



# National Transportation Safety Board Aviation Accident Factual Report

<b>Location:</b>	Montgomery, Texas	<b>Accident Number:</b>	CEN19FA109
<b>Date &amp; Time:</b>	March 27, 2019, 14:10 Local	<b>Registration:</b>	N818MC
<b>Aircraft:</b>	Aerospatiale AS350	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Aircraft maintenance event	<b>Injuries:</b>	1 Fatal, 2 Serious
<b>Flight Conducted Under:</b>	Public aircraft		

On March 27, 2019, about 1410 central daylight time, an Airbus AS350B3 helicopter, N818MC, was substantially damaged when it was involved in an accident near Montgomery, Texas. The pilot was seriously injured, one crew member was fatally injured, and another crew member sustained minor injuries. The helicopter was operated as a public flight.

The helicopter and United States Forest Service (USFS) crew were conducting plastic sphere dispenser (PSD) applications in support of a controlled fire operation in an area of the Sam Houston National Forest. The pilot and surviving crew member reported that, after completing the application, they began flying back to the staging area when the engine lost total power. The helicopter descended into trees and subsequently impacted terrain, coming to rest on its right side. The surviving crew member and pilot were able to exit the helicopter; however, the second crew member was partially ejected from the helicopter and sustained fatal injuries.

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	50, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	May 9, 2018
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 29, 2018
<b>Flight Time:</b>	(Estimated) 8760 hours (Total, all aircraft), 3886 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Aerospatiale	<b>Registration:</b>	N818MC
<b>Model/Series:</b>	AS350 B3	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	2009	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	4755
<b>Landing Gear Type:</b>	High skid	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	February 4, 2019 100 hour	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>	72.4 Hrs	<b>Engines:</b>	Turbo shaft
<b>Airframe Total Time:</b>	5027.3 Hrs at time of accident	<b>Engine Manufacturer:</b>	Safran
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	Arriel 2B1
<b>Registered Owner:</b>		<b>Rated Power:</b>	871 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	Rotorcraft external load (133), On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	MHHA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KCXO, 245 ft msl	<b>Distance from Accident Site:</b>	21 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	116°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	None /
<b>Wind Direction:</b>	120°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.25 inches Hg	<b>Temperature/Dew Point:</b>	23° C / 7° C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Montgomery, TX	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	Montgomery, TX	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal, 2 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal, 2 Serious	<b>Latitude, Longitude:</b>	30.510278,-95.770835(est)

The helicopter came to rest in a wooded area of the Sam Houston National Forest, at an elevation of 328 ft mean sea level on a 108° magnetic heading. All major components of the helicopter were located at the accident scene. Trees surrounding the accident site were about 70 ft tall and displayed damage consistent with a helicopter descent vector of about 40-50°. There was no post impact fire.

The fuel line between the firewall and hydro-mechanical unit (HMU) was loose and the required safety wire was not installed. All other connections were found to be secure.

Examination of the airframe and engine did not reveal any additional discrepancies.

Federal Aviation Administration inspectors from the Houston Flight Standards District Office interviewed Mountain Air's Director of Maintenance, who stated that on February 14, 2019, the USFS requested to validate the helicopter's weight and balance. The helicopter was defueled, which involved disconnecting the main fuel line. After the weight and balance were verified, the main fuel line was reconnected. The director of maintenance asked another mechanic to verify that the fuel lines were reconnected, which was reportedly accomplished. The mechanic that accomplished the work informed the operator that he "was confident" that he torqued and secured the line. There was no other maintenance work which involved opening the fuel line after that day. On February 23, 2019, the helicopter's engine would not light, and the engine's igniters and/or igniter box was replaced. A maintenance records review found that the helicopter flew about 24.9 hours after the weight and balance was conducted on February 14, 2019.

On March 25, 2019, the pilot reported to management that the fuel pressure light had "flickered" during a flight "a few days before;" the pilot turned on the fuel boost pump, turned

it off, and the light never reappeared. The pilot was informed to monitor the situation and report if it occurred again.

Following the accident, the digital engine control unit (DECU) was removed and sent to the manufacturer for data download. On April 11, 2019, the DECU was downloaded under the auspices of the FAA. The last recorded fault was a “P3 drift or engine flame out.”

## Additional Information

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### Review of Mountain Air Fleet

Following the accident, Mountain Air inspected their other helicopters, and all helicopters had the fuel lines properly secured.

## Administrative Information

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<b>Investigator In Charge (IIC):</b>	Aguilera, Jason
<b>Additional Participating Persons:</b>	Robert McGee; FAA FSDO; Houston, TX Michael Hemann; FAA Rotorcraft Directorate; Fort Worth, TX Seth Buttner; Airbus Helicopters; Grand Prairie, TX Bryan Larimore; SafranHE; Grand Prairie, TX Dwight Jones; Mountain Air Helicopters; Los Lunas, NM
<b>Report Date:</b>	December 17, 2021
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=99185">https://data.nts.gov/Docket?ProjectID=99185</a>