U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND – AVIATION & MISSILE CENTER

Aviation and Missile Command (AMCOM) Policy 070-062 -
U.S. Army Aviation Policy for Advanced Manufactured Aircraft
Parts, Components and Support Products

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21 April 2021
TOPICS

• What it is
• Why it is needed
• What it does
• Method to construction
• Vision
• Questions
• Contact Info
WHAT IT IS

- This policy provides guidance to the U.S. Army Aviation Enterprise Stakeholders regarding Advanced Manufacturing (AdvM)
  - Army Units
  - Defense Logistics Agency
  - Program Executive Office Aviation
  - OEMs
  - AMCOM
  - CCDC AvMC

- Constructed at request of MG Royar, AMCOM CG
• AdvM, specifically additive, is available to the masses
• Fielded Units looking to AdvM for quick repairs and tools
• Needed to ensure airworthiness
WHAT IT DOES

• Provides direct POCs for AdvM approval
• Provides categorization for AdvM parts for aviation
• Provides types of information requested by the Engineering Support Activity to approve AdvM parts
• Provides example of AdvM currently in use

AH-64 Environmental Seal

MH-47G Fan Shroud
METHOD TO CONSTRUCTION

• **Type of Part**
  – Prototype, Fixture, Jig, Shop Aid, Tool
  – Aviation Ground Support Equipment
  – Flight Part

• **Consequence of failure**
  – Readiness Impact
  – Operational Impact
  – Safety Impact

• **Teaming with Army Aviation Enterprise Stakeholders**
  – Reviewed
  – Comments
  – Adjudicated by policy team

<table>
<thead>
<tr>
<th>Shop Aids and Non-Flyable Prototypes</th>
<th>Per Annex D</th>
<th>Category 0</th>
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</thead>
<tbody>
<tr>
<td>Fixtures, Jigs and Tooling</td>
<td>Per Annex E</td>
<td>Category 1</td>
</tr>
<tr>
<td>Aviation Ground Support Equipment (AGSE)</td>
<td>Per Annex F</td>
<td>Category 2</td>
</tr>
<tr>
<td>Flight Parts/Components</td>
<td>Per Annex G (no safety, operation or readiness impact)</td>
<td>Category 3</td>
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<tr>
<td></td>
<td>Per Annex H (readiness impact, no safety or operation impact)</td>
<td>Category 4</td>
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<tr>
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<td>Per Annex I (operation impact, no safety impact)</td>
<td>Category 5</td>
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<tr>
<td></td>
<td>Per Annex J (safety impact to include Critical Safety Items)</td>
<td>Category 6</td>
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Categorization Table
- Living document
- Expanded to included defined requirements in time

<table>
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<tr>
<th>Application: Shop Aids &amp; Non-Flyable Prototypes</th>
<th>Tool &amp; Fixture</th>
<th>AGSE</th>
<th>Flight</th>
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<td>Cat 5</td>
<td>Cat 6</td>
</tr>
</tbody>
</table>

### Qualification Item

#### Material

- None required: P
- S-Basis: P P P
- B-Basis: P P P P P
- A-Basis: P
- Feed stock spec: P P P P P P
- Material spec: P P P P P P

#### Design

- FMECA: P P P P P P P
- Form, fit, function check: P P P P P P P P
- Safety margin analysis (static, fatigue, fracture): P P P P P P P
- Validation test (proof/ static load, dynamic): P P P P P P

#### Manufacturing

- Process spec: P P P P P P P
- Machine calibration: P P P P P P P
- Machine/material operational qualification: P P P P P P P
- Process performance qualification: P P P P
- Fatigue tests (coupon/full scale): P P P
- Production readiness review: P P P

#### Part Quality

- First article verification inspection: P P P P
- Acceptance inspection (dimensional, NDI, surface, functional): P P P P P P
- Material spec coupons with build (tensile, density, chemistry): P P P P P P
QUESTIONS
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