

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA22FA233

AIRFRAME AND ENGINE EXAMINATION FACTUAL REPORT

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A. ACCIDENT

Location: Wayne, Nebraska
Date: May 20, 2023
Time: 1842 Local
2342 UTC
Airplane: Cessna 140, N76075

B. AIRFRAME AND ENGINE EXAMINATION FACTUAL REPORT

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C. SUMMARY

On May 20, 2022, at 1842 central standard time, a Cessna 140 airplane, N76075, was destroyed when it impacted terrain at the Wayne Municipal Airport (LCG), Wayne, Nebraska. The private pilot was fatally injured. The airplane was operated by the pilot as a personal flight conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91.

D. DETAILS OF THE INVESTIGATION

The NTSB investigator-in-charge traveled to the accident site on May 21, 2021, and was assisted by a Textron Aviation party member and three FAA inspectors¹. The accident site and wreckage were documented on May 21 and 22 2022 at the accident site and at an LCG Airport hangar. The wreckage was secured in the hangar and a recovery crew one week after the accident transported the wreckage to a recovery facility in Minneapolis, MN. The wreckage was subsequently without further examination.

¹ The FAA Inspector named in this report was assigned to the investigation after the on-site activities concluded.

E. WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in an open field about 1,600 ft from the runway 31 threshold which was marked by yellow cones. The airplane impacted terrain in a near vertical nose down attitude. There was no evidence of fire and both wings contained fuel. Figure 1 provides an overview of the accident site and a view of the landing runway. Note, the semi-trucks and cars positioned in the farm field were not present at the time of the accident.



Figure 1: Overview of the accident site and landing runway.

F. METEOROLOGICAL INFORMATION

Review of the weather conditions at the airport revealed the following available METARs surrounding the accident time:

1815L: KLCG 202315Z AUTO 31016G24KT 10SM CLR 15/02 A2978 RMK AO2 T01510020

1835L: KLCG 202335Z AUTO 29015G21KT 10SM CLR 15/02 A2978 RMK AO2 T01500016

Accident Time: 2342UTC (1842L)

1855L: KLCG 202355Z AUTO 30015G20KT 10SM BKN120 15/01 A2979 RMK AO2 T01500013 1017820150

G. AIRFRAME EXAMINATION

Flight control continuity was confirmed to each surface to the flight controls. The manual flap handle was parallel to the floor with the latch mechanism out of alignment. The flap handle and latch sustained impact damage and could not be correlated to a specific flap setting.

The fuel selector valve shaft was bent, and the fuel selector handle could not be rotated out of the right tank position. Both wing tanks contained fuel. The seat belt center bracket fractured. The seat 1 outboard lap belt attach bracket separated from the fuselage structure. No shoulder harness was found installed on either side of the cockpit. A key switch was not installed, both magneto switches were in the OFF position. A rub mark was observed under the airspeed needle at 57 MPH. A pilot helmet was located in the debris.

H. ENGINE EXAMINATION

The engine was a Continental C-85-12, serial number 23740-6-1. It had crushed inward into the cockpit area and remained attached to its mounts. The engine was removed from the airframe and examined.

The rocker covers were removed, and all valves appeared normal. The top spark plugs were removed. They displayed normal to normal worn out appearances. They were all dark in color and were sooted with a carbon appearance, consistent with carbon fouling when compared to the Champion Check-A-Plug chart.

The propeller was rotated by hand. The engine displayed crankshaft and camshaft continuity as observed via a borescope through rear accessory section of the engine and as evidence of all valves displaying movement. Thumb compression was confirmed on all cylinders. The magnetos were removed, and the leads were cut. A power drill was applied to the drive gear and all leads showed spark.

The carburetor and throttle body had separated from the engine and remained partially attached via a metal bracket. It contained fuel and was free of obstruction or debris. The carburetor air duct heat baffle was found in an OFF position, which corresponded to the OFF position the lever arm was located in at the cockpit. The fuel was negative for water when tested with water finding paste. The mixture control at the carburetor was safety wired to a full rich position. The cockpit throttle lever was found extended about 1 ¾ inches and had fractured.

The propeller remained attached the hub. One blade was largely free of twisting or bending, and other blade demonstrated a slight forward bend about its mid-span.

I. MAINTENANCE RECORDS

The airplane's maintenance records revealed that the most recent annual inspection was performed on October 6, 2021, at a tachometer time of 1371.69. The tachometer reading found at the accident site was 1484, which resulted in the airplane flying 113 hours since the last annual inspection.

The most recent maintenance endorsement was on October 9, 2021, which denoted an oil change and oil filter evaluation, which was unremarkable.

J. PHOTOGRAPHS AND FIGURES



Photo 1: View of the airplane at the accident site.



Photo 2: View of the airplane at the accident site (Photograph Courtesy of Sheriff's Office)



Photo 3: View of the airplane at the accident site.



Photo 4: View of the airplane during recovery operations.



Photo 5: View of the airspeed indicator as found indicating about 57 MPH.



Photo 6: View of the engine after removal from the airframe.

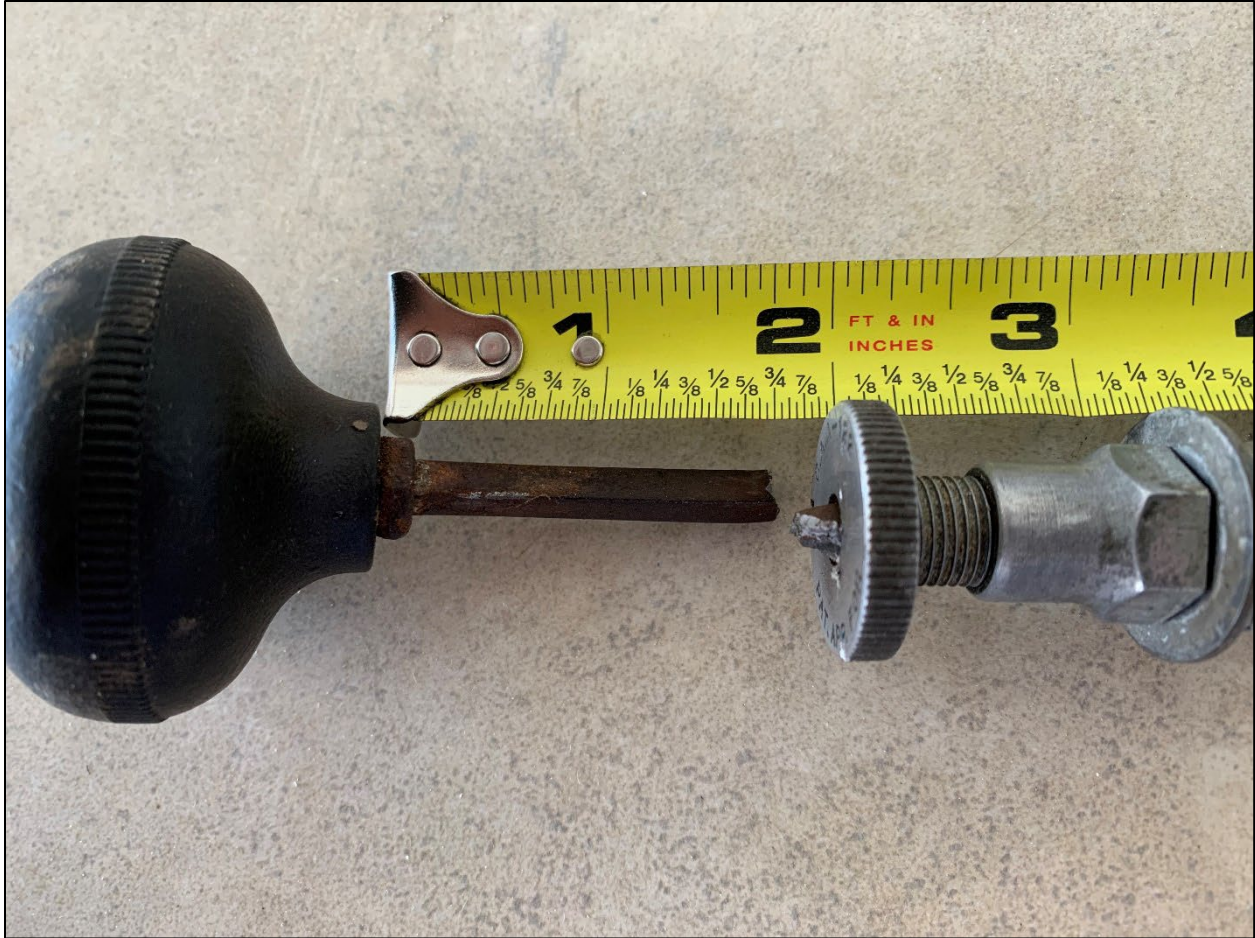


Photo 7: View of the throttle lever as found and view of its fracture area.



Photo 8: View of the top spark plugs.



Photo 9: View of the right side of the engine with the cylinder covers removed for examination.

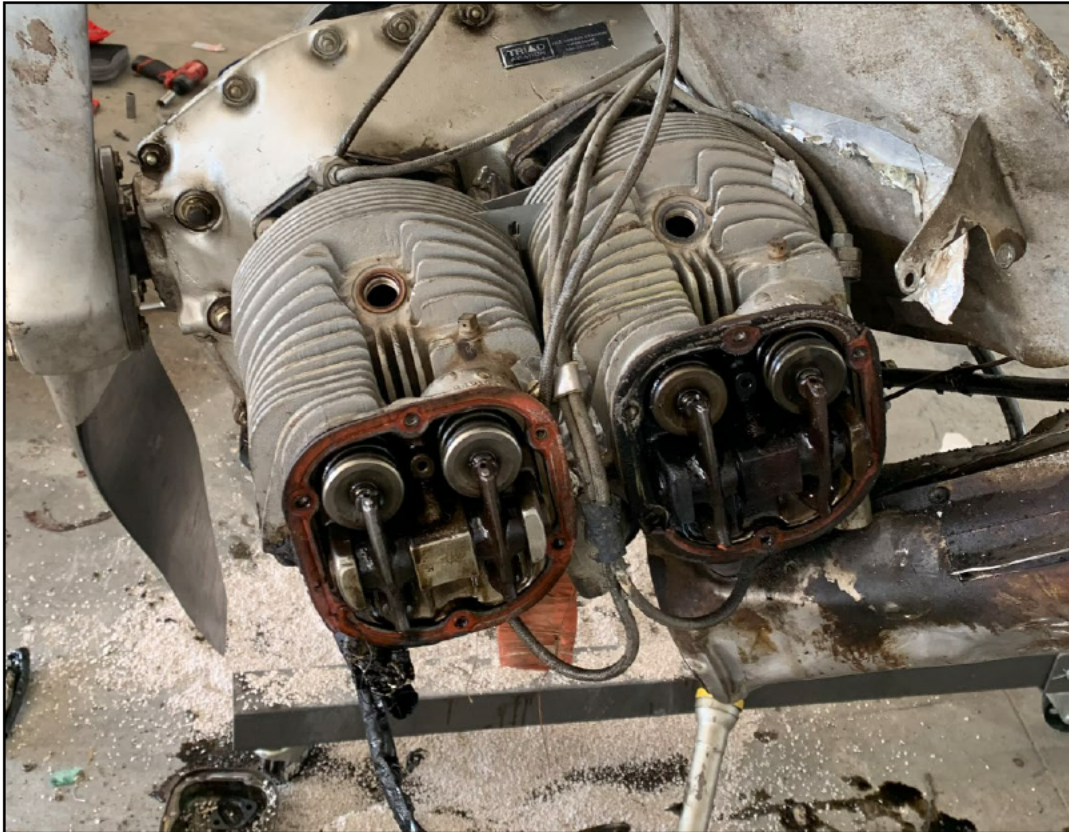


Photo 10: View of the left side of the engine with the cylinder covers removed for examination.

YEAR: DATE	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
				10/6/2021 Tach 1371.69 ACTT 3029.78 hours. Inspected aircraft and propeller for annual. Tested ELT In accordance with CFR91.207d and found it to be properly operational. Batteries expire October 2022. Checked AD's thru 2021-19. Recurring AD's: C/W AD 48-25-03 Wing Drag Wires OK. C/W AD 48-07-01 Stabilizer attach bolts secure. C/W AD 47-50-02 Fuselage bulkhead Ok by inspection. C/W AD 47-43-05 Elevator Spar Web reinforcement. OK by inspection. C/W 43-43-04 Rudder Control Cable Horn. OK by inspection. I certify that this aircraft has been inspected in accordance with an annual inspection and has been determined to be in airworthy condition. RN# N76075 Randy L. Thompson A&P

Photo 11: View of the most recent annual inspection endorsement.

Submitted by:

Adam Gerhardt
Senior Air Safety Investigator