Survivable Vehicles for the Warfighters

MRAP Vehicles – Rapid Acquisition to Organic Maintenance Support

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Joint Logistics and Sustainment
Joint MRAP Vehicle Program

2010 DoD Maintenance Symposium
MRAP Joint Vehicle Program

USA

USAF

USMC

USN

SOCOM
"The MRAP program should be considered the highest priority Department of Defense acquisition program…"

"…any and all options to accelerate the production and fielding of this capability to the theater should be identified, assessed and applied where feasible."

"…the urgency of the situation …requires that we thoroughly examine all options to put as much of this enhanced capability in the hands of our troops as rapidly as reasonably possible."

"Directing that a Department-wide task force be formed to integrate planning, analysis, and actions to accelerate over the next year the acquisition of as many MRAPs as is possible and prudent"
Dynamic Environment!

Service & Congressional call for added vehicle protection drove rapid requirements growth.

- 185, May 06 MNF-W Commander
- 1,185, Dec 06 JROC Validated
- 4,066, Nov 06 Army-USMC board
- 6,738, Feb 07 MROC validated
- 15,374, Sep 07 JROC validated
- 16,238, Nov 08 JROC validated
- 15,838, Jul 08 JROC validated
- 21,482, Jul 09 JROC validated
- 26,882, Jan 10 JROC validated
- Increased Army totals from 2,500 to 10,000 vehicles and included 100 test vehicles
- Supported increased vehicle reqts for OEF
- Supported increased reqts for OEF
- Supported M-ATV reqts for OEF
- Established Army final reqt at 12K, SOCOM final reqt at 378 and final ballistic test reqt at 133 vehicles
- Increased Army totals from 2,500 to 10,000 vehicles and included 100 test vehicles
- Service & Congressional call for added vehicle protection drove rapid requirements growth.

Dynamic Environment!
Joint MRAP Vehicle Program

**Extreme Makeover of Joint MRAP Log Strategy**

**Original Plan**
- USMC
- Army
- Navy
- USAF
- SOCOM
- Centralized Fieldings
- Centralized Support Requirements
- 90 Day Parts Block
- Pure CLS - Non-Std COTs Manuals

**War Fighter feedback**
- 7,000+ total feedback

**Current Reality**
- USMC
- Army
- Navy
- USAF
- SOCOM
- Ballistic Testing

- Decentralized Simultaneous Fieldings
- Decentralized Support Requirements
- Hybrid/Organic Support Concept
  - Multi-variant OEM FSRs
  - Multi-variant OEM NET Trainers
  - Govt Depot Mechanics
  - PLLs and ASLs
  - Assigned NSNs to parts
  - Govt validated manuals for all field-level tasks
  - Use of Existing Supply Chain

**Changed to:**
- 25,000+ total

**Complexity**

**Lessons learned**

**Responding to Warfighter Requirements**
How MRAP Fits into DoD Acquisition Map

Integrated Defense Acquisition, Technology, and Logistics Life Cycle Management System

Following the Materiel Development Decision, the Materiel Decision Authority may authorize entry into the acquisition process at any point, consistent with phase-specific entrance criteria and statutory requirements.
How MRAP Fits into DoD Acquisition Map
Joint Sustainment Support Timelines
The “Challenge”

- Typical Organically Supported Weapon System
  - Provision repair parts
  - Complete Technical Manuals
  - Procure repair parts

- CLS Weapon System
  - Prepare to provide logistics support

MRAP Support
Concurrent with Fielding

- MRAP Fielding
  - Provision
  - Validate COTS Manuals
  - Buy Initial Spt Pkgs
  - Procure repair parts

All MRAP Activities Happen in Parallel – 2 to 3 year timeline!

Risk

Fielding
Overarching JPO MRAP Operations

Building capability over time

Cascade Operations

...the movement, reception, processing, sustainment, reconfiguration, re-task organization of assets designed to support follow-on missions

Sustainment Maintenance Operations

- Repair-and-return
- Activity that can be brought as far forward as required
- Relies on end item and component repair with some component replacement

RESET / REFURB Operations

Three Tenets of RESET / REFURB
- Replacement
- Recapitalization
- Repair

Capability Insertion (CI)

The integration of technological solutions to drive commonality, standardization, supportability, and performance enhancements

ISS Operations

Start + 18 months!!

All four capabilities build on each other to enable efficient fleet management
Representative Retrofit Fielding Schedule

OEF

MRAP Retrofit Fielding Schedule

OIF

MRAP Support Facility
The Hybrid Strategy

JPO provides initial parts push (ASL/PLL/BDAR)

JPO MRAP

JPO Buys Initial Support Packages and ships to theater

JPO Funds all parts buys

What Does Hybrid Mean?

- PM is the bill Payer until program transitioned to Services
- Uses the Organic military supply chain
- Employs STAMIS/SASSY
- OEMs are the source of supply until fully provisioned
- JPO Executes sustainment maintenance and BDAR at the RSAs
  - Augmenting maintenance support with RRAD mechanics/ Barstow Mechanics and FSR technical advisors
  - OEF uses CLS Maintenance via MANTECH & AECOM

ULLS
SAMS-E
SASSY
SBSS

Replenishment

TACOM
LOGCOM

Repairables
Consumables

Parts are consumed

Parts are ordered via STAMIS

Focusing on Readiness & Operation Scorpion Cascade support
Joint MRAP Vehicle Program

Concept of Operations Shift

Weight of effort has shifted

Iraq Key Tasks:
- Fielding completed
- Support sustainment of fleet
- Support restructuring of force
- Support CI in Iraq (as req’d)
- Restructure footprint
- BDAR

Afghanistan Key Tasks:
- Ramp up fielding tempo
- Build capacity to support increased fleet size
- Support Cougar suspension upgrade
- Support CI / retrofits in OEF (as req’d)
- BDAR

Operation Iraq Freedom

Operation Enduring Freedom

MRAP Support Facility
The MRAP Team has completed over 60 Provisioning conferences since February 2008!

New variants, ECPs, vehicle upgrades, and GFE efforts all require additional provisioning.
Overall Post-Conference NSN Status

Total Parts (Estimated 72984)
- Reviewed: 66821 (92%)
- Not Reviewed: 6163 (8%)

NSN Attainment Status (24317 Unique Parts Requiring NSN)
- NSN Assigned: 20942 (86%)
- Pending NSN Assignment: 3375 (14%)

Overall Status
- Provisioning Ongoing
- Clean-up efforts Continue

Management Status
- DLA Managed: 20320 (97%)
- Service/Agency Managed: 622 (3%)

Goal: 100% NSN attainment based on current provisioning schedule

As of 30 September 2010
Provisioning for MRAP vehicles will continue as the vehicles evolve: LRIP 20+ vehicles, ISS, ECPs, …

New parts are added at different stages of the vehicles’ life cycle due to the evolution of the vehicles’ configuration.
MRAP + GFE

GFE Nearly Triples The Total Value of the Vehicle!
Changes to vehicle configurations result in the continuation of provisioning.
### Sustainment Concept

**Provisioning**
- Assign/identify NSNs to parts needed for tactical level maintenance
- Provision weapon system through iterative process (provisioning conferences)
- Complete base provisioning effort

**Technical Manuals**
- Validate/verify COTS Operators, Maintenance, and Parts Manuals
- Update COTS manuals and contract for Military Standard Manuals
- Complete TMs - LOG Demo for Operators, Maintenance, and Parts Military Standard Manuals - Depot Pilots for system and component NMWRs

**Maintenance**
- Augment organic maintainers with FSRs & depot mechanics
- Utilize more CLS support in OIF (AECOM for tactical and MANTECH for sustainment)
- Organic maintenance supplemented in OIF as needed

**Supply Support**
- JPO MRAP forecasts parts buys and funds
- DLA and services use their info systems to forecast based on demands. JPO MRAP funds
- DLA and services use their info systems to forecast and fund with Working Capital Funds
MRAP Provisioning and Supply Support

JPO joined with DLA to successfully execute MRAP support plan

Provisioning normally takes place 2 years before fielding & then DLA buys triggered by initial demand

MRAP NSNs attained faster

MRAP parts bought rapidly & robustly

Initial

Individual Purchase Actions

High Manual Effort

JPO funding

Suppliers

ND FPII BAE GDLSS

Current

Multiple Procurement Options

Provisioning benefits:

- ID common hardware & automotive parts already in organic supply system
- ID component OEM for reparables such as Allison, Caterpillar

Contracting efficiencies:

- Award long term contracts (LTCs) to vehicle OEMs
- Award LTCs to sole source suppliers or add items to existing LTCs
Joint MRAP Vehicle Program

- JPO MRAP
- CONUS Distribution

- Initial Support Packages (ASL.PLL)
- Deprocessing Kits & BDAR
- Retrofit Kits

- JSSC
- MSF
- MRAP U
- RSAs

- Units in OEF/OND
- Depots
- HST & PDTE Customers

Core Customers

Enhance Readiness & Vehicle Production

Maximum Flexibility to Support Warfighter
Parts Support: Push / Pull

JPO

Units
SSAs
SMUs

PLL & ASL Fielding Packages

Wholesale Supply System

Fill requisitions from the field

Units
SSAs
SMUs

Organic Supply Support from Sep 2007 onwards
# MRAP Technical Manual Plan

<table>
<thead>
<tr>
<th>Crawl</th>
<th>Walk</th>
<th>Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop initial COTs Operator, Maintenance, and Parts Manuals</td>
<td>Update COTs Operator, Maintenance, and Parts Manuals</td>
<td>Develop initial Military Standard Technical Manuals</td>
</tr>
<tr>
<td>Completed</td>
<td>Completed for most MRAP variants</td>
<td>Contracted with vehicle OEMs for Operator, Maintenance, and Parts Military Standard Manuals</td>
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<tr>
<td></td>
<td></td>
<td>- Verification effort has started</td>
</tr>
<tr>
<td>Augmented by Safety/Maintenance Messages/Technical Bulletins to update / clarify and cover vehicle improvements</td>
<td>System level National Maintenance Work Requirements (NMWRs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Verification effort to begin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Detailed status follows</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Component NMWRs verifications to begin</td>
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</table>
# LOG DEMO VS TM VER

<table>
<thead>
<tr>
<th>LOGISTICS DEMONSTRATION</th>
<th>TECHNICAL MANUAL VERIFICATION</th>
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<tbody>
<tr>
<td>Evaluate SSP</td>
<td>Purpose</td>
</tr>
<tr>
<td>PM ILS Manager</td>
<td>Verify TM</td>
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<tr>
<td>Who’s in charge</td>
<td>MARCORSYSCOM</td>
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<tr>
<td>All Logistics Products</td>
<td>Focus</td>
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<tr>
<td>Focus</td>
<td>TM</td>
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<tr>
<td>Hands On</td>
<td>Type of work package review</td>
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<tr>
<td>Hands On / Desktop Review / Simulation</td>
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<tr>
<td>Selected work packages</td>
<td>Percentage of TM Review</td>
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<tr>
<td>100%</td>
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<tr>
<td>Executable</td>
<td>Work Package Focus</td>
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<tr>
<td>Accuracy / Completeness</td>
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<td>Red/Amenber/Green</td>
<td>Scoring</td>
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<tr>
<td>Go/Go With Change/No Go</td>
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</tbody>
</table>
Technical Manual Summary

Crawl
- Completed first two phases
  - COTS Operator, Maintenance, & Parts Manuals augmented by Safety/Maintenance Messages/Technical Bulletins

Walk
- Started final phase - Military Standard TMs
  - Operator, Maintenance, and Parts Manuals
  - Vehicle and Component NMWRs

Run
- IETMs will be placed on contract
  - Force structure decision will neck down requirement

Challenging Final Phase – 50+ TMs
Depot Source of Repair

- **Marine Corps Logistics Command (MCLC)**
  - Maintenance Center Albany (MCA)
  - Maintenance Center Barstow (MCB)

- **Army Materiel Command (AMC)**
  - Red River Army Depot (RRAD)
  - Letterkenny Army Depot (LEAD)
Summary

- Vehicles Delivered to Warfighter

- Hybrid Support Strategy Transitioning to Organic Capability

- Logistics Responding to Service Requirements
Questions?