



# COMBINED AIRWORTHINESS EXPOSITION

<b>BGA REFERENCE:</b>	<b>BGA-EXPO-03</b>
<b>CAA PART-CAO APPROVAL:</b>	<b>UK.CAO.0025</b>

**8 MERUS COURT  
MERIDIAN BUSINESS PARK  
LEICESTER  
LE19 1RJ**

**TELEPHONE NUMBER: +44 (0)116 289 2956**

**FACSIMILE NUMBER: +44 (0)116 289 5025**

**EMAIL: [office@gliding.co.uk](mailto:office@gliding.co.uk)**

**[www.gliding.co.uk](http://www.gliding.co.uk)**

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## AMENDMENT RECORD

All changes to this document shall be made in accordance with the procedure defined in BGA Standard Operating Procedure 001 (SOP 001). The Quality Manager will show his approval of changes by a signature in the Approval column below.

All amendments are to be registered on this sheet and the Quality Manager is responsible for the technical content and the submission of amendments to Approving Bodies.

This revision meets the applicable requirements of Part ML / Part CAO as appropriate.

Issue No.	Rev. No/Date	Amendment Details	Approval
1	00/01 March 2021	This Combined Airworthiness Exposition is issued to reflect the requirements of Part-ML and Part-CAO and how the BGA complies with those requirements through its working practices. As the approval is a new approval, this exposition is entirely new.	

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## DISTRIBUTION LIST

There is no defined distribution list for this Exposition. It is published on the BGA web site and any of the content printed from the website for personal use must be marked 'UNCONTROLLED' and managed accordingly.

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## PART A GENERAL DESCRIPTION

### A1 STATEMENT BY THE ACCOUNTABLE MANAGER

As Accountable Manager of the British Gliding Association, I confirm that work undertaken will at all times be in accordance with this Combined Airworthiness Exposition (CAE) and the requirements of Regulation (EU) No. 1321/2014 – Annex Vd (Part-CAO).

Name: Pete Stratten

Signed:



Dated: 1<sup>st</sup> March 2021

Accountable Manager  
British Gliding Association Ltd

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## A2 GENERAL PRESENTATION OF THE ORGANISATION

The British Gliding Association is the governing body for the sport of gliding in the United Kingdom. Its members consist of around 80 clubs spread throughout the UK and it provides advice and assistance to these clubs on a wide range of topics. It provides oversight of a variety of self-regulated activities and has previously held Part-MF, Part-MG, BCAR A8-24 and A8-25 approvals and has provided maintenance and management services to sailplane, motor glider and tug owners within the organisation.

As the organisation has transitioned from previously held EASA approvals, certain transition arrangements and alleviations apply as detailed in Regulation (EU) 1321/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018. Where not contained in the content of this exposition, those arrangements and alleviations still apply.

## A3 DESCRIPTION & LOCATION OF THE FACILITIES

There are a number of facilities spread across the United Kingdom where the privileges of the Part-CAO approvals are exercised. They include the BGA head office in Leicester, gliding club workshops and stand-alone professional maintainers. Oversight of these and other facilities is managed through the BGA audit schedule and BGA Standard Operating Procedures (SOPs). All maintenance and continuing airworthiness activities carried out within the BGA organisation are planned and conducted in accordance with the facilities and resources at each site.

### A3.1 Head Office Leicester

The BGA Head Office in Leicester has adequate office space, furniture, file storage and equipment for the day to day running of the airworthiness system along with other BGA activities. The office comprises open plan accommodation of ample proportions for the Chief Executive, Office Manager and other administrative staff, with a dedicated archive area equipped with steel storage cabinets. General administration, financial and airworthiness functions are located within the office. This includes a limited technical library, personnel files for BGA authorised inspectors, registration and C of A details for each aircraft in the BGA system, relevant records for all personnel involved in airworthiness management and records of all audits carried out by the BGA and the CAA. All this information is held electronically and/or in hard copy form.

### A3.2 BGA List 1 Maintenance Facilities

The BGA approves a small number of maintenance sites to carry out inspections and complex tasks on all sailplanes within the BGA's scope of approval as part of their routine work processes without having to get technical approval for each task as it arises. These sites are subject to additional requirements before they can be approved to exercise the privileges granted by BGA List 1 status. Details of these facilities can be found in Appendix 1 of this CAE.

### A3.3 Other BGA Maintenance Facilities (List 2)

With the exception of the List 1 sites referenced in A3.2, all List 2 maintenance facilities (BGA professional maintainers and BGA club sites) must be authorised by the BGA Chief Technical Officer prior to carrying out any tasks considered to be complex maintenance (for details see Complex Maintenance AMP 2-13 on the BGA website). An application must be made to the CTO on BGA Form 277, which will then be assessed for the appropriate skills, tools and data available (which could include an audit) to perform the task satisfactorily. When satisfied that these are all in place the CTO will sign the Form 277 to indicate approval of the specific task, which must be agreed before any work commences. Site visits may be required before and during the performance of the complex maintenance task.

### BGA Professional Maintainers

There are a number of non-List 1 BGA professional maintainers carrying out inspection, maintenance, repair and ARC renewals on aircraft within the scope of the BGA's approval. Each facility should have a suitable hangar or workshop, adequate tooling and equipment and a robust system for control of aircraft spares. Office facilities must be available to carry out airworthiness review surveys, along with suitable inspection and access equipment.

### BGA Club Sites

Where gliding club facilities are used to perform maintenance and airworthiness reviews, they should comply with the same basic requirements applicable to the professional maintainers and have a suitable workshop or hangar, appropriate equipment and suitable office facilities available to carry out airworthiness review surveys.

Private owners are responsible for the control of maintenance and airworthiness documentation in conjunction with their BGA inspector or Chief Engineer.

## **A4 SCOPE OF WORK**

The organisation scope of work includes Maintenance, Continuing Airworthiness support and Airworthiness Reviews as expressed in the tables below:

Rating	Maintenance	Continuing Airworthiness Management	Airworthiness Review	Permit to Fly
Piston Engine Aeroplanes up to 2730 kg (MTOM)	Yes	Yes	Yes	No
A4 Sailplanes and powered sailplanes	Yes	Yes	Yes	No

The BGA is also approved for fabrication of, in conformity with maintenance data, a restricted range of parts for use in the course of undergoing work within its airworthiness organisation, as identified in Appendix 2.

## **A5 EXPOSITION AMENDMENTS & CHANGES TO THE ORGANISATION**

### **A5.1 Changes to the Organisation**

The UK CAA will be informed of any of the following changes **prior to** such changes taking place:

1. Changes affecting information contained in the approval certificate or terms of approval.
2. Changes to the Accountable Manager or Nominated Personnel.
3. Changes in the scope of work by addition of aircraft subject to Part-ML regulation.
4. Addition of Airworthiness Review Personnel.
5. Any changes to this CAE Section A5 only.

Changes noted in item 1 will also require a variation application to be made, investigated, approved and a new approval certificate issued prior to such changes taking effect.

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Changes noted in items 2 through 5 will be notified to the UK CAA by the submission of a CAA SRG 1777 Form and supporting information and, where appropriate, an amended CAE. The change will not be considered approved until the SRG 1777 Form is returned, signed on behalf of the UK CAA.

The following changes will be notified to the UK CAA within 15 days of the changes taking place including in that notification an updated CAE:

1. Any other changes in locations and or facilities not affecting the approval certificate.
2. Any changes in staff, tooling, equipment, material, scope of work or procedures affecting content of this CAE.

### **A5.2 Process and Approval of CAE Amendments**

The initial CAE will be submitted to the UK CAA for approval as part of the initial application for Part-CAO approval. Further amendments to the CAE will be initiated by the BGA Chief Technical Officer.

After determining compliance with applicable regulations relating to each change, the Quality Manager will approve amendments to the CAE by signing the transmittal page. A copy will be sent to the UK CAA for records purposes, to [apply@caa.co.uk](mailto:apply@caa.co.uk) within 15 days of the change.

When the CAE is amended, the entire document takes the revision number given. Changes will be indicated by a vertical bar in the left-hand margin and all previously indicated changes will be removed. Summary information relating to the changes will be included in the transmittal page.

Where changes to the CAE relate to a variation application, such amendments will not be considered to take effect until the variation application has been completed and a new Part-CAO approval certificate has been issued.

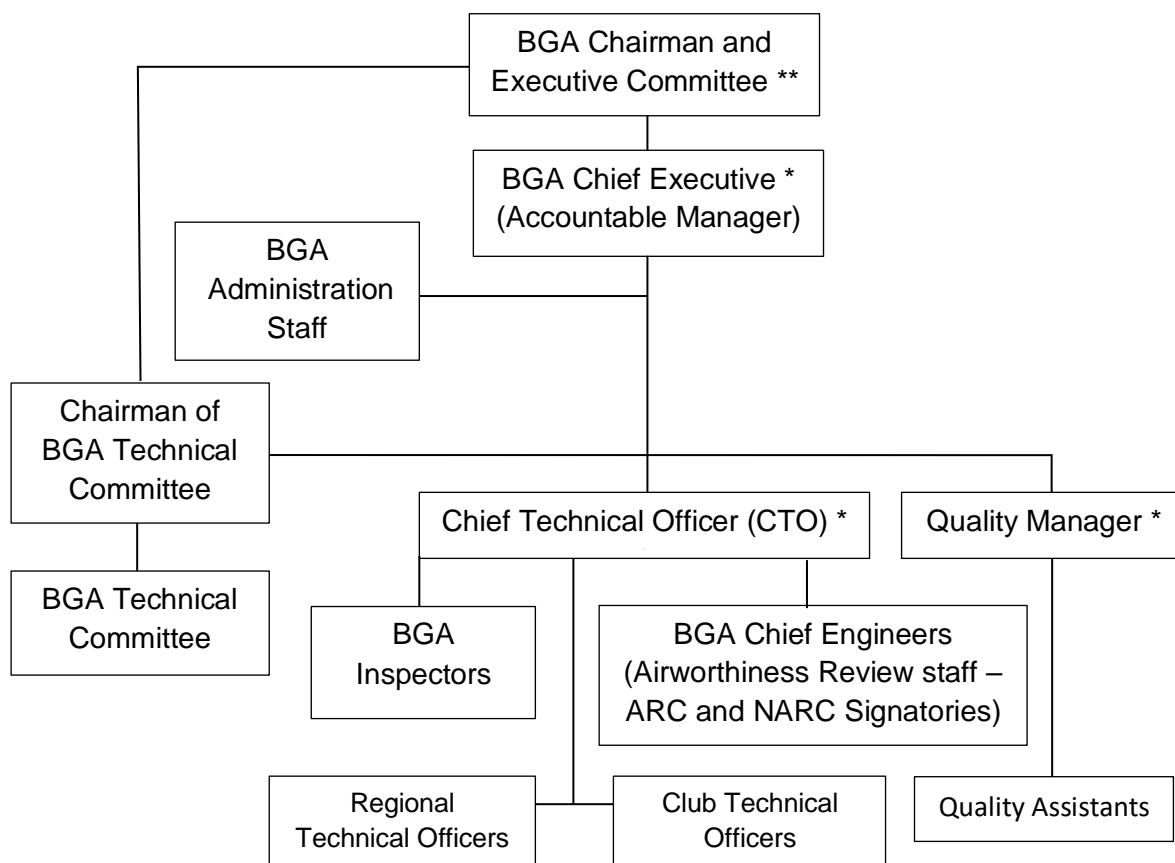
## **A6. PROCEDURES FOR ALTERNATIVE MEANS OF COMPLIANCE**

The EASA produced Acceptable Means of Compliance (AMC) will be used to demonstrate compliance with Annex Vd (Part-CAO) requirements. On occasions where the BGA wishes to use an Alternative Means of Compliance (Alt MOC), a proposal will be made by the BGA Chief Technical Officer with a full description of how that Alt MOC is compliant with Annex Vd (Part-CAO) requirements.

After satisfactory verification and assessment, the UK CAA will be provided with the information above with an associated request for approval of the Alt MOC. The Alt MOC will not be used until properly documented in the CAE and the Alt MOC has been given formal approval by the UK CAA.

**A7 MANAGEMENT PERSONNEL**

Position	Name
Accountable Manager	Pete Stratten
Chief Technical Officer	Gordon MacDonald
Quality Manager	Keith Morgan
Technical Committee Chairman	Howard Torode

**A8 BGA ORGANISATION CHART**

\* Senior Staff referred to in CAO.A.035 (a) & (b)

\*\* The BGA Chairman and Executive Committee position is shown for its role within the BGA airworthiness system.

Note: A number of Inspectors, Regional Technical Officers and Club Technical Officers are also Airworthiness Review staff (Chief Engineers) but are shown separately for the purposes of this organigram and the maintenance/airworthiness responsibilities within the BGA.

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## **A9 MANPOWER RESOURCES**

Management	1 Full Time
Technical Office	1 Full Time
Administration	3 Full Time
Quality Manager	1 Part Time
Quality Assistants	2 Part Time

The BGA does not employ its inspectors, a large proportion of whom are airworthiness review signatories, but they are under the direction of the BGA and its processes and procedures.

The positions of Chief Executive, Chief Technical Officer and Administration staff are full time employed. The Quality Manager and Quality Assistants are part-time contractors. All other positions are either employed outside the BGA or voluntary.

### **A9.1 Regional Technical Officers**

BGA Regional Technical Officers are experienced aircraft engineers who offer their time on a voluntary basis to carry out various aircraft surveys, act as a local contact point and represent the BGA Technical Committee as directed by the BGA Chief Technical Officer.

### **A9.2 Chief Engineers**

The BGA Chief Engineer role is to carry out airworthiness reviews for the issue of Airworthiness Review Certificates and act as the focal point for the owners' continued airworthiness management function. The number of Chief Engineers in the BGA is approximately 270, all of whom are also inspectors.

### **A9.3 Inspectors**

Inspectors fall into a number of categories with ratings that define the extent of their authorised capability. All BGA Maintenance Authorisations will start from Glider Inspector as a base for further endorsements as required. Detailed procedures for the approval of BGA Inspectors are contained in BGA Airworthiness Maintenance Procedures on the BGA website. The total number of inspectors in the BGA is approximately 416. A large number of these are also ARC signatories (see A9.2 above).

### **A9.4 Club Technical Officers**

The club Technical Officer (TO) is the single point of contact at each club for technical matters. It is recommended (but not essential) that the TO holds BGA Glider Inspector Authorisation. Club Technical Officers are persons nominated by the club concerned to whom all technical circulars and other communications of a technical nature may be sent and, working with the club committee, should ensure that the continuing airworthiness and maintenance of club aircraft is managed effectively.

### **A9.5 The BGA Technical Committee**

The Technical Committee meets periodically to address technical issues pertaining to its published Terms of Reference, which can be found in Appendix 3 of this CAE. The members of this committee serve in a voluntary capacity with the exception of the BGA Chief Technical Officer (CTO), who is a paid employee of the BGA. The committee members are engineers drawn from the UK aerospace and engineering industries with skills and knowledge that are relevant to the technical needs of the BGA.

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### Meetings and Responsibilities

The Technical Committee meets at intervals for the purpose of receiving reports of any technical work that is in hand. The committee also ratifies the appointment or suspension of Inspector and Senior Inspector ratings as recommended by the CTO. Any new faults in sailplanes will also be considered by the Technical Committee, which will then decide the appropriate course of action to be taken.

### Role of the Chairman

The Chairman of the Technical Committee is appointed by the Executive Committee of the BGA and thereby reports directly to the Chairman of the BGA. The BGA Chairman, through the Chief Executive (Accountable Manager), is ultimately responsible for any failure of the BGA to comply with this Exposition, particularly in respect to its terms of reference with the Civil Aviation Authority and the BGA's British Civil Airworthiness Requirements (BCAR) approvals and Part-CAO approvals.

## **A10 LIST OF CERTIFYING PERSONNEL**

Records of Certifying personnel are kept electronically and in hard copy at the BGA Head Office in Leicester. This is to ensure that the list is always up to date.

## **A11 PERSONNEL RESPONSIBLE FOR DEVELOPMENT & APPROVAL OF THE AMP**

The development and approval of the aircraft maintenance programme (SDMP) is the responsibility of each aircraft owner.

## **A12 AIRWORTHINESS REVIEW PERSONNEL**

Records of all Airworthiness Review personnel are kept electronically and in hard copy at the BGA Head Office in Leicester. This is to ensure that the list available to BGA members or aviation regulatory personnel is always up to date.

## **A13 PERSONNEL RESPONSIBLE FOR THE ISSUANCE OF A PERMIT TO FLY**

Not applicable.

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## **PART B            GENERAL PROCEDURES**

### **B1        QUALITY SYSTEM**

The British Gliding Association has a formal quality system to provide an independent monitoring function of how the organisation ensures compliance with the applicable requirements, policies and procedures, and to request actions where non-compliances are identified. These audits are the responsibility of the Quality Manager, who reports directly to the Accountable Manager.

The Quality Manager will have a thorough knowledge of the applicable regulations (e.g., Part-M, Part-ML & Part-CAO) and knowledge of audits obtained by either training or experience (e.g., previous audit experience or active participation in several audits conducted by the UK CAA). The Quality Manager will not be involved in or responsible for the functions, procedures or products that are audited.

Findings against the organisation's procedures or regulatory requirements will be recorded and reported in accordance with Parts B2.9, B2.10 and B2.11 of this CAE. The Accountable Manager reviews the content and status of audit findings through the Airworthiness Management Meeting (Part B.12). Any findings that lower the safety standard and seriously hazard flight safety shall be immediately notified to the Accountable Manager and the competent authority and all necessary actions on aircraft in service shall be immediately taken.

#### **B1.1    Quality Policy**

The British Gliding Association is committed to the achievement of a high standard of safety and airworthiness at all times for the aircraft falling within its jurisdiction. The procedures and disciplines necessary to achieve these aims are fundamental to this policy and are detailed within this Combined Airworthiness Exposition and BGA Airworthiness and Maintenance Procedures. Safety is everyone's responsibility, and it is the duty of all persons involved in the activities of the BGA to comply with all applicable procedures, standards and regulatory requirements and to report all airworthiness related errors and incidents as they arise.

### **B2        AUDIT PLAN**

Checklists are used during audits to record the effectiveness of the Quality System and audits will include an appropriate combination of control of tools and equipment, component storage, aircraft records / documentation review, sample check of aircraft, work orders, interview of personnel involved and a review of discrepancies and any deviations. The audit report will reference the items sampled.

Aircraft located outside the UK and under BGA control are subject to the same audit requirements as those within the UK.

An audit report will be produced in every instance and will record any observations, recommendations and, where necessary, corrective actions. This information is used to ensure both the timely correction of any system deficiency and identify where revised procedures would be of benefit to operation of the continuing airworthiness system. Previous audit findings will be reviewed during subsequent audits to establish if there are any underlying trends or repetitive items that may require action. A comprehensive summary of audit findings will be presented to the Accountable Manager on an annual basis at the Airworthiness Management Meeting.

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## B2.1 Responsibility and Authority

Every member of the BGA management team, as shown in the organisation chart (Part A.8), is responsible for all activities carried out within their remit, especially the quality aspects of these activities. It is the responsibility of the Quality Manager to maintain an effective quality assurance organisation within the BGA.

## B2.2 Internal Audit

Audits will be carried out of the processes and procedures used by head office staff in the administration of airworthiness tasks. The following activities are sampled for compliance with the requirements:

- a) ARC renewals.
- b) Modification applications.
- c) Complex repair applications.
- d) C of A Transitions.
- e) CAA C of A renewals.
- f) BGA C of A issues or renewals.
- g) New applications and Inspector upgrades.
- h) Inspector renewals.

## B2.3 External Site Audit

Site audits are normally pre-scheduled but random audits may also be carried out during times of high workload and to ensure consistency across the external audit programme. Site audits are either List 1 sites (see Appendix 1) or other maintenance sites (List 2) consisting of gliding clubs or other professional maintainers. All clubs and maintainers are listed on the BGA head office database in Leicester.

The audit will take into account a sample of the following areas:

Hangar and general facilities:

- a) General inspection of stores and procedures for stock control and component segregation.
- b) Surveillance inspection of hangars, maintenance workshops and aircraft storage arrangements.
- c) Environmental protection arrangements.

Workshops and repair facilities:

- a) Adequacy of accommodation for depth of intended maintenance/repair.
- b) Surveillance of the general condition of facilities, including access and housekeeping.
- c) Availability of tooling and equipment for the task, including calibration as required.
- d) Availability of maintenance information - ADs, Maintenance Schedules, etc.
- e) Appropriate staffing levels.
- f) Correct issue status and use of BGA documentation and procedures.
- g) Appropriate health and safety requirements.

## B2.4 Aircraft Audit

The audit schedule is designed to include aircraft audits as part of the process carried out by the Quality group and aircraft will be included on each occasion. In addition, C of A

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issue / renewal applications or ARC issues may be used to select aircraft for audit on an ad hoc basis.

Non-Part 21 aircraft will also be subject to audit, although they may be included in a scheduled club audit if appropriate. Tug aircraft will generally be audited as a separate element of the annual programme, although they may be included in club audits if appropriate.

An aircraft shall not be audited by any auditor who has had any involvement in any part of its maintenance regime. Details of any findings will be forwarded to the Competent Authority of the state of registry on request. In the case of the UK CAA, findings will be retained for review on request.

## **B2.5 Audit content**

The aircraft audit shall include, but not be limited to, the following activities:

- a) Examination of Airworthiness Review reports.
- b) Physical survey of selected aircraft.
- c) Review of modifications to ensure correct compliance and embodiment.
- d) Review of AD compliance list.
- e) Review of repair activity and associated logbook entries.
- f) Review of other maintenance records.

## **B2.6 Presentation of Aircraft**

Following formal notification by the BGA, it is the owner's responsibility to make the aircraft selected for audit available at a suitable location for audit. Adequate facilities, i.e., hangar or workshop, must be available along with the associated aircraft documentation. Aircraft and facilities not based in the UK are subject to site visits and random audit requirements as if they were based in the UK. At the option of the BGA, it will be the owner's responsibility to either present the aircraft at a suitable location on the UK mainland or reimburse all expenses incurred by the BGA for on-site visits outside the UK.

## **B2.7 Audit Planning**

### Head Office

Head office audits will be completed annually.

### BGA Approved Facility

Audits of BGA approved List 1 facilities will be carried out every two years. If any significant issues are found during the audit process the BGA Quality Manager may reduce the period between audits to 12 months or less, depending on the severity of the finding(s).

### Club Audits (List 2)

Audits of gliding club maintenance facilities will be carried out at approximately four yearly intervals. Where a club does not have any maintenance facilities, audits of aircraft and their associated maintenance records will be carried out.

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### List 2 Professional Maintainers

Audits of BGA List 2 professional maintainers' facilities will be carried out at approximately two-yearly intervals.

#### **B2.8 Audit Schedule**

The audit schedule is determined by the Quality Manager and agreed and approved by the BGA Chief Executive. The audit year is split into quarters for convenience and a copy of the schedule is held on the computer system at BGA head office. It is available on request to relevant parties. The Quality Manager is responsible for ensuring that audits are carried out in accordance with the schedule requirements.

#### **B2.9 Audit Reporting and Classification of Non-Conformances**

Audit findings shall be qualified as Level 1 or Level 2.

- a) Level 1 is a finding that requires immediate action because of non-compliance with the regulations that could jeopardise aircraft safety.
- b) Level 2 is a finding that may be corrected in an agreed timescale due to procedural inconsistencies that would not jeopardise aircraft safety.

#### **B2.10 Quality Records**

The following documents constitute Quality Records and shall be retained for a minimum of two years and be made available for review by the UK CAA as part of the continued oversight of the BGA:

- a) Quality reviews.
- b) Records of Quality audits and associated corrective actions.
- c) Records of club and site visits by CTO or RTO, if applicable.
- d) Recommendations for ARC issue.
- e) Technical Committee meeting minutes including feedback from BGA Inspectors.
- f) All technical data generated in support of modification approval.
- g) Mandatory Occurrence Reports.

#### **B2.11 Tracking Corrective Actions**

The audit schedule is raised and maintained by the Quality Manager. All audit activity is recorded by administration staff on a computer database at BGA head office. The database contains details of each audit, including the auditor, the date the audit was carried out, the number of findings raised, the agreed timescale and the date of closure. On completion of an audit, it is the responsibility of the auditor to monitor corrective actions, ensure that they are satisfactory and notify administration staff of the date of audit closure. The master schedule is located at BGA head office stored on the shared drive.

#### **B2.12 Airworthiness Management Meeting**

As part of the BGA Quality System the organisation will carry out internal audits to establish that the processes and procedures are suitable for the safe continued airworthiness of aircraft and to ensure that the requirements of the relevant regulations are being met. The BGA Chief Executive (Accountable Manager), Quality Manager, Chief Technical Officer, Chairman of the Technical Committee and other attendees as requested by the

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Accountable Manager will be engaged in a Quality Review of BGA Airworthiness processes and procedures. This Quality Review is called the Airworthiness Management Meeting, is chaired by the Accountable Manager and will satisfy the organisational review requirement under Part-CAO.A.100.

The Airworthiness Management Meeting will be held at least once a year and will cover the following aspects:

- a) A review of any audits carried out by the UK CAA.
- b) Status of the BGA Quality Management System.
- c) A review of the internal audit programme.
- d) A review of the external audit programme (including any RTO audits).
- e) An overview of the BGA C of A, UK CAA C of A and ARC issuing process.
- f) A review of any Technical Occurrence reports raised during the reporting period.
- g) A review of any airworthiness related complaint raised against the BGA.
- h) A review of MORs and any serious incident/accident event.
- i) Inspector appointment, upgrade, renewal and disciplinary procedures.
- j) BGA personnel levels.
- k) A report on audit non-conformances and audit performance, which will be produced at least once a year for review and discussion at this meeting.
- l) Regulatory updates.

## **B2.13 BGA Procedures**

### General

BGA procedures are maintained current to reflect best practice. The BGA Technical Committee will initially approve any technical element to proposed changes to Standard Operating Procedures and Airworthiness Maintenance Procedures. Final approval before incorporation into the approved Quality System will be by the Quality Manager. Changes to procedures will be verified and validated before use where practicable.

### Standard Operating Procedures

Standard Operating Procedures (SOPs) are used to control clerical activities based at the BGA head office in Leicester. A full list of BGA Standard Operating Procedures is held on computer and in a file in the BGA office.

Note: SOPs are for BGA internal use and are only available in the BGA office.

### Airworthiness Maintenance Procedures

Airworthiness Maintenance Procedures (AMPs) are used to control airworthiness issues and are made available to BGA Inspectors operating in the field via the BGA website. AMPs are kept under strict revision control with the master file / paper copy being retained at BGA Head Office. A full list of BGA Airworthiness Maintenance Procedures is available on the BGA website. Document issue status is the latest held at BGA Head Office and promulgated through the BGA website.

## **B3. MONITORING OF MAINTENANCE CONTRACTS**

Not applicable.

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## **B4. QUALIFICATION, ASSESSMENT & TRAINING OF PERSONNEL**

### **B4.1 Nominated Personnel**

Personnel nominated by the Accountable Manager as detailed in section A8 of this CAE will meet the following requirements (where appropriate):

1. Practical experience and expertise in the application of aviation safety standards and safe operating practices including 5 years aviation experience, at least 2 years of which should be from the aeronautical industry in an appropriate position, and:
2. Comprehensive knowledge of Part-M, Part-ML and any associated requirements, procedures, quality systems, maintenance standards (including human factors) as well as the content of this CAE, and:
3. Knowledge of a relevant sample of types and components that are within the scope of work. This knowledge may be demonstrated by documented evidence or by an assessment performed by the UK CAA. Training courses when used as documented evidence should be at level equivalent to Part-66 Appendix III Level 1, by the manufacturer or by another organisation accepted by the competent authority.

### **B4.2 Competence Assessment, Initial and Recurrent Training**

The BGA Chief Technical Officer will ensure that all personnel involved in maintenance and continuing airworthiness management are assessed for competence and qualification. On-the-job evaluation or specific examination as deemed appropriate by the BGA Chief Technical Officer will be performed and recorded prior to unsupervised work being performed.

Initial training will be adequate for the position as determined by the BGA Chief Technical Officer but will not be less than training required by the applicable regulatory requirements.

Training in the requirements of this CAE will apply to all personnel where relevant to their tasks. Initial training will be by hangar briefing, one to one discussion, computer or classroom based as appropriate to the material or as required by the regulation and will be recorded.

Recurrent training will be adequate for the position as determined by the BGA Chief Technical Officer. Examples of material to be considered are as follows:

1. New technology.
2. aircraft and / or components where training is appropriate.
3. Results of MORs / Investigations / Incident and Accident Reports.
4. Changes in the content of this CAE or regulation that impact the individual's role.

Recurrent training will be by hangar briefing, one to one discussion, computer or classroom based as appropriate to the material and will be recorded.

### **B4.3 Specialised Personnel**

Welding will be contracted to personnel qualified in accordance with an officially recognised standard (e.g., CAA BCAR A8-10, EN 287, ISO 9606).

Non-Destructive Testing (excluding colour contrast penetrant inspection) will be contracted to an appropriately approved organisation.

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#### **B4.4 Certifying Personnel**

The BGA Chief Technical Officer will ensure that certifying personnel meet the following requirements prior to releasing aircraft to service:

1. Be qualified in accordance with Part-66 and appropriately rated (if applicable) and:
2. Have at least 6 months maintenance experience in the last 24 months consistent with the privileges of the licence and:
3. Have adequate training and competence demonstrated in line with this section B4 and:
4. Be able to read, write and communicate to an understandable level in English and the language of applicable technical data and:
5. Have an adequate understanding of the aircraft as well as applicable company procedures.

#### **B4.5 Airworthiness Review Personnel (Chief Engineers)**

Airworthiness Review personnel must be nominated by the BGA and will be formally notified to the UK CAA by the completion of form SRG 1777 prior to performing an Airworthiness Review and issuing an ARC. Within the BGA airworthiness organisation the term Chief Engineer refers to personnel who are approved to carry out Airworthiness Reviews.

The BGA Chief Technical Officer will ensure that airworthiness review personnel meet the following requirements prior to performing an Airworthiness Review and issuing an ARC:

1. Have acquired experience in continuing airworthiness of at least 1 year for sailplanes and of at least 3 years for all other aircraft and:
2. Hold an appropriate Part-66 licence or an aeronautical degree or equivalent and:
3. Have adequate training and competence demonstrated in line with this section B4 and:
4. Have acquired appropriate aeronautical maintenance training.
5. Where compliance with point 2 above cannot be demonstrated, the qualifications can be substituted by an additional 2 years' experience (sailplanes) or an additional 4 years' experience for all other aircraft.
6. Have satisfactorily completed and recorded an "Airworthiness Review under Supervision" with either the UK CAA or another current BGA ARC signatory.

The experience specified in item 1 refers to any appropriate combination of tasks related to maintenance, continuing airworthiness management including, if applicable, surveillance of such tasks.

An equivalent to an aeronautical degree as specified in item B4.5 above refers to an engineering degree from mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft. An addition to the list of Airworthiness Review personnel is a notifiable change to the CAA.

Continued validity of the above authorisation is dependent on airworthiness review personnel performing at least one Airworthiness Review in the last 12-month period **or** having experience of continuing airworthiness tasks for at least 6 months in every 2-year period. Restoration of lost validity will be achieved by performing an Airworthiness Review under supervision of the UK CAA or any other BGA ARC signatory. A record will be kept of the review under supervision. Records showing compliance with all the above requirements for airworthiness review staff will be kept for at least 2 years after the individual has left the organisation.

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The list of airworthiness review personnel will be continually updated. Personnel appointed will be recorded on the BGA database and BGA personal file that is available for inspection by the CAA on request.

Existing ARC signatories with other organisations may apply for BGA ARC signatory status without further training as follows:

- a) Current ARC signatory – Interview by CTO / RTO to ensure understanding of BGA procedures.
- b) Lapsed ARC signatory – Airworthiness Review under supervision and interview by CTO / RTO to ensure understanding of BGA procedures.

In both cases a copy of the other company's Form 4 with CAA endorsement shall be held on file and referenced on the BGA Form 4 application.

For Part 21 tug aircraft, in addition to TG, the person making the report must also hold a Part 66 licence. Only Part 21 sailplanes, self-sustaining sailplanes, self-launching motor gliders and glider tugs within the BGA airworthiness organisation may be processed through the BGA CAO.

#### Remaining compliant with the BGA Approval

To remain compliant a BGA inspector is only authorised and insured to certify aircraft within the BGA Airworthiness Organisation. A BGA inspector is not authorised or insured to certify any work or carry out any airworthiness review, renew or extend any ARC, or allowed to certify any maintenance activity as part of another Part-CAO organisation or on aircraft not registered with the BGA as current within the BGA airworthiness organisation.

For initial issue and every five years BGA inspectors shall undergo human factors and procedural training. In exceptional circumstances these requirements can be varied by up to one year with the agreement of the BGA CTO. Details of initial and continuation training for each BGA Inspector are held at BGA Head Office.

### **B5. ONE-OFF CERTIFICATION AUTHORISATION**

All BGA Authorisations are for maintenance and repair of BGA and Part 21 / non-Part 21 approved types. The BGA CTO may, at his discretion, grant one-off or limited authorisation if a particular case merits this due to an operational requirement. This authorisation can only be granted to personnel who are already in possession of a Part-66 licence appropriate for the task(s) required and will generally take the form of an authorisation letter or e-mail.

### **B6. LIMITED CERTIFICATION AUTHORISATIONS (CREW AUTHORISATIONS)**

Not applicable.

### **B7. SUB-CONTRACTING**

The BGA does not sub-contract any maintenance functions to non-approved organisations.

## B8. MAINTENANCE DATA & CONTINUING AIRWORTHINESS MANAGEMENT DATA

The person performing the work will ensure that all maintenance and continuing airworthiness management activity is supported by the applicable current maintenance data. Applicable means:

1. Any applicable requirement, procedure, standard, AD or information published by EASA, UK CAA or applicable NAA (e.g., state of design).
2. Applicable Instructions for Continuing Airworthiness issued by the Type Certificate Holder, Supplemental Type Certificate holder or Part-21 organisation as appropriate. Practical examples include the Service Manual, Parts Catalogue, Repair Manual and Modification Data.

For less common types, or where the maintenance data is provided by the owner, or where the data is free to view the inspector will ensure the availability of current applicable maintenance data prior to any work taking place and will ensure that only that data is used.

## B9. RECORDS MANAGEMENT & RETENTION

The BGA head office maintains an electronic file and computer database on each aircraft under its control containing the following information:

- a) Database record of ARCs issued.
- b) Copies of supporting documentation for the issue of an ARC.
- c) Recommendations for issue or renewal of the ARC.
- d) Accident / Incident reports.
- e) Correspondence and reports relating to a specific aircraft, if applicable.

All other continuing airworthiness records in the uncontrolled environment are retained by, and the responsibility of, the aircraft owner. The maintenance organisation or inspector that has carried out any work on the aircraft also has a responsibility to hold copies of such records. Records shall be stored in a manner that ensures protection from damage and theft and must be kept for a period of three years from the date that the aircraft to which the work relates was issued with a certificate of release to service from the maintenance organisation or inspector that carried out the work. These records include logbooks, life-controlled item records, defect sheets and worksheets, mass and balance reports, component release paperwork and CAA Form 1s as applicable. Aircraft records will be sample checked as part of the annual airworthiness review and will also be included in routine BGA audit processes.

The periods of records retention will be as detailed in the table below.

Records Details / Subject	Retention Duration
Maintenance Records including the CRS, and subcontractor documentation and additionally any modification / repair data related to that work.	Until superseded by new equivalent information and in any case not less than 3 years from the CRS date.
Continuing Airworthiness Management records (ML.A.305)	*Until 2 years after the aircraft has been permanently withdrawn from service.
Airworthiness Review Certificate, Report, Recommendation, extension (as applicable) and all supporting documents.	*Until 2 years after the aircraft has been permanently withdrawn from service.

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Records Details / Subject	Retention Duration
Any issued Permit to Fly and associated supporting documentation.	*Until 2 years after the aircraft has been permanently withdrawn from service.
Assessment and Qualification of all personnel involved in Continuing Airworthiness Management and / or Maintenance. Records of Certifying Staff, Records of Airworthiness Review Staff.	Until 2 years after the staff are no longer employed or contracted by the organisation.

\*When records are transferred to another organisation or person, from the moment of transfer, the retention of records requirements will apply to that organisation or person.

Aircraft Continuing Airworthiness Records will consist of logbooks for the airframe, engine(s), propeller(s) as appropriate and record sheets for any service life limited components.

## B9.1 Records Storage & Disposal

Logbooks, continuing airworthiness and maintenance records will be retained by the aircraft owner / club and must be protected from damage and unauthorised access. Some records can be kept electronically but **must be backed up** and stored remotely.

Where an aircraft is withdrawn from service, the maintenance records (or copies) will be retained as detailed in the table on the previous page. All continuing airworthiness management records held by an inspector or maintenance facility will be transferred to the owner who will then be responsible for retention in accordance with ML.A.305 (h).

## B.10 PERFORMANCE OF THE AIRWORTHINESS REVIEW

The primary facility is the BGA Head Office, Leicester, where the Part-CAO activity is co-ordinated. Each BGA Chief Engineer will utilise a maintenance facility, appropriate for the class or size of aircraft, for the survey and documentary review.

Each facility should have a suitable area for review and retention of records to establish scheduled maintenance requirements, AD compliance, control of out-of-phase inspections, life-controlled items and time limited tasks, modifications, weighing, deferred defects and ARC expiry / renewal.

The airworthiness review will be recorded on BGA Form 276 and will include details of what was checked along with any findings. Findings must be resolved prior to the issue of the CAA Form 15c Airworthiness Review Certificate.

### B10.1 Airworthiness Review – Full Documented Review

Only the Chief Engineers referenced in this CAE will perform a documented review of the aircraft records to verify that:

1. Airframe, engine and propeller flying hours and associated flight cycles have been properly recorded:
2. The flight manual is applicable to the aircraft configuration and reflects the latest revision status:
3. All the maintenance due on the aircraft according to the AMP has been carried out:

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4. All known defects have been corrected or deferred in a controlled manner:
5. All applicable ADs have been applied and properly registered:
6. All modifications and repairs made to the aircraft have been registered and are in compliance with Annex I (Part 21) to UK Reg. (EU) No 748/2012:
7. All service-life limited components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit:
8. All maintenance has been certified in accordance with Annex Vb (Part-ML):
9. If required, the current mass and balance statement reflects the configuration of the aircraft and is valid:
10. The aircraft complies with the latest revision of its type design approved by the agency:
11. If required, the aircraft holds a noise certificate corresponding to the current configuration of the aircraft in compliance with subpart I of Annex I (Part-21) to UK Reg. (EU) 748-2012:
12. Where applicable, the review of the effectiveness of the AMP will be performed in conjunction with the airworthiness review.

### **B10.2 Airworthiness Review – Physical Survey**

Airworthiness review personnel will also carry out a physical survey of the aircraft. Those personnel not appropriately qualified under Annex III (Part-66) will be assisted by Part-66 certifying personnel in removing panels, ensuring access and generally facilitating the review. Any work performed to facilitate the review will be certified by the certifying personnel. The physical survey will be performed only by airworthiness review personnel.

Through the physical survey of the aircraft, the airworthiness review personnel will ensure that:

1. All required markings and placards are properly installed:
2. The aircraft complies with its approved flight manual:
3. The aircraft configuration complies with the approved documentation:
4. No evident defect can be found that has not been addressed according to point ML.A.403:
5. No inconsistencies can be found between the aircraft and the documented review of records as referred to above:
6. Where applicable, the review of the effectiveness of the AMP is performed in conjunction with the airworthiness review.

### **B10.3 Airworthiness Review – Anticipation**

The airworthiness review may be anticipated for a maximum period of 90 days without loss of continuity of the airworthiness review pattern, in order to allow the physical review to take place during a maintenance check.

### **B10.4 Airworthiness Review Certificate (ARC)**

#### ARC Processing

For aircraft subject to the Part ML regime, CAA Form 15c (ARC) shall be issued by appropriately authorised airworthiness review personnel upon completion of a satisfactory airworthiness review (Part ML, appendix IV refers) only when all findings have been closed and any discrepancy found in the SDMP as a result of the coincident SDMP review has been satisfactorily addressed. A copy of any issued CAA Form 15c shall be sent to the CAA within ten days of issue.

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A scanned copy of the ARC and BGA 276 will be retained in a dedicated aircraft electronic file in the BGA Head Office.

## Currency Requirements

In order to keep their authorisation current, ARC signatories should have conducted at least one airworthiness review in the last 12-months period.

In order to restore the validity of an authorisation, an ARC signatory should conduct, at a satisfactory level, an airworthiness review under the supervision of another currently valid authorised BGA ARC signatory.

## **B11. CONFORMITY WITH THE APPROVED FLIGHT CONDITIONS**

Not applicable.

## **B12. ISSUE OF THE PERMIT TO FLY**

Not applicable.

Note: This section does not apply to aircraft with an enduring permit to fly issued in accordance with 21.A.701 (a) (15).

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## PART C MAINTENANCE PROCEDURES

### C1 GENERAL

The following section details the maintenance procedures to be followed during the performance of maintenance work undertaken by BGA inspectors.

### C2. WORK ORDER ACCEPTANCE & WORK PACK CREATION

BGA inspectors will ensure that all maintenance work is supported by a written work order before the commencement of work. Work orders are required for all maintenance unless the owner is part of the same organisation performing the work. The written work order can take the form of an e-mail, fax, purchase order, letter or work package. BGA Form 273 may be used as a maintenance work order in the absence of any locally designed forms.

The work order will only be accepted if the aircraft is within the BGA's scope of work, the work order detail clearly establishes the maintenance to be carried out, the facility can physically accommodate the aircraft for the duration of the maintenance and all applicable facility requirements, tooling, equipment, data, personnel and parts can be made available to facilitate proper performance of the work. A copy of the work order will be filed with the completed work package.

All work orders are processed by the creation of a work package to ensure that the documentation being used for aircraft maintenance is clear as to the maintenance requirement and includes the following as applicable:

1. A documentation control sheet so the content of the work pack can be controlled. It should also contain aircraft identification and a workpack reference number.
2. Work sheets / task cards for the routine maintenance.
3. Non-routine cards or worksheets for recording defects and other non-routine work.
4. An Independent Inspection sheet for the recording and signing off of Independent Inspections. If a dedicated sheet is not used, each independent inspection should be **clearly** identified against its corresponding first inspection.
5. BGA 280 or the relevant pages of the logbook for recording compliance with ADs.
6. Engine Ground Run Record (if applicable).
7. Certificate of Release to Service and an entry on the worksheet that includes tool / panel / misc. items check.
8. Parts Used record sheet.

The work order number is generated locally by the organisation or inspector carrying out the work and should be a unique reference for every package of work. This reference will also be written in the maintenance page of the logbook with details of the work carried out as part of the certification statement.

### C3. COMPONENTS, EQUIPMENT, TOOLS AND MATERIAL

#### C3.1 Tooling

All maintenance shall be performed using appropriate tooling and, where required, using tooling and equipment as specified in approved maintenance data or an equivalent accepted by the BGA. General hand tools shall be kept in good order and should be appropriate for the task being performed. Where possible tools should be checked calibrated

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before use i.e., torque tools with an 'Acratork' or similar equipment. Professional maintainers should have a simple tool register in use at the facility which may be either a traditional paper document listing tool description, reference number, location and calibration requirements (if appropriate) or a computer record. Alternative methods such as shadow boards or named hooks will suffice for small organisations.

### Tool Calibration Requirements

Tools and equipment, where appropriate, shall be calibrated or tested in accordance with the manufacturer's recommendations or industry standard. When establishing the period between calibrations, due account can be made of the level of utilisation and storage conditions. In a club environment where weighing scales could be used infrequently, it is important that they are checked with a known weight before use. With regard to ASIs and altimeters, calibration can only be carried out with an instrument certified by a test house. The use of a manometer is valid for an operational or comparison check only. In all cases of heavy usage, it may be necessary to calibrate tools and equipment at more frequent intervals. In the absence of specific manufacturer instructions, the following intervals shall be used:

Measuring equipment	2 years
Torque tools	2 years
Pitot/static calibration equipment	2 years
Weighing equipment	5 years
Self-calibrating tools	before use

### Calibration Records

In all cases tool calibration will be accomplished by a UKAS approved company or traceable to a CAA acceptable standard. Certificates of calibration shall be retained by the maintenance site in accordance with the requirements for the retention of Quality records. In the case of self-calibration, the method and standards used shall be identified and recorded on the appropriate calibration sheet.

### Damaged Tooling

Tooling or equipment that is damaged, abused or believed to be inaccurate shall not be used and shall be repaired, checked and calibrated before use.

### Tool Control

At the completion of any maintenance a check shall be made to ensure that all tools and equipment have been removed from the aircraft and that any components or parts disturbed during the maintenance have been reinstated. A tool control system in the form of shadow boards or pegs is recommended to ensure good practice. List 1 maintenance sites shall indicate the method of tool control in their application.

## **C3.2 Component and Raw Material Storage Facilities**

A bonded store shall be provided for the storage of released parts and material. Storage conditions shall be in accordance with standard industry practice, taking into account manufacturers' instructions for abnormal climatic conditions. Components, parts, consumables and raw material being received should be inspected for condition, acceptable documentation and conformity with the order. Access to the bonded store should be

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restricted to authorised personnel at all times. In addition to component storage, secure storage facilities will be provided for test equipment and tools in order to promote good tool control. Storage conditions shall ensure segregation of unserviceable components and material from all other components, material, equipment and tools.

#### Commercial Store

A Commercial store should be available for the storage of non-released consumable items. The stores should be appropriate for the intended use and may consist of a secure cupboard up to a purpose-built store. Combining the Bonded store with the Commercial store is not permitted.

#### Quarantine Store

A secure Quarantine store should be provided for the storage of unserviceable items and for newly received items waiting release paperwork until classified and inspected. In some cases, this may be achieved by providing a suitable secure cupboard or shelf in a secure cupboard. Items in Quarantine are positively identified using labels and recorded in a Quarantine Register. Once removed from Quarantine the register shall be updated with details of the component's disposition.

For larger Maintenance Organisations where there is a larger throughput of spares a separate store may be appropriate in combination with a bonded store for released components.

The BGA Inspector is responsible for managing the quarantine store and deciding upon the course of action to be taken with respect to each unserviceable item.

#### Storage Racks

Adequate storage racks should be provided at each site to ensure the safe storage of aircraft components when not being worked on. Covers shall be used to prevent the ingress of dirt, dust and other foreign matter during storage.

#### Shelf-Life Control

Items and materials having a limited shelf life shall be segregated within the bonded store. Although not intended to be exhaustive, a typical range of items in this category includes:

- a) Adhesives.
- b) Laminating resin and hardener.
- c) Rubber components and seals.
- d) Locking compounds.
- e) Lubricants.

No shelf life can be extended without the written approval of the manufacturer. The BGA Inspector is responsible for ensuring life expired items are either formally re-lifed or permanently withdrawn from the facility and disposed of in accordance with the manufacturer's data sheet.

### **C3.3 Component Installation**

The Certifying Engineer will only certify installation of a component if:

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1. The part is in a satisfactory condition **and**:
2. Has been appropriately released using a CAA Form 1 or equivalent **and**:
3. Has been marked in accordance with Part-21, Subpart Q (e.g., Part / Serial Number, TSO markings as applicable).
4. Is eligible to be fitted if different modification standards or AD configurations are applicable.

Equivalent documents to a CAA Form 1 may be:

1. EASA Form 1 issued prior to 1<sup>st</sup> January 2021.
2. EASA Form 1 issued by a non-UK organisation, acceptable for installation until 31<sup>st</sup> December 2022.
3. A release document issued by an organisation under the terms of a bilateral agreement signed by the EU or JAA.
4. A JAA Form 1 issued by a JAR 145 organisation approved by a JAA Full Member State prior to 28<sup>th</sup> November 2004.
5. In the case of new aircraft components that were released from manufacturing prior to the Part-21 compliance date, a JAA Form 1 issued by a JAR-21 organisation approved by a JAA Full Member State within the JAA mutual recognition system.
6. A JAA Form 1 issued prior to 28<sup>th</sup> September 2005 by a production organisation approved by a competent authority in accordance with its national regulations.
7. A JAA Form 1 issued prior to 28<sup>th</sup> September 2008 by a maintenance organisation approved by a competent authority in accordance with its national regulations.
8. A release document acceptable to the competent authority according to the provisions of a bilateral between the competent authority and the third country as long as the agreement has been notified to the European Commission and other competent authorities.
9. A CRS and release document issued by an organisation approved by the UK CAA prior to 28<sup>th</sup> October 2008 in accordance with national regulation in force at that time.

Where used components are supplied with an FAA Form 8130-3 without EASA release, reference should be made to procedure C9 of this CAE.

Standard parts may be fitted to a component or aircraft when the maintenance data specifies those particular standard parts. They will be accompanied by evidence of conformity to the applicable standard (e.g., C of C). For standard parts, raw or consumable material, no CAA Form 1 is required therefore none should be expected.

Raw or consumable material will only be used on the component or aircraft if the aircraft or component manufacturer allows for its use in the appropriate maintenance data. The material must be accompanied by documentation clearly relating to the particular material, confirming conformity with the material specification as well as the manufacturer and supplier source.

Components accepted by the owner in accordance with 21.A.307(c) or parts that do not need a Form 1 - such parts are defined as follows and limited to ELA1 or ELA2 aircraft:

- Not life limited nor part of the primary structure or flight controls.
- Manufactured in accordance with an applicable design.
- Marked in accordance with Part-21 Subpart Q.
- Identified for installation in a specific aircraft.

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- To be installed in an aircraft for which the owner has verified compliance with the conditions 1 through 4 and has accepted responsibility for this compliance by completing and signing a BGA 286 form.

### C3.4 Component Control

The control of components fitted to aircraft operated within the scope of the BGA approval fall into four categories:

- a) Components removed from the aircraft for repair within the BGA system.
- b) Swapping of serviceable parts between aircraft.
- c) Components removed from an aircraft and sent to a third party outside the BGA approval system.
- d) Components removed from an aircraft for overhaul.

Component maintenance on BGA aircraft may be carried out under the BGA Part-CAO approval and released as aircraft maintenance with a Part-MLA.801 Certificate of Release to Service.

Component maintenance may only be carried out by BGA inspectors provided the maintenance is detailed in the appropriate aircraft maintenance manual or component maintenance manual. Details of the maintenance carried out must be recorded in the aircraft maintenance records. Installed service life limited components shall not exceed the approved service life limit as specified in the approved maintenance programme and airworthiness directives. In instances where a major life limited component has been substituted, details of the consumed fatigue life must be clearly entered in the aircraft logbook. The impact of any component substitution must be taken into account when managing the overall airframe total hours remaining in service.

No component may be fitted unless it is in a satisfactory condition, has been appropriately released to service under cover of an EASA Form 1 (see section C3.3), CAA Form 1, BGA maintenance release or equivalent and is marked in accordance with Part 21 Subpart Q. It is the responsibility of the BGA Inspector concerned to establish the serviceability and 'eligibility' of the component before installing on the aircraft.

Certain parts that meet the criteria below, for economic or availability reasons, may be sourced from commercial suppliers. In many cases these will be OEM or quality pattern parts as originally used in the aircraft construction and may not be available from aviation parts suppliers. Many automotive/equipment derived engines are used in powered sailplanes. In addition, some commercial hardware and small parts are used in the construction of sailplanes generally. In the case of ELA 1 or ELA 2 aircraft, a part or appliance that is:

1. Not life limited, nor part of the primary structure, nor part of the flight controls.
2. Manufactured in accordance with the applicable design.
3. Marked in accordance with Part 21 Subpart Q.
4. Identified for installation in the specific aircraft.
5. To be installed in an aircraft for which the owner has verified compliance with conditions 1 through 4 and has accepted responsibility for this compliance.

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The acceptance by the owner of these non-released parts is recorded on BGA Form 286 and is included in the aircraft maintenance documentation package. BGA AMP 'Parts and Materials for EASA Aroplanes and Sailplanes including Powered Sailplanes' refers.

Prior to installation of a component on an aircraft the BGA inspector shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive configurations may be applicable.

#### Components removed and retained for repair without leaving the BGA system

Components removed for maintenance remaining within the BGA system must be maintained in accordance with approved data and certified by an appropriately rated BGA inspector. These components should be released to service by issuing a Part- ML.A.801 Certificate of Release to Service on the appropriate work sheets or logbook entry. These components are normally refitted to the same aircraft. If the component is fitted to another BGA aircraft the repair details (work pack) are retained in the recipient aircraft records.

#### Swapping of Serviceable components between Aircraft

Parts transferring between aircraft in the BGA system may be transferred using a Part- ML.A.801 CRS. The work done to verify the serviceability, origin, life used and details of any other work done must be recorded on worksheets, also verifying that any maintenance due has been completed and alignment with the recipient aircraft maintenance programme must be established.

#### Components removed from an Aircraft and sent to a Third Party outside the BGA System

Components removed from an aircraft and sent to another organisation outside the BGA approval system will require release back into service with an EASA Form 1 / CAA Form 1.

#### Components removed from an aircraft to overhaul

With the exception of sporting equipment and sailplane standard parts, component overhaul is not within the BGA scope of approval.

Overhaul of sailplane sporting equipment and sailplane standard parts is released to service by issuance of a Certificate of Conformity.

#### Non-Type Certified engine overhaul

BGA inspectors are not approved to overhaul engines as their approval is limited to inspection and repair only. Engine overhaul can only be carried out by appropriately approved external organisations and release back into service will be by EASA Form 1 (see section C3.3) or CAA Form 1 certification.

### **C3.5 Component Identification and Disposition**

Unserviceable components shall be identified by tagging and storage in a quarantine store until a decision is made on the future status of such components. Where a significant number of unserviceable components is expected, the use of a register is required to trace the components and methods of repair or disposal.

The decision-making process regarding unserviceable components shall take into account the following considerations in the order presented:

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- a) Safety.
- b) Availability.
- c) Value.

Forward and reverse traceability is required on any salvaged component that re-enters the airworthiness system following rectification. Initially, an entry in the quarantine register will indicate the start of the rectification process. Subsequent in-process inspection and final inspection activities will lead to the generation of a batch number. The batch number shall be referenced in the relevant work pack. Components salvaged via external overhaul/repair will be received under cover of an EASA Form 1 (see section C3.3) or CAA Form 1. This shall be referenced in the work pack upon fitting the component to aircraft.

#### Component Disposal

If unserviceable components are returned to the aircraft owner, it is the responsibility of the owner to ensure the components are not released into service without appropriate overhaul, repair or maintenance being completed. If ownership changes the responsibility also transfers to the new owner.

Components which have reached their certified life limit or contain a non-repairable defect shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system, unless certified life limits have been extended or an approved repair solution has been promulgated.

#### Component Mutilation

Unsalvageable components shall be mutilated in a manner that ensures that they are beyond economic salvage or repair before relinquishing responsibility for such components.

Where the Type Certificate holder specifies, critical component data plates should be returned to the manufacturer with final disposition advice and history of the component.

### **C3.6 Component Maintenance ‘On Wing’**

“On wing” means component maintenance carried out within the vicinity of the aircraft where it may be appropriate to remove the component for maintenance and refit on completion. For component maintenance “on wing” final certification is covered by a Part ML.A.801 Certificate of Release to Service.

Appropriate certification will be made initially on a worksheet bearing the BGA authorised inspector’s details and signature. Worksheets are to be retained in the aircraft records. A reference to the worksheets shall also be made in the aircraft logbook.

### **C3.7 Component Maintenance ‘Away from Aircraft’**

Component maintenance away from the aircraft is deemed to have taken place in instances where the component is removed and transported to another repair facility.

### **C3.8 Unserviceable Components**

Unserviceable components may be deemed to be unserviceable as a result of any of the following circumstances:

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1. Expiry of a stated life limit.
2. Non-compliance with an applicable AD or mandatory requirement.
3. Issues with or an absence of documentation needed to establish the status of the item.
4. The item is defective.
5. Involvement in an incident / accident.

Where an item is deemed to be unserviceable, it will be processed using one of the methods below:

1. Returned to the supplier if received defective or with questionable paperwork.
2. Quarantined in the Quarantine Store to allow further investigation or to give time to determine the next steps.
3. Returned to the owner (a record needs to be made of this).
4. Routed to an appropriately approved workshop, either internally or externally.
5. Destruction or mutilation.

Components that have reached the certified life limit or have a non-repairable defect or malfunction will be marked as such, returned to the owner responsible for the airworthiness of the aircraft and an entry made in the continuing airworthiness records to that effect.

Parts removed from the aircraft and / or replaced as part of routine servicing defects (e.g., rod ends, spark plugs) will be retained in case of dispute with the aircraft owner and destroyed / disposed of when advised by the Inspector.

Where an item removed from the aircraft is subject to an investigation (e.g., MOR or AAIB action), the part will not be disposed of and will be quarantined as detailed above.

#### **C4. MAINTENANCE FACILITY**

All facilities should be commensurate with the level of work undertaken and should include a well organised and clean workshop of suitable size and protection from the elements, with power, lighting and heating as required. Suitable office space should be provided at each site for the completion and maintenance of technical records and access to the relevant technical publications should be available. Secure storage facilities must be provided for components, equipment and tools. Adequate tooling must be available for day-to-day maintenance activities. Arrangements must be made for the receipt, quarantine and provision of bonded stores for released parts. Commercial (non-released) parts are to be stored separately from released parts. Consumable products, including flammables, are to be stored correctly in accordance with the appropriate procedures or regulations. Records are to be kept of test equipment calibration and equipment testing and are to be available for inspection if required.

Cleanliness of the facility is the responsibility of the users and cleaning activities will be organised such that the area is kept clear of dirt or contamination (e.g., leaves blown in, bird faeces, excessive dust, machine work contamination). Where maintenance data specifies conditions that must be met for a particular task, those performing the work will ensure these conditions are met prior to the work being completed. Whilst it may be appropriate to perform some work outside, such as a 50-hour check or minor defect rectification, in the case of lengthy maintenance, the work will be performed in a workshop or hangar.

#### **C4.1 Office Accommodation**

Each site is required to provide, relevant to the volume of work carried out, suitable office accommodation equipped with a suitable surface and chairs for the management of planned work and preparation of aircraft records. The office area may be combined with the general hangar space providing its function is not impaired.

An arrangement for the safe retention of aircraft records is required at every site. In instances where computer media is used to store aircraft records a back-up file shall be made at daily intervals or as appropriate depending on the size and scope of the facility. The back-up file is to be removed to a safe alternative location to preserve the records in the event of fire.

Each site shall have a process for gaining appropriate access to the internet for the recovery of technical data and, where required, access to manufacturers' airworthiness data.

#### **C4.2 Specialised Work Areas**

When carrying out any specialised maintenance or repair task or complex repair the appropriate environmental conditions, tooling, equipment and maintenance data must be available and used. This includes:

- a) Temperature/humidity-controlled workshop or area.
- b) Temperature and humidity recording in maintenance documentation.
- c) Clean area.
- d) Dust/fume extraction.
- e) Specialist tooling & equipment.
- f) Jigs and alignment devices and fixtures.
- g) Power and clean air source.
- h) Pressure chambers.
- i) Testing & proof loading equipment.
- j) Inspection equipment.
- k) Weighing equipment.
- l) Maintenance manuals.
- m) Component maintenance manuals.
- n) Repair manuals.
- o) Standard practices manuals.

### **C5. MAINTENANCE ACCOMPLISHMENT & MAINTENANCE STANDARDS**

The BGA will ensure that work under this approval is limited to the maintenance of any aircraft for which it is approved at the locations specified in section A3 of this CAE. Methods, techniques, standards and instructions specified in the maintenance data will be adhered to.

For details relating to the extent of work permitted under the aircraft ratings, refer to section A4.

#### **C5.1 Maintenance by Pilot/Owner**

In the case of limited pilot/owner maintenance, the person maintaining the aircraft should have had relevant training or previous experience to assure competency. The scope of tasks permitted to be carried out by a pilot is documented in BGA AMP 2.1.

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A suitably rated BGA inspector may carry out on-the-job training provided those tasks are within the scope of the inspector's BGA authorisation. In addition, an experienced pilot/BGA instructor may carry out training for Daily Inspection and pre-flight tasks. It is recommended that a suitable record of the training should be kept by the trainer and trainee.

## C6. PREVENTION OF MAINTENANCE ERRORS

Where performing maintenance involving multiple steps that are grouped for the purpose of sign off, the worksheet will be annotated with an entry for each critical step to allow certifying personnel to assess the work performed and apply an appropriate level of inspection prior to that sign-off.

Any work performed under supervision will be checked and signed off by an appropriately authorised inspector.

If a task involves removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, whose failure could have an impact on safety, a different person shall be allocated to perform identical tasks in different systems. The key to error prevention regarding basic servicing tasks is having different performers rather than application of additional post work inspections.

## C7. CRITICAL MAINTENANCE TASKS & INDEPENDENT INSPECTIONS

A Critical Maintenance Task is defined as follows and any task meeting the below criteria will be subject to an independent inspection:

1. Tasks that may affect the control of the aircraft's flight path and attitude such as the installation, rigging and adjustment of flight controls.
2. Tasks that may affect the aircraft stability control systems.
3. Tasks that may affect the propulsive force of the aircraft, including the installation of aircraft engines, propeller and rotors.
4. The overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.

In addition, critical bolted joints on:

- a) Wing structure.
- b) Fuselage structure.
- c) Tail plane structure.
- d) Engine mounting.
- e) Landing gear structure.

In the case of any of the above items being located within an enclosed structure the independent inspection must be carried out before the structure is closed for the final time.

After the performance of a critical maintenance task, an independent inspection will be called up by the certifying personnel inspecting the work. The independent inspection will ensure:

1. All of those parts of the system that have actually been disconnected or disturbed are inspected for their correct assembly and locking.
2. The system as a whole is inspected for full and free movement over the complete range.
3. The cables are correctly tensioned with adequate clearance at secondary stops.

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4. The operation of the control system as a whole is observed to ensure that controls operate in the correct sense.
5. Where controls are interconnected, all other interactions should be checked through the full range of the applicable controls.
6. Software that is part of a critical maintenance task is checked e.g. for version and compatibility with the aircraft configuration.

The completed task is performed or supervised and signed off by the authorised person, who assumes full responsibility for the task. An entry is made recording the full details of the work performed and the task is signed off in the normal way. At this point an entry is made in the workpack requiring an independent inspection referring back to the task that has been completed. That reference must also include detail of what has been checked.

The independent inspection attests to the satisfactory completion of the task and is completed by the independent qualified person and signed off prior to the CRS for the aircraft or component being issued.

Personnel authorised to perform independent inspections are as follows:

1. Certifying personnel with scope to cover the applicable aircraft.
2. Staff authorised by the BGA Chief Technical Officer after training, assessment and recording of that person's experience and competence. This authorisation only allows the holder to perform the second inspection and provides no CRS responsibilities.

Note that with regard to item 2, the training will take the form of on-the-job training supervised by the BGA Chief Technical Officer or a suitably authorised person nominated by him. Normally independent inspections are completed independently of each other but in the case of critical bolted joints the independent inspection should be simultaneous with the initial inspection to verify bolt torque, etc. Inspections shall check for correct assembly and function, adjustment, torque, tension, free play, friction, stops, locking, safety, range of movement, full and free movement and sense of operation as appropriate to the item. Interactive systems, i.e., control mixers, should be checked in all modes of operation. In the case of control systems, the entire system should be checked. Adjustable systems such as rudder pedal position shall be checked at each extreme position to ensure full and unobstructed travel is available.

## C8. FABRICATION

A restricted range of parts may be fabricated in conformity with maintenance data. The approved data necessary to fabricate the part are those approved either by the UK CAA, the TC holder, Part 21 design organisation approval holder or STC holder. It is not permitted to manufacture any aircraft part to pattern, and it is not permissible to manufacture any part that would normally be available from the TC holder or other approved source.

Items fabricated by BGA inspectors as part of the BGA Part-CAO approved organisation may only be used in the course of overhaul, maintenance, modifications, or repair of aircraft or components undergoing work within the BGA system. The permission to fabricate does not constitute approval for manufacture or to supply externally and the parts do not qualify for certification on a CAA Form 1. The manufacturing process must be within the competence of the BGA inspector and facility carrying out the task.

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Parts fabricated by the BGA Part-CAO organisation must be marked with the appropriate part number and the company approval number unless there is inadequate space.

### **C8.1 Components that can be fabricated under BGA Part-CAO Approval**

The following list is intended to be a guide as to the type of component that can be fabricated by a maintenance facility:

- a) Fabrication of bushes, sleeves and shims.
- b) Fabrication of secondary structural elements and skins.
- c) Fabrication of control cables.
- d) Fabrication of flexible and ridged pipes.
- e) Fabrication of electrical cable looms and assemblies.
- f) Formed or machined sheet metal panels for repairs.

For a comprehensive list and limitations refer to Appendix 2. BGA Inspectors should consult the BGA Chief Technical Officer if the complexity of the task is in question.

## **C9. CERTIFYING PERSONNEL RESPONSIBILITIES & MAINTENANCE RELEASE**

### **C9.1 Release to Service – General Requirements**

It is the responsibility of each member of certifying personnel to ensure that the requirements of section B4 of this CAE continue to be met with respect to validity of the Part-66 licence, aircraft, and company procedures knowledge and demonstrable recent experience.

A CRS will be issued by certifying personnel identified in this CAE only after the maintenance required by the work order has been properly carried out.

A CRS may only be issued where the inspector has either performed the work themselves or exercised adequate supervision and control of the persons performing the work, i.e., subject to his / her direct and continuous control.

A CRS will not be issued in the case of any known non-compliance with the requirements of this CAE or any applicable regulation that may endanger flight safety. Prior to aircraft release and after completion of maintenance, a general verification will be performed to ensure the aircraft is clear of all tools, equipment and any extraneous parts or material, and that all access panels removed have been refitted.

### **C9.2 Aircraft Release to Service**

The release to service for aircraft maintenance will include the following information:

1. Basic details of maintenance carried out.
2. Details of the ODMP from which it has been derived (if applicable).
3. Date, flying hours and landings/cycles at completion (as applicable).
4. The BGA Part-CAO approval number and the normal signature and identification number of the inspector.
5. Cross reference to the work pack containing the full details of maintenance performed.

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Aircraft CRS wording will be as follows:

*'Certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-ML, and in respect to that work, the aircraft is considered ready for release to service.'*

In limited cases and within any relevant aircraft limitations, a CRS may be issued where required maintenance cannot be completed, however, the CRS will indicate the work that could not be completed as well as indicate any associated airworthiness or operational limitations.

For a pilot-owner CRS the wording will be as follows:

*'Certifies that the limited pilot-owner maintenance specified, except as otherwise specified, was carried out in accordance with Part ML, and in respect to that work, the aircraft is considered ready for release to service.'*

Note:

If using a BCAR CAA logbook or BGA sailplane logbook the CRS may be signed in the certification column provided a general CRS sticker is placed inside the front cover.

### **C9.3 Release to Service – Standard Repairs / Changes (CS-STAN)**

The inspector responsible for the embodiment of a Standard Repair / Standard Change will ensure the following:

1. No conflict is apparent with data produced by the TC/STC holder or other approved repairs or modifications:
2. Adequate design and full embodiment of the SR/SC:
3. The selection / manufacturing of suitable parts including identification:
4. Properly documenting the SR/SC in the maintenance workpack:
5. Communication of the SR/SC to the owner using CAA Form 123 including full information (e.g. drawings, embodiment instructions, instructions for continuing airworthiness) of the work performed.

The owner will be requested to sign the CAA Form 123 and return a signed copy to be filed with the work pack. As long as it contains all of the correct information and is legible, a single CAA Form 123 can be used to record multiple SR/SC completed during one input.

### **C9.4 Component Release to Service after Maintenance**

As detailed in Section C12, component maintenance is possible without a component rating and is released as part of the aircraft level CRS. The BGA is not approved for component overhaul.

See the table over the page for a simple breakdown of activity and release to service applicability.

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Activity	CAA Form 1 Release	Aircraft Work Pack Release
<b>Components maintained in accordance with component maintenance data (maintenance data published by the component manufacturer)</b>		
Component maintenance other than overhaul to limits of Section A4 – Scope of work	No	Yes
Component Overhaul	No	No
<b>Components maintained in accordance with aircraft maintenance data. (maintenance data published by the aircraft manufacturer)</b>		
All components and all types of maintenance	No	Yes

Where component work is released at aircraft work pack level, the release to service for that component is the aircraft CRS.

Components fabricated in accordance with this CAE section C8 are not eligible for release using a CAA Form 1.

## **C10. DEFECTS ARISING DURING MAINTENANCE**

All defects identified during maintenance will be recorded in the work package on an additional worksheet for investigation and correction prior to release to service of the aircraft.

Any aircraft defect that seriously hazards flight safety shall be rectified before further flight. Consideration should be given to reporting serious defects via the Occurrence Reporting process, section D7.1 of this exposition.

### **C10.1 Deferred Aircraft Defects**

The deferment of any potentially serious defect associated with the aircraft structure, flying controls, landing gear, or that could potentially affect the safe operation of an aircraft shall only be assessed by an appropriately rated BGA inspector. Any deferred defects should be rectified as soon as possible.

The non-operational status of a self-sustaining sailplane powerplant and other minor defects may be assessed by a competent pilot. Any defect considered acceptable for deferment shall be recorded in the Daily Inspection (DI) book and logbook when available. Any defect that is not considered acceptable for deferment shall be rectified prior to flight.

### **C10.2 Recording Deferred Defects**

All deferred defects shall be recorded in the aircraft records and, in the case of minor defects, the DI book. Details of outstanding deferred defects and rectification action required must be advised to the Chief Engineer during airworthiness reviews.

The BGA DI book does not contain a CRS statement. Rectification action should be transferred to a suitable worksheet or logbook for recording the CRS. Defects recorded in the DI book should be closed once transferred to the maintenance records and rectification has been completed.

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### **C11. MAINTENANCE AWAY FROM THE APPROVED LOCATION**

The nature of sailplane and tug maintenance activities is such that there may be times when maintenance has to be performed away from BGA List 1 / List 2 facilities. In such cases the following conditions will apply:

1. The person(s) performing the tasks must be suitably qualified.
2. The area in which maintenance is carried out must be clean and dry.
3. The methods, techniques, standards and instructions specified in the maintenance data must be used.
4. The tools, equipment and material specified in the maintenance data must be used and relevant tools must be calibrated to an officially recognised standard.
5. Maintenance must be performed within any specified environmental limitations.
6. Proper facilities must be used in case of inclement weather or lengthy maintenance.
7. The risk of multiple errors or errors being repeated in identical maintenance tasks must be minimised.
8. Independent inspections must be implemented after any critical maintenance tasks.
9. A general verification must be carried out after maintenance to ensure the aircraft is clear of any tools, equipment and any extraneous parts and that all access panels have been refitted.
10. All maintenance performed must be properly recorded and documented.

### **C12. COMPONENT MAINTENANCE UNDER AIRCRAFT RATING**

Maintenance work performed under the aircraft rating means performance of maintenance on the aircraft and any component (including engines) in accordance with the aircraft maintenance data. If referenced from the airframe data as being applicable to the completion of an AMP task or defect, work may be performed under the airframe rating in accordance with engine or component maintenance data. This excludes overhaul level work and, in the case of engines, is limited to work that does not split the engine casings or remove accessory gearboxes or covers (unless aircraft level data expressly permits it). Engines and components may be temporarily removed to improve access to that engine or component except when removal itself or a condition identified during the work creates a need for additional maintenance not eligible for work under the aircraft rating.

### **C13. MAINTENANCE ON INSTALLED COMPONENTS UNDER COMPONENT RATING**

Not applicable.

### **C14. SPECIAL PROCEDURES**

The organisation does not hold a Non-Destructive Testing (NDT) approval.

### **C15. ISSUE OF ARC UNDER MAINTENANCE PRIVILEGE**

See Section D11 of this CAE.

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## **PART D CONTINUING AIRWORTHINESS MANAGEMENT PROCEDURES**

### **D1. CONTINUING AIRWORTHINESS MANAGEMENT – GENERAL**

The continuing airworthiness management function of the BGA is the responsibility of the BGA Chief Technical Officer and the Chief Engineers, supported by head office administrative staff. The activities of the BGA airworthiness organisation are currently limited to providing maintenance and airworthiness review services relevant to aircraft subject to Part-ML.

### **D2. MINIMUM EQUIPMENT LIST & CONFIGURATION DEVIATION LIST (CDL)**

Not applicable to aircraft within the BGA's airworthiness management organisation.

### **D3. AMP DEVELOPMENT/APPROVAL/CONTROL & PERIODIC REVIEW (PART-ML AIRCRAFT)**

#### **D3.1 Maintenance Programme – General**

The aircraft must have an ML.A.302 compliant maintenance programme which could be either an approved programme or an owner-declared maintenance programme (ODMP) not less restrictive than the CAA Minimum Inspection Programme (MIP). The preferred option is the BGA ODMP template documented in the BGA 267, which is no less restrictive than the CAA MIP. The BGA may assist owners in the development of an initial maintenance programme if requested to do so. The owner is responsible for customising the programme in accordance with all BGA and regulatory requirements. The effectiveness of the maintenance programme or ODMP will be reviewed at each ARC renewal and owners will effectively self-declare their maintenance programme at every annual inspection.

BGA policy is to accept the standard maintenance template from AMC 2 ML.A.302 for all aircraft within its continuing airworthiness organisation.

#### **D3.2 Aircraft Maintenance Programmes – Development (Based on MIP or DAH Data)**

The AMP will identify the owner of the aircraft, the aircraft as well as the installed engine and propeller types, if applicable. Note that the AMPs of all aircraft within the BGA CAO are the owners' responsibility.

The AMP will be based on the Instructions for Continuing Airworthiness (ICA) issued by the Design Approval Holder (DAH) or alternatively the tasks or inspections contained in the Minimum Inspection Programme (MIP).

DAH refers to the holder of the type certificate, restricted type certificate, supplemental type certificate, European Technical Standard Order (ETSO) authorisation, repair or change to the type design. The ICA issued by the DAH do not include the data issued by other original equipment manufacturers (OEM), except where the DAH's ICA makes clear reference to such OEM data.

The AMP will include all mandatory information (e.g., repeat ADs, Airworthiness Limitations, maintenance required by the TCDS and Operational Directives). Care will be taken when considering what is mandatory as the regulatory system in place today may not have been so clear when the aircraft was designed and produced, Airworthiness Limitations being an example.

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The intent is that the AMP (whether it is based on the MIP or DAH data) contains all mandatory scheduled maintenance requirements identified during the initial airworthiness activity by the TC, STC or engine TC holder. These requirements may have been identified under a variety of designations such as:

1. Airworthiness Limitations or Airworthiness Limitation Items (ALI).
2. Certification Maintenance Requirements (CMR).
3. Safe Life Items, Safe Life Limits or Safe Life Limitations.
4. Life Limited Parts (LLP).
5. Time Limits.
6. Retirement Life.
7. Mandatory Inspections or Mandatory Airworthiness Inspections.

The above will be considered as part of the AMP development process and where doubt exists as to the intent of the DAH with regard to mandatory status, the owner will be responsible for making contact with the DAH for clarification.

The AMP will identify any additional maintenance tasks to be performed because of the specific aircraft type, aircraft configuration, type and specificity of operation taking into consideration as a minimum:

1. Specific installed equipment.
2. modifications, repairs.
3. life limited components.
4. flight safety critical components.
5. maintenance recommendations such as TBO intervals issued through service information.
6. applicable operational directives or requirements related to the periodic inspection of certain equipment.
7. special operational approvals and the use of the aircraft including its operational environment.

Additional maintenance actions may be added by the owner.

The AMP will identify whether pilot owners are authorised to perform maintenance.

An aircraft will be maintained in accordance with only one programme at a time and when transitioning from one programme to another, the owner will consider any additional maintenance needed to bridge from one programme to another.

### **D3.3 Aircraft Maintenance Programmes – Additional Requirements for use of a MIP**

Any programme based on the ML.A.302 (d) Minimum Inspection Programme (MIP) requirements will be prepared by the owner in accordance with ML.A.302 (c) & (d) and the associated Guidance Material (GM) and Alternative Means of Compliance (AMC).

Whilst the MIP itself does not necessarily follow all DAH recommended tasks, those required by the MIP must be performed in accordance with the manufacturer's data.

In the context of the MIP, an operational test is a task used to determine that an item is operating normally. It does not require quantitative tolerances.

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A functional test is a quantitative check to determine if one or more functions of an item perform within the limits specified in the maintenance data. The measured parameter(s) should be recorded.

The MIP must be customised as detailed in D3.2 above. This is catered for in the standard AMP template around which this procedure is based.

Notwithstanding that the use of the MIP is possible, any deviations from, or tasks alternative to, the DAH recommendations will be justified as detailed in the section below.

The MIP will contain, for aeroplanes and touring motor gliders, intervals of every annual or 100hr check, whichever comes first. The MIP will contain, for sailplanes and powered sailplanes other than touring motor gliders, an annual interval.

### **D3.4 Aircraft Maintenance Programmes – Alternative Tasks / Deviations**

Deviations or tasks alternative to mandatory requirements are not permissible under this procedure.

When evaluating an alternative to a maintenance task issued or recommended by the DAH, such as the extension of TBO intervals, or when considering when not to include a maintenance task issued or recommended by the DAH, a risk-based approach will be taken, considering aspects such as the operation, engine type (if applicable), hours, calendar time in service, redundancy of components and any compensating measures. Consideration of the above should allow for an informed decision to be made when evaluating alternative tasks.

When considering deviations from DAH recommendations, reference should be made to ML.A.302 and specifically AMC1 ML.A.302(c).

Maintenance actions alternative to those recommended by the DAH will in no cases be less restrictive than the applicable MIP. That means the extent and type of task, the time / frequency applied cannot be less than the extent of the corresponding task in the MIP. When considering maintenance actions alternate to those recommended by the DAH, reference should be made to GM1 ML.A.302(c)3.

### **D3.5 Aircraft Maintenance Programmes – Update and Review**

The aircraft maintenance programme will be reviewed at least annually by the Chief Engineer as part of the ARC renewal process. The following will constitute a review which will be recorded on the BGA 276 form.

1. Review of the results of the maintenance performed during that year which may reveal that the current maintenance programme is not adequate.
2. Review the results of the Airworthiness Review itself which may reveal that the current maintenance programme is not adequate.
3. Revisions to the maintenance data that forms the basis of the programme such as the MIP or the DAH data.
4. Changes in the aircraft configuration and type and specificity of operation.
5. Changes in the list of pilot owners.
6. Applicable mandatory tasks for compliance with Part 21 such as AD's, Airworthiness Limitations, CMR tasks, and specific maintenance requirements contained on the TCDS.

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When reviewing items 1 & 2, attention must be paid to whether the defects found during that period or as a result of the review could have been prevented by introducing DAH recommendations that were initially disregarded by the owner.

Where the programme is owner declared and this review is being performed as part of the Airworthiness Review process, the owner will be requested to amend the programme. Where there is disagreement between the BGA Chief Engineer and the owner, the BGA Chief Technical Officer will be consulted and, if there is no resolution, the UK CAA will be notified to take appropriate action. CAA Form 15c will not be issued with open discrepancies related to the review of the AMP or where a “promise” of action to be taken has been given. The discrepancy must be corrected in the AMP and the revised AMP appropriately declared by the owner prior to issue of the CAA Form 15c.

In the context of responsibilities for maintenance programmes, reviewing staff may find the content of GM1 ML.A.302 useful.

The review will be recorded in the appropriate section of the AMP.

### **D3.6 Aircraft Maintenance Programme – Approval**

Each AMP will be allocated a unique reference by the owner or owner’s representative. No UK CAA reference number is required, and although the CAA are able to request a copy, it is not required to send a copy of the AMP or amendments to the UK CAA as part of the approval process.

A copy of each complete AMP, subsequent amendment, approval and justification for any deviations or alternate tasks will be kept on file by the owner. Initial Issue, Amendments, Deviations and Alternate Tasks will be approved by the Chief Engineer.

### **D3.7 Short Term Variations to Check Periodicities**

Short term variations may be issued for aircraft scheduled maintenance checks due to operational needs or to cover unforeseen events as follows:

MIP	Annual / 100hrs (Aeroplanes / TMGs)	1 Month or 10hrs*
MIP	Annual (Sailplanes and powered sailplanes, not TMG)	1 Month*

\*Where two values are given, the soonest occurring will apply. The next interval will be calculated as from the time the inspection takes place.

Mandatory items (such as ADs / ALIs / Life Limits) cannot be varied using this procedure.

The decision to issue a short-term variation will also take into consideration the validity of the ARC and the impact on mandatory items such as Airworthiness Directives that cannot be varied.

### **D3.8 Aircraft Maintenance Programmes – when a formal AMP is not required**

Notwithstanding the above, when all of the following conditions apply, a formal AMP approval or declaration by the owner is not required:

1. All ICAs issued by the Design Approval Holder (DAH) are be followed without deviation:

2. All maintenance recommendations, such as TBO intervals, issued through Service Bulletins, Service Letters and other non-mandatory service information are being followed without any deviations:
3. There are no additional maintenance tasks to be performed resulting from specific equipment, modifications, repairs, life limited or flight safety critical components, operational approvals or use of the aircraft and operational environment:
4. Pilot owners are authorised to perform pilot owner maintenance.

Pilot owner maintenance does not preclude this option unless the pilot owner or any of the pilot owners are not authorised to perform pilot owner maintenance, because this has to be specified in the AMP.

The above requirements cannot be less restrictive than the Minimum Inspection Programme.

#### **D4. AIRWORTHINESS DIRECTIVES & OTHER MANDATORY AIRWORTHINESS REQUIREMENTS**

It is the responsibility of the aircraft owner in the uncontrolled environment of the BGA airworthiness system to ensure that all applicable Airworthiness Directives and airworthiness directive supported mandatory modifications are applied as specified.

Operational directives issued by the UK CAA where they have a continuing airworthiness implication should also be monitored and actioned as required. UK CAA Generic Requirements will also be monitored for applicability.

The primary source for the above from 1<sup>st</sup> January 2021 is the UK CAA, CAP 747 Mandatory Requirements for Airworthiness. 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. Where applicable, periodically issued documents and reports should also be checked to ensure that no applicable AD or mandatory requirement is missed.

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

<b>AD Action Required</b>
Emergency AD – Immediate or very short notice compliance required - AD planned and accomplished according to AD requirements.
AD – Will be due before the next maintenance opportunity – note any limitations and AD planned and accomplished according to AD requirements.
AD – Due date after the next maintenance opportunity – AD added to the next package of work for accomplishment.
Any of the above having also recurrent requirements (Repeat ADs) - AMP amended with appropriate details to ensure capture of the repeat requirements.

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## D5. MODIFICATIONS AND REPAIRS

In the uncontrolled environment it is the responsibility of the aircraft owner to review approved non-mandatory modifications for possible embodiment.

All major changes (modifications) will be raised through a suitably approved Design Organisation and submitted to the UK CAA by that organisation. The approval of the change will be by the UK CAA and will be recorded and filed with the aircraft airworthiness records.

Where an aircraft is damaged, that damage will be assessed by a suitably approved inspector. Based on that assessment and appropriate dialogue, a work package will be created making reference to the approved data to be used to accomplish the repair. Modifications and repair data will be either approved by the UK CAA, approved by a design organisation (Part-21) or be a Standard Change or Repair. In a practical sense, the following are more common examples of acceptable repair or modification data as appropriate:

- Service Bulletin Issued by the manufacturer.
- AMM or Repair Manual Issued by the manufacturer.
- Part-21 Approved Data (Modification or Repair).
- Standard Change or Standard Repair (CS-STAN).
- EASA Supplemental Type Certificate
- CAA Supplemental Type Certificate.
- FAA Supplemental Type Certificate – where grandfathered or validated by the UK CAA.

The above list is not exhaustive but covers the most common scenarios. In cases of doubt the BGA Chief Technical Officer will be consulted and give direction regarding the status of modification or repair data. In all cases, including the above, the approval status and validity for the particular aircraft will be established.

Where a repair or modification is performed during maintenance either as requested or as a result of a defect, the repair / modification work record will be checked, and details entered into the continuing airworthiness records (e.g., worksheets / CAA Form 123 / copies of the modification or repair data and making an appropriate logbook entry).

Any instructions for continuing airworthiness resulting from a repair or modification will be used to make an appropriate amendment to the AMP.

## D6. PRE-FLIGHT INSPECTION

In general aviation, the Pre-flight Check is usually performed by the Pilot-in-Command (ML.A.201 (d)).

## D7. DEFECTS

Any aircraft defect that seriously hazards flight safety shall be rectified before further flight. Consideration should be given to reporting serious defects via the Occurrence Reporting Procedure, para. D7.1. of this exposition.

Defects reported by the owner will be assessed and arrangements made with an appropriate maintenance provider to have them rectified. A work order will be issued to cover the work accomplishment if required.

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Where the work cannot be accomplished, or it is preferable to defer the rectification to a more convenient time (e.g., due to spares availability or operational requirements), it may be possible to defer the defect in accordance with ML.A.403. Defects may only be deferred by certifying personnel.

Once deferred, the defect will be tracked by the owner / inspector who will organise rectification within applicable limits as soon as practical. Where a questionable deferral has been made, the BGA Chief Technical Officer will be consulted to establish an appropriate resolution.

It will be ensured that deferred defects are made known to the owner along with any associated operational or airworthiness limitations.

Defects will not be deferred in cases where they may seriously hazard flight safety.

## **D7.1 Occurrence Reporting Procedure**

### Defect Reporting

Owners and authorised maintenance personnel are responsible for reporting occurrences and significant defects through the BGA Accident/Incident reporting scheme.

The BGA, in its capacity as an approved CAO, will review all reports before forwarding to the relevant authorities as appropriate. Incident reviews will be carried out by the BGA Technical Committee in conjunction with the BGA Chief Technical Officer. The conclusions drawn by the review will be forwarded to the relevant authorities who may include the UK CAA, EASA, AAIB, Type Design Organisation and STC holder. The BGA will also disseminate reports to members in the interests of safety using the BGA website News facility. Reports shall be clearly and uniquely identified making reference to the BGA Part-CAO approval reference, details of the subject aircraft or component, any supporting technical information and details of the occurrence.

### Reportable Occurrences

All significant in-flight defects, failures or other incidents must be reported to the BGA Head Office using the BGA Accident/Incident reporting scheme, available through the BGA website.

In the case of serious defects, the occurrence report must be raised and submitted to the BGA as soon as practical. However, the initial report must be made within 72 hours of the occurrence. Examples of serious defects are:

- a) Serious cracks, permanent deformation, burning or serious corrosion of structure found during maintenance of the aircraft or component.
- b) Failure of any emergency system during scheduled testing.
- c) Non-compliance with an Airworthiness Directive.
- d) Exceeding life limitations.
- e) Embodiment of non-approved modifications.

A comprehensive list of mandatory reportable occurrences is detailed in UK Reg. (EU) No. 376/2014.

**D8. ESTABLISHMENT OF WORK ORDERS & CONTRACTS FOR MAINTENANCE**

Once the requirement for maintenance has been established, a work order will be raised by the aircraft owner based on the required work. The work order will define the work to be performed such that the work can be easily determined at a task level. This will normally be by including in the work order a description of the work to be performed and a copy of the AMP. In any case the method used must always make it clear to the maintainer the work to be performed. Work orders are required for all maintenance unless the owner is part of the same organisation performing the work.

**D9. COORDINATION OF MAINTENANCE ACTIVITIES**

Live records are considered to be those that detail open or recurrent tasks such as, but not limited to, status of compliance with the maintenance programme, recurrent ADs or other mandatory requirements, LLPs or component maintenance limitations and a list of deferred maintenance requirements. The information received relating to defects, maintenance performed, and utilisation is used to determine the next due date for maintenance activity.

**D10. MASS & BALANCE STATEMENT**

Any new or amended weight and balance report or schedule as appropriate will be provided to the owner and filed in the aircraft's maintenance file prior to operation of the aircraft. The weight and balance sticker in the cockpit will also be updated at this time. If required, a copy will be placed in the appropriate section of the approved flight manual.

Practical guidance relating to Weight and Balance can be found in CAP 562 CAAIPs Leaflet 8-10.

**D11. ISSUE OF ARC OR ARC RECOMMENDATION**

Performance of the Airworthiness Review will be as described in Section B10 of this exposition.

The Airworthiness Review personnel referenced in this CAE, upon completion of the airworthiness review, may only issue the CAA Form 15c Airworthiness Review Certificate when all findings have been closed and any discrepancy found in the maintenance programme as a result of the coincident AMP review has been satisfactorily addressed.

The Airworthiness Review Certificate will be valid for 12 months from the date of issue.

The UK CAA ARC online system will be used to produce the ARC. Where the system is not available the CAA Form 15c template may be used. A copy of any issued CAA Form 15c will be sent to the state of registry within ten days of issue, the original will be given to the owner and a copy retained with the Airworthiness Review file.

Where the UK CAA are to issue the Airworthiness Review Certificate, a full Airworthiness Review will be performed and documented as detailed in Section B10 of this exposition.

An ARC will not be issued when there is evidence or reason to believe the aircraft is not airworthy.

**D12. ARC EXTENSION**

BGA aircraft are not managed in a controlled environment and this paragraph is not applicable.

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### D13. MAINTENANCE CHECK FLIGHTS

The BGA does not have a formal maintenance check flights process. However, an owner or inspector may wish to perform a check flight after the aircraft has undergone certain maintenance while maintenance data does not call for such a flight. Therefore, after the maintenance has been properly carried out, a CRS is issued, and the aircraft airworthiness certificate remains valid for this flight.

## **PART E SUPPORTING DOCUMENTS**

### **E1. SAMPLE DOCUMENTS**

The following documents are all available to view and/or download on the BGA website and will be to the latest revision in all cases:

BGA ARC Template – CAA Form 15c.  
BGA Accident/Incident Report Form.  
BGA Form 202 Non-Part 21 ARC / NARC Application.  
BGA Form 204 Inspection Report.  
BGA Form 205 Rectification Worksheet.  
BGA Form 210 Document Control Sheet.  
BGA Form 211 Weight and Balance Schedule – Powered Aircraft.  
BGA Form 267 GMP Report - Non-Part 21 Aircraft only.  
BGA Form 273 Maintenance Work Order.  
BGA Form 276 Airworthiness Review Checklist.  
BGA Form 277 Complex Maintenance Application.  
BGA Form 278 NARC Checklist – Non-Part 21 Aircraft only.  
BGA Form 280 AD Status Report.  
BGA Form 282 Non-Part 21 Modification Application.  
BGA Form 286 Owner Approved Parts.

### **E2. LIST OF SUB-CONTRACTED ORGANISATIONS**

The BGA does not have any sub-contracted organisations.

### **E3. LIST OF ORGANISATIONS CONTRACTED BY THE BGA**

Currently not used.

### **E4. AIRCRAFT TECHNICAL LOG SYSTEM**

Not used.

### **E5. LIST OF CURRENTLY APPROVED ALTERNATIVE MEANS OF COMPLIANCE**

Not used.

### **E6. COPY OF CONTRACTS FOR SUB-CONTRACTED AIRWORTHINESS TASKS**

Not used.

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# APPENDICES

## APPENDIX 1 BGA LIST 1 FACILITIES

### Primary Administration Site:

8 Merus Court Meridian  
Business Park Leicester  
LE19 1RJ

### List 1 - Primary Complex Maintenance Sites:

Maintenance Organisation	Site Manager	Capability
McLean Aviation The Aerodrome Rufforth York YO23 3NA	R. McLean I/A/050	Inspection and complex repairs on all glider types within the scope of the BGA's Part M approval
North Yorkshire Sailplanes Thorpefield Sowerby Thirsk YO7 3HH	D. Taylor I/A/174	Inspection and complex repairs on all glider types within the scope of the BGA's Part M approval
Targett Aviation Nympsfield Gloucs GL10 3TX	R. Targett I/A/106	Inspection and complex repairs on all glider types within the scope of the BGA's Part M approval
Zulu Glasstek Baileys Farm Westfield Road Long Crendon Aylesbury HP18 9EN	P. Wells I/A/113	Inspection and complex repairs on all glider types within the scope of the BGA's Part M approval
Lasham Gliding Society Lasham Airfield Alton Hants GU34 5SS	R. Moyse I/A/1334	Inspection and complex repairs on all glider types within the scope of the BGA's Part M approval

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## APPENDIX 2 BGA LIST OF ALLOWABLE FABRICATED PARTS

The following list of parts may be fabricated, in conformity with maintenance data, for use in the course of undergoing work within its own facilities on Sailplanes, Self-Sustaining Sailplanes, Self-Launching Motor Gliders and Tug aircraft.

In accordance with approved repair schemes or modifications:

Fabrication of primary structural repair elements only with prior permission of the BGA (including DOA or TC holder when appropriate) and as specified in the approved repair scheme.

Fabrication of secondary structural elements and skin panels as below:

1. Composite sections including autoclave and post cure techniques where maintenance data specifies and equipment available.
2. Wood sections.
3. Metal sections, including forming and basic machining, excluding heat treatment and specialist treatments.
4. Composite Skin panels including autoclave and post cure techniques where maintenance data specifies and equipment available.
5. Wood Skin panels.
6. Metal Skin panels including forming and basic machining, excluding heat treatment and specialist treatments.
7. Access panels and closures.
8. Fabric repair panels.
9. Steel tube and plate welded sections and repair pieces.
10. Minor equipment mounting brackets and fixtures.

In accordance with approved maintenance data:

11. Control cables.
12. Bushes, sleeves and shims.
13. Internal aircraft soft furnishings and covers.
14. Internal aircraft trim.
15. Wiring looms.
16. Instrument plumbing.
17. Flexible and rigid low-pressure pipes where special equipment and techniques are not required.

### Note

It is not acceptable to fabricate any item to pattern unless an engineering drawing of the item is produced which includes any necessary fabrication processes and which is accepted by the BGA.

As appropriate, inspection, testing and proof loading must be completed in accordance with the approved maintenance data.

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## APPENDIX 3 BGA TECHNICAL COMMITTEE – TERMS OF REFERENCE

The aim of the Technical Committee (TC) is to maintain and develop a self-regulated and cost-effective UK airworthiness system for gliders (and motor gliders/self-launching gliders under CAA delegation) with safety as the prime objective.

The scope of activities and specific tasks of the TC are:

- a) To develop policies for recommendation to and endorsement by the BGA Executive Committee (EC) and, where necessary under the BGA's constitution, by the members of the BGA in General Meeting, in relation to agreed technical matters and strategies.
- b) To develop, establish, maintain and manage a system of technical standards for the airworthiness of gliders/sailplanes and self-sustaining sailplanes on the BGA register of gliders.
- c) To develop, in consultation with the CAA, and maintain and manage a delegated system of technical standards for self-launching motor gliders ('G' registered) and specified G-registered tug aircraft.
- d) To investigate the airworthiness of new designs of gliders/sailplanes for the purpose of recommending or rejecting their acceptance on to the BGA register of gliders.
- e) To promulgate technical advice and information to owners and operators.
- f) To determine the broad objectives of the programme of work of the BGA's Chief Technical Officer.
- g) To recommend to the EC, and then manage, the structure of qualifications for BGA glider inspectors and the process for their examination, appointment, renewal and continued suitability.
- h) To appoint appropriate persons under the CAA delegated authority for the maintenance of self-launching motor gliders and for tugs under the BGA's 'BCAR A8-24 approval' status.
- i) To contribute to the development of gliders / sailplanes, both structurally and aerodynamically, and to further the development of instrumentation systems.
- j) To receive and consider recommendations from BGA Accident Investigators' reports on serious or fatal accidents, and to report to the EC on the adoption of any recommendations relevant to technical matters.

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# PART-CAO BCAR A8-24 National Supplement

BCAR Approval DAI/8378/73

Supplement Reference: BGA-EXPO-03/01

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**F1. STATEMENT BY THE ACCOUNTABLE MANAGER:**

This supplement and any associated referenced manuals define the organisation and procedures upon which the UK Civil Aviation Authority A8-24 approval is based.

These procedures are approved by the undersigned and must be complied with, as applicable, when work orders are being progressed under the terms of the A8-24 approval.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the UK Civil Aviation Authority from time to time where these new or amended regulations are in conflict with these procedures.

It is understood that the UK Civil Aviation Authority will approve this organisation whilst the UK Civil Aviation Authority is satisfied that the procedures are being followed and work standards maintained. It is further understood that the UK Civil Aviation Authority reserves the right to suspend, limit or revoke the A8-24 approval of the organisation if the UK Civil Aviation Authority has evidence that procedures are not followed, or standards not upheld, or the organisation is no longer in compliance with A8-24.

Name: Pete Stratten

Signed:



Dated: 1<sup>st</sup> March 2021

Accountable Manager  
British Gliding Association Ltd.

## F2. INTRODUCTION

Due to the high level of commonality between BCAR A8-24 and Part-CAO, the majority of working practices, processes and procedures are common irrespective of the work being performed under the National system or the EASA system.

Notwithstanding the above, there are differences between the EASA and BCAR requirements and where those differences have been identified, they have been included in this supplement.

In terms of practical use, the CAE is considered the main document for detailing how maintenance work is ordered, processed, performed and released with any differences noted in this supplement for national aircraft considered and actioned accordingly during the maintenance process.

## F3. SCOPE OF WORK (A8-24)

The organisation scope of work is limited to non-Part 21 aircraft, not used for commercial air transport or for state purposes and comprises of aircraft maintenance as follows:

<b>Aircraft - A2 – Aeroplanes 5700kg and below - Piston Engine</b>	<b>C of A</b>	<b>Permit</b>
Piper PA18 Super Cub	Yes	No
DH Chipmunk	Yes	No
Slingsby T61	Yes	No

## F4. SUPPLEMENT AMENDMENT

All amendments to this supplement must be approved by the UK CAA, in the first instance by sending a PDF copy of the amended supplement indicating the changes in the same way as detailed in the CAE to [apply@caa.co.uk](mailto:apply@caa.co.uk)

## F5. PROCEDURES TO MAINTAIN AND SAFELY OPERATE SPECIALIST EQUIPMENT AND SYSTEMS (EX-MILITARY)

Not applicable to the BGA.

## F6. CERTIFYING PERSONNEL REQUIREMENTS

The BGA Chief Technical Officer will ensure that BGA inspectors are aware of the differences between the EASA or National regulations and importantly, the way work is planned, processed and released under national regulation in accordance with this supplement.

For national C of A aircraft, certifying personnel will be qualified, and type rated in accordance with BCAR Section L. The use of a Part-66 AML is only permitted if that license includes the specific airframe and engine combination type rating for the aircraft being certified.

The BGA Chief Technical Officer will ensure that any person authorised by the BGA will be able to read, write and communicate to an understandable level in the languages in which the technical documentation and procedures necessary to support the CRS are written.

Suitably authorised personnel may issue Certificates of Fitness for Flight under 'A' Conditions for non-Part 21 aircraft for C of A renewal, flight testing or positioning.

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### List of Certifying Personnel (National)

Records of certifying personnel are kept electronically and in hard copy at the BGA Head Office in Leicester. This is to ensure that the list is always up to date.

These personnel are authorised to perform and certify maintenance to the extent of the referenced AMEL, including any paragraph or individual aircraft type ratings and this National Supplement Section F3 Scope of Work, whichever is most restrictive.

## **F7. COMPONENTS, EQUIPMENT & TOOLS**

In addition to the content of the CAE regarding documentation required for the acceptance of components, parts, consumables and materials, the inspector may also accept a CAA Form 1 for components being installed on national aircraft only. Where block 12 of the CAA Approved Certificate indicates that the item can only be fitted to an aircraft eligible for a National Permit to Fly, the affected parts cannot be used on C of A aircraft. A CAA Form 1 is not an eligible release for installation of any component on EASA aircraft.

Each relevant facility will ensure that tooling is available for each aircraft as specified in the maintenance data for the full scope of work defined in this supplement.

## **F8. MAINTENANCE DATA**

In addition to the sources of approved data detailed in the CAE, for national aircraft, applicable maintenance data also includes data published in accordance with BCAR A8-21 and BCAR A8-24 paragraph 11 and Mandatory Permit Directives (MPDs) published by the UK CAA.

## **F9. COMPONENT MAINTENANCE & RELEASE TO SERVICE**

Component maintenance may be performed in accordance with aircraft or component maintenance data under the A rating, only whilst such components are fitted to the aircraft. Nevertheless, the component may be removed temporarily to improve access to the component, except when the removal necessitates additional work not eligible for the provisions of this paragraph. Work performed using this provision must be released as part of the aircraft CRS and is not eligible for the issue of a CAA Form 1. Section C9 of the CAE entitled "Component Release to Service after Maintenance or Overhaul" applies equally to national aircraft. However, the "EASA Form 1" will not be issued. The document issued to release a component for installation on a national aircraft is a CAA Form 1.

## **F10. DEFECTS**

Any aircraft defect that hazards seriously the flight safety will be rectified before flight. Only certifying personnel can determine that a defect hazards seriously the flight safety and therefore how and when the rectification action will be taken, including when a defect can be deferred. However, this does not apply where defects are defined as being acceptable by the UK CAA.

Any aircraft defect that would not hazard flight safety will be rectified as soon as practicable, within any limits specified in the maintenance data. Any defect not rectified before flight will be recorded in the aircraft records or technical log system as applicable.

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### F11. AIRCRAFT RELEASE TO SERVICE

Due to the different methods of release between EASA and the two national options, care will be taken to ensure the correct release documentation is issued.

The Certificate of Release to Service should relate to the task specified in the relevant maintenance data and contain the following statement:

*'The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft / equipment is considered fit for release to service.'*

### F12. QUALITY SYSTEM

Through the established BGA Quality System, work performed in accordance with BCAR A8-24 and the corresponding aircraft maintenance records is included in the annual audit schedule. Full details of the BGA Quality System are documented in section B1 of this CAE.

### F13. CHANGES TO THE APPROVED MAINTENANCE ORGANISATION

Notwithstanding the additional flexibility and devolved responsibility afforded by Part-ML as expressed in the CAE, the following changes where they affect the national BCAR A8-24 approval will be notified to the CAA in advance of such changes occurring. In the case of personnel changes not known to the management beforehand, these changes will be notified at the earliest opportunity:

- a) Change of organisation name.
- b) Change in the organisation location or addition of location(s).
- c) Change of the Accountable Manager or Senior Staff.
- d) Change in the facilities, equipment, tools, material, procedures, work scope and certifying staff that could affect the approval.

### F14. LIST OF FORMS APPLICABLE TO THE A8-24 APPROVAL

Refer to Section E of the CAE.

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# PART-CAO BCAR A8-25 National Supplement

BCAR Approval DAI/8378/73

Supplement Reference: BGA-EXPO-03/02

# COMBINED AIRWORTHINESS EXPOSITION



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## G1. STATEMENT BY THE ACCOUNTABLE MANAGER:

This supplement and any associated referenced manuals define the organisation and procedures upon which the UK Civil Aviation Authority A8-25 approval are based.

These procedures are approved by the undersigned and must be complied with, as applicable, when work/orders are being progressed under the terms of the A8-25 approval.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the UK Civil Aviation Authority from time to time where these new or amended regulations are in conflict with these procedures.

It is understood that the UK Civil Aviation Authority will approve this organisation whilst the UK Civil Aviation Authority is satisfied that the procedures are being followed and work standards maintained. It is further understood that the UK Civil Aviation Authority reserves the right to suspend, limit or revoke the A8-25 approval of the organisation if the UK Civil Aviation Authority has evidence that procedures are not followed, or standards not upheld, or the organisation is no longer in compliance with A8-25.

Name: Pete Stratten

Signed:

A handwritten signature in black ink, appearing to be 'Pete Stratten', written over a horizontal line.

Dated: 1<sup>st</sup> March 2021

Accountable Manager  
British Gliding Association Ltd.

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## G2. INTRODUCTION

Due to the high level of commonality between BCAR A8-25 and Part-CAO, the majority of working practices, processes and procedures are common irrespective of the work being performed under the National system or the EASA system.

Notwithstanding the above, there are differences between the EASA and BCAR requirements and where those differences have been identified, they have been included in this supplement.

In terms of practical use, the CAE is considered the main document for detailing how continuing airworthiness and airworthiness review are managed and performed with any differences noted in this supplement for national aircraft considered and actioned accordingly.

## G3. SCOPE OF WORK (A8-25)

The organisation scope of work is limited to non-Part 21 aircraft, not used for commercial air transport or for state purposes, 2730kg or below and comprises of the following privileges related to the aircraft contained in the table below:

1. To issue National Airworthiness Review Certificates in accordance with BCAR A3-1.
2. In the case of initial issue, make recommendations to the UK CAA for the issue of a National Airworthiness Review Certificate.

Aircraft Type/Group/Series	Airworthiness Review (C of A)	Airworthiness Review (Permit)	Organisation working under the Quality System
Aeroplane (Single Piston Engine, Metal Structure not exceeding 5700kg MTOM).	Yes	No	N/A
Piper PA-18 Super Cub	Yes	No	N/A
DH Chipmunk	Yes	No	N/A
Slingsby T61	Yes	No	N/A

## G4. SUPPLEMENT AMENDMENT

All amendments to this supplement must be approved by the UK CAA, in the first instance by sending a PDF copy of the amended supplements indicating the changes in the same way as detailed in the CAE to [apply@caa.co.uk](mailto:apply@caa.co.uk)

## G5. PERSONNEL REQUIREMENTS

The BGA Chief Technical Officer will ensure that airworthiness review personnel are aware of the differences between the EASA or National regulations and importantly, the way continuing airworthiness is managed under national regulation in accordance with this supplement.

## G6. AIRWORTHINESS REVIEW PERSONNEL

The BGA Chief Technical Officer will ensure and keep records to demonstrate that airworthiness review personnel meet the following minimum requirements.

For aircraft not used in commercial air transport (CAT) of 2730kg MTWA and below personnel will have acquired:

1. At least 3 years of experience in Continuing Airworthiness; and

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2. An appropriate licence in compliance with BCAR Section L or Part 66 as appropriate to the aircraft category or / and aeronautical degree or equivalent; and
3. Appropriate aeronautical maintenance training; and
4. A position within the organisation with appropriate responsibilities.

Notwithstanding the above, the requirement for an appropriate licence or aeronautical degree may be replaced by four years of experience in continuing airworthiness additional to those already required by item 1 above.

Records of airworthiness review personnel are kept electronically and in hard copy at the BGA Head Office in Leicester. This is to ensure that the list is always up to date. These personnel are authorised to perform Airworthiness Reviews and issue or recommend an ARC limited to aircraft in Section G3 of this supplement.

## **G7. CONTINUING AIRWORTHINESS MANAGEMENT**

All BGA aircraft are maintained in the uncontrolled environment and continuing airworthiness management is the responsibility of the aircraft owner.

As the BGA does not have indirect privileges granted by the UK CAA, it is acknowledged that the provisions of Part-CAO do not apply with respect to the organisation locally approving AMP for national aircraft and the procedures below will be followed.

Use of CAA LAMS (Light Aircraft Maintenance Schedule) CAP 411 is permitted for aircraft within the scope of the programme provided the rules of the programme are applied appropriately. The use of LAMS is not permitted where specifically prohibited by regulations (e.g., MPD2019/003 for high performance aircraft operating on a national permit to fly).

In addition to the types of data already specified in the CAE, data provided within the terms of a BCAR A8-21 approval is approved data for modifications and repairs as is data directly approved by the UK CAA. Modifications and Repairs can also be accomplished using the provisions of CS-STAN, with some minor adjustments (such as using the CAA Form 123). CAP 1419 (guidance for the approval of minor modifications) will be consulted when managing this activity.

The Certificate of Release to Service (CRS) wording for national aircraft will be as shown in Part F11 of this CAE.

Regarding applicable ADs, attention will be given to CAP 747 Mandatory Requirements for Airworthiness.

Regarding components to be installed on National aircraft, a CAA Form 1 is also considered to be an acceptable release. Care will be taken when accepting a component for a C of A aircraft using this document to ensure that the detail in block 12 does not limit the use of that component to aircraft operating on a National Permit to Fly.

With respect to defect management, only authorised personnel can determine that a defect hazards seriously the flight safety and therefore how and when the rectification action will be taken, including when a defect can be deferred. However, this does not apply where defects are defined as being acceptable by the UK CAA. Any aircraft defect that would not hazard flight safety will be rectified as soon as practicable, within any limits specified in the

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maintenance data. Any defect not rectified before flight will be recorded in the aircraft records. Any aircraft defect that hazards seriously the flight safety will be rectified before flight.

## **G8. DOCUMENTATION**

In addition to the sources of approved data detailed in the CAE, for national aircraft applicable maintenance data also includes data published in accordance with BCAR A8-21 and BCAR A8-23 paragraph 10.4 and Mandatory Permit Directives (MPDs) published by the UK CAA.

## **G9. AIRWORTHINESS REVIEW (NATIONAL C OF A)**

For aircraft operating on a National C of A, the Airworthiness Review will be performed in accordance with BCAR A8-25, Paragraph 10 and documented on BGA Form 278.

The Airworthiness Review can be anticipated by a maximum of 90 days without loss of continuity of the Airworthiness Review pattern, to allow the physical review to take place during a maintenance check.

Where the aircraft has not previously held a NARC, the NARC must be issued by the UK CAA for which purpose a full review will be performed and a recommendation made.

For aircraft not in a controlled environment the NARC may be extended a maximum of two times after carrying out an annual review to establish that:

1. All maintenance specified by the maintenance programme has been carried out in accordance with that programme.
2. All modifications and inspections deemed mandatory by the UK CAA have been carried out.
3. All defects entered in the aircraft records have been rectified or deferred in accordance with UK CAA approved procedures.
4. All required CRS have been issued.

The annual review is detailed on BGA Form 278 and can be issued by staff listed in section G5 above (Airworthiness Review Staff).

The recommendation will not be made, or a NARC will not be issued or extended, if there is reason to believe the aircraft is not airworthy or if the airworthiness review is inconclusive. In the case of an inconclusive review, the UK CAA will be informed.

Any findings will be corrected prior to making a recommendation or issue / extension of the NARC.

An issued NARC will be valid for 12 months. A copy of the issued or extended NARC will be sent to the UK CAA [apply@caa.co.uk](mailto:apply@caa.co.uk) within 10 days of issue or extension.

## **G10. AIRWORTHINESS REVIEW (NATIONAL PERMIT TO FLY)**

Not applicable to the BGA.

## **G11. OPERATORS TECHNICAL LOG**

Not applicable to the BGA.

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## **G12. RECORD KEEPING**

National Airworthiness Review Certificates (including NARC extensions) and Certificates of Fitness for Flight issued under A conditions, including all supporting documents for each, shall be retained until at least two years after the aircraft has been withdrawn from service.

## **G13. QUALITY SYSTEM**

Through the established BGA Quality System, work performed in accordance with BCAR A8-25 and the corresponding airworthiness review records is included in the annual audit schedule. Full details of the BGA Quality System are documented in section B1 of this CAE.

## **G14. CHANGES TO THE APPROVED MAINTENANCE ORGANISATION**

Notwithstanding the additional flexibility and devolved responsibility afforded by Part-CAO as expressed in the CAE, the following changes where they affect the national BCAR A8-25 approval will be notified to the CAA in advance of such changes occurring. In the case of personnel changes not known to the management beforehand, these changes will be notified at the earliest opportunity:

- a. Change of organisation name.
- b. Change in the organisation location or addition of location(s).
- c. Change of the Accountable Manager or Senior Staff
- d. Change in the facilities, procedures, work scope and certifying staff that could affect the approval.

## **G15. LIST OF APPROVED MAINTENANCE PROGRAMMES**

None.

## **G16. LIST OF FORMS APPLICABLE TO THE A8-25 APPROVAL**

Refer to the CAE.

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# Non-Part 21 Sailplanes and Self-Sustaining Sailplanes Procedures Supplement

Supplement Reference: BGA-EXPO-03/03

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## H.1 INTRODUCTION

**This Part H of the Combined Airworthiness Exposition is unregulated but is described here for completeness.**

Sailplanes and Self-Sustaining Sailplanes (SSS) in the UK formerly declared by EASA as Annex II are now classified as non-Part 21 and are exempt from many of the provisions of the Air Navigation Order and do not legally require a Certificate of Airworthiness (Airworthiness Certificate) to be able to operate in the Private and Sporting roles, except in special circumstances. However, the BGA has decided that some system of control is necessary to ensure that sailplanes and SSS operating within the Association are inspected and maintained to a satisfactory standard. Moreover, it has been agreed that there should be adequate means of distributing technical information, whether advisory or mandatory, to those persons concerned with the day-to-day maintenance of such aircraft. Whilst the BGA does not possess statutory legal powers, it ensures compliance with airworthiness procedures through its club structure, which prohibits the operation at a BGA club of any sailplane or SSS which does not possess a current C of A (Airworthiness Certificate) or Permit-to-Fly. This effectively denies the provision of launch facilities to any non-complying sailplane. The BGA uses the same organisational structure for its self-regulated airworthiness control as it does for that aspect of its airworthiness function which is regulated by the UK CAA and this structure is defined in Part A of this CAE. Each BGA-registered aircraft must display the unique number allocated by the BGA on the fin or rear fuselage. Sailplanes and SSS subject to UK CAA regulation are subject to the procedures detailed in Parts A-G of this Exposition.

## H.2 AIRWORTHINESS REQUIREMENTS FOR SAILPLANES AND SSS

### H.2.1 Background

The airworthiness of BGA-registered sailplanes and SSS is based upon the design requirements contained in the following documents:

- Joint Airworthiness Requirement (JAR) Part 22/Certification Specifications (CS) 22.
- OSTIV Design Code for Sailplanes.
- BCAR Section E for vintage sailplanes which predate JAR 22/CS 22.

Sailplanes designed to other airworthiness standards may be accepted for BGA registration provided the necessary technical information is supplied to the BGA Technical Committee (see Part A9.5 of the CAE). This information enables the Committee's members to assess the effects on safety and the need for any additional limitations resulting from the differences in design requirements.

A number of simple old/vintage glider types of UK and foreign design have held valid UK Certificates of Airworthiness in the past, but the original Type Design Organisation no longer exists or no longer provides continued airworthiness support. In these cases, the BGA could provide support through a Type Responsibility Agreement in accordance with any applicable agreement between the BGA and the UK CAA. Details of support arrangements will be documented in BGA AMPs.

### H.2.2 Principles

The continuing airworthiness of BGA-registered sailplanes is achieved by the classical framework of annual certification of airworthiness inspections, periodic checks and daily inspections. Sailplanes are frequently dismantled and reassembled (de-rigged and rigged), much more so than any other type of light aircraft.

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Particular attention is therefore demanded for rigorous Daily Inspection (DI), with special procedures following control connection and the completion of a daily logbook entry on each occasion that a DI is completed. The technical standards to be followed in the maintenance of the BGA's airworthiness standards follow criteria established by the international aviation community, principally those of the FAA, the UKCAA and ICAO. Additional procedures have evolved from specific sailplane requirements and BGA operational experience.

### **H.2.3 Flight Manuals**

Operating data for sailplanes and SSS is usually found in the Aircraft Flight Manual or Operator's Handbook provided by the manufacturer. Knowledge of the manufacturer's operating requirements is a fundamental tenet of continued airworthiness, and these documents sometimes contain details of maintenance procedures or a technical description of aircraft systems.

### **H.2.4 Logbooks**

A logbook is to be raised for all BGA-registered sailplanes and SSS. Aircraft owners are to enter into the logbook details of flying hours and launches and a summary of all work carried out. A copy of each BGA GMP report form (BGA 267) is to be retained in the logbook. Additionally, a Daily Inspection Record Book is to be raised for each BGA registered sailplane or SSS. This book is to be used to certify that the "Daily Inspection" and, where necessary, post-rigging control checks or duplicate checks have been carried out.

### **H.2.5 Documentation of Work Carried Out**

All work carried out on sailplanes and SSS is to be documented in the aircraft logbook, the BGA GMP report form BGA 267 or on a rectification work sheet, copies of which are to be attached to the logbook or maintained in a maintenance file which forms part of the logbook. These documents form part of the documentary history of the aircraft and are to be retained until the aircraft is destroyed. When aircraft change hands, all documentation is to be transferred to the new owner.

### **H.2.6 Certification of Work Carried Out**

Daily inspections and pilot maintenance may be certified on private sailplanes by pilots who have been briefed by a flying instructor or BGA Inspector on the requirements of the inspection. On club sailplanes this may be carried out by pilots who have been deemed competent and have been approved by the operating club.

All other work, including defect rectification and the GMP report form BGA 267, is to be certified by a BGA Inspector. Any certification outside of normal limitations, such as for new aircraft type approval, initial build or development work, must be authorised by the BGA Chief Technical Officer and/or the Technical Committee.

### **H.2.7 Classic and Vintage Sailplanes**

Unless a finite airframe life is promulgated by the aircraft manufacturer, the BGA places no arbitrary life limitation on classic and vintage sailplanes. These sailplanes are allowed to fly within the constraints of suitable operating limitations subject to them being shown to be airworthy.

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### H.2.8 Defect Reporting

It is essential that BGA Inspectors ensure that details of new or unusual defects are promptly reported to the BGA Chief Technical Officer. This will ensure that significant faults are brought to the attention of the BGA Technical Committee, and that appropriate remedial action can be initiated. Where necessary, details of the faults will be circulated throughout the gliding community by use of BGA Technical News Sheets.

### H.2.9 Approval of Welders

The requirements for the approval of welders for aircraft with a CAA Airworthiness Certificate are contained in BCAR Section A8-10. These requirements are supported by the BGA Technical Committee. However, for aircraft with a BGA Airworthiness Certificate, the BGA Technical Committee has also agreed that welders who are appropriately qualified and quality assured under Ministry of Defence Technical procedures for the three Services are also acceptable to the BGA.

Note: Only CAA approved welders may carry out welding on 'G' registered aircraft, Self-Launching Powered Sailplanes & Touring Motor Gliders.

Commercial welders may also carry out welding on sailplanes issued with a BGA Airworthiness Certificate provided that they are regularly tested in the correct discipline (Tig or Gas, Tube to tube or plate). Regularly tested means approximately at two-yearly intervals by an accredited testhouse. It is the BGA Inspector's responsibility to ensure that the welder is suitably qualified and a BGA inspector must certify all welding.

## H.3 SAILPLANE AND SSS BGA AIRWORTHINESS CERTIFICATE

### H.3.1 Introduction

Sailplanes and SSS new or new to the UK post 28/9/03 and listed as non-Part 21 aircraft are eligible for the issue of a BGA Airworthiness Certificate. A BGA Airworthiness Certificate is issued on satisfactory completion of a systematic technical audit of the aircraft to ensure compliance with accepted standards of airworthiness, the embodiment of essential modifications and the satisfactory compliance with other technical instructions or Service Bulletins. A BGA Airworthiness Certificate can only be granted to a sailplane or SSS which has been awarded BGA Type Approval and is listed as non-Part 21.

### H.3.2 Maintenance Facilities

To ensure appropriate levels of airworthiness can be sustained, all maintenance activity is to be carried out in suitable accommodation. The standards of facility required for the maintenance of sailplanes and SSS are similar to those detailed in Part C of this CAE. Access is required to appropriate tooling and calibrated test equipment as dictated by the aircraft maintenance schedule or the BGA Glider Maintenance Programme (GMP).

### H.3.3 Depth of Inspection

The depth of inspection necessary to determine the airworthiness of a sailplane or SSS must be judged by a suitably rated BGA Inspector. This assessment must be made taking into account the previous utilisation of the aircraft, its overall condition and the nature of its previous history as recorded in the logbook. A further factor to be considered is the nature of the aircraft's storage when not in use. Prolonged storage in a poorly ventilated trailer, or in the open and exposed to the elements, can cause significant deterioration, especially to sailplanes

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of wooden construction. All defects and the remedial action carried out are to be recorded on a rectification worksheet.

### H.3.4 Role of The BGA GMP Report Form (BGA 267)

The BGA GMP report form BGA 267 provides a systematic method of inspection and reporting on the condition and state of airworthiness of a sailplane or SSS prior to renewal of the BGA Airworthiness Certificate and is used as a check list for the BGA Glider Maintenance Programme (GMP). Three copies of the completed BGA 267 are required; one is to be retained in the aircraft logbook, one is to be sent to the BGA and the third copy is to be retained by the inspector. Copies of any additional rectification worksheets are to be retained in the aircraft logbook or maintenance file. If a maintenance file is used this forms part of the logbook and maintenance history.

### H.3.5 Mandatory Instructions

Details of all mandatory Service Bulletins, modifications or other technical instructions applicable to each type of sailplane or SSS are promulgated in the BGA Compendium or Airworthiness Directives. Compliance with mandatory inspections and modifications (AD's) must be recorded in the sailplane logbook. Compliance with all mandatory instructions is to be checked at each BGA Airworthiness Certificate renewal and noted on the BGA 267. The primary method of retrieving the Compendium is the BGA website, where it is updated every two months to include the TNS information.

### H.3.6 Cockpit Placards

Cockpit placards are required to notify to pilots all details of aircraft weight, balance and speed and manoeuvre limitations. These placards must be clearly visible to the pilot and contain the data promulgated in the Flight Manual for the aircraft type. The validity date of the BGA Airworthiness Certificate is to be displayed on a placard in the aircraft cockpit.

### H.3.7 Extension and Anticipation of BGA Airworthiness Certificate

With the prior agreement of the BGA CTO, sailplane and SSS BGA Airworthiness Certificate renewal dates may be extended by a period not exceeding 30 days. A request should be made in writing either by e-mail (preferred) or by letter. BGA Airworthiness Certificates may be anticipated by up to 2 months without loss of continuity of the maintenance cycle. Any anticipation in excess of two months will be lost.

When a BGA Inspector is satisfied that all necessary work has been completed, that the sailplane or SSS is airworthy and that the BGA GMP report form (BGA 267) has been completed and sent to the BGA without undue delay, the aircraft may be released for flight in advance of receipt of the renewed BGA Airworthiness Certificate. This action is certified by attaching a 30-Day Ticket, suitably dated and signed, in the cockpit. This ticket remains valid for a maximum period of 30 days.

It is not necessary to issue a 30-day ticket where the airworthiness certificate has been anticipated by more than 30 days.

A 30-Day Ticket **may not** be issued to sailplanes, self-sustaining sailplanes, self-launching sailplanes, motor gliders or tug aircraft issued with an EASA Airworthiness Certificate.

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## H.4 MODIFICATION OF SAILPLANES

### H.4.1 Applicability

The modification procedure below is only applicable to sailplanes and SSS issued with a BGA Airworthiness Certificate.

### H.4.2 Introduction

By virtue of its composition, the BGA Technical Committee enjoys the benefit of the expertise of specialists in the fields of aircraft design, structure, handling qualities, maintenance and repair. As a result, the BGA Technical Committee has the capability to investigate and approve modifications to sailplanes and SSS which may fall into either of the 'Minor' or 'Major' classifications. This capability is usually exercised in close consultation with the aircraft manufacturer concerned.

### H.4.3 Classification and Modifications

Modifications are classified as follows:

#### Minor Modifications

Minor modifications are usually relatively simple changes of aircraft configuration to improve reliability or maintainability. Minor modifications usually do not require a change to the aircraft Flight Manual and may be authorised by the BGA Chief Technical Officer.

#### Major Modifications

A major modification is required when a change to an aircraft requires amendment of the Flight Manual. Additionally, a major modification is required when a repair has been carried out which is not covered in the aircraft repair manual or in journals of standard aircraft repair techniques. Major modifications may need to be forwarded to the BGA Technical Committee for approval but in the first instance are to be referred to the BGA Chief Technical Officer.

### H.4.4 Modification Application Procedure

The procedure for applying for approval of a modification is shown in BGA Airworthiness Maintenance Procedures.

### H.4.5 Recording of Modifications

The embodiment of a modification is to be recorded in the aircraft logbook. A copy of the modification instructions and any drawings needed for embodiment of the modification are to be retained with the aircraft documents.

## H.5 REPAIRS TO SAILPLANES

### H.5.1 Introduction

Whilst extremely strong (typically +8g load factors), sailplanes and SSS are, by virtue of their long wing and mono-wheel undercarriage configuration, more susceptible to minor damage than general aviation light aircraft. On occasions such as field landing accidents this damage may be of an extreme nature and could require major structural repair of wings, fuselage or tail. The BGA procedures provide standard repair schemes based on FAA and UK CAA practices for sailplane repairs. In the event of major repairs being required, particularly in composite structures, reference is always made where possible to the original sailplane manufacturer for a specific repair scheme. The need for a major modification must also be considered.

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## H.5.2 Repair Schemes

All repairs to sailplanes are to be carried out in accordance with a specific approved repair scheme or in accordance with an approved standard repair scheme. A series of design-approved standard repairs suitable for older sailplanes are promulgated in the former Air Publication AP 2662 A&B - Standard Repairs to Gliders. Although this publication is no longer supported by the MOD, copies are available from the BGA. Further information on the repair of wooden and fabric-covered structures is available in various leaflets within CAP 562 - Civil Aircraft Airworthiness and Inspection Procedures. Major repair schemes may require the specific approval of the manufacturer or the BGA Technical Committee.

## H.5.3 Repair Facilities

It is essential that repairs to sailplanes and SSS are only carried out in workshop conditions which are suitable to ensure structural integrity. This is especially so in the case of repairs to fibre-reinforced plastic structure where temperature and humidity are fundamental to the subsequent strength of a repair and this data should be recorded as part of the aircraft maintenance records.

## H.5.4 Certification and Recording of Repairs

Full details of all repairs are to be recorded in the aircraft logbook and certified by an appropriately rated BGA Inspector. On completion of the repair a comprehensive repair report is to be compiled, a copy of which is to be forwarded to the BGA head office for inclusion in the aircraft's file.

## H.5.5 Guidance on Specific Repairs

Additional guidance on the conduct of specific repairs is as follows:

### Repair of Metal Aircraft

The manufacturer's Repair Manual must form the basis of all repairs. Additional guidance, especially on corrosion control, is contained in the various leaflets of CAP 562 - Civil Aircraft Airworthiness and Inspection Procedures. The manufacture of replacement parts may only be undertaken as a modification procedure. Further information on standard repairs to metal aircraft structures, including tubular-steel frames, is contained in the FAA publication EA-AC43-13, 1a and 2a, available from the BGA.

### Repair of GRP Aircraft

As with metal aircraft, GRP aircraft must be repaired only in accordance with an approved repair scheme. Guidance on the techniques to be used in GRP repairs is contained in BGA Airworthiness Maintenance Procedures.

## H.6 INVESTIGATION OF ACCIDENTS AND INCIDENTS

### H.6.1 Investigation of Accidents

The prompt and thorough investigation of all aspects of sailplane accidents and incidents is an essential element of sustaining the continued airworthiness of any aircraft. Operational and engineering assessments, together with trend analysis, are carried out. The ANO permits the AAIB to delegate the investigation of sailplane accidents to the BGA. Investigation of the engineering implications of an accident will be directed by the Chairman of the BGA Technical Committee. A rapid response is required in the event of an accident and, of necessity, much of this work will be organised on the telephone.

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## H.6.2 Investigation of Incidents

In addition to the investigation of accidents, it is essential that the engineering implications of air incidents or other engineering arisings are also thoroughly investigated. Reports on these arisings are to be submitted on the BGA Incident and Accident Report Form using the procedure outlined in more detail in BGA Airworthiness Maintenance Procedures.

## H.7 AUDIT AND QUALITY

Although not a regulatory requirement the BGA has decided that the airworthiness of non-Part 21 sailplanes and SSS will be subjected to a similar level of quality oversight as Part 21 types and these requirements are detailed in Part B1 of this CAE.

## H.8 CERTIFICATION OF MAINTENANCE

### H.8.1 General

All maintenance carried out on BGA aircraft, including sailplanes, powered sailplanes and self-sustaining sailplanes, is to be certified by a BGA-authorized Inspector holding the appropriate rating. The scope of these approvals, including specific limitations and privileges, is detailed in BGA Airworthiness Maintenance Procedures.

### H.8.2 BGA Airworthiness Certificate

All maintenance carried out on aircraft with a BGA Airworthiness Certificate is to be certified in the appropriate logbook. Alternatively, the work may be certified on an approved worksheet and a summary of the work recorded in the aircraft logbook. Any certification is to be made in accordance with the following statement (on BGA approved worksheets reference may be made to this CAE chapter number):

*“The work recorded has been carried out in accordance with BGA procedures as stated in the BGA Combined Airworthiness Exposition and in that respect the aircraft/equipment is considered fit for release to service.”*

The maintenance entry is to be signed, dated and the individual's BGA Authorisation number stated.

### H.8.3 Limitation of Certification Authority

A BGA inspector of any rating may not certify under the authority of the BGA authorisation any aircraft, equipment, parts or components unless the said aircraft or equipment is under the control of and registered with the British Gliding Association. The BGA approval granted is for maintenance only and, should approval be required for development or construction work, application should be made to the BGA Technical Committee. In the case of aircraft with a BGA Airworthiness Certificate, maintenance certifications may only be made by an appropriately rated BGA inspector (except in the case of duplicate inspections as detailed below). Any requests for certifications by other inspectors approved elsewhere should be made to the BGA Chief Technical Officer in writing and may be passed for approval by the Technical Committee.

## H.9 DUPLICATE INSPECTIONS

### H.9.1 General

A duplicate inspection must be made if any control system (airframe or engine) is disturbed, or any critical bolted joint is disturbed or made. The inspection must be carried out after

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assembly and before flight. The inspection must take into account inspections during the assembly stages for inaccessible or concealed locations. The duplicate inspection must be an independent inspection except where simultaneous inspections are required, i.e., observing bolt torque. Each part of the inspection must be recorded in the appropriate logbook or worksheet. It is the responsibility of the inspector completing the BGA Airworthiness Certificate renewal or certifying the maintenance check that any required duplicate inspections are carried out and recorded. This task must not be left as an open entry for completion at a later date by a third party.

## H.9.2 Rigging of Sailplanes

A duplicate inspection is not required on a control designed to be disconnected for rigging and de-rigging. However, replacing or adjusting the control does require a duplicate inspection. This statement does not inhibit a duplicate inspection being made after rigging if desired or if club policy requires it.

## H.9.3 Authority to Carry Out Duplicate Inspections

For sailplanes with a BGA Airworthiness Certificate the following people are authorised to conduct duplicate inspections-

- a) Glider Inspector - any airframe inspections but second inspection only on SSS engine.
- b) SSS inspector - any airframe inspection or SSS engine inspection.
- c) Motor Glider Inspector - any inspection.
- d) Tug inspector - any inspection.
- e) Licensed Aircraft Engineer - any inspection.
- f) An experienced sailplane or motor glider pilot - second inspection only to the limit of the pilot's licence held.
- g) A person authorised by the BGA Chief Technical Officer for the purpose.

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