



Aviation Investigation Final Report

Location:	Morganton, North Carolina	Accident Number:	ERA24LA086
Date & Time:	October 22, 2023, 14:00 Local	Registration:	N5954Q
Aircraft:	Mooney M20C	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Flight test		

Analysis

The pilot and passenger reported that the airplane had undergone recent maintenance, and the purpose of flight was to perform a test flight. The first takeoff was made without issue and the pilot landed after performing two go-arounds in the traffic pattern. The pilot then taxied to the ramp and completed a visual inspection of the airplane. Subsequently, the pilot taxied for another takeoff. During the takeoff roll, the airplane began pulling and turning to the left, and despite the pilot's control applications, the airplane departed the runway and its left wing collided with the runway's precision approach path indicator (PAPI) lights. The collision with the PAPI lights resulted in substantial damage to the left wing. The pilot reported that there were no preimpact mechanical malfunctions or failures with the airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to maintain directional control during the takeoff roll, which resulted in a runway excursion and an impact with the runway's precision approach path indicator (PAPI) lights.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Directional control - Not attained/maintained

Factual Information

History of Flight

Takeoff	Loss of control on ground (Defining event)
Takeoff	Runway excursion
Takeoff	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	43,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	September 21, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	March 8, 2022
Flight Time:	116 hours (Total, all aircraft), 63 hours (Total, this make and model), 2 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Pilot-rated passenger Information

Certificate:	Student	Age:	29,Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	August 11, 2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 72 hours (Total, all aircraft), 2 hours (Total, this make and model), 3 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	Registration:	N5954Q
Model/Series:	M20C No Series Exists	Aircraft Category:	Airplane
Year of Manufacture:	1965	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3194
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	October 22, 2023 Annual	Certified Max Gross Wt.:	2575 lbs
Time Since Last Inspection:	0 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3864 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C126 installed, not activated	Engine Model/Series:	IO-360
Registered Owner:	On file	Rated Power:	180 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MRN, 1269 ft msl	Distance from Accident Site:	0.1 Nautical Miles
Observation Time:	14:25 Local	Direction from Accident Site:	230°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	21°C / 5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Morganton, NC	Type of Flight Plan Filed:	None
Destination:	Morganton, NC	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	Foothills Regional Airport MRN	Runway Surface Type:	Asphalt
Airport Elevation:	1269 ft msl	Runway Surface Condition:	Dry
Runway Used:	03/21	IFR Approach:	None
Runway Length/Width:	5500 ft / 75 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	35.819809,-81.611685

Administrative Information

Investigator In Charge (IIC):	Gerhardt, Adam
Additional Participating Persons:	James D. Caudill; FAA/FSDO; Charlotte, NC
Original Publish Date:	April 12, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=193536

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).