

**BY ORDER OF THE COMMANDER
305TH AIR MOBILITY WING**

**305TH AIR MOBILITY WING
INSTRUCTION 91-203**



4 JUNE 2015

Safety

HANGAR DOOR OPERATIONS

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This instruction implements and extends the prescribed policies and procedures governing hangar door operations in the 305th Air Mobility Wing (305 AMW). This instruction applies to all units and personnel assigned to the 305 AMW and 514 AMW. This instruction does NOT apply to Lakehurst facilities and operations. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. Additionally, if the publication generates a report(s), alert readers in a statement and cite all applicable Reports Control Numbers in accordance with AFI 33-324. 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*, route AF Form 847s from the field through the appropriate functional's chain of command.

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. This revision clarifies the training plan policy and corrects errors in the 3 December 2010 edition.

1. Squadron Commanders will:

- 1.1. Ensure all building custodians operationally check hangar doors annually.

1.2. Ensure qualified trainers are identified by appointment letter, with one copy being maintained by the unit training manager.

2. Unit Training Managers will:

2.1. Coordinate with the squadron commander and work center supervisors to identify qualified trainers.

2.2. Maintain a copy of qualified trainers' appointment letter signed by the squadron commander.

3. Building Custodians will:

3.1. Document annual hangar door operational checks and post in continuity book.

3.2. Ensure current hangar door operating checklists are posted at each hangar door control panel.

3.3. Call 87th Civil Engineering Squadron if a repair is needed on the hangar doors.

3.4. Conduct initial qualification training for individuals designated by the squadron commander as hangar door operation trainers.

3.5. Ensure qualified trainers utilize the local operational checklists and training guides to conduct hands-on training prior to certification.

4. Training Requirements:

4.1. All applicable personnel will be properly trained in the procedures contained in the local checklists or operations placards relating to applicable hangar doors utilizing the training plan outlined in [Attachment 1](#). All training will be tracked in G081 or TBA/training records for work centers that do not use G081. Training requirements will be accomplished every 12 months and entered as a special certification. The exception is "Awareness Training" that will be an annual requirement but will not be entered as a "Special Certification" training task.

4.2. Training may be customized to cover only those hangars necessary for the trainee's work center requirements.

4.3. Only qualified personnel who have completed prescribed training and have documented training indicating which hangar doors may be operated are authorized to operate hangar doors.

4.4. Two qualified personnel will be required to operate hangar doors.

5. Documentation of Training:

5.1. Personnel who require training will obtain an AF Form 2426, *Training Request and Completion*, or equivalent (i.e. class roster) from the work center to document hangar door training. Upon successful completion of training and practical evaluation, the member will provide AMC Form 64, *Special Certification Roster*, to the unit training manager to update the applicable G081 course code.

5.2. The following local G081 course codes (see Table 1) will be used to track hangar door operation training as special certification and Hangar Door Awareness Training.

Table 1. Hangar Door G081 Course Codes.

Item	Course Code	Title
1	MCGR 000001	HANGAR DOOR OPER MAN/ELEC BLDG 1837
2	MCGR 000002	HANGAR DOOR MAN/ELEC BLDG 3210
3	MCGR 000003	HANGAR DOOR OPER MAN /ELEC BLDG 3209
4	MCGR 000004	HANGAR DOOR OPER MAN/ELEC BLDG 3211
5	MCGR 000005	HANGAR DOOR MAN OPER 1823,1809,1817,1801,1816
6	MCGR 000006	HANGAR DOOR OPER MAN BLDG 2251
7	MCGR 000007	HANGAR DOOR OPER MAN/ELEC BLDG 2201
8	SAFE 001100	HANGAR DOOR AWARENESS

6. Hangar Door Cold Weather Operation Procedures:

- 6.1. When the outside air temperature is 40°F or below, hangar doors will remain closed until the point that aircraft or equipment are ready to move in or out of the hangar.
- 6.2. For aircraft movement in these conditions, the tow supervisor is responsible for minimizing door open time. For equipment, it is the responsibility of the ranking member on the movement.

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Commander, 305th Air Mobility Wing

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

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

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

LCL MXG CL-20, *Bldg 3209 Big Beige Hangar Door Operations*, 8 Jan 2015

Abbreviations and Acronyms

AFI—Air Force Instruction

AMC—Air Mobility Command

AMW—Air Mobility Wing

CES—Civil Engineering Squadron

CL—Checklist

FOD—Foreign Object Debris

LCL—Local

MOC—Maintenance Operations Center

MXG—Maintenance Group

OJT—On-The-Job Training

TBA—Training Business Area

Attachment 2**305TH AIR MOBILITY WING HANGAR DOOR OPERATIONS TRAINING PLAN 305
MXO/MXOT DATE: 22 DEC 14**

A2.1. Below is the training outline for hangar door operations, this training will be performed by OJT using the lecture and demonstration/performance methods of training. Trainers must ensure that the Hangar Door Awareness Training is completed before the hands-on portion of training is accomplished.

A2.2. Perform Inspection, Operational Checkout, and Safe Operation of Specific Hangar Doors.

A2.3. Objective: Using the applicable hangar door checklist; inspect and operate hangar doors in both normal and manual modes of operation with zero trainer assists.

A2.4. References: AFI 21-101_AMCSUP, AFI 91-203, LCL305MXG-20, or applicable placard located on hangar door.

A2.5. Equipment and Materials: Hangar Door Placard, LCL MXG-20, Hangar Door Awareness Training on MXG QA Sharepoint.

A2.6. Demonstration: The following items will be reviewed prior to hands on training with the hangar door.

A2.6.1. Perform an inspection of the track ways and safely operate Hangar doors in both the normal and manual modes of operation.

A2.6.1.1. Safety and Hazards:

A2.6.1.1.1. Pinch/Crush Points

A2.6.1.1.2. Barriers/Fencing

A2.6.1.1.3. Blind Spots - Operator must have clear view of complete door travel.

A2.6.1.1.4. Clear Zone Marking - There must be a 5 feet clear zone outlined on floor w/ 3 inch yellow/black striped diagonal line.

A2.6.1.1.5. Danger Signs Location

A2.6.1.1.6. Mechanical safeguards - *Close Button must have hinged plate over button to prevent inadvertent operation.* Ensure limit switches or doorstops have been installed and operational.

A2.6.1.1.7. Hearing Protection - Required anytime a door is in operation requires a minimum of two personnel to operate doors.

A2.6.1.1.8. Safety Lights and Warning Horns. **NOTE:** Warning device(s) must be distinguishable from facility alarm and audible above normal noise levels. **NOTE:** Warning device must sound for 5 seconds before door operation. If any part of the system is inoperative stop immediately and contact CES via command post or MOC.

A2.6.1.2. Housekeeping/Inspection

A2.6.1.2.1. Inspection of door tracks and door track ways for FOD or debris/obstructions; drive mechanism appears to be in good working order must be inspected every 6 months by qualified personnel outlined in AFI 91-203.

A2.6.1.3. Tools and Equipment

A2.6.1.3.1. Checklists

A2.6.1.4. Discuss Cold Weather Procedures. **WARNING:** Do not leave hangar doors open any longer than necessary in cold weather (below freezing) to prevent damage to hangar facilities. Hangar doors must be opened to a minimum of 10 ft. Inspect door tracks and pockets for any snow and ice build-up that would prevent safe operation of the doors and remove if necessary prior to door operation. An additional spotter may be required in adverse weather.

A2.6.1.5. **Door Operation:**

A2.6.1.5.1. **Building 3209:**

A2.6.1.5.1.1. Discuss electrical opening procedures.

A2.6.1.5.1.1.1. Ensure door tracks are free of any obstructions.

A2.6.1.5.1.1.2. Ensure personnel exit doors are closed.

A2.6.1.5.1.1.3. Ensure personnel stairs are removed from both sides of hangar doors (Bay 2 doors only) and placed in the personnel stairs holding area.

A2.6.1.5.1.1.4. Spotter- positioned outside of hangar and in full view of panel operator

A2.6.1.5.1.1.5. Minimum clearance for hangar door is 10 feet.

A2.6.1.5.1.1.6. Hangar door must be completely opened for aircraft removal and installation.

A2.6.1.5.1.1.7. Do not press and release operation switches repeatedly.

A2.6.1.5.1.1.8. When temperatures are 40 degrees or below, do not open doors until aircraft is ready to be towed in or out of hangar.

A2.6.1.5.1.2. Discuss electrical closing procedures.

A2.6.1.5.1.2.1. Ensure door tracks are free of obstruction.

A2.6.1.5.1.2.2. Ensure personnel exit doors are closed.

A2.6.1.5.1.2.3. Ensure the main power lever is placed in the power on position; the power on light will illuminate.

A2.6.1.5.1.2.4. Spotter positioned outside of hangar and in full view of panel operator.

A2.6.1.5.1.2.5. Operator- Ensure spotter is positioned outside of hangar doors and in full view. Wait for all clear signal

A2.6.1.5.1.2.6. Emergency stop buttons are located on the end of each door.

A2.6.1.5.1.2.7. Ensure all hangar doors are closed if temperature is below 40

degrees.

A2.6.1.5.1.3. Perform electrical and manual opening/closing of hangar door for building 3209 using MXG CL 20.

A2.6.1.5.2. Building 1801, 1809, 1816, 1817, 1823, and 2251:

A2.6.1.5.2.1. Discuss opening procedures.

A2.6.1.5.2.1.1. A minimum of 2 personnel trained on manual operation are required to open or close the doors.

A2.6.1.5.2.1.2. Ensure door tracks are free of any obstructions.

A2.6.1.5.2.1.3. Ensure all personnel and equipment are clear of doors before opening.

A2.6.1.5.2.1.4. When temperatures are 40 degrees or below, do not open doors until aircraft is ready to be towed in or out of hangar.

A2.6.1.5.2.2. Discuss closing procedures.

A2.6.1.5.2.2.1. Ensure door tracks are free of any obstructions.

A2.6.1.5.2.2.2. Ensure all personnel and equipment are clear of doors before closing.

A2.6.1.5.2.2.3. Ensure all hangar doors are closed if temperature is below 40 degrees.

A2.6.1.5.2.3. Perform opening/closing of hangar door for buildings 1801/1809/1816/1817/1823 or 2251.

A2.6.1.5.3. Building 1837 A-BAY Hanger Doors:

A2.6.1.5.3.1. Discuss electrical opening procedures (A-Bay).

A2.6.1.5.3.1.1. Ensure door tracks are free of any obstructions.

A2.6.1.5.3.1.2. Ensure personnel and equipment are clear of doors before operating.

A2.6.1.5.3.1.3. Physically ensure all personnel access doors and motor component access doors are clear and door ajar lights are not illuminated, prior to door operation.

A2.6.1.5.3.1.4. Hangar door must be completely open for aircraft removal and installation.

A2.6.1.5.3.1.5. Hangar door must be open a minimum of 10 feet for all other operations.

A2.6.1.5.3.1.6. When temperatures are 40 degrees or below, do not open doors until aircraft is ready to be towed in or out of hangar.

A2.6.1.5.3.2. Discuss electrical closing procedures (A-Bay).

A2.6.1.5.3.2.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or

the closed position.

A2.6.1.5.3.2.2. Ensure door tracks are free of any obstructions.

A2.6.1.5.3.2.3. Ensure personnel and equipment are clear of doors before operating.

A2.6.1.5.3.2.4. Ensure all hangar doors are closed if temperature is below 40 degrees.

A2.6.1.5.3.3. Discuss manual opening procedures (A-Bay).

A2.6.1.5.3.3.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or the closed position.

A2.6.1.5.3.3.2. Manual door operation will be accomplished with a warehouse tug or T-500 tow vehicle.

A2.6.1.5.3.3.3. Doors will be towed because of power failure or electrical/mechanical component failure.

A2.6.1.5.3.3.4. Notify Production Supervisor prior to towing doors.

A2.6.1.5.3.4. Discuss manual closing procedures (A-Bay).

A2.6.1.5.3.4.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or the closed position.

A2.6.1.5.3.4.2. Manual door operation will be accomplished with a warehouse tug or T-500 tow vehicle.

A2.6.1.5.3.4.3. Doors will be towed because of power failure or electrical/mechanical component failure or during testing or maintenance work on doors.

A2.6.1.5.3.5. Perform opening/closing of hangar door for A Bay.

A2.6.1.5.4. Building 1837 B-Bay and C-Bay Hangar Doors:

A2.6.1.5.4.1. Discuss electrical opening procedures (B & C-Bay).

A2.6.1.5.4.1.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or the closed position.

A2.6.1.5.4.1.2. Ensure door tracks are free of obstruction.

A2.6.1.5.4.1.3. Ensure personnel and equipment are clear of **BOTH** bay doors before operating.

A2.6.1.5.4.1.4. Physically ensure all personnel, access doors and motor component access doors are closed door and ajar lights are not illuminated, prior to door operation.

A2.6.1.5.4.1.5. When doors are opened to the less than full open position, the egress doors are blocked in the adjacent hangar door. For this reason doors

should not be left in this configuration.

A2.6.1.5.4.1.6. If operating B and C bay doors, notify personnel in opposite hangar that doors will be operated.

A2.6.1.5.4.1.7. When temperatures are 40 degrees or below, do not open doors until aircraft is ready to be towed in or out of hangar.

A2.6.1.5.4.2. Discuss electrical closing procedures (B & C-Bay).

A2.6.1.5.4.2.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or the closed position.

A2.6.1.5.4.2.2. To ensure doors close completely, hold button until limit switches automatically stop the door.

A2.6.1.5.4.2.3. Ensure all hangar doors are closed if temperature is below 40 degrees.

A2.6.1.5.4.3. Discuss manual opening procedures (B & C-Bay).

A2.6.1.5.4.3.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or the closed position.

A2.6.1.5.4.3.2. Manual door operation will be accomplished with a warehouse tug or T-500 tow vehicle.

A2.6.1.5.4.3.3. Doors will be towed because of power failure or electrical/mechanic component failure or during testing or maintenance work on doors.

A2.6.1.5.4.3.4. Notify Production Supervisor prior to towing doors.

A2.6.1.5.4.3.5. Since all safety devices are inactive during manual operation, every personnel exit doors and motor/component access doors **WILL BE** physically checked and verified in the position, prior to door movement.

A2.6.1.5.4.4. Discuss manual closing procedures (B & C-Bay).

A2.6.1.5.4.4.1. A minimum of one 7-level and one spotter trained on hangar door operation for this hangar is required to operate doors in either the open or the closed position.

A2.6.1.5.4.4.2. Doors will be towed because of power failure or electrical/mechanical component failure or during testing or maintenance work on doors.

A2.6.1.5.4.5. Perform opening/closing procedures for B & C Bay hangar doors.

A2.6.1.5.5. **Building 2201:**

A2.6.1.5.5.1. Discuss opening procedures.

A2.6.1.5.5.1.1. Ensure the areas inside and outside of the hangar doors are clear prior to opening doors.

- A2.6.1.5.5.1.2. Ensure door tracks are free of any obstructions.
- A2.6.1.5.5.1.3. Ensure all personnel and equipment are clear of doors before opening.
- A2.6.1.5.5.1.4. Do not operate doors when winds exceed 45 knots.
- A2.6.1.5.5.1.5. When temperature is 40 degrees or lower, do not open doors until aircraft is ready to be moved.
- A2.6.1.5.5.1.6. Inform Cobra-5 of any abnormalities in door operation and call CE Ext 4-2388 to get the door fixed.
- A2.6.1.5.5.1.7. Two each personnel are required; control panel operator and a scanner, and both must be qualified to open and close hangar.
- A2.6.1.5.5.1.8. Hangar door must be opened a minimum of 10 feet to enter or exit through the doors.
- A2.6.1.5.5.1.9. Ensure both exit doors are closed and latched prior to use.
- A2.6.1.5.5.2. Discuss mullions opening procedures.
 - A2.6.1.5.5.2.1. Mullion beams pivot and swing outboard. Stand clear of area when mullions are operating.
 - A2.6.1.5.5.2.2. Failure to reposition mullion floor plates prior to use can cause damage to the floor and mullion.
 - A2.6.1.5.5.2.3. During freezing temperatures, check the mullion pit to ensure no ice buildup is present.
 - A2.6.1.5.5.2.4. Failure to reposition floor plates after mullions are raised is a tripping hazard and can cause injury to personnel or equipment.
- A2.6.1.5.5.3. Discuss closing procedures.
 - A2.6.1.5.5.3.1. Ensure there are no obstructions prior to operating doors.
 - A2.6.1.5.5.3.2. Failure to reposition floor plates prior to closing will cause damage to the floor and mullion.
 - A2.6.1.5.5.3.3. Ensure all hangar doors are closed if temperature is below 40 degrees.
- A2.6.1.5.5.4. Discuss manual opening and closing procedures.
 - A2.6.1.5.5.4.1. Hand cranks are supplied to fit on the motor shaft unit for manual operation of the doors.
 - A2.6.1.5.5.4.2. Can only be accomplished by qualified personnel.
- A2.6.1.5.5.5. Perform electrical and manual operations on hangar 2201.
- A2.6.1.5.6. **Building 3210/3211:**
 - A2.6.1.5.6.1. Discuss electrical opening procedures.
 - A2.6.1.5.6.1.1. Ensure the areas inside and outside of the hangar doors are

clear prior to opening doors.

A2.6.1.5.6.1.2. Inform Cobra-5 of any abnormalities in door operation and call CE Ext 4-2388 to get the door fixed.

A2.6.1.5.6.1.3. Three each personnel are required; control panel operator and two scanners, all personnel must be qualified to open and close hangar.

A2.6.1.5.6.1.4. Hangar door must be opened a minimum of 10 feet to enter or exit through the doors.

A2.6.1.5.6.1.5. Ensure door area is free of any equipment or personnel prior to operating.

A2.6.1.5.6.1.6. Ensure there are no personnel on the overhead catwalk prior to use failure to comply could result in personnel injury due to cable and pulley operation.

A2.6.1.5.6.1.7. The hangar doors can only be operated when the swing-up mullions are completely in vertical position.

A2.6.1.5.6.1.8. Ensure both exit doors are closed and latched prior to use.

A2.6.1.5.6.1.9. When opening doors, all doors will be opened fully. Doors are only to be opened for large objects.

A2.6.1.5.6.1.10. When temperatures are 40 degrees or below, do not open doors until aircraft is ready to be towed in or out of hangar.

A2.6.1.5.6.2. Discuss mullions opening procedures.

A2.6.1.5.6.2.1. Mullion beams pivot and swing outboard. Stand clear of area when mullions are operating.

A2.6.1.5.6.2.2. Failure to reposition mullion floor plates prior to use can cause damage to the floor and mullion.

A2.6.1.5.6.2.3. During freezing temperatures, check the mullion pit to ensure no ice buildup is present.

A2.6.1.5.6.2.4. Failure to reposition floor plates after mullions are raised is a tripping hazard and can cause injury to personnel or equipment.

A2.6.1.5.6.3. Discuss closing procedures.

A2.6.1.5.6.3.1. Ensure there are no obstructions prior to operating doors.

A2.6.1.5.6.3.2. Failure to reposition floor plates before mullions are lowered will cause damage to the floor and mullion.

A2.6.1.5.6.3.3. Ensure all hangar doors are closed if temperature is below 40 degrees.

A2.6.1.5.6.4. Discuss manual opening and closing procedures.

A2.6.1.5.6.4.1. Hand cranks are supplied to fit on the motor shaft unit for manual operation of the doors.

A2.6.1.5.6.4.2. Can only be accomplished by qualified personnel.

A2.6.1.5.6.5. Discuss emergency opening and closing procedures (temporary source of electrical power).

A2.6.1.5.6.5.1. In the event of a power failure the doors can be operated by emergency power.

A2.6.1.5.6.5.2. CE will start the emergency generator.

A2.6.1.5.6.6. Perform electrical and manual operations on hangar 3210/3211.