

Rapid Lesson Sharing

Event Type: Helicopter Rotor Strike

Date: July 8, 2018

Location: North Spring Fire, Colorado

The Story

On what was described as a “normal day of flying” a flight crew on the North Spring Fire experienced an injury from a rotor strike.

On July 8, 2018 at approximately 1330, a contract Chinook Helicopter was returning from a water dropping mission. The crew’s plan once their helicopter landed and shut down was to refuel, check levels, and prep the aircraft to return to the fire.

Once the Chinook’s rotors had come to a complete stop, the crew was prepared and eager to check their assigned sectors and all required fluid levels. During this shut-down process, an error code for Engine #2 indicated a failure. This code pointed to a cannon plug issue, which was pulled, inspected, reinserted, and the error code cleared.

To complete the shut-down process, the Pilot in Command (PIC) had to pull the fuel lever, which essentially starved the engine of fuel until engine shut down was complete. Once the rotors came to a complete stop and the engines completely shut down, the Chinook’s mechanic crew swiftly went to work.



A Chinook Helicopter similar to the one on the North Spring Creek Fire incident.

Are you prepared to flawlessly handle an unintended outcome?

“Get Down! Get Down!”

Two of the crew’s mechanics climbed on top of the aircraft to complete their tasks. These tasks include, but are not limited to, visually checking certain fluid levels within a five-minute window for the most accurate readings. As the crew members were busy at work and focused on their assigned

tasks, the PIC began going through the engine start-up process to see if the error code issue was completely resolved.

Upon hearing the engine spool up, the crew chief immediately wanted eyes on top of the aircraft, knowing that there might be crew personnel engaged on top.

Two crew mechanics were indeed on top of the aircraft, aft of the front rotor. Hearing the engines spool up, several support personnel noticed these two mechanics and began yelling: “Get down! Get down!”

As the engine was spooling up and the rotors began to turn, one of the mechanic crew members was struck in the head, impacting the side of this individual’s face/head and their safety helmet.

The crewmember immediately went limp and slumped down.

The second crewmember was able to grab the struck mechanic in a bear hug to prevent them both from falling off the aircraft. Crewmember 2 stated that he “fundamentally supported and slid partway down the aircraft and then pushed off the fuel tank near the bottom.” He explained that this response was based on his military training.

Crewmember 2, still supporting the injured mechanic, fell onto the pavement—both landing safely.

At this point, the injured mechanic sat up, stunned. Simultaneously, the PIC heard the noise outside the aircraft and immediately initiated complete engine shut-down.

During this start-up process, prior to the immediate shutdown, the PIC “remembers seeing one or two rotor blades passing by the windscreen.”

Immediately, the crew requested the on-site Helibase Paramedic, who arrived shortly after the incident.

Due to the nature of the injury, it was determined by the crew and Paramedic that the individual should be evaluated at a hospital for further precautionary measures. A company driver transported the injured mechanic to a nearby hospital to be examined. The individual was treated and—luckily—was released from the hospital the same afternoon.



RLS Discussion Highlights

- ❖ Trouble-shooting the error code and engine shut down problem likely caused a distraction from normal operating procedures which led to multiple counts of communication virga.
- ❖ Within the past year, the company has implemented a safety practice that requires all crew members climbing on the aircraft to wear safety helmets. Fortunately, the crew member during this accident was wearing the provided safety helmet which potentially prevented further injury.
- ❖ The crew’s fast and efficient response to the unfortunate accident shows a clear path of communication, leadership and trust throughout the crew.
- ❖ The company Safety Officer arrived the same afternoon after the event to ensure that all appropriate medical attention was received, as well as to perform an immediate review and capture any lessons learned. This review and lessons learned was immediately distributed to their other aircrews within the company.

- ❖ After the incident, the crew discussed how traumatic situations like this can affect everyone differently and at different times, depending on their personal experiences or “slides”. With this in mind, the crew emphasized continuously checking in with each other, the need for support networks, and following-up however appropriate.
- ❖ Within the company, training is being closely examined, including emphasizing procedures and communication for all personnel.
- ❖ The crew expressed the importance of having/continuing weekly safety meetings. These safety meetings will serve to provide the crews consistent situational awareness with high productivity while strictly adhering to all safety practices.
- ❖ After the accident and before any other flight operations continued, the crew had a “safety stand-down”. This safety stand-down provided the crew with an opportunity to establish a clear understanding of what happened, how operations will continue moving forward, and closure for anyone who may have been traumatically affected by the incident.



Similar helmet to the one being used by the Chinook Helicopter crew.

SAFECOM

A SAFECOM for this incident was filed and can be found under its report number: [18-0489](#).

This RLS was submitted by:



Rocky Mountain Area
Coordination Center

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