



National Transportation Safety Board Aviation Accident Final Report

Location:	DEVILS TOWER, WY	Accident Number:	DEN83LA132
Date & Time:	06/01/1983, 1600 MDT	Registration:	N80711
Aircraft:	BELL 47G3-B1	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE ACFT CRASH LANDED IN TREES AFTER THE ENGINE LOST POWER. THE HELICOPTER WAS BEING USED IN AERIAL APPLICATION AT THE TIME OF THE ACCIDENT. THE OPERATION WAS BEING DONE IN 8 MINUTE SEGMENTS. EVERY 8 MINUTES THE HELICOPTER LANDED FOR A RELOAD OF HERBICIDE. AT ABOUT 1430-1500 HOURS THE ACFT WAS REFUELED WITH 29 GALLONS OF 100 OCTANE FUEL. AT 1600 HOURS THE ENGINE CEASED OPERATION 3 MINUTES AFTER A TAKEOFF. THE ACFT WAS AT 50 FT AGL GOING ABOUT 30 MPH. THERE WAS NO CLEAR AREA FOR A LANDING SO THE PILOT AUTOROTATED INTO TREES. THE ACFT HAS AN ENDURANCE OF ABOUT ONE AND ONE HALF HOURS. DURING THE FIRST INTERVIEW THE PILOT SAID THE ACFT RAN OUT OF FUEL. NO FUEL WAS ABOARD THE ACFT AFTER THE ACCIDENT. THE PILOT LATER FOUND AN AN FITTING WAS LOOSE ON THE GAS TANK SUMP DRAIN. HE SAID IT WAS NOT LEAKING WHEN THE ACFT WAS REFUELED. THE PILOT FOUND AN AREA OF LEAKED FUEL WHICH HE ESTIMATED AT 5 GALLONS NEAR THE SUMP DRAIN. THE ACFT HAS ONLY ONE FUEL TANK AND IT CONTAINS 2 UNUSABLE GALLONS OF FUEL.

Probable Cause and Findings

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

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) FLUID,FUEL - EXHAUSTION
 2. (C) FUEL SUPPLY - INADEQUATE - PILOT IN COMMAND
 3. (F) FUEL SYSTEM,DRAIN - LOOSE
 4. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

5. (F) AUTOROTATION - PERFORMED - PILOT IN COMMAND
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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

6. (F) OBJECT - TREE(S)

Factual Information

Pilot Information

Certificate:	Commercial	Age:	36, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	04/21/1983
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	5550 hours (Total, all aircraft), 4570 hours (Total, this make and model), 5250 hours (Pilot In Command, all aircraft), 10 hours (Last 90 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N80711
Model/Series:	47G3-B1 47G3-B1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Restricted	Serial Number:	3815
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	04/27/1983, 100 Hour	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	16 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3607 Hours	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	IVO-435
Registered Owner:	AGRI HELICOPTERS	Rated Power:	260 hp
Operator:	AGRI HELICOPTERS	Operating Certificate(s) Held:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 0 ft agl	Visibility	50 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	24° C / 4° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1557 MDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	FRED R WINNINGHAM	Report Date:	
Additional Participating Persons:			
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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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](#).