



Upgrade Training to the DCMA 8210-1D

Presented By:

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DCMA-AO

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In an effort to meet current Service requirements in a rapid changing environment, policy must maintain momentum...

Evolution

- DLAM- Run with scissors
- DLAI- Run with scissors, but hold them at arm's length
- 8210.1A- Conduct Flight and Ground Operations safely
- 8210.1B- Conduct Flight and Ground Operations safely and minimally address...
- 8210.1C/Chg.1- Conduct Flight and Ground Operations safely and IAW...
- 8210-1D- Conduct Flight and Ground operation safely and smartly....



- The Combined Instruction is not the contract, rather a safety mechanism used to ensure those items needed to facilitate a maintenance/industrial event and perform flight operations, in a safe and effective manner to support contractual requirements
- Use the contract to define specific Service standard expectations
- Focus area must align with the expectations of the GFRC to target *ASSET PROTECTION*



- Section 1- Responsibilities
- Section 2- Waivers & Approvals
- Section 3- Procedures
- Appendix 3A- Procedures Outline
- Section 4- Flight Operations
- Section 5- Ground Operations
- Section 6- AVN Safety Mgmt System
- Section 7- Infrastructure & Support
- Section 8- Unmanned AO
- Section 9- Non-Standard Applications
- Appendix 9A- Procedures Matrix for contractor owned ACFT PAO/State without GFRC
- Section 10- Government Flight Representatives
- Glossary
- Glossary 2- Acronyms

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Sections 1-3 Breakdown

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- New section addition that defines the responsibilities of the Approving Authority, Commanders, GFRs, and Contractors
- Most information previously resided in the lead-in section of the Chg 1
- The Approving Authority is a new addition describing appointment requirements for GFRs/G-GFRs
- One change with Contractor responsibilities:
 - Previously stated- Contractors are responsible for establishing and enforcing safe and effective written Procedures IAW this Instruction
 - Now states- Contractors are contractually required to ensure their responsibilities from this Instruction are fully met

Section 2- Procedures for Waivers and Approvals



- No major changes to this section, mostly minor grammatical restructures
- (**New**) Added Approval Requests into paragraph 2.2
 - Approval requests refer to areas in the Instruction that require special attention from the GFR but are approved at the Service Waiver Authority level
 - Examples are multiple aircraft qualifications or orientation flights
 - Routing is the same as all waivers to the instruction
- Removed the requirement of using DD1716s for contract changes
- (**New**) Added a paragraph (2.8) for waivers generated by the government
- (**New**) Added a Combat Operations paragraph (2.9)
 - SWA can not allow/approve operations where it places the aircraft in a potential loss
 - Examples- Thunderstorm penetration or fuel (continue operations below designated bingo, minimum, or emergency fuel)



- No major content changes, but huge restructure
- Now identifies *all* contractor responsibilities up front
- No more Attachment 10; structure is IAW Appendix 3A which immediately follows section 3

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New Flow





- 3.1 No change to opening paragraph
- Removes some language that is already stated in the GFRC and does not need to be restated in this instruction-example subcontractors responsibilities 3.2.1
- 3.2.2 Adds the FAR 52.246 requirement for contractor facility access
- 3.3 Questions of interpretation
 - (New) Adds email is an acceptable method for the request
 - No change with processing through DCMA-AO or for Services with the SWA
 - (New) Interpretations will be disseminated in writing back to the GFR, ACO, and the contractor
- 3.5 Locations with Multiple Versions of this Instruction
 - Section did not change, but...
 - If a location has both 8210.1C and -1D contracts, it is **HIGHLY** recommended to work with the contractor to merge to the latest due to the large restructure and changes



- 3.6 Minor change from 3 months to 90 days
- 3.7 Guidance/Requirements for Procedures
 - 3.7.1 Changed Guidance from simply “DFARS” to DFARS 228.370 or the GFRC
 - 3.7.1 (New) Added Contractors must not use Procedures to make specific requirements less restrictive than they appear in this Instruction
 - 3.7.3 (New) Added The Core procedures are treated the same as any referenced procedures (see paragraph 3.8.)



- 3.7.4 (**New**) “Line in the Sand” for aircraft not “in the open” or “covered aircraft” as defined in the 2023 GFRC
 - Contractors will provide GOPs for the FOD Prevention Program (Commensurate to risk), ACFT Servicing, W&B, and ACFT/Equipment Hydraulic Fluid Analysis Program
 - The above programs are the ONLY GOPs the contractor must address “when not in the open”
 - Keep in mind this is for new production and not Government Furnished Aircraft (GFA)
 - Important to also remember this would not apply if the definition of “in the open” is modified for specific areas (e.g. to include a hangar, hush house, structure)
- Background: Service Waiver Authorities wanted standardization and the production facilities to focus on future risk vice immediate risk (where the contractor would be fully liable)



- 3.7.5 (**New** to this section) Addition of how to address flight and ground operations (excluding industrial or quality) not covered in the instruction
 - Must be a process that increases risk to the aircraft
 - The new procedure identified must be mutually agreed upon (GFR and KTR)
 - If no agreeance exists, exercise the question of interpretation process
- 3.7.6 (**New**) Procedures for Non-Standard Applications- (FMS, Lease Agreements, Bailments, COCO, etc.)- Use section 9
- 3.7.7 (**New**) Procedures for integrated maintenance or CLS on BPCS
 - KTR may use available U.S. Government Service processes in order to fulfil procedure requirements unless contract states differently
 - If used, the contractor must adhere to local policies
- 3.7.8 No change



- 3.8 Procedures Preparation, Format, and Content
 - (New) Contractors must address configuration control for referenced documents
 - (New) Admin or maintenance changes to referenced documents that DOES NOT AFFECT A PROCESS or PROCEDURE do not need GFR approval prior to publication; however,
 - The GFR must be notified of the change
 - 3.8.1 (New) Appendix 3A introduced as to the format requirement- Must go to the 3rd bullet level (but all subs must be addressed)
 - 3.8.1.3 Adequately explain all aspects of a given operation to include (*as appropriate*) the purpose, scope, and steps to accomplish the task- Addition of as appropriate
 - 3.8.2 (New) Format- Spells out the two approaches to Procedure development
 - 3.8.2.1 Specific directions for areas requiring Procedures (Sections 3, 4, 5, 6, and 7)
 - 3.8.2.2 Table of contents approach
- Example will be displayed on the next Appendix 3A slide



- Opening Paragraph- Instructions on the approach
 - Some titles in the 3A list may not match
 - Outline does not negate the requirements of the instruction even when no paragraph
- Sections 1 and 2- No Procedure required
- Section 3 must cover 3.7.5, 3.8, and 3.9.2- Additional FGOPs not mentioned, Referenced documents configuration control, and Procedures POC
- Sections 4, 5, 6, and 7 are self explanatory
- Sections 8*, 9*, and 10- No Procedure required
- Glossary- Can not change if added
 - Be cognizant of the new FOD additions
 - Words mean something

* These sections will be addressed in corresponding paragraphs of 4, 5, 6, and 7 (as applicable)

Section 5: GROUND OPERATIONS	[New layout according to this instruction]
5.4. Qualification.	←
5.4.1. Training plan.	←
5.4.2. Employee qualification records.	
5.4.3. Testing.	
5.4.4. Recurring training.	
5.4.5. Initial and annual egress.	
5.4.6. Medical/physical. Document ground operations positions requiring physicals.	
5.5.3. FOD prevention meetings.	
5.5.4. FOD prevention procedures.	



- 3.9 (**New**) Approvals- Only real change is the “get out of jail free” language
 - Basically discusses what the GFR’s approval constitutes (Not OSHA / industrial processes)
 - Highly recommended to add this language to the GFR approval letter
- 3.10 Changes- No change
- 3.11 Review Requirements- Only change is removing the requirement to attach the GFR approval to Procedures (no longer needed with a separate GFR letter)
- 3.12 Deficiencies- No Change
- 3.13 (**New**) Noncompliance- Only addition of the statement that “Corrective actions must correct root causes”



Bottom line, the expectation is to focus the attention on asset protection and meet the expectation of the GFRC while continuing to foster safe and effective Aircraft Operations





Philosophical Approach to the DCMA 8210-1D (Section 4, includes applicable items from 8)

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- Restructured Chapter 4 from Change 1 (C1) to better group topics
 - Incorporates changes aligned with 2023 GFRC
 - Adds UAS non-applicability notation (UAS NA) and notes supplemental UAS guidance in Section 8 may supplant Section 4 language – these Section 8 supplements will be included with the appropriate Section 4 paragraphs
- General order remains similar:
 - 8210-1D p4.1-4.8 cover General Oversight topics (C1 p4.1.1-4.1.15, 4.2.1)
 - 4.9 Crew/Non-Crew Approvals (C1 p4.2)
 - 4.10 General Procedures (C1 p4.3)
 - 4.11 Crew Currency (C1 p4.4)
 - 4.12-4.13 Crew Training/Ground Training (restructured from C1 p4.5-4.6)
 - 4.14 Evaluations (C1 p4.7)
 - 4.15 Forms and Records (C1 p4.8)



DCMA 8210-1D Section 4 Breakdown

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- 4.1 Flight Operations
 - Section applies to all CROs, crewmembers, & non-crewmembers
 - Adds new UAS section and references Section 8 supplemental guidance
- 4.2 Flight Management
 - Removed requirement for a Flight Planning 'area' to focus on planning process
 - Approved unit flight schedules for 'Flight Services' constitutes a flight profile
 - 8.2 Addresses UA Operations Outside of Special Use Airspace
- 4.3 Contract Flight Approval
 - Replaces DCMA-644 with DD 3062 (throughout section)
 - (New) Embedded Flight Operations – clarifies how 'Flight Services' personnel are approved for assignment to the flight schedule by the supported unit
- 4.4 Approved Flights
 - (New) Adds experimental test plan approval authorities



- 4.5 Flights not Under GFR cognizance
 - Clarifies types of operations not under the GFR's contract with examples (e.g., formation, tankers)
 - 8.3 UAS used in vicinity of government aircraft but not under a contract that includes the GFRC or Combined Instruction do not require GFR involvement
 - Ex: security, fire detection, wildlife abatement
 - SUAS used to facilitate maintenance or inspections, see 5.8.3



- 4.6 Flight Supervision
 - Clarified expectations for Safe-For-Flight Release
 - Added GFR access to documentation
 - Clarified minimum crew requirement expectation
 - (New) Non-Crewmembers
 - » Clarifies FOPs and flight approval requirements for non-crewmembers, to include mission essential personnel (MEP)
 - » Clarifies that a contract modification may be required to clearly place the flight requirement within scope of the contract
 - » Ground-only contract maintenance personnel can fly in Service aircraft without FOPs or GFR approval
 - They are non-crewmembers with minimum requirements (see 4.13 & 8.12)
 - G-GFR can accept the non-crewmember status documentation from the CRO
 - A good example is a ground-only contract for unit level daily maintenance. If an aircraft goes down off-station, maintenance personnel can be assigned as non-crewmembers without the need for a GFR. However, they must still be designated by the CRO to the G-GFR.



- 4.6 Flight Supervision
 - Crew duty and crew rest – now a Procedures requirement
 - » 8.4 clarifies duty period ending for UAS
 - » Clarifies that the Service flight authority (unit operations) have the authority to extend contractor crew duty period by 2 hours *for embedded flight services contracts only*



- 4.7 Publications
 - No change from 8210-1C Chg 1
- 4.8 Contractor's Requesting Official
 - No change from 8210-1C Chg 1



- 4.9 Crewmember/Non-Crewmember Approval
 - No changes from 8210-1C Chg 1
 - DD Form 2627 update, is now Controlled Unclassified Information (CUI) when filled in, treat accordingly
 - DD Form 1821 updated and the title is now “Contractor Crewmember Flight Summary” vice the “Contractor Crewmember Record” in 8210-1D
 - » It is also CUI when filled in
 - » Ignore note at end of 4.9.3 due to update, instructions included in new form
 - Moved multiple qualifications requirement to this paragraph
 - Added requirement for CROs to annotate non-crewmember lists with restrictions (*USAF Only*)
 - 8.5 & 8.6
 - » allows the GFR to authorize UAS crewmembers to maintain up to 4 qualifications unless Service Guidance is more restrictive
 - » (*New*) Adds restriction for simultaneous operations



- 4.10 Crewmember Qualification Requirements
 - Added 'type-rating' requirement for COCO operations
 - Clarified experimental test flight pilots must attend a U.S. military TPS full length course
 - 'Non-TPS Approval' replaces 'TPS Waiver', considerations and process (submit IAW Section 2) remain unchanged
 - 8.7 Greatly expanded old 4.3.6 to match 4.10
 - » Experimental Test Flight qualifications are not applicable for SUAS
 - » Adds TPS requirements for non-SUAS
 - » Adds hours requirements for various qualifications
 - Clarified requirements for Nonstandard Army Aircraft functional check flight qualification
 - 8.8 (**New**) mimics 4.10.4 (no change) for UA operators
 - Medical Requirements – changed non-crewmember requirement from an 'annual' FAA Third Class to simply an 'FAA Thirds Class' which is good for 2 years
 - 8.9 UA medical requirements moved from old Chapter 4



- 4.11 General Procedures

- Expanded licensing requirements to include FCC, FAA, *or host nation regulations*
- Weather Requirements
 - » Clarified when to use 'initial ACF/FCF' minimums vice 'subsequent ACF/FCF' minimums
 - » Removed Army's direction to 95-1
 - » Changed FCF/ACF hover check visibility from 'visual reference to ground' to '1/2 mile visibility'
 - » Removed 'all other' requirements, simply follow Service Guidance for non-ACF/FCF flights
 - » 8.10 no distinction, simply follow Service Guidance or establish minimums if none exists
- Added exception for Engineering flights from required daylight operations
- (**New**) Aircrew Flight Equipment, Life Support, and Survival Gear
 - » Greatly expanded due to removal from Ground
 - » Contractor must be a graduate of a Service training program, equivalent technical training courses, or sister-service equivalent courses



- 4.11 General Procedures

- Aircrew and Contractor Response to Emergencies

- » Added expectation that the emergency responses in this section is to focus on local processes and actions of the airfield and contractor personnel to support the aircrew during ground and in-flight emergencies beyond the aircrew's flight manual
 - » 8.11 (New) repeats full list with UAS specific issues such as-
 - Lost GPS navigation
 - Lost link
 - Flight termination criteria

- (New) Added Aircrew FOD Awareness

- » Intent is to ensure aircrews know what they bring aboard the aircraft and take it off with them
 - » Prevents disconnect between FOD Prevention Program in a FOD Critical Area requirements to list all personal items (e.g., pens, flashlights, gloves, pubs, tablet) by placing the responsibility for those items on the aircrew directly



- 4.12 Crewmember Training Requirements
 - Clarified that Service training syllabi do not require GFR approval
 - Clarifies that GFRs approve in-house training programs but may request Service review for feedback
 - (**New**) For Air Force contracts, GFRs may approve local requalification training for personnel unqualified for <24 months
 - Clarified use of 'similar aircraft' in maintaining currency
- 4.13 Crewmember/Non-Crewmember Ground Training Requirements
 - Clarifications made on when training must be **equivalent to** Service Guidance (i.e., Physiological) vice **based on** Service Guidance (i.e., Water & Land Survival)
 - Frequency of training remains **per** Service Guidance
 - 8.12- specifies training requirements for UAS to replace the 4.13 requirements



- 4.14 Crewmember Evaluations
 - No changes, just re-ordered subparagraphs
- 4.15 Forms and Records
 - Replaced DCMA 644 with DD 3062 affecting subparagraphs
 - Note: 4.15.2 allows use of the DD 1821 as a crewmember record, that form has changed to crewmember flight summary, therefore use Service forms and directives
 - Added documentation expectations to both crewmember and non-crewmember Records paragraphs



Bottom line, the expectation is to focus the attention on asset protection and meet the expectation of the GFRC while continuing to foster safe and effective Aircraft Operations





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Section 5- Ground Operations

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- Leverage current/future technologies
- National and International Industrial Standards (e.g. NAS-412, AS-9146)
- Set the requirement and expectation through the Combined Instruction and allow the contractor to define the “how” of that requirement through procedures



- Leverage definitions (Glossary) to remove subjectivity

In order to successfully apply the expectations of the 8210-1D **section 5**, contractors must understand the definitions associated with the requirement. For example:

Control consumables, hardware, and personal items...

Definition of control: To ~~reduce or~~ prevent the unintentional spread of, to verify, or regulate

- Where applicable, definitions will align with industry standards



- **Ground Operations:** Activities performed on/in/ or around the aircraft without the intent for flight. Ground operations are separate and distinct from quality and industrial processes but may facilitate those processes. Specific ground operations include those identified in section 5.
- **FOD Prevention Definitions-** 16 different FOD related items defined (e.g. accountability, items, expendables, hardware)
- **Qualification-** will now encompass the requirements of previous training, qualification, and certification. *Industry required certifications addressed separately (e.g. welding).*





- *Typically* follows the current flow of the 8210.1C Chg1
- Removes processes that are defined as industrial and quality
 - Egress Systems (With exception of the egress training moved to Qualifications)
 - Oil Analysis
 - Tire and Wheel (Only retained requirement for storage of tire and wheel assemblies)
 - Security of Aircraft
 - TMDE- Only requirement is validate the tools in use are calibrated
 - Gases (Any protection needed while in use would be captured in the servicing section)
- Transfers several previous ground requirements into the new Infrastructure section and narrows the scope of effect to only when there is a risk to asset
 - ALSE- Truncated and moved under Flight Operations
 - Welding and Brazing- modified and moved into the new Infrastructure section
 - Battery Handling and Storage/ Corrosion Control (except painting)/ Lasers/ HAZMAT – These sections were mostly removed and only the requirement to address in section 7 when risk to asset
 - Severe Weather- Moved into Safety section 6



- 5.1. Ground Operations
- 5.2. Preparation
- 5.3. Ground Operations Procedures
- 5.4. Qualification
- 5.5. FOD Prevention Program
- 5.6. Aircraft Engine/APU/GTC Operation
- 5.7. Engine/APU/GTC Qualification Program
- 5.8. Aircraft Ground Support Equipment
- 5.9. Vehicle and Powered Equipment Operation
- 5.10. Aircraft Servicing
- 5.11. Aircraft Ground Handling
- 5.12. Aircraft/Equipment Hydraulic Fluid Analysis Program
- 5.13. Weight and Balance
- 5.14. Technical Orders/Maintenance Manuals
- 5.15. Aircraft Records Management
- 5.16. Safe-for-Flight Release
- 5.17. Aircraft Related Explosives and Ordnance
- 5.18. Hangaring of Aircraft
- 5.19. UAS Ground Control Stations and Ground Data Terminals



- *Unless otherwise required by contract, procedures must be based on existing aircraft technical publications or equivalent OEM data/instruction*
- *Added several examples throughout to further understand the expectation. Keep in mind e.g. is an example, not all inclusive or a “limited to only.”*



DCMA 8210-1D Section 5 Breakdown

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- 5.1 Explains how to apply paragraphs to UAS Operations
- 5.2 Defines the Upfront expectations so the aircraft is properly configured for the task being by requiring the usage of existing aircraft technical publications (e.g., GOPs, Service Technical Orders/Manuals) or equivalent original equipment manufacturer (OEM) data/instructions
- 5.3 Establishes the requirement to develop procedures for their *applicable* ground operations

Intent:

- To not overly apply ground requirements where not needed for UASs
- Requires the contractor to follow some form of technical process (contract dependent) for all operations performed on the aircraft

Paragraphs 5.4- Qualification



- Formerly known as Training, Qualification, and Certification
- 5.4.1 Refocused the new paragraph onto training requirements for personnel to perform ground operations verse operating systems in a maintenance event
- Removed the requirements to follow attachment 12
- Six main elements:
 - 5.4.1 Training Plan
 - 5.4.2 Employee Qualification Records,
 - 5.4.3 Testing,
 - 5.4.4 Recurring Training,
 - 5.4.5 Egress Training, and
 - 5.4.6 Medical Physical
- Changes broken down on next slide

Attachment 12 – Ground Operations Training Matrix
Contractors shall align their training program with the following requirements:

GOP	Initial Training Trained	Qual	Cert	Practical Exam*	Recurring Training
FOD and	X	X			X
Aircraft/Engine	X	X	X	X	X
Ground Support Equipment (powered)	X	X			X
Ground Support Equipment (non-powered)		X			
Flight Line/Facility Vehicle Operations		X			
Aircraft Servicing		X			
Tow Supervisor				X	X
Tow Brake Rider				X	
Tow Vehicle Operator	X			X	X
Tow Wing/Tail walkers	X				
Jacking Supervisor				X	X
Jack Team Member					
Jack Manifold Operator					X
Marshalling		X		X	
Mooring and Tie Down		X			
Aircrew Life Support Equipment		X	X		X
Egress System Maintenance	X	X	X		X
Egress System Familiarization	X	X			X
Hydraulic	X	X	Note 1	Note 1	
Engine Analysis	X	X	Note 1	Note 1	
TMD (Lab)	X	X		X	
Weight and Balance	X	X	X	X	



- 5.4.1 Training Plan- No longer requires a list of instructors; moved away from telling the KTR how they must train and empowered them to define
- 5.4.2 Employee Qualification Records-
 - No longer tell the contractor how to do initial, recurring (except as noted below in 5.4.4), or certification
 - Removed the requirement for a medical record and only now require a date
- 5.4.3 Testing- Added a requirement to retain the last EP exam
- 5.4.4 Recurring Training- Added the GOPs that require recurring training
- 5.4.5 Egress Training- Moved the Egress (access) training requirements here
- 5.4.6 Medical Physical- Added into the training section; remained 5yr cycle
 - Defined the distance required (10' of the silhouette) for self-propelled equipment
 - No longer licensed physician and now “qualified medical professional”



Section 5.5- FOD Prevention Program Agenda and Approach

- Agenda

- 8210-1D Definitions and Deltas
- 8210-1D FOD Prevention Program Overview
- 8210-1D FOD Prevention Program Main Elements



- Approach

- 8210-1D FOD Prevention Program section is complementary to the combined approach of AS9146 (“shall”) and NAS412 (“should”, or good practices and program development)
- 8210-1D is both the “must” forcing function, but also provides flexibility to define different processes with the overall goal of maintaining positive **control** and mitigating potential for Foreign Object Debris (FOD) or Foreign Object Damage (FOD)



- Closely aligned with definitions in AS9146 and NAS412, w/ minor differences
 - Control
 - 8210-1D – “To prevent the unintentional spread of, to verify, or regulate”
 - NAS412 – begins with, “To reduce or to prevent...”
 - Production Aids
 - 8210-1D – “A set of specialized items used during the performance of a particular task” (w/ examples)
 - NAS412 – “Tooling, tooling details, tooling fixtures, and tooling assemblies, non-flight hardware used to assist **operations**”
 - Production/Maintenance Support Equipment
 - 8210-1D – “Miscellaneous items used in the support of maintenance activities” (w/ examples)
 - NAS412 – only lists examples, but mostly the same examples as listed in the 8210-1D
 - Item
 - 8210-1D – “An individual article or unit, especially one that is part of a list, collection, or set”
 - NAS412 – does not define
- In lieu of using “Operations”, 8210-1D uses manufacturing/maintenance



- 5.5 – 5.5.2 Introduction (No Procedure requirement)
- 5.5 FOD Prevention Program
 - Explains the overall expectation of the program
 - Processes must mitigate the FOD risk using control methods based on the level of risk of migration, entrapment, encapsulation or damage
 - This entire paragraph is predicated on leveraging FOD definitions in the glossary section.
- 5.5.1 No hard requirements in this paragraph but,
 - Gives the contractor the latitude to determine what measures to put into place to determine effectiveness and control
 - This should be determined based on their evaluation of effectiveness described in 5.5.3
- 5.5.2 Requires greater leadership involvement
 - All levels of the contractor's management must demonstrate leadership commitment to the FOD Prevention Program
 - (**New**) Designation of a FOD Prevention Focal Point



- 5.5.3 FOD prevention meetings
 - Content, attendees, and frequency based off risk, but minimum quarterly
 - Program must be evaluated for effectiveness
 - Evaluation results will be presented to management
- 5.5.4, Establishes program requirements and **must** address:
 - Area Designation and Management *
 - Training and Personnel Access*
 - Product Protection**
 - Housekeeping and Clean-As-You-Go*
 - Consumables, Hardware, and Personal Items**
 - Flight Line*** (See follow on slide)
 - Tool, Expendable***, and Equipment*** Accountability and Control
 - Lost Tool/Item Reporting**



* Aligned with AS9146

** Minor additions to the AS9146 or NAS412

*** Items not in AS9146, but are captured within the NAS412



- 5.5.4.1 Area Designation and Management
 - (New) Added in visual management of each FOD area designation
 - (New) Mitigate FOD risk when non-product related activities are performed
- 5.5.4.2 Training and Personnel Access
 - (New) Requires all elements of the FOD Prevention Program to be trained
 - (New) Adds the requirement for external parties to follow FOD prevention procedures
 - Moves Aircrew FOD control requirements into section 4
- 5.5.4.3 Product (Aircraft) Protection (also applies to removed [associated] parts)
 - Important to correctly apply the definitions of FO/FOD/FOD
 - (New) Added in the requirement to protect removed components
 - (New to FOD section) Storage of tire and wheel assemblies



- 5.5.4.4 Housekeeping and Clean-As-You-Go definitions are important
- 5.5.4.5 Consumables, Hardware, and Personal Items
 - Leverage the definition of control
 - (New) Requirement to limit items to those only needed for the task
- 5.5.4.6 Flight Line- No changes in requirements, just restructure
- 5.5.4.7 Tool, Expendable, and Equipment Accountability and Control

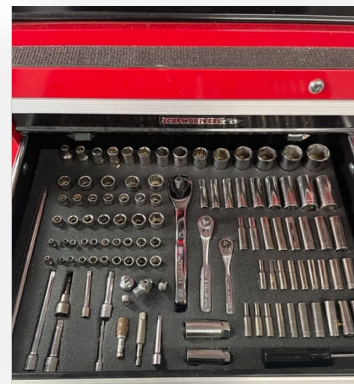
This single paragraph is the most important to understand and get correct in order to ensure the contractor develops an EFFECTIVE tool control program.

The key to leveraging the requirement is CONTROL and that definition.



- 5.5.4.7 Throughout this section tools, expendables, and equipment are considered tools
 - The purpose is to **control** and account for all tools
 - Must assess their operations, establish, implement, and maintain a process to **control** company and personally-owned tools
 - Must demonstrate the performance effectiveness of the controls they select
 - Must be effective and commensurate with risk
- 19 supporting paragraphs that describe elements of an effective tool control program which allows contractors to choose from the smorgasbord of options and determine how they effectively **control** tools

**Bottom line – The 8210-1D sets the expectation,
and the Procedures tell how it is achieved**



Section 5.6- Aircraft Engine/APU/GTC Operation



- 5.6 (**New**) Standalone section- This section does not require a procedure, rather establishes the hard requirements of who can run what
- 5.6.1 No changes as to who may run fixed wing engines/APU/GTC/Uninstalled
- 5.6.2.1 (**New**) for helicopter and tilt rotor- engine **motoring/windmill** only (not full engine run) may be performed by qualified ground personnel provided the rotor lock/brake is engaged (excluding U.S. Army contracts)
- 5.6.2.2 No changes to who may run helicopter and tilt rotor APUs



Section 5.7- Engine/APU/GTC Qualification



- Mostly in line with the 8210.1C Chg 1 keeping the same approach for qualification (minor tailoring change for APU Qualifications)
- 5.7.1 – 5.7.3 Continued the Phase I (Academics), II (Practical), and III (Actual run) approach with the following differences:
 - 5.7.1 Phase I and II may be tailored for APU/GTC
 - 5.7.2.1 Phase III Engine run currency remained 90 days, except APU/GTC moved to 180 days- currency in aircraft and/or simulator remained the same
 - 5.7.2.2 Added in for the annual evaluation in addition to type/model, for multiple series aircraft, if the control, instrumentation, limitations, or procedures are different
 - 5.7.3 Added in the certifier will be appointed in writing *by the contractor* to clear up confusion



- 5.8 Large changes to this section
 - Moved away from the “powered and non-powered” approach to Direct and Indirect Support Equipment
 - Identifies up front that management of equipment is for the purpose of aircraft protection and not GSE management (Not the FAR 52.245-1 police)
- 5.8.1 Indirect Support Equipment facilitates an operation but does not directly connect or interface with the aircraft (stands, platforms, etc.)
 - Less stringent inspection and equipment management criteria than Direct
 - Allows the contractor to develop the procedures
- 5.8.2 Direct Support Equipment connects or interfaces directly with the aircraft (excluding test equipment, that is a MX process)
 - Must be based on OEM or Service Guidance
 - (New) Minimally checked prior to use first use of the day (doesn't define how or documentation)
 - (New) Equipment usage requirements- inadvertent damage/ FOd
 - (New) Added SUAS Usage



- 5.9 Vehicle and Power Equipment Operation
 - (**New**) Added a distance for applicability of 10' of the ACFT Silhouette or component
 - Removed- proximity of support equipment
 - (**New**) Spotters not required for designated vehicle lanes
- 5.10 Aircraft Servicing
 - Collapsed into a single New Paragraph
 - Removed the specific types of servicing events and set the requirement for servicing procedures for fluid and gaseous systems (provided examples)
 - Additionally added in the requirement that procedures must be based on existing aircraft technical publications or equivalent OEM/ Data instructions
 - Removed fuel quality and storage. That requirement now resides in the new infrastructure section.



Same sub-elements associated: Towing, Marshalling, Jacking, Parking/Mooring/Tie Down, and Taxiing

- Added Responsibilities to both Towing and Jacking
- 5.11.3 Parking/Mooring/Tie Down- procedures must be based on existing aircraft technical publications or equivalent OEM/ Data instructions
- 5.11.4.6 Jacking- Changed to read “appropriate locations to jack the aircraft”. With the requirement to follow technical guidance, there is no reason to further define what an appropriate location looks like.
- 5.11.4.9 (New) Aircraft stability while on jacks (e.g. minimizing number of personnel on aircraft, use of ballast to adjust for changes in center of gravity)
- 5.11.5 (New) Hoisting- similar requirements as jacking
- 5.11.6 Taxiing- Remained the same, but expanded the information to further follow Service Technical Manuals



- 5.12 Aircraft/Equipment Hydraulic Fluid Analysis Program
 - Mostly remained the same
 - (**New**) Added “For Naval aircraft, unless otherwise required by contract, hydraulic analysis must be performed on AGSE per NAVAIR 00-80T-96”

- 5.13 Weight and Balance
 - Mostly the same
 - (**New**) Removed the “good source of information” and added “In the absence of specific guidance, OEM, or other applicable standards, contractors **will** weigh the aircraft IAW the -50...”



- 5.14 Technical Orders/ Maintenance Manuals
 - Collapsed into a single New Paragraph removing the foreign disclosure section.
- 5.15 Aircraft Records Management
 - No Changes
- 5.16 Safe-for-Flight Release
 - No Changes other than adding “by the contractor” for appointment.
- 5.17 Aircraft Related Explosives and Ordinance
 - Removed the bunker storages and focused the requirements when handling in close proximity of the aircraft.
 - Paragraph requires: Managing the risk posed to the aircraft while handling explosives in close proximity (applicable blast hazard danger zone) to the aircraft



- 5.18 Hangering of Aircraft
 - Combined Fuel System Maintenance and Hangering into a single section and refocused the requirements needed to protect the asset. Additionally expect fuel cell maintenance preparation to be a part of safe-for-maintenance (Reach back to para 5.2 for enforcement).
 - Basically removed the maintenance portions and focused on hangar setup for preparation

- 5-19 UAS Ground Control Stations (GCS) and Ground Data Terminals (GDT)
 - Requires the usage of section 8.18 for applicability which states:
 - GCS and GDT are not considered aircraft
 - 8.18 Procedures must be based on the type of equipment and complexity, and will address the following
 - » 8.18.1 Preventive Maintenance/Inspection
 - » 8.18.2 Safe-for-Flight Release Procedures- must be based on existing technical publications or equivalent OEM data/instructions. Release Authority Appointed in writing and must review specific items.
 - » 8.18.3 GCS/GDT Maintainer/Operator FOD Awareness- Operators responsible/ No Procedure required

Section 8- UAS Ground Requirements



- 8.13 Medical/Physical- Follow Section 5 except for Group 1 UAS
- 8.14 FOD Prevention Program- Group 1 and Group 2 UAS Operations may tailor the requirements of this section based on conditions and risk
- 8.15 Engine Runs by Ground Personnel- follow section 5 except for Groups 1 & 2 Electric Motor UAS which must at least consist of initial and annual training
- 8.16 Aircraft Servicing for Electric Powered UAS- Must address on-aircraft battery servicing and charging to include thermal runaway
- 8-17 Aircraft Ground Handling- hand carried ACFT, paragraph 5.11.1. are not applicable, however, must provide procedures for safe handling

8210.1C Chg 1 Major Modifications Reemphasized



- 5.1. Ground Operations Procedures (GOPs)
- 5.2. Training, Qualification and Certification
- 5.3. FOD and Tool Control
- 5.4. Aircraft Engine/APU/GTC Operation (Ground Personnel)
- 5.5. Medical (Physical) Requirements for Ground Personnel
- 5.6. Aircraft Ground Support Equipment (AGSE)
- 5.7. Airfield and Facility Vehicle Operation
- 5.8. Aircraft servicing
- 5.9. Aircraft Ground Handling
- 5.10. *~~AFE/ALSE/ALSS~~
- 5.11. *~~Egress System/Component Maintenance and Storage~~
- 5.12. Aircraft/Equipment Hydraulic Fluid Analysis Program
- 5.13. ~~Oil Analysis Program~~
- 5.14. ~~Test, Measurement, and Diagnostic Equipment (TMDE)~~
- 5.15. Weight and Balance
- 5.16. *~~Tire and Wheel~~
- 5.17. *~~Welding and Brazing~~
- 5.18. ~~Security of Aircraft/Prevention of Unauthorized Access~~
- 5.19. Technical Orders/Maintenance Manuals
- 5.20. Aircraft Records Management
- 5.21. Safe-for-Flight Release
- 5.22. *~~Battery Handling, Recharge and Storage~~
- 5.23. ~~Corrosion Control~~
- 5.24. Aircraft Weapons, Munitions, and Cartridge Activated Devices
- 5.25. *~~LASERS~~
- 5.26. *~~Severe Weather~~
- 5.27. *~~Fuel System Maintenance~~
- 5.28. Hangering of Aircraft
- 5.29. *~~Storage and Handling of Hazardous Materials (HAZMAT)~~
- 5.30. ~~Gases (Inert and Flammable)~~
- 5.31. ~~Application of Electrical and Hydraulic Power to the Aircraft.~~
- 5.32. ~~Operation of Landing Gear, Powered Doors, and Flight Control Surfaces.~~



Bottom line, the expectation is to focus the attention on asset protection and meet the expectation of the GFRC while continuing to foster safe and effective Aircraft Operations





Philosophical Approach to the DCMA 8210-1D (Sections 6)

Presented By:
Mike & Steve
DCMA-AO





- Restructured Chapter 6 from Change 1 based on Safety Management System construct adopted by ICAO, FAA, and the Services
- Transfers all ARFF and Facility requirements (Chg1 6.15-6.18) into the new Infrastructure section
- Severe Weather moved into Section 6 from old Chapter 5



- No safety program requirements from Change 1 were dropped, just moved into the appropriate pillar
- For clarification with the contractor, these layout the requirements for the *Aviation Safety* portion of their SMS. A full SMS include environmental and health (OSHA) safety programs.
 - If the contractor has an SMS established, we only evaluate the Aviation Safety portion
 - If the contractor does not have an SMS established, they only need to stand-up the Aviation Safety elements



DCMA 8210-1D Section 6 Breakdown

Presented By:
Mike and Steve





- 6.1 Explains the purpose and scope of the SMS including the 4 pillars
- 6.2 Defines the Safety Policy pillar
 - Procedures, including roles and responsibilities
 - ASO
 - (New) Safety philosophy
 - Privileged Data
- 6.3 Defines Safety Risk Management (RM) pillar
 - Flight & Aviation Ground RM, includes flight RM assessments, human factors awareness training (New) and Hazard Identification and Elimination
 - Aviation Safety Council
 - Severe Weather, moved from ground
 - BASH, greatly expanded expectations
 - MACA, slightly expanded expectations



- 6.4 Defines the Safety Assurance pillar
 - Internal Audits/Surveillance, expanded expectations and options for meeting requirement
 - Aircraft Damage Reporting
 - » added exception for *'fair wear and tear or workmanship'*
 - » Clarified range (>\$5K <\$25K)
 - Aircraft Mishap Reporting
 - » Added exception for *'fair wear and tear or workmanship'*
 - » Clarified Contractor investigation expectations / format
 - » (New) Addressed COCO aircraft
 - Mishap Response Plan
 - (New) Additional Safety Assurance Tools



- 6.4 Defines the Safety Assurance pillar
 - Mishap Response Plan
 - » Expanded from 6.14
 - » Impounding aircraft revised for clarification
 - » Toxicological Testing
 - Added a 'host nation restrictions' caveat
 - *No dollar threshold!* Tied to 6055.07 A/B with Army exception to follow AR 385-10 which includes Class C.
 - MUST use AFMES...no more 'at least equal to' language
 - » Medical Examinations - removed Army requirement to only be examined by a military flight surgeon
 - » Physiological Events – added 'or host nation equivalent'
 - (New) Additional Safety Assurance Tools
 - » Lists additional programs/tools that *may* be added to SMS, such as-
 - Safety climate surveys
 - Human Factors Boards



Bottom line, the expectation is to focus the attention on asset protection and meet the expectation of the GFRC while continuing to foster safe and effective Aircraft Operations





Philosophical Approach to the DCMA 8210-1D (Section 7)

Presented By:
Brent Abbott

DCMA-AO

February 2023





- **NEW SECTION**

- Addresses requirements that support the protection of the aircraft
- Basically a restructure of content pulled from Chg 1 sections 5 & 6
- Consolidates ARFF, facility, fuel and supporting programs into one section
- No *truly new* requirements
 - Provides clarification
 - In some instances, reduces / eliminates previous requirements
 - Some previously “inferred” requirements now clearly stated





- Better guidance for completion of Contractor's Infrastructure Evaluation
- (**New**) Clarifies applicability on BPCS
- Clearly states to provide NAS 3306 documentation (**not a new requirement**)
- Basic ARFF, facility fire response and facility requirements mostly unchanged!

SECTION 7: INFRASTRUCTURE AND SUPPORT	61
7.1. Infrastructure and Support	61
7.2. Contractor Infrastructure Evaluation	61
7.3. ARFF, Aircraft Facility Fire Response, and Facility Requirements at U.S. Service- Controlled Base, Post, Camp, or Station Locations	61
7.4. Documentation.....	62
7.5. ARFF and Aircraft Facility Fire Response	62
7.6. Aircraft Facilities	63
7.7. Infrastructure for Aircraft Operations Outside the Continental United States	63
7.8. Fuel Equipment, Storage, and Quality.....	64
7.9. Painting, Stripping, and Coating.....	65
7.10. Supporting Programs/Processes.....	65

New Section



- The requirement to follow local, state, federal, or host nation codes/laws does not negate the requirements of this Section
- When contractor's meet the minimum requirements of this section, the resulting inherent risk is considered to be acceptable.
- When contractor's do not or cannot meet the requirements of this section, it should not become a science project
 - Contractors should identify issues and take timely, appropriate action
 - GOAL: Push risk (and noncompliance) to appropriate level(s) for acceptance or action; do not carry the risk
 - Corrective actions related to this section are typically time consuming and expensive
 - Communication up and down the chain is key
- Be aware of para 10.18.3 – Allows continued ops at pre-existing locations while addressing issues



DCMA 8210-1D Section 7 Breakdown

Presented By:
Brent Abbott



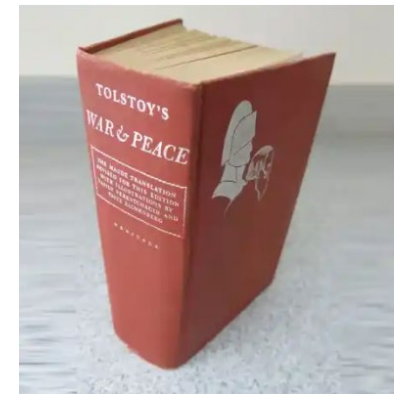
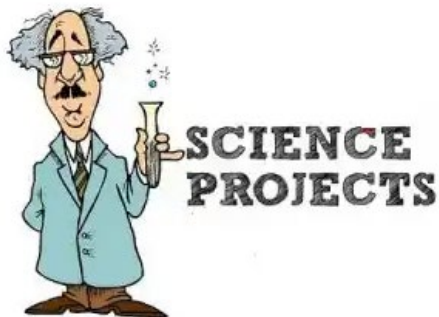


- 7.2 Basically the same as Chg 1 para 6.17 with clarification
 - Clarifies use of 3306 Section 4 for evaluation of airfield but, section is not mandatory (not enforceable via audit) unless specifically called out in the contract
 - GOAL: Contactor should know airfield is suitable for type aircraft, work, etc.; however, once established as suitable, there is no vested interest in auditing the airfield
 - See Section 10.18 for more information
- 7.2.1 Expands on what report must contain
 - Not intended to be a science project or a “War and Peace” novel
 - Succinct presentation of capabilities. I.e., it should state capabilities by addressing germane topics from 3306.
- 7.2.2 Contractor required to provide corrective action/risk mitigation with timelines for shortfalls (previously “inferred” requirement)



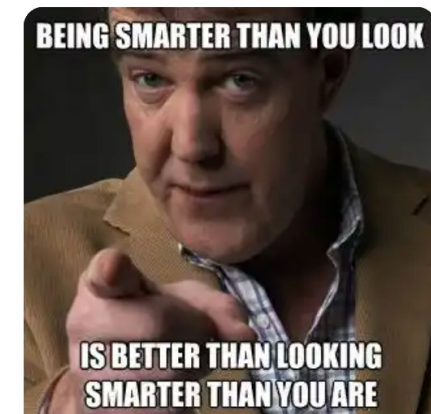


- 7.2.3 Establishes suspense times (more realistic)
 - Requirement to review and update the evaluation (previously “inferred” requirement)
 - Must attach report to Procedures (previous requirement too often overlooked)
- 7.2.4 Statement of capability (SOC) for BPCS and exception for CLS ops
 - SOC is not intended to be a science project or a “War and Peace” novel. It should be a succinct presentation of protection capabilities.
 - GOAL: Contractor should be aware of protection capabilities and liabilities. Not intended to put contractor in a position of “fixing” a BPCS (complements section 7.3). Ensures contractor has contacted appropriate BPCS agencies/personnel. Once provided to the GFR, it becomes a Govt issue to address concerns (see 10.18.2)





- 7.3 (**New**) Removes contractor from situation of trying to “fix” a BPCS by eliminating applicability of sections 7.4 – 7.7 under specific conditions
- 7.3.1 Ensures everyone understands the capabilities
- 7.3.2 Ensures sufficient ARFF capability exists on the installation. This would be the most likely condition not to be met when on a BPCS situation.
- 7.3.3 Ensures appropriate BPCS agencies and personnel are aware of contractor presence and operations



- 7.4 Highlights the previously “inferred” requirement for contractors to provide the documentation required by **3306** (see NAS 3306 Job Aid)

NAS 3306 Revisions 3 / 4 JOB AID

Evaluation					
NAS 3306 Paragraph	Topic	Status	GFR Approval	Provide (P) Available (A) to GFR	SWA Approval
1.6	Contractor evaluation of airfield/heliport suitability, ARFF, facility fire response, and hangar/facility capabilities at all operating locations			P	

Risk Analysis					
NAS 3306 Paragraph	Topic	Status	GFR Approval	Provide (P) Available (A) to GFR	SWA Approval
1.5.3	Waivers			P	X
5.3.3	Standby ARFF Coverage			P	
5.3.6.1	Reduced ARFF Coverage			P	
5.4.4.2 (Rev 3)	MCE for Rescue Tool/Equip List			P	
5.4.3.2.1 (Rev 4)	Evaluation of realistic worst-case scenario to develop tool list			P	
5.5.1 (Rev 3)	ARFF Firefighter PPE			P	
5.5.1.1 (Rev 4)	Group 1-3 UA Fire Response			P	
5.8.1 (Rev 3)	Group 1-3 UA Fire Response			P	
5.8.1.1 (Rev 4)	Group 1-3 UA Fire Response			P	
6.3.2.2.2 (Rev 3 ONLY)	Defueled Aircraft in Older Hangars			P	
6.3.2.9	Tight/Close Parking of Aircraft Within a Hangar			P	
6.5.2 (8 subs) (Rev 4 ONLY)	Modifying Electrical Classifications of Areas			P	
6.6.1 (Rev 3)	Group 1-3 UA Facility Fire Plans			P (Rev 3)	
6.6.1.1 (Rev 4)	Group 1-3 UA Facility Fire Plans			A (Rev 4)	

Compliance / Technical Documentation					
NAS 3306 Paragraph	Topic	Status	GFR Approval	Provide (P) Available (A) to GFR	SWA Approval
1.5.1	Equivalencies			P	X
1.5.2 (see 6.1.3)	New Technology and/or Alternate Methods			P	X
1.5.3	Waivers			P	X
4.1 (Rev 4)	Deviation from minimum airfield requirements			P	X
5.4.1	ARFF Vehicle			A	
5.4.3 (Rev 3)	ARFF Vehicle Test/Maintenance Records			A	
5.4.2.3 (Rev 4)				A	
5.5.1.2	Firefighter PPE			A	
5.5.2 (8 subs)	Firefighter PPE & SCBA Records			A	
5.6 (1 & 3)	ARFF Firefighter Qualification/Training Records			A	
6.1.3 (see 1.5.2)	Proof of Equivalent Level of Protection			P	X
6.2.2.3	Production Facility Fire Systems Test/Inspection Records			A	
6.3.1.3	Use of Other Standards for Hangars			P	X
6.3.2.1	Construction & Protection of Aircraft Hangars			P (Rev 3) A (Rev 4)	
6.3.2.3	Major Renovation Plans			A	
6.3.2.6	Hangar Fire Alarm Test/Inspection Records			A	
6.4	Special Purpose Facilities		X	A	X (resolves conflicts)
6.5.2 (Rev 3)	Hangar Fire Protection System Test/Inspection Records			A	
6.5.3 (Rev 4)				A	
6.5.3 (Rev 3)	Fire Door Test/Inspection Records			A	
6.5.4 (Rev 4)				A	
6.5.4 (Rev 3)	Fire Extinguisher Records			A	
6.5.5 (Rev 4)				A	
6.6.1 (Rev 3)	Group 1-3 UA Facility Test/Inspection Records			A	
6.6.1.4 (Rev 4)				A	

Plans / Procedures					
NAS 3306 Paragraph	Topic	Status	GFR Approval	Provide (P) Available (A) to GFR	SWA Approval
Tbl 5.1 Note 3	Administrative control of aircraft fuel load		X		
5.3.1.4	Designation of Hazardous Operations		X		
5.3.3	Standby ARFF Coverage (Address how standby coverage is obtained and other issues such as when it is required (see 5.3.1.4), minimum requirements (equipment/personnel), etc.)		HR		
5.3.4	ARFF Operations & Pre-emergency Planning			A	
5.3.5	Change in ARFF Capability (Process for GFR notification)		HR		
5.3.6	Reduced ARFF Coverage (Address issues such as how, when, circumstances, minimum equipment & personnel, etc.)		HR		
5.3.7 (8 subs)	Suspension of ARFF Coverage (Address issues such as how, when, circumstances, limiting of operations, monitoring of aircraft, notification of fire department, etc.)		HR		
5.4.2	ARFF Vehicle Test/Inspection/Maintenance Program			A	
5.4.2.1 (Rev 3)	Weekly vs. Daily Check of ARFF Vehicles (GFR must approve weekly vs. daily frequency; recommend adding this to ARFF procedures)		HR		
5.4.2.1.1 (Rev 4)	Weekly vs. Daily Check of ARFF Vehicles (GFR must approve weekly vs. daily frequency; recommend adding this to ARFF procedures)		HR		
5.4.4.2 (Rev 3)	Required Rescue Tools/Equipment List (Contractor is responsible to develop tool/equipment requirements. GFR only approves omitting tools from Tbl 5.2 & 5.3 when supported by risk analysis and "accepts" the final list)		X	P	
5.4.3.2 (8 subs) (Rev 4)	Required Rescue Tools/Equipment List (Contractor is responsible to develop tool/equipment requirements. GFR only approves omitting tools from Tbl 5.2 & 5.3 when supported by risk analysis and "accepts" the final list)		X	P	
5.5.2 (8 subs)	Firefighter PPE & SCBA Cleaning/Inspection/ Maintenance			A	
5.6.2	Firefighter Medical & Physical Requirements			A	
5.6.3 (8 subs)	ARFF Training/Cert Program			A	
5.7.1 (8 subs)	Facilities Fire Response Plan (Contractor is responsible for the content and development of this plan. The GFR will "accept" the plan or not based on the perceived feasibility of the plan. A GFR is not expected to be a fire response expert.)		X	P	
5.8.1 (8 subs)	Group 1-3 UA Fire Response Plan		X		
6.3.2.2.2 (Rev 3 ONLY)	Defueled Aircraft in Older Hangars		X		
6.3.2.9	Aircraft Hanging Procedures		X		
6.5.1 (8 subs)	Hangaring of Defueled Aircraft		X		
6.5.2 (8 subs) (Rev 4 ONLY)	Modifying Electrical Classifications of Areas		X	P	
6.5.6 (8 subs) (Rev 3)	Placing Fueled Aircraft in Water Only Protected Hangars During Severe Weather		X		
6.5.7 (8 subs) (Rev 4)	Placing Fueled Aircraft in Water Only Protected Hangars During Severe Weather		X		
6.5.8 (Rev 3)	Hangar Fire Protection System Impairment Plan of Action (include GFR notification process)			P Under 30 days	X Exceeds 30 days
6.5.9 (Rev 4)	Hangar Fire Protection System Impairment Plan of Action (include GFR notification process)			P Under 90 days	X Exceeds 90 days
6.6.1	Group 1-3 UA Facility Fire Plans		X		
6.6.3	Group 1-3 UA Unusual/Hazardous Operations			P	

- 7.5.1 Essentially the same as Chg 1, 6.15.1
- 7.5.2 No change, simply combines Chg 1, 6.15.2.1 and 6.15.2.2
- Chg 1, 6.15.3, “Communication checks” requirement **REMOVED**
 - Too much confusion on what was actually required
 - Fire Depts will do this as a matter of daily ops without a requirement in 8210.1
- 7.5.3 No change from Chg 1, 6.15.4
- 7.5.3.1 No change from Chg 1, 6.15.4.1, except for addition of last sentence
- 7.5.3.2 (& subs) No change from Chg 1, 6.15.4.2
 - Clarifies that there may be a mix to meet total requirements (e.g., Boeing San Antonio)
 - Note that a US Service providing all or part of ARFF/fire response is a “third party” providing the services, therefore para 7.5.3.1 applies as well





- 7.6 No change from Chg 1, 6.16
- 7.6.1 No change from Chg 1 6.16.1
- 7.6.2 No requirement change from Chg 1, 6.16.2
 - Contractor provides shortfalls to GFR; GFR follows para 10.18.4
 - » Remember, there will be a facilities contract for the GOCO
 - » Not intended to change the facilities contract; contractor is responsible to meet that contract and notify appropriate parties of issues
 - GOAL: Get correct parties notified of issues for correction or acceptance at correct level
 - Added clarification that operational considerations from 3306 apply





- 7.7.1.1 Enhances clarity [Chg 1, 6.18.1] for FMS OCONUS where contractor provides ARFF, facility fire response or facilities
 - Use of 3306, follow guidance same as presented for 7.1 – 7.6
 - Use of “germane” (being at once relevant and appropriate) host nation standards
 - » Use of host nation standards is not the absence of a standard. Remember, where no germane host nation standard exist or where they do not address a topic (e.g., standby ARFF coverage), procedures will be based on the applicable 3306 requirements.
 - » Procedures based on guidance used (3306 or Statement of Capabilities (SOC))
 - Clarifies GFR (APT) not responsible to enforce or ensure compliance to host nation std
 - SOC must be attached to Procedures and reviewed annually
- (NOTE) there could be a mix of who provides the services/facilities (e.g., contractor owns hangar, host nation provides ARFF and fire response)
 - Apply applicable guidance relative to who provides the service/facility



- 7.7.1.2 (**New**) FMS where host nation provides ARFF, aircraft facility fire response or facilities (see 9.4.2)
 - Procedures will state the specific required services/functions that are provided by the host nation and how the contractor obtains those services
 - This is not a path for a contractor to simply ignore ARFF, fire response or facility requirements. They must show the host nation is providing the service or facility. Examples to discuss:
 - » Contractor is on a foreign base
 - » Contractor facility located next to a foreign base (will base respond or not?)
 - » Host nation will not allow a contractor to provide ARFF or fire response
 - There may be instances where 7.7.1.2 applies but a SOC from the contractor would make sense
 - GOAL: Stop holding a contractor responsible for things they have no control or influence over and remove the APT from trying to evaluate a foreign nation's services. Evaluate resulting risk and notify/proceed accordingly.



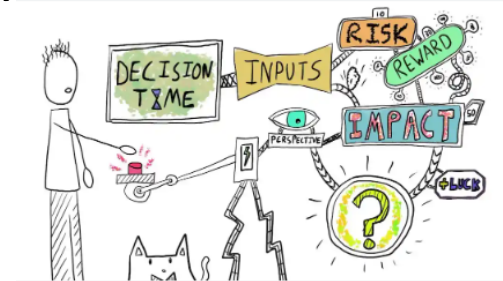


- 7.7.2.1 Enhances clarity [Chg 1, 6.18.2] for US aircraft OCONUS where contractor provides ARFF, facility fire protection, or facilities
 - Apply sections 7.1 – 7.6 as already discussed **OR**
 - If contractor wants to use germane host nation standards
 - » Must identify and correct shortfalls
 - » **OR** seek approval to use different standards via waiver process (assumes with identified shortfalls)
 - » Must have procedures to address 7.4 – 7.6 no matter what standards are used
 - GOAL: Protect US aircraft with same level of protection as if in US or seek waiver so additional risk (if any) is accepted at appropriate level.
 - If a contractor can prove using a germane host nation standard provides an equivalent level of protection (e.g., ARFF vehicle designed to ICAO instead of NFPA 414), then no waiver would be needed. Burden of proof is on the contractor, not the APT.





- 7.7.2.2 (**New**) US Aircraft where host nation provides ARFF, aircraft facility fire response or facilities
 - Contractor completes evaluation per 7.2
 - Identify if any shortfalls exist but, corrective action not required
 - GFR routes like a waiver to coordinate for guidance and direction
 - GOAL: Stop holding a contractor responsible for things they have no control or influence over and remove us the APT from trying to evaluate a foreign nation's services. Evaluate resulting risk and get additional risk (if any) accepted at correct level.
- (**NOTE**) there could be a mix of who provides the services/facilities (e.g., contractor owns hangar, host nation provides ARFF and fire response)
 - Apply applicable guidance relative to who provides the service/facility

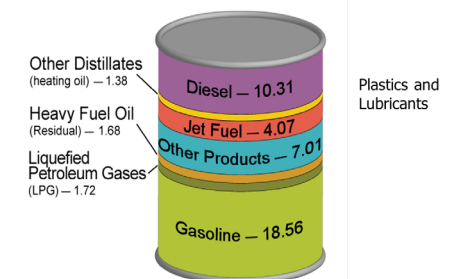




- 7.8 (**Newish**) While the details of this section are new, the concept has simply been moved from Chg 1, 5.8.2 – 5.8.4. The requirement for procedures to address fuel equipment, storage and quality has always existed.
 - The “guidance” references listed are just that, guidance..., unless directly on contract **OR** unless the contractor adopts them via procedures
 - Permissible for contractors to tailor procedures to specific operations
 - May use guidance from several sources..., if need be and does not conflict with contract
 - GOAL: Ensure quality fuel is delivered to the aircraft in a safe manner. Will require a good understanding of the contractor’s fuel procedures, and operations



Products Made from a Barrel of Crude Oil (Gallons)





- 7.8.1 (**Newish**) Always permissible for contractors to use outside source.
- 7.8.2 – 7.8.5 (**New**) These sections break down the most common methods of fuel sourcing, storage and delivery to the aircraft and apply appropriate oversight requirements for each scenario
- 7.8.2 (**New**) Fuel acquired from an FBO
 - 7.8.2.1 An Into-plane FBO already has oversight, no need to have a contractor duplicate the effort. However, must establish procedures for services outside the scope of the Into-plane contract
 - » GOAL: Eliminate duplicate oversight while ensuring all facets of fuel ops have proper procedures
 - 7.8.2.2 Similar to validating a supplier via a higher level quality system
 - » FBOs that do not have an Into-plane contract have very little (if any) oversight
 - » GOAL: Ensure quality of fuel, safety/serviceability of equipment





- 7.8.3 (**New**) Fuel acquired from a U.S. Service or host nation
 - 7.8.3.1 GOAL: Stop holding a contractor responsible for things they have no control or influence over and remove the APT from trying to evaluate a US Service or a foreign nation's services. Eliminate duplicate oversight.
 - 7.8.3.2 Makes contractor responsible for what they have control over and how they perform those functions
 - GOAL: Ensure all facets of fuel ops have proper procedures and ensure quality of fuel, safety & serviceability of equipment
- 7.8.4 (**New**) Fuel acquired from other sources. Basically the catch-all for unique circumstances. Impossible to write an instruction that captures all possible scenarios





- 7.8.5 (**New**) Contractor controlled/managed fuel operations. This is the section that captures most people's assumption of how fuel ops are performed at contractor's locations.
 - 7.8.5.1 Ensure safety and serviceability of equipment
 - 7.8.5.2 Ensure proper storage (factors into fuel quality)
 - 7.8.5.3 Single best way to bring down a multi-engine aircraft... feed it bad fuel!
Contractor must thoroughly understand fuel quality, testing, and other requirements.
 - GOAL: Ensure quality fuel is delivered to the aircraft in a safe manner.





- 7.9 (**Newish**) Focus is on facility and operational safety considerations as they relate to the protection of and risk to the aircraft
 - Relates to Chg 1, 5.23 but refocuses from actual painting/stripping of aircraft to more relevant safety considerations
 - Highlights the need for procedures if doing spot painting in a normal hangar
 - References are “sources of guidance” ..., need to be careful on how/if/SHOULD they apply
 - GOAL: Don’t blow up the aircraft while you are painting it. Use the correct facilities and related equipment. Have appropriate procedures to ensure safe operations.



Unclassified





- 7.10 (**New**) This section is not intended to be a free-for-all to dig into a contractor's business. However, with the removal of several areas (e.g., AE, welding, lasers, battery handling, hazmat) the APT must consider how these and other processes may impact protection of and risk to the aircraft
 - New concept, will take some coordination and communication to work out the bugs
 - Address **risk to aircraft** even if not listed in the examples (the “e.g.” list), Ex:
 - » Flammables stored near aircraft... expect a minimum procedure to show proper storage and max quantities. Judgement call on what “near” is... same fire area?
 - » Fuel tank maintenance performed... expect minimum procedure to address where, proper equipment (PID meter), safe LEL levels. **NOT the MX ITSELF**
 - If Govt AE items are stored/handled
 - » Ensure AE clauses are on contract (DFARS 252.223-7002 & 7003); CSM will address via clauses
 - » If not, notify ACO/PCO for contract mod..., the correct way to do it
 - GOAL: Let other entities (e.g., OSHA, fire marshal, contractor quality) do their jobs. We are not here to be all-encompassing. Only go deep enough to ensure the contractor has appropriate procedures to ensure protection of aircraft & safe operations.



Bottom line, the expectation is to focus the attention on asset protection and meet the expectation of the GFRC while continuing to foster safe and effective Aircraft Operations





Philosophical Approach to the DCMA 8210-1D (Section 9)

Presented By:
Mike and Steve
DCMA-AO





- Brand **new** section
- VERY loosely tied to old 7.14 – 7.18
- Completely revised old Attachment 16 as Appendix 9A



- This new Section is mostly informational for both the Contractor & GFR
- There are very few 'musts' in this section



DCMA 8210-1D Section 9 Breakdown

Presented By:
Mike and Steve





- 9.1 Explains the purpose with large focus on COCO PAO/State Operations
- 9.2 Defines Civil (CAO) and Public (PAO)/State operations
 - When this Instruction is applied to contractor-owned aircraft under a PAO/state contract without the GFRC, the applicable programs and oversight will change because the government has no insurable interest in the aircraft
 - » When a COCO contract is given a “Declaration of PAO/state”, this Instruction applies
 - » When a COCO aircraft is not designated as PAO/state, it remains a CAO and this Instruction does not apply
 - » Armed Forces PAO Decision Tool not discussed
 - Procedures
 - » Appendix 9A provides guidance
 - » Discusses intent
 - » Note that these reduced procedures are only if GFRC is NOT on the contract
 - » If GFRC is on the COCO contract, then full Procedures are expected though flight manuals, qualifications, and currency may be OEM/FAA/host nation vice Service Guidance



- 9.3 COGO PAO/State Operations – rare, directed to App 9A if no GFRC
- 9.4 Foreign Military Sales
 - FMS at U.S. Locations
 - » Treat aircraft as DoD aircraft until transfer to FMS customer
 - FMS at Non-U.S. Locations
 - » (New) paragraph to be used in conjunction with Section 7
 - » Applicable instructions/regulations dependent on contract
 - » If host nation is solely providing services (no contractor personnel), Host Nation standards/instructions apply
 - » No oversight of host nation required
 - » Procedures will need to define the specific services/functions provided by the host nation and how the contractor obtains the service (e.g., mishap response, fuel servicing)
 - (New) paragraph added to discuss ‘hold harmless’ language



- 9.5 (**New**) Other Foreign-Owned Aircraft – not FMS or DCS
 - Primarily aimed at ‘Partner Nations’
 - Treat all aircraft as U.S. assets
 - Submit waiver for use of host nation standards
- 9.6 Direct Commercial Sales (DCS)
 - Rare, consult legal and/or AO if requested to perform CAS on DCS contracts



- 9.7 (**New**) Short-Duration/Limited-Scope Operations

- Includes
 - » Field team modifications at BPCS locations
 - » Downed aircraft recovery teams
 - » Short term work away from the contractor's premises
- Unless otherwise stated in the contract, Section 7 does not apply
- Procedural requirements from Section 3 would apply as limited to the scope of the work
 - » Ground handling not required if no towing, jacking, taxi, or marshalling is required
 - » Servicing not required for installation of a 'black box'
- Procedural requirements from Section 6 would still apply
 - » May be addressed through a combination of Core Procedures, local site annexes, & unit processes
 - » Items that are site specific, such as mishap response initiation
 - » Example of expectation: contractor holds a quarterly safety council, but the individual teams in the field does not have to hold separate ones

Clarification & Errata MFR published to define 'Short-Duration' and 'Limited Scope'. Short-duration is when contractors perform flight or ground operations at a location for less than 6-month presence with boots on ground less than 6-months (collectively). Limited scope is considered localized repairs/modifications that do not require movement (lifting/jacking/towing) of the aircraft by the contractor personnel.



- 9.8 (**NEW**) Lease Agreements
 - Addresses contractor as the leasee and as the lessor
 - » Aircraft leased **FROM** the contractor – treat as normal DoD aircraft
 - » Aircraft leased **BY** a contractor (from Service) – Including the Combined Instruction in the lease agreement is recommended but not mandatory
- 9.9 Miscellaneous/Atypical Agreements
 - Expanded from 7.17
 - Describes ‘atypical’ agreements with examples
 - » Other Transactions (OT)
 - » Bailment Agreements
 - » CRADAs
 - FAR/DFARS may not apply
 - If GFRC or Combined Instruction is included, execute as written
 - If you are assigned to an atypical program involving DoD aircraft without the Combined Instruction - consult with the appropriate waiver authority (OU & HQ-AO for DCMA GFRs)



- Completely Overhauled old Attachment 16
- Key take away – Only applies to COCO aircraft on contract **without** GFRC
- If GFRC **is on** a COCO contract, follow Appendix 3A
 - Beware that some FAA processes will have to be followed in lieu of Service Guidance
- Appendix must be used in conjunction with Appendix 3A
 - Only lists items that differ from baseline for Procedures
 - Some items only apply if the aircraft are housed in a Service owned hangar
 - The standard for acceptable Procedures is ‘safe and effective’ vice matching Service Guidance

When COCO aircraft are designated PAO or State, the Service is now responsible for the airworthiness of the aircraft. **However**, remember that the GFR **is not responsible** for oversight of maintenance or for the continued airworthiness of the aircraft...for **Government-owned or contractor-owned** aircraft. Any requirement for the GFR to conduct that oversight must be stated separately in the contract.



Bottom line, the expectation is to focus the attention on asset protection and meet the expectation of the GFRC while continuing to foster safe and effective Aircraft Operations





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Philosophical Approach to the DCMA 8210-1D (Section 10)

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DCMA-AO



Section 10 Government Flight Representatives



No major changes, but yes you still must approve procedures, flights, crewmembers, perform surveillance, and conduct surveys to ensure safe and effective flight and ground operations

- 10.1 (**New**) Added the requirement for GFRs to follow the most recent instruction
- 10.2 GFR Qualifications
 - 10.2.1 Clarified the definition of GFR
 - 10.2.2 Clarified the definition of G-GFR; also changed the acronym from GGFR
 - 10.2.3 (**New**) Added in a qualification for SUAS GFRs
- 10.3 GFR Selection and Appointment- (**New**) 10.3.3 Added in the requirement for GFRs to work directly with contracting officers



- 10.4 GFR Training
 - Removed the DAU name of the course
 - Added “DCMA approved GFR/G-GFR Course”
 - Added DCMA responsibility to the course
 - Opens up the ability for DCMA and the Services to define when and how for the course
- 10.5 GFR/G-GFR Appointment
 - Added the requirement to give a copy of the appointment letter to the ACO
 - (New) 10.5.1-10.5.5 Moved from old Attachment 6.1 all Services appointment offices
- 10.6 and 10.7 No Change
- 10.8 CFT/CLS- Changed the requirement for a GFR to be selected from within the organization to a “should be selected”



- 10.9 GFR General Responsibilities- (**New**) Added in the “purpose” of a GFR
 - 10.9.1 (**New**) Addresses the GFR Procedure approval letter requirement and process
 - » 10.9.1.2 Changed the review and response time from 30 to within 14 days
 - » 10.9.1.5 (**New**) How to handle referenced document changes and out-of-cycle changes
 - » 10.9.1.6 Added verbiage in with the SWA expectations with questions of interpretation and how they will be adjudicated either through the SWA or DCMA-AO
 - » 10.9.2.3 New wording on when a GFR CAS responsibility ends
 - 10.9.6 Crewmember Approval Process- Revised/expanded to include accepting current/qualified from another GFR
 - 10.9.6.3 (**New**) Guidance to GFRs for use of civil aircraft for currency
 - 10.9.6.4 Multiple Aircraft Qualifications- Huge expansion of the scope of approvals for GFRs
 - 10.9.8 Added in verbiage on how to handle flight approvals at multiple locations/GFRs



- 10.10 APTs- No change
- 10.11 (**New**) Processing and Routing Waivers
 - Incorporate KTR waiver requests into the appropriate DCMA/AFMC forms
 - Process requests within 10 working days
 - Waivers generated by the government
- 10.12 Mishap Response
 - 10.12.2 Added in the requirement to update and provide the final report to the CSSO
 - 10.12.3 Clarified that only the KO can direct impoundment of an aircraft (Not CSSO/ GFR)
- 10.13 Subcontractor Flight Operations- No change



- 10.14 CAS Responsibilities
 - Revised and expanded supporting contract administration delegations and process
 - 10.14.2.3 Added in further communication needed with the CROs for flights, crewmember, and Procedures approvals
- 10.15 (**New**) GFR Routine Surveillance
 - Purpose of this surveillance is to validate contractor compliance with the requirements of this Instruction and their own
 - Surveillance consists of scheduled, unscheduled, and follow-up audits
 - Frequency of surveillance must be based on risk
 - Service GFRs should (DCMA is a must [8210-2] develop a surveillance plan to standardize and prioritize areas for surveillance
 - Results of the surveillance execution (Services) should be recorded for trend analysis



- 10.16 Contractor Flight and Ground Operations Surveys
 - Revised the minimum six months time for nonresident surveys to “at least one mid cycle survey 5 to 7 months later”
 - Changed annual survey frequencies to plus or minus two months and further allows DCMA plus or minus three months to align with an AOI
 - (New) Surveys for Short-Duration/Limited-Scope Operations
 - » Official policy interpretation through an MFR in works
 - » Surveys should be conducted during actual contractor aircraft operations in order to verify contractor compliance with procedures
 - » GFRs are authorized to fit their surveillance to match the contractor’s aircraft operations, and are not tied to the semi-annual/annual time frames
 - Added contract modifications to the list of documents to review prior to the Survey
 - (New) Added the requirement for **USAF Service** GFRs to forward a copy of the annual survey to the Air Force lead MAJCOM office



- 10.17 Other GFR Responsibilities
 - 10.17.1 Noncompliances and Discrepancies-
 - » Added further clarifying language on how or what the GFR should or can do when these occur
 - » 10.17.5 In reference to the GFR, changed “deductible” to “cost share”
- 10.18 (New) Infrastructure
 - 10.18.2 Contractor Infrastructure Evaluation- GFRs must ensure the contractor appropriately completes the evaluation and determine any further actions required
 - 10.18.3 How to approach ARFF when a newer version of the Instruction is applied
 - 10.18.4 Requirements to forward identified facility shortfalls to the appropriate offices
 - 10.18.5 Evaluation of the contractor’s processes to determine if any items from 7.10 would or should require a GFR approved procedure
- 10.19 (New) Other Areas
 - NDAs- Be aware they exist and not allows clear it is a NDA- DO NOT SIGN
 - CORs- Separate duty from A GFR/G-GFR; They CAN NOT perform your duties (unless qualified)



Philosophical Approach to the DCMA 8210-1D (Glossary)

Presented By:
Mike and Steve
DCMA-AO





- Previously chapter one- Definitions, now Glossary section in the end
- The following definitions were removed:
 - 1.14 Certified,
 - 1.18 Component,
 - 1.29 DD Form 250,
 - 1.32 FAR and DFARS References,
 - 1.45 Leased Aircraft,
 - 1.59 Shall,
 - 1.71 WAWF RR
- The following were moved out of order embedded under FOD Protection Program: 1.19 Composite Tool Kits, 1.27 Control, 1.42 Hardware Control
- Added in Glossary 2: Acronyms



- **G.1.5 Aircraft Operations**

- G.1.5.1 Operations inside U.S. territory and it's airspace- Added verbiage clarifying how aircraft operations may shift between PAO and CAO
- G.1.5.2 Operations outside U.S. territory as defined by ICAO- complete revision, but basically identifies how the aircraft are recognized to be designated "state"

- **G.1.6 Aircraft Operations (Contract arrangements)- complete revision adding in the different scenarios of GOGO, GOCO, COCO, or COGO**

- **G.1.8 Airworthiness- Simplified - The property of an air system configuration to safely attain, sustain, and complete flight IAW approved usage limits**

- **G.1.9 (New) Annual-** "...to be repeated no later than 12 calendar months (to the end of the month) after the previous event." Conducting the required event earlier (e.g., 10 months) rebases the next required annual event.



- G.1.10.6 Added in GSA to the overall Approval Authority definition
- G.1.15 (**New**) **Care, Custody, Control, or Possession (CCCP)**
 - An aircraft is under the care of the contractor when performing routine/normal maintenance functions and support functions
 - A contractor can take control of an aircraft when the aircraft remains on a Government base/post/camp/station for modification or specific major maintenance tasks
 - CCCP relates to the legal term “duty of care” but is not related to the terms “title” or “ownership”
- G.1.16 **Certificate**- Removed the specific language (e.g. FAA) and made it universally applied for any situation
- G1.20 (**New**) **Combat Operations**- “A military action that may involve carrying out a strategic, operational, or tactical mission against a hostile or unfriendly force...”



- **G.1.24 CLS**
 - A CLS contract is a service contract where the contractor conducts required maintenance or modification on a Government owned operational unit aircraft
 - May or may not involve a MX Flight
- **G.1.29 (New) Covered Aircraft**
 - The 2023 GFRC replaces the definition for “in the open” with one for “covered aircraft”
 - applies to aircraft that are covered by the Government’s assumption of risk under the GFRC
 - term cannot be modified except as provided within the GFRC or as provided at DFARS 201.4
- **G.1.35 (New) Flight Services**
 - Involves a contractor flying, or flying in, a government owned operational unit aircraft as a crewmember or non-crewmember
 - These services augment Service personnel to complete operational missions



- G.1.37 (**New**) **FOD Prevention Definitions**

- Foreign Object- (**FO**) An alien substance or article that could potentially enter and/or migrate into/on the product or system becoming FOD and potentially causing FOD, if not removed and controlled.
- Foreign Object Debris- (**FOD**) Any FO that has entered and/or migrated into/on the product or system, and could potentially cause FOD, if not removed and controlled
- Foreign Object Damage- (**FOD**) Any damage attributed to FOD that can be expressed in physical or economic terms, which could potentially degrade the product or system's required safety and/or performance characteristics
- Additional new FOD Prevention definitions are on the next slide



- G.1.37 (**New**) **FOD Prevention Definitions**
 - The following are defined in this section:
 - » Accountability
 - » Clean-As-You-Go
 - » Consumables
 - » Control
 - » Equipment- Test/Serviceing, Production Aids, Production/MX support equipment
 - » Expendables
 - » Hardware
 - » Housekeeping
 - » Item
 - » Personal Items
 - » Tools
 - » Tool Container
- Remember, if the contractor choses to add them into their procedures, they must not change the definition



- **G.1.38 GFR**
 - Added in the language to match section 10 language for a GFR and G-GFR
 - G.1.38.6 (**New**) Non-Resident GFRs/G-GFR “Sites”- Describes appropriate workload assignments and approval authorities using proper discretion
- **G1.39 GGR**- Added same language changes as above
- **G.1.41- Ground Operations**- Significant revision; Removed the extra verbiage
 - Activities without the intent for flight
 - Separate and distinct from quality and industrial processes
 - May facilitate quality and industrial processes
 - Include those identified in chapter 5



- G1.44 (**New**) **IPI**- An additional inspection or verification step at a critical point in the installation, assembly, or reassembly of a system, subsystem or component
- G.1.45 (**New**) **In the Open**- Same definition as the GFRC
- G.1.46 (**New**) **Integrated Maintenance**
 - Contractor maintenance personnel conduct ongoing maintenance on government owned operational unit aircraft
 - Augment Service personnel to complete scheduled and unscheduled maintenance tasks
- G.1.50 (**New**) **MEP**- MEPs (USAF) are Service or contractor personnel who are required for the execution of the aircraft or unit mission
- G.1.52 (**New**) **Must**- Denotes the imperative
- G.1.56 (**New**) **PC/PIC**- The PC/PIC is the aircrew member designated by competent authority as being in command of an aircraft and responsible for its safe operation



- **G.1.62 Qualified**- Combined Trained, Qualified, and Certified into a one definition
 - Possesses the necessary knowledge, skills and abilities to perform assigned duties and responsibilities
 - Satisfies the proficiency/competency requirements needed to correctly complete all elements of a task without direct supervision
 - Maintains required certification for special processes
- **G.1.64 (New) Rated**- Aeronautical ratings as authorized by Title 10, U.S. Code
- **G.1.65 Service Guidance**
 - Added “(and associated manuals)” to the list of instructions
 - Added further clarification to the understanding that the third tier Service instructions/regulations are not considered contractual requirements



- **G.1.65 Service Guidance- Subordinate Service Paragraphs**
 - **G.1.65.1 USAF-** Revised and updated publications applicable; also added in AFMC/A3V is the Office of Primary Responsibility for the set of flight test instructions containing attachments for each weapon system
 - **G.1.65.2 USN/USMC-** Revised and added “for contracts that require ordnance handling in direct support of military ordnance personnel on base/post/camp/station, Office of the Chief of Naval Operations Instruction 8023.24D, “Navy Personnel Conventional Ammunition and Explosives Handling Qualification and Certification Program,” applies”
 - **G.1.65.3 Army-** No Change
 - **G.1.65. USCG-** No Change
 - **G.1.65.5 (New)-** For non U.S. Armed Service contracts use applicable agency guidance as specified in the contract in lieu of Service Guidance



- G.1.67 (**New**) **Similar Aircraft**- Aircraft are considered similar when the aircraft are comparable in flight characteristics, handling qualities, and have basically the same aircraft systems
- G.1.68 **Sortie**- Revised to now use the Service definition
- G.1.76 (**New**) **UAS**- An UAS, includes the aircraft, communication equipment, control systems, and ground support elements
 - Army SUAS include UAS in Group 1 only
 - Navy SUAS include UAS in UA Groups 1 and 2
 - Air Force SUAS include UAS in Groups 1, 2 and 3
- G.1.77 (**New**) **Workmanship Error**- Means damage to the aircraft that is the result of an incorrectly performed skill-based task, operation, or action that was originally planned or intended



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