

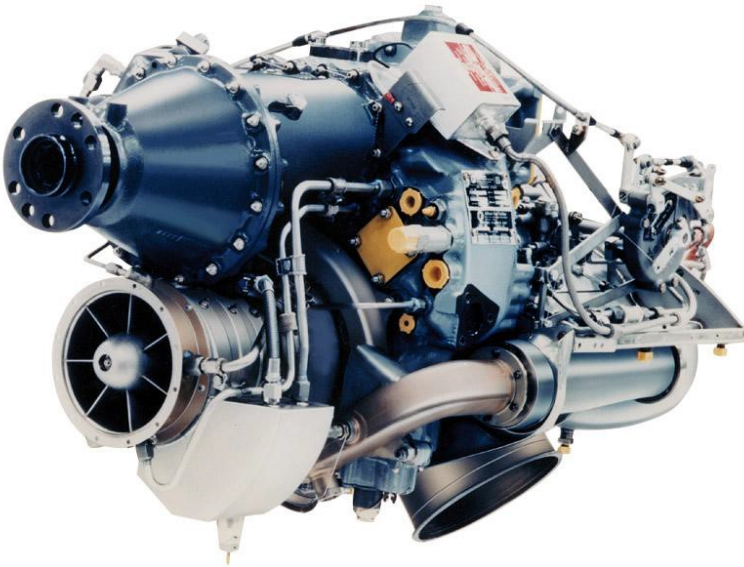


Rolls-Royce

Field Observations

**Rolls-Royce Corporation
Model 250-B17F
Engine CAE 881357**

**Cessna P210N
O+N Silver Eagle
Registration: N7LV**



**Surfside Consulting
Big Bear, California**

**Jack Johnson
Air Safety Investigator**

**Accident date: 2 December 2023
Investigation date: 10 April 2024**

Background Information:

On 2 December 2023, a Cessna P210N Silver Eagle was substantially damaged after impacting terrain while attempting to take off from Big Bear City Airport. The pilot was seriously injured.

After a delay due to questions about insurance coverage, the wreckage was recovered to Prop-Jet Aviation in Santa Rosa, California.

On 10 April 2024, the wreckage was examined at Pro-Jet by the NTSB, Cessna Flight Safety and Rolls-Royce Air Safety investigators. Prop-Jet provided assistance when necessary.

This report presents the observations made during that examination.

Flight Information

According to information provided by the NTSB, the pilot reported that the aircraft has recently had the engine's hot section overhauled, as well as major work on the accessory gearbox to address recurring MIO (Metal In Oil). While this work was being performed, Prop-Jet performed an annual inspection on the aircraft.

Prior to the flight, the pilot noted that when he went to top-off the aircraft's fuel tank prior to the accident flight, the fuel caps seemed to be under some amount of vacuum. He also noted that the aircraft would normally vent fuel overboard when the tanks were topped off, but no fuel vented from the tanks after the fuel was topped-off immediately before the accident flight.

The accident sequence was captured on a cell phone video as well as a "Ring Doorbell" surveillance recording. The cell phone video shows the aircraft performing a normal take-off, with no unusual sounds or emissions from the engine. As the aircraft begins to climb away from the runway, the propeller appears to slow slightly. No changes in engine sounds could be heard. The pilot appears to struggle with control of the aircraft, making several oscillating elevator inputs as the cell phone video ends.

The Ring Doorbell captured the aircraft as it landed back on the runway after the aborted take-off. Although the video was captured too far away to clearly see the aircraft, audio could be heard of the tires squealing and the crash as the aircraft departed the end of the runway and flipped over. A cloud of dust could be seen past the end of the runway.

The pilot stated that 1-2 seconds after lifting off the runway surface, the engine seemed to lose power. The pilot attempted to land on the remaining runway, but was unable to stop the aircraft before departing the end of the runway, resulting in the aircraft overturning in the soft soil.

There was no post-crash fire.

Airframe Observations:

An investigator from Cessna made a detailed examination of the airframe. No major pre-accident anomalies were noted.

Engine Observations:

The engine was too badly damaged to run on a test cell. The propeller gearbox had fractured near the split line. The propeller blades had all fractured in apparent overload. (One blade was missing. It was later determined that the aircraft owner/pilot had retained one blade as a souvenir).

Inspection of the engine revealed no evidence of engine failure, nor any condition which would have prevented the engine from making rated power. Boroscope inspection of the engine revealed no internal damage or evidence of abnormal combustion. N1 and N2 rotated smoothly and resulted in corresponding geartrain rotation. Additionally, the Cessna ASI found no issues with the aircraft's fuel storage or delivery systems.

Subsequent Findings:

The investigation is ongoing. Propeller controls as well as audio analysis have been proposed to help determine a probable cause of the reported loss of power.