SECTION VIII

WEIGHT AND BALANCE

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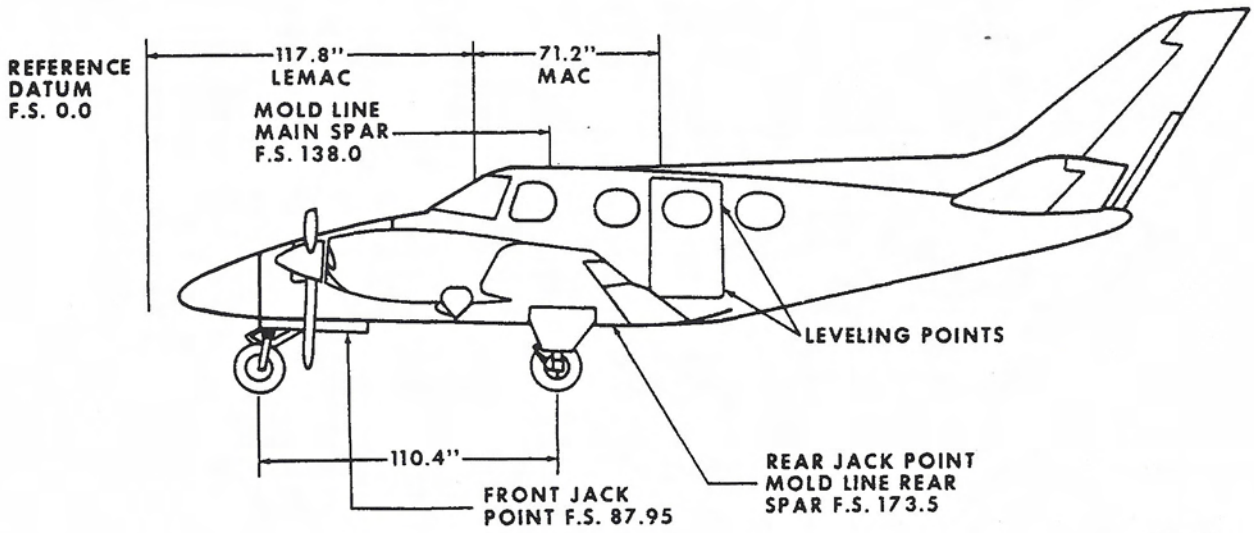
DIMENSIONAL DATA



A60-607-2

WEIGHING INSTRUCTIONS

Periodic weighing of the Duke 60 & A60 may be necessary to keep the Basic Empty Weight current. Frequency of weighing is to be determined by the operator. All changes to the airplane affecting weight and balance are the responsibility of the aircraft operator.

1. Aircraft may be weighed on wheels or jack points. Jack point locations are on the forward fuselage station 87.95 and on the wing center section rear spar fuselage station 173.5. Wheel reaction locations must be measured as described in Paragraph 6, below.
2. Fuel should be drained preparatory to weighing. Tanks are drained from the regular drain ports with the airplane in static ground attitude. When tanks are drained, 11 pounds of undrainable fuel remains in the aircraft at an arm of 135 inches. The remainder of the unusable fuel to be added to a drained system is 79 pounds at fuselage station 131.2, for the 192 gal. system. The remainder of the unusable fuel to be added to a drained system is 19 pounds at fuselage station 133.4 for the 202 gal. system. When the aircraft is weighed with full fuel, the fuel specific weight (pounds/gallon) should be determined by using a hydrometer. Full usable fuel of 192 gallons has a center gravity at fuselage station 139.5. Full usable fuel of 202 gallons has a center of gravity at fuselage station 139.0.
3. Engine oil must be at the full level in each tank. Total engine oil aboard when tanks are full is 49 pounds at an arm of 88.0 inches.
4. Installed equipment is checked against the aircraft equipment list or superseding forms. All equipment must be in its proper place during weighing.
5. Aircraft is placed on scales in a level attitude. Leveling screws are located on the fuselage entrance door frame. Leveling is accomplished with a plumb bob. Jack pad leveling may require the nose gear shock to be secured in the static position to prevent its extension. Wheel weighings can be leveled by varying the amounts of air in shocks and tires.
6. Measurement of the reaction locations for a wheel weighing is made using the nose jacking point for a reference. Using a steel measuring tape, measurements are taken from the reference (a plumb bob hung from the center of the nose jacking point) to the axle center line of the nose gear and then from the nose gear axle center line to the main 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 in a plane level with the floor and parallel to the fuselage center line. The locations of the wheel reactions will be approximately at an arm of 152 inches for main wheels and 42 inches for the nose wheel.
7. The Basic Empty Weight and Moment/100 are determined from the scale readings. Items weighed which are not part of the empty airplanes are subtracted, e.g., usable fuel. Unusable fuel and engine oil are added if not already in the airplane.
8. Weighing should always be performed in an enclosed area which is free of air currents. The scales used should be properly calibrated and certified.

AIRCRAFT BASIC EMPTY WEIGHT AND BALANCE

DATE:

SERIAL NO:

REGISTRATION NO:

PREPARED BY:

STRUT POSITION -	NOSE	MAIN
EXTENDED	40.3	151.0
COMPRESSED	41.9	152.0

JACK POINT LOCATION	
FORWARD	87.95
AFT	173.5

REACTION WHEEL - JACK POINTS	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN					
RIGHT MAIN					
SUB TOTAL				173.5	
NOSE				87.95	
TOTAL (AS WEIGHED)					

SPACE BELOW PROVIDED FOR ADDITIONS AND SUBTRACTIONS TO AS WEIGHED CONDITION

EMPTY WEIGHT			
ENGINE OIL UNUSABLE FUEL	49	88	4312
BASIC EMPTY WEIGHT			

WEIGHT AND BALANCE LOADING FORM

SERIAL NO:	REGISTRATION NO:	DATE:

PAYLOAD COMPUTATIONS			
ITEM		WEIGHT	MOM/100
PASSENGERS (OR CARGO)			
NO.	LOCATION (ROW, F.S., ETC)		
BAGGAGE			
CABINET CONTENTS			
TOTAL PAYLOAD			

ITEM	WEIGHT	MOM/100
BASIC EMPTY WEIGHT CREW (NO.) CREW'S BAGGAGE EXTRA EQUIPMENT		
OPERATING WEIGHT		
TAKE-OFF FUEL		
AIRPLANE WT. - TOTAL		
PAYLOAD - TOTAL		
TAKEOFF CONDITION		
LESS FUEL		
LANDING CONDITION		

LOADING INSTRUCTIONS

It is the responsibility of the airplane operator to insure that the airplane is properly loaded. At the time of delivery, Beech Aircraft Corporation provides the necessary weight and balance data for the operator to compute individual loadings. All subsequent changes in weight and balance are the responsibility of the airplane owner and/or operator.

The Basic Empty Weight and Moment of the Airplane at the time of delivery is shown on the Aircraft Empty Weight and Balance Form. Useful load items which may be loaded into the Airplane are shown on the Useful Load Weights and Moments Tables. The Minimum and Maximum Moments approved by the FAA are shown on the Gross Weight Moment Limits Graph. These Moments correspond to the forward and aft Center of Gravity flight limits for a particular weight. All Moments are divided by 100 to simplify computations.

COMPUTING PROCEDURE

1. Record the Basic Empty Weight and Moment from the Aircraft Empty Weight and Balance Form (or from the latest superseding form). The moment must be divided by 100 to correspond to Useful Load Moments.
2. Record the weight and corresponding moment of each item to be carried.
3. Total the weight column and moment column. The total weight must not exceed the maximum allowable gross weight and the total moment must be within the minimum and maximum moments shown on the Gross Weight Moment Limits Table.
4. Determine the weight and corresponding moment of fuel to be burned by subtracting the amount on board on landing from the amount on board at take-off.
5. Subtract the weight and moment of fuel to be burned from the take-off weight and moment. The landing weight must not exceed the maximum amount shown in the limitations section, page 1-3. The landing moment must be within the minimum and maximum moments shown on Gross Weight Moment Limits Graph for that weight. If the total moment is less than the minimum moment allowed, useful load items must be shifted aft or forward load items reduced. If the total moment is greater than the maximum moment allowed, useful load items must be shifted forward or aft load items reduced. If the quantity or location of load items is changed, the calculations must be revised and the moments rechecked.

USEFUL LOAD WEIGHTS AND MOMENTS

OCCUPANTS					
		STANDARD SEATING		CLUB SEATING	
WEIGHT	PILOT OR COPILOT	CENTER SEATS	5TH & 6TH SEATS	CENTER SEATS AFT FACING	5TH & 6TH SEATS
	ARM 141	ARM 173	ARM 205	ARM 178	ARM 218
	MOMENT/100				
100	141	173	205	178	218
110	155	190	226	196	240
120	169	208	246	214	262
130	183	225	267	231	283
140	197	242	287	249	305
150	212	260	308	267	327
160	226	277	328	285	349
170	240	294	349	303	371
180	254	311	369	320	392
190	268	329	390	338	414
200	282	346	410	356	436

BAGGAGE				
		STANDARD SEATING		CLUB SEATING
	NOSE	AFT CABIN		AFT CABIN
WEIGHT	COMPT	FLOOR	SHELF	FLOOR
	ARM 75	ARM 230	ARM 230	ARM 236
	MOMENT/100			
20	15	46	46	47
40	30	92	92	94
60	45	138	138	142
70	53	161	161	165
80	60	184	184	
100	75	230	230	
120	90	276	276	
135	101	311	311	
140	105	322		
160	120	368		
180	135	414		
200	150	460		
220	165	506		
240	180	552		
260	195	598		
280	210	644		
300	225	690		
315	236	725		
320	240			
340	255			
360	270			
380	285			
400	300			
420	315			
440	330			
460	345			
480	360			
500	375			

FUEL			
		192 GAL.	202 GAL.
GALLONS	WEIGHT	MOM/100	
10	60	80	78
20	120	161	158
30	180	243	239
40	240	325	321
50	300	407	403
60	360	490	485
70	420	574	568
80	480	657	652
90	540	741	735
100	600	825	819
110	660	910	903
120	720	995	987
130	780	1080	1072
140	840	1165	1157
150	900	1250	1243
160	960	1336	1328
170	1020	1421	1413
180	1080	1506	1499
190	1140	1591	1584
192	1152	1607	---
200	1200		1668
204	1224		1685

OIL		
GALLONS	WEIGHT	MOMENT/100
6.5	49	43

NOTE

Oil weight and moment is included in airplane basic empty weight.

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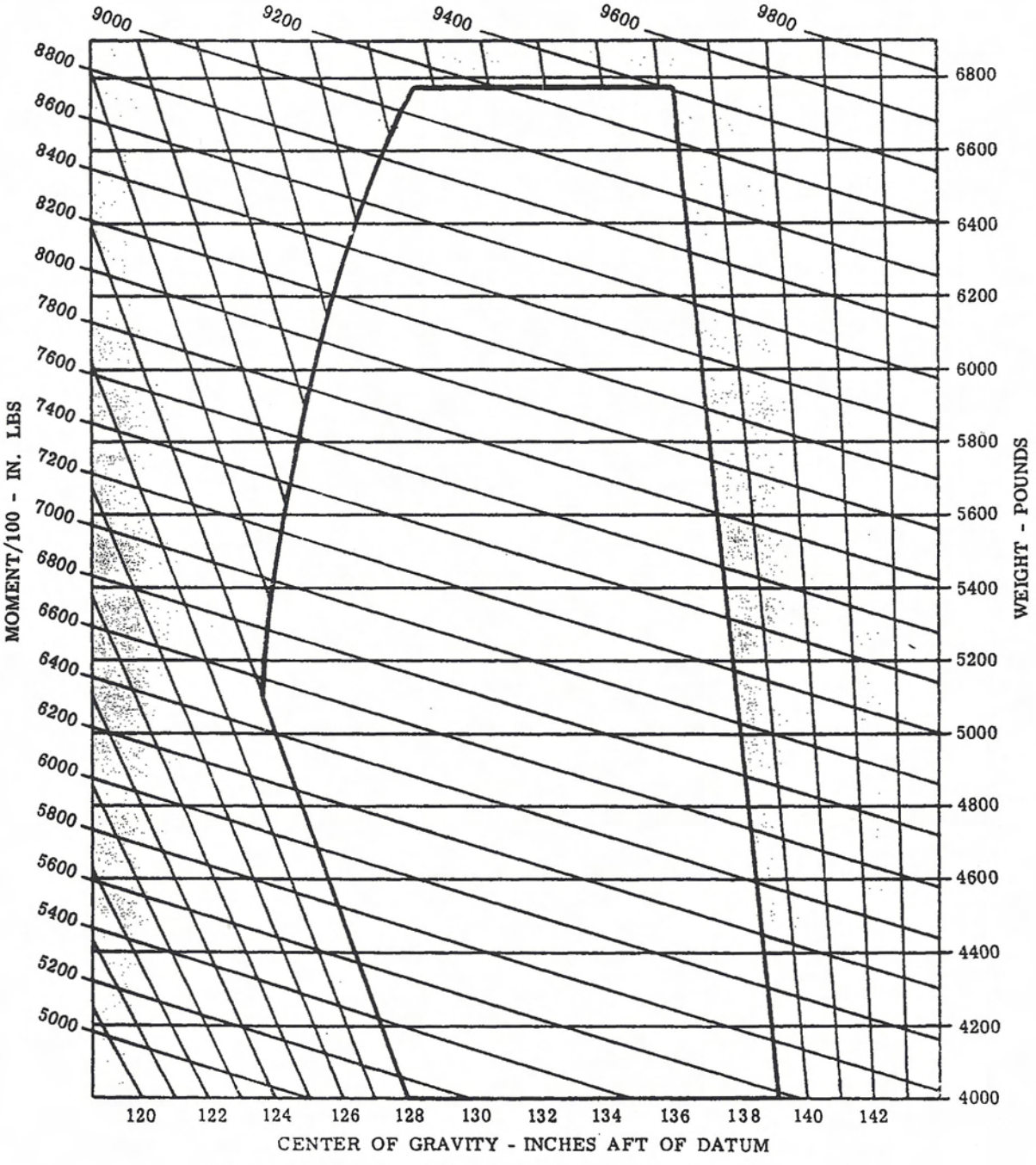
DUKE 60 & A60

GROSS WEIGHT MOMENT LIMITS



ENVELOPE BASED ON THE FOLLOWING WEIGHT AND CENTER OF GRAVITY LIMIT DATA (LANDING GEAR DOWN)

WEIGHT CONDITION	FORWARD C.G. LIMIT	AFT C.G. LIMIT
6775 LB. MAXIMUM TAKE-OFF	134.6	139.2
6775 LB. LANDING	134.6	139.2
6600 LB. LANDING	133.9	139.2
6450 LB. LANDING	133.3	139.2
5100 LB. OR LESS	128.0	139.2

NOTE: SEE LIMITATIONS SECTION FOR LANDING WEIGHT RESTRICTIONS.

A60-601-325

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EQUIPMENT LIST

AIRCRAFT SERIAL NO.

DATE

REGISTRATION NO.

I.D.	DESCRIPTION	WEIGHT	ARM