



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

August 11, 2014

AIRWORTHINESS

Group Chairman's Factual Report

DCA13MA121

**Attachment 5 – N93PC Weight and Balance Information
(11 pages)**

AIRCRAFT WEIGHT AND BALANCE RECORD (Chart C)

Current A/C empty weight and C.G. as equipped

A/C Type: *DHC-3T*

Registration: *N93PC*

Serial No: 280

[illegible]**Rediske Air Inc.**

PO Box 7079

Nikiski, AK 99635

Weight and Balance

N93PC
S/N 280

DeHavilland DHC-3T

Previous Data

Wt.	Arm	Moment
4259.00	132.66	565010.70

Removed Equipment

Attitude Indicator

2.00	69.00	138
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T&B

1.20	72.00	86.4
------	-------	------

D.G.

2.40	69.00	165.6
------	-------	-------

VSI

0.85	72.00	61.2
------	-------	------

Total Removed

6.45	313.20
------	--------

Installed Equipment

PMA7000H

1.50	69.00	103.50
------	-------	--------

GNS430

6.20	67.00	415.40
------	-------	--------

GNS430

6.20	67.00	415.40
------	-------	--------

4300 Electric Attitude Ind.

2.50	69.00	172.50
------	-------	--------

GDU620

6.38	72.00	459.36
------	-------	--------

GRS77

3.46	301.00	1041.46
------	--------	---------

GMU44

0.50	160.00	80.00
------	--------	-------

GDC74A

2.30	301.00	692.30
------	--------	--------

GTX327

3.00	69.00	207.00
------	-------	--------

Total Installed

30.54	114.06	3483.42
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New Weight and Balance

4283.09	132.66	568180.92
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Empty Weight
Empty Wt. CG

4283.09
132.66

On Wheels

By:

CRS# P69R447Y

8/19/2010

Equipment List
N93PC

Cargo Net
ELT
Texas Turbine Conversion
Baron STOL Kit
Extended Range Fuel System
PulseLite System
G600
GNS430
GNS430
PMA7000H
GTX327
4300-311

LSTC# C-LSA95-092/D
Pioneer Avionics S/N 405475
STC#SA-02-15
STC#SA94-114
STC#SA03-82
STC#SA4005NM
STC#SA02153LA
STC#SA01933LA
STC#SA01933LA
Audio Panel
Transponder
Mid Continent Attitude Indicator

DHC-3

Weight and Balance Report

C-FMPX

SN 280

Aircraft weighed in standard fashion on wheels, in a closed hangar
 Wheel points used for scale readings, residual fuel, full oil, full hydraulic fluid
 Type of scales used Black & Decker load meters and Electronic scale

Scale	Weight	Tare	Arm	Moment
LH	1930	0	108.30	209019
RH	2014	0	108.30	218116.2
Rear Tail	315	0	437.70	137875.5
Total	4259		132.66	565010.7

New Empty Weight**New C of G**

Maximum C of G Limits for sea plane

131.9 to 148.3 at 6600 lbs or less

135.8 to 148.3 at 7600 lbs

135.8 to 148.3 at 8000 lbs

Reference DHC-3 Flight Manual for W & C of G, Landing Gear Configuration and Loading Diagrams to ensure
 Center of Gravity limits are not exceeded

The maintenance described has been performed in accordance
 with the applicable standards of airworthiness.

Date:

07-Jul-10

Signature:

Lic #

AMO 69-91

Equipment List

DHC-3

C-FMPX

SN 280

CARGO NET	LSTC # C-LSA95-092/D
ELT	PIONEER AVIONICS SN 405475
TEXAS TURBINE CONVERSION	STC #SA-02-15
BARON STOL KIT	STC #SA94-114
EXTENDED RANGE FUEL SYSTEM	STC #SA03-82
PULSELITE SYSTEM	STC #SA4005NM

[REDACTED]

From: "Chris McManus" <[REDACTED]>
Date: Sunday, March 10, 2013 6:46 AM
To: [REDACTED]
Subject: Re: Bear viewing

From: Chris McManus <[REDACTED]>
To: [REDACTED]
Sent: Mon, March 4, 2013 9:05:57 PM
Subject: Re: Bear viewing

Fantastic!

Weights are 100# for the 10yo girl; 110# for the 11yo boy; the 14 yo boy, the 2 girls 16 and 17 yo and the 2 moms are all within 3 lbs of 145; one dad is 190# and i am 220# giving us a combined weight of 1345#.

Each family could pack in one suitcase (or soft duffles) per family at 40# per family for an 80# luggage max. we could make sure that included cameras. we shouldn't have tripods or extra lenses.

I'm guessing your water is collected in a cistern so i am not sure if you have showers for guests or not- just let me know.

I think we would probably be leaving from Soldotna if that works for y'all.

I'll call my insurance company re: trip insurance. I've seen it on their website but have never used it before. Am i looking for coverage regarding personal illness/disaster on our part or in case we can't make it due to bad weather canceling the charter flight from the peninsula to your lodge?

Thanks-we are really looking forward to this trip!!!

Chris M

From: [REDACTED]
To: Chris McManus <[REDACTED]>
Sent: Mon, March 4, 2013 1:03:20 AM
Subject: Re: Bear viewing

All of our travel to and from the lodge is by air taxi and they are only able to carry a certain number of passengers and baggage. Could you get me the approximate weights of each person? If the children and adults are light enough and depending on baggage, it should not be a problem, however, we would not be able to do that if the plane would be overweight limits, and we would need to charter another flight due to weight restrictions. Things that would add a lot of baggage weight: Camera gear, numerous lenses, tripods, et cetera., oversize, or hard sided baggage. We recommend packing as light as possible, even though it would be an overnight excursion bring only the necessary personal clothing and personal hygiene items to be comfortable and dry. We do have heated cabins, vehicles and the main lodge is heated with a wood stove. I do not foresee it being a problem however, with having the 10 yr. old free of charge. We do require 50% non-refundable deposit to hold the reservation, and highly recommend trip insurance.

Mac and Angela McGahan
 Bear Mountain Lodge
 Chinitna Bay, AK

7/7/2013

Rediske Air

Load Manifest

Company: AK Bear Mt Lodge P.O. Box 7079
Nikiski, AK 99635
907-776-8985

Date: 7-7-13

PO/AFE #: _____

Airplane #: 93 PC

	PASSENGER NAME	Origin / Destination	Company	Pax Wt.	Bag Wt.
1	Chris McManus	9AX SXR CHB		1350	80
2	Freight				380
3					
4					
5					
Amount \$ _____				Subtotals	1350 380
				Total Weight	1730

REAL LEMON JUICE 25lb
C&H SUGAR 2 @ \$15.49 EA
BISQUICK
HILLS BROS ORIGINAL 6 @ \$11.69 EA
ICE TEA MIX
FRUIT SYRUP
KRUSTEAZ BASIC MUFFI 2 @ \$6.49 EA
RL CHEDDAR BISCUIT M 2 @ \$8.85 EA
WELCH'S 100% JUICE
MOM HONEY BUZZERS CE
WB FARM STRAWBERRY P
WELLS BERRY RED RASP
TANG POWDER
COFFEEMATE PUMP 2 @ \$14.85 EA
COFFEEMATE HAZELNUT 2 @ \$14.85 EA
SM GRAPE JELLY
SMUCKERS STRWBRY LEM
GATORADE ORIG
GATORADE LEMON LIME
KERN'S VARIETY JUICE
OLIVE GARDEN CROUTON
KS STEWED ORG TOMATO 2 @ \$7.89 EA
COCONUT OIL
CORNSTARCH
FRSH GRMT CROUTONS

ROZEN FOOD
CRINKLE CUT FRIES 2 @ \$10.99 EA
BROCCOLI FLORETS
KS TRIPLE BERRY BLEN 2 @ \$14.65 EA
KS STIR FRY VEGETABL 2 @ \$9.39 EA
KS BLUEBERRIES

TAX TAX CHARGE
MAX TAX CHARGE

PRODUCE
LETTUCE-ICEBRG 3.98 lb @ \$1.79/ 1b
LETTUCE-ICEBRG 2.89 lb @ \$1.79/ 1b
ONION-GREEN 3 @ \$0.59 EA
CELERY 4.09 lb @ \$1.29/ 1b
TOMATO-HH VINE 4.94 lb @ \$2.19/ 1b
are Weight: 0.031b
SPINACH-2.5LBS
SQUASH-BUTTRNT 4.46 lb @ \$1.89/ 1b
are Weight: 0.031b
RUSSET POTATOES 2 @ \$8.99 EA
RED BELL PEPPERS
LETTUCE-ROMAINE HRTS

TOTAL PURCHASES

98 BALANCE DUE

Debit Card
[S] **** *922
Auth Code = 876930

CHANGE
TOTAL TAX
TAX FORGIVEN

\$3.75 1 F
\$30.98 X F
\$6.95 1 F
\$70.14 X F
\$8.05 1 F
\$11.99 1 F
\$12.98 X F
\$17.70 X F
\$18.95 1 F
\$6.85 1 F
\$5.35 1 F
\$6.65 1 F
\$8.89 1 F
\$29.70 X F
\$29.70 X F
\$4.19 1 F
\$10.99 1 F
\$24.39 1 F
\$13.15 1 F
\$14.99 1 F
\$7.99 1 F
\$15.78 X F
\$27.15 1 F
\$4.25 1 F
\$7.45 1 F
\$21.98 X F
\$5.79 1 F
\$29.30 X F
\$18.78 X F
\$14.09 1 F
\$30.00 X N
\$7.12 1 F
\$5.17 1 F
\$1.77 X F
\$5.28 1 F
\$10.82 1 F
\$8.99 1 F
\$8.43 1 F
\$17.98 X F
\$9.99 1 F
\$6.49 1 F
\$867.31
\$867.31
\$867.31
\$0.00
\$0.00
\$50.24

only 1 sent over

only 3

sent 7/8/13 AWA

sent 7/8/13 AWA

sent 7/8/13 AWA

sent 7/8/13 AWA
sent 7/8/13 AWA

Still here; not sent

Greens sent on 7/7/13
Reduce flight that crashed.
* Besides items sent @ later date *

\$35.25 X F
\$28.77 X F
\$12.66 X F
\$7.89 1 F
\$19.99 1 F
\$10.25 1 F
\$11.49 1 F
\$16.79 1 F
\$33.90 X F
\$14.64 X F
\$18.30 X F

SIGN UP TO RECEIVE OUR SALE FLYER VIA
EMAIL AT WWW.THREEBEARSALASKA.COM

10575 KENAI-SPUR HWY
KENAI, AK 99611
907-283-6577



Purchase \$ 867.31
PIN Used
Debit Card #SXXXXXXXXXX2922
Auth # 876930
Payment from primary
Cashier # 124
Lane # 06
07/06/13 15:33 Ref/Seq # 063051
Term=001 IC=DC
EPS Sequence # 063051

BAKERY UPC'D
BUSY BAKER WHEAT 10 @ \$1.83 EA
BUSY BAKER WHITE 8 @ \$1.83 EA
CANDY
GRANDMA'S VARIETY 2 @ \$16.95 EA
FRITO CLASSIC MIX
PLANTERS NUTS ON TH
AUSTIN VARIETY COOKI
VARIETY SNACKING NUT
COOLER
DARIGOLD SOUR CRM
DARIGOLD HALF & HALF 3 @ \$4.22 EA
DARIGOLD HEAVY WHIPP 3 @ \$9.59 EA
FRESH EGGS 3 @ \$11.75 EA

TAX EXEMPT #13

Item	Quantity	Pounds	Total Weight
Busy Baker Wheat	10	1.4	14
Busy Baker White	8	1.4	11.2
Frito's Classic Mix	1	4.38	4.38
Planter's Nuts	1	3.88	3.88
Varity Snacking Nut	1	3.59	3.59
Fresh Eggs	3	8.5	25.5
Real Lemon Juice	1	3.29	3.29
C&H sugar	1	25	25
Bisquick	1	6.45	6.45
Hills Brothers Original Coffee	3	3.32	9.96
Ice Tea Mix	1	6.54	6.54
Fruit Syrup	1	5.25	5.25
Krusteaz Basic Muffin Mix	2	5.3	10.6
RL Cheddar Biscuit Mix	2	2.42	4.84
Welch's 100% Juice	1	20	20
Mom Honey Buzzers	1	2.15	2.15
Tang Powder	1	4.97	4.97
Coffe Mate Pump	2	4.45	8.9
Coffe Mate Hazelnut	2	4.45	8.9
Gatorade Original	1	37.25	37.25
Gatorade Lemon Lime Powder	1	5.17	5.17
Kern's Variety Juice	1	24.8	24.8
Olive Garden Croutons	1	2.07	2.07
KS Stewed Original Tomatoes	2	8.74	17.48
Corn Starch	1	2.52	2.52
Frsh Grmt Croutons	1	2.1	2.1
Crinkle Cut Fries	2	8.1	16.2
Broccoli Florets	1	3.59	3.59
KS Triple Berry Blend	2	4.04	8.08
KS Stir Fry Vegetable	2	5.6	11.2
KS Blueberries	1	4.99	4.99
Lettuce-Iceberg	1	3.98	3.98
Lettuce-Iceberg	1	2.89	2.89
Onion-Green	3	0.41	1.23
Celery	1	4.09	4.09
Tomato-HH Vine	1	4.94	4.94
Spinach	1	2.32	2.32
Squash-Butternut	1	4.46	4.46
Russet Potatoes	2	20.38	40.76
Red Bell Peppers	1	2.66	2.66
Lettuce-Romaine Hearts	1	3.92	3.92
Total			386.1



A096. Actual Weight Program For All Aircraft

HQ Control: 05/27/05
HQ Revision: 010

- a. The certificate holder is authorized to use only actual weights when determining the aircraft weight and balance.
- (1) This includes the passenger weights, carry-on bag weights, checked bag weights, plane-side loaded bag weights, and heavy bag weights, and/or
- (2) Actual weights of all passengers and bags or solicited ("asked") passenger weight plus 10 pounds and actual weight of bags.
- b. If this operations specification is issued, operations specifications A097, A098 and A099 must not be issued.
- c. Operations specification A011 must be issued if the certificate holder has a carry-on baggage program.
- d. The following aircraft must use actual weights:
- (1) All single-engine aircraft, with the exception of single engine turbine-powered EMS helicopters operations
- (2) All reciprocating-powered aircraft, and
- (3) All aircraft certificated with less than five (5) passenger seats, with the exception of single engine turbine-powered EMS helicopters operations
- e. Cargo-Only aircraft jumpseat and/or additional crewmembers.
- (1) For large and medium cabin aircraft used in cargo-only operations, jumpseat occupants and/or additional crewmembers must be accounted for using their actual weight, solicited ("asked")-weight plus ten pounds, or the standard average flight crewmember weight of 190 pounds (as revised by AC 120-27).
- (2) For small cabin aircraft used in cargo-only operations, jumpseat occupants and/or additional crewmembers must be accounted for using their actual weight, or solicited ("asked")-weight plus ten pounds.
- (3) Each bag carried aboard a cargo-only aircraft by a jumpseat occupant and/or additional crewmember will be accounted for as 30 pounds each (as revised by AC 120-27).
- (4) For cargo-only operated aircraft, standard flight crewmember average weights and flight crewmember average bag weights, as listed in AC 120-27 (as revised) may be included in the basic empty weight of the aircraft.
- f. The following loading schedules and instructions shall be used for routine operations:

Table 1 – Loading Schedules and Instructions for Routine Operations

Aircraft M/M/S	Type Loading Schedule	Loading Schedule Instructions	Weight and Balance Control Procedure
BN-2-A21	Actual Weights Asked + 10 lbs	IAW GOM, Section B-1 & B-2 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook	IAW GOM, Section B-2 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH)

Operations Specifications

Aircraft M/M/S	Type Loading Schedule	Loading Schedule Instructions	Weight and Balance Control Procedure
		(POH).	
CE-206- U206F	Actual Weights Only	IAW GOM, Section B-1 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH).	IAW GOM, Section B-2 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH)
CE-207-207	Actual Weights Only	IAW GOM, Section B-1 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH).	IAW GOM, Section B-1 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH)
CE-207-A	Actual Weights Only	IAW GOM, Section B-1 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH).	IAW GOM, Section B-1 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH)
CE-207- T207A	Actual Weights Only	IAW GOM, Section B-1 and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH).	and Aircraft Flight Manual (AFM) or Pilots Operating Handbook (POH)

1. The Certificate Holder applies for the Operations in this paragraph.
2. Support information reference: Added BN-2-A21.
3. These Operations Specifications are approved by direction of the Administrator.

Devlin, Jack

Principal Maintenance Inspector

AL03

4. Date Approval is effective: 3/3/09

Amendment Number: 2

5. I hereby accept and receive the Operations Specifications in this paragraph.

Rediske, Walter W

Agent for Service

Date: 3/3/09

ORIGINAL