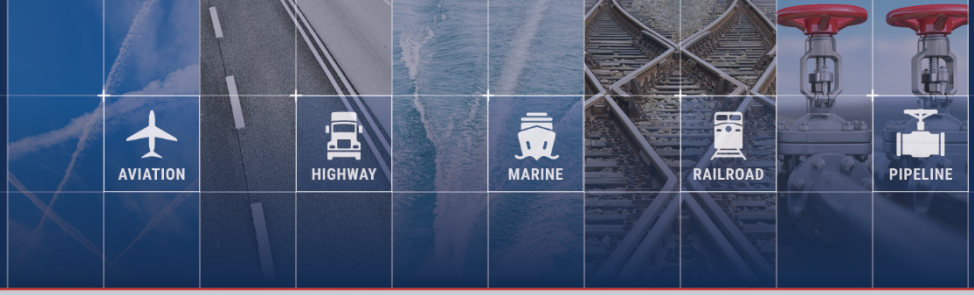

Aviation Investigation Final Report

Location:	Fort Lupton, Colorado	**Accident Number:**	CEN15LA084
Date & Time:	December 8, 2014, 11:15 Local	**Registration:**	N409LH
Aircraft:	Enstrom 280FX	**Aircraft Damage:**	Substantial
Defining Event:	Hard landing	**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot reported that, during a solo cross-country flight, the helicopter experienced a total loss of engine power during cruise flight. The pilot performed an autorotation to a field. During the landing flare, the helicopter's tail struck the ground, which resulted in the main rotor blades flexing upward and severing the tail rotor from the tailboom. The helicopter then fell to the ground and sustained substantial damage to the fuselage. The operator test ran the engine and noted no anomalies; no further engine examination or testing was conducted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The loss of engine power during cruise flight for reasons that could not be determined based on the available information.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (total)
Autorotation	Collision with terr/obj (non-CFIT)
Landing-flare/touchdown	Hard landing (Defining event)

On December 8, 2014, at 1115 mountain standard time, an Enstrom Helicopter, N409LH; experienced a total loss of engine power during cruise flight. The student pilot performed an autorotation to a field. The helicopter sustained substantial damage. The student pilot was uninjured. The helicopter was operated by Mountain One Helicopters under 14 Code of Federal Regulations Part 91 as an instructional flight that was operating on a flight plan. The flight last departed from Greeley-Weld County Airport, Greeley, Colorado, and was destined to Platte Valley Airpark, Hudson, Colorado.

During a solo cross country flight flown by a student pilot, the helicopter experienced a total loss of engine power during cruise flight. The pilot performed an autorotation to a field. During landing flare, the helicopter tail struck the ground resulting in the main rotor blades flexing downwards, which severed the tail rotor boom. The helicopter sustained substantial damage to the fuselage and rotor blades. The pilot was uninjured. The engine was test run by the operator without the knowledge and permission of the National Transportation Safety Board Investigator-In-Charge or the Federal Aviation Administration Inspector assigned to the accident investigation. The operator stated the engine was run without any anomalies.

Student pilot Information

Certificate:	Student	**Age:**	25
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	July 31, 2014
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	57 hours (Total, all aircraft), 57 hours (Total, this make and model), 9 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Enstrom	**Registration:**	N409LH
Model/Series:	280FX	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2014
Landing Gear Type:	N/A; Skid	**Seats:**	3
Date/Type of Last Inspection:	July 15, 2014 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	4063 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	HIO-360-F!AD
Registered Owner:	New Course Aviation Company	**Rated Power:**	225 Horsepower
Operator:	Mountain One Helicopters	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	EIK,5119 ft msl	**Distance from Accident Site:**	18 Nautical Miles
Observation Time:	10:00 Local	**Direction from Accident Site:**	239°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	30.32 inches Hg	**Temperature/Dew Point:**	3°C / 5°C
Precipitation and Obscuration:			
Departure Point:	Greeley, CO (KGXY)	**Type of Flight Plan Filed:**	None
Destination:	Fort Lupton, CO (18V)	**Type of Clearance:**	None
Departure Time:	10:45 Local	**Type of Airspace:**	Class E;Class G

Airport Information

Airport:	Platte Valley 18V	**Runway Surface Type:**	
Airport Elevation:	4965 ft msl	**Runway Surface Condition:**	Dry;Soft
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	40.079448,-104.800788(est)

Administrative Information

Investigator In Charge (IIC):	Gallo, Mitchell
Additional Participating Persons:	Tom Wiesner; Federal Aviation Administration; Denver FSDO; Denver, CO
Original Publish Date:	February 3, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=90521