



Memorandum

Noreen Price
Aviation Accident Investigator
Alaska Regional Office

Subject: Weight and Balance Information
NTSB Accident Number: ANC18FA055, DHC-2, N9878R

This is a summary of weight and balance investigation information used for computations in the Regal Air accident that occurred at Willow Seaplane Base on July 18, 2018. Most all of the cargo and baggage was burned in the post impact fire. The pilot's weight and balance computations were not located, and the company forms in the "can" were illegible due to thermal damage.

Passenger Cargo and Baggage

Mrs. Vicoria Stone provided a list of items and receipts for her baggage and purchased items that were on the accident flight. (Refer to her record of conversation for receipts and list.) The Lowes and Costco item weights were obtained from their websites. The Walmart items on the receipts were each weighed at the Walmart in Wasilla, Alaska. The weights of the baggage, mail and books and small items were estimated by the passenger and the investigator-in-charge. The propane tank weights were obtained from the Regal Air standard weight list. The balance calculations were conducted with cargo items in the most likely locations based on weights and size.

Pilot

The pilot's weight was listed as 195 lb on his last FAA medical. He carried a pilot's bag with required company manuals and charts and personal items that were estimated to be 20 lbs.

Airplane

The airplane's weight and balance information was obtained from the most recent weight and balance update conducted when the new Aerocet floats were installed on December 15, 2017. Configuration "D" (rear seats stowed) was assumed based on cargo.

AIRCRAFT WEIGHT & BALANCE COMPUTATION
AND
EQUIPMENT LIST AMENDMENT

DESCRIPTION OF AIRCRAFT: [REDACTED]
MANUFACTURER: DHC
SERIAL NO.: 1135
MODEL: DHC-2
NATIONALITY & REGISTRATION MARK: N9878R

OWNERSHIP: NAME (AS SHOWN ON REG. CERT.): Laughlin Acquisitions LLC
ADDRESS (AS SHOWN ON REG. CERT.): Anchorage AK 99502
SUPERSEDES WEIGHT OR COMP. DATED: 6/1/2016

PREVIOUS EMPTY WEIGHT DATA		CENTER OF GRAVITY		MOMENT	
GROSS WEIGHT	EMPTY WEIGHT				
5600	3489.0	97.00			338430.00
REM./INST.	DESCRIPTION OF CHANGE	+WEIGHT	+ARM	+MOMENT	
XX	Remove EDO 4930 Floats	-584.00	100.7	-58809	
XX	Install Aerocet 5850 Floats	657.00	102.2	67145.40	
XX	Wipaire 5800lb Gross Weight Increase Kit	15.56	15.42	239.94	
XX	Kenmore Cargo Door	3.50	76	266.00	
XX	Skiplane Fuselage Skin Reinforcement	2.20	228	501.60	
XX	Tailwind Aviation Tail Stinger	8.50	342	2907.00	

TOTAL WT. CHANGE: 102.76
TOTAL MOMENT CHANGE: 12251.14

NEW USEFUL LOAD: 2008.24
NEW EMPTY WEIGHT: 3591.76
NEW C.G.: 97.63
NEW AIRCRAFT MOMENT: 350681.14

COMPUTED BY: [REDACTED]
Regal Air
William Bredin [REDACTED]
DATED: 12/15/2017

Aircraft Configuration Float Plane

Tables

Weights

ITEM	WEIGHT (LBS.)	NOTES
Lowe's	860	10x80 lb bags mortar, sink, misc. (mortar in second row, receipt)
Costco	151	Food in boxes and bags (website weights of receipt items)
Walmart	88	Clothes and kitchen gadgets (all receipt items weighed, some bags in left float)
Beer	100	4x30 packs
Wine	20	7 bottles
Propane	80	2x40, small 20 lb tanks filled
Baggage	20	Passenger list of personal items, estimated
Miscellaneous	5	Passenger essential oil bottles, estimated
	5	Passenger handgun, 44
	10	3 totes (empty) estimated
	20	13 books not in purchase receipts, estimated
	30	Passenger's mail estimated by passenger
Passengers	215	180+35 lbs, passenger stated
Pilot	215	195 lb on last FAA medical 2018, +20 lb pilot bag
Fuel, front	210	Full, 35 gal@6 lb/gal
Fuel, center	120	20 gal
Aircraft empty	3526.8	Regal config "D" with Aerocet floats

Total Weight 5,675.8 lbs

Center of Gravity Computation

78R Configuratio D

Location	Description	Weight	Arm	Moment
Aircraft Empty	N9878R	3526.8	96.8	341288.5
Front PAX	Colt	215	93	19995
2nd row PAX	Jennifer + Child	215	129	27735
2nd row Freight	Concrete+ Misc	860	129	110940
3rd row Freight	Misc(Costco, Walmart)	339	162	54918
Baggage	Misc Remaining	90	194	17460
Float Locker-FWD	Propan + Wine	100	48.9	4890
Fuel - Front	35gal	210	95.5	20055
Fuel - Middle	20gal	120	119.6	14352
Totals		5675.8	107.7616371	611633.5

Arm Index

Total Passenger + Freight 1586 lbs