



Aviation Investigation Final Report

Location:	Marana, Arizona	Accident Number:	WPR10CA028
Date & Time:	October 22, 2009, 09:15 Local	Registration:	N105LN
Aircraft:	Eurocopter AS 350 B3	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

During a practice hovering autorotation the helicopter impacted terrain, which resulted in substantial damage to the tailboom. The left seat check pilot who was giving instruction to the right seat pilot reported that a clear, flat area had been identified for hovering autorotation practice. After being briefed by the check pilot, the right seat pilot brought the helicopter up to a 3- to 5-foot hover. The check pilot stated, "I reminded the pilot that he would retard the throttle. [The] aircraft drifted up to less than 10 feet, [and] before I could correct the altitude deviation the [right seat] pilot aggressively retarded the throttle. The aircraft was allowed to settle to approximately 4 feet before the collective pull was initiated, but I was unable to sufficiently arrest the descent." An examination of the helicopter by a Federal Aviation Administration airworthiness inspector revealed that the tailboom had been wrinkled as a result of the impact with terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The improper use of the throttle by the pilot receiving instruction, and the check pilot's inadequate supervision and delayed remedial action, which resulted in the collision with terrain.

Findings

Aircraft	(general) - Incorrect use/operation
Personnel issues	Aircraft control - Pilot
Personnel issues	Delayed action - Instructor/check pilot

Factual Information

History of Flight

Maneuvering	Simulated/training event
Autorotation	Attempted remediation/recovery
Landing-flare/touchdown	Hard landing (Defining event)

Flight instructor Information

Certificate:	Commercial	Age:	40, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	July 13, 2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 18, 2009
Flight Time:	4500 hours (Total, all aircraft), 400 hours (Total, this make and model)		

Pilot Information

Certificate:	Commercial	Age:	61, Male
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):		Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 2	Last FAA Medical Exam:	January 14, 2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:			

Pilot Information

Certificate:	Airline transport; Commercial	Age:	60, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	January 14, 2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 14, 2009
Flight Time:	12000 hours (Total, all aircraft), 500 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Eurocopter	Registration:	N105LN
Model/Series:	AS 350 B3	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3249
Landing Gear Type:	Skid	Seats:	5
Date/Type of Last Inspection:	October 21, 2009 AAIP	Certified Max Gross Wt.:	4961 lbs
Time Since Last Inspection:	47 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	6244 Hrs at time of accident	Engine Manufacturer:	Turbomeca
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	Arrius 2B1
Registered Owner:	Wells Fargo Bank Northwest NA Trustee	Rated Power:	
Operator:	Air Methods	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	AVG,2031 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	08:45 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	40 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.01 inches Hg	Temperature/Dew Point:	21°C / 1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Marana, AZ (MZJ)	Type of Flight Plan Filed:	Company VFR
Destination:	Marana, AZ (MZJ)	Type of Clearance:	None
Departure Time:	08:45 Local	Type of Airspace:	

Airport Information

Airport:	Marana Regional Airport AVQ	Runway Surface Type:	Dirt
Airport Elevation:	2031 ft msl	Runway Surface Condition:	Dry
Runway Used:	12	IFR Approach:	None
Runway Length/Width:	6901 ft / 100 ft	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:	32.509723,-111.325279

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	Ken Fenning; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	March 3, 2010
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=74943

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).