Two - Level Maintenance

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Chief of Ordnance
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Purpose

- Provide insight into our two-level maintenance work
- Explain the mergers we are working on & why
60+ Years of Four Level Maintenance Doctrine

- Unit
- Direct Support
- General Support
- Depot

User

Supply System
## Maintenance Allocation Chart

<table>
<thead>
<tr>
<th>Component/Assembly</th>
<th>Maintenance Function</th>
<th>Operator C</th>
<th>(ORG) O</th>
<th>(DS) F</th>
<th>(GS) H</th>
<th>Depot D</th>
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</thead>
<tbody>
<tr>
<td><strong>Engine</strong></td>
<td>Inspect</td>
<td>0.1</td>
<td>1.5</td>
<td>8.0</td>
<td>16.1</td>
<td>40.0</td>
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<td>Test</td>
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<td>2.0</td>
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<td></td>
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<tr>
<td></td>
<td>Service</td>
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<td>Replace</td>
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<tr>
<td></td>
<td>Repair</td>
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<tr>
<td></td>
<td>Overhaul</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transmission</strong></td>
<td>Inspect</td>
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<td>6.0</td>
<td>10.0</td>
<td>20.0</td>
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<tr>
<td></td>
<td>Service</td>
<td>0.5</td>
<td></td>
<td>8.0</td>
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<td></td>
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</tr>
</tbody>
</table>
Characteristics of 4-Level Maintenance

• Echeloned maintenance
• Large logistics footprint
• Reliant on evacuation systems
• Built-in overhead burden
• Significant contribution to 6:1 CSS/CA support ratio
• Requires own maintenance support
• Not a 21st century concept
The area of operations is growing...

- AOE - Linear Area of Operations
  - 20 km BDE Front
  - 609 Mechanics (1:1.8)

- FXXI - Linear and Non-linear Area of Operations
  - 240 km
  - 463 (1:2)

- SBCT - Non-linear Area of Operations
  - 50 km BDE Front
  - 247 (1:5.9)
  - Objective Force
    - UA Non-linear Area of Operations
  - Greatly Increased Area of Operations (1000x1000 kms)
  - 35* (1:23.2)
In fact, we’ve been evolving...

...But what about the current force?
Current Maintenance System

A better way to do Maintenance
Two Levels

Replace...on-system
Repair & return to user
Largely a merging of Org & DS

Repair...off-system
Repair & return to stock
Largely a merging of GS & Depot
Typical Two Level Maintenance Actions

**Field Maintenance Actions**
- On-System
- Plug and Play Components
- Fewer Actions Requiring Tools
- Crew Level Maintenance Tasks
- Typical **Replace** Tasks:
  - Replace Starter
  - Replace Winch
  - Replace Electronic Module
  - Replace Geared Hubs
  - Replace Engine

**Sustainment Maintenance Actions**
- Off-System
- Disassemble / Assemble
- Repair to National Standard
- Requires Wide Variety of Tools
- Typical **Repair** Tasks:
  - Repair Starter
  - Repair Winch
  - Repair Electronic Module
  - Repair Geared Hubs
  - Repair Transmission
Force Structure Implications at the Field Level of Maintenance

- On-System Automotive, Turret & Power Generation Equipment Repair (MSTs) organic to supported units
- Small Arms Repair organic to CA units
- Low Density Maintenance MOSs
Where will “Sustainment” (off-system) Maintenance Be?

- Depots
- Installation Maintenance Activities under the Direction of the NMM
- Component repair companies at EAD
- Component repair platoon in the MSB/DSB?
- Contractor Facilities?
Benefits of a Two-Level System

- Less Echelons
- Eliminates Duplication of Work
- Reduced “Handling” during evacuation
- Decreases Repair Cycle Time/Increases Readiness
- Reduced Logistics Footprint
- Syncs well with SSF/NMM
- Increased Flexibility and Depth of Capabilities
- Takes advantage of expected improvements in reliability, Embedded Diagnostics & Prognostics
### 100 HMMWV (4-Levels of Maintenance)

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>UNIT</th>
<th>DS</th>
<th>GS</th>
<th>DEPOT</th>
</tr>
</thead>
<tbody>
<tr>
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<td>63W</td>
<td>63W</td>
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<tr>
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<td>3230</td>
<td>3778</td>
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<td>2.2</td>
<td>1.4</td>
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</tbody>
</table>

### 100 HMMWV (2-Levels of Maintenance)

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>FIELD</th>
<th>SUSTAINMENT*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMH</td>
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<td>75.3</td>
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<tr>
<td>MOS</td>
<td>63B</td>
<td>63B</td>
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<tr>
<td>FACTOR</td>
<td>3176</td>
<td>3778</td>
</tr>
<tr>
<td>MY</td>
<td>9</td>
<td>2.0</td>
</tr>
</tbody>
</table>

*Assumes 30% of current DS Tasks migrate to “Sustainment” Echelon
Where We Are...

✓ Formed ICT - met 4 times already

✓ Studied impact on HMMWV, HEMTT, ABRAMS
  .  TM
  .  MAC
  .  NMWR

✓ Task Migration boards at TACOM & CECOM

✓ G-4 Memo; endorsed by CG, TRADOC

✓ Working Force Structure Implications in FDUs
  .  Personnel
  .  Equipment
Automotive MOS Mergers in Support of the "Field" Level of Maintenance

GO ORDNANCE!!!

The Ordnance Corps...
Freedom’s Flame!!
Abrams Tank System Maintainer

63E
Organizational Level
Hull Mechanic

45E
Organizational Level
Turret Mechanic

63H
DS/GS Automotive
Tracked Vehicle Mechanic

45K
DS/GS Armament
Turret Mechanic

63A
On-system multicapable Abrams Mechanic

All DS Abrams Tasks

2 DS Abrams Tasks
Bradley Fighting Vehicle System Maintainer

63T
Organizational Level Hull Mechanic

45T
Organizational Level Turret Mechanic

63H
DS/GS Automotive Tracked Vehicle Mechanic

45K
DS/GS Armament Turret Mechanic

63M
On-system multicapable BFV/CFV Mechanic
Consolidation of 45D and 63D

45D - SP Field Artillery Turret Mechanic (ORG)

63D - SP Field Artillery Hull Mechanic (ORG)

Plus all DS Automotive Tasks from 63H & 7 Tasks from 45K

Merged 63D – On System Multicapable PALADIN Mechanic

Self-Propelled Artillery System Maintainer

Mechanics currently performing each other’s jobs anyway - this formalizes what’s already practiced in the field

45Ds already merge with 63D at SSG - eliminates separate career tracks

Simply creates one mechanic that can do the job of two

The only other weapon system with a separate hull mechanic and turret mechanic is the PALADIN

Capitalizes on success with Abrams and BFV MCM “On System” mechanics

640 soldiers affected
Consolidation of 63B, 63S, 63W

63B - Light Wheel Vehicle Mechanic (ORG)
63S - Heavy Wheel Vehicle Mechanic (ORG)
63W - Wheel Vehicle Repairer (DS)

Merged 63B - Wheeled Vehicle Mechanic

14,948 soldiers affected

- Does exactly what CSA wants with ADS XXI initiatives
- Retains equipment back into the fight faster - reduces evacuation
- Significantly increases combat power
- Creates one Wheeled Vehicle Mechanic that can perform both Org and DS tasks
- Essential to support Two-level Maintenance
- Reduces logistics footprint
Tracked Vehicle Mechanic

Consolidation of 63H, 63Y
63H - Track Vehicle Repairer (DS)
63Y - Track Vehicle Mechanic (ORG)
Merged 63H - Tracked Vehicle Mechanic

3,380 soldiers affected

- Does exactly what CSA wants with ADS XXI initiatives
- Returns equipment back into the fight faster - reduces evacuation
- Significantly increases combat power
- Creates one Tracked Vehicle Mechanic that can perform both Org and DS tasks
- Essential to support Two-level Maintenance
- Reduces logistics footprint
MOSs Already Capable of ORG and DS

27T  Avenger System Repairer
27X  Patriot System Repairer
35D  Air Traffic Control Systems Repairer
35M  Radar Repairer
44B  Metal Worker
52C  Utility Equipment Repairer
52D  Power Generation Equipment Repairer
62B  Construction Equipment Repairer
63J  QM and Chemical Equipment Repairer
Benefits of Merged ORG and DS

- Gets rid of maintenance echeloning
  - Reduces logistics footprint in the battle space
  - Returns equipment back to the fight faster
  - Lessens equipment evacuation requirements
  - Empowers commanders with more options and flexibility

- No longer have to retrain feeder MOSs in NCOES

- Increases operational readiness rates
  - Reduces repair time - No longer have to job-order all repairs to DS
  - Increases productivity
  - Reduces costs in time, fuel, wear and tear of recovery vehicles

- Increases Personnel Management Efficiencies
  - One soldier to be managed rather than three for assignments and promotions
  - Allows commanders to utilize one soldier in more places on the battlefield and in garrison
  - Streamlines and cleans-up progression models, data collection, entries and maintenance, special duty selections, training, and authorization documents

- Increases combat power
Two-Level Maintenance

Summary

✓ The time is right to transition to two-level maintenance ... supports the needs of Army transformation, as well as the current force

✓ Our MOS mergers complement our two-level maintenance vision

✓ Expect some force structure savings

✓ We believe we can build a transition plan that does not require a lot of resources

✓ Considerable benefits to the Army
mitchell.h.stevenson@us.army.mil

GO ORDNANCE!
Back up...
Task Decision Diagram

Start

Is the Task On-system?

YES

Does the Field Level have the skills and tools required to perform the task?

YES

Does real and applicable data show the desirability of the task to be Field?

YES*

* Need to identify tools and skills required.

NO

NO

NO

Does the Failure Rate high?

YES

Does the Failure effect readiness?

YES

Is the Task low risk?

YES

NO

NO

NO