

ENGINE TEARDOWN REPORT INSPECTOR STATEMENT

Engine Model: Continental, IO-550B-89B

Engine Serial Number: 1009478

Aircraft Make: Beechcraft Bonanza

Aircraft Model: A36

Aircraft Serial Number: E-2561

Registration Number: N8014T

Date of Examination: September 4, 2019

Requesting FAA Office:

FSDO: Marvin C. Daniels - Flight Standards District Office AFG-100/EA FSDO-11
Farmingdale, NY 11735

NTSB – Millicent Hoidel

Accident/Incident Number: ERA19FA189

Investigation Party:

NTSB- None on site.

Todd T. Pryor - Birmingham, Alabama AFG-600-BHM FSDO SO-09

Philip Grice---Continental Motors, Mobile, Al.

Description of Engine:

550 cubic inch displacement horizontally opposed six cylinder, air cooled, fuel injected engine, developing 310 horsepower at 2700 RPM.

Initial Inspection:

Aircraft engine was located in the Analytical Department at Continental Motors, Mobile, Alabama. The engine had severe burns with dirt and debris. The engine was removed from a shipping container and placed on an engine stand.

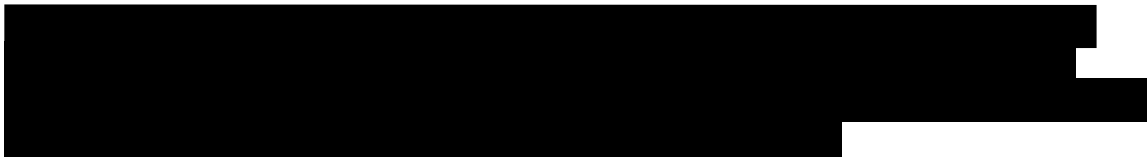
Initial examination of engine disclosed that the crankshaft flange was broken and missing from the engine. Impact damage was noted on the lower front of the crankcase, along with broken engine mounts, damage to oil sump and exhaust system. Rear of the engine displayed fire/smoke/impact damage.

Engine Disassembly:

- Alternator was removed—shaft would not rotate due to impact and fire damage.
- Magnetos, starter, alternator and propeller governor – fire damaged.
- Spark plugs were removed—displaying a normal operating appearance.
- Cylinders removed—all six cylinders and pistons had abnormal operating appearance with damage to the top of #6 piston.
- Crankcase separated---main bearings displayed a wear and damaged appearance, scoring with wear on all journals. Rear main bearing at crankcase was mushroomed at case half indicating severe wear.
- Camshaft/governor drive gear has severe wear patterns with heavy scoring on the aft third of shaft.
- Crankshaft was removed and disassembled—Rear main journal has severe scoring and spun bearing, major discoloration.
- Oil pump disassembled—severe cracking and damage to housing.
- Fuel pump was removed---shaft was sheared and would not rotate due to impact and fire damage.
Fuel pump disassembled—internal components contaminated with firefighting material; impellers and shaft rusty.
Fuel metering valve destroyed and bent, severe fire damage.
Fuel manifold has severe fire damage.

Accessory Testing:

Accessories were not tested due to severe damage.



Todd T. Pryor
Aviation Safety Inspector, FSDO SO-09
September 4, 2019

Enclosures: Photographs one thumb-drive.

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