

## **TECHNICAL NEWS SHEET**

TNS issue 1-2021

3<sup>rd</sup> May 2021

### Airworthiness Directives post Brexit (from 1st January 2021)

The primary source for ADs from the 1<sup>st</sup> January 2021 is the UK CAA, CAP 747 Mandatory Requirements for Airworthiness. However, State of Design ADs will be considered to apply unless the UK choose not to adopt the AD and publish a decision to that effect.

For Airworthiness Directives issued prior to 1<sup>st</sup> Jan 2021, the EASA Safety Publications Tool will be considered the primary source of information. State of Design ADs shall apply unless EASA has chosen not to adopt the AD and published a decision to that effect.

This means you should subscribe to the CAA ADs and remain subscribed to the EASA AD publication tool. You should adopt EASA ADs (because EASA is considered a state of design for EASA products). The CAA might not publish the EASA AD or could publish an alternative means of compliance method if not adopting a state of design AD fully.

In addition, the CAA are now publishing more Safety notices with recommendations (13 since Brexit). See weblinks below.

EASA AD EASA Safety Publications Tool (europa.eu)

CAA Emergency ADs <u>List of Emergency Airworthiness Directives (caa.co.uk)</u>

CAA Safety Notices <u>List of Safety Notices Publications (caa.co.uk)</u>

## **CAA Airworthiness Directives (ADs)**

L Robin DR400 EASA AD 2021-0043e

Mandatory

<u>EASA EAD 2021-0043-E: CEAPR - DR400 aeroplanes: Air Conditioning – Cabin Heater and Carburettor Heater Ducts – Operational Restriction / Inspection (caa.co.uk)</u>

Cabin Heater/Carburettor Heater Ducts – Operational Restriction / Inspection

Owners notified

#### **EASA Airworthiness Directives (ADs)**

2 Duo Discos and Duo Discus T

EASA AD 2020-0233

Mandatory

https://ad.easa.europa.eu/ad/2020-0233 Airbrake End Stops / Bushings – Inspection / Replacement. Owners notified

- 3 Janus, Mini Nimbus, Nimbus-2/-3, Standard Cirrus EASA AD 2020-0260 Mandatory <a href="https://ad.easa.europa.eu/ad/2020-0260">https://ad.easa.europa.eu/ad/2020-0260</a> Elevator Connection Modification / Aircraft Flight Manual Amendment. Owners notified
- 4 LYCOMING ENGINES AEIO-360, IO-360, O-360, SUPERIOR AIR PARTS INC IO-360, O-360 Mandatory US 2020 25-12 This is EASA adopting an FAA AD. <a href="https://ad.easa.europa.eu/ad/US-2020-25-12">https://ad.easa.europa.eu/ad/US-2020-25-12</a> Reciprocating Engine Crankshaft Assembly Removal. Owners notified

5 Robin DR400 EASA AD 2021-0043e Mandatory

https://ad.easa.europa.eu/ad/2021-0043-E Cabin Heater/Carburettor Heater Ducts – Operational Restriction / Inspection. Owners notified

https://ad.easa.europa.eu/ad/2021-0070 Airbrake Blade No. 3 – Inspection.

Owners notified

#### 7 All Libelle and Kestrel 401 LBA AD 74-323/2

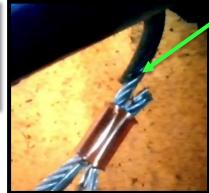
Mandatory

<u>TN201-6.pdf</u> (streifly.de) This is not a new AD (it was issued in 1971) but we are highlighting it to ensure it is complied with correctly, as there has been some confusion with it. The AD says inspect S bends every 100 hours. But the nature of the failure you are looking for is not always a conventionally frayed cable.

If the rudder pedals are flown mostly in the fully forward position, the end of the S bend is very near the front rudder cable end crimp. Every time it moves there is little space for flexing and puts a point load on the rudder cable as it exits the S bend. This was known about in 1971 and hence the AD for 100 inspections. But the AD does not convey the nature of the problem well.

In addition, some crimps have tubing put over them to stop the sharp ends of the cable snagging on shoes etc. This makes the fatigue failure harder to spot. This repeat AD should be in the SDMP as an annual and 100hour AD.





S bend to crimp is a very short distance.
The Fatigue happens where the S bend ends.

### **CAA Safety Notices**

- 8 Non-Part 21 General Aviation Aircraft Safety Harness Integrity. SN-2021/006 Recommended This could affect the Slingsby T61, Pa18 Super Cub and Supermunks.

  Safety Notice SN-2021/006 (caa.co.uk) For aircraft maintained using LAMs (CAPP 411) this introduces more guidance and more frequent inspection (every 6 months of harness).
- 9 For all aircraft fitted with Lockable Gascolator Drain Valves on General Aviation Aircraft SN-2021/005 Recommended SN-2021/005: Lockable Gascolator Drain Valves on General Aviation Aircraft (caa.co.uk) This recommendation effects all aircraft with lockable fuel Gascolators in the Part 21 and non-Part 21 system.
- 10 Carbon Monoxide Contamination Minimisation & Detection in General Aviation Aircraft SN-2020/003

  Recommended SN-2020/003: Carbon Monoxide Contamination Minimisation & Detection in General Aviation

  Aircraft (caa.co.uk) This is worth a good read. A cheap portable measuring device that can check different parts of the cockpits (especially rear seats Robin Dr400 in tug mode which gives poor ram air ventilation on tow) has revealed some interesting results on how Carbon Monoxide flows around a cockpit.

## BGA updates to forms and procedures

- 11 The BGA Has extended the period between weighing to 10 years. The compendium is being modernised to reflect this.
- 12 Transition from CAMO or Part CAO has not happened yet. When it does a lot of the forms (including ARCs) with change as well as the exposition and BGA/CAA approval numbers. We will inform you the day this happens. DO NOT keep using saved copies of forms after this date.

#### 13 Updated (AMP) with updated buying and selling procedures

Buying and Selling an aircraft (AMP 3-8) - Pilot & Club Info (gliding.co.uk)

This update incorporates the changes to procedures for exporting and importing aircraft. The Golden rule being NEVER deregister it until you are sure all the paperwork is in place at wherever its being exported to.

- New Post Brexit phraseology. A reminder that in the UK all formally EASA aircraft are now known as Part 21 and all non-EASA aircraft are known as non-Part 21. All CAA/BGA procedures will be changing to use those terms.
- 15 Checking SDMP compliance on unsupported Rotax engines. Rotax275, 501,505 and 535 Mandatory --SB-501-505-010-535-009 New maintenance schedule, checklist and engine preservation for ROTAX engine type 275, 501, 505 and 535 (3).pdf

Rotax stopped supporting the above engines many years ago. Spare parts, gaskets, repairs and zero-time overhauls are challenging. The last Service Bulletin on these engines (May 2007) specifies overhaul periods and many other actions. A lack of spares means some of these actions are impossible. If Rotax specified maintenance is not done, these deviations **MUST** be listed and signed for (if the inspector agrees) in the aircraft SDMP maintenance program deviation section.

#### Reported issues

**16 Duo Discus XLT** Could apply to many other types

**Advisory** 

See image of corroded pushrods. Would you all spot this on an annual inspection? With modern cheap 5.5mm wide cameras this is quite easy to find on annual inspections. This is a 2008 glider, do not assume newer gliders cannot have these problems.





17 K21 resin tail bonding failed All K21 after heavy landings or ground loops etc Mandatory
See Video <a href="https://youtu.be/8UbrWgjVnH8">https://youtu.be/8UbrWgjVnH8</a> This damage has sometimes been missed during heavy landing or nose first landings. The repair involves cutting holes, so really must be done by someone who fully understands composites and how it was built.

18 Poor quality Battery box installation Any sailplane with a battery box Advisory
See Video <a href="https://youtu.be/NvvZ3biwrMQ">https://youtu.be/NvvZ3biwrMQ</a> During the annual maintenance a slight scraping sound was heard when the stick was moved. Upon investigation it was found to be a bolt that was too long inserted during a previous battery box installation. After a any work is done its worth moving all the controls and U/C there is adequate clearance in all configurations.



**19 ASK21 Cable front release knob** (can apply to Schemp Hirth, DG and Grob). Reported by Allan Tribe **Advisory** A K21 release knob (see pictures) has the outer conduit broken allowing it to swing with gravity. It also might not be where the pilot expects to find it (on aerotow etc). In this case it smashed the ASI glass.

These usually fail in service between annual maintenance. Pilots should be trained to put the glider U/S when they see the defect. The same goes for the Front rudder cable adjustment cable as well if the return spring fails.

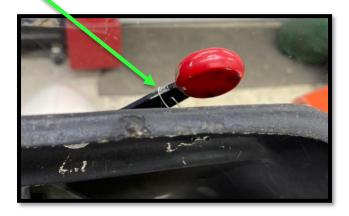


**20** Wheel brake retaining studs Any glider with a drum or disc wheel brake.

**Advisory** See video <a href="https://youtu.be/RpvHwa8PKhU">https://youtu.be/RpvHwa8PKhU</a> Any play in the wheel brake torque stud can lead to the stud fatiguing and sheering off. On gliders with drum wheel brakes this stud breaking can cause the stick to be pulled forward as the wheel brake cable is wrapped around the axle.

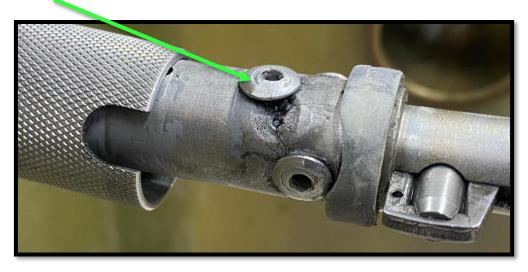


**21 ASK21** (but applies to all gliders that use breakable tell-tale wire on canopy jettison systems) **Advisory** Yet another canopy found to be locked using locking wire. This canopy was extremely difficult to jettison. Imagine a child training just before solo at 14. Could they easily pull this lever to jettison the canopy?



# 22 Poorly fitted L'hotelier/Wederkind fitting Can apply to any glider with these fittings. Advisory

These previously drilled holes should not exist. This is in very poor condition and not fit for purpose.



#### **Compliance Statement:**

All mandatory inspections and modifications have been included up to the following:

CAA CAP 455 Airworthiness Notices, Withdrawn. See CAP 562 and CAP 747.

CAA CAP 747 Mandatory Requirements for Aircraft: issue 4, Amendment 27 January 2021

State of Design Airworthiness Directives: review date 03/05/21

CAA Airworthiness Directives reviewed 03/05/21

#### For reference:

FAA Summary of Airworthiness Directives: Small Aircraft, Biweekly 2021-09, 04/12/2021 - 04/25/2021

EASA Airworthiness Directives: review date 03/05/2021

EASA Airworthiness Directives: bi-weekly issue 08 2021-04-05 to 2021-04-18 CAA CAP 476 Mandatory Aircraft Modifications and Inspections Summary: issue 287

#### Maintenance Programme:

CAA CAP 411/LAMS/A/1999: Issue 2, amendment 0 (for none EASA motor gliders/tugs only)

BGA GMP: Issue 1, amendment 2 (for non EASA gliders only)

BGA SDMP 267 (for EASA sailplanes and powered sailplanes only) updated 12/06/2020 Part M Light AMC

#### **Gordon MacDonald**