

# Interagency Aviation Lessons Learned



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**Subject:** Interagency Aviation Lessons Learned

**Area of Concern:** Aviation Operations

**Distribution:** To All Aviation Users

FY 07 SAFECOM 07-0093

Bell 206B-III

## *What Happened.*

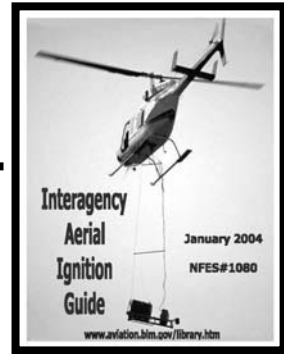
**A recent SAFECOM described a close call on a Plastic Sphere Dispensing mission.**

*Narrative: Shortly after beginning ignition operations with the PSD machine the drive motor circuit breaker “popped”. Operator made 2 attempts to reset it with no success. Decision was made to land and attempt repairs. After landing operator noticed smoke coming from machine. Emergency water button was pressed and did not appear to be having any affect. Operator attempted to use emergency water bottle but was unable to gain access due to it being buried under 12 bags of PSD balls. Decision was made to cut strap and jettison machine onto the ground. Strap was cut, but was unable to clear the door due knots being tied in strap to reduce excess webbing. This resulted in the machine getting stuck hanging partially out the door. Operator removed hopper from machine and unscrewed cap from emergency water reservoir and extinguished fire.*

**Lessons Learned.** Interagency Prescribed Burning Operations are on-going. To reduce the risk of a malfunction that could lead to damage or injury, and to better prepare for possible emergencies, the following helpful tips for safe PSD operations and an excerpt from the Interagency Aerial Ignition Guide are provided.

- #1.** Ensure that all crewmembers are fully qualified and meet the prerequisites, training and currency requirements of the Interagency Aerial Ignition Guide before initiating PSD operations.
- #2.** Do not compromise safety and your ability to maneuver and react to an emergency by packing the aircraft with an excessive number of bags. Build time into your plan to land and load additional PSD bags as the mission dictates.
- #3.** Do not reduce your ability to maneuver in the aircraft by modifying equipment in an effort to reduce flight time.
- #4.** Do not tie knots in the PSD strap to take up excess strap. This could make it difficult to cut the strap in case of emergency. Additionally, the door on the opposite side of the PSD operator can be closed tightly enough to prevent the machine being jettisoned in case of emergency (the strap can get hung up in the door).
- #5.** During the pre-mission safety briefing ensure that all crewmembers are familiar with the location of both the PSD machine's circuit breaker and the cockpit circuit breaker.

Prior to initiating Prescribed Burn Operations review **ALL** portions of the Interagency Aerial Ignition Guide. The following information requires extra attention:



## VIII. Preparation for Aerial Ignition

- A. Preparation of Helicopter
1. Remove appropriate door/doors.
  2. Remove all loose cushions and other loose materials.
  3. Locate and assure proper electrical connections.
  4. Install tether attachments to hard points per instructions on MTDC drawing #-946.
  5. Have operator don harness, attach tether to tether attachment ring using approved carabiner, and adjust tether length. A properly adjusted tether shall insure that the operator is restrained inside the aircraft if the seat belt should become unbuckled during flight.

**Note: Only PSD Operator will have control (electrical or manual) of the machine.**

- B. Preparation of Premo Mark III Aerial Ignition Device (PSD)
1. Fill glycol tank at least 25 feet from aircraft.
  2. Fill water storage tank.
  3. Ensure adequate supply of plastic spheres is available to complete project.
  4. Ensure one-gallon container of water and seatbelt cutter is on board, secured, and is readily accessible.
  5. Fire shelters for all occupants must be on board and accessible, and one or more hand tools is recommended.

- C. Installation
- The PSD is designed to be operated from the right rear of a Bell 206 series Jet/Long Ranger helicopter. Other types of helicopters may require an auxiliary support bracket so the exit chute clears the aircraft fuselage. Installation instructions for various helicopters are included at the end of this unit.

1. Install in doorway with exit chute attached and overhanging.
2. Attach tie-down strap.
  - a. Y-end attached to PSD beside exit chute, fasten from the inside out.
  - b. Pass strap under the fuselage, making sure it clears all wiring and accessories attached to the bottom of the aircraft.
  - c. Return through the opposite door.
  - d. Fasten to buckle attached to machine.
  - e. Cinch tight and secure loose ends.
3. Connect power supply cord.
4. Perform electrical power check by turning on drive switch and hopper feed switch. Manual assist must rotate counter-clockwise (direction of arrow).
5. Recheck the installation.
6. Ensure a seat belt cutter is available to cut holding strap in case it is necessary to jettison the PSD.

**Note: Pilot must inspect and approve installation of PSD prior to flight operations.**

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