Aviation Investigation Final Report

Location:	SANTA CLARITA, California	**Accident Number:**	LAX00LA226
Date & Time:	June 14, 2000, 09:15 Local	**Registration:**	N9692F
Aircraft:	Hughes 269C	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The helicopter touched down on the downside portion of a hill, struck a tree, and became inverted. The purpose of the flight was to conduct a new hire checkout. The purpose of the landing was to retrieve a door that had come off in flight the day prior to the accident. During the approach for landing the new hire pilot performed a high and low reconnaissance of the area. This was to check for wind direction and verify the landing area was clear of obstructions. About 100 feet from the intended touchdown point, the wind changed direction and became a tailwind. He attempted to compensate for the loss of altitude by increasing power, but the engine did not have enough power. The helicopter was still controllable with full left rudder. The helicopter started to settle and the engine and rotor rpm were decaying. When the new hire attempted to fly down hill to regain rpm, he felt resistance on the controls, but did not recall the check pilot indicating that he was going to take the controls. The check pilot instructed the other pilot to verify his rpm and verbalized that he was taking the flight controls. He attempted to perform a low rpm recovery. He reduced the collective and rolled on the throttle. However, he noted that the throttle was already in the full on position. He attempted to recover rpm by moving the collective up and down to clear the ridgeline. The helicopter continued to settle and landed hard. No discrepancies were noted with engine power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Settling with power precipitated by a wind direction change during the approach to land sequence and the check pilot's delayed remedial action to correct the event. Factors in the accident were crew resource management coordination concerning flight control authority and unsuitable terrain for landing.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. WEATHER CONDITION - VARIABLE WIND
2. (C) SETTLING WITH POWER - ENCOUNTERED - PILOT IN COMMAND(CFI)
3. (C) REMEDIAL ACTION - DELAYED - CHECK PILOT
4. (F) CREW/GROUP COORDINATION - NOT COORDINATED/DISSEMINATED - FLIGHTCREW

Occurrence #2: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
5. (F) TERRAIN CONDITION - NONE SUITABLE

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

Factual Information

On June 14, 2000, at 0915 hours Pacific daylight time, a Hughes 269C, N9692F, rolled over after encountering settling with power while attempting to land in the Newhall Pass, near Santa Clarita, California. The helicopter, operated by King Aviation Centers as a new hire instructor checkout flight under the provisions of 14 CFR Part 91, sustained substantial damage. The airline transport pilot/owner (check pilot) and the certified flight instructor were not injured. Visual meteorological conditions existed for the flight, and no flight plan was filed. The flight originated from the Van Nuys Airport, Van Nuys, California, at 0900, and was scheduled to terminate at Van Nuys.

The check pilot stated that the purpose of the flight was to conduct a new hire instructor checkout for the company, and for insurance requirements. On a training flight the day before the accident, the accident helicopter had lost a door. On the accident flight, he and the other pilot were attempting to locate the door.

The preflight, start, and before takeoff procedures were performed per the checklist with no discrepancies noted. The check pilot indicated that the weather at Van Nuys was hazy with calm winds and a temperature of 70 degrees Fahrenheit. After entering the Newhall Pass, they found the winds to be variable, gusting from 5 knots to 15 knots, with light turbulence, and a temperature "in excess of 90 [Fahrenheit]."

After locating the area where the door had been lost, the check pilot directed the new hire pilot to land. He stated that the new hire was going to conduct a pinnacle landing. This included a high and low reconnaissance of the landing area. After identifying winds from the southwest, the new hire initiated an approach to the ridgeline. The check pilot stated that approximately 100 feet from the intended touchdown point, the "wind suddenly changed direction becoming north-northeast . . . ." The helicopter was still controllable with full left pedal. He noted that the helicopter had begun to settle and that engine and rotor rpm's were decaying.

The check pilot took the controls from the other pilot to perform a low rpm recovery. This required reducing the collective and rolling "ON" the throttle; however, he noted that the throttle was already in the full on position. In an attempt to recover the rpm, he started "pumping" the collective in order to gain enough rpm to clear the ridgeline. The helicopter continued to settle and he was unable to regain rpm. The pilot stated that he had two options; one was to settle vertically on the ridge, or to land downhill on the other side. He chose the second option. After landing, the helicopter came to a sudden stop and rolled over on its left side after the main rotor blades contacted a tree. The pilot stated that there were no engine power discrepancies during the accident sequence.

A deputy from Los Angeles Sheriff's department interviewed both pilots. The new hire stated

that when he started to descend for landing the helicopter experienced a "strong tailwind." They were unable to maintain altitude due to the "downwash." He attempted to compensate for the loss of altitude by increasing power to the helicopter, but the engine did not have enough power.

The check pilot stated that the wind was blowing from the southwest; the new hire turned the helicopter into the wind and started to descend. The descent was into a "canyon area" and the check pilot noted that the wind direction changed rapidly in this environment. The helicopter lost lift. A power increase was attempted; however, there was not enough power to compensate for the loss of altitude, and the helicopter landed hard.

A Federal Aviation Administration (FAA) inspector interviewed both pilots. The new hire stated that he had set up for a landing into the wind. When he got closer to the ground he felt the helicopter lose lift and determined that the wind had shifted to a tailwind. He added power and flew forward, to the left, down a hill to regain airspeed. The new hire stated that as the helicopter started to fly down the hill, he felt resistance on the controls. He determined that the check out pilot was lowering the collective to land. The new hire stated that the check pilot did not tell him he was taking the controls.

The check pilot stated that he told the other pilot to verify rpm because it was decaying and to do something about it. He further stated that he verbalized that he was taking the controls from the other pilot.

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	40,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	March 19, 1999
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	3254 hours (Total, all aircraft), 303 hours (Total, this make and model), 3098 hours (Pilot In Command, all aircraft), 98 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	**Registration:**	N9692F
Model/Series:	269C 269C	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	200892
Landing Gear Type:	Skid	**Seats:**	2
Date/Type of Last Inspection:	February 2, 2000 100 hour	**Certified Max Gross Wt.:**	2050 lbs
Time Since Last Inspection:	32 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	7451 Hrs	**Engine Manufacturer:**	Lycoming
ELT:		**Engine Model/Series:**	IO-360-D1A
Registered Owner:	TWINAIR, INC.	**Rated Power:**	190 Horsepower
Operator:	MAX & ENE'S AEROPLANES CO, INC	**Operating Certificate(s) Held:**	None
Operator Does Business As:	KING AVIATION CENTERS	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	VNY ,799 ft msl	**Distance from Accident Site:**	15 Nautical Miles
Observation Time:	09:51 Local	**Direction from Accident Site:**	140°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	120°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	81°C / 66°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(VNY)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	09:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Cornejo, Tealeye
Additional Participating Persons:	GARY BARNARD; VAN NUYS , CA
Original Publish Date:	August 21, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=49436