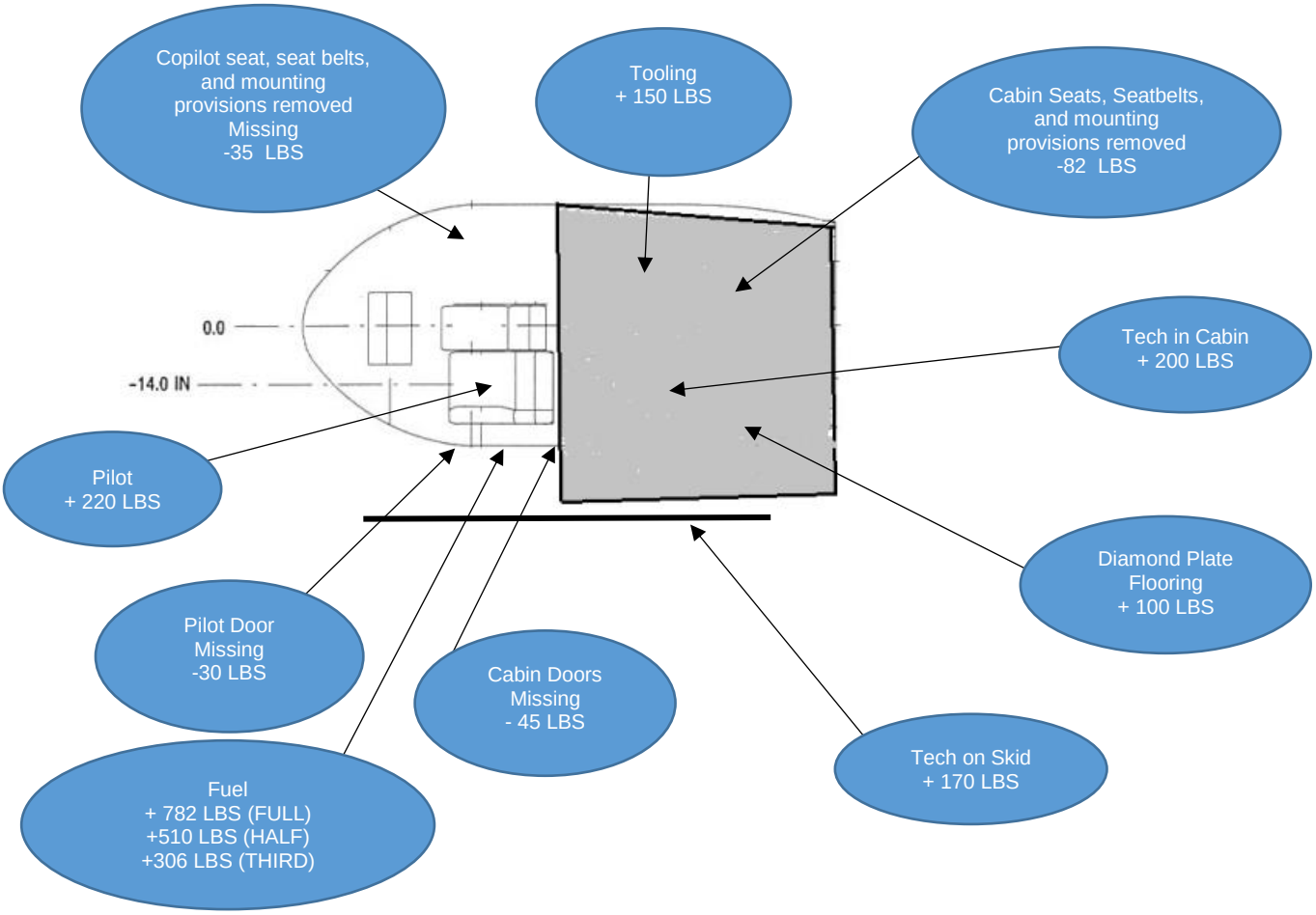
N602BP WEIGHT AND BALANCE ESTIMATION

Figure 1 – Aircraft Configuration at Time of Accident [1] [2] [3]



Flight Manual – 600N (600RFM-1)

MD-600N Flight Manual 2-1 Flight Restrictions [4]

Flight with doors removed is approved under the following conditions.

- Approved doors-off configurations:
- Both pilot's doors removed. **OR**
- Either pilot door removed. **OR**
- All cabin doors removed. **OR**
- All cabin doors, plus left pilot door removed. **OR**
- Right side aft cabin door removed. **OR**
- Right side mid and aft cabin doors removed. **OR**
- Left side aft cabin door removed.

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[1] *This weight and balance is an estimation based on the configuration of the aircraft at the time of the accident, a review of manufacturer technical data, and research and analysis of N602BP airworthiness records.*

[2] *No load manifest depicting the current configuration of the aircraft or adjustments for changes was found in the aircraft records nor was a load manifest produced by the operator following the accident depicting the removal of doors, seats, or installation of the cabin floor.*

[3] *Pilot and Technician weights include physical weight plus winter attire and safety harnesses*

[4] *As depicted in Section 2-1 of the MD600-N FAA approved flight manual, operations with the left side cockpit and left side cabin doors removed or copilot seat assembly removed are not authorized. CFR 91.107(a)(3) requires all passengers to be seated in an approved seat and properly secured with a seatbelt during aircraft movement*

MD-600 Flight Manual Section 2-4 Weight Limitations

For internal gross weight operations above 3850 LB, refer to Section XI.

Maximum gross weight: 3850 LB.

Minimum flying gross weight: Refer to Figure 2-3

Cargo deck capacity: 1350 lbs. (not to exceed 115 lbs. per square foot).

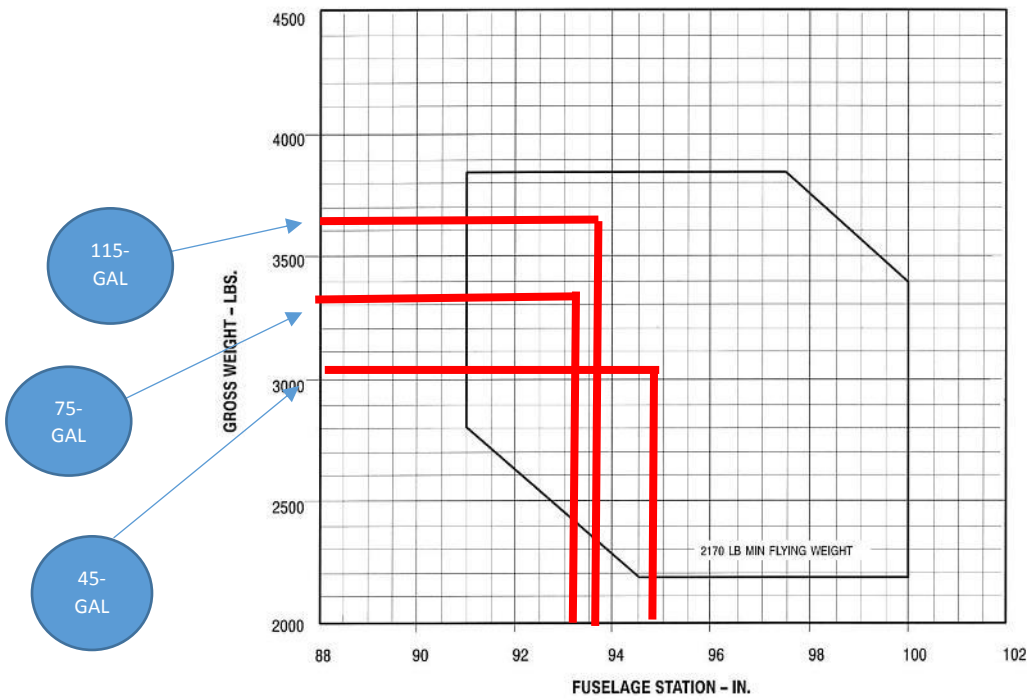
CG Limits: Ensure helicopter CG and weight are within approved limits throughout flight.

Lateral CG limits ±5.0 IN

Figure 2 – Estimated Weight and Balance Table [5] [6]

BASIC WEIGHT AND BALANCE RECORD															
AIRCRAFT MODEL 600N			SERIAL NUMBER RN0025								REGISTRATION NUMBER N602BP				
DESCRIPTION	ADDED (+)					REMOVE (-)					RUNNING TOTAL				
DESC	WT	LONG ARM	LAT ARM	LONG MOM	LAT MOM	WT	LONG ARM	LAT ARM	LONG MOM	LAT MOM	WT	LONG ARM	LAT ARM	LONG MOM	LAT MOM
Actual Weight											**2196.2**	**105.3**	**0.0**	**230575**	**-26**
LH Cockpit Door						30	43.0	-20	1290	-60					
LH Cabin Door						30	78.5	-20	2355	-60					
LH Cabin Door						15	96.9	-20	1453.5	-300					
Cabin Flooring	100	74	0.0	7400.0	0.0										
Coplt Seat Assy						35.0	43.0	13.5	1505.0	472.5					
Cabin Seat Assy						30.0	110.2	0.0	3306.0	0.0					
Cabin Seat Assy						52.0	66.5	0.0	3458.0	0.0					
GNS-430	4.1	12.0	-1.1	49.0	-5.0										
GTX-327	4.1	12.0	-1.1	49.0	-5.0										
FM Radio	2.8	12.0	-1.1	33.0	-3.0										
Cargo Hook	7.0	84.8	-3.1	594.0	-22.0										
ELT	10.0	12.0	-1.1	120.0	-11.0										
SUBTOTAL	**128.0**	**64.41**	**-.4**	**8245.0**	**-46.0**	**192.0**	**43.21**	**2.22**	**8296.0**	**426.5**	**2132.2**	**108.12**	**-.023**	**230524**	**-498**
Pilot	220	43.0	-14	9460	-3080										
Technician	200	72.5	-16	8600	-3200										
Technician	170	94.0	-30	15980	-5100										
Tooling	150	107.0	0.0	16050	0.0										
Fuel- 115 GAL	782	82.1	0.0	67199	0.0										
TOTAI											**3654.2**	**93.79**	**-3.11**	**342741.5**	**-11373.8**
Fuel – 75 GAL	**510**	**81.3**	**0.0**	**41463.0**	**0.0**						**3382.2**	**93.73**	**-3.36**	**317005.5**	**-11373.8**
Fuel -45 GAL	**306**	**83.2**	**0.0**	**25459.2**	**0.0**						**3180.2**	**94.65**	**-3.58**	**301001.7**	**-11373.8**

Figure 3 – Longitudinal Center of Gravity Envelope



[5] *Last physical weight and balance performed on N602BP was February 28, 2013. These numbers are annotated as the Actual Weight as depicted in Figure 2, Estimated Weight and Balance Table. Some major alterations were found to have been embodied into the aircraft following the physical weigh and were added to the basic weight adjustment.*

[6] *Weight and balance estimation appears to depict N602BP to have been operating with the longitudinal and lateral CG range at the time of the accident.*