



Aviation Investigation Final Report

Location:	APPLE SPRINGS, Texas	Accident Number:	FTW84LA376
Date & Time:	August 30, 1984, 11:00 Local	Registration:	N48930
Aircraft:	HUGHES 269A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

AFTER DISPENSING A LOAD OF GELLED GASOLINE, TO BURN WINDROWS OF BRUSH, THE PLT LANDED & REFILLED THE CHEMICAL TANK. BEFORE TAKING OFF, HE CHECKED HIS FUEL WITH A DIP STICK & DECIDED THERE WAS ENOUGH REMAINING TO DISPENSE A 2ND LOAD. WHILE FLYING DOWNWIND & DISPENSING AT ABOUT 15 FT OVER A WINDROW, THE ENG LOST POWER FROM FUEL EXHAUSTION. SUBSEQUENTLY, THE HELICOPTER LANDED HARD ON SOFT TERRAIN, THE RIGHT SKID DUG IN & THE ACFT ROLLED OVER. THE PLT STATED THAT HE SHOULD HAVE USED TIME AS A MEASUREMENT OF FUEL INSTEAD OF COMPARING IT TO GEL USE. HE HAD FLOWN ABOUT 3 HRS WITHOUT REFUELING.

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) FUEL CONSUMPTION CALCULATIONS - INACCURATE - PILOT IN COMMAND
2. (C) FLUID,FUEL - EXHAUSTION
3. (C) FUEL SUPPLY - MISJUDGED - PILOT IN COMMAND

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

Findings

4. AUTOROTATION - PERFORMED - PILOT IN COMMAND

Occurrence #3: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Occurrence #4: ROLL OVER
Phase of Operation: LANDING

Findings

5. (F) TERRAIN CONDITION - SOFT

Factual Information

Pilot Information

Certificate:	Commercial	Age:	31, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	September 16, 1983
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1905 hours (Total, all aircraft), 52 hours (Total, this make and model), 1796 hours (Pilot In Command, all aircraft), 102 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HUGHES	Registration:	N48930
Model/Series:	269A 269A	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	1210033
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1575 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-360-C2D
Registered Owner:	CUSTOM AIR SERVICE	Rated Power:	180 Horsepower
Operator:		Operating Certificate(s) Held:	
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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	225°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	31°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:	Dirt
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	31.260105,-94.96923(est)

Administrative Information

Investigator In Charge (IIC):	Johnson, J
Additional Participating Persons:	OTIS KEY; HOUSTON , TX
Original Publish Date:	
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=21451

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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](#).