

Inspectors Statement
N1215M
CEN17LA148
4-25-2017

At the request of the NTSB I observed the initial trouble shooting into the gear malfunction of N1215M, a Cessna T210M S/N T21061924, at the Detroit Lakes airport, Detroit Lakes, MN on April 18 2017. The mechanic performing the work was Eric Carlson AP [REDACTED].

Aircraft was on jacks and inspection panels were opened when I arrived. I had the mechanic check fluid level in reservoir before performing a retraction check, fluid level and color were ok and no unusually odor was noted.

Mechanic performed gear retraction and extension with normal hydro-electrical system several times. Each time gear up function was ok, gear down cycle resulted in left main and nose gear extending and locking and right gear extending with no movement from the actuator. With the gear operation normal other than the down lock actuator not moving a manual extension with the hand pump was not performed.

Cracking the fittings loose at the down lock actuator found hydraulic fluid present at the actuator. The decision was made to remove the actuator and check it on the bench. After removal, the actuator was difficult to move, but once it released the spring action from internal spring took over and actuator moved freely.

Removed actuator end cap and actuator shaft and inspected for damage to O-rings and shaft, none was noted. Removed fitting and ball and spring assembly for inspection and with no visible defects noted. Fluid was bright red in actuator no signs of excessive O-ring material deposits in the fluid, a fair amount was noted when wipe with a white rag around the O-ring and backup rings.

Reassembled actuator and was able to operate freely. Reinstallation to check operation in the aircraft was not done since it would require re-rigging of the lock and the mechanic was going to replace O-rings and clean actuator before re-installation.

Contacted NTSB investigator with the information and was released from further investigation.

Note: This aircraft was originally equipped with main landing gear doors, but they have since been removed along with the required hydraulic operating components.

On April 24, 2017 Steve Nelson (certificate [REDACTED]) a former pilot of this aircraft for the owners, was in our office and told me that he had flown this aircraft from Detroit Lakes, MN to Moorhead, MN where it was stored last September after the annual and on landing at Moorhead had a gear unsafe warning and that he had advised the owners. He had landed with the pump circuit breaker in and gear warning horn going off, but with the pump running it keep hydraulic pressure on the gear actuator and held it in the saddle until he was on the ground then the weight of the aircraft on the wheels will hold the gear down.

A follow up call was placed to the mechanic on April 25, 2017 and the actuator had been rebuild, re installed and rigged. Operation of the gear and actuator were found to be normal.

Brent Allen Aviation Safety Inspector
Fargo, F5DO

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