

Fox Todd

From: Fox Todd
Sent: Wednesday, June 25, 2014 11:13 AM
To: 'Mick'
Cc: 'Curt.Lindauer [REDACTED]'; Ralph [REDACTED]; Fox Todd; jim [REDACTED]
Subject: CEN14LA309 - Additional Engine Examination (Oil Pump Failure)
Attachments: Oil Pump.JPG

Importance: High

Mr. Schumacher,

Thank you for your phone call concerning the additional engine examination performed at Jim Leon's facility (FAA Repair Station - 3TUR007B) located in Kankakee, Illinois.

-- Examination Summary --

The oil pump seized, which resulted in oil starvation to the forward cylinder/piston. The small piston (about 0.5-inch diameter) within the oil pump had seized, which resulted in the nylon drive-coupling to fracture. The oil pump is a non-serviceable component that could not be disassembled further.

The forward cylinder/piston exhibited signatures of oil starvation and scoring of the piston body near the exhaust and intake ports.

The rear cylinder piston body did not exhibit any scoring near the exhaust and intake ports. The rear cylinder had evidence of oil lubrication; however, it would have eventually seized without adequate lubrication.

You mentioned that your engine was not originally manufactured with the oil pump option... however, you recently had the oil pump installed about 50 hours before the engine seizure. The oil pump had accumulated about 50 hours since new.

Sincerely,
Andrew Todd Fox
NTSB, Air Safety Investigator



From: Fox Todd
Sent: Wednesday, June 25, 2014 7:13 AM
To: Mick
Cc: Fox Todd; 'Curt.Lindauer [REDACTED]'; [Ralph \[REDACTED\]](#)
Subject: RE: CEN14LA309 - Piston Seizure
Importance: High

Mr. Schumacher,

Thank you for the clarification that you haven't pulled the forward cylinder, but rather the exhaust and intake tubes. You observed the piston scoring through the intake and exhaust ports.

I will continue to stand-by for additional information and photos, pending your forthcoming teardown inspection in Kankakee, IL.

Sincerely,
Andrew Todd Fox
NTSB, Air Safety Investigator

From: Mick [REDACTED]
Sent: Tuesday, June 24, 2014 8:18 PM
To: Fox Todd
Subject: Re: CEN14LA309 - Piston Seizure

Andrew I haven't took the cylinder off yet, I just observed scoring through the intake manifold and also the exhaust manifold. The piston is scored on both sides, in intake and exhaust. I am not sure that I may have had an oil pump failure. I did not have any oil in the front cylinder oil line I'm still gonna take it to Jim's tomorrow morning. Appreciate your help, thank you.

Sent from my Verizon Wireless 4G LTE DROID

Fox Todd [REDACTED] wrote:
Mr. Schumacher,

I received your voicemail message from earlier this evening...

You removed the forward cylinder and saw some scoring of the piston adjacent to the intake port.

Can you please email me a couple photos of the piston and the observed scoring adjacent to the intake port?

Also, can you please review the attached document that ROTAX has prepared about piston seizures... and identify which seizure mode the accident engine encountered during the accident flight?

Please advise when able.

Sincerely,
Andrew Todd Fox
NTSB, Air Safety Investigator