

Leadplane Training Lesson Plan

Scooper Operations

12-15-N9065-HO

Objective:

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

Content:

The Air Tractor 802 Fire Boss and the Canadair CL-415 are the two types of scoopers that are used for firefighting.

It is helpful to give the scoopers an initial recon of the area they will be working in prior to starting water operations. Initially the scoopers may be brought in at the orbit altitude to recon the operations area. As the scoopers return from the scoop they will typically fly lower in route altitudes than the orbit or maneuvering altitudes. This will require sequencing the scoopers with tanker drops but also helicopter patterns and drops.

Working scoopers in twos or threes is very efficient for suppression activities. Working more aircraft into the pattern will depend on the pattern size, the scoop size and the approach/departure terrain around the scoop. Since companies train differently, pairing up company aircraft can also have an effect on operations.

The scoopers can generally fly steep descending drops due to the additional drag these aircraft have.

Scooper aircraft operate at similar altitudes as the helicopters.

When operating in conjunction with helicopters, improved communications can be achieved by putting the scoopers on the rotor victor.

Scoopers with water should not be used in conjunction with air tankers to build retardant line.

It is not necessary to lead scoopers on every run. Initially leading the scooper to identify the target is acceptable but it is best to coordinate with the scoopers to set up a route between the scoop and the drop after that.

It is not necessary to give an initial briefing or target description each time the scooper returns for the scoop. Even if the scoop is outside the FTA boundaries. As the scoopers objectives are met, verbalize or give a show me run to identify additional objectives.

Once the scoopers have integrated into the FTA they usually call off the scoop with a time to target. This will give the leadplane a sense of when to expect them and sequence them into the operation.

It is best not to call the pilot while they are scooping water. Save communications for once the aircraft is airborne again.

For sequencing efficiencies and aircraft flight patterns it is helpful to identify a lead scooper. Identifying the number 2 aircraft, number 3 aircraft, and so on will clarify which aircraft has responsibility for separation from the other aircraft.

Factors such as temperature, terrain around the water source, vegetation around the water source, wind speed and direction relative to the shape of the water source will affect the use of the water source. Fuel load may also affect the ability to take a full load of water. Always allow the scooper pilot to make the final determination as to if the water source is acceptable.

Scooper water techniques:

Direct attack on flare ups or active parts of the line.

Direct attack on active flames that are threatening retardant line, hand line or dozer line.

Direct attack ahead of crews or next to retardant line to reduce intensity or spotting potential.

Direct attack on spot fires.

Direct attack on fire line that is within 300 yards of a water source.

Air Tractor 802, Fire Boss

The Air Tractor 802 Fire Boss is the same aircraft as the wheeled SEAT but on amphibious floats. The hopper can hold up to 800 gallons and can be filled through a port at the back of the gate or by scooping from a water source.

The Fire Boss can drop water from a tanker base or water source, injected foams or gels, or retardant. It is important to know what the aircraft is carrying so that the tactical use of the suppressant or retardant can be determined.

The aircraft generally has a 140 knot enroute speed and depending on weight, pilot preference and environmental conditions and a 110 knot drop speed. External factors may change the speeds the pilot chooses to fly at. The wheeled aircraft have an airspeed indicator that read in miles per hour while the Fire Boss has an airspeed indicator that reads in knots.

Some of the Fire Bosses have infrared cameras.

The Fire Boss can be outfitted with the Fire Gate, Hydromax Gate, or the Hatfield gate.

The tank systems can be selected to drop a coverage level 1 thru 6. As with retardant, the water coverage level is based on the fuel type the fire is burning in.

Once the Fire Boss is on the water, the pilot lowers a probe on the bottom of each float. This directs the flow of water up a system of pipes and into the hopper. There is a visual gauge in the cockpit showing the load in the hopper. It takes about 15 seconds to fill the tank. The pilot retracts the probe when the tank is at the desired level.

Amphibious SEAT's, Fire Boss's, will have a 200 series call sign.

When a Fire Boss injects jell into the tank, it will need approximately two drops for a clean out. When this happens, expect the last two drops on the fire to be water.

Canadair CL-415

The Canadair CL-415 is a turbine powered twin engine amphibious aircraft. It can scoop up to 1600 gallons of water.

The CL-415 can drop water from a tanker base or water source, and has the ability to inject foams. It is important to know what the aircraft is carrying so that the tactical use of the suppressant can be determined.

The tank system cannot select coverage levels. The normal drop is a salvo 4 door drop. The doors can be opened in sequence to spread the load over a longer distance.

415's transit to and from the scoop at 180 knots and can over take a Fire Boss if the scoop is further out from the drop.

Some 415's have infrared for finding hot areas on the fire line.

The 415's also have 200 series call signs.

Completion Standards:

The lesson is complete when the student can explain the uses of scoopers during fire suppression activities and the best practices for integrating the scoopers into the FTA. The student must also be able to demonstrate the use of scoopers in a fire environment for Phase 2 without the reliance on the evaluator.