### **BGA Airworthiness Compendium**



### Compendium of Airworthiness Directives, Mandatory Modifications, Special Inspections and Checklist of Defects

# **Motor Gliders and Tugs**

#### INTRODUCTION

General information for guidance of inspectors collated from experience of incidents, published articles and general information.

#### **MOTOR GLIDER AND TUG ISSUES**

Note: Deleted entries in this section have been entered into relevant sections within the compendium.

- 1. Airworthiness Notices CAA: withdrawn by CAA. Remaining items transferred to CAP 747 and CAP 562
- 2. **CAP 520 "Light Aircraft Maintenance"**: withdrawn from publication.
- 3. **Gas Collators in Fuel Systems:** inspect the retention system for wear TNS 10/98
- 4. Fuel Contamination: (whether MOGAS or AVGAS) has been recurring. Reported in GASILs and AAIB bulletins throughout the year. TNS 12/88, TNS 02/88
- 5. **Fuel Hoses:** advise on selection and maintenance of fuel hoses TNS 08/01
- 6. **Gypsy Induction Flame:** traps may disintegrate and be swallowed by the engine. TNS 12/88
- 7. Light Aircraft Maintenance Schedule (LAMS): Latest issue is IAMS/A/1999 issue 2, amendment 0. Edition 5
- 8. **Lycoming, Gypsy:** (and other types) cylinder studs must be correctly torqued and regularly re-torqued to minimise the probability of cylinder separation from the crank case and cracking the cylinder head. All in accordance with maintenance manual or instructions.
- 9. **Heat Exchangers:** withdrawn by CAA. Requirements now included in maintenance programme
- 10. **Motor Glider and Tug**: Continued airworthiness flight tests not required for EASA aircraft at C of A issue or renewal.
- 11. **PA-25 Pawnee**: Wing root cluster Improved design to eliminate the inspection TNS 04/97 & TNS 08/97. Booker Air Services (01494 442501) can carry out the Failed landing gear. TNS 06/97 Deeside GC have embodied new STC mod eliminating most of repetitive NDT full details on web site [www.pawnee.soaring.org.uk] TNS 02/00 GASIL 2/97 recommends check cables to limit damage if u/c fails TNS 08/97 Parking brake malfunction FAA AD 85-02-05 TNS 12/97 "Magna Flite" starter motors found unsatisfactory on 0-540 engines TNS 02/99. Alternative hot air shutter failure causes power loss TNS 04/99. Cracked flap operating bell cranks TNS 1-2007 EASA approved AD RA 2006-06-01Rev 1 inspection of tail plane mounting spigots TNS 6-2006
- 12. **Propellers**: check bolt torque and locking regularly. Must be to manufacturers' instructions to prevent damaged installations and propellers coming off. TNS 12/97

BGA Compendium – 03/13

#### **BGA Airworthiness Compendium**



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- 13. **PVC Tubing:** shrinks and becomes hard and brittle with prolonged exposure to fuel. Replace "site tubes" regularly and use fuel proof tube for all other applications. TNS 04/99
- 14. **Schweitzer Type Banner Towing Hooks:** Mod to add bearing to reduce release loads, very strongly recommended. BGA Mod "BGA/T/1/85" ref TNS 08/86, TNS 02/88 & TNS 06/03
- 15. **Scott Tail-Wheel Axis:** vertical bolts should be replaced to prevent loss of the tail-wheel assembly.
- 16. Tail-Wheel Leaf Spring Failures: TNS 06/88
- 17. **Undercarriage Pivot Bolts:** should be replaced (or crack detected) at frequent intervals to prevent failures which may lead to significant damage. PA-18s, PA-25s, Citabrias, Bellanca Scouts, Austers etc.
- 18. **Unleaded MOGAS:** withdrawn by CAA transferred to CAP 747
- 19. **Water In Fuel:** identification of water see TNS 06/97
- 20. **Bulk Fuel**: Avgas contaminated by Diesel. Ensure safeguards and policy to prevent TNS 02/00
- 21. **Engines General:** Reminder that engines, propellers, magnetos, hoses have lives refer to LAMS schedule and manufacturers data TNS 08/00
- 22. **Duplicate Inspections:** Reminder that duplicate inspections are required if a control system or critical point is disturbed. TNS 08/00
- 23. **Torque Loading:** Reminder to follow manufacturers specified torque loading TNS 12/00
- 24. **Heavy Landings:** Recommend "weight off" inspections following heavy landing TNS 12/00 Check crank case, crankshaft and propeller flange even if no prop strike on VW engines with VP props.
- 25. **Weighing:** BGA recommends that Motor Gliders and Tugs are reweighed every eight years Airworthiness Notice 38 gives guidance for weighing after painting..
- 26. **Generic Requirement No 24:** Motor gliders may obtain a variation from the rule to have at least 200 hours before TBO on first UK C of A. apply to CAA propulsion Dpt. TNS 08/02 GR No 24 NOT APPLICABLE MID WEST engines TNS 04/05 Rotax engines now included TNS 1-2013
- 27. **Piper Metal Battery Boxes:** ensure that positive cable does not short on box lid due to being loose in insulator TNS 06/03
- 28. Motor Glider Restoration Projects: Requirement cancelled by CAA

BGA Compendium – 03/13

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# **Motor Gliders and Tugs**

- 29. **Airworthiness Publications:** The BGA Compendium of Airworthiness Directives does not include Tug AD's or other service information. Obtain information directly from approved sources.
- 30. Fabric Inspections: CAA Generic Requirement 8 fabric inspections require details of the inspection to be entered into the aircraft log book TNS 10/04
- 31. **Non-Amended Publications:** with increased use of the internet, paper publications may not be amended. Either withdraw from use or mark "Uncontrolled Copy"
- 32. **Wooden Structure:** BGA Inspection of wooden structures using Kaurite glue and 5 year repeat BGA 047/02/2006 issue 1, TNS 1-2006
- 33. **Permit Aircraft:** MPD 1995-001R4 issued to clarify compliance with all applicable AD's on aircraft issued with CAA Permit to Fly. TNS 1-2006
- 34. **Lycoming Engines:** EASA AD 2005-0023R2 requiring mandatory check for exhaust valve sticking and wear every 440 hours unless chrome guides are fitted. Lycoming crankshaft inspection FAA 2006-20-09 ECI Cylinders some have 800 hour life FAA AD 2006-12-07. TNS 5-2006 & Cracking problems AD 2008-19-05 TNS 5-2008
- 35. **A/W Notice Mandatory Inspections Transfer to Generic Requirements:** transferred requirements A/W n 88 GR 6, A/Wn 20 GR 8, A/Wn 38 GR 10, A/Wn 75 GR 17, A/Wn 35 GR 24. GR's should be recorded in log books. Note changes to GR 17 and GR 24. TNS 3-2006
- 36. **Primer Pipes:** reported on Pawnee but applicable to most tugs. Primer line unclipped from bulkhead and chafed through on silencer. High risk of fire. Inspect regularly.
- 37. **Piper Cub:** Incorrect bolts fitted to some lower lift strut fittings and may foul landing gear SB 1172. now available on internet www.newpiper.com Cracked flap operating bell crank (same as Pawnee) TNS 1-2007
- 38. **Rallye:** Cracked elevator hinge <u>TNS 1-2007</u>
- 39. **Piper Cub:** stab trim screw jack failure TNS 2-2008,
- 40. **CAA Lamp:** to be used for all EASA Tugs and SLMG after ARC is issued and by 28/9/08 at the latest. LAMP must be customised to each aircraft or type. See AIRCOM 2009/18
- 41. **Pawnee Landing Gear:** cracks in forward hinge point <u>TNS 4-2008</u>
- 42. ARC Renewal: ARC's can be renewed until 5 Jan 2009 using the BGA M3 process TNS 4-2008
- 43. Flight Manuals for T61 Series: available from Slingsby. C of A with conditions no longer applicable

BGA Compendium – 03/13