

Beechcraft[®]

Debonair[®] 35-C33

and

Bonanza[®] E33 F33

Pilot's Operating Handbook *and* FAA Approved Airplane Flight Manual

FAA Approved in Utility Category based on CAR 3. This document must be carried in the airplane at all times and be kept within reach of the pilot during all flight operations.

This handbook includes the material required to be furnished to the pilot by CAR 3.

Airplane Serial Number: _____

Airplane Registration Number: _____

FAA Approved: _____

A. C. Jackson
Beech Aircraft Corporation
DOA CE-2

This handbook supersedes all BEECH published owner's manuals, flight manuals, and check lists issued for this airplane with the exception of FAA Approved Airplane Flight Manual Supplements.

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NOTE

Where Beech Aircraft Corporation or Beechcraft is referred to in this publication, it will be taken to read Raytheon Aircraft Company.

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SECTION V

PERFORMANCE

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INTRODUCTION TO PERFORMANCE AND FLIGHT PLANNING

The graphs and tables in this section present performance information for flight planning at various parameters of weight, power, altitude and temperature. Examples have been presented on all performance graphs. In addition, the calculations for flight time, block speed and fuel required for a proposed flight are detailed below. All examples and calculations utilize the following conditions:

CONDITIONS

At Denver:

Outside Air Temperature 15°C (59°F)
 Field Elevation 5330 ft
 Altimeter Setting 29.60 in. Hg
 Wind 270° at 10 kts
 Runway 26L length 10,010 ft

Route of Trip

*DEN-V81-AMA

For VFR Cruise at 11,500 feet

ROUTE SEGMENT	MAGNETIC COURSE	DIST NM	WIND 11500 FEET DIR/KTS	OAT 11500 FEET °C	ALT SETTING IN.HG
DEN-COS	161°	55	010/30	-5	29.60
COS-PUB	153°	40	010/30	-5	29.60
PUB-TBE	134°	74	100/20	0	29.56
TBE-DHT	132°	87	200/20	9	29.56
DHT-AMA	125°	65	200/20	10	29.56

*REFERENCE: Enroute Low Altitude Chart L-6

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At Amarillo:

Outside Air Temperature 25°C (77°F)
Field Elevation 3605 ft
Altimeter Setting 29.56 in. Hg
Wind 180° at 10 kts
Runway 21 Length 13500 ft

To determine pressure altitude at origin and destination airports, add 100 feet to field elevation for each .1 in. Hg below 29.92, and subtract 100 feet from field elevation for each .1 in. Hg above 29.92.

Pressure Altitude at DEN:

$$29.92 - 29.60 = .32 \text{ in. Hg}$$

The pressure altitude at DEN is 320 feet above the field elevation.

$$5330 + 320 = 5650 \text{ ft}$$

Pressure Altitude at AMA:

$$29.92 - 29.56 = .36 \text{ in. Hg}$$

The pressure altitude at AMA is 360 feet above the field elevation.

$$3605 + 360 = 3965 \text{ ft}$$

NOTE

For flight planning, the difference between cruise altitude and cruise pressure altitude has been ignored.

Calculations for flight time, block speed and fuel requirement:

Cruise Climb:

Enter the graph for TIME, FUEL AND DISTANCE TO CLIMB at 15°C to 5650 ft and to 3050 lbs. Enter at -5°C to 11,500 ft and to 3050 lbs. Read:

$$\text{Time to Climb} = (22 - 9) = 13 \text{ min}$$

$$\text{Fuel Used to Climb} = (6.1 - 2.6) = 3.5 \text{ gal}$$

$$\text{Distance Traveled} = (42 - 17) = 25 \text{ NM}$$

The cruise power setting is assumed to be at 2450 rpm. Since cruise at 11,500 feet requires full throttle, the manifold pressure and fuel flow should be read from either the cruise power setting table for 75 percent or 65 percent maximum continuous power.

The temperatures for cruise are presented for a standard day (ISA); 20°C (36°F) above a standard day (ISA + 20°C); and 20°C (36°F) below a standard day (ISA - 20°C). These should be used for flight planning. The IOAT values are true temperature values which have been adjusted for the compressibility effects. IOAT should be used for setting cruise power while enroute.

Enter the graph for ISA conversion at 11,500 feet and the temperature for the route segment:

DEN-PUB	OAT	=	-5°C
	ISA Condition	=	ISA + 3°C
PUB-TBE	OAT	=	0°C
	ISA Condition	=	ISA + 8°C
TBE-DHT	OAT	=	9°C
	ISA Condition	=	ISA + 17°C
DHT-AMA	OAT	=	10°C
	ISA Condition	=	ISA + 18°C

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Enter the cruise power settings table for 75% maximum continuous power (or full throttle) at 10,000 ft, 12,000 ft, ISA and ISA + 20°C.

	TEMPERATURE					
	ISA			ISA + 20°C		
ALTI- TUDE FEET	MAN. PRESS. IN. HG	FUEL FLOW PSI/ GPH	TAS KNOTS	MAN. PRESS. IN. HG	FUEL FLOW PSI/ GPH	TAS KNOTS
10000	20.1	6.6/12.0	154	20.1	6.1/11.2	152
12000	18.6	6.0/11.0	151	18.6	5.6/10.5	148

Interpolate for 11,500 feet and the temperature for the appropriate route segment. Results of the interpolations are:

ROUTE SEGMENT	MAN. PRESS. IN. HG	FUEL FLOW PSI/GPH	TAS KNOTS
DEN-PUB	19.0	6.1/11.2	152
PUB-TBE	19.0	6.0/11.0	151
TBE-DHT	19.0	5.8/10.8	149
DHT-AMA	19.0	5.7/10.7	149

NOTE

The above are exact values for the assumed conditions.

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Time and fuel used were calculated as follows:

$$\text{Time} = \frac{\text{Distance}}{\text{Ground Speed}}$$

$$\text{Fuel Used} = (\text{Time}) (\text{Fuel Flow})$$

Results are:

ROUTE SEGMENT	DISTANCE NM	EST GROUND SPEED KNOTS	TIME AT CRUISE ALTITUDE HRS: MIN	FUEL USED FOR CRUISE GAL
DEN-COS	*30	181	0:10	1.9
COS-PUB	40	179	0:13	2.4
PUB-TBE	74	136	0:33	6.1
TBE-DHT	87	136	0:38	6.8
DHT-AMA	65	139	0:28	5.0

*Distance required to climb has been subtracted from segment distance.

TIME - FUEL - DISTANCE

ITEM	TIME HRS: MINS	FUEL GAL	DISTANCE NM
Start, Runup, Taxi and Take- off acceleration	0:00	1.7	0
Climb	0:13	3.5	25
Cruise	2:02	22.2	296
Total	2:15	27.4	321

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Total Flight Time: 2 hours, 15 minutes

Block Speed: $321 \text{ NM} \div 2 \text{ hours, 15 minutes} = 143 \text{ knots}$

Reserve Fuel (45 minutes at 45% maximum continuous power)

Enter the cruise power settings table for 45% MCP (or full throttle). The fuel flow for 45% MCP is 8.3 gallons per hour.

Reserve fuel = (45 min) (8.3 GPH) = 6.2 gallons

Total Fuel = $27.4 + 6.2 = 33.6$ gallons

The estimated landing weight is determined by subtracting the fuel required for the trip from the ramp weight:

Assumed ramp weight = 3060 lbs

Estimated fuel from DEN to AMA = (27.4 gal) (6 lbs/gal)
= 164 lbs

Estimated landing weight = $3060 - 164 = 2896$ lbs

Examples have been provided on the performance graphs. The above conditions have been used throughout. Rate of climb was determined for the initial cruise altitude conditions.

**COMMENTS PERTINENT TO THE USE OF
PERFORMANCE GRAPHS**

1. The example, in addition to presenting an answer for a particular set of conditions, also presents the order in which the graphs should normally be used, i.e., if the first item in the example is OAT, then enter the graph at the known OAT.
2. The reference lines indicate where to begin following guide lines. Always project to the reference line first, then follow the guide lines to the next known item.
3. Indicated airspeeds (IAS) were obtained by using the AIRSPEED CALIBRATION NORMAL SYSTEM Graph.
4. The associated conditions define the specific conditions from which performance parameters have been determined. They are not intended to be used as instructions, however, performance values determined from charts can only be achieved if specified conditions exist.
5. The full amount of usable fuel is available for all approved flight conditions.

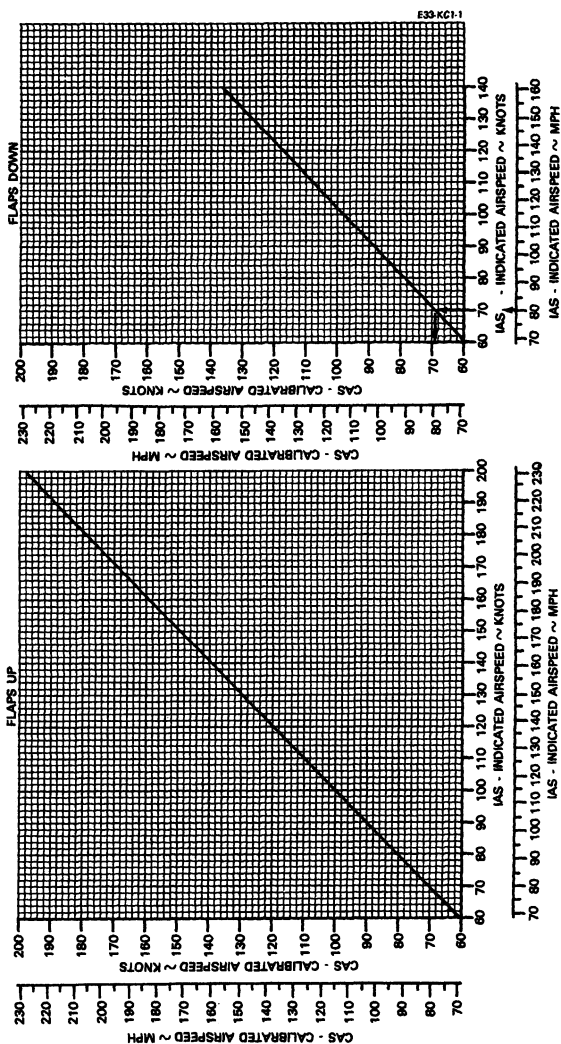
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AIRSPEED CALIBRATION - NORMAL SYSTEM

NOTE: INDICATED AIRSPEED ASSUMES ZERO INSTRUMENT ERROR

EXAMPLE:
IAS 70 KNOTS (81 MPH)
FLAPS DOWN
CAS 69 KNOTS (79 MPH)

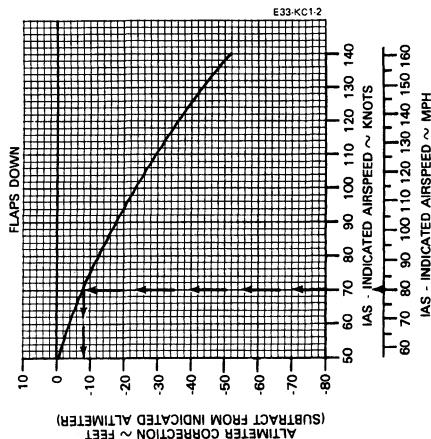
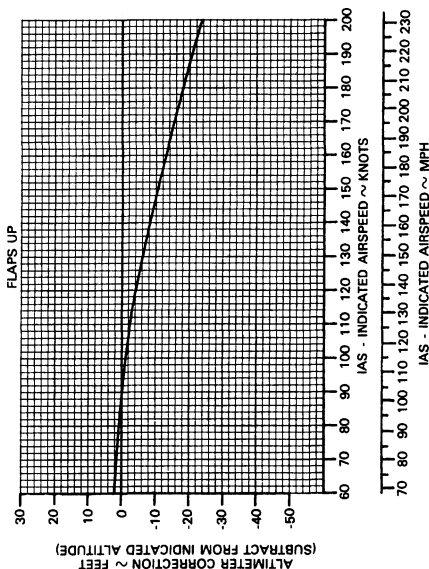


ALTIMETER CORRECTION - NORMAL SYSTEM

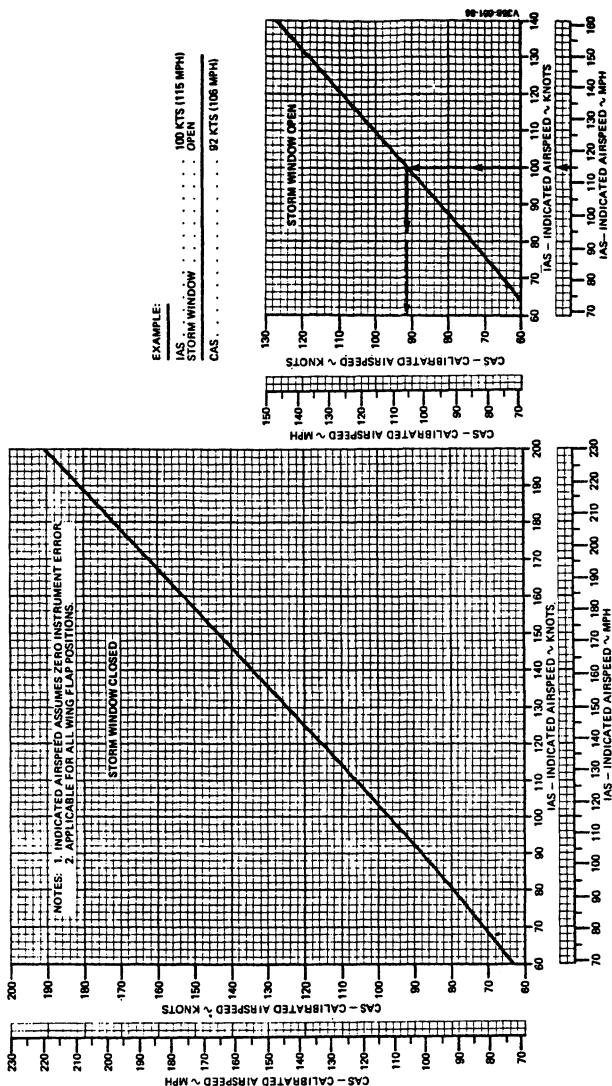
NOTE: INDICATED AIRSPEED AND INDICATED ALTITUDE ASSUME
 ZERO INSTRUMENT ERROR

EXAMPLE:

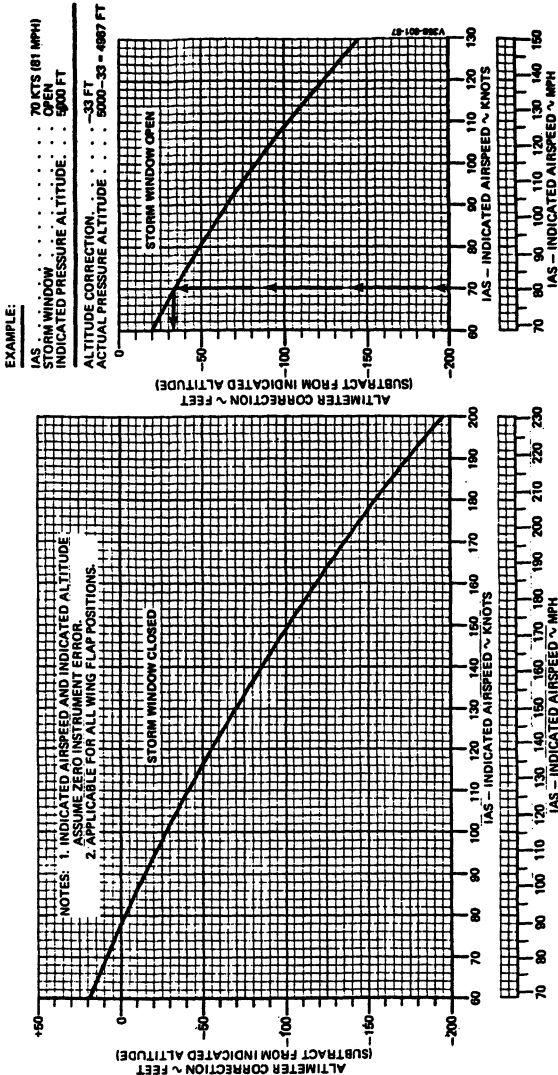
IAS	70 KNOTS (81 MPH)
FLAPS	DOWN
INDICATED PRESSURE ALTITUDE	4500 FT
ALTITUDE	-8 FT
ALTIMETER CORRECTION	
ACTUAL PRESSURE ALTITUDE:	
= 4500 - 8 = 4492 FT	

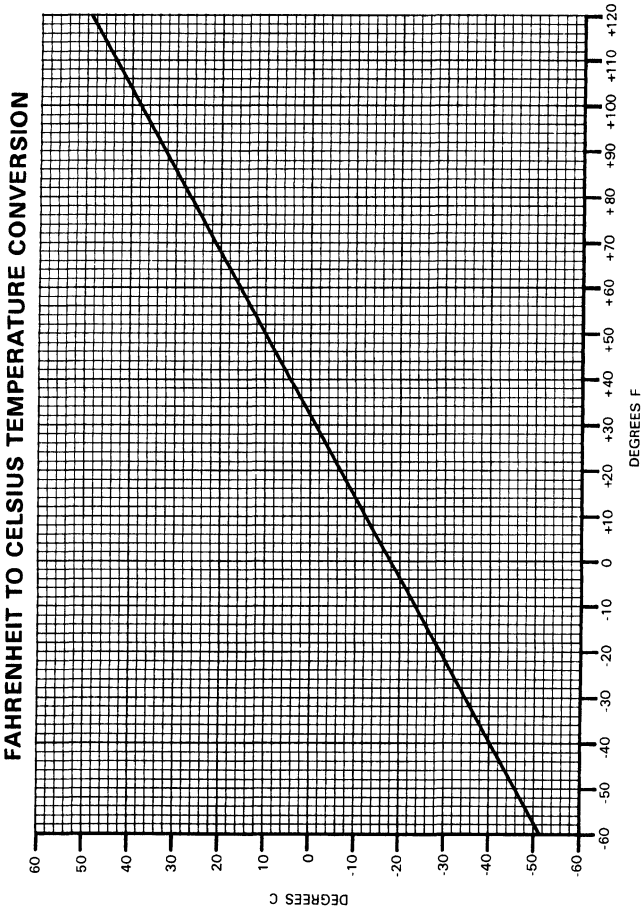


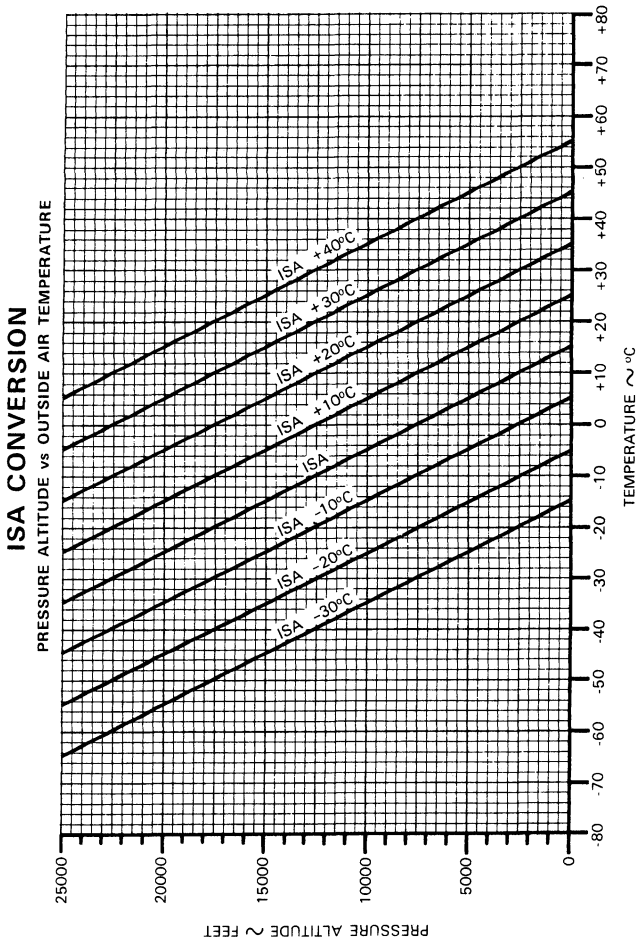
AIRSPEED CALIBRATION - EMERGENCY SYSTEM



ALTIMETER CORRECTION - EMERGENCY SYSTEM







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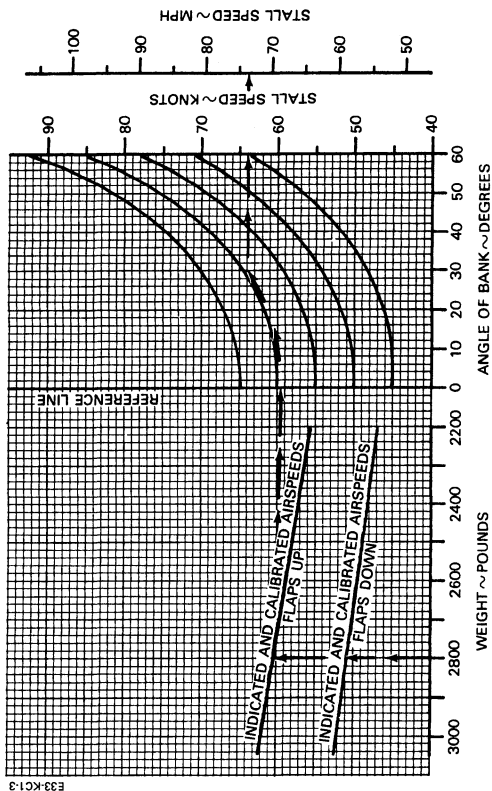
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STALL SPEEDS - POWER IDLE

NOTES: 1. THE MAXIMUM ALTITUDE LOSS EXPERIENCED WHILE CONDUCTING STALLS IN ACCORDANCE WITH CAM 3,120 WAS 200 FT.

2. A NORMAL STALL RECOVERY TECHNIQUE MAY BE USED

EXAMPLE:
WEIGHT 2800 LBS
FLAPS UP
ANGLE OF BANK 30°
STALL SPEED CAS: 64 KNOTS (74 MPH)



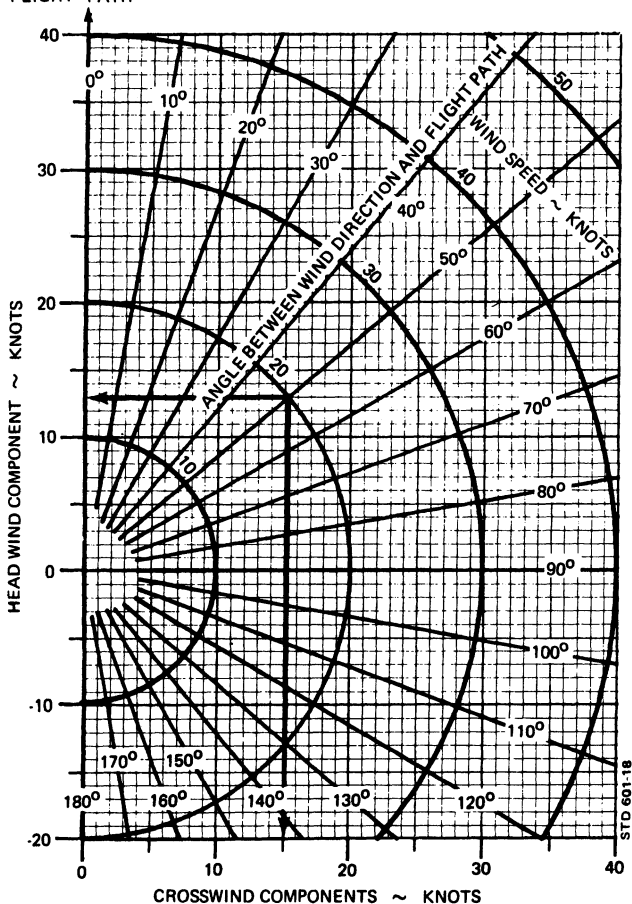
WIND COMPONENTS

Demonstrated Crosswind Component is 17 kts

EXAMPLE:

WIND SPEED	20 KTS
ANGLE BETWEEN WIND DIRECTION AND FLIGHT PATH	50°
HEADWIND COMPONENT	13 KTS
CROSSWIND COMPONENT	15 KTS

FLIGHT PATH



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TAKE-OFF DISTANCE

ASSOCIATED CONDITIONS:

POWER FULL THROTTLE
MIXTURE 2600 RPM APPROPRIATE
FLAPS RETRACT AFTER POSITIVE
LANDING GEAR CLIMB ESTABLISHED
COWL FLAPS OPEN

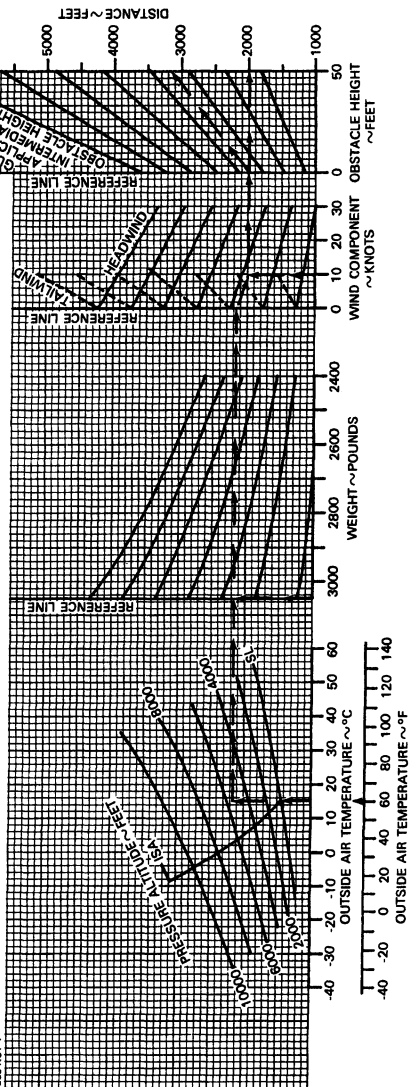
WEIGHT ~ POUNDS	TAKE-OFF SPEED	
	LIFT-OFF	50 FT
3050	68	74
2900	67	73
2700	65	71
2400	62	68

EXAMPLE:

OAT 15°C (59°F)
PRESSURE ALTITUDE 5650 FT
TAKE-OFF WEIGHT 3050 LBS
HEAD WIND COMP. 9.5 KNOTS

GROUND ROLL 2000 FT
TOTAL DISTANCE OVER
A 50 FT OBSTACLE 3150 FT
TAKE-OFF SPEED AT
50 FT 68 KNOTS (78 MPH)
74 KNOTS (85 MPH)

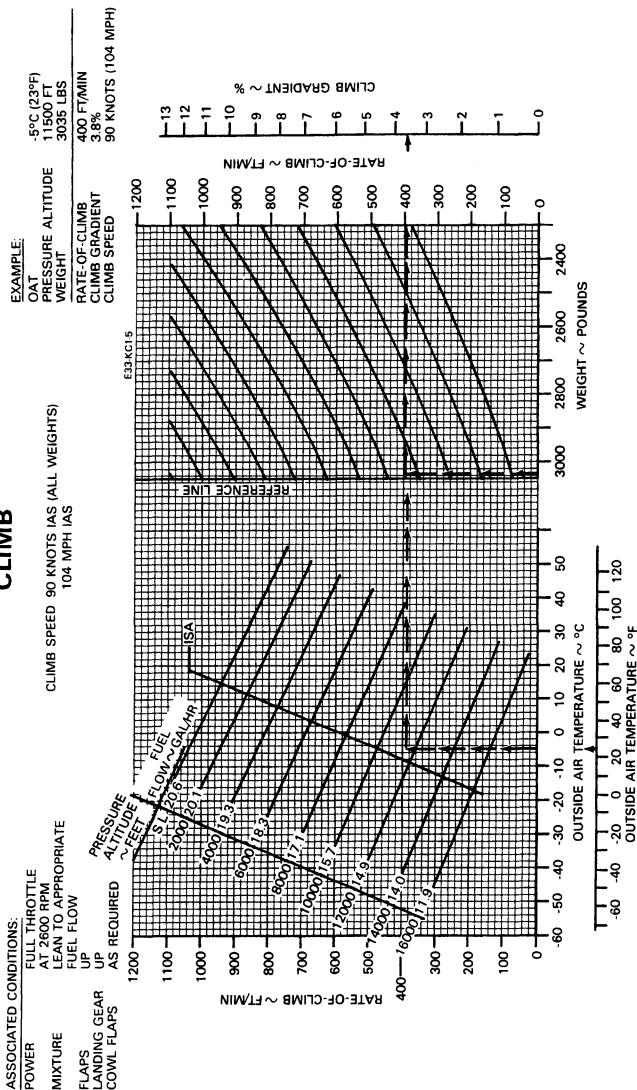
E33-KC1-4



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CLIMB



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TIME, FUEL AND DISTANCE TO CLIMB

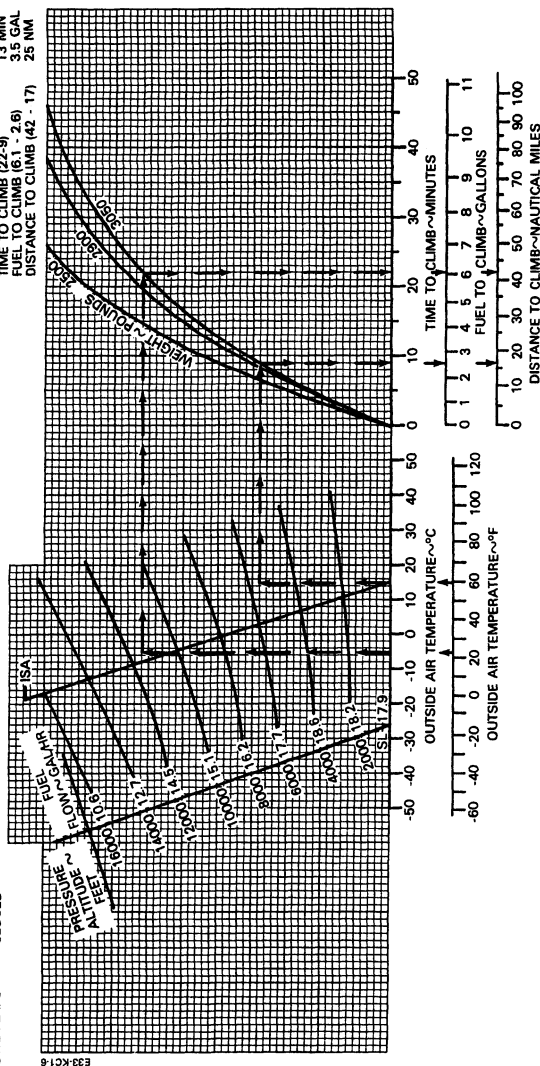
ASSOCIATED CONDITIONS:

POWER 25 IN. HG. OR FULL THROTTLE
2800 RPM
FUEL DENSITY 6.0 LBS/GAL
MIXTURE LEAN TO APPROPRIATE FUEL FLOW
COWL FLAPS CLOSED

CLIMB SPEED - 104 KNOTS
120 MPH

EXAMPLE:

OAT AT TAKE-OFF 15°C (59°F)
OAT AT CRUISE -5°C (23°F)
AIRPORT PRESSURE ALTITUDE 5650 FT
CRUISE PRESSURE ALTITUDE 11500 FT
INITIAL CLIMB WEIGHT 3050 LBS
TIME TO CLIMB (22.9)
FUEL TO CLIMB (6.1 - 2.6)
DISTANCE TO CLIMB (42 - 17)



CRUISE POWER SETTINGS

75% MAXIMUM CONTINUOUS POWER (OR FULL THROTTLE)
 @ AVERAGE CRUISE WEIGHT 2950 LBS.

PRESS ALT.	ISA -36°F (-20°C)						STANDARD DAY (ISA)						ISA +36°F (+20°C)												
	OAT		ENGINE SPEED	MAN. PRESS	FUEL FLOW		TAS	OAT	ENGINE SPEED	MAN. PRESS	FUEL FLOW		TAS	OAT	ENGINE SPEED	MAN. PRESS	FUEL FLOW								
	°F	°C			PSI	GPH					KTS	MPH					°F	°C	PSI	GPH	KTS	MPH	°F	°C	PSI
	FEET	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH
	SL	26	-3	2450	23.4	7.8	13.4	144	166	63	17	2450	24.0	7.8	13.4	148	170	99	37	2450	24.5	7.8	13.4	150	173
	2000	19	-7	2450	22.9	7.8	13.4	147	169	56	13	2450	23.4	7.8	13.4	150	173	92	33	2450	24.0	7.8	13.4	153	176
	4000	12	-11	2450	22.4	7.8	13.4	150	172	49	9	2450	22.8	7.8	13.4	153	176	85	28	2450	23.5	7.8	13.4	156	180
	6000	5	-15	2450	21.9	7.8	13.4	152	175	42	5	2450	22.2	7.8	13.4	156	179	78	26	2450	23.1	7.6	13.2	159	182
	8000	-2	-19	2450	21.3	7.8	13.4	156	178	36	1	2450	21.7	7.4	12.9	156	180	70	21	2450	21.7	6.8	12.1	155	178
	10000	-9	-23	2450	20.1	7.3	12.7	155	178	27	-3	2450	20.1	6.8	12.0	154	177	63	17	2450	20.1	6.1	11.2	152	175
	12000	-16	-27	2450	18.8	6.5	11.5	152	175	20	-7	2450	18.8	6.0	11.1	151	173	56	13	2450	18.0	5.8	10.5	148	171
	14000	-23	-31	2450	17.3	5.8	10.9	149	171	11	-11	2450	17.3	5.5	10.3	146	168	49	9	2450	17.3	5.2	9.7	143	164
	16000	-31	-35	2450	16.0	5.4	10.1	144	166	5	-15	2450	16.0	5.0	9.6	141	162	41	5	2450	16.0	4.8	9.1	139	156

NOTES:

1. FULL THROTTLE MANIFOLD PRESSURE SETTINGS ARE APPROXIMATE.
2. SHADED AREA REPRESENTS OPERATION WITH FULL THROTTLE.

CRUISE POWER SETTINGS

65% MAXIMUM CONTINUOUS POWER (OR FULL THROTTLE)
@ AVERAGE CRUISE WEIGHT 2950 LBS.

PRESS ALT.	ISA -36°F (-20°C)										STANDARD DAY (ISA)										ISA +36°F (+20°C)									
	OAT		ENGINE SPEED		MAN. PRESS		FUEL FLOW		TAS		OAT		ENGINE SPEED		MAN. PRESS		FUEL FLOW		TAS		OAT		ENGINE SPEED		MAN. PRESS		FUEL FLOW		TAS	
	°F	°C	RPM	°C	°F	°C	PSI	GPH	KTS	MPH	°F	°C	RPM	°C	°F	°C	PSI	GPH	KTS	MPH	°F	°C	RPM	°C	°F	°C	PSI	GPH	KTS	MPH
FEET	26	-3	2450	17	63	17	2450	21.7	6.3	11.5	138	159	98	37	2450	22.3	6.3	11.5	141	163										
SL	19	-7	2450	13	55	13	2450	21.3	6.3	11.5	141	162	91	33	2450	21.8	6.3	11.5	144	166										
2000	12	-11	2450	9	48	9	2450	20.8	6.3	11.5	143	165	84	29	2450	21.4	6.3	11.5	146	168										
4000	5	-15	2450	5	41	5	2450	20.4	6.3	11.5	146	168	77	25	2450	20.9	6.3	11.5	149	171										
6000	-2	-19	2450	1	34	1	2450	19.9	6.3	11.5	148	171	70	21	2450	20.4	6.3	11.5	151	174										
8000	-9	-23	2450	-3	27	-3	2450	19.5	6.3	11.5	151	174	63	17	2450	20.0	6.2	11.5	152	175										
10000	-16	-27	2450	-7	20	-7	2450	18.6	6.0	11.1	151	173	56	13	2450	18.6	5.6	10.5	148	171										
12000	-23	-31	2450	-11	13	-11	2450	17.3	5.5	10.3	146	168	48	9	2450	17.3	5.1	9.7	143	164										
14000	-31	-35	2450	-15	6	-15	2450	16.0	5.1	9.6	141	162	41	5	2450	16.0	4.8	9.1	135	156										

NOTES:

1. FULL THROTTLE MANIFOLD PRESSURE SETTINGS ARE APPROXIMATE.
2. SHADED AREA REPRESENTS OPERATION WITH FULL THROTTLE.

CRUISE POWER SETTINGS

55% MAXIMUM CONTINUOUS POWER (OR FULL THROTTLE)
 @ AVERAGE CRUISE WEIGHT 2950 LBS

PRESS. ALT.	ISA -36°F (-20°C)										STANDARD DAY (ISA)										ISA +36°F (+20°C)									
	OAT		ENGINE SPEED	MAN. PRESS	FUEL FLOW		TAS		OAT		ENGINE SPEED	MAN. PRESS	FUEL FLOW		TAS		OAT		ENGINE SPEED	MAN. PRESS	FUEL FLOW		TAS							
	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH						
	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH						
SL	26	-4	2300	20.2	5.2	9.8	126	145	62	17	2300	20.7	5.2	9.8	128	147	98	37	2300	21.1	5.2	9.8	130	150						
2000	19	-7	2300	19.7	5.2	9.8	128	147	55	13	2300	20.3	5.2	9.8	130	150	91	33	2300	20.7	5.2	9.8	133	153						
4000	12	-11	2300	19.2	5.2	9.8	130	149	48	9	2300	19.8	5.2	9.8	132	152	84	29	2300	20.2	5.2	9.8	135	155						
6000	4	-15	2300	18.7	5.2	9.8	132	152	41	5	2300	19.3	5.2	9.8	134	154	77	25	2300	19.8	5.2	9.8	136	157						
8000	-3	-19	2300	18.2	5.2	9.8	134	154	34	1	2300	18.8	5.2	9.8	136	157	70	21	2300	19.3	5.2	9.8	138	159						
10000	-10	-23	2300	17.8	5.2	9.8	136	156	27	-3	2300	18.3	5.2	9.8	138	159	63	17	2300	18.8	5.2	9.8	140	161						
12000	-17	-27	2300	17.3	5.2	9.8	138	158	19	-7	2300	17.9	5.2	9.8	140	161	55	13	2300	18.4	5.2	9.8	142	163						
14000	-24	-31	2300	16.8	5.2	9.8	140	161	12	-11	2300	17.3	5.0	9.5	138	159	48	9	2300	17.3	4.8	9.0	134	154						
16000	31	-35	2300	16.2	4.9	9.2	136	155	5	-15	2300	16.2	4.7	8.9	132	152	41	5	2300	16.2	4.6	8.5	123	141						

NOTES:

1. FULL THROTTLE MANIFOLD PRESSURE SETTINGS ARE APPROXIMATE.
2. SHADED AREA REPRESENTS OPERATION WITH FULL THROTTLE.

CRUISE POWER SETTINGS

45% MAXIMUM CONTINUOUS POWER (OR FULL THROTTLE)
@ AVERAGE CRUISE WEIGHT 2950 LBS

PRESS. ALT.	ISA -36°F (-20°C)										STANDARD DAY (ISA)										ISA +36°F (+20°C)									
	OAT		ENGINE SPEED		MAN. PRESS		FUEL FLOW		TAS		OAT		ENGINE SPEED		MAN. PRESS		FUEL FLOW		TAS		OAT		ENGINE SPEED		MAN. PRESS		FUEL FLOW		TAS	
	°F	°C	RPM	RPM	IN HG	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	RPM	IN HG	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	RPM	IN HG	IN HG	PSI	GPH	KTS	MPH
SL	25	-4	2100	2100	20.1	20.1	4.5	8.3	113	130	61	16	2100	2100	20.4	20.4	4.5	8.3	115	132	97	36	2100	2100	20.9	20.9	4.5	8.3	117	134
2000	18	-7	2100	2100	19.6	19.6	4.5	8.3	115	132	54	12	2100	2100	19.9	19.9	4.5	8.3	117	134	90	32	2100	2100	20.5	20.5	4.5	8.3	118	136
4000	11	-12	2100	2100	19.1	19.1	4.5	8.3	116	134	47	8	2100	2100	19.5	19.5	4.5	8.3	118	136	83	28	2100	2100	20.0	20.0	4.5	8.3	119	137
6000	4	-16	2100	2100	18.6	18.6	4.5	8.3	118	135	40	4	2100	2100	19.1	19.1	4.5	8.3	119	137	76	24	2100	2100	19.5	19.5	4.5	8.3	120	138
8000	-3	-20	2100	2100	18.2	18.2	4.5	8.3	119	137	33	-1	2100	2100	18.7	18.7	4.5	8.3	120	138	69	21	2100	2100	19.1	19.1	4.5	8.3	121	139
10000	-10	-24	2100	2100	17.2	17.2	4.5	8.3	120	138	26	-3	2100	2100	18.2	18.2	4.5	8.3	121	139	62	17	2100	2100	18.6	18.6	4.5	8.3	121	139
12000	-17	-27	2100	2100	17.3	17.3	4.5	8.3	120	139	19	-7	2100	2100	17.8	17.8	4.5	8.3	121	139	55	13	2100	2100	18.2	18.2	4.5	8.3	120	138
14000	-25	-32	2100	2100	16.8	16.8	4.5	8.3	121	139	11	-12	2100	2100	17.3	17.3	4.4	8.2	118	136	45	7	2100	2100	17.3	17.3	4.3	7.9	-	-
16000	-32	-36	2100	2100	16.0	16.0	4.3	7.9	110	127	2	-17	2100	2100	16.0	16.0	4.2	7.7	-	-	38	3	2100	2100	16.0	16.0	4.1	7.5	-	-

NOTES:

1. FULL THROTTLE MANIFOLD PRESSURE SETTINGS ARE APPROXIMATE.
2. SHADED AREA REPRESENTS OPERATION WITH FULL THROTTLE.

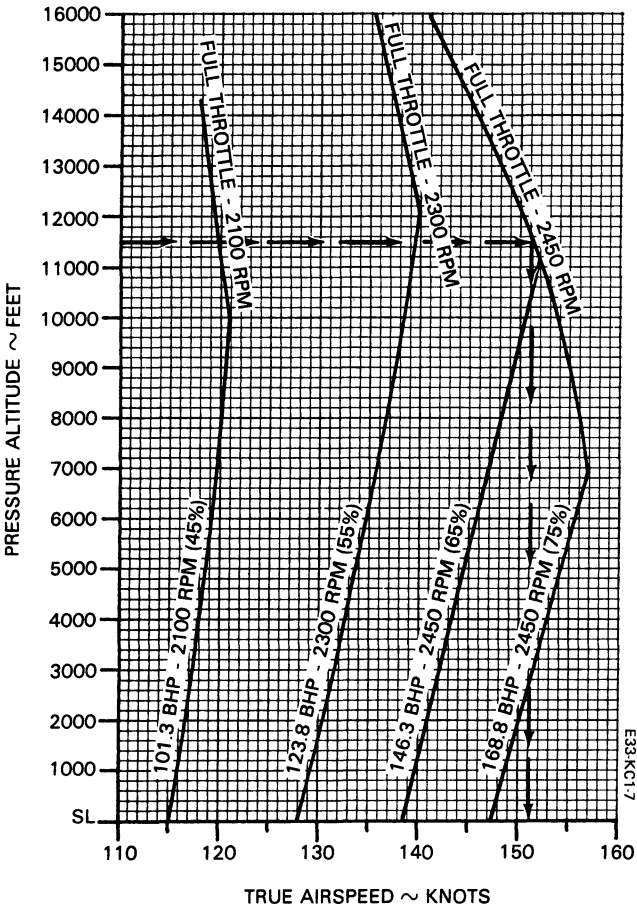
CRUISE SPEEDS

ASSOCIATED CONDITIONS:

AVERAGE CRUISE WEIGHT 2950 LBS
TEMPERATURE STANDARD DAY (ISA)

EXAMPLE:

PRESSURE ALTITUDE 11500 FT
POWER SETTING FULL THROTTLE
2450 RPM
TRUE AIRSPEED 151 KNOTS

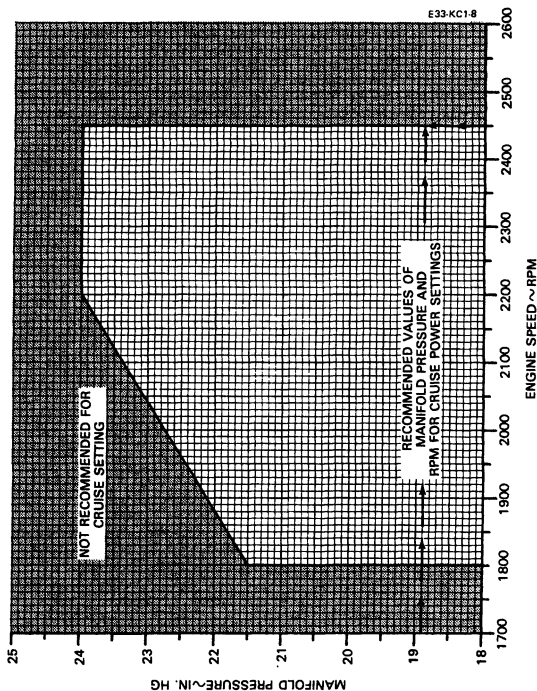


Section V Performance

BEECHCRAFT
Debonair C33
Bonanza E33 and F33

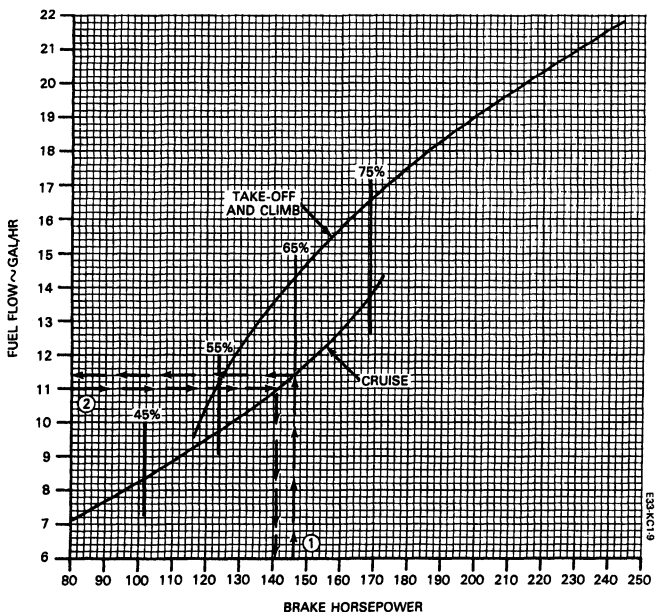
MANIFOLD PRESSURE vs RPM

EXAMPLE:
ENGINE SPEED 2450 RPM
MANIFOLD PRESSURE 18.9 IN. HG.
WITHIN RECOMMENDED LIMITS



FUEL FLOW vs BRAKE HORSEPOWER

<u>EXAMPLE:</u>	
① BRAKE HORSEPOWER	148.3
CONDITION	(65% MCP) LEVEL FLIGHT CRUISE LEAN
FUEL FLOW	11.4 GAL/HR
② FUEL FLOW	11.0 GAL/HR
CONDITION	LEVEL FLIGHT CRUISE LEAN
BRAKE HORSEPOWER	141



Section V Performance

BEECHCRAFT
Debonair C33
Bonanza E33 and F33

RANGE PROFILE - 74 GALLONS

STANDARD DAY (ISA)

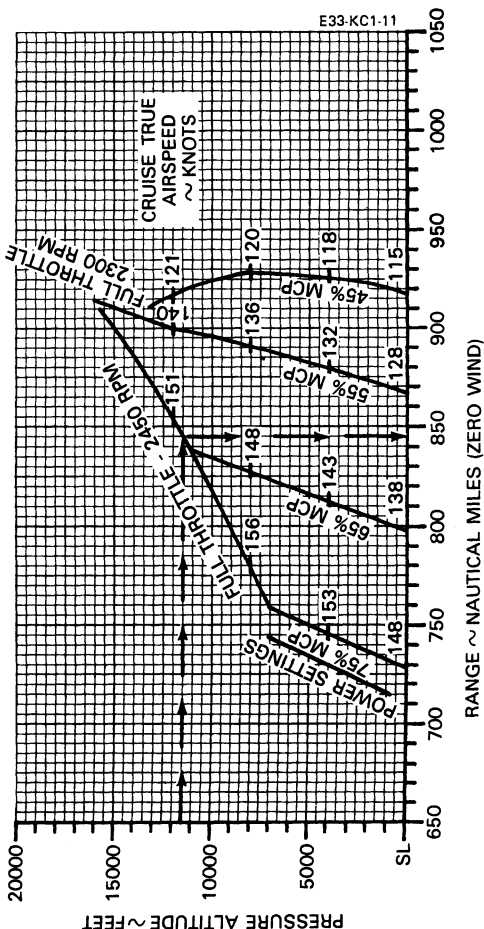
ASSOCIATED CONDITIONS:

WEIGHT 3060 LBS BEFORE ENGINE START
FUEL AVIATION GASOLINE
FUEL DENSITY 6.0 LBS/GAL
INITIAL FUEL LOADING 74 U.S. GAL (444 LBS)

NOTE:

RANGE INCLUDES START, TAXI, AND CLIMB WITH
45 MINUTES RESERVE FUEL AT 45% MCP

EXAMPLE:
PRESSURE ALTITUDE 11500 FT
POWER SETTING 2450 RPM
FULL THROTTLE 2450 RPM
RANGE 845 NM



BEECHCRAFT
Debonair C33
Bonanza E33 and F33

Section V
Performance

RANGE PROFILE - 44 GALLONS

STANDARD DAY (ISA)

ASSOCIATED CONDITIONS:

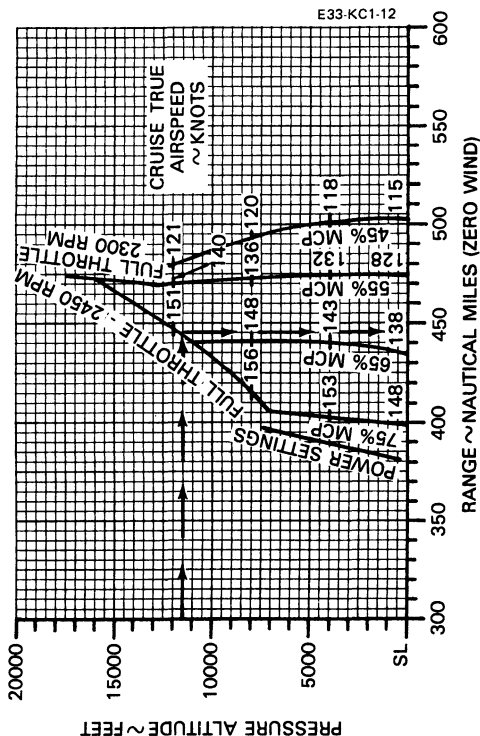
WEIGHT 3060 LBS BEFORE ENGINE START
 FUEL AVIATION GASOLINE
 FUEL DENSITY 6.0 LBS/GAL
 INITIAL FUEL LOADING 44 U.S. GAL (264 LBS)

NOTE:

RANGE INCLUDES START, TAXI AND CLIMB
 WITH 45 MINUTES RESERVE FUEL AT 45% MCP

EXAMPLE:

PRESSURE ALTITUDE 11500 FT
 POWER SETTING FULL THROTTLE
 RANGE 2450 RPM 445 NM

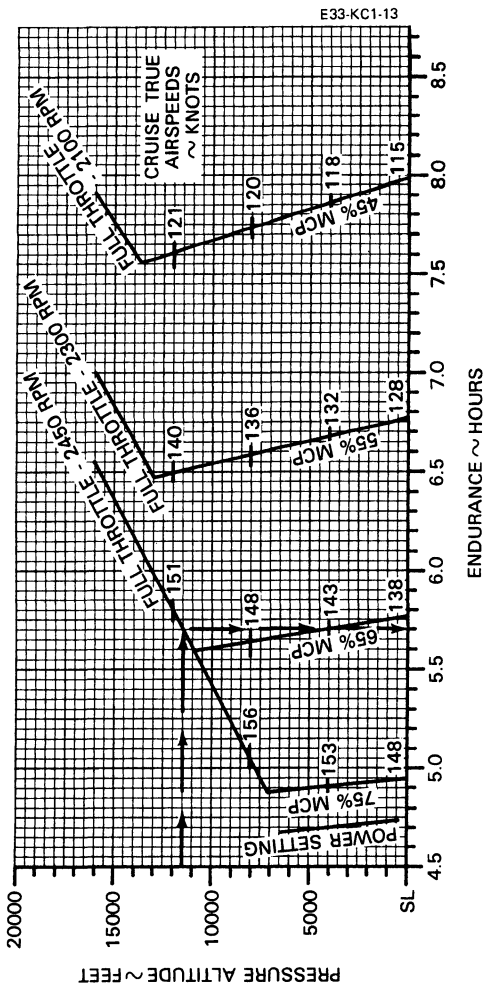


Section V Performance

BEECHCRAFT
Debonair C33
Bonanza E33 and F33

ENDURANCE PROFILE - 74 GALLONS

ASSOCIATED CONDITIONS:		STANDARD DAY (ISA)	
WEIGHT	3060 LBS BEFORE ENGINE START	NOTE:	ENDURANCE INCLUDES START, TAXI, AND CLIMB
FUEL	AVIATION GASOLINE		WITH 45 MINUTES RESERVE FUEL AT 45% MCP
FUEL DENSITY	6.0 LBS/GAL		
INITIAL FUEL LOADING	74 U.S. GAL (444 LBS)		
		EXAMPLE:	
		PRESSURE ALTITUDE	11500 FT
		POWER SETTING	FULL THROTTLE
			2450 RPM
		ENDURANCE	5.70 HRS (5 HRS, 42 MIN)



BEECHCRAFT Debonair C33 Bonanza E33 and F33

Section V Performance

ENDURANCE PROFILE - 44 GALLONS

STANDARD DAY (ISA)

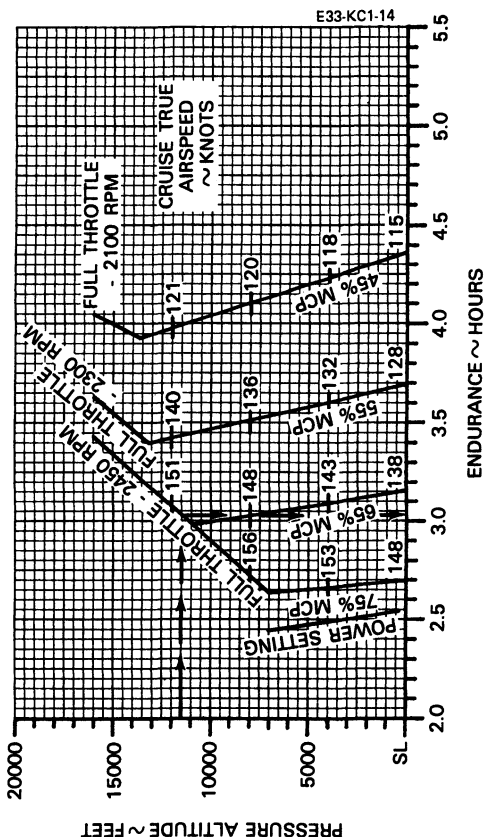
ASSOCIATED CONDITIONS:

WEIGHT 3060 LBS BEFORE ENGINE START
FUEL AVIATION GASOLINE
FUEL DENSITY 6.0 LBS/GAL
INITIAL FUEL LOADING 44 U.S. GAL (264 LBS)

NOTE:
ENDURANCE INCLUDES START, TAXI, AND CLIMB
WITH 45 MINUTES RESERVE FUEL AT 45% MCP

EXAMPLE:

PRESSURE ALTITUDE 11500 FT
POWER SETTING FULL THROTTLE
ENDURANCE 2450 RPM
3.03 HRS
(3 HRS: 2 MIN)



Section V Performance

BEECHCRAFT Debonair C33 Bonanza E33 and F33

LANDING DISTANCE

ASSOCIATED CONDITIONS:

POWER RETARDED TO MAINTAIN
900 FT/MIN ON FINAL APPROACH
FLAPS DOWN
RUNWAY PAVED, LEVEL, DRY SURFACE
APPROACH SPEED IAS AS TABULATED
BRAKING MAXIMUM

WEIGHT ~ POUNDS	SPEED AT 50 FT ~ KNOTS	MPH
3050	70	81
3000	69	79
2800	67	77
2600	65	75
2400	64	73

EXAMPLE:

OAT 25°C (77°F)
PRESSURE ALTITUDE 3965 FT
WEIGHT 2884 LBS
WIND COMPONENT 9.0 KNOTS (HEADWIND)
GROUND ROLL 1150 FT
TOTAL OVER 50 FT OBSTACLE 1775 FT
APPROACH SPEED 68 KNOTS (78 MPH)

