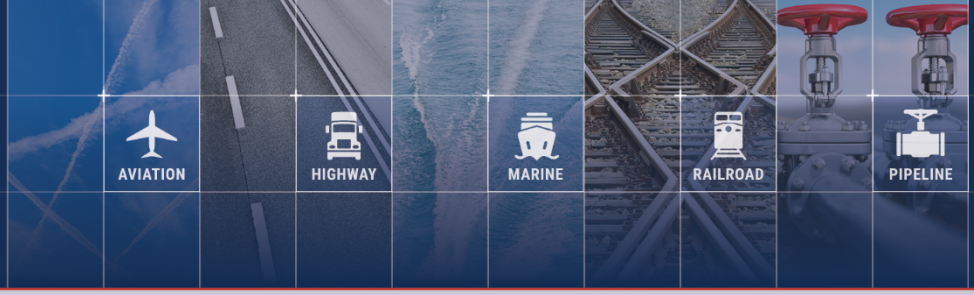


# Aviation Investigation Final Report

| | | | |
|---|---|---|---|
| **Location:** | Amarillo, Texas | **Accident Number:** | CEN10LA295 |
| **Date & Time:** | May 29, 2010, 18:54 Local | **Registration:** | N260PK |
| **Aircraft:** | PITTS AEROBATICS S-2B | **Aircraft Damage:** | Destroyed |
| **Defining Event:** | Powerplant sys/comp malf/fail | **Injuries:** | 1 Minor |
| **Flight Conducted Under:** | Part 91: General aviation - Personal | | |

## Analysis

During the initial climb following an engine teardown, inspection, and engine reinstallation, the airplane's engine experienced a partial loss of power. The pilot initiated a 180-degree turn and performed a downwind landing on the runway from which he had just departed. Following the landing, and while taxiing, the pilot observed flames emanating from the engine cowling area. The pilot shut down the engine and exited the airplane. Moments later the airplane was engulfed in flames. An examination of the airplane's engine revealed that the engine-driven fuel pump housing had fractured where the fuel line fitting had been inserted. The fitting, with its pipe thread, was the correct fitting; however, its preaccident torque value is unknown. Due to thermal damage to the pump housing the reason for the failure could not be determined.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The fracture of the fuel pump housing for undetermined reasons.

### Findings

| | |
|---|---|
| **Aircraft** | Fuel pumps - Failure |
| **Not determined** | (general) - Unknown/Not determined |

# Factual Information

## History of Flight

| | |
|---|---|
| **Initial climb** | Powerplant sys/comp malf/fail (Defining event) |
| **Initial climb** | Loss of engine power (partial) |
| **Emergency descent** | Loss of engine power (partial) |
| **Landing-landing roll** | Fire/smoke (non-impact) |

On May 29, 2010, about 1854 central daylight time, a Pitts Aerobatics S-2B airplane, N260PK, was destroyed by fire during a post maintenance flight at the Blue Sky Airfield (2TX0), in Amarillo, Texas. The pilot, the sole occupant, sustained minor injuries. The airplane was registered to and operated by the pilot. Visual meteorological conditions prevailed and no flight plan was filed for the 14 Code of Federal Regulations Part 91 local flight. The flight originated moments before the accident.

Reportedly, the purpose for the flight was a test flight following an engine tear down, inspection, and engine reinstallation. During the initial climb, while at an altitude of 700 feet above ground level (agl), the engine experienced a partial loss of power. The pilot initiated a 180 degree turn and performed a downwind landing on the runway he had just departed from. Following the landing, and while taxiing, the pilot observed flames emanating from the engine cowling area. The pilot shut down the engine and exited the airplane. Moments later the airplane was engulfed in flames.

An examination of the airplane's engine conducted by a Federal Aviation Administration (FAA) inspector who responded to the accident site, revealed that the engine driven fuel pump housing had fractured where the fuel line fitting had been inserted. The fitting, with its pipe thread, was the correct fitting; however, its pre-accident torque value is unknown. Due to thermal damage to the pump housing, the reason for the failure could not be determined.

## Pilot Information

| | | | |
|---|---|---|---|
| **Certificate:** | Private | **Age:** | 53,Male |
| **Airplane Rating(s):** | Single-engine land | **Seat Occupied:** | Rear |
| **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 With waivers/limitations | **Last FAA Medical Exam:** | February 12, 2009 |
| **Occupational Pilot:** | No | **Last Flight Review or Equivalent:** | November 29, 2008 |
| **Flight Time:** | 720 hours (Total, all aircraft), 346 hours (Total, this make and model), 1 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

## Aircraft and Owner/Operator Information

| | | | |
|---|---|---|---|
| **Aircraft Make:** | PITTS AEROBATICS | **Registration:** | N260PK |
| **Model/Series:** | S-2B | **Aircraft Category:** | Airplane |
| **Year of Manufacture:** | | **Amateur Built:** | |
| **Airworthiness Certificate:** | Aerobatic | **Serial Number:** | 5034 |
| **Landing Gear Type:** | Tailwheel | **Seats:** | 2 |
| **Date/Type of Last Inspection:** | May 29, 2010 Annual | **Certified Max Gross Wt.:** | |
| **Time Since Last Inspection:** | | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | | **Engine Manufacturer:** | LYCOMING |
| **ELT:** | Installed, not activated | **Engine Model/Series:** | AEIO-540 SER |
| **Registered Owner:** | On file | **Rated Power:** | 260 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:** | | **Distance from Accident Site:** | |
| **Observation Time:** | | **Direction from Accident Site:** | |
| **Lowest Cloud Condition:** | Clear | **Visibility** | 10 miles |
| **Lowest Ceiling:** | None | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 11 knots / | **Turbulence Type Forecast/Actual:** | / |
| **Wind Direction:** | 170° | **Turbulence Severity Forecast/Actual:** | / |
| **Altimeter Setting:** | | **Temperature/Dew Point:** | 24°C |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | Amarillo, TX (2TX0) | **Type of Flight Plan Filed:** | None |
| **Destination:** | Amarillo, TX (2TX0) | **Type of Clearance:** | None |
| **Departure Time:** | 15:52 Local | **Type of Airspace:** | |

## Airport Information

| | | | |
|---|---|---|---|
| **Airport:** | Blue Sky Airfield 2TX0 | **Runway Surface Type:** | Grass/turf |
| **Airport Elevation:** | 3615 ft msl | **Runway Surface Condition:** | Dry |
| **Runway Used:** | 35 | **IFR Approach:** | None |
| **Runway Length/Width:** | 4800 ft / 60 ft | **VFR Approach/Landing:** | Forced landing |

## Wreckage and Impact Information

| | | | |
|---|---|---|---|
| **Crew Injuries:** | 1 Minor | **Aircraft Damage:** | Destroyed |
| **Passenger Injuries:** | | **Aircraft Fire:** | On-ground |
| **Ground Injuries:** | N/A | **Aircraft Explosion:** | None |
| **Total Injuries:** | 1 Minor | **Latitude, Longitude:** | 35.064445,-101.849441(est) |

## Administrative Information

| | |
|---|---|
| **Investigator In Charge (IIC):** | LeBaron, Timothy |
| **Additional Participating Persons:** | Gordon Morris; Federal Aviation Administration; Lubbuck, TX |
| **Original Publish Date:** | December 20, 2010 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class |
| **Note:** | |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=76209 |