

BONANZA 1992 F33A (IO-520): N484D (SER.NO. CE-1699)

V-speeds (IAS K) @ 3400 lbs

V* with approach flaps (15 deg), approx.

Vso	52
Vso*	59
Vs	64
Vx*	73
Vx	77
Vy	96
Vfe	123
Va	134
Vlo	154
Vno	167
Vne	196

Misc. speeds (IAS K)

Max demo X-wind	17
Cruise climb (POH)	107
Turb air penetration (max weight)	134

Emergency V-speeds (IAS K)

Balked Landing	70
Approach to Land (no power, approx)	80
Max time aloft (min descent, approx)	85
Max glide (Max weight)	105
Max range (approx)	125
Max descent	154

Weight adjusted V-speeds (IAS K)

Weight	Vr	Vx	VL	Vy	Va	Vmg	Vs	Vso*	Vso	Vrsf	Vxsf
3400	71	77	70	96	134	105	64	59	52	67	73
3100	68	74	67	93	128	100	62	57	51	64	70
2800	64	71	63	90	122	95	59	54	49	60	67

Notes:

Vr: rotation speed

Vx: clean (Beech calls this Vr @ 50 ft)

VL: full flaps landing speed

Vmg: power off max glide speed

Vrsf/Vxsf: short field TO and climb with flaps 15 deg

Vso*: stall speed with flaps 15 deg, approx.

Weight and Balance (effective: 05/01/2016)

Full fuel: 80 gal; Useable fuel: 74 gal

Useable fuel to tab detent: 32 gal; fuel to tab bottom: 27 gal

Empty weight	2275.8
Max ramp weight	3412
Max TO weight	3400
Useful load	1124
Full fuel load	444
Payload	680
Max wt between spars	200
Max wt rear spar to station 154	270
Forward seat arm	85-89
Rear seat arm	121-127
Cargo area arm	145
Fuel arm	75
Empty wt CG	80.38

Fwd CG <2800 lbs	77.0
Fwd CG = 3400 lbs	82.1
Aft CG all weights	86.7

Approx. Loading with Full Fuel

Pilot	Pass	Weight
1	0	2890
1	1	3060
1	2	3230
1	3	3400

Notes:

pilot/passengers @ 170 lbs/each

Approx. fuel burn in climb: 24 gal/hr (144 lb/hr)

Approx. fuel burn in cruise: 13 gal/hr (78 lb/hr)

Power + Configuration + Attitude = Performance

PHASE	MP	RPM	ATT Deg	FLAPS	GEAR	IAS K	VSI ft/min
TO	FT	2700	10	UP	UP	100	1000
CLIMB	FT	2500	5	UP	UP	120	700
CRUISE	23	2300	0	UP	UP	165	0
DESCENT	18	2300	-2	UP	UP	165	-500
TERMINAL	18	2300	1	UP	UP	120	0
APPROACH	18	2300	0	15 Deg	UP	110	0
FINAL	18	2500	-3	15 Deg	DOWN	110	-500
MDA (level)	23	2500	0	15 Deg	DOWN	110	0
GO AROUND	FT	2700	10	30 Deg	DOWN	70	300

Note: FT = full throttle

FUEL FLOWS: RICH OF PEAK

MP in	RPM	LEAN (ROP)	FUEL g/hr	TAS K	POWER
24	2500	36 F (20 C)	15.2	173	75%
23	2300	36 F (20 C)	13.3	164	65%
22	2100	36 F (20 C)	11.5	151	55%
19	2100	36 F (20 C)	9.6	138	45%

FUEL FLOWS: LEAN OF PEAK

Note: LOP data not available from POH

Notes:

Conditions: ISA + 36 deg F (+20 deg C)

Continuous operation < 2300 rpm not recommended (CSB)

Avoid operation at peak EGT +/- 36 deg F (20 deg C) above 65% power

RPM VS MANIFOLD PRESSURE: CRUISE SETTINGS

MP	1900	2000	2100	2200	2300	2400	2500
25	NR	NR	X	P	P	X	P
24	NR	NR	P	P	P	X	P
23	NR	P	P	P	P	P	P
22	P	P	P	P	P	P	P
21	P	P	P	P	P	P	P
20	P	P	P	P	P	P	P

Notes:

X: Operation between 2350-2450 is PROHIBITED for MP => 24 in by AD

NR: not recommended

P: recommended values of MP and RPM for cruise setting

Trim Settings

Front seats only: 3 deg nose up

Front + any back seat: 0 deg nose up

Tires and Struts

Nose: 40 psi and 3.5 in

Mains: 35 psi and 3.0 in

Oil

Min: 8 qts
Max: 12 qts

Operating Limitations

CHT

Min: 200 F; 93 C
Max: 460 F; 238 C

Oil Temp

Min for TO: 100 F; 38 C
Max: 240 F; 116 C

Oil Pressure

Min at idle: 30 psi
Max: 100 psi

Fuel flow for TO

Max 24.3 g/hr

Flight Load Factor Limits: Utility Cat. (<3400 lbs)

Flaps Up	Flaps Down
+ 4.4 g	+2.0 g
- 1.76 g	n/a

Misc. Limitations

Max slip duration: 30 sec
Max magneto drop: 150 rpm
Max drop between mags: 50 rpm
Min fuel for TO each tank: 13 gal (yellow arc)

Notes:

1. While I believe the information contained herein to be accurate, no representations are made as to the degree of accuracy of the information. This information constitutes only partial information necessary to properly operate this aircraft and is not to be used as a substitute for the use of other information sources routinely used in the operation of an aircraft or the acquisition of the requisite training to operate this aircraft.
2. This aircraft has a Continental IO-520, 285 hp engine. The performance data show above have been derived from the POH/AFM, and the BPPP Training Manual.
3. Specifications are approximate due to operational factors related to environmental conditions, pilot technique, and the specific aircraft.

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