

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: N3964L Preflight details
Date: Wednesday, March 2, 2022 11:48:15 AM

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I had arrived at 04G around 13:45 on the day of the accident. I checked the fuel with a sight gauge and found around 7 gallons in the right tank and less than two gallons in the left tank to which I added 3.8 gallons of Shell, Non-Ethanol automotive gas from Pump # 1 from the station located at [REDACTED] Youngstown, Ohio 44502. Ph.# [REDACTED]. After adding the fuel I began the preheating the engine with propane fired forced air portable heaters. I then checked the oil level and found 7 quarts on the dipstick. The left fuel gauge showed slightly less than half tank and the right gauge showed one quarter tank. Around 14:30 I removed the airplane from the hangar and finished the preflight checklist and started the engine. During the warm up no anomalies were noted. At run up no anomalies were noted and the takeoff was normal. I had the fuel selector on BOTH tanks and did not change it's position at any time. During my downwind approach at 04G I applied full carburetor heat and the engine stumbled then quit but the propeller was windmilling. I confirmed full rich mixture and began stroking the throttle with no restart.



RECORD OF CONVERSATION

Michael J. Hodges
Air Safety Investigator
Central Regional Office
Office of Aviation Safety
National Transportation Safety Board

Date: 01/18/2022

**Person Contacted: Alex McAninch (FAA Columbus FSDO – Aviation
Safety Inspector, Operations)**

NTSB Case Number: CEN22LA098

Narrative:

The following is a synopsis of the information provided by Alex McAninch to the NTSB investigator-in-charge, via a telephone conversation.

- Alex traveled on 01/12/2022 to Youngstown, Ohio, to document the airplane (N3964L – Cessna 172G airplane equipped with a Continental Motors O-300-D engine) after it was recovered from the accident site. The airplane was recovered to the pilot's personal hangar.
- An attempt was made to start the airplane after it was brought down from the tree. The airplane appeared to produce spark as it popped and blew some smoke from the exhaust, but then the battery died.
- The airplane was fueled with automotive gas (MOGAS) before the accident by the pilot. The airplane was modified with a supplemental type certificate (STC) to utilize MOGAS. The STC states that the engine is more susceptible to encountering carburetor icing when MOGAS is used. The pilot purchased the MOGAS from a local gas station in town.
- Flight control continuity was established for the airframe.
- Engine control continuity was established for the engine.
- The fuel tank selector handle was found set to the both position.
- Both fuel tanks were found intact. There were no signs of a fuel leak on the airframe. There were no smells of fuel or any fuel stains.
- A little over four gallons of fuel was drained from the left fuel tank.
- About a quarter of a gallon of fuel was drained from the right fuel tank.
- For the fuel that was recovered from the two fuel tanks, there were no sign of contaminants or water present.

**** Nothing Follows ****



RECORD OF CONVERSATION

Michael J. Hodges
Air Safety Investigator
Central Regional Office
Office of Aviation Safety
National Transportation Safety Board

Date: 02/03/2022

**Person Contacted: Arnold Wolfe (FAA Columbus FSDO – Aviation Safety
Inspector, Airworthiness)**

NTSB Case Number: CEN22LA098

Narrative:

The following is a synopsis of the information provided by Arnold Wolfe to the NTSB investigator-in-charge, via a telephone conversation.

- Arnold traveled on 02/03/2022 to Youngstown, Ohio, to examine the airplane (N3964L – Cessna 172G airplane equipped with a Continental Motors O-300-D engine) after it was recovered from the accident site. The airplane was recovered to the pilot's personal hangar.
- The pilot was present and assisted during the examination.
- The left wing fuel tank was removed from the wing and the fuel tank was filled with water and placed in a position to replicate the position of the airplane in the trees. This was done to gauge how much fuel would have drained out of the airplane in the impact position, through the fuel vent. The amount of water remaining in the fuel tank was almost five gallons. This was approximately the same amount of fuel that was drained from the airplane by the FAA previously.
- The engine oil filter was removed and cut open. There was no metal or carbon pieces observed.
- The engine oil level was full.
- The firewall fuel filter was checked and was clean.
- The spark plugs were removed and checked. The spark plug wear was satisfactory and lower plugs were oil soaked from when the engine was on its side after the impact.
- The propeller was rotated by hand several times with no anomalies.
- Thumb compression was checked on all cylinders with no anomalies.
- The magnetos and spark plugs all produced spark.
- Airframe to engine control continuity was confirmed.
- No leaks were found, and no damage was observed to the engine.
- An attempt was made to start the airplane; however, the battery was dead and only turned the propeller two revolutions.

**** Nothing Follows ****

June 23, 2022

Marvel-Schebler Aircraft Carburetors LLC. has completed a fuel flow evaluation of carburetor model MA-3SPA, part number: 10-4895-1, serial number: BF-0-142. This evaluation was performed on June 2, 2022. The evaluation was witnessed by Jerry L. Toms, Greensboro NC FSDO. The results are as follows.

As compared to the target flow for this model, the performance of carburetor: 10-4895-1, serial number: BF-0-142, was lean overall. This evaluation does not include idle, as the final determination for this setting is done in the field.

At the first power setting the unit is nominally 8% more lean than the target flow, nominally 4.2% more lean than the flow of the target is the maximum permitted at this setting.

The second setting the unit is nominally 14.7% more lean than the target flow, nominally 2% more lean than the flow of the target is the maximum permitted at this setting.

The full throttle power setting is nominally 3.6% more lean than the target flow, nominally 1.3% more lean than the flow of the target is the maximum permitted at this setting.

Carburetor serial number BF-0-142 was returned to Jerry Toms.

Please feel free to contact me for any further assistance,

Mark Keeney
for

Marvel-Schebler Aircraft Carburetors LLC.