



Aviation Investigation Final Report

Location:	Shoup, Idaho	Accident Number:	SEA02LA059
Date & Time:	March 25, 2002, 09:00 Local	Registration:	N139SP
Aircraft:	Potts KitFox	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot attempted a takeoff in an experimental aircraft who's engine/propeller combination had not produced the expected rpm since the pilot/builder changed the engine but did not change the propeller. Prior to the attempted takeoff, the pilot experienced a 250 rpm drop on each magneto during the engine run-up check. During the takeoff roll, the pilot realized that the aircraft was not performing as desired, and momentarily thought about aborting, but instead continued. After liftoff, the pilot was unable to get the aircraft to climb, and as he was making a turn over a river situated off the departure end of the runway, the aircraft stall/mushed, and one wing drug in the water. Immediately after the wing contacted the water, the aircraft cartwheeled along the river's surface, coming to rest upright in about 30 inches of water.

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 a speed above stall speed, and the resulting inadvertent stall/mush. Factors include the pilot's failure to abort the takeoff when he realized the aircraft's performance was not as expected, his decision to attempt a takeoff after experiencing an unacceptable rpm drop on each magneto during the engine run-up check, and the failure of the magnetos to maintain an acceptable engine rpm when operated individually.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF

Findings

1. (C) AIRSPEED(VS) - NOT MAINTAINED - PILOT IN COMMAND
2. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND
3. (F) ABORTED TAKEOFF - NOT PERFORMED - PILOT IN COMMAND
4. (F) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
5. (F) IGNITION SYSTEM,MAGNETO - UNDETERMINED

Factual Information

On March 25, 2002, approximately 0900 mountain standard time, an experimental Potts KitFox, N139SP, impacted the waters of the Salmon River during a takeoff attempt from a private airstrip near Shoup, Idaho. The commercial pilot, who was the sole occupant, was not injured, but the aircraft, which was owned and operated by the pilot, sustained substantial damage. The Title 14, CFR Part 91 personal pleasure flight, which was being operated in visual meteorological conditions, was departing for Challis, Idaho, at the time of the accident. No flight plan had been filed.

According to the pilot, who was departing his 1,000 foot private strip, about the time the aircraft got half way down the runway, he realized the engine was not producing as much power as he expected. He momentarily thought about aborting the takeoff, but instead elected to continue. Although he was able to get the airplane in the air, he was unable to get it to climb. After crossing the departure end of the runway, and only being able to keep the aircraft a few feet off the ground, he attempted to make a shallow turn in order to fly down the Salmon River. During the turn, he was unable to maintain sufficient airspeed, and the aircraft began to stall/mush. As it started to drop, one wing made contact with the river. Immediately after the wing drug in the water, the aircraft cartwheeled along the river's surface, and it came to rest upright in about 30 inches of water.

According to the pilot, when he changed the experimental aircraft's powerplant to a new Franklin engine from a Rotax engine, he did not change the propeller. Although he had shortened the blades of the propeller approximately one inch, and sent the carburetor to the factory for inspection and service, he was never able to get the engine to run at the expected 2,800 rpm. Although the engine would not reach the expected rpm, the pilot reported that it seemed to run smooth and steady. Just prior to the subject takeoff, the pilot did a magneto check at 1,800 rpm, and as he selected each magneto individually, the engine slowed by 250 rpm.

Pilot Information

Certificate:	Commercial	Age:	67, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
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 3 Valid Medical—no waivers/lim.	Last FAA Medical Exam:	December 6, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	July 1, 2000
Flight Time:	1969 hours (Total, all aircraft), 28 hours (Total, this make and model), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Potts	Registration:	N139SP
Model/Series:	KitFox	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	59501-0089
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	March 1, 2002 Condition	Certified Max Gross Wt.:	1550 lbs
Time Since Last Inspection:	3 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	28 Hrs at time of accident	Engine Manufacturer:	Franklin
ELT:	Installed, not activated	Engine Model/Series:	PZLF-4A235831
Registered Owner:	Stanley V. Potts	Rated Power:	116 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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Shoup, ID	Type of Flight Plan Filed:	None
Destination:	Challis, ID (U15)	Type of Clearance:	None
Departure Time:	09:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	Colson Creek	Runway Surface Type:	Dirt
Airport Elevation:	3100 ft msl	Runway Surface Condition:	Dry
Runway Used:	25	IFR Approach:	None
Runway Length/Width:	1000 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	45.389678,-114.420181(est)

Administrative Information

Investigator In Charge (IIC): Anderson, Orrin

Additional Participating Persons: Bob Rountree; Boise FSDO

Original Publish Date: September 9, 2002

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=54400>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).