Interagency Aviation
Lessons Learned

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Subject: Single Engine Air Tanker Operations

Area of Concern: Fire Suppression Operations

Distribution: All Aviation Activities

Discussion: In FY07, two DOI Single Engine Air Tanker (SEAT) accidents occurred during fire suppression operations. Both accidents involved loss of control and resulted in flight into terrain. Already the FY08 fire season has claimed the life of another SEAT pilot while conducting fire suppression operations for the Department of Defense and state of Colorado. That accident is currently under investigation by the National Transportation Safety Board (DEN08GA076). During high-tempo fire suppression operations, it is crucial that everyone involved with SEAT operations be aware of Lessons Learned from these and other similar mishaps.

Pilots - You are the last line of defense in aviation safety. As a professional aviator, you have the responsibility to be prepared for each and every flight. A memory aid used by many pilots during fire suppression operations is the acronym ASHE:

Approach - Plan your approach route taking into account terrain and environmental factors.

Speed - Maintain adequate airspeed. Be conscious of the effect of gate opening, wind direction and velocity, and aircraft performance.

Height - Maintain altitude in compliance with operating procedures and current contracts.

Exit - Plan your exit route to ensure adequate room for maneuvering.

LESSONS LEARNED:

1. Operating at speeds less than 1.3 x stall speed during fire suppression operations can result in stalling the aircraft due to the combined effects of an increase in AOA (angle of attack), an increase in drag, and a decrease in airspeed during the drop sequence.

2. When releasing retardant, the pitch-up associated with gate opening will aggravate a slow speed condition. Maintaining a higher airspeed will reduce the possibility of inadvertent stall.

3. The stall recovery altitude for the AT-802 (wings level) is 280 feet. Stalling the aircraft below this altitude may not allow for recovery before impacting the ground.

Thorough pre-flight briefings and a robust risk-management program are essential in mitigating the hazards associated with fire suppression operations.

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