



MEMORANDUM of RECORD

Ralph E. Hicks
Senior Air Safety Investigator
Eastern Region Aviation

Date: June 22, 2015
Engine Examination Factual Notes
NTSB Accident Number: ERA14LA405 – Wiggins, MS

An examination of the wreckage of N1229M, a Cessna T206H that crashed at Wiggins, MS on 8/14/2014, was conducted on 8/20/2014 at Southern Aircraft Recovery, Baton Rouge, Louisiana.

Participants were Mr. Richard S. Gordon (FAA FSDO), Mr. Mike Childers (Lycoming), Mr. Jan Smith (Textron Aviation) and Mr. Mike Gibbons (Textron Aviation).

The following notes were taken from field notes provided by Mr. Childers:

General Remarks:

As first viewed, the engine was separated from the firewall and lying on its right side at the facilities of Southern Aircraft Recovery in Baton Rouge, LA. The propeller remained attached to the crankshaft flange. The propeller spinner was partially crushed. The lower engine cowl and the exhaust tailpipe were partially crushed. The throttle, mixture and propeller control cables were pulled from the firewall. The engine cowlings were removed and the engine was suspended from a lift so it could be partially disassembled to facilitate the examination. The engine oil dipstick indicated 8 quarts.

The engine was rotated by turning the propeller and continuity of the crankshaft to the rear gears and to the valve train was confirmed. Compression and suction were observed from all engine cylinders. The interiors of the cylinders were examined using a lighted borescope and no anomalies noted other than oil in the right side cylinders.

The NTSB investigator has not received aircraft or engine logbooks.

Propeller Remarks:

The propeller remained attached to the crankshaft flange. The propeller spinner was partially crushed. One propeller blade remained straight. Another blade exhibited about a 20 degrees bend of the propeller tip and scratches on the forward surface. The remaining blades was loose in the propeller hub and was bent about 45 degrees at about mid-span. The propeller governor remained attached to the engine. The governor control arm assembly was impact separated from the governor. The propeller control cable remained attached to the governor control arm. The governor was removed and the governor oil screen was observed absent of debris.

Fuel System Remarks:

The fuel injector servo remained attached to the engine. The throttle control cable remained attached to the servo throttle control arm. The control arm was against the idle stop pin on the servo and the pin was bent about 45degrees. The portion of the control cable which is normally clamped just forward of the upper right firewall was observed forward of and not clamped in the clamping device. The pilot reported to the NTSB that the cockpit throttle control "felt very loose" when he attempted to add power after a descent. The mixture control cable remained attached to the servo mixture control arm. The control arm was observed against the idle cut-off stop.

The servo was removed and partially disassembled. The servo fuel inlet screen was absent of debris. The fuel regulator section safety wire was intact and the brass plug was secure. The rubber diaphragms were intact. The flow divider remained attached to the engines and the associated hoses and lines were secure. The flow divider was partially disassembled and the rubber diaphragm observed intact. The fuel injector nozzles were observed unobstructed.

The engine driven fuel pump remained attached to the engine and the associated fuel lines remained attached and secure. The pump was removed and produced water when a hose to the fuel inlet was submerged in water and the pump was rotated using an electric drill. Liquid with and odor consistent with that of aviation gasoline was observed in all engine compartment fuel hoses from the firewall to the fuel flow divider and in the engine driven fuel pump, fuel injector servo and the flow divider. The aircraft fuel strainer screen on the firewall was absent of debris.

Magneto Remarks:

Both magnetos remained attached to the engine and no damage was noted. Both produced spark from all ignition towers when rotated by hand.

Spark Plugs and Ignition Harness Remarks:

All spark plugs were removed for examination. The numbers 2 (top and bottom), 4 (top and bottom), 5 (bottom), and 6 (top and bottom) had undamaged electrodes and were normal in color. The numbers 1 (top and bottom), 3 (top and bottom), and 5 (top) plugs had undamaged electrodes and were oil-soaked.

The ignition harness exhibited substantial impact-related damage.

Turbo System Remarks:

The turbocharger remained attached to the engine but was separated from the exhaust system. No damage was noted to the turbocharger and it was not removed. The associated oil lines remained attached and secure. The turbine wheel was oily (the engine was lying on its right side). The turbine and compressor wheels rotated freely by hand and no scoring was noted in the turbine or compressor housings. The sloped controller was impact separated from the firewall. No damage was noted and the hoses remained attached. The manifold pressure relief valve remained attached to the induction system and no damage was noted. The valve operated freely by hand. The exhaust bypass valve controller remained attached to the turbocharger and was impact damaged. No damage was noted to the exhaust bypass valve.

These notes will be forwarded to the FAA inspector for approval.

Hicks Ralph

From: Richard.S.Gordon@faa.gov
Sent: Monday, June 22, 2015 4:34 PM
To: Hicks Ralph
Subject: RE: Cessna T206 - N1229M - Wiggins, MS

Yes Sir! As best as I can recall. I will send this to Greg King my trainee at the time, and ensure the data is in-line with what we saw.

From: Hicks Ralph [mailto:ralph.hicks@ntsb.gov]
Sent: Monday, June 22, 2015 3:06 PM
To: Gordon, Richard S (FAA)
Subject: RE: Cessna T206 - N1229M - Wiggins, MS

Thank you for providing the oversight....are the notes factual to your best recollection?

Ralph

From: Richard.S.Gordon@faa.gov [mailto:Richard.S.Gordon@faa.gov]
Sent: Monday, June 22, 2015 4:05 PM
To: Hicks Ralph
Subject: RE: Cessna T206 - N1229M - Wiggins, MS

Thank you Ralph!

From: Hicks Ralph [mailto:ralph.hicks@ntsb.gov]
Sent: Monday, June 22, 2015 2:47 PM
To: Gordon, Richard S (FAA)
Cc: McCray, Albert L (FAA)
Subject: Cessna T206 - N1229M - Wiggins, MS

Hi Richard,

I have attached an NTSB Memorandum of Record that details the examination of the engine from the Cessna T206 from Wiggins, MS (you looked at it with Textron and Lycoming at Southern Aircraft Recovery on August 20, 2014).

I have attached the MoR and the Lycoming Field Notes that they were pulled from. If you concur with the factual observations, state so in your response to this email.

I will be forwarding my factual draft investigation report shortly.

Many thanks,

Ralph

Ralph E. Hicks
Senior Air Safety Investigator – NTSB
2146 Roswell Road
Suite 108 - 1214