

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA18LA075	01/29/2018 1725 EST	Regis# N942SC	Zebulon, GA	Apt: N/a
Acft Mk/Mdl BELL OH 58C-NO SERIES		Acft SN 68-16872	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl ROLLS ROYCE T63-A-700		Acft TT 8596	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR PUBU
Opr Name: SPALDING COUNTY SHERIFFS OFFICE	Opr dba:			Aircraft Fire: NONE
				AW Cert: NON

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## Events

1. Autorotation - Loss of engine power (total)

## Narrative

On January 29, 2018, about 1725 eastern standard time, a Bell OH-58C, N942SC, operated by the Spalding County Sheriff's Department, was substantially damaged during a hard landing after a loss of engine power near Zebulon, Georgia. The flight instructor and the student pilot were not injured. Visual meteorological conditions prevailed, and no flight plan was filed for the public use instructional flight.

In written statement and a telephone interview, the flight instructor stated the purpose of the flight was to provide flight training to a sheriff's department detective. He said that the accident occurred at the completion of the 5th simulated engine failure of the flight. When the throttle was advanced for the power recovery, the engine accelerated and the engine and rotor tachometer needles "joined" in the normal operating range of the dual engine/rotor tachometer.

Once normal operating rpm was achieved for the engine and rotor, the flight instructor initiated a climb. Approximately "4 to 5 seconds" into the climb about 25 knots and 125 ft above ground level, the engine stopped producing power. The flight instructor selected a field and completed the forced landing. He said that due to "low rotor rpm" he performed an aggressive flare to build rpm and cushion the landing. The tail of one skid along with the tail stinger struck the ground and the main rotor contacted the tailboom before the helicopter came to rest upright.

The flight instructor held a commercial pilot certificate with ratings for airplane single engine land, rotorcraft-helicopter, and instrument airplane and helicopter. He held a flight instructor certificate with the same ratings. His most recent Federal Aviation Administration (FAA) third-class medical certificate was issued March 22, 2016. The flight instructor estimated he had 5,800 total hours of flight experience of which 200 hours were in the OH-58C.

The helicopter was manufactured in 1968 for the United States Army and was acquired by the Spalding County Sheriff's Department for public use. It was maintained under an annual inspection program. The most recent annual inspection was completed July 14, 2017 at 8,596 total aircraft hours and had accrued 56.9 hours since that date.

At 1755, the weather reported at Griffin-Spalding County Airport (6A2), 6 miles northeast of the accident site included clear skies, 10 miles visibility, and winds from 350ø at 8 knots gusting to 19 knots. The temperature was 14ø C, the dew point was -7ø C, and the altimeter setting was 30.08 inches of mercury.

The wreckage was examined at the accident site by an FAA inspector and all major components were accounted for at the scene. Examination of photographs revealed substantial damage to the tailboom near the fuselage (buckling) and evidence of a strike to the tail rotor driveshaft cover. Continuity of flight and engine controls was confirmed by an airframe and powerplant mechanic. The helicopter was retained for further examination.

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Accident Rpt# DCA17FA021 10/28/2016 0 Regis# N345AN Chicago, IL Apt: Chicago O'hare International A KORD  
Acft Mk/Mdl BOEING 767-323 Acft SN N345AN Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl GENERAL ELECTRIC CF6-80C2 B6 Fatal 0 Ser Inj 1 Flt Conducted Under: FAR 121  
Opr Name: AMERICAN AIRLINES INC Opr dba: Aircraft Fire: GRD

## Summary

NTSB investigators traveled in support of this investigation and used data obtained from various sources to prepare this aircraft accident report.

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-18/01.

On October 28, 2016, about 1432 central daylight time, American Airlines flight 383, a Boeing 767-323, N345AN, had started its takeoff ground roll at Chicago O'Hare International Airport, Chicago, Illinois, when an uncontained engine failure in the right engine and subsequent fire occurred. The flight crew aborted the takeoff and stopped the airplane on the runway, and the flight attendants initiated an emergency evacuation. Of the 2 flight crewmembers, 7 flight attendants, and 161 passengers on board, 1 passenger received a serious injury and 1 flight attendant and 19 passengers received minor injuries during the evacuation. The airplane was substantially damaged from the fire. The airplane was operating under the provisions of 14 Code of Federal Regulations Part 121. Visual meteorological conditions prevailed at the time of the accident.

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The failure of the high-pressure turbine (HPT) stage 2 disk, which severed the main engine fuel feed line and breached the right main wing fuel tank, releasing fuel that resulted in a fire on the right side of the airplane during the takeoff roll. The HPT stage 2 disk failed because of low-cycle fatigue cracks that initiated from an internal subsurface manufacturing anomaly that was most likely not detectable during production inspections and subsequent in service inspections using the procedures in place. Contributing to the serious passenger injury was (1) the delay in shutting down the left engine and (2) a flight attendant's deviation from company procedures, which resulted in passengers evacuating from the left overwing exit while the left engine was still operating. Contributing to the delay in shutting down the left engine was (1) the lack of a separate checklist procedure for Boeing 767 airplanes that specifically addressed engine fires on the ground and (2) the lack of communication between the flight and cabin crews after the airplane came to a stop.

## Events

1. Takeoff-rejected takeoff - Uncontained engine failure
2. Other - Fire/smoke (non-impact)
3. Other - Evacuation

## Findings - Cause/Factor

1. Aircraft-Aircraft power plant-Engine (turbine/turboprop)-Turbine section-Failure - C
2. Aircraft-Aircraft systems-Fuel system-(general)-Damaged/degraded
3. Personnel issues-Task performance-Use of equip/info-Use of policy/procedure-Cabin crew - F
4. Personnel issues-Action/decision-Action-Delayed action-Flight crew - F
5. Personnel issues-Task performance-Communication (personnel)-Lack of communication-Flight crew - F
6. Personnel issues-Task performance-Communication (personnel)-Lack of communication-Cabin crew - F
7. Organizational issues-Development-Manufacture/production-Equipment manufacture-Manufacturer - C
8. Organizational issues-Development-Design-Task design-Manufacturer - F

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