMWV)
  - More Systems
    - CTIS, Adjustable Ride Height, ABS, Axle Locks
  - Driver Interface to Electronic Controls
    - Gages & Switches
- Saloon Doors for Flank Protection During Dismount
- Fore & Aft Adjustable Front Seats

**CONCERNS**

- Interior Stowage Volume
- C4I Suite Placement
- Visibility & Situational Awareness
  - Blind Spots at Driver & Commander Positions
  - Rearward Visibility & Situational Awareness
  - Immediate Front & Close-in Side Visibility
- Vehicle Height - Combat Dismounts & Mounts

**RECOMMENDATIONS**

- Need to Address Internal Stowage
  - Provide Space & Means to Secure Equipment
  - Want certain items accessible from inside
    - E.g., ammo, water, chow, mission equipment
  - Comfortable w/ Outside Stowage

- Turret Ring Location
  - Room for Gunner’s Feet
  - 360 Deg Freedom of Movement

- Do not need smaller rear side door

- Means to quickly lower vehicle from Combat Height for Combat Dismounts

- Wrap around instrument panel to provide more room btwn Driver & Cmdr/A-driver

- Potential for Opening Windows
  - In Event of Non Functional HVAC
Payload, Performance, Protection
EMIP info at

JLTV Program Updates at
http://contracting.tacom.army.mil/majorsys/jltv/jltv.htm