



Federal Aviation Administration

Memorandum

Date: March 27, 2017
To: Roberto Gonzalez, ATL FSDO Manager
From: ASO ATL FSDO 11
Prepared by: Steven Davidson, Principal Avionics Inspector
Subject: N99716 Accident Investigation/ ERA17LA109

On February 19, 2017, about 1130 Eastern Standard Time, a 1946 ERCOUCPE 415-C, N99716, lost oil pressure and landed on the shoulder of a county road in Dawsonville, Georgia. The airplane was substantially damaged. The private pilot suffered minor injuries and was transported to the local hospital by EMS personnel. The airplane was registered to a private individual and was operated by the pilot under the provisions of 14 CFR Part 91 as a personal flight. Day, visual meteorological conditions prevailed, and no flight plan was filed for the local, personal flight. The flight originated about 1100.

On February 19, 2017 an FAA Inspector from the Atlanta FSDO was dispatched to the scene in order to determine the cause of the accident. At the accident site the FAA was met by members of the local police and fire department. An initial examination of the wreckage site revealed that the aircraft had come to rest in a ditch nose down with the tail of the aircraft positioned vertically in the air. Both wings suffered major damage from the impact as fuel was leaking profusely from both wing tanks. The engine compartment displayed extensive damage with the engine mounts and engine firewall receiving the majority of destruction. The right side of the horizontal tail section had been severely damaged. The propeller received minimal damage and displayed bend characteristics of an engine not making power. The nose landing gear had been completely destroyed on impact as a result of the uneven terrain landing. The engine oil tank contained over 3 quarts of oil with a maximum capacity of 4 quarts. A large amount of oil residue was present from the bottom of the engine cowling all the way down the belly of the aircraft to the tail section. The engine compartment was relatively free of oil residue as it appeared that the oil had been blown out the oil breather tube which runs out the bottom of the engine cowling. Finally, the aircraft was recovered and transported to Atlanta Air Salvage in Griffin, Georgia for further evaluation.

During the interview with the pilot he stated that he had just recently purchased the aircraft and had departed Jackson Co. Georgia airport enroute to LaFayette, Georgia airport. After reaching 3000' he noticed a sudden decrease in oil pressure while flying near Dawsonville, Georgia. The pilot stated that the oil pressure continued to drop as he believed the engine was going to quit and decided to make an emergency landing on a county road. The pilot stated that the engine never

quit nor was it running erratically when he made the decision to pull the power back and land the aircraft. According to the pilot the only indication of a malfunction was the loss of oil pressure and there were no reported issues with oil temperature. The Pilot further explained that the oil pressure never reached “0” psi but appeared that it may get that low so he made a decision to land the aircraft before getting too far in the approaching mountainous terrain of North Georgia. According to the pilots written statement it was noted that the pilot added oil on several occasions the day of and before his intended cross country flight. Further discussion revealed that the pilot wasn’t very familiar with this type of aircraft and may have been adding oil after each engine run and not allowing the hot oil to cool and drain back into the oil pan before taking an accurate reading.

On March 13, 2017 an FAA Inspector from the Atlanta Flight Standards District Office travelled to Atlanta Air Salvage to perform a further evaluation of the wreckage and oil pressure malfunction. To help duplicate the in-flight failure it was decided that an engine run would be needed to properly troubleshoot the loss of oil pressure. Due to the damage of the prop a temporary propeller was installed before running. A verification of the current oil capacity was conducted and revealed 3.5 quarts, as the engine was run in that condition to see what it would do. As expected the engine cranked right up with little to no hesitation and was able to maintain an oil pressure reading of around 45 Psi. The engine ran in this configuration for about 10 minutes as the power setting was varied. During this process there was no indication of loss of oil pressure or leaking oil. Based on the Pilots statement and speculation of an over service condition, additional oil was added to the engine to try and duplicate an over fill. An additional one quart of oil for a total of around 4.5 quarts was added. The engine once again was run for about 15 minutes as the power setting was varied. The oil pressure once again reached the green 45 psi setting but this time after about 5 minutes it started to slowly drop off until it reached 25 psi. The pressure settled at 25 psi for a few seconds as it crept back up to 45 psi where it remained there for the remainder of the engine run. This concluded the examination as no further tests or evaluations were conducted.

Aircraft Inspection Status:

1. Aircraft: 1946 ERCOUE, Model: 415-C, S/N: 2339
2. Engine: Continental, Model: A&C75 Series S/N 2563-6-12
3. Current Registration: DOI 09/30/2015
4. Standard Airworthiness Certificate: DOI 09/24/1955
5. Annual inspection was completed and returned to service on 09/04/2016 at 131.85 SMOH.
6. AD’s were signed off as to being complied with during last annual inspection 09/04/2016
7. The Current aircraft Total Time is 1906 Hours on 02/19/2017
8. The aircraft has operated 25.15 hours since the last annual inspection on 09/04/2016.

Pilot Inspection Status:

1. Certificate # [REDACTED]
2. Private Pilot
3. Expired Third Class Medical: 01/10/2012
4. No previous EIS records reported

Maintenance Mechanic Inspection Status:

1. Certificate # [REDACTED]

2. Mechanic: Airframe and Power plant
3. Inspection Authorization # [REDACTED]
4. [REDACTED]
5. No previous EIS records reported

Environmental Conditions:

1. Actual Weather: VMC
2. Runway Conditions: Dry
3. Precipitation: None