

Report of Findings

Date of accident: June 26, 2024
Location of accident: Rio Linda, CA
Aircraft registration: N912RG
Aircraft type: Canino Bill STING RG
Engine type and S/N: Rotax 912ULS2FR 4429950
NTSB file number: WPR24LA218
Date of Report: May 12th 2025
File number: 2024-053

Original Accident Location:

Rio Linda, CA

Preliminary engine inspection:

Inspection carried out at: Arizona Air Salvage

Date of inspection: May 12th 2025

Persons in attendance

- NTSB IIC – Tealeye Cornejo – NTSB Air Safety Investigator
- RFS – Jordan Paskevich – Chief Air Safety Investigator

ENGINE

Rotax Engine Model Number: Rotax 912ULS2FR

Rotax engine serial number: 4429950

Date of Manufacture: 12.09.2003

OVERVIEW

See NTSB Preliminary Report

Initial condition of Engine as presented prior to detailed inspection

- The engine was still attached to the engine mount; however, the salvage company had separated it from the airframe.
- The engine appeared in good overall condition with no visible impact damage.
- The oil system was breached, and the oil tank was no longer connected to the oil lines.
- The fuel system was also breached, with the fuel feed line to the mechanical fuel pump disconnected.
- The oil cooler was damaged due to impact.
- The coolant radiator sustained impact damage and the coolant system was void of coolant.
- The propeller had been removed from the gearbox and was not present for examination.
- The exhaust system was damaged due to impact.

Detailed Engine Inspection

Spark Plugs & Spark Plug Caps

- All plugs were NGK DCPR8E.
- All spark plugs were in good physical condition, with a light tan coloration indicating a proper fuel/air ratio.
- All spark plugs had excessive heat transfer paste on the threads.
- The bottom #3 spark plug was wet with engine oil. This was attributed to the engine's position, which allowed engine oil to migrate into the combustion chamber.

No anomalies were observed with the spark plugs that would have precluded normal operation.

Ignition System

The ignition system was in good physical condition; however, it was not functionally tested. The condition of the spark plugs indicated that the ignition system was functioning properly at the time of the accident.

Fuel System including carb inspection and fuel lines

- The fuel system was in good physical condition; however, the fuel feed line to the fuel pump was not connected.
- The fuel pump was removed and manually actuated. No fuel exited the outlet port when the plunger was activated.
- The carburetor float bowls were removed and inspected. Both the #1/3 and #2/4 carburetor float bowls were absent of fuel and contamination.
- Both carburetors were equipped with B-type floats, which should have been replaced in accordance with applicable Rotax Service Bulletins.
- The main jets in both carburetors were examined and found to be free of any obstructions.

Other than the absence of fuel, no anomalies were observed in the fuel system that would have precluded normal operation.

Fuel supply including fuel pump

Fuel Pump Part Number: 893115

Fuel Pump Serial Number: 17.0724

Rotax specifies a mandatory replacement interval of 5 years for fuel pumps, as outlined in the Rotax Line Maintenance Manual. The fuel pump installed on the accident aircraft engine was manufactured in 2017, making it overdue for replacement at the time of the accident.

Lubrication system

The oil tank was no longer connected to the oil lines.

The oil cooler was damaged, compromising the system.

Evidence of oil lubrication was found throughout the engine, as engine oil spilled out of the valve covers upon removal.

The oil filter and oil pump were undamaged and in good condition. No anomalies were observed in the lubrication system that would have precluded normal operation of the engine.

Cylinder and cylinder head

- The cylinders and cylinder heads were in good physical condition.
- Good thumb compression was felt during a continuity check.
- The valve covers were removed, and the engine was rotated by hand. Continuity was confirmed with the rocker arms and valve train on all cylinders.

No anomalies were discovered with the cylinders or cylinder heads that would have precluded normal operation.

Cooling system

- The coolant system was breached, and the coolant radiator was damaged from impact. The system was void of coolant; however, there was no evidence of overheating on the cylinders that would indicate a cooling-related issue.

No anomalies were observed in the cooling system that would have precluded normal operation of the engine.

Air Filter system

- The air filters were aftermarket K&N brand and were in good physical condition. However, the filter pleats were dirty with dust and debris, and there did not appear to be any red protective oil coating on the pleats, as they were gray in color and dry.

Exhaust system

The exhaust system was an aftermarket installation and was damaged from impact.

No anomalies were observed with the exhaust system that would have precluded normal operation of the engine.