



National Transportation Safety Board Aviation Accident Final Report

Location:	Fort Myers, Florida	Accident Number:	ERA10LA063
Date & Time:	November 14, 2009, 10:18 Local	Registration:	N3823
Aircraft:	Curtiss Wright TRAVEL AIR	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	3 Minor
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

During approach, the pilot of the tailwheel-equipped biplane flew along at 20-30 feet above the runway until he was at midfield. The biplane touched down, bounced back in to the air, touched down again, and bounced once more prior to touching down for a third time in a nose-high attitude. The biplane then veered to the right, the right wing dipped, and the biplane cartwheeled, coming to rest inverted. The pilot had 60 hours of flight experience in the biplane. The previous owner had advised the pilot that landing the biplane took patience to land it perfectly and that attempting to land the biplane on asphalt with low experience could cause the biplane to bump repeatedly. He also advised that if the pilot pulled back on the control stick too soon during landing it could result in ballooning and porpoising.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper recovery from a bounced landing and failure to maintain directional control, which resulted in a ground loop. Contributing to the accident was the pilot's minimal experience in the airplane make and model.

Findings

Aircraft	Landing flare - Not attained/maintained
Aircraft	Directional control - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Personnel issues	Total experience w/ equipment - Pilot

Factual Information

HISTORY OF FLIGHT

On November 14, 2009, about 1018 eastern standard time, a Curtiss Wright Travel Air 4000, N3823, was substantially damaged while landing at Page Field Airport (FMY), Fort Myers, Florida. The certificated commercial pilot and two passengers received minor injuries. Visual meteorological conditions prevailed, and no flight plan was filed for the local revenue sightseeing flight conducted under 14 Code of Federal Regulations (CFR) Part 91.

According to witness statements, during landing on runway 5 at FMY, the airplane was observed to touch down, bounce back in to the air, touch down again, and bounce once more prior to touching down for a third time in a "nose high attitude with the tailwheel on the runway surface" oscillating "left and right," for 5 to 10 seconds. The airplane then veered to the right, the right wing "dipped," and the airplane cart wheeled, and came to rest inverted.

According to the two passengers on the accident flight (an adult and nine year old child), they felt the engine "hiccup" or make a noise like a "dirt bike" several times during the flight, at which time the pilot would "throttle up" the engine to smooth it out. The pilot gave no indication that anything was wrong during these times.

During the approach, the pilot flew over the "numbers," and then "cruised" at 20-30 feet above the runway until he was at approximately "midfield," where runways 13/31 intersected runway 5 before attempting to land.

During the landing, the airplane touched down, bounced, touched down again, and was then pushed to the right by the wind. The adult passenger stated that he heard the pilot "throttle up" again "but it appeared the aircraft had stalled and lost its lift."

According to the Lee County Port Authority Police, the pilot stated all aspects of the flight went well, and without event until he attempted to land. As the airplane touched down, a gust of wind came from the left side of the airplane, which pushed him to the right. He "powered up" the aircraft to go around as he drifted to the right but the aircraft did not respond, at which point it flipped over.

According to the pilot's Pilot/Operator Aircraft/Incident Report, NTSB Form 6120.1, during the run-up, he checked the magnetos and all appeared normal. During takeoff when he applied takeoff power the biplane responded normally and lifted off in approximately 200-250 feet. When he was on 3 mile left base leg for runway 5, he applied carburetor heat. When he was cleared to land he reduced power and turned final approach, 1 mile from the runway at his approach speed of 60 miles per hour (mph). He cleared the engine on short final by adding power and it responded normally. He then reduced power to idle and "touched down approximately 3,000 feet down the runway at 50 mph." Just as the aircraft was slowing a gust of wind hit the airplane on the left side and it became airborne and climbed 15 to 20 feet above the runway. The pilot then corrected with left rudder and aileron, and added full power to go-around but the engine did not respond. He shut off the carburetor heat and again added power

to go-around, but the engine still did not respond and the aircraft touched down right wing low and turned to the right. He "put the aircraft in a level attitude," and the airplane departed the runway surface to the right, and "flipped over on its back."

PERSONNEL INFORMATION

According to FAA and pilot records, the pilot held a Commercial Pilot certificate with ratings for airplane single-engine land, airplane multi-engine land, and instrument airplane. He received authorization to conduct air tour operations under 14 CFR 91.147 in September 2009. He reported 1,789 total hours of flight experience with 60 hours of flight experience in the accident airplane make and model. His most recent application for an FAA second-class medical certificate was dated September 1, 2009.

AIRCRAFT INFORMATION

The accident aircraft was a conventional single-bay biplane with staggered wings braced by N-struts. The fuselage was of fabric-covered steel tube and included two open cockpits in tandem, the forward of which could carry two passengers side-by-side. It was powered by a Continental W670-6N, 220 horsepower engine.

According to FAA and maintenance records, the airplane was manufactured in 1927. The airplane's most recent annual inspection was completed on July 2, 2009. It was purchased by the owner on July 8, 2009. At the time of the accident the airplane had accrued 5,284 total hours of operation.

METEOROLOGICAL INFORMATION

A weather observation taken at FMY, 1 minute after the accident, recorded the winds as 310 degrees at 5 knots, 10 statute miles visibility, clear sky, temperature 23 degrees C, dew point 13 degrees C, and an altimeter setting of 29.98 inches of mercury.

Review of METAR reports taken both before the accident and after, revealed no record of any wind gusts.

AIRPORT INFORMATION

According to the Airport Facility Directory, FMY was a public use airport. It had two runways, oriented in a 5/23, and 13/31 configuration. Runway 5 was asphalt, in good condition, and grooved. It was 6,406 feet long by 150 feet wide. The runway had precision markings that were in good condition. It was equipped with medium intensity runway edge lights, and a 4-box visual approach slope indicator that displayed a 3.0 degree glide path. The threshold was displaced 459 feet due to obstructions.

WRECKAGE AND IMPACT INFORMATION

Examination of the wreckage by Federal Aviation Administration (FAA) inspectors revealed that the airplane had sustained substantial damage to multiple ribs, wing struts, and the wing

spars. The landing gear had also collapsed and the wooden propeller was shattered. Further examination revealed no evidence of any preimpact failures or malfunctions of the airplane's flight control system or engine.

Measurements taken by Lee County Port Authority police officers revealed that, from the land and hold short (LAHSO) markings located on runway 5 at the intersection of runway 13/31 to the first set of ground scars was 31 feet. The second set of ground scars was 37 feet from the LAHSO markings. And the third set of ground scars were 40.4 feet from the LAHSO markings. Another 403 feet farther they discovered another set of ground scars in the grass by taxiway "B5," One set measured 40 feet in length, a second measured 30 feet in length, and a third measured 7.6 feet in length. Total measurement from the LAHSO markings to where the airplane came to rest was 482 feet.

TESTS AND RESEARCH

Owner Supplied Information

According to written information that was provided to the pilot by the previous owner advised that landing the Travel Air required "patience". A perfect three point landing could be very rewarding but, it took practice to perfect the landing by first learning to land the airplane on grass, as attempting to land with low experience on asphalt could cause the airplane to "bump a bunch of times at first". The materials also advised that the lower wing was concave on the bottom and that during landing, if the pilot pulled back on the control stick too soon, it could result in the airflow being accelerated over the lower wing causing the airplane to balloon and porpoise (enter a series of pitch oscillations). The materials advised that if this occurred, to add a 100 to 200 rpm and allow the airplane to move further down the runway and land with the tail low. Furthermore, the materials advised that by bleeding the airspeed off and holding the airplane from touching down "just a little bit longer" it would result in a gentle touchdown.

History of Flight

Landing-flare/touchdown	Abnormal runway contact
Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Collision with terr/obj (non-CFIT)
Landing-landing roll	Nose over/nose down

Pilot Information

Certificate:	Commercial	Age:	40, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	September 1, 2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 27, 2009
Flight Time:	1789 hours (Total, all aircraft), 60 hours (Total, this make and model), 1538 hours (Pilot In Command, all aircraft), 127 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Curtiss Wright	Registration:	N3823
Model/Series:	TRAVEL AIR	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	306
Landing Gear Type:	Tailwheel	Seats:	3
Date/Type of Last Inspection:	July 2, 2009 Annual	Certified Max Gross Wt.:	2590 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	5284 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	W670-6N
Registered Owner:		Rated Power:	220 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:	FMY, 17 ft msl	Distance from Accident Site:	
Observation Time:	10:19 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.97 inches Hg	Temperature/Dew Point:	23° C / 13° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Myers, FL (FMY)	Type of Flight Plan Filed:	None
Destination:	Fort Myers, FL (FMY)	Type of Clearance:	VFR
Departure Time:	10:00 Local	Type of Airspace:	Unknown

Airport Information

Airport:	Page Field Airport FMY	Runway Surface Type:	Asphalt
Airport Elevation:	17 ft msl	Runway Surface Condition:	Dry
Runway Used:	05	IFR Approach:	None
Runway Length/Width:	6406 ft / 150 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	2 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Minor	Latitude, Longitude:	26.586389, -81.863052(est)

Administrative Information

Investigator In Charge (IIC):	Gunther, Todd
Additional Participating Persons:	Laura A Burns; FAA/FSDO; Orlando, FL
Original Publish Date:	October 3, 2011
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=75053

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](#).