

N900CR Fuel Use Estimates

Capacity:

Main wingtip tanks – 50 gallons ea. usable x 2 (100 gallons)

Auxiliary Tanks 31.5 gallons ea. usable x 2 (63 gallons)

Total capacity when full: 163 usable gallons.

Assume all 4 tanks were full before flight.

Airplane was fueled on 10/17/17 with 102.3 gallons at Hobbes Time 589.0.

(The previous flight was 3.3 hours Hobbes duration, unknown number of takeoffs. Assuming it was full at the start, used 102.3 gallons for 3.3 Hobbes hours)

Hobbes at accident site read 592.7

Total Hobbes duration for accident day was 3.7 hours, since fueling.

Straight line distances:

from OPF to TLH 345 nm

TLH to TPA 173 nm

TPA to SPG 14 nm

Total: 532 nm

At an average cruise speed of 170 knots, and average cruise fuel usage rate of 181.2 lbs/hour (30.2 gallons per hour at 65% power at 5,000 FT, standard conditions):

$532\text{nm}/170\text{ knots} = 3.1\text{ hours}$

$3.1\text{ hours} \times 30.2\text{ gallons/hr} = 93.6\text{ gallons used in cruise.}$

At 60% power, 164 knots, at 5,000 ft cruise, fuel usage at 169.2 lbs/hour (28.2 gallons per hour):

$532\text{nm}/164\text{ knots} = 3.2\text{ hours}$

$3.2\text{ hours} \times 28.2\text{ gallons/hr} = 91.5\text{ gallons used in cruise.}$

(+/- Wind, non-direct routing, and taxi/ground ops, and climb). Climb data for SL to 5,000: 6 minutes, 15 miles 8.3 gallons