INTERAGENCY HELICOPTER LOAD CALCULATION

AMD-67/FS 5700-17 (10/06)

NFES #1064

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		MODEL
		N#
PILOT(S)		**DATE**
MISSION		**TIME**

1 **DEPARTURE**	**PA**	**OAT**	
2 **DESTINATION**	**PA**	**OAT**	
3 **HELICOPTER EQUIPPED WEIGHT**			
4 **FLIGHT CREW WEIGHT**			
5 **FUEL WT** (_____ gallons **X** _____lbs per gal)			
6 **OPERATING WEIGHT** (3 + 4 + 5)			

	Non-Jettisonable		Jettisonable
	HIGE	**HOGE**	**HOGE- J**
7a **PERFORMANCE REF** (List page/chart from FM)			
7b **COMP GROSS WT** (FM **Performance** Section)			
8 **WT REDUCTION** (Req for all Non-Jettisonable)			
9 **ADJUSTED WEIGHT** (7b minus 8)			
10 **GROSS WT LIMIT** (FM **Limitations** Section)			
11 **SELECTED WEIGHT** (**Lowest** of 9 or 10)			
12 **OPERATING WEIGHT** (From Line 6)			
13 **ALLOWABLE PAYLOAD** (11 minus 12)			

14 **PASSENGERS/CARGO MANIFEST**	
15 **ACTUAL PAYLOAD** (Total of all weights listed in Item 14) **Line 15 must not exceed Line 13 for the intended mission.**	

PILOT SIGNATURE	**HazMat**
MGR SIGNATURE	**Yes ___ No ___**

INSTRUCTIONS

A load calculation must be completed for all flights. A new calculation is required when operating conditions change (± 1000' in elevation or ± 5°C in temperature) or when the Helicopter Operating Weight changes (such as changes to the Equipped Weight, changes in flight crew weight or a change in fuel load).

All blocks must be completed. Pilot must complete all header information and Items 1-13. Helicopter Manager completes Items 14 & 15.

1. DEPARTURE – Name of departure location and current Pressure Altitude (PA, read altimeter when set to 29.92) and Outside Air Temperature (OAT, in Celsius) at departure location.

2. DESTINATION – Name of destination location and PA & OAT at destination. If destination conditions are unknown, use MSL elevation from a map and Standard Lapse Rate of 2° C/1000' to estimate OAT.

Check the box in Line 1 (Departure) or Line 2 (Destination) to indicate the most restrictive values used to obtain Computed Gross Weight in Line 7b.

3. HELICOPTER EQUIPPED WEIGHT – Equipped Weight equals the Empty Weight (as listed in the Weight and Balance Data) plus the weight of lubricants and onboard equipment required by contract (i.e. survival kit, rappel bracket).

4. FLIGHT CREW WEIGHT – Weight of the Pilot and any other assigned flight crewmembers on board (i.e. Co-pilot, flight engineer, navigator) plus the weight of their personal gear.

5. FUEL WEIGHT – Number of gallons onboard **X** the weight per gallon (**Jet Fuel = 7.0 lbs/gal**; AvGas = 6.0 lbs/gal).

6. OPERATING WEIGHT – Add items 3, 4 and 5.

7a. PERFORMANCE REFERENCES – List the specific Flight Manual supplement and **hover performance** charts used to derive Computed Gross Weight for Line 7b. Separate charts may be required to derive HIGE, HOGE and HOGE-J. **HIGE:** use Hover-In-Ground-Effect, External/Cargo Hook Chart (if available). **HOGE & HOGE-J:** use Hover-Out-Ground-Effect charts for all HOGE operations.

7b. COMPUTED GROSS WEIGHT - Compute gross weights for HIGE, HOGE and HOGE-J from appropriate Flight Manual **hover performance** charts using the Pressure Altitude (PA) and temperature (OAT) from the most restrictive location, either Departure or Destination. Check the box in Line 1 (Departure) or Line 2 (Destination) to indicate which values were used to obtain Computed Gross Weight.

8. WEIGHT REDUCTION – The Government Weight Reduction is required for all "non-jettisonable" loads. The Weight Reduction is optional (mutual agreement between Pilot and Helicopter Manager) when carrying jettisonable loads (HOGE-J) where the pilot has total jettison control. The appropriate Weight Reduction value, for make & model, can be found in the current helicopter procurement document (contract).

9. ADJUSTED WEIGHT – Line 7b minus Line 8.

10. GROSS WEIGHT LIMITATION – Enter applicable gross weight limit from **Limitations Section** of the basic Flight Manual or the appropriate Flight Manual Supplement. This may be Maximum Gross Weight Limit for Take-Off and Landing, a Weight/Altitude/Temperature (WAT) limitation or a Maximum Gross Weight Limit for External Load (jettisonable). Limitations may vary for HIGE, HOGE and HOGE-J.

11. SELECTED WEIGHT – The lowest weight, either line 9 or 10, will be entered for all loads. Applicable limitations in the Flight Manual must not be exceeded.

12. OPERATING WEIGHT – Use the value entered in Line 6.

13. ALLOWABLE PAYLOAD – Line 11 minus Line 12. The maximum allowable weight (passengers and/or cargo) that can be carried for the mission. Allowable Payload may differ for HIGE, HOGE and HOGE-J.

14. PASSENGERS AND/OR CARGO – Enter passenger names and weights and/or type and weights of cargo to be transported. Include mission accessories, tools, gear, baggage, etc. A separate manifest may be used.

15. ACTUAL PAYLOAD – Total of all weights listed in Item 14. Actual payload must not exceed Allowable Payload for the intended mission profile, i.e. HIGE, HOGE or HOGE-J.

Both Pilot and Helicopter Manager must review and sign the form. Check if HazMat is being transported. Manager must inform the pilot of type, quantity and location of HazMat onboard.

Bambi Bucket Actual Payloads

USE THIS CHART WHEN CARRYING WATER, ONLY. **(1 U.S. Gal = 8.3 lbs)**
Use this chart to determine actual bucket payloads based on Model # and bucket percentage adjustment. ***Actual Payloads*** ***must not*** ***exceed Allowable Payloads***.

Formula: (Gallons X 8.3) + Bucket Empty Weight = Actual Bucket Payload
Note: Bucket Empty Weights have already been added to arrive at figures below.
Note: Weight of any extra hardware used (longline/remote) must be added.

%	Model	Model	Model
	# 6072	**# 8096**	**# 9011**
	(*66 lbs empty wt*)	(*70 lbs empty wt*)	(*70 lbs empty wt*)
100	72 gal → **666 lbs**	96 gal → **867 lbs**	108 gal → **966 lbs**
90	65 gal → **606 lbs**	86 gal → **784 lbs**	97 gal → **875 lbs**
80	58 gal → **547 lbs**	77 gal → **709 lbs**	86 gal → **784 lbs**
70	50 gal → **481 lbs**	67 gal → **626 lbs**	76 gal → **701 lbs**
	# 1012	**# 1214**	**# 1518**
	(*72 lbs empty wt*)	(*73 lbs empty wt*)	(*75 lbs empty wt*)
100	120 gal → **1068 lbs**	144 gal → **1268 lbs**	180 gal → **1569 lbs**
90	108 gal → **968 lbs**	130 gal → **1152 lbs**	162 gal → **1420 lbs**
80	96 gal → **869 lbs**	115 gal → **1028 lbs**	144 gal → **1270 lbs**
70	84 gal → **769 lbs**	101 gal → **912 lbs**	126 gal → **1121 lbs**
	# 1821	**# 2024**	**# 2732**
	(*76 lbs empty wt*)	(*135 lbs empty wt*)	(*154 lbs empty wt*)
100	210 gal → **1819 lbs**	240 gal → **2127 lbs**	324 gal → **2843 lbs**
90	189 gal → **1645 lbs**	216 gal → **1928 lbs**	292 gal → **2578 lbs**
80	168 gal → **1470 lbs**	192 gal → **1729 lbs**	259 gal → **2304 lbs**
70	147 gal → **1296 lbs**	168 gal → **1529 lbs**	227 gal → **2038 lbs**
	# 3542	**# 4453**	**# 5566HD**
	(*167 lbs empty wt*)	(*170 lbs empty wt*)	(*304 lbs empty wt*)
100	420 gal → **3653 lbs**	530 gal → **4569 lbs**	660 gal → **5782 lbs**
90	378 gal → **3304 lbs**	477 gal → **4129 lbs**	594 gal → **5234 lbs**
80	336 gal → **2956 lbs**	424 gal → **3689 lbs**	528 gal → **4686 lbs**
70	294 gal → **2607 lbs**	371 gal → **3249 lbs**	462 gal → **4139 lbs**
	# 5870HD	**# 6578HD**	**# 7590**
	(*330 lbs empty wt*)	(*356 lbs empty wt*)	(*375 lbs empty wt*)
100	700 gal → **6140 lbs**	780 gal → **6830 lbs**	900 gal → **7845 lbs**
90	630 gal → **5559 lbs**	702 gal → **6183 lbs**	810 gal → **7098 lbs**
80	560 gal → **4978 lbs**	624 gal → **5535 lbs**	720 gal → **6351 lbs**
70	490 gal → **4397 lbs**	546 gal → **4888 lbs**	630 gal → **5604 lbs**

TEMPERATURE CONVERSION CHART

(C X 1.8) + 32 = F

C	F
1	33.8
2	35.6
3	37.4
4	39.2
5	41
6	42.8
7	44.6
8	46.4
9	48.2
10	50
11	51.8
12	53.6
13	55.4
14	57.2
15	59
16	60.8
17	62.6
18	64.4
19	66.2
20	68
21	69.8
22	71.6
23	73.4
24	75.2
25	77

C	F
26	78.8
27	80.6
28	82.4
29	84.2
30	86
31	87.8
32	89.6
33	91.4
34	93.2
35	95
36	96.8
37	98.6
38	100.4
39	102.2
40	104
41	105.8
42	107.6
43	109.4
44	111.2
45	113
46	114.8
47	116.6
48	118.4
49	120.2
50	122