



Aviation Investigation Final Report

Location:	Manvel, Texas	Accident Number:	FTW02LA035
Date & Time:	November 10, 2001, 15:00 Local	Registration:	N54RX
Aircraft:	Terry Zenith 801	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The amateur-built airplane was at 1,500 feet msl and maneuvering at a slow airspeed for 7-8 minutes when the engine lost power. The pilot switched fuel tanks, restarted the engine, and continued the flight toward a nearby airport. Prior to reaching the airport, the engine again lost power. The pilot initiated a forced landing to a highway. Due to traffic on the highway, the pilot had to delayed the landing, which resulted in the airplane continuing towards power lines. As the pilot "quickly landed the airplane," the nose landing gear collapsed, and the airplane came to a stop upright on the highway. During an examination of the airplane, 3 inches of fuel was found in both of the fuel tanks, and over 15 gallons of fuel was drained. Upon further inspection of the fuel system, no blockages were found in the fuel lines, and the gascolator was clean. The pilot suspected that a vacuum was created in both of the fuel tanks since there were no fuel tank vents, except for the vents in the fuel caps. The airplane had accumulated 5 hours at the time of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: loss of engine power while maneuvering for an undetermined reason. A contributing factor was the lack of suitable terrain for the forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: MANEUVERING

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. (F) TERRAIN CONDITION - NONE SUITABLE

3. TERRAIN CONDITION - ROADWAY/HIGHWAY

4. OBJECT - VEHICLE

5. OBJECT - WIRE, TRANSMISSION

Factual Information

On November 10, 2001, at 1500 central standard time, a Terry Zenith 801 amateur-built airplane, N54RX, was substantially damaged during a forced landing following a loss of engine power near Manvel, Texas. The airplane was registered to and operated by the pilot. The private pilot, sole occupant, was not injured. Visual meteorological conditions prevailed, and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The flight originated from the Clover Field Airport, Friendswood, Texas, at 1410.

The airplane was maneuvering west of Rosharon, Texas, at 1,500 feet msl, at a slow airspeed for 7-8 minutes when the engine lost power. The pilot switched fuel tanks and restarted the engine. The pilot then continued the flight toward the Wolfe Air Park Airport (3T2) located 2 miles northeast of Manvel. Prior to reaching 3T2, the engine again lost power. According to the pilot, "both tanks indicated 1/4+ in fuel quantity." The pilot initiated a forced landing to Highway 6 south of Manvel. Due to traffic on the highway, the pilot had to delay the landing, which resulted in the airplane continuing towards power lines. As the pilot "quickly landed the airplane," the nose landing gear collapsed, and the airplane came to a stop upright on the highway.

Examination of the airplane by the FAA inspector, who responded to the accident site, revealed that the firewall was buckled, the nose landing gear was folded under the airplane, and one propeller blade was bent aft.

The pilot reported that during the examination of the airplane, "3 inches of fuel was found in both of the fuel tanks, and over 15 gallons of fuel was drained from the airplane. Upon further inspection of the fuel system, no blockages were found in the fuel lines, and the gascolator was clean." The pilot suspects that a vacuum was created in both of the fuel tanks, since there were no fuel tank vents, except for the vents in the fuel caps.

The airplane had accumulated 5 hours at the time of the accident.

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical—no waivers/lim.	Last FAA Medical Exam:	September 27, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	November 2, 2001
Flight Time:	258 hours (Total, all aircraft), 6 hours (Total, this make and model), 231 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Terry	Registration:	N54RX
Model/Series:	Zenith 801	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	84347
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	November 2, 2001 100 hour	Certified Max Gross Wt.:	2000 lbs
Time Since Last Inspection:	5 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-470
Registered Owner:	Rex W. Terry	Rated Power:	230 Horsepower
Operator:		Operating Certificate(s) Held:	None

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:	Clear	Visibility	
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	26°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Friendswood, TX (LVJ)	Type of Flight Plan Filed:	None
Destination:	Manvel, TX (3T2)	Type of Clearance:	None
Departure Time:	14:10 Local	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	29.48084,-95.34925(est)

Administrative Information

Investigator In Charge (IIC):	Wigington, Douglas
Additional Participating Persons:	Robert D Fuller; FAA FSDO; Houston, TX
Original Publish Date:	May 21, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=53770

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](#).