

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23FA201

AIRCRAFT EXAMINATION SUMMARY

June 13-14, 2023

A. ACCIDENT

Location: Grand Isle, LA
Date: May 25, 2023
Time: 1101 CDT
Aircraft: Cessna 182T; N577TZ

B. AIRCRAFT EXAMINATION SUMMARY

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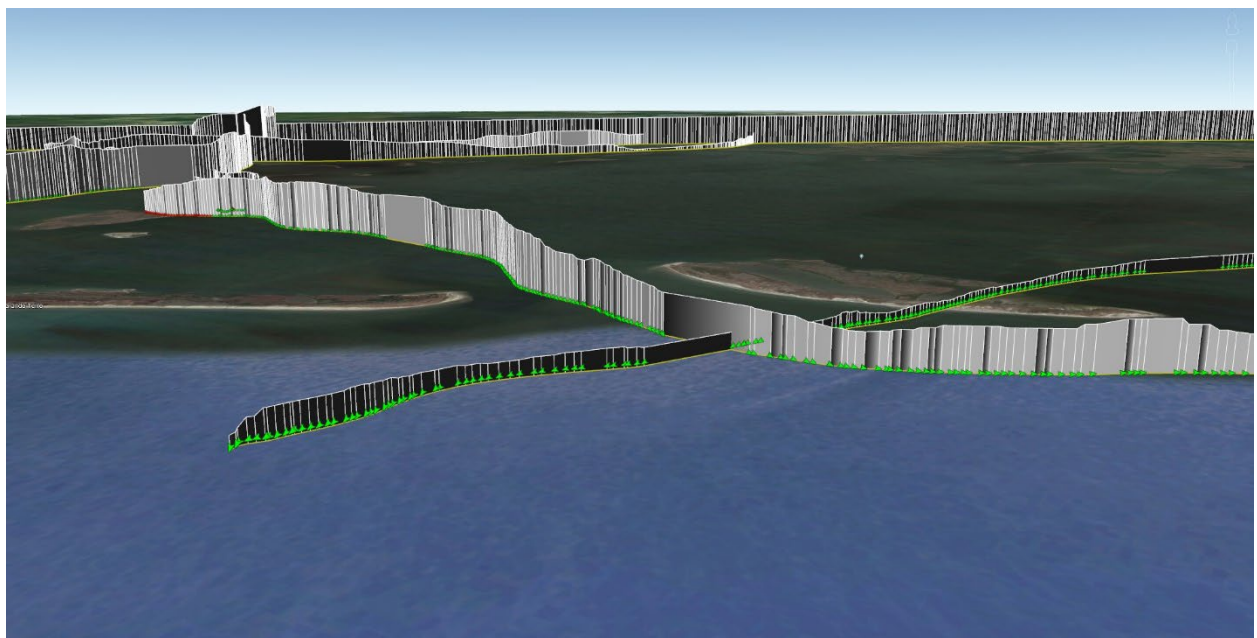
C. SUMMARY

On May 25, 2023, about 1101 central daylight time, a Cessna 182T airplane, N577TZ, sustained substantial damage when it was involved in an accident near Grand Isle, Louisiana. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 aerial observation flight.

Automatic dependent surveillance-broadcast (ADS-B) data indicated that the pilot performed several low-level flight maneuvers for about 3 hours that were consistent with aerial observation for fish spotting activities. The last ADS-B contact showed the airplane about 1.8 miles offshore on a southwest heading about 175 ft above the ocean water.



ADS-B data showing the end of the flight track



ADS-B data showing the end of the flight track

There were no emergency or distress calls received from the accident airplane. Company personnel notified the US Coast Guard about the missing airplane, and a search was initiated. The pilot was located the following morning near a coastline, and the airplane was not located.

On June 6th, a shrimp boat caught the airplane in its fishing net. Unable to raise the airplane onto the boat, the boat captain cut the net and noted the location. On June 11th, a majority of the airplane wreckage was recovered from the ocean. The airplane wreckage was retained for further examination, and the airplane was examined at the facilities of Southern Aircraft Recovery, Baton Rouge, Louisiana.

Airframe:

The airplane was recovered approximately 1.8 miles offshore of Grand Isle in about 15 ft of water. The extent of airframe damage during the water impact was unknown due to the shrimp boat net entangling the wreckage and the recovery operations. During recovery, the water clarity was limited to about 6". The fuselage was recovered in about 4 main sections - forward fuselage, mid-fuselage, empennage, and left wing. The right wing, two cabin doors, lower engine cowling, and a portion of the upper rudder were not located.

The forward fuselage, which included the engine and propeller assembly, sustained minor underside crush damage. The nose landing gear strut was bent/pushed aft about 60° into the firewall and forward fuselage floor. The nose landing gear tire remained attached. The forward fuselage floor was bent and distorted. The left and right seats remained attached to the seat rails. Both lap/shoulder harness restraints were cut during recovery, neither restraint was found secure in their respective buckle assembly.

The right wing strut fuselage attach point was fractured, and the connection lugs and hardware were not located. The left wing strut fuselage attach point was attached and intact. The strut was fractured about 6" from the attach point.

The instrument panel was intact and contained heavy deposits of ocean silt debris. The tachometer indicated 1,112.4 hours, and the HOBBS meter indicated 9,277.2 hours. All other instrument indications were unreliable due to damage. The magneto switch was in the "BOTH" position, the master switches were "ON", the avionics master switches were "ON", and the fuel pump was "OFF". The throttle lever was pulled out about 2.25", the mixture was pulled out and bent down about 1.75", and the propeller lever was pulled out about 0.25".



Engine and propeller cockpit controls

The lower right engine mount was fractured, the other three attachments were intact. The upper engine cowling remained partially attached, and the lower cowling was missing. The cabin roof was separated. Both cabin doors were missing and not recovered. The fuel selector was removed from the fuselage. The selector valve was in the "Both" position. Fuel was noted in the valve. The gascolator was removed, and an odor of fuel was noted, silt deposits noted inside bowl. A damaged can of White Claw Hard Seltzer (code on bottom of can - D0423M100), which appeared to be unopened, was located behind the instrument panel.

Flight control continuity was established from the mid-fuselage section to the cockpit controls. No issues noted with flight control continuity from the cockpit to their respective flight control surfaces. Disconnects at the mid-fuselage, empennage, and upper left wing were consistent with impact and recovery operations.

The Garmin GTN 750 (p/n: 011-02282-00; s/n: 1ZA017629) and JPI EDM-700 were removed from the instrument panel and sent to NTSB Recorders Laboratory for potential data extraction.



Right side of forward fuselage, engine, and propeller assembly



Forward fuselage cockpit and instrument panel – post freshwater wash

The mid-fuselage structure (rear seat area) displayed heavy distortion and bending consistent with the recovery operations. The section remained partially attached to the forward fuselage and empennage sections via aircraft wiring. The rear seats remained attached to the structure. The upper cabin roof was separated. The main landing gear struts remained attached to the fuselage. The left tire assembly and wheel pant were missing. The right tire assembly and wheel pant remained attached. The wheel pant displayed minor damage to the forward fiberglass structure. The landing gear strut fairings appeared to be hydraulic molded around the landing gear struts.



Fuselage cabin roof



Right side of mid-fuselage section



Left side of mid-fuselage section

The empennage section was separated aft of the rear seats and remained partially attached via aircraft wiring. The empennage was bent and distorted during recovery operations. The horizontal and vertical stabilizers remained attached. The right horizontal and elevator were cut/separated for recovery operations. The elevators remained attached, and elevator trim tab measured about 10° tab down (nose up). The upper half of the rudder was separated and not recovered. The lower rudder section remained attached to the vertical stabilizer. Flight control cables remained attached to their respective flight control surfaces and bellcranks.

The ELT (Pointer 3000-11) remained attached to its mounting structure, and the antenna was connected. The switch was in the "AUTO" position. Battery replacement date - November 2024.



Right side of empennage section



Left side of empennage section

The left wing was separated from the fuselage at the wing root and strut. The left wing remained with the fuselage being entangled in the shoulder harness belts. Some minor fiberglass wing tip damage. The aileron and flap surfaces remained attached to the wing. The flap was recovered in the down/extended position. The flap push/pull rod was bent outward and prohibited the flap from retracting. The flap and aileron cables were separated near the wing root with broomstraw signatures.



Upper surface of the left wing



Underside of left wing

The right wing was not located in the debris field. The forward and rear spar attach points remained attached to the cabin roof structure. The attach point structure was separated and bent upward.



Right wing forward spar attach structure



Right rear spar attach structure

Engine:

Model: Lycoming IO-540-D4B5/serial number: L-19847-48E

The engine remained attached to the engine mount. Corrosion and ocean silt debris was noted on the engine, and the engine data plate remained attached.

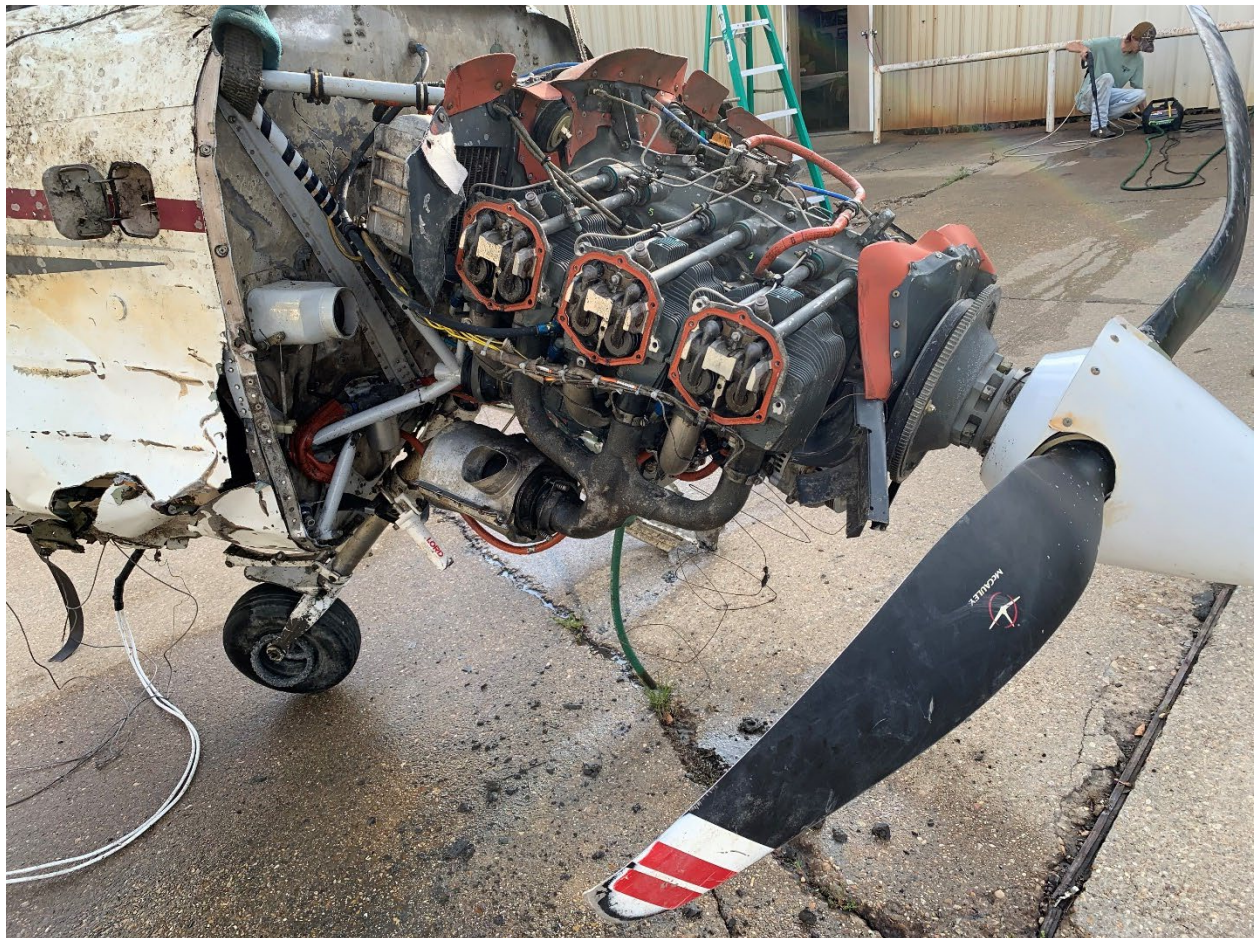
The cylinder valve covers, and spark plugs were removed, and heavy ocean silt material were noted within the cylinders and valve sections. The propeller assembly was manually rotated. Heavy silt material exited the lower spark plug holes when the crankshaft was rotated. Thumb compression was noted on all 6 cylinders, and mechanical continuity was noted throughout the engine. The cylinders were boroscoped and silt material was noted within each cylinder. The oil suction screen removed and found clear of debris. The spark plugs contained corrosion and silt deposits. The plug electrodes were cleaned, and the plugs coloration and wear appeared normal.

The left magneto, a Lycoming EIS electronic magneto, and the right side magneto were removed. Neither magneto produced spark when rotated. The engine fuel pump removed - suction and compression noted, odor of fuel present, diaphragm intact with

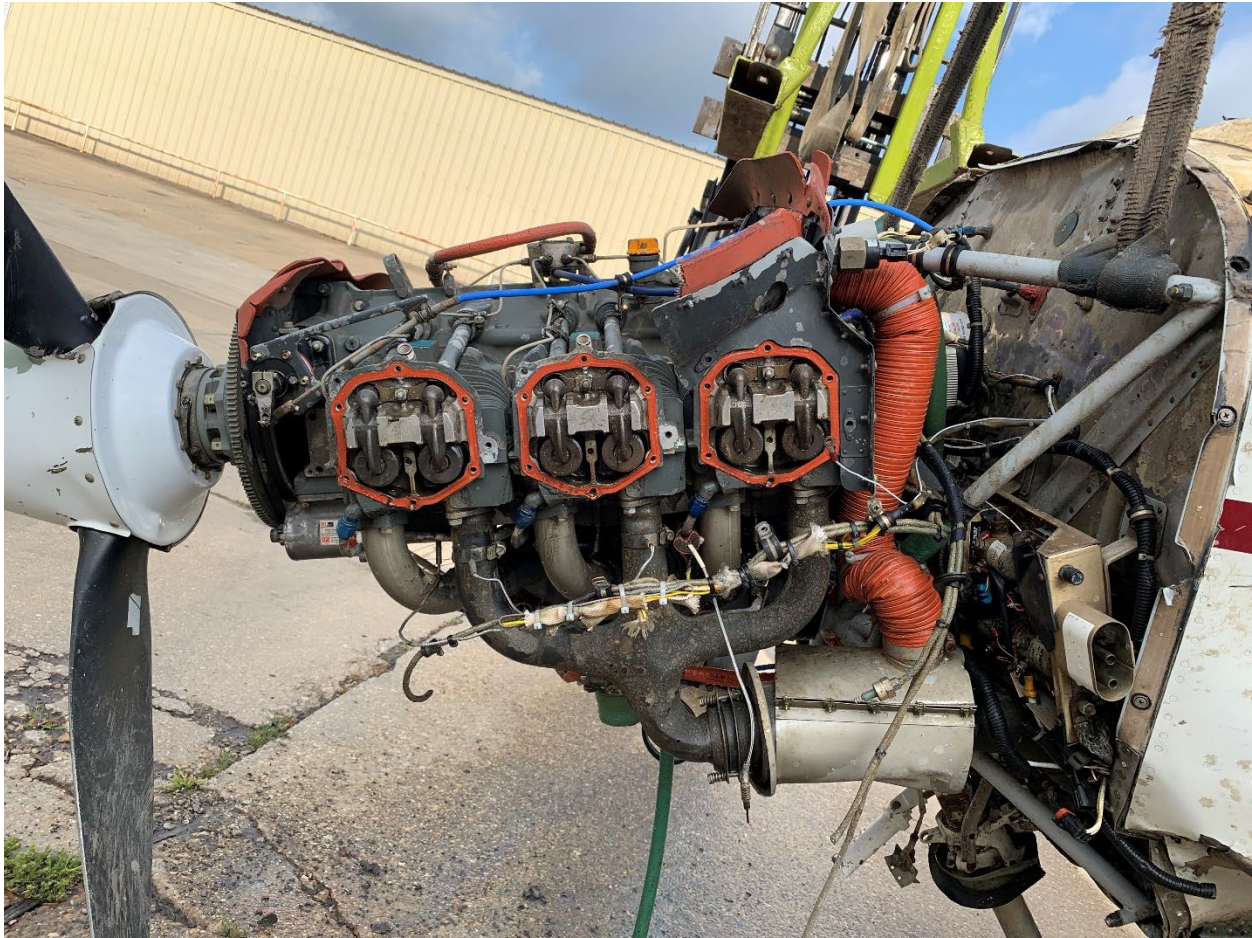
no tears observed. The fuel flow divider was removed, presence and odor of fuel noted in the divider, diaphragm intact and undamaged. Fuel was observed draining from fuel servo lines when removed. The servo screen inlet screen was clean and unobstructed, fuel and water mixture noted throughout the servo, and diaphragm intact; free of tears/damage. The fuel nozzles were removed, nozzles Nos. 2 and 5 were clear, the other nozzles contained silt debris.

The propeller governor was removed and partially disassembled. The gasket screen was clear of debris. The governor drive spline was free to rotate. The control arm was connected and free to move.

The oil filter was removed and cut open. No debris noted within the filter element. A handwritten date of 05/11/2023 and tachometer time of 1,050.5 was noted on the outside of the filter.



Right side of engine - post freshwater wash



Left side of engine - post freshwater wash

Propeller:

The 3-blade propeller assembly remained attached to the engine. Two blades were loose in the hub. The three blades displayed slight aft bending. Propeller spinner was unremarkable. Heavy silt deposits noted on the inside of the spinner.



Propeller assembly and spinner



Propeller assembly with spinner removed

Submitted by:

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