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**Maintenance**

**CORROSION CONTROL AND PREVENTION  
PROGRAM AND MARKING OF AEROSPACE  
EQUIPMENT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements policy guidance in Air Force Policy Directive (AFPD) 21-1, *Managing Aerospace Equipment Maintenance*, and Air Force Instruction (AFI) 21-105, *Aerospace Equipment Structural Maintenance*. It provides policy and objectives and assigns responsibilities for implementing and maintaining an effective Corrosion Prevention and Control Program for aerospace systems, equipment, and components in AFMC. It specifies responsibilities performed at each level of command and implements guidance presented in AFI 21-105, *Air Force Occupational, Safety, and Health*, 48 and 91 series instructions, Technical Order's (T.O.) 1-1-691, *Aircraft Weapons Systems Cleaning and Corrosion Control*, and 1-1-689, *Avionics Cleaning and Corrosion Prevention/Controls*, command instructions, and the specific aircraft -23 T.O.s. This instruction also provides for applying command approved non-USAF standards, and aircraft markings and describes markings of aerospace ground equipment (AGE). This instruction does not apply to the Air National Guard and Air Force Reserve. All AFMC maintenance organizations shall maintain a current copy of this instruction.

**SUMMARY OF REVISIONS**

**This document is substantially revised and must be completely reviewed.**

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**1. General.** A relationship exists between preventing and controlling corrosion on aerospace systems, equipment, and components. Corrosion will decrease if corrosion prevention efforts are increased. At the field level, the best and most economical means to corrosion prevention is frequent cleaning in conjunction with periodic maintenance touch-up painting and frequent corrosion inspections. Prevention is the key to an effective corrosion control program; therefore, strict adherence to corrosion prevention policies is essential. USAF technical instructions for corrosion prevention, detection, treatment, and protection furnish general guidance concerning application of the AFMC Corrosion Prevention and Control Program. The applicable USAF or commercial weapon system equipment manuals include inspection frequencies and maintenance requirements of specific weapons systems and equipment. Apply paint schemes/configuration and USAF standard aircraft markings according to T.O. 1-1-8, *Application of Organic Coatings*, and applicable weapon system T.O.s. There is no authorization to deviate from the requirements of this instruction without prior approval of HQ AFMC/LGM.

1.1. Depot Maintenance Application. The Air Logistics Centers (ALC), Aerospace Maintenance and Regeneration Center (AMARC), and other AFMC depot maintenance activities will implement this instruction as written. Waivers for deviation to this instruction will be submitted to HQ AFMC/LGM for review and approval/disapproval for any responsibilities/functions deemed not applicable. Implementation will include appointing a center Corrosion Control Manager and establishing a corrosion control operating instruction as necessary.

## **2. Responsibilities.**

### 2.1. HQ AFMC/LGM.

2.1.1. Oversees the command's Corrosion Control and Prevention Program.

2.1.2. Designates a senior NCO to manage the Corrosion Control and Prevention Program for AFMC and perform the following responsibilities:

2.1.2.1. Reviews Air Force publications concerning corrosion control and prevention for adequacy and coordinates with appropriate agencies.

2.1.2.2. Represents AFMC at assigned weapon systems corrosion prevention advisory boards (CPAB), AF/DOD corrosion conferences and field surveys.

2.1.2.3. Develops and coordinates AFMC policy and guidance for corrosion control and prevention.

2.1.2.4. Coordinates within AFMC on the development and testing of corrosion control techniques and materials.

2.1.2.5. Submits comments and recommendations to agencies responsible for the conception, definition, and acquisition of Air Force materials.

2.1.2.6. Represents AFMC at Aircraft Structural Maintenance (ASM) Utilization and Training Workshops.

### 2.2. Center/Wing Commander.

2.2.1. Approves all aircraft paint waiver requests before submittal to HQ AFMC/LGM.

### 2.3. Maintenance Group Commander (MXG/CC)/Product Director.

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

2.3.2. Appoint a Wing Corrosion Program Manager.

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

2.3.3.1. Provides a facility for maintenance painting of assigned aircraft on a year round basis.

2.3.3.2. Ensures requirements outlined in AFI 32-1024, *Standard 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.

2.3.3.3. Ensures facility control technology meets local, state and federal Environmental Protection Agency requirements in conjunction with current National Emission Standards for Hazardous Air Pollutants (NESHAP).

2.3.4. 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:

2.3.4.1. 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.

2.3.4.2. An environmentally compliant enclosed or covered wash rack.

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

2.3.4.4. Appoints an aircraft wash rack facility manager to ensure proper cleaning materials, equipment, and supplies are maintained in accordance with applicable technical orders and AFMCI 21-119, *Objective Center/Test Wing Aircraft Maintenance Management Policy*.

2.4. Aircraft Structural Maintenance (ASM) Section Chief or Wing/Center Corrosion Program Manager.

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

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

2.4.3. Ensures only authorized chemical cleaning materials and corrosion removal methods are used and that Material Safety Data Sheets are available for each chemical used. Authorized cleaning compounds are identified in a Quality Product Listing (QPL) found on the AF Petroleum Office, Technical Division(Det 3, WR-ALC/AFTT) website:

<https://afpet.lackland.af.mil/sft/specs/>.

2.4.4. Ensures Aircraft Structural Maintenance personnel receive pre-placement, special purpose, periodic and termination occupational physicals as deemed necessary by local Medical Group Aeromedical Services IAW AFOSH Standard 48-17, *Standardized Occupational Health Program*, and AFI 48-101, *Aerospace Medical Operations*.

2.4.5. Ensures no other maintenance is accomplished on the aircraft or equipment during corrosion prevention treatment when hazardous/toxic materials are in use which require the use of specialized personal protective equipment. In the event specialized respiratory protection equipment

is required, personnel will be properly fitted for the equipment and trained in its use IAW AFOSH Standard 48-137, *Respiratory Protection Program*.

2.4.6. Provides Environmental, Occupational Safety, Fire Prevention, Health and Hazard Communication training to all personnel as required by AFI 91-301, *Air Force Occupational Safety, Fire Prevention, and Health Program*, and AFOSH Standard 48-21, *Hazardous Communication*. Also, ensures that required training is documented in appropriate training records.

2.4.7. Ensures Bioenvironmental services conduct initial baseline comprehensive evaluations and provide annual follow-ups to determine adequacy of workcenter controls for occupational hazards. Maintains records of this survey in the work center.

2.4.8. Forecasts funding to attend and participate in applicable Corrosion Prevention Advisory Boards (CPABs) and other corrosion/structural related programs/meetings.

2.4.9. Submits CPAB agenda items to HQ AFMC/LGM.

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

2.4.11. Appoints an aircraft wash rack facility manager to ensure proper cleaning materials, equipment, and supplies are maintained in accordance with applicable technical orders and AFMCI 21-119, *Objective Center/Test Wing Aircraft Maintenance Management Policy*.

2.4.12. Trains operations squadrons' wash crew supervisor(s) in all aspects of aircraft wash and develops local checklists.

2.4.13. Provides wash crew supervisor(s) and the AGE Flight Superintendent with an updated Quality Product Listing (QPL) every 6 months to ensure only approved cleaning compounds are being used on aircraft and AGE.

2.4.14. Ensures deficiency reports (DR) are accomplished as necessary IAW T.O. 00-35D-54, *USAF Deficiency Reporting and Investigating System*.

2.4.15. Requests depot assistance IAW T.O. 00-25-107, *Maintenance Assistance*, or T.O. 00-25-108, *Communications-Electronics (C-E) Depot Support*, through the AFMC weapon system manager with an information copy to HQ AFMC/LGM when corrosion treatment/repairs are beyond the unit's capability.

2.4.16. Reports corrosion program deficiencies through proper channels, as required.

2.4.17. Serves as the ASM technical assistant to the Group Commander/Product Director and HQ AFMC/LGM.

2.4.18. Ensure facilities meet requirements for safety, fire and personal protection IAW AFOSH Standard's 91-31, *Personal Protective Equipment*, 91-32, *Emergency Shower and Eye Wash Units*, 91-66, *General Industrial Operations*, and 91-100, *Flight Line Ground Operations and Activities*.

2.4.19. Reviews familiarization courses conducted by the unit and/or local field training detachments.

2.4.20. Determines the adequacy of corrosion control workcards for assigned equipment based on mission and location.

2.4.21. Enforces the use of approved coating materials and cleaning compounds as determined by Det 3, WR-ALC/AFTT for cleaning compounds and Air Force Research Laboratory (AFRL/MLSA) for coating materials.

## 2.5. Aircraft Maintenance Squadron Supervisor/Superintendent.

2.5.1. Ensures frequency-of-cleaning/wash/fresh water rinse 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.

2.5.1.1. Reports any aircraft wash overdue more than 30 days with a formal message to HQ AFMC/LGM not later than 7 days after the 30-day overdue date. When aircraft are located in severe corrosion environments the overdue wash reporting requirement is 15 days. Along with this report, include reason for overdue and corrective action taken to prevent further occurrences.

2.5.2. Appoints an experienced/qualified wash crew supervisor, 5-level or above (or civilian equivalent). The wash crew supervisor will be trained by a 7-level ASM technician (or civilian equivalent) and training documented in the wash rack supervisor's training record.

2.5.3. Provides a task trained and qualified aircraft wash crew, to include as a minimum, a dedicated crew chief and/or assistant dedicated crew chief and ensures availability of personnel protective equipment within the workcenter.

2.5.4. Ensures Plans, Scheduling & Documentation sections schedule aircraft washes through Core Automated Maintenance System (CAMS).

2.5.5. Ensures frequency of wash/rinse cycles are maintained IAW T.O. 1-1-691 and revised as necessary based on changes in mission and location.

## 2.6. Wash Rack Facility Manager.

2.6.1. Ensure facilities meet requirements for safety, fire and personal protection IAW AFOSH Standard's 91-31, *Personal Protective Equipment*, 91-32, *Emergency Shower and Eye Wash Units*, 91-66, *General Industrial Operations*, and 91-100, *Flight Line Ground Operations and Activities*.

2.6.2. Ensures at least two approved cleaners are available IAW T.O. 1-1-691 and are identified in the QPL. It is essential to comply with proper mix ratios listed in T.O. 1-1-691 and/or each cleaner's Manufactures Data Sheet.

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

2.6.4. Maintains all wash rack equipment in serviceable condition, i.e., water hoses, pumps, air hoses, powered wash equipment, support equipment, personnel protective equipment, etc.

## 2.7. Wash Crew Supervisor.

2.7.1. Provides safety briefings explaining hazards associated with wash rack operations.

2.7.2. Ensures aircraft wash crews are task trained and qualified.

2.7.3. Ensures proper safety equipment, personal protective equipment and cleaning materials are inspected, serviceable, and properly used IAW AFOSH Standard's 91-31, 91-32, 91-66, and 91-100. Examples of equipment used include fall protection, water and air hoses, pumps, and powered wash equipment.

- 2.7.4. Ensures a current copy of the QPL is available.
- 2.7.5. Enters the requirement for wash, performs cleanliness inspection, signs the wash completion and enters the lubrication requirement in the aircraft's AFTO Form 781A, **Maintenance Discrepancy and Work Document**.
- 2.7.6. Ensures aircraft are properly grounded IAW T.O. 00-25-172.
- 2.7.7. Ensures wash rack facility and surrounding area is clean before and after use.
- 2.8. Quality Assurance.
  - 2.8.1. Frequently spot-checks aircraft for cleanliness and lubrication after wash.
  - 2.8.2. Monitors and enforces the use of approved coating materials and cleaning compounds identified in the QPL.
- 2.9. Aerospace Ground Equipment (AGE) Flight Chief.
  - 2.9.1. Ensures an effective corrosion control program is established and enforced for assigned equipment.
  - 2.9.2. Develops a tracking system to prioritize complete paint for AGE equipment based on a "worst is first" principle.
  - 2.9.3. Ensures CAMS is used to schedule and document AGE painting.
  - 2.9.4. Ensures maintenance, servicing, and inspection activity personnel are oriented to corrosion prevention and control.
  - 2.9.5. Ensures powered and nonpowered AGE is cleaned and thoroughly inspected during each periodic inspection. If touch-up painting is required, accomplish IAW T.O. 35-1-3, *Painting of Aerospace Ground Equipment*.
  - 2.9.6. Enforces the use of approved cleaning compounds identified in the QPL.
  - 2.9.7. Schedules work beyond AGE workcenter capability into the appropriate fabrication workcenter.
  - 2.9.8. Ensures tone-down procedures are followed as described in **paragraph 4.22.1.** of this instruction.
- 2.10. Maintenance Training Flight/Lead Center.
  - 2.10.1. Provides all maintenance personnel (excluding ASM personnel or depot equivalent) that come in contact with aircraft and aerospace ground equipment, with corrosion prevention/control initial training and recurring training. Ensures new personnel assigned receive initial corrosion prevention/control training during the maintenance orientation. Ensures recurring training is conducted every 2 years. Refresher training in the depots is required every 3 years IAW AFMCI 21-108, *Maintenance Training and Production Acceptance Certification Program* (not to exceed 36 months).
  - 2.10.2. Develops and implements a corrosion prevention and control training program.
  - 2.10.3. Tailors the course to meet local needs.
  - 2.10.4. Codes and documents training in the appropriate CAMS or approved depot products.

2.10.5. Training curriculum shall include but not be limited to:

2.10.5.1. Corrosion identification procedures and techniques.

2.10.5.2. Familiarization with aircraft/equipment corrosion prone areas.

2.10.5.3. Reporting and documentation procedures for identified corrosion.

2.10.5.4. Removal and treatment of minor corrosion.

2.10.5.5. Proper use of cleaning compounds.

2.10.5.6. Enforcement and awareness of approved cleaning compounds identified in the QPL.

### **3. Unit Corrosion Control Program Requirements.**

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

3.2. ASM personnel will assist the owning activities in their corrosion prevention efforts by accomplishing scheduled corrosion inspections on aircraft, support and test equipment.

3.3. Only ASM personnel shall perform aircraft corrosion inspection work cards specified for accomplishment by ASM in the -6 T.O. All maintenance personnel, regardless of AFSC, shall examine each part removed and inspect the inside of all exposed areas for corrosion. Avionics maintenance personnel shall inspect the electrical connectors of avionics line replaceable units (LRUs), inside equipment drawers, and so forth, for corrosion. All deficiencies noted during these inspections will be entered in the aircraft's AFTO Forms 781A. When corrosion discrepancies are discovered that may affect aircraft structural integrity or safety of flight/operation or are beyond the using organization's capability to evaluate and repair, an ASM specialist will be requested.

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

3.5. Maintenance personnel shall report all corrosion deficiencies through the CAMS IAW 00-20 series technical orders or depot equivalent. Accurate documentation of maintenance actions in support of the Corrosion Control and Prevention Program is essential to support future manning, equipment requirements, training and parts/material procurement requirements.

**4. Aerospace Vehicles Marking Requirements.** This section implements the policies outlined in AFI 21-105 and provides guidance for applying command approved, non-USAF standard aircraft markings as authorized in T.O. 1-1-8. 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. Aircraft markings will be applied to aircraft as specifically authorized by HQ AFMC/LGM, this instruction, T.O. 1-1-8, or the applicable aircraft technical order. Low observable aircraft markings not currently approved necessitates a waiver from HQ AFMC/LGM with System Program Directorate (SPD) approval due to strict survivability analysis requirements. Aircraft inputs to depot will be marked IAW Air Force directives and this instruction only, unless otherwise approved by HQ AFMC/LGM. HQ AFMC/LGM is the point of contact for aircraft painting and markings, to include all unit designation markings.

4.1. Aircraft markings. All aircraft markings and basic paint schemes will be maintained intact, legible and distinct in color. Command standardization of markings by mission design series (MDS) is of primary concern. Fighter units should plan to scuff sand and overcoat their aircraft every 24-36

months to maintain the coating system integrity and aircraft appearance. However, the coating system may experience premature failure or exceed the 36-month life expectancy. The 24-36 month overcoat is the approximate mid-life expectancy of present coating systems qualified for aircraft application. All aircraft coatings will be evaluated/rated every 6 months for appearance/coating system integrity using applicable technical data or a locally developed system. The aircraft must be washed and clean prior to paint scoring. Supervisors will use ratings to determine corrosion treatment/paint scheduling priority. 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. Partial painting "sections" of the aircraft will help reduce the effects of mottling and mismatch. Units should rotate Commander's aircraft to prevent excessive paint build-up from too frequent overcoating. Fully overcoated aircraft will be documented in CAMS and the individual aircraft AFTO Form 95, **Significant Historical Data**, for tracking purposes. Large aircraft units should rely on spot maintenance painting and sectionalized painting between depot cycles to maintain the coating system integrity.

4.1.1. Do not apply aircraft markings to aircraft unless specifically authorized by this directive, T.O. 1-1-8, aircraft drawings, or the applicable aircraft T.O. HQ AFMC/LGM is the point of contact for aircraft painting and markings.

4.1.2. Aircraft assigned to AFMC but possessed by other units, such as Air Warfare Center aircraft, will not have AFMC markings.

4.1.3. All newly assigned aircraft in AFMC will be in compliance with this instruction within 90 days after arrival.

4.1.4. Conspicuity Markings. Test and test support aircraft may use these markings. AFMC field commanders have the authority to select aircraft for this type of marking scheme. Selection must be based on selection on mission essentiality and conform to T.O. 1-1-8. Waivers will be submitted to HQ AFMC/LGM IAW paragraph [4.20](#).

4.2. Silk-Screen Printing. The silk-screen printing process is an approved method for applying insignia to aircraft.

4.2.1. The silk-screen print method will not be used on aircraft surfaces that are contoured or have protruding screws, rivets, or bolts making use of rigid silk-screen frames impossible.

4.2.2. When used, silk-screen printing kits will be procured using local purchase procedures with organizational and maintenance (O&M) funds. Vendors can be identified by local contracting offices.

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

4.4. Command Insignia. The application of the command insignia on aircraft is mandatory. The insignia will be applied to both sides of the vertical stabilizer unless otherwise specified. Fighter type aircraft will use full color insignias and large aircraft (B-52, B-1, etc.) will use subdued insignias unless otherwise specified in [Attachment 2](#). Size and location of command insignias by MDS are specified in [Attachment 2](#).

4.5. 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 the same color scheme as

the command insignia, i.e., subdued for large aircraft and full color for fighter aircraft unless otherwise specified in [Attachment 2](#).

4.6. Distinctive Unit Aircraft Identification Marking. The application of the unit designator is mandatory for all AFMC aircraft unless otherwise directed. HQ AFMC/LGM is the office of primary responsibility (OPR) for the assignment of unit designators. T.O. 1-1-8 or the applicable aircraft TO will provide color restrictions for the unit designator. The unit designator will be applied in accordance with guidelines in [Attachment 2](#) of this instruction.

4.7. Tail Stripe. Tail stripes are used to identify an aircraft operations squadron. Each operations squadron will have a tail stripe unique to the squadron. The use of the same tail stripe by two or more squadrons within a wing is not permitted. The Wing Commander may include colors from all flying squadrons. The tail stripe will be applied at the upper portion of the vertical stabilizer, and must be in the form of a straight stripe. The width will not exceed 6 inches on fighter type aircraft and 28 inches on large aircraft. The stripe may be any color or pattern, and may contain a logo. On aircraft bearing the American Flag the tail stripe must be solid in color and will not contain any logo, name, or lettering. 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.

4.8. Aircrew And Crew Chief Names. Aircrew and crew chief/assistant names may be applied to all command aircraft, but must be removed prior to deployment from home station when participating in contingencies that may subject aircraft to hostile fire abroad. Application of nicknames, punctuation, and/or call signs is not permitted. The style and size of letters for each MDS aircraft are identified in [Attachment 2](#). Any style and size letter not identified for a particular MDS aircraft in [Attachment 2](#) will be considered a unit option, but will not exceed 3 inches in height. Each MDS aircraft in the wing will be standardized with the exception of the designated Commander's aircraft. The Commander's aircraft may have different lettering, but will not exceed 3 inches in height. A background block for pilot/crew chief names may be used. The block should be in contrasting color to the section of the aircraft where applied. 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. The name block should give a subdued appearance and may be other than rectangular in shape. Names will contain military/civilian rank, first name, initial, and last name.

4.9. Commander's Aircraft Markings. Commander's aircraft referred to in this instruction are those designated as Test Center, Test Wing, OG and Operations Squadron Commander's aircraft. The Test Center Commander may select one Wing within the command to have an aircraft specifically marked. It will be the only aircraft authorized so marked. Wing, OG, and Operations Squadron Commanders are authorized only one aircraft each to be marked with standardized commander type markings. The following are markings authorized for use on Commander aircraft:

4.9.1. Wing and/or Test Center insignias on the right forward fuselage and a collage of assigned flight/operations squadron insignias on the left forward fuselage.

4.9.2. Highlighting of unit designator and tail number. All highlighting will be done in a contrasting gray color except for F-16s, which will be done in black. With exception of the B-2 aircraft, all unit designators and radio call numbers will remain on vertical stabilizers as depicted in applicable technical orders.

4.9.3. Unit unique markings. This policy is provided to allow latitude for application of anniversary logo markings to Wing Commander aircraft. When applied, anniversary markings will not

interfere with required aircraft markings and must be removed immediately after the anniversary period (1-year maximum). Waivers are not required for unit unique markings, however, Wing Commanders must approve the markings, and photographs must be provided to HQ AFMC/LGM for review and file. State flags and logos, other than anniversary type, are not considered unit unique markings. AFMC/CC has designated HQ AFMC/PA as the clearinghouse for all requests to name AFMC aircraft. This includes markings previously considered unit unique and are community related/appreciation types such as “Spirit of,” “City of,” “State of.” Naming aircraft is a tradition designed to commemorate or honor individuals, geographic locations, or events either for the support provided the Air Force on a long-term basis, or because of its significance to Air Force history or heritage. Recommendations must include a proposed name, suggested aircraft and tail number, and detailed justification for the proposed name. Contact the wing Public Affairs office for details.

4.10. Aircraft Travel Pods. Travel pods will be painted in gloss paint the same color as the aircraft with no additional markings. Units with multicolor aircraft should select one primary color of the aircraft for the travel pod. Standardization is the key. Travel pods designated for Commander’s aircraft may be any color and may contain the position and name of the individual and appropriate insignia. Lettering may be of any color and style, but shall not exceed 6 inches in height.

4.11. External Fuel Tanks. External fuel tanks shall be painted the same color and tone as existing aircraft coating. Squadron designator and tank serial number shall be applied with contrasting colors to ensure accurate tracking of fuel tanks (see [Attachment 2](#) for marking instructions).

4.12. Paint Identification Placard. The paint identification block is a mandatory marking specified in T.O. 1-1-8. The block may be of a unique design, i.e., eagle head, falcon head, or state outline but must not exceed 6 inches by 6 inches in size and will match the color of other markings on the aircraft. Waiver requests are not required for this item, however, Wing Commander approval is required, and photographs of the design must be provided to HQ AFMC/LGM for review and file.

4.13. 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 3](#). The paint material(s) used to apply nose numbers shall have the same gloss requirement as the base aircraft coating.

4.14. 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. No waiver is required to apply bird of prey silhouettes but a photograph must be submitted to HQ AFMC/LGM for review and file. The following guidelines apply:

4.14.1. 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.

4.14.2. 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.

4.15. Gun Ports. Gun ports will be painted in flat black paint.

4.16. Nose Art. For purposes of clarification, “nose art” shall be the term used to identify specialized artwork applied to any area of the aircraft. Nose art is authorized under the following guidelines:

4.16.1. Be representative of the unit or civilian community.

- 4.16.2. Be distinctive, symbolic and designed in good taste.
- 4.16.3. Enhance unit pride.
- 4.16.4. Be gender neutral.
- 4.16.5. Match gloss requirements of the basic paint scheme, i.e., aircraft with flat camouflage schemes require application of nose art in flat colors.
- 4.16.6. All designs will be reviewed by the base Judge Advocate and Social Actions office for legal, discriminatory, and copyright issues. In addition, designs will not be used to endorse any unofficial organization or activity. Final approval for nose art applied to aircraft rests with the Wing Commander. Photographs of all approved designs will be submitted to HQ AFMC/LGM for review and file. World War II nose art that meets the above criteria may be used. Cartoon-type characters may be used; however, the unit will be responsible for all copyright issues. Removal of nose art prior to deployment will be at the discretion of the Wing Commander.
- 4.16.7. Apply approved nose art within these specific areas:
  - 4.16.7.1. C-135/C-18 Aircraft. On the left side, just aft of the nose radome between Body Station's (BS), 182.0 and 22.0, and Water Line's (WL) 162.0 and 210.0. The art must be no larger than 4 x 4 feet.
  - 4.16.7.2. B-52/B-1B Aircraft. On the left side, just below the pilots windshield, and no larger than 4 x 4 feet.
  - 4.16.7.3. Fighter/Training Aircraft. On the left side of the fuselage or the nose gear door and no larger than 2 x 2 feet. All aircraft will have a standardized location.
- 4.17. Competition Aircraft. Units participating in competitions such as William Tell, Gunsmoke, etc, will follow the guidelines established in competition rules for aircraft appearance. Competitions will 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 titanium, using Commander type markings, etc.
- 4.18. Helicopter Rotor Markings. All helicopter rotor markings will be in accordance with T.O. 1-1-8 and applicable weapons system technical data.
- 4.19. Aircraft Transfer. The following markings must be removed prior to formal transfer of aircraft to other units or MAJCOMs (aircraft retiring to AMARC need not have any markings removed).
  - 4.19.1. Organizational insignias.
  - 4.19.2. Unit designator.
  - 4.19.3. Tail stripe.
  - 4.19.4. Aircrew and crew chief names.
  - 4.19.5. Unit unique markings.
  - 4.19.6. Nose art may be retained if gaining unit agrees.
- 4.20. Waivers. Wing Commanders will submit waiver requests to HQ AFMC/LGM for review and to HQ AFMC/LG for approval/disapproval. Waivers that are in violation of aircraft technical data will not be accepted. Waiver requests must include the following:

4.20.1. Clear statement of present procedure/markings.

4.20.2. Clear statement of proposed change.

4.20.3. Justification to include historical significance, if applicable.

4.20.4. Photographs: Two 8" x 10" or digital color photographs, one of present marking and one of requested change.

4.21. Photo Requirements. Each AFMC unit will submit one full-length (landscape orientation) 8" x 10" color photo (with negatives) of the Wing Commander's aircraft each time a marking change occurs. Changes will be forwarded to HQ AFMC/LGM for review and file.

4.21.1. Units shall provide 8" x 10" color photographs with negatives of unique markings for all local option changes authorized by this instruction (i.e., tail stripe/name block design and/or color changes, paint data placard, bird of prey silhouettes, nose art, etc.) to HQ AFMC/LGM for review and file.

4.22. Tone Down.

4.22.1. Aerospace Ground Equipment (AGE). Polyurethane paint systems Mil-C-83286 or Mil-C-85285 high solid, low VOC paint, color number 24052, are the approved paint systems for AGE.

4.22.1.1. Polyurethane paint will not be applied over lacquer or enamel coating.

4.22.1.2. Equipment will be completely stripped and properly prepared IAW T.O.'s 1-1-8 and 35-1-3 before applying polyurethane coatings.

4.22.1.3. Minimum reflectorized 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.

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

4.22.1.5. Caution markings will be nonreflective black.

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

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

4.22.1.8. Locally devised field numbers will be black.

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

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

4.22.2. Vehicles. Tone down, painting and marking of registered/nonregistered vehicles will be accomplished IAW T.O. 36-1-3.

4.22.3. Test Equipment/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.

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

4.22.3.2. Flight line test equipment and CTKs used to support mobility/contingency requirements 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.

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

4.22.3.4. 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.

4.22.4. 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 HQ AFMC/LGM before changing paint schemes.

## 5. Communications-Electronics (C-E) Responsibilities.

### 5.1. C-E Commander and/or Sustainment Manager's Responsibilities.

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

5.1.2. Appoints an organizational member as the unit CPCP functional manager.

5.1.3. Ensures an adequate corrosion prevention and training program is in place for initial and reoccurring training.

5.1.4. Establishes support as necessary with host maintenance organization and Base Civil Engineer (BCE).

### 5.2. C-E CPCP Functional Manager Responsibilities.

5.2.1. Obtains corrosion control and treatment beyond the units capability from the BCE, vehicle maintenance shop, maintenance organizations, avionics maintenance shop, or respective Air Logistics Center (ALC).

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

5.2.3. Procures needed materials for prevention and treatment of corrosion within each work center. A locally fabricated corrosion control kit may be used. Kit contents can be jointly determined by the unit CPCP functional manager and work center supervisor.

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

5.2.5. Reports all unresolved problems, through channels, to HQ AFMC/LGM for assistance.

5.2.6. Works closely with BCE for support of the unit CPCP. **Note:** Support coverage should consider Real Property Installed Equipment (RPIE), vehicles, sheltered equipment (including van

interior and exteriors, undercarriages, and mobilizers) and equipment in storage awaiting project installation.

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

5.2.8. Ensures oil-based coating is applied to all ground connections not environmentally controlled IAW TOs 1-1-689 and 31-10-24, *Communications Systems Grounding, Bonding, and Shielding*, and Mil-Std 188-124. This coating will not be applied on ground terminals of shelters and vans.

5.2.9. Ensures minimum quantities of reference publications are available to accommodate units needs.

5.3. Real Property Installed Equipment Requirements (RPIE). BCE has maintenance responsibility for all C-E equipment categorized as RPIE IAW AFI 32-9005, *Real Property Accountability and Reporting*. The operation and maintenance of power plants by C-E 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 units capability.

#### 5.4. C-E Training Programs.

##### 5.4.1. Qualification Training.

5.4.1.1. 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.

5.4.1.2. The units 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.

5.4.2. 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.

5.4.3. 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.

LESTER L. LYLES, General, USAF  
Commander

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

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

***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*.

T.O. 00-5-1, *Air Force Technical Order System*

T.O. 00-25-107, *Maintenance Assistance*

T.O. 00-25-108, *Communications-Electronics (C-E) Depot Support*

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

T.O. 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance, and Test of Electronic Equipment*

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

T.O. 1-1-8, *Application of Organic Coatings*

T.O. 1-1-689, *Avionics Cleaning and Corrosion Prevention/Controls*

T.O. 1-1-691, *Aircraft Weapons Systems Cleaning and Corrosion Control*

T.O. 21M-LGM30F-101, *LGM30 Weapon System Corrosion Control and Treatment* (mandatory for units with ICBM support mission)

T.O. 31-1-75, *General Maintenance Practices*

T.O. 31R-10-5, *Antenna Systems, Maintenance, Repair and Testing*

T.O. 31-10-24, *Communication Systems Grounding, Bonding and Shielding*

T.O. 32-1-101, *Use and Care of Hand Tools and Measuring Tools*

T.O. 4W-1-61, *Maintenance and Overhaul Instructions All Type Aircraft Wheels*

T.O. 35-1-3, *Painting of Aerospace Ground Equipment*

T.O. 42A-1-1, *Safety, Fire Precaution and Health Promotion Aspects of Painting, Doping and Paint Removal*

AFPD 21-1, *Managing Aerospace Equipment*

AFI 21-101, *Maintenance Management of Aircraft*

AFI 21-105, *Aerospace Equipment Structural Maintenance*

AFI 32-1024, *Standard Facility Requirements*

AFI 32-1062, *Electrical Power Plants and Generators*

AFI 32-9005, *Real Property Accounting and Reporting*

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*

AFI 48-101, *Aerospace Medical Operations*

AFI 91-301, *Air Force Occupational Safety, Fire Prevention, and Health Program*

AFMCI 21-119, *Objective Center/Test Wing Aircraft Maintenance Management Policy*

AIR FORCE INDEX 17, *Index of Air Force Occupational Safety and Health (AFOSH) Standards, Department of Labor Occupational Safety and Health (OSHA) Standards, and National Institute for Occupational Safety and Health (NIOSH) Publications*

AFOSH Standard 48-17, *Standardized Occupational Health Program*

AFOSH Standard 48-20, *Hearing Conservation Program*

AFOSH Standard 48-21, *Hazardous Communication*

AFOSH Standard 48-137, *Respiratory Protection Program*

AFOSH Standard 91-12, *Interior Spray Finishing*

AFOSH Standard 91-25, *Confined Spaces*

AFOSH Standard 91-31, *Personal Protective Equipment*

AFOSH Standard 91-32, *Emergency Shower and Eye Wash Units*

AFOSH Standard 91-66, *General Industrial Operations*

AFOSH Standard 91-100, *Flight Line-Ground Operations and Activities*

AFOSH Standard 161-2, *Industrial Ventilation*

## Attachment 2

## AIRCRAFT MARKING SPECIFICATION INDEX

Table A2.1. Aircraft Marking Index

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## AIRCRAFT MARKINGS

## A-10

COMMAND INSIGNIA: 18 inches

Located both sides of vertical stabilizer, 9 inches aft of leading edge and centered on tail designator (ET or ED) and tail stripe.

ORGANIZATIONAL INSIGNIA: 18 inches.

1 inch aft of panel F-16 and 1/2 inch above F-18 panel.

TAIL STRIPE: No more than 6 inches wide. Align with bottom seam of fin cap.

UNIT DESIGNATOR: 24 inch letters.

Level with center rudder hinge panel.

CREW CHIEF NAMES: Not to exceed 1 3/4 inch block letters.

Pilot: Under left windscreen beginning at fuselage station (FS) 188.92.

Crew Chief: Directly below pilot name.

**B-1B**

COMMAND INSIGNIA: 18 inches.

Centered on the vertical stabilizer, and centered between the unit designator and the upper most part of the vertical stabilizer.

ORGANIZATIONAL INSIGNIA: 18 inches.

Will be placed 6 inches below and centered on the defensive system operator window on the left side and the offensive system operator window on the right side.

UNIT DESIGNATOR: 24 inches.

Letters (ED) will be centered on the vertical stabilizer, 10 inches above the call numbers.

CALL NUMBERS:

Will be applied in accordance with aircraft technical order.

**\*NOTE.** All paint used will be in accordance with FED STD 595, light gray 36118.

**B-52**

COMMAND INSIGNIA: 36 inches.

18 inches below and centered on the first number of the radio call number from the leading edge. Left and right side of the vertical stabilizer.

ORGANIZATIONAL INSIGNIA: 36 inches.

Place 6 inches aft of the three static sensors, and 6 inches below the pitot tube.

UNIT DESIGNATOR: 36 inches.

18 inches below the command insignia with the (ED) centered on the command insignia.

**C-12**

COMMAND INSIGNIA: 6 inches on both sides of the fuselage.

Centered and located between the Pilot/Co-pilots window and most forward passenger viewing window.

TAIL STRIPE: 8 inches wide on both sides of the vertical stabilizer.

- 6-inch dark blue background stripe (Color Number 15044) with 1- inch yellow stripe (Color Number 13538) bordering above and below background stripe.

- Command Letters: (AFMC) 5- inch block white lettering (Color Number 17875) centered within the blue background stripe and located 1-inch forward of the rudder.

CALL NUMBERS: 8 inch block numbers on both sides of the vertical stabilizer.

8 inch block numbers (Color Number 17038) located on WL .

U.S. FLAG: 24 inches wide by 14 inches high on both sides of the vertical stabilizer.

UNITED STATES AIR FORCE: 6 inches high on both sides of the fuselage.

Located 1.5 inches above the passenger viewing windows and beginning 2 inches forward of the crew entry door.

### C-17

COMMAND INSIGNIA: 18 inches.

18 inch AFMC insignia located above and centered above unit designator.

ORGANIZATIONAL INSIGNIA: 18 inches.

18 inch, 412 test wing insignia located on left side of fuselage.

Vertical Station - Z 200.000.

Horizontal Station - Y 450.250.

18 inch AFFTC insignia located on right side of fuselage.

Vertical Station - Z 200.000.

Horizontal Station - Y 450.250.

UNIT DESIGNATOR: 36 inch block letters.

36 inch block letters "ED" located 40 inches above fuselage and centered between leading edge and trailing edge of the vertical stabilizer.

TAIL NUMBER: 15 inch block letters.

15 inch block letters located below and centered on unit designator.

CREW CHIEF NAMES: 1 3/4 inch block letters.

1 3/4 inch block letters located 6 inches above and centered over the crew entry door.

### C-18

COMMAND INSIGNIA: 36 inches.

Left side of aircraft.

Vertical Station: F.S. 460.

Horizontal Station: W.L. 208.1.

\*ORGANIZATIONAL INSIGNIA: 36 inches.

Right side of aircraft.

Vertical Station: F.S. 460.

Horizontal Station: W.L. 208.1.

TAIL STRIPE: 28 inches wide.

20 inch blue stripe.

4 inch yellow top and bottom.

COMMAND LETTERS: (AFMC) 12 inch letters centered in blue stripe.

CREW CHIEF NAMES: Not to exceed 1 3/4 inch block letters.

Bottom of crew entrance door. Centered on a black background that will accommodate the lettering.

**\*NOTE.** Due to uniqueness of the nose of these aircraft, units may use 24 inch command insignia. Organization insignia is also at unit discretion; however, maintain uniformity of location on all MDS.

**\*\*The use of solar resistant finishes are authorized for all ARIA aircraft.**

### **C-130**

COMMAND INSIGNIA: 36 inches.

Located 18 inches above and centered on the unit designator, on the left and right sides of the vertical stabilizer.

ORGANIZATIONAL INSIGNIA: 36 inches.

Vertical Station: F.S. 277.0.

Horizontal Station: W.L. 207.5 on both left and right sides of the fuselage.

TAIL STRIPE:

Centered between the command insignia and the upper most portion of the stabilizer 8 inches wide.

CALL NUMBERS:

10 inches above fuselage and 7.0 inches below and centered on unit designator.

CREW CHIEF NAMES: Not to exceed 1 3/4 inch block letters.

Vertical Station: F.S. 105.

Horizontal Station: W.L. 194.

### **C/EC/KC/NKC-135**

**\*COMMAND INSIGNIA:** 24/36 inches.

Left side of fuselage.

Vertical Station: F.S. 223.8.

Horizontal Station: W.L. 200.0.

ORGANIZATIONAL INSIGNIA: Applied as the command insignia on the right side.

TAIL STRIPE: 28 inches wide.

20 inch blue stripe.

4 inch yellow stripe top and bottom.

COMMAND LETTERS: (AFMC) 12 inch letters centered in blue stripe.

CREW CHIEF NAMES: Not to exceed 1 3/4 inch block letters. Above crew entrance door. Centered on a black background that will accommodate the lettering.

**\*NOTE.** Organization locate insignia at your discretion. Maintain uniformity on all MDS.

**\*\***The use of solar resistant finishes are authorized for our special purpose aircraft.

### F-15

COMMAND INSIGNIA: 18 inches.

Centered between tall stripe and unit designator on outboard sides of both vertical stabilizers.

\* ORGANIZATIONAL INSIGNIA: 18 inches.

Vertical: Bottom of insignia on W.L. 100.0.

Horizontal: Forward edge of insignia on F.S. 458.0.

UNIT DESIGNATOR: 24 inches.

Note: Unit designator and tail numbers will be black, color #37038

Vertical: Top letters even with top of rudder.

Horizontal: Leading edge of the first letter on FS 760.0.

CREW NAMES: 1 3/4 inch block letters.

Pilot: Centered on left windscreen frame.

Crew Chief: Centered on right windscreen frame.

**\*NOTE.** F-15E Aircraft. Aircraft with conformal fuel tanks installed. Forward edge organizational insignia 18 inches, bottom of insignia at W.L. 110.0, horizontal station: F.S. 454.00.

### F-16

COMMAND INSIGNIA: 18 inches.

22 inches below top of vertical stabilizer and centered. Applied to both sides.

\*ORGANIZATIONAL INSIGNIA: 10 inches.

Place directly above panels 2409 and 2406, 2 inches above the seam and 7 inches aft of the forward seam. Because of silk screening this area is not accessible; currently doing 1 inch down and 1 inch aft on panel 3302.

TAIL STRIPE: 6 inch maximum width.

10 inches below top of vertical stab.

UNIT DESIGNATOR: 41 inches below top of vertical stabilizer and centered.

CREW NAMES: 2 inch block letters.

Pilot Name: Centered on left canopy rail.

Crew Chief Name: Centered on right canopy rail.

\* **NOTE.** F-16B and D models only.

**ORGANIZATIONAL INSIGNIA:**

Place on panels 3301-3302 L and R 1 inch under top seam and 1 inch aft forward seam (because of silk screen size).

**T-38**

**COMMAND INSIGNIA:** 18 inch insignia applied to both sides of vertical stabilizer, 1 inch below and centered on unit designator.

**ORGANIZATIONAL INSIGNIA:**

10 inch insignia applied to both sides of the fuselage.

3 inches aft of leading edge of the first backbone panel and 1 inch above lower edge of backbone panel.

**TAIL STRIPE:** 6 inches maximum width, 12 inches below top of fin cap.

**UNIT DESIGNATOR:** 12 inches below tail stripe and centered on vertical stabilizer.

\* **CREW NAMES:** Not to exceed 1 3/4 inch block letters.

Both canopy rails painted blue.

Pilot Name: Centered on left canopy rail.

Crew Chief Name: Centered on right canopy rail.

\***NOTE.** 586 FLTS aircraft are painted with a two tone gray paint scheme. Crew names may be contrast gray color.

**T-39**

**COMMAND INSIGNIA:** 18 inch insignia applied on the left side of the fuselage. 6 inches aft and aligned with top seam of crew entrance door.

**ORGANIZATIONAL INSIGNIA:** If applied, do the same as the command insignia except on the right side of the fuselage.

**TAIL STRIPE:** 8 inch wide blue stripe with 1 inch wide top and bottom yellow border.

Centered between call numbers and top of vertical stabilizer.

**COMMAND LETTERS:** (AFMC) 6 inch letters centered in blue stripe.

**CREW CHIEF NAMES:** 1 inch block letters.

1 inch above bottom edge and centered on left nose gear door.

**H-1**

**COMMAND INSIGNIA:** 10 inch insignia, left side of aircraft on post and centered between pilot's door and aft cargo door, even with pilot's door handle.

ORGANIZATIONAL INSIGNIA: 10 inch insignia, left side of the aircraft.

Vertical Station: W.L. 33. on forward cargo door, centered and even with command insignia

Horizontal Station: F.S. 80.

TAIL STRIPE: 6 inches maximum width. 6 inches below top of tail rotor boom.

UNIT DESIGNATOR: 10 inch insignia IAW T.O. 1-1-8.

CREW CHIEF NAMES: 2 inch block letters. 2 inches below crew door window and centered on door.

**NOTE:** Organizational insignia and unit designator markings need to be 10 inch due to aircraft size. These markings will not fit due to area not being large enough and fasteners in the way will detract from overall appearance.

## B-2

COMMAND INSIGNIA: 24 inches (subdued)

Located on left side of aircraft at FS 304.5 (center of crest), with crest bottom at WL 167.2

ORGANIZATIONAL INSIGNIA: 24 inches (subdued)

Located on right side of aircraft at FS 304.5 (center of crest), crest bottom at WL 167.2

UNIT DESIGNATOR: 16 inches (subdued) 30 degree negative slant

Top of unit designator to be 15 inches from top of main landing gear door, 50 inches from extreme aft end of door.

AIRCRAFT NAME: (all measurements to top of letters)

"SPIRIT" located: 10.5 inches from top of main landing gear door, 57 inches from extreme forward of door in 8 inch block letters with a 30 degree negative slant.

"OF" located: 19.5 inches down from top of main landing gear door, centered underneath the "SPIRIT" in 6 inch block letters with a 30 degree negative slant.

"STATE/CITY" located: 26.5 inches from top of main landing gear door, centered beneath the "SPIRIT" in 8 inch block letters with a 30 degree negative slant

TAIL STRIPE: The tail stripes will be 18 feet long by 11.25 inches high from leading edge to trailing edge of main landing gear doors.

PILOT/AIRCREW/CREW CHIEF NAMES: (all measurements to top of letters)

Pilot: The word "PILOT" is centered on left half of nose gear door 8 inches from the top of the door in 1.75 inch letters. The pilot's name is centered below the word "PILOT," 13.5 inches from the top of the door.

Mission Commander: The word "MISSION COMMANDER" is centered on right half of nose gear door, 8 inches from top of door in 1.75 inch letters. The mission commander's name is centered below the word "Mission Commander," 13.5 inches from the top of the door.

Crew Chief/Assistant: The letters "DCC" are centered on nose gear door, 26 inches from top of door, with 1.75 inch letters. The crew chief's name is centered 1 inch below "DCC" also in 1.75 inch letters. The let-

ters "ADCC" are centered 1 inch below the crew chief name in 1.75 inch letters and the assistant crew chiefs are centered below with 1 inch spacing from "ADCC," also in 1.75 inch letters.

NOSE NUMBERS: Last five digits of tail number, 6 inches in height, 12 inches from bottom of nose gear door and centered.

## F-22

AFMC COMMAND INSIGNIA: 18 inches (silhouette - contrasting shade of gray)

Vertical: Top of insignia applied 50.3" below the top of the vertical stabilizer.

Horizontal: Centered on trailing edge aft unit designator letter.

WING INSIGNIA: 18 inches (silhouette - contrasting shade of gray)

Vertical: Centered between the chine and bottom of the intake

Horizontal: Centered between the leading edge of the right side intake lip and right side weapons bay.

SQUADRON INSIGNIA: 18 inches (silhouette - contrasting shade of gray)

Vertical: Centered between chine and bottom of the intake.

Horizontal: Centered between the leading edge of the left intake lip and left side weapons bay.

UNIT DESIGNATOR: 24 inches

NOTE: Unit designator and tail numbers will be applied in a contrasting shade of gray)

Vertical: Bottom of the letters applied 96.1" below the top of the vertical stabilizer.

Horizontal: Bottom leading edge of the first letter is applied 28.8" aft of vertical stabilizer leading edge.

TAILSTRIPE: 6 inches

Any design applied in contrasting shades of gray applied to the upper most elements on both sides of the vertical stabilizers.

PILOT AND CREW CHIEF NAMES: 1.75 inches (contrasting shade of gray)

Aircrew: Center on the left side canopy skirt.

Crew Chief: Justified to the forward edge of the nose landing gear door.

NOSE NUMBER: 4 inches (contrasting shade of gray)

Last three/four digits of tail number applied vertically above the left and right avionics bay panels (4135 & 4165) just below the fuselage chine and forward of the fuselage formation light.