



Aviation Investigation Final Report

Location:	Walters, Oklahoma	Accident Number:	CEN17LA286
Date & Time:	July 8, 2017, 10:50 Local	Registration:	N6257V
Aircraft:	Beech V35	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 Minor
Flight Conducted Under:	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

Aircraft	(general) - Incorrect service/maintenance
Personnel issues	Installation - Maintenance personnel
Aircraft	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 an 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

Certificate:	Airline transport	Age:	48, Male
Airplane Rating(s):	Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	June 14, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(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

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

Airport Information

Airport:	Jones Farm Field Airport OK12	Runway Surface Type:	
Airport Elevation:	1042 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	34.399166,-98.266387(est)

Administrative Information

Investigator In Charge (IIC):	Lemishko, Alexander
Additional Participating Persons:	Mark C Shurig; FAA FSDO; Oklahoma City, OK John Kent; Continental Engines; Mobile, AL
Original Publish Date:	April 13, 2020
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=95674

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