



Aviation Investigation Final Report

Location:	Corvallis, Oregon	Accident Number:	SEA02LA168
Date & Time:	August 31, 2002, 09:20 Local	Registration:	N50TX
Aircraft:	Nolley BD-5	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During a telephone conversation with an investigator from the NTSB, the pilot reported that the airplane began to lose power shortly after takeoff from the Corvallis Airport. He reported that he was unable to restore engine power and elected to perform an off-airport landing to a nearby open field. He reported that the airplane touched down hard and the gear collapsed. He also reported that he was unable to recall any specific engine instrument readings or warning lights in the cockpit before, during or after the power failure. The initial onsite investigation was conducted by an inspector from the Portland, Oregon, Flight Standards District Office (FSDO) on the day of the accident. During the examination the inspector noted that the left main fuel supply line, at the quick connect coupler, was disconnected. No damage was noted to the fuel line or associated coupler. A test run of the accident aircraft's converted Solar gas turbine engine was conducted at Apex Gas Turbines, Silverdale, Washington. The test was conducted with the engine mounted on a test stand. The engine was successfully started and run at multiple power settings. No operating malfunctions or anomalies were noted during the test run.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel starvation resulting in a loss of engine power during the aircraft's initial climb. A disconnected fuel line was a factor.

Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: CLIMB

Findings

1. (F) FUEL SYSTEM,LINE FITTING - DISCONNECTED

2. (C) FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: HARD LANDING

Phase of Operation: LANDING

Occurrence #4: GEAR COLLAPSED

Phase of Operation: LANDING

Factual Information

On August 31, 2002, approximately 0920 Pacific daylight time, an amateur-built experimental-category Nolley BD-5 airplane, N50TX, was substantially damaged in a forced landing in a field approximately 1 1/2 miles southeast of the Corvallis Municipal Airport, Corvallis, Oregon, following a reported partial loss of engine power during climb after takeoff. The private pilot, who owned and had built the single-seat aircraft, received serious injuries in the forced landing. Visual meteorological conditions were reported at Corvallis at 0935. No flight plan had been filed for the local 14 CFR 91 personal flight, which departed Corvallis Municipal about 0900.

According to the FAA aircraft registry, the accident airplane received initial experimental-category airworthiness certification on June 19, 1998. The aircraft was equipped with a 95-shaft horsepower Quantum turboprop engine, a conversion based on components of the Solar T-62 power system. A witness to the accident, who reported that he was a co-builder of the accident airplane and stated he witnessed the accident from a chase aircraft, reported that the accident flight was part of the accident aircraft's initial required 40-hour flight test period, with 16.8 hours on the aircraft's Hobbs meter at the time of the accident. The witness reported that the objective of the accident flight was to determine the aircraft's stall characteristics pursuant to the 40-hour flight test period. The witness reported that after takeoff, the pilot reported to him on the radio that he was not able to climb higher than traffic pattern altitude (approximately 1,000 feet above ground level). The witness stated that the aircraft completed about two circuits around the airport when it suddenly pitched over and subsequently impacted the ground in a level attitude, coming to a stop in 100 to 125 feet and pivoting about 90 degrees to the left.

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On November 25, 2002, a test run of the accident aircraft's converted Solar gas turbine engine was conducted at Apex Gas Turbines, Silverdale, Washington. The test was conducted with the engine mounted on a test stand. The engine was successfully started and run at multiple

power settings. No operating malfunctions or anomalies were noted during the test run.

Pilot Information

Certificate:	Private	Age:	66, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	July 22, 2001
Occupational Pilot:	No	Last Flight Review or Equivalent:	August 8, 2001
Flight Time:	2962 hours (Total, all aircraft), 1 hours (Total, this make and model), 262 hours (Pilot In Command, all aircraft), 1 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Nolley	Registration:	N50TX
Model/Series:	BD-5	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	
Landing Gear Type:	Retractable - Tricycle	Seats:	1
Date/Type of Last Inspection:	Continuous airworthiness	Certified Max Gross Wt.:	860 lbs
Time Since Last Inspection:	18.6 Hrs	Engines:	1 Turbo prop
Airframe Total Time:	18.6 Hrs at time of accident	Engine Manufacturer:	Quantum
ELT:	Not installed	Engine Model/Series:	T-62
Registered Owner:	Mell B. Nolley	Rated Power:	95 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:	CVO,246 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	09:35 Local	Direction from Accident Site:	315°
Lowest Cloud Condition:	Clear	Visibility	9 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	0 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	17°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Corvallis, OR (CVO)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	09:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	44.497222,-123.289718

Administrative Information

Investigator In Charge (IIC):	Nesemeier, Gregg
Additional Participating Persons:	Terry L Wilmeth; FAA-FSDO, Portland (Hillsboro); Hillsboro, OR
Original Publish Date:	May 1, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=55606

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](#).