



# Aviation Investigation Final Report

|                                |                                |                         |                 |
|--------------------------------|--------------------------------|-------------------------|-----------------|
| <b>Location:</b>               | Temple, Texas                  | <b>Accident Number:</b> | CEN18LA118      |
| <b>Date &amp; Time:</b>        | March 8, 2018, 10:45 Local     | <b>Registration:</b>    | N60JN           |
| <b>Aircraft:</b>               | Bereznak Lancair Legacy        | <b>Aircraft Damage:</b> | Destroyed       |
| <b>Defining Event:</b>         | Loss of engine power (partial) | <b>Injuries:</b>        | 1 Minor, 1 None |
| <b>Flight Conducted Under:</b> | Part 91: General aviation      |                         |                 |

## Analysis

After leveling off at 9,500 ft, the airline transport pilot switched the fuel selector from the right to the left fuel tank of the experimental, amateur-built airplane. He noticed a change in the sound of the engine, a decline in fuel flow, and a partial loss of engine power. He switched back to the right fuel tank and turned on the auxiliary fuel pump, but this did not correct the problem. Realizing that he would not be able to glide to a nearby airport, the pilot made a forced landing in a plowed field. Postaccident examination of the engine revealed no discrepancies that would have precluded normal operation. The fuel selector was found separated just below the selector handle, and the selector valve was found in the 90-percent-closed position. The fuel selector assembly showed extensive wear. It is likely that the fuel selector separated with the valve in an intermediate position when the pilot changed the fuel selector handle position, which resulted in a partial loss of engine power due to fuel starvation as a result of the nearly closed fuel valve.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the fuel selector valve in a nearly closed position, which resulted in a partial loss of engine power due to fuel starvation.

## Findings

|                         |   |
|-------------------------|---|
| <b>Aircraft</b>         | Fuel selector/shutoff valve - Fatigue/wear/corrosion  |
| <b>Aircraft</b>         | Fuel selector/shutoff valve - Not serviced/maintained |
| <b>Personnel issues</b> | Scheduled/routine inspection - Maintenance personnel  |

# Factual Information

## History of Flight

|                             |   |
|-----------------------------|---|
| <b>Enroute-cruise</b>       | Loss of engine power (partial) (Defining event) |
| <b>Emergency descent</b>    | Off-field or emergency landing                  |
| <b>Landing-landing roll</b> | Collision with terr/obj (non-CFIT)              |

On March 8, 2018, about 1045 central standard daylight time, a Bereznak Lancair Legacy, N60JN, experienced a partial loss of engine power while in cruise flight at 9,500 feet, and the pilot made a forced landing in a plowed field one-mile northwest of Draughon-Miller Central Texas Regional Airport (TPL), Temple, Texas. The pilot sustained minor injuries. His passenger was not injured. The airplane was destroyed. The airplane was registered to and operated by a, Airborne Legacy, LLC, Austin, Texas, under the provisions of Title 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at and about the time of the accident. A visual flight rules (VFR) flight plan had been filed for the flight that originated at Austin-Bergstrom International Airport, Austin, Texas, and was destined for Dallas Love Field Airport (DAL), Dallas, Texas.

In his accident report the pilot said that after levelling off at 9,500 feet, he switched from the right to the left fuel tank to maintain balance. He noticed a change in the sound of the engine and a decline in fuel flow (the airplane was not equipped with a fuel pressure gauge). He switched back to the right fuel tank and turned on the auxiliary fuel pump, but this did not correct the problem. During the approach to TPL, manifold pressure was registering but airspeed was decreasing. The pilot advanced the throttle slightly, then applied full throttle. The engine did not respond. Realizing he could not glide to TPL, the pilot made a forced landing in a plowed field.

On April 4, 2018, the engine was examined at the facilities of Air Salvage of Dallas (ASOD), Lancaster, Texas. The engine was intact, undamaged, and remained attached to the airframe. No discrepancies were found that would have prohibited the production of rated horsepower.

The fuel selector handle was separated just below the handle selector. The two "U" joints and the drive shaft were intact. The selector valve was found in the 90 percent closed position. The fuel selector assembly was extensively worn.

## Pilot Information

|                                  |  |  |                |
|----------------------------------|--|--|----------------|
| <b>Certificate:</b>              | Airline transport; Commercial; Private   | <b>Age:</b>                              | 57,Male        |
| <b>Airplane Rating(s):</b>       | Single-engine land; Multi-engine land  | <b>Seat Occupied:</b>                    | Left           |
| <b>Other Aircraft Rating(s):</b> | None   | <b>Restraint Used:</b>                   | 5-point        |
| <b>Instrument Rating(s):</b>     | Airplane   | <b>Second Pilot Present:</b>             |                |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | No             |
| <b>Medical Certification:</b>    | Class 2 Without waivers/limitations  | <b>Last FAA Medical Exam:</b>            | March 8, 2016  |
| <b>Occupational Pilot:</b>       | No   | <b>Last Flight Review or Equivalent:</b> | March 29, 2017 |
| <b>Flight Time:</b>              | 3900 hours (Total, all aircraft), 185 hours (Total, this make and model), 3650 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) |  |                |

## Aircraft and Owner/Operator Information

|                                      |                               |                                       |                 |
|--------------------------------------|-------------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | Bereznak                      | <b>Registration:</b>                  | N60JN           |
| <b>Model/Series:</b>                 | Lancair Legacy                | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          | 2008                          | <b>Amateur Built:</b>                 | Yes             |
| <b>Airworthiness Certificate:</b>    | Experimental (Special)        | <b>Serial Number:</b>                 | L2K-263         |
| <b>Landing Gear Type:</b>            | Retractable - Tricycle        | <b>Seats:</b>                         | 2               |
| <b>Date/Type of Last Inspection:</b> | May 2, 2017 Condition         | <b>Certified Max Gross Wt.:</b>       | 2700 lbs        |
| <b>Time Since Last Inspection:</b>   | 34 Hrs                        | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 310 Hrs as of last inspection | <b>Engine Manufacturer:</b>           | Continental     |
| <b>ELT:</b>                          | Installed, not activated      | <b>Engine Model/Series:</b>           | IO-550-N        |
| <b>Registered Owner:</b>             |                               | <b>Rated Power:</b>                   | 310 Horsepower  |
| <b>Operator:</b>                     |                               | <b>Operating Certificate(s) Held:</b> | None            |

## Meteorological Information and Flight Plan

|   |                   |   |                  |
|---|-------------------|---|------------------|
| <b>Conditions at Accident Site:</b>     | Visual (VMC)      | <b>Condition of Light:</b>                  | Day              |
| <b>Observation Facility, Elevation:</b> | KTPL,682 ft msl   | <b>Distance from Accident Site:</b>         | 1 Nautical Miles |
| <b>Observation Time:</b>                | 10:51 Local       | <b>Direction from Accident Site:</b>        | 135°             |
| <b>Lowest Cloud Condition:</b>          | Clear             | <b>Visibility</b>                           | 10 miles         |
| <b>Lowest Ceiling:</b>                  | None              | <b>Visibility (RVR):</b>                    |                  |
| <b>Wind Speed/Gusts:</b>                | 7 knots /         | <b>Turbulence Type Forecast/Actual:</b>     | / None           |
| <b>Wind Direction:</b>                  | 150°              | <b>Turbulence Severity Forecast/Actual:</b> | /                |
| <b>Altimeter Setting:</b>               | 30.26 inches Hg   | <b>Temperature/Dew Point:</b>               | 14°C / -1°C      |
| <b>Precipitation and Obscuration:</b>   |                   |   |                  |
| <b>Departure Point:</b>                 | Austin, TX (KAUS) | <b>Type of Flight Plan Filed:</b>           | VFR              |
| <b>Destination:</b>                     | Dallas, TX (KDAL) | <b>Type of Clearance:</b>                   | VFR              |
| <b>Departure Time:</b>                  | 10:30 Local       | <b>Type of Airspace:</b>                    | Class E          |

## Airport Information

|                             |                                    |                                  |                |
|-----------------------------|------------------------------------|----------------------------------|----------------|
| <b>Airport:</b>             | Draughon-Miller Central TX Reg TPL | <b>Runway Surface Type:</b>      |                |
| <b>Airport Elevation:</b>   | 682 ft msl                         | <b>Runway Surface Condition:</b> |                |
| <b>Runway Used:</b>         |                                    | <b>IFR Approach:</b>             | None           |
| <b>Runway Length/Width:</b> |                                    | <b>VFR Approach/Landing:</b>     | Forced landing |

## Wreckage and Impact Information

|                            |                 |                             |                           |
|----------------------------|-----------------|-----------------------------|---------------------------|
| <b>Crew Injuries:</b>      | 1 Minor         | <b>Aircraft Damage:</b>     | Destroyed                 |
| <b>Passenger Injuries:</b> | 1 None          | <b>Aircraft Fire:</b>       | None                      |
| <b>Ground Injuries:</b>    | N/A             | <b>Aircraft Explosion:</b>  | None                      |
| <b>Total Injuries:</b>     | 1 Minor, 1 None | <b>Latitude, Longitude:</b> | 31.100505,-97.410209(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Scott, Arnold   |
| <b>Additional Participating Persons:</b> | Boyd Kempf; FAA Flight Standards District Office; San Antonio, TX<br>Randall Kaser; FAA Flight Standards District Office; San Antonio, TX |
| <b>Original Publish Date:</b>            | March 18, 2019  |
| <b>Note:</b>                             | The NTSB did not travel to the scene of this accident.  |
| <b>Investigation Docket:</b>             | <a href="https://data.nts.gov/Docket?ProjectID=96849">https://data.nts.gov/Docket?ProjectID=96849</a>                                     |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).