

BY ORDER OF THE COMMANDER



**ANDREWS AIR FORCE BASE
INSTRUCTION 21-103**

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Maintenance

HANGAR DOOR OPERATION

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This publication supports AFD 21-1, *Managing Aerospace Equipment Maintenance*, AFOSH STD 91-100, *Aircraft Flight Line-Ground Operations and Activities*, and AFOSH STD 91-501 *Aircraft Flight Line Consolidated Occupational Safety Standard* outlining responsibilities and procedures for the operation of the hangar doors. This publication is the source document for qualifying maintenance personnel to operate hangar doors and is applicable to all personnel who routinely work in the hangars. All units will continue to use their individual supplemental regulations.

1. Responsibilities. Branch managers and affected supervisors will ensure compliance with this publication.

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

1.1.1. Supervisors will document training in each individual's Qualification Record or equivalent form, GO-81/CAMS, *Core Automated Maintenance System* and **AF Form 55, Employee Safety and Health Record**.

1.2. Building custodians are responsible for the following:

1.2.1. Monitor the status of the doors and manage civil engineering (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 CE and the Fire Department of any door malfunction that causes initiation of lockout/tagout procedures. Only designated military personnel or qualified contractors 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 logbook.

1.2.3. The respective maintenance group commander and wing commander will receive monthly briefings on hangar door discrepancies, repair status and get-well date of inoperable door systems.

2. Procedures.

- 2.1. Perform hangar door training and operation in accordance with **Attachment 2** for hangars with electrical doors, **Attachment 3** for hangars with manual doors and **Attachment 4** for emergency procedures.
- 2.2. Manual operation of hangar doors is only authorized if the following precautions are observed:
 - 2.2.1. Only doors that are rendered safe by lockout/tagout procedures and specifically identified on the danger tag that manual operation is authorized shall be operated manually. Personnel authorized to perform lockout/tagout procedures must ensure that the door motor clutch is disengaged as part of their lockout procedures, if they authorize manual control.
 - 2.2.2. To move a malfunctioning door by other than manual means (i.e. UKE, truck), a maintenance production supervisor/qualified designated contractor must authorize and oversee the movement.
- 2.3. When severe weather threatens (lightning within 5 miles or winds exceeding 34 knots), the maintenance production supervisor/designated contractor, who will ensure all hangar doors are closed.
- 2.4. 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 has reached the hangar and will only be opened when the aircraft or equipment is positioned for entry or exit. The hangar doors will be closed immediately thereafter.
- 2.5. Hangar doors will be opened at a minimum of 10 feet for the entry/exit of any personnel or vehicle.
- 2.6. All hangar doors will be kept closed whenever possible to prevent bird entry. Doors will only be opened when aircraft is positioned for entry or exit, and closed immediately thereafter.

GLENN F. SPEARS, Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 21-1, *Managing Aerospace Equipment Maintenance*

AFOOSH STD 91-100, *Aircraft Flight Line-Ground Operations and Activities*

AFOOSH STD 91-501, *Aircraft Flight Line Consolidated Occupational Safety Standard*

Abbreviations and Acronyms

CAMS—Core Automated Maintenance System

CE—Civil Engineering

MOC—Maintenance Operations Center

Attachment 2

**HANGAR DOOR OPEN/CLOSE PROCEDURES
ELECTRICAL DOORS**

A2.1. Only qualified personnel are authorized to operate the hangar doors. Operators will be thoroughly familiar with these operating instructions and certified on their Training Standard, in CAMS/GO-81 and AF Form 55. A list of all hangar door operators will be posted on all hangar doors, IAW AFOSH STD 91-501. The following sequence of door operations will be strictly adhered to:

Hangar door opening procedures:

CAUTION

Ensure personnel doors are closed

WARNING

Check door tracks and closets to ensure they are clear of personnel, equipment and debris

WARNING

For safety of personnel, hangar door openings will be a minimum of 10 feet when entering or exiting the hangar

WARNING

Stop operation if horn does not sound! Alert spotter and proceed with caution.

Make sure building custodian is notified of the malfunction.

WARNING

The door opening shall remain at least 10 feet wide any time doors are open.

WARNING

Do not change direction (Open/Close) until the door comes to a complete stop.

WARNING

Do not ride on doors when in operation

A2.2. Press and hold in door open switch. You should hear a horn for 8 to 10 seconds IAW AFOSH STD 91-501 before the door moves. Hold this button until the door opening reaches the desired width; but no less than 10 feet.

Hangar door closing procedures.

WARNING

Check door tracks and closets to ensure they are clear of personnel, equipment and debris.

WARNING

Stop operation if horn does not sound. Acquire a spotter and proceed with caution.

Ensure the building custodian is notified of the malfunction.

WARNING

Do not ride on doors when in operation.

A2.3. Hold the closed button in the pressed position until the door automatically stops at the center of the hangar.

WARNING

Do not move doors by hand or with a vehicle. After approval by the maintenance production superintendent, a tow vehicle may be used in an emergency.

Doors that fail to operate properly will be tagged with an AF Form 981, Out of Order Tag and an emergency work order will be called into the base civil engineer emergency service. The building custodian will be notified of this condition.

Attachment 3**HANGAR DOOR OPEN/CLOSE PROCEDURES
MANUAL DOORS**

A3.1. Only qualified personnel will be authorized to operate the hangar doors. Operators will be thoroughly familiar with these operating instructions and certified on their Training Standard, in CAMS/GO-81 and AF Form 55. The following sequence of door operations will be strictly adhered to.

A3.1.1. Hangar door opening procedures:

A3.1.1.1. Ensure door lock pins are unlocked and retracted.

A3.1.1.2. Check door tracks and closets to ensure they are clear of personnel, equipment and debris.

A3.1.1.3. Ensure personnel doors are closed.

A3.1.1.4. Manually push hangar doors open until they are firmly against the doorstops and aligned with the full open mark on the hangar floor.

WARNING:

Do not move doors with a vehicle. After approval by the maintenance production superintendent, a tow vehicle may be used in an emergency.

A3.1.2. Hangar door closing procedures:

A3.1.2.1. Check door tracks to ensure they are clear of personnel, equipment and debris.

A3.1.2.2. Ensure personnel doors are closed.

A3.1.2.3. Manually push hangar doors closed.

Doors that fail to operate properly will be tagged with an AF Form 981, Out of Order Tag, and an emergency work order will be called into the base civil engineer emergency service. The respective building custodian will be notified of this condition.

Attachment 4

EMERGENCY HANGAR DOOR PROCEDURES

A4.1. For an emergency, there is no A/C power for the hangar doors and/or the drive motor is inoperable and there is an urgent need to open the hangar doors.

A4.1.1. Hangar door opening procedures:

A4.1.2. Remove access panel to motor drive assembly and disengage clutch assembly.

A4.1.3. Reinstall access panel

CAUTION

Failure to disengage clutch assembly will result in damage to the motor drive system.

A4.1.4. Install tow bar or chain assembly to pintle hook on hangar door to tow vehicle

A4.1.5. Open hangar doors very slowly to full open position

A4.1.6. Remove tow bar or chains from door and tow vehicle

A4.1.7. Hangar door closing procedures:

A4.1.7.1. Install tow bar or chain assembly to pintle hook on hangar door to tow vehicle

A4.1.7.2. Close hangar doors very slowly to their closed position

A4.1.7.3. Remove tow bar or chains from door and tow vehicle

A4.1.7.4. Remove access panel to motor drive assembly and re-engage clutch assembly or place lockout/tagout procedures.