

**BY ORDER OF THE COMMANDER
4TH FIGHTER WING**



AIR FORCE INSTRUCTION 21-101

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**COMBAT AIR FORCES
Supplement**

11 JULY 2012

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9 AUGUST 2013

Maintenance

**AEROSPACE EQUIPMENT MAINTENANCE
MANAGEMENT**

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AFI 21-101_CAFSUP_I, Aerospace Equipment Maintenance Management dated 11 July 2012 is supplemented as follows: This supplement applies to all Seymour Johnson AFB personnel involved in on- and off-equipment maintenance operations. Send all comments and suggested changes to 4 MXG/MXQ, 1305 Hangar Row, Seymour Johnson AFB NC 27531. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of records IAW the AF Records Disposition Schedule, located at <https://www.my.af.mil/afirms/afirms/afirms/rimc.cfm>. Contact supporting records managers as required. Refer recommended changes and questions about this publication to the Office of Primary Responsibility using the AF IMT 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate functionalism chain of command.

SUMMARY OF CHANGES

This Instruction supplements AF1 21-101 and CAF Supplement I. This publication is substantially revised and must be read in its entirety.

2.1. General Safety Guidance.

2.1.1. **(Added)** Eyewash station inspections will be documented on AF IMT 2411, Inspection Document.

2.1.2. **(Added)** Double hearing protection is mandatory within 50 feet of aircraft with operating engines, A/M32A-60 generator set, Hydraulic Test Stand. All other operating powered AGE requires single hearing protection within 25 feet unless identified by bioenvironmental survey.

2.8. Flight Line Safety.

2.8.1. **(Added)** Document F-15E Tow Prep/Hangar Entry Checklist, located on Quality Assurance's (QA) SharePoint under approved checklist when towing into a hangar and store on forward section of aircraft while in hangar.

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

3.4.1.22.1. **(Added-CAF)** Authority to direct use of flight line authorized AGE for non-flight line purposes will be approved by the MXG/CC.

3.4.1.61.1. **(Added-CAF)** Repeat and recurring discrepancies will be reviewed at daily maintenance group stand-up status meeting. Could Not Duplicate (CND) discrepancies will be reviewed daily at AMU production meeting. For CND discrepancies, flight line personnel will annotate the Integrated Maintenance Database System (IMDS) entry as CND in the corrective action block of the applicable screen. The discrepancy will be referred to a 7-level or higher skill level designated on special certification roster to clear CND discrepancies in the AFTO Form/IMT 781A. Repeat/recur discrepancies will be referred to a 7-level or higher skill level designated on special certification roster to clear repeat/recurs. Individual will clear the discrepancy in the AFTO Form/IMT 781A in accordance with TO 00-20-1 and applicable supplements.

3.9. Flight Commander/Flight Chief or AMU Officer in Charge (OIC)/Superintendent.

3.9.42. **(Added)** Establish a central point of contact between their organization and Engine Management Branch (EMB) for submission of engine documentation and required computer inputs.

3.9.42.1. **(Added)** AMU Supervision will designate in writing a Deployed Engine Monitor (DEM) and forward the name to the Engine Monitor (EM). Appointed personnel will report to EM prior to deployment/TDY for DEM training and responsibilities brief.

4.7. Aircrew and Maintenance Debrief Section.

4.7.5.1.1. **(Added-CAF)** Refer to QA SharePoint, approved checklist for Red X criteria during F-15E debriefing.

4.7.5.2. **(Added-CAF)** Refer to 4th FW Incident Worksheet (4 MXG MOI 21-268) for all IFEs, bird strikes and other notable incidents.

4.7.6.1.1. **(Added)** Upon confirmation of an IFE, abort, repeat or recur condition, IMDS entries will be identified by typing “IFE”, “Ground/Air Abort”, “Repeat” or “Recur” in the narrative description on appropriate screens. The entry on the AFTO Form/IMT 781A, Maintenance Discrepancy and Work Document, will be marked in the same manner.

5.6. Aerospace Ground Equipment (AGE) Flight.

5.6.1.2.2.1. **(Added-CAF)** Bomblifts are controlled assets and must be signed out using an AF IMT 1297.

5.6.1.2.2.2. **(Added-CAF)** Users of bomblifts must ensure the equipment is returned to the AGE Servicing Section team within 24 hours of being signed out Monday – Friday or the next duty day after a weekend or holiday for proper inspection and servicing. The only exceptions are the Munitions Flight and Weapons Standardization. The Munitions Flight and Weapons Standardization will keep its bomblifts at their respective areas and notify the AGE Servicing Section of status changes.

5.9. Fabrication Flight.

5.9.2.1.1. **(Added)** Structural maintenance repair or rivet replacement in the intake will be accomplished in accordance with Local Intake Maintenance Check Sheet located on QA SharePoint, approved checklists.

6.2.3. Engine Management (EM) Section.

6.2.3.17.1. **(Added)** The deployed/TDY EM will establish communications with home station upon arrival at the deployed site as soon as possible. The DEM will ensure required documentation is initiated, processed in IMDS and sent back to home station, normally the same day the action occurs but no later than the next duty day.

6.2.3.17.2. **(Added)** When IMDS is not available, required documentation will be faxed to home station for processing by AMU personnel. The DEM will contact EM daily to provide status of engine removals/installations and delinquent documentation. Negative reports are required.

6.2.6. Maintenance Management Analysis (MMA) Section.

6.2.6.16.1.2.1. **(Added)** For TDY, deployment operations or any locations utilizing IMDS for inputs appoint NCO-Debrief controller to obtain terminal-IDs that are specific for deployments. These terminal-IDs will be used only during the specified rotation and must be accounted for and returned to Database Management upon returning to home station.

6.2.6.16.4.1.2. **(Added)** All IMDS users requesting password resets must send an e-mail to Database Management (4 MOS/DBM) that will include User-ID and employee number.

8.15. One-Time Inspections (OTI).

8.15.1. **(Added)** QA will validate all local OTI requests, prepare the draft and perform validation verification on OTIs to verify accuracy and procedures. The QA TODO will prepare and distribute sufficient copies for all affected agencies and maintain all OTIs in a master file with an electronic back up.

8.18. High Speed Taxi Checks.

8.18.2. **(Added)** Reference 4 MXG MOI 21-269, *Functional Check Flight Program* for guidance on high speed taxi checks.

9.1. **Aircraft and Equipment Impoundment.** 9.2.1 (Added) Aircraft/equipment impoundment procedures are addressed in 4 MXG MOI 21-256.

10.1. Tool and Equipment Management.

10.1.1. **(Added SJAFB)** Guidelines for tool and equipment management are addressed in 4 MXG MOI 21-253.

12.1. **Wing Weapons Manager (WWM).** 12.1.10 (Added) See Wing Weapons Manager's "Weapon Load Crew/Armament Personnel Recognition Program" letter.

12.1.15. **(Added)** Refer to SJAFBI 11-250, *Airfield Operations* for further guidance on parking, launch/recovery of explosive-loaded aircraft, EOR procedures, and hung ordnance/jammed guns.

12.1.29.1. **(Added)** The Armament flight may be tasked to comply with the following requirements for Unit Type Code (UTC) tasked personnel supporting Combat Coded (CC) flying squadrons during exercises and contingencies.

12.1.29.1.2. **(SJAFB)** Send team to assist with removal of armament associated equipment to support Phase I re-generation upon the flight line request.

12.1.29.1.3. **(Added)** Send flight line red ball team to assist with Phase I regenerations upon the flight line request.

12.1.29.1.4. **(Added)** Send two EOR-qualified personnel per CC coded squadron for Phase II/Employment upon flight line request (Armament EOR-qualified personnel will be under supervision of checklist-qualified weapons flight line personnel).

12.17. Transient Aircraft Responsibilities.

12.17.1. **(Added)** Control of impulse carts removed from transient aircraft will be the responsibility of the AMU tasked with Transient Alert support per the 4 FW weekly flying schedule.

14.13. End-Of-Runway (EOR) Inspection.

14.13.6.3. **(Added)** EOR team composition will consist of the following:

14.13.6.3.1. Each AMU will provide a minimum of two 2W1X1 weapons personnel on a rotating basis, with at least one being checklist qualified.

14.13.6.3.2. Each AMU will provide three 2A3X3 crew chief personnel, each with a minimum of 6 months F-15E experience.

14.13.6.3.3. All rotations will be coordinated through EOR supervision. During extended flying windows, exercises or otherwise abnormally heavy flying periods, each AMU will augment EOR as directed by AMXS supervision.

14.13.6.3.4. Arm end will have a minimum of two crews, each consisting of two 2A3X3 and two 2W1X1 personnel. At least one 2W1X1 individual per crew must be checklist qualified.

14.13.6.3.5. **(Added)** De-arm end will have a minimum of two crews, each consisting of one 2A3X3 and two 2W1X1 personnel. At least one 2W1X1 individual per crew must be checklist qualified.

14.13.8.1. **(Added)** EOR supervision will ensure all discrepancies discovered during EOR operations are immediately reported to the owning AMU Production Supervisor.

14.22. **Hangar Queen Aircraft.**

14.22.1.1. **(Added)** Follow guidance in 4 MXG MOI 21-263, *Management of Hangar Queen and Cannibalization Aircraft* in addition to 4 MXG MOI 21-269, *F-15E Functional Check Flight Program* for all donor and hangar queen aircraft.

14.23. **Hot Refueling Procedures.**

14.23.1.1. **(Added)** Follow guidance in 4 MXG MOI 21-259, *Maintenance Instruction for Hot Refueling Requirements* and LCL-4FW-043, *Hot Refuel Supervisor Checklist*.

JEANNIE M. LEAVITT, Col, USAF
Commander, 4th Fighter Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010

<http://www.e-publishing.af.mil/>

AFI 21-101, CAFSUP_I, *Aircraft and Equipment Maintenance Management*, 11 July 2012

<http://www.e-publishing.af.mil/>

AFI 21-201, *Conventional Munitions Maintenance Management*, 7 March 2012

<http://www.e-publishing.af.mil/>

AFI 31-101, *Integrated Defense (FOUO)*, 8 October 2009

<http://www.e-publishing.af.mil/>

AFI 91-202, *The U.S. Air Force Mishap Prevention Program*, 5 August 2011

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AFI 91-204, *Safety Investigations and Reports*, 24 September 2008

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

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AFMAN 91-201, *Explosives Safety Standards*, 12 January 2011

<http://www.e-publishing.af.mil/>

TO 1F-15-101, *Maintenance Instruction F15 Service Usage Recorder Program Data Collecting and Reporting*, 1 January 1997

TO 1F-15E-2-31JG-31-1 (31-31-1), *Indicating/Recording Systems Recorders*, 1 April 2012

SJ SUPP 21-201, *Management and Maintenance of Non-Nuclear Munitions*, 30 November 2012

SJAFBI 11-250, *Airfield Operations*, 7 May 2007

4 MXG MOI 21-103, *Special Purpose Recoverables Authorized Maintenance*, 19 October 2012

4 MXG MOI 21-105, *Corrosion Program*, 26 January 2011

4 MXG MOI 21-250, *Self-Inspection Program*, 10 January 2011

4 MXG MOI 21-251, *Management of Ground Instructional Trainer Aircraft*, 1 November 2012

4 MXG MOI 21-253, *Composite Tool Kit Management*, 28 November 2012

4 MXG MOI 21-254, *Repair and Reclamation Section Tasks*, 20 January 2011

4 MXG MOI 21-255, *Maintenance Training Program*, 9 October 2012

4 MXG MOI 21-256, *Impoundment Procedures*, 10 January 2011

4 MXG MOI 21-257, *Flight Control Maintenance, 19 January 2011*
4 MXG MOI 21-258, *Non-Tactical Radios, 18 October 2012*
4 MXG MOI 21-259, *Hot Refueling Requirements, 2 November 2012*
4 MXG MOI 21-260, *Pacer Century III Program, 19 January 2011*
4 MXG MOI 21-261, *Weight and Balance Procedures, 25 May 2011*
4 MXG MOI 21-262, *Non-Destructive Inspection, 1 November 2012*
4 MXG MOI 21-263, *Management of Hangar Queen and Cannibalization Aircraft, 22 October 2012*
4 MXG MOI 21-265, *Management of Integrated Maintenance Information System (IMIS), 28 February 2013*
4 MXG MOI 21-266, *Aircraft Shelter Operational Procedures, 2 November 2012*
4 MXG MOI 21-267, *Aircraft Structural Integrity Program (ASIP), 4 November 2012*
4 MXG MOI 21-268, *Aircraft Engine Inspection/Maintenance and FOD/DOP Prevention Procedures, 15 May 2012*
4 MXG MOI 21-269, *F-15E Functional Check Flight Program, 10 January 2011*
LCL-4FW-043, *Hot Refuel Supervisor Checklist, 22 April 2011*
LJG-4FW-044, *Red Ball Procedures (Crypto Key Loading Only, 28 November 2012*
LCL-4FW-047, *4th Maintenance Group Emergency Action Checklist, 21 January 2011*
LJG-4FW-016, *Red Ball Procedures (Avionics and Electro-Environmental), 30 January 2009*

Adopted Forms:

AF 1297, *Temporary Issue Receipt*
AF 2411, *Inspection Document*
AFTO 781A, *Maintenance Discrepancy and Work Document*

Abbreviations and Acronyms

AFI—Air Force Instruction
AFTO—Air Force Technical Order
AGE—Aerospace Ground Equipment
AMU—Aircraft Maintenance Unit
AMXS—Aircraft Maintenance Squadron
CC—Combat Coded
CND—Could Not Duplicate
DBM—Database Management
DEM—Deployed Engine Monitor

EM—Engine Management
EM—Engine Monitor
EMB—Engine Management Branch
EOR—End-of-Runway
FW—Fighter Wing
HMXS—Helicopter Maintenance Squadron
IFE—In-Flight Emergency
IMDS—Integrated Maintenance Data System
IMT—Information Management Tool
MMA—Maintenance Management Analysis
MOI—Maintenance Operating Instructions
MOS—Maintenance Operations Squadron
MXG—Maintenance Group
MXS—Maintenance Squadron
NCO—Noncommissioned Officer
OIC—Officer In Charge
OTI—One Time Inspections
QA—Quality Assurance
SUPT—Superintendent
TO—Technical Order
TODD—Technical Order Distribution Office
TDY—Temporary Deployment
UTC—Unit Type Code
WWM—Wing Weapons Manager

Attachment 2

A2.1 MANUAL JCN ASSIGNMENT

JCN	USED FOR	CONTROLLED BY
0001-2000	Integrated Maintenance Data System (IMDS)	N/A
2001-2049	Preplans (Sched, TCTO, Time Changes)	MOF PS&D
2050-2099	Preplans (Sched, TCTO, Time Changes)	333 AMU
2100-2149	Preplans (Sched, TCTO, Time Changes)	334 AMU
2150-2199	Preplans (Sched, TCTO, Time Changes)	335 AMU
2200-2249	Preplans (Sched, TCTO, Time Changes)	336 AMU
2250-2349	PS&D	MOF PS&D
2350-2399	PMEL Type 2	CMS
2450-2509	Lantirn	CMS
2510-2579	Engine Shop	CMS
2580-2589	Test Cell	CMS
2590-2599	Small Gas Turbine	CMS
2600-2609	Pneudraulics Shop	CMS
2610-2619	Electric Shop	CMS
2620-2629	Environmental Shop	CMS
2630-2639	Fuel Shop	CMS
2640-2649	Egress	CMS
2650-2749	Transient Alert	EMS
2750-3009	EMS AGE	EMS
3010-3019	Armament	EMS
3020-3089	Munitions Control	EMS
3090-3119	Quality Assurance	MXG
3120-3129	R&R Crash Recovery	EMS
3130-3139	NDI LAB	EMS
3140-3149	Corrosion Control	EMS
3150-3159	Tire Shop	EMS

A2.2 Debrief Series

JCN	USED FOR	CONTROLLED BY
3500-3999	RED AMU Home station	RED AMU
4000-4299	RED AMU Deployed	RED AMU
4300-4399	RED AMU Manual JCN	RED AMU
4400-4899	BLUE AMU Home station	BLUE AMU
4900-5199	BLUE AMU Deployed	BLUE AMU
5200-5299	BLUE AMU Manual JCN	BLUE AMU
5300-5799	GREEN AMU Home station	GREEN AMU
5800-6099	GREEN AMU Deployed	GREEN AMU
6100-6199	GREEN AMU Manual JCN	GREEN AMU
6200-7199	YELLOW AMU Home station	YELLOW AMU
7200-7499	YELLOW Deployed	YELLOW AMU
7500-7599	YELLOW Manual JCN	YELLOW AMU

7801- 9999 will remain open for future use.