



National Transportation Safety Board Aviation Accident Final Report

Location:	Buena Vista, CO	Accident Number:	CEN16FA241
Date & Time:	07/04/2016, 1128 MDT	Registration:	N46EB
Aircraft:	BOEVE EARL SEAWIND	Aircraft Damage:	Destroyed
Defining Event:	Loss of engine power (partial)	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot was making a personal flight in the experimental amateur-built airplane. A witness at the destination airport reported hearing the pilot declare a "mayday" on the airport's common traffic advisory frequency, but the pilot did not state the nature of the emergency. Witnesses near the accident site reported hearing the airplane's engine running extremely rough and seeing the airplane's wings rocking back and forth. The accident site was in an open, flat field with sparse vegetation and ample area in which to make a forced landing. Examination of the wreckage indicated that the airplane impacted the ground and nosed over, and a fire then erupted which consumed most of the airplane. Fire damage precluded a complete examination of the airframe, engine, and systems; however, the examinations that were performed did not reveal any preimpact anomalies. Based on the available evidence, it is likely that the airplane's engine lost partial power for a reason that could not be determined due to the extent of the fire damage, and the pilot did not maintain control of the airplane during the ensuing forced landing.

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 control of the airplane during a forced landing following a partial loss of engine power, which resulted in a hard landing and nose over. The reason for the loss of engine power could not be determined due to the severity of the postimpact fire damage.

Findings

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

Factual Information

HISTORY OF FLIGHT

On July 4, 2016, about 1128 mountain daylight time, an amateur-built Seawind airplane, N46EB, was destroyed by impact forces and a postimpact fire, during a forced landing near Buena Vista, Colorado. The pilot, who was the sole occupant, was fatally injured. The aircraft was registered to Boeve Enterprises, Inc., and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, which was not on a flight plan. The flight originated from the Lake County Airport (LXV), Leadville, Colorado, at an unconfirmed time, and was destined for the Central Colorado Regional Airport (AEJ), Buena Vista, Colorado, when the accident occurred.

It was reported that the pilot flew the accident airplane from AEJ to LXV earlier in the day, and was on the return flight to AEJ when the accident occurred. The airplane owner, who witnessed the takeoff from LXV for the return flight to AEJ, reported no problems with the airplane's takeoff roll and initial climb.

A witness at AEJ reported that she heard the pilot declare a "mayday" on the airport common traffic advisory frequency, and that he was straight in for runway 15. The witness reported that the pilot did not state the nature of the emergency during the radio transmission.

Witnesses near the accident site reported hearing the engine running extremely rough as if it was running on only three cylinders and the wings were rocking back and forth. One witness reported seeing the airplane about 200 to 300 ft. agl, descending rapidly. The airplane made a steep left turn and witness noted that the landing gear was extended. The witness lost sight of the airplane prior to its impact with the ground.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with airplane single-engine and airplane multiengine land ratings. He also held a second class medical certificate issued on September 4, 2015. The medical listed the following limitation: Must wear corrective lenses.

The pilot's flight logbook was not recovered during the investigation, however, the pilot reported having 2,000 total flight hours and 35 hours in the six months preceding his most recent medical examination.

AIRCRAFT INFORMATION

The accident airplane was a composite, four-seat, amphibian airplane that featured a single tail-mounted engine. The airplane was produced as a kit that was assembled by an individual. The airplane had retractable tricycle landing gear and was powered by a six-cylinder Lycoming model IO-540-K1G5D engine rated to produce 300 horsepower.

METEOROLOGICAL INFORMATION

At 1115, the recorded weather conditions at AEJ were: wind 140 degrees at 8 knots, clear sky, temperature 22 degrees Celsius, dew point 3 degrees Celsius, altimeter setting 30.35 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The accident site was located about 4 miles and 330 degrees from AEJ. The accident site was an open, flat field with sparse vegetation and ample area in which to make a forced landing. The initial impact point was located about 15 feet south of the main wreckage and contained the airplane's nose landing gear. The airplane came to rest in an inverted position. Based on the position of the airplane and the impact point, the airplane was heading in a northerly direction at the time of the impact. The entire airplane was almost completely consumed by the postimpact fire that ensued. Remnants of all of the major airplane components and control surfaces were located in the immediate vicinity of the main wreckage. The control system of the airplane consisted mainly of cable controls which were traced from the cockpit control to each respective control surface. All of the cables and end attachments remained intact except for one aileron cable turnbuckle. The fractured turnbuckle exhibited signatures consistent with overload failure due to impact forces. The elevator control had a bellcrank and pushrod that was mounted in the vertical tail that actuated the elevator. The pushrod was intact; however, the composite bellcrank was mostly consumed by fire. The engine control push-pull cables were traced from the cockpit to the engine. The throttle and mixture cables remained intact and attached to the throttle arm, and mixture arm of the fuel control unit. The fuel control unit itself was consumed by fire and only the steel components remained intact. The propeller control cable was intact from the cockpit to the propeller governor. No anomalies could be found with respect to the airframe, flight control system, or engine control system; however, the extent of the fire damage precluded a complete examination and testing of components.

The engine of the airplane was examined on-site. It was still attached to the steel tube engine mount structure. The oil sump, and rear accessory case portions of the crankcase were consumed by fire. The accessory gears remained in position and no anomalies were noted. The remnants of the dual magneto were still in-place on the rear of the engine; however, the aluminum components of the magneto had been consumed by fire. The fuel control servo had been almost completely consumed by fire with only the steel components remaining. The upper spark plugs were removed and examined. The right side spark plugs were covered by oil due to the resting position of the engine. The oil was allowed to drain from the plugs and the combustion deposits that remained indicated a normal burn signature. The left side plugs were dry and also exhibited normal combustion deposits. The valve covers were removed and the right side cylinders contained oil, indicating that oil was present in the engine prior to impact. No anomalies were noted with respect to the valves or valve rocker arms. No anomalies could be found with respect to the engine or engine accessories; however, the extent of the fire damage precluded a complete examination and testing of components.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was performed by the El Paso County Coroner's Office, Colorado Springs, Colorado, on July 5, 2016. The autopsy report listed the cause of death as multiple blunt force injuries sustained in the accident.

Toxicology testing was performed by the FAA Civil Aerospace Medical Institute. Testing results were negative for all substances in the screening profile.

History of Flight

Enroute-cruise	Loss of engine power (partial) (Defining event)
Landing	Loss of control in flight Hard landing Nose over/nose down

Pilot Information

Certificate:	Private	Age:	63, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	09/04/2015
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	BOEVE EARL	Registration:	N46EB
Model/Series:	SEAWIND NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2006	Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	64
Landing Gear Type:	Retractable - Amphibian; Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	IO-540-K1G5D
Registered Owner:	BOEVE ENTERPRISES INC	Rated Power:	300 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	AEJ, 7950 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	1115 MDT	Direction from Accident Site:	150°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.35 inches Hg	Temperature/Dew Point:	22° C / 3° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Leadville, CO (LXV)	Type of Flight Plan Filed:	None
Destination:	BUENA VISTA, CO (AEJ)	Type of Clearance:	None
Departure Time:	MDT	Type of Airspace:	Class G

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
Total Injuries:	1 Fatal	Latitude, Longitude:	38.862500, -106.156944

Administrative Information

Investigator In Charge (IIC):	John M Brannen	Report Date:	11/29/2016
Additional Participating Persons:	Kevin P Grenier; FAA - Denver FSDO; Denver, CO		
Publish Date:	11/29/2016		
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93522		

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](#).