

On 9/18/18 at approximately 0615, I arrived and did my preflight inspection and picked the aircraft up from the T hangars. A note from maintenance indicated that the 50-hour inspection had just been completed the previous night, as well as a repair to an engine cowl. Upon my preflight inspection I found the oil level was at 9 quarts, the fuel was at 11 gallons, and the hobbs meter read 3702.40. Everything else on the aircraft was in normal and air-worthy condition.

After my preflight inspection, I repositioned the aircraft from the T hangars to the Novictor flight line near the intersection of taxiways Charlie and Echo. Soon after Air Service arrived and fueled the helicopter to 40 gallons. Before take-off the hobbs meter read 3702.44.

After departure, I conducted a normal tour up until crossing the Ko'Olau mountains. Before the mountains I was at 1,700 feet in Sacred Valley. After exiting the north wall, I climbed towards the ridgeline and crossed about 1 mile north of "the notch" at approximately 200 feet over the ridgeline. I continued to climb to approximately 2,200 feet and proceeded directly towards the Dole Maze at approximately 95 kts.

The first indication there was a problem was the red "Oil" light illuminating on the panel and it stayed illuminated throughout the remainder of the flight. This was approximately 3-4 SM east of the landing location. Initially there were no other symptoms associated but I began to execute the appropriate procedure of landing immediately, being prepared to enter autorotation. I began a descent at approximately 12" of manifold pressure and maintained my airspeed. My goal was to get on the ground expeditiously, safely, and land as near as possible to an area where I could get further help if needed. I did recognize that at the time, I still had a working engine and I did not need to adjust the throttle or enter autorotation, nor did I. However, I did not extend or shorten my approach but concentrated on conducting a safe landing. This resulted in a rather shallow and fast approach for my best use of energy management if I were to lose power.

The second indication happened about 4-7 seconds after I noticed the oil light on. I had several fairly minor fluctuations in my engine RPM. I would say that they were less than 105% (noted minor over speeds) and no lower than 98%, since the horn or light to indicate low RPM did not activate.

The third indication was a major spike and over speed of the engine RPM, greater than 110% and likely to the maximum the gauge could indicate. This happened about 3-6 seconds after the initial RPM fluctuation had seemed to stabilize to the normal operating range. I did not notice a decay in rotor RPM and the low rotor RPM horn and light did not activate. From what I recall, this RPM stabilized back to the normal operating range after about 3-5 seconds. However, this over-speed may have continued longer, but I am not entirely certain. I continued the descent and as I approached closer to the ground, I began to decelerate as my altitude lowered, to keep a perceptive constant airspeed of an approximate running pace.

The fourth indication I noticed while nearing the end of the descent and essentially in a quick stop, I began to slowly raise collective and almost immediately, the low rotor RPM horn and light activated. I kept the collective where it was at or possibly lowered my hand one inch and tried to lower my tail into a steeper flare. After the flare, I brought the aircraft to a mostly level attitude while purposely keeping the tail low so we could slide better through the soil, and cushion the landing as necessary by raising the collective as we neared touchdown.

The landing was fairly soft given the circumstances and felt no harder than a regular hovering autorotation. We slid through the soil for approximately 40 feet before the toes of the skids started to dig into the soil at which time I heard a loud bang and the aircraft began to roll forward. Rather quickly the aircraft rolled fairly high onto its nose. Later I noticed that the forward portion of the left skid was broken and there was dirt all the way up to landing light.

During this time, the main rotor blades did not contact the ground. The aircraft stopped rolling forward and after rocking back onto the skids, I heard a second loud bang. I later observed from outside the aircraft that we had rotated more than 90 degrees from the original westbound heading and we were now facing nearly south.

Once the aircraft had settled, the first thing I remembered was how loud the engine had been during this time. It sounded as if I were not wearing a headset. I recall rapidly pulling the mixture as fast as possible, since I believed that the engine was violently over-speeding. I did not notice a tachometer reading at this time.

During the descent I spent good amount time making radio calls to another nearby pilot on the island traffic frequency 122.85 and told him I had a red engine light on and I would be landing immediately near the Dole maze and that I may be having an engine failure. I also continued to calmly tell the passengers that I had a warning light on and that we were going to have to land in a field. I assured them that everything would be alright and said other things to try and ease their anxiety. Both passengers were fairly calm during this whole experience and the only vocalization was from the lady when the aircraft rolled up onto its nose.

After we were on the ground and I had pulled the mixture, I immediately turned off the master battery and the fuel shut off valve. I began using the rotor brake and instructed the passengers to remain seated but to take off their headsets and unlatch their seatbelts and doors by lifting the handle and sliding it forward. I told them to remain in the aircraft until the blades were completely stopped and then at that time we would be exiting the aircraft towards the front. I left all switches as they were. The magnetos, alternator, avionics and the clutch were all left on/engaged, and no circuit breakers were activated.

After we were out of the aircraft, I notified Nicole at 0815 and told her that I made an emergency landing in the Dole Fields and that no one was injured. I did a post flight walk around and noted that there was oil over all over the outside of both lower engine inspection panels which trailed all the way down the tail boom and over the vertical stabilizer and tail rotor. Next I inspected inside of the engine inspection panels and found a large quantity of oil

everywhere, predominantly on the pilots side. I documented the landing by photos, which I provided to Nicole. Once Nicole arrived she checked the oil and it indicated oil only about 1/8" up the dipstick. The ending hobbs meter read 3702.98.

After reviewing the in cockpit video on 09/21/18, I noticed two differences between what I had perceived in flight and what the video shows. I purposely reviewed the video after I had written my statement on the information I remember processing and reacting to during flight.

The first thing I noticed was that during the time frame that I thought the engine was over speeding, it was actually my main rotor RPM building and over speeding. This was listed above as my third indication.

The other difference I had noticed in the video is that as I began my deceleration/ flare the engine RPM did drop to approximately 80% and once I was fully on the ground the engine again increased its RPM back to 102%. This change in sound was what led me to believe that during shutdown the engine RPM was again over speeding.