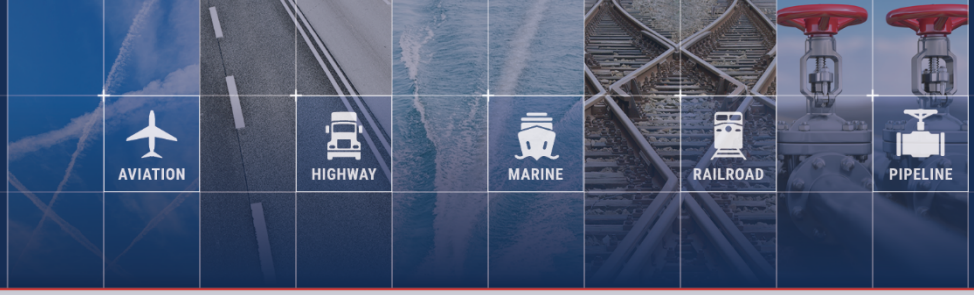

Aviation Investigation Final Report

Location:	Danbury, Texas	**Accident Number:**	CEN13LA360
Date & Time:	June 19, 2013, 10:00 Local	**Registration:**	N485PM
Aircraft:	Enstrom F-28A	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of engine power (total)	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The pilot had just taken off in the helicopter when the pilot and the flight instructor heard a loud “bang,” and the engine lost total power. The flight instructor took control of the helicopter and initiated an autorotation to available terrain from a low altitude; however, when the helicopter touched down, it encountered a rut and rolled over on its right side. The main rotor blades were destroyed, and the tail boom was severed. Postaccident examination of the engine revealed that a connecting rod had failed. The reason the connecting rod failed could not be determined during postaccident examination.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The total loss of engine power due to the failure of a connecting rod for reasons that could not be determined during postaccident examination.

Findings

Aircraft	Recip eng cyl section - Failure

Factual Information

History of Flight

Approach-VFR pattern downwind	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Autorotation	Collision with terr/obj (non-CFIT)

On June 19, 2013, at 1013 central daylight time, an Enstrom F-28A, N485PM, landed hard after the engine lost power at Salaika Aviation Airport (07TA), Danbury, Texas. The instructor and student pilot were not injured. The helicopter was destroyed. The helicopter was registered to and operated by Salaika Air Services, Danbury, Texas, under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed at the time of the accident, and no flight plan had been filed. The local flight originated from 07TA approximately 1000.

The helicopter had just taken off and was turning downwind in the airport's traffic pattern when the pilots heard a loud "bang" and the engine lost power. The instructor initiated an auto rotation. The helicopter touched down and slid, striking a ground rut that broke the right skid. The helicopter rolled over on its right side. The main rotor blades were destroyed and the tail boom was severed.

Post-accident examination revealed a connecting rod had ventilated the engine crankcase. The reason the connecting rod failed was not determined.

Flight instructor Information

Certificate:	Commercial; Flight instructor	**Age:**	52,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 2 Unknown	**Last FAA Medical Exam:**	January 9, 2012
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	December 1, 2011
Flight Time:	(Estimated) 5000 hours (Total, all aircraft), 5000 hours (Total, this make and model)		

Student pilot Information

Certificate:	Student	**Age:**	41,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	July 27, 2012
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Enstrom	**Registration:**	N485PM
Model/Series:	F-28A	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	259
Landing Gear Type:	Skid	**Seats:**	3
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	2150 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	LYCOMING
ELT:		**Engine Model/Series:**	HIO-360-C1B
Registered Owner:	SALAIKA TIMOTHY A	**Rated Power:**	205 Horsepower
Operator:	SALAIKA TIMOTHY A	**Operating Certificate(s) Held:**	None
Operator Does Business As:	SALAIKA AIR SERVICES	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:			
Departure Point:	Danbury, TX (07TA)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	
Departure Time:	09:50 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	29.237777,-95.340278(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Mark C Hopp; FAA Flight Standards District Office; Houston, TX
Original Publish Date:	December 2, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=87234