



Aviation Investigation Final Report

Location:	Morgantown, West Virginia	Accident Number:	ERA09CA367
Date & Time:	June 24, 2009, 00:30 Local	Registration:	N106HN
Aircraft:	Eurocopter AS 350 B2	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

About 1.5 hours after beginning an introductory instructional flight in the use of night vision goggles (NVGs), the pilot and the flight instructor returned to the airport to practice autorotations from a hover. After establishing the helicopter in a 3-foot hover, the flight instructor moved the fuel flow control lever toward the idle cutoff position. The pilot responded by increasing collective pitch, and the helicopter began to ascend, and as a result, the rotor rpm decayed. The flight instructor attempted to apply corrective action, but the pilot physically resisted his efforts. The helicopter descended rapidly to the ground, resulting in substantial damage to the tailboom. The pilot noted that during the maneuver, he had misjudged the helicopter's height above the ground, due to the decreased peripheral vision afforded by the NVGs. This was the pilot's first flight operating with NVGs.

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 control of the helicopter during the practice hovering autorotation. Contributing to the accident was the pilot's lack of experience in night vision goggle helicopter operations.

Findings

Personnel issues	Total experience w/ equipment - Pilot
Aircraft	(general) - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Autorotation	Loss of control in flight (Defining event)
Landing	Hard landing

Flight instructor Information

Certificate:	Airline transport; Commercial; Flight instructor; Private	Age:	53, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	November 24, 2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 12, 2009
Flight Time:	8869 hours (Total, all aircraft), 650 hours (Total, this make and model), 4947 hours (Pilot In Command, all aircraft), 55 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor; Private	Age:	33, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	December 11, 2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 20, 2009
Flight Time:	2664 hours (Total, all aircraft), 147 hours (Total, this make and model), 2492 hours (Pilot In Command, all aircraft), 72 hours (Last 90 days, all aircraft), 29 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Eurocopter	Registration:	N106HN
Model/Series:	AS 350 B2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2818
Landing Gear Type:	High skid	Seats:	6
Date/Type of Last Inspection:	June 23, 2009 AAIP	Certified Max Gross Wt.:	4960 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	8113 Hrs at time of accident	Engine Manufacturer:	TURBOMECA
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	ARRIEL 1SER
Registered Owner:	GE BUSINESS FINANCIAL SERVICES INC	Rated Power:	681 Horsepower
Operator:	Air Methods Corporation Inc.	Operating Certificate(s) Held:	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Morgantown, WV (MGW)	Type of Flight Plan Filed:	Company VFR
Destination:	Morgantown, WV (MGW)	Type of Clearance:	None
Departure Time:	23:40 Local	Type of Airspace:	

Airport Information

Airport:	Morgantown Municipal Airport MGW	Runway Surface Type:	
Airport Elevation:	1248 ft msl	Runway Surface Condition:	
Runway Used:		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:	39.642776,-79.916114

Administrative Information

Investigator In Charge (IIC):	Diaz, Dennis
Additional Participating Persons:	John Riggs; FAA/FSDO; Charleston, WV
Original Publish Date:	September 30, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=74132

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