



Memorandum

From: [REDACTED]
To: Record
Date: 27 July 2024
Subject: N134MG Mishap Pilot Statement

1. Background:

- a. I was the instructor of record for student [REDACTED] for the mishap flight.
- b. We briefed and completed a training flight in the same aircraft earlier the same day as the mishap flight. There were no aircraft anomalies on that flight or on the preflight for the mishap flight that afternoon.
- c. After lunch, we again briefed (approximately 1330 and began the second training flight at about 1400, with actual takeoff at 1432. We began the flight with a short-field takeoff, and practiced single-engine maneuvers and stalls in the practice area.
- d. In the practice area, we performed several advanced single-engine maneuvers with the Left Engine secured, but none with the Right Engine secured, and none with the gear and/or flaps extended. We had no issues maintaining altitude during the maneuvers.
- e. That mirrored the performance of the aircraft on the morning flight, where we had the Right Engine secured for all single-engine maneuvers. I do this to balance wear and tear on the engines. For both flights, and despite the high ambient temperatures (for the afternoon flight the ATIS reported 39° C at takeoff time), we were able to maintain 8,500' MSL with less than full power on the operating engine during single-engine maneuvers.
- f. After the practice area maneuvers, we returned to the airport via an instrument approach (ILS RWY 03) with both engines operating, followed by a Missed Approach Procedure back to Approach Control. We did not extend the gear during that approach because we knew we were not going to land.
- g. We executed a second instrument approach (ILS RWY 03) with a simulated Left Engine failure by reducing the Manifold Pressure (MAP) on that side to 13-14 inches of Mercury (InHg) which results in zero thrust that simulates a failed engine with the propeller feathered. This power setting also avoids nuisance alerts for the landing gear not being down and locked that would occur with the throttle levers retarded fully.

2. Mishap Sequence:

- a. Just prior to or after the Final Approach Fix on the second approach, we were executing the Landing Checklist and extended the landing gear. However, the right main landing gear indicator did not show the gear down and locked.
- b. The first troubleshooting step was to swap the bulbs for the left and right main gear down indicators to identify a failed bulb, with no change in results. The original right bulb illuminated when installed in the left indicator, and the original left bulb which had been working failed to illuminate when installed on the right side.



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- c. We raised the gear handle and all three landing gear indicated up and locked, which Dani confirmed visually using the mirror on the left nacelle.
- d. We again attempted to lower the gear and the indications again showed down and locked only for the left main gear and the nose gear.
- e. I then attempted to lower the gear using the emergency extension method, with no change in the indications.
- f. We transmitted to KOGD Tower that we were having a gear issue, and they approved us to fly parallel to the runway but closer to the tower so that they could visually confirm the right landing gear position. They informed us that it appeared to them as if all three gear were extended. However, neither of us were sure that the gear was truly locked down, because Dani was experiencing some oscillations and asymmetric drag on the aircraft.
- g. The Tower controller offered to call in the fire and rescue equipment to be in position next to the runway in case we experienced the gear collapsing on landing. I agreed, and he approved us to hold on the East side of the airport airspace to allow time for the fire trucks to get into position. Tower approved an extension upwind, and then a turn to the right to hold and advised us to remain below 5,500 ft MSL due to fighter traffic arriving at Hill AFB.
- h. After completing one large circle on the East side of the airport in a right-hand turn, the Tower directed us to cross over to the Northwest side of the airport for conflicting traffic.
- i. We completed that circle, and turned to the NE to parallel Runway 03 and extended upwind more than two miles before turning a left crosswind for a left downwind for Runway 03.
- j. During the crosswind turn to the left, [REDACTED] advanced the power on the Left Engine and I fully secured the right engine to avoid significant damage to the propellor and engine if the right main landing gear collapsed on landing which would result in the propellor striking the pavement and the engine suffering an abrupt stoppage.
- k. Initially, the aircraft was able to maintain altitude and 92 KIAS (Blue Line or Vyse) with maximum power on the left engine.
- l. However, when established on the downwind, we were also getting frequent over-boost annunciations indicating that we were exceeding the Manifold Pressure (MAP) limit of 40.5 inches of Hg. I directed the student to retard the throttle to avoid the exceedance, which she accomplished. Incremental movement of the throttle would again result in another over-boost which she would then correct by retarding the throttle. During these excursions of power, I saw MAPs from the low 30s to just over 40 InHg.
- m. As the aircraft was passing mid-field on the downwind leg, I perceived that we were no longer able to maintain both altitude and airspeed: I saw a rate of descent whenever Dani tried to maintain Vyse (best speed for single-engine climb rate), or a decay in airspeed whenever she tried to maintain altitude.
- n. I began an Engine Restart procedure for the Right Engine, but had only accomplished a few steps (propellor and mixture full forward, throttle open $\frac{1}{4}$ ") before I aborted the attempt when I decided that we were in a critical state of energy and needed to take the controls.



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- o. We advised tower that we intended to land immediately and maneuvered for to the South to be closer to the runway.
- p. I took the controls when we were approximately abeam the threshold for Runway 03, below 5,000' MSL (500' AGL) and descending more rapidly. At that point, it was clear that we were losing altitude so quickly that we could not turn to make a landing on the runway or the airport, so I began looking for a survivable place to land to the West or Southwest, within 30° of the aircraft's nose on that heading.
- q. I estimate that only ten seconds elapsed from the time I recognized the increasingly negative vertical velocity and loss of airspeed, through the aborted attempt to restart the Right Engine, until I diverted all of my attention to making a survivable landing.
- r. I maneuvered the aircraft away from a school and towards a road partially obscured by trees. My reasoning was that the park and school grounds in Roy could probably have people playing on them, especially in the middle of the afternoon, so I looked elsewhere between the two green fields. I found a road and aimed to land in the trees above it to dissipate energy and hoped to land on the road below.
- s. My focus during the final portion of the descent was to keep the airspeed above 66 KIAS, which is the minimum controllable airspeed for that aircraft, so that I could somehow manage a rough but survivable landing. Allowing the airspeed to decay below that would result in an un-commanded roll from which there would be no recovery and we would be killed. I never saw airspeed below 75 KIAS.
- t. Just before hitting the trees, I retarded the throttles to slow down, and I took my hands and feet off the controls to avoid injury during violent deceleration. We clipped the tops of some trees, crashed onto the road, skidded across the road and the front yard of a house, and came to an abrupt stop when we slide sideways into a tree in the middle of that yard.
- u. The final heading before striking the trees was about 190°, but when the aircraft came to rest it was heading 135°; I can't recall how the aircraft rotated into that orientation; I don't know if the trees and ground obstructions rotated it clockwise or counter-clockwise.
- v. When the aircraft came to stop, the door on the right side could not be opened due to the tree that stopped us, so we exited via a large hole in the front windscreen which was shattered and mostly missing. I had back pain on standing but was able to exit the aircraft, but exited on my own. I did not have time to secure the engines before crashing, and did shut-off the left fuel valve before exiting the aircraft.

w. [REDACTED]