



Aviation Investigation Final Report

Location:	Milton, Florida	Accident Number:	ERA14CA397
Date & Time:	August 19, 2014, 19:30 Local	Registration:	N636TM
Aircraft:	RAYTHEON AIRCRAFT COMPANY G36	Aircraft Damage:	Substantial
Defining Event:	Aircraft loading event	Injuries:	2 Minor, 3 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

The pilot attempted the takeoff with the airplane loaded 238 pounds over the maximum gross weight of 3,833 pounds, with the center of gravity (cg) 3.3 inches aft of the aft cg limit. During the takeoff roll, the nose of the airplane lifted 10 knots prior to the recommended rotation speed for a no-flap takeoff, and witnesses described the airplane in an unstable "pitch-up" attitude before it settled back on the runway and overran the departure end, struck a ditch, and came to rest with substantial damage to the left wing and horizontal stabilizer. The pilot reported he had 1.8 hours of flight experience in the accident airplane make and model, and that there were no mechanical 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 inadequate preflight planning, which resulted in an attempted takeoff over the airplane's maximum gross weight and beyond its aft center of gravity limit. Contributing to the accident was the pilot's lack of total flight experience in the aircraft make and model.

Findings

Aircraft	Maximum weight - Capability exceeded
Aircraft	CG/weight distribution - Capability exceeded
Personnel issues	Preflight inspection - Pilot
Personnel issues	Total experience w/ equipment - Pilot

Factual Information

History of Flight

Prior to flight	Aircraft loading event (Defining event)
Takeoff	Loss of lift
Takeoff-rejected takeoff	Miscellaneous/other
Takeoff	Runway excursion
Takeoff	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	39
Airplane Rating(s):	Single-engine land; Multi-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):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	July 22, 2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 1, 2014
Flight Time:	2528 hours (Total, all aircraft), 1.7 hours (Total, this make and model), 2200 hours (Pilot In Command, all aircraft), 131 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	RAYTHEON AIRCRAFT COMPANY	Registration:	N636TM
Model/Series:	G36	Aircraft Category:	Airplane
Year of Manufacture:	2006	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	E-3746
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental Motors, Inc.
ELT:		Engine Model/Series:	IO-550
Registered Owner:	ALIJIM LTD LLC	Rated Power:	
Operator:	John Galdieri	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	NDZ,177 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	19:56 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 4500 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/ None
Wind Direction:		Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.97 inches Hg	Temperature/Dew Point:	29°C / 23°C
Precipitation and Obscuration:	In the vicinity - Thunderstorm -		
Departure Point:	MILTON, FL (2R4)	Type of Flight Plan Filed:	None
Destination:	CLEMSON, SC (CEU)	Type of Clearance:	None
Departure Time:	19:30 Local	Type of Airspace:	Class E

Airport Information

Airport:	PETER PRINCE FIELD 2R4	Runway Surface Type:	Asphalt
Airport Elevation:	82 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	3701 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor, 3 None	Latitude, Longitude:	30.635833,-86.98944

Administrative Information

Investigator In Charge (IIC):	Stein, Stephen
Additional Participating Persons:	Joseph Arvay; FAA/FSDO; Baltimore, MD
Original Publish Date:	October 20, 2014
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=89915

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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](#).