

Statement of Events

03 July 2017

On 01 July 2017, at approximately 2040hrs, while flying an inter-hospital patient flight beginning at the Farmington, Missouri base the aircraft was forced to land due to abrupt inputs in attitude and loss of power in both engines.

I arrived at base at 1840hrs to begin preparation for the assumption of duties as the night pilot for the Farmington, Missouri base.

I conducted a preflight of aircraft N238BK, a BK117 B2, IAW Air Methods BK117 preflight checklist and took a fuel sample with the PM fuel sample jar. After the preflight was completed I entered the office at approximately 1857hrs, was notified by the crew of a pending flight request to St. Francis Medical Center in Cape Girardeau. I signed into 411 at 1900hrs. I accepted the flight request from AIRCOM at 1901hrs after checking weather, requesting a 15 minute delay to complete required PFRA, weight and balance, and DFL. The PFRA was approved by OCC (ID:288056) at 0:09UTC (1909 CDT). The medical crew of 3 was briefed IAW BK117 Passenger Briefing Card and the standard preflight walk around was completed. The crew boarded with the medic in the co-pilot's seat and the 2 nurses boarded the aft facing seats. The aircraft run up was completed and verified with reference to the Air Methods BK117 Normal Procedures Checklist verifying all switches and controls were in the proper position for flight. Prior to lifting, I confirmed the pre-takeoff confirmation checklist noting torques, rotor and N2's, engine N1's, TOT's, engine temp's and pressures. All were in the normal range. I also verified the fuel which was indicated at 140 gallons in the main fuel tank. I verified that the SAS, and SPAS switches were engaged and that there were no illuminated caution lights on the warning / caution panel.

I lifted off at 1922hrs, performing a three foot hover power check and ensured the aircraft had a minimum of 10 percent power available. We hovered at sixty eight percent torque with the current load and a fuel load of 140 indicated gallons of fuel in the main fuel tank. We proceeded enroute to St. Francis Medical Center hospital for patient pickup arriving at 1949hrs. The aircraft was secured with the power levers in ground idle IAW the checklist and the crew was cleared to deplane and proceed to take care of the patient.

While waiting for the crew to return, I completed the information for the next leg of flight on the DFL. I realized that I had used the wrong weight line on the Weight and Balance form for the second leg of flight and so I crossed it out and re-entered the right information. The patient's weight was 28kgs.

At approximately 2015hrs crew arrived at the pad with the patient and was loaded aboard the aircraft. Once again the walk around was completed, the aircraft boarded in the same manner with the exception that one nurse was seated on the aft bench seat for patient care.

Once again the aircraft was run up and verified IAW the Normal Procedures Checklist verifying again that all switches and controls were in the proper positions for flight. Prior to lifting I confirmed the pre-takeoff confirmation checklist noting torques, rotor and N2's, engine N1's, TOT's, engine temp's and pressures. All were in the normal range. I also verified the fuel which was indicated at 110 gallons in the main fuel tank. I verified the SAS, and SPAS switches were engaged and I verified that there were no illuminated caution lights on the warning / caution panel. The last thing I did was verify that the crew was ready for takeoff and then completed the required power check. The aircraft was hovering at approximately sixty seven percent torque.

The takeoff and flight were uneventful and smooth at 120kts and an altitude of 1600ft MSL (approximately 1200 AGL) and a heading of 338 degree's enroute to St Louis Children's Hospital. Approximately 15 minutes into the flight I performed a standard scan of the instruments and gauges noting that all systems were in the normal range and fuel was transferring from the main tank. The fuel level indication was approximately 95 gallons in the main and the supply tanks were just below the full indication. There were no illuminated lights on the warning / caution panel.

After crossing the ridgeline which drops off into the Mississippi river valley approximately five miles north of Perryville, Missouri, I made my traffic call for Perryville Regional Airport traffic. Shortly afterwards, the aircraft experienced a sharp change in attitude yawing to the left with a hard upward bump. I looked at the medic in the co-pilots seat and he looked at me with the look of "what was that?" As I turned my focus back to scan the instrument panel, I heard a change in engine noise. My attention immediately went to the N1 gauges. Both were indicating below forty percent and descending. I then noticed the #1 engine low warning light, the #1 Generator light and the Batt Discharge warning lights were illuminated. Suddenly the aircraft pitched nose up and rolled to the right. I could hear the rotor begin to deteriorate. I immediately applied right forward cyclic and reduced the collective to full down to enter into an autorotative descent. The aircraft recovered from the abrupt pitch attitude change and leveled out. I continued the descent.

During the descent, I maneuvered the aircraft to the left to avoid power lines at the edge of the field. I then noticed a ditch crossing my new flight path. I attempted to adjust my descent to land on the far side of the ditch. I began to flare the aircraft at approximately one hundred feet AGL. As the aircraft descended into ground effect I felt a slight lifting in the aircraft which soon dissipated and the aircraft rotor began to decay rapidly. I attempted to level the aircraft as it began to fall through. We contacted the ground in a right skid low attitude but in line with the direction of flight. The aircraft began to slide until what felt like the right skid digging in at which point it began to roll to the right. I felt the rotor blades begin to hit the ground, and the aircraft continued to roll onto the right side of the aircraft. Once the aircraft came to rest, I immediately reached for and pulled the power levers to the stop position.

As the dust began to settle, I called out to the crew via ICS and asked if everyone was okay. All responded to affirmative and I then gave the order to egress the aircraft. One of the nurses in the back immediately jettisoned the left cabin door and exited the aircraft and immediately called AIRCOM to report that we were down. The medic in the co-pilots seat had unbuckled and was exiting the left cockpit door. I then unbuckled and began to climb up through the left cockpit door. The nurse on the bench seat stated that she was trapped beneath the stretcher and could not egress the aircraft. Immediately the medic turned to assist her and she carefully released the restraints holding the patient to the stretcher. She was able to hand the patient to the medic who then handed the patient to the nurse outside the aircraft. As this was taking place I egressed the aircraft and moved around to the clam shell doors, opening them to assist with the moving of the stretcher so the nurse could free herself and egress. As I arrived at the rear of the aircraft I observed fuel draining in a solid stream from one of the drains on the belly of the aircraft. I immediately moved around and re-entered the cockpit and turned off all the electrical and fuel switches to assist in minimizing the likelihood of a fire. By this time the nurse in the cabin was free and we all exited and rallied away from the aircraft.

I called Air Methods OCC to initiate a PAIP.

In time we were all transported to Perryville Hospital and the patient and one crew member received care.

This is my statement.

Ivan Duayne Thomas

Certificate # [REDACTED]