

From: [REDACTED]
To: [REDACTED]
Subject: Re: CEN23LA107 (N304MA) - Prebuy Inspection Question
Date: Friday, September 15, 2023 15:41:40
Attachments: [image001.png](#)
[image002.png](#)

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Thank you again for all the help on this. There was no indication that the prebuy had the timing checked.

Now for me trying to tip toe on how I say things... I believe there was little to no real inspection done, I have some evidence to support this. Additionally, the aircraft was rough running on each start from the beginning. The broker explained to me that this was a known issue with the owners and you just had to make sure it was leaned out to get it stop with the morning sickness.

My prebuy was delayed for a lengthy time due to not having anyone available. The everyone in entire process was getting antsy. (This is where I really try to watch how I say things, it could be hard to prove and then used to sue me as slander). I "believe" that some of what was on the prebuy inspection was the result of the broker and his mechanic looking at the aircraft and passing this to the prebuy mechanic. I have an email that wasn't supposed to come to me that sort of supports this belief. I wasn't at all happy with the prebuy and almost cancelled the entire purchase.

Thank you again for the info, as things come out I maybe able to share more information. I'm not wanting to burn anyone's business down due to my loss but also I'm not inclined to eat a crash (and monetary loss) due to people's presumed negligence.

Thank you again
Sean

On Sep 15, 2023, at 3:22 PM, Michael Hodges [REDACTED] wrote:

Hi sir,

Hope you are doing well.

The NTSB Materials Laboratory is currently examining the damaged engine parts. The damage to the engine we are seeing appears to be likely consistent with detonation.

The right magneto was found at 22 degrees during the wreckage examination. It is supposed to be at 20 degrees.

The left magneto was found at 15 degrees during the wreckage examination. It is supposed to be at 20 degrees.

nce

It looks like the timing was last checked about 4 months prior:

<image001.png>

The attached prebuy inspection sheet doesn't say anything about the timing being checked.

I just want to confirm, the mechanic didn't check or do anything with the timing during the prebuy inspection?

The reason I ask, Continental Motors has a service bulletin out (it is also attached), that talks about timing, that could lead to detonation:

<image002.png>

The last time the timing was checked, was at 2,732.40 hours Hobbs. The accident time was 2,757.9 hours Hobbs. That comes out to 25.5 hours Hobbs, since the last time it was checked.

Thank you again for the help. Have a good weekend.

Mike

Mike J. Hodges, MS
Aviation Accident Investigator, Central Region
National Transportation Safety Board

14291 East 4th Avenue, Suite 7-300
Aurora, Colorado 80011

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Work Hours: Monday-Friday, 0900-1730 Central Time

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<N304MA Prebuy Inspection.pdf>

<msb94-8d.pdf>

From: [REDACTED]
To: [REDACTED]
Subject: Re: CEN23LA107 (N304MA, Mooney M20K) - Accident Update
Date: Tuesday, April 2, 2024 11:49:48

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Mr Hodges

Thanks for the update.

As for your question: Yes, the engine was run lean. I was told the previous owners ran it lean and the broker ran it lean when he picked it up and brought it to Spring Branch TX. This conversation came about because the aircraft didn't want to start easily. The broker informed me that the aircraft had to be started and run in a lean condition as per the owner's technique. When I was doing my transition training, the CFI leaned it for start and it stayed lean thru out all phases of flight for the 6 plus hours of training. During that training the CFI had a habit of aggressively applying power. I expressed my concerns on both things, his reply was that the broker assured him that the waste gate was good enough to handle it. The morning of, I leaned as per the training and brokers instructions. The aircraft again didn't want to start unless leaned. After refuel I had the same issue. Pre takeoff checks seemed normal, but on takeoff it didn't seem to have the power it did the day before. On climb out, I didn't feel it was 100% but the instruments (those that worked) didn't show anything abnormal. Once at cruise, there was nothing I could do with mixture or the Cowl flaps in order to get the temp right. It was about at this point I decided that I was taking it back. I wasn't sure if it was all in my imagination or not because I had no real indication of a problem. I wasn't until I noticed a 1 inch difference in manifold pressure that I realized something wasn't right. Even then the rest of the engine gauges showed no issue. The jpi was quarky and one of the cylinders didn't have a reading. I inquired about the jpi not reading and was told it had bad sensors and it's not a primary so not to rely on it. The rest of the event is in my statement.

There was nothing good about the entire thing from purchase thru the crash event. Throughout the entire purchase, I ran inspection findings and the flight with my IA A&P. He told me to walk away from the aircraft. I wish I had.

Sean

Respectful,
Sean Jones
[REDACTED]
Graduate Student

From: Michael Hodges [REDACTED]
Sent: Tuesday, April 2, 2024 10:47:25 AM
To: s j [REDACTED]
Subject: CEN23LA107 (N304MA, Mooney M20K) - Accident Update

Hi sir,

I hope you are doing well.

The last item to be examined was the FloScan fuel flow transducer. It was examined at the manufacturer's facility with NTSB oversight. Electrical continuity was established, and air pressure was applied to the inlet port, and that confirmed rotation of the internal wheel in the transducer.

The removal of the fittings was required to facilitate functional testing of the transducer. One fitting was removed, however, during removal of the other fitting, excessive force was needed. Penetrating oil was applied to the fitting, and it was moved clockwise and counterclockwise multiple times. When a second attempt to remove the fitting was made, while rotating it in a counterclockwise direction, the housing of the transducer fractured. Due to the fractured housing, functional and leak testing of the unit was unable to be performed.

With the engine itself, the examination revealed signatures likely consistent with detonation.

I know you purchased the airplane shortly before the accident occurred, but when you flew it, were you ever running the fuel mixture lean?

Do you know if the prior owner would ever run the fuel mixture lean? Did the prior owner ever report any previous issue with the engine to you?

I wanted to reach out if you had any other ideas on what may have caused the likely detonation in the engine.

Thank you again for the help.

Mike

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From: [REDACTED]
To: [REDACTED]
Subject: Re: CEN23LA107 (N304MA, Mooney M20K) - Additional Questions
Date: Friday, April 26, 2024 11:28:29

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Mr Hodges,

I'm at the Charlotte airport flying home. Once I get back this evening, I'll gather the fuel information and send it to you.

As for the other questions

1. The date i got the prebuy back in an email was 1/18/23.
2. I don't know the name of the mechanic; all my correspondence was with a person name Micha Behrens.
3. The turbo was weeping and they sent it off for a quick turnaround rebuild. The prop was done by a mechanic at Spring Branch Airpark.

Respectful,
Sean Jones

[REDACTED]
Graduate Student

From: Michael Hodges [REDACTED]
Sent: Friday, April 26, 2024 12:13:33 PM
To: s j [REDACTED]
Subject: CEN23LA107 (N304MA, Mooney M20K) - Additional Questions

Hi sir,

I hope you are doing well.

I have a few additional questions/requests please.

1. What was the date for the prebuy inspection that was performed by Dugosh Aviation? It is attached, but it doesn't have a date listed on it.
2. What was the name of the mechanic from Dugosh Aviation that performed the prebuy inspection?
3. After the prebuy inspection was completed, was there any maintenance work performed on airplane after that? If so, do you have a list/records of what was done after the prebuy

inspection? I looked through the maintenance records, I didn't see anything listed for the airframe after the annual inspection on 10/08/2022. It looks like for the engine, after the annual inspection on 10/08/2022, the turbocharger was removed, overhauled, and reinstalled. For the propeller, after the annual inspection on 10/08/2022, the propeller was removed, overhauled, and reinstalled.

4. Do you have a copy of the fueling receipt (the most recent one prior to the accident)?

Thank you again and have a good weekend.

Mike

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Transaction Details



ALOHA AVIATION SERVICE



Transaction details

Type	Sale
Transaction date	Feb 11, 2023
Posted date	Feb 13, 2023



Description ALOHA AVIATION SERVICES

Merchant type Automated fuel dispensers

Method In person

Category Gas

Reference number

Memo (optional)

What's it for?

Transaction Details

City of Hondo

Transaction details

Type	Sale
Transaction date	Feb 11, 2023
Posted date	Feb 13, 2023

Hondo, TX 78861

Description	CITY OF HONDO
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Merchant type	Automated fuel dispensers
---------------	---------------------------

Method	In person
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Category	Gas
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Reference number	
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Transaction Details



ALOHA AVIATION SERVICE



Transaction details

Type	Sale
Transaction date	Feb 12, 2023
Posted date	Feb 14, 2023

Description ALOHA AVIATION SERVICES

Merchant type Automated fuel dispensers

Method In person

Category Gas

Reference number

Memo (optional)
What's it for?