

On June 4th, 2024, I, Raphael D. Joly, was involved in an emergency landing in a Cessna 182 Skylane N5755B during a simulated IFR practice flight for my check ride scheduled for Thursday, June 6th, 2024. Prior to departing Eagle County Regional Airport (EGE), a fuel top-off was requested by an instructor from Alpine Flight Training shortly after landing with N5755B at KEGE. While awaiting fuel, Gus LeBlanc, Quinn Robinson, and I were briefing and going over IFR approach plates to be flown that afternoon (RNAV into KSBS, VOR into KCAG, and ILS into KHDN). After approximately 30 minutes, Gus LeBlanc and I proceeded toward N5755B to fly the briefed approaches. After completing the preflight checklist, we found no issues with the plane, both agreeing it was in flying condition: oil dipstick at 11 liters, all lights functional, gas (based on wing gauges) fluctuated from more than half to a little higher than 3/4 of a tank, no gross deformities on the propeller or damage to the plane. The run-up checklist all passed within normal limits for this specific aircraft. After the run-up, we took off from KEGE and flew a RNAV IFR approach into KSBS, VOR KCAG, and the ILS into KHDN. Completing all necessary pre and post checklist items for each approach, there were no reported issues. Completing the ILS into KHDN and practicing a holding procedure, we began to head back to KEGE.

Departing KHDN, we checked the fuel quantity on the electronic fuel gauge, which read 25 gallons remaining. At this point, we applied forward trim and higher manifold pressure in an attempt to make it back to KEGE to polish my practice landings for my check ride on Thursday, June 6, 2024. At about 15 miles north of KEGE at approximately 11,000 ft MSL, the engine began to run rough. We immediately pulled the carburetor heat, thinking it was icing on the carburetor causing the engine roughness. Once the carb. heat was applied, we noticed an increase in RPMs, manifold pressure, and EGT, which only lasted roughly 1 minute. After 1 minute or so, there was a significant drop in RPM (2200-1400), drop in manifold pressure (18-13), and a sharp decrease in EGT (1350-700). Immediately, we began the engine failure checklist, including checking the fuses and ensuring that both fuel tanks were being utilized. We cycled the throttle, carburetor heat, and magnetos, but the RPMs, EGT, and manifold pressure continued to drop with additional engine roughness. Once it was apparent that we had an engine failure, we began to execute the engine failure emergency procedures. Going through the checklist, we realized that based on our current glide, mountainous terrain, descent rate, and distance from runway 25 and the glide advisory feature on Foreflight, we were unable to make it to KEGE. Knowing well that there was no good place to land near KEGE as around the airport there are houses, I-70, and large businesses such as Costco, we looked around our current position for "the best place to land". Below us, off our left wing (east of our position), we found a small field of grass in the midst of sagebrush and small hills. Despite there not being many ideal places to land, this small strip of grass was our only and best option, so we proceeded to circle to land to make the field. At approximately 200-250 feet from the ground, we began to turn final towards the runway on a westerly heading. However, as we turned final, the setting sun was blinding us, losing all visual references. The sunshades installed previously on the aircraft had been removed due to students scratching on the windshield. As we descended closer to the ground, we squawked 7700, declared an emergency landing on 121.5, pulled the mixture to full lean, and turned off the master battery switch to avoid any fires upon landing. As we fell below the mountain ridge, the setting sun was hidden behind the mountains to our west. At this moment, we realized that we were 10-15 feet AGL and that we were slightly

off course (50-100 yards north of the grassy field) from our original landing point, bracing for impact as we saw sagebrush and a small hill directly ahead of us in a small valley. As the aircraft came to a complete stop, Gus and I checked on each other to ensure our wellbeing. We both exited the aircraft from the left door that had opened upon impact. The right door had been crushed shut, unable to be opened. As we exited the aircraft, the property owner, Nick, and his wife came to make sure we were both OK on their UTV. The proprietors of the land we made the crash landing on were walking their dogs at the time of our emergency landing, confirming the blinding nature of the setting sun as they had to divert their route due to their inability to see while walking their dogs. Thankfully, Gus and I walked away from this incident uninjured, and our landing did not cause any other injuries to those on the ground. Shortly after our emergency landing, paramedics, Eagle County Sheriff officers, and firefighters arrived on the scene within 30 minutes.

Reflecting on the incident, there are a few items that could have been improved. Upon closer inspection, there should have been visual inspections of the fuel tanks as I have done with my first training aircraft, the low-wing Piper Archer. It was part of the preflight checklist to visually inspect the gas tanks in the PA-28-191. Understandably, as N5755B is a high-winged aircraft, it would be necessary to have a small ladder or step stool. Unfortunately, during my training, I have only visually inspected the tanks twice. The first time, I was told by an instructor to take a few steps back to make sure the gas lids were securely closed as the Signature had, on a few occasions, not securely closed them. The second time was when I was refueling in Moab on my 250 NM cross-country flight. Now experiencing this unfortunate accident, I see the absolute importance of visually checking the fuel tanks, whether needing to purchase a collapsible step stool or small ladder that lives with the aircraft. In retrospect, knowing that the wing fuel tank gauges did not provide an accurate depiction, the visual check is of even greater importance. Since I have flown with N5755B, the wing fuel gauges have always greatly fluctuated. When requesting fuel, I have either had eyes on Signature refueling the plane, or another instructor has had eyes on the refueling process. On this occasion, due to both instructors aiding me in briefing and familiarizing myself with my IFR approaches, we did not visually see Signature refueling the plane. Despite having the electronic fuel gauge, it is only accurate if the tanks are full. Even with the large fluctuations in the wing fuel tanks, we calculated that the aircraft had enough fuel onboard for our 2.5-hour flight plus 30 minutes reserve, making 3 hours of fuel onboard. Looking back, the gauges not offering an accurate reading, visually inspect.