

16 March 2025

I am the Director of Operations for Exec Air Montana and a qualified Check Airman for our company approved by the FAA. I was conducting a Part 135.297, 135.299 FAA Checkride for Rob Efinger in N513JM a nice KingAir C90A. We were on final approach for the last landing of the checkride, upon landing gear extension all sounds were normal, and we received two main gear green lights but no light for the nose gear. There are three safety reminders to prevent landing with the gear up; low power (throttle) setting, flaps selected beyond approach which provide both provide a warning horn and two red lights in the gear handle when lit indicate an unsafe gear condition. There was no warning horn with the throttle at a low power setting or with flaps beyond approach and no red “unsafe” gear indication light in the gear handle. This means all gear should be down and locked.

Instead of landing we both agreed this should be investigated further and departed for the north practice area. Upon going around the gear handle was moved up but due to a safety solenoid it would not allow the pilot to move the handle. This tells the system that there is weight on wheels to prevent inadvertent retraction while sitting on the ground. This can be and was overridden and when the handle moved up I can't recall if the gear moved or not but we also found the circuit breaker by the gear handle labeled Landing Gear Relay popped. This is a 2amp breaker. This was pushed back in and I believe at this time that's when the gear retracted normally. Then in the north practice area the emergency checklist was referenced but there are only hydraulic failures and manual extensions for the gear listed. We had no Hydraulic issues. The gear was extended again and this time we had no indications on any gear. I then noticed on the right circuit breaker panel the Landing Gear Indicator 5amp circuit breaker had popped. I reset that and immediately showed that the nose gear was now indicating down, the right main gear was down and now the left main gear was not indicating down. Once again, low power test, flaps beyond approach and the red light in the handle all indicated that the gear was down as we received no warning horns or red light in the handle. We cycled the gear one last time and got the same results, no left gear, good nose and good right main gear. No aural warnings with the throttles and flaps and the red light in the handle was extinguished thus indicating all gear were down. We elected to perform a flyby of the Helena tower and they reported that all gear were down. We elected to land and Rob did a superb job of setting the airplane lightly down on the right main gear first, even with a strong left crosswind and then settled the left main and nose down. Very uneventful and superb stick and rudder airmanship. As we decelerated without braking after about 1,500 feet of normal rollout the left main retracted slowly. We exited the airplane through the main cabin door and walked around looking for any sign of fire. There was none. There were also never any leaks of hydraulic fluid, oil or fuel. The Helena airport was superb in helping get the airplane back up on the landing gear and it was towed safely and uneventfully back to the maintenance shop.

Curtis Suter | Director of Ops.



I met up with check airman Curtis Suter at 1000 lcl to start the oral portion of my 6 month check ride in the King Air C90. We worked through ground school questions for about an hour, after which I asked the ground crew to pull 513JM out of the hangar and fuel it with 100 Gal (50/side). I did a very thorough preflight and carefully inspected the aircraft with no discrepancies noted.

We took off at 12:31 lcl for the flying portion of the check ride where I performed a coupled ILS to rwy 27 and other approaches where we cycled the gear at least 4 times successfully (with 3 green). Because it was a check ride, we went missed several of those but still cycled the gear with no issues. We went into the north practice area where we did normal check ride maneuvers (steep turns, approach to land stalls, accelerated stalls and departure stalls). In those maneuvers we cycled the landing gear several more times and didn't have any unsafe gear indications.

In the last maneuver, a hand-flown ILS landing with one inoperative engine, I received vectors from the examiner until we were at localizer intercept where we also captured glide slope and began a normal approach. At about 6 miles from the runway, the examiner killed my critical engine. I ran the Engine Failure checklist (page E-4) and continued the approach using the single one engine inoperative checklist (A-5). At 5 miles I ran the before landing checklist (A-5) and configured the aircraft to land by setting propeller to high rpm, and selecting landing gear down. At that point I noticed that I had Left and Right main gear green lights but the nose gear was unsafe which I expressed to the check airman. The examiner gave me back my failed engine and we jointly decided to go missed and divert to the north practice area to assess the malfunction. On missed, at positive rate of climb, I attempted to raise the gear but the landing gear handle was locked with the mechanical lock (I assumed because of a weight on wheels issue). I manually released the landing gear handle to move to the up position, but nothing happened. It was then that we noticed that the circuit breaker by the landing gear handle was popped. We reset the circuit breaker IAW checklist A-9, and the gear came up. Noting that we had an electrical issue, we tried to cycle the landing gear down again and we got a positive nose gear and right main but the left main light was out. We cycled it again and had no gear lights at all. At that time we noticed that the landing gear indication circuit breaker was popped and reset it IAW checklist A-9 with the result of having a green light for the nose, right main but not left main (indicating that the left main was still unsafe). At that time Curtis Suter started running the landing gear manual extension checklist (A-10), and we also checked to see if the warning horn would alert if we retarded the throttles to idle and/or flaps past approach and neither resulted in a warning horn (indicating that the gear was down and safe and that we were dealing with an indication issue). We jointly determined that the landing gear manual extension checklist was not appropriate as we had functioning landing gear but thought we were having a gear indication issue. As a last resort, we decided to request a fly by the Helena tower to have them verify that our gear was down. After the fly by, Helena tower verified that they saw 3 gear extended and cleared us to land.

I entered a left downwind for runway 27 and after turning base, completed the before landing checklist (N-14) and configured for landing with props set to high RPM, Flaps full and we still had the 2 green gear indicators (thinking that the left main was down and locked but not indicating correctly). We had a left cross wind so I landed gently on the left gear which held the weight of the plane, so I pulled power and allowed the aircraft to land and we landed without issue. Curtis and I had discussed that if we felt anything abnormal that we would abort the landing and go missed. After landing roll of approximately 2000 feet with only beta prop reversing (no brakes), we were instructed to exit runway 27 at runway 17 and taxi via charlie to park. It was at that time, at idle and rolling at a slow taxi speed and starting a left turn to exit the runway, that the left main collapsed and pulled the aircraft to a skidding halt on runway 27 at around 14:24 lcl.