

Banning Brice

From: [REDACTED]
Sent: Thursday, July 14, 2022 6:26 PM
To: Banning Brice
Cc: Kanayama, Darett I (FAA); Garrison, Dylan L (FAA)
Subject: RE: N4888W - NTSB request
Attachments: 20220712_124220.jpg; 20220712_124128.jpg; 20220712_124138.jpg; 20220712_114906.jpg; 20220712_113227.jpg; 20220712_113301.jpg; 20220712_113454.jpg; 20220712_114900.jpg

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Good Afternoon Brice!

I wanted to update you on the gear swing. I helped Mr. Michael Anderson, troubleshoot the gear retraction/deployment issue and also reviewed the emergency gear deployment procedure. I've transcribed my field notes and comments:

10:30am arrival, met with Michael Anderson at his shop, he moved the aircraft from its tiedown spot to his maintenance tent. We secured the tail tiedown, used wing jack points to lift the aircraft until all three tires were off the ground. Disconnected nose gear doors and secured out of the way to prevent interference in the gear retraction. Confirmed with the mechanic that the PIC has not been in the aircraft since the day of our interview.

Emergency gear extension toggle was in the up and stowed (normal operation) position. Landing gear position selector was in the down position.

Switched battery on and noted right landing gear indicator light was not lighting up, press to test verified that the bulb is functioning.

Placed the landing gear position selector in the "up" position and heard a slight click but no retraction of the landing gear. Cycled the gear position selector down and up multiple times and heard a more audible click in the down position but no movement of the gear.

The mechanic tapped on the electric motor that drives the landing gear hydraulic pump, nothing happened. He then checked that power was getting to the relay and found it was functioning properly. He then bypassed the relay and supplied power to the motor direct with but did not get any movement out of it.

He then removed the brushes and found that they were worn beyond limits, one brush disconnected from the spring entirely. The permanent magnets were damp with hydraulic fluid and brush dust and the stator and windings were also covered in hydraulic fluid and brush dust. I turned the stator and it turned freely.

Reviewed the landing gear system description as described in the POH and have the following information:

"The emergency dump valve bypasses fluid from the up side of the hydraulic actuators (which form the hydraulic uplock) directly to the reservoir, the gears then drop by gravity, assisted by down springs. With the emergency dump valve in the down position, the gear will not retract because the pressure is being relieved through the dump valve back to the reservoir and not to the hydraulic cylinders."

The mechanic stated that the emergency dump valve worked as designed when he used it to fully extend the landing gear when he retrieved the airplane off the runway on the day of the accident.

Troubleshoot the right main landing gear light not illuminating, the position micro-switch ground wire had pulled out of its ring terminal. When the mechanic jammed the broken wire into the ring terminal the right MLG light worked as designed.

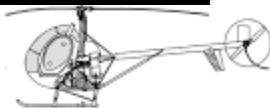
[REDACTED]

Best Regards,

W. Shawn Tu

Honolulu FSDO Aviation Safety Inspector

[REDACTED]



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From: Banning Brice [REDACTED]
Sent: Thursday, July 14, 2022 6:03 AM
To: Tu, William (FAA) [REDACTED]
Subject: RE: N4888W - NTSB request

Hi Shawn,

Did you have an opportunity to swing the gear?

Thanks,

Brice

Brice Banning
Senior Aviation Accident Investigator
National Transportation Safety Board

[REDACTED]