



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Preston, Georgia	Accident Number:	ERA20LA071
Date & Time:	January 8, 2020, 13:39 Local	Registration:	N6186U
Aircraft:	Hughes OH 6A	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (partial)	Injuries:	2 Minor
Flight Conducted Under:	Public aircraft		

Analysis

During the flight to observe feral swine invading farm fields, the pilot noted a loss of engine power and rotor rpm. He maneuvered the helicopter away from trees for an autorotation to an open, plowed cornfield. During the landing on rough terrain, the helicopter nosed forward and the main rotor blades contacted the ground, resulting in substantial damage to the helicopter.

A postaccident examination of the flight controls, drive train, fuel system, main rotor system, and tail rotor system did not reveal evidence of a preexisting mechanical malfunction or anomaly. The engine was removed and placed on a test stand; it ran normally for about 2 minutes before the run was concluded. A laboratory test of a fuel sample was unremarkable. The reason for the loss of engine power could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A partial loss of engine power for reasons that could not be determined based on the available information.

Findings

Not determined

(general) - Unknown/Not determined

Factual Information

History of Flight

Maneuvering	Loss of engine power (partial) (Defining event)
Autorotation	Off-field or emergency landing
Landing-flare/touchdown	Nose over/nose down

On January 8, 2020, about 1339 eastern standard time, a Hughes OH-6A, N6186U, was substantially damaged when it was involved in an accident near Preston, Georgia. The commercial pilot and one crewmember sustained minor injuries. The helicopter was registered to the U.S. Department of Agriculture and was operated as a public aerial observation flight.

The pilot reported that the purpose of the flight was to conduct aerial wildlife damage management operations. A feral swine was located and the pilot informed the ground crew via radio of its location. Shortly thereafter, the pilot noted a loss of engine power and rotor rpm. The pilot maneuvered the helicopter away from trees for an autorotation to an open, plowed cornfield. During the landing on rough terrain, the helicopter nosed forward and the main rotor blades contacted the ground. The engine appeared to be running at the time of impact.

A Federal Aviation Administration inspector responded to the accident site and examined the wreckage. The tail boom was separated from the helicopter and three of the four main rotor blades were separated from the hub. The fuselage sustained structural damage.

The operator reported that the N2 (power turbine) governor was changed before the flight due to a problem on a previous flight. The wreckage was retained for further examination, and examination of the flight control system, drive train, main rotor system, and tail rotor system did not reveal evidence of a preexisting mechanical malfunction or anomaly.

The engine was removed from the airframe and sent to a factory-authorized overhaul facility for further examination. Continuity was established for the N1 (gas producer turbine) and N2 rotors. The rotors moved freely without binding or noise. Control continuity was confirmed from the collective twist grip to the fuel control unit. The control linkage to the power turbine governor was fractured at the engine firewall due to impact forces.

The engine was installed on a test stand and prepared for a test run. The engine performed satisfactorily at takeoff power for 2 minutes as well as two lower power test points over a test period totaling about 20 minutes.

Following the test run, the power turbine governor, fuel control unit, fuel nozzle, and fuel pump were bench-tested. The power turbine governor that was removed and replaced before the accident flight was also tested. All units tested satisfactorily and within the manufacturers' specifications.

Examination of the fuel system revealed no anomalies, and the fuel lines and filters were free of contamination and obstructions. A fuel sample was tested in a laboratory with normal results.

Pilot Information

Certificate:	Commercial; Flight instructor; Private	Age:	62, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	February 26, 2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 31, 2019
Flight Time:	10175 hours (Total, all aircraft), 8229 hours (Total, this make and model), 10047 hours (Pilot In Command, all aircraft), 93 hours (Last 90 days, all aircraft), 36 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	Registration:	N6186U
Model/Series:	OH 6A No Series	Aircraft Category:	Helicopter
Year of Manufacture:	1969	Amateur Built:	
Airworthiness Certificate:	None	Serial Number:	69-16048
Landing Gear Type:	High skid	Seats:	4
Date/Type of Last Inspection:	October 10, 2019 100 hour	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	14 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	12987 Hrs as of last inspection	Engine Manufacturer:	Allison
ELT:	C126 installed, not activated	Engine Model/Series:	250-C20B
Registered Owner:	US Dept Of Agriculture	Rated Power:	420 Horsepower
Operator:	US Dept Of Agriculture	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KCSG,392 ft msl	Distance from Accident Site:	39 Nautical Miles
Observation Time:	13:51 Local	Direction from Accident Site:	328°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.43 inches Hg	Temperature/Dew Point:	16°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Preston, GA	Type of Flight Plan Filed:	None
Destination:	Albany, GA (ABY)	Type of Clearance:	None
Departure Time:	12:40 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	31.962499,-84.527496(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Robert Lohr; FAA/FSDO; College Park, GA Thomas McLeary; USDA; Cedar City, UT Joan Gregoire; MD Helicopters; Mesa, AZ Nick Shepler; Rolls-Royce; Indianapolis, IN Barry Holt; Thoroughbred Aviation Maintenance; Georgetown, KY
Original Publish Date:	March 23, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=100789

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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](#).