



Aviation Investigation Final Report

Location:	Frisco, Colorado	Accident Number:	CEN15MA290
Date & Time:	July 3, 2015, 13:39 Local	Registration:	N390LG
Aircraft:	AIRBUS HELICOPTERS INC AS350B3E	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	1 Fatal, 2 Serious
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Air Medical (Unspecified)		

Analysis

The NTSB's full report is available at <http://www.ntsb.gov/investigations/AccidentReports/Pages/AccidentReports.aspx>. The Aircraft Accident Report number is NTSB/AAR-17/01.

On July 3, 2015, about 1339 mountain daylight time, an Airbus Helicopters AS350 B3e helicopter, N390LG, registered to and operated by Air Methods Corporation, lifted off from the Summit Medical Center Heliport, Frisco, Colorado, and then crashed into a parking lot; the impact point was located 360 feet southwest of the ground-based helipad. The pilot was fatally injured, and the two flight nurses were seriously injured. The helicopter was destroyed by impact forces and a postcrash fire. The flight was conducted under the provisions of 14 Code of Federal Regulations Part 135 on a company flight plan. Visual meteorological conditions prevailed at the time of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Airbus Helicopters' dual-hydraulic AS350 B3e helicopter's (1) preflight hydraulic check, which depleted hydraulic pressure in the tail rotor hydraulic circuit, and (2) lack of salient alerting to the pilot that hydraulic pressure was not restored before takeoff. Such alerting might have cued the pilot to his failure to reset the yaw servo hydraulic switch to its correct position during the preflight hydraulic check, which resulted in a lack of hydraulic boost to the pedal controls, high pedal forces, and a subsequent loss of control after takeoff. Contributing to the accident was the pilot's failure to perform a hover check after liftoff, which would have alerted him to

the pedal control anomaly at an altitude that could have allowed him to safely land the helicopter. Contributing to the severity of the injuries was the helicopter's fuel system, which was not crash resistant and facilitated a fuel-fed postcrash fire.

Findings

Organizational issues	Equipment design - Manufacturer
Organizational issues	Design of document/info - Manufacturer
Aircraft	(general) - Design
Aircraft	Hydraulic, indicating system - Design
Personnel issues	Use of equip/system - Pilot
Personnel issues	Forgotten action/omission - Pilot
Personnel issues	Use of checklist - Pilot
Personnel issues	Aircraft control - Pilot
Personnel issues	Lack of action - Pilot
Personnel issues	Use of policy/procedure - Pilot
Aircraft	(general) - Design

Factual Information

History of Flight

Takeoff	Preflight or dispatch event
Takeoff	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)
Post-impact	Fire/smoke (post-impact)

The NTSB's full report is available at <http://www.nts.gov/investigations/AccidentReports/Pages/AccidentReports.aspx>. The Aircraft Accident Report number is NTSB/AAR-17/01.

On July 3, 2015, about 1339 mountain daylight time, an Airbus Helicopters AS350 B3e helicopter, N390LG, registered to and operated by Air Methods Corporation, lifted off from the Summit Medical Center Heliport, Frisco, Colorado, and then crashed into a parking lot; the impact point was located 360 feet southwest of the ground-based helipad. The pilot was fatally injured, and the two flight nurses were seriously injured. The helicopter was destroyed by impact forces and a postcrash fire. The flight was conducted under the provisions of 14 Code of Federal Regulations Part 135 on a company flight plan. Visual meteorological conditions prevailed at the time of the accident.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	64, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	January 12, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 22, 2015
Flight Time:	13231 hours (Total, all aircraft), 5231 hours (Total, this make and model), 13131 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AIRBUS HELICOPTERS INC	Registration:	N390LG
Model/Series:	AS350B3E	Aircraft Category:	Helicopter
Year of Manufacture:	2013	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	7595
Landing Gear Type:	High skid	Seats:	5
Date/Type of Last Inspection:	July 2, 2015 AAIP	Certified Max Gross Wt.:	5225 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	487.4 Hrs at time of accident	Engine Manufacturer:	Turbomeca
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	Arriel 2D
Registered Owner:	AIR METHODS CORP	Rated Power:	802 Horsepower
Operator:	AIR METHODS CORP	Operating Certificate(s) Held:	Rotorcraft external load (133), On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	QMLA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KCCU,12028 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	13:35 Local	Direction from Accident Site:	200°
Lowest Cloud Condition:	Scattered / 6000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	19 knots / 24 knots	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	280°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.62 inches Hg	Temperature/Dew Point:	18°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Frisco, CO (91CO)	Type of Flight Plan Filed:	Company VFR
Destination:	Gypsum, CO	Type of Clearance:	None
Departure Time:	13:38 Local	Type of Airspace:	Class G

Airport Information

Airport:	SUMMIT MEDICAL CENTER 91CO	Runway Surface Type:	Asphalt;Concrete
Airport Elevation:	9042 ft msl	Runway Surface Condition:	Dry
Runway Used:	H1	IFR Approach:	None
Runway Length/Width:	100 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Serious	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	On-ground
Total Injuries:	1 Fatal, 2 Serious	Latitude, Longitude:	39.568611,-106.079444(est)

Administrative Information

Investigator In Charge (IIC):	Rodi, Jennifer
Additional Participating Persons:	Matt Rigsby; FAA AVP-100; Washington, DC Phil Potter; FAA Denver FSDO; Denver, CO Seth Buttner; Airbus; Grand Prairie, TX Brian Larimore; Turbomeca; Grand Prairie, TX Dennis McCall; Air Methods Corporation; Denver, CO Ed Stenby; OPEIU - Local 109; Denver, CO Vincent Ecalte; BEA
Original Publish Date:	May 9, 2017
Last Revision Date:	
Investigation Class:	Class 1
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=91489

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).