BY ORDER OF THE COMMANDER
419TH FIGHTER WING

419th FIGHTER WING INSTRUCTION 91-203

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Safety

SAFETY PROCEDURES DURING FUEL SYSTEM MAINTENANCE

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction defines responsibilities and outlines safety procedures to be followed during defueling, inserting, purging, component replacement, and repair of F-16 fuel tanks/cells. It implements AFPD 91-2, *Safety Programs*. References T.O. 1-1-3, *Inspection and Repair of Aircraft Integral Tanks and Fuel Cells*, T.O. 1F-16C/D-28JG-10-1, *Fuel System Storage*, F-16C/D Aircraft, T.O. 1F-16C/D-28JG-20-1, *Fuel System Distribution*, F-16C/D Aircraft, T.O. 1F-16C/D-28JG-20-2, *Fuel System Distribution*, F-16C/D Aircraft, T.O. 1F-16C/D-28JG-20-3, *Fuel System Distribution*, F-16C/D Aircraft, T.O. 1F-16C/D-28JG-40-1, *Fuel System Indicating*, F-16C/D Aircraft, T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, and AFOSH Standard 91-66, *General Industrial Operations*. This instruction applies to all personnel assigned to the 419th Logistics Group (LG) and 419th Operations Group (OG).

SUMMARY OF REVISIONS

Paragraph 2.3. Added requirement to have static discharge plates marked "PERSONNEL STATIC DISCHARGE". Paragraph 2.4. Added requirement to wear fuel resistant gloves and white cotton coveralls. A (|) indicates revisions from the previous edition.

1. Responsibilities:

1.1. Squadron Commanders and Maintenance Officers:

1.1.1. Become thoroughly familiar and ensure compliance with this publication and all directives identified above.

1.1.2. Ensure periodic inspections accomplished by quality assurance and ground safety personnel of facilities are in compliance with current directives.

1.2. Maintenance Supervisors:

1.2.1. Become thoroughly familiar with this publication and all directives identified.

1.2.2. Comply with and/or monitor compliance with this publication and all directives listed as references.

1.3. Fuel System Repair Supervisor:

1.3.1. Observes individual inside fuel tank/cell.

1.3.2. Complies with all safety precautions.

1.3.3. Briefs fuel tank/cell repair crew on all safety precautions to be observed during major repair, dismantling of vents, tank/cell interconnects, refueling lines, and removal and replacement of fuel tank/cell.

1.3.4. Obtains field permits when required.

1.3.5. Schedules and maintains a current list of physical examinations required for fuel tank repair personnel.

1.3.6. Designates training forecast's (TMA's) input to the core automated maintenance system (CAMS), and AF Form 623, **On-The-Job Training Record**, the individual's authorization to perform duties as fuel tank/cell repair.

1.3.7. Checks cockpit for safe condition before performing fuel tank/cell maintenance

1.4. Individuals Involved in Fuel Cell/ System Maintenance:

1.4.1. Ensure strict adherence to prescribed safety standards. Checklists are mandatory for all personnel participating in any phase of fuel system maintenance.

1.4.2. Utilize AF Form 1024, Confined Spaces Entry Permit for all confined space entries.

1.4.3. Utilize defueling checklist when a determination is made that defueling is required.

1.4.4. Renders cockpit safe before fuel tank/cell maintenance is performed on aircraft.

1.4.5. Ensures munitions were removed from aircraft and explosives rendered safe.

1.5. Maintenance Operations Center (MOC):

1.5.1. Notifies all concerned organizations and radio dispatched vehicles of areas where defueling, purging, and repair is in progress.

1.5.2. Notifies specialist flight not to use any high power radar within 300 feet of aircraft undergoing defueling or purging operations.

1.5.3. Confirms the availability of material, equipment, and manpower to accomplish fuel tank maintenance.

1.5.4. Notifies the accessories maintenance section of specialist support required for fuel system repair.

1.6. Accessories Maintenance Section. Assures the use of the safety guides, tank entry worksheets, and field permits when applicable.

NOTE: Blank safety guides and field permit coordination is available from the fuel tank/cell repair personnel.

2. General:

2.1. Maintenance is not permitted on aircraft during defueling and purging of fuel tanks/cells.

2.2. Refueling, defueling, and draining of separate tanks/ cells may be accomplished on parking spots meeting the minimum safety requirements. A minimum wing tip clearance of 50 foot radius restricted area is required from any building or aircraft, 120 feet from any ditch or deep depression that will hold fuel vapors. Transfer of fuel is not permitted after any fuel tank/cell door has been removed from the aircraft.

2.3. All air ducting, blowers, work stands and personnel static discharge plates will be grounded in A/W T.O. 1-1-3 prior to fuel system work. Personnel static discharge plates need to be marked "PERSONNEL STATIC DISCHARGE".

2.4. Personnel cleanliness cannot be overemphasized. Toxic poisoning may occur if fuel resistant gloves and white cotton coveralls are not worn while working with fuel and fuel components. Hands must be washed before eating and personnel should shower after fuel system work is accomplished.

2.5. Defueling is not accomplished if:

2.5.1. Electrical storm is within a three-mile radius of defueling operation.

2.5.2. Aircraft is less than 50 feet from a building or smoking area or 50 feet from other aircraft. (Distance to be measured from vents and/or fuel caps).

2.5.3. Transmission from attack or ground radar is within a radius of 300 feet.

2.5.4. Any other maintenance is being performed on the aircraft.

2.6. Fuel from aircraft sumps must be drained into approved fuel waste containers and must be properly grounded.

3. Procedures. Utilize checklists at all times, during defueling. MOC is notified of defueling spot and aircraft number. If abnormal defueling is accomplished, fire department must be present. (This is determined by fuel shop personnel.)

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