



National Transportation Safety Board Aviation Accident Final Report

Location:	Caldwell, ID	Accident Number:	WPR09LA378
Date & Time:	08/01/2009, 1350 MDT	Registration:	N69KG
Aircraft:	Gray RV-6	Aircraft Damage:	Destroyed
Defining Event:	Aerodynamic stall/spin	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

According to a family member of the pilot, the airplane had sat on the airport's ramp for about a year without having been flown. About a week before the accident, the pilot flew the airplane once around the traffic pattern. On the day of the accident, the pilot had removed and sandblasted the spark plugs, checked the cylinders for compression, and removed and cleaned the air filter; the filter was reported to have had "some goop" on it. A witness reported observing the airplane take off, and, as it went by him at 100 to 200 feet above ground level, he heard a "popping noise." He subsequently observed the airplane make a quick left turn to a left downwind leg, and as the airplane continued on the downwind he observed the nose increase in pitch, but it was not climbing. As the airplane came abeam the numbers, it made a steep left turn, followed by the nose dropping before it dove into the ground and erupted in flames. The airplane was consumed by a post impact fire. A post accident examination of the engine revealed no anomalies with the cylinders and valve train. All spark plugs were found to have excessive gaps, and all but one failed a bench check when exposed to pressure greater than 80 psi. A post accident examination of the airframe revealed no anomalies. No aircraft or engine logbooks were located during the investigation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain adequate airspeed that led to a stall/spin while maneuvering in the traffic pattern.

Findings

Aircraft	Performance/control parameters - Not attained/maintained (Cause) Airspeed - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause)

Factual Information

On August 1, 2009, about 1350 mountain daylight time, an experimental built Gray RV-6, N69KG, was destroyed following impact with terrain near the Caldwell Industrial Airport (EUL), Caldwell, Idaho. The private pilot, the sole occupant, was killed. Visual meteorological conditions prevailed for the local flight, which was conducted in accordance with 14 Code of Federal Regulations (CFR) Part 91, and a flight plan was not filed. The flight was originating at the time of the accident.

According to a witness who was positioned about midfield on the airport, he observed a tan colored with blue trim RV-6 type aircraft depart Runway 12. The witness stated that as the airplane passed him at an altitude of about 100 to 200 feet [above ground level] (agl), "...the engine of the plane began to make a 'popping' noise." The witness reported that a few seconds later the aircraft turned onto a left crosswind, then "quickly" to downwind at an altitude of about 200 feet [agl]. The witness further reported that as the airplane continued on downwind "...the nose of the RV was increasing its pitch and it was apparent that the RV was not climbing. As the RV came approximately abeam the number 12 on its left downwind, it made a steep left turn as to land on 12. As this occurred the nose of the RV dropped, and within a few seconds I saw it dive into the ground and erupt into flames." Prior to impact the airplane had collided with a set of power lines, which bordered the airport on its north perimeter. The airplane was consumed by the post impact fire.

A Federal Aviation Administration (FAA) aviation safety inspector who examined the accident site reported that the airplane came to rest in an upright position next to an airport perimeter fence and inside airport property. The accident site was located about 700 feet northeast of the approach end of Runway 12. The fuselage, empennage, and engine were all located together at the main impact site. Due to impact forces and thermal damage, control continuity could not be confirmed. There were no observed anomalies with the airframe when examined at the accident site.

The airplane's engine was examined under the supervision of the FAA inspector by a certificated airframe and powerplant mechanic. The examination revealed no anomalies with the cylinders or the valve train as a result of a borescope inspection. Additionally, no stuck valves were observed. The examination also revealed that all spark plugs were found to have excessive gaps from .028 - .030; the manufacturer recommends .016 - .021. All but one spark plug failed a bench check when exposed to pressures above 80 psi. During the examination, the oil filter was cut and inspected with an acceptable amount of trace particulate matter noted.

According to the FAA inspector, a family member reported that the airplane had set idle for about a year on the airport ramp and had not been flown. The family member stated that about a week prior to the accident flight [the pilot] flew it [the airplane] around the airport traffic pattern. The family member further revealed that on the morning of the accident flight [the pilot] removed the spark plugs, sandblasted them, checked [cylinder] compression, and removed the air filter. The family member reported, "The filter had 'goop' on it. [The pilot] cleaned it around noon before the accident." No aircraft, engine or pilot logbooks were located during the investigation.

An autopsy was performed on the pilot at the Ada County Coroner's Office, Boise, Idaho, on August 3, 2009. According to the autopsy report the cause of death was "...Carbon monoxide poisoning and thermal injuries." The FAA's Forensic Toxicology Research Section, Oklahoma

City, Oklahoma, performed postmortem toxicology of specimens from the pilot. The specimens were negative for cyanide, ethanol, and drugs. The results also revealed 28 percent carbon monoxide was detected in the blood.

History of Flight

Initial climb	Loss of engine power (partial)
Approach-VFR pattern downwind	Loss of control in flight Aerodynamic stall/spin (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	35, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	11/09/2007
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	302 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Gray	Registration:	N69KG
Model/Series:	RV-6	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	23069
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1650 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:	Justin C. Walker	Rated Power:	150 hp
Operator:	Justin C. Walker	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	EUL, 2432 ft msl	Observation Time:	1335 MDT
Distance from Accident Site:	1 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	120°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	33°C / 9°C
Lowest Ceiling:	None	Visibility	5 Miles
Wind Speed/Gusts, Direction:	3 knots, 190°	Visibility (RVR):	
Altimeter Setting:	30.05 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Caldwell, ID (EUL)	Type of Flight Plan Filed:	Unknown
Destination:	Caldwell, ID (EUL)	Type of Clearance:	None
Departure Time:	1350 MDT	Type of Airspace:	

Airport Information

Airport:	Caldwell Industrial Airport (EUL)	Runway Surface Type:	Asphalt
Airport Elevation:	2432 ft	Runway Surface Condition:	Dry
Runway Used:	12	IFR Approach:	None
Runway Length/Width:	5500 ft / 100 ft	VFR Approach/Landing:	Traffic Pattern

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:	None
Total Injuries:	1 Fatal		

Administrative Information

Investigator In Charge (IIC):	Thomas Little	Adopted Date:	03/03/2010
Additional Participating Persons:	Patrick Darling; Federal Aviation Administration; Boise, ID		
Publish Date:	03/03/2010		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74419		

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