



# Aviation Investigation Final Report

<b>Location:</b>	Lorain, Ohio	<b>Accident Number:</b>	IAD02LA033
<b>Date &amp; Time:</b>	February 19, 2002, 15:10 Local	<b>Registration:</b>	N9296F
<b>Aircraft:</b>	Hughes 269C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The accident occurred during the pilot's second solo takeoff in a helicopter, and his first takeoff from a platform. After quickly lifting off, the helicopter began a 360-degree "aggravated spin" to the right. The pilot then "chopped" the throttle and the collective, and the helicopter "dropped fast." The helicopter impacted the platform, then rolled onto its left side and impacted the ground. Examination of the helicopter revealed no mechanical discrepancies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain directional control during takeoff.

## Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: TAKEOFF

### Findings

1. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND  
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

Findings

2. TERRAIN CONDITION - GROUND

## Factual Information

On February 19, 2002, at 1510 eastern standard time, a Hughes 269C helicopter, N9296F, was substantially damaged during a takeoff attempt from a platform at the Lorain County Regional Airport (LPR), Lorain, Ohio. The certificated private pilot was not injured. Visual meteorological conditions prevailed, and no flight plan was filed for the instructional flight conducted under 14 CFR Part 91.

In a telephone interview, the pilot reported that during the takeoff, he lifted the helicopter "quickly" off the platform. As the helicopter gained altitude, it began a turn to the right, and the pilot applied left pedal. As the pilot continued to increase the collective, the helicopter began a 360-degree "aggravated spin" to the right.

The pilot then "chopped" the throttle and the collective, and the helicopter "dropped fast." He added a slight amount of collective before landing, and the spin to the right became more aggravated. The helicopter then impacted the platform, and rolled over, onto its side.

Several witnesses observed the helicopter "spinning" after liftoff from the platform, then impact the ground on its left side.

A Federal Aviation Administration (FAA) inspector examined the helicopter after the accident. The tail rotor blades were rotated by hand and control continuity was confirmed to the main rotor blades. Control continuity was also confirmed from the cyclic and collective to the main rotor blades, and from the pedals to the tail rotor blades. All belts in the tail boom pulley assembly were in place, and the tail rotor drive shaft was twisted aft of the upper pulley assembly. The clutch switch and actuator were observed in the engaged position, and the belt tension pulley was engaged. The magneto switch was observed in the "both" position. Substantial damage was observed to the main rotor and tail rotor blades.

The pilot reported 173 hours of total flight experience, and 30 hours of rotary wing flight time. He had 10 flight hours in make and model, and this was his second solo takeoff, and first time taking off from a platform.

The winds reported at the airport, at 1453, were from 160 degrees at 8 knots.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	48, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical—no waivers/lim.	<b>Last FAA Medical Exam:</b>	October 9, 2001
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	November 15, 2000
<b>Flight Time:</b>	173 hours (Total, all aircraft), 10 hours (Total, this make and model), 42 hours (Pilot In Command, all aircraft), 14 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Hughes	<b>Registration:</b>	N9296F
<b>Model/Series:</b>	269C	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	350407
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	December 27, 2001 100 hour	<b>Certified Max Gross Wt.:</b>	2050 lbs
<b>Time Since Last Inspection:</b>	21.9 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2053.2 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	RL-21866-51A
<b>Registered Owner:</b>	Rapidturn Inc.	<b>Rated Power:</b>	190 Horsepower
<b>Operator:</b>	Hurst Aviation	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	LPR,793 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 7000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	160°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.04 inches Hg	<b>Temperature/Dew Point:</b>	7°C / -3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(LPR)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(LPR)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Lorain County Regional Airport LPR	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	793 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	41.344165,-82.177497

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Andrews, Jill
<b>Additional Participating Persons:</b>	Jose Borges; Federal Aviation Administration; Cleveland, OH
<b>Original Publish Date:</b>	April 8, 2003
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=54212">https://data.nts.gov/Docket?ProjectID=54212</a>

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