Section 5
Performance

Beechcraft Corporation Model G58

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Every new Model G58 is delivered with the following forms which are unique to each serial-numbered airplane:

- Basic Empty Weight and Balance (Actual)
- · Sample Loading
- Equipment List

It is the Owner's responsibility to ensure that changes in equipment and weight and balance are kept up to date. It is recommended that the *Weight and Balance Record* in this POH/AFM Section, or similar form, be used. The current Equipment List and Basic Empty Weight and Balance data must stay with the airplane when it changes ownership. Hawker Beechcraft Corporation cannot maintain the current airplane configuration status.

The airplane Pilot-in-Command is responsible for the airplane to be properly loaded for each flight. All pertinent weight and balance loading data is presented in this POH/AFM Section. The airplane weight and center of gravity limits are shown on the Weight and Balance Diagram page, with the moment limits shown in the Moment Limits vs. Weight Table. A blank Weight and Balance Loading Form, along with Computing Procedure instructions on how to complete it, are provided for the Pilot's use, or to use as an example for creating a separate loading form. Payload and fuel weights, center of gravities, moments/ 100 and applicable limits are shown on the Useful Load Weights and Moments pages.

All Weights are in pounds (lb) and all Arms are in horizontal inches (in.) from the Fuselage Datum, which may also be expressed as Fuselage Stations (FS). Moments/100 are in pound-inches (lb-in.).

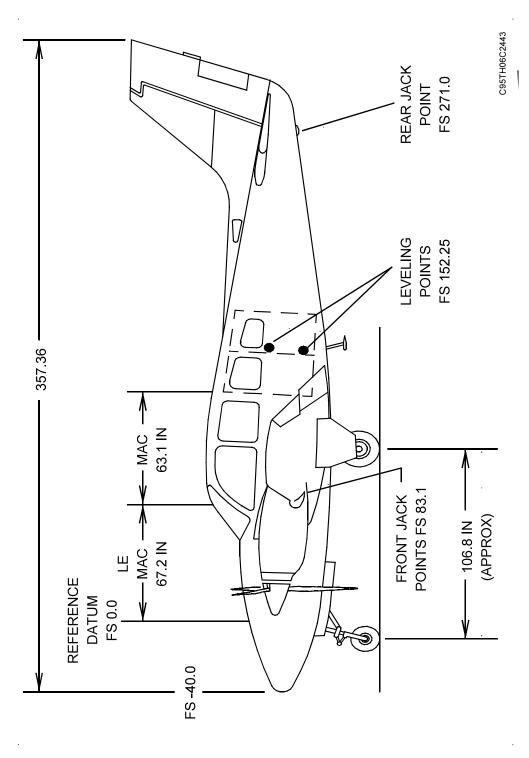






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WEIGHING INSTRUCTIONS



DIMENSIONAL DATA



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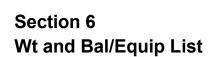


Periodic weighing of the airplane may be required to keep the Basic Empty Weight current. All changes to the airplane affecting weight and balance are the responsibility of the airplane's owner and/or operator.

- 1. Three jack points are provided for weighing: two on the wing front spar at Fuselage Station 83.1 and one on the aft fuselage at Fuselage Station 271.0.
- 2. Fuel should be drained prior to weighing. Tanks are drained from the regular drain ports with the airplane in static ground attitude. When tanks are drained, 5.7 pounds of trapped fuel remain in the airplane at Fuselage Station 81.6. The remainder of the unusable fuel to be added to a drained system is 30.3 pounds at Fuselage Station 78.5.
- 3. Engine oil must be at the full level or completely drained. Total engine oil when full is 45 pounds at Fuselage Station 43.
- 4. To determine airplane configuration at time of weighing, installed equipment is checked against the airplane equipment list or superseding forms. All installed equipment must be in its proper place during weighing.
- 5. The airplane must be longitudinally and laterally level with the landing gear fully extended at the time of weighing. Leveling screws are located on the left side of the fuselage at Fuselage Station 152.25 (approximately). Longitudinally level attitude is determined with a plumb bob. Laterally level attitude is obtained when the vertical distance from each wing tip to the floor is equal.





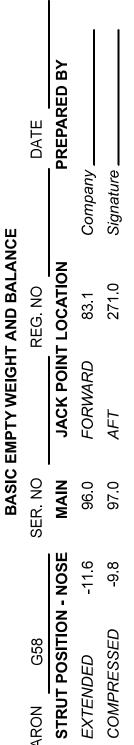


- 6. Measurement of the reaction arms for a wheel weighing is made using a steel measuring tape. Measurements are taken with the airplane level on the scales, from the reference (a plumb bob dropped from the center of either main jack point) to the axle center line of the main gear and then to the nose wheel axle center line. The main wheel axle center line is best located by stretching a string across from one main wheel to the other. All measurements are to be taken with the tape level with the hangar floor and parallel to the fuselage center line. The locations of the wheel reactions will be approximately at Fuselage Station 96.7 for main wheels and Fuselage Station -10.3 for the nose wheel.
- 7. Jack point weighings are accomplished by placing scales at the jack points specified in step 1 above. Since the center of gravity of the airplane is forward of Fuselage Station 83.1, the tail reaction of the airplane will be in an up direction. This can be measured on regular scales by placing ballast of approximately 200 pounds on the scales to which the aft weighing point is attached by cable of adjustable length. The up reaction will then be total ballast weight minus the scale reading and is entered in the weighing form as a negative quantity.
- 8. Weighing should always be made in an enclosed area which is free from air currents. The scales used should be properly calibrated and certified.









REACTION WHEEL - JACK POINTS	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN					
RIGHT MAIN					
NOSE OR TAIL					
TOTAL (AS WEIGHED)					
Space belor	n provided for additic	ons and subtractions	Space below provided for additions and subtractions to as - weighed condition	on	
ADD:					
DRAINABLE UNUSABLE FUEL			30.3	78.5	2379
BASIC EMPTY WEIGHT					
NOTE: Basic Empty Weight includes full engine oil and unusable fuel	full engine oil ar	nd unusable fuel			

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PAGE NO.

WEIGHT AND BALANCE RECORD

REGISTRATION NO.

Hawker Beechcraft Corporation Model G58

RUNNING BASIC EMPTY WEIGHT	MOM 100					
RUNNIN EMPTY	WT (LBS)					
3E VED (-)	MOM 100					
WEIGHT CHANGE ADDED (+) OR REMOVED (-)	ARM (IN.)					
WEI ADDED (WT (LBS)					
DESCRIPTION OF ARTICLE	OR CHANGE					
ІТЕМ NO.	OUT					
ITEM	NI					
L	DAIE					



SERIAL NO.



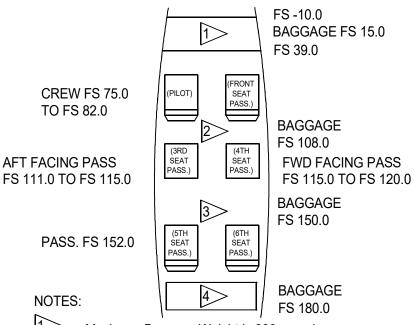
	ı		I						1
CORD PAGE NO.	G BASIC WEIGHT	MOM 100							
	O	RUNNING BASIC EMPTY WEIGHT	WT (LBS)						
	ie VED (-)	MOM 100							
	WEIGHT CHANGE ADDED (+) OR REMOVED (-)	ARM (IN.)							
LANCE RE	ANCE RE	WEIG ADDED (1	WT (LBS)						
WEIGHT AND BALANCE RECORD	REGISTRATION NO.	DESCRIPTION OF ARTICLE	OR CHANGE						
		ITEM NO.	OUT						
	, Ö	LE	Z						
	SERIAL NO.	ļ .	DAIE						

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PAYLOAD LOCATIONS



Maximum Baggage Weight is 300 pounds.

Maximum Baggage Weight is 200 pounds between Front and Rear Spars with aft facing or removed 3rd and 4th seats. This location is not approved for baggage when the 3rd and 4th seats are facing

Maximum Baggage Weight is 400 pounds aft of the Rear Spar, with 5th and 6th seats removed, or 200 pounds with only the 5th or 6th seat removed.

Maximum Baggage Weight is 120 pounds.

Notes

- 1. The floor structure load limit is 50 pounds per square foot between the front and rear spars, and 100 pounds per square foot aft of the rear spar.
- 2. Any combination of the 3rd, 4th, 5th and 6th seats may be removed by the Owner/Operator or Pilot-in-Command, with the appropriate Log Book approved entry and Weight and Balance Record change. Refer to the Equipment List for seat weights and arms.
- 3. All Maximum Baggage Weights include baggage, cargo and installed equipment, if applicable. All baggage and cargo must TH06C be secured with an approved retention system. 053923AA.AI

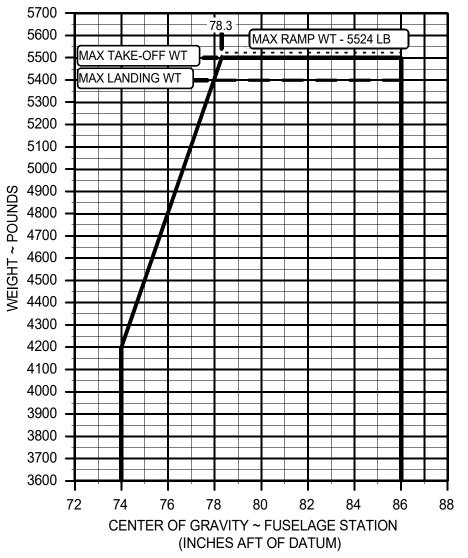


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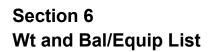
WEIGHT AND BALANCE DIAGRAM



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MOMENT LIMITS vs. WEIGHT TABLE

WEIGHT	MOMENT/1	00 (lb-in.)
(lb)	FWD LIMIT	AFT LIMIT
3800	2812	3268
3850	2849	3311
3900	2886	3354
3950	2923	3397
4000	2960	3440
4050	2997	3483
4100	3034	3526
4150	3071	3569
4200	3108	3612
4250	3152	3655
4300	3196	3698
4350	3241	3741
4400	3285	3784
4450	3330	3827
4500	3375	3870
4550	3420	3913
4600	3465	3956
4650	3510	3999
4700	3556	4042
4750	3601	4085
4800	3647	4128
4850	3693	4171
4900	3740	4214
4950	3786	4257
5000	3832	4300
5050	3879	4343
5100	3926	4386
5150	3973	4429
5200	4020	4472
5250	4067	4515
5300	4115	4558
5350	4163	4601
5400	4210	4644
5450	4258	4687
5500	4307	4730

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LOADING COMPUTING PROCEDURE

NOTE

Loadings may be prepared accumulating weights and moments/100 only and using the *Moment Limits vs. Weight Table* for Step 10. compliance. Or, by also including the calculated arms as indicated and using the *Weight and Balance Diagram* for Step 10. compliance. For each step that indicates the Arm to be calculated, divide the total moment/100 by the total weight and multiply the result by 100.

- 1. Record the most current **Basic Empty Weight**, Arm (optional) and Moment on line 1. The moment must be divided by 100 to correspond to the *Useful Load Weights* and *Moments Tables*.
- 2. Record the weight, arm (optional) and corresponding moment/100 from the appropriate *Useful Load Payload, Weights and Moments Table*, for each payload item on lines 2. through 9.
- 3. Total the weight column and moment/100 column to determine the **Zero Fuel Weight** on line 10. Calculate the arm.
- 4. Record the weight and corresponding moment/100 for the total fuel loaded on line 11. Add the fuel weight and moment/100 to the Zero Fuel Weight values to determine the Ramp Weight on Line 12. Calculate the arm.
- Record the weight and corresponding moment/100 for the fuel to be used for start, taxi and take-off on Line 13. Subtract the fuel weight and moment/100 from the Ramp Weight values to determine the **Take-off Weight** on Line 14. Calculate the arm.







- 6. Copy the fuel load weight only from Line 11. to Line 15.
- 7. Off to the side, add the calculated fuel to destination to the Start, Taxi and Run-Up fuel. Record the total weight only on line 16.
- 8. Subtract the Line 16. weight from the Line 15 weight and record the results on Line 17. Obtain the corresponding moment/100 from the Usable Fuel Table. Interpolation may be necessary.
- 9. Copy the **Zero Fuel Weight** from Line 10. to Line 18. and the fuel remaining from Line 17. to Line 19. Add the Line 19. weight and moment/100 to the Line 18. values to determine the **Landing Weight** on Line 20. Calculate the arm.
- 10. Refer to the Moment Limits vs. Weight Table or the Weight and Balance Diagram and ensure that the Zero Fuel Weight, Take-Off Weight and Landing Weight are all within the Weight and Center of Gravity or Moment/100 Limits. If not, rearrange or remove Useful Load Item(s) to stay within the limits.







Section 6 Wt and Bal/Equip List

WEIGHT AND BALANCE LOADING FORM

Serial No.:	Date:
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LINE	ITEM	WEIGHT (lb)	ARM (in.)	MOMENT 100 (lb-in.)
1.	BASIC EMPTY WEIGHT			
2.	Pilot and Front Seat Passenger			
3.	3rd and/or 4th Seat Passengers			
4.	5th and/or 6th Seat Passengers		152.0	
5.	Baggage - Nose Compartment		15.0	
6.	Baggage - Between Spars		108.0	
7.	Baggage - Aft of Rear Spar		150.0	
8.	Baggage - Aft Compartment		180.0	
9.	Other -			
10.	ZERO FUEL WEIGHT			
11.	Fuel Load			
12.	RAMP WEIGHT (DO NOT EXCEED 5524 LB)			
13.	*Less Fuel for Start, Taxi and Run-Up			
14.	TAKE-OFF WEIGHT (DO NOT EXCEED 5500 LB)			
15.	Fuel Load from Line 11.			
16.	Less Fuel to Destination <u>including</u> Start, Taxi and Run-up from Line 13.			
17.	Fuel Remaining - Moment/100 from Usable Fuel Table			
18.	Zero Fuel Weight from Line 10.			
19.	Add Fuel Remaining from Line 17.			
20.	LANDING WEIGHT (DO NOT EXCEED 5400 LB)			

^{*} Fuel for start, taxi and run-up is typically 24 lb with a Moment/100 of 20 lb-in., which may operationally vary.





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WEIGHT AND BALANCE LOADING FORM

Serial No.: Date:

LINE	ITEM	WEIGHT (lb)	ARM (in.)	MOMENT 100 (lb-in.)
1.	BASIC EMPTY WEIGHT			
2.	Pilot and Front Seat Passenger			
3.	3rd and/or 4th Seat Passengers			
4.	5th and/or 6th Seat Passengers		152.0	
5.	Baggage - Nose Compartment		15.0	
6.	Baggage - Between Spars		108.0	
7.	Baggage - Aft of Rear Spar		150.0	
8.	Baggage - Aft Compartment		180.0	
9.	Other -			
10.	ZERO FUEL WEIGHT			
11.	Fuel Load			
12.	RAMP WEIGHT (DO NOT EXCEED 5524 LB)			
13.	*Less Fuel for Start, Taxi and Run-Up			
14.	TAKE-OFF WEIGHT (DO NOT EXCEED 5500 LB)			
15.	Fuel Load from Line 11.			
16.	Less Fuel to Destination <u>including</u> Start, Taxi and Run-up from Line 13.			
17.	Fuel Remaining - Moment/100 from Usable Fuel Table			
18.	Zero Fuel Weight from Line 10.			
19.	Add Fuel Remaining from Line 17.			
20.	LANDING WEIGHT (DO NOT EXCEED 5400 LB)			

^{*} Fuel for start, taxi and run-up is typically 24 lb with a Moment/100 of 20 lb-in., which may operationally vary.



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Section 6
Wt and Bal/Equip List

USEFUL LOAD - PAYLOAD, WEIGHTS AND MOMENTS TABLE

OCCUPANTS

Pilot & 2nd Seats				5th & 6th Seats				
Weight	Filot 6	t Ziiu Seats	Aft Facing	(Club Arr.)	Forward	l Facing	otii a otii oeats	
(lb)	Fwd. Pos. Arm 75 (in.)	Aft Pos. Arm 82 (in.)	Fwd. Pos Arm 111 (in.)	Aft Pos. Arm 115 (in.)	Fwd. Pos. Arm 115 (in.)	Aft Pos. Arm 120 (in.)	Arm 152 (in.)	
	•		N	loment/100 (lb-in.)				
100	75	82	111	115	115	120	152	
110	83	90	122	127	127	132	167	
120	90	98	133	138	138	144	182	
130	98	107	144	150	150	156	198	
140	105	115	155	161	161	168	213	
150	113	123	167	173	173	180	228	
160	120	131	178	184	184	192	243	
170	128	139	189	196	196	204	258	
180	135	148	200	207	207	216	274	
190	143	156	211	219	219	228	289	
200	150	164	222	230	230	240	304	

Note: Occupant Arms and Moments/100 for adjustable seats are shown at their extreme positions. Intermediate positions (0.75 in. increments for the front seats and 1.00 in. increments for the 3rd & 4th seats) will require interpolation of the Moment/100 values.

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USEFUL LOAD WEIGHTS AND MOMENTS TABLE

		В	AGGAGE		
Weight (lb)	Nose Compart ment	Between Spars (Aft Facing or Removed 3rd and 4th Seats)	Aft of Rear Spar (5th <u>or</u> 6th Seat Removed)	Aft of Rear Spar (5th <u>and</u> 6th Seats Removed)	Aft Compart ment
	Arm 15 (in.)	Arm 108 (in.)	Arm 150 (in.)	Arm 150 (in.)	Arm 180 (in.)
			Moment/100	(lb-in.)	
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 240 260 280 300 320 340 360 380 400	2 3 5 6 8 9 11 12 14 15 17 18 20 21 23 24 26 27 29 30 32 33 36 39 42 45	11 22 32 43 54 65 76 86 97 108 119 130 140 151 162 173 184 194 205 216	15 30 45 60 75 90 105 120 135 150 165 180 195 210 225 240 255 270 285 300	15 30 45 60 75 90 105 120 135 150 165 180 195 210 225 240 255 270 285 300 330 360 390 420 450 480 510 540 570 600	18 36 54 72 90 108 126 144 162 180 198 216

NOTE: All baggage must be secured with an approved retention system.







USEFUL LOAD WEIGHTS AND MOMENTS TABLE

USABLE FUEL							
	Varia	ble Arm					
Gallons	Weight	166 Gal.	194 Gal.				
	(lb)	Moment/	100 (lb-in.)				
10	60	46	46				
20	120	92	92				
30	180	140	140				
40	240	189	189				
50	300	238	238				
60	360	288	288				
70	420	338	338				
80	480	388	388				
90	540	439	439				
100	600	489	489				
110	660	539	539				
120	720	590	590				
130	780	641	641				
140	840	692	692				
150	900	743	743				
160	960	793	793				
166	996	824	824				
170	1020		845				
180	1080		899				
190	1140		953				
194	1164		974				







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