



Continental Motors

ENGINE FIELD RUN REPORT

ENGINE MODEL	IO-520-D139B
ENGINE SERIAL NUMBER	812883-R
AIRCRAFT MAKE & MODEL	Cessna A185F
AIRCRAFT SERIAL NUMBER	18502235
AIRCRAFT REGISTRATION	N401WC
FILE NUMBER	17-042

NAME	SIGNATURE	DATE
Nicole L. Charnon		08/11/2017

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PAGE 2 of 11**GENERAL INFORMATION****EXAMINATION****DATE** 08/04/2017**FACILITY** Private Hangar**ADDRESS** [REDACTED]
Anchorage, Alaska 99502**ACCIDENT DATA****NTSB ACCIDENT #** ANC17LA037**NTSB INVESTIGATOR** Noreen Price**FAA INVESTIGATOR** Gregory Varner**ACCIDENT DATE** 07/15/2017**ACCIDENT LOCATION** Wasilla, Alaska**ENGINE INFORMATION****ENGINE POSITION** Single-Engine**TOTAL TIME** Unknown**TIME SOH** 251.0 hours**TYPE & TIME SLI** 16 hours since last Annual Inspection; 07/27/2016**BUILD DATE** 10/14/1997**IN SERVICE DATE** Unknown**Significant logbook information:**

The maintenance records indicate that the engine underwent its last annual inspection on July 27, 2016. The pilot/owner reported that the engine was last overhauled about 251 hours prior to the accident and the aircraft accumulated 16 hours since its last annual inspection.

Report Summary:**Search Code(s):**

15-12-68

The engine was examined prior to a test run. There were no signs of operational distress or pre-accident anomalies noted with the engine or engine-related systems. The engine was test run on the airframe utilizing all the original aircraft and engine systems as well as the fuel recovered from one of the fuel tanks. The engine started with no hesitation noted and was run for a few minutes at a maximum engine speed of 900 RPM (due to impact damage sustained by one of the propeller blades). A magneto test was performed with no pre-accident anomalies noted.

Disposition of engine following exam:

The NTSB investigator-in-charge released the aircraft to the owner following the exam/test run.

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NAME	Nicole L. Charnon	NAME	Noreen Price
ADDRESS	Washington, DC	ADDRESS	Anchorage, AK
ORGANIZATION	Continental Motors	ORGANIZATION	NTSB – Anchorage Office
PHONE	██████████	PHONE	██████████
NAME	Sean Lidey	NAME	
ADDRESS	Anchorage, AK	ADDRESS	
ORGANIZATION	Mechanic	ORGANIZATION	
PHONE	N/A	PHONE	

EXTERNAL INSPECTION OF ENGINE

The engine remained attached to the airframe with no pre-accident anomalies noted with any of the structural attachments. The engine cowling was previously removed. One of propeller blades contained dried mud on the face side of the blade and was loose in the hub. The mixture and throttle control levers were examined with no pre-accident anomalies noted. The throttle and mixture controls were manually manipulated in the cockpit and a coinciding movement of the throttle and mixture control levers/shafts was observed at the fuel metering unit with no signs of slipping or binding noted. All of the fuel lines were secured to their respective fittings with no signs of fuel leaks noted. There was no sign of any oil leaks.



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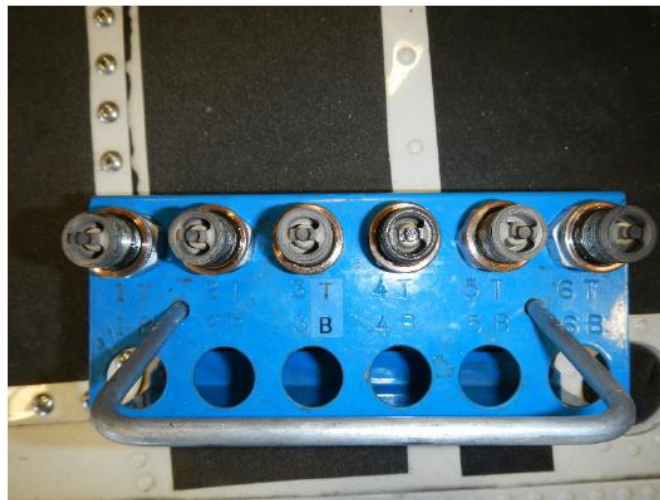
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ENGINE PREPARATION PRIOR TO RUN

The top sparkplugs were removed from their respective cylinders and a borescope inspection was performed and documented (see borescope images below). The top sparkplugs appeared to be in a near-new wear condition with no signs of lead or carbon fouling. No pre-accident anomalies were noted with the internal components. The propeller was manually rotated and a spark was observed on the ignition leads. The top sparkplugs were reinstalled in their original cylinders and their ignition leads were reattached. The fuel that was drained from the wing tanks following the accident was poured into the fuel tanks in preparation for the test run.



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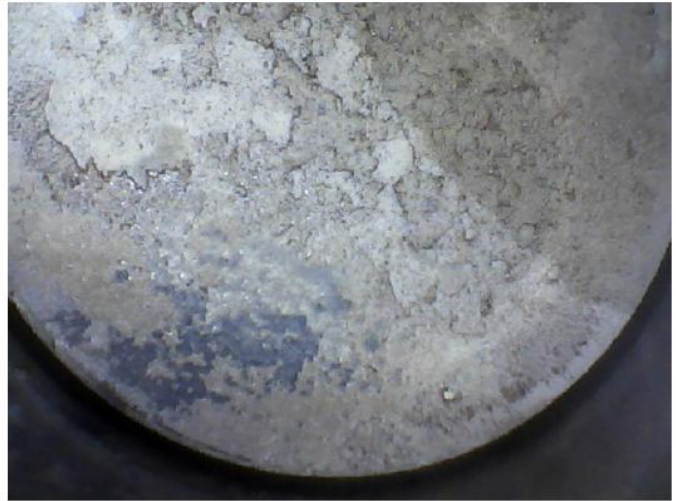
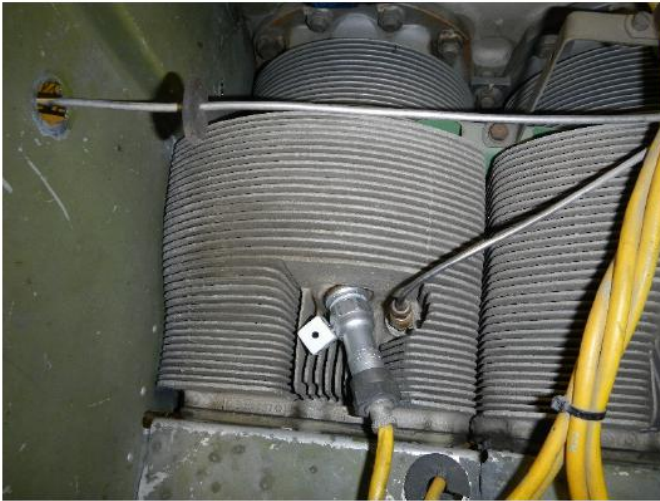
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NOTE: The images that follow each cylinder number represent the cylinder's external condition, piston, intake valve, and exhaust valve in that order unless otherwise specified.

Cylinder 1



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Cylinder 3



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Cylinder 5



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Cylinder 2



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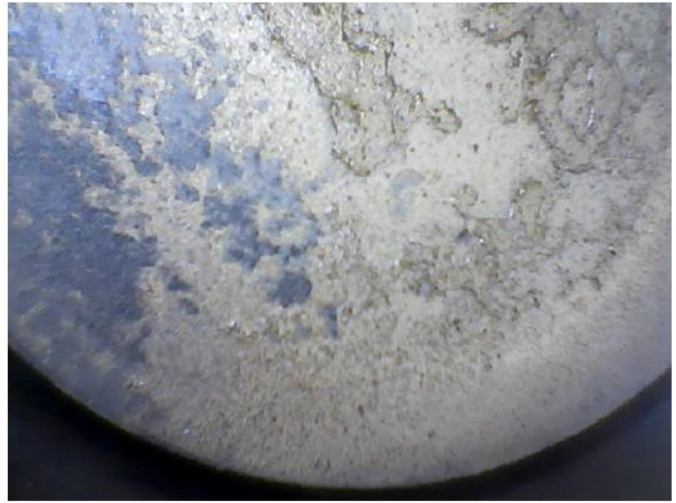
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Cylinder 4



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Cylinder 6



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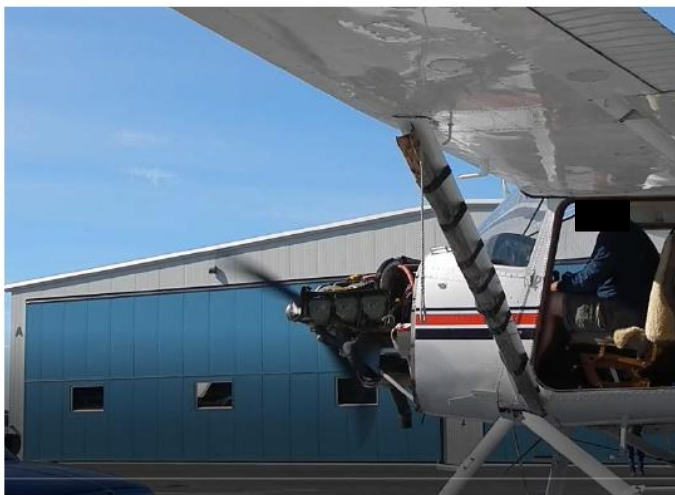
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DESCRIPTION OF RUN

The engine was started utilizing the normal aircraft starting system after a replacement battery was installed. The engine started without hesitation and was run at a low RPM due to the vibrations induced by a loose propeller blade. The engine RPM was increased to 900 RPM for a magneto check with no pre-accident anomalies noted. The test run was kept short to prevent any damage due to the loose propeller blade.



ENGINE RUN CONCLUSION

Examination of the engine and engine-related systems revealed no pre-accident anomalies that would have prevented the engine's ability to produce full, rated power. A short engine test run did not reveal any pre-impact anomalies that would have precluded the development of full power.