



# Aviation Investigation Final Report

<b>Location:</b>	Vale, Oregon	<b>Accident Number:</b>	WPR25LA010
<b>Date &amp; Time:</b>	October 9, 2024, 16:00 Local	<b>Registration:</b>	N646H
<b>Aircraft:</b>	ENSTROM HELICOPTER CORP 280C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

The pilot of the helicopter reported that, after completing an aerial application, he returned to the mix vehicle for an additional load. While reloading the helicopter, he noticed the wind direction was changing and “blowing harder” and may have shifted to a quartering tailwind. During takeoff from the mix vehicle, the engine and main rotor blade rpm started to decay. He aborted the takeoff and made a run on landing to an open field near the mix vehicle. During the landing the main rotor blades tilted aft and severed the tailboom. The helicopter sustained substantial damage to the tailboom.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the helicopter that would have precluded normal operation.

## 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 engine and rotor rpm during takeoff, that resulted in a hard landing.

## Findings

<b>Aircraft</b>	Main rotor blade system - Capability exceeded
<b>Aircraft</b>	(general) - Incorrect use/operation
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	(general) - Incorrect use/operation

## Factual Information

### History of Flight

Maneuvering-hover	Loss of control in flight (Defining event)
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### Pilot Information

Certificate:	Commercial; Private	Age:	69,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	April 3, 2024
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 11, 2023
Flight Time:	18318 hours (Total, all aircraft), 8000 hours (Total, this make and model), 18218 hours (Pilot In Command, all aircraft), 200 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

Aircraft Make:	ENSTROM HELICOPTER CORP	Registration:	N646H
Model/Series:	280C	Aircraft Category:	Helicopter
Year of Manufacture:	1977	Amateur Built:	
Airworthiness Certificate:	Normal; Restricted (Special)	Serial Number:	1099
Landing Gear Type:	None; Skid	Seats:	3
Date/Type of Last Inspection:	June 3, 2024 Annual	Certified Max Gross Wt.:	2600 lbs
Time Since Last Inspection:	90 Hrs	Engines:	1
Airframe Total Time:	8764 Hrs at time of accident	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	Rotorcraft external load (133), Agricultural aircraft (137)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KEUL, 2429 ft msl	<b>Distance from Accident Site:</b>	48 Nautical Miles
<b>Observation Time:</b>	15:56 Local	<b>Direction from Accident Site:</b>	113°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/ None	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.98 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Vale, OR	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Vale, OR	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	44.206733,-117.48245(est)

## Administrative Information

Investigator In Charge (IIC):	Gutierrez, Eric
Additional Participating Persons:	Rudy Rossi; FAA; Boise, ID
Original Publish Date:	April 8, 2025
Last Revision Date:	
Investigation Class:	<a href="#">Class 4</a>
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=195294">https://data.nts.gov/Docket?ProjectID=195294</a>

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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](#).