

Inspector Statement

Accident of N143MG, October 9th, 2024, KTYS

Phoebe E. Gordon, Aviation Safety Inspector, Operations

Nashville Flight Standards District Office



Credit: Josh Helton, TYS Operations 1

November 9th, 2024

On Saturday, November 9th, 2024, at approximately 11:45 EST, Inspector Phoebe Gordon (Inspector Gordon) was contacted by the Nashville FSDO Operations Front Line Manager regarding an accident that had occurred at KTYS airport in Knoxville, TN, that morning. Due to the nature of the event, Inspector Gordon's availability, and the time at which had occurred, it was determined that the aircraft would remain secured at the Signature FBO until Tuesday, November 12th. Operations personnel of the TYS airport were advised by FSDO management that the aircraft may be moved after photographs were obtained of its position after the accident. The aircraft was then moved to the ramp area of Signature FBO. Inspector Gordon contacted Operations personnel Josh Helton to coordinate the onsite visit. An initial report from KTYS operations personnel was received via email, and the statement is as follows: "Pilot advised that he had exited the runway onto taxiway B when the aircraft started acting up. He advised that the aircraft started pulling and he adjusted. The aircraft then pulled hard to the right and he went into the grass off taxiway B. The pilot advised the aircraft then struck the wind sensor with his right wing spinning the aircraft around. The aircraft came to a rest with its nose striking the wind sensor. The aircraft was then removed by Signature Aviation and was stored at their FBO after the FSDO released the aircraft."

November 12th, 2024

On Tuesday, November 12th, 2024, Inspector Gordon contacted the pilot of the accident via email with the Compliance Brochure, Privacy Act, and a request for both pilot and aircraft documentation. The owner of aircraft, who was not the accident pilot, was contacted via telephone for Inspector Gordon to request permission to enter the cockpit of N143MG to establish continuity checks. The owner provided this permission both verbally and in a text message to Inspector Gordon.

Inspector Gordon traveled to KTYS for an on-site visit of the accident aircraft. The aircraft was photographed by Inspector Gordon, and the following conditions of the aircraft were noted. The aircraft's overall damage was focused to the leading edge of the right wing, the right engine's propeller, the outboard right tip tank, and the nacelle of the right engine.

Fuselage. The fuselage and body of the aircraft had no noted damage except to the nose of the aircraft that showed paint chipping to the skin and minor impact damage.



Credit: Inspector Gordon, BNA FSDO 1

Empennage. The empennage of the aircraft had no noted damage albeit minor hangar rash on the rudder.



Credit: Inspector Gordon, BNA FSDO 3

Wings. The left wing had no noted damage. The right wing contained significant damage to the leading edge on the center portion of the wing, directly beside the right engine nacelle. The damage to the leading edge measured approximately 164 inches in length. Significant fragmentation of the wing skin was evident. Impact damage to the right wing's leading edge is consistent with the aircraft striking the wind sensor at a high taxi speed. Significant wing separation at the attachment point to the right engine was evident. The right wing's leading edge wing spar was significantly bent, and cable damage was visually apparent. Wing skin buckling aft of the impact damage and wing/nacelle attachment point was present. The lower portion of the right wing showed fuselage buckling behind the point of impact. The right-wing tip tank showed impact damage forward of the position near the strobe light assembly.



Credit: Inspector Gordon, BNA FSDO 4



Credit: Inspector Gordon, BNA FSDO 5



Credit: Ian Mullins, BNA FSDO 1



Credit: Inspector Gordon, BNA FSDO 11

Credit: Inspector Gordon, BNA FSDO 12



Credit: Inspector Gordon, BNA FSDO 14



Credit: Inspector Gordon, BNA FSDO 16

Right engine. Right engine nacelle skin damage was present at the attachment point of the leading-edge point of attachment between the right wing and right engine nacelle. Scrapping damage was evident on the right side of the nacelle, indicating a point of impact on the wind sensor. The right engine nose cone showed impact damage and denting. The propeller blades of the right engine showed minor scrapping damage along the tips. The propeller blades were positioned vertically. The propeller blades were not curled, indicating little to no power at the time of impact on the wind sensor. The nacelle skin behind the nose cone showed a crack on the right side.



Credit: Inspector Gordon, BNA FSDO 22

Left Engine. The left engine had no noted visible damage by Inspector Gordon. The left engine's propeller was positioned horizontally. Upon further evaluation from the aircraft mechanic with oversight from Inspector Ian Mullins, a stripped bearing was located at the throttle body of the left engine. This part failure results in the throttle plate fail safe to the full open throttle position. See Inspector Mullins report below.



Credit: Inspector Gordon, BNA FSDO 23

Flight controls. The left aileron was undamaged. The elevator was undamaged. The rudder appeared undamaged but did present minor signs of hangar rash on the right-hand side. The rudder trim tab was set in the neutral position. The elevator trim is set slightly nose low. The right aileron appeared visually undamaged. Both the left and right flaps were in the retracted position. Inspector Gordon established flight control continuity for the ailerons, rudder, and elevator from both the left and right seats. Observation from TYS operations personnel noted that the rudder deflected further left than it did when deflected to the right. The difference in travel in inches is 11.5 of travel for left rudder input versus 8 inches of travel for right rudder deflection.



Credit: Inspector Gordon, BNA FSDO 25

Landing Gear and brakes. The landing gear system showed no visible damage. All three main landing gears appeared to be in suitable condition with no visible hydraulic fluid, appropriate tire pressure, appropriate strut compression, and no additional concerns. The brakes showed no visible damage, no leaking hydraulic fluid, no torn or distressed brake lines, or significant wear on the brake pads. A full operational check of the brakes was completed by the owner's mechanic with oversight from Inspector Ian Mullins. No issues or concerns were noted during the check, and the brakes were fully operational with full power applied on the left engine.



Credit: Inspector Gordon, BNA FSDO 27



Credit: Inspector Gordon, BNA FSDO 28



Credit: Inspector Gordon, BNA FSDO 29



Credit: Inspector Gordon, BNA FSDO 30



Credit: Inspector Gordon, BNA FSDO 31



Credit: Ian Mullins, BNA FSDO 2



Credit: Ian Mullins, BNA FSDO 3

Flight deck. The aircraft flight deck was examined by Inspector Gordon. An aircraft checklist was located on the floor forward of the front right seat. The yoke and foot pedals were in the neutral position. The aircraft Hobbs meter displayed 1325.3 hours. The fuel selectors were switched to the left tank for the left engine and the right tank for the right engine. All circuit breakers appeared in and were not popped. The throttles were both at idle. Propeller levers were both at high RPM. The mixtures were at idle cutoff. The landing gear lever was in the down position. The radio master switch was in the on position. The flap indicator showed "zero." The left and right generators, battery switch, and magnetos were in the off position. The rudder trim was set slightly left of center. Roll trim indicated neutral. Nose trim was set in the takeoff position. All engine gauges indicated zero except the Manifold Pressure gauge indicate 30 inches for both engines. The altimeter indicated 960 feet MSL. The VSI indicated zero. The attitude indicators had precessed. The HSI showed a heading of 150. The airspeed indicator showed 0 knots. The

has a total flight time of 18,400 hours. The pilot's statement for the event is attached below.

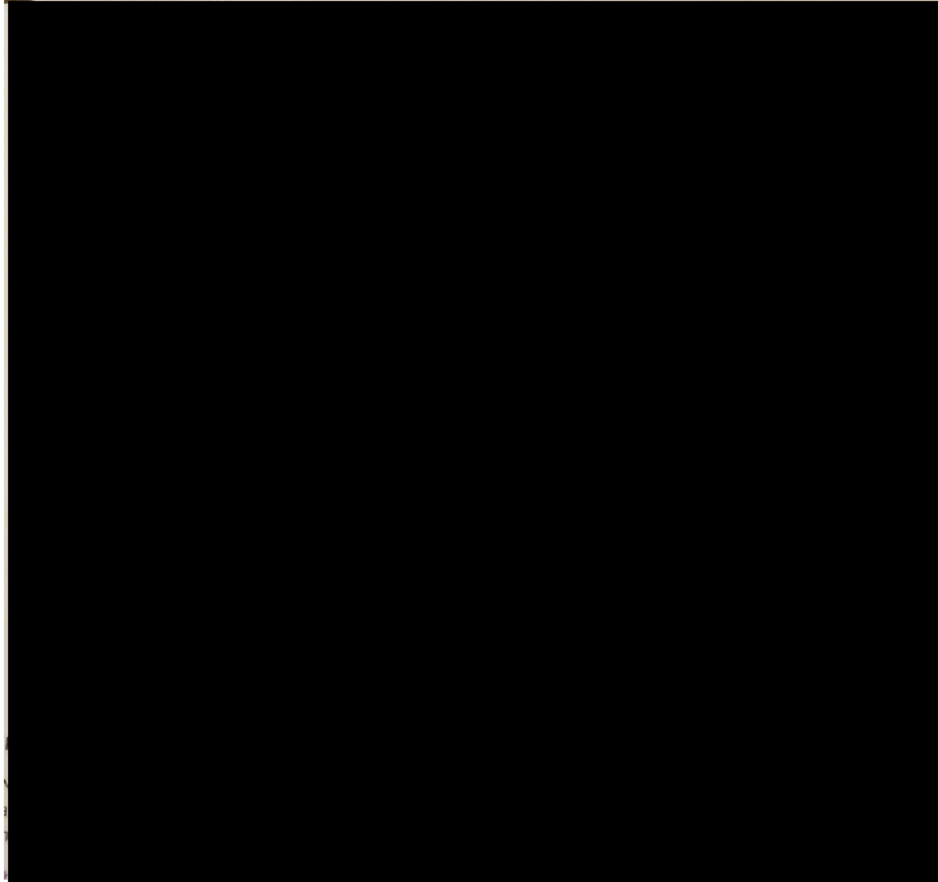


Figure 1: Pilot's Accident Statement

The owner of the aircraft forwarded maintenance inspection records for N143MG to Inspector Gordon via email. The annual inspections for the airframe, left propeller, right propeller, left engine, and right engine were completed on 05/02/2024. The ELT was inspected on 05/02/2024. The pitot/static, altimeter, and transponder systems were inspected on 05/02/2024. Applicable Airworthiness Directives were complied with on the annual inspection on 05/02/2024.

Pilot recount of the accident. The pilot recounted the event with Inspector Gordon via telephone following the confirmation of the Compliance Brochure and Privacy Act. The pilot stated this was an IFR flight that departed 1H0 airport for TYS in his student's aircraft. He stated the weather was not a concern

and the skies were smooth. The pilot stated the approach and landing was carried out as normal. He stated that the performed a normal approach and landing and rolled the aircraft down the runway, applying minimal braking as the runway is 10,000 feet long. The airman stated that when he went to apply brake pressure, he did not get the response as he normally he would. The airman approximated he lost more than 50% of normal brake effectiveness. He decided to continue the taxi off runway 5L onto taxiway B4 as assigned. The airman stated he did not stay on the taxiway centerline as he departed runway 5L onto B4 and was right of centerline. The airman stated as he applied right rudder, the aircraft did not want to turn immediately. The airman stated while turning from taxiway B4 onto taxiway Bravo, the aircraft was at the edge of the taxiway. The airman stated he was able to maneuver the airplane parallel to the taxiway, then the aircraft suddenly ran out rudder and he became startled. The airman stated the aircraft was heading off the taxiway and was going downhill towards the gulley. The airman reiterated he was startled by the sequence. The airman stated the airplane did not want to slow down although he had the throttles at idle. The airman stated the aircraft continued down the gulley and came up the other side and crested the gulley. The airman at this point stated he could not control the aircraft and the aircraft was continuing to veer right. The airman stated the right engine was not running. The aircraft then struck the wind sensor. The airman shut the engine down and exited the aircraft without injury. The airman stated he performed a brake check prior to departure for TYS with no noted issues. The airman stated he retracted the flaps after exiting the runway. The airman stated he performs the after-landing checklist after shutting down on the ramp. The airman stated he advised ATC, prior to the accident, that he was unfamiliar with the TYS airport, to which they replied, "I'll take care of you on that."

Weather. Weather reported for TYS at the time of accident is as follows: KTYS 091553Z 05006KT 10SM CLR 18/10 A3018 RMK AO2 SLP216 T01830094 \$. The pilot would have experienced a direct headwind of 6 knots upon landing. Upon taxiing north on taxiway Bravo, the pilot would have had a 6-knot direct headwind.

November 21st, 2024

The aircraft owner provided his own mechanic to observe the status of the aircraft following the accident. This mechanic had oversight from Avionics Inspector Ian Mullins from the Nashville FSDO. Inspector Mullins provided his written statement, and it is attached in this statement.



Credit: Ian Mullins, BNA FSDO 4



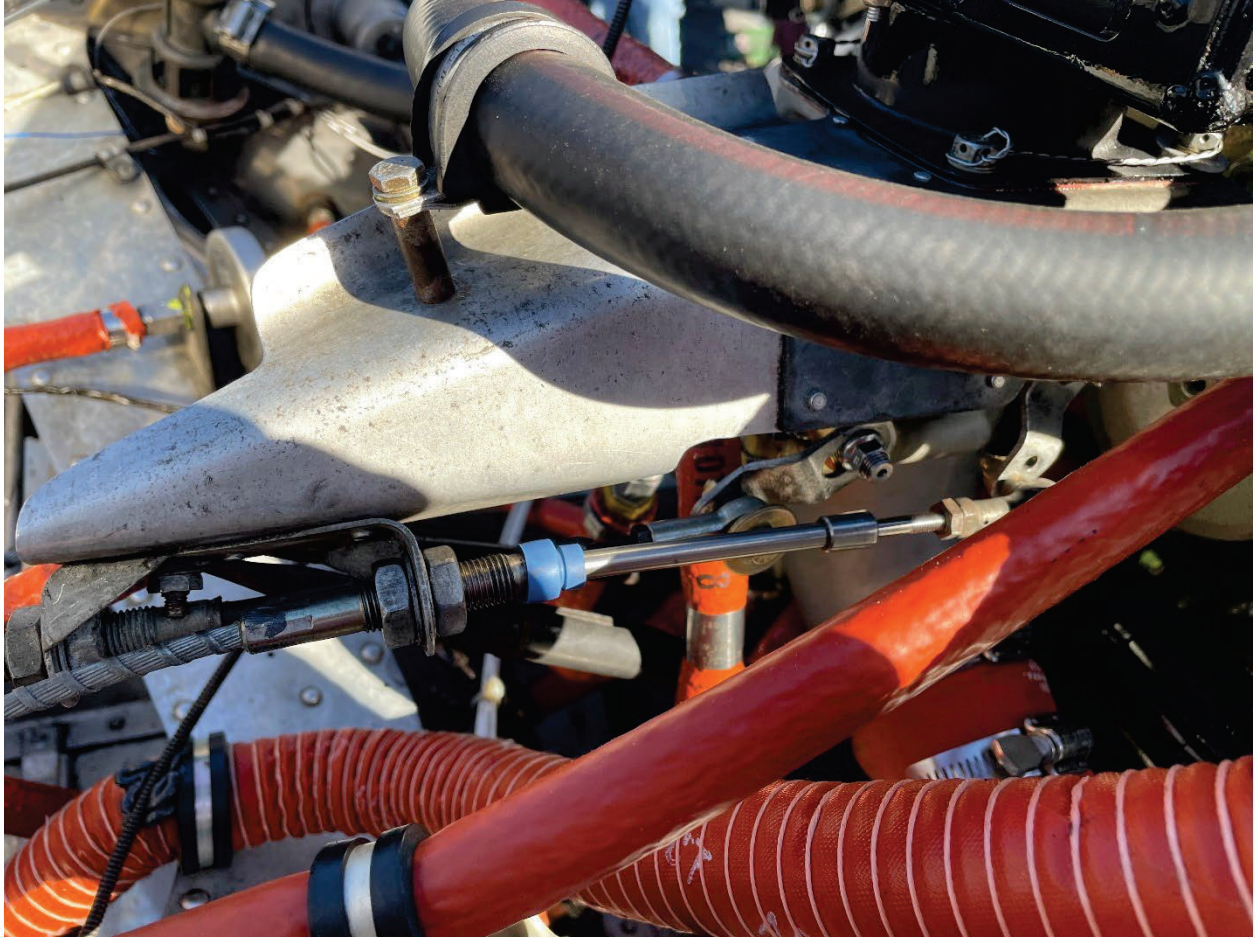
Credit: Ian Mullins, BNA FSDO 5



Credit: Ian Mullins, BNA FSDO 6



Credit: Ian Mullins, BNA FSDO 7



Credit: Ian Mullins, BNA FSDO 8

N143MG NTSB Oversight

On November 21st, 2024, I arrived at the Signature FBO at TYS to meet with the mechanic that regularly performs maintenance on N143MG. I was met by the owner's mechanic (Jason Mollinger) and another mechanic that came with him. We were escorted onto the ramp and provided access to the aircraft.

The brakes were first inspected visually with no obvious defects. Mr. Mollinger entered the aircraft, applied the brakes and the other mechanic and I attempted to move the aircraft. No malfunction with the brakes was noted.

Mr. Mollinger and I noted there was prop damage on the right side and determined not to run that engine. He then entered the aircraft to perform power checks on the left engine. Once the engine was started, it immediately went to full power. The mechanic stated he had to manipulate the mixture setting in order to shut down the engine. Another attempt to run the engine was made one more time with the same results. During the engine run attempts, while at full power, there was no malfunction with the braking system.

The left engine cowlings were then removed to inspect the throttle body/linkages of the engine. Linkages all appeared to work normally while being manipulated, but it was noted that the throttle shaft was not moving while controls were manipulated. The throttle arm was then removed to inspect the splined bushing. It was noted that the splined bushing was stripped, which resulted in no resistance to the throttle shaft, allowing full power upon start.

Depending on when the bushing was stripped/failed, it is possible that the failed component could have contributed to the aircraft's tendency to want to move in the right direction as stated by the pilot.

Aircraft maintenance record review over the previous 2 years with no irregularities noted.

Ian Mullins
Nashville FSDO
Aviation Safety Inspector