



Continental Motors

ENGINE FIELD RUN REPORT

ENGINE MODEL	O470 L (9H)
ENGINE SERIAL NUMBER	900714 OH
AIRCRAFT MAKE & MODEL	Cessna 182A
AIRCRAFT SERIAL NUMBER	34309
AIRCRAFT REGISTRATION	N9909B
CMI FILE NUMBER	15-524

NAME	SIGNATURE	DATE
Mike Council		6-16-2016

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GENERAL INFORMATION

EXAMINATION		ACCIDENT DATA	
DATE	6-15-2016	NTSB ACCIDENT #	WPR16LA094
FACILITY	Plain Parts	NTSB INVESTIGATOR	Josh Cawthra
ADDRESS	[REDACTED] Pleasant Grove, California	FAA INVESTIGATOR	Kevin Marpert
		ACCIDENT DATE	4-19-2016
		ACCIDENT LOCATION	Selma, CA

ENGINE INFORMATION

ENGINE POSITION	Single
TOTAL TIME	3478.3 reported at last annual inspection dated 9-2-2015
TIME SOH	450.4 reported at last annual inspection dated 9-2-2015
TYPE & TIME SLI	63.8 since last annual inspection dated 9-2-2015
BUILD DATE	9-10-1974
IN SERVICE DATE	3-10-1975 (assumed)

Report Summary:

Search Code(s):

The engine started and ran briefly before losing power for unexplained reasons. The carburetor was disassembled and contamination was found. Once the contamination was removed and the carburetor reassembled and reinstalled, the engine ran normally.

Disposition of engine following exam: The engine will remain at Plain Parts, Pleasant Grove, CA until released by the NTSB IIC.

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PAGE 3 of 8**Significant logbook information:***McGregor Executive Airport, McGregor TX 76657***Reg. #:** N9909B **Date:** 9-2-15 **Work Order #:** 15-0151**Make:** Cessna **Model:** 182A **Serial #:** 34309 **Tach:** 3478.3**Eng:** TCM O-470-L **S/N:** 900714-OH **TSMOH:** 450.4

Performed an Annual Inspection as required by FAR 91.409 in accordance with the Cessna service manual, and FAR 43 Appendix D. Accomplished the following items: Compressions check results. 1) 72/80, 2) 70/80, 3) 72/80, 4) 70/80, 5) 73/80, 6) 73/80. Drained oil and serviced engine with 10 quarts of Aeroshell 100W Plus. Replaced oil filter with new CH48108-1. Leak check satisfactory. Adjusted left magneto timing to spec as required. Removed cracked left front engine baffle and seal, fabricated new baffle from 2024-T3 .032" aluminum alclad, installed baffle and new seal.

I certify that this engine has been inspected in accordance with an ANNUAL / 100 Hr inspection and has been determined to be in an airworthy condition.



Carl Farris A&P

BROUGHT FORWARD

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NAME	Mike Council	NAME	Josh Cawthra
ADDRESS	██████████, Mobile, Alabama	ADDRESS	Western Pacific Region
ORGANIZATION	Continental Motors	ORGANIZATION	NTSB
PHONE	██████████	PHONE	██████████
NAME	Jonathan Hirsch	NAME	Dennis James
ADDRESS	██████████ ██████████. Wichita, KS 67215	ADDRESS	██████████ Pleasant Grove, California
ORGANIZATION	Textron Aviation	ORGANIZATION	Plain Parts
PHONE	██████████	PHONE	██████████

EXTERNAL INSPECTION OF ENGINE

The induction air box had separated but remained attached by the carburetor heat cable. The carburetor remained intact and attached to its mount. The rear induction wye pipes remained attached to the left and right induction components but the attachment bosses had separated. The front induction tube was slightly pinched.

The exhaust risers remained intact and attached to their respective cylinders but the muffler was detached on the left attach point to the left exhaust manifold. The single muffler exhaust pipe was pinched approximately 90% closed due to impact with the ground.

An examination of the engine priming system indicated a fuel leak at the firewall fitting of the primer line. Corrective action was taken to stop the fuel leak. The magnetos produced spark when the engine was manually rotated. Valve train continuity was confirmed by obtaining thumb compression when the engine was manually rotated and observing the rocker arm movement on cylinder # 6. The rocker box cover had been removed to observe the rocker arms and was reinstalled.

The two left engine mounts remained intact but the two right side engine mounts separated.

Attached to the engine crankshaft propeller hub was a two blade, McCauley constant speed propeller. The propeller blades were marked with an "A" or "B" to facilitate photo identification. Both propeller blades were free of cord-wise scratching or leading edge gouging. Both blades exhibited paint transfer on the last 8 inches of the blade tips. Propeller blade "A" exhibited a rearward bending motion beginning approximately 25 inches outboard of the blade shank. Propeller blade "B" exhibited a rearward bending motion beginning approximately 12 inches outboard of the blade shank.

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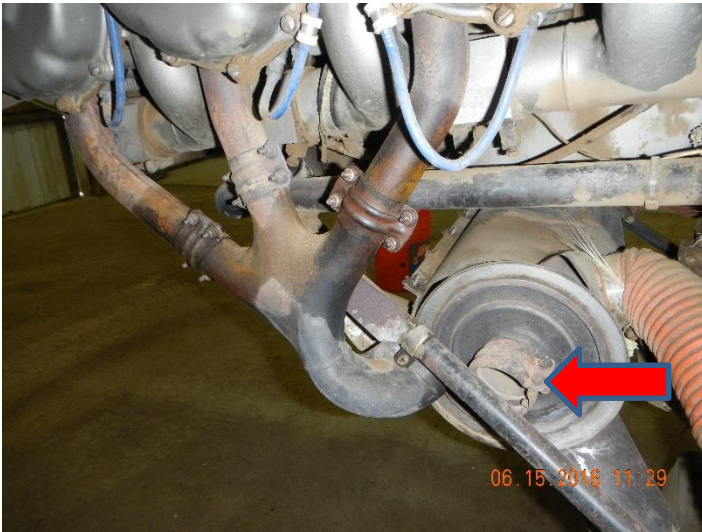
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ENGINE PREPARATION PRIOR TO RUN

All sparkplugs were removed and examined. A lighted borescope inspection was performed to confirm valve and inner cylinder condition. All sparkplugs were reinstalled back to original positions as found. Magneto function was confirmed by manually rotating the engine and observing spark at the disconnected ignition leads. The ignition leads were reinstalled to the sparkplugs.

The right side engine mounts separated. Safety straps were used to prevent the engine from lifting up as a natural reaction to engine torque during the engine test run.

The engine oil level was checked and two quarts of aviation oil were added.

An alternate fuel set up was installed since the wings and wing mounted fuel tanks had been removed. A portable fuel container was plumbed into the right wing fuel inlet tube and the left wing inlet fuel tube was secured.

The damaged propeller was removed from the engine and a slave test club propeller was installed.

DESCRIPTION OF RUN

The engine was started and ran at idle for approximately 80 seconds before losing power and coming to a stop. Several attempts were made to restart the engine. The engine was primed and the throttle was pushed in and out to facilitate starting. Each time, the engine would start then cease running as if out of fuel. An examination of the engine priming system indicated a leak at the firewall fitting of the primer line. Repairs were made to the primer lines and a restart of the engine was attempted. Again, after priming the engine and pushing the throttle in and out, the engine would start and run for just a few seconds before losing power and stopping. At this point, the NTSB IIC directed that the carburetor be removed, disassembled and inspected. The carburetor was removed and the bowl separated from the carburetor body. The metal floats were intact and the float operation appeared to operate normally. When low air pressure air was introduced into the mixture venturi tube, contamination was forced out. The contamination was removed and the carburetor was reassembled.

The carburetor was reinstalled on the engine and the engine controls rigged for proper motion. The engine was started and ran normally for several minutes. The engine was allowed to run at idle for several minutes until reaching proper operating temperatures. The actual engine speed could not be verified as the mechanical tachometer was inoperative. The manifold pressure gage was operative and indicated normal idle performance. The engine speed was raised momentarily to perform a magneto test which appeared to be normal. After several minutes of normal running, the engine mixture control was moved to the mixture cut-off position and the engine ceased running. The engine test run was complete.

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Duration		RPM	MP (" Hg)
Reading	Minutes		
1	2	*Estimated at 600	Undetermined
2	1	*Estimated at 1700	17 inches
3	.5	*Estimated at 2300	23 inches

***NOTE:** The panel mounted mechanical tachometer was inoperative during the engine test run.



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Engine RPM	Left Mag RPM	Left Mag RPM Drop	Right Mag RPM	Right Mag RPM Drop
*Estimated 1700	* slight audible drop in RPM	* slight audible drop in RPM	* slight audible drop in RPM	* slight audible drop in RPM

ENGINE RUN CONCLUSION

After cleaning contaminants from the carburetor, the engine ran and produced normal power.

Examiner	Signature	Date
Mike Council		6-16-2016