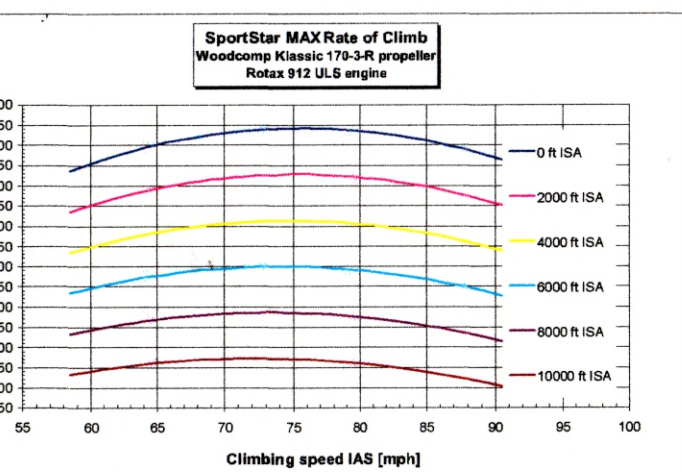
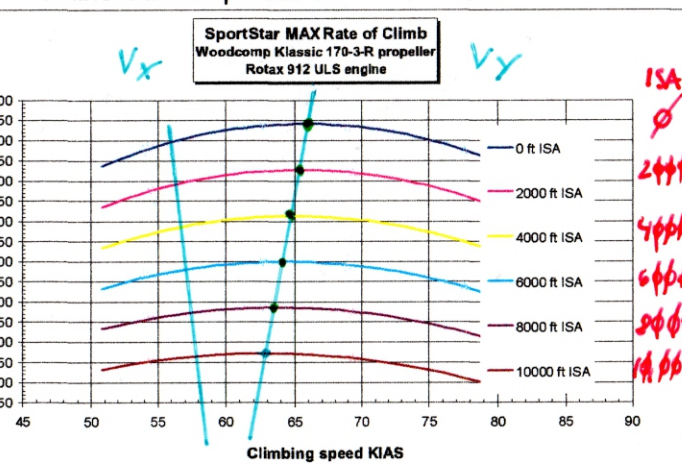




Performance

Conditions:

engine: maximum take-off power
 flaps: retracted (0°)
 carburettor preheating: OFF
 airplane weight: 1320 lbs
 vortex generators along the whole span of the wing
 ambient air temperature: ISA



V_y : 120 fpm less per 2,000 ft ↑
 30 fpm less per 500 ft ↑

ISA
 ϕ 840 > 110
 2000 730 > 110
 4000 610 > 110
 6000 500 > 110
 8000 390 > 110
 10000 270 > 110

every 500 ft: 27.5 fpm less

AVG: 265 KIAS $\Rightarrow$ 11.5 fpm less per 2,000 ft less
 not accurate!

not really accurate and reasonable
 worst case: ISA, V_y at 65 km: 0...10,000 ft
 $\rightarrow$ per 2,000 ft less 110 fpm $\Rightarrow$ 120 fpm
 $\rightarrow$ 0,0 ISA 840 fpm (base)
 $\rightarrow$ every 500 ft less: 27.5 fpm less

V_y ISA:			
ϕ	: 840 fpm	840 fpm	(v)
2000	: 730 fpm	730 fpm	(v)
4000	: 620 fpm	610 fpm	(v)
6000	: 510 fpm	500 fpm	(v)
8000	: 400 fpm	390 fpm	(v)
10,000	: 290 fpm	270 fpm	!

Section 6
Weight and
Balance

SportStar^{MAX}
AIRCRAFT OPERATING INSTRUCTIONS



Doc. No. SSM2008AOIUS

6.5 Airplane Loading Schedule Chart

Type / Model	SportStar MAX	Serial No.:		Registration:	
--------------	---------------	-------------	--	---------------	--

Loading Schedule Chart							
Your Aircraft			Sample Aircraft			Your Aircraft	
No	Item	Arm * (in)	Arm (in)	Weight (lb)	Moment/100 (lb-in)	Weight (lb)	Moment/100 (lb-in)
1.	Empty Airplane		10,39 in	740,75 lb	77,1 lb-in		
2.	Crew	21,45 in		399,04 lb	85,6 lb-in		
3.	Baggage (Max. 55 lb)	42,65 in		11,02 lb	4,7 lb-in		
4.	Fuel (Max. 32 USGAL)	26,75 in		60,41 lb	16,2 lb-in		
5.	Take off weight = Sum of weights 1-4 (MTOW 1268 lb) Total moment = Sum of moments 1-4			1211 lb	184 lb-in		

*) ñ for your empty airplane arm see Weight and Balance Record delivered with your airplane

6.6 Table of Static Moments

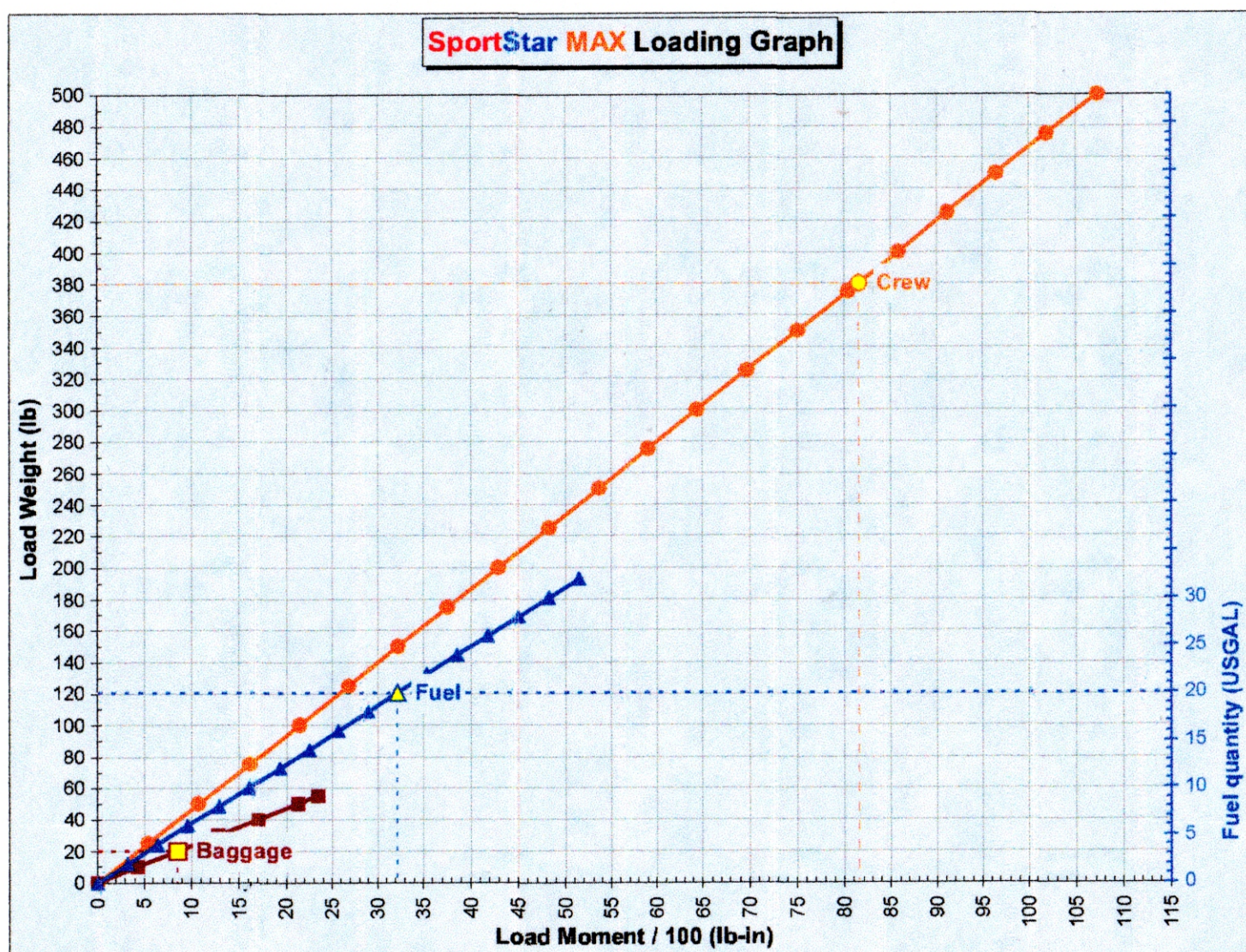
CREW		BAGGAGE		FUEL		
Weight (lb)	Moment/100 (lb-in)	Weight (lb)	Moment/100 (lb-in)	Quantity (USGAL)	Weight (lb)	Moment/100 (lb-in)
0	0,0	0	0,0	0,0	0,0	0,0
100	21,5	2	0,9	1,0	6,0	1,6
120	25,7	4	1,7	2,0	12,0	3,2
140	30,0	6	2,6	3,0	18,0	4,8
160	34,3	8	3,4	4,0	24,0	6,4
180	38,6	10	4,3	5,0	30,0	8,0
200	42,9	12	5,1	6,0	36,1	9,6
220	47,2	14	6,0	7,0	42,1	11,3
240	51,5	16	6,8	8,0	48,1	12,9
260	55,8	18	7,7	9,0	54,1	14,5
280	60,1	20	8,5	10,0	60,1	16,1
300	64,4	22	9,4	11,0	66,1	17,7
320	68,6	24	10,2	12,0	72,1	19,3
340	72,9	26	11,1	13,0	78,1	20,9
360	77,2	28	11,9	14,0	84,1	22,5
380	81,5	30	12,8	15,0	90,1	24,1
400	85,8	32	13,6	16,0	96,1	25,7
420	90,1	34	14,5	17,0	102,1	27,3
440	94,4	36	15,4	18,0	108,2	28,9
460	98,7	38	16,2	19,0	114,2	30,5
480	103,0	40	17,1	20,0	120,2	32,2
500	107,3	42	17,9	21,0	126,2	33,8
520	111,5	44	18,8	22,0	132,2	35,4
540	115,8	46	19,6	23,0	138,2	37,0
560	120,1	48	20,5	24,0	144,2	38,6
		50	21,3	25,0	150,2	40,2
		52	22,2	26,0	156,2	41,8
		54	23,0	27,0	162,2	43,4
		55	23,5	28,0	168,2	45,0
				29,0	174,3	46,6
				30,0	180,3	48,2
				31,0	186,3	49,8
				32,0	192,3	51,4

Section 6
Weight and
Balance

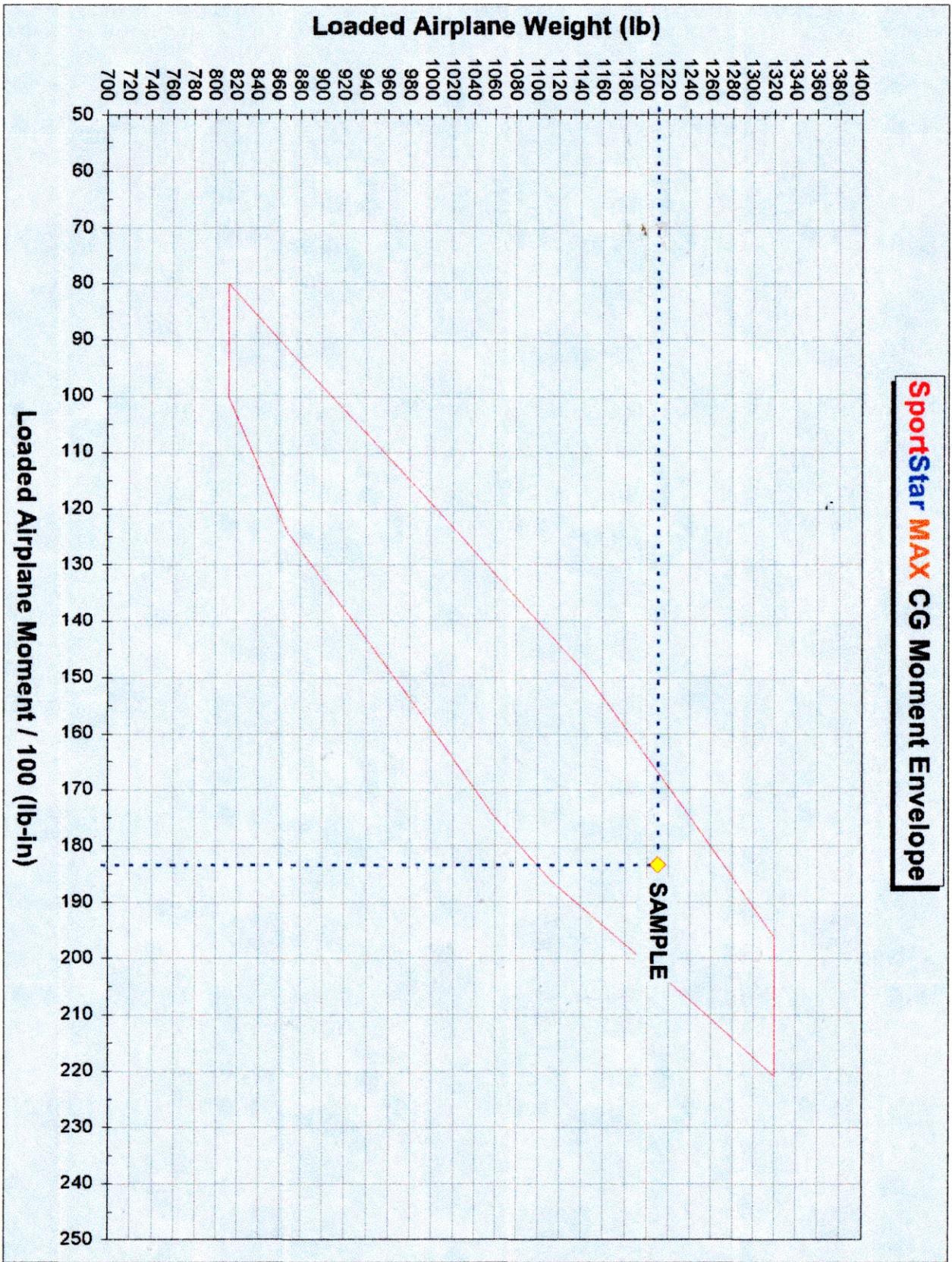
SportStar^{MAX}
AIRCRAFT OPERATING INSTRUCTIONS
Doc. No. SSM2008AOIUS



6.7 Airplane Loading Graph

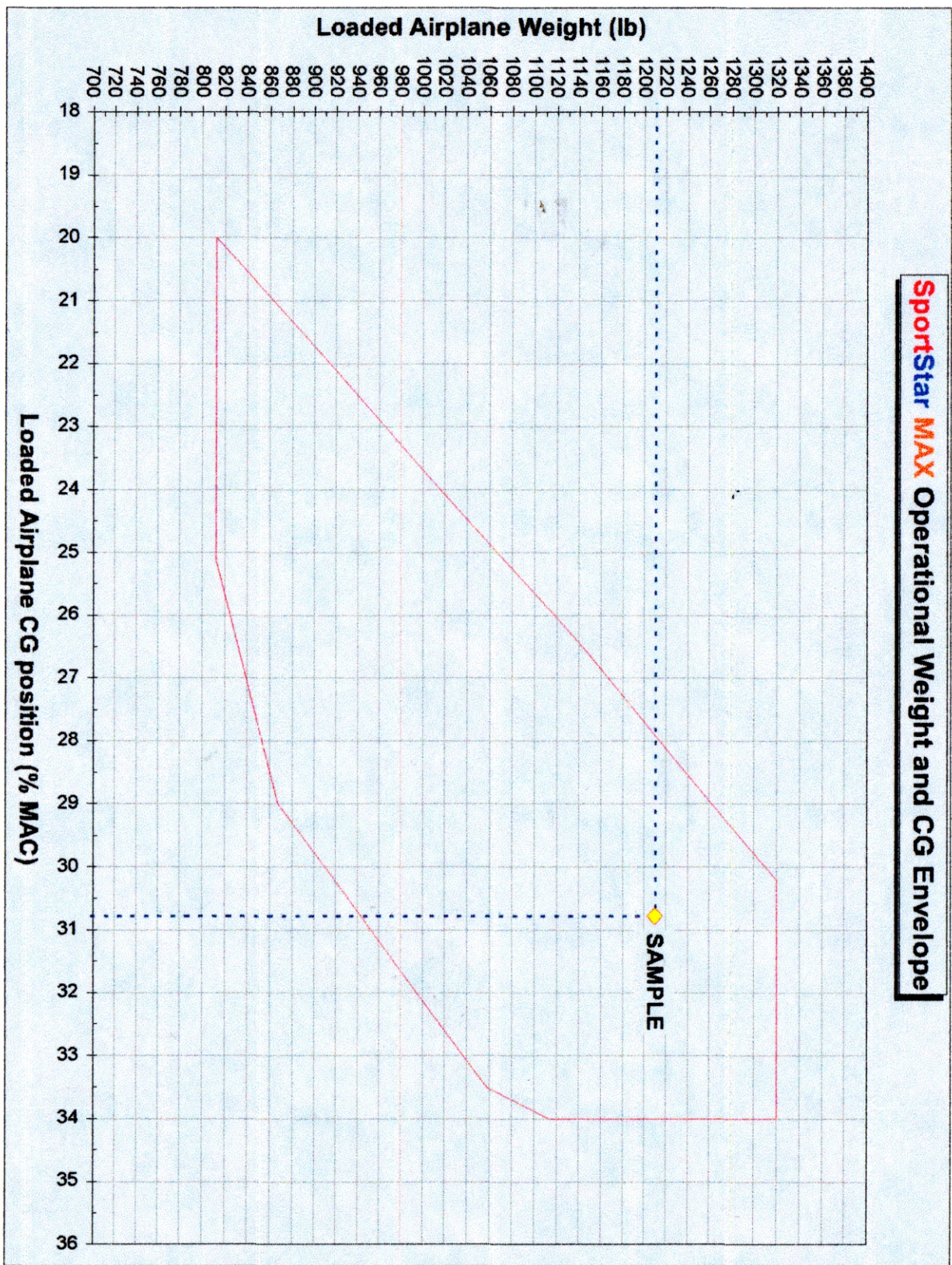


6.8 CG Moment Envelope





6.9 Operational Weight and CG Envelope



EVSS: plan with

ISA climb: V_y @65kn:

0 ft: 840 fpm

4500 ft: 580 fpm AVG: 710 fpm 120fpm less per 2000ft, 30fpm less per 500 ft

3500 ft: 640 fpm AVG: 740 fpm

Cruise: 4800 rpm ISA

4500 ft: KTAS 81kn KIAS 76kn

3500 ft: KTAS 81kn KIAS 77kn

Fuel:

full speed : 6.6 gal/h

cruise : 4.9 gal/h (4800 rpm)

descent : 3.0 gal/h (3500 rpm)