



Aviation Investigation Final Report

Location:	Zephyrhills, Florida	Accident Number:	ERA19LA014
Date & Time:	October 15, 2018, 14:16 Local	Registration:	N245AP
Aircraft:	HARGROVE HUMMEL ULTRA CRUISER	Aircraft Damage:	Substantial
Defining Event:	Fuel starvation	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Before departing on a on a local pleasure flight, the sport pilot reported that he did not activate the airplane's auxiliary fuel pump, which would have replenished the header fuel tank with fuel from the airplane's two main wing fuel tanks. About 5 minutes later, the airplane's engine lost power when the fuel supply in the header tank was exhausted. The pilot attempted a forced landing, but as he maneuvered the airplane to avoid a tree, the airplane stalled and descended into the tree. The pilot was seriously injured and the airplane's fuselage and wings were substantially damaged.

The pilot reported taking gabapentin prior to the flight. Gabapentin carries the warning, "patients should be advised that gabapentin may cause dizziness, somnolence and other symptoms and signs of central nervous system depression." It is likely the impairing effects of gabapentin contributed to the pilot's failure to turn on the fuel pump, which led to fuel starvation and the loss of engine power.

Probable Cause and Findings

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

The pilot's failure to activate the airplane's auxiliary fuel pump, which resulted in fuel starvation and a total loss of engine power. Contributing to the accident were the impairing effects of the pilot's medication on his performance.

Findings

Personnel issues	Use of equip/system - Pilot
Personnel issues	Prescription medication - Pilot
Aircraft	Fuel pumps - Not used/operated

Factual Information

History of Flight

Enroute-cruise	Fuel starvation (Defining event)
Maneuvering	Loss of control in flight
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On October 15, 2018, about 1416 eastern daylight time, an experimental amateur-built Hummel-Ultra Cruiser Plus, N245AP was substantially damaged when it was involved in an accident near Zephyrhills, Florida. The sport pilot was seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot stated that he had been taking gabapentin four times a day for about 3 months before the accident, and since taking it, he noticed his reactions were not what they previously were. Earlier that day he took his first dosage of gabapentin then flew the airplane uneventfully several times in the airport traffic pattern at Zephyrhills Municipal Airport (ZPH), Zephyrhills, Florida. After securing the airplane, which included turning off the auxiliary fuel pump, he took a second dose of gabapentin then fueled the airplane bringing the total fuel capacity to about 8 gallons. After fueling, he received a call from his sister who asked him to fly over her location. He agreed but, "did not recall turning on the auxiliary fuel pump before departure." He departed ZPH, turned crosswind and announced leaving the airport pattern. He climbed to 2,000 ft mean sea level (msl) and turned southwest towards his sister's house. After about 5 minutes the engine "sputtered a few times" and then lost power completely. He checked the throttle and tried to restart adding that the engine turned over normally but did not start. He spotted a large clear field to his left and maneuvered for a forced landing. About 200 ft msl he maneuvered the airplane with no flaps deployed to avoid a tree that was ahead. At that time, "...the right wing [stalled] and the [airplane]" descended into the tree.

A postaccident examination of the airplane by a Federal Aviation Administration airworthiness inspector revealed both fuel shutoff valves were on and both main fuel tanks were breached. The pilot also stated that following recovery of the airplane the header fuel tank was empty.

The airplane's fuel system consisted of a 7.0-gallon capacity fuel tank in the leading edge of each wing near the wing root, a fuel shutoff valve for each tank, lines from each wing fuel tank to a 1-liter header tank, and then lines that supplied fuel to the engine. An electrically operated auxiliary fuel pump pulled fuel from the wing fuel tanks to the header tank located at the top of the fuselage behind the firewall.

Based on the pilot's previous testing, the length of time that it took to deplete the fuel supply in the header tank by not having the auxiliary fuel pump on was about the same length of time of the accident flight. He also indicated there was no engine failure or malfunction.

Gabapentin, often marketed with the name Neurontin, carries the following warning regarding central nervous system symptoms, “Patients should be advised that gabapentin may cause dizziness, somnolence and other symptoms and signs of central nervous system depression. Accordingly, they should be advised neither to drive a car nor to operate other complex machinery until they have gained sufficient experience on gabapentin to gauge whether or not it affects their mental and/or motor performance adversely.”

Pilot Information

Certificate:	Sport Pilot	Age:	73, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Sport pilot	Last FAA Medical Exam:	August 19, 2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	100 hours (Total, all aircraft), 60 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	HARGROVE	Registration:	N245AP
Model/Series:	HUMMEL ULTRA CRUISER Plus	Aircraft Category:	Airplane
Year of Manufacture:	2017	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	132-B
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Volkswagen
ELT:		Engine Model/Series:	2400cc
Registered Owner:		Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ZPH,90 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	14:15 Local	Direction from Accident Site:	124°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 4400 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	Unknown / Unknown
Wind Direction:		Turbulence Severity Forecast/Actual:	Unknown / Unknown
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	33°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Zephyrhills, FL (ZPH)	Type of Flight Plan Filed:	None
Destination:	Zephyrhills, FL (ZPH)	Type of Clearance:	None
Departure Time:	14:00 Local	Type of Airspace:	

Airport Information

Airport:	Zephyrhills ZPH	Runway Surface Type:	
Airport Elevation:	90 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	28.260833,-82.210556

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy		
Additional Participating Persons:	Robert Blake; FAA/FSDO; Tampa, FL		
Original Publish Date:	July 15, 2021	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98488		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).