



# Aviation Investigation Final Report

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<b>Location:</b>	Gulf of Mexico, Texas	<b>Accident Number:</b>	CEN09LA252
<b>Date &amp; Time:</b>	April 8, 2009, 17:06 Local	<b>Registration:</b>	N309CH
<b>Aircraft:</b>	Bell 222B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Collision with terr/obj (non-CFIT)	<b>Injuries:</b>	5 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

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## Analysis

While landing on the “winch only” deck of a ship at anchor in the Gulf of Mexico, the helicopter’s tail rotor struck a valve assembly protruding from the ship’s deck. The helicopter yawed approximately 60 degrees nose-right, then struck the ship’s side rail with the helicopter’s tail and came to rest upright on the deck. There was substantial damage to the helicopter’s fuselage, tail boom, horizontal stabilizer, tail rotor blades, tail rotor hub, and tail rotor gearbox. The pilot and four passengers were not injured and exited the helicopter normally through the doors on the right side of the helicopter. There were no injuries to any of the persons on board the ship.

## 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 obstructions while landing on a shipboard helipad.

## Findings

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<b>Personnel issues</b>	Incomplete action - Pilot
<b>Aircraft</b>	(general) - Not attained/maintained
<b>Environmental issues</b>	Airport structure - Awareness of condition
<b>Personnel issues</b>	Complacency - Pilot

## Factual Information

### History of Flight

<b>Maneuvering-hover</b>	Collision with terr/obj (non-CFIT) (Defining event)
<b>Maneuvering-hover</b>	Part(s) separation from AC
<b>Maneuvering-hover</b>	Loss of tail rotor effectiveness
<b>Maneuvering-hover</b>	Loss of control in flight

On April 8, 2009 at 1706 central daylight time (CDT), a Bell 222B helicopter, N309CH, was substantially damaged when it struck an obstruction while landing on the deck of a ship in the Gulf of Mexico, Texas. The pilot and the four passengers were not injured, and there were no injuries to persons on-board the ship. The helicopter was owned and operated by Central Helicopter Service, Inc., of Houston, Texas. Visual meteorological conditions (VMC) prevailed at the time of the accident and a company flight plan had been filed for the Title 14 Code of Federal Regulations Part 135 on-demand passenger flight. The helicopter had departed the William P. Hobby Airport (KHOU) Houston, Texas, on a visual flight rules (VFR) flight to the ship, which was anchored in the Gulf of Mexico approximately 71 nautical miles southeast of Galveston, Texas.

The pilot was being directed by ship's personnel during the landing on the "winch only" area when the helicopter's tail rotor struck a valve assembly protruding from the ship's deck. The helicopter yawed approximately 60 degrees nose to the right, then struck the ship's side rail with the helicopter's tail, and came to rest upright on the deck. There was substantial damage to the helicopter's fuselage, tail boom, horizontal stabilizer, tail rotor blades, tail rotor hub, and tail rotor gearbox. There was minor damage to the ship's side rail and the valve on the deck. The pilot and four passengers exited the helicopter normally through the doors on the right side of the helicopter after shut-down procedures were complete.

The ship was the 870 foot long Motor Tanker Wilana, based in Oslo, Norway. It was at anchor on a heading of 320 degrees. The pilot said he made the landing approach to the port (left) side of the ship on an approach course of 340 degrees. The pilot estimated the surface winds were variable from 250 degrees to 305 degrees at 15 knots.

In the pilot's statement he recommended that "pilots need to use extreme caution when conducting confined-area shipboard landings. Be especially vigilant for obstacles that are painted the same color as the deck..."

## Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine; Helicopter; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	November 7, 2008
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 5, 2009
<b>Flight Time:</b>	(Estimated) 12130 hours (Total, all aircraft), 322 hours (Total, this make and model), 9000 hours (Pilot In Command, all aircraft), 87 hours (Last 90 days, all aircraft), 54 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bell	<b>Registration:</b>	N309CH
<b>Model/Series:</b>	222B	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	47141
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	7
<b>Date/Type of Last Inspection:</b>	September 4, 2008 AAIP	<b>Certified Max Gross Wt.:</b>	8250 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Turbo shaft
<b>Airframe Total Time:</b>	8905 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	LTS 101-750
<b>Registered Owner:</b>	CENTRAL HELICOPTER SERVICE INC	<b>Rated Power:</b>	750 Horsepower
<b>Operator:</b>	CENTRAL HELICOPTER SERVICE INC	<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	C9PA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	GLS,47 ft msl	<b>Distance from Accident Site:</b>	71 Nautical Miles
<b>Observation Time:</b>	16:52 Local	<b>Direction from Accident Site:</b>	307°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	13 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.95 inches Hg	<b>Temperature/Dew Point:</b>	23°C / 17°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Houston, TX (HOU)	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	Gulf of Mexico, TX	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	16:00 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Scholes International Airport GLS	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	6 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	4 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	5 None	<b>Latitude, Longitude:</b>	31.054735,-97.562889(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Latson, Thomas
<b>Additional Participating Persons:</b>	Jimmy D Stahl; FAA Houston FSDO; Houston, TX Harold R Barrentine; Bell Helicopter; Fort Worth, TX
<b>Original Publish Date:</b>	August 12, 2010
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=73671">https://data.nts.gov/Docket?ProjectID=73671</a>

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](#).