



NATIONAL GUARD BUREAU
3500 FETCHET AVENUE
JOINT BASE ANDREWS MD 20762-5157

28 June 2024

MEMORANDUM FOR: United States Forest Service

FROM: NGB A3/10MT

SUBJECT: Concurrent Servicing of USAF C-130H/J Aircraft

This memo outlines procedures and safety considerations for concurrently servicing USAF C-130H/J aircraft with retardant, fuel, and compressed air. Individual tanker base personnel are encouraged to review this document in addition to a face-to-face briefing by USAF Aircrew/Maintenance personnel prior to concurrent servicing. Individual tanker base managers will give permission for concurrent servicing and assign pit personnel and refueling personnel familiar with this procedure.

The USAF has well established thorough procedures for concurrent servicing. The following publications will be utilized:

C-130H model

Maintenance personnel will adhere to:

TO 1C-130H-2-12JG-10-1, GROUND HANDLING FUEL SYSTEM SERVICING AND CONCURRENT SERVICING. USAF SERIES ALL C-130 AIRCRAFT EXCEPT C-130J AIRCRAFT. 3 DECEMBER 1990, CHANGE 55 - 15 DECEMBER 2022, SECTION 2. CONCURRENT SERVICING.

Aircrew personnel will adhere to:

AIR FORCE MANUAL 11-2C-130H VOLUME 3, C-130H OPERATIONS PROCEDURES, 5 December 2023 - Corrective Action, 15 DECEMBER 2023, Paragraph 10.4. Aircraft Servicing and Ground Operations.

C-130J model

Maintenance personnel will adhere to:

TO 1C-130J-2-12JG-10-1, AIRPLANE SERVICING FUEL SYSTEM USAF C-130J SERIES AIRCRAFT. 01 JANUARY 2022 CHANGE 2 - 01 JANUARY 2024, CHAPTER 5 CONCURRENT SERVICING

Aircrew personnel will adhere to:

AIR FORCE MANUAL 11-2C-130J VOLUME 3, C-130J OPERATIONS PROCEDURES, 1 AUGUST 2023, Paragraph 10.4.
Aircraft Servicing.

The above procedures will be followed by USAF personnel in conjunction with the NWCG Standards for Airtanker Base Operations, and local airtanker base procedures.

See the attached assessment and mitigation for concurrent servicing procedures.

WILLIAM E. HARDIN, Civ, DAF
MAFFS Program Manager

Assessment and Mitigation of: USAF Retardant Loading Procedures C-130H&J

Sub-System- Concurrent servicing 1 of 2

		Pre Mitigation			Post Mitigation						
Sub-system	Hazards	Likelihood	Severity	Outcome	Mitigation	Likelihood	Severity	Outcome	Mitigation Achieved ?	Additional Local Mitigation	Post Mitigation Value
Aircraft	Entry of aircraft into the pit area creates a risk to ground personnel and a risk of aircraft contact with ground equipment and facilities	Occasional	Critical	Serious	Aircrews are trained and operate in compliance with Standards for Airtanker Base Operations (SABO)	Occasional	Critical	Low		Aircrews are briefed with airbase personnel before the start of each operations shift.	
Communications	Lack of Communication procedures and understanding with both radio as well as ground handling signals	Occasional	Critical	Serious	Conduct effective airbase in-briefings. Check radio systems with every crew change. Familiarize personnel with ground handling procedures and ensure effective communication.	Occasional	Critical	Low		Maintain published frequencies and airtanker base guides in aircraft	
Human Factors	Understanding of procedures with ground/ramp personnel	Occasional	Critical	Serious	Concurrent servicing requires approval from Air Tanker Base Plan as well as consensus between Base Manager and Aircrew/MX Personnel.	Remote	Critical	Low		Establish Retardant concurrent servicing plan specific to aircraft type.	
Equipment	Retardant loading has the potential to be over loaded or spilled, creating risk of environmental contamination.	Occasional	Critical	Serious	Ensure ground handling personnel are trained and qualified to fill C-130 aircraft.	Remote	Critical	Low		C-130 aircraft are equipped with computerized loading technology to mitigate over filling and assure accurate fill levels.	
Equipment	Fuel loading has the potential to be over loaded or spilled, creating risk of environmental contamination.	Occasional	Critical	Serious	Designated, trained fuel handlers with PPE will conduct fueling.	Occasional	Critical	Low		A trained MX/Aircrew member oversees every concurrent operation	
Environment	Heat, wind, noise, exhaust, direct sunlight all creates a hazardous environment	Occasional	Critical	Serious	Training and utilization of Airtanker base safe work procedures including the use of PPE, and established breaks.	Occasional	Critical	Low		Proper positioning of aircraft, minimizes aircraft generated exposures.	

Final Assessment Value: **Prepared By:** William HARDIN, WILLIAM E CIV, NGB MAFFS Program Manager **Date:** 6/21/2024

Operation Approved by: **Title:** **Date:**

In no case would the overall risk of the mission be less than the highest specific risk factor (example: one high, one serious, and two medium threats couldn't result in anything less than high).

Assessment and Mitigation of: USAF Retardant Loading Procedures C-130H&J

Sub-System- Concurrent servicing 2 of 2

		Pre Mitigation			Post Mitigation						
Sub-system	Hazards	Likelihood	Severity	Outcome	Mitigation	Likelihood	Severity	Outcome	Mitigation Achieved ?	Additional Local Mitigation	Post Mitigation Value
Operational Layout	Improper placement of equipment and or personnel causing hazard	Occasional	Critical	Serious	Assure each base plan addressed equipment placement in relationship to aircraft for compatibility and safety	Occasional	Critical	Low		Pit personnel approaches aircraft from the right.	
Communication Loss	Radio Loss: Inability to safely manage and direct	Occasional	Critical	Serious	Suspend operations until positive communication is restored	Occasional	Critical	Low		MX/Aircrew establishes communication CRM to deal with radio or frequency loss.	
Communication Loss	Ground Handling loss: inability to safely manage in the ramp/pit area	Occasional	Critical	Serious	Suspend operations until communication is restored	Occasional	Critical	Low		MX/Aircrew establishes positive communication with ground handling personnel	
Fuel/Retardant Spill	Environmental hazard, employee slip/fall hazard contact with skin, clothing hazard, fuel fire hazard	Occasional	Critical	Serious	Training and utilization of Airtanker base safe work procedures including retardant/ fuel spill response and the utilization of PPE	Occasional	Critical	Low		MX/Aircrew is familiarized with base retardant spill response procedures	
Compressed Air Leak	Pressurized air can injure personnel and/or damage equipment.	Occasional	Critical	Serious	Inspection of equipment prior to use, monitoring during servicing, and proper use of PPE.	Occasional	Critical	Low		MX/Aircrew will be aware of potential hazard and monitor closely during servicing with ground handling personnel.	

Final Assessment Value:

Prepared By: William HARDIN, WILLIAM E CIV, NGB MAFFS Program Manager **6/21/2024**

Operation Approved by:

Title:

Date:

In no case would the overall risk of the mission be less than the highest specific risk factor (example: one high, one serious, and two medium threats couldn't result in anything less than high).

Assessment and Mitigation of: USAF Retardant Loading Procedures C-130H&J

System- Concurrent servicing procedures on same side of aircraft 1 of 1

Sub-system	Hazards	Pre Mitigation			Mitigation	Post Mitigation			Mitigation Achieved ?	Additional Local Mitigation	Post Mitigation Value
		Likelihood	Severity	Outcome		Likelihood	Severity	Outcome			
Environment	Heat, wind, exhaust, direct sunlight FOD, noise, lack of situational awareness all create a hazardous environment	Probable	Critical	Serious	USAF concurrent servicing procedures are followed in conjunction with USFS & local airtanker base procedures.	Remote	Critical	Low		MX/Aircrew assures pre-training is accomplished and utilizes check-lists before operations.	
Operational Layout	Improper placement of equipment and or personnel causing hazards	Probable	Critical	Serious	Stop distance from aircraft 25+ Feet. Position at the aircraft, all equipment prior to fuel/retardant flow.	Remote	Critical	Low		MX/Aircrew does not start operations until assurance that all equipment is in proper place.	
Operational Layout	Additional hazards with two operations within close proximity of same side of aircraft.	Probable	Critical	Serious	Emergency shut down procedures are in place, separation between each operation, communication established between fueling and retardant	Remote	Critical	Low		MX/Aircrew members monitor each operation to assure communication and procedures	
Fuel Or Retardant Spill	The risk exists of a fuel or retardant spill	Occasional	Significant	Serious	Rapid shutdown procedures are in place for both fueling and retardant operations	Remote	Critical	Low		If a spill occurs both operations initiate rapid shut down.	
Communication	MX/Aircrew, Retardant Loaders, Ramp personnel & Fuel Loaders creates multi-communication needs increasing complexity.	Occasional	Significant	Serious	Communication procedures is established per base. Concurrent servicing supplements local policy.	Remote	Critical	Low		MX/Aircrew members are trained and participate in communication procedures	

Final Assessment Value:

Prepared By: William HARDIN, WILLIAM E CIV, NGB MAFFS Program Manager **6/21/2024**

Operation Approved by:

Title:

Date:

In no case would the overall risk of the mission be less than the highest specific risk factor (example: one high, one serious, and two medium threats couldn't result in anything less than high).

Bibliography

TO 1C-130H-2-12JG-10-1, GROUND HANDLING FUEL SYSTEM SERVICING AND CONCURRENT SERVICING. USAF SERIES ALL C-130 AIRCRAFT EXCEPT C-130J AIRCRAFT. 3 DECEMBER 1990, CHANGE 55 - 15 DECEMBER 2022.

TO 1C-130J-2-12JG-10-1, AIRPLANE SERVICING FUEL SYSTEM USAF C-130J SERIES AIRCRAFT. 01 JANUARY 2022 CHANGE 2 - 01 JANUARY 2024.

AIR FORCE MANUAL 11-2C-130H VOLUME 3, C-130H OPERATIONS PROCEDURES, 5 December 2023 - Corrective Action, 15 DECEMBER 2023.

AIR FORCE MANUAL 11-2C-130J VOLUME 3, C-130J OPERATIONS PROCEDURES, 1 AUGUST 2023.

NWCG Standards for Airtanker Base Operations, PMS 508, June 2022. Boise, ID, USA: National Wildfire Coordinating Group.