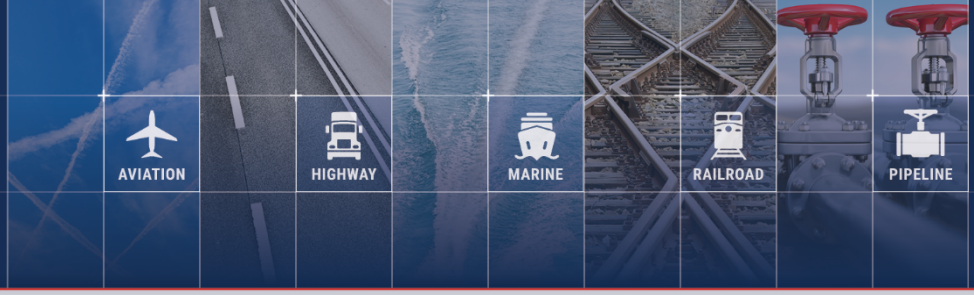

Aviation Investigation Final Report

Location:	London, Ohio	**Accident Number:**	CEN13CA145
Date & Time:	January 29, 2013, 09:30 Local	**Registration:**	N193M
Aircraft:	Hughes 369HS	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot said the helicopter's turbine engine lost power after flying through an area of moderate to heavy snow. The pilot entered an autorotation and applied excessive aft cyclic during the touchdown in a field, which caused the main rotor blades to flex down and sever the tailboom. Weather reported in the area included snow and freezing fog, with a temperature of 16 degrees F. The helicopter was equipped with an automatic engine re-ignition and engine failure warning system, which was required per the rotorcraft flight manual (RFM) for operation in falling or blowing snow. The pilot said this system was armed at the time of the engine failure and the engine-out warning light illuminated and an audible tone sounded before the power loss. The RFM also stated that flight into known icing conditions was prohibited and fuel had to meet anti-icing capability of JP-4 when operating at 40 degrees or less. A review of fueling records revealed that no anti-icing additive was added to the fuel. The pilot was aware of the icing conditions, but he continued the flight. Examination of the engine found no mechanical anomalies that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to comply with established cold weather operating procedures, which resulted in a total loss of engine power. Contributing to the accident was the pilot's excessive aft cyclic input during the landing flare, which resulted in main rotor blade contact with the tail boom.

Findings

Personnel issues	Decision making/judgment - Pilot
Personnel issues	Incorrect action performance - Pilot
Environmental issues	Snow - Effect on equipment

Factual Information

History of Flight

Enroute	Loss of engine power (total) (Defining event)

Pilot Information

Certificate:	Private	**Age:**	53,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**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:**	June 14, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	January 14, 2013
Flight Time:	500 hours (Total, all aircraft), 400 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	**Registration:**	N193M
Model/Series:	369HS	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1190219S
Landing Gear Type:	Skid	**Seats:**	
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo shaft
Airframe Total Time:	6309 Hrs	**Engine Manufacturer:**	Allison
ELT:	Not installed	**Engine Model/Series:**	A250-C18
Registered Owner:	Daniel Mills	**Rated Power:**	250 Horsepower
Operator:	Daniel Mills	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	OSU,906 ft msl	**Distance from Accident Site:**	21 Nautical Miles
Observation Time:	09:53 Local	**Direction from Accident Site:**	242°
Lowest Cloud Condition:		**Visibility**	
Lowest Ceiling:	Indefinite (V V) / 800 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.19 inches Hg	**Temperature/Dew Point:**	-9°C / -10°C
Precipitation and Obscuration:			
Departure Point:	Canton, OH	**Type of Flight Plan Filed:**	VFR
Destination:	Dayton, OH (DAY)	**Type of Clearance:**	VFR;VFR flight following
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	None	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:		**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:**	
Total Injuries:	2 None	**Latitude, Longitude:**	40.050834,-83.386665(est)

Administrative Information

Investigator In Charge (IIC):	Yeager, Leah
Additional Participating Persons:	David Tarrant; FAA/FSDO; Columbus, OH
Original Publish Date:	June 19, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=86104