



Aviation Investigation Final Report

Location:	MINNEAPOLIS, Minnesota	Accident Number:	CHI88LA108
Date & Time:	May 7, 1988, 12:25 Local	Registration:	N9487F
Aircraft:	HUGHES 269B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

THE PILOT WAS EXECUTING A DOWNWIND TAKEOFF, THE WINDS REPORTEDLY GUSTING TO 25 KNOTS, LOADED WITH TWO PASSENGERS, WHEN JUST AFTER TAKEOFF THE PILOT STATED THE HELICOPTER EXPERIENCED A LOSS OF POWER. THE PILOT THEN ATTEMPTED TO EXECUTE AN AUTOROTATION, BUT DURING THE EMERGENCY DESCENT THE PILOT WAS UNABLE TO MAINTAIN DIRECTIONAL CONTROL. AS A RESULT THE HELICOPTER STRUCK A MOVING VEHICLE WITH ITS TAIL ROTOR AND SUBSEQUENTLY COLLIDED WITH THE TERRAIN. THE HELICOPTER WAS APPROXIMATELY 130 LBS UNDER GROSS WT AT THE TIME OF TAKEOFF. WHEN EXAMINED AND TESTED THE ENGINE OPERATED NORMALLY AND NO MECHANICAL MALFUNCTIONS WERE FOUND. EXAMINATION OF THE ENGINE DID REVEAL THAT A FUEL NOZZLE HAD BEEN INSTALLED IN THE AIRCRAFT'S FUEL SYSTEM WITH A RESTRICTOR MISSING BUT TO COMPENSATE FOR THE MISSING RESTRICTOR THE FUEL SERVO IDLE MIXTURE WAS SET AT A VERY LEAN SETTING. THIS WAS DETERMINED NOT TO BE A FACTOR IN THE ACCIDENT.

Probable Cause and Findings

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

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND
2. (F) WEATHER CONDITION - TAILWIND
3. (F) WEATHER CONDITION - GUSTS
4. (C) WIND INFORMATION - DISREGARDED - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Findings

5. AUTOROTATION - INITIATED - PILOT IN COMMAND
6. (C) ADEQUATE ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

7. TERRAIN CONDITION - GRASS
8. (F) TERRAIN CONDITION - DOWNHILL
9. OBJECT - VEHICLE

Factual Information

Pilot Information

Certificate:	Commercial	Age:	46, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	May 28, 1987
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1543 hours (Total, all aircraft), 542 hours (Total, this make and model), 1285 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HUGHES	Registration:	N9487F
Model/Series:	269B 269B	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	270313
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	October 15, 1987 Annual	Certified Max Gross Wt.:	1670 lbs
Time Since Last Inspection:	47 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2230 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	H10-360-A1A
Registered Owner:	WARNER AVIATION	Rated Power:	180 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MSP ,841 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	12:50 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 4000 ft AGL	Visibility	
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	17 knots / 25 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	23°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BEHTEL COLLEGE , MN	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	12:20 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Grass/turf
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	45.080352,-93.190139(est)

Administrative Information

Investigator In Charge (IIC):	Dinwiddie, Carl
Additional Participating Persons:	ROBERT TURNER; MINNEAPOLIS , MN MIRLO E OCHOA; WEST CHICAGO , IL
Original Publish Date:	June 7, 1989
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=14072

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