

**BY ORDER OF THE COMMANDER
OF THE 19TH AIRLIFT WING (AMC)**

**LITTLE ROCK AFB INSTRUCTION
21-103**



30 APRIL 2026

Maintenance

**SEVERE WEATHER ALERT AND
ADVERSE WEATHER FLIGHT LINE
SECURING AND OPERATIONS
PROCEDURES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Colonel Amanda M. Sheets)

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This instruction implements AFD 21-1, *Maintenance of Military Materiel*, and requirements outlined in AFMAN 91-203 and DESR 6055.09_AFMAN 91-201. This instruction establishes procedures for 19 AW, 314AW, 189AW, flight line personnel attached or assigned to Little Rock Air Force Base. This instruction defines unit and individual responsibilities for securing aircraft and support equipment in the event of a severe weather warning. It also establishes procedures for winter and inclement weather operations. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). 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 Forms 847 from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

The following paragraphs have been revised: Paragraphs 1.2.3, 1.2.4, and 2.2.6..

1. Overview. This instruction establishes procedures for 19 AW, 314AW, 189AW, flight line personnel attached or assigned to Little Rock Air Force Base. This instruction defines unit and

individual responsibilities for securing aircraft and support equipment in the event of a severe weather warning. It also establishes procedures for winter and inclement weather operations.

2. General Responsibilities.

2.1. Operations, Maintenance, Mission Support Group supervision will:

2.1.1. Ensure flight line, support, and in-shop personnel are thoroughly briefed on requirements and responsibilities in the event of a severe weather watch or warning.

2.1.2. Ensure all actions required to secure aircraft and Aerospace Ground Equipment (AGE) in accordance with the predicted weather severity are accomplished.

2.1.3. Be prepared to initiate recall actions to ensure required personnel are available to effectively evacuate aircraft, save lives and protect government property as directed by the wing commander or Crisis Action Team (CAT).

2.2. Squadron production superintendents and flight line/in-shop supervisors will:

2.2.1. Take every opportunity to ensure safety of Air Force property and personnel.

2.2.2. During weather watches and warnings, ensure aircraft not being worked are moored, flaps raised, doors, windows and hatches are closed, and fire bottles are secured. If maintenance is being performed, the fire extinguisher will remain secured unless the maintenance being performed is on an active system that poses a potential fire hazard, or power is applied to the aircraft.

2.2.3. Ensure all unnecessary equipment/AGE is moved outside the circle of safety, to await transportation off the line. As soon as mission permits, all unnecessary equipment/AGE will be removed from the flight line to designated storage locations and all brake/locking devices engaged. If this cannot be accomplished, the equipment will be towed to an area away from the flight line and secured by the best means possible. Power units left on the flight line will be rolled up and moved outside the circle of safety. The flight line will be cleared of all unnecessary equipment/AGE. Fire bottles will be chained down under the wing prior to releasing personnel for the weekend if inclement weather is forecasted over the weekend.

2.2.4. Production and shop superintendents have the authority to shut down work and close their portion of the flight line if, in their opinion, personnel are in immediate danger and cannot safely complete assigned work and secure aircraft.

2.2.5. Ensure aircraft are moored in accordance with technical orders according to the predicted weather severity. 19 MXS/MXMT is responsible for mooring Isochronal (ISO) aircraft on backline.

2.2.6. Production superintendents and expeditors will plan for the immediate ground handling requirements of aircraft not fully parked on assigned spots once lightning is beyond a 5 nautical mile radius and or winds are below prescribed limits.

2.3. The respective Maintenance Operation Center (MOC) controller will, upon the receipt of any weather watch advisory or warning for lightning, thunderstorm, wind, or freezing precipitation, notify the following:

2.3.1. 19th, 189th and 314th Aircraft Maintenance Squadron production superintendents and expeditors.

2.3.2. 19th Maintenance Squadron production superintendents.

2.3.3. 19 MXG/QA, 314 MXG/QA, and 189 MXG/MXQ.

3. Severe Weather, High Winds, Lightning, Thunderstorm or Freezing Precipitation Watch and/or Warning.

3.1. Everyone will:

3.1.1. When frost, ice, snow, precipitation, high winds or other severe weather watches are evident or in effect, supervisors must constantly weigh the hazards inherent in performing aircraft maintenance against the necessity to perform or continue the task(s) at hand. Operations activities may continue during a weather watch; however, all personnel must implement lightning, thunderstorms, or freezing precipitation procedures without delay when required. If operational needs or priorities arise, production supervisors will evaluate the situation and direct the use of elevated platforms, work stands, or other appropriate equipment to accomplish the task.

3.1.2. Be aware of, and adhere to, specific weather restrictions in applicable technical orders, check lists, job guides, operating instructions, and AFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards*.

3.1.3. Be alert for rapidly changing conditions, thunder, or unreported lightning.

3.2. Winds forecast of 20-30 knots:

3.2.1. Comply with procedures listed in [paragraph 3.1](#).

3.2.2. All loose equipment around facilities will be anchored, secured or placed in the building includes: trash receptacles, butt cans, barbeques, etc.

3.2.3. Keep hangar and building doors closed to the maximum extent possible.

3.2.4. Non-Powered AGE that cannot be readily tied-down will have wheels locked and jack-pads lowered. If this cannot be accomplished, the equipment must be towed to an area away from the flight line and secured by the best means possible.

3.2.5. Vehicles with towing capabilities will be used to remove all unused support equipment from the flight line.

3.2.6. Remove support equipment and roll up power cords not in use.

3.2.7. Ensure all removed aircraft parts and panels are placed inside aircraft, secured inside a vehicle or relocated to a building storage area.

3.2.8. Production superintendents will notify the MOC when flight line severe weather securing operations are complete.

3.2.9. Aircraft in nose hangars will have tails moored.

3.3. Winds forecast of 31-50 knots:

3.3.1. Complete specific requirements listed in [paragraphs 3.1](#) and [3.2](#).

3.3.2. No maintenance will be performed on top of the aircraft when winds are above 35 knots. Use of stands will be limited to mission-essential requirements only.

3.3.3. All aircraft in hangars 245, 255 and 280 will be down-jacked unless maintenance actions prevent this.

3.3.4. Remove all equipment from the flight line. All squadrons will support AGE/equipment removal from the flight line to a secure location.

3.4. Winds forecast in excess of 50 knots:

3.4.1. Complete specific requirements listed in paragraphs 3.1, 3.2 and 3.3.

3.4.2. No maintenance will be performed outside when wind velocities exceed 50 knots except to secure and prepare for evacuation.

3.4.3. Aircraft in hangars 245, 255 and 280 will be removed from the hangar when wind velocities or gusts are forecasted to reach 50 knots, unless maintenance actions prevent this.

3.4.4. Evacuation of aircraft is recommended if winds above 75 knots are expected (must be evacuated at velocities above 83.5 knots).

3.5. Lightning watch:

3.5.1. Complete paragraphs 3.1-3.1.3.

3.5.2. A *Lightning Watch* will be in effect 30 minutes prior to thunderstorms being within a 5 nautical mile (nm) radius of the predetermined location.

3.5.3. Initiate controlled termination procedures for all explosives operations at outdoor locations equipped with an LPS (Lightning Protection System), at locations (outdoor and indoor) not equipped with an LPS, and facilities containing exposed explosives, explosive dust, or explosive vapor. See DESR 6055.09_AFMAN 91-201.

3.6. Lightning warning:

3.6.1. Complete paragraphs 3.1-3.1.3.

3.6.2. During *Lightning Warning* evacuate personnel from explosives locations, to include parked explosives-laden vehicles, aircraft, flightline locations which do not have an LPS. See DESR 6055.09_AFMAN 91-201.

3.6.3. No flight line maintenance, aircraft servicing or fuel cell in-tank maintenance will be performed when lightning is within 5 nautical miles. All other in-shop activities may continue unless prohibited by specific directives. Production Supers can close down flight line operations if lightning is observed but not called within 5 nautical miles by the MOC.

3.6.4. Maintenance personnel will not leave their vehicle to chock or ground the aircraft until lightning is reported outside a 5 nautical mile radius by MOC.

3.6.5. If caught on the flight line during a lightning storm, remain in the aircraft until all clear or transportation arrives. Do not walk across the flight line. Wait for vehicle transportation.

3.6.6. No maintenance of any kind will be performed on aircraft in hangars 245, 255N/S, or 280 due to the grounding danger to personnel if the exposed empennage was struck by lightning.

3.7. Command Post will:

3.7.1. Upon notification of local mission or cross-country aircraft return, contact the aircraft commander using Little Rock primary Ultra High Frequency (UHF) radio frequency 349.4 and/or secondary frequency.

3.7.2. Ensure the aircraft commander understands the aircraft must be stopped one spot short of its assigned parking spot and personnel must remain in the aircraft until lightning is outside of the 5 nautical mile radius or ground transportation arrives.

3.7.3. Aircraft commanders can, at their discretion, park on spots when no aircraft are parked to the left or right of them.

3.8. Freezing precipitation and icing conditions:

3.8.1. If operational needs or priorities arise, and fall protection use is not feasible, production supervisors will evaluate the situation and direct the use of elevated platforms, work stands or other appropriate equipment to accomplish the task. Supervisory personnel will be present during these operations.

3.8.2. Aircraft flaps will be raised when icing conditions are forecasted, including flaps on sealed spares, unless a maintenance condition exists.

3.8.3. Walkways around buildings and work areas will be clear of snow or ice accumulation.

3.9. Transient Alert (TA) section responsibilities:

3.9.1. For the Transient Alert section, aircraft moor/mooring is defined as: securing aircraft nose landing gear and wings or main landing gears and tail section if applicable with aircraft cargo chains and devices or straps unless coordinated and approved different by the Quality Assurance Evaluator (QAE).

3.9.2. Transient Alert will determine what mooring equipment will be used for aircraft when specific airframe technical orders are not on-site, and when specific airframe technical orders are on on-site but the correct mooring equipment is not. The QAE may at any time disapprove mooring equipment used and request the use of another type, example; chains and devices versus straps.

3.9.3. Moor or hangar transient aircraft and remove AGE and secure fire extinguishers when requested and determined by the QAE that the potential for moderate to severe weather conditions are probable during TA non-duty hours.

3.9.4. When the TA section is closed, TA will ensure transient aircraft are moored as required per technical data, remove AGE and secure fire extinguishers unless coordinated and approved different by the QAE.

3.9.5. Moor or hangar transient aircraft according to on-site specific airframe technical orders.

3.9.6. In the event of a base weather watch or warning (potential winds at or above 35 knots or potential hail) during TA operational hours, TA shall comply with the following when specific airframe technical orders are not on-site, with the exception of transient C-130 aircraft:

3.9.6.1. Moor transient aircraft unless coordinated and approved different by the QAE.

3.9.6.2. Moor transient C-130 aircraft in accordance with Little Rock AFB assigned C-130 aircraft mooring requirements.

3.9.6.3. If an aircraft is scheduled to fly, a nose chain/strap will remain in place until the crew shows.

3.9.6.4. If a transient aircraft arrives for a gas and go (minimum ground time) just prior to or during a moderate to severe weather watch or warning, moor or tow aircraft as requested by the aircraft commander.

3.9.6.5. When determined by transient alert or when requested by the QAE, TA will hangar transient aircraft.

3.9.6.6. Remove AGE from the flight line when not in use.

3.9.6.7. Secure fire extinguishers located on the flight line to an aircraft mooring point with an aircraft cargo chain or strap when aircraft are not being worked. When aircraft are being worked, fire extinguishers will be properly positioned and not secured. Aircraft loaded with chaff and flares will have the fire extinguisher at the nose of the aircraft and not chained.

3.9.6.8. Comply with other applicable requirements listed in the entirety of this instruction to ensure the protection of all government resources and workforce safety.

DENNY R. DAVIES, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 21-1, Maintenance of Military Materiel, 1 Aug 2018

AFMAN 91-203, Air Force Occupational Safety, Fire, and Health Standards, 11 Dec 2018

DESR 6055.09_AFMAN 91-201, Explosives Safety Standard, 28 May 2020

AFI 33-322, Records Management and Information Governance Program, 23 Mar 2020

Abbreviations and Acronyms

AFI—Air Force Instruction

AGE—Aerospace Ground Equipment

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRIMS—Air Force Records Information Management System

AW—Airlift Wing

CAT—Crisis Action Team

IAW—In Accordance With

ISO—Isochronal

LPS—Lightning Protection System

MOC—Maintenance Operation Center

OPR—Office of Primary Responsibility

QAE—Quality Assurance Evaluator

RDS—Records Disposition Schedule

TA—Transient Alert

UHF—Ultra High Frequency

Attachment 2

19 AW COMBINED WEATHER MATRIX

Figure A2.1. 19 AW Combined Weather Matrix.

LITTLE ROCK AIR FORCE BASE MX/OPS WEATHER MATRIX v.1.3 cmo 24 Jan 2020					
Ops Major Wind Limitations					
ACTION	WIND	# OF OPS/WX PER REQ For E/O	EST TIME FOR SINGLE TASK COMPLETION	MX/OPS Wx CON	Notes
MAX CROSS WINDS T/O AND LAND (WET RUNWAY)	23-26 knts	3/0	N/A	2	The heavier the aircraft the higher the max crosswind (gross weight 120k-200k)
MAX CROSS WINDS T/O AND LAND (DRY RUNWAY)	35 knts	3/0	N/A	4	
MAX WINDSPEED FOR FLT BLE ENGINE OPERATION (WIND 90-270)	45 knts	3/2	N/A		Wind direction within 90° from the front of the aircraft
MAX WINDSPEED FOR FLT BLE ENGINE OPERATION (WIND 45-90)	60 knts	3/2	N/A		Wind direction within 45° from the front of the aircraft
MAINTENANCE ACTIOS LIMITS					
ACTION	WIND	# OF MX PER REQ	EST TIME FOR SINGLE TASK COMPLETION	MX/OPS Wx CON	Notes
Work on top of AC suspension	>35 knts	N/A	N/A	1	
Hangar doors closed to max extent	>20 knts	2	5 min	1	
Minor aircraft tow (C-230-3-000v-08-1 Table 12-1)	>35 knts	3	15-20 min	1	
Tier 1 High Wind Inspection	>35 knts	1	30 min	3	
AGE nct in use removed from flight line	>20 knts	4-5	30-60 min	3	
Cross-towing aircraft	>40 knts	N/A	N/A	3	
AC in Nose Dock Hangar 222, 243, 255, 290 A, on jacked	>30 knts	7	1 hr	3	1 hour per aircraft (can be done concurrently with enough manpower)
AGE remaining removed from flight line	>30 knts	4-5	30-60 min	3	
AC in Nose Dock Hangar 222, 243, 255, 290 removed	>30 knts	7	1 hr	5	1 hour per aircraft (can be done concurrently with enough manpower)
No maintenance performed outside except for evac bench	>30 knts	N/A	N/A	5	
Consider aircraft evacuation Per AF 91-230	>30 knts			5	
Tier 2 High Wind Inspection	>25 knts	2	1 hour	7	
RECOMMEND HANGARING OR EVACUATION	>25 knts	3	20 hrs for Clear Run/ Hangar Plan	7	Preflight if needed, Gas if needed, AC normally are fueled on the ramp to 325
REQUIRED AIRCRAFT HANGARING OR EVACUATION	>15 knts		8 hrs for alert scenario	7	
WEATHER CONDITIONS					
Status	Alert Level	Details	Impact		
MX/OPS Wx CON Can VII	Weather Watch / Warning	Tornado, Hurricane (sustained winds ≥ 75KT)	Potential for extreme damage or loss of life - evacuate or shelter in place		
MX/OPS Wx CON Can VI	Weather Watch / Warning	Tropical Storm, Sustained winds greater than 50KT, Hail larger than 3/4" in diameter	Potential for severe damage or loss of life - cease flight line ops - consider evac		
MX/OPS Wx CON Can V	Weather Watch / Warning	Lightning w/in 5, Heavy Snow (≥ 2 inches w/in 12 hrs), Freezing Precipitation	Potential for moderate damage or loss of life - cease flight line ops		
MX/OPS Wx CON Can IV	Weather Advisory	Crosswinds ≥ 35KT	Potential for damage, and high risk of injury - cease flight line ops		
MX/OPS Wx CON Can III	Weather Advisory	Surface winds 35-50kt, Heavy rain (≥ 2 inches w/in 12 hrs.)	Potential for light damage and moderate risk of injury - Emergency flight/ops operations		
MX/OPS Wx CON Can II	Weather Advisory	Crosswinds ≥ 22KT w/ wet runway, Surface Vis <1/8 mile, Ambient temps	Increased risk of damage to equipment or personnel in use - limits flight line ops		
MX/OPS Wx CON Can I	Normal Conditions		Normal Operations		
Step	Description	Time To Event	Time to next event	Expected Day Time	
19	Normal Weather Forecast - Take notice	N+ 120	24:00	22/Aug/2020 14:00	
18	Normal Weather Forecast - Take notice - Standard Sig Wx Messaging	N+ 96	24:00	23/Aug/2020 14:00	
17	Normal Weather Forecast - Take notice - Standard Sig Wx Messaging - Notify WG-MXG-OG/CCs	N+ 72	24:00	24/Aug/2020 14:00	
16	Stage 1 Plan - 19 OSS/WX Notify assigned WG and Group Reps	N+ 48	8:00	25/Aug/2020 14:00	
15	Tasked Mission Coordination - OSO HHQ Adjustments	N+ 40	4:00	25/Aug/2020 22:00	
14	Stage 2 Mission Generation - Prep aircraft and crew coordination	N+ 36	12:00	26/Aug/2020 02:00	
13	Stage 3 Execution - WX Updated Product WG/Group/CCs teleconference	N+ 24	2:00	26/Aug/2020 14:00	
12	Prep Order sent to SQ Units UCC Standups	N+ 22	1:00	26/Aug/2020 16:00	
11	Aircrew Mass Enter Crew Rest - MX enacts hangar plan	N+ 21	1:00	26/Aug/2020 17:00	
10	Crew Rest (First launch crew NLT than N+ 20, Last Launch NLT N+16)	N+ 20	11:00	26/Aug/2020 18:00	
9	WG/CC and CAT Primary Launch Decision Point - Notification decision pushed to units	N+ 09	1:00	27/Aug/2020 05:00	
8	Alert Sequence	N+ 08	1:00	27/Aug/2020 05:00	
7	WG/CC Final Launch Decision Point	N+ 07	0:30	27/Aug/2020 06:00	
6	NLT point for CAT/UCC to push notification final launch decision	N+ 06+30	0:15	27/Aug/2020 06:30	
5	Crews Step - Note: Recommended Positive Launch coordination with Rock Ops	N+ 06+15	0:30	27/Aug/2020 06:45	
4	Sequence aircraft loading (if required)	N+ 05+45	1:00	27/Aug/2020 07:15	
3	Launch of first aircraft, last at N+ 0+45 (4 hour window for 20 planes means a T/O every 12 min)	N+ 04+45	4:00	27/Aug/2020 08:15	
2	Launch of last aircraft	N+ 00+45	0:45	27/Aug/2020 12:15	
1	Storm Winds > 22 knots and predicted to be sustained	N	0:00	27/Aug/2020 13:00	