

On January 26th 2017 at approximately 2128 local time, N911MK departed for Armour, SD from Avera McKennan Hospital (2SD1) in Sioux Falls, SD. Approaching the Monroe, SD area the Twist Grip caution light illuminated on the number 2 engine. I checked the throttle position on the collective as per the checklist and it was in the proper Flight position. I also checked the FLI and tachometer, both were indicating properly. The Twist Grip light disappeared then reappeared and flickered a few more times.

I remarked that everything was indicating correctly and the sensor probably needed to be adjusted. Seconds later the CAD illuminated with ENG PA DIS cautions on both engines. I referenced the FLI and both needles were married and all parameters were in the proper range. Shortly after the ENG PA DIS lights illuminated we heard what I would describe as a winding down sound. We then heard a hissing sound and the smell of exhaust in the cabin. I immediately reached up and turned off the cabin heat then started lowering the collective and beginning a turn to return to Sioux Falls, as I was unsure of what exactly was happening. During the turn the FIRE light illuminated on the number 2 engine.

The first step in the emergency procedure is to establish OEI conditions and then reduce airspeed if above 100 knots. I was still above 100 knots at that time. As I was slowing down I glanced back and to the right and noticed an orange glow coming from the aft section of the aircraft. Once below 100 knots, I broke and raised the red plastic guard and pressed the EMER OFF SW. I noticed the FLI needles split and subsequent lights illuminated along with the ACTIVE and BOT 1 lights. I pressed the BOT 1 push button and continued to trim the RPM up. I had started the clock, but was unsure how much time had passed. The BOT 2 light illuminated and since the FIRE light was still illuminated I pressed the BOT 2 push button. Two seconds after pressing the BOT 2 push button, the FIRE light extinguished. I then handed the flight paramedic, Perry Munyon, the Emergency checklist and asked him to open it to the Engine Fire page. Once he found the correct page he handed the Emergency Checklist back to me. I read through the procedure to ensure I completed all the proper steps.

Since the FIRE light did extinguish I decided to continue the flight and make an emergency landing at KFSD. I reached down to the collective and slowly rolled off the throttle to the number two engine. I felt like I had lost some altitude during the emergency so I cross checked my IAS, VSI, and Altimeter. I had lost about 300 feet so I checked power and had enough power to hold level flight and started a slow climb. I wanted to keep the helicopter about 500 feet AGL en route to the airport.

Even though I was talking throughout the procedure I alerted the crew of what had happened and what I did in response to it. I informed them that the FIRE light had gone out and believed the condition had been resolved. I also informed them that we were heading to the airport and we are going to make an emergency landing with one engine inoperative. The flight paramedic handled all the communication with the Avera Careflight Communications Center.

After briefing the crew of what happened and what to expect moving forward, I set up the GPS to navigate to KFSD. I gave an updated ETA to our communications center about 12

minutes out. Approximately 12.7 nautical miles SW of the KFSD airport I called Sioux Falls Approach and declared an emergency. I informed them we were operating on one engine and needed a runway. They started diverting other aircraft and cleared me to land on Runway 3.

As we approached the airport I briefed the crew that the approach would look like what we always brief in our shift briefings, a low approach with a running landing. I asked them to make sure everything is secure and once we have landed to remain in the helicopter. The landing was along the centerline of Runway 3, with no horizontal movement and a running landing distance of less than 100 feet. During the entire maneuver, the FLI for Engine 1 never exceeded above 10.5 and the Mast Moment indication did not enter into the yellow region or hit the red line. Overall the landing was uneventful with no further damage.

Once on the runway I informed the KFSD ATC that we were on the ground. The ATC controller inquired if we needed any further assistance, I informed him we did not and would be losing communications with him when I shut down. Once I shut down and did a walk around inspection of the helicopter I called the Director of Maintenance, Director of Operations, Careflight Communications Center, and the Safety Officer.

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