



Aviation Investigation Final Report

Location:	Lebanon, Indiana	Accident Number:	CHI01LA222
Date & Time:	July 16, 2001, 09:52 Local	Registration:	N4697T
Aircraft:	Druine Turbulent D-31	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was on the first flight following the installation and adjustment of a new ground-adjustable propeller. The pilot reported that while on initial climb, "... at aprox. [approximately] 40-50 foot altitude, I gently lowered the nose to continue the climbout at 70 kts. [knots]. At about the same time the aircraft experienced a sudden loss of forward thrust, with the engine continuing to run. I tried to maintain aircraft control to attempted to glide the aircraft back to the runway. The aircraft struck the ground about 20-25 feet right of the runway, turning about 180 degrees counter-clockwise, after impact." The pilot reported that he believed the loss of forward thrust was due to the propeller pitch adjustment prior to the accident flight. The propeller was inspected and was found at a minimum pitch setting of approximately 3 degrees.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot not maintaining aircraft control while maneuvering during initial climb. Factors to the accident were the improperly serviced propeller that resulted in a pitch setting that was insufficient for normal flight.

Findings

Occurrence #1: PROPELLER FAILURE/MALFUNCTION
Phase of Operation: OTHER

Findings

1. (F) PROPELLER SYSTEM/ACCESSORIES,PITCH CHANGE MECH - IMPROPERLY SERVICED
2. (F) PROPELLER - IMPROPER - OTHER MAINTENANCE PERSONNEL

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

3. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On July 16, 2001, at 0952 eastern standard time, an amateur-built Druine Turbulent D-31, N4697T, piloted by a commercial pilot, sustained substantial damage during an in-flight collision with the terrain during initial climb from runway 18 (3,600 feet by 60 feet, dry/concrete) at the Boone County Airport, Lebanon, Indiana. Visual meteorological conditions prevailed at the time of the accident. The personal flight was operating under the provisions of 14 CFR Part 91 and was not on a flight plan. The pilot, the sole occupant, reported minor injuries. The flight was originating at the time of the accident and had the intended destination of Owosso, Michigan.

According to the pilot's written statement, he was having difficulties obtaining the recommended static engine rpm and had the propeller blade pitch adjusted prior to the accident flight. The pilot reported that, "After refueling the aircraft, I performed the preflight check, then I followed the engine start checklist, no defects noted, then the Before Takeoff checks, with all temps, pressures and RPM well within limits. On Takeoff roll at 65 kts. [knots] I lifted off maintaining 65 kts. on climb out at aprox. [approximately] 40-50 foot altitude, I gently lowered the nose to continue the climbout at 70 kts. At about the same time the aircraft experienced a sudden loss of forward thrust, with the engine continuing to run. I tried to maintain aircraft control to attempted to glide the aircraft back to the runway. The aircraft struck the ground about 20-25 feet right of the runway, turning about 180 degrees counter-clockwise, after impact."

The pilot reported that a new ground adjustable propeller was installed and adjusted by an airframe and powerplant mechanic at the Boone County Airport. The piloted stated, "Suspect prop as cause of forward thrust loss."

An inspector with the Federal Aviation Administration (FAA) performed the post-accident inspection of the airplane. No anomalies were found with the airframe or engine that could be associated with any pre-impact condition. The propeller was inspected and the adjustment screw was found with 18 threads showing, or an adjustment of about 5 full turns. According to the FAA inspector's statement, "This propeller is factory preset to a 35 [inches of helix advancement] pitch or "relaxed" position, the adjustment procedures call for five and one-half turns from neutral to get 18 [inches of helix advancement] pitch (minimum pitch) to 52 [inches of helix advancement] pitch (maximum pitch)."

Pilot Information

Certificate:	Commercial; Flight engineer	Age:	47, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Center
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 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	January 26, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	January 17, 2001
Flight Time:	462 hours (Total, all aircraft), 41 hours (Total, this make and model), 433 hours (Pilot In Command, all aircraft), 146 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft), 9 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Druine	Registration:	N4697T
Model/Series:	Turbulent D-31	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	PFA-588
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	May 31, 2001 Condition	Certified Max Gross Wt.:	750 lbs
Time Since Last Inspection:	42 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	930 Hrs as of last inspection	Engine Manufacturer:	Volkswagen
ELT:	Not installed	Engine Model/Series:	1584cc
Registered Owner:	Les Lee Schneider	Rated Power:	53 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:	EYE,823 ft msl	Distance from Accident Site:	13 Nautical Miles
Observation Time:	09:53 Local	Direction from Accident Site:	148°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	26°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lebanon, IN (614)	Type of Flight Plan Filed:	None
Destination:	Owosso, MI (5D3)	Type of Clearance:	None
Departure Time:	09:52 Local	Type of Airspace:	Class G

Airport Information

Airport:	Boone County 614	Runway Surface Type:	Concrete
Airport Elevation:	959 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	3600 ft / 60 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	40.050907,-86.470542(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Bob Bissonette; FAA - Indianapolis FSDO; Indianapolis, IN
Original Publish Date:	January 16, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52911

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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](#).