

LET, 686 04 KUNOVICE, CZECHOSLOVAKIA

SAILPLANE FLIGHT MANUAL

Model : **L 23 SUPER - BLANÍK**

Serial No. : **938023**

Registration : **N8023**

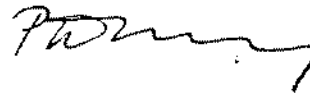
Document No.: Do - L 23. 1011.5

Date of Issue : June 12, 1992

This Sailplane Flight Manual is FAA Approved for U.S.-registered sailplanes in accordance with provisions of 14 CFR Section 21.29, and as required by FAA Type Certificate Data Sheet No. **G60EU**. Pages identified as " Appr. " provide information required to be furnished by the Federal Aviation Regulations.

Approved by The Civil Aviation Inspectorate of Czech and Slovak Federal Republic in Prague, on August 28, 1989 under No. 4694/ 1034/ 89/ OL.

Signature:



Authority: CIVIL AVIATION INSPECTORATE
OF CSFR

Stamp:



Original date of approval: June 12, 1992

This Sailplane Flight Manual must be carried in the sailplane at all times

This sailplane is to be operated in compliance with information and limitations contained herein.



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0.1. RECORD OF REVISIONS

Any revision or amendment of the present Manual will be issued in the form of Bulletins, approved by the Czechoslovak State Aviation Inspection, a supplement of which will contain new (revised) pages. It is the operator's duty to make a note indicating each revision in the Record of revisions and to replace the effected page(s) with the revised one(s). Revised or amended parts of the text will be indicated by a vertical line in the left hand margin and the revision No. and the effective date will be shown on the bottom left hand of the page.

Rev. No.	Affected Section	Affected pages	Date	Bulletin No.	Date of Bulletin approval	Date inserted and signature
1	0,2	0-1,0-3,2-5	Dec 14/92	L23/011a	24.3.1993	



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SECTION 1

General

CONTENTS

- 1.1 Introduction
- 1.2 Certification basis
- 1.3 Warnings, cautions and notes
- 1.4 Descriptive data
- 1.5 Three-view drawing



1.1 INTRODUCTION

This Sailplane Flight Manual has been prepared to provide pilots and instructors of the L 23 SUPER - BLANÍK sailplane with information for training and for performing soaring flight. The Manual is intended to be used by qualified sailplane pilots and so it contains directions, in which the L 23 SUPER - BLANÍK sailplane is different from other sailplanes.

This manual includes the material required to be furnished to the pilot by JAR 22. It also contains supplemental data supplied by the manufacturer.

1.2 CERTIFICATION BASIS

The L 23 SUPER - BLANÍK has been approved by the State Aviation Inspection of the Czechoslovak Socialist Republic in accordance with the JAR-22 (JOINT AIRWORTHINESS REQUIREMENTS) issued in April 1980 including Change 4 dated 7 May 1987, Category U (UTILITY) and in compliance with OSTIV (ORGANISATION SCIENTIFIQUE ET TECHNIQUE INTERNATIONALE DU VOL A VOILE) AIRWORTHINESS STANDARDS issued in October 1986, Category U (UTILITY).

FAA Type Certificate No. G60EU (Utility Category) was issued on February 22, 1993.

1.3. WARNINGS, CAUTIONS AND NOTES

The following definitions apply to warnings, cautions and notes used in the Flight Manual.

WARNING: **MEANS THAT THE NON-OBSERVATION OF THE CORRESPONDING PROCEDURE LEADS TO AN IMMEDIATE OR IMPORTANT DEGRADATION OF THE FLIGHT SAFETY**

CAUTION: **means that the non-observation of the corresponding procedure leads to a minor or to a more or less long term degradation of the flight safety.**

Note: **draws the attention on any-special item not directly related to safety but which is important or unusual.**



1.4 DESCRIPTIVE DATA

1.4.1 BRIEF DESCRIPTION

The L 23 SUPER - BLANÍK sailplane is a cantilever, high-wing, two-seat glider of all-metal structure. The rudder, elevator and ailerons are fabric covered. In the forward section part of the fuselage there are front and rear cockpits. Both cockpits are covered with a two-part canopy which can be jettisoned in flight. Both cockpits are equipped with all sailplane flight control including flight and navigation instrument panels. The sailplane is equipped with tow hooks either for winch or aero-tow take-off.

Wings including ailerons and air brakes, are attached to the fuselage at six suspension points (three on each side). The vertical stabilizer is permanently fixed to the rear fuselage section. The horizontal stabilizer is fastened by hinges on the top of the vertical stabilizer.

Elevator and aileron controls are actuated by control push rods and control cables, the rudder control is pedal-operated also by control push rods and control cables. Air brakes are controlled by control levers. The elevator trim tab is controlled by the control lever.

The sailplane is equipped with the main landing gear and the tail landing gear. The main landing gear is mechanically semi-retractable with an oleo-pneumatic shock-absorber and a mechanical brake. The tail landing gear is equipped with a wheel and shock-absorber. Cockpits are ventilated by cold air tapped from the nose part of the fuselage. The baggage compartment is behind the rear cockpit. Both cockpits are upholstered.

1.4.2 BASIC DIMENSIONS

1. Main dimensions

Wing span 53.48 ft(16.2 m)

Length 27.89 ft(8.5 m)

Height 6.23 ft(1.9 m)

2. Wing

Area 206.13 sq ft(19.15 sq.m)

Aspect ratio 13.7

Dihedral 3°

(Cont.)



Sweep angle -5°
Mean aerodynamic chord 4.11 ft(1.253 m)
Geometric twist -3°

Ailerons

Area 24.86 sq ft (2.31 sq.m)
Span 11.18 ft(3.408 m)
Deflections: up $34^{\circ} + 2^{\circ}$
 down $13^{\circ} + 2^{\circ}$

Air brakes

Area 6.98 sq ft(0.648 sq.m)
Span 4.43 ft(1.35 m)

3.Horizontal tail surfaces

Area (total) 26.51 sq ft (2.463 sq.m)
Span 10.99 ft(3.35 m)
Aspect ratio 4.4
Dihedral 0°

Elevator

Area 10.98 sq ft(1.02 sq.m)
Deflections:up $32^{\circ} + 2^{\circ}$
 down $25^{\circ} + 2^{\circ}$

Elevator trim tab

Area 0.75 sq ft(0.07 sq.m)
Deflections:up $15^{\circ} \pm 1^{\circ}$

(Cont.)



down $35^{\circ} \pm 1^{\circ}$

4. Vertical tail surfaces

Area (total) 20.17 sq ft(1.874 sq.m)

Height 5.1 ft (1.55 m)

Aspect ratio 1.29

Rudder

Area 10.98 sq ft(1.02 sq.m)

Deflections both sides (normally to axis
of rotation) $30^{\circ} + 1^{\circ}$

5. Fuselage

Width 2.16 ft(0.66 m)

Height 3.61 ft(1.10 m)



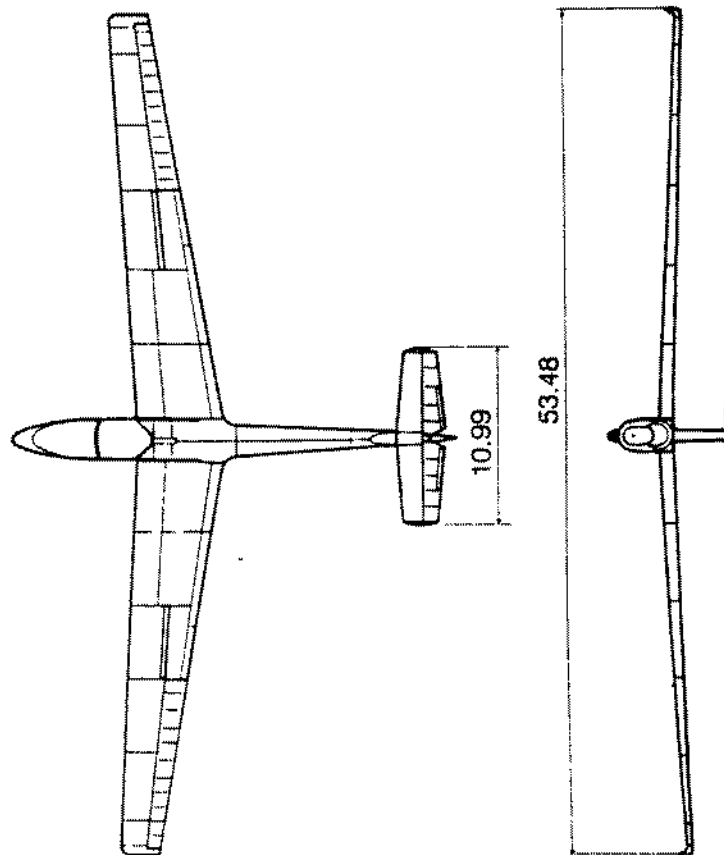
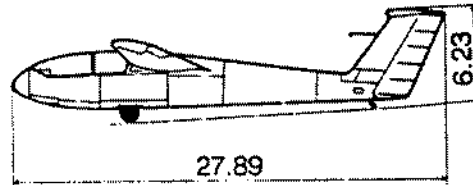
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1.5 THREE-VIEW DRAWING (DIMENSION IN FT)





SECTION 2

Limitations

CONTENTS

- 2.1 Introduction
- 2.2 Airspeed
- 2.3 Airspeed indicator markings
- 2.4 Weight Limits
- 2.5 Centre of gravity Limits
- 2.6 Approved manoeuvres
- 2.7 Manoeuvring load factors
- 2.8 Flight crew
- 2.9 Kinds of operation
- 2.10 Aerotow and winch-launching
- 2.11 Other limitations
- 2.12 Limitation placards

2.1 INTRODUCTION

Section 2 includes operating limitations and basic placards necessary for safe operation of the sailplane, its standard systems and standard equipment. Compliance with the limitation in this section is required by regulation.

2.2 AIRSPEED

Speed		(KIAS)	Remarks
VNE	Never exceed speed up to a pressure altitude of 11,000 ft	133	Do not exceed this speed in any operation and do not use more than 1/3 of control deflection
VRA	Rough air speed	86	Do not exceed this speed except in smooth air, and then only with caution. Examples of rough air are lee-wave rotor thunderclouds etc.
VA	Manoeuvring speed	81	Do not make full or abrupt control movement above this speed, because under certain conditions the sailplane may be overstressed by full control movement
VW	Maximum winch-launching speed	65	Do not exceed this speed during winch- or autotow-launching
VT	Maximum aerotowing speed	81	Do not exceed this speed during aerotowing
VLO	Maximum landing gear operating speed	133	Do not extend or retract the landing gear above this speed

Note: V_{NE} airspeed limits above 11,000 ft Pressure Altitude are reduced as follows:

15,000 - 123 KIAS
20,000 - 111 KIAS
25,000 - 100 KIAS
30,000 - 89 KIAS
35,000 - 79 KIAS



2.3 AIRSPPEED INDICATOR MARKINGS

Marking	KIAS (value - range)	Significance
Green arc	36 - 86	Normal Operating Range. (Lower limit is maximum weight 1.1 vs ₁ at most forward c.g. Upper limit is rough air speed)
Yellow arc	86 - 133	Manoeuvres must be conducted with caution and only in smooth air.
Red line	133	Maximum speed for all operations
Yellow triangle	41	Approach speed at maximum weight.

2.4 WEIGHT LIMITS

Maximum take - off landing weight:

- with two occupants 1124 lb

- with one pilot 925 lb

Empty weight with standard equipment 683 lb \pm 2 %

and the corresponding centre
of gravity position 67.30 \pm 1% MAC

Note : Refer to weight and Balance (Section 6.0) to determine actual
empty weight / c.g. as established by the installed equipment
and manufacturing tolerances.

Pilot's weight (including parachute):

- minimum pilot's weight (solo) 154 lb

**WARNING: IT IS NECESSARY TO USE FRONT SEAT REMOVABLE
BALLAST OF 33 LB WHEN FLOWN SOLO BY A PILOT
(INCLUDING PARACHUTE) WEIGHING LESS THAN 154 LB
IN THE FRONT COCKPIT.**

(Cont.)



Note: Installation of the front seat ballast is described in Section 7, paragraph 7.2 of this Flight Manual.

- maximum pilot's weight (solo) 242 lb

Maximum useful load (occupants,
baggage, optional equipment) 440 lb

Maximum baggage compartment load 22 lb

2.5 CENTRE OF GRAVITY

Centre of gravity range

- front limit 23 % MAC i.e. 4.397 in
(112 mm) aft of
reference datum

- rear limit 40 % MAC i.e. 12.783 in
(325 mm) aft of
reference datum

The reference datum is located 93.6 in aft of the sailplane nose.

2.6 APPROVED MANOEUVRES (UTILITY CATEGORY)

Manoeuvre	Airspeeds - KIAS				Procedures
	SOLO	DUAL	ENTRY	RECOVERY	
Loop	86	97	X		Section 4.3.6 item 1.
Stall turn	92	97	X		Section 4.3.6 item 2.
Lazy Eight	97	97	X		Section 4.3.6 item 3.
Spin	32 86	32 86	X	X	Section 4.3.6 item 4.
Chandelle(climbing)	97	97	X		Section 4.3.6 item 5
Steep turn	92	97	X		Section 4.3.6 item 6.



2.7. MANOEUVRING LOAD FACTORS

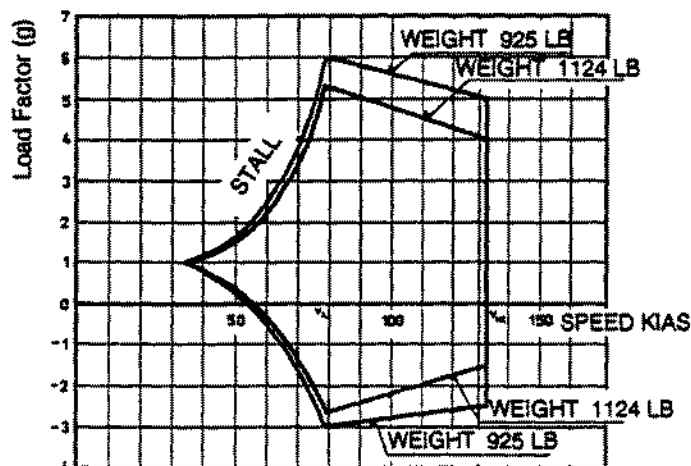


FIG. 2 - 1

2.8 FLIGHT CREW

Maximum number of occupants is two. If the sailplane is to be flown solo, the pilot must be sitting in the front seat and his weight (including parachute) must be 154 lb at least. If the pilot's weight is less than 154 lb, it is necessary to use the cushion with 33 lb ballast.

WARNING: THE REAR SEAT MUST BE SECURED AGAINST FOLDING AND SAFETY HARNESSSES ON THE REAR SEAT MUST BE CONNECTED, DRAWN TOGETHER AND SECURED.

2.9 KINDS OF OPERATION

The sailplane is certified in the Utility Category with a limited selection of approved aerobatic manoeuvres (see paragraph 2.6). The sailplane is approved for Day VFR operations. Cloud- flying is permitted where operational regulations permit.

WARNING: OPERATIONS IN ICING CONDITIONS ARE PROHIBITED. OPERATIONS ARE LIMITED BY THE INSTALLED EQUIPMENT AS LISTED IN SECTION 6.

IT IS NECESSARY TO RECORD THE AEROBATIC MANOEUVRES INTO THE SAILPLANE LOG BOOK SO AS TO BE POSSIBLE TO FIND OUT WHENEVER TOTAL FLIGHT TIME OF ACROBATICS FROM DATA OF SAILPLANE MANUFACTURE.



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2.10 AEROTOW AND WINCH LAUNCHING

Aerotow

- the maximum cable strength or cable safety device (weak link) strength is 1460 lb .
- the minimum cable length for aerotowing is 50 ft , recommended length is 100-130 ft .

Winch-launching

- the maximum cable strength or cable safety device (weak link) is 1460 lb .

2.11 OTHER LIMITATIONS

A. Maximum crosswind component

- maximum demonstrated crosswind component for safe approach, landing and aerotow launching is 16 kt for angle 90° .

Maximum demonstrated crosswind component for winch-launching:

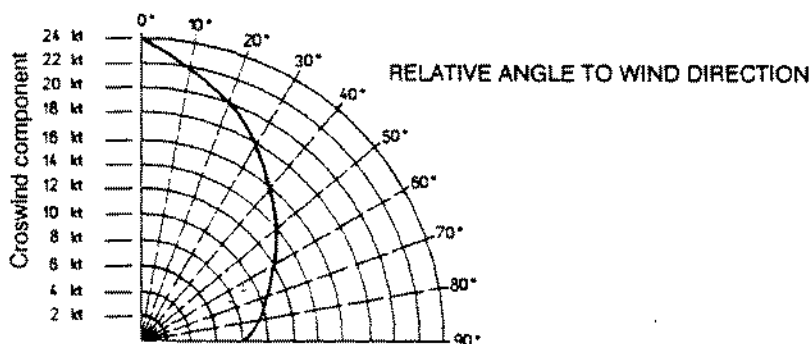


FIG. 2 - 2

B. Maximum demonstrated operating altitude - 13,780 ft

C. Maximum Tire Pressure 37 psi.



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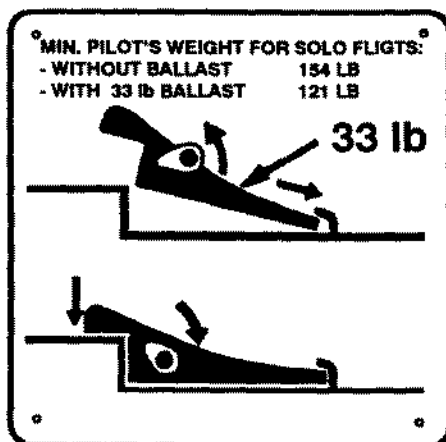
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2.12 LIMITATIONS PLACARDS

The following operating limitations are emphasized on the limitation placards in both cockpits:

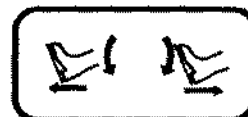
a) front cockpit



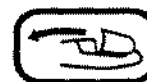
SEAT BACK



PEDAL ADJUSTMENT



AIR VENT



CANOPY - JETTISON see para 3.2

CENTRE OF GRAVITY RANGE

FRONT LIMIT . 23 % MAC
REAR LIMIT . . 40 % MAC

b) both front and rear cockpits

MAX. WINCH - LAUNCHING SPEED 65 KIAS
MAX. AERO - TOWING SPEED 81 KIAS
MAX. MANOEUVRING SPEED 81 KIAS

See para 2.2

OPERATING LIMITATIONS

THE MARKING AND PLACARDS INSTALLED IN THIS SAILPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING IN UTILITY CATEGORY. OTHER LIMITATIONS ARE CONTAINED IN SAILPLANE FLIGHT MANUAL.

MAX. GROSS WEIGHT 1124 LB

PERMITTED AEROBATIC MANOEUVRES:

LOOP SPIN
STALL TURN CHANDELLE(Climbing)
LAZY EIGHT STEEP TURN
SOLO FLIGHT FROM FRONT SEAT ONLY

VNE . . . 133 KIAS
VRA . . . 86 KIAS



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MAX. ALLOWABLE SPEED VS ALTITUDE

PRESSURE ALTITUDE (FT) UP TO	11 000	15 000	20 000	25 000	30 000	35 000
SPEED KIAS, MAX.	133	123	111	100	89	75



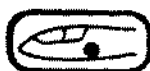
AIR BRAKES



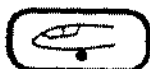
JETTISON/LIFT OFF
(REAR SEAT ONLY)
see para 3.2



WHEEL BRAKE



LANDING GEAR



FRONT LIFT OFF
see para 3.2



BAGAGGE
(REAR SEAT ONLY)



TRIMMER



RELEASE

THIS GLIDER MUST
BE OPERATED IN
COMPLIANCE
WITH THE OPERA-
TING LIMITATIONS
STATED IN THE
FORM OF
PLACARDS,
MARKINGS AND
MANUALS



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SECTION 4

Normal procedures

CONTENTS

- 4.1 Introduction
- 4.2 Preflight Inspection
- 4.3 Normal operations and recommended speeds
 - 4.3.1 Take-off and climb
 - 4.3.2 Flight
 - 4.3.3 Approach
 - 4.3.4 Landing
 - 4.3.5 Use of air brakes
 - 4.3.6 Basic aerobatics



4.1 INTRODUCTION

Section 4 provides checklists and information on recommended procedures for normal operation.

4.2 PREFLIGHT INSPECTION



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Sequence of the walkaround inspection

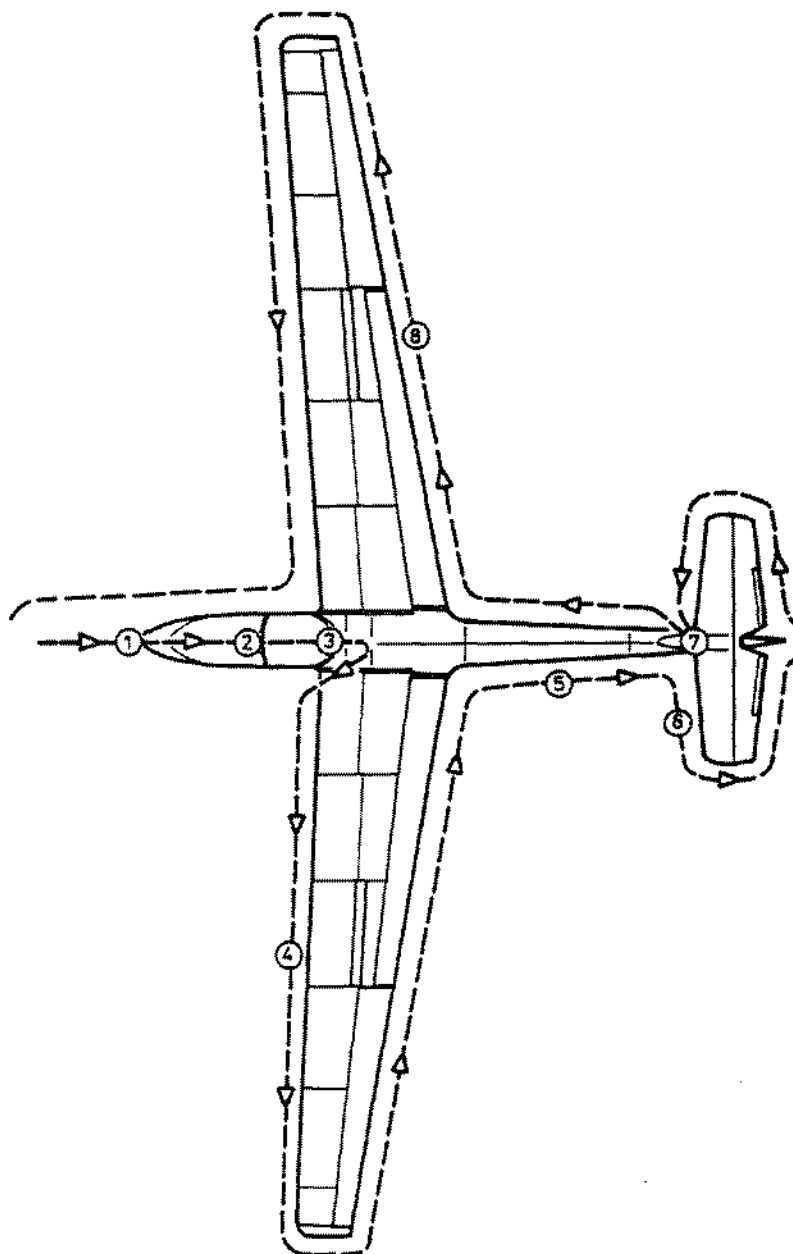


FIG. 4 - 1

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4.2.1 WALKAROUND INSPECTION CHECKLIST

Item No.	Subject	Check/activity
1	<u>Front fuselage section</u>	
	Fuselage skin	no damage
	Cockpit canopy surface	no damage or dirt
	Nose pitot tube	no damage or clogging
2	<u>Cockpit</u>	
	Instruments	no damage
	Altimeters	correct setting QFE (QNH)
	Radio station (if installed)	proper operation
	Safety belts	no damage
3	<u>Landing gear</u>	
	Tire	no damage, correct inflation
4	<u>Left wing</u>	
	Wing skin including leading edge	no damage
	Wing-tip fairing	no damage
	Aileron skin	no damage to fabric cover or trailing edge
	Ailerons	free movement
	Airbrake locking hinges	locking no damage of hinges or control tie rods

(Cont.)

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Item No.	Subject	Check/ activity
5	<u>Rear fuselage section</u>	
	Fuselage skin	no damage
6	<u>Empennage</u>	
	Vertical stabilizer	no damage
	Elevator	free movement
	Horizontal stabilizers	condition of locking wire on the front pin of the horizontal stabilizer (in front of the leading edge of the top part of the vertical stabilizer)
	Rudder	free movement
7	<u>Tail landing gear</u>	
	Landing gear attachment	no damage of attachment
8	<u>Right wing</u>	see Item 4 - left wing



4.2.2 BEFORE TAKE-OFF CHECKLIST

Front seat

Before entering the front cockpit, adjust the front seat back-rest to a position allowing control of the sailplane when fully strapped in.

Rudder control

The position of the rudder pedals should be adjusted with the pilot fully strapped in so that both left and right pedals can be moved comfortably to the full extent of their travel. The position of the rudder pedals in the front cockpit can be adjusted by means of the crank. In the rear cockpit, adjustment to one of three possible positions may be obtained by removing the locking pin.

Note: This can be done only before the flight.

Control column

Check for full and free movement of the control column in all directions; move it to the left, to the right, forwards and backwards.

Instruments

Set the altimeters to zero or as desired by the baro-set knob. Check the other instruments and see that vertical speed indicators and airspeed indicators read zero.

Cockpit canopy

Close and lock.

Safety belts

Fasten the safety belts.

Trim

Set the elevator trim tab to the neutral position marked "0".

Air brakes

Check for easy movement of air brake control. Confirm air brakes retracted for take off.

Tow rope release

Check the tow rope release mechanism for proper functioning.

**4.3 NORMAL OPERATIONS AND RECOMMENDED SPEEDS****4.3.1 TAKE-OFF AND CLIMB****1. Aerotow launching**

The take-off technique by aerotow is entirely conventional. The elevator and rudder efficiency is high enough during the initial stages of the take-off run, that it is easy to prevent directional or roll oscillations by use of rudder or ailerons. Set the elevator trim tab control to a position between „zero“ and „nose heavy“ and hold the control stick in the neutral position - on the landing gear and at liftoff speed pull the control stick gently to unstick the sailplane. Hold the sailplane in horizontal flight at a height of 3 ft (1 m) until the towing airplane starts to climb. The take-off with cross wind is different from the normal take-off. It is necessary to bank the wing into the wind (in proportion to the wind speed) and to unstick the sailplane at a higher speed.

Note: The tow rope should be attached to the front hook only for crosswind teke-off operations.

Note: Before take-off close the ventilation in order that dust and impurities do not get into the cockpit. The ventilation can be opened during at climb.

2. Winch-launching

**WARNING: USE EITHER SIDE HOOKS OR LOWER HOOK
(DEPENDING ON WHICH HOOK IS INSTALLED)**

The winch launching is entirely conventional. Set the elevator trim tab control to the neutral position. The recommended speed for winch launching is 43 - 54 KIAS. Do not retract the landing gear when performing the traffic pattern.

3. Aerotow**a)Climb**

Retract and lock the landing gear (by pulling the handle in your direction) when above a minimum safe height of 66 ft and the minimum speed of 54 KIAS is reached. Trim the sailplane for the climb speed. The sailplane angle of attack is fairly high when the climb speed is low and the view from cockpit is reduced considerably. Therefore it is recommended that to keep a climb speed of 54 - 70 KIAS .

(Cont.)



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The pilot should avoid overcontrolling.

Principles of aerotow are the same as for other sailplanes.

b) Level flight

The maximum speed for aerotow is 81 KIAS. It is necessary to trim the sailplane to reduce control forces and to decrease pilot fatigue during longer flights on tow. It is necessary to realize that control sensitivity increases with flight speed.

c) Descending

A satisfactory rate of descent 390 - 590 ft/min can be obtained when the towing aircraft maintains an airspeed at least of 54 KIAS .

**4.3.2 FLIGHT****1. Turns and circling**

The sailplane is very manoeuvrable and controllable and its behaviour is very good in turns with angles bank up to 60° .

2. Side slipping

The piloting technique of the side slipping is entirely conventional. The angle of bank of the sailplane should be between 10° and 20° . The side slip is not very effective mean of losing height in this sailplane. As, the rate of descent may be effectively increased by the use of the air brakes. If a constant airspeed is to be maintained during a side slip, the angle of pitch must be constant. The air speed indicator is unreliable during slip maneuvers.

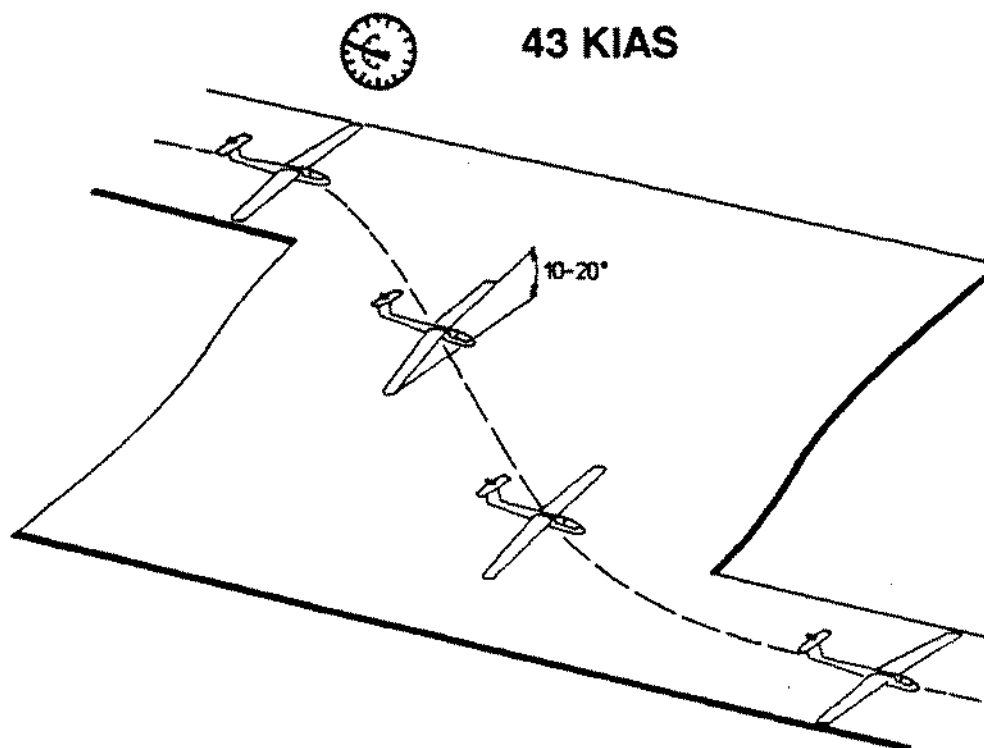


FIG. 4 - 2



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3. Stalls

Slow and continuous pulling aft on the control stick causes the sailplane to stall. Ailerons and rudder should be used to control bank, if any. Pre-stall warning starts (at the speed of about 5% higher than the stalling speed), in the form of buffeting of the rudder pedals and of all front fuselage section. When stalled, the sailplane settles with a gentle pitching. Move the control stick forward and start the stall recovery.

CAUTION: Before stalling and spinning the following procedures must be done:

Trim:	neutral
Air brakes:	retracted and secured
Cockpit canopy	locked and secured
Ventilation	shut
Rudder pedals:	properly adjusted to allow full deflections
Safety belts:	fastened and tight
Loose objects:	removed or secured

4. High Altitude Flight

Operation above 13,780 feet have not been demonstrated by the manufacturer. A sailplane placard provides calculated maximum (VNE) airspeeds above a pressure altitude of 11,000 feet for information only. High altitude flight should be conducted in accordance with any applicable operating rules.

**4.3.3 APPROACH**

The following approach speeds are recommended.

Descent	Air brakes	Approach speeds
Normal	retracted	41-46 KIAS
	extended	43-51 KIAS
Steeper	extended	51-60 KIAS

Anticipate mild sailplane ballooning when using higher approach speeds.

4.3.4 LANDING**Landing on the airport**

The landing manoeuvre is entirely conventional. Use small elevator inputs at the flare. The sailplane should touch down with the landing gear first and then with the tail wheel if landed correctly (to reduce shock to the tail wheel on ground contact). Do not flare prematurely in order to prevent the sailplane from dropping from a higher height.

Off-field landing

It is recommended to land with the landing gear retracted if landing on a soft ground.

Note: In this case extend the wheel before the next flight.



4.3.5 USE OF AIR BRAKES

It is recommended to use the air brakes in following cases :

1. To reduce landing especially roll on rough ground.
2. To increase accuracy of the landing manoeuvre.

Note: In case of using air brakes during landing, it is necessary to maintain an approach speed of about 5 kts higher, because the stall speed with fully opened air brakes is about 3-4 kts higher.

3. To avoid exceeding the never exceed speed (V_{NE}) during unusual attitude recoveries (for example during aerobatics).

It is recommended to use the air brakes in any case when the sailplane starts to increase the speed and the pilot is uncertain of his orientation or how to manage the situation. Configuration with "air brakes extended" will ensure that V_{NE} is not exceeded. Use of air brakes will enhance the safety and makes handling easier because the extended air brakes tend to stabilize the sailplane.

The control lever should be held firmly when operating the air brakes to ensure smooth deployment and retraction.



4.3.6 BASIC AEROBATICS

The L 23 SUPER-BLANÍK sailplane is able to perform the listed approved aerobatic manoeuvres. The rate of acceleration of this sailplane is high, so great care must be taken not to exceed limitations given in Sections 2.2, 2.6 and 2.7.

Instruction guidelines for performing approved aerobatic manoeuvres are given on pages 13 to 19 of this Section.

WARNING: ONLY MANOEUVERS WITH POSITIVE G LOAD FACTORS ARE APPROVED.

(Cont.)



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1. Loop

Enter a moderate dive with slight forward movement of the control stick to gain a speed of 86 KIAS when flying solo or 97 KIAS when flying dual. Raise the nose of the sailplane by slight backward movement of the control stick, taking care not to apply excessive "g" forces, and maintain this rate of backward stick movement throughout the first half of the loop, but do not use more than about 60 % of the control stick full deflection. The load factor must drop in the inverted position. After passing the inverted position the speed will increase and the control stick must be eased forward gradually until the sailplane is flying level again. Before and during this manoeuvre rudder should be used to prevent yaw and ailerons used to keep the wings level. Maintain precise directional control for proper completion.

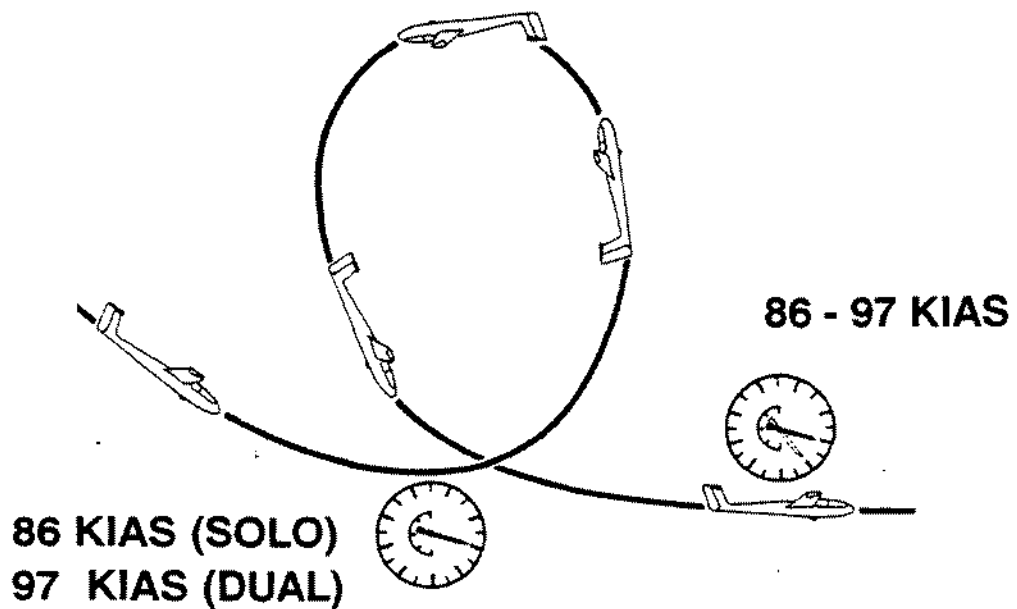


FIG. 4 - 3

(Cont.)

2. Stall turn

This manoeuvre should be begun at the speed of 92 KIAS when flying solo or 97 KIAS when flying dual. Pull the control stick gently backward to bring the nose to a position of about 60° to 70° above the horizon. Ease the control stick forward slightly to maintain this attitude. As the speed falls to 70 - 76 KIAS, start to apply rudder slowly in the required direction of turn. As the force on the rudder decreases, gradually apply full rudder.

Full deflection of the rudder should be reached when the sailplane heads about 45° in the direction of turn. The ailerons should be used against the direction of turn as necessary to prevent the sailplane rolling to the inverted position. As the nose approaches the reciprocal heading, neutralize the rudder, keep the wings level by use of the ailerons, and ease out of the resulting dive, taking care not to apply excessive "g".

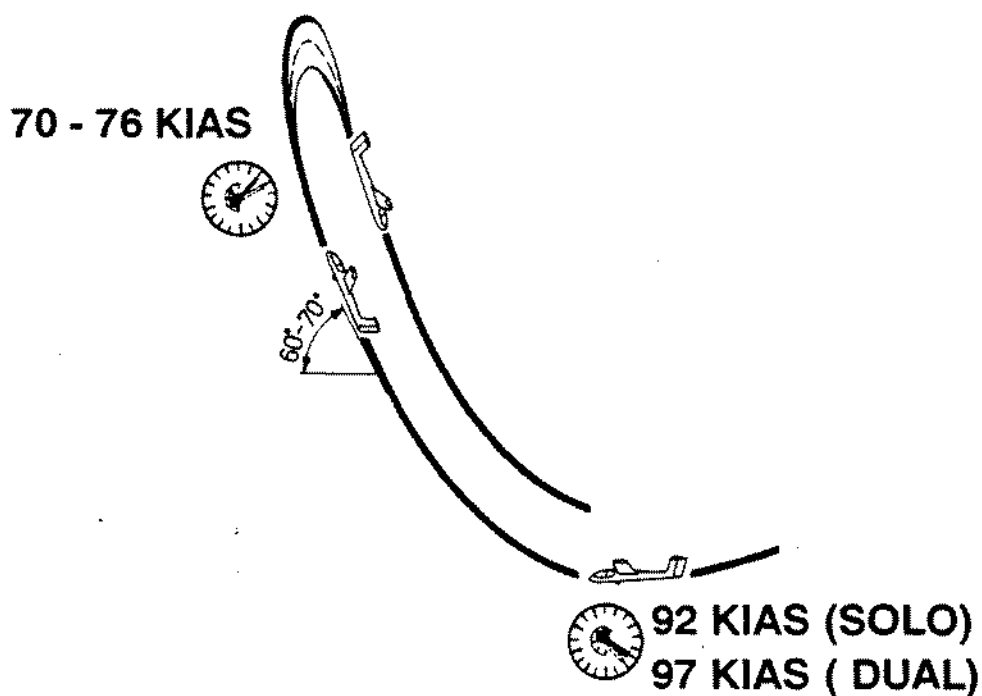


FIG. 4 - 4

(Cont.)



3. Lazy eight

Move the control stick slowly forward to attain the entry speed of 97 KIAS (solo or dual). Perform the steep turn to the selected side, smoothly pulling the control stick with simultaneous coordinated use of ailerons and rudder.

At a speed of 54 KIAS transition the sailplane to a descent and after reaching a speed of 97 KIAS perform the steep turn to the opposite side, smoothly pulling the control stick with simultaneous coordinated use of ailerons and rudder.

The flight path intersects at the lowest point of the manoeuvre.

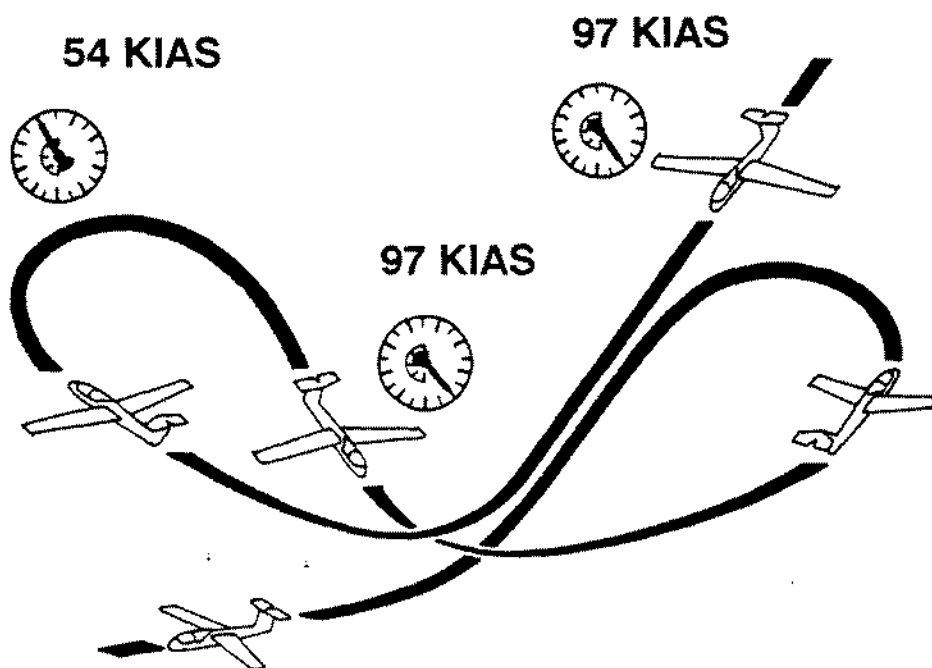


FIG. 4 - 5

(Cont.)



4. Spin

The sailplane performs the spin without any tendency to enter a flat spin at all operating centre of gravity positions. The sailplane has the tendency to recover from the spin by itself, when at the maximum flight weight and the forward centre of gravity. Entering the spin is entirely conventional. Pull the control stick slowly back to approach the stall, use the full deflection of the rudder at the stall speed of approximately 32 KIAS (Fig. 4-3) and maintain full aft deflection of the control stick. Initiate recovery from the spin by applying full opposite deflection of the rudder. When the sailplane stops the rotation, neutralize the rudder and simultaneously ease the control stick forward. Recover the sailplane from the dive in the usual way. The attitude during the spin is 60° to 70° nose down and the loss of height in one turn is approximately 260 ft when flying solo and 390 ft when flying dual. The time of one revolution of the spin is approximately 3.5 secs.

Caution: 1. **Before spinning accomplish the procedures given in the Flight Manual, Section 4, paragraph 3.**

2. **IAS error.**

The airspeed indications become erroneous at large yaw angles, because the static vents on the sides of the fuselage are by-passed asymmetrically.

3. **When the spin is performed as an aerobatic manoeuvre, it is possible to maintain the spin by applying aileron in the direction of the rotation.**

Stop the spin rotation by applying full opposite rudder and neutralize the ailerons. When the sailplane stops the rotation, neutralize the rudder and ease the control stick forward. Pull-out from the dive using standard procedure.

Note: Airspeed indications well above the stall speed during a spin may indicate a spiral dive rather than a spin.

(Cont.)



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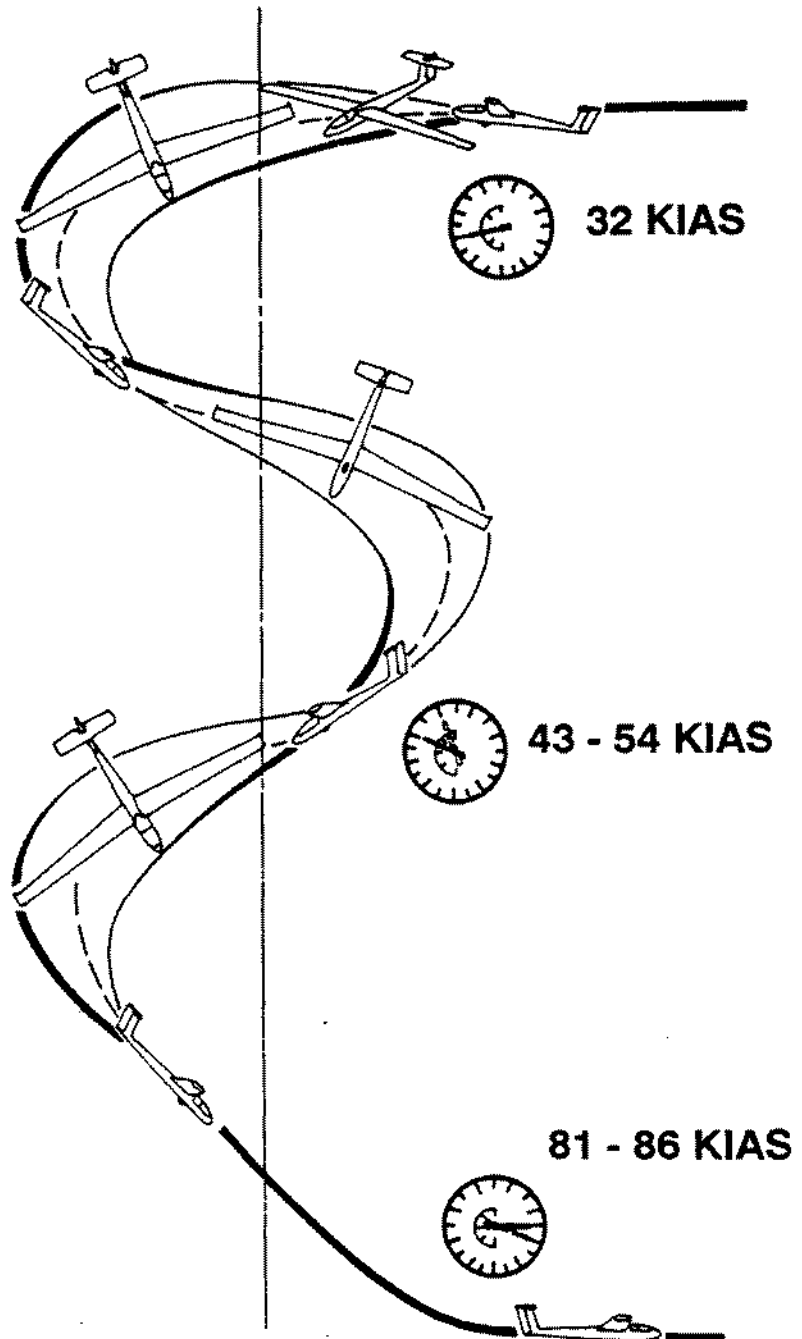


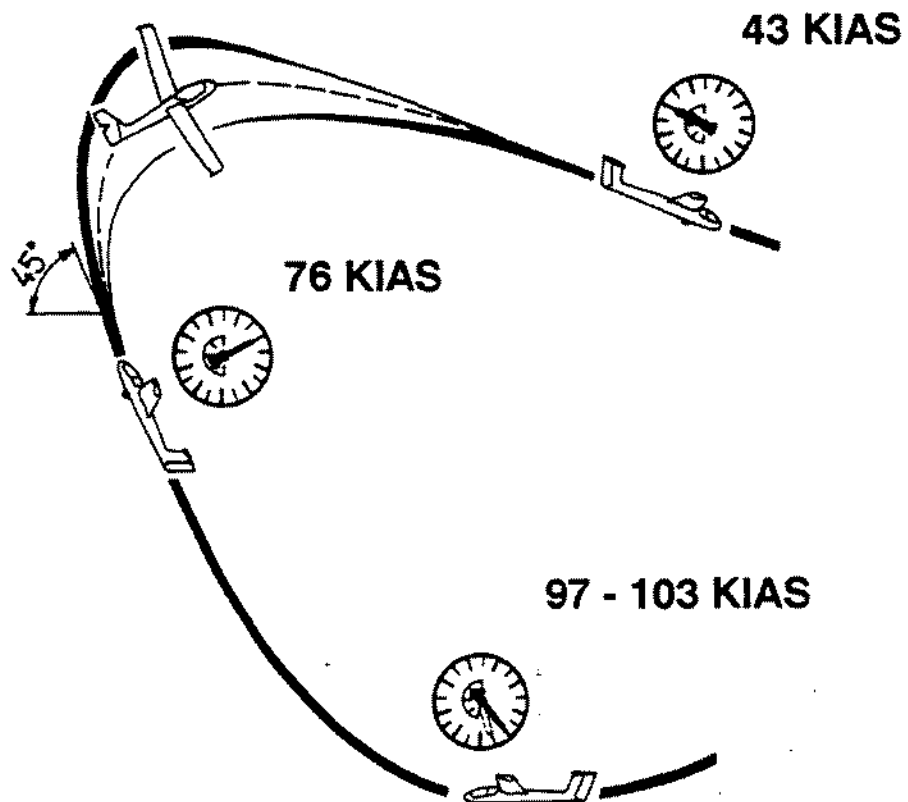
FIG. 4 - 6

5. Chandelle (climbing)

Move the control stick slowly forward to attain the entry speed of 97 to 103 KIAS (solo or dual).

Transition the sailplane to a steep climb at an angle of approximately 45° above the horizon (do not increase the angle).

At a speed of 76 KIAS, apply the rudder to the selected side of the turn and by coordinated positive use of the ailerons make a transition to gliding flight in the opposite direction at a minimum speed of 43 KIAS.


FIG. 4 - 7

(Cont.)

**6. Steep turn**

To perform this manoeuvre keep the entry speed of 92 KIAS when flying solo or 97 KIAS when flying dual. Enter the climb simultaneously with a bank of approx. 45° . After turning 150° start a transition to a glide angle such that the manoeuvre will be finished in the opposite direction with the speed not decreasing below 43 KIAS.

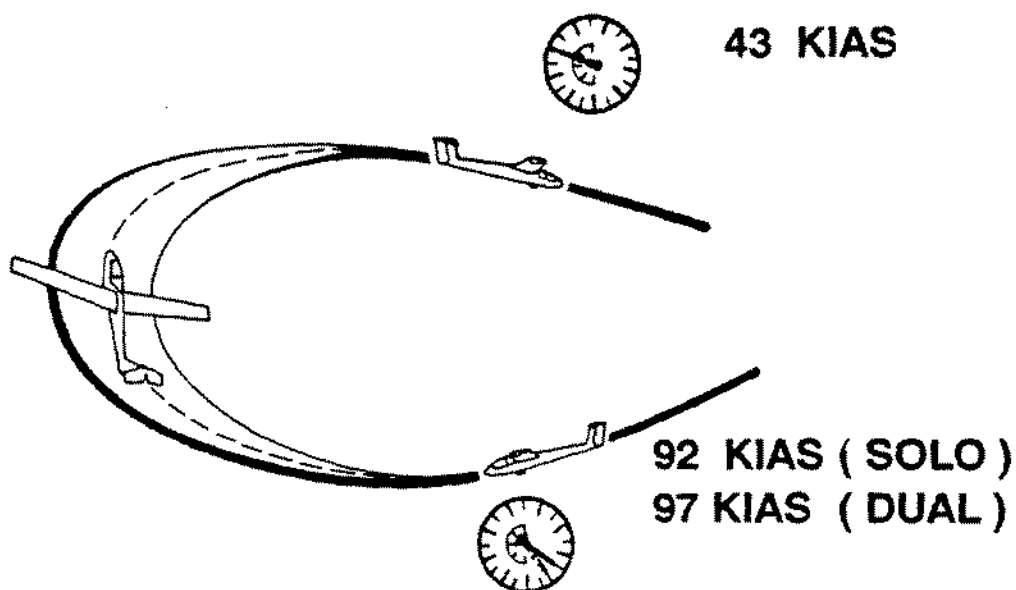


FIG. 4 - 8



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SECTION 5

Performance

CONTENTS

- 5.1 Introduction
- 5.2 Approved data
 - 5.2.1 Airspeed system calibration
 - 5.2.2 Stall speeds
- 5.3 Additional information
 - 5.3.1 Flight polar



5.1 INTRODUCTION

Section 5 provides approved data for airspeed calibration and stall speeds. Other non-approved information is provided.

5.2 APPROVED DATA

5.2.1 AIRSPEED INDICATOR SYSTEM CALIBRATION. (Assumes zero indicator instrument error)

The diagram is effective for maximum flight weight of 1124 lb.

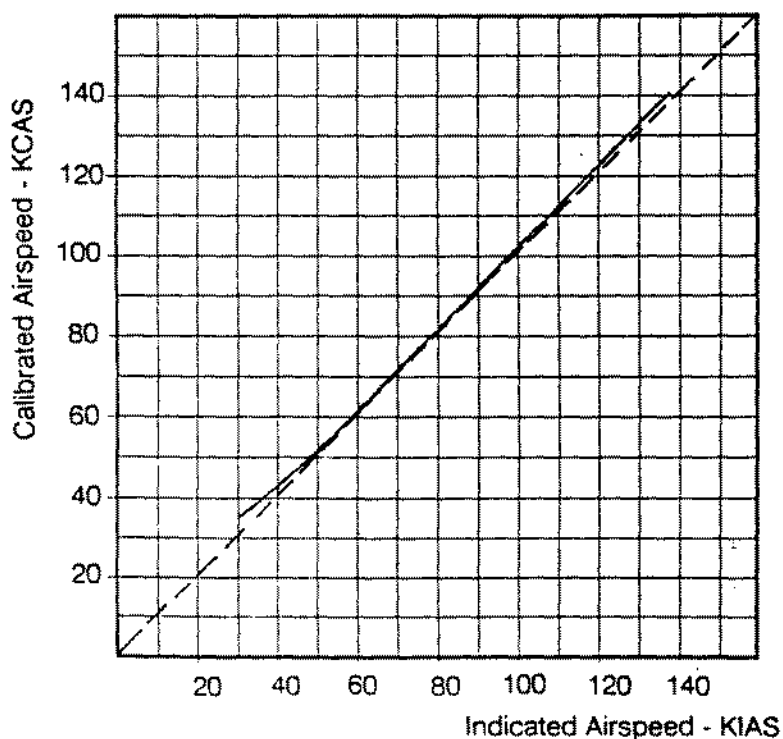


FIG. 5 - 1



5.2.2 STALL SPEEDS (unaccelerated)

The effect of gross weight on stall speed is given in Fig. 5-2.

Note: The stall warning speed is about 5 % higher than stall speed for all configurations.

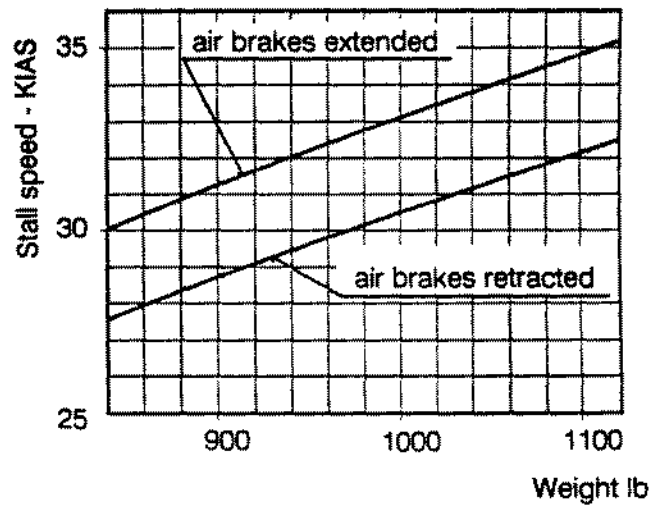


FIG. 5 - 2



5.3 ADDITIONAL INFORMATION

5.3.1 FLIGHT POLAR

5.3.1.1 FLIGHT SPEED POLAR

Maximum flight gross weigh of 1124 lb

Airspeed with the angle

of descent of 45° 124 KIAS

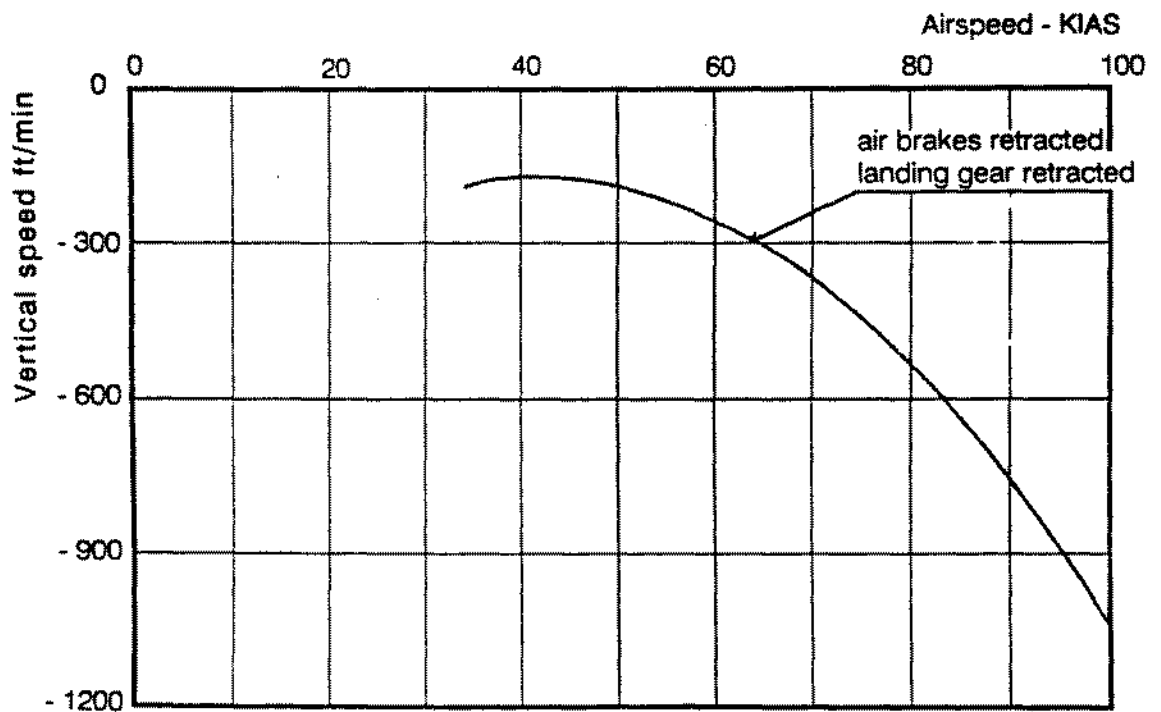


FIG. 5 - 3



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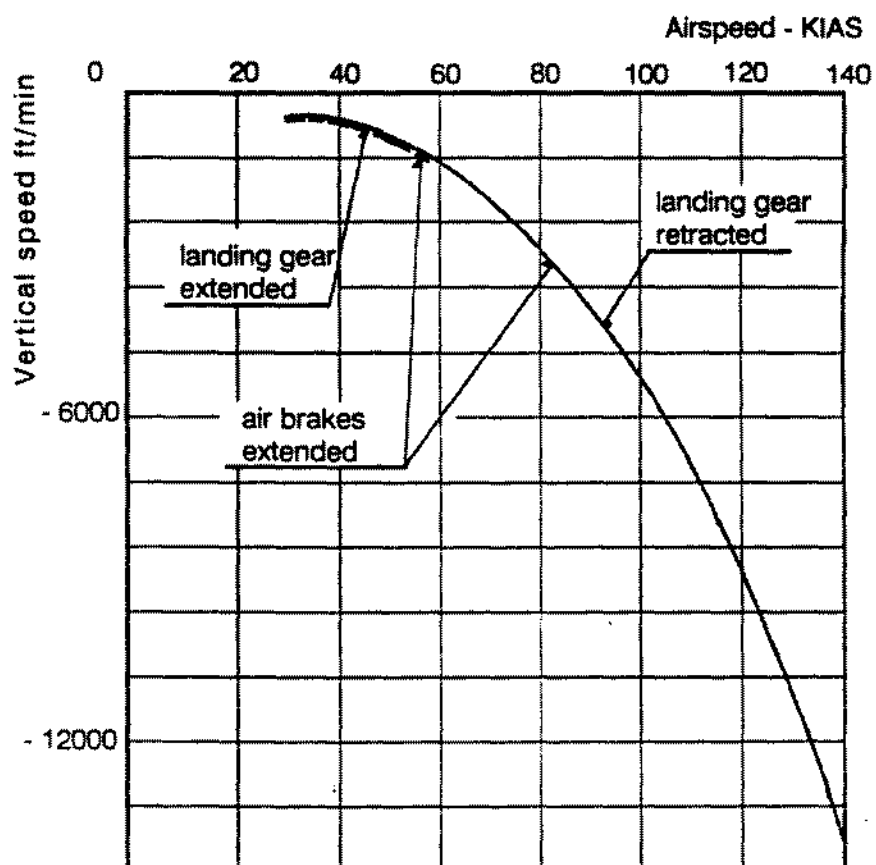


FIG. 5 - 4



5.3.1.2 AERODYNAMIC POLAR

Max. flight weight of 1124 lb

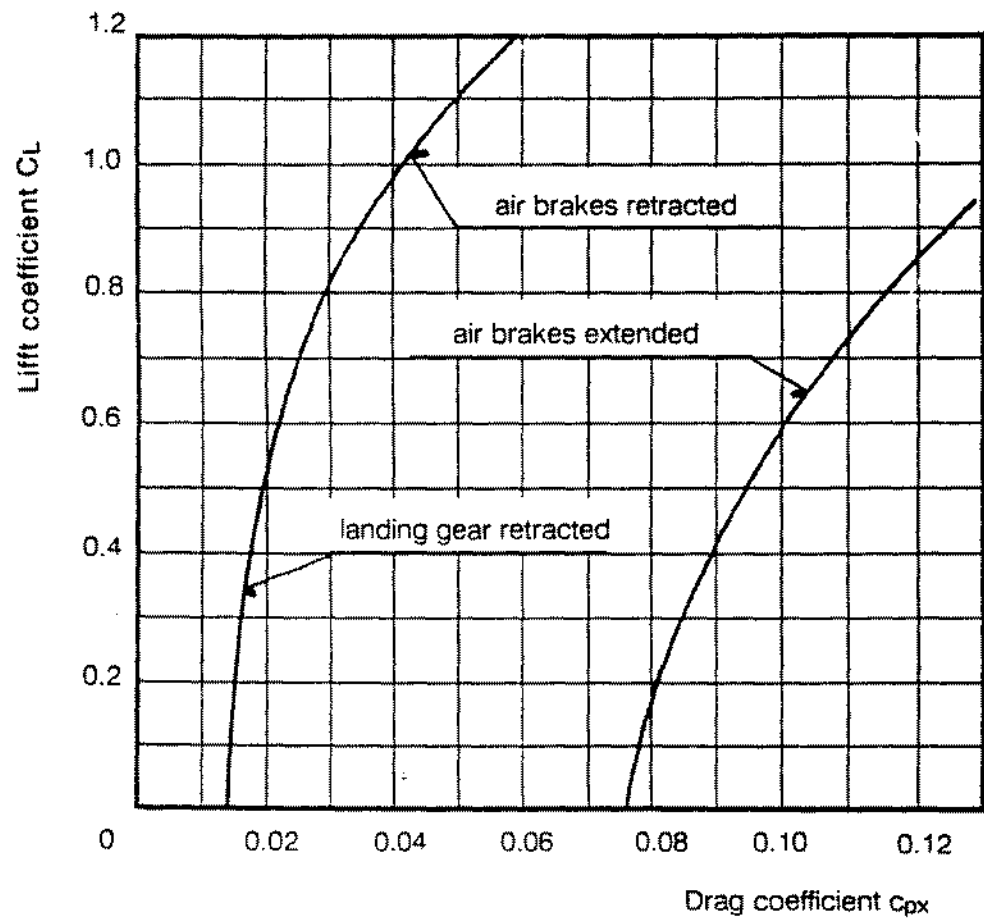


FIG. 5 - 5



SECTION 6

Weight and balance

CONTENTS

- 6.1 Introduction
- 6.2 Weight and balance record
- 6.3 Basic empty weight and moment
- 6.4 Balance chart
- 6.5 Balance record
- 6.6 Equipment list



6.1 INTRODUCTION

Section 6 includes basic empty weight and moment of the sailplane with standard equipment and the equipment list (standard and optional equipment). Procedures for determining the weight and centre of gravity position are explained by an example calculation.

6.2 WEIGHT AND BALANCE RECORD

Weight and balance record providing information for calculating centre of gravity position is given in the Maintenance Manual of the L 23 SUPER - BLANIK Sailplane, chapter 8.

6.3 BASIC EMPTY WEIGHT AND MOMENT

Basic empty weight 683 lb \pm 2%

Moment to the reference plane 17,923.1 in-lb

(see weight and balance record).

The reference datum is located 93.6 in aft of the sailplane nose.

6.4 BALANCE CHART (FIG. 6-1)

1. Balance chart description

The varying load scales are in the upper part of the page. The separate scales are plotted in the middle part of the page. The chart of the centre-of-gravity position vs. sailplane weight is given in the bottom part of the page. The region of the allowable centre of gravity range is the slanted shape in the chart and it refers to all flight conditions.

Cont.



2. Directions for the balance chart use

See FIG.6-1 on Page 6-4, Line 0.

- . Make a dot on the Empty Sailplane Center of Gravity Range corresponding with the value shown on the Balance Record on page 6 - 5. Draw a vertical down to Line 1. The intersection of the vertical and Line 1 is Point A.
- . Next, use Scale 1 at the top of the chart. Measure the distance from 0 on that scale to a number corresponding with the weight of the front pilot + parachute + ballast seat (if used). Transfer this distance from Point A to the left, draw a vertical, and mark the intersection with Line 2 as Point B.
- . Next, use Scale 2. Measure the distance from 0 on that scale to a number corresponding with the weight of the rear pilot + parachute. Transfer this distance from Point B to the left, draw a vertical, and mark the intersection with Line 3 as Point C.
- . Next, use Scale 3 for any changes in the front instrument panel. Measure the distance from 0 on that scale to a number corresponding with the weight of any instrument added or removed. Transfer this distance from Point C to the left (if an instrument is added), to the right (if removed). Draw a vertical, and mark the intersection with Line 4 as Point D.
- . Next, use Scale 4 for any changes in the rear instrument panel in the same fashion as in the previous paragraph. That is how you arrive at point E. Draw a vertical on down to the lower part of the chart.
- . Now, use the weight scale on the lower left part of the balance chart. Mark the sum of all weights: Empty sailplane + front pilot + parachute + ballast seat + rear pilot + parachute + instrument changes + baggage.
- . Draw a horizontal line from the mark to the right. The center of gravity position is at the intersection of this horizontal line with the vertical from Point E.
- . If this intersection is inside the slanted shape, the glider is loaded correctly. If the intersection is outside, the glider has to be reloaded.

Note: The baggage weight is to include any battery, oxygen bottle, water bottle etc. Items in the baggage compartment have no influence on the centre of gravity position, but they must be included to the sum of all the weights.



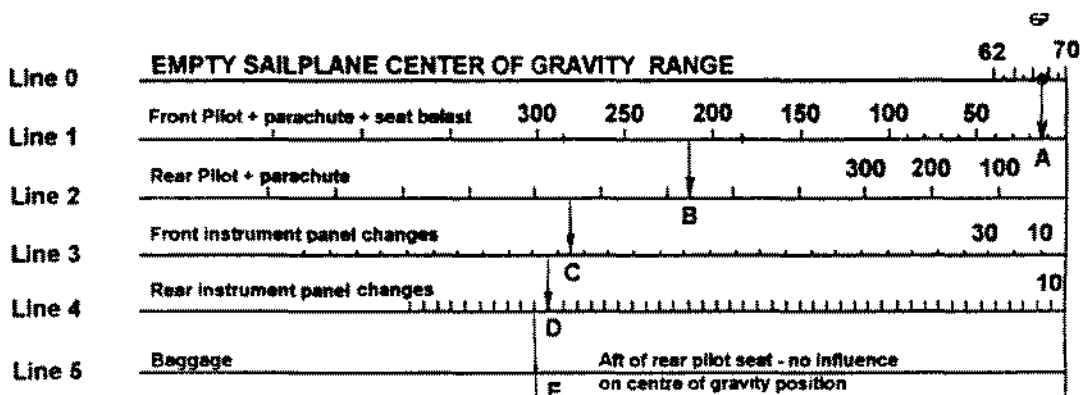
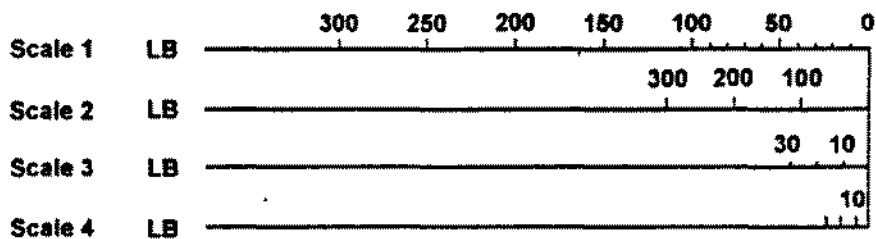
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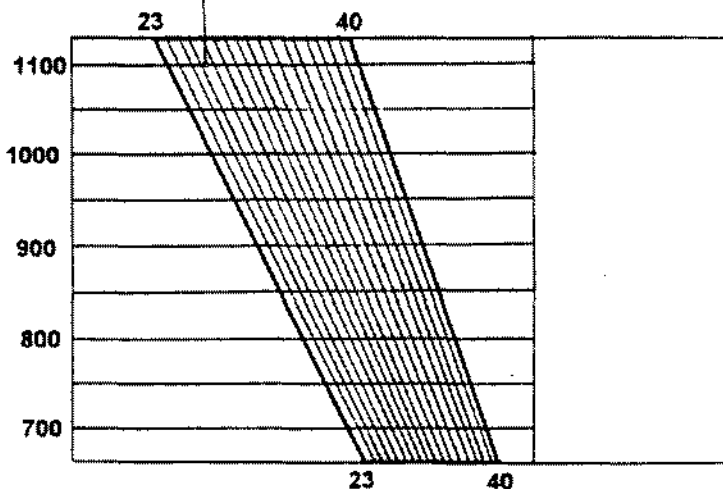
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See pages
2-3 2-4



Weight LB





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6.5 BALANCE RECORD

Date	Empty weight lb	c/g pos. % MAC	Permitted crew + passenger weight with :												Approved	
			Max. baggage (22 lb)				Half baggage (11 lb)				No baggage (0 lb)				Date	Signed
			Front seat		Rear seat		Front seat		Rear seat		Front seat		Rear seat			
			Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
Jun 12/92	635.2	67.3	198	154	198	154	220	154	220	154	243	154	198	154		

Jun 12/92



6.6 EQUIPMENT LIST

Standard (S) items must be installed for all operations. Optional (O) items are available for installation. Installed items for each sailplane equipment list will be marked with an "X" and included in the Empty Weight/c.g. pos of the Balance Record.

	S	O	Subject	Type	Mass lb	Arm from the reference plane (rib No. 1) ft	Date of installation
1	X		Altimeter	IFR 46-20 front instr.panel rear instr.panel	1.75	-5.82 -1.81	
2	X		Airspeed indicator	LUN 1106-8 front instr.panel rear instr.panel	0.88	-5.83 -1.82	
3		X	Electric turn-and-bank/side indicator	LUN 1211.1 front instr.panel rear instr.panel	0.79	-5.83 -1.82	
4		X	Rate-of climb indicator ± 100 ft/min or Rate-of climb indicator ± 10 knots	LUN 1141.02 front instr.panel rear instr.panel LUN 1141.04 front instr.panel rear instr.panel	1.06 1.06	- 5.87 -1.87 - 5.87 -1.87	
5		X	Rate-of-climb indicator ± 6000 ft/min or Rate-of-climb indicator ± 60 knots	LUN 1147.12-8 front instr.panel LUN 1147.23-8 front instr.panel rear instr.panel	1.1 1.1	- 5.802 - 5.802 -1.79	
6		X	Magnetic compass	LUN 1221.1-8 front instr.panel rear instr.panel	0.23	-5.79 -1.79	

Cont.



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	S	O	Subject	Type	Mass lb	Arm from the reference plane (rib No. 1) ft	Date of installation
7		X	Accelerometer	AM-10 front instr. panel	0.55	- 5,51	

Optional (O) Items 3, 4, 5, 6, 7 as applicable are required for pilot's station for cloud flying operations.

	S	O	Subject	Type	Mass lb	Arm from the reference plane (rib No. 1) ft	Date of instalation
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							



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SECTION 7

Sailplane and systems description

CONTENTS

- 7.1 Introduction
- 7.2 Front Seat Ballast



7.1 Introduction

The description and operation of the sailplane and its systems are given in the Maintenance Manual of the L 23 SUPER - BLANÍK Sailplane.

7.2 Front Seat Ballast

A.Seat installation, Fig. 7-1

1. Disassemble and remove the seat from the front cockpit.
2. Put the seat with ballast into the free space and insert stirrups (pos. 2) in the rear part of the seat into the chamber on the rest suspender.
3. Move the levers on the seat sides upwards (pawls will shift in the seat face) and fold the seat (pos. 1) to the floor.
4. Move the levers downwards, the pawls will shift out and they must shift in the hole on the floor frame (if the pawls do not shift in the holes, move the seat to both sides to enable shifting the pawls in the holes).

B.Seat removal

Removal is carried out in a reverse order to installation.

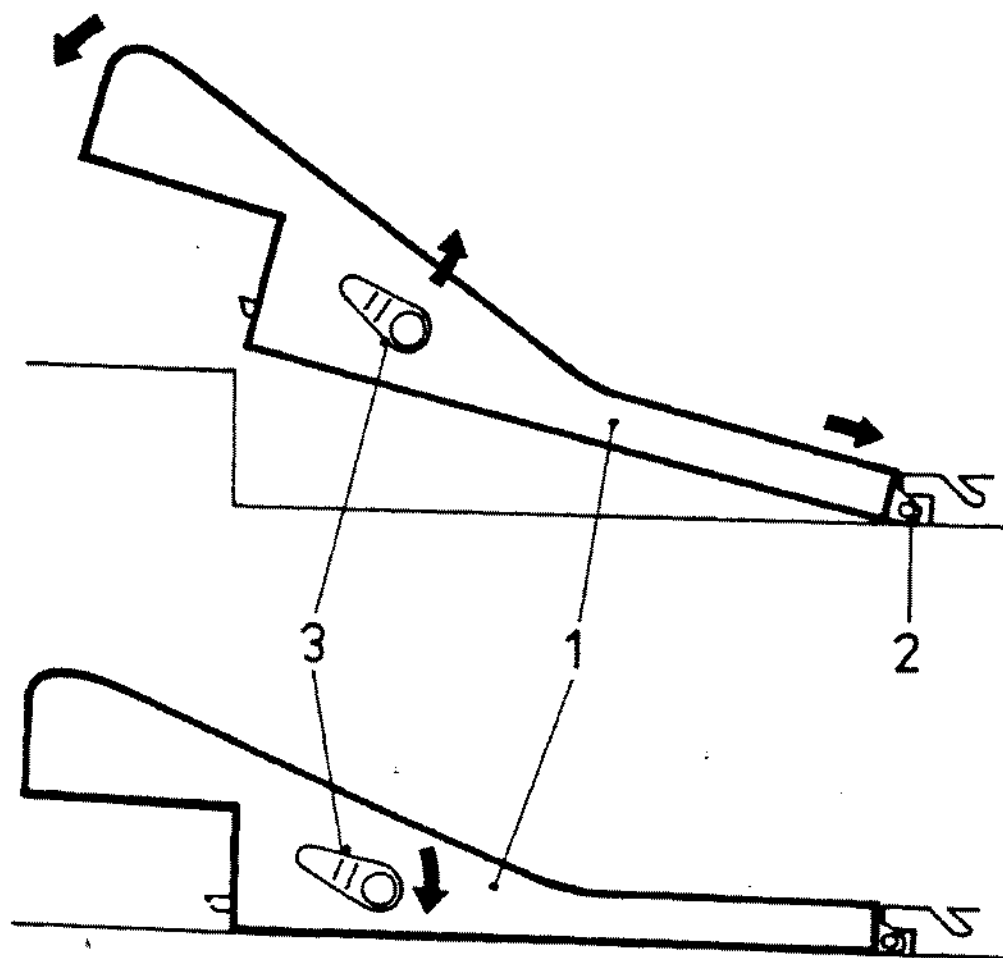


FIG. 7 - 1



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SECTION 8

Sailplane handling, care and maintenance

CONTENTS

- 8.1 Introduction
- 8.2 Sailplane ground handling

**8.1 INTRODUCTION**

Procedures recommended by the manufacturer for proper ground handling, servicing and maintenance, which must be followed if the sailplane is to retain new-plane performance and dependability, are given in the Maintenance Manual of the L 23 SUPER - BLANÍK Sailplane.

8.2 SAILPLANE GROUND HANDLING**8.2.1 WING REMOVAL**

Four people are needed for the wing removal. The first holds the fuselage, the second holds the wing tip, the third and the fourth hold the wing root (see Fig. 8-1). Level the sailplane to the horizontal position.

Take off the fairings between the fuselage and the wing. Uncouple the aileron control tie rods by unlocking safety pins and removing pins on rocker levers, pivoted in consoles on the ribs No.1 (from the fuselage side). Remove lock pins out of both front hinge pins and wing main pins and knock out the front pin. Remove electrical ground strap.

Move the wing gently up and down when installing or removing the pins. Pull the wing from the fuselage by slow careful movement and sit the wing vertically with the leading edge down on the special handling equipment.

8.2.2 WING INSTALLATION

The process of wing installation is the opposite. For easier installation of the centre hinge pins use the centering pin (or installation drift pin) before inserting the main pins (see Fig. 8-1, Detail A). When slipping wing hinges on fuselage hinges make sure that the globular joint of the air brakes control (see Fig. 8-1, Detail B) will be positioned to fit into the control drivers in the wing.

When assembling first slide in the wing main hinge pin and then the wing front hinge pin.

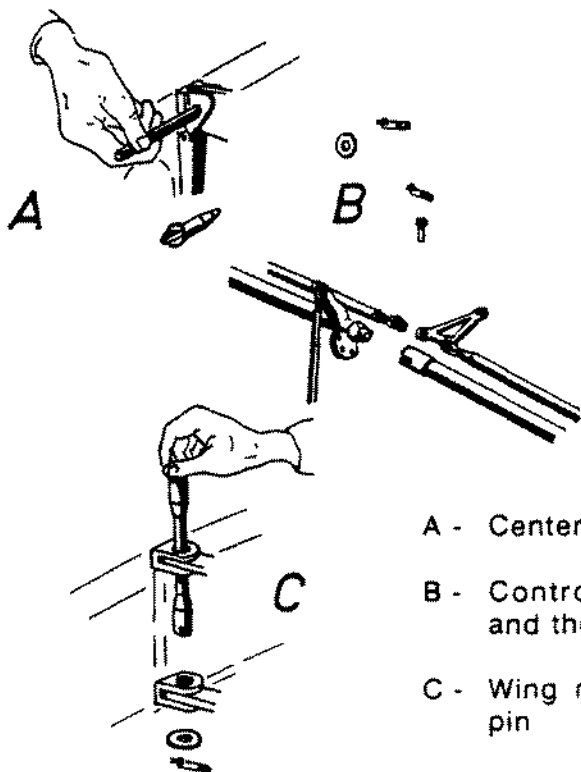
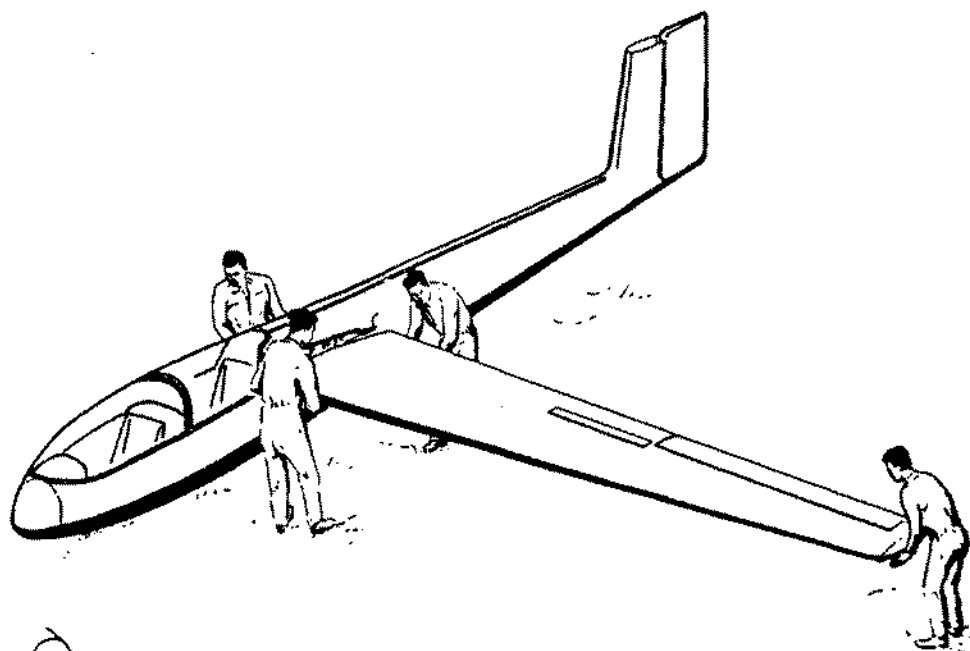


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- A - Centering the front hinge pin
- B - Control joint between the wing and the fuselage
- C - Wing main hinges with the main pin

**8.2.3 HORIZONTAL STABILIZER REMOVAL**

Remove the safety wire from the front pin of the horizontal stabilizers (in front of the leading edge of the vertical stabilizer on its top). Rotate the pin handle 180° and pull out the pin. Elevate the horizontal stabilizer leading edge about 30° up, slip out the horizontal stabilizers from pins by pulling forward. It is recommended that the elevator to be in the neutral position during removal. Put the horizontal stabilizers on the special handling equipment support.

8.2.4 HORIZONTAL STABILIZER INSTALLATION

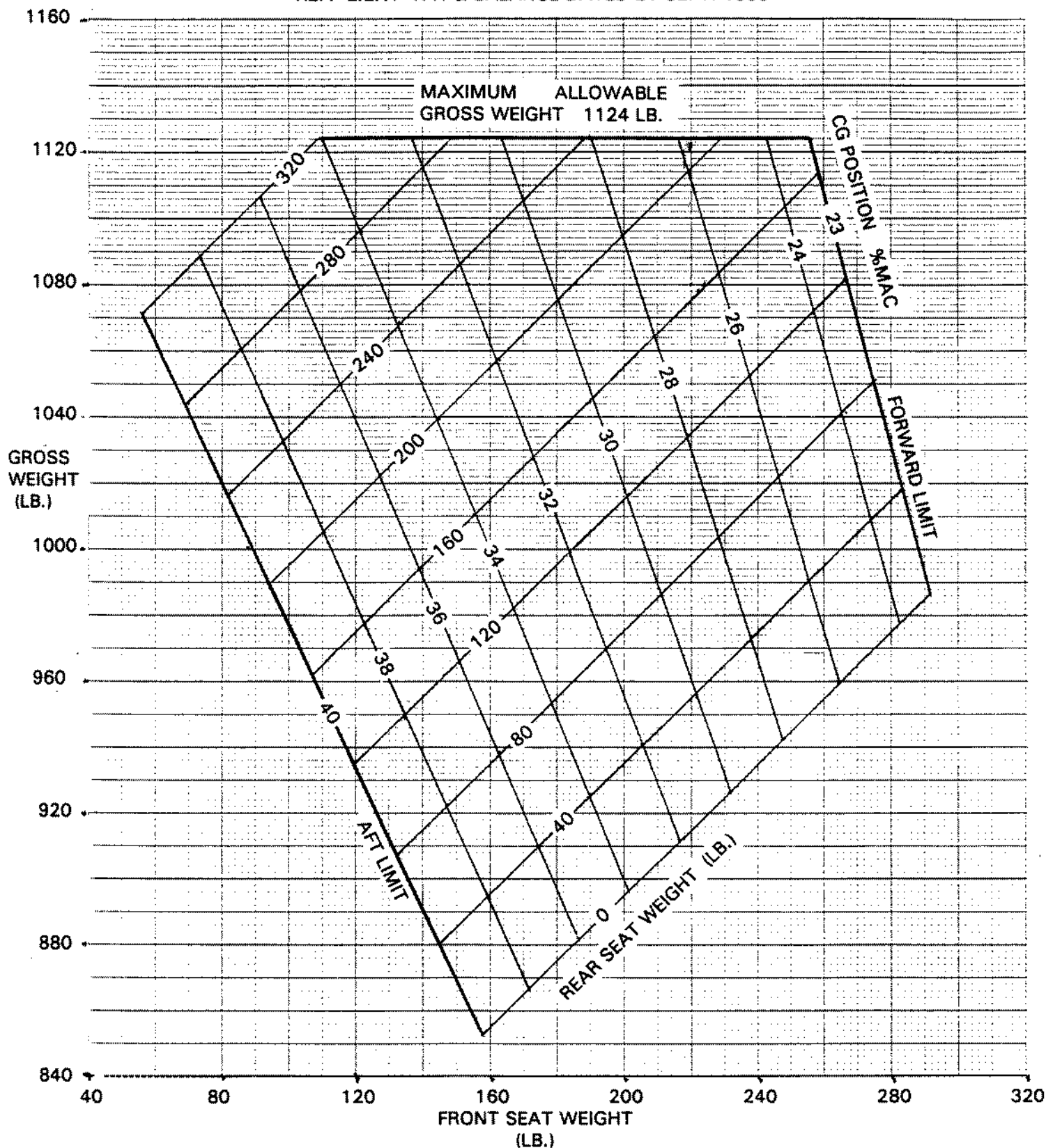
The process of horizontal stabilizer installation is the opposite. It is recommended that the horizontal stabilizer and the automatic connection rocker levers of the elevator trim tab control on the vertical stabilizer, and on the horizontal stabilizer, are approximately parallel.

WEIGHT AND BALANCE

BLANIK L-23

S.N. 938023 N8023

REF: L.E.T. WT. & BALANCE DATED 21 SEPT. 1993

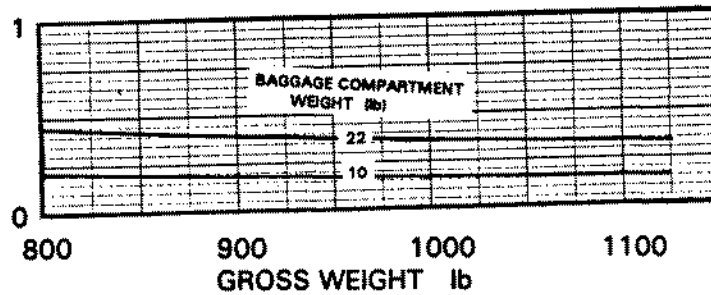


NOTE: CHART IS FOR EMPTY BAGGAGE COMPARTMENT SEE EXAMPLE IF WEIGHT IS CARRIED IN BAGGAGE AREA

EFFECT OF BAGGAGE COMPARTMENT LOAD ON CG POSITION

MAX ALLOWABLE BAGGAGE COMPARTMENT LOAD: 22 lb

AFT SHIFT OF
CG POSITION
%MAC



EXAMPLE

WEIGHT AND BALANCE

BLANIK L-23

S.N. 938023 N8023

REF: L.E.T. WT. & BALANCE DATED 21 SEPT. 1993

FRONT SEAT WEIGHT 170 lb
REAR SEAT WEIGHT 175 lb
22 lb IN BAGGAGE COMPARTMENT

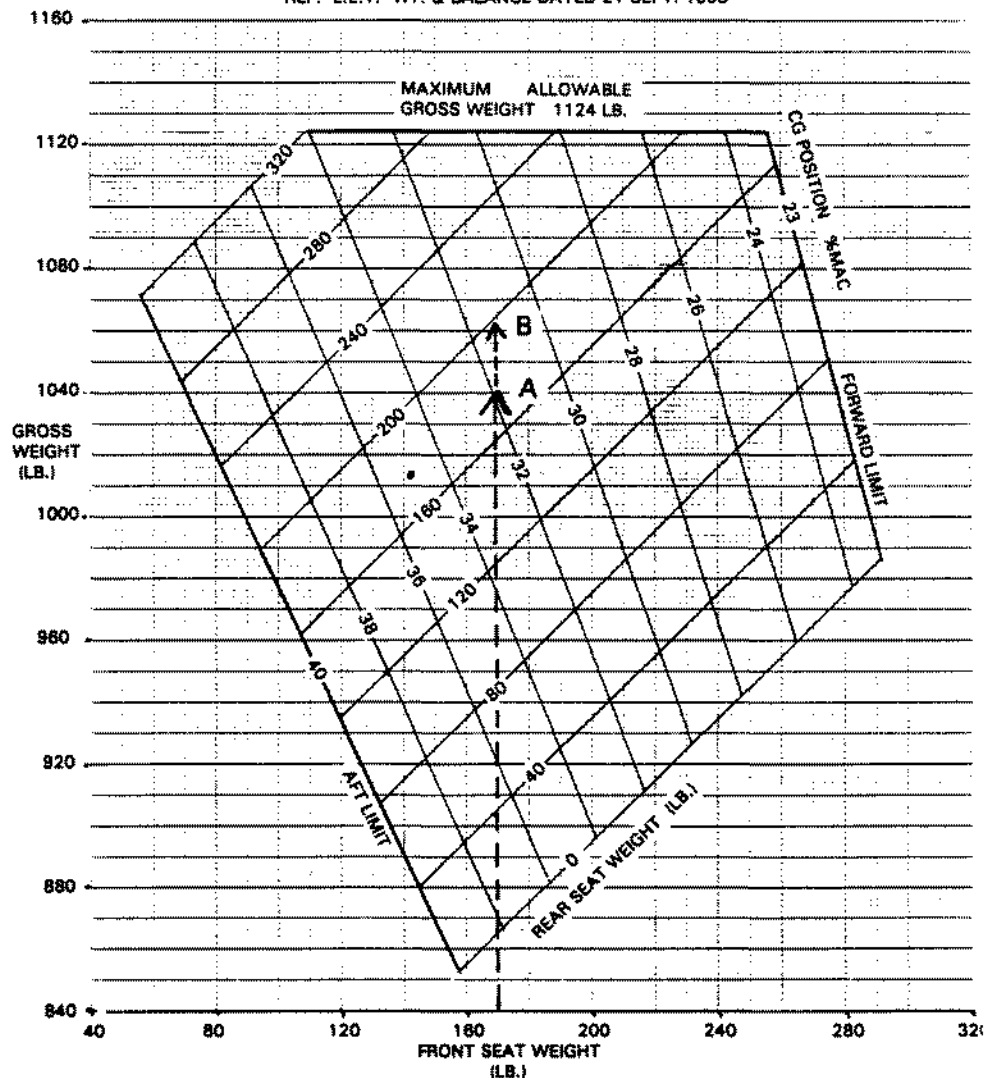
ENTER THE CHART AT 170 lb ON
THE FRONT SEAT WEIGHT SCALE

FOLLOW THE VERTICAL 170 lb LINE
UP TO THE REAR SEAT WEIGHT
VALUE OF 175 lb, (A)
THIS WILL REQUIRE INTERPOLATION
BETWEEN THE 160 AND 200 lb
REAR SEAT WEIGHT LINES.
NOTE: EACH OF THE SMALL DIVISIONS
ON THE GRAPH REPRESENTS 2 lb.

READ THE GROSS WEIGHT WITHOUT
BAGGAGE COMPARTMENT LOAD ON
THE LEFT SCALE. (1040 lb).

ADD THE BAGGAGE COMPARTMENT
WEIGHT TO OBTAIN A GROSS WEIGHT
OF 1062 lb, (B), WELL WITHIN LIMITS.

CHECK THE CHART SHOWING THE AFT
SHIFT OF CG POSITION WITH BAGGAGE
COMPARTMENT LOAD. AT 1062 lb THE
SHIFT AFT FROM (B) IS 0.35 % MAC,
PUTTING THE CG AT THIS LOADING AT
APPROXIMATELY 31.5% MAC, WELL
WITHIN LIMITS



THINGS THAT CAN HAPPEN IF YOU OPERATE OUTSIDE THE WEIGHT AND BALANCE LIMITS

1: BAD THINGS

A: IF YOU EXCEED THE GROSS WEIGHT LIMIT:

YOU MIGHT OVERSTRESS THE AIRCRAFT DUE TO A RECOVERY FROM AN UPSET OR AN ENCOUNTER WITH A GUST. THE AIRCRAFT DOESN'T FLY WELL IF YOU LEAVE PART OF THE WING OR TAIL BEHIND.

THE TOW PILOT WILL NOT LIKE YOU, ESPECIALLY ON A HOT DAY

THE TIRE OR SHOCK STRUT MAY GO FLAT ON LANDING UNLESS THE LANDING IS VERY SMOOTH

B: IF YOU ARE LOADED BEHIND THE REAR CG LIMIT:

THE AIRCRAFT MIGHT BECOME UNSTABLE, MAKING IT VERY DIFFICULT TO FLY

STALL OR SPIN RECOVERIES MAY BE FAR MORE EXCITING THAN YOU REALLY HAD IN MIND

YOU MIGHT OVERSTRESS THE AIRCRAFT DUE TO THE SURPRISE OF A VERY SMALL STICK FORCE PER "G" DUE TO THE AFT LOADING

C: IF YOU ARE LOADED FORWARD OF THE FORWARD LIMIT

YOU WILL FIND IT DIFFICULT TO THERMAL AT MINIMUM SINK SPEED

YOU MIGHT OVERSTRESS THE TAIL DURING A DIVE RECOVERY

YOU MAY NOT HAVE ENOUGH ELEVATOR AUTHORITY TO FLARE PROPERLY ON LANDING, POSSIBLY RESULTING IN A HARD LANDING AND DAMAGE TO USEFUL PARTS OF THE AIRCRAFT LIKE THE LANDING GEAR AND WINGS

2: GOOD THINGS

-0-

SO CHECK THE WEIGHT AND BALANCE AND DON'T FLY UNLESS IT IS WITHIN THE PUBLISHED LIMITS

ČESKÁ REPUBLIKA

STÁTNÍ LETECKÁ INSPEKCE

CZECH REPUBLIC

CIVIL AVIATION INSPECTORATE

EXPORTNÍ OSVĚDČENÍ LETOVÉ ZPŮSOBILOSTI

EXPORT CERTIFICATE OF AIRWORTHINESS

Č.: E - 5728
No

Tímto dokumentem se potvrzuje, že níže uvedený výrobek, jak je podrobně specifikován v **TOLZ**
č. byl přezkoušen a v době vydání tohoto osvědčení byl uznán způsobilým k leteckému provozu ve shodě
s předpisy způsobilosti platnými v ČSFR a vyhovuje zvláštním požadavkům vydaným státem dovozu, s výjimkami
uvedenými dole.

Toto osvědčení neosvědčuje plnění jakýchkoliv obchodních dohod mezi dodavatelem a odběratelem a neopravňuje
k provozu letadla.

This certifies that the product identified below and particularly described in **CS Type Cert. No. 89-02**.....
has been examined and as of the date of this certificate is considered airworthy in accordance with Czechoslovak
airworthiness requirements and is in compliance with special requirements of the importing State, except as noted below.
This certificate in no way attests to compliance with any agreements or contracts between the vendor and purchaser,
nor does it constitute authority to operate an aircraft.

Výrobek: Product:	Sailplane		
Typové označení: Type Designation:	L 23 SUPER-BLANIK		
Výrobce: Manufacturer:	LET a.s. Kunovice, CR		
Výrobní číslo: Serial No.:	938023		
Stát dovozu: Importing State:	USA		
Výjimky: Exceptions:	none		
Výrobek je: Product is:	Nový New X	Po gen. opravě Newly Overhauled	Použitý Used

The glider covered by this certificate has been examined, tested
and found to conform to the type design approved under FAA
Type Certificate No. G60EU and is in condition for safe operation.

September 23, 1993

Datum vydání - Date of Issue



[Handwritten Signature]
Podpis - Signature

Diagram illustrating the weight distribution and center of gravity (CG) for a model aircraft. The aircraft is shown in two views: a side profile and a top-down view.

Side Profile View:

- Dimensions: 2.200, 1.253, 0.18, 0.008, 0.09, 0.2, 0.1765, 100% SAT, 0.1765, NIB2, XL, NIB4, R1, R2, X1=0.567, X2=4.346, and GL.
- Labels: 3, 12, NIB2, NIB4, R1, R2, X1=0.567, X2=4.346, GL.

Top-down View:

- Dimensions: 0.1765, SAT.

Table A: Values obtained by weighing

Masses		
	gross	tare
R ₁	253,5 kg (1b)	18,2 (1b)
R ₂	83,5 kg (1b)	3,6 (1b)

The sailplane weighed
on supports

All dimensions are in
metres

The ladding gear extended

Masses				Dimensions
	gross	tare	net	
R ₁	253,5 ^{kg} (1b)	18,2 ^{kg} (1b)	235,3 ^{kg} (1b)	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> $x_1 = 0.567 \text{ m}$ </div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-top: 5px;"> $x_2 = 4.346 \text{ m}$ </div>
R ₂	83,5 ^{kg} (1b)	3,6 ^{kg} (1b)	79,9 ^{kg} (1b)	
G _L			315,2 ^{kg} (1b)	

a) relative to the reference plane	b) relative to the mean aerodynamic chord
$X_L = \frac{R_2 \cdot 4.346 - R_1 \cdot 0.567}{G_L}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $X_L = 0,678 \quad \text{m}$ </div>	$\bar{X}_T = \frac{(X_L + 0.177) \cdot 100\%}{1.253}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\bar{X}_T = 68,27 \quad \% \text{ MAC}$ </div>

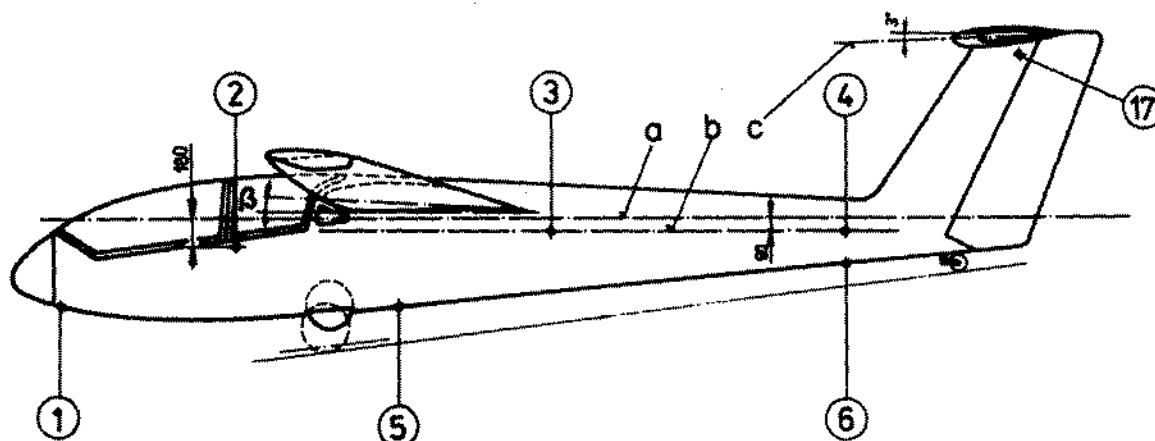
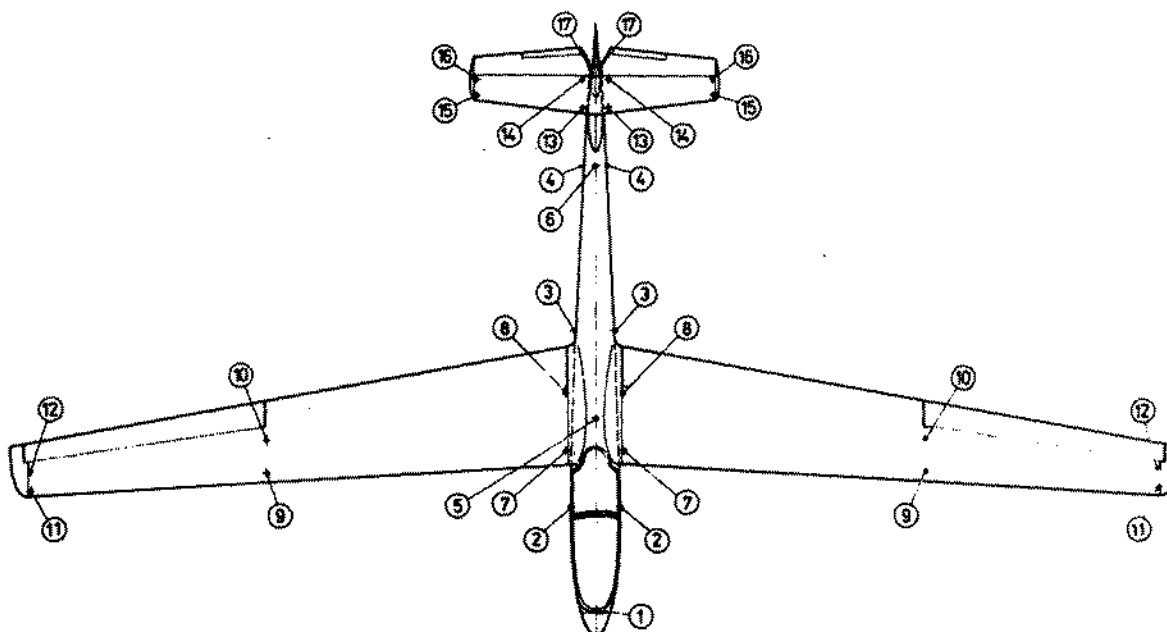
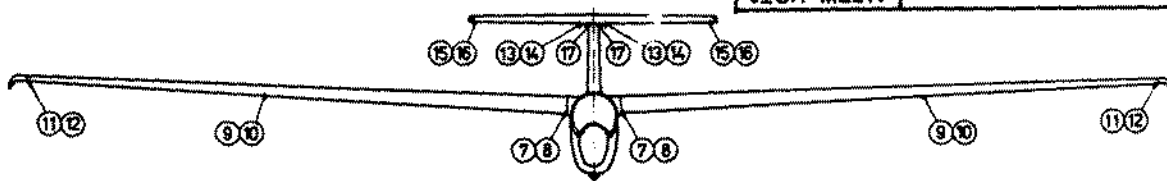
21.9.1993
.....
Uherské Hradiště-Date

LET
akciová společnost
KUNOVICE
zkušebna zálet. o.č.

Ing. JAROMÍR MATYŠKA
Aircraft maintenance
technician type L and
License No 206H706
Elaborated by

L 23 SUPER-BLANIK SAILPLANE LEVELLING AND RIGGING RECORD

Type	L23 SUPER-BLANIK
Manufactured by	LET C. E. Uh. Hradiště
Serial number	938023
Registration mark	NB023



- a - fuselage datum
- b - horizontal levelling plane
- c - stabilizer chord

The levelling procedure is given in the Maintenance Manual of the L 23 SUPER-BLANIK Sailplane (Do-L23.1031.1), Section 8-20-00.

VERTICAL MEASUREMENTS										
Measurements	Level point No.	Theoretical values LH and RH (mm)			Measured values					
					LH (mm)			RH (mm)		
		Value	Difference	Tolerance	Value	Difference	Tolerance	Value	Difference	Tolerance
Fuselage seg and twist	1	-609	-	±5	-609					
	2	- 90	-	±2	-90			-90		
	3	0	-	-	-1			0		
	4	0	-	-	0			0		
Wing twist. Angle of wing setting relative to the horizontal levelling plane. Wing dihedral. Wing position relative to the horizontal levelling plane.	7	151	22,5	±2	155			153		
	8	128,5			132	23	+ 0,5	130,5	22,5	0
	9	371	4,5	±2	364,5			364,5		
	10	375,5			369	4,5	0	368,5	4	- 0,5
	11	540	2,5	±2	538			540,5		
	12	542,5			541	3	+ 0,5	543	2,5	0
Stabilizer twist. Angle of stabilizer setting relative to the horizontal levelling plane. Stabilizer position relative to the horizontal levelling plane.	13	1428,5	6,7	±4	1425			1425,5		
	14	1435,2			1431	6	- 0,2	1437,5	6	- 0,2
	15	1450,9	1,3	±4	1442			1450,5		
	16	1452,2			1448	1	- 0,3	1453	2,5	+ 1,2
	15	1450,9	0	±8	1442	-3,9		1450,5	- 0,4	
HORIZONTAL MEASUREMENTS										
Vertical plane - - sailplane longitudinal axis. Fuselage seg.	1	0	0	±5	0			0		
	5	0		±5	0			0		
	6	0		±5	0			0		
Wing position relative to the sailplane longitudinal axis.	6	8937		±20						
	12				8944	+2		8946	+9	
Stabilizer position relative to the sailplane longitudinal axis.	5	5238		±15						
	15				5232	-1		5233	-5	
Fin position relative to the wing.	12	9575		±20						
	17				9571	-4		9570	-5	
CONTROL SURFACE DEFLECTIONS										
Type of measurement	Nominal value (deg.)		Measured value (deg.)		Side	Remark				
	up	down	up	down						
Elevator deflection	32°±2°	25°±1°	34°	25°	LH					
			33°	26°	RH					
Elevator trim tab deflection	15°±1°	35°±1°	15°	35°	LH					
			15°	35°	RH					
Aileron deflection	34°±2°	13°±2°	35°	15°	LH					
			35° 30'	14° 30'	RH					
	RH	LH	RH	LH						
Rudder deflection	30°±1°	30°±1°	31°	30°						

LIST OF INSTRUMENT CERTIFICATES OF QUALITY AND COMPLETNESS

L 23 SUPER-BLANIK

Serial No. 938023

No.	Name	Type	Serial No.	Note
1	Landing gear shock absorber	L 13.501-17	31-129	without. certif.
2	Air speed indicator	LUN 1106.12-8	9324011	"
3	Air speed indicator	LUN 1106.12-8	9324016	"
4	Turn and band indicator	LUN 1211.1	9112635	"
5	Turn and band indicator	LUN 1211.1	9109535	"
6	Rate of climb indicator	LUN 1141.04-8	9322144	"
7	Rate of climb indicator	LUN 1141.04-8	9322135	"
8	Rate of climb indicator	LUN 1147.23-8	9324005	"
9	Liquid type compass	LUN 1221.1-8	9106601	"
10	Liquid type compass	LUN 1221.1-8	9106610	"
11	Altimeter	LUN 1124.03-8		
12	Altimeter	LUN 1124.03-8		
13	Wing	A 720 210 L	938023	without. certif.
14	Wing	A 720 210 P	938023	"
15	Winglet	A 721 450 L	938023	"
16	Winglet	A 721 450 P	938023	"
17	Elevator surface	A 730 200 N	938017	"
18	Elevator	A 730 300 N	938017	"
19	Rudder	A 730 500 N	928028	"
20	Landing gear wheel	350 x 135	54-76	"
21	Wheel brake	350 x 135	97-75	"
22	Landing gear tyre	350 x 135	1104028	"

22.9.1993

LEA
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