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Subject: CEN21LA371

During the course of the investigation, the following information was collected:

- ADS-B data recorded the airplane previous flight to purchase fuel and the accident flight.
 - On August 4, 2021, the airplane flew to Wahoo Municipal Airport (KAHQ), Wahoo, Nebraska to purchase 38.8 gallons of fuel. About 1105 central daylight time (CDT), the airplane took off from KAHQ, remained in the traffic pattern for two landings, and then flew to Eppley Airfield (KOMA), Omaha, Nebraska, at 5,500 ft mean sea level (msl) and landed about 1130 CDT
 - On August 10, 2021, the airplane departed KOMA about 1328 CDT, and flew at 10,500 ft msl towards West Fargo Municipal Airport (D54), West Fargo, North Dakota. The airplane entered the downwind pattern for a right traffic pattern to runway 18 and did a go-around/low approach. The airplane turned right to enter the traffic. The airplane initially climbed, but about halfway through the right turn, the airplane began to descend. The last recorded point was at 1547 CDT.
- According to the airplane's Type Certificate Data Sheet, the fuel capacity is 65 gal. (63 gal. usable). Each tank is 32.5 gallons. The airplane was airborne for 2 hours and 34 minutes.
 - Numerous assumptions were made for the accident airplane for performance calculations. The assumption is that the pilot had the airplane fully fueled at KAHQ. Airplane weight was estimated at 2,700 lbs. Calculations for fuel consumed for start, taxi, idling on the ground, temperature deviation from standard day, or leaning plan at cruise were not included. It is estimated that the airplane consumed at least 41.5 gallons of fuel prior to the accident.

	Time	Burn	Gal
Flight 1			
T/O 1			2.5
Pattern 1	4 min		0.86
T/O 2			2.5
Pattern 2	4 min		0.86
T/O 3			
Climb to Cruise			3.3
Cruise	10 min	13 gal/hr	2.1
Flight 2			
T/O 1			
Climb to Cruise			4.9
Cruise	2 hr	11 gal/hr	22
Go Around			2.5
		Total	41.52

Figure 1 Fuel Calculations

- A Federal Aviation Administration inspector from the Fargo Flight Standards District Office responded to the accident site and performed a brief examination of the airplane. The inspector noted:
 - The propeller would turn freely, and the impulse coupling could be heard.
 - There was no fuel recovered from the right wing. Damage to the right wing could have led to a loss of fuel following the accident
 - Approximately 8 gallons was recovered from the left wing.

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