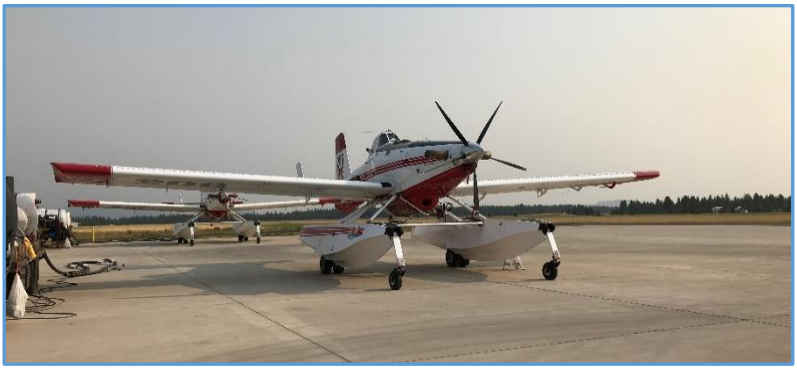
Rapid Lesson Sharing

Event Type: SEAT Emergency Landing Mishap Response

Date: August 14, 2018

Location: Horns Mountain Fire, Colville National Forest, Washington



Two Fire Boss Single Engine Air Tankers (SEATs) aircraft that were working with Fire Boss 242 on the Horns Mountain Fire.

Introduction

On August 14, Fire Boss 242 (a Single Engine Air Tanker) experienced a complete power loss and was forced to make an emergency landing.

The aircraft, working with two other Fire Bosses on the Horns Mountain Fire, went down in a group of trees next to a gravel road and came to an abrupt stop. The pilot was able to extricate himself from the aircraft and make it on his own to the gravel road.

The response to this Incident Within an Incident (IWI) resulted in the pilot being airlifted to Sacred Heart Medical Center in Spokane, Washington where he was diagnosed with broken ribs and a bruised lung. He was treated and released.

The National Transportation Safety Board (NTSB) was notified and initiated an accident investigation. The Colville National Forest also requested a Rapid Lesson Sharing Team to review the events of this mishap to see if there are lessons that the Forest can use to refine their procedures for an aviation mishap when an Incident Management Team (IMT) is assigned.

IMT In-briefing and Transition

The briefing for the IMT was conducted at 1800 hours on August 12. The following morning at 0600 the IMT assumed command of three fires.

The IMT transitioned rather quickly and did not have an opportunity to shadow the Type 3 organization but felt that it was the right decision to let the Type 3 personnel get some needed rest. In addition to taking over two fires from the Type 3 Team, a new start (Horns Mountain Fire) had developed quickly before the Type 3 Team could put any resources on it.

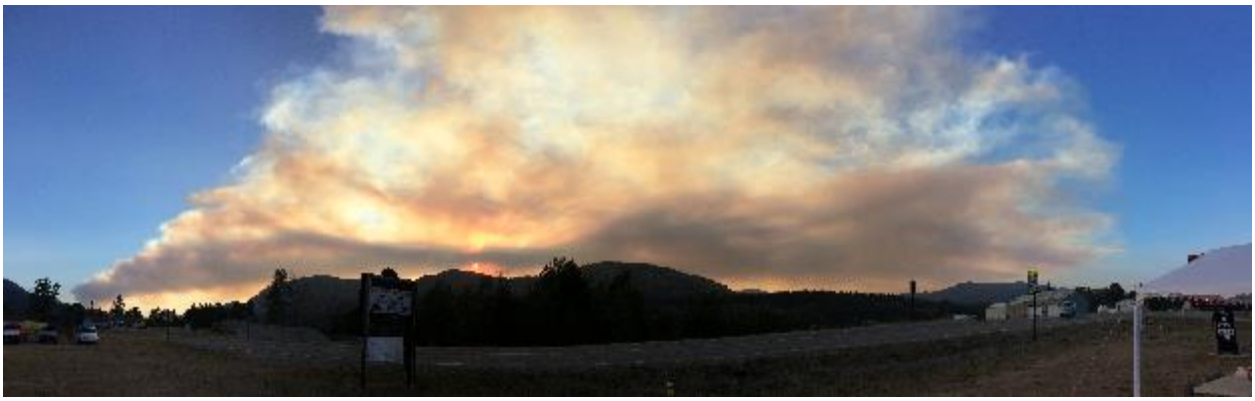
The IMT was still gathering intelligence and working on developing better maps for that fire when the SEAT IWI accident occurred. The maps that ground resources had for the area were difficult to read and had few drop points or helispots identified.

In retrospect, it was noted that the Delegation of Authority to the IMT did not directly address how the Forest wanted IWIs to be handled. The interagency partners for the Northeast Washington Interagency Communication Center (NEWICC) had developed an Aviation Mishap Response Guide and Checklist (Mishap Guide). However, a copy of that document was not included in the in-briefing packet to the IMT.

A Helibase Manager for the IMT obtained a copy of the guide, and later provided a copy to the Communications Unit (Comm Unit) at Horns Mountain ICP.

Key Lessons

- Consider including IWI information in the Delegation of Authority to IMTs to define roles and reduce confusion.
- Consider including the Mishap Guide and Emergency Incident Procedures plan—which have valuable information for the IMT Medical Unit—at the IMT in-briefing.



Smoke from the Horns Mountain Fire on August 11. (Photo courtesy InciWeb.)

Transition with the Type 3 Organization

The IMT inherited several crews, including the incident ambulance that could not be raised during the incident. It was found that the ambulance had been on the fire for two weeks prior with the same radio problems, but this was not discovered because the incident ambulance was able to communicate with Division and other resources close to the area on their handheld radio.

Air Attack Notifies Dispatch of Downed Aircraft

At 1407 hours, Horns Mountain Air Attack called NEWICC with a "Mayday" and reported that: Fire Boss 242 was on the ground, that Air Attack was trying to get a location of the downed aircraft, and to begin notifications. Eighteen minutes after Air Attack's notification of a downed aircraft, the pilot was spotted walking around on the road by another Fire Boss pilot who was circling the area.

Upon the initial report of a downed aircraft, NEWICC began implementing the Mishap Guide. This guide lists items to be completed for an aviation mishap such as securing the accident scene, making notifications identified in the communication tree, and ordering emergency medical response. As identified in the plan, Dispatchers ordered an air ambulance and a ground ambulance.

Meanwhile, Air Attack requested the other two Fire Boss aircraft to return to Deer Park Airport. A Bell 205 working on a different part of the fire was asked to drop its bucket and assist Air Attack with monitoring the downed pilot and selecting a helispot location for a medivac.

The air ambulance pilot called NEWICC to get information on the mishap and accident scene, including radio frequencies, lat/long location for the helispot, patient condition, and other pertinent information. The air ambulance provider also mentioned that there was a second order for the same location, and Dispatchers realized that the IMT must have also submitted an order according to their protocols.

In the midst of all of this activity a miscommunication occurred and the medivac order was cancelled. The cancellation was rescinded a few minutes later and did not result in a delay to the response.

NEWICC began trying to contact the IMT but did not have phone numbers for anyone other than the Air Operations Branch Director (AOBD). The Forest Supervisor and Fire Staff, in NEWICC after being notified of this IWI, realized that the local District Ranger was at the Incident Command Post (ICP) to meet with a General from the National Guard. The Forest Supervisor to District Ranger communication link was then used to provide updated information to Dispatch and the IMT.

Key Lesson

- Ensure that the local Initial Attack Dispatch receives a phone list for the IMT.

The Mishap Guide also provided direction to secure the fuel truck that was last used by the downed aircraft. Dispatchers began contacting aircraft that refueled from that truck in order to have them land at the nearest airport. Two National Guard Blackhawk helicopters that were assigned for initial attack out of the Deer Park Airport were flying near Republic, Washington when they were directed to land.

After some uncertainty about their status, the aircrew was eventually directed to return to the Deer Park Airport. But it was late enough in the evening that they would not be able to arrive under visual flight rules, so they would not be able to depart until the next morning.

Republic has an unsecured airport and according to military protocol the National Guard unit could not leave the helicopters unattended. After making several phone calls, the Logistics Coordinator for the aircraft was able to get the Border Patrol to provide security details until relieved at 0800 the next morning. The aircrews did not have overnight gear but were able to secure motel rooms in Republic.

Air Attack Notifies Communications Unit/AOBD

Shortly after notifying NEWICC, Air Attack notified the IMT's Communications Unit and the Air Operations Branch Director. While some within the communications chain understood what a Fire Boss was, others did not. Some thought it might be a position title for a person working on the fireline, or even a name for the National Guard units working on the fire.

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Key Lesson

- Keep in mind that acronyms, names, and phrases used in fire response may not be familiar to all personnel assigned to a fire. Use clear language as much as possible and ensure communications are understood.

After establishing that a Fire Boss is a type of aircraft, concern for the pilot grew quickly. At ICP, the IMT gathered essential personnel in the Comm Unit. Essential personnel were identified in the IWI Plan and included key IMT positions.

Personnel who were considered non-essential for the IWI response, yet who still needed information about the IWI to do their jobs, met in a designated room separate from the Comm Unit that was established specifically for IWIs. This room contained three radios tuned into the proper channels so they could still gather information without adding more personnel to the Comm Unit.

Key Lesson

- Having separate rooms during an IWI may allow individuals to gather needed information while keeping noise and activity in the Comm Unit to a minimum.

As the IWI progressed it was noted how calm everyone was throughout the entire incident. The IMT had experience with several IWIs on previous fires and felt like everyone knew their role. Local leadership was well positioned to assist with coordination and notifications. The District Ranger was at ICP, the Forest Supervisor was in Dispatch with the Forest FMO, and the County Sheriff was within a few minutes of ICP.

A communications link with the IMT and NEWICC was established shortly thereafter with key players helping to make the proper links. Notifications to the Regional Office and Washington Office were quickly made.

Which process do you use for an IWI?

On Scene Resources

As the incident unfolded and the pilot was located, getting resources to the injured pilot was taking time. Normally the Medical Incident Report is followed to help guide the response and resources needed for an IWI. Because the pilot's injury status was unknown, what resources were needed was also largely unknown. NEWICC followed their protocols, which included ordering a ground ambulance and an air ambulance.

Meanwhile, circling above was Air Attack and a Bell 205 rotary wing aircraft keeping an eye on the injured pilot below. The Bell 205 dropped its bucket in an open field and flew to the incident location. The Bell was able to slowly hover around the area to keep an eye on the injured pilot. The Bell 205 Pilot was also able to scout-out a landing zone for the incoming air ambulance.

As Air Attack and the Bell 205 worked on bringing in the air ambulance, a ground ambulance was responding from Colville, Washington. The IMT had an ambulance assigned to the incident, but the Comm Unit was unable to contact them on the radio.

The ambulance from Colville arrived on scene prior to the incident ambulance being notified of the Fire Boss mishap. It was later determined that the external antenna in the incident ambulance had interference and a Radio Technician on the incident was able to correct the problem. The ambulance crew had used a handheld radio to communicate with fireline personnel with the Type 3 organization and the Medical Unit did not realize that there was an issue with the mobile radio.

Key Lesson

- Have incident medical resources check-in with the Medical Unit each day when they arrive at their staging area to ensure communication is established.

When the air ambulance arrived on scene it was guided in by the Bell 205 from above. The landing zone did have some obstacles and the Bell 205 was able to prevent the air ambulance's tail rotor from striking a logging deck located to the rear of the aircraft.

The injured pilot was brought approximately one-half mile up the road to the waiting aircraft where the injured pilot was transferred for the 35-minute flight into the trauma center in Spokane.

"You never know who you're going to get: Someone who has flown fires on the weekends or someone who's never landed in a hover hole like that. That's not the type of flying they typically train for."

Bell 205 Pilot

Point for Consideration

Some air ambulance companies prefer, but do not require, mountain flying experience for new pilots. Some medivac pilots may be very experienced in landing at small, remote helispots and others may not. With that in mind, what factors would influence your decision on the best way to get a person with life-threatening injuries to a hospital? What options may be available?

The incident ambulance did not make it to the accident location prior to the air ambulance departing. In addition to the communication issue, they were unfamiliar with the new location where they were staged and they had difficulty navigating with the maps provided to them.

The Incident's Medical Unit discussed how "day one" requires implementing many processes and how areas unfamiliar to medical personnel can be difficult to navigate in an emergency.

Key Lesson

- Incident Medical Units should consider providing medical resources a Forest map or other transportation maps in case they need to navigate to areas not included, or not well defined, on incident maps.

SAFECOM

A SAFECOM for this incident was also filed:
https://www.safecom.gov/searchone_new.asp?ID=22955

This RLS was submitted by:

Tristan Fluharty and Damen Therkildsen, with thanks to the Colville National Forest and NW Team 9.

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