

I am a commercially rated instrument ASEL pilot with 2963.3 hours, accumulated predominantly flying in day VFR conditions in fixed gear planes while conducting aerial survey work. I completed my complex rating in May 2003, commercial in August 2003 and my instrument rating in October of 2006. I recognized that my IFR skillset had deteriorated from repetitive VFR flying and enrolled in a local flight school in the spring of 2023 to regain my instrument competency and completed 11.4 hours of instrument instruction over 10 flights receiving an IPC signoff in July 2023. I also completed an annual safety review / check ride for the aerial survey company that I contract for in Dec 2023, in a Cessna T206.

In the interest of continuing training, I enrolled in another local flight school at the beginning of 2024 for instruction that focused on multi engine ratings utilizing a piper PA-34-200 Seneca. In preparation for the course, I studied the course guide and Seneca operator handbook diligently and completed the 63 question 4-page pre-arrival worksheet twice. In addition, I completed 2.5 hours of sim based multi engine instruction at another flight school one week prior to my course start date in order to arrive ready and prepared for the multi engine training/rating course.

On day one, Jan 8, of the flight training, we conducted a local flight, practicing maneuvers and reviewing procedures, aircraft systems, and aircraft flight controls/characteristics. On this first outing, the flight characteristics of the multi engine Seneca felt stranger than I had anticipated, especially during landing. The nose was very heavy at low speed, requiring a huge amount of added trim to feel stable in ground effect. The first flight on the morning of day two, Jan 9, we practiced more maneuvers, and performance characteristics in an area southeast of the field. I understood the multi engine procedures and flight profiles that we were following during training and felt confident in my progress getting maneuver flows memorized. On the afternoon session of Jan 9, we began instruction on pattern work and tol's on runway 05. Over the course of three circuits using runway 05, the wind shifted from the northeast to the southeast, resulting in a prevalent crosswind component. The crosswind was manageable and provided a good opportunity to incorporate crosswind landing flight characteristics into the training.

On the downwind leg of the 4th and final lap we configured the plane to "10-G-18"; flaps 10, fuel selectors and fuel pumps on, and 18" MAP. After completing the above before landing items, the instructor and I began a conversation about when the appropriate time would be to complete the gumps/landing checklist, and what flap settings and speeds might be appropriate for a simulated short field landing. At this time, roughly abeam the numbers on the downwind leg, the tower called to offer us a landing on runway 15 to accommodate the change in wind direction and we responded

that we would like to continue for a landing on RWY 05 to complete this circuit. The tower then requested that we extend our downwind leg to allow time for one departure, which we acknowledged, and then continued our discussion of how best to configure the plane for a successful short field landing in a crosswind. Very soon after the request to extend our downwind leg, the tower called again with landing clearance, essentially canceling the extended downwind, and I commenced our base leg while still discussing the short field technique/procedure. As we turned final, my focus was on managing airspeed and power settings. I compensated and adjusted for the crosswind landing, while simultaneously listening to observations and feedback from my instructor. My airspeed had been slightly below desired approach speed in the turn for the final leg of the pattern, and I corrected with pitch and power to return aircraft to IAS of 87mph while adjusting with roll and yaw against the crosswind to align with runway centerline. I commenced to flare the aircraft just beyond the threshold markings, and touched down lightly at the desired aiming point, instantly realizing that our landing gear was not extended. The plane remained fairly stable in the slide on the ground coming to a stop on the aircraft belly still near the center of the runway. After coming to a stop, we exited the aircraft to assess for fire and possible fuel leaks, which we did not find. The instructor then returned to the plane to inform the tower that we were unhurt, and that the plane was not on fire, or leaking fuel.

I feel that the confluence of these factors listed below contributed to the resulting gear up landing:

- My lack of practice with retractable gear in the 21 years since I got the rating.
- My unfamiliarity with multi engine aircraft and mental preoccupation with the unfamiliar flight characteristics of the Seneca - especially on landing.
- The crosswind component complicating the approach.
- The simulated short field landing complicating the approach.
- The breakup of the GUMPs check I was just becoming familiar with into 2 parts. "10-G-18" on downwind then UMPS.
- Tower making three requests during late downwind to final.
- The rapid tower clearance to land canceling an extension thus shortening the approach.
- My hyperfocus on airspeed and runway centerline on final.
- Demanding information from, listening to, and responding to instructor feedback during the approach.
- Neither the instructor or I recall hearing the gear warning signal which had been working earlier in the day.