



# Aviation Investigation Final Report

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<b>Location:</b>	Las Vegas, Nevada	<b>Accident Number:</b>	WPR12CA100
<b>Date &amp; Time:</b>	February 11, 2012, 12:00 Local	<b>Registration:</b>	N20536
<b>Aircraft:</b>	Schweizer 269C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of tail rotor effectiveness	<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

During an introductory helicopter training flight, the instructor attempted to demonstrate a hovering maneuver around a point on the ground. The wind at the time of the accident was estimated by the instructor to be 15 to 20 knots from the south. During the maneuver, when the helicopter was nearly headed downwind, the instructor lost control of the helicopter and it started to rotate in an uncontrollable right yaw. The instructor reported that the helicopter continued to spin until hitting the ground and rolling over about 300 feet from the initiation of the loss of control. The helicopter sustained substantial damage to the tailboom and main rotor drive system. The reported wind at the time of departure was from 180 degrees at 18 knots, gusting to 25 knots. The instructor reported no mechanical malfunctions prior to the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate compensation for the known wind conditions during a hovering maneuver, which resulted in a loss of tail rotor effectiveness and directional control.

## Findings

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<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Tailwind - Effect on equipment
<b>Environmental issues</b>	Tailwind - Response/compensation
<b>Aircraft</b>	Directional control - Not attained/maintained

## Factual Information

### History of Flight

<b>Maneuvering-hover</b>	Loss of tail rotor effectiveness (Defining event)
<b>Maneuvering-hover</b>	Loss of control in flight
<b>Maneuvering-hover</b>	Collision with terr/obj (non-CFIT)

### Flight instructor Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	52, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	August 18, 2010
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 29, 2010
<b>Flight Time:</b>	233 hours (Total, all aircraft), 42 hours (Total, this make and model), 170 hours (Pilot In Command, all aircraft), 1 hours (Last 90 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Schweizer	<b>Registration:</b>	N20536
<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>	S1818
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	January 14, 2012 100 hour	<b>Certified Max Gross Wt.:</b>	1946 lbs
<b>Time Since Last Inspection:</b>	77 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5109 Hrs as of last inspection	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	HIO-360-D1A
<b>Registered Owner:</b>	L J AIR CORP	<b>Rated Power:</b>	205 Horsepower
<b>Operator:</b>	Airworks 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>	VGT,2205 ft msl	<b>Distance from Accident Site:</b>	9 Nautical Miles
<b>Observation Time:</b>	11:53 Local	<b>Direction from Accident Site:</b>	125°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	18 knots / 25 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.79 inches Hg	<b>Temperature/Dew Point:</b>	21°C / -3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	North Las Vegas, NV (VGT)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	North Las Vegas, NV (VGT)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:30 Local	<b>Type of Airspace:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Minor	<b>Latitude, Longitude:</b>	36.295833,-115.338333(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Jones, Patrick
<b>Additional Participating Persons:</b>	Gary Cambell; Federal Aviation Administration; Las Vegas, NV
<b>Original Publish Date:</b>	April 20, 2012
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=82867">https://data.nts.gov/Docket?ProjectID=82867</a>

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