

PILOT'S OPERATING HANDBOOK

Cessna. 1977

414

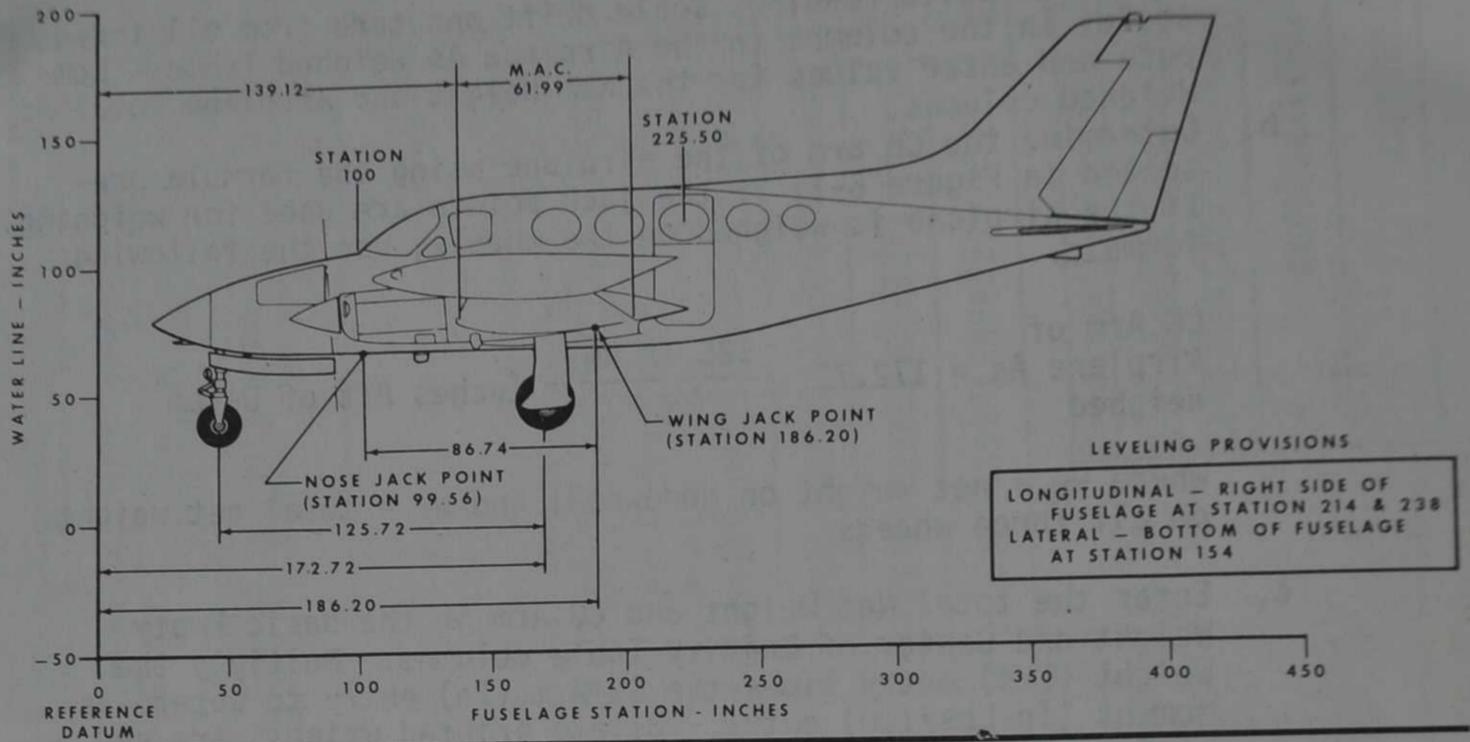
CESSNA MODEL 414



WILDBLUE

— AIRCRAFT SALES —

AIRPLANE WEIGHING FORM



AIRPLANE AS WEIGHED TABLE

POSITION	SCALE READING	SCALE DRIFT	TARE	NET WEIGHT
LEFT WING				
RIGHT WING				
NOSE				
AIRPLANE TOTAL AS WEIGHED				
CG ARM OF AIRPLANE AS WEIGHED = (186.2) - $\frac{(86.74) \times (\text{NOSE NET WEIGHT})}{(\text{TOTAL AS WEIGHED})}$ = () INCHES AFT OF DATUM				

NOTE

IT IS THE RESPONSIBILITY OF THE PILOT TO INSURE THAT THE AIRPLANE IS LOADED PROPERLY. THE BASIC EMPTY WEIGHT AND CG FOR THIS AIRPLANE AS DELIVERED FROM THE FACTORY IS SHOWN BELOW. IF THE AIRPLANE HAS BEEN ALTERED, REFER TO THE LATEST WEIGHT AND BALANCE DATA FOR THIS INFORMATION.

BASIC EMPTY WEIGHT AND CENTER OF GRAVITY TABLE

ITEM	WEIGHT - POUNDS	CG ARM - INCHES	MOMENT (INCH-POUNDS/100)
*AIRPLANE (CALCULATED OR AS WEIGHED)			
DRAINABLE UNUSABLE FUEL AT 6 POUNDS PER GALLON	TIP MAIN	12.0	152.0
	WING AUXILIARY	6.0	164.0
	WING LOCKER LEFT	3.0	175.0
	WING LOCKER RIGHT	3.0	175.0
BASIC EMPTY WEIGHT			

*INCLUDES ALL UNDRAINABLE FLUIDS AND FULL OIL

Figure 6-1

October 1976
Revision 1 - 1 Jan 1978

WILDBLUE

WEIGHT AND MOMENT TABLES

WEIGHT (POUNDS)	BAGGAGE AND CABINET CONTENTS					
	NOSE COMPARTMENT ARM = 71"	WING LOCKERS ARM = 186"	AFT CABIN			
			BAY "A" ARM = 266"	BAY "B" ARM = 282"	OVERHEAD CABINET ARM = 282"	REFRESHMENT BAR ARM = 279"
			MOMENT/100			
10	7	19	26	28	28	56
20	14	37	53	56	56	56
30	21	56	80	85		
40	28	74	106	113		
50	36	93	133	141		
60	43	112	160	169		
70	50	130	186	197		
80	57	149	213	226		
90	64	167	239	254		
100	71	186	266	282		
110	78	205	293			
120	85	223	319			
130	92	242	346			
140	99	260	372			
150	107	279	399			
160	114	298	426			
170	121	316	452			
180	128	335	479			
190	135	353	505			
200	142	372	532			
210	149	391	559			
220	156	409	585			
230	163	428	612			
240	170	446	638			
250	178		665			
260	185		692			
270	192		718			
280	199		745			
290	206		771			
300	213		798			
310	220		825			
320	227		851			
330	234		878			
340	241		904			
350	248		931			
360			958			
370			984			
380			1011			
390			1037			
400			1064			

WEIGHT (POUNDS)	CREW AND PASSENGERS					
	1ST OR 2ND SEATS ARM = 137"	3RD OR 4TH SEATS		5TH OR 6TH SEATS ARM = 218"	TOILET SEAT ARM = 250"	
		FORWARD FACING ARM = 175"	AFT FACING ARM = 178"			
	MOMENT/100					
10	14	18	18	22	25	
20	27	35	36	44	50	
30	41	52	53	65	75	
40	55	70	71	87	100	
50	68	88	89	109	125	
60	82	105	107	131	150	
70	96	122	125	153	175	
80	110	140	142	174	200	
90	123	158	160	196	225	
100	137	175	178	218	250	
110	151	192	196	240	275	
120	164	210	214	262	300	
130	178	228	231	283	325	
140	192	245	249	305	350	
150	206	262	267	327	375	
160	219	280	285	349	400	
170	233	298	303	371	425	
180	247	315	320	392	450	
190	260	332	338	414	475	
200	274	350	356	436	500	
210	288	368	374	458	525	
220	301	385	392	480	550	
230	315	402	409	501	575	
240	329	420	427	523	600	
250	342	438	445	545	625	
260	356	455	463	567	650	
270	370	472	481	589	675	
280	384	490	498	610	700	
290	397	508	516	632	725	
300	411	525	534	654	750	

GALLONS	WEIGHT (POUNDS)	FUEL		
		MAIN TANKS ARM = 152"	AUXILIARY WING TANKS ARM = 164"	WING LOCKER TANKS ARM = 166"
5	30	46	49	50
10	60	91	98	100
15	90	137	148	149
20	120	182	197	199
25	150	228	246	249
30	180	274	295	299
35	210	319	344	349
40	240	365	394	398
45	270	410	443	
50	300	456	492	
55	330	502	541	
60	360	547	590	
63	378	575	620	
65	390	593		
70	420	638		
75	450	684		
80	480	730		
85	510	775		
90	540	821		
95	570	866		
100	600	912		

PASSENGER SEAT AND BAGGAGE MOMENT ARMS

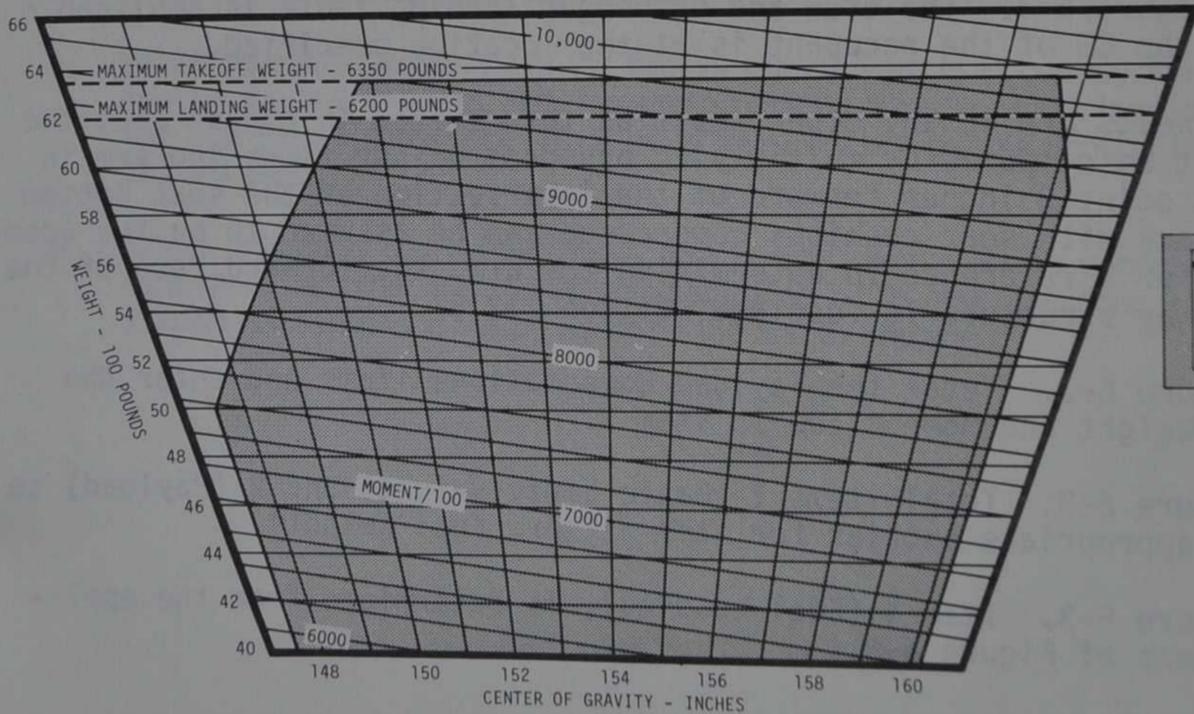
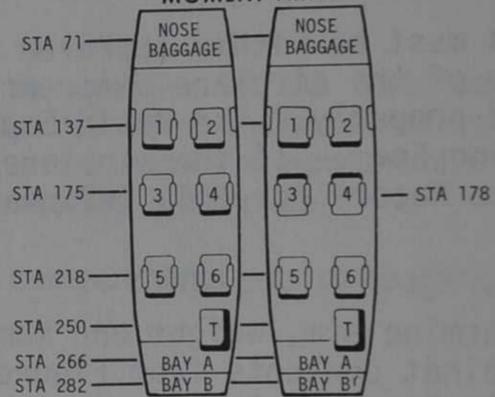


Figure 6-2

1 October 1976

WILDBLUE

AIRCRAFT SALES

SECTION 6
WEIGHT & BALANCE

SAMPLE WEIGHT AND BALANCE FORM

PAYLOAD COMPUTATIONS				REF	ITEM	WEIGHT	MOMENT/100	
				1.	BASIC EMPTY WEIGHT	4517	7020	
				2.	PAYLOAD	743	1077	
				3.	* ZERO FUEL WEIGHT (sub-total) (Do not exceed maximum zero fuel weight of 6165 pounds)	5260	8097	
Seat 1	137	160	219	4.	FUEL LOADING	(main)	600	912
Seat 2	137	170	233			(auxiliary)	240	394
Seat 3	175	120	210			(wing lockers)	---	---
Seat 4	175	190	332					
Seat 5								
Seat 6 Toilet								
				5.	* TAKEOFF WEIGHT (See Figure 6-2)	6100	9403	
BAGGAGE	71	103	73	6.	LESS FUEL TO DESTINATION	(main)	354	538
Nose						(auxiliary)	240	394
Wing Lockers						(wing lockers)	---	---
Bay A Bay B								
CABINET CONTENTS	--	---	---	7.	LANDING WEIGHT (See Figure 6-2)	5506	8471	
PAYLOAD	--	743	1077					

*Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Airplane Weighing Form. If the airplane has been altered, refer to the Weight and Balance Record for this information.

Figure 6-3

Determine arm, weight and Moment/100 of the crew, passengers, baggage and cabinet contents from Figure 6-2 and enter them under Payload Computations in Figure 6-3. The crew and passenger loading table is applicable only when the CG of the occupant is at the location specified.

If the seats are in any other position than stated in Figure 6-2, the moment must be computed by multiplying occupant weight times the arm in inches. A point 9 inches forward of the intersection of the seat bottom and seat back with seat cushions compressed can be assumed to be the occupant CG. For a reference in determining the arm, the forward face of the cabin doorway structure is fuselage station 212.87.

See Figure 6-3. Total the Payload Computations items and enter the resulting Weight and Moment/100 in item 2.

See Figure 6-3. Total items 1 (Basic Empty Weight) and 2 (Payload) to determine appropriate entries for item 3 (Zero Fuel Weight).

See Figure 6-3. Item 4 (Fuel Loading), is determined from the applicable columns of Figure 6-2.

WILDBLUE

AIRCRAFT SALES