



NTSB MEMORANDUM FOR RECORD

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National Transportation Safety Board

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The following is the complete pilot statement submitted on NTSB Form 6120:

On or about August 22nd, I received a call from Alex MacKenzie, the manager of Go Skydive Boston a/k/a Skydive South Boston to inquire whether I might be available to fly jumpers between August 24th to August 27th, 2018(Friday through Monday). I accepted the invitation and travelled from Orlando International Airport to Boston's Logan International Airport on Thursday, August 23, 2018 on a flight departing at 3:33 PM.

Upon arrival in Boston, I took an Uber to the Cranland Airport located at 777 Monponsett Street, in Hanson, Massachusetts. Upon my arrival I was shown where I was to reside for the weekend.

Friday morning I was introduced to the company's staff and given access to airplane documentation and records, and I was shown to the aircraft itself, a Cessna 182.

At 8 AM, I performed a complete preflight inspection of the aircraft in accordance with the Cessna 182 owner's handbook provided with the Aircraft. I found no issues with the aircraft. My Preflight procedure off checklist included:

Checking fuel and oil quantity and quality were sufficient for upcoming operations.

Removing Control Lock

Checking Circuit Breakers

Magnetos, Avionics and Master Switches confirmed Off.

Master Switch On, check fuel, electronics, lights, alt-static, annunciator panel, extend flaps, stall-warning check.

Master Switch Off.

Remove Tie-downs.

Check control surfaces, free and secure.

Check antennas.

Check Right-Wing Flaps, Ailerons, Fuel Tank Vent clear, Main Wheel Tire check pressure and brakes, Fuel Tank Sump, Check Fuel Quantity Visually.

Check Nose, static-source opening clear, air intakes clear, propeller check for abnormal cracks or shape, nose wheel strut/tire.

Check Left-Wing Flaps, Ailerons, Main Wheel Tire check pressure and brakes, Pitot-Tube Cover Removed, Fuel Tank Sump, Check Fuel Quantity Visually.



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After completing the walk-around and initial preflight inspection, I was given leave to perform a few laps in the pattern to familiarize myself with the airport and aircraft systems before carrying passengers.

I followed the handbook's pre-start procedures and completed the final items on the checklist, including the run-up. When I performed a run-up, I observed that the engine instruments were reading normal and in the green. I then proceeded to perform 2 full-stop takeoffs and landings to familiarize myself with the airport and the aircraft's systems before carrying passengers. After performing the two full stop landings I felt sufficiently familiar with the aircraft and the airport that I informed Mr. MacKenzie that I was prepared to carry passengers as part of the skydiving operations.

Following proper procedures, I called into Boston Approach and notified them that operations would be in effect from 10 AM to 5 PM. I operated the aircraft for the duration of the day executing 9 additional takeoffs and landings and delivering approximately 9 loads of jumpers without incident. The aircraft functioned without any noticeable issues during Friday's flights. On our final Friday load, I noticed an aircraft sitting in the water at the end of the runway, and attempted to notify aid for a potential crash, however first-responders were already arriving. Saturday and Sunday, operations proceeded without incident. I successfully completed an additional 28 takeoffs and landings delivering an additional 28 loads of jumpers without incident. During the Saturday and Sunday flights I did notice that the oil temperature gauge was running in the high end of the green. Therefore, I notified the manager, Mr. MacKenzie, of this fact, and I made multiple checks of the oil-levels throughout the weekend. I confirmed by observing the oil dipstick that the oil levels remained well above minimums throughout the weekend (11-12 qts). The oil also appeared to be relatively clean. The oil gauges never exceeded standard operating ranges. In total, I completed 41 takeoff and landings throughout the 4-day span I flew at Cranland.

Monday I began my day by checking in with the manager. I walked out to the aircraft and proceeded to do my walk around in accordance with the manual's preflight checklist. I checked all fluid levels and noted that the oil level was in range and the oil looked clean. I confirmed that the aircraft had adequate fuel and the quality of fuel after straining looked excellent. After starting the aircraft's engine I continued with the preflight checklist, including the run-up. The magnetos were in range, the engine instruments were all in the green. I then proceeded to perform three successful takeoffs and landings and dropped three loads of jumpers before refueling.

After topping off fuel and, before take-off, I performed my standard run-up, that I do after every refueling, and noted engine and instruments were all reading standard in the green.

I then proceeded to take-off on Runway 18.

At approximately 1500-2000 ft AGL into my climb I experienced an electrical failure with an associated minor but noticeable reduction in power.



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At this point I considered the situation to be a serious aircraft system failure, that might require an immediate route or altitude change. Had my radios been operational I would likely have called out Pan Pan Pan to 121.5 or Boston Approach. Keeping the airfield within sight and within a reasonable gliding distance, I opted to continue a slow climb in order to allow the jumpers to exit the aircraft safely because I determined landing with jumpers on-board would pose an unnecessary risk.

I asked Mr. MacKenzie, the on-board tandem instructor, what he considered to be the minimum safe altitude to drop tandem passengers. He answered 7500 ft.

I changed the transponder code to 7600, and began climb to 7500 feet AGL attempting to stay close to the field in case of critical engine failure, while remaining clear of the class Bravo airspace to the north.

As I climbed, I closely monitored my engine and instruments, and attempted to troubleshoot fixes for power-loss (Carb-heat, mixture reduction, Battery-master cycling, circuit-breakers) to no effect.

Engine roughness and power loss slowly intensified on climb-out.

Unsure of engine safety I evacuated jumpers from the aircraft at the safe altitude of 7500 feet AGL (7571 feet ASL) and began my descent.

I circled down above the airport, gauging that my distance from other landing areas, with an unreliable engine, made landing at the Cranland Airport the safest option, as I knew I could make the runway.

On descent, the engine roughness increased, to a degree that I feared full engine failure if overly stressed or given full-power on the throttle.

I then set up for landing, staying higher than usual on glide path so that in case of engine failure I could still manage to make the runway.

Preparing for a landing with unreliable battery-driven flaps and a short landing distance I came in on final approach as slowly as possible, while maintaining appropriate speed to make the runway in case of engine failure. Once it was clear that I could make the runway I slipped the aircraft to bleed off speed and altitude. I moved the electric flap lever to full in the hopes that I would get some benefit and noticed little to no movement upon visual check. Prior to setting up for final approach, I had already deemed a go-around as potentially dangerous given the unreliability of my engine. In a similar situation, with a healthy engine, I would have gone-around or attempted landing at another airport.

Upon landing I attempted max braking only to discover that the braking action on the right main was less than the braking action on the left main, limiting my available braking action and negatively impacting directional control.

The aircraft was moving slowly when it left the runway but unfortunately fast enough to cause the aircraft to become inverted when the nose wheel submerged in the soft grassy area just beyond the departure end of Runway 18. I was unharmed and able to walk away from the aircraft. The jumpers were likewise unharmed and had a successful jump from a safe altitude.



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The aircraft's fuselage and wings appeared to be intact despite the incident and the only visible damage I noticed was to the front gear and propeller. The doors worked normally and the interior of the aircraft was not damaged to my knowledge