

## APPENDIX

## PERFORMANCE DATA

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## INTRODUCTION

The performance data shown on the following pages are compiled from actual tests by Cessna with the aircraft and engine in good condition and using average piloting technique and best power mixture. This data is a valuable aid for flight planning.

A power setting selected from the range chart usually will be more efficient than a random setting, since it will permit you to estimate your fuel consumption more accurately. Using the chart will pay dividends in overall efficiency.

Cruise and range performance is based on flight tests using a McCauley 1B235/DFC7850 propeller. Other conditions of the tests are shown in the chart headings. Allowance for fuel reserve, headwinds, takeoffs and climb, should be made and are in addition to those shown on the charts. Other variables such as fuel metering characteristics, engine and propeller conditions, and turbulence may account for variations of 10 percent or more in maximum range.

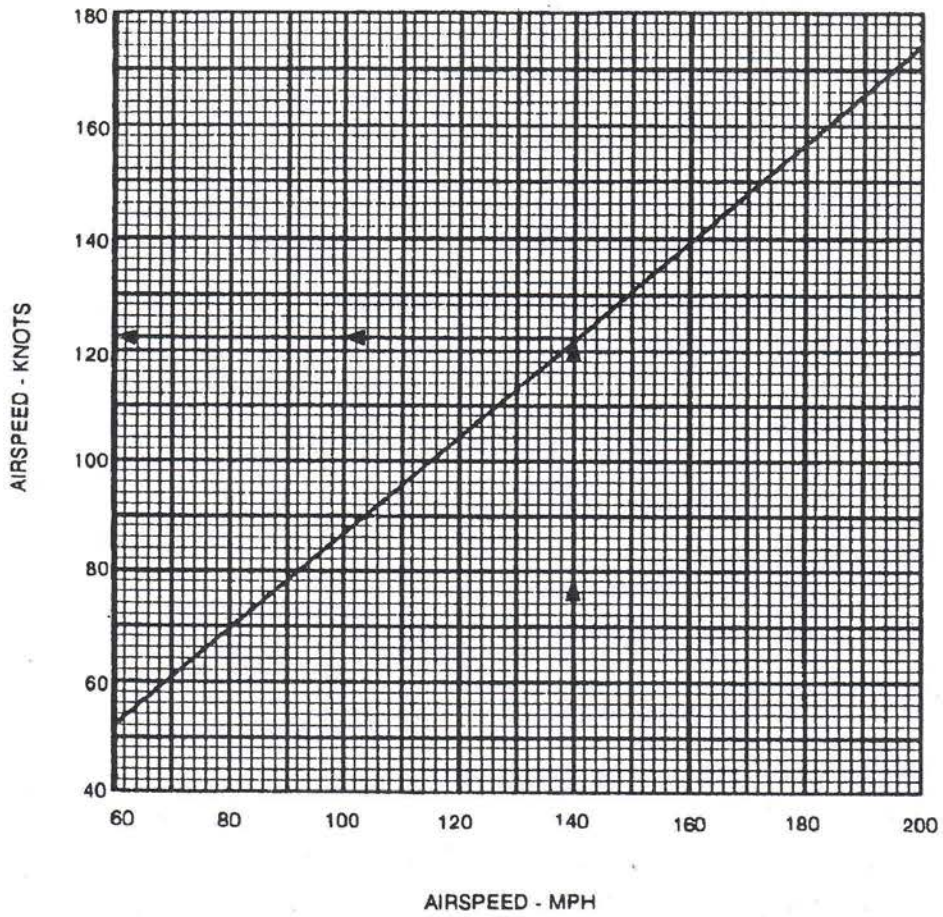


Figure A1-1. Airspeed Conversion Chart

AIRSPEED CORRECTION TABLE												
FLAPS	IAS	50	60	70	80	90	100	110	120	130	140	150
UP	CAS	60	64	69	77	86	96	106	116	126	137	147
DOWN	CAS	59	63	71	80	88	98	•	•	•	•	•

Figure A1-2. Airspeed Correction Table

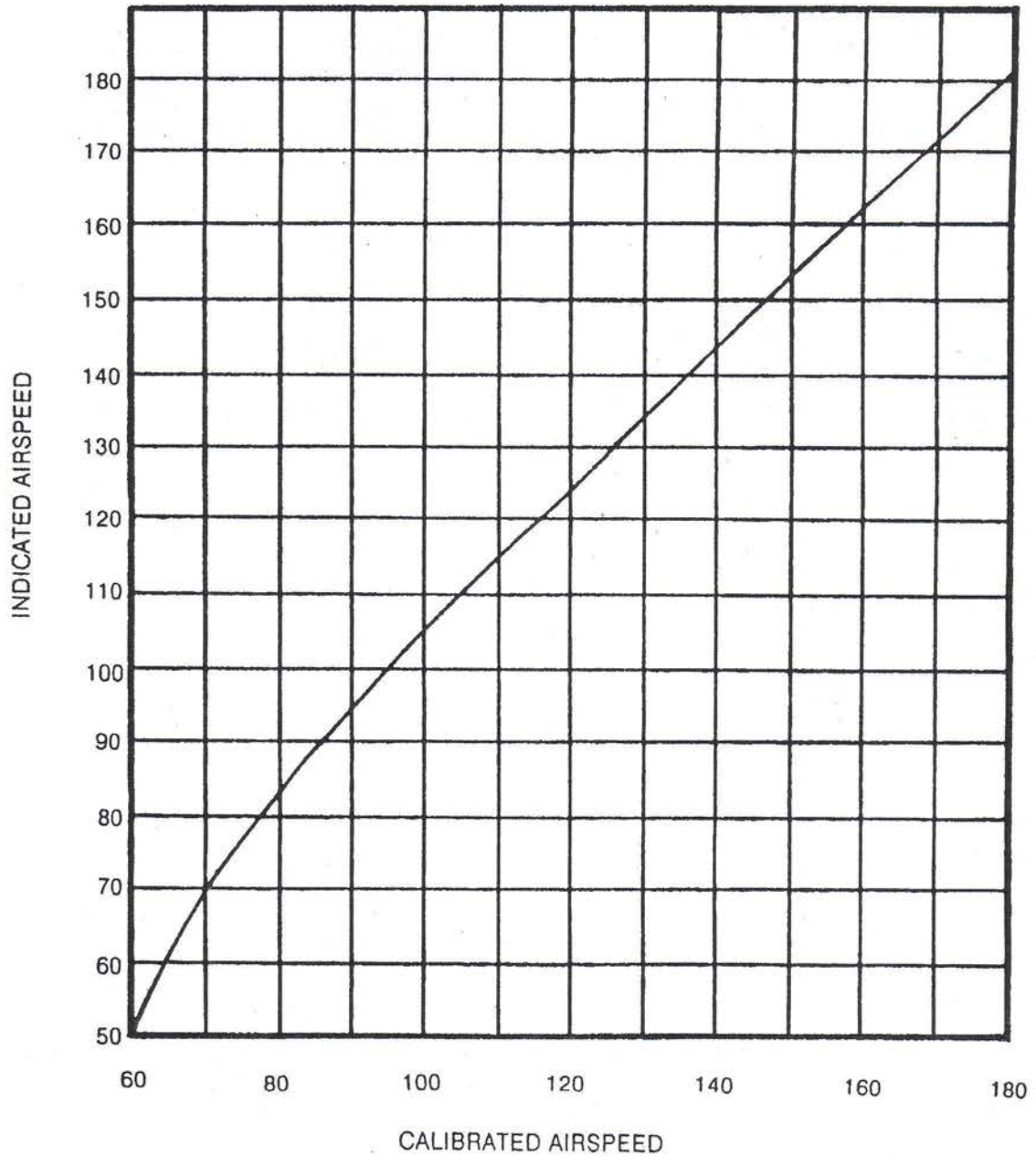


Figure A1-3. T-41C Airspeed Correction Chart

### WEIGHT AND BALANCE

The following information will enable you to operate the airplane within the prescribed weight and center of gravity limitations. To figure the weight and balance for your particular airplane, use the pertinent Sample Program, and the Loading Graph and Center of Gravity Moment Envelope as follows:

Take the licensed Empty Weight and Moment/1000 from the Weight and Balance Data sheet, plus any changes noted on forms FAA-337, carried in your airplane, and write them down in the proper columns. Using the Loading Graph, determine the moment/1000 of each item to be carried. Total the weights and moments /1000 and use the Center of Gravity Moment Envelope to determine whether the point falls within the envelope, and if the loading is acceptable.

SAMPLE LOADING PROBLEM (UTILITY CATEGORY)	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1. Licensed Empty Weight (Sample Airplane) .....	1443	54.1		
2. Oil (10 pts - Full oil may be assumed for all flights) .....	19	-0.4	19	-0.4
3. Fuel (46 gal. at 6 lbs/gallon) .....	276	13.2		
4. Pilot and Instructor .....	400	14.4		
5. TOTAL WEIGHT AND MOMENT .....	2138	81.3		
6. Locate this point (2138 at 81.3) on the center of gravity moment envelope, and since this point falls within the envelope, the loading is acceptable.				

SAMPLE LOADING PROBLEM (NORMAL CATEGORY)	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1. Licensed Empty Weight (Sample Airplane) .....	1468	56.1		
2. Oil (10 pts - Full oil may be assumed for all flights) .....	19	-0.4	18	-0.4
3. Fuel (46 gal. at 6 lbs/gallon) .....	276	13.2		
4. Pilot and Front Passenger .....	400	14.4		
5. Rear Passengers (or baggage in same area) ..	200	14.0		
6. Baggage .....	120	11.4		
7. TOTAL WEIGHT AND MOMENT .....	2483	108.7		
8. Locate this point (2483 at 108.7) on the center of gravity moment envelope, and since this point falls within the envelope, the loading is acceptable.				

Figure A1-4. Weight and Balance Chart

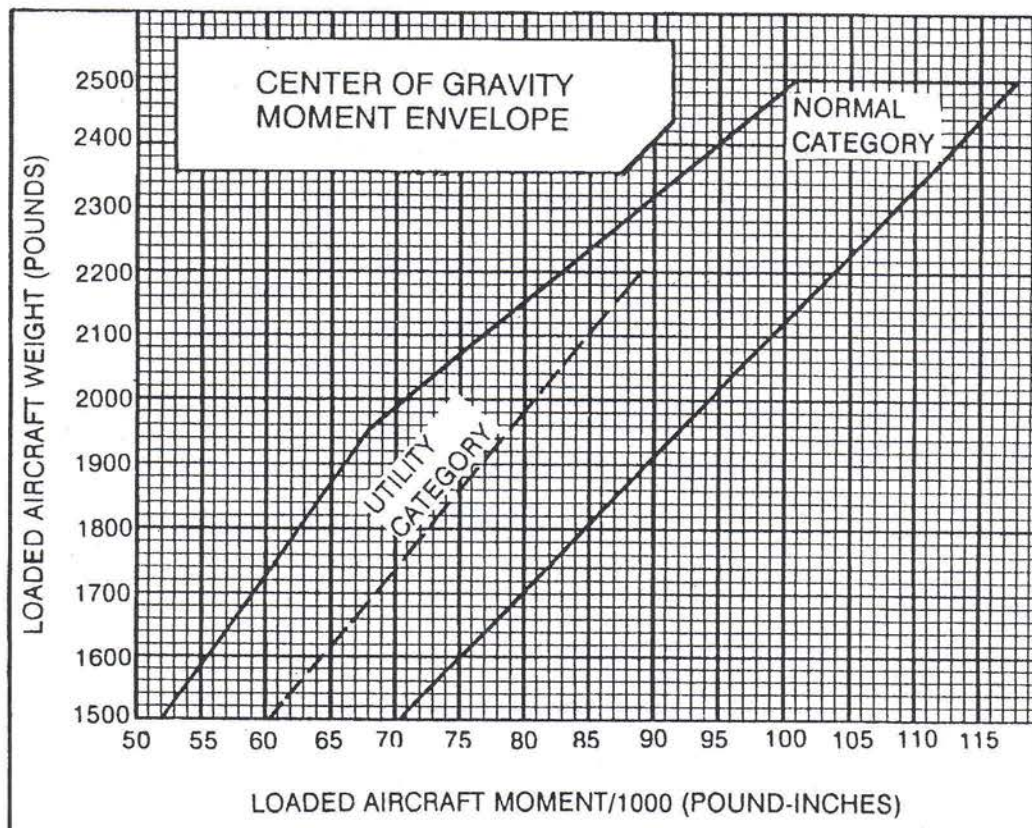


Figure A1-5. Center of Gravity Moment Envelope

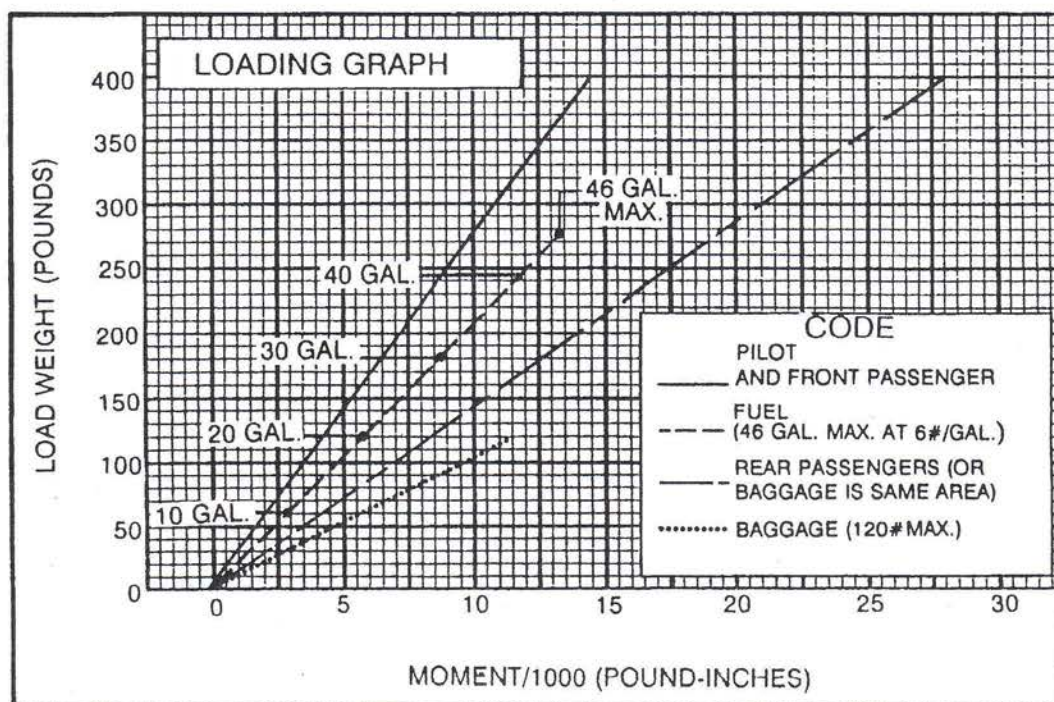
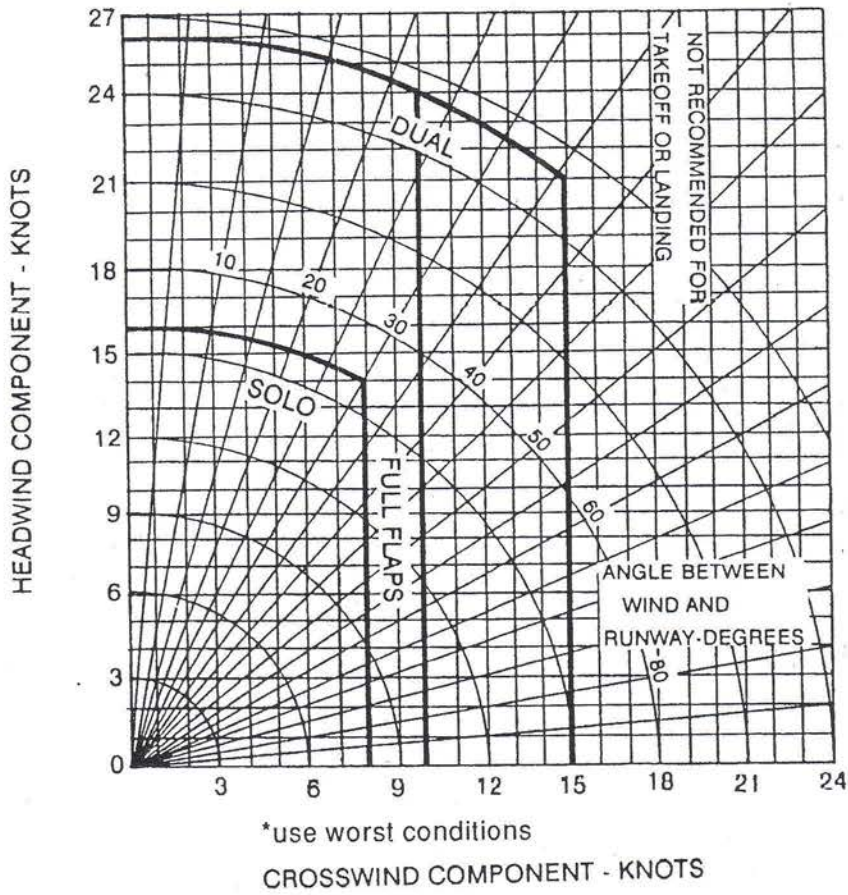


Figure A1-6. Loading Graph



### TAKEOFF AND LANDING CROSSWIND CHART

#### WIND LIMITATIONS

	Maximum Any Direction	Maximum Crosswind Components	
		(0-20° Flaps)	(Full Flaps)
DUAL	26 Knots	15 Knots	10 Knots
SOLO	16 Knots	8 Knots	

Aircraft will not be moved without wing walkers when winds (steady state or gusts) exceed 26 knots. Taxi operations will cease when winds (steady state or gusts) exceed 35 knots.

Figure A1-7. Takeoff and Landing Crosswind Chart