



AIRWORTHINESS ADVICE NOTICE

TYPE AFFECTED: ASK 21 / ASK 21 Mi.

SUBJECT: Miscellaneous airworthiness information.

BACKGROUND: This AN records airworthiness information which is useful for the operator and maintainer.

MODIFICATIONS: Copies of Technical Notes may be obtained from Type Certificate Holders website.

1. OPTIONAL TAIL WHEEL. Alexander Schleicher Technical Note ASK 21 No 2 describes the optional installation of a Tail Wheel.

2. AUTOMATIC ELEVATOR CONNECTION. Alexander Schleicher Technical Note ASK 21 No 11 describes the optional installation of an Automatic Elevator Connector on Serial Numbers 21205 and below. This modification is standard on serial numbers 21206 and higher.

3. NEW CANOPY LOCKING SYSTEM. Alexander Schleicher Technical Note No. 15 describes the optional installation of an improved canopy locking system. This modification has been incorporated as standard on serial numbers 21223 and 21233 and higher.

4. HAND OPERATED RUDDER ACTUATOR. To allow disabled pilots who cannot operate normal rudder pedals to fly Alexander Schleicher have issued ASK 21 Technical Note No. 25.

5. WEDEKIND SAFETY SLEEVES. Alexander Schleicher Technical Note No. 27 for the ASK 21 allows the installation of Wedekind Safety Sleeves on the L'Hotellier couplings.

MAINTENANCE: 1. TRIM SYSTEM MAINTENANCE. Alexander Schleicher Technical Note ASK 21 No 18 describes the correct maintenance procedures for the ASK 21 Trim system to prevent jamming the Bowden cable between the control column and the right hand aileron stop. This Technical Note forms part of this AN.

SIGNED:

CHIEF TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

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2. OPTIONAL TAILPLANE LOCKING PIN RETAINER. The GFA has tested 16mm (ID) clear vinyl tubing placed over the tailplane attachment bolt / safety pin assembly. The vinyl hose, when correctly positioned, ensures a positive lock of the locking spring prior to applying the transparent plastic cover as detailed in AWA 2020-4. Pope Clear Vinyl Tubing Joiner – 16mm or similar is available at your local hardware store. The hose is soft and flexible and will assume the hex shape of the bolt head. It should be cut relatively square at a length of 12-13mm (maximum 13mm). Note: when tubing length less than 12mm it can be more difficult to remove the tubing when derigging.



Figure 1: Vinyl Tube And Plastic Cover Adjacent To Tailplane Retaining Bolt



Figure 2: Vinyl Tube Inserted Over Safety Pin And Tailplane Retaining Bolt

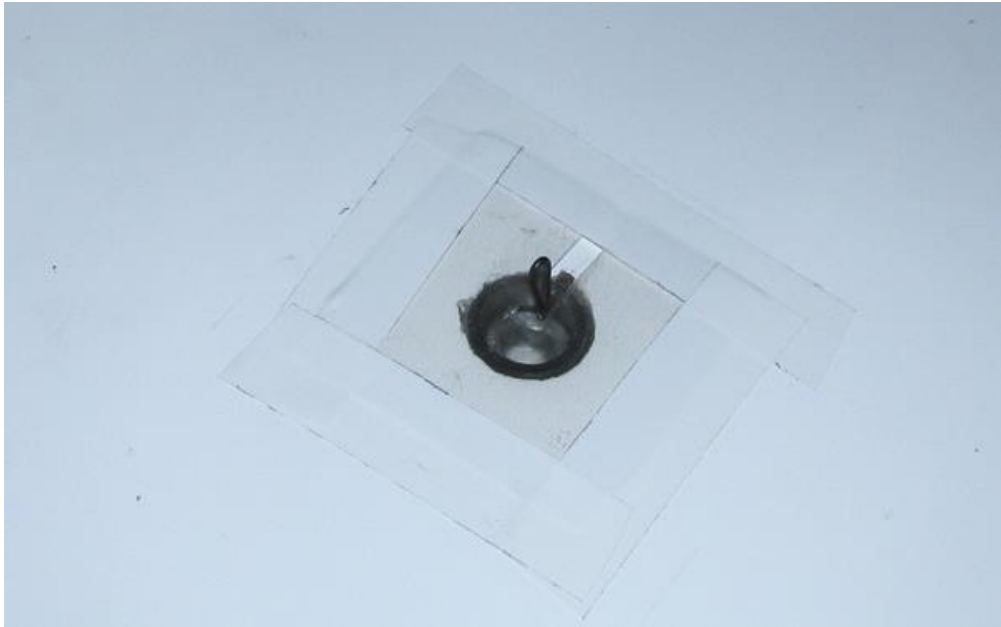


Figure 3: Taped Transparent Cover Over Vinyl Tube. Note Slot In Cover For Safety Pin

3. Whilst performing a pre-take off check, a restriction in the movement of the controls were identified. GFA AWA 2010-1 now cancelled was issued addressing the failure.



The restriction was caused by a bend (bent area circled above) in the pushrod connecting the front and rear trim levers. This bend resulted in the pushrod being displaced downwards into an area normally occupied by the aileron / elevator control tube. This in turn caused blockage of right aileron travel. The damaged rod can be seen only when the cockpit floor is removed. It was not identified how the damage occurred but there are two ways an excessive load to the trim

lever could be applied. The picture below shows how it is possible for the front harness buckle to lodge between the front stick and trim lever. Forward movement of the stick, or more likely the rear stick would exert significant pressure on the trim lever resulting in very high compression loads in the pushrod connecting the two trim levers. Similar loads could also be applied if an occupant entering the front cockpit accidentally put a foot on the front trim lever.



When performing annual inspections, or whenever the cockpit floor is removed, it is highly recommended that the trim connecting pushrod be inspected for any obvious bending damage or deformation.

4. An un-commanded ASK 21 Mi aerotow release occurrence were reported, the sailplane had recently undergone maintenance and returned to service. In the fault finding process, the TOST release was tested and found to be serviceable. Friction in the release control circuit however was found to prevent full release closure. AWA 2015-2 was raised, now cancelled.

During the investigation it was found that when gently closing the release, the TOST unit remained partially open. Releasing the release knob at the fully open position permitting rapid closing resulted in full closure. An overtightened bolt in the system (shown in photo below) was found to cause binding preventing full closure. Slight backing off of the nut freed the assembly returning full functionality.

The affected bolt should be either stepped or bushed to prevent crushing. Manufacturer Alexander Schleicher has been advised.



The above overtightened bolt prevented the release system to 'action' correctly.