



Aviation Investigation Final Report

Location:	Los Banos, California	Accident Number:	WPR10CA285
Date & Time:	June 10, 2010, 20:30 Local	Registration:	N38110
Aircraft:	TEXAS HELICOPTER CORP OH-13E/M74	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported that during an aerial application flight he lined up for a downwind spray pass at an approximate height of three feet above the crop. During the pass the engine sputtered and died. He entered an auto-rotation and attempted to slow the aircraft down from 50 MPH. The aircraft subsequently impacted terrain and came to rest on its side. The pilot noted that the helicopter was refueled for the second time during the job about an hour prior to the accident. An FAA Inspector's report noted that the helicopter was not refueled to its proper quantity, causing the pilot to miscalculate the fuel on-board. Post impact inspection of the aircraft revealed an estimated two gallons or less of fuel in the tank, and that there were no ruptures in the fuel tank. During the on-scene inspection there was no odor of fuel at the accident site. Post-recovery engine tests revealed that the engine operated without any significant issues and fuel contamination was ruled out.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to fuel exhaustion and the pilot's failure to verify the fuel quantity onboard.

Findings

Aircraft	Fuel - Fluid level
Personnel issues	Fuel planning - Pilot

Factual Information

History of Flight

Maneuvering-low-alt flying	Fuel exhaustion (Defining event)
Maneuvering-low-alt flying	Loss of engine power (total)

Pilot Information

Certificate:	Commercial	Age:	47, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	December 10, 2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 31, 2009
Flight Time:	18115 hours (Total, all aircraft), 2100 hours (Total, this make and model), 17961 hours (Pilot In Command, all aircraft), 77 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	TEXAS HELICOPTER CORP	Registration:	N38110
Model/Series:	OH-13E/M74	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	77-010
Landing Gear Type:	High skid	Seats:	1
Date/Type of Last Inspection:	January 20, 2010 Annual	Certified Max Gross Wt.:	2850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	8188 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	VO-435A1F
Registered Owner:	BETTENCOURT FLYING SERVICE INC	Rated Power:	260 Horsepower
Operator:	BETTENCOURT FLYING SERVICE INC	Operating Certificate(s) Held:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:		Distance from Accident Site:	8 Nautical Miles
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Few	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / 10 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Atwater, CA	Type of Flight Plan Filed:	None
Destination:	Los Banos, CA	Type of Clearance:	None
Departure Time:	17:30 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	36.983333,-120.666664(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jefferey
Additional Participating Persons:	Jose D Salazar; FAA Fresno FSDO; Fresno, CA
Original Publish Date:	July 22, 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=76297

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](#).