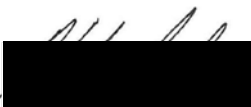




Continental Motors

ENGINE FIELD RUN REPORT

ENGINE MODEL	IO-520-D
ENGINE SERIAL NUMBER	159155-9-D
AIRCRAFT MAKE & MODEL	Bellanca 17-30
AIRCRAFT SERIAL NUMBER	30207
AIRCRAFT REGISTRATION	N7328V
FILE NUMBER	16-642

NAME	SIGNATURE	DATE
Kurt Gibson		08/07/2017

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159155

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GENERAL INFORMATION

EXAMINATION		ACCIDENT DATA	
DATE	07/13/2017	NTSB ACCIDENT #	CEN17LA220
FACILITY	Beegles Aircraft Services	NTSB INVESTIGATOR	Josh Lindberg
ADDRESS	635 Airport Rd Greeley, CO 80631	FAA INVESTIGATOR	Sidney Jensen
		ACCIDENT DATE	06/08/2017
		ACCIDENT LOCATION	Bennett, Colorado

ENGINE INFORMATION

ENGINE POSITION	Single engine (Front)
TOTAL TIME	2673.4
TIME SOH	594.02
TYPE & TIME SLI	24.02 since the last annual inspection
BUILD DATE	02/13/1969
IN SERVICE DATE	Unknown

Significant logbook information:

The last annual inspection was performed on 07/08/2016 at a tachometer time of 1489.69

Report Summary:

Search Code(s):

15-12-68

There were no anomalies noted during the engine run and engine examination that would have prevented normal operation or production of rated horsepower.

Disposition of engine following exam:

The engine remained at Beegles Aircraft Services in Greeley, Colorado.

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PAGE 3 of 7**INSPECTION WITNESSES**

NAME	Kurt Gibson	NAME	Sidney Jensen
ADDRESS	Mobile, Alabama	ADDRESS	Denver, Colorado
ORGANIZATION	Continental Motors	ORGANIZATION	FAA
PHONE		PHONE	
NAME		NAME	
ADDRESS		ADDRESS	
ORGANIZATION		ORGANIZATION	
PHONE		PHONE	
NAME		NAME	
ADDRESS		ADDRESS	
ORGANIZATION		ORGANIZATION	
PHONE		PHONE	

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EXTERNAL INSPECTION OF ENGINE

Prior to the investigators arrival the aircraft was secured to a trailer and an undamaged propeller was installed onto the engine crankshaft. The engine remained attached to the airframe through all the engine mounts, cables, hoses, and wires. The crankcase, cylinders, and crankshaft remained intact and were undamaged.

The throttle control cable end displayed impact damage signatures and was bent; during throttle movement, the throttle control arm was noted to be unable to reach the idle stop which was consistent with the impact damage. The mixture and propeller control cables and arms operated normally.

The fuel pump remained intact and was undamaged; all the fuel lines were noted to be secure. The throttle and metering assembly remained attached to its installation point and was undamaged; all the fuel lines were noted to be secure. The fuel manifold valve remained attached to its installation point and was undamaged; here were no fuel leaks noted and all the fuel lines were secure.

Both magnetos remained attached to their installation point and were undamaged. The ignition harness remained attached to both magnetos and to all the spark plugs; all the ignition leads were undamaged. All the spark plugs remained installed in their cylinders and were undamaged.

The exhaust system displayed minor impact damage to the exhaust tailpipes; the exhaust risers were undamaged and there were no signs of exhaust leaks. The induction system remained intact and was undamaged; there were no signs of induction leaks noted.

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ENGINE FIELD RUN REPORT**FILE NUMBER:**

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PAGE 6 of 7**ENGINE PREPARATION PRIOR TO RUN**

A slave fuel tank was used and was installed into the fuel system. The top spark plugs were removed and visually inspected; the spark plug electrodes displayed normal operating signatures and were in a normal worn out condition. All the cylinders were inspected using a lighted borescope; the valve heads, piston faces, and cylinder bores displayed normal operating and combustion signatures. The crankshaft was rotated and thumb compression was obtained on all cylinders. The spark plugs were reinstalled into their cylinders.

DESCRIPTION OF RUN

After powering up the aircraft electrical system it was discovered that the electric boost pump was inoperative. After several failed attempts to start the engine without priming the fuel system a functional electric boost pump was installed into the fuel system and the fuel system was bled and then primed. After the engine was primed the engine started on the first attempt without hesitation. The engine was operated at an RPM of 1500 until the engine warmed up to operating temperatures; it was noted that the engine could not run below 1500 RPM which was consistent with the impact damage to the throttle cable end. After the engine warmed to operating temperatures the engine RPM was advanced to 2100 RPM and allowed to stabilize without any issues noted. After approximately 2 minutes the engine was advanced to full throttle where the RPM reached 2800; after a couple of seconds the propeller governor reduced the RPM to 2600. After running the engine for approximately 1 minute the slave fuel tank securing straps broke and the engine was shut down by the investigator using the mixture control.

After the engine was shut down the investigators tested the aircraft fuel selectors by blowing compressed air in the various fuel tank outlets and observing the air come out of the engine driven fuel pump inlet line. Both fuel selectors operated normally and there were no blockages noted with any of the fuel lines.

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Max RPM Observed



RPM after stabilized by propeller governor



ENGINE RUN CONCLUSION

According to the recovery personnel approximately a total of 45 gallons of fuel was drained from the fuel tanks; however, the recovery personnel and the FAA investigator noted that only a few ounces were able to be drained from the left inboard fuel tank (left main fuel tank).

There were no anomalies noted with the engine that would have prevented normal operation. The cause of the airframe's electric boost pump failure was not determined at the time of the engine run.