



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Eagle Pass, Texas	Accident Number:	DFW06TA054
Date & Time:	January 12, 2006, 16:00 Local	Registration:	N840BP
Aircraft:	Aerospatiale AS350-B2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Public aircraft		

Analysis

The 1,672 hour commercial pilot departed the operations base near the border on a routine patrol of the Rio Grande River dividing the two countries. Upon reaching the limits of his search area he reversed course to return to home base. On the return leg he decided to search an area where he had noticed two law enforcement airboats operating north of the port of entry. The pilot reported on the Pilot/Operator Accident Report Form (NTSB Form 6120.1/2), that he recalled seeing two sets of power lines on the outbound leg of his patrol. After crossing the first set of power lines and locating the airboats he began a turn to orbit the boats. The pilot added that when he looked up and saw that he was about to hit the second set of wires, he instinctly initiated a cyclic climb to clear the wires; however, the maneuver was initiated too late and the tail rotor impacted the wires resulting in the separation of the tail rotor gear box, tail rotor assembly, and vertical fin. The pilot managed to keep the helicopter in controlled flight and elected to execute an autorotation to a clearing. The helicopter made a successful autorotation and landed upright in the middle of the river, 853 feet from the point of the wire strike. The helicopter came to rest in about 3 feet of water, and the pilot performed an emergency engine shutdown and egressed through the pilot door with assistance from the crews of the airboats.

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 clearance from the unmarked transmission lines. A factor was the pilot's diverted attention while monitoring ground activity.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: MANEUVERING

Findings

1. (F) OBJECT - WIRE, TRANSMISSION
 2. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
 3. (F) DIVERTED ATTENTION - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. ROTOR SYSTEM, TAIL ROTOR - SEPARATION
 5. TAIL ROTOR/ANTI-TORQUE CONTROL - NOT AVAILABLE - PILOT IN COMMAND
 6. AUTOROTATION - INITIATED - PILOT IN COMMAND
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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

Findings

7. TERRAIN CONDITION - WATER

Factual Information

On January 12, 2006, approximately 1600 central standard time, a single-engine Aerospatiale AS350-B2 turbo-shaft helicopter, N840BP, registered to and operated by the U.S. Customs and Border Patrol Air Operations, was substantially damaged when it impacted wires while maneuvering near Eagle Pass, Texas. The 1,672 hour commercial pilot, sole occupant of the helicopter, was seriously injured. Visual meteorological conditions prevailed, and a company visual flight plan was filed for the public use flight conducted under 14 Code of Federal Regulations Part 91. The local flight departed Del Rio International Airport (DRT), near Del Rio, Texas, approximately 1500.

A Customs and Border Patrol Safety Officer performed an on-scene examination of the wreckage. The Safety Officer reported that unmarked transmission wires were approximately 100 feet above the water at the impact point and that the helicopter made a successful autorotation and landed upright in the middle of the Rio Grande River, 853 feet from the point of the wire strike. The helicopter came to rest in about 3 feet of water, and the pilot performed an emergency engine shutdown and egressed through the pilot door unassisted. The pilot stated that prior to impacting the wires, his attention was diverted to locating the airboats on the water and searching for ground activity and failed to recognize his proximity to the set of power lines.

The wreckage of the helicopter was recovered to the facilities of the U.S. Customs and Border Patrol Air Operations, at Del Rio, Texas, for further examination.

At 1540 CST, the automated weather reporting facility at Piedras Negras, Mexico (MMPG), located approximately 6 miles south of the accident site reported wind light and variable, visibility 7 statute miles, scattered clouds at 16,000 feet, temperature 79 degrees Fahrenheit, dew point 54 degrees Fahrenheit, and a barometric pressure of 29.77 inches of Mercury.

Pilot Information

Certificate:	Commercial	Age:	37,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	April 1, 2005
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 1, 2005
Flight Time:	1672 hours (Total, all aircraft), 150 hours (Total, this make and model), 1254 hours (Pilot In Command, all aircraft), 155 hours (Last 90 days, all aircraft), 58 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aerospatiale	Registration:	N840BP
Model/Series:	AS350-B2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2035
Landing Gear Type:	High skid	Seats:	6
Date/Type of Last Inspection:	January 1, 2006 Continuous airworthiness	Certified Max Gross Wt.:	4961 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	11150 Hrs as of last inspection	Engine Manufacturer:	Turbomeca
ELT:	Installed, not activated	Engine Model/Series:	ARRIEL 1D1
Registered Owner:	United States Border Patrol Air Operations	Rated Power:	712 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:	United States Border Patrol Air Operations	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MMPG,958 ft msl	Distance from Accident Site:	6 Nautical Miles
Observation Time:	15:40 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 16000 ft AGL	Visibility	7 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.77 inches Hg	Temperature/Dew Point:	26°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Del Rio , TX (KDRT)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	15:00 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	28.717777,-100.606391

Administrative Information

Investigator In Charge (IIC): Gamble, William

Additional Participating Persons: Jesse Sanchez; San Antonio FSDO

Original Publish Date: July 31, 2006

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=63098>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).