



ASK 21 VH-WKI INFORMATION FOR PILOTS

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August 2008
(Revised April 2017)

Table of Contents

1. [General Information/Specifications](#)
2. [Daily Inspection](#)
3. [Rigging / DeRigging Notes](#)
4. [Placards](#)
5. [Pilot Handling Notes](#)
6. [Wheel Brake Information](#)
7. [Spare Parts](#)
8. [Maintenance Schedule](#)

1. GENERAL INFORMATION/SPECIFICATIONS

The ASK 21 is a two-seat sailplane in tandem configuration, with a sprung, fixed main wheel, nose wheel and T-tail. Designed by Rudolph Kaiser and produced by Alexander Schleicher GmbH, this type had its first flight in 1979. More than 900 have been produced.

Registration: VH-WKI	Serial No: 21313	Manufactured 1986
Wing Span		17.00 metres
Fuselage Length		8.35 metres.
Wing Area		17.95 M ²
Height		1.50 metres
Aspect Ratio		16:1
Max AUW		600 Kg
Max Wing Loading		33.4 kg/M ²
Empty Weight		381.5 Kg
Vne		151 Kts
Max Rough Air (V _B)		108 Kts
Max Maneuvering (V _M)		97 Kts
Max Aerotow (V _T)		97 Kts
Max Winch Launch (V _W)		81 Kts
V _{ne} Reduction with Altitude (Ft)		
	5000	151Kts
	10000	144Kts
	15000	132Kts
	20000	121Kts
Cockpit Load, subject to AUW		
	Front Seat	Min 70Kg, Max 110Kg
	Rear Seat	Min 0Kg, Max 110Kg
	Wing Root Baggage	Max, 10Kg each side

Cockpit Ballast (1 disc =1.25Kg pilot weight)	Min Cockpit Load (Kg)
0	70
1	68.7
2	67.5
3	66.25
4	65.00
5	63.75
6	62.50
7	61.25
8	60.00
9	58.75
10	57.50

Tow Rope Weak Link	
Aerotow	600 Kg
Winch Tow	1000 Kg

Tyre Pressures	
Main	270 kPa (38 PSI)
Nose	200 kPa (28 PSI)
Tail	250 kPa (36 PSI)

Crosswind Component	Demonstrated crosswind component, 8 Kts, (15 Km.Hr)
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Wet Wings	add 5 Kts to approach speed with wet wings
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Approved Aerobatic Maneuvers	Entry Speeds, Knots	
	Single	Dual
Loop	84	92
Split 'S'	92	97
Slow Roll	81	89
Stall Turn	89	97
Immelmann	89	97
Steep Climbing Turn	76	81
Lazy Eight	76	81
Chandelle	86	95

Inverted Flight	No Pitot extension	With Pitot Extension
Vne	130 Kts IAS	151 Kts IAS
Maneuvering	76 Kts IAS	97 Kts IAS

Wheel Brake

The ASK 21 main wheel brake is a very effective, heavy duty, hydraulically actuated disc brake operated at the full extension of the air-brake lever. Care must be exercised to ensure the brake is not **ON** at touchdown. Heavy use of the brake will result in extreme temperatures at the disc. The hydraulic brake fluid reservoir is visible through a small Perspex window on the left side of the rear seat.

Canopies

The rear canopy may focus the sun to one spot, resulting in the potential for damage (fire) to the glider. This may be overcome by turning the glider nose into a north or south alignment while on the ground.

The rear canopy is inter-locked with the front canopy, which cannot be locked until the rear canopy is locked. **Warning!! If the rear canopy is opened after the front canopy is closed, the inter-lock is bypassed.**

The front canopy is jettisoned by operating the canopy jettison lever.

The rear canopy is jettisoned by opening the rear canopy, and pushing it up into the airstream (if necessary).

The canopies are supported by “gas struts”, which assist in the opening of the canopies and hold them open. As these struts weaken, there is the potential for them to be blown closed or be unable to support the weight of the canopy. The canopies must never be left open and unattended.

Electronic Vario

The sailplane is fitted with an **LX 16D** electronic Variometer. The front and rear seat units are completely independent units.

The full-scale range of this Vario is selectable +/- 2.5 / 5 / 10 metres/sec (approx 10 knots), while the full-scale range of the audio generator is +/- 15 metres/sec. The audio tone is distinctly perceivable through the full range requiring little attention to the visual indicator.

A separate Manual is provided for the LX-16D vario.

Radio

The sailplane is fitted with a XCOM VHF radio. This radio is a simple has up to 99 Memory Channels, with a selectable squelch level. The Two frequencies are displayed, the top one being the duty frequency while the bottom is the secondary frequency. These two frequencies are swapped by pressing the up/down arrow switch on the right of the display. The XCOM radio has a feature known as **Dual Watch**, whereby both displayed frequencies may be monitored at the one time.

The controls on this radio are:

- | | |
|-------------------|---|
| ON – OFF Switch, | Press for 1 Sec to turn radio ON.
Press for 2 Secs to turn radio OFF |
| Volume Switch | Adjust Volume level.
Press Vol switch to activate Squelch. Use Vol knob to adjust. |
| Frequency Switch, | to select desired frequency or to change frequency (press to initiate). |
| Dual Watch switch | to select Dual Watch ON / OFF |

Sailplane Seats

The seats in the ASK 21 consist of a moulded fiberglass shell which includes an area for a parachute. If a parachute is not worn, cushions are required. A fabric covered thin foam lining is installed over both seats.

The “back-rest” in each seat is adjustable to cater for different size pilots. It is necessary to be outside the glider to adjust the backrest, which is best accomplished by lifting the bottom of the backrest up to allow the locating “rack” to be adjusted. **It is a requirement that the “locating rack” be adjusted such that both sides of the back-rest are even to avoid damage to the backrest supports.**

Pitot Extension Tube

A small aluminium extension tube is provided (stored in the rear seat side-pocket) for inverted flight. During inverted flight, it is necessary to maintain a high nose attitude, which results in an erroneous reading from the ASI. The extension tube resolves this.

When not in use, this tube should be returned to the rear seat side-pocket.

Care of the ASK 21

- Never leave the glider with the canopy open.
- Clean the Canopy with a damp Chamois or recognized plexiglass cleaner.
- Use canopy cover when it is necessary to park the glider outside.
- Clean wings and fuselage with a damp Chamois before and after flying.
- Do not subject the glider to exposure to intense heat or sunlight unnecessarily – if its not to be flown return it to the hangar.
- Ensure the cockpits remain clean and tidy.

Considerations

1) Because of the nose wheel / main wheel configuration and the loaded C of G, the sailplane rests on the nose and main wheels. On takeoff and landing, it is not possible the "steer" the sailplane unless there is sufficient elevator authority to lift the nose wheel off the ground.

On landing, as airspeed decays and elevator authority is lost, it is again not possible to steer (or alter the direction of travel).

While this aspect has the advantage of minimizing the risk of a ground loop, it also prevents steering away from objects.

2) The front and rear canopies have the ability to focus the sun's rays, which may result in heat damage or fire to the sailplane. Care must be taken to avoid this occurring.

2. DAILY INSPECTION

1. Cockpit
 - a. Check main wing pin fully home and locked.
 - b. Check all visible control circuitry.
 - c. Check full and free and correct movement of all controls.
 - d. Check for foreign / loose objects, Cockpit cleanliness.
 - e. Check Canopy locks, vents, gas-struts, cleanliness.
2. Undercarriage
 - a. Check tyre pressures.
 - i. Nose wheel 200 kPa (28 psi)
 - ii. Main wheel 260 kPa (38 psi)
 - iii. Tail wheel 250 kPa (36 psi)
3. Check tow release condition and correct function.
4. Check upper and lower wing surfaces (cracks, dents etc); Check airbrake boxes/airbrakes/ailerons.
5. Check fuselage for damage.
6. Check ASI & STATIC PORTS (Rear fuselage).
7. Check TE Probe, security, operation.
8. Check ASI & Vario operation.
9. Check horizontal stabilizer attachment and locking.
10. Check elevator and rudder for correct movement.
11. Check trailing edge of rudder & elevator for damage.
12. Clean both Canopies.
13. Complete Glider paperwork.

3. ASK 21 RIGGING & DE-RIGGING

Rigging

Ensure all pins, connections etc are cleaned and greased.

1. Unlock Airbrake lever.
2. Insert **Port** wing panel first.
 - a. Check that control pushrods are correctly located.
3. Insert the **Starboard** wing panel.
4. Insert Main Wing Pins
5. Insert Drag Spar Pins
6. Slide tailplane onto locating pins.
 - a. Elevator is an "automatic" connection.
 - b. Secure Tailplane.
 - c. Check elevator function.
7. Connect Airbrake and Aileron L'Hotelliers.
 - a. Ensure L'Hotelliers "locked".
 - b. Check all controls for correct function.
8. Seal all joints with tape.
 - a. Wing / Fuselage connections.
 - b. Drag Spar Pin holes.
 - c. Tailplane Attachment bolt.
9. Perform control connection "Dual Check".

De-Rigging

1. Remove all sealing tapes.
2. Unlock and disconnect all control connections,
 - a. Aileron, Airbrake.
3. Using Tool, remove tailplane.
4. Re-Stow Rigging Tool in Cockpit.
5. Remove and store main wing pins.
6. Remove Wings.

4. PLACARDS ASK 21 VH-WKI

CLOUD FLYING PROHIBITED

CHAOTIC

FUBST

Pilot Weights – subject to A UW	Min Cockpit Load	Max Cockpit Load
Front Seat	70 Kg	110 Kg
Rear Seat	0 Kg	110 Kg
Baggage Compartment		Max 10 Kg

Tow Release	
Aerotow Weak Link	600 kg
Winch Tow Weak Link	1000 kg

Speeds	
Vne	151 kts IAS
Max Winch Tow	81 kts IAS
Max Aerotow	97 kts
Best L/D	48.5 kts
Stall, Vs at 470 kg AUW	35 kts
Stall, Vs at 600 kg AUW	40 kts
Rough air max, Vb	108 kts
Max Control Deflection, Va	97 kts
Safe Approach	1.5 X Vs) = 52 Kts + 1/2 wind / gust speed

Main Wheel	5.00 – 5, 6 Ply rating	Inflate to 40 psi, 270 kPa, 2.7 Bar
Nose Wheel	4.00 – 4, 4 Ply rating	Inflate to 30 psi, 200 kPa, 2.0 Bar
Tail Wheel		Inflate to 37 psi, 250 kPa, 2.5 Bar

Canopy

LIFT ONLY BY THE HANDLES PROVIDED

DO NOT LIFT HERE

CAUTION – MAGNIFIED SUNS RAYS

5. PILOT HANDLING NOTES

The ASK 21 is a fibre-glass 2 seat, tandem configuration standard class sailplane. The large two-piece canopy and mid wing offer excellent visibility. The glider is fully aerobatic. It is fitted with a fixed wheel main wheel and nose wheel. This sailplane does not have flaps or facilities to carry water ballast.

Daily Inspection

The daily inspection is straight forward.

H'otellier couplings are used on the main control systems, with access provided through a small hand hole in the top of the fuselage, reached from behind the port wing. A slotted screw-driver or coin will open the hatch. Care is required not to damage the fibreglass surface of the wing with hands or elbows while conducting the inspection of control system couplings.

Cockpits

The cockpit layout of the ASK 21 is standard. All controls fall easily to hand. The cockpit is entered through a large 2 piece canopy.

The pilot's weight should be supported on the sides of the fuselage when boarding, while stepping onto the obvious floor area of the cockpit.

The rear pilot must take care not to allow elbows to damage the wing surface while entering and leaving the rear seat.

Canopy

The Canopy is a large, two-piece unit, with each section supported by an air strut. When opening and closing the canopy, a secure grip should be maintained on the handles provided until the canopy section has reached the limit of its travel – **both UP and DOWN. Do not support the canopy other than by the handles.**

The locking mechanisms on the canopy sections are interlocked. The front section **cannot** be locked until the rear canopy is closed and locked. Locking is achieved by pushing **white** handles (like paddles) on either side of the canopy fully forward. Unlocking is achieved by pulling the **white** handles out/back. Do not force these handles.

The front canopy has an emergency jettison handle located at the front of the canopy. The rear canopy is jettisoned by opening the canopy into the slip stream.

Both the front and rear canopy sections have the ability to focus the sun's rays when open outdoors. This may result in fire and / or damage to the sailplane or its equipment.

This is more likely to occur when the sailplane is aligned east – west.

The sailplane should be parked with the canopy cover installed, in a north-south direction, or preferably, in the hangar.

Seating

The front seat back is adjustable. Adjustment must be made while out of the seat, ensuring that both sides of the locking mechanism are symmetrical and fully engaged.

Cushions should be used if further seat adjustment is required.

The seats are designed for pilots wearing parachutes. Appropriate cushions are recommended if a parachute is not worn. A max seat limit weight of 110 Kg applies.

Conventional safety harnesses are fitted in both cockpits, with an additional strap provided between the pilots legs for aerobatic flight. The harness mechanism is released by turning the centre of the buckle.

Flying Controls

Flying controls are standard. The elevator trim is located immediately alongside the stick and consists of a load adjustable spring on the elevator pushrod system. The trim is effective, although at max cockpit loading there is a tendency to run out of back trim.

The front rudder pedals are readily adjustable in flight, using the pull cable.

Ensure the rudder pedals are re-locked in position following adjustment (push on both pedals equally).

The rear pedals may also be adjusted, using a simple adjusting frame on the rear floor.

The tow release (yellow knob) is located to the left of the control column.

Two tow release points are located on the aircraft - the forward unit for aerotow and the rear release mechanism for winch launch. **Care is required to ensure the correct release unit is used.**

The airbrake lever is located on the left wall of the cockpit. A very positive over-centre lock keep the airbrakes closed. The very effective wheel brake is operated at the full extension of airbrakes. Pilots must ensure the wheel brake is not on at touchdown.

Instruments

Standard instruments are installed.

A G-Meter is provided to monitor loading during aerobatic and inverted flight.

Electric instruments and the radio are powered from a common battery, stored inside the port-side wing root. A common master switch is located on the front and rear instrument panels.

A 720 channel radio is fitted. The required frequency is selected by operating either the Frequency Knob. An automatic, pilot selectable squelch is provided by selecting "SQ" on the Vol knob. **The front seat push-to-talk switch is located on top of the control column**, while the rear seat push-to-talk switch is located on the rear instrument panel.

Two **LX 16D** electronic variometers ~~is~~ are installed in the sailplane. Separate Notes are provided on the features and operation of this instrument.

Weight and Balance

The minimum front seat loading for solo flight is 70 Kg. the maximum seat loading is limited to a maximum of 110 kg in each seat.

Ballast weights may be added for under-weight pilots in the front seat. The lead weights are secured by bolts located immediately in front of the front pilot seat. The yellow coloured weights are stored in the Pie Cart. A **Ballast Trim** chart is located in the front cockpit of the glider.

FLYING

The ASK 21 is a docile and very stable aircraft, and offers no unusual or adverse tendencies.

Pre-Takeoff Checks

Before entering the cockpit, complete the standard pre-board checklist,

- A** Aircraft. No obvious damage, faults etc. DI'd, Maint Release completed
- B** Ballast. Fitted as required.
- C** Controls, working in the correct sense.
- D** Dolly, no tail dolly fitted.

After entering the cockpit, the standard pre take-off (**CHAOTIC**) check is completed.

- C** Controls
- H** Harness
- A** Airbrakes
- O** Outside, Options
- T** Trim
- I** Instruments
- C** Controls, Canopy

TAKE-OFF

Aerotow

Connect the tow rope to the **front** release, located under the front pilot seat. In the initial ground run, it is necessary to lift the nose wheel off the ground to obtain steerage. This can be achieved at a relatively slow speed. Hold the aircraft on the main wheel, maintaining directional control with rudder and wings level with aileron. As speed increases, the aircraft will fly off. Hold the sailplane parallel to the ground until the Tug becomes airborne.

The **Maximum Aerotow Speed is 97 Kts.**

Winch Tow

Connect the winch wire, using the small ring, to the **rear** release mechanism, located in front of the main wheel, under the rear pilot.

In the initial ground run, it is necessary to lift the nose wheel off the ground to obtain steerage. This can be achieved at a relatively slow speed. Hold the aircraft on the main wheel, maintaining directional control with rudder and wings level with aileron. As speed increases, the aircraft will fly off. Enter the initial climb and full climb as speed increases.

Towards the top of the launch, gently release the backpressure on the elevator, ensuring the glider continues to climb. When the winch driver signals the top of the launch by cutting the power, lower the nose and pull the release, twice.

In the event of a winch wire break or winch failure, lower the nose quickly to maintain a safe flying speed. Release the winch cable. Proceed as briefed.

Remember, every launch has a potential for failure - be prepared.

The **Maximum Winch Tow speed is 81 Kts.**

After Take-off Check – relevant to ASK 21

After release, perform FUBST Check

- F** Flaps - Not Fitted.
- U** Under-carriage – Fixed.
- B** Ballast – Not carried
- S** Speed – 50 Kts.
- T** Trim – Set for 50 kts.

Free Flight

The trim is effective at most weights, although at max AUW, there is a tendency to run out of back trim.

Flight controls are relatively light and effective. The aircraft will accelerate quickly when the nose is lowered.

A speed of 45 - 50 knots is ideal for normal flight. A noticeable reduction in glider performance occurs above 80 Kts.

Stall

No positive breakaway occurs with a gentle stall. A nose high stall results in a definite breakaway. Some buffeting of the elevator is felt. There is little tendency to drop a wing. Recovery is quick and effective with slight forward stick.

At most weight configurations, the aircraft will not tend to spin unless the C of G position is towards the aft limit – which may be achieved with a light weight pilot in the front seat.

Spin Kit

A factory (Schleicher) *Spin Kit* is installed on this glider. The purpose of the Spin Kit is to move the C of G closer to the rear C of G limit to improve the spin performance of the glider. A separate “Spin Kit Fitted” LOADING CHART is provided. This is to be used to determine the amount of weight to be added to the fin post ballast attachment.

It is vital that all fin ballast is removed from the aircraft after its use to prevent inadvertent flight with unintended fin ballast still loaded.

Approach and Landing.

The approach and landing is straight forward. Approach is made at 55 knots plus half wind / gust strength.

Having decided to land, complete the pre-Landing Checklist,

- F** Flaps – Not Fitted.
- U** Undercarriage – Fixed.
- B** Ballast – Not Fitted.
- S** Speed – Safe Speed Near The Ground – $1.5 V_s + \frac{1}{2}$ wind/gust speed.
- T** Trim – Set for selected speed.

The airbrakes are very effective. Aim to touch-down with approximately half airbrake to avoid high rates of descent.

Side-slipping is effective in increasing the sink rate however care needs to be exercised as the pressure on the rudder reduces to zero at maximum deflection, requiring the rudder to be pushed back to neutral.

Touchdown should be made in a two-point attitude, main wheel and tailwheel.

Directional control is maintained while the nose-wheel is off the ground.

The very effective wheel brake is operated at the full extension of air brake. Ensure the wheel brake is not actuated if full airbrake is used at touchdown.

Ground Handling

The sailplane can comfortably be handled by 2 persons on the ground, one on the wing tip, the other on the nose, pushing the aircraft backwards. Push down on the nose to lift the tail when turning.

6. ASK 21 WHEEL BRAKE

The ASK 21 wheel brake system consists of a "**Cleveland**" (or similar) hydraulically operated disc brake, actuated at the full extent of travel of the airbrake lever.

This brake system is extremely effective in stopping the glider on the ground.

There are some important features pilots must be aware of in order to ensure the ongoing effectiveness of this braking system.

- A. While the brake system is very effective, be aware of the tremendous heat the brake is capable of generating. Gliders have been burnt as a result of fires started by the brake system.
- B. The heart of the brake system is the master cylinder, which is actuated by the Airbrake lever. It is possible to apply tremendous force to the brake pads through the Airbrake lever.
- C. The **Brake Pads** and **Brake Disc** are subject to wear. Pilots must inspect the **Brake Pads** at the Daily Inspection, to ensure the pads are not worn sufficient to damage the **Brake Disc**. Damage to the disc may occur if the rivets, which hold the **Brake Pads** to the **Brake Pad Holder**, protrude above the **Brake Pads** (due to wear) and come into contact with the **Brake Disc**. Braking efficiency will be significantly reduced if this occurs.

Check:

- A. The hydraulic (brake) fluid level in the small storage vessel which is located on the L/Hand side of the rear seat under the cockpit trim. This reservoir is visible through a small "window". Mil (Military) or aviation grade brake fluid only must be used.

B. Examine the wear on the brake disc pads (see sketch) at each DI.

Never:

- A. get into a situation where the wheel brake must be relied on to avoid damaging the glider. Never land directly towards another glider, vehicle, hangar, fence, tree, crops, stationary object etc
- B. land with the airbrake fully extended, causing the wheel brake to be fully applied.
- C. tow the glider, either with a tow rope or the tow-out gear, with the airbrakes held open by the Harness.

Wheel / Braking System

- Main Wheel 5.00 – 5, 6 Ply rating. Inflate to 40 psi, (270 kPa, 2.7 Bar)
- Nose Wheel 4.00 – 4, 4 Ply rating. Inflate to 30 psi, (200 kPa, 2.0 Bar)
- Tail Wheel Inflate to 37 psi (250 kPa, 2.5 Bar)

The tyre pressure in the main wheel – recommended at 40 psi – is critical in preventing damage to the tyre/tube. A tyre/tube with low pressure may turn "on the rim" in the event of landing with the wheel brake "ON". This will cause the valve stem to be ripped from the tube.

If the tyre looks flat, the chances are it is.

Brake Assembly

Cleveland 30-9 Brake Assy.

Brake Fluid

Esso UNIVIS J-13, AeroShell Fluid 4 or or similar, ie Mil spec brake fluid

Bleeding the brake system;

Attach a length of clear polythene hose to the bleed nipple below the Brake Cylinder on the main wheel. Discharge to Fluid reservoir or Separate container.

Brake Pad Lining

Minimum thickness 2.54 mm

Brake Disc

Minimum thickness 4.24 mm

To Change Brake Pads (under G1109 supervision)

- Remove wheel fairing.
- Cut safety wire, remove 2 X thru bolts.
- Remove Brake Pads.
- Replace Pads, insert 2 X thru bolts and secure.
- Safety wire the thru bolts.
- Re-install wheel fairing.

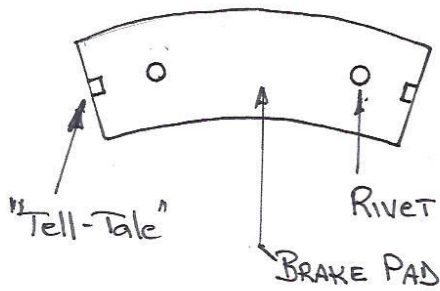
Brake Pad "Tell Tale" – a small cutout on each end of brake pads is incorporated to identify when a Brake Pad has worn to its minimum thickness.

When this "cutout" is no longer visible, the Pads should be changed.

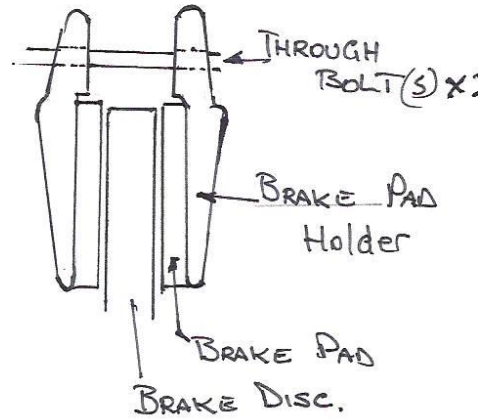
Note: Not all pads have this "tell-tale".

BRAKE SYSTEM COMPONENTS

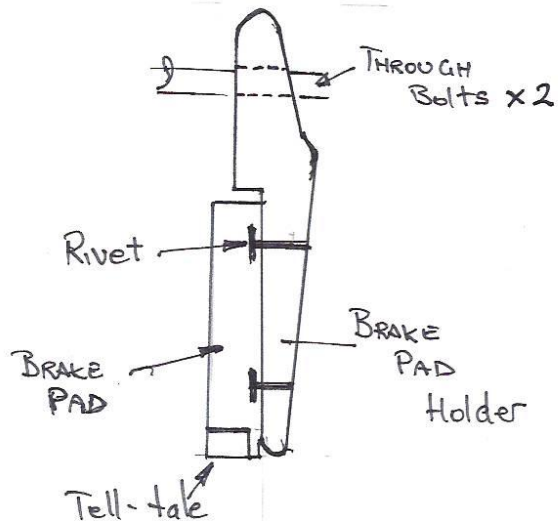
Disc Brake Pads



Disk Brake Pads, Pad Holders and the Brake Disc - Schematic



Disc Brake Pad Holder and Disc Pad - Enlarged View



7. ASK 21 Spare Parts Listing

1. Undercarriage Tyres.

- Main Wheel
5.00 – 5, 6 Ply rating. Inflate to 40 psi (270 kPa, 2.7 Bar)
5.00 – 5 Tube
- Nose Wheel
4.00 – 4, 4 Ply rating. Inflate to 30 psi (200 kPa, 2.0 Bar)
4.00 – 4 Tube
- Tail Wheel
Inflate to 37 psi, 250 kPa, 2.5 Bar

2. Wheel / Wheel Brake.

- Rim – Cleveland wheel, 4078 (B) 5.00-5, Type III.
- Disk Brake – Cleveland Brake Assy, 30-9
- Master Cylinder – Master Cylinder 10-20.
- Disc Brake Pads – to suit 30-9 Cleveland Brake Assembly.
- Brake Fluid. Esso UNIVIS J-13, AeroShell Fluid 4 or similar (i.e. Mil spec brake fluid)
- High pressure brake hose.

3. Lock-wire

4. L'Hotellier

- Aileron 2 of M12.41
- Airbrake 2 of M12.41

8. ASK 21 MAINTENANCE SCHEDULE

Registration: VH-WKI

Serial No: 21313

Manufactured: 1986

Landings:.....

Airframe Hours:.....

Wing Frequency: Ambient Temp:C

Comment:

8.1 Lubrication

- Grease - a quality multi-purpose grease.
- Oil – A quality machine oil.

8.2 Control Stops

- Airbrake Brake Cylinder
- Aileron Pushrod Box, rear seat, ahead of stick.
- Elevator Torsion rod. Front and rear end.
- Rudder At the rudder, bearing bracket

8.3 Wheel Brake

- Disk Brake Pads, Min thickness 2.54 mm (0.10 in)
.....
- Disk Brake Min thickness 4.242 mm (0.167 in)
.....
- 6 yearly intervals, replace high pressure brake hose, **Due**
.....

8.4 Control Deflections (mm)

Control surface	Specification	Left	Right	Comment
Aileron	Up 110+/- 10			
In-board end	Down 45 +/-5			
Elevator	Up 90 +/-5			
Elevator	Down 65 +/-5			
Rudder	180 +/- 20			
Airbrake	Up 25 – 35			

8.5 Release Force

Specification	Observed
12 G	

8.6 Airbrake Force

Specification	Observed
Kg	

8.7 Grease Points Nipples

- Control Column
- Landing Gear Rocker

8.8 Releases

- Aerotow Type:
- Winch Type:
- Ops since last

8.9 Instruments

a) ASI

- Front Type: S. No:
- Rear Type: S. No:

Knots	+/-	UP			DOWN		
		Front ASI	Rear ASI	Error	Front ASI	Rear ASI	Error
30	1.5						
40	1.8						
50	2.5						
60	3.0						
70	3.5						
80	4.0						
90	4.0						
100	4.0						
110	4.0						
120	4.0						
130	4.0						
140	4.0						
150	4.0						
151	4.0						
160	4.0						
170	4.0						

b).Altimeter:

Date:/...../..... Time:Hrs QNH: Elev:Ft

Position	Type	Serial Number	Altitude reading (FT)
Front			
Rear			

Allowable error: 100 Ft

8.10 Airbrake Locking

Each airbrake has a separate toggle in the wing. A ckeck must be made that they lock simultaneously and securely.

- 1) Connect airbrakes individually.
- 2) Identify one linkage "dead centre", mark operating lever.

- 3) Repeat for other linkage, mark operating lever.
- 4) Marks to be within 5mm of each other and
- 5) the front lever should have 10 mm free forward movement.

For adjustment of over-centre, see AS K21 **Maintenance Instruction A**.

8.11. Control Surface Sealing Tapes

See AS K21 **Maintenance Instruction C** for detail of replacement of sealing tapes.

8.12. Weight & Balance

- a) Max weight, Non-lifting parts 410 kg.
- b) Max AUW – 600 kg.

8.13. Items Found OUTSIDE Tolerance:

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.....
.....
.....
.....

8.14. Items Requiring Replacement:

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.....
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.....
.....

Planned Maintenance Items

1. Item Due at: / / or TTIS
.....Hrs

Action:

.....

2. Item Due at: / / or TTIS
.....Hrs

Action:

.....

3. Item Due at: / / or TTIS
.....Hrs

Action:

.....

4. Item Due at: / / or TTIS
.....Hrs

Action:

.....

5. Item Due at: / / or TTIS
.....Hrs

Action:

.....

Notes:

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