

Summary of Aircraft Examination

NATIONAL TRANSPORTATION SAFETY BOARD Office of Aviation Safety Washington, DC 20594

SUMMARY OF AIRCRAFT EXAMINATIONS

-- CEN20LA270 --

A. ACCIDENT

Location: Pembina, North Dakota

Date: July 9, 2020

Aircraft: Cessna 188, Canadian Registry C-GWEE

Engine: Continental IO-520, serial # 552509

B. OVERVIEW

On July 9, 2020, about 0805 central daylight time, a Cessna 188 airplane, Canadian registry C-GWEE, was destroyed when it was involved in an accident near Pembina, North Dakota. The commercial pilot was seriously injured. The airplane was operated as a Canadian Aviation Regulations (CAR) Subpart 702 aerial work flight.

About 0745, a U.S. Customs and Border Protection officer observed the airplane spraying fungicide on a canola field in Canada that was adjacent to the U.S. border. Following each southbound spray pass, the airplane would fly into the U.S. and make a left turn back toward the Canadian field. When the officer observed a fire north of his position, he responded to the accident site and rendered assistance to the pilot.

C. PARTICIPANTS

Representatives from the FAA participated in an examination of the airplane at the accident site and representatives from the FAA and Textron Aviation participated in an examination of the airframe and engine at the recovery location.

D. SUMMARY OF ON-SITE EXAMINATION

The debris field was about 150 feet in length, oriented from northwest toward the southeast. The left-wing tip was found near the initial ground scar and the airplane came to rest with the right wing laying over the left wing.

About 40 feet from the initial ground scar were indications of a wheel imprint, followed by an area with loosened soil consistent with spinner and propeller impacts.

A post-crash fire consumed the center portions of each wing and part of the forward fuselage.

The spinner-propeller was located about 100 ft from the initial ground scar and the engine was perpendicular to the fuselage.

The mixture knob was in the rich position and the throttle was full forward.

Summary of Aircraft Examination

The airplane was being used for aerial application and operator stated the pilot was applying fungicide with a commercial name of Caramba.

Noticeable crop kill was noted in a circular pattern beginning near the location of the spray equipment and extending to the airplane.

E. SUMMARY OF RECOVERY LOCATION EXAMINATION

The airframe and engine were examined at the recovery location on May 12, 2021.

All flight controls remained attached except for the right elevator that was cut by recovery personnel.

No anomalies were observed with the continuity of flight control cables.

The fuel pump drive coupling was intact and the fuel pump was able to be rotated by hand.

The flow divider screen was clear.

The top sparkplugs were removed and examined. When compared to a Champion Sparkplug "Check-A-Plug" chart, the sparkplugs condition was "normal".

The engine was not able to be manually rotated due to damage.

All cylinders were borescoped, with no anomalies noted.

The propellor showed rotation crushing of the spinner. Two blades were bent and one was straight.

Examination of the airframe and engine at the accident site and recovery location revealed no anomalies that would have precluded normal operation.

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