



Aviation Investigation Final Report

Location:	MANLEY HOT SPRG, Alaska	Accident Number:	ANC94LA046
Date & Time:	April 8, 1994, 09:55 Local	Registration:	N42DC
Aircraft:	Helio 295	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

DURING CRUISE FLIGHT IN SNOW SHOWERS THE ENGINE SUDDENLY LOST POWER. SUBSEQUENT EXAMINATION OF THE PLANE BY COMPANY MAINTENANCE PERSONNEL REVEALED THAT THE FUEL VENT TUBE LOCATED ON TOP OF THE LEFT WING HAD BEEN BENT BACK ALLOWING SNOW TO BECOME IMPACTED THROUGH THE CURVE OF THE LINE. THIS WOULD RESULT IN FUEL STARVATION TO THE ENGINE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FUEL STARVATION CAUSED BY A BLOCKED FUEL VENT LINE. A FACTOR IN THE ACCIDENT WAS THE IMPROPER AIRCRAFT PREFLIGHT.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE

Findings

1. (C) FLUID,FUEL - STARVATION
 2. FUEL SYSTEM,VENT - BENT
 3. (C) FUEL SYSTEM,VENT - BLOCKED(TOTAL)
 4. (F) AIRCRAFT PREFLIGHT - IMPROPER - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

On April 08, 1994, at 1755 Alaska daylight time, a wheel equipped Helio Courier airplane, N42DC, registered to Wright Air Service, Inc. of Fairbanks, Alaska, experienced a total loss of engine power while in cruise flight approximately 40 miles southeast of Manley Hot Springs, Alaska. The airline transport certificated pilot-in-command and his one revenue passenger were not injured and the airplane sustained substantial damage during the ensuing off airport emergency forced landing on a small frozen lake. The 14 CFR Part 135 on demand flight last departed Fairbanks at about 0855 and the destination was the passengers home near the Cosna River. The pilot reported that at the time of the accident, visual meteorological conditions prevailed in the area of the mishap site and that a VFR flight plan was on file with the Flight Service Station (FSS) in Fairbanks.

The pilot reported that about 25 minutes into the flight light snow showers were encountered and that about one hour into the flight the snow showers became more intense reducing the inflight visibility to about 3 miles. Then while in cruise flight at an altitude of 3500 feet msl and about 10 miles from the destination the engine suddenly stopped with no warning. Carburetor heat was applied, the fuel boost pump was turned on and the magneto's and fuel valve were check but to no avail.

Company A&P mechanics were flown to the mishap site the following day. Their finding was that the fuel vent located on the top left wing had been bent back allowing snow to become impacted through the curve of the line. This situation would produce a significant reduction in fuel flow to the engine. Company personnel offered the comment that the vent may have become bent during the removal of snow from the upper surface of the wing by brooming.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	54, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	February 1, 1994
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	22218 hours (Total, all aircraft), 1500 hours (Total, this make and model), 22000 hours (Pilot In Command, all aircraft), 205 hours (Last 90 days, all aircraft), 65 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Helio	Registration:	N42DC
Model/Series:	295 295	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1454
Landing Gear Type:	Ski/wheel	Seats:	4
Date/Type of Last Inspection:	February 16, 1994 100 hour	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:	73 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2999 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	GO-480-G1D6
Registered Owner:	WRIGHT AIR SERVICE, INC.	Rated Power:	295 Horsepower
Operator:	WRIGHT AIR SERVICE, INC.	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	HYTA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	FAI	Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	3 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	8 knots / 10 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	315°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-7°C
Precipitation and Obscuration:	N/A - Blowing - Snow		
Departure Point:	FAIRBANKS , AK (FAI)	Type of Flight Plan Filed:	VFR
Destination:		Type of Clearance:	None
Departure Time:	08:55 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	64.650749,-150.900115(est)

Administrative Information

Investigator In Charge (IIC):	Borson, Timothy
Additional Participating Persons:	PHILP B EVANS; FAIRBANKS , AK
Original Publish Date:	January 25, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=2495

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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](#).