



# Aviation Investigation Final Report

<b>Location:</b>	Walters, Oklahoma	<b>Accident Number:</b>	CEN17LA286
<b>Date &amp; Time:</b>	July 8, 2017, 10:50 Local	<b>Registration:</b>	N6257V
<b>Aircraft:</b>	Beech V35	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The airline transport pilot was conducting a personal, cross-country flight. He reported that, about 10 minutes after takeoff, the oil pressure decreased to 0, and the engine experienced a loss of all power. The pilot conducted a forced landing on a soft field about 1 mile short of an airport, during which the airplane sustained substantial damage to the firewall and lower fuselage.

A review of the airplane's maintenance records revealed that the vacuum pump had been replaced the day before the accident. Examination of the engine revealed that three connecting rods exhibited thermal and impact damage, and three rod journals were found dry and exhibited thermal discoloration, indicative of oil starvation. Disassembly indicated that a gasket typically used for carburetors was installed on the vacuum pump. The installed gasket did not completely cover the high-pressure oil orifice on the vacuum pump mounting fixture, which resulted in oil leakage, subsequent oil starvation to the engine, and the loss of engine power.

## Probable Cause and Findings

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

Maintenance personnel's installation of an improper vacuum pump gasket, which resulted in oil starvation to the engine and a subsequent total loss of engine power.

## Findings

<b>Aircraft</b>	(general) - Incorrect service/maintenance
<b>Personnel issues</b>	Installation - Maintenance personnel
<b>Aircraft</b>	Oil - Fluid level

# Factual Information

## History of Flight

Enroute	Loss of engine power (total) (Defining event)
Landing	Off-field or emergency landing

On July 8, 2017, about 1050 central daylight time, a Beech VA airplane, NV, sustained substantial damage during a forced landing after a loss of engine power near Walters, Oklahoma. The airline transport pilot and one passenger sustained minor injuries. Visual meteorological conditions prevailed and no flight plan was filed. The airplane was registered to Gas Corporation of America of Wichita Falls, Texas, and the flight was being operated by the pilot under the provisions of Title 14 *Code of Federal Regulations* Part 91. The flight originated at 1040 from Kickapoo Downtown Airport (CWC), Wichita, Falls, Texas, and was en route to Lawton, Oklahoma.

The pilot reported that about 10 minutes after departing CWC, the oil pressure went to zero and the engine failed. He executed a forced landing to a soft farm field, about one mile south of the Walters Airport (OK12). The pilot and passenger exited the airplane with minor injuries. The airplane sustained substantial damage to the firewall and lower fuselage.

A review of the airplane maintenance records showed that the vacuum pump was replaced on July 7, 2017, the day before the accident. The engine was visually examined and disassembled. During the disassembly, it was discovered that a improper gasket (P/N-21051) was installed on the vacuum pump. The gasket was normally used for the installation of a carburetor. The installed gasket did not completely cover the high-pressure oil orifice on the vacuum pump mounting fixture. The proper gasket was (PN-MS9134-01) for the vacuum pump. Three connecting rods showed thermal and impact damage, and three rod journals were observed to be dry and showed thermal discoloration.

## Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	48,Male
<b>Airplane Rating(s):</b>	Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Lap only
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	June 14, 2016
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 5000 hours (Total, all aircraft), 26 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N6257V
<b>Model/Series:</b>	V35 UNDESIGNAT	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1967	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	D-8587
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	February 7, 2017 Annual	<b>Certified Max Gross Wt.:</b>	3400 lbs
<b>Time Since Last Inspection:</b>	10 Hrs	<b>Engines:</b>	Reciprocating
<b>Airframe Total Time:</b>	3432 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	IO-520-BB6
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>	On file	<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>	LAW	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	10:53 Local	<b>Direction from Accident Site:</b>	180°
<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>	3 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	130°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.06 inches Hg	<b>Temperature/Dew Point:</b>	25°C / 22°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Wichita Falls, TX (CWC )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Lawton, OK (LAW )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:40 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	Jones Farm Field Airport OK12	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	1042 ft msl	<b>Runway Surface Condition:</b>	Dry
<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>	Substantial
<b>Passenger Injuries:</b>	1 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Minor	<b>Latitude, Longitude:</b>	34.399166,-98.266387(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Lemishko, Alexander
<b>Additional Participating Persons:</b>	Mark C Shurig; FAA FSDO; Oklahoma City, OK John Kent; Continental Engines; Mobile, AL
<b>Original Publish Date:</b>	April 13, 2020
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<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=95674">https://data.nts.gov/Docket?ProjectID=95674</a>

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](#).