



Aviation Investigation Final Report

Location:	Minden, Nebraska	Accident Number:	CEN10LA408
Date & Time:	July 18, 2010, 20:50 Local	Registration:	N410JM
Aircraft:	Schweizer 269C	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While en route to the destination airport, the pilot began detecting heavy vibrations emanating from the helicopter. He performed a scan of the engine instruments, all of which indicated that it was operating within the normal ranges. Unsure of the malfunction, the pilot elected to perform a cautionary autorotation to a plowed field. During the autorotation, the pilot landed hard and the helicopter subsequently rolled over. During the touchdown sequence the helicopter incurred substantial damage. A postaccident examination of the airframe and engine did not reveal any evidence of a preimpact anomaly.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate flare during an autorotation, which resulted in a hard landing and subsequent rollover.

Findings

Aircraft	(general) - Not attained/maintained
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Factual Information

History of Flight

Enroute	Unknown or undetermined
Autorotation	Off-field or emergency landing
Autorotation	Loss of control in flight (Defining event)
Autorotation	Hard landing
Landing-flare/touchdown	Roll over

On July 8, 2010, approximately 2050 central daylight time, a Schweizer 269C, N410JM, was substantially damaged upon impact with terrain during a precautionary landing near Minden, Nebraska. The private pilot and one passenger were not injured. Visual conditions prevailed and no flight plan was filed for the Title 14 Code of Federal Regulations Part 91 personal flight. The local flight departed Pioneer Village Field (0V3), Minden, Nebraska, at approximately 2000.

According to a written statement provided by the pilot, the helicopter was approximately four miles from 0V3, at an altitude of 2,550 feet mean sea level, when the helicopter began producing vibrations. The pilot described the vibrations as "heavy" and at a "slow frequency." A scan of the engine instruments did not reveal any abnormalities with the helicopter, although the gages were difficult to read due to the heavy vibrations. The pilot chose to perform a precautionary autorotation to a field. Prior to touchdown, the pilot increased his flare in order to reduce ground-run. The helicopter made a hard impact with the ground and rolled before coming to rest on the helicopter's left side.

An inspector from the local Federal Aviation Administration (FAA) examined the helicopter and engine. The inspector did not find any signature of pre-impact failure or malfunction of any component.

Pilot Information

Certificate:	Private	Age:	44, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
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 Without waivers/limitations	Last FAA Medical Exam:	April 19, 2010
Occupational Pilot:		Last Flight Review or Equivalent:	July 29, 2009
Flight Time:	574 hours (Total, all aircraft), 341 hours (Total, this make and model), 407 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schweizer	Registration:	N410JM
Model/Series:	269C	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	S1906
Landing Gear Type:	High skid	Seats:	3
Date/Type of Last Inspection:	February 18, 2010 100 hour	Certified Max Gross Wt.:	2050 lbs
Time Since Last Inspection:	35 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1482 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	HIO-360-D1A
Registered Owner:	DAKOTA EQUIPMENT SALES AND LEASING LLC	Rated Power:	190 Horsepower
Operator:	DAKOTA EQUIPMENT SALES AND LEASING LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	KEAR,2131 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	20:55 Local	Direction from Accident Site:	332°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	24°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Minden, NE (0V3)	Type of Flight Plan Filed:	None
Destination:	Minden, NE (0V3)	Type of Clearance:	None
Departure Time:	20:00 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	40.499046,-98.949241(est)

Administrative Information

Investigator In Charge (IIC):	Aguilera, Jason
Additional Participating Persons:	Robert Wiley; FAA FSDO; Lincoln, NE
Original Publish Date:	April 7, 2011
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=76671

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