



National Transportation Safety Board Aviation Accident Data Summary

Location:	Bisbee, AZ	Accident Number:	LAX05GA192
Date & Time:	06/01/2005, 1835 MST	Registration:	N5205F
Aircraft:	Eurocopter AS 350 B2	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General Aviation - Public Aircraft		

Analysis

While hovering over a mountainous area on an aerial observation mission, the helicopter entered a rapid yaw rotation to the left then descended to ground impact. While hovering over items of interest on the ground, the pilot began a turn to the left at 200 feet above ground level. The helicopter began to turn more rapidly than normal and the pilot applied right pedal. The right pedal application did not counteract the turn rate and the helicopter continued spinning to the left. The pilot then reduced power and pitched the helicopter's nose forward while maintaining right pedal. The helicopter continued to rotate as it descended to impact with the ground. At the time of the accident, the pilot was not aware from which direction the wind was blowing. The pilot's regular flying assignment consisted of high-altitude surveillance flights over Florida and he was on a short duration pilot augmentation assignment to the Tucson operations base and had limited mountain flying experience. A pilot flying in the area immediately following the accident reported winds greater than 20 knots and blowing from the west. The helicopter was operating at a gross weight of 4,020 pounds. The maximum allowable gross weight of the helicopter is 4,961 pounds. The density altitude was 7,850 feet mean sea level (msl) and the out of ground effect hover capability of the helicopter was about 8,000 feet msl. Post accident examination of the helicopter did not reveal any preimpact airframe or engine malfunctions.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to maintain an adequate forward airspeed, which resulted in an in-flight loss of control due to a loss of tail rotor effectiveness, while operating near the out of ground effect hover capability of the helicopter. Contributing factors to the accident was the high density altitude and the pilot's lack of experience in the operating environment.

Findings

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

Findings

1. TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (F) LACK OF FAMILIARITY WITH GEOGRAPHIC AREA - PILOT IN COMMAND
3. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
4. WEATHER CONDITION - TAILWIND
5. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
6. (C) LOSS OF TAIL ROTOR EFFECTIVENESS - ENCOUNTERED - PILOT IN COMMAND
7. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

8. TERRAIN CONDITION - GROUND

Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	45
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane; Helicopter
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Helicopter; Instrument Airplane; Instrument Helicopter
Flight Time:	8000 hours (Total, all aircraft), 600 hours (Total, this make and model), 6000 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Eurocopter	Registration:	N5205F
Model/Series:	AS 350 B2	Engines:	1 Turbo Shaft
Operator:	United States Customs and Border Protection	Engine Manufacturer:	Turbomeca
Air Carrier Operating Certificate:	None	Engine Model/Series:	Arriel 1D1
Flight Conducted Under:	Part 91: General Aviation - Public Aircraft		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	DUG, 4154 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	15 knots/ 19 knots, 280°
Temperature:	32° C / -2° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Tucson, AZ (DMA)	Destination:	Tucson, AZ (DMA)

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC): Kristi Dunks

Adopted Date: 02/28/2006

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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