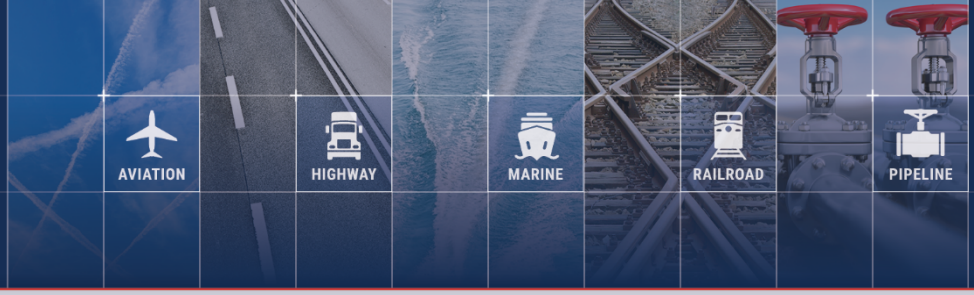

Aviation Investigation Final Report

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

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

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

Factual Information

History of Flight

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

Certificate:	Airline transport; Flight instructor	**Age:**	61,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:**	No
Instructor Rating(s):	Airplane single-engine; Helicopter; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	November 7, 2008
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 5, 2009
Flight Time:	(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

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

Meteorological Information and Flight Plan

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

Airport Information

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

Wreckage and Impact Information

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

Administrative Information

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