

ENGINE TEARDOWN REPORT INSPECTOR STATEMENT

Engine Model: Continental C85-12

Engine Serial Number: 22890-6-12

Aircraft Make: Cessna

Aircraft Model: 140

Aircraft Serial Number: 9296

Registration Number: N72129

Date of Examination: September 17, 2021

Requesting FAA Office:

NTSB— Heidi Kemner

Accident/Incident Number:

Investigation Party:

Kyle Cook ---- Nashville, FSDO SO-19

Philip Guidry – A&P, IA

Description of Engine:

188 cubic inch displacement horizontally opposed four cylinder, air cooled, carburetor fueled engine, developing 85 horsepower at 2575 RPM.

Initial Inspection:

Aircraft engine was located at the aircraft owner's hangar (K7) at the Murfreesboro, TN airport KMBT. The engine was still mounted on aircraft N72129, a Cessna 140 aircraft with serial number 9296. All engine magnetos, harness, spark plugs, carburetor, propeller, exhaust system, engine baffle were still installed. The aircraft nose and engine were hoisted/elevated using a forklift and straps that were placed on the engine mount. Work was performed while the aircraft nose and engine remained elevated in this manner.

Initial examination of engine disclosed that the landing impact had caused the lower engine cowling to be crushed and the carburetor to sustain damage. The engine remained intact without initial indication of damage with the exception of the carburetor and the lower engine cowling.

Engine Disassembly:

- Propeller showed to rotate freely.
- Propeller was removed for hoisting clearance.

- Aircraft nose and engine were hoisted using a forklift and straps around the engine frame mount.
- Top cylinder spark plugs were removed—displaying a normal operating appearance. No excessive carbon buildup was noted, no visual damage was noted.
- Compression test was conducted on all cylinders.
#1 – 60 PSI, #2 – 62 PSI, #3 – 72 PSI, #4 – 76 PSI
- Bottom cylinder spark plugs were removed – displaying normal operating appearance. No excessive carbon buildup was noted, no visual damage was noted.
- Spark plug wires were tested for spark by rotating the engine, all spark plug wires showed spark.
- Carburetor and lower engine exhaust manifold discharge showed excessive damage from crash impact. Carburetor was broken off at the neck and carburetor mount and bolts were attached to the bottom of the engine.
- All carburetor linkage was attached, fuel rich, throttle and carburetor heat. Carburetor butterfly valve moved freely.
- Carburetor air intake was crushed from impact damage, filter was still in place.
- Spark plug resistance test was conducted with all spark plugs testing good resistance except the #1 cylinder bottom plug tested bad with no resistance.

Causal Factor/ Observations:

The examination of this engine revealed no abnormalities or operational issues.

Kyle R. Cook
Aviation Safety Inspector, FSDO CE-19
September 22, 2021