



National Transportation Safety Board Aviation Accident Data Summary

Location:	Madison, WI	Accident Number:	CHI04FA203
Date & Time:	08/01/2004, 1849 CDT	Registration:	N98SN
Aircraft:	Knoepflein Lancair Legacy 2000	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The amateur-built airplane was destroyed when it impacted a light pole and terrain during an off airport landing following a loss of engine power. The airplane was at an altitude of 8,000 feet mean sea level (msl), 15 miles southeast of the airport, when the pilot informed air traffic control (ATC) that he was having an engine problem and he needed to land. The controller cleared the airplane to land on either runway 32 or runway 21. The pilot told the controller, "Alright uh if you don't mind I'm going to circle around up here and uh see if I can iron out the problem and then uh I'll try to let you know what I need to do." Two minutes later, the controller informed the pilot that he was now eight miles from the airport. The pilot responded that he had the airport in site. The controller informed the pilot that runway 32 was the closest runway to his present position to which the pilot responded that he would enter a left base for runway 21. Nineteen seconds later, the pilot reported he was "really having problems" and he was going to land on runway 32. The pilot then stated that he was losing altitude "really bad" and he did not think he was going to make it to the airport. The airplane contacted a light pole and the terrain along a 4-lane divided roadway. The pilot was also the aircraft builder. He installed a supercharger system on the Continental IO-550 engine. Acquaintances of the pilot reported he told them he was experiencing problems with high oil temperatures and high cylinder head temperatures on the number one and number three cylinders. One acquaintance stated the pilot mentioned the problem approximately 10 months prior to the accident and others stated the pilot talked about the continuing problem on the day prior to the accident. Post accident inspection of the engine revealed a hole in the top of the engine case near the number two cylinder. An engine teardown revealed the engine had suffered internal heat and impact damage. Metal debris was found throughout the engine. All of the pistons and cylinders sustained heat and/or impact damage. The number three piston head was burned through along an approximate 60 degree arc around the circumference and down the side of the head past the rings. The piston head was black in color. The piston rings were distorted and were out of their grooves. The airplane was equipped with an electronic flight instrument system (EFIS). The EFIS data showed the engine oil pressure was at its maximum of 69 pounds per square inch (psi) prior to takeoff and it decreased throughout the flight as the oil temperature increased. The data also indicated that after the pilot informed ATC of the engine problem, the airplane's rate of descent varied between 100 and 4,000 feet per minute.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to high engine temperatures which resulted in a failure of the number three piston, the pilot's continued operation of the airplane with known high temperature problems,

the pilot's poor inflight planning, and the pilot's failure to maintain a proper emergency descent rate. A factor associated with the accident was the light pole that the airplane contacted.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF

Phase of Operation: CRUISE

Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - OVERTEMPERATURE
2. (C) ENGINE ASSEMBLY,PISTON - FAILURE,TOTAL
3. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - CONTINUED - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. (F) OBJECT - POLE
5. (C) IN-FLIGHT PLANNING/DECISION - POOR - PILOT IN COMMAND
6. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

7. TERRAIN CONDITION - ROADWAY/HIGHWAY

Pilot Information

Certificate:	Private	Age:	28
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	705 hours (Total, all aircraft), 235 hours (Total, this make and model), 625 hours (Pilot In Command, all aircraft), 44 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Knoepflein	Registration:	N98SN
Model/Series:	Lancair Legacy 2000	Engines:	1 Reciprocating
Operator:	Shannon K. Knoepflein	Engine Manufacturer:	Continental
Operating Certificate(s) Held:	None	Engine Model/Series:	IO-550-N17
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MSN, 887 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	5 knots / , 230°
Temperature:	28° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Oshkosh, WI (OSH)	Destination:	Lebanon, KY (6I2)

Airport Information

Airport:	Dane County Regional (MSN)	Runway Surface Type:	
Runway Used:		Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Latitude, Longitude:	43.139722, -89.337500		

Administrative Information

Investigator In Charge (IIC):	Pamela S Sullivan	Adopted Date:	07/07/2005
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.nts.gov/pubdms/ .		

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