

3/19/2012

Corky Smith

NTSB

Atlanta Federal Center Room 3M-25

60 Forsyth Street

Atlanta, Georgia, 30303

Dear Mr. Smith,

I was contacted by the FAA Eastern Regional Communications Center on February 17, 2012, and assigned an accident that had occurred at Fayetteville Regional Airport, Fayetteville, North Carolina. The airplane involved in the accident was a Mooney M20 TN, N118RZ, registered to Tenn. Reality LLC.

I responded to the accident site on February 18, 2012 and examined the wreckage.

The pilot holds a private pilot certificate with ratings for airplane single engine land and instrument airplane. He indicated on the NTSB accident report that he had accumulated 356 total flight hours of which 49 hours are in the Mooney M20 TN. He has 282 total hours as pilot in command of which 49 hours are in the Mooney M20 TN. He has flown 66 hours in the last 90 days of which 49 hours were in the Mooney M20 TN and 19 hours in the last 30 days in the Mooney M20 TN. He flew 1 hour in the Mooney M20TN 24 hours before the accident. His last flight review was on February 20, 2011. He holds a third class medical certificate with the restriction, "Must wear corrective lenses for intermediate and near vision".

Review of the aircraft logbooks revealed the last annual inspection was conducted on December 24, 2011. The airplane has flown 33 hours since the last annual inspection. The engine and airframe had 390 total hours at the time of the accident.

The pilot informed the NTSB that he was initially cleared for left traffic to runway 4. He questioned the controller and verified that he was to enter a right downwind for landing. The pilot was switched to tower frequency and instructed to land on runway 4 following a Gulfstream. The airplane touched down softly on the main landing gear. The airplane encountered some wake turbulence from the Gulfstream and the nose pitched up high and the airplane lifted off the runway. He added power and the airplane went to the left. Right rudder and right aileron was applied. The airplane was in a right bank and struck a pole on the left side of the fuselage pushing inward on the pilot's side. The airplane spun around and came to a stop. He and his wife had to be removed from the airplane. They were both transported to a local area hospital. His wife was treated and released. The pilot was treated for a broken leg. When asked if he experienced any mechanical problems with the airplane before the accident the pilot stated no.

A witness who was located on the ramp stated he observed the Mooney about 8 feet above runway 4 when the airplane stalled. "The main landing gear and tail section hit the runway. He heard the engine go to what he describe as "full power" and he observed the nose of the airplane pitch up to about a 30 degree attitude at a slow airspeed. The airplane reached about 15 feet off the runway and stalled. The airplane collided with the runway on the main landing gear and tail section. The pilot applied full power and reached about 15 feet and was in a 35 to 40 degree left bank when the airplane stalled. The left wing and left main landing gear scrapped the runway. The pilot rolled the airplane to the right to avoid hitting a G4 airplane on the ramp and scrapped the right wing. The right main landing gear touched down on the tarmac and the nose of the airplane collided with a light pole. The engine assembly and nose landing gear separated from the airframe. The airplane spun to the left two 360 degree turns before it came to a stop in a nose down attitude resting on the main landing gear".

A witness informed the NTSB that he observed the Mooney landing on runway 4. He initially saw top of the airplane in a torque roll to the left at full power. The airplane rolled back to the right and disappeared from view followed by an impact sound. He went to the crash site and observed the airplane in an upright but nose down attitude. The engine assembly had collided with a light pole and had separated from the light pole. The engine was on fire and he put the fire out.

Another witness was standing next to his company G4 that had just landed. It had been on the ground for about 4 minutes. He was under the right wing hooking up the single point refueling receptacle when he observed the Mooney land on runway 4. The next time he saw the Mooney the right wing tip was dragging the ground and the engine was at full power. The nose section of the Mooney collided with a light pole adjacent to the G4. The engine assembly separated from the airplane and it spun around to the right before coming to a complete stop.

Review of radio communications between N118RZ and Fayetteville Air Traffic Control revealed at 17:27:09, that a Gulfstream airplane was between twelve to one o'clock at 5 miles on final approach. N118RZ replied at 17:27:19, with a 5.72 mile separation on radar, "I see the gulfstream ah gulfstream on the final". At 17:27:24, the controller informed N118RZ while at 2,500 feet, "caution wake turbulence" and instructed to contact the tower. At 17:27: 48 N118RZ was cleared to land on runway 4. The pilot acknowledged the transmission and contacted the tower. At 17:29:09, the local controller informed N118RZ, "Mooney eight Romeo zulu caution wake turbulence from the gulfstream". The response from N118RZ was unintelligible. At 17:34:53, the ground controller reported the accident to Safety 1.

The Airman's Information Manual states in Chapter 4 Air Traffic Control, paragraph 4-4-14 Visual Separation, (b), "A pilot's acceptance of instructions to follow another aircraft or to provide visual separation from it is an acknowledgement that the pilot will maneuver the aircraft as necessary to avoid the other aircraft or to maintain in-trail separation. In operations conducted behind heavy jet aircraft, it is also an acknowledgement that the pilot accepts the responsibility for wake turbulence separation". The Mooney M20 is considered a small airplane and the Gulfstream is considered a large airplane in accordance with paragraph 7-3-9 Air Traffic Wake Turbulence Separations. The required separation between the two airplanes is 4 miles. The Pilot who is landing behind a larger aircraft on the same runway should stay above the larger aircraft's final approach flight path and note its touchdown point and land beyond it in accordance with paragraph 7-3-5 Vortex Avoidance Procedures. The controller will provide to VFR aircraft that they are in contact with when in their opinion may be adversely affected by wake turbulence from a larger aircraft, the position, altitude, and direction of flight of larger aircraft followed by the phrase "Caution Wake Turbulence".

Examination of the crash site revealed the left wing left a ground scar on the tarmac. The airplane departed the left side of the runway and traveled about 200 yards before the nose section of the airplane collided with the base of a light pole. Propeller strike marks were present on the base of the concrete block holding the light pole. The nose section with the nose landing gear and propeller assembly separated from the airframe. The airplane spun around to the right and came to rest on a heading of 120 degrees magnetic. The engine assembly had a post crash fire from a ruptured fuel line and was extinguished by an individual who ran to the site to assist.

Examination of the propeller assembly revealed the propeller assembly remained attached to the propeller crankshaft flange. The propeller spinner exhibited evidence of rotation. The propeller blades remained attached to their respective propeller hubs and exhibited torsional twisting and "s" bending.

The engine assembly remained attached to all engine mounts. According to the pilot and witnesses to the accident he did not experience any mechanical malfunction or failures that would have precluded normal operations prior to the accident.

The cabin windscreen was destroyed. The cabin roof was removed by emergency responders extending aft to the forward door post along with the left and right control yokes and instrument panel in order to remove both left and right front seat occupants. The throttle, propeller and mixture cables were stretched and the position could not be determined. The right cabin door was in the open position and the door lock mechanism was in the open position. Continuity of the flight controls was confirmed to all flight control surfaces.

The right wing remained attached at the wing root. The outboard section of the wing tip was bent upward about 30 degrees and scarring was present on the bottom of the wing. The right aileron remained attached at all hinge points and was buckled. The right flap remained attached at all hinge points and was extended. The right main fuel cap was in place with a tight seal. The right main fuel tank was not ruptured and contained fuel. The right main landing gear was extended.

The right side of the aft fuselage was buckled upward aft of the baggage compartment door. The baggage compartment door was in the locked position. The fuselage skin on the right side was buckled in front of the right horizontal stabilizer. The bottom of the tail cone was crushed upward. The tail tie down was bent to the right. The right horizontal stabilizer was not damaged and the right elevator remained attached at all hinge points. The left horizontal stabilizer was not damaged. The left elevator remained attached at all hinge points and was buckled along the trailing edge. The vertical fin was not damaged. The rudder remained attached at all hinge points and was not damaged.

The left wing remained attached at the wing root and was not damaged. The left aileron remained attached at all hinge points and was buckled. The left flap remained attached at all hinge points, was buckled, and extended. The left main fuel cap was in place with a tight seal. The left main fuel tank was not ruptured and contained fuel. The left main landing gear was extended.

The wreckage was released to Atlanta Air Salvage at the request of the insurance adjuster for the registered owner on February 20, 2012.

Anthony Congelosi

