



Aviation Investigation Final Report

Location:	Batavia, Ohio	Accident Number:	GAA18CA276
Date & Time:	May 8, 2018, 16:25 Local	Registration:	N377ES
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, before the flight, he performed weight and balance and performance calculations with the initial fuel level in the airplane. The fuel tanks were then filled full of fuel, but he did not amend the weight and balance or performance calculations.

The pilot reported that, during takeoff, after the airplane became airborne, he did not feel comfortable with the way the airplane was performing, so he reduced power and landed the airplane on the remaining runway. He added that he did not have enough runway to stop and attempted to exit on a taxiway but "understeered," and the airplane exited the runway into a ditch.

The airplane sustained substantial damage to the fuselage.

The airplane's maximum gross weight was 2,460 lbs, and the weight at the time of the accident was 2,600 lbs, which was about 140 lbs over the maximum gross weight and likely affected the airplane's takeoff performance.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's decision to take off with the airplane over its maximum gross weight due to his failure to perform preflight weight and balance calculations, which affected the airplane's takeoff performance,

and his subsequent decision to abort the takeoff with too little runway remaining, which resulted in a runway excursion.

Findings

Personnel issues	Decision making/judgment - Pilot
Personnel issues	Weight/balance calculations - Pilot
Personnel issues	Aircraft control - Pilot
Aircraft	Maximum weight - Capability exceeded
Environmental issues	(general) - Contributed to outcome

Factual Information

History of Flight

Prior to flight	Miscellaneous/other
Takeoff-rejected takeoff	Loss of control on ground (Defining event)
Takeoff-rejected takeoff	Runway excursion

Pilot Information

Certificate:	Private	Age:	18,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:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	February 11, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 26, 2018
Flight Time:	(Estimated) 286 hours (Total, all aircraft), 105 hours (Total, this make and model), 130 hours (Pilot In Command, all aircraft), 125 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N377ES
Model/Series:	172 R	Aircraft Category:	Airplane
Year of Manufacture:	1997	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17280086
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2460 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	IO-360-B1E
Registered Owner:		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:	KLUK,490 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	19:53 Local	Direction from Accident Site:	278°
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:	240°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.11 inches Hg	Temperature/Dew Point:	24°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Batavia, OH (I69)	Type of Flight Plan Filed:	None
Destination:	Batavia, OH (I69)	Type of Clearance:	None
Departure Time:	16:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	CLERMONT COUNTY I69	Runway Surface Type:	Asphalt
Airport Elevation:	843 ft msl	Runway Surface Condition:	Dry
Runway Used:	22	IFR Approach:	None
Runway Length/Width:	3566 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.080276,-84.20861(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Michael A Puehler; FAA; Cincinnati, OH
Original Publish Date:	October 24, 2018
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97244

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.

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