

N225FR

Aircraft Weight & Balance and Performance Form

Weight and Balance Data as of 06/17/19

Station	Weight		Arm	Moment
Empty Aircraft	1532.60		40.09	61452.42
Fuel	_____	X	48	_____
Front Seats	_____	X	*37	_____
Rear Seats	_____	X	73	_____
Baggage A	_____	X	**95	_____
Baggage B	_____	X	**123	_____
Total	_____	CG	_____	_____

*Pilot or passenger center-of-gravity on adjustable seats positioned for average occupant. Actual front seat aft and forward limits are 34-46.

**Arms measured to the center of the baggage areas indicated. Actual Baggage 'A' forward and aft limits are 82-108. Actual Baggage 'B' forward and aft limits are 108-142.

Aircraft Takeoff Performance and Weather

(Short Field Takeoff Distance)

Headwind	_____ KTS	Crosswind	_____ KTS
Visibility	_____ SM	Ceiling	_____ FT
Temperature	_____ °C	Altimeter	_____ "Hg
Pressure Altitude	_____ FT		
Computed Ground Roll	_____ FT		
Computed Distance To Clear a 50 Ft. Obstacle	_____ FT		

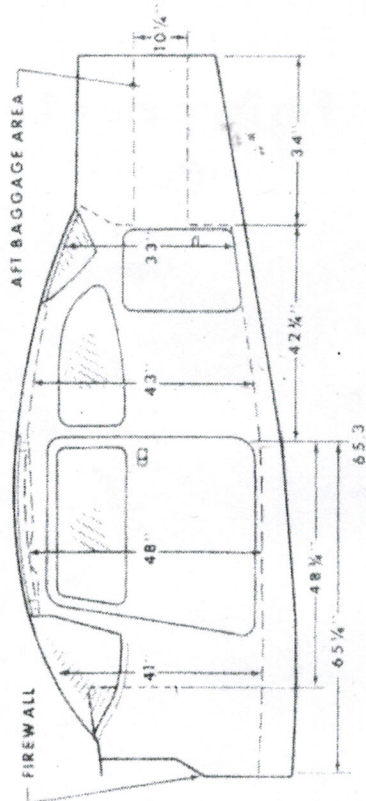
I affirm that I have accurately computed the weight and balance and performance data based on actual weights and current atmospheric conditions. The conditions also meet the Spinks Flight Center weather minimums.

Signature

Print Name

____/____/____
Date

CABIN HEIGHT MEASUREMENTS



DOOR OPENING DIMENSIONS

	WIDTH (TOP)	WIDTH (BOTTOM)	HEIGHT (FRONT)	HEIGHT (REAR)
CABIN DOOR	32"	37"	40"	41"
BAGGAGE DOOR	15 1/4"	15 1/4"	22"	21"

WIDTH
● LWR WINDOW
LINE
* CABIN FLOOR

CABIN WIDTH MEASUREMENTS

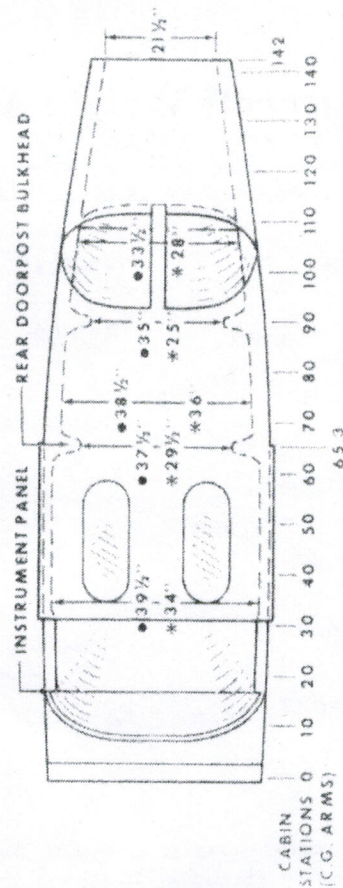


Figure 6-4. Internal Cabin Dimensions

SAMPLE LOADING PROBLEM

	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb. - ins. /1000)	Weight (lbs.)	Moment (lb. - ins. /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil)	1454	57.6		
2. Usable Fuel (At 6 Lbs./Gal.) Standard Tanks (40 Gal. Maximum)	240	11.5		
Long Range Tanks (50 Gal. Maximum)				
3. Pilot and Front Passenger (Station 34 to 46)	340	12.6		
4. Rear Passengers	170	12.4		
5. * Baggage Area 1 or Passenger on Child's Seat (Station 82 to 108, 120 Lbs. Max.)	103	9.8		
6. * Baggage Area 2 (Station 108 to 142, 50 Lbs. Max.)				
7. RAMP WEIGHT AND MOMENT	2307	103.9		
8. Fuel allowance for engine start, taxi, and runup	-7	-.3		
9. TAKEOFF WEIGHT AND MOMENT (Subtract Step 8 from Step 7)	2300	103.6		
10. Locate this point (2300 at 103.6) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable. * The maximum allowable combined weight capacity for baggage areas 1 and 2 is 120 lbs.				

Figure 6-5. Sample Loading Problem

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Wellington Airport
Wellington, Ks. 67152

Cessna Model 172N

TAKEOFF DISTANCE SHORT FIELD MAXIMUM WEIGHT 2400 LBS

CONDITIONS:

Flaps 10 deg.

Full Throttle Prior to Brake Release

Paved, Level, Dry Runway, Zero Wind

NOTES:

1. Short field technique as specified in Section 4.
2. Prior to Takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2400	51	56	S.L.	795	1460	860	1570	925	1685	995	1810	1065	1945
			1000	875	1605	940	1725	1015	1850	1090	2000	1170	2155
			2000	960	1770	1035	1910	1115	2060	1200	2220	1290	2395
			3000	1055	1960	1140	2120	1230	2295	1325	2480	1425	2685
			4000	1165	2185	1260	2365	1355	2570	1465	2790	1575	3030
			5000	1285	2445	1390	2630	1500	2895	1620	3160	1745	3455
			6000	1425	2755	1540	3015	1655	3300	1800	3620	1940	3990
			7000	1580	3140	1710	3450	1850	3895	2000	4220	---	---
			8000	1755	3615	1905	4015	2050	4480	---	---	---	---
2200	49	54	S.L.	650	1195	700	1280	750	1375	805	1470	865	1575
			1000	710	1310	765	1405	825	1510	885	1615	950	1735
			2000	780	1440	840	1545	905	1660	975	1785	1045	1915
			3000	855	1585	925	1705	995	1835	1070	1975	1150	2130
			4000	945	1750	1020	1890	1100	2040	1180	2200	1270	2375
			5000	1040	1945	1125	2105	1210	2275	1305	2465	1405	2665
			6000	1150	2170	1240	2355	1340	2555	1445	2775	1555	3020
			7000	1270	2440	1375	2655	1485	2890	1605	3155	1730	3450
			8000	1410	2760	1525	3015	1650	3305	1785	3630	1925	4005
2000	46	51	S.L.	525	970	565	1035	605	1110	650	1185	695	1265
			1000	570	1060	615	1125	665	1215	710	1295	765	1385
			2000	625	1160	675	1240	725	1290	780	1425	840	1525
			3000	690	1270	740	1365	800	1465	860	1570	920	1685
			4000	755	1400	815	1500	880	1615	945	1735	1015	1865
			5000	830	1545	900	1660	970	1790	1040	1925	1120	2070
			6000	920	1710	990	1845	1070	1990	1150	2145	1235	2315
			7000	1015	1900	1095	2055	1160	2225	1275	2405	1370	2605
			8000	1125	2125	1215	2305	1310	2500	1410	2715	1520	2950

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MAXIMUM RATE OF CLIMB

WEIGHT LBS	PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM			
			-20°C	0°C	20°C	40°C
2400	S.L.	76	805	745	685	625
	2000	75	695	640	580	525
	4000	74	590	535	480	420
	6000	73	485	430	375	320
	8000	72	380	330	275	220
	10,000	71	275	225	175	---
	12,000	70	175	125	---	---

LANDING DISTANCE - SHORT FIELD

Conditions:
Flaps 30 deg.

Note:

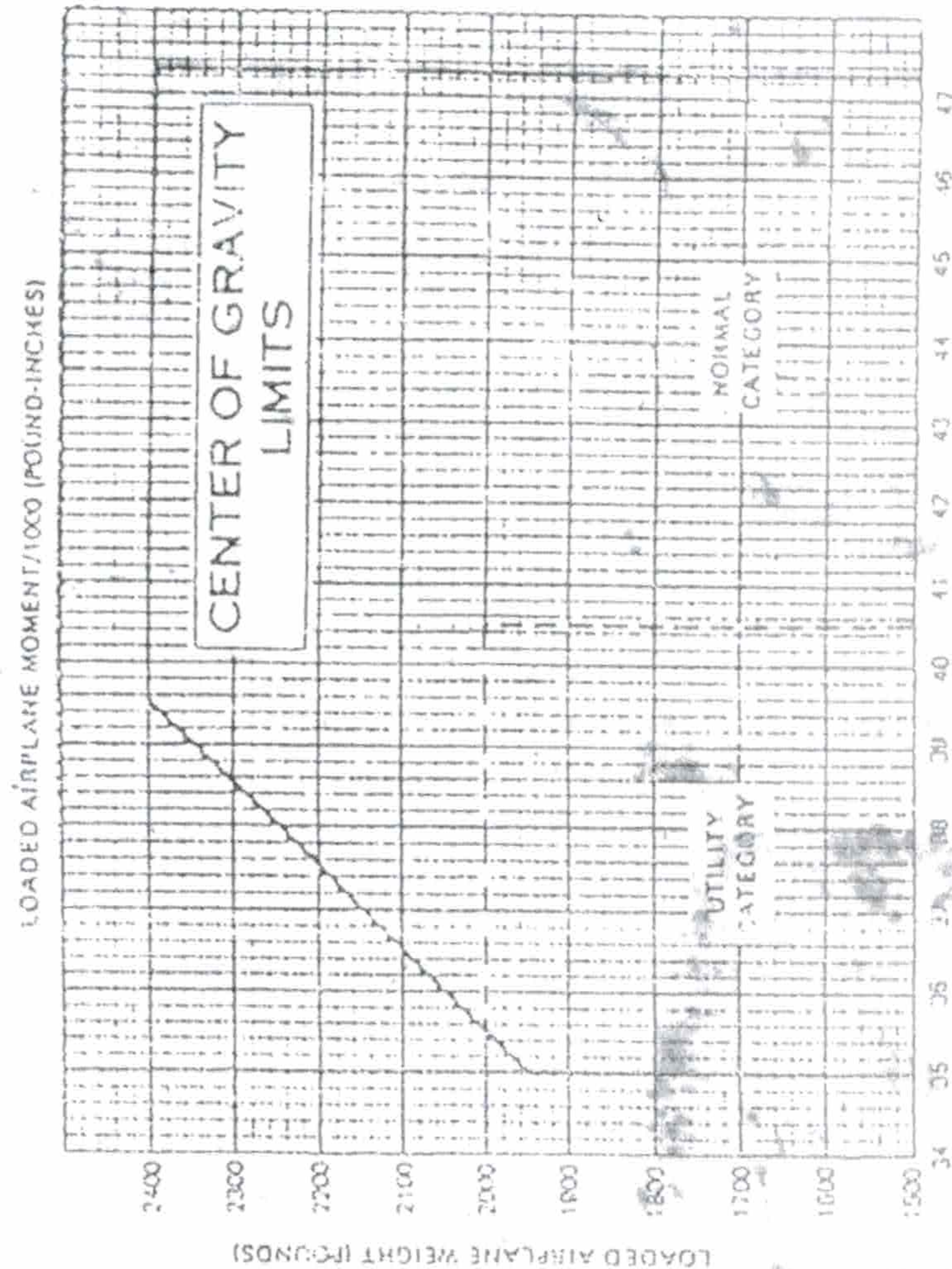
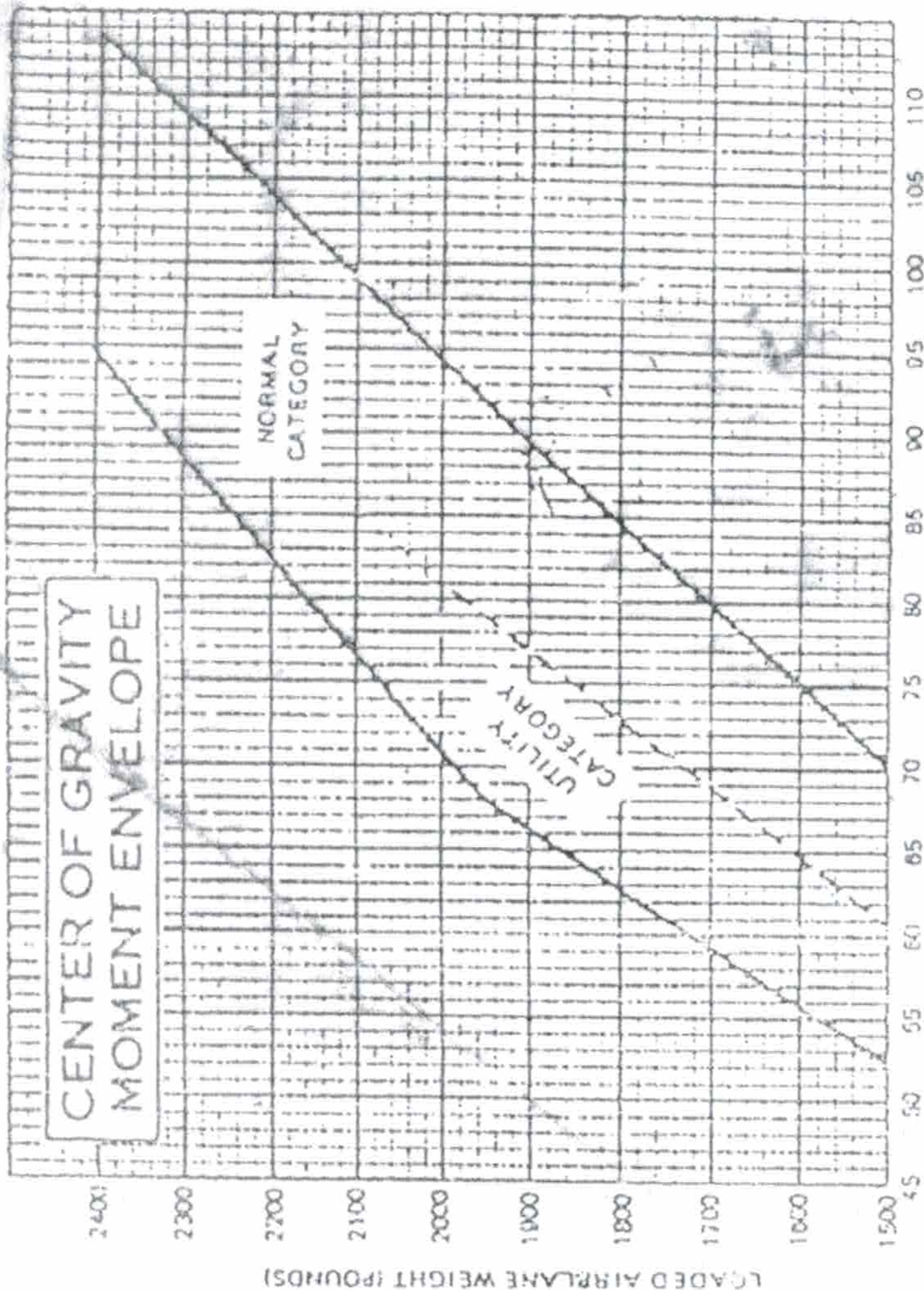
If a landing with flaps up is necessary, increase approach by 7 KIAS and allow for 35% longer distance.

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2400	61	S.L.	510	1235	530	1265	550	1295	570	1325	585	1350
		1000	530	1265	550	1295	570	1325	590	1360	610	1390
		2000	550	1295	570	1330	590	1360	610	1390	630	1425
		3000	570	1330	590	1360	615	1395	635	1430	655	1460
		4000	595	1365	615	1400	635	1430	660	1470	680	1500
		5000	615	1400	640	1435	660	1470	685	1510	705	1540
		6000	640	1435	660	1470	685	1510	710	1550	730	1580
		7000	665	1475	690	1515	710	1550	735	1590	760	1630
		8000	690	1515	715	1555	740	1595	765	1635	790	1675

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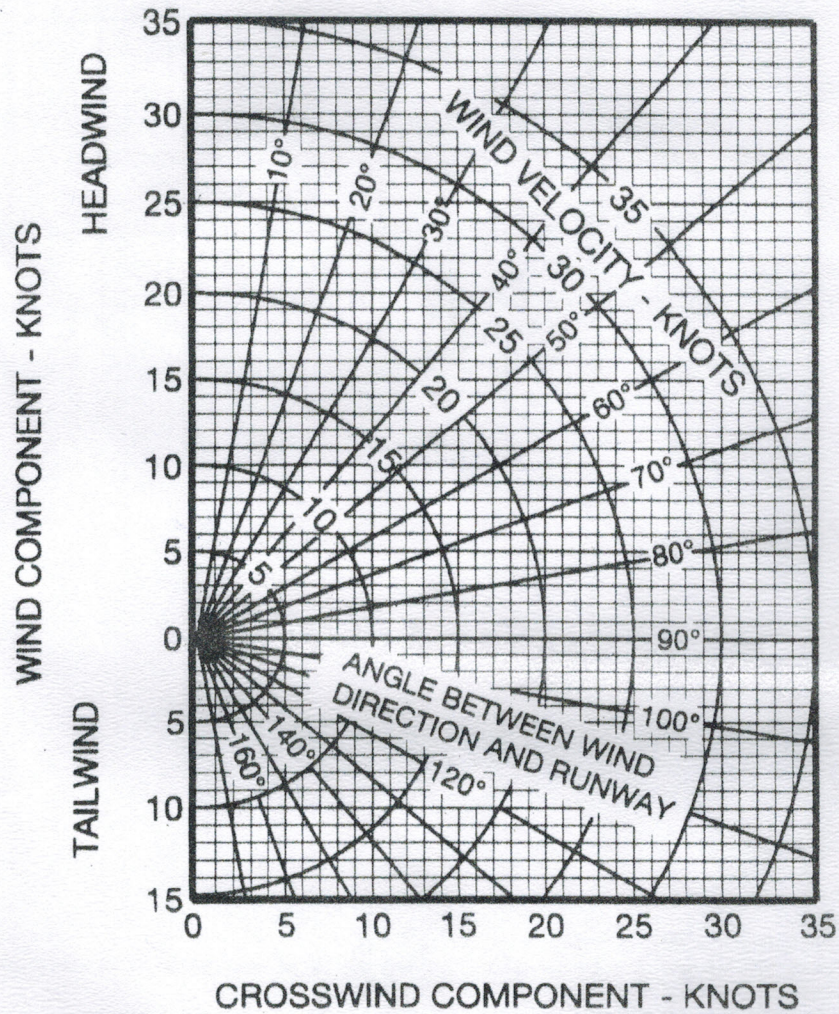
SECTION 6. WEIGHT AND BALANCE



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CROSSWIND COMPONENT

B3084



NOTE

Maximum demonstrated crosswind velocity is 15 knots (not a limitation).

0585T1003

Figure 5-4. Crosswind Components

Aircraft	
Tail No:	N225FR
Make	Cessna
Model:	172N
Serial:	17273947
Time	Tach 3805.9
TCD No	

Name: Clark Hanger Hanger Aviation
Address:

FWD: 35-39.5 AFT: 47.3

Empty Weight:	1532.60	Useful Load:	867.40	Empty Weight CG:	40.09	Moment:	61452.42
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New			
Empty Weight:	1532.60	Useful Load:	867.40
		Empty Weight CG:	40.10
			Moment: 61452.42

As Calculated: ☒ As Weighed: ☐

Signature: _____

Printed Name: Terence Wray

Repair Agency No:

Terence Wray

DA 2702874