



National Transportation Safety Board Aviation Accident Final Report

Location:	Mountain Home, Idaho	Accident Number:	WPR21LA293
Date & Time:	July 28, 2021, 11:30 Local	Registration:	N46MU
Aircraft:	Enstrom F-28A	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, while the helicopter was in the hanger, he put 4 gallons of fuel into the left fuel tank. He then intended to hover taxi to the fuel island for fuel. He observed people and an aircraft near the fuel island, and he hover taxied to a dirt area. While about 12-15 ft above ground level, the engine had a complete loss of power. He further reported that he was too low to autorotate, landed hard on uneven terrain and collapsed the left skid. An inspection revealed that both fuel tanks were empty. The helicopter sustained substantial damage to the fuselage and main rotor blades. The pilot reported that there were no preaccident mechanical malfunctions or failures with the helicopter 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 improper fuel planning and improper in-flight decision-making, which resulted in a total loss of engine power due to fuel exhaustion and a subsequent hard landing on uneven terrain.

Findings

Aircraft	Fuel - Fluid level
Personnel issues	Fuel planning - Pilot
Personnel issues	Aircraft control - Pilot
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Sloped/uneven terrain - Contributed to outcome

Factual Information

History of Flight

Maneuvering-hover	Fuel exhaustion (Defining event)
Maneuvering-hover	Loss of engine power (total)
Autorotation	Hard landing

Pilot Information

Certificate:	Private	Age:	67, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	March 11, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	August 25, 2020
Flight Time:	(Estimated) 3100 hours (Total, all aircraft), 5 hours (Total, this make and model), 2885 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Enstrom	Registration:	N46MU
Model/Series:	F-28A	Aircraft Category:	Helicopter
Year of Manufacture:	1974	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	253
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	August 23, 2020 Annual	Certified Max Gross Wt.:	2150 lbs
Time Since Last Inspection:	5 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3907 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	HIO-360-C1A
Registered Owner:		Rated Power:	205
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KMUO, 2996 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	11:58 Local	Direction from Accident Site:	231°
Lowest Cloud Condition:	Few / 15000 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.14 inches Hg	Temperature/Dew Point:	31° C / 8° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mountain Home, ID (U76)	Type of Flight Plan Filed:	None
Destination:	Mountain Home, ID	Type of Clearance:	None
Departure Time:	11:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Mountain Home Municipal Airport U76	Runway Surface Type:	
Airport Elevation:	3166 ft msl	Runway Surface Condition:	Dry; Soft
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	43.131389, -115.7303

Administrative Information

Investigator In Charge (IIC):	Salazar, Fabian		
Additional Participating Persons:	Edwin "Brian" Lord; Federal Aviation Administration; Boise, ID		
Original Publish Date:	September 20, 2021	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=103577		

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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](#).