



National Transportation Safety Board

Aviation Accident Data Summary

| | | | |
|--------------------------------|--------------------------------------|-------------------------|------------|
| Location: | Bristol, WI | Accident Number: | CEN15FA315 |
| Date & Time: | 07/25/2015, 1117 CDT | Registration: | N9601 |
| Aircraft: | SANFORD ZENITH CH 601XL | Injuries: | 2 Fatal |
| Flight Conducted Under: | Part 91: General Aviation - Personal | | |

Analysis

The pilot was flying his experimental, amateur-built airplane on a cross-country flight. GPS and radar data showed that, about an hour into the flight, the airplane turned left and then turned right. About 1 minute later, the airplane's groundspeed slowed to below its stall speed, and the airplane then entered a steep descent. Witnesses reported seeing the airplane "corkscrew" downward, and one witness reported that the propeller was "not spinning." Flight control continuity was confirmed, and witness marks on the propeller blades were consistent with the propeller not rotating at impact.

A pilot who shared a hangar with the accident pilot reported that the accident pilot replaced the airplane's ignition system coils the day before the flight. Postaccident examination of the engine revealed that the coils were not engine-manufacturer replacement parts. During a postaccident test run, the engine would not start. During subsequent troubleshooting, the right distributor center coil tower socket was found separated; further examination revealed that it failed due to overload. The right ignition coil was then connected to the left distributor cap, and the engine operated normally during the subsequent test run. The broken right distributor cap was then replaced with a new cap, the right ignition coil was connected to the new cap, and the engine again operated normally during a subsequent test run. The left ignition coil did not produce any sparks during the test runs. No other anomalies were observed during the engine runs that would have prevented normal operation. The airplane likely experienced a loss of engine power due to the ignition issues, and the pilot failed to maintain adequate airspeed, which resulted in a subsequent stall and loss of airplane control.

Flight Events

Prior to flight - Aircraft maintenance event
Enroute-cruise - Loss of engine power (total)
Enroute-cruise - Loss of control in flight
Uncontrolled descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain airspeed and airplane control following a loss of engine power during cruise flight. Contributing to the accident was the installation of ignition system coils that were not engine-manufacturer replacement parts, which subsequently failed and resulted in the loss of engine power.

Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Airspeed-Not attained/maintained - C
 Aircraft-Aircraft oper/perf/capability-Performance/control parameters-(general)-Not attained/maintained - C
 Aircraft-Aircraft power plant-Engine (reciprocating)-Recip eng wiring-Failure - F
 Aircraft-Aircraft power plant-Engine (reciprocating)-Recip eng wiring-Incorrect service/maintenance - F
 Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
 Personnel issues-Task performance-Maintenance-Installation-Pilot - F

Pilot Information

| | | | |
|----------------------------------|---------------------------------|------------------------------|------|
| Certificate: | Private | Age: | 69 |
| Airplane Rating(s): | Single-engine Land | Instrument Rating(s): | None |
| Other Aircraft Rating(s): | None | Instructor Rating(s): | None |
| Flight Time: | 250 hours (Total, all aircraft) | | |

Aircraft and Owner/Operator Information

| | | | |
|---------------------------------------|--------------------------------------|-----------------------------|-----------------|
| Aircraft Make: | SANFORD | Registration: | N9601 |
| Model/Series: | ZENITH CH 601XL | Engines: | 1 Reciprocating |
| Operator: | On file | Engine Manufacturer: | JABIRU |
| Operating Certificate(s) Held: | None | Engine Model/Series: | 3300 |
| 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: | KENW, 743 ft msl | Weather Information Source: | Weather Observation Facility |
| Lowest Ceiling: | Broken / 4000 ft agl | Wind Speed/Gusts, Direction: | 9 knots / , 310° |
| Temperature: | 28° C | Visibility | 10 Miles |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | VALPARAISO, IN (VPZ) | Destination: | Oshkosh, WI |

Airport Information

| | | | |
|-----------------------------|-----------------|----------------------------------|------------|
| Airport: | BINZEL (WI95) | Runway Surface Type: | Grass/turf |
| Runway Used: | 18 | Runway Surface Condition: | Dry |
| Runway Length/Width: | 2000 ft / 40 ft | | |

Wreckage and Impact Information

| | | | |
|----------------------|-----------------------|---------------------|-------------|
| Crew Injuries: | 1 Fatal | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 Fatal | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Latitude, Longitude: | 42.581389, -88.011667 | | |

Administrative Information

| | | | |
|-------------------------------|---|---------------|------------|
| Investigator In Charge (IIC): | Edward F Malinowski | Adopted Date: | 02/08/2016 |
| Note: | The NTSB traveled to the scene of this accident. | | |
| Investigation Docket: | http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=91630 | | |

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.