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This publication implements Air Force Policy Directive (AFPD) 21-1, *Maintenance of Military Materiel*; and is consistent with AFPD 13-5, *Air Force Nuclear Enterprise*. It is the basic Air Force instruction (AFI) for all weapon system and support equipment maintenance management guidance. It provides the minimum essential guidance and procedures to safely and effectively maintain, service, and repair weapon systems and support equipment. This publication is applicable to all PACAF units and PACAF Air Reserve Component (ARC) Classic Associate units. This publication applies to the Air National Guard (ANG) only upon mobilization. Supplements to this publication are not required to be sent to the OPR for review unless they have deviations. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (T-2, T-3) number following the compliance statement. Waivers for T-0, T-1, T-2 or non-tiered compliance items will be sent to HQ PACAF/A4M, pacaf.a4mv3@us.af.mil. Refer recommended changes and questions about this publication through the appropriate functional chain of command to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

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Chapter 1

AIRCRAFT METALS TECHNOLOGY PROGRAM (2A7X1)

1.1. MAJCOM/A4M Responsibilities.

1.1.1. Designate a Senior Noncommissioned Officer (SNCO) to perform the following duties:

1.1.1.1. Manage command Aircraft Metals Technology program.

1.1.1.2. Manage the welder certification program IAW T.O. 00-25-252, *Aeronautical Equipment Welding*, and this instruction.

1.1.1.3. Approve all intra-command Aircraft Metals Technology TDY manning assistance requests.

1.1.1.4. Develop and coordinate command policy and procedures for Aircraft Metals Technology functions.

1.1.1.5. Coordinate inter/intra-command 2A7X1 equipment transfers.

1.1.1.6. Forecast and ensure scheduling of 2A7X1 supplemental training.

1.1.1.7. Support the Air Force Metals Technology Office by participating in equipment evaluations, field surveys, Integrated Process Teams, Product Improvement Teams, working groups, and advisory board meetings as requested.

1.1.1.8. Serve as the MAJCOM voting authority during the 2A7X1 Specialty Training Requirements Team (STRT) and Utilization and Training Workshop (U&TW).

1.2. Maintenance Group Commander (MXG/CC) Responsibilities.

1.2.1. Serve at the certifying official for unit level welding examinations. The MXG/CC may delegate responsibility in writing IAW T.O. 00-25-252.

1.3. Maintenance Squadron Commander Responsibilities.

1.3.1. Ensure funding is available for Aircraft Metals Technology weld certification requirements at an Air Logistics Center (ALC) when local certification capabilities do not exist.

1.4. Fabrication Flight Chief Responsibilities.

1.4.1. Ensure all journeyman, craftsman or civilian equivalent welders assigned to the Aircraft Metals Technology section are Level II certified IAW T.O. 00-25-252 to perform welding operations in the following base metal groups: I (Carbon and Low Alloy Steel), II (Stainless Steels), III (Nickel--Base Alloys), IV (Aluminum Base Alloys), V (Magnesium--Base Alloys), VI (Titanium--Base Alloys), VII (Cobalt--Base Alloys).

1.4.1.1. Level I certification may be obtained and utilized prior to achieving Level II certification if necessary to meet mission requirements.

1.4.2. Determine if welders should be qualified locally or by an ALC. If qualification will be accomplished at an ALC, ensure funding is forecasted.

1.5. Aircraft Metals Technology Section Chief Responsibilities.

1.5.1. Ensure assigned Aircraft Metals Technology personnel maintain welding certifications outlined in paragraph [1.4.1](#).

1.5.2. Coordinate requests for an ALC or other qualified organization to qualify welders. If qualification and certification is accomplished locally, coordinate the certification requirements with the nondestructive inspection (NDI) section to ensure x-ray capability exists and required image quality indicators are present.

1.5.3. Ensure correct completion of DD Form 2757, *Welding Examination Record*, for all shop welders.

1.5.3.1. The Observing Official should be a 5 or 7-level Aircraft Metals Technology technician or civilian equivalent welder.

1.5.3.2. The Examining Official (not the NDI examiner) must be a 7-level Metals Technology technician or civilian equivalent welder and will sign and date block 18.

1.5.3.3. The Welder's Supervisor will function as the Testing Official. The Welder's Supervisor may also perform Examiner duties and date/sign block 18, when applicable **(T-2)**.

1.5.3.4. The Certifying Official is the MXG/CC or designated representative.

1.5.4. Ensure journeyman are weld certified NLT 12 months following award of 5-skill level. Qualified individuals that PCS from another MAJCOM that did not have the same requirements will be certified within 6-months of assignment.

Chapter 2

NONDESTRUCTIVE INSPECTION PROGRAM (2A7X2)

2.1. MAJCOM/A4M Responsibilities.

- 2.1.1. Designate a SNCO to perform the following duties:
 - 2.1.1.1. Manage command NDI and Oil Analysis programs (OAP).
 - 2.1.1.2. Approve all intra-command NDI TDY manning assistance requests.
 - 2.1.1.3. Develop and coordinate command policy and procedures for NDI and OAP functions.
 - 2.1.1.4. Coordinate inter/intra-command 2A7X2 equipment transfers.
 - 2.1.1.5. Forecast and ensure scheduling of 2A7X2 supplemental training.
 - 2.1.1.6. Support the Air Force NDI Office by participating in equipment evaluations, field surveys, Integrated Process Teams, Product Improvement Teams, working groups, and advisory board meetings as requested.
 - 2.1.1.7. Serve as the MAJCOM voting authority during the 2A7X2 Specialty Training Requirements Team (STRT) and Utilization and Training Workshop (U&TW).

2.2. MXG/CC Responsibilities.

- 2.2.1. Ensure an effective NDI and OAP is maintained.
- 2.2.2. Ensure civilian NDI technicians are NAS 410 certified.

2.3. Maintenance Squadron Commander Responsibilities.

- 2.3.1. Ensure only trained 2A7X2 personnel or NAS 410 certified civilians operate NDI equipment and perform NDI assessments.
- 2.3.2. Ensure personnel performing NDI are certified IAW AFI 21-101 and NAS 410 as applicable.

2.4. NDI Section Chief Responsibilities.

- 2.4.1. Ensure all equipment required to perform NDI on assigned weapon systems and support equipment is authorized, available and operational.
- 2.4.2. Ensure NDI Quality Assurance Augmentees are properly trained in their additional duty.
- 2.4.3. Manage the OAP IAW TO 33-1-37-1/2/3/4, *Joint Oil Analysis Program Manual*, AFI 21-124, *Oil Analysis Program*, and other applicable directives.
- 2.4.4. Forecasts funding for personnel to attend training courses and participate in applicable NDI conferences or working groups.

Chapter 3

AIRCRAFT STRUCTURAL MAINTENANCE AND CORROSION CONTROL PROGRAM (2A7X3)

3.1. MAJCOM/A4M Responsibilities.

3.1.1. Designate a SNCO to perform the following duties:

3.1.1.1. Manage command Aircraft Structural Maintenance and Corrosion Control programs.

3.1.1.2. Approve all intra-command ASM TDY manning assistance requests.

3.1.1.3. Develop and coordinate command policy and procedures for ASM functions.

3.1.1.4. Coordinate inter/intra-command 2A7X3 equipment transfers.

3.1.1.5. Forecast and ensure scheduling of 2A7X3 supplemental training.

3.1.1.6. Support the Air Force Corrosion Prevention and Control Office (AFCPCO) by participating in equipment evaluations, field surveys, Integrated Process Teams, Product Improvement Teams, working groups, and advisory board meetings as requested.

3.1.1.6.1. Coordinate with AFCPCO to ensure command corrosion survey is accomplished at a minimum of every 5 years.

3.1.1.7. Serve as the MAJCOM voting authority during the 2A7X3 Specialty Training Requirements Team (STRT) and Utilization and Training Workshop (U&TW).

3.2. Wing Commander Responsibilities.

3.2.1. Review and ensure all aircraft paint waivers and nose art requests have been routed through local Public Affairs and Wing Historians prior to submission to HQ PACAF/A4M.

3.3. Maintenance Group Commander Responsibilities.

3.3.1. Establishes and maintains an effective corrosion prevention and control program.

3.3.2. Ensures adequate facilities, equipment, material, and funding are available to support a sound corrosion prevention and control program. The minimum requirements are:

3.3.2.1. Provide a facility for preparation and maintenance painting of assigned aircraft on a year round basis IAW Unified Facilities Criteria (UFC) 4-211-02NF, *Corrosion Control and Paint Finishing Hangars*.

3.3.2.2. Ensures requirements outlined in AFI 32-1024, *Standard Facility Requirements*, and AFMAN 32-1084, *Facility Requirements* are met for support equipment (SE) and aircraft small parts. This capability can be incorporated in the aircraft corrosion control facility if space permits.

3.3.2.3. Ensures facility meets local, state, and federal Environmental Protection Agency requirements in conjunction with current National Emission Standards for Hazardous Air Pollutants [40 CFR Part 61 and 63].

3.3.3. Ensures adequate wash rack facilities are available to wash aircraft on a year round basis. This requirement can be satisfied with any one or more of the following:

3.3.3.1. A specially designed corrosion control facility completely enclosed, heated with environmentally controlled ventilation and waste disposal systems, and equipped with all utilities necessary for accomplishing all facets of aircraft corrosion control.

3.3.3.2. An environmentally compliant enclosed or covered wash rack.

3.3.3.3. An outside wash rack may be used on an interim basis when weather conditions permit and when approved by Base Civil Engineer.

3.3.4. Determines organization responsible for management of aircraft wash facility.

3.3.5. Ensures frequency of wash/rinse cycles are maintained IAW T.O. 1-1-691, *Cleaning and Corrosion Prevention and Control, Aerospace And Non-Aerospace Equipment*, and revised as necessary based on changes in mission and location.

3.3.5.1. Report any aircraft wash overdue with official memo to MAJCOM Corrosion Program Manager. Within this memo include aircraft tail number(s), date of last wash, reason for overdue condition, and corrective action taken to prevent further occurrences.

3.3.6. Ensures Plans, Scheduling & Documentation section(s) schedule aircraft washes through Integrated Maintenance Data System (IMDS) or by other automated means.

3.3.7. Ensures Quality Assurance (QA) adequately evaluates corrosion control programs through inspection and maintenance follow-up evaluations.

3.3.7.1. Ensures QA evaluates a minimum of 10% of all aircraft washes.

3.3.8. Appoints by letter, a Wing Corrosion Program Manager (2A773) or civilian equivalent to ensure all facets of corrosion prevention are being conducted throughout the wing.

3.4. Wing Corrosion Program Manager Responsibilities.

3.4.1. The wing corrosion manager will be a 2A773, 2A775, 2A790, or civilian equivalent (T-2).

3.4.2. The wing corrosion program manager serves as the wing focal point for all aircraft and SE cleaning, corrosion and organic coatings related information and taskings. The wing corrosion program manager shall organize, direct, and manage the wing/group corrosion management program according to: AFI 21-101, AFI 20-114, TO 1-1-691, TO 1-1-8, TO 1-1-689-3, *Cleaning and Corrosion Control Volume III Avionics and Electrics*, TO 35-1-3, *Corrosion Prevention and Control, Cleaning; Painting, and Marking of USAF Support Equipment (SE)*, applicable weapon system specific -3 (structural repair manual), -23 (corrosion prevention and control manual), and this instruction.

3.4.3. Before reassignment or retirement the wing corrosion manager will ensure their successor is appointed early enough prior to DEROS (NLT 60 days long tour/30 days short tour) to provide an effective turnover of the corrosion program. The outgoing corrosion manager must confer with the Fabrication Flight Chief and ASM supervisors to identify a replacement. A copy of the new appointment memo will be sent to HQ PACAF/A4M,

Command Fabrication Functional/Corrosion Manager, within 60 days of the appointment (T-2).

3.4.4. Ensures creation of a wing supplement to this instruction to include, but not limited to the following:

3.4.4.1. MAJCOM, NAF, Wing, OG and Fighter/Bomber Squadron commander aircraft designation and marking requirements of identified aircraft.

3.4.4.2. Local unit marking requirements e.g., tail stripes, crew names, etc.

3.4.4.3. Aircraft paint identification placard size, shape and information requirements.

3.4.5. Ensures corrosion inspections are accomplished during each phase/periodic inspection for aircraft and equipment assigned.

3.4.6. Ensures corrosion prevention and treatment procedures are performed within technical order requirements.

3.4.6.1. In the event there are no weapons system specific post wash corrosion inspection requirements, units must establish local requirements (T-2).

3.4.7. Ensure only qualified product list (QPL) and/or the Qualified Product Database (QPD) authorized wash agents are utilized for overall and spot washes. Use of unapproved commercial or household/janitorial cleaners is strictly prohibited.

3.4.8. In conjunction with the local Supply/Hazmart pharmacy, ensure only products from QPLs/QPDs approved for aircraft/aerospace equipment are being used.

3.4.9. Ensures required equipment is obtained for an efficient and effective corrosion prevention and control program.

3.4.10. Ensures corrosion related training courses (initial and refresher) are administered as intended by the MAJCOM or AFI. Local corrosion training programs may be initiated as deemed necessary due to local corrosive environment, weapon system corrosion susceptibility and forward operating environments.

3.4.11. Determines the adequacy of corrosion control work cards for assigned equipment based on mission and location.

3.4.12. At units utilizing wash contractors, the wing corrosion manager must be thoroughly familiar with contract specifications, applicable technical orders, and inspection/acceptance criteria. The wing corrosion manager should be included in the coordination process of all new/updated wash contracts (T-2).

3.4.13. Maintain records of all approved waivers with full length color photographs, score sheets of maintained aircraft, and wing corrosion manager appointment letter.

3.5. Fabrication Flight Chief Responsibilities.

3.5.1. Forecasts funding to attend and participate in applicable Corrosion Prevention Advisory Board (CPAB) and other corrosion/structural related programs/meetings.

3.5.2. Recommend a wing corrosion manager to the MXG/CC.

3.6. Aircraft Structural Maintenance (ASM) Section Chief Responsibilities.

3.6.1. Ensures no other maintenance is accomplished on the aircraft, equipment or within the environmentally controlled/cordon off areas during corrosion prevention treatment when hazardous/toxic materials are in use, which requires the use of specialized personal protective equipment.

3.6.2. Submits CPAB agenda items to MAJCOM ASM Manager.

3.6.3. Requests depot assistance IAW T.O. 00-25-107, *Maintenance Assistance*, through the MAJCOM weapon system manager with an information copy to PACAF/A4M when corrosion treatment/repairs exceed technical order limits.

3.6.4. Ensures bioenvironmental conducts initial baseline comprehensive evaluations and provide annual follow-ups to determine adequacy of work center controls for occupational hazards. Briefs all structural personnel and maintains records of this survey in the work center.

3.6.5. Appoints a qualified 2A753/2A755 or higher technician, or civilian equivalent, as the wash rack facility manager. This manager will ensure proper cleaning materials, equipment, and supplies are maintained in accordance with applicable technical orders, AFI 21-101 and PACAF supplements.

3.6.6. Ensure a corrosion control facility housekeeping program is developed and followed IAW AFI 21-101.

3.7. Wash Rack Facility Manager Responsibilities.

3.7.1. Ensures the required number and size of fire extinguishers are available and serviceable.

3.7.2. Ensures grounding points are inspected and approved IAW T.O. 00-25-172.

3.7.3. Ensure fall protection equipment is available, used and maintained IAW AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, to allow coverage of all surface areas of aircraft during washing operations.

3.7.4. Ensures aircraft wash rack has cleaners identified in weapon system specific technical data. When cleaning products are not listed in weapon system specific technical data, ensure at least two types of approved cleaners IAW T.O. 1-1-691 are properly used, to include proper mix ratio and the correct cleaner for each area cleaned.

3.7.5. Ensures wash rack facility and surrounding area is kept clean and properly maintained.

3.7.6. Procure personal protective equipment used during wash process. Maintains wash rack facilities and equipment in serviceable condition (i.e., water hoses, pumps, air hoses, powered wash equipment, SE, Personal Protective Equipment (PPE), etc.). This may not apply to units utilizing wash contracts.

3.8. Wash Crew Supervisor Responsibilities.

3.8.1. Provides daily safety briefings explaining hazards associated with wash rack operations.

3.8.2. Ensure aircraft wash crews are task trained and qualified. All training and qualifications must be documented in the personnel's training records.

3.8.3. Ensure proper safety equipment, PPE and cleaning materials are serviceable and properly used IAW AFI 91-203.

3.8.4. Enters the requirement for wash, performs cleanliness inspection, signs the wash completion and enters the lubrication requirement in the AFTO Form 781A, *Maintenance Discrepancy and Work Document* or other electronic form of documentation.

3.8.5. Ensure that fall protection is serviceable and inspected prior to use IAW AFI 91-203.

3.8.6. Ensure aircraft are properly grounded as required IAW TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, and weapon system-specific technical data.

3.8.7. Inspects all wash rack equipment for serviceability, i.e., water hoses, pumps, air hoses, powered wash equipment, support equipment, etc prior to use.

3.8.8. Ensure wash rack facility, surrounding area and equipment is clean and equipment is properly stored before and after use.

3.9. Maintenance Plans, Scheduling, and Documentation (PS&D).

3.9.1. Ensure frequency-of-cleaning/wash cycles are established for assigned aircraft to maximize corrosion prevention. Monitors aircraft wash schedules to eliminate overdue washes. In no case will unit wash cycles exceed the maximum wash cycles listed in T.O. 1-1-691, unless coordinated and approved IAW T.O. 00-25-107 or other published T.O. guidance (T-2).

3.10. Aircraft Maintenance Unit Responsibilities.

3.10.1. Appoint an experienced/qualified wash crew supervisor (T-2).

3.10.2. Ensure trained wash crew supervisors are present throughout the duration of aircraft washes.

3.10.3. Provide a task trained, appropriately equipped and qualified aircraft wash crew.

3.10.4. The wing corrosion manager and owning unit supervisors/managers train and qualify personnel on aircraft washing and cleaning. Training will be locally developed based on environmental conditions and specific MDS assigned.

3.10.5. The wash supervisor ensures the facility and equipment is cleaned and properly stored at completion of each wash.

3.11. Quality Assurance Responsibilities.

3.11.1. Evaluate at least 10% of all aircraft washes and at least 10% of all AGE washes for compliance with applicable technical data.

3.11.2. Evaluate the quality of 10% of all aircraft and equipment corrosion inspections.

3.11.3. Periodically review wash rack cleaning agents for QPL/QPD compliance.

3.11.4. Contracting Officer Representative (COR) for aircraft washes will evaluate at least 10% of all aircraft washes. COR should maintain a file of discrepancies for consideration during contract rewrites. If a current contract specifies a different level of inspection than that specified herein, the contract will take precedence. Future contracts will incorporate the 10% inspection rate as a minimum (T-2).

3.11.5. The COR will use locally developed aircraft wash cleanliness forms and checklists to evaluate contract wash compliance (T-2).

3.11.6. Contract washes will be signed off by personnel authorized in writing by the maintenance group commander (T-2).

3.12. AGE Flight Chief Responsibilities.

3.12.1. Ensure AGE work center personnel attend corrosion training.

3.12.2. Corrosion manager, in concert with the AGE supervisor and unit maintenance training manager, will develop a corrosion prevention and control training curriculum. The AF Corrosion Prevention and Control Computer Based Training is available on Advanced Distributed Learning Service (T-2).

3.12.3. The corrosion manager, in conjunction with the AGE supervisor, will determine the training interval. The training interval shall be at least annually (T-2).

3.12.4. Establish and enforce an effective corrosion program on assigned AGE and SE.

3.12.5. Aircraft structural maintenance and AGE supervisors determine repainting requirements.

3.12.5.1. Complete over coating of equipment is accomplished on an as needed basis. AGE will not be over coated solely for cosmetic purposes unless the AGE Flight Chief and Fabrication Flight Chief determine it is required. Equipment will be prioritized based on “worst is first” unless downing the equipment would affect AGE Flight mission essential levels (T-2).

3.12.5.1.1. Complete over coating of equipment may be accomplished to apply the new SE standard color (26173 FED-STD-595, MIL-PRF-85285). However, this shall be accomplished on the units’ regular corrosion schedule and equipment will be aligned with the new scheme on an attrition basis (T-2).

3.12.6. Owning work center personnel may treat small chips in the paint with Corrosion Prevention Compounds (CPC) listed in TO 35-1-3. For more permanent repairs of small chipped areas, use authorized coating systems that are contained in items such as but not limited to: SEMPENS, Preval compressed air spray packs, Clip-Pacs, Brush and Roller, or Akzo Nobel’s Spray 2 Fix aerosol can. Larger areas will be treated by the aircraft structural maintenance work center or if applicable, contracted sources (T-2).

3.12.6.1. Units will familiarize themselves with AGE painting materials and processes IAW TO 35-1-3 prior to awarding off-base contracts to get AGE painted. Units will verify specifications for primer and topcoat, and color number requirements and ensure that these are addressed in the contract (T-2).

3.12.7. AGE SE will be painted IAW TO 35-1-3 (T-2).

3.12.8. Ensure an automated system is used to schedule and document AGE painting. A historical entry will be made into the automated system upon complete repainting of equipment (T-2).

3.12.9. Enforce the proper use of approved cleaning compounds IAW TO 35-1-3 and the QPL or QPD.

3.13. Unit Corrosion Control Program Requirements.

3.13.1. Owning activities shall wash and clean their aircraft and support equipment.

3.13.2. Wing Corrosion Program Manager and/or ASM personnel will assist the owning activities in their corrosion prevention efforts by accomplishing scheduled corrosion inspections on aircraft, support and test equipment.

3.13.3. Only Aircraft Structural Maintenance personnel shall perform aircraft inspection work cards specified for accomplishment by Aircraft Structural Maintenance in the -6 T.O. or within ALIS on the F-35. All maintenance personnel, regardless of Air Force Specialty Code (AFSC), shall examine each part removed and inspect the inside of all exposed areas for corrosion. When corrosion discrepancies are discovered affecting aircraft structural integrity, safety of flight/operation, or are beyond the using organization's capability to evaluate/repair, an aircraft structural maintenance specialist will be requested.

3.13.4. Maintenance personnel who remove/install aircraft panels and doors must ensure seals are serviceable and sealant applied to panels and fasteners as specified in applicable aircraft technical orders.

3.13.5. Maintenance personnel shall report all corrosion deficiencies through applicable MIS IAW 00-20 series technical orders or ALIS. Accurate documentation of maintenance actions in support of the corrosion control program is essential to support future manning, equipment requirements, training and parts/material procurement requirements.

3.13.5.1. ICARR-3D Reporting (C-130 users). NDI, ASM and QA personnel shall use the Inspection, Crack/Corrosion And Repair Reporting (ICARR-3D) software to make inputs to the Automated Inspection, Repair, Corrosion, and Aircraft Tracking (AIRCAT) database for all NDI directed by technical orders; cracks and corrosion exceeding blending limits of Structural Repair Manual; and structural repairs IAW 1C-130A-6/1C-130J-6. Corrosion within blending limits of the Structural Repair Manual shall not be documented. This is an Aircraft Structural Integrity Program (ASIP) requirement. See <https://c130aircat.robins.af.mil> for program instructions and information on ICARR-3D.report all C-130 discrepancies in ICARR-3D.

3.14. Propulsion Flight/Element Responsibilities.

3.14.1. As required, establish a statement of work with the Fabrication Flight Chief defining the local repair process. Ensure personnel are trained in the tasks required to complete composite repairs in the TO 1-1-690, *General Advanced Composite Repair Processes Manual*, and applicable technical data.

3.14.2. As required, establish a maintenance plan to ensure work being accomplished is safe and has bioenvironmental approval. Follow Unified Facilities Criteria 4-211-02, Aircraft Corrosion and Paint Facilities, guidance for proper exposure controls to personnel.

Chapter 4

GENERAL INFORMATION

4.1. Aerospace Vehicle Coating and Marking Requirements.

4.1.1. Paint schemes/configurations and USAF standard aircraft markings will be applied in accordance with T.O. 1-1-8 and the applicable aircraft technical order.

4.1.2. Coating System Scoring and Maintenance. All units will score aircraft coating systems to determine frequency of topcoat application.

4.1.2.1. All aircraft coating systems except F-22 and F-35 will be evaluated/rated every 6 months for appearance/coating system integrity using applicable technical data or a locally developed system.

4.1.2.2. The exterior of aircraft must be clean prior to paint scoring.

4.1.3. Supervisors will use ratings to determine corrosion treatment/paint scheduling priority.

4.1.3.1. All aircraft painting will be scheduled on a worst first basis to maintain coating system integrity and aircraft appearance.

4.1.4. Units are required to adopt maintenance-painting techniques (i.e., spot painting and sectionalized painting as stated in T.O. 1-1-8) to maintain aircraft corrosion protection and appearance between overcoats.

4.1.5. Fully over coated aircraft will be documented in applicable MIS and the individual aircraft AFTO Form 95, *Significant Historical Data*, for tracking purposes.

4.1.6. Large aircraft units should rely on spot maintenance painting and sectionalized painting between depot cycles to maintain the coating system integrity.

4.2. Equipment Inspections.

4.2.1. All sections within the Fabrication Flight are authorized (not required) to utilize Process Control Automated Management System (PCAMS). It can be utilized to track maintenance, inspections, and discrepancies for shop equipment. PCAMS can be found on the NDI AF Portal website.

Chapter 5

AIRCRAFT MARKING POLICY

5.1. Paint Schemes/Configurations and USAF Standard Markings.

5.1.1. Paint schemes/configurations and USAF standard markings will be applied in accordance with the applicable aircraft technical order, aircraft drawings, TO 1-1-8 and this instruction.

5.2. Exterior Markings/Coatings.

5.2.1. All aircraft markings will be maintained intact, legible, and distinct in color (not faded). Command standardization of markings by MDS is of primary concern (T-2).

5.2.2. All exterior aircraft markings must match the gloss level of the basecoat. No approved diffuse clear coats are available; low-gloss materials must be used for all markings on aircraft with lusterless paint schemes (T-2).

5.2.3. Operational markings and structural coating/corrosion maintenance will take precedence over cosmetic refinements; markings, such as nose art, tail flash, and Dedicated Crew Chief (DCC) names should be considered lowest priority work (T-2).

5.2.4. When large sections of an aircraft are repainted (i.e. entire wing, fuselage, or empennage) they will be documented in applicable MIS and the individual AFTO Form 95 (T-2).

5.2.5. Review applicable weapon system technical data for W&B requirements.

5.2.6. **Stenciling.** Markings may be applied using stencils. Refer to T.O. 1-1-8 to determine the compatibility of stenciling paints, paint finishes and decal applications.

5.3. Aircraft Mandatory Markings (Mobility Aircraft).

5.3.1. Letters and Numerals. Unless specified in other guidance, these markings may be applied using any style letter/numeral (font) deemed appropriate by the Wing Commander. Size and location must remain standardized for all wing-assigned aircraft.

5.3.2. Standard Air Force Markings. Mandatory markings will be applied IAW TO 1-1-8, weapon system drawings, if applicable, weapon system specific TO and the applicable table in this instruction. **Attachment 2** list the size, location and color of markings by aircraft type. For identification, placement, and color of mandatory markings other than those identified in this instruction, refer to the weapon system technical orders and system drawings.

5.3.3. US Flag. Paint may be used only when high-quality templates or silk-screen processes are used. Flag decals can be obtained by going online to the Defense Logistics Agency Document Services website at <https://www.dso.documentservices.dla.mil>. Customer support may be reached at 1-866-736-7010. Flag decals may be purchased with the International Merchant Purchasing Authorization Card. There is no form number or part number for flag decals; therefore a “short title” should be used. The short title is either “21-inch by 40-inch Matte Finish Flag Decal” or “24-inch by 48-inch Matte Finish Flag Decal,” as applicable. Flag decals have a one-year shelf life. For best results, use 3M edge sealer part # 4150 (designed for polyester decal films).

5.4. Optional Markings (Mobility Aircraft).

5.4.1. When used, the following optional markings will be applied IAW the applicable tables in this instruction. Changes/standardization of optional markings may be done on an attrition basis to minimize workload, aircraft availability, and environmental impact. **Attachment 2** list the size, location and color of markings by aircraft type (T-2).

5.4.2. Approval Authority for Optional Markings. Final approval for all permanent optional markings will come from the Fabrication Functional and PACAF/A4. All levels of supervision have the responsibility to review the markings for tastefulness, appropriateness, and adherence to copyright laws.

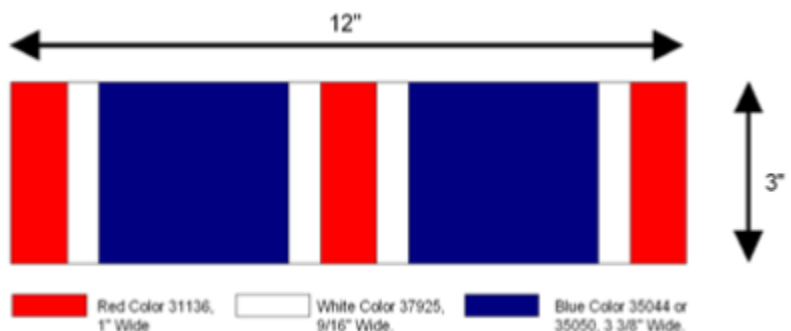
5.4.2.1. Nose Art: E-mail request with WG/CC approval, local Public Affairs and Wing Historian coordination, justification, the design, and tail number to pacaf.a4mv3@us.af.mil for TMT coordination and PACAF/A4 approval.

5.4.3. Nose Art. Nose art is authorized on one aircraft per flying squadron, plus the wing pride aircraft. Additionally, one aircraft per wing may have the “Let’s Roll” graphic applied as nose art (not to exceed three feet in diameter); it may be on one of the above aircraft, or in addition to the above aircraft. Nose art is not permitted on any aircraft flying missions where local populations may consider it sensitive or offensive. Art will reflect a theme of civic and community pride, be distinctive, symbolic, and designed and maintained to the highest quality standards. Positioning of nose art is at the discretion of the Wing Commander; however, it must be forward of the wing leading edge and not interfere with any mandatory markings. Nose art should be approximately two-thirds the size of the fuselage national star insignia, not to exceed three feet in diameter. All nose art applied to wing aircraft will be of standard size and location. Nose art and tail flash designs must be approved prior to installation.

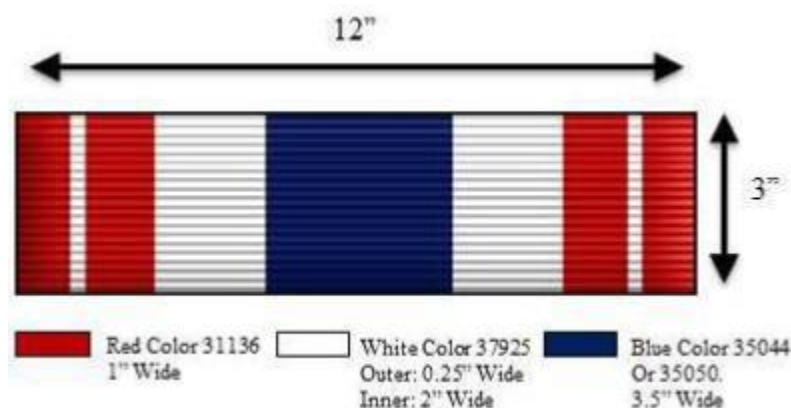
5.4.3.1. On aircraft with lusterless paint schemes, nose art and tail flash must be applied using lusterless paint and/or decals.

5.4.4. Aircraft Names. Aircraft Names are authorized on PACAF aircraft only after approval by USAF/CV. The proposed name must either have a national or military theme or honor a locale adjacent to a PACAF base or aircraft manufacturing point. Route recommendations through your WG/CC to PACAF/PA; include the proposed name and detailed justification. If applied in addition to nose art, the aircraft name and nose art must be complementary; the font, size, and location may be changed to complement the nose art.

5.4.5. Air Force Outstanding Unit Award. The Air Force Outstanding Unit Award (AFOUA) may be applied if applicable. AFOUA decals, with and without oak leaf clusters, are available from <https://www.dso.documentservices.dla.mil>.

Figure 5.1. Outstanding Unit Award.

5.4.6. Air Force Meritorious Unit Award (MUA) may be applied immediately adjacent to the AFOUA if applicable.

Figure 5.2. Meritorious Unit Award.

5.4.7. Boom Elevator Markings. Boom elevator markings may be applied IAW the appropriate table, weapon system specific TO, and/or weapon system drawings with the approval of the Wing Commander.

5.4.8. Wing Pride Aircraft. Each Wing Commander may designate one aircraft to be the wing pride aircraft; this aircraft is authorized the additional markings stated below.

5.4.8.1. Wing CC/CV names and Group Commander's names (list all group commanders or none) may be used in place of the DCC names. The wing designator may be included in the name block. Prior to deployment or flight into a combat zone (including transient aircraft), all names will be removed from the aircraft (T-2).

5.4.8.2. Tail Flash may contain colors/numbers of all squadrons assigned to the wing, but must remain within the tail band stripes specified in the applicable table. Refer to paragraph 5.3 (T-2).

5.4.8.3. Wing mascot/logo may be applied as nose art (in addition to the one per flying squadron), paragraphs 5.5.5 and 5.5.5.1 apply.

5.4.9. Dedicated Crew Chief (DCC)/Assistant Dedicated Crew Chief (ADCC). If elected, DCC and ADCC names will be applied IAW TO 1-1-8 and placed on interior placards or exterior of the aircraft. See Attachment 2. Units will be consistent when selecting interior or

exterior placards. Aircraft will adhere to sanitization methods for all aircraft IAW TO 1-1-8 (T-2).

5.4.9.1. Prior to deployment into a combat zone, regardless of tour length, all marking will be sanitized IAW TO 1-1-8. Consistency across the wing is paramount. MAJCOM/A4, WG/CCs, and MXG/CCs are authorized to direct the removal of all names for the duration of contingency operations (T-2).

5.4.9.2. The name will consist of the abbreviated rank, first name, and last name. The first name can be either the given proper name (William, Robert, Daniel, etc.) or the more familiar shorter form (Bill, Bob, Dan, etc.). The use of an individual's middle name or initial is optional. For extremely long names, it is permissible to use the individual's rank, first initial and last name or to use smaller letters to accommodate the entire name.

5.4.9.3. Nicknames are not authorized. Size and font are at the MXG/CC's discretion; size not to exceed 2 ½ inches; standardized within the wing. Unit mascot graphics, i.e., razorback and eagle head (outlines or silhouettes) may be used as the forward edge of the placard or crew chief block. For standardization purposes, either all or none of the wing aircraft will bear the graphic.

5.4.10. Aircraft Maintenance Unit/Squadron/Wing Colors. Each operational squadron may have its colors and/or logos applied within the boundaries of the tail stripes, or the entire wing may share one tail stripe design.

5.5. Aircraft Mandatory Markings (Combat Aircraft).

5.5.1. **Command Insignia.** The application of the command insignia on aircraft is mandatory. Fighter type aircraft will use subdued insignias. Size and location of command insignias by MDS are specified in [Attachment 2](#).

5.5.2. **Organizational Insignia.** The application of wing insignia is mandatory. The insignia will be applied to both sides of the forward fuselage. The operational squadron insignia may be applied on the left side in place of the wing insignia. Wing and squadron insignias will be subdued for fighter aircraft.

5.5.3. **Distinctive Unit Identifier Marking.** The application of the unit identifier is mandatory for all CAF aircraft unless otherwise directed. ACC/A4M is the office of primary responsibility (OPR) for the assignment of AF unit designators as directed by T.O. 1-1-8. The primary factor used to determine unit identifier is the aircraft/unit assignment location.

5.5.3.1. The unit identifier will be applied in accordance with guidelines T.O. 1-1-8 or the applicable weapon system T.O. and guidelines contained in [Attachment 2](#) of this instruction.

5.5.4. **Paint Identification Placard.** The paint identification block is a mandatory marking and is intended to provide important paint information, i.e. type of paint and associated hazards.

5.5.5. **Nose Numbers.** Aircraft nose numbers shall be in block or Helvetica letters, not to exceed four digits. Specific location and size for each different type aircraft is contained in [Attachment 2](#). The paint material(s) used to apply nose numbers shall have the same gloss or subdued requirement as the base aircraft coating.

5.6. Aircraft Optional Markings (Combat Aircraft).

5.6.1. **Tail Stripe.** Tail stripes are used to identify aircraft operation squadrons and are authorized as a wing option on all aircraft except F-35 aircraft. In lieu of a tail stripe, F-35 aircraft are authorized a special unit marking as defined in paragraph 3.14.3.5.4.

5.6.2. Each flying squadron will have a standardized tail stripe unique to that squadron, and the use of the same tail stripe by two or more squadrons within a wing is not permitted. Commanders' aircraft, as defined in paragraph 3.14.3.7, may have a unique tail stripe, but must remain within the guidelines of this instruction.

5.6.2.1. Tail stripe will be applied to the upper portion of the vertical stabilizer in the form of a straight stripe. Width will not exceed 9 inches on fighter aircraft.

5.6.2.2. Tail stripe may be any color or pattern, and may contain a logo with the following exceptions:

5.6.2.2.1. Tail stripe on F-22 aircraft will be subdued and must meet all TOD requirements.

5.6.2.2.2. Tail stripe on aircraft bearing the American Flag will be solid in color and will not contain any logo, name, or lettering.

5.6.2.2.3. On aircraft with multiple vertical stabilizers, the tail stripe may be of either a wrap-around style on both vertical stabilizers or applied to the outboard sides of each vertical stabilizer.

5.6.2.2.4. Units will not repaint tail flashes/stripes or F-35 special unit markings during deployed operations unless otherwise directed by the combatant commander.

5.6.3. **Aircrew and Crew Chief Names.** Aircrew and dedicated crew chief/assistant names may be applied to all command aircraft as a unit option but must be removed prior to deployment from home station in direct combat zones or when participating in contingencies that may subject aircraft to hostile fire abroad.

5.6.3.1. Units are encouraged to keep name changes to the minimum as the removal/application of decals can cause damage to the coating system and is especially of concern on LO platforms/surfaces as it can negatively affect the radar cross section.

5.6.3.2. Application of nicknames, punctuation, and/or call signs is not authorized.

5.6.3.3. All aircraft in the wing will be standard in color, style and size of letters, but will not exceed 3 inches in height. The only exception is that designated commander aircraft may have different color, style and/or size lettering, but will not exceed 3 inches in height.

5.6.3.4. A background block for pilot/crew chief names may be used, should give a subdued appearance and be in contrasting color to the section of the aircraft where applied. It may be other than rectangular in shape and to further an MDS theme, block may be preceded by a design depicting the MDS i.e., F-15 eagle head, F-16 falcon head, etc.

5.6.4. **Commander's Aircraft Markings.** Commander's aircraft referred to in this instruction are those designated as Numbered Air Force (NAF), Wing, OG and commanders of flying

squadrons (Fighter/Reconnaissance). The NAF Commander may select one wing within the command to have one aircraft specifically marked; it will be the only aircraft authorized so marked. Wing, OG and flying squadron commanders are authorized to designate one aircraft each to be marked. For TFI locations under classic association, the wing commander may authorize one aircraft to be identified as the associate ANG or AFRC Commander's aircraft. COMPACAF may select one aircraft within the command to have one aircraft specifically marked; it will be the only aircraft authorized so marked. The following guidance governs markings authorized for commander's aircraft:

5.6.4.1. Wing and/or NAF insignias on the right forward fuselage and a collage of assigned flight/operations squadron insignias on the left forward fuselage.

5.6.4.2. Unit identifier and radio call numbers. Unit Identifier and radio call numbers will remain on vertical stabilizers as depicted in T.O. 1-1-8, applicable weapons system T.O. and this instruction. Highlighting (shadowing) of unit identifier and radio call number on the vertical tail(s) is authorized on all designated commander aircraft except F-35 units. All highlighting will be done in contrasting gray, black or white and must meet the primary basecoat gloss requirement e.g., flat, semi-gloss, gloss.

5.6.4.3. **Anniversary markings.** This policy is provided to allow latitude for application of anniversary logo markings to Wing Commander aircraft only.

5.6.4.3.1. Wing commanders will review all requests for fiscal responsibility as it is of primary concern. Proposed markings must be further be coordinated through local Public Affairs, local Staff Judge Advocate, the base historian and approved by the wing commander prior to application.

5.6.4.3.2. Size of marking will be no larger than nine square feet. Location on the aircraft is at wing commander discretion, but will not interfere with required aircraft markings.

5.6.4.3.3. Anniversary markings will meet primary basecoat gloss requirements and will not alter nor interfere with T.O. 1-1-8 and weapon system specific T.O. guidance and/or markings. State flags and logos other than anniversary type are not authorized.

5.6.4.4. Applied anniversary marking(s) must be removed within 60 days following the anniversary period (1 year maximum time period). Extension requests must be submitted by the wing commander to PACAF/A4 for consideration. Submit waivers to pacaf.a4mv3@us.af.mil.

5.6.4.5. **Bird Of Prey Silhouette.** Bird of prey silhouettes are authorized on F-15 and F-16 aircraft as a unit option, but must be standardized within a wing by MDS. The following guidelines apply:

5.6.4.5.1. F-15 Aircraft. The silhouette will be placed on the insides of the vertical stabilizers. They will not exceed 24 inches in height and must be applied in a contrasting gray color.

5.4.4.5.2. F-16 Aircraft. The silhouette can be placed anywhere on the aircraft as long as it does not interfere with standard required markings. The silhouette will not exceed 18 inches in height and must be applied in a contrasting gray color.

5.6.4.6. Aerial Victory Marking. Fighter aircraft awarded a verified aerial victory are authorized to display a 6-inch green star with a 1/2 inch black border located just below and centered on the pilot's name block. The type of aircraft shot down shall be stenciled inside the star in 1/2 inch white lettering. For aircraft with multiple aerial victories, a star is authorized for each aircraft shot down. No other victory markings are authorized.

5.6.4.7. A-10, F-15, F-16 Combat Marking. Deployed units supporting combat operations are authorized to place combat markings (bomb and 20/30MM ammunition) on aircraft operating at deployed locations using the following criteria. The combat markings will be placed inside the pilot/DCC name placard (name markings must be sanitized/removed during deployment) on A-10, F-15 and F-16 aircraft. The markings will be displayed using contrasting shades conforming to the basic aircraft camouflage requirements. Cut the stencils out of a removable adhesive marking material. The bomb markings are intended to generically represent each general purpose conventional bomb (i.e., GBU-12/31/38s and MK-82s) dropped at a one-to-one ratio and each 20/30-mm ammo round silhouette represents 100 rounds, or one pass. The Air Expeditionary Wing is responsible for providing the stencil machine/materials and removing the combat markings prior to redeployment.

5.7. Aircraft Travel Pods. Travel pods will be painted the same color and tone as the aircraft with no additional markings. Gloss paint may be used to aid in cleaning. Units with multicolor aircraft should select one primary color of the aircraft for the travel pod. Lettering will be subdued in color, but shall not exceed 6 inches in height.

5.8. External Fuel Tanks. External fuel tanks shall be painted the same color and tone as existing aircraft coating. A 2 inch marking (centered on lugs) is optional for tracking purposes.

5.9. Gun Ports. Gun ports on non-LO fighters will be painted in flat black paint.

5.10. Competition Aircraft.

5.10.1. Units participating in competitions will follow the guidelines established in competition rules for aircraft appearance. Competitions should be considered "come as you are" and no waivers will be granted. "Come as you are" is defined as no special effort, painting, or additional markings applied to enhance or improve the overall appearance of the aircraft. This includes polishing of metal surfaces, using commander type markings, etc.

5.11. Aircraft Transfer.

5.11.1. The following markings must be removed prior to formal transfer of aircraft to other units or MAJCOMs (aircraft retiring to Aerospace Maintenance and Regeneration Group need not have any markings removed). Deviations from transfer requirements are authorized provided the gaining and losing units reach a mutual agreement (**T-2**).

5.11.1.1. Organizational insignias.

5.11.1.2. Unit identifier.

5.11.1.3. Tail stripe.

5.11.1.4. Aircrew and crew chief names.

5.11.1.5. Unit unique markings.

5.11.1.6. Nose art.

5.12. Waivers.

5.12.1. Wing Commanders must submit waiver requests to pacaf.a4mv3@us.af.mil. Waivers that are in violation of aircraft technical data will not be accepted. Waiver requests must include the following:

5.12.1.1. Clear statement of present procedure/markings.

5.12.1.2. Clear statement of proposed change.

5.12.1.3. Justification to include historical significance, if applicable.

5.12.1.4. Digital color photographs, one of present marking and one of requested change. The use of a slide presentation format is allowed.

5.12.2. All approved waiver documentation must be kept on file by owning organization.

5.13. Historical Requirements. Aircraft Structural Maintenance and/or Low Observable section will maintain a record of all current unit unique markings, i.e. commanders' aircraft, tail stripes, travel pods, paint ID placard, etc.

5.13.1. In addition, units will file a copy of all wing approval memorandums with photos with the applicable base historian and will send a copy to MAJCOM Corrosion Program (pacaf.a4mv3@us.af.mil).

5.14. Tone Down.

5.14.1. **Aerospace Ground Equipment (AGE).** Polyurethane paint system Mil-PRF-23377, Chromate Epoxy Primer, Tie Coat and Mil-C-85285 high solid, low VOC paint, color number 26173 is the approved topcoat paint system for AGE.

5.14.1.1. When feasible, equipment will be completely stripped and properly prepared IAW T.O.s 1-1-8 and 35-1-3 before applying polyurethane coatings.

5.14.1.2. Minimum reflectorizing requirements will be IAW T.O. 35-1-3. Black subdued reflectorized tape will be used in lieu of white when left optional by T.O. 35-1-3.

5.14.1.3. Safety/danger/warning markings will be nonreflective red.

5.14.1.4. Caution markings will be nonreflective black.

5.14.1.5. Informational markings will be nonreflective black and be kept to a minimum.

5.14.1.6. Dedicated squadron identification markings will not exceed a 2-inch by 6-inch area below two field numbers if the equipment area permits.

5.14.1.7. Fuel designation markings will be 1-inch nonreflective black letters on the filler cap or most conspicuous area adjacent to the filler cap.

5.14.1.8. Locally devised field numbers will be black.

5.14.1.9. Interior areas of AGE exposed during operation will be toned down to match exterior painted surfaces.

5.14.1.10. AGE arriving on base and requiring tone down will be painted within 60 days of receipt.

5.14.2. **Test equipment/composite tool kits (CTKs).** Tone down of test equipment, CTKs and like equipment will be determined by the aircraft gloss requirement, i.e., unit with aircraft having gloss finishes may apply gloss finishes to their test equipment and CTKs. If the aircraft assigned have a requirement for flat finishes, then all test equipment and CTKs designed for on-equipment application will be toned down in flat colors.

5.14.2.1. To prevent obscuring of instructions and possible damage to components, only exteriors of test equipment boxes will be toned down.

5.14.2.2. Test equipment and CTKs used outside the shop environment will be toned down, i.e., gray, olive drab, brown, black or forest green. A camouflage pattern incorporating a combination of these colors may be used.

5.14.2.3. Equipment not removed from back shops need not be toned down i.e., test equipment, test benches, and mockups.

5.14.2.4. **Warranted CTKs.** Name brand tool boxes received from base supply with corrosion service life warranties will not be painted solely to change color (this will void the manufacturer's warranty unnecessarily). The exception to this policy is if this equipment is deployed to support combat coded units with flat aircraft finishes.

5.14.3. **Tactical Air Control System (TACS) Equipment Requirements.** TACS shelters, vehicles, and support equipment will be camouflage pattern painted using chemical agent resistant coating IAW T.O. 36-1-171, *Painting Instruction for Army Material*.

5.14.3.1. TACS shelters, vehicles and support equipment will be pattern painted in a three-color camouflage scheme IAW T.O. 36-1-161, *Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment and Materials Handling Equipment* and authorized equipment specific technical guidance.

5.14.3.2. Reflective tape, signs, and decals will not be applied.

5.14.3.3. Fabric or inflatable shelters will not be painted in accordance with this instruction.

5.14.3.4. Mobilizers can be toned down in the solid complementary colors of desert sand or forest green.

5.14.4. **Alternate Mission Equipment (AME).** AME will be painted IAW specific technical data. When such data does not exist, units will coordinate with the applicable item manager and MAJCOM/A4M before changing paint schemes.

5.15. Communications Activity Responsibilities.

5.15.1. Communications Squadron Commander Responsibilities.

5.15.1.1. Ensures a local Corrosion Prevention and Control Program (CPCP) is established for ground CEM equipment, stressing prevention and control of corrosion through equipment cleanliness, timely detection, and maintenance of protective finishes.

5.15.1.2. Appoints a member of Quality Assurance as the unit CPCP functional manager.

5.15.1.3. Ensures an adequate corrosion prevention and training program is in place for initial and recurring training.

5.15.1.4. Establishes support as necessary with host Maintenance Squadron and Base Civil Engineer (BCE).

5.15.2. CPCP Functional Manager Responsibilities.

5.15.2.1. Obtains corrosion control treatment beyond the unit's capability from the BCE, vehicle maintenance shop, maintenance organizations, avionics maintenance shop, or respective Air Logistics Center (ALC).

5.15.2.2. Ensures corrosion prevention or treatment actions are taken and documented on all equipment and systems under their control.

5.15.2.3. Procures needed materials for prevention and treatment of corrosion within each work center. A locally fabricated corrosion control kit may be used. The unit CPCP functional manager and work center supervisor can determine kit contents.

5.15.2.4. Ensures all maintenance personnel receive training on CPCP. The training depth will be based on the local environment and particular equipment involved.

5.15.2.5. Reports all unresolved problems, through channels, to MAJCOM/A4M for assistance. When project material is involved, send information copies to EID/ISQ.

5.15.2.6. Works closely with BCE for support of the unit CPCP. **Note:** Support coverage should consider Real Property Installed Equipment (RPIE), vehicles and sheltered equipment (including van interior and exteriors, undercarriages and mobilizers) and equipment in storage awaiting project installation.

5.15.2.7. Ensures each work center adequately adheres to and participates in the unit CPCP. Periodically evaluates the effectiveness of each work center's CPCP.

5.15.2.8. Ensures oil-based coating is applied to all ground connections not environmentally controlled IAW T.O. 1-1-689-3 *Cleaning and Corrosion Control Vol III* and T.O. 31-10-24, *Communication Systems Grounding, Bonding and Shielding* and MIL Std 188-124. This coating will not be applied on ground terminals of shelters and vans..

5.15.2.9. Ensures minimum quantities of reference publications are available to accommodate unit's needs.

5.15.3. RPIE Requirements. BCE has maintenance responsibility for all CE equipment categorized as RPIE IAW AFI 32-9005, *Real Property Accountability and Reporting*. The operation and maintenance of power plants by CE personnel include corrosion control painting IAW AFI 32-1062, *Electrical Power Plants and Generators*. Painting categorized as organizational level responsibility will be accomplished IAW local policy. Assistance should be from BCE when corrosion control maintenance exceeds the unit's capability.

5.15.4. Corrosion Control Training Programs for Communication Systems.

5.15.4.1. Qualification training.

5.15.4.1.1. Initial subject knowledge will cover background knowledge of the causes, removal, control, and prevention of corrosion. This training will be required upon initial assignment to the unit and refresher training every 2 years.

5.15.4.1.2. The unit CPCP functional manager may exempt work centers from using part or all of quality training packages (QTP) covering corrosion control and

prevention where career development course material adequately covers all module subjects contained in the QTP.

5.15.4.2. Follow-on training will be conducted when new techniques are developed to identify, remove, or treat corrosion encountered by the unit. The unit CPCP functional manager, maintenance support personnel, and supervisors must be alert for applicable follow-on training subjects and cross feeds which may appear in technical orders, WR-ALC RP 400-1 (Corrosion Summary), or other publications procurable through the unit publications personnel.

5.15.4.3. Local job qualification standards will consist of performance tasks to identify, remove, and treat all types of corrosion encountered or anticipated by the work center.

Chapter 6

LOW OBSERVABLE AIRCRAFT STRUCTURAL MAINTENANCE PROGRAM (2A7X5)

6.1. MAJCOM/A4M Responsibilities.

6.1.1. Designate a SNCO to perform the following duties:

6.1.1.1. Manage command Low Observable (LO) programs

6.1.1.2. Approve all intra-command LO TDY manning assistance requests.

6.1.1.3. Develop and coordinate command policy and procedures for LO functions.

6.1.1.4. Coordinate inter/intra-command 2A7X5 equipment transfers.

6.1.1.5. Forecast and ensure scheduling of 2A7X5 supplemental training.

6.1.1.6. Represent MAJCOM for all applicable 2A7X5 issues at LO conferences and meetings.

6.1.1.7. Serve as the MAJCOM voting authority during the 2A7X5 Specialty Training Requirements Team (STRT) and Utilization and Training Workshop (U&TW).

6.2. Wing Commander Responsibilities.

6.2.1. Ensures funding is available to support annual RCS flight test requirements.

6.3. Maintenance Group Commander Responsibilities.

6.3.1. Establish and maintain an effective low observables maintenance program.

6.3.1.1. Ensure scheduling of aircraft downtime for LO reduction at the appropriate time based on overall fleet health and/or SAS/LOHAS damage priority screen.

6.3.2. Appoint a fully qualified 2A775 technician or civilian equivalent to QA who is solely focused on LO maintenance processes. Requirement is 1 per AMU.

6.3.2.1. LO Quality Assurance personnel must possess a valid program security clearance in order to fully perform QA duties.

6.3.3. Ensure Plans, Scheduling & Documentation sections schedule F-22 and F-35 annual aircraft audits.

6.3.4. Monitor annual LO F-22 and F-35 audit trends to ensure fleet LO mission capable status is accurately documented and reported.

6.3.5. Support radar cross section (RCS) test events with required aircraft and maintenance personnel. This includes Signature Management Program (SMP) flight testing, Acceptance Test Facility (turntable) revisits and Repair Verification Radar testing.

6.3.5.1. Units must confirm aircraft will support SMP at least 90 days prior to event.

6.3.6. Approval authority for flying aircraft in Aero Only configuration; ensures procedures contained in F-22A TOD and F-35 Interim Maintenance Procedure F35-IMP-A0110510105-960A-A are followed.

6.3.7. Work closely with the OG/CC to balance flying requirements with maintenance capability to prevent an uncontrollable LO backlog.

6.3.8. Ensure all personnel who directly perform maintenance on F-22 and F-35 aircraft complete annual LO awareness, panel handling training through the MTF.

6.3.9. Ensure hot wash/lessons learned information is documented for each Theater Security Package (TSP) deployment and shared with like units/MAJCOMs.

6.4. Fabrication Flight Chief.

6.4.1. Use LO FTD training availability/capacity at every opportunity to elevate capability over the long term and provide recommended changes as required.

6.4.2. Forecast funding to attend and participate in applicable LO meetings, CPABs and other structural related programs/meetings.

6.4.3. Ensure all personnel exposed to LO work environments comply with OSHA, AF, MAJCOM, and wing policies on hygiene standards and preventing contamination of common areas outside of the direct work environment.

6.4.4. Report fleet LO mission capable status ([Attachment 5](#)) to the applicable MAJCOM weapon system team on a daily basis. Fleet SAS/LOHAS average reported must not include non-possessed aircraft.

6.5. LO ASM Section Chief Responsibilities.

6.5.1. Maintain a comprehensive training plan ensuring assigned personnel develop and maintain proficiency in all facets of LO finishes, metallic structures, composite repair, corrosion control, signature assessment, and electronic maintenance information system data entry commensurate with awarded skill level.

6.5.2. Ensure LO ASM personnel receive pre-placement, special purpose, periodic and termination occupational physicals as deemed necessary by local Medical Group Aero Medical Services IAW AFI 48-145, *Occupational and Environmental Health Program*.

6.5.3. Ensure LO ASM personnel provide updated information required to obtain and retain special program security access to the unit or group security manager in a timely manner.

6.5.4. Ensure an LO composite repair facility security training plan is developed with initial and annual training to be used for each individual working within the section.

6.5.5. Develop a dedicated LO OML inspection crew to maintain inspection consistency and inspector proficiency.

6.5.5.1. Establish an OML team rotation plan to ensure all LO personnel remain proficient.

6.5.6. F-22s Request depot assistance IAW T.O. 00-25-107 through the ACC weapon system manager. F-35s Request depot assistance through ALIS utilizing the CRM process.

6.5.7. Ensure accuracy of LO mission capable status documentation and reporting [Attachment 3/Attachment 7](#). This includes establishment of a SAS data integrity team to ensure data is routinely cross checked for accuracy.

6.5.8. Appoint an LO production supervisor to manage scheduling and workload, [Attachment 6](#), on each shift.

6.5.9. Ensure no other maintenance is accomplished on the aircraft, equipment, or within the environmentally controlled/cordoned-off areas during corrosion prevention/ treatment or coatings restoration when hazardous/toxic materials are in use requiring the use of specialized personal protective equipment.

6.5.10. Ensure deficiency reports (DR) are accomplished as necessary IAW T.O. 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*.

6.6. LO Quality Assurance Responsibilities.

6.6.1. Establish a comprehensive inspection program assuring the integrity of LO maintenance and SAS documentation associated with mission capable status reporting. This includes frequent personal evaluations of aircraft OML inspections, SAS documentation and LO repair processes IAW established technical order guidance.

6.6.2. Identify/report all LO training and process deficiencies to the Fabrication Flight Chief.

6.6.3. Include periodic participation in annual aircraft LO audit inspections, [Attachment 4](#), as part of Maintenance Standardization Evaluation Program.

6.6.4. Update Wing leadership on LO maintenance quality and potential improvement areas during the Health of Fleet (HoF) brief if applicable.

6.7. Low Observable/Composite Repair Facility (LO/CRF) Manager Responsibilities.

6.7.1. Responsible for reporting facility operation deficiencies such as the Heating, Ventilation and Air Conditioning (HVAC) systems, compressed and breathing air systems, electrical systems, plumbing and drainage systems in the LO/CRF and on assigned real property of the LO/CRF.

6.7.2. Perform tasks related to the overall management and operations of the LO/CRF, including energy management and equipment inventory.

6.7.3. Perform facility inspections to determine repair and maintenance requirements. Ensure all measures are taken to maintain security accreditation of facility if required.

6.7.4. Submit facility work orders through Civil Engineer (CE) Customer Service. In cases of established/approved contract maintenance for facilities, contact contractor for emergency or out of cycle maintenance. This includes warranty repairs and maintenance required.

6.7.5. Track the completion of contractor and CE work orders. Maintain record of all work to include response time and time required until satisfactory completion of work.

6.7.6. Perform facility and safety inspections as required by technical orders and Air Force instructions.

6.7.7. Perform escort duties or provide escorts as needed for contract maintenance personnel within special access areas of the LO/CRF.

6.8. LO Support Responsibilities.

6.8.1. Stocks supplies, consumables, tools, and equipment to support LO aircraft inspection, maintenance, and surface treatment. Processes supply requests, maintains AF Form 2413,

Supply Control Log (or operates remote devices), tracks MICAP due-outs, monitors bench stock, conducts bench stock and adjusted stock level reviews, and operates tool storage areas. In addition the Support Section NCOIC will ensure a section due-out release point and holding bins are established. Supports CTK/Special tools, E- tools and test equipment.

6.8.2. Maintain bench and operating stocks.

6.8.3. Control and maintain TMDE IAW TO 33-1-27, *Maintenance Support of Precision Measurement Equipment*. Comply with T.O. 33K-1-100-2-CD-1, *TMDE Calibration Interval Technical Order and Work Unit Code Reference Guide*; T.O. 00-20-14, and other applicable technical directives concerning the use, care, handling, transportation, and calibration of TMDE owned by the section.

6.8.4. Provide monthly critical support equipment status update to squadron supervision.

6.8.5. Maintain QRL as needed and provide it to technicians.

6.8.6. Track and process DIFM assets.

6.8.7. Manage reusable containers IAW AFI 24-203, *Preparation and Movement of Air Force Cargo*, and T.O. 00-20-3.

6.8.8. Manage section's hazardous material (HAZMAT) program.

6.8.8.1. Organize and coordinate effective shipping and staging operation.

6.8.8.2. Issue/turn in materials to/from workers using the tool accountability system (TAS).

6.8.8.3. Maintain records and documentation actions to ensure compliance with applicable directives.

JEFFREY R. KING, Brig Gen, USAF
Director of Logistics, Engineering and Force
Protection

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

In addition to required/recommended publications, each Section will maintain publications for possessed equipment IAW T.O. 00-5-1, *AF Technical Order System*.

AFI 21-101, *Aerospace Equipment Maintenance Management*, 21 May 2015

AFI 21-124, *Oil Analysis Program*, 12 January 2017

AFI 32-1024, *Standard Facility Requirements*, 14 July 2011

AFI 32-1062, *Electrical Systems, Power Plants and Generators*, 15 January 2015

AFI 20-114, *Air and Space Equipment Structural Maintenance*, 07 June 2011

AFI 48-145, *Occupational and Environmental Health Program*, 11 July 2018

AFI 91-202, *The US Air Force Mishap Prevention Program*, 24 June 2015

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 June 2012

AFMAN 33-363, *Management of Records*, 01 March 2008

UFC 4-211-02NF, *Corrosion Control and Paint Finishing Hangars*, 10 January 2005

T.O. 00-25-107, *Maintenance Assistance*, 15 July 2009

T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, 10 November 2009

T.O. 00-25-252, *Intermediate and Depot Level Maintenance Instructions Aeronautical Equipment Welding*, 30 September 2008

T.O. 00-35D-54, *USAF Deficiency Reporting and Investigating System*, 1 October 2009

T.O. 1-1-8, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*, 12 Jan 2010

T.O. 1-1-689-3, *Cleaning and Corrosion Control Volume III Avionics and Electronics*, 15 July 2008

T.O. 1-1-691, *Cleaning and Corrosion Prevention And Control, Aerospace And Non-Aerospace Equipment*, 19 October 2007

T.O. 31-10-24, *Installation Practices - Communication Systems Grounding, Bonding and Shielding*, 15 November 2011

T.O. 33B-1-1, *Nondestructive Inspection Methods*, 15 October 2007

T.O. 33-1-37-1 through -3, *Joint Oil Analysis Program Manual Volumes I – III*, 12 September 2008

T.O. 35-1-3, *Corrosion Prevention, Painting and Marking USAF Equipment*, 6 August 2009

T.O. 35E4-1-162, *Field and Depot Maintenance Instruction Tactical Shelters, Foam Beam, Honeycomb*, 11 June 2008

T.O. 36-1-161, *Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment and Materials Handling Equipment*, 7 May 1991

Prescribed Forms

No Forms Prescribed

Adopted Forms

DD Form 2757, *Welding Examination Record*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

AFTO Form 95, *Significant Historical Data*

AF Form 1800, *Operator's Inspection Guide and Trouble Report*

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms:

ACC—Air Combat Command

AGE—Aerospace Ground Equipment

AFCENT—Air Force Central Command

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFOSH—Air Force Occupational Safety and Health

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFRL—Air Force Research Laboratory

AFSC—Air Force Specialty Code

ALIS—Autonomic Logistics Information System

ALC—Air Logistics Center

AME—Alternate Mission Equipment

AMU—Aircraft Maintenance Unit

AMX—Aircraft Maintenance

AMXS—Aircraft Maintenance Squadron

ANG—Air National Guard

APC—Advance Performance Coatings

ARC—Air Reserve Component

ASM—Aircraft Structural Maintenance

BCE—Base Civil Engineer
CAF—Combat Air Force
CC—Commander
CE—Civil Engineering
CEM—Communications-Electronics-Meteorological
CMS—Component Maintenance Squadron
CPAB—Corrosion Prevention Advisory Board
CPCP—Corrosion Prevention and Control Program
CTK—Composite Tool Kit
DoD—Department of Defense
DR—Deficiency Reports
EMS—Equipment Maintenance Squadron
ESA—Electrical Surge Arrestor
FAC—Forward Air Control
FTD—Field Training Detachment
HAZMART—Hazardous Material
HQ—Headquarters
HVAC—Heating, Ventilation and Air Conditioning
IAW—In Accordance With
IC—Interim Change
ICBM—Intercontinental Ballistic Missile
IMIS—Integrated Maintenance Information System
IMDS—Integrated Maintenance Data System
IPT—Integrated Process Teams
JOAP—Joint Oil Analysis Program
LO—Low Observable
LOCRF—Low Observable/Composite Repair Facility
LRU—Line Replaceable Units
MAJCOM—Major Command
MDS—Mission Design Series
MOA—Memorandum of Agreement
MSDS—Material Safety Data Sheet

NAF—Numbered Air Force
NCO—Noncommissioned Officer
NDI—Non-Destructive Inspection
NESHAP—National Emission Standards for Hazardous Air Pollutants
OAP—Oil Analysis Program
OPR—Office of Primary Responsibility
PGM—Product Group Manager
PIT—Product Improvement Team
PR—Personnel Recovery
QA—Quality Assurance
QPD—Qualified Product Database
QPL—Qualified Products Listings
QPT—Quality Training Package
QTP—Quality Training Package
RAM—Radar Absorbing Material
RCS—Radar Cross Section
RDS—Records Disposition Schedule
RDT&E—Research, Development, Test and Evaluation
RPIE—Real Property Installed Equipment
RTO—Responsible Test Organization
SAS—Signature Assessment System
SE—Support Equipment
SEM/EDX—Scanning Electron Microscope/Energy Dispersive X-Ray
SMD—Structural Management Director
SME—Subject Matter Expert
SMP—Signature Management Program
SPD—System Program Directorate
SPM—System Program Manager
STD—Standard
TACS—Tactical Air Control System
TMDE—Test, Measurement and Diagnostic Equipment
TDY—Temporary Duty

TFI—Total Force Integration

T.O—Technical Order

UFC—Unified Facilities Criteria

USAF—United States Air Force

Attachment 2

AIRCRAFT MARKING SPECIFICATIONS

A2.1. (Not all inclusive, refer to specific weapon system T.O. or drawings for further guidance) .

Table A2.1. A-10 Markings.

Marking	Location	Size	Color/Finish
Tail Stripe	Per local instruction	Not to exceed 9 inches	Per local instruction
PACAF Command Patch	Outboard side of both vertical stabs; Vertical: 10 inches below bottom edge of rudder cap Horizontal: Centered on unit identifier	10 inches tall	36118
Unit Unique Silhouette (per local instruction)	On both vertical stabs; Vertical: Centered between PACAF command patch and unit identifier Horizontal: Centered on vertical stab, excluding rudder measurement	Per local instruction	36118
Unit Identifier "OS"	Outboard side of both vertical stabs; Vertical: Bottom of letters located 3 inches above top of tail numbers Horizontal: Centered on tail numbers	10 inches tall	36118
Aircraft Tail Numbers	Marked in accordance with T.O. 1A-10() -23	6 inches tall	36118
Wing Patch	On left side of fuselage; Vertical; Above panel F-18 Horizontal: Aft of panel F-44	10 inches tall	36118
Squadron Patch	On right side of fuselage; Vertical; Above panel F-79 Horizontal: Aft of panel F-105	10 inches tall	36118
Pilot and Crew Chief Names	Pilot name located on left side under windscreen beginning at FS 188.92. Crew chief name located under pilot name. Assistant crew chief name located under crew chief name.	Not to exceed 2 inches tall	Per local Instruction
Nose Numbers	Last three/four digits of tail number on	6 inches tall	36118

	both sides of aircraft nose		
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A2.2. C-17 Markings.

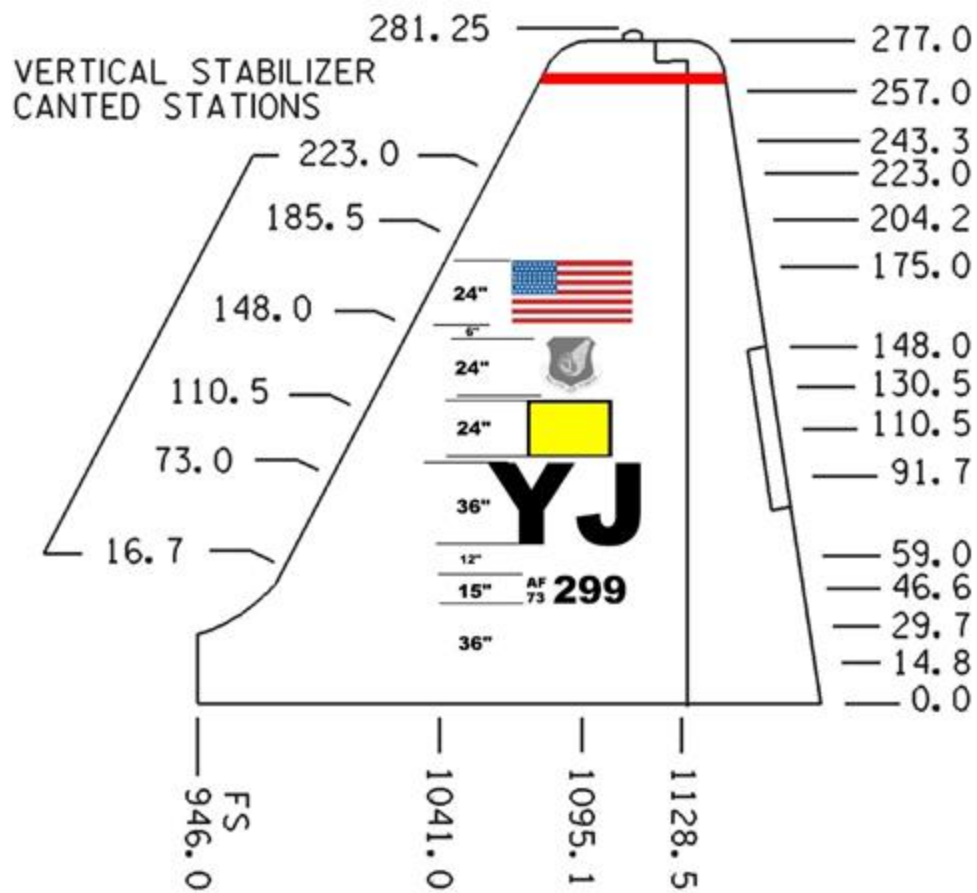
A2.2.1. All C-17 marking will be marked IAW T.O. 1C-17A-23.

A2.3. C-130 Markings.**Table A2.2. C-130 Markings.**

Marking	Location	Size	Color/Finish
Tail Stripe	Horizontal wrap around stripe. Top of stripe located at vertical stabilizer station 265.	6 inches tall	Per local instruction
American Flag	On both sides of vertical stab; Vertical: Top of flag located 23 inches below the vertical stab antenna (178 inches from base of vertical); Horizontal: centered on vertical stab (excluding rudder measurements).	24 X 48 inches	Matte Finish
PACAF Command Patch	On both sides of vertical stab; Vertical: Top of patch located 6 inches below bottom of flag Horizontal: centered on vertical stab (excluding rudder measurements).	24 inches tall	Subdued
Unit Unique Silhouette (per local instruction)	On both sides of vertical stab; Vertical: Centered between PACAF command patch and unit identifier Horizontal: Centered on vertical stab, excluding rudder measurement	Not to exceed 24 inches tall x 36 inches long	Per local instruction
Unit Identifier "YJ"	On both sides of vertical stab; Vertical: Bottom of unit identifier located at vertical stab station 63. Horizontal: Centered between FS 1068 and 1122.	36 inches tall	37038
Radio Call Numbers	On both sides of vertical stab; Vertical: Bottom of radio call numbers located at vertical stab station 36. Horizontal: Centered between FS 1068 and 1122.	15 inches tall	37038

Wing Patch	Left fuselage; Vertical: 8 inches above first porthole beneath light panel Horizontal: Centered between FS 245.0E and FS 245.00	12 inches tall	Black
Squadron Patch	Right fuselage symmetrically located same as wing patch.	12 inches tall	Black
Aircraft Commander and Crew Chief Names	Vertical: Bottom of name block on WL175.0 Horizontal: Center between FS 175.0 and FS 210.0.	Per local instruction	Subdued
Nose Numbers (Number will consist of last four digits of aircraft serial number)	On both sides of fuselage; Vertical: Aligned with the bottom of the kick window Horizontal: 23 inches aft of kick window	6 inch block letters	Black
Wing Designation	On both sides of fuselage; Vertical: 6 inches below nose numbers Horizontal: The last letter of the Wing designator will be aligned with last digit of the nose numbers.	6 inch block letters	Black
Armament Placard	Top of placard located 15 inches below top of CED door and 5 inches aft of the door. The word "ARMAMENT" will be located $\frac{3}{4}$ " below upper border of placard.	16 X 10 inches with 1 inch border	37038

Figure A2.1. C-130 Markings.



A2.4. E-3 Markings.**Table A2.3. E-3 Markings.**

Marking	Location	Size	Color/Finish
Tail Stripe	Horizontal stripe on both sides of tail. Top of stripe located at WL 557.1	Not to exceed 24 inches tall	Per local instruction
American Flag	Applied to both sides of the vertical stabilizer. The top of the American flag is located at Fin Station 210.15 with the forward top corner of each flag resting on the vertical stabilizer leading edge seam.	60 x 31.5 inches	Per T.O. Guidance
PACAF Command Patch	Centered 12 inches fwd Sta 259.5. Top of insignia 40 inches above Stringer 19 on co-pilot's side	18 inches tall	Black silhouette
Unit Unique Silhouette (per local instruction)	On both sides of vertical stab; Vertical: Centered between American flag and unit identifier Horizontal: Centered on vertical stab, excluding rudder measurement	Not to exceed 24 inches tall x 36 inches wide	Per local instruction
Unit Identifier	Left side: Located 7 inches above the radio call number with the top corner of the first letter at the leading edge seam Right side: Located 7 inches above the radio call number with the top corner of the last letter at the leading edge seam	24 inches tall	Gloss Black
Aircraft Tail Numbers	On both sides of vertical stab; 7 inches below unit identifier	12 inches tall	Gloss Black
Wing Patch	Centered 12 inches fwd Sta 259.5. Top of insignia 40 inches above Stringer 19 on pilot's side	18 inches tall	Black silhouette
Pilot and Crew Chief Names	In a 1/4" black bordered, 30 1/2" by 11 1/2" box, just below the commander's window on the left side of the aircraft with the upper edge of the box 40" plus or minus 0.50" above the edge of the skin stringer 19, running from body station 227.8 to 203.8 will be the words "ACFT Commander" in Helvetica medium with	Per verbiage	Per verbiage

	<p>1.13" lettering with the individuals name centered below it in Brush Script with 1.695" lettering. Below the ACFT Commander's name will be the words "Dedicated Crew Chief" in Helvetica medium in 1.13" lettering with the individuals name centered below it in Brush Script in 1.695" lettering. The stencil will be placed 1/4" below seam and 1/2" forward of window beef up plate (all lettering will be black).</p> <p>In a 1/4" black bordered, 30 1/2" by 11 1/2" box just below the Pilots window on the right side of the aircraft, with the upper edge of the box 40" plus or minus .50" above the skin stringer 19, running from body station 227.8 to 203.8 will be the words "MCC" in Helvetica medium with 1.13" lettering with the individuals name centered below it in Brush Script with 1.695" lettering. Below the MCCs' name will be the word "ADCC" in Helvetica medium with 1.13" lettering with the individuals name centered below it in Brush Script with 1.695" lettering. The stencil will be placed 1/4" below seam and 1/2" forward of window beef up plate (All lettering will be black).</p>		
Nose Numbers	Last four digits of tail number on left and right nose gear door	6 inches tall	Gloss Black

A2.5. F-15 Markings.

Table A2.4. F-15 Markings.

Marking	Location	Size	Color/Finish
Tail Stripe	Per local instruction	6 inches tall	Per local instruction
PACAF Command Patch	<p>Vertical: Bottom of insignia 18 inches above unit designator</p> <p>Horizontal: Aft edge of insignia of FS 806.5</p>	18 inches tall	37038

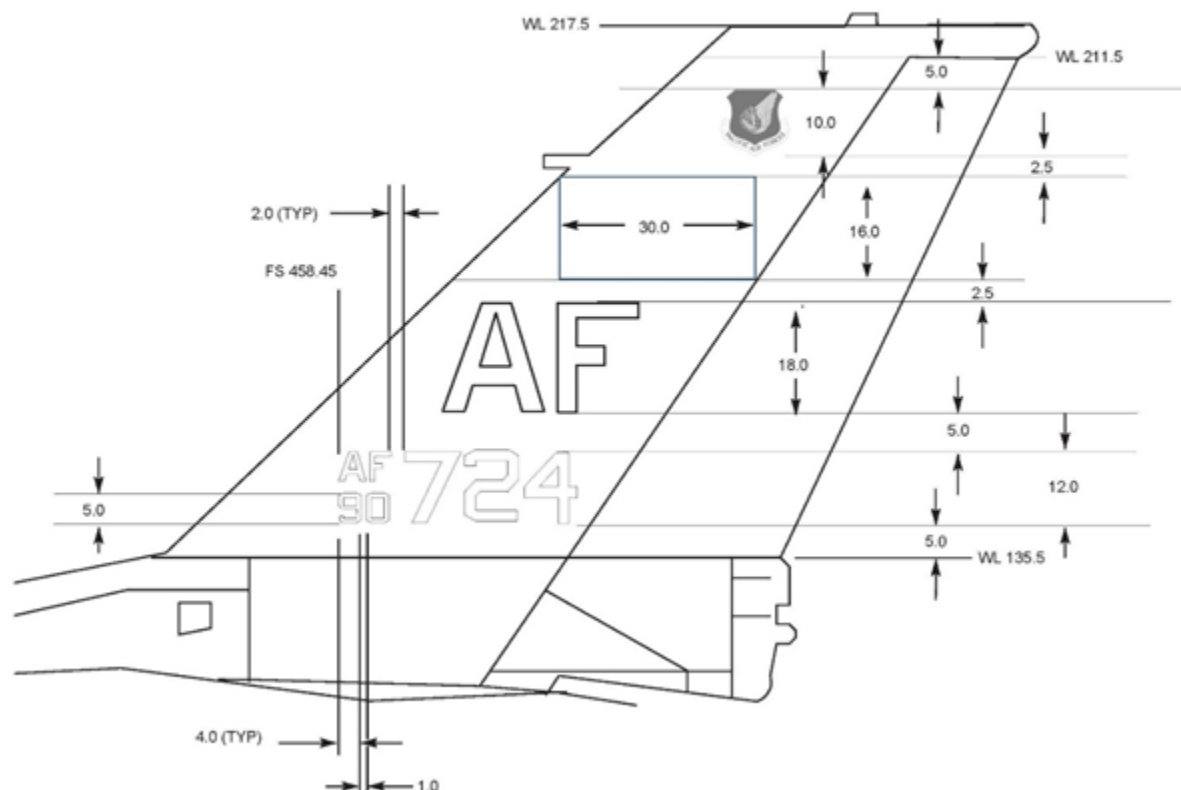
Unit Unique Silhouette (per local instruction)	Inside surface of both vertical stabs; Vertical: Centered between PACAF command patch and unit identifier Horizontal: Centered on vertical stab, excluding rudder measurement	Per local instruction	Per local instruction
Unit Identifier "ZZ"	On both vertical stabs; Vertical: Top of letters even with top of rudder Horizontal: Leading edge of first letter on FS 760.0	24 inches tall	37038
Aircraft Tail Numbers	Follow specific -23 T.O. reference for location.	15 inches tall	37038
Wing Patch	On left side of fuselage; Vertical: Bottom of insignia on WL 100.0 Horizontal: Forward edge of insignia on FS 458.0	18 inches tall	37038
Squadron Patch	On right side of fuselage; Vertical: Bottom of insignia on WL 100.0 Horizontal: Forward edge of insignia on FS 458.0	18 inches tall	37038
Pilot and Crew Chief Names	Pilot centered below left windscreen frame and crew chief and assistant crew chief names centered below right windscreen frame.	Not to exceed 2 inches tall	Per local Instruction
Nose Numbers	Last three/four digits of tail number vertically on left and right side of the nose gear door or on the aircraft nose 1 inch below the EWWS antenna with the last number ending 1 inch from radome.	4 inches tall	37038

A2.6. F-16 Markings.

Table A2.5. F-16 Markings.

Marking	Location	Size	Color/Finish
Tail Stripe	Horizontal wrap around stripe. Top of stripe located at WL 217.5	6 inches tall	Per local instruction
PACAF	On both sides of vertical stab;	10 inches tall	36118

Command Patch	Vertical: Top of patch 5 inches below bottom of tail stripe Horizontal: Centered on vertical stab, excluding rudder measurement		
Unit Unique Silhouette (per local instruction)	On both sides of vertical stab; Vertical: Centered between PACAF command patch and unit identifier Horizontal: Centered on vertical stab, excluding rudder measurement	Not to exceed 16 inches tall x 30 inches long	36118
Unit Identifier “OS”, “WP”, “WW”, “AK”	On both sides of vertical stab; Vertical: Bottom of letters at WL 157.5 Horizontal: Centered on vertical stab, excluding rudder measurement	18 inches tall	36118
Aircraft Tail Numbers	Marked in accordance with T.O. 1F-16()-2-00GV-00-1	12 inches tall	36118
Wing Patch	On left side of fuselage; Vertical; Top of patch 11 inches below fuselage/intake splitter vane Horizontal: Leading edge 52 inches aft of intake duct lip	10 inches tall	36118
Squadron Patch	On right side of fuselage; Vertical; Top of patch 11 inches below fuselage/intake splitter vane Horizontal: Leading edge 52 inches aft of intake duct lip	10 inches tall	36118
Pilot and Crew Chief Names	Pilot name located on left canopy rail. Crew chief name located on right canopy rail. Assistant crew chief name located on inside of nose gear door.	Not to exceed 2 inches tall	Per local Instruction
Nose Numbers	Last three/four digits of tail number on both sides of nose gear door or centered below teardrop EWWS antenna on each side of aircraft nose	4 inches tall	36118

Figure A2.2. Typical Paint Scheme.**A2.7. Unique Paint Scheme.**

A2.7.1. Aggressor Aircraft (Eielson Only) Aircraft are authorized to be painted using the “Artic”, “Blizzard”, “Desert”, “Fulcrum”, “Lizard”, “Shark” or “Splinter” paint scheme, however, units must submit for engineer approval IAW T.O. 00-25-107, *Maintenance Assistance*, prior to paint application. Unless approved by T.O. guidance all other paint scheme change requests require approval prior to painting IAW T.O. 1-1-691, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*, in conjunction with T.O. 00-25-107, *Maintenance Assistance*.

A2.7.2. F-16 units operating in icing conditions are authorized to paint a flat black (color code 37038) ring around the inside lip of the engine inlet duct to aid in the detection of ice build-up. In these cases, units will pay particular attention not to paint over any rain erosion coating as this may lead to premature failure of the rain erosion coating. Flat black ring should be painted on first white section of inlet lip RAM coating.

A2.8. F-22 Markings.**Table A2.6. F-22 Markings.**

Marking	Location	Size	Color/Finish
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Tail Stripe	Horizontal wrap around stripe applied to the upper most elements on both sides of the vertical stabilizers.	6 inches tall	Any design applied in contrasting shades of gray
PACAF Command Patch	On both vertical stabs; Vertical: Top of insignia applied 50.3 inches below top of vertical stabilizer Horizontal: Centered on trailing edge aft unit designator letter	18 inches tall	Contrasting gray
Unit Unique Silhouette	Not authorized on F-22	N/A	N/A
Unit Identifier "AK"	On both sides of vertical stab; Vertical: Bottom of letters applied 96.1 inches below top of vertical stabilizer Horizontal: Bottom leading edge of first letter is applied 28.8 inches aft of vertical stabilizer leading edge	24 inches tall	Contrasting gray
Wing Patch	On left side of fuselage; Vertical: Centered between chine and bottom of the intake Horizontal: Centered between leading edge of right intake lip and right weapons bay	18 inches tall	Contrasting gray
Squadron Patch	On right side of fuselage; Vertical: Centered between chine and bottom of the intake Horizontal: Centered between leading edge of left intake lip and left weapons bay	18 inches tall	Contrasting gray
Pilot and Crew Chief Names	Pilot: Justified to forward edge of left nose landing gear door Crew Chief: Justified to forward edge of right nose landing gear door	1.75 inches tall	Per local Instruction

A2.9. F-35 Markings.**Table A2.7. F-35 Markings.**

Marking	Location	Size	Color/Finish
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Tail Stripe	Not authorized for F-35 aircraft	N/A	N/A
PACAF Command Patch	On both vertical stabs; Vertical: bottom centered 47 inches above the bottom edge of the blackboard Horizontal: Centered fore to aft in the vertical stabilizer blackboard area	12 inches tall	Contrasting gray silhouette
Unit Unique Silhouette	Not authorized for F-35 aircraft	N/A	N/A
Unit Identifier	On both sides of vertical stab; Vertical: Bottom of the designator will be centered 25 inches above the bottom edge of the vertical stabilizer blackboard. Horizontal: Centered on vertical stab, excluding rudder measurement	12 inches tall	Contrasting gray
Aircraft Tail Numbers	Bottom of the tail number will be centered 2 inches above the bottom edge and 2.6 inches from the inner most trailing edge corner of the vertical blackboard area.	6 inches tall	Contrasting gray
Wing Patch	Insignia will be centered within the blackboard area on the right side inlet below the chine and formation light.	12 inches tall	Contrasting gray silhouette
Squadron Patch	Insignia will be centered within the blackboard area on the left side inlet below the chine and formation light.	12 inches tall	Contrasting gray silhouette
Pilot and Crew Chief Names	Pilot: End of name will be located two inches forward of inboard aft apex (BL 0) and two inches from BL 0 door edge (left NLG door); Crew Chief: Beginning of name/rank will be located two inches forward of inboard aft apex (BL 0) and two inches from BL 0 edge (right NLG door).	2 inches tall	Per local Instruction
Nose Numbers	Nose numbers will be located four inches from the inboard door forward apex (BL 0) and two inches from BL 0 door edge.	4 inches tall	Contrasting gray
Note: All lettering/numbering applied to F-35 blackboard areas will meet vertical block			

type/style font/lettering and Arabic numerals as specified in Technical Order 1-1-8, Appendix B, Figure B-3 (Form of Letters and Numerals) or similar computer generated font.

A2.10. HH-60 Markings.

Table A2.8. HH-60 Markings.

Marking	Location	Size	Color/Finish
PACAF Command Patch	Left side: 11 inches below WL 319.633 centered Right side: 7 inches below WL 319.633 centered	10 inches tall	Subdued
Unit Identifier	Left side: Positioned 21.5 inches below WL 319.633, centered Right side: Positioned 19 inches below WL 319.633, centered	9 inches tall	Subdued
Wing Patch	On right cargo door 8 inches below forward window, centered	10 inches tall	Subdued
Squadron Patch	On left cargo door, 8 inches below forward window, centered	10 inches tall	Subdued
Pilot and Crew Chief Names	Pilot: Right door, 2.5 inches below window, centered Copilot: Left door, 2.5 inches below window, centered Crew chief/assistant: Crew chief, right cargo door, 3.1 inches below and centered on forward window. Assistant: Left cargo door, 3.1 inches below and centered on forward window	Not to exceed 2 inches tall	Per local Instruction
Helicopter Rotor Markings	All helicopter rotor markings will be in accordance with T.O. 1-1-8 and applicable weapons system technical data.	IAW T.O. 1-1-8 and applicable weapons system technical data	IAW T.O. 1-1-8 and applicable weapons system technical data

A2.11. KC-135 Markings.

Table A2.9. KC-135 Markings.

Marking	Location	Size	Color/Finish
Tail Stripe	Horizontal wrap around stripe. Top of	24 inches tall	Per local

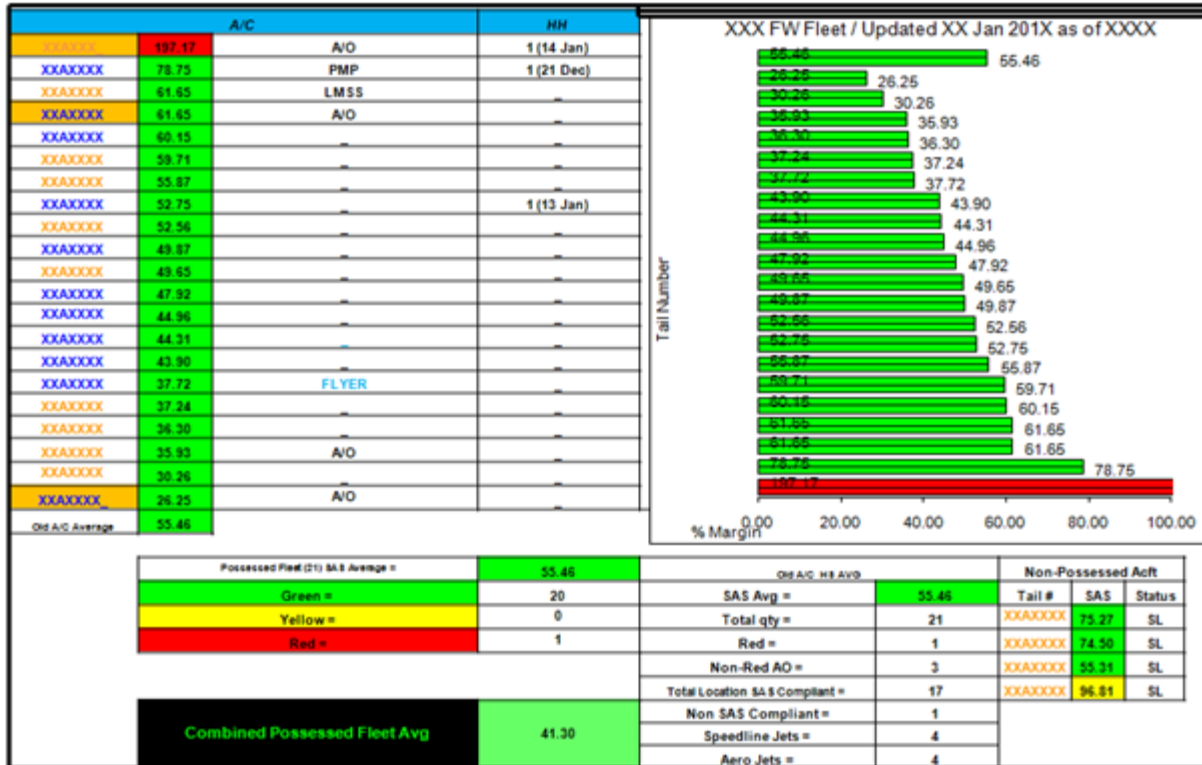
	stripe located at WL 557.1		instruction
American Flag	On both sides of vertical stab; Center on vertical stabilizer with bottom of flag 79 inches above top of UHF antenna.	40 X 23 inches	See TO 1C-135-3-8
PACAF Command Patch	On both sides of vertical stab; Vertical: Top of patch 24 inches below bottom of tail stripe Horizontal: Leading edge of patch 17 inches from leading edge of tail	24 inches tall	Black silhouette
Unit Unique Silhouette (per local instruction)	On both sides of vertical stab; Vertical: Centered between PACAF command patch and unit identifier Horizontal: Centered on vertical stab, excluding rudder measurement	Not to exceed 24 inches tall x 36 inches wide	Per local instruction
Unit Identifier	On both sides of vertical stab; Locate 24 inches down from bottom of command emblem. Last letter of designator will end 17 inches in from leading edge of tail.	36 inches tall	Black
Aircraft Tail Numbers	On both sides of vertical stab; 6 inches below unit identifier	12 inches tall	Black
Wing Patch	Locate on left fuselage centered on Fuselage Station 360 & Water Line 214.	24 inches tall	Black silhouette
Squadron Patch	Locate on right fuselage centered on Fuselage Station 360 and Water Line 214. Insignia should be symmetrical with wing insignia.	24 inches tall	Black silhouette
Pilot and Crew Chief Names	See paragraph 5.5.10 .	Not to exceed 2.5 inches tall	Per local Instruction
Nose Numbers	Last four digit of aircraft serial number. Start numbers on left fuselage at FS 277.0 with bottom of numbers on WL 200.0. Start numbers on right fuselage at FS 203.6 with bottom of numbers on WL 200.0.	6 inches tall	Black
Ruddervator Markings	Numeric and alpha designator of assigned squadron centered on the	8 inches tall	36622

	underside of the left and right ruddervator.		
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Attachment 3

DAILY SAS REPORTING METRIC

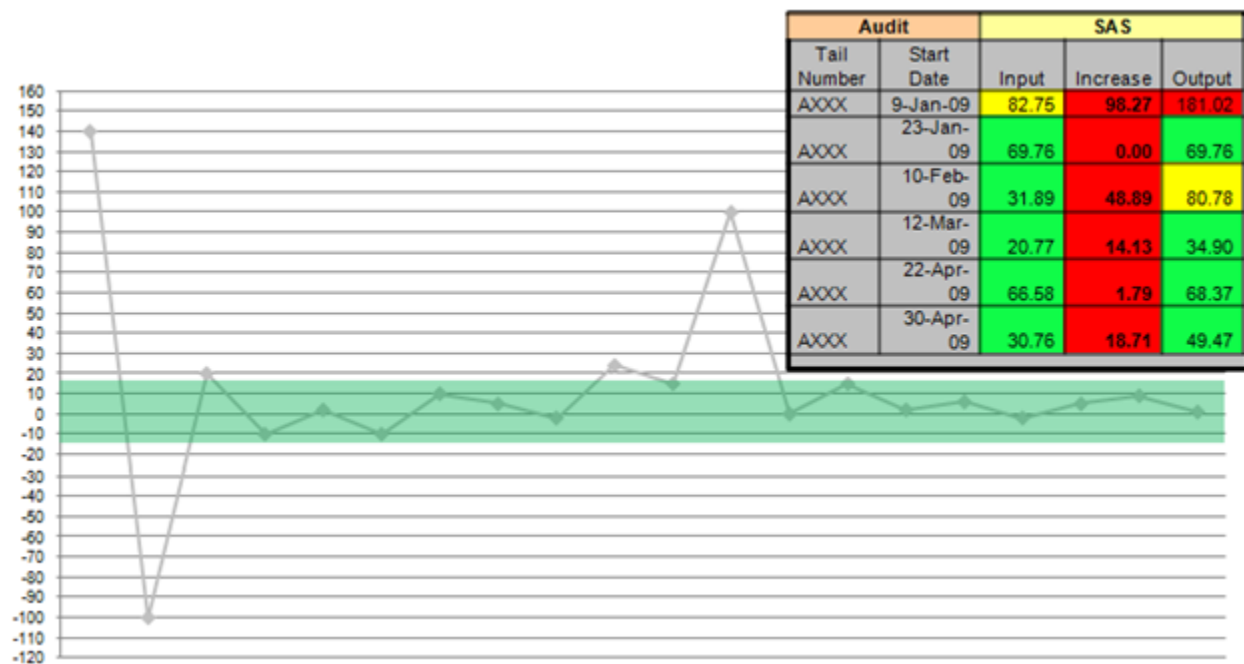
Figure A3.1. Daily SAS Reporting Metric.



Attachment 4

SAS AUDIT METRIC

Figure A4.1. SAS Audit Metric.

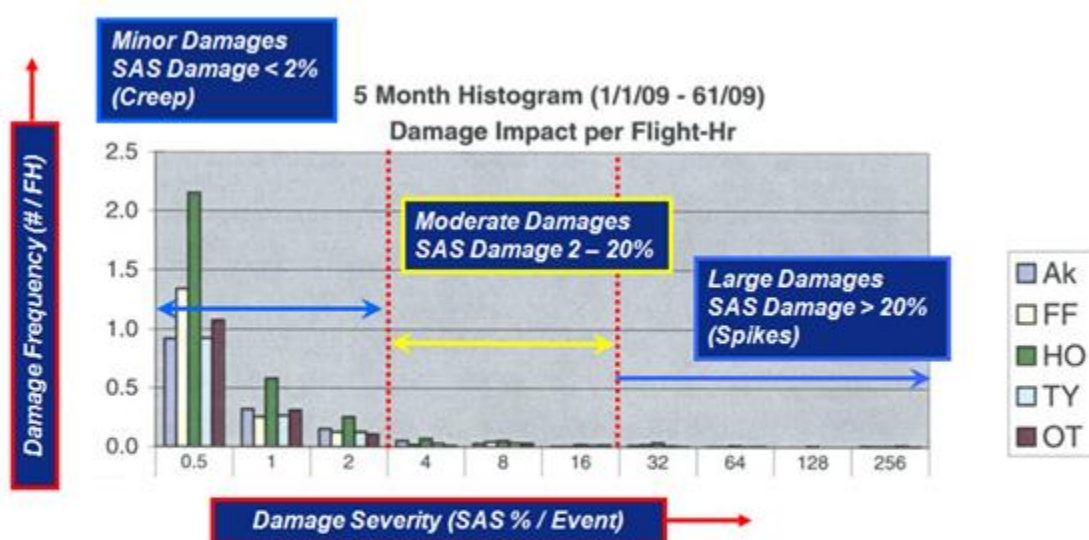


Attachment 5

SAS DAMAGE IMPACT DEFINITION

A5.1. The chart below shows a categorization approach to optimize maintenance activities. It outlines three categories of damages, those with an impact greater than 20% (major “spikes”), those between 2% and 20% (moderate “routine”) and those less than 2% (minor “creep”). Post flight OML inspections accomplished by the crew chief and/or LO personnel must identify any LO spike damages as soon as possible after flight if the aircraft is on the next day flying schedule.

Figure A5.1. SAS Damage Impact Chart.



Note: Actual chart includes all data (including SAS creep rate) by base

SAS Creep = LO Damages 2% or Less

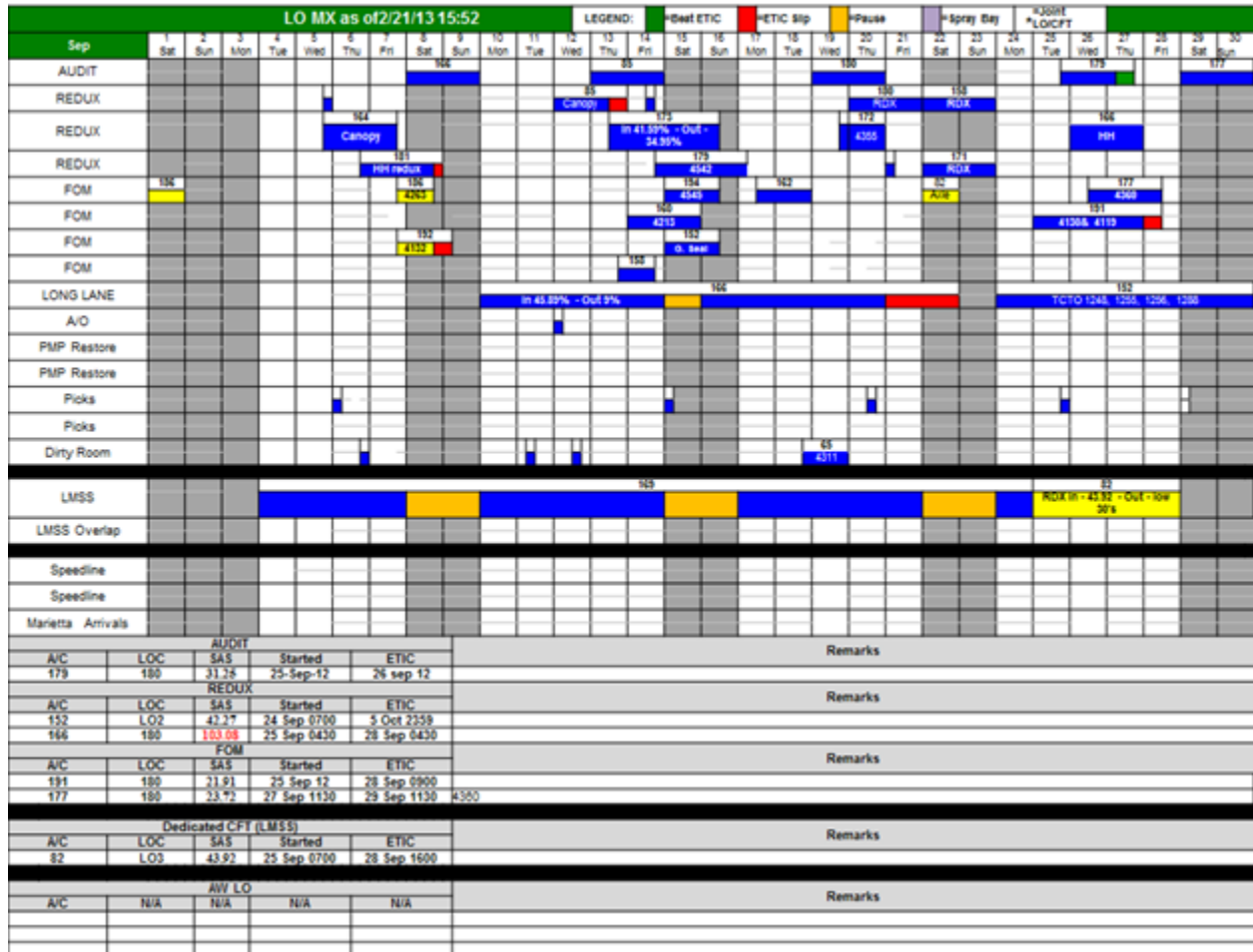
A5.1.1. The damage definition/SAS creep metric must be used to establish a battle rhythm for managing LO maintenance. Minor damages are repaired through scheduled SAS redux. Moderate damages should primarily be worked in groups in conjunction with other scheduled maintenance, e.g. Packaged Maintenance Plans, TCTOs, and panel removals to facilitate other maintenance. Any existing moderate damages should be the priority when performing scheduled SAS reduction efforts. Large damages that drive significant increases in SAS must be fixed as soon as possible to manage SAS growth. In some cases it may be prudent to define large damages as >10 percent to effectively control SAS margins. This more aggressive approach is particularly beneficial prior to major deployments. Units have the option to define spikes as >10% if necessary to control spike growth, but the SAS creep definition provided above must be used in all cases.

A5.1.2. Use wing analysis and scheduling experts to help balance flying operations and LO maintenance events/downtime to best manage LO fleet health. Failure to effectively balance flying and LO maintenance requirements could lead to an uncontrollable LO backlog.

Attachment 6

LO MAINTENANCE SCHEDULE

Figure A6.1. LO Maintenance Schedule.



CANOPY TRANSPARENCY STATUS REPORTING.

Figure A7.1. Canopy Transparency Status Chart.

[illegible]