



National Transportation Safety Board Aviation Accident Final Report

Location:	ROCKVILLE, IN	Accident Number:	CHI95LA145
Date & Time:	05/02/1995, 1827 EST	Registration:	N3428
Aircraft:	FRANKLIN EAA BI-PLANE/P1	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

THE PILOT REPORTED IN HIS WRITTEN STATEMENT THAT HE WAS CONDUCTING AN ENGINE RUNUP BECAUSE THE ENGINE WOULD NOT DEVELOP FULL POWER. HE DECIDED TO TAXI DOWN THE RUNWAY WITH NO INTENTION OF TAKING OFF, BUT INADVERTENTLY BECAME AIRBORNE. SHORTLY AFTER THE UNINTENTIONAL TAKEOFF, THE ENGINE LOST PARTIAL POWER, TURNED TO THE RIGHT AND IMPACTED TERRAIN. POST-ACCIDENT EXAMINATION OF THE ENGINE REVEALED EVIDENCE OF HEAT DAMAGE AND ABNORMAL PISTON RING WEAR. THERE WERE SCRAPE MARKINGS ON THE PISTON, PISTON RINGS, AND CYLINDER WALL. THE PILOT STATED THAT HE PERFORMED THE CYLINDER AND RING CHANGE AND WAS NOT AWARE THAT THE CYLINDER AND RING COMBINATION WERE NOT COMPATIBLE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper maintenance installation and his inadvertent takeoff. A factor was the pilot's inadequate pre-flight planning.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. COMBUSTION ASSEMBLY - SCORED
2. (C) MAINTENANCE, INSTALLATION - IMPROPER - OWNER/BUILDER
3. (C) LIFT-OFF - INADVERTENT - PILOT IN COMMAND
4. (F) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

On May 2, 1995, at 1827 eastern standard time, a Franklin EAA Bi-Plane/P1, registered to a private owner, of Rockville, Indiana, received substantial damage on impact with terrain following a takeoff to the west and experiencing a loss of engine power. The personal 14 CFR Part 91 flight was operating in visual meteorological conditions. The pilot reported minor injuries. No flight plan was on file. The local flight was on departure from the Bulter Airport, Rockville, Indiana, at the time of the accident.

The pilot reported in his written statement, that he was conducting an engine runup, because the engine would not develop full power. He decided to taxi down the runway with no intention of taking off, but inadvertently became airborne. The engine sustained a power loss shortly after liftoff.

Witnesses stated that the takeoff appeared normal until at the end of the runway, the engine sounded like it was reduced to idle power.

Postaccident examination of the engine was conducted. An FAA Inspector's report stated, "...evidence of heat damage and abnormal piston ring wear. There were scrape markings on the piston, piston rings, and cylinder wall...". The pilot said that he performed a cylinder and piston ring change and was not aware that the rings and cylinder were not compatible.

Pilot Information

Certificate:	Student	Age:	57, Male
Airplane Rating(s):	None	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Expired	Last FAA Medical Exam:	06/22/1992
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	500 hours (Total, all aircraft), 60 hours (Total, this make and model), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	FRANKLIN	Registration:	N3428
Model/Series:	EAA BI-PLANE/P1 EAA BI-PLA	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	24610
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1500 lbs
Time Since Last Inspection:	30 Hours	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-235-C
Registered Owner:	UNDERWOOD, JACK E.	Rated Power:	118 hp
Operator:	UNDERWOOD, JACK E.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	HUF, 585 ft msl	Distance from Accident Site:	17 Nautical Miles
Observation Time:	1845 EST	Direction from Accident Site:	15°
Lowest Cloud Condition:	Thin Broken / 7000 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 7000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	14° C / 3° C
Precipitation and Obscuration:			
Departure Point:	(718)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1815 CDT	Type of Airspace:	Class G

Airport Information

Airport:	BUTLER FIELD AIRPORT (718)	Runway Surface Type:	Grass/turf
Airport Elevation:	687 ft	Runway Surface Condition:	Dry
Runway Used:	27	IFR Approach:	None
Runway Length/Width:	2600 ft / 500 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	STEPHEN A WILSON	Report Date:	01/29/1996
Additional Participating Persons:	BRUCE A MONTIGNEY; INDIANAPOLIS, IN		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.ntsbt.gov/pubdms/ .		

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](#).