

**BY ORDER OF THE COMMANDER
22D AIR REFUELING WING**

**MCCONNELL AIR FORCE BASE
INSTRUCTION 21-109**

6 SEPTEMBER 2012

Maintenance

**OPERATION OF HANGAR DOORS AND
AIRCRAFT HANGARING**



COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFI 21-101, AFI 21-101_AMCSUP1 and AFOSH 91-501 outlining responsibilities and procedures for the operation of the hangar doors in Buildings 1106, 1107, 1108, 1111, 1128, 1129, 1166, 1176 and 1218. This instruction is the source document for qualifying maintenance personnel to operate hangar doors and is applicable to all personnel who operate hangar doors. This instruction is the source document for all aircraft hangaring operations. Ensure that all records created as a result of processes prescribed in this publication are maintained In Accordance With (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW with the Air Force Records Information Management System (AFRIMS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*.

SUMMARY OF CHANGES

The following paragraphs have content that has been changed. Para 1.1.2, 1.2.2, 1.2.3, 2.1, 2.2, 2.3. The following paragraphs have been added. Para 2.3.1, 2.3.1.1, 2.3.1.2. Paragraph 2.4 has been changed. Para 2.5, 2.6 have moved to para 2.3 and 2.4. The following Para have been added 3.1, 3.1.1, 3.1.2, 3.1.3, 3.2,3.3, 3.3.1.

1. RESPONSIBILITIES:

1.1. Each commander and supervisor affected will ensure compliance with this instruction.

1.1.1. Only personnel trained in accordance with this instruction are authorized to operate doors and train others.

1.1.2. Hangar door training will consist of: initial training and refresher training depending on unit and individual needs.

1.1.3. Training will be conducted by the Maintenance Qualification Training Program (MQTP), facility managers and/or supervisors. Use MQTP lesson plan and this instruction for all proficiency training. Unit training managers will load, update and track training using appropriate courses codes in G081.

1.1.4. MXG training shall be documented in each individual's Training Business Area (TBA). A separate TBA entry is required for each different style hangar door. TBA entries will be for hangars 1166 and 1176; 1106 and 1107 and manual doors in hangars 1108, 1111, 1128, 1129, 1218. Hangar door awareness training will be documented in G081(course code MCNL000680)

1.2. Building custodians are responsible for the following:

1.2.1. Monitor the status of the doors and manage civil engineer (CE) work orders for required maintenance. Assign an urgent priority to all work orders that affect safety or normal door operation.

1.2.2. Notify the Maintenance Operations Center (MOC) ext. 3383, CE and the fire department of any door malfunction that causes lockout/tagout procedures to be initiated. Only qualified personnel and or the designated contractor, designated by G081 course code SAFE002024, will implement and remove lockout/tagout procedures. Doors that can be moved manually will be identified as such on the tag. Building custodians must maintain a lockout/tagout log book and track all doors that Qualified personnel/CE/Contractors have locked-out/tagged-out. MOC will coordinate any hangar door maintenance outside normal duty hours.

1.2.3. Group facility manager will brief the maintenance group (MXG) commander monthly on any hangar door discrepancies, repair status and get-well date of all inoperable door systems.

2. PROCEDURES:

2.1. All hangar door operations will be done by qualified individuals per this instruction. All hangar door operating instructions will be located on all applicable hangar doors.

2.2. When severe weather threatens (lightning within 5 miles or winds exceeding 34 knots), MOC personnel will notify all production supervisors, who will ensure their respective hangar doors are closed.

2.3. When the ambient air temperature is 32 degrees Fahrenheit (0 degrees Celsius) or below, the hangar doors will be kept closed until aircraft or equipment have reached hangar and will only be opened when aircraft is positioned for entry or exit, and closed immediately thereafter.

2.4. All hangar doors should be kept closed whenever possible to prevent bird entry. To preclude damage to the bird entry barriers in Buildings 1106 and 1107, do not open the doors

any further than necessary into the door closet area. Floor/door alignment marks must be observed when closing doors in Buildings 1106 and 1107.

3. AIRCRAFT HANGARING:

3.1. The tow supervisor will ensure:

3.1.1. Hangar doors are properly operated, opened and closed per operating instructions located on hangar door.

3.1.2. All ceiling mounted air ducts that could strike the aircraft are properly positioned to provide adequate clearance.

3.1.3. The aircraft is towed along the proper tow path for the intended spot and maintenance action (e.g. PE, wash, jack) and centered properly on the correct center line and wheel parking spots.

3.2. Due to the design of Hangar 1106/1107, there may be times when adjacent aircraft and hangar doors require movement to allow neighboring aircraft to be positioned properly. In those cases, both tow supervisors and a production leader(pro-super) will meet, discuss and brief the full plan of aircraft and door movements. The protection and safety of aircraft and personnel will be maintained at all times. Two aircraft shall not be positioned with tails full-in (diagonally), in Hangar 1106/1107 slots 2 and 3.

3.3. When parking an aircraft in any hangar, the tow supervisor will complete section 1 and 2 of the Aircraft Hangaring Requirements (AHR) Checklist (Attachment 2). The AMXS/MXS pro-super will provide the checklist and the tow supervisor will ensure the checklist is signed legibly and placed in the front of the aircraft forms binder once all the actions of the aforementioned checklist are complete.

3.3.1. When removing an aircraft from a hangar, the tow supervisor completes section 3 and 4 of the same checklist and hands the completed checklist back to the AMXS/MXS pro-super. The pro-super will verify that all items of section 3 and 4 have been completed satisfactorily.

RICKY N. RUPP, Colonel, USAF
Commander, 22d Air Refueling Wing

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

AFMAN 33-363, *Management of Records*, 1 March 2008

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

AFI 21-101 AMCSUP1, *Aircraft and Equipment Maintenance Management*, 14 Feb 2011

AFOSH 91-501, *Air Force Consolidated Occupational Safety Standard*, 7 Jul 2004

Prescribed Forms

No Forms or IMT's prescribed by this publication.

Adopted Forms

MXG FORM 21-35, *Aircraft Hangaring Requirements (AHR) Checklist*

Abbreviations and Acronyms

AFMAN—Air Force Manual

AFRIMS—Air Force Records Information Management System

CE—Civil Engineer

IAW—In Accordance With

MOC—Maintenance Operations Center

MQTP—Maintenance Qualification Training Program

MXG—Maintenance Group

MXS—Maintenance Squadron

OPR— Office of Primary Responsibility

Attachment 2

AIRCRAFT HANGARING REQUIREMENTS CHECKLIST

AIRCRAFT HANGARING REQUIREMENTS (AHR) CHECKLIST		
SECTION I PARKING AIRCRAFT INTO HANGAR		
1. DATE/TIME AIRCRAFT ENTERED HANGAR	2. AIRCRAFT TAIL NUMBER	3. HANGAR
4. TOW SUPERVISOR (RANK, LAST NAME)	5. EMPLOYEE NUMBER	6. TOW SUPERVISOR SIGNATURE
SECTION II PARKING AIRCRAFT INTO HANGAR REQUIREMENTS		
<p>CAUTION: WHEN TEMPERATURES ARE 32 DEGREES OR BELOW, KEEP DOORS CLOSED UNTIL THE AIRCRAFT IS READY FOR ENTRY OR EXIT. IN FREEZING TEMPERATURES WATER PIPES MAY BURST.</p>		
TOW TEAM PERSONNEL ARE RESPONSIBLE FOR THE FOLLOWING:		COMPLIED WITH
1. ENSURE ALL SAFETY LOCKS ARE INSTALLED		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
2. ENSURE THE AIRCRAFT IS PROPERLY GROUNDED (2 GROUNDS FOR FUEL CELL MX)		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
3. ENSURE ALL GROUNDING WIRES HAVE STREAMERS		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
4. ENSURE DRIP PANS ARE PLACED UNDER ALL ENGINES AND HYDRAULIC RESERVOIRS		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
5. ENSURE AIRCRAFT FORMS ARE WITH THE AIRCRAFT AND ARE PROPERLY ANNOTATED		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
SECTION III REMOVING AIRCRAFT FROM HANGAR		
1. DATE/TIME AIRCRAFT DEPARTED HANGAR	2. TOW SUPERVISOR (RANK, LAST NAME)	
3. EMPLOYEE NUMBER	4. TOW SUPERVISOR SIGNATURE	5. PRO-SUPER NOTIFIED OF REMOVAL <input type="checkbox"/> YES <input type="checkbox"/> NO
SECTION IV REMOVING AIRCRAFT FROM HANGAR REQUIREMENTS		
<p>CAUTION: WHEN TEMPERATURES ARE 32 DEGREES OR BELOW, KEEP DOORS CLOSED UNTIL THE AIRCRAFT IS READY FOR ENTRY OR EXIT. IN FREEZING TEMPERATURES WATER PIPES MAY BURST.</p>		
TOW TEAM PERSONNEL ARE RESPONSIBLE FOR THE FOLLOWING:		COMPLIED WITH
1. CONTACT AMXS/MXS PRODUCTION OFFICE PRIOR TO AIRCRAFT REMOVAL		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
2. ENSURE DRIP PANS ARE CLEAN AND STORED IN DESIGNATED STORAGE LOCATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
3. ENSURE CHOCKS ARE REMOVED FROM HANGAR OR STORED IN DESIGNATED STORAGE LOCATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
4. ENSURE ALL STANDS AND LADDERS ARE CLEAR OF AIRCRAFT AND STORED IN DESIGNATED STORAGE LOCATION		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
5. ENSURE CEILING PURGE DUCTS ARE CLEAR OF AIRCRAFT		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
6. ENSURE PERSONNEL RESPONSIBLE FOR OTHER MAINTENANCE ON THE AIRCRAFT HAVE POLICED THE AREA FOR AGE, FLUID SPILLS, RAGS, AND DEBRIS RELATED TO THEIR MAINTENANCE ACTIONS PRIOR TO TOWING AIRCRAFT FROM HANGAR.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A