

On 8/22/2023 I went to Corrigan Towing in Brighton, MI to examine N29TM that had an inflight engine failure and the pilot elected to make an emergency landing in a small lake in Brighton, MI. Corrigan Towing recovered the aircraft from the lake on 8/20/2023 and took it to their facility about .20 miles from the accident site.

Upon arrival Corrigan's removed the wreckage from the facility so it could be examined in a less confined area. The aircraft was destroyed by the impact with the water, the left wing was separated at the wing root from impact with a small dead tree prior to entering the water. Both main landing gears were sheared off, one was not recovered from the lake and the other was hanging from the aircraft by the brake lines. The nose section of the aircraft was sheared at the instrument panel but remained attached by wiring. The canopy glass was broken, and the canopy frame was not attached to the fuselage.

Examination of the cockpit was accomplished, and engine controls were checked and found to operate smoothly. The ignition switch was in the OFF position, pilot stated he turned electrical switches off while waiting for the fire department to get him out of the lake. All of the fuses and circuit breakers were checked and a 2-amp fuse that was in a fuse block under the pilot's seat was found blown, all others were normal. The owner later checked the builders' drawings (current owner was not builder) and stated it was the fuse to power the headsets and ELT. The Odyssey battery that is located behind the rear cockpit headrest was checked with a digital multi-meter and it indicated 4.3 VDC.

The right fuel tank was checked, and it was almost full of 100LL fuel. The owner stated it contained 20 gallons.

The upper engine cowl and fiberglass engine baffle were removed, a pair of Nomex flight gloves was found on top of #2 cylinder, the owner stated they belonged to him and did not know how they got there.

A general visual inspection of the upper part of the engine was accomplished with no obvious defects. The dipstick was pulled to check the oil level and it indicated 7 quarts, the oil appeared to be clean and recently changed.

A Lycoming experimental IO-320 was installed along with an experimental fuel injection system, there was not a dataplate installed on the fuel servo. The aircraft file with AFS-750 indicated the aircraft was equipped with an O-235 but it had been changed to the IO-320 by the previous owner and the records were not updated. According to the maintenance records the engine was changed on 7/19/2005 and overhauled 1/11/2013.

The engine had a dual electronic ignition (E-mag system). Left mag is Model E113, serial number 466. Right mag is Model P113, serial number 613.

Throttle continuity was checked and the arm on the fuel servo mounted on top of the engine operated smoothly and went to stops, the 4 upper spark plugs (automotive style) were removed and checked, all had a light gray/brown color and no evidence of fouling. Compression/suction on all cylinders was verified by thumb method. Rocker box covers were removed, and the prop rotated to verify valve train continuity.

An alternator was installed on the engine and the drive belt was intact and had tension on it. Due to the orientation of the wreckage a dataplate could not be seen. Due to the condition of the aircraft when battery power was applied nothing electrical worked.

During conversation with the pilot, he stated that the engine just quit suddenly. He stated that he moved the mixture and throttle to full open and full rich and nothing happened. He stated that he tried to restart the engine but when he turned the key the engine did not seem like it was doing anything, he did not get the normal sound and feel of the engine turning over.