Aviation Investigation Final Report

Location:	Fredericksburg, Texas	**Accident Number:**	CEN14LA200
Date & Time:	April 16, 2014, 10:30 Local	**Registration:**	N50WP
Aircraft:	Cessna O 1E	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor reported that he was providing instruction to a pilot in the tandem-seat airplane. He reported that, immediately after the pilot receiving instruction turned the airplane from the downwind to the base leg of the traffic pattern, the engine lost power. He took control of the airplane and called for the magnetos and boost pump to be turned on as he switched fuel tanks. He was unable to find a suitable landing area, so he attempted a landing to a small field. During the landing and while he was attempting to avoid a tree at the end of the field, the airplane struck a cattle pen. Examination of the engine revealed no preimpact anomalies. The reason for the loss of engine power could not be determined.

Probable Cause and Findings

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

The loss of engine power for reasons that could not be determined because postaccident examination of the engine revealed no anomalies.

Findings

Not determined	(general) - Unknown/Not determined
Environmental issues	(general) - Contributed to outcome

Factual Information

History of Flight

Approach-VFR pattern base	Loss of engine power (total) (Defining event)
Landing	Collision with terr/obj (non-CFIT)

On April 16, 2014, about 1030 central daylight time, a Cessna O-1E airplane, N50WP, sustained substantial damage when it struck a fence during a forced landing following a loss of engine power near Fredericksburg, Texas. The pilot and instructor pilot received serious injuries. The airplane was registered to an individual and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed for the flight, which was not on a flight plan. The local flight originated from the Silver Wings Airport (TS36), Fredericksburg, Texas, at an unconfirmed time.

The flight instructor reported that he was providing instruction to an 82 year old pilot in the airplane when the accident occurred. The instructor was seated in the rear seat and the instructed pilot was in the front. The instructor noted that from the rear seat, there is no view of the gauges except for the flap indicator that was located at the top right edge of the instrument panel. He stated the instructed pilot entered a right downwind for runway 17 at TS36, and the flaps were extended to about 20 degrees. Just prior to turning onto a base leg, the engine abruptly "failed". The instructor called for the magnetos and boost pumps "on" and took control of the airplane. He switched fuel tanks although both were full, and looked for a suitable area to make an off-airport landing to no avail. He executed a landing to a small field that had a large oak tree at the end. During the landing the instructor attempted to avoid the tree and the airplane struck a cattle pen. He noted that after the accident he could see that the magneto switch was in the "off" position.

The instructed pilot reported that he was receiving a checkout in the accident airplane. He stated that stop and go landings were being performed at the Gillespie County Airport (T82), Fredericksburg, Texas. After several landings were performed at T82, a decision was made to fly to TS36 for further practice due to more favorable wind conditions. He reported that they entered a right downwind for runway 17. Immediately after turning on a right base leg, the engine stopped producing power and the instructor assumed control of the airplane. He stated that during the forced landing, the airplane struck the corner post of a cattle pen.

An examination of the engine was conducted by a representative of the engine manufacturer with oversight provided by a Federal Aviation Administration Inspector. The examination did not reveal any preimpact anomalies.

Pilot Information

Certificate:	Private	**Age:**	83
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	October 1, 2013
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Flight instructor Information

Certificate:	Airline transport; Commercial; Flight engineer; Flight instructor	**Age:**	62
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	January 30, 2014
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N50WP
Model/Series:	O 1E E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	61-2970
Landing Gear Type:	Tailwheel	**Seats:**	
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	2101 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	
ELT:		**Engine Model/Series:**	
Registered Owner:	On file	**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KT82,1695 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:		**Direction from Accident Site:**	90°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	14 knots / 22 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	160°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.06 inches Hg	**Temperature/Dew Point:**	14°C / 2°C
Precipitation and Obscuration:			
Departure Point:	Fredericksburg, TX (TS36)	**Type of Flight Plan Filed:**	None
Destination:	Fredericksburg, TX (TS36)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	SILVER WINGS TS36	**Runway Surface Type:**	
Airport Elevation:	2110 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	30.219444,-99.14083

Administrative Information

Investigator In Charge (IIC):	Brannen, John
Additional Participating Persons:	
Original Publish Date:	March 14, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=89071