

Folkerts Michael

From: Folkerts Michael
Sent: Thursday, February 20, 2020 7:40 AM
To: Folkerts Michael
Cc: Michael Tweedus
Subject: ABS technical rep information for docket

From: Michael Tweedus
Sent: Monday, February 17, 2020 10:32 AM
To: Folkerts Michael

1. The aircraft you described as having the optional 200 gallon fuel system. That would be 100 gallons per side with approximately 3 gallons per side as being unusable.
2. An aircraft with a standard fuel system would hold a total of 172 gallons... or 86 gallons per side with the same 3 gallons of unusable fuel.
3. The fuel storage system is the same for the standard 172 gallon system as it is for the optional 200 gallon system with the exception the optional system has wet wing tips.
4. The fuel quantity indicating system for both the 172 gallon and 200 gallon system are the same. The fuel quantity systems will not start to register a drop in the fuel level until the level in either wing reaches 75.
5. The fuel quantity transmitters are wired in series with one another. The resistance value of the transmitter circuits in each of the wing is directly proportionate to fuel quantity of the wing. At 199 ohms the quantity will be at least 75 gallons in that wing. At 100 ohms the fuel quantity will be approximately 38 gallons remaining. And at 0 ohms all that remains should be the 3 gallons of unusable fuel.
6. With a tested total empty resistance of 13.7 ohms for the left wing and 14.6 ohms for the right wing.... That would give us a false reading of 5.16 gallons (LH) and 5.5 gallons (RH) more in those tanks than we actually had. That could give the pilot the sense he had 20 to 24 minutes of flying time left than he actually had. This is based on flying the aircraft at 6000 feet on a standard day with a power setting of 2300 RPM & 23" MP.

Best Regards
Mike Tweedus
ABS Technical Representative