



# Aviation Investigation Final Report

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<b>Location:</b>	Pierson, Florida	<b>Accident Number:</b>	ERA17LA091
<b>Date &amp; Time:</b>	January 17, 2017, 10:30 Local	<b>Registration:</b>	N841ML
<b>Aircraft:</b>	AMERICAN LEGEND AIRCRAFT CO AL3	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The private pilot of the tailwheel-equipped airplane was performing a touch-and-go landing on the 2,600-ft-long, 200-ft-wide turf runway in a 5- to 10-knot tailwind. The pilot reported that during the takeoff portion of the touch-and-go, the airplane suddenly nosed over and came to rest inverted on the runway. She reported that there were no preimpact mechanical malfunctions or failures with the airplane. About 500 ft of wheel marks were observed on the runway leading up to the wreckage, consistent with a loss of directional control, as the marks were initially along the runway centerline, then deviated to the left, then to the right, and then back to the left. Just before the wreckage, 1 to 2 ft of marks appeared to be skid marks, consistent with heavy braking. Examination of the airplane and testing of the brakes did not reveal any evidence of preimpact malfunctions or failures that would have precluded normal operation. Given this information, it is likely that the pilot improperly applied the brakes during the attempted transition to takeoff, which resulted in a nose-over.

## Probable Cause and Findings

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

The pilot's improper braking during takeoff, which resulted in a nose-over.

## Findings

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**Personnel issues**

Aircraft control - Pilot

**Aircraft**

Surface speed/braking - Incorrect use/operation

## Factual Information

### History of Flight

<b>Takeoff</b>	Loss of control on ground (Defining event)
<b>Takeoff</b>	Nose over/nose down

On January 17, 2017, at 1030 eastern standard time, an American Legend Aircraft Company AL3, N841ML, was substantially damaged when it nosed over during takeoff from the Pierson Municipal Airport (2J8), Pierson, Florida. The private pilot and the pilot-rated passenger were seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed, for the personal flight operated under the provisions of 14 Code of Federal Regulations Part 91. The local flight departed Ormond Beach Municipal Airport (OMN), Ormond Beach, Florida about 1000.

According to the pilot, she flew to 2J8 to perform touch-and-go landings. Upon arrival, she overflew the airport and did not observe any traffic in the area nor hear any radio calls over the common traffic advisory frequency. The pilot entered the traffic pattern for runway 5, a 2,600 foot-long, 200 foot-wide, turf runway, on a left downwind, and performed two touch-and-go landings without incident. The pilot recalled that during the third touch-and-go landing, she landed slightly farther down the runway than the first two landings, and that all three landings were within the first 25 percent of the runway length. As the airplane rolled on the runway, she added power to accelerate and the airplane suddenly nosed over like "hitting a brick wall," and came to a rest inverted. She noted there were no preimpact mechanical malfunctions with the airplane that would have precluded normal operations.

A witness, who was a designated pilot examiner, was sitting at a picnic table at the airport and observed the accident airplane. The witness stated that the airplane entered the traffic pattern for runway 5; however, the wind was favoring runway 23 at 5 to 10 knots. He observed the airplane complete two touch-and-go landings uneventfully. From his location about 1,500 ft away, he did not realize there had been an accident during the third touch-and-go until law enforcement arrived. He then went to the airplane to assist and observed about 500 ft of marks on the runway. The marks were initially along the runway centerline, then deviated to the left, then to the right, and then back to the left as they lead to the inverted airplane. Just prior to the wreckage, 1 to 2 ft of marks appeared to be skid marks.

The pilot held a private pilot certificate with an airplane single-engine land rating. Her most recent second-class medical certificate was issued on March 2, 2015, at which time she reported 148 hours of total flight experience. During an interview, she indicated that she had about 30 hours of flight experience in the same make and model as the accident airplane.

Examination of the conventional landing gear equipped airplane by a Federal Aviation Administration inspector revealed substantial damage to the rudder, vertical stabilizer, and wing struts. Flight control continuity was confirmed from each control surface to the cockpit controls. The wheel brakes functioned normally. The inspector examined the runway surface during the week following the accident, and he observed some animal burrows and holes in the turf at several locations, though not in the area of the

accident. He further reported that damage to the runway in the area of the impact had been repaired prior to his examination.

DeLand Municipal Airport (DED), DeLand, Florida, was located about 14 miles southeast of 2J8. At 1035, the reported weather included wind from 190 degrees at 10 knots, scattered clouds at 2,400 feet above ground level, with 10 statute miles of visibility.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	62,Female
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	March 1, 2015
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 26, 2015
<b>Flight Time:</b>	(Estimated) 301 hours (Total, all aircraft), 38 hours (Total, this make and model), 301 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AMERICAN LEGEND AIRCRAFT CO	<b>Registration:</b>	N841ML
<b>Model/Series:</b>	AL3	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2006	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Special light-sport (Special)	<b>Serial Number:</b>	AL-1064
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	December 8, 2016 Condition	<b>Certified Max Gross Wt.:</b>	1320 lbs
<b>Time Since Last Inspection:</b>	9 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	184 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	C91A installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-200-A66B
<b>Registered Owner:</b>	Mike Lima Corporation	<b>Rated Power:</b>	100 Horsepower
<b>Operator:</b>	Mike Lima Corporation	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KDED, 79 ft msl	<b>Distance from Accident Site:</b>	14 Nautical Miles
<b>Observation Time:</b>	10:35 Local	<b>Direction from Accident Site:</b>	140°
<b>Lowest Cloud Condition:</b>	Scattered / 2400 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	190°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.28 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 18°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Pierson, FL (2J8 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Pierson, FL (2J8 )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:25 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	PIERSON MUNI 2J8	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	63 ft msl	<b>Runway Surface Condition:</b>	Rough
<b>Runway Used:</b>	05	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2600 ft / 200 ft	<b>VFR Approach/Landing:</b>	Touch and go

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Serious	<b>Latitude, Longitude:</b>	29.25,-81.459442(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Brazy, Douglass
<b>Additional Participating Persons:</b>	Rene Padilla; FAA/FSDO; Orlando, FL
<b>Original Publish Date:</b>	November 6, 2019
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=94628">https://data.nts.gov/Docket?ProjectID=94628</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).