



Aviation Investigation Final Report

Location:	PLAINVIEW, Minnesota	Accident Number:	CHI98LA291
Date & Time:	July 30, 1998, 16:30 Local	Registration:	N90529
Aircraft:	Bell 47G-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported he was in a 'hard right hand ag turn' when the engine lost power. The helicopter impacted the terrain hard during the resulting landing. Inspection of the helicopter revealed it was low on fuel 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: The pilot's not achieving the proper descent rate prior to touchdown. A factor related to the accident was fuel starvation due to a low fuel level.

Findings

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

Findings

1. (F) FLUID,FUEL - LOW LEVEL
2. (F) FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING

Occurrence #3: HARD LANDING

Phase of Operation: EMERGENCY LANDING

Findings

3. PROPER DESCENT RATE - NOT OBTAINED - PILOT IN COMMAND

Factual Information

On July 30, 1998, at 1630 central daylight time, a Bell 47G-2, N90529, sustained substantial damage when it impacted the terrain following a loss of engine power while maneuvering near Plainview, Minnesota. Visual meteorological conditions prevailed at the time of the accident. The pilot reported no injuries. The 14 CFR Part 137 aerial application flight was not operating on a flight plan. The local flight departed from a field near Plainview, Minnesota.

The pilot reported he was in a "hard right hand ag turn" when the engine lost power. The helicopter impacted the terrain hard during the resulting landing.

Post accident inspection of the helicopter by inspectors from the Federal Aviation Administration Minneapolis, Minnesota, Flight Standards District Office revealed the helicopter was low on fuel.

Pilot Information

Certificate:	Commercial	Age:	29, Male
Airplane Rating(s):	None	Seat Occupied:	Center
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	March 1, 1998
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1215 hours (Total, all aircraft), 250 hours (Total, this make and model), 1100 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N90529
Model/Series:	47G-2 47G-2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	NT1958-1
Landing Gear Type:	Skid	Seats:	1
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	2850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	VO-435
Registered Owner:	NORTHLAND HELICOPTERS, INC.	Rated Power:	
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:	SCOTT'S HELICOPTER SERVICES	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	RST ,1317 ft msl	Distance from Accident Site:	22 Nautical Miles
Observation Time:	16:54 Local	Direction from Accident Site:	225°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	22°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	44.160324,-92.159088(est)

Administrative Information

Investigator In Charge (IIC):	Carlson, Todd
Additional Participating Persons:	ROLLAND SCHNEIDER; MINNEAPOLIS , MN
Original Publish Date:	January 28, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=43630

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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](#).