



Flying Operations

C-130 MASS OPERATIONS FLIGHT ENGINEER CHECKLIST

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This checklist establishes procedures for employing the Modular Aerial Spray System (MASS) on C-130 aircraft employed by Mobility Air Forces (MAF) to accomplish their worldwide mission. This checklist complements AFMAN 11-2C-130V3, *ADDENDA C Modular Aerial Spray Systems (MASS) Procedures*, and is printed on standard 8 1/2" x 11" bond paper, and trimmed to fit the standard plastic aircrew checklist binders. This checklist is intended to provide MASS certified crewmembers quick reference to procedures required for the safe execution of MASS ground and flight operations. All MASS certified C-130 flight engineers will carry this annex.

Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, Recommendation for Change of Publication; route AF IMT 847s from the field through the appropriate chain of command.

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PART ONE – PREFLIGHT CHECKLIST

Note

This checklist will be performed by the flight engineer on all aerial spray missions in addition to the normal -1 preflight.

BEFORE EXTERIOR INSPECTION

1. Pilots radar repeater scope - Removed, stowed
2. Remote TAS & radar altimeter indicators - Installed
3. Differential GPS (if req'd) - Installed

EXTERIOR INSPECTION

1. Walk around inspection

Caution

Wear face shields and gloves when inspecting booms.

Note

Ensure all hardware and lines are attached.

- a. Right wing booms (if installed) - Checked
- b. Right wing spray lines (if installed) - Checked
- c. Right fuselage boom (if installed) - Checked
- d. Left fuselage boom (if installed) - Checked
- e. Left wing spray lines (if installed) - Checked
- f. Left wing booms (if installed) - Checked

INTERIOR & TOP OF AIRCRAFT INSPECTION

1. Litter stanchions at FS 245 blocking access to lower main ac distribution panel – Removed (NA for SP1G)

Note

Only stanchions interfering with access have to be removed.

2. Emergency tie down fixtures - Stowed
3. MASS module installation - Checked
 - a. Interior spray line attachment points - Checked

Note

Only attachment points to aircraft need be checked.

- b. Absence of leaks – Checked

Note

Check connections from system to aircraft for leaks.

- c. Vent line to overboard vent – Attached

AERIAL SPRAY SAFETY OBSERVER CHECKLIST

1. Fire Department - Notified
 - a. Provide a handout of aircraft, crew locations, and emergency entrances
 - b. Provide a MSDS identifying chemical being used, the symptoms of exposure, and the antidote.
 - c. Provide fire department personnel with an aircraft tour.
2. Rescue Personnel -Briefed (As Required)
 - a. Battery compartment - Battery disconnect procedures
 - b. Crew entrance door - Opening procedures
 - c. Flight Deck
 - (1)Engine shutdown procedures using condition levers/fire handles
 - (2)Battery and SCNS switches - Location/use
 - (3)Overhead hatch - Location/use
 - d. Cargo Compartment
 - (1)Oxygen shutoff valve - Location/use
 - (2)Chopping Locations - Location/use
 - (3)Overhead hatches - Location/use
 - (4)Troop doors -Location/use
 - (5)Aft cargo door - Opening procedures
 - (6)MASS emergency shutdown procedure – flight deck/console
 - e. Hospital Coordination
 - (1)Establish the most direct route to the hospital
 - (2)Ensure transport capability to medical facility with adequate supply of antidote required.
 - (3)Provide a MSDS of the chemical being used.
3. Safety Circle - Designated
 - a. Establish a circle of safety around the aircraft approximately 10 feet from each wing tip.
 - b. Allow no one to enter the safety circle that is not required for chemical upload/download.
4. Personnel - Check and monitor
 - a. Monitor all personnel involved in chemical loading/downloading operations for symptoms of chemical contamination.
 - b. Ensure contact information for rescue is available.

PART TWO – NORMAL PROCEDURES

BEFORE SPRAY CHECKLIST

NOTE

This checklist will be initiated by the pilot and will be completed prior to descending for the swath.

- | | |
|-----------------------------------|-----------|
| 1. “Crew, before spray checklist” | (PF) |
| “Acknowledged” | (LM) |
| 2. Crew briefing - “Complete” | (PF) |
| 3. Spray area - “Reviewed” | (P,CP,N) |
| 4. Stall speeds - “Checked” | (P,CP, E) |

NOTE

Stall speeds for bank angles of 0, 30, 45, and 60 degrees will be posted.

- | | |
|---|---------------|
| 5. Altimeters - “Set, state setting” | (P,CP,N) |
| 6. Radar altimeter - “Set, state setting” | (P,N) |
| 7. GCAS - “Set, state setting” | (PM) |
| 8. Communication radios - “Set” | (CP) |
| 9. DGPS - “Set” | (N) |
| 10. TD control valve switches - Locked | (E) |
| 11. Synchrophaser master switch - Off | (E) |
| 12. Propeller ice control switches - Off | (E) |
| 13. Seat belt/shoulder harness - “Fastened, unlocked” | (P, CP, E) |
| 14. NVGs (As Required) – “ON, Ready” | (P,CP,E,N,LM) |
| 15. Pressurization - As required | (E) |
| 16. Before Spray checks - “Complete” | (LM, E) |

AFTER SPRAY CHECKLIST

- | | |
|---|--------|
| 1. Synchrophase master switch - As required | (E) |
| 2. TD control valve switches - Auto | (E) |
| 3. Propeller ice control switches - On | (E) |
| 4. Pressurization - As required | (E) |
| 5. After spray checks - “Complete” | (LM,E) |

PART THREE – EMERGENCY PROCEDURES

CHEMICAL LEAK/SPILL*

**LEAK* is defined as a quantity of chemical which can be contained within the MASS. *SPILL* is defined as a quantity of chemical in excess of the amount which can be contained within the MASS.

1. Notify Pilot – “SPRAY OFF”

- Brief description of malfunction (LM)

2. Initiate Immediate Shallow Climb to MSA (Spill only) - (PF)

3. Pilot – “OXYGEN/ON, 100%” (if needed) - (ALL)

4. CHEMICAL LEAK/SPILL CHECKLIST – “COMPLETE” (ALL)

EMERGENCY CLIMB

1. Announce – “EMERGENCY CLIMB” (ANY)

2. Execute – GCAS Escape Maneuver (PF)

- As outlined in TO 1C-130H-1