



National Transportation Safety Board Aviation Accident Factual Report

Location:	Simmesport, LA	Accident Number:	CEN16LA118
Date & Time:	03/02/2016, 1500 CST	Registration:	N3339J
Aircraft:	CESSNA 150G	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

On March 2, 2016, about 1500 central standard time, a Cessna 150G airplane, N3339J, was substantially damaged during a forced landing to a field near Simmesport, Louisiana. The student pilot was not injured. The instructional flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no Federal Aviation Administration (FAA) flight plan had been filed for the flight. The cross country flight departed Hammond Northshore Regional Airport (HDC), LA, about 1400 and was en route to Alexandria International Airport (AEX), Alexandria, Louisiana.

According to the student pilot, while in cruise flight at 4,500 feet mean sea level the engine lost power and deposited engine oil all over the front windscreen. During the forced landing to a plowed field the airplane nosed over resulting in substantial damage to the fuselage.

The Federal Aviation Administration inspector who responded to the accident noted a hole in the crank case directly aft of the #1 cylinder. The engine was secured and shipped to a laboratory for further examination. The examination was conducted under the auspices of the National Transportation Safety Board investigator-in-charge and with the assistance of Continental Motors investigators.

The crank case was cracked in multiple locations and the hole in the crank case was approximately 2.5 inches by 2.5 inches. Oily residue was noted along the entire outer case and engine. Pieces of piston, piston rings, lifter, rod bolt, connecting rod, and a thrust washer were recovered from the engine oil sump. The #1 piston and rod assembly were jammed, wedged, and frozen in the cylinder and could not be disassembled. The rod assembly was fragmented and partially separated at the rod cap. The rod bolt broke at the split line of the rod and the rod cap.

The #2 piston and rod assembly were also jammed, wedged, and frozen in the cylinder and could not be disassembled. A second thrust washer fell from the assembly after the #3 and #4 cylinders were removed. One thrust washer near the propeller flange on the crank shaft exhibited fretting.

The front main crankshaft bearing (part #633398) with the separate thrust washer was removed from the engine. According to the most recent revision of the Continental Motors

Overhaul Manual and Illustrated Parts catalogs (both dated 2011) the front main bearing (part #627246) with the thrust washer as part of the assembly should have been used (a one-piece assembly as opposed to three separate pieces).

The engine had been disassembled and stored in that condition for about 2 years before being reassembled in May of 2015. In a telephone conversation with the mechanic who reassembled the engine, he stated many of the original components were not there for his reference. He utilized a parts catalog, dated March 1977, to reassemble the engine. He understood from these resources that all engines required the same bearing and thrust washer (three separate pieces and not one assembly). He stated further that while ordering kits for this reassembly the first three came incomplete. It was the fourth bearing kit that he received that came complete and included the main bearing with the separate thrust washer.

The mechanic encountered difficulty while reassembling the engine – specifically with the thrust washer staying in place during the reassembly. He stated that the instructions in the manual to use grease to keep the thrust washer in place were ineffective. He called Continental Motors customer service and was instructed to torque the case down and then install the cylinders to ensure the thrust washer remained in place. He followed these instructions and installed the #3 cylinder last to ensure that the bearing and thrust washer stayed in place. There was no question from the customer service representative to ensure that the correct part was being used during the reassembly.

Pilot Information

Certificate:	Student	Age:	19, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	10/07/2015
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	57.3 hours (Total, all aircraft), 44.5 hours (Total, this make and model), 35.9 hours (Last 90 days, all aircraft), 7.8 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N3339J
Model/Series:	150G	Aircraft Category:	Airplane
Year of Manufacture:	1966	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	15066039
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	05/01/2015, Annual	Certified Max Gross Wt.:	1499 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	6328 Hours	Engine Manufacturer:	CONT MOTOR
ELT:	Installed, not activated	Engine Model/Series:	0-200-A
Registered Owner:	DYLAN AVIATION LLC	Rated Power:	100 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KHZR	Observation Time:	1455 CST
Distance from Accident Site:		Condition of Light:	Day
Direction from Accident Site:		Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	20° C / 2° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	6 knots, 90°	Visibility (RVR):	
Altimeter Setting:	30.12 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hammond, LA (HDC)	Type of Flight Plan Filed:	None
Destination:	Alexandria, LA (AEX)	Type of Clearance:	None
Departure Time:	1400 CST	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None		

Administrative Information

Investigator In Charge (IIC):	Jennifer Rodi
Additional Participating Persons:	Shawn C Crump; Federal Aviation Administration; Baton Rouge, LA Mike Council; Continental Motors; Mobile, AL
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=92804