

Report of Findings

Date of accident: April 22 2020

Location of accident: Logan UT

Aircraft registration: N802PS

Aircraft type: Czech Sport Aircraft

Engine type and S/N: Rotax 912 ULS 6776502

NTSB or TSB file number: WPR20LA145

Date of Report: July 17, 2020

File number: 2020-033

Original Accident Location

- Logan UT

Preliminary engine inspection

Inspection carried out at Rocky Mountain Kit planes West Desert Airpark Cedar Valley UT

Date of inspection: July 17th, 2020

Persons in attendance

Oversight by NTSB/FAA personnel:

- Fabian Salazar – NTSB Investigator

ENGINE

Rotax Engine Model Number: Rotax 912ULS

Rotax engine serial number: 6776502

OVERVIEW:

- See NTSB Preliminary

The initial condition of the Engine as presented before the detailed inspection

- Good physical condition, no impact damage
- Oil line sitting on the exhaust manifold
- Fuel Pump vent line routed into the slipstream
- Wings previously removed from aircraft
- L/H main gear damaged and sitting on foam and pallet
- Top engine cowling removed
- Propeller removed
- R/H carburetor throttle cables frayed
- R/H fuel line into wing tank cracked
- Removed spark plugs and rotated crankshaft by hand with the prop shaft. Established compression and continuity

Detailed Engine Inspection

Spark Plugs & Spark plug Caps:

- Removed spark plugs and inspected. #1 top and bottom were black and sooty. This may be an indication of long ground runs and low RPM. The number 3 bottom had heat transfer paste on the electrode. No other anomalies seen with spark plugs

Ignition System:

- Tested during engine run and conducted a MAG drop on both ignition system. Both mag drops were around 200 RPM
- No anomalies with the ignition system

Fuel System including carb inspection and fuel lines

- **Fuel return line?** – Yes, leading to R/H wing tank
- **Fuel pump drain line in neutral air zone?** – No, a fuel line from the fuel pump drain is routed into the slipstream
- **Electric fuel pump installed with a check valve in parallel ?**– Facet (Cube) electric fuel pump installed in parallel, but no check valve installed
- Removed 2/4 carburetor float bowl. – 155 Main jet clear of obstructions. No fuel or contamination was found in the float bowl. Floats were weighed at 5.5 Grams. No anomalies were seen with the 2/4 carb float bowl.
- Removed 1/3 carburetor float bowl – 155 Main jet clear of obstructions. A minimal amount of fuel sitting at bottom of the float bowl with some contamination inside. Fuel tested negative for water. Floats were weighed at 5.7 grams. Float pins were worn. No other anomalies were seen with the 1/3 carb

Fuel supply including fuel pump:

- BDC (Corona) Fuel pump installed. P/N 893 115 S/N 182610
- Facet Electric fuel pump (Cube) – Fuel pump turned on and loud audible noise could be heard coming from it. Once the fuel pump was primed with fuel the noise level was greatly diminished and almost quiet. Fuel pressure with the electric fuel pump went from 0 PSI to 3.5 for within a 1 minute and then the pressure dropped and fluctuate between 1.6 and 1.7 PSI
- Gascolator Darin valve was found open
- Removed Gascolator – No fuel contained inside and no contamination seen.
- Bore scoped the wing tank finger screens – No obstructions
- Both wing tank vents were clear of obstructions.
- No obstructions found in any of the fuel systems

Lubrication system:

- Oil return line routed so it is resting on the exhaust manifold
- Oil level check and found in the middle of the dipstick
- No anomalies were seen with the lubrication system

Cylinder and cylinder head

Number 1, 2, 3 cylinder and cylinder heads appear to have a slight oil leak.
No other anomalies were seen.

Cooling system

- 0.9 Bar radiator cap
- Coolant found in the expansion tank
- No anomalies were seen with the coolant system

Air Filter system

- Inspected. No anomalies

Exhaust system

- Inspected. No anomalies

Gearbox

- Rotated by hand. No anomalies

Crankcase and crankshaft

- Crankcase externally inspected. No anomalies.
- Crankshaft continuity was checked during rotation of the engine by hand and during the test run. No anomalies

Engine Maintenance and Journey Log

- Documented

Test Run

Several test runs were done for several minutes. No anomalies noted during the test run