



Aviation Investigation Final Report

Location:	Denali Park, Alaska	Accident Number:	ANC05LA053
Date & Time:	March 30, 2005, 10:00 Local	Registration:	N2204N
Aircraft:	Cessna 140	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The solo private pilot stated that prior to the 14 CFR Part 91, personal cross-country flight, he preheated the airplane engine prior to takeoff. During the takeoff roll the engine started running rough. The pilot said he applied carburetor heat and continued the takeoff because there was not enough runway left to stop. The engine lost all power about 5 miles south of the airport, and during the ensuing emergency forced landing, the left wing struck a tree. The airplane came to rest inverted in a creek. The pilot said there were no preaccident mechanical anomalies with the airplane, but he suspected ice in a gas line, or restricted airflow to the carburetor from fresh snow, or possibly a stuck valve. The airplane sustained structural damage to the wings and fuselage during the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power during takeoff and cruise flight for an undetermined reason, which resulted in an emergency descent/landing, and collision with trees.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

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

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

Findings
2. OBJECT - TREE(S)

Occurrence #4: NOSE OVER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
3. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

On March 30, 2005, about 1000 Alaska standard time, a Cessna 140 airplane, N2204N, sustained substantial damage when it impacted trees during an emergency descent and landing, following a total loss of engine power about 5 miles south of the Denali National Park Airport, Denali National Park, Alaska. The airplane was being operated by the pilot as a visual flight rules (VFR) personal cross-country flight under Title 14, CFR Part 91, when the accident occurred. The solo private pilot received minor injuries. Visual meteorological conditions prevailed, and a VFR flight plan was filed. The flight departed the Denali National Park Airport about 1000.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on March 31, the park ranger who spoke with the pilot said the pilot told him the airplane started running rough during the takeoff roll. The pilot said he applied carburetor heat and continued the takeoff, and about 5 miles south of the airport the engine quit. The pilot said while attempting an emergency landing in a snow-covered meadow, the airplane's left wing struck a tree, and the airplane came to rest inverted in a creek.

In a written statement to the NTSB the pilot wrote that the airplane was preheated before the flight, and ran fine until three-quarters of the way down the runway. He said there was not enough runway remaining to stop, so he applied carburetor heat and continued. He said the engine would not produce more than 1200 rpm, and eventually quit. He wrote that he suspected ice in a gas line, or restricted airflow to the carburetor from fresh snow, or possibly a stuck valve.

Pilot Information

Certificate:	Private	Age:	30, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
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 With waivers/limitations	Last FAA Medical Exam:	May 1, 2005
Occupational Pilot:	No	Last Flight Review or Equivalent:	February 1, 2005
Flight Time:	250 hours (Total, all aircraft), 15 hours (Total, this make and model), 230 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N2204N
Model/Series:	140	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	12440
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	April 1, 2005 Annual	Certified Max Gross Wt.:	1450 lbs
Time Since Last Inspection:	60 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1240 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	C-85
Registered Owner:	Christopher Ho	Rated Power:	85 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:	Few / 100 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Denali National, AK (INR)	Type of Flight Plan Filed:	VFR
Destination:	Bethel, AK (PABE)	Type of Clearance:	None
Departure Time:	10:00 Local	Type of Airspace:	

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:	63.652778,-148.902221

Administrative Information

Investigator In Charge (IIC):	Lewis, Lawrence
Additional Participating Persons:	Ruben Saldana; Anchorage FSDO-03; Anchorage, AK
Original Publish Date:	February 28, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=61248

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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](#).