Skyline Soaring
ASK-21 Cockpit Guide

N341KS

KFRR (Front Royal) CTAF:	123.0	Potomac Approach:	120.45
Glider-to-Glider Common:	123.3	8W2 (New Market) CTAF:	122.8
KOKV (Winchester) CTAF:	122.7	W45 (Luray) CTAF:	122.8
AWOS: 124.85 (540-662-6970)		AWOS: 118.275 (540-743-1148)	

Before Takeoff Checklists

A BB CCCCC DDD E

- A - Altimeter
- B - Ballast
- B - Belts
- C - Controls, Flaps, Trim
- C - Comm
- C - Cable
- C - Clock
- C - Canopy
- D - Dolly
- D - Dive Brakes
- D - Direction of Wind
- E - Emergency Plan

or

CB SIFTT CB WET

- C - Controls
- B - Ballast
- S - Straps
- I - Instruments
- F - Flaps
- T - Trim
- T - Tail Dolly
- C - Canopy
- B - Brakes
- W - Winds
- E - Emergency Plan
- T - Time

Before Landing

FUSTALL

- F - Flaps
- U - Undercarriage
- S - Speed
- T - Trim
- A - Airbrakes
- L - Lookout
- L - Landing

	Dual / Solo
Stall	38 / 35
Stall Spoilers	40 / 37
Min Sink	40 / 37
Rec Apch (POH)	49+
Best L/D	50 / 48
Pattern	55+
Aero Tow	97
Maneuver	97
Rough Air	108
Never Exceed	151
G Limits @Vm	+6.5 ~ -4.0
G Limits @Vne	+5.3 ~ -3.0
Pilot Wt	154-242 each
Max XW	N/A
Flight in Precip	+5 kts

Speed to Fly (Dual):

Sink (K)	0	1	2	3	4	5
Airspeed	50	59	68	73	78	84
Glider Sink	1.5	1.9	2.2	2.7	3.2	3.8
Total Sink	1.5	2.9	4.2	5.7	7.2	8.8
Glide Ratio	33	21	16	13	11	9

Speed to Fly (Solo):

Sink (K)	0	1	2	3	4	5
Airspeed	48	54	59	65	73	78
Glider Sink	1.4	1.7	2.0	2.4	3.1	3.7
Total Sink	1.4	2.7	4.0	5.4	7.1	8.7
Glide Ratio	33	20	15	12	10	9

Min Sink Speed by Bank Angle: (Dual / Solo)

0 deg	15 deg	30 deg	45 deg	60 deg
40/37	41/38	43/40	48/44	57/52

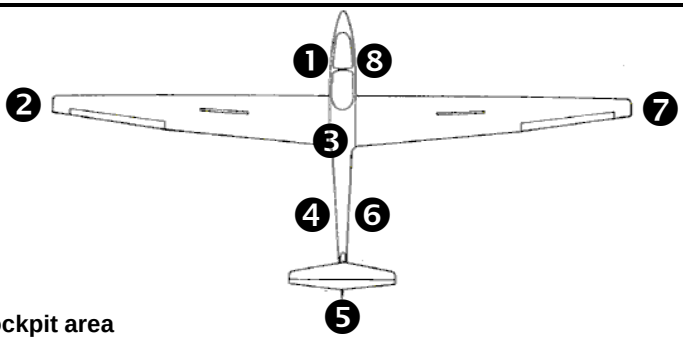
Never Exceed Speed (Vne) by Altitude:

SL	5 K	10 K	15 K	20 K
151	151	144	132	121

Skyline Soaring
ASK-21 Cockpit Guide

N341KS

Daily Inspection / Pre-Flight Checklist



1 – Cockpit area
- Canopy condition, latches operable, main pins secured
- Ballast removed from seat and bolt-in positions, or set for flight
- Battery secure, radio and instruments operable
- Main spar pins in place and secured
- Check for foreign bodies or loose items
- Documents in place
- Flight controls free, clear, proper movement against load
- Rudder S-tubes proper and tight fit, adjust mechanism functions
- Release mechanisms engage, release, cables return
- Nose tire 28 psi, main tire 38 psi, wheel brake engages and effective

2 – Left wing
- Upper and lower surfaces free of damage, no fore/aft play
- Aileron condition, full travel, pushrod connected
- Airbrake condition, travel, fit, and locking

3 – Inspection port
- Ailerons and airbrakes connected and secured with spring clips
- Check for foreign bodies

4 – Fuselage
- Check for damage, especially bottom
- Static ports, pitot, and venturi tube clear

5 – Tail
- Tailplane properly assembled and secured, pushrod connected, clip
- Rudder properly assembled and secured, cables connected
- Tail wheel 36 psi

6 – Fuselage: same as (4)

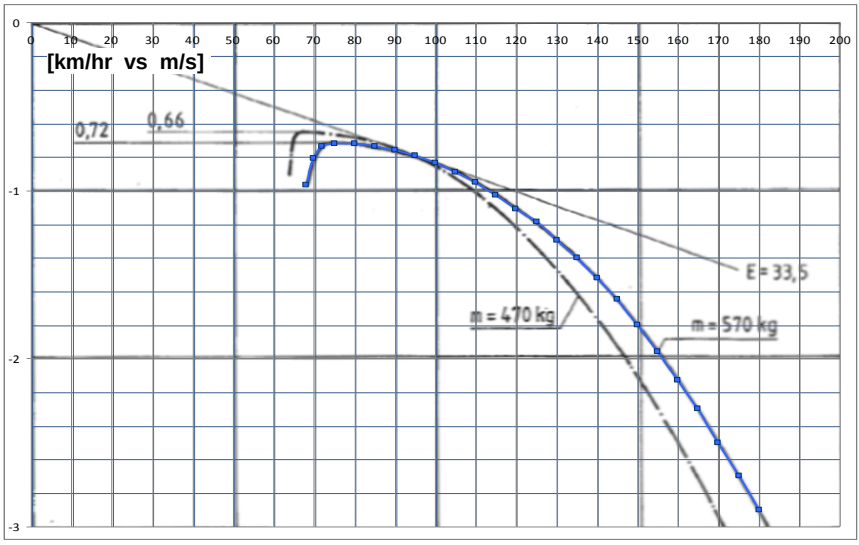
7 – Right Wing: same as (2)

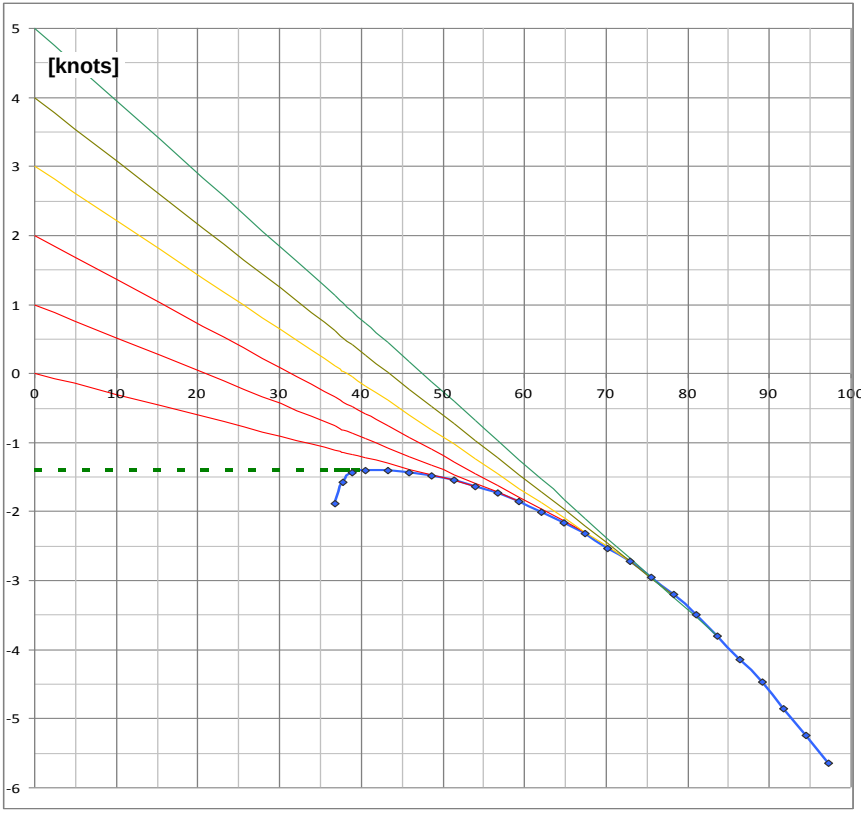
8 – Cockpit area: complete exterior inspection

Front Seat Ballast:

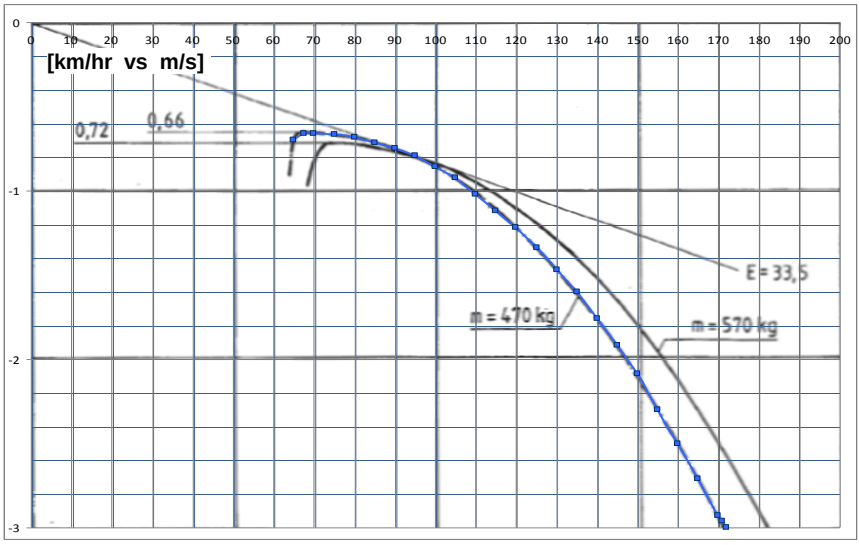
# Lead Disks	Min Pilot Wt	# Lead Disks	Min Pilot Wt	# Lead Disks	Min Pilot Wt
0	154.3	5	140.5	10	126.8
1	151.6	6	137.8	11	124.0
2	148.8	7	135.0	12	121.2
3	146.6	8	132.3		
4	143.3	9	129.5		

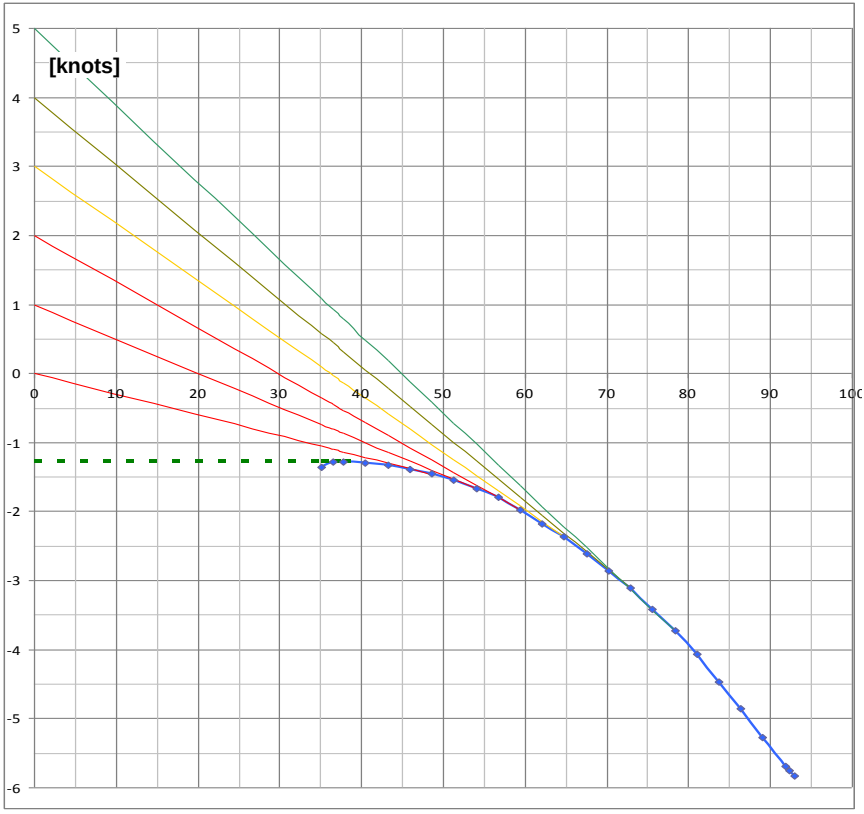
ASK-21 Polar, Dual





ASK-21 Polar, Solo





Skyline Soaring
Grob-103 Cockpit Guide

N4794E

KFRR (Front Royal) CTAF:	123.0	Potomac Approach:	120.45
Glider-to-Glider Common:	123.3	8W2 (New Market) CTAF:	122.8
KOKV (Winchester) CTAF:	122.7	W45 (Luray) CTAF:	122.8
AWOS: 124.85 (540-662-6970)		AWOS: 118.275 (540-743-1148)	

Before Takeoff Checklists

A BB CCCCC DDD E or CB SIFTT CB WET

A - Altimeter

B - Ballast
B - Belts

C - Controls, Flaps, Trim
C - Comm
C - Cable
C - Clock
C - Canopy

D - Dolly
D - Dive Brakes
D - Direction of Wind

E - Emergency Plan

C - Controls
B - Ballast

S - Straps
I - Instruments
F - Flaps
T - Trim
T - Tail Dolly

C - Canopy
B - Brakes

W - Winds
E - Emergency Plan
T - Time

Before Landing

FUSTALL

F - Flaps

U - Undercarriage

S - Speed

T - Trim

A - Airbrakes

L - Lookout

L - Landing

	Dual / Solo
Stall	39 / 36
Stall Spoilers	46 / 41
Min Sink	46 / 43
Rec Ldg (POH)	51+
Best L/D	57 / 51
Pattern	55+
Aero Tow	92
Maneuver	92
Rough Air	92
Never Exceed	135
G Limits @Vm	+5.3 ~ -2.65
G Limits @Vne	+4.0 ~ -1.5
Pilot Wt	154-242 ea, 389 max
Max XW	11 kts
Flight in Precip	+6 kts

Speed to Fly (Dual):

Sink (K)	0	1	2	3	4	5
Airspeed	57	68	73	81	86	95
Glider Sink	1.5	1.9	2.2	2.7	3.2	3.5
Total Sink	1.5	2.9	4.2	5.7	7.2	8.5
Glide Ratio	38	23	17	14	12	11

Speed to Fly (Solo):

Sink (K)	0	1	2	3	4	5
Airspeed	51	59	65	73	81	86
Glider Sink	1.3	1.6	1.9	2.5	3.1	3.7
Total Sink	1.3	2.6	3.9	5.5	7.1	8.7
Glide Ratio	38	23	17	13	11	10

Min Sink Speed by Bank Angle: (Dual / Solo)

0 deg	15 deg	30 deg	45 deg	60 deg
46/41	47/42	49/44	55/49	65/58

Never Exceed Speed (Vne) by Altitude:

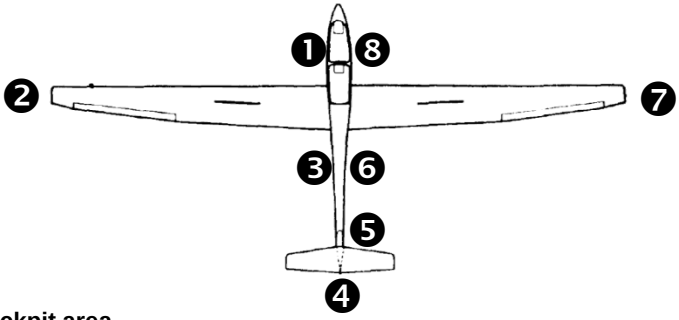
SL	6.5 K	10 K	13 K	16.5 K	19 K
135	135	128	121	115	109

2011 / 11 / 11

Skyline Soaring
Grob-103 Cockpit Guide

N4794E

Daily Inspection / Pre-Flight Checklist



1 – Cockpit area
- Canopy condition, latches operable, main pins secured
- Ballast removed from seat and bolt-in positions, or set for flight
- Battery secure, radio and instruments operable
- Main spar pins, ailerons, airbrakes connected & secured with clips
- Check for foreign bodies or loose items
- Documents in place
- Flight controls free, clear, proper movement against load
- Rudder adjust mechanism functions
- Release mechanisms engage, release, cables return
- Nose tire 36 psi, main tire 36-40 psi, wheel brake engages & effective

2 – Left wing
- Upper and lower surfaces free of damage, no fore/aft play
- Aileron condition, full travel, pushrod connected
- Airbrake condition, travel, fit, and locking

3 – Fuselage
- Check for damage, especially bottom

4 – Tail
- Tailplane properly assembled and secured, pushrod connected, clip
- Rudder properly assembled and secured, pushrod connected

5– Tail wheel area
- Static ports, pitot, and venturi tube clear
- Tail wheel 36 psi

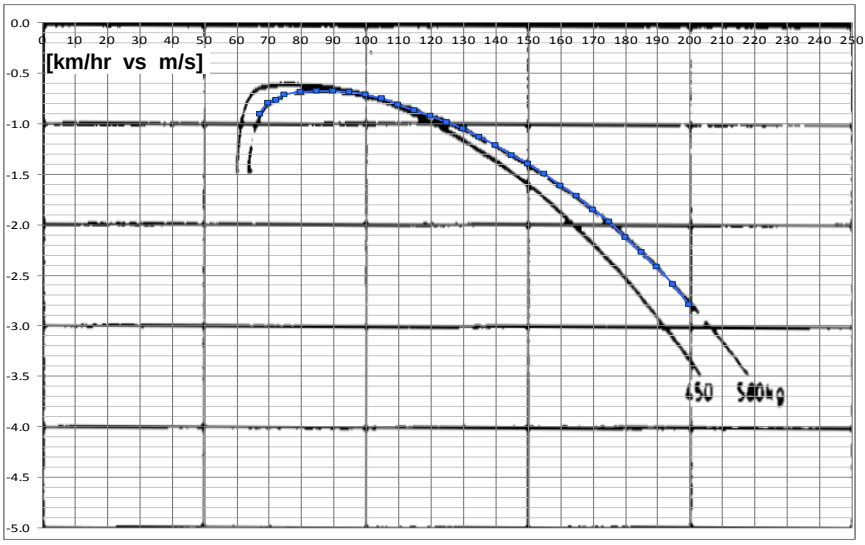
6 – Fuselage: same as (3)

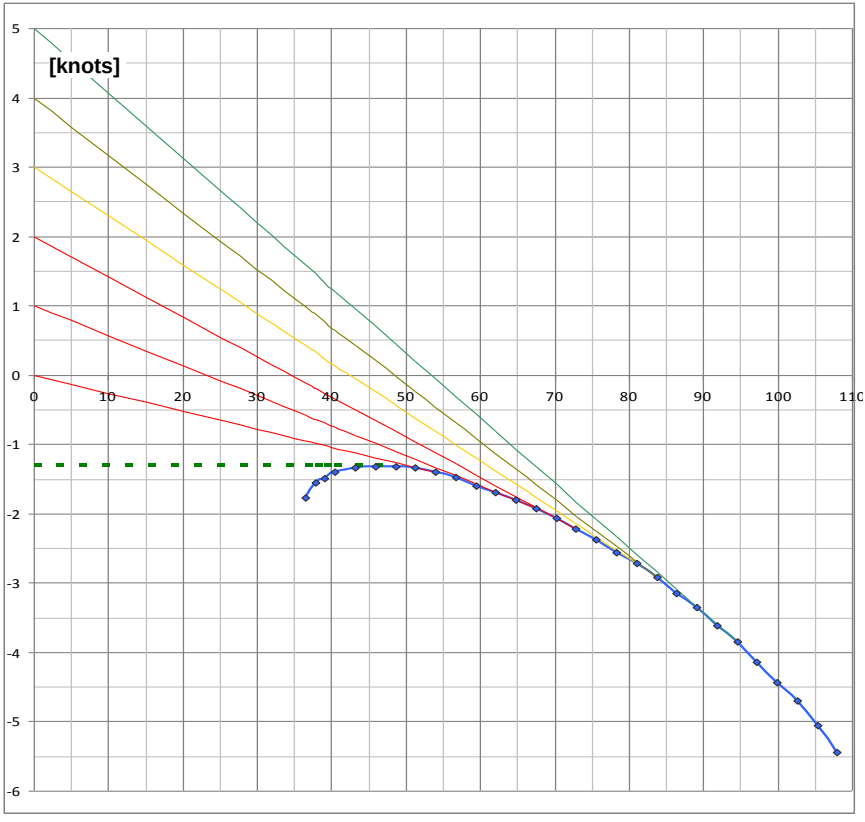
7 – Right Wing: same as (2)

8 – Cockpit area: complete exterior inspection

Front Seat Ballast: 1 bolt-on lead plate (12.3 lbs) reduces min front seat pilot weight to 138 lbs (16 lb offset); additional under-cushion ballast (bags or plates) offset pilot weight 1:1

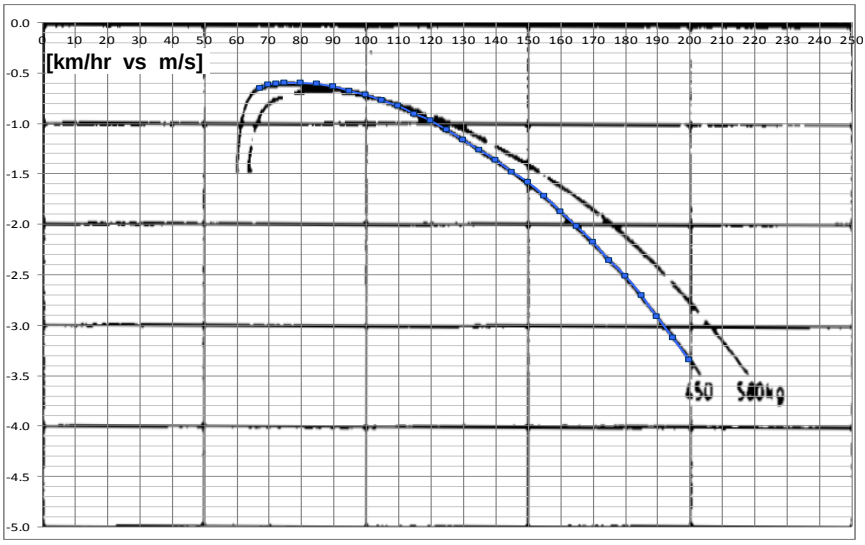
Grob 103 Polar, Dual

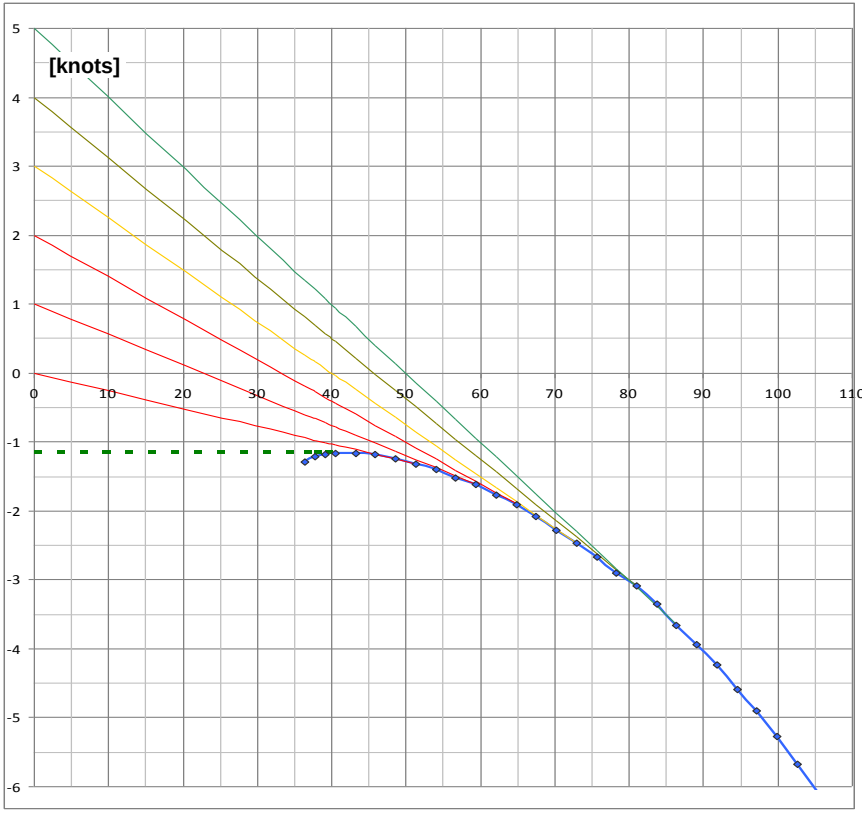




2011 / 11 / 11

Grob 103 Polar, Solo





Skyline Soaring
SGS 1-36 Cockpit Guide

N3617B

KFRR (Front Royal) CTAF:	123.0	Potomac Approach:	120.45
Glider-to-Glider Common:	123.3	8W2 (New Market) CTAF:	122.8
KOKV (Winchester) CTAF:	122.7	W45 (Luray) CTAF:	122.8
AWOS: 124.85 (540-662-6970)		AWOS: 118.275 (540-743-1148)	

Before Takeoff Checklists

A BB CCCCC DDD E

- A - Altimeter
- B - Ballast
- B - Belts
- C - Controls, Flaps, Trim
- C - Comm
- C - Cable
- C - Clock
- C - Canopy
- D - Dolly
- D - Dive Brakes
- D - Direction of Wind
- E - Emergency Plan

or CB SIFTT CB WET

- C - Controls
- B - Ballast
- S - Straps
- I - Instruments
- F - Flaps
- T - Trim
- T - Tail Dolly
- C - Canopy
- B - Brakes
- W - Winds
- E - Emergency Plan
- T - Time

Before Landing

FUSTALL

- F - Flaps
- U - Undercarriage
- S - Speed
- T - Trim
- A - Airbrakes
- L - Lookout
- L - Landing

Stall	35
Stall Spoilers	39
Min Sink	42
Best L/D	53
Rec Apch (POH)	55+
Pattern	55+
Maneuver	64
Aero Tow	98
Rough Air	108
Never Exceed	121
G Limits	+5.33 ~ -2.67
Pilot Wt (lbs)	110 - 204
Max XW (demonstrated)	15 mph (13 kt)

Speed to Fly (mph):

Sink (fpmx100)	0	1	2	3	4	5
Airspeed	53	62	68	74	78	82
Glider Sink	1.5	1.8	2.1	2.5	2.8	3.1
Total Sink	1.5	2.8	4.1	5.5	6.8	8.1
Glide Ratio	31	19	15	12	10	9

Min Sink Speed by Bank Angle:

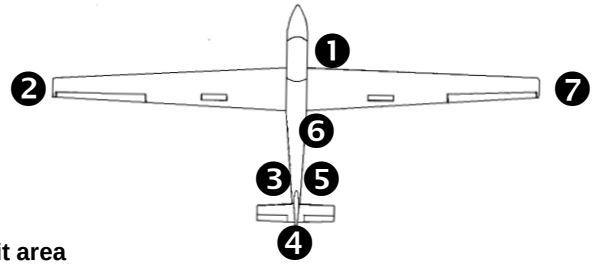
0 deg	15 deg	30 deg	45 deg	60 deg
42	43	45	50	59

2011 / 11 / 11

Skyline Soaring
SGS 1-36 Cockpit Guide

N3617B

Daily Inspection / Pre-Flight Checklist



1 – Cockpit area
- Canopy condition, latches operable, hinge conditon
- Flight controls free, clear, proper movement against load
- Rudder pedal adjustment
- Seat adjustment
- Instruments, radio, lines, pitot-static openings, static line drain
- Seat belt and shoulder harness
- Ballast removed from seat, or set for flight
- Check for foreign bodies or loose items
- Documents in place
- Release hook and linkage
- Wing pins – main spar and aft carry-thru
- Aileron control attachment, fuselage to wing
- Dive brake attachment
- Tire condition and inflation (31 psi)
- Wheel and brake operation
- Nose skid attachment and condition
- General condition exterior surfaces

2 – Left wing
- Upper and lower surfaces free of damage, no fore/aft play
- Aileron and hinge condition, full travel, pushrod connected
- Dive brake condition, travel, fit, and locking
- Tip wheel and spring

3 – Fuselage
- General condition of surfaces

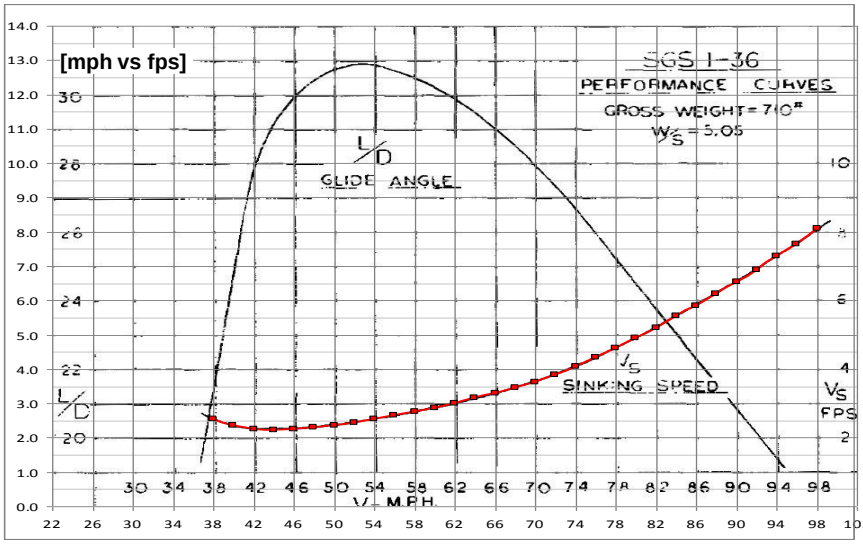
4 – Tail
- Horizontal tail surface attachment, elevator hinges, pushrod, fabric
- Rudder hinges and fabric
- Inspection plate – ruder and elevator control linkages
- Tail wheel conditon
- Total energy probe

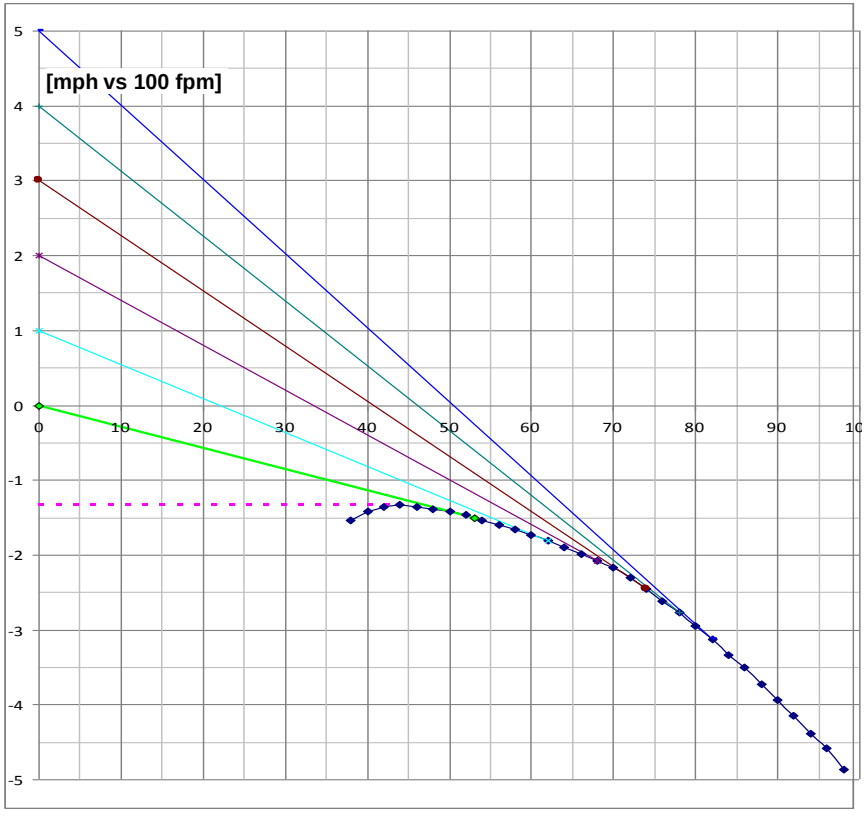
5 – Fuselage: same as (3)

6 – Inspection port:
- Battery secure and connected, latches secure

7 – Right Wing: same as (2)

SGS 1-36 Sprite Polar





Skyline Soaring
Cirrus Cockpit Guide

N888AN

KFRR (Front Royal) CTAF:	123.0	Potomac Approach:	120.45
Glider-to-Glider Common:	123.3	8W2 (New Market) CTAF:	122.8
KOKV (Winchester) CTAF:	122.7	W45 (Luray) CTAF:	122.8
AWOS: 124.85 (540-662-6970)		AWOS: 118.275 (540-743-1148)	

Before Takeoff Checklists

A BB CCCCC DDD E

- A - Altimeter
- B - Ballast
- B - Belts
- C - Controls, Flaps, Trim
- C - Comm
- C - Cable
- C - Clock
- C - Canopy
- D - Dolly
- D - Dive Brakes
- D - Direction of Wind
- E - Emergency Plan

or CB SIFTT CB WET

- C - Controls
- B - Ballast
- S - Straps
- I - Instruments
- F - Flaps
- T - Trim
- T - Tail Dolly
- C - Canopy
- B - Brakes
- W - Winds
- E - Emergency Plan
- T - Time

Before Landing

FUSTALL

- F - Flaps
- U - Undercarriage
- S - Speed
- T - Trim
- A - Airbrakes
- L - Lookout
- L - Landing

Stall	34
Stall Spoilers	36
Min Sink	39
Rec Ldg (POH)	43+
Best L/D	46
Pattern	55+
Aero Tow	75
Airbrakes Ext	108
Never Exceed	119
G Limits	+5.5 ~ -3.5
Pilot Wt	154-242
Max XW	N/A

Speed to Fly (knots): *[no water ballast]*

Sink (K)	0	1	2	3	4	5
Airspeed	46	54	62	70	76	84
Glider Sink	1.1	1.3	1.8	2.3	2.8	3.5
Total Sink	1.1	2.3	3.8	5.3	6.8	8.5
Glide Ratio	44	23	17	13	11	10

Min Sink Speed by Bank Angle:

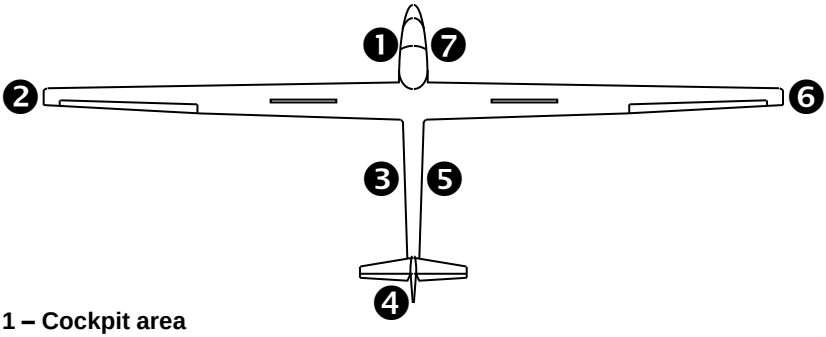
0 deg	15 deg	30 deg	45 deg	60 deg
39	40	42	46	55

2011 / 11 / 11

Skyline Soaring
Cirrus Cockpit Guide

N888AN

Daily Inspection / Pre-Flight Checklist



1 – Cockpit area
- Canopy condition, latches operable
- Ballast removed from seat, or set for flight, seat back adjusted
- Battery secure, radio and instruments operable, data logger secure
- Main spar pin in place and secured with clip
- Ailerons and airbrakes connected and secured with spring clips
- Check for foreign bodies or loose items
- Documents in place
- Flight controls free, clear, proper movement against load
- Drag chute control secured
- Release mechanisms engage, release, cables return
- Main tire 50 psi, wheel brake engages and effective

2 – Left wing
- Upper and lower surfaces free of damage, no fore/aft play
- Aileron condition, full travel, pushrod connected
- Airbrake condition, travel, fit, and locking

3 – Fuselage
- Check for damage, especially bottom
- Static ports, pitot, and venturi tube clear

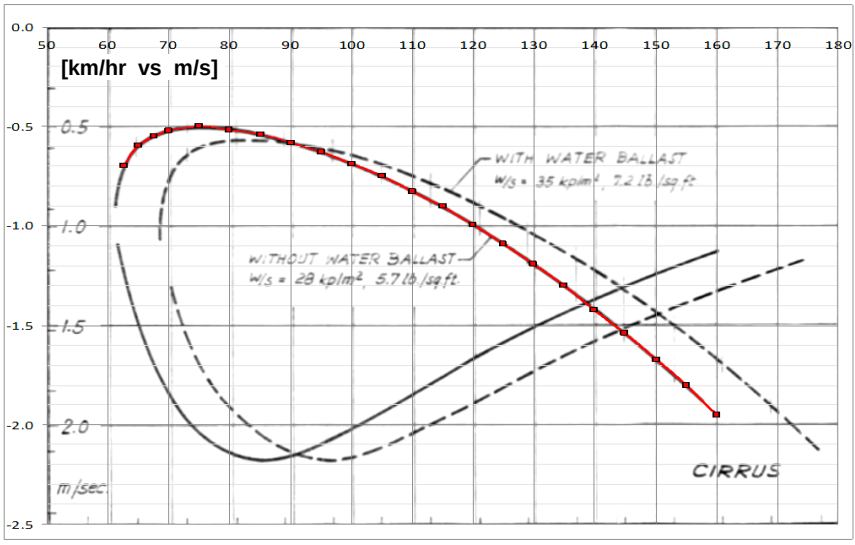
4 – Tail
- Tailplane properly assembled and secured
- Rudder properly assembled and secured, cables connected
- Tail wheel 36 psi
- Drag chute cover secured

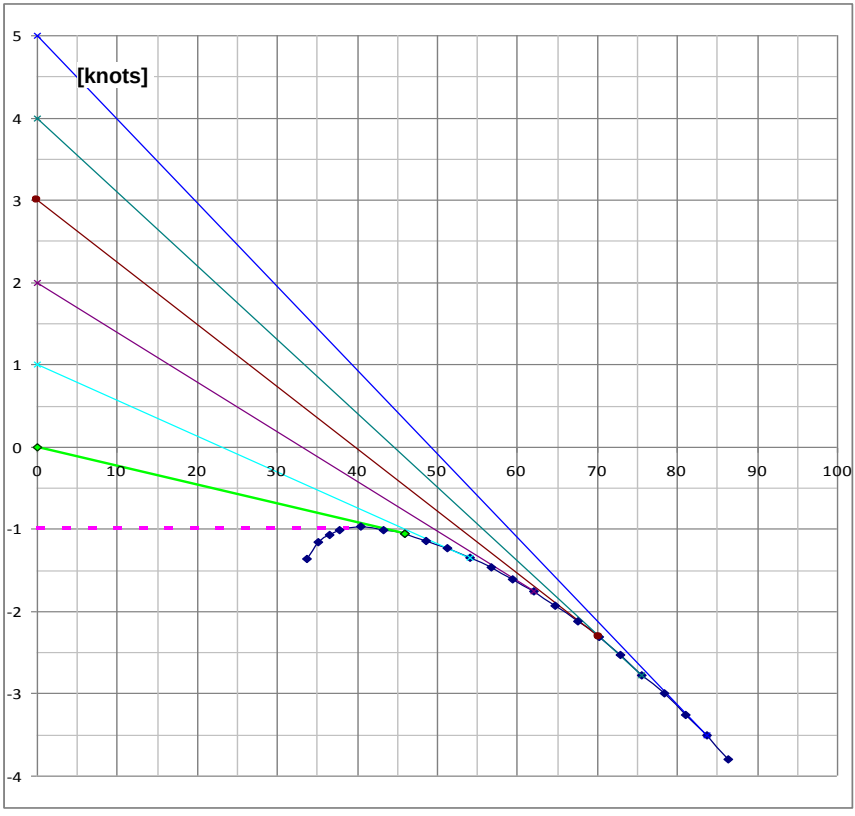
5 – Fuselage: same as (3)

6 – Right Wing: same as (2)

7 – Cockpit area: complete exterior inspection

Cirrus Polar (no ballast)






78-30W
39N
5
10
15
20
25
30
35
40
45
NOTICE
Special awareness training required within 60 NM of DCA VOR-DME. See description in chart border.
FRONT ROYAL-WARREN CO (FRR)
709 * 30 123.0
Front Royal
Strasburg
Toms Brook
Woodstock
Edinburg
Mount Jackson
Bentonville
Rileyville
Luray
LURAY CAVERNS (LUA)
AWOS-3 118.275
NEW MARKET (8W2)
963 *L 29 122.8
Timberville
Broadway
Fulks Run
Stanley
Winchester
WINCHESTER RGNL (OKV)
AWOS-3 124.85
Stephens City
Wardensville
Moorefield
Lost City
Columbia Furnace
Basye
Tenth Legion
Singers Glen
Edom
Linville
HARRISONBURG
ROCKINGHAM MEML HOSPITAL (Pvt)
McGaheysville
Cross Keys
Grottoes
Elkton
Stanardsville
Criglersville
Madison
Brightwood
Culpeper
Sperryville
Washington
Woodville
Orange
Mitchells
Rapidan
Gainesboro
Gore
Capon Bridge
Augusta
Romney
Inwood
SHENANDOAH NATIONAL PARK
SHENANDOAH VALLEY RGNL (SHD)
AWOS-3 124.925
EXAMPLES OF CLASS B ALTITUDES
Ceiling in hundreds of feet MSL
Floor in hundreds of feet MSL
WEST VIRGINIA
VIRGINIA
WASHINGTON CLASS
LINDEN
114.3 Ch 90 LDN
LEESBURG
EASTERN WV RGNL/SHEPHERD (MRB)
MARTINSBURG
CULPEPER MEML (Pvt)
GRAND PRE (Pvt)
CHARLOTTESVILLE RCO

NAME	ICAO	LAT	LON	BRG	MH	NM	COD	ALT	FREQ	RWY	SFC	LEN	WID
Front Royal 540-635-3570	FRR	38:55.050N	078:15.200W	000	000	0.0	A	709	123.000	10/28	A	3007	75
River Bend	VA58	38:54.367N	078:26.667W	266	276	8.9	P	606		14/32	G	2650	60
Mulberry Run	VA17	39:02.150N	078:23.533W	318	328	9.6	P	820		06/24	G	2000	75
White Post	3VA7	39:03.750N	078:05.483W	041	051	11.5	P	610		04/22	G	2000	75
Karmys	67VA	38:50.250N	078:31.167W	249	259	13.3	P	890		04/22	G	1800	30
Hepner	4VA4	38:56.083N	078:32.400W	275	285	13.4	P	1150		07/25	G	2000	75
Burner	VG55	38:52.917N	078:33.467W	262	272	14.4	P	965		03/21	G	3100	100
Winchester	OKV	39:08.617N	078:08.667W	020	030	14.5	A	726	122.700 w124.850	14/32	A	5498	100
Longs	VA32	38:48.250N	078:34.317W	246	256	16.4	P	870		N/S	G	2100	75
Ayers	VA93	38:54.300N	078:39.283W	268	278	18.8	P	1340		01/19	G	2100	100
Luray Caverns	W45	38:40.017N	078:30.033W	218	228	19.0	A	903	122.800 w118.275	04/22	A	3125	75
High View Farm	61VA	39:14.117N	078:00.717W	030	040	22.1	P	595		03/21	G	3000	150
Franwood Farms	9VA4	38:41.450N	078:37.767W	232	242	22.2	P	990		03/21	G	1550	90
Al's Field	48VA	39:17.433N	078:21.050W	349	359	22.8	P	1120		03/21	G	1500	50
Timber Ridge Airpark	VA46	39:17.767N	078:21.733W	347	357	23.3	P	1024		09/27	D	2700	80
Sky Bryce	VG18	38:48.950N	078:46.217W	256	266	24.9	P	1263		05/23	A	2240	50
River's Edge Farm	38WV	39:19.517N	078:25.533W	342	352	25.7	P	810		06/24	G	1800	50
New Market	8W2	38:39.367N	078:42.517W	234	244	26.4	A	963	122.800	06/24	A	2920	60
Hidden River	89VA	38:31.333N	078:31.450W	208	218	26.9	P	780		11/29	G	1500	40
Jucapa Farms	9VG9	39:22.333N	078:18.267W	355	005	27.4	P	1160		16/34	G	1500	70
Michaels Farms	WV17	39:23.600N	078:09.350W	009	019	28.9	P	510		01/19	G	2000	60
Lost Mountain	WV06	39:17.100N	078:44.300W	314	324	31.6	P	1960		02/20	G	2650	50
Martinsburg	MRB	39:24.117N	077:59.083W	023	033	31.6	A	565	124.300 w119.925	08/26	A	7815	150
Belmont Farm	88VA	38:22.450N	077:59.517W	159	169	34.8	P	305		04/22	G	2200	50
Joe's Creek	2VG3	38:32.917N	078:52.267W	233	243	36.4	P	1350		05/23	G	1400	75
Orange County VA	OMH	38:14.833N	078:02.733W	166	176	41.4	A	465	122.800 w118.075	08/26	A	3200	75
Bridgewater Air Park	VBW	38:22.000N	078:57.617W	225	235	46.8	A	1165	122.700	15/33	A	2745	60
Shenandoah Valley	SHD	38:15.833N	078:53.783W	218	228	49.5	A	1201	123.000 w124.925	05/23	A	6002	150