



Aviation Investigation Final Report

Location:	New Kent, Virginia	Accident Number:	ERA18LA233
Date & Time:	August 26, 2018, 16:10 Local	Registration:	N1537U
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot was on the first leg of a solo cross-country flight. A witness at the destination airport reported that he heard loud “engine noise,” looked up, and then saw the airplane about midfield in a steep, left descending turn with the “nose about 40° down.” The airplane then descended out of his view behind a hangar, and shortly thereafter, he heard the sound of impact. Examination of the accident site revealed that the airplane had struck a power line about 700 ft left of the runway centerline at midfield, impacted terrain and three different sections of fencing, and then came to rest nose down.

During postaccident examination of the airplane, the throttle control was found in the full-forward position, and the pitch trim was found in a slightly nose-down position. Postaccident examination of the airframe and engine revealed no evidence of any preaccident mechanical malfunctions or failures that would have precluded normal operation.

According to the flight school owner, a flight school policy prohibited students from conducting touch-and-go landings on solo cross-country flights. Given this policy and the postaccident throttle position, it is likely that the student was conducting a go-around and that he lost airplane control during the initial climb.

Probable Cause and Findings

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

The student pilot’s loss of airplane control during a go-around.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	(general) - Not attained/maintained

Factual Information

History of Flight

Approach-VFR go-around	Loss of control in flight (Defining event)
------------------------	--

On August 26, 2018, about 1610 eastern daylight time, a Cessna 172M, N1537U, was substantially damaged when it was involved in an accident near Quinton, Virginia. The student pilot was seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

According to the flight school owner, earlier on the day of the accident, the student had practiced maneuvers in the accident airplane with his flight instructor. Later that day, he took off for the (solo) accident flight destined for New Kent County Airport (W96), Quinton, Virginia. A witness, who was located outside W96's main hangar at the time of the accident, reported that he heard loud "engine noise," looked up, and then saw the airplane in a steep, left turn with the "nose about 40° down." The airplane then descended out of his view behind a hangar, and shortly thereafter, he heard the sound of impact. The witness did not report seeing the airplane perform a go-around or touch-and-go landing before seeing it in the turn.

The flight school owner also reported that a flight school policy prohibited student pilots from conducting touch-and-go landings during solo cross-country flights.

Examination of the accident site revealed that the airplane had struck a power line about 700 ft left of the runway centerline at midfield and then impacted terrain and three different sections of fencing while crossing a road before coming to rest nose down in grass adjacent to the fixed-base operator's parking lot. The wreckage path was 65 ft long and oriented on a magnetic heading of about 85°, which was about the opposite direction of the runway heading.

All the airplane's major components were present at the accident site. The forward fuselage was crushed aft and was in a 90° nose-down attitude. The empennage was completely separated just aft of the rear window and folded downward relative to the fuselage, and the tail was resting on the ground. Both wings were substantially damaged and crushed aft, and the left wing was partially separated near its root. An outboard 3-ft-long section of the left wing and aileron was separated from the remainder of the wing. All flight controls remained attached to the airplane, and flight control continuity was established from the cockpit to the control surfaces. The flaps were found retracted, and the elevator trim tab actuator was found extended about 1 1/2 inches, which is about 5° trailing edge up (a slightly airplane nose-down position).

The engine throttle, mixture, and carburetor heat controls were found in the "full-forward" position. The fuel selector was found in the "both" position. Both wing fuel tank outlet screens

and the fuel strainer were free of debris. Engine crankshaft and valvetrain continuity were confirmed. Both magnetos produced spark on all towers. The sparkplugs exhibited normal wear and coloration consistent with normal engine operation with some corrosion (rust) present. Thumb compression and suction were confirmed for all the engine cylinders. The air filter was free of debris. One propeller blade was bent rearward about 80° (12 inches from the hub), and the other blade was bent rearward about 10° (30 inches from the hub). Both blades exhibited leading-edge polishing and gouging and chordwise scratching.

Pilot Information

Certificate:	Student	Age:	36, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Unknown	Last FAA Medical Exam:	July 15, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	40 hours (Total, all aircraft), 40 hours (Total, this make and model), 5 hours (Pilot In Command, all aircraft), 23 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N1537U
Model/Series:	172 M	Aircraft Category:	Airplane
Year of Manufacture:	1976	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17267168
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	June 8, 2018 100 hour	Certified Max Gross Wt.:	2299 lbs
Time Since Last Inspection:	85 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	9872 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91 installed	Engine Model/Series:	O-320-E2A
Registered Owner:		Rated Power:	160 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	W96,121 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:15 Local	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.12 inches Hg	Temperature/Dew Point:	30°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Norfolk, VA (CPK)	Type of Flight Plan Filed:	
Destination:	New Kent, VA (W96)	Type of Clearance:	None
Departure Time:	15:11 Local	Type of Airspace:	Class G

Airport Information

Airport:	New Kent County W96	Runway Surface Type:	Asphalt
Airport Elevation:	120 ft msl	Runway Surface Condition:	Dry
Runway Used:	29	IFR Approach:	None
Runway Length/Width:	3603 ft / 75 ft	VFR Approach/Landing:	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	37.501388,-77.126113(est)

Administrative Information

Investigator In Charge (IIC):	Brazy, Douglass		
Additional Participating Persons:	Nikolas Kubli; FAA/FSDO; Richmond, VA Henry Soderlund; Textron Aviation Inc; Wichita, KS David; Harsanyi; Williamsport, PA		
Original Publish Date:	June 24, 2021	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98158		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).