



National Transportation Safety Board Aviation Accident Data Summary

Location:	Clear, AK	Accident Number:	ANC01LA039
Date & Time:	03/03/2001, 1300 AST	Registration:	N42DC
Aircraft:	Helio H-295	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

The certificated airline transport pilot reported that while in level, cruise flight, the engine began to run rough and lose power. The pilot said that while performing the engine emergency procedures, he smelled smoke in the cabin, and noted a substantial amount of engine oil on the windscreen. The airplane collided with trees during a subsequent forced landing. A postaccident investigation revealed that the number two connecting rod had sustained a complete fracture. The number 2 connecting rod journal displayed significant amount of heat induced bluing. The fractured connecting rod, main journal bearing shells (7 halves), and rod bearing shells (7 halves) were sent to the NTSB's Materials Laboratory for examination. A Senior Safety Board metallurgist reported that the separated connecting rod displayed evidence of low cycle, high stress fatigue cracking. A scanning electron microscope (SEM) examination of the rod bearing shells disclosed pitting, with irregular-shape metal particles embedded on the surface of the bearing material. The area around the pits showed evidence of metallic flow from the pits.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The shifting of engine connecting rod bearings, and the fracture of an engine connecting rod.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD - FRACTURED
2. (C) ENGINE ASSEMBLY,BEARING - SHIFTED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

3. OBJECT - TREE(S)

Pilot Information

Certificate:	Airline Transport; Flight Engineer	Age:	51
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	18800 hours (Total, all aircraft), 5500 hours (Total, this make and model), 18300 hours (Pilot In Command, all aircraft), 100 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Helio	Registration:	N42DC
Model/Series:	H-295	Engines:	1 Reciprocating
Operator:	Wright Air Service, Inc.	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	GO-480-G1D6
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Weather Information Source:	Pilot
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	Calm / ,
Temperature:	-15° C	Visibility	100 Miles
Precipitation and Obscuration:			
Departure Point:	Stampede, AK (Z90)	Destination:	Fairbanks, AK (FAI)

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	64.178611, -149.437500		

Administrative Information

Investigator In Charge (IIC): Clinton O Johnson

Adopted Date: 07/02/2002

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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