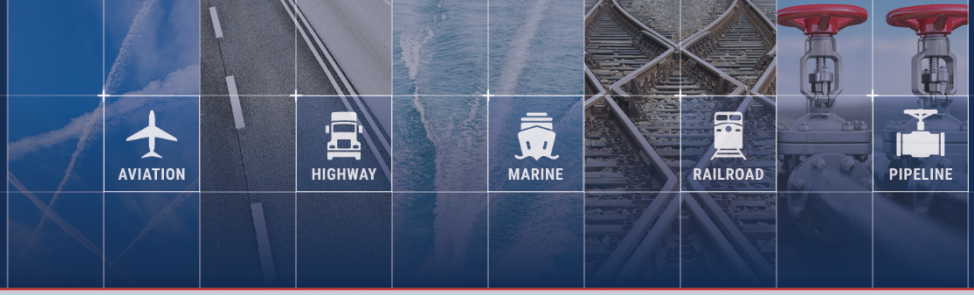

Aviation Investigation Final Report

Location:	Cleburne, Texas	**Accident Number:**	CEN17LA368
Date & Time:	September 25, 2017, 17:27 Local	**Registration:**	N5112S
Aircraft:	Eris E. Ervin Quicksilver	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of engine power (total)	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The noncertificated pilot was departing in the experimental light sport airplane when the engine lost power. The pilot attempted to return to the runway, but the airplane impacted trees and a fence west of the departure end of the runway. Examination of the airplane revealed that the fuel line between the fuel tank and engine was brittle and cracked and had broken. Both carburetor bowls were dry. Additionally, putty was found at the fuel tank outlet connector, consistent with a repair to prevent or fix a fuel leak, and the engine air filter was dirty. Although no maintenance records were located, the condition of the engine and its components suggested that it was not being properly maintained. It is likely that the engine experienced a total loss of power due to fuel starvation as a result of the broken fuel line; the loss of engine power prevented the pilot from reaching a suitable landing area. Toxicological testing found potentially impairing drugs in the pilot; however, it is unlikely that the negative effects of the drugs directly contributed to the outcome of this accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: An engine loss of power due to fuel starvation from a broken fuel line between the fuel tank and the engine; the loss of engine power prevented the pilot from reaching a suitable landing area. Contributing to the accident was the inadequate maintenance of the engine and its components.

Findings

Personnel issues	Incorrect action selection - Pilot
Aircraft	Fuel distribution - Failure
Aircraft	(general) - Incorrect service/maintenance
Personnel issues	Qualification/certification - Pilot

Factual Information

History of Flight

Initial climb	Loss of engine power (total) (Defining event)
Maneuvering-low-alt flying	Off-field or emergency landing
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On September 25, 2017, about 1730 central daylight time, a Quicksilver GT 400S experimental light sport airplane, N5112S, impacted terrain shortly after takeoff from Blackwood Airport (TX46), Cleburne, Texas. The noncertificated pilot was fatally injured and the aircraft was destroyed. The airplane was registered to and operated by the pilot under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions existed at the accident site and no flight plan was filed for the local personal flight which was originating at the time of the accident.

According to Federal Aviation Administration (FAA) inspectors who responded to the scene, the airplane took off on runway 17. During the initial climb, the engine lost power. The pilot attempted to return to the airport, but the airplane impacted trees and a fence behind an apartment complex on the west side of runway 17 near the departure end of the runway.

FAA inspectors noted a strong odor of fuel and found a broken fuel line between the fuel tank and the engine. The line was also brittle and cracked. The engine had two carburetors, and both carburetor bowls were dry. The fuel tank was half full. Putty had been placed around the fuel outlet connector at the bottom of the fuel tank, consistent with an attempt to prevent or repair a fuel leak. The engine air filter was dirty. The airplane had been registered to the pilot about 2 years before the accident. No flight or maintenance records were located during the investigation.

The Tarrant County Medical Examiner's Office, Fort Worth, Texas, performed an autopsy on the pilot and attributed his death to "blunt trauma". A toxicology screen performed by the medical examiner's office detected ephedrine/pseudoephedrine in urine, and 301 ng/mL ephedrine/pseudoephedrine in femoral blood.

Toxicology tests performed by the FAA's Bioaeronautical Sciences Research Laboratory identified cetirizine, loratadine, and pseudoephedrine in subclavian blood at levels too low to quantify. Pseudoephedrine and its metabolite norpsuedoephedrine were also identified in urine.

Cetirizine is a sedating antihistamine available over the counter, often marketed with the name Zyrtec. Loratadine is a non-sedating antihistamine available over the counter, often marketed with the name Claritin. Pseudoephedrine is a sympathomimetic decongestant not indicated for use by individuals with hypertension. When sold by itself, a common name is Sudafed but it is also used in combination with each of the identified antihistamine in products such as Zyrtec-D and Claritin-D.

Pilot Information

Certificate:	None	**Age:**	40,Male
Airplane Rating(s):	None	**Seat Occupied:**	Single
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	None None	**Last FAA Medical Exam:**	March 3, 2008
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 25 hours (Total, all aircraft), 25 hours (Total, this make and model), 1 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Eris E. Ervin	**Registration:**	N5112S
Model/Series:	Quicksilver GT 400S	**Aircraft Category:**	Airplane
Year of Manufacture:	1994	**Amateur Built:**	
Airworthiness Certificate:	Experimental light sport (Special)	**Serial Number:**	1419
Landing Gear Type:	Tricycle	**Seats:**	1
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	570 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	ROTAX
ELT:	Not installed	**Engine Model/Series:**	503 DCDI
Registered Owner:	On file	**Rated Power:**	50 Horsepower
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:	KCPT,854 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	17:35 Local	**Direction from Accident Site:**	225°
Lowest Cloud Condition:	Few / 6000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots / 17 knots	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	29.8 inches Hg	**Temperature/Dew Point:**	32°C / 18°C
Precipitation and Obscuration:			
Departure Point:	Cleburne, TX (TX46)	**Type of Flight Plan Filed:**	None
Destination:	Cleburne, TX (TX46)	**Type of Clearance:**	None
Departure Time:	17:25 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Blackwood TX46	**Runway Surface Type:**	Grass/turf
Airport Elevation:	835 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	2600 ft / 75 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	32.409721,-97.387222(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Dwayne B Holt; FAA North Texas Flight Standards District Office; Irving, TX Gary Watson; FAA North Texas Flight Standards District Office; Irving, TX
Original Publish Date:	October 10, 2018
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=96090

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.