

Leadplane Training Lesson Plan

MAFFS Operations and Interim Endorsement

12-16-N9065-HO

Objective:

To familiarize and develop the student's proficiency with MAFFS operations.

Content:

The Modular Airborne Fire Fighting Systems are military C130 aircraft with a removable tank system. These aircraft hold 3000 gallons of retardant.

The gallons of retardant each aircraft can deliver will vary due to density altitude, fuel load, and departure airport. The gallons will vary from load to load but generally will be close to the maximum capacity. The download amounts don't usually affect the retardant tactics and is not usually a concern.

MAFFS must operate out of MAFFS approved tanker bases. Operations at any MAFFS approved base are contingent on having qualified MAFFS personnel, Airtanker Base Specialist (MABS) or MAFFS Airtanker Base Manager (MABM) and appropriate Airport Rescue & Firefighting (ARFF) on site. The tanker captains will know if they can use one base or another and should be consulted.

MAFFS aircraft are maneuverable enough to fly in most terrain depending on pilot experience. MAFFS can be used like other LAT's but will have a narrower retardant line due to the delivery system.

MAFFS crews are not initial attack rated and must be led by a leadplane or ASM.

Minimum drop altitude is 150 feet above the fuels for MAFFS aircraft. This altitude is based on a coverage level 4 and should be raised up as coverage level is increased. There are a variety of factors that influence the final coverage level on the ground (wind speed, aircraft drop speed, uneven terrain, fuel density, etc.) but the drop altitude should not need to be higher than 200 feet. Coverage levels lower than a 4 are not dropped below 150 feet.

There is no delay for wake turbulence after a MAFFS has dropped.

MAFFS aircraft generally are most comfortable in orbit at the same altitude. Stacking tankers is usually not done. If there is a situation that may warrant stacking tankers consider grouping tankers at an IP or holding point prior to coming into the operations area. Grouping like aircraft and then clearing them into the operations area is usually a best practice.

When MAFFS operate out of tanker bases that do not have a ground compressor, the tank must be pressurized by the onboard compressor. The onboard compressor takes longer and may cause a delay if the in route time to the fire is less than 20 minutes.

Interim MAFFS Endorsement

If the leadplane student has sufficient exposure to working with the MAFFS prior to finishing the leadplane training, the evaluator can sign the pilot off for a MAFFS Interim Endorsement. This will allow the fully qualified leadplane pilot to lead MAFFS prior to attending one of the annual MAFFS training events.

Not receiving an interim MAFFS endorsement should not keep the leadplane student from passing a final leadplane pilot check ride and being designated as a leadplane pilot. The new leadplane pilot will have the limitation of not being able to lead MAFFS.

Completion Standards:

The lesson is complete when the student can explain the uses of MAFFS during fire suppression activities and the best practices for integrating the MAFFS into the FTA. The student must also be able to demonstrate the use of MAFFS in a fire environment to receive an interim MAFFS endorsement without the reliance on the evaluator.

Drop Height Table

This table shows the minimum altitude above the height of the fuel to eliminate forward momentum of the retardant which eliminates retardant shadowing on the fuels.

Controller Setting	B747	DC10	CV580	S2	MAFFS2	RJ85	C130	BAe146	MD87	P3A
1	200	200	150	150	150	150	150	150	150	150
2	200	200	150	150	150	150	150	150	150	150
3	200	200	150	150	150	150	150	150	150	150
4	200	200	150	150	150	150	150	150	150	155
6	265	250	170	150	150	155	150	160	170	175
8	265	265	200	180	150	175	185	175	190	200

*737 data was not available at the time of writing.

Drop height may be affected by the ground speed of the aircraft, variations in the height of the terrain, variations in the height of the fuels, wind speed, wind direction, and the steepness of the terrain.