BGA Airworthiness and Maintenance Procedure

CUSTOMISATION OF MAINTENANCE PROGRAMMES AND RECORDING OF AIRWORTHINESS DIRECTIVES (AMP 2-14)

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1. INTRODUCTION

Sailplanes, Powered Sailplanes and Aeroplanes must be maintained in accordance with an approved maintenance programme. For non commercial operation a minimum generic or baseline maintenance programme is acceptable. The BGA GMS for sailplanes and CAA/LAMP (soon to be replaced) for aeroplanes are generic maintenance programmes and have been accepted as the BGA CAMO maintenance programmes. Ref Part M, M.A.302 & M.A.709. Annex II powered aircraft use CAA/LAMS.

Part of the requirements for using a minimum generic maintenance programme is that type certificate holders, manufacturers and other mandatory requirements are incorporated into the programme. This process is called "customisation". Customisation is not an option – it is a requirement.

2. CUSTOMISATION OF THE MAINTENANCE PROGRAMME

Required information

Before you can start to customise a maintenance programme you need to gather some information as follows;

- A copy of the generic programme (BGA GMS, CAA/LAMP or CAA/LAMS)
- The aircraft manufacturers maintenance schedule
- Engine & propeller manufacturers maintenance schedule
- Equipment manufactures maintenance requirements
- Any special maintenance requirements resulting from modifications
- Aircraft, engine and propeller maintenance manuals
- Airworthiness Directives that have a repetitive or scheduled maintenance requirement
- Technical notes or service bulletins that have maintenance requirements

For "manufacturer" also read "Type Certificate holder" as this may not be the manufacturer if the type certificate has changed hands.

The maintenance requirements may be in some or all of the above documents. Some older aircraft, especially classic sailplanes will have very little manufacturers maintenance information.

Review the information

The best way to review the information is to start with the manufactures information and see if it is included in the generic programme. Then check the frequency in the generic programme to ensure the time/launches requirement is not exceeded. We recommend making a working copy so you can make notes or tick off.

If the task is adequately satisfied in the generic programme mark your working copy or make an appropriate note.

Continue the process with all the manufactures requirements reviewing all the above documents that are applicable.

When you have finished review the tasks that have not been adequately covered either by non inclusion of the frequency being inadequate should be clear. You should end up with a list of tasks for inclusion.

On simple sailplanes there probably won't be anything to add as it is all adequately covered in the BGA GMS. Remember the BGA GMS was developed from the old BGA 267 incorporating many years of development. On newer or more complex aircraft there may well be some items not adequately covered especially powered aircraft operating on CAA/LAMP or CAA/LAMS.

Non-applicable tasks

Customisation also includes the deletion of non applicable tasks, for example; if your sailplane does not have flaps then BGA GMS tasks 44 and 48 are non applicable. You can, optionally, mark these as not applicable in the master programme.

Customisation

Now that you have a list of tasks that require adding to the generic programme there are several way of doing this depending on what maintenance programme is in use;

BGA GMS (Sailplanes and Self Sustaining Sailplanes)

On the master copy you received after transition or downloaded, first ensure the title page is completed. This identifies the programme applicability and check it is at the latest revision.

On the master copy add the additional items in blank tasks 90 to 100. See appendix A

If in the unlikely event you run out of room, it will be necessary to make an additional page. If this is necessary don’t forget to add it to the list of revisions on page 1-4.

At the annual inspection add the extra tasks to the BGA 267, complete and certify as normal. The BGA 267 is available in Word format so it can be customised to make a master.

If some additional tasks fall outside the annual requirement, compliance and the certification should be recorded in the log book with reference to worksheets if applicable. For example; some Eastern European sailplanes have 50, 100 and 250 hour requirements. These must be incorporated in the customisation process.

It is recommended to align out of phase tasks with the annual if appropriate. For example; a 200 hour "S" tube inspection or 50 or 100 hour check so the clock starts again after the annual check.

CAA/LAMP & CAA/LAMS (Self Launching Sailplanes and Powered Aircraft)

The CAA maintenance programmes are a little more difficult to customise as there are no blank tasks for you to complete. The CAA have published CAP 543 "Time Limited Task, Additional Inspections and Component Change Record" with instructions that this document should be used for customising the LAMP or LAMS. CAP 543 is better suited to managing lifed items and inspections.

It is recommended to carry out the same review as previously stated resulting in a list of tasks to be included or deleted and as before ensure the aircraft details are entered into the maintenance programme so identifying the applicability.

Step 1; Using an editable version (Word) of LAMP or LAMS, delete the non applicable tasks noting the task number you have deleted. The deleted task numbers must be annotated at the end of the scheduled tasks.

Step 2; Add additional tasks that align with a scheduled maintenance check (50hr, 150hr or Annual) in their appropriate position using the same coding principals. (INSP/CHK etc) and the frequency.

Step 3: Renumber the tasks from 1 to xx. This then becomes you new master LAMP or LAMS. Print a master copy and keep with the original document for reference with your log books. See appendix 2.

Step 4; Enter out of phase tasks in CAP 543 stating when they were last completed and next due. See appendix 3.

When maintenance is required, print a copy of the master and use as worksheets to record the work and refer to CAP 543 for out of phase requirements.

Airworthiness Directives

AD's and BGA inspections that call up a repetitive inspection scheduled at the Annual for example, may be included as an additional task just the same as a manufacturers requirement. However the AD must also be recorded in the main log book entry and in the AD controlling pages (Pink pages).

The inclusion of AD's is optional as they are also controlled on the AD status report or in the log book. See 'Recording of Airworthiness Directives' below for further guidance

Review

The customisation should be periodically reviewed to ensure it is still current and reflects the aircraft maintenance requirements, a review annually is recommended.

3. RECORDING OF AIRWORTHINESS DIRECTIVES

Background

It is a BGA and Part M requirement that all applicable airworthiness directives (AD) are complied with and correctly recorded in the aircraft maintenance records. The recording process has a number of elements

- Recording of AD's that are applicable to the type or series of aircraft but for some reason are not applicable to the particular aircraft.
- Recording compliance with the AD
- Recording that an AD or part of an AD is due in the future

AD's that are not applicable

Recording non applicable AD's may seem to be pointless, however it serves some very important functions. It records the fact that the particular AD has been assessed and it was determined that it is not applicable for one of a number of reasons.

a) The AD is only applicable to a particular variant within a generic group (N/A to type)
b) The AD was published before the aircraft was manufactured and the requirement has been superseded by build standard (N/A by Mfg date)
c) The AD is only applicable to aircraft within a specified serial number range (N/A by serial no)
d) The applicability of the AD has been removed by modification or because a particular mod has not been embodied. (N/A by mod state)
e) It records the fact that the research has been completed to save it being repeated in future.

In each case it must be verified that the reason for non applicability is correct and any subsequent work on the aircraft does not render the AD applicable. Installing a mod for example, may invoke a particular AD that was previously non applicable.

The non applicable AD's are recorded either in the BGA Sailplane log book (2010) pink pages, BGA 280 AD Status Report or applicable CAA log book

The reason for the non applicability must be specified i.e. N/A to type, N/A by mfg date, N/A by serial no, N/A by mod state.

See appendix 4 and 5 for examples of BGA 280 and BGA Sailplane Log Book pink pages

Recording compliance with an AD

Compliance with an AD must be recorded in three places.

a) The aircraft or engine log book for the certificate of release to service
b) The AD record – BGA 280 or Pink Pages of the log book as a planning record
c) On worksheets – BGA 205 to record any work carried out to satisfy the AD requirements (if necessary)

The log book entry is the Certificate of Release to Service and the primary certification of compliance with the AD. The AD number must be quoted in the log book entry, e.g.

Annual inspection carried out i.a.w. BGA GMS 2005 issue 1, AD 2006-0150, AD 2010-0053, AD 1993-001/3 complied with. Details on file ref G01/2011

Compliance with the AD is recorded on BGA 280 AD Status Report if using the old BGA Glider log book or in the pink pages of the BGA Sailplane log book. These are used to note when the AD was carried out and if it is a repeat the BGA sailplane log book has a repeat page for individual AD's. NOTE: BGA 280 and pink pages are not a release to service. See appendix 4, 6 & 7 for examples.

Work required to satisfy must be recorded on a work sheet (BGA 205) unless it is a very simple and straightforward inspection where a simple log book entry will suffice. The work sheet is contained within a work pack and is referenced in the log book entry.

Recording an AD due in the future

Many AD's have a repeat requirement or are due at some time in the future when for example when a certain number of hours are reached.

The BGA 280 or log book pink pages are used for this purpose. See appendix 4 and 8 for examples

Technical Notes and Service Bulletins

If required technical notes and service bulletins can be recorded in exactly the same way as AD's. There is no mandatory requirement to do this but it could save time in the future as an aid to planning.

APPENDIX 1

BGA GMS Customised.

88	**Mandatory checks**	Check for compliance of all mandatory modifications, airworthiness directives and inspections applicable to the engine, propeller, accessories & equipment. Record compliance in the logbook. State of design Type certificate and STC holder AD list, BGA Compendium, BGA Technical News Sheet, BGA Mandatory inspections, Manufacturers mandatory check list (if available).	Insp/chk
89	**Manufacturers recommendations**	Review manufacturers maintenance schedules for the engine/propeller to establish if any additional work is required (enter in tasks 90 to 100) Where a recommended engine TBO is specified, On gliders used for private flight only – Engines may be lifed "on condition" provided there is no Airworthiness Directive mandating replacement or overhaul.	Insp/chk
Tasks 90 to 100, Additional maintenance tasks not included in schedule (Complete as required. If necessary use additional sheets)			
90	**Every 200 hours and Annual**	Inspect rudder cables especially near "S" tubes	Insp/chk
91	**Annual**	Check all screwed connections and safety devices	Insp/chk
92	**Annual**	ATC transponder checks	Insp/chk Op/chk
93	**Every 3 months and Annual**	Detailed inspection and lubrication of canopy emergency release	Insp/Chk Lub
94	**50 hour check**	50 hour check items as detailed in maintenance manual	Insp/chk
95	**100 hour check**	100 hour check items as detailed in maintenance manual	Insp/chk
96	**250 hour check**	250 hour check items as detailed in maintenance manual	Insp/chk
97			
98			
99		**NOTE: this is a mixture of additional tasks for various sailplanes of differing manufactures some German and some Polish. Please review the additional tasks for the sailplane being researched.**	
100			

BGA GMS Initial issue 10/01/05, Section 4, Page 4-1

APPENDIX 2

CAA/LAMP Customised for SF25 (extract)

Structural / Zonal:					
7	External structure of fuselage, main planes, empennage, cowlings, nacelles, control surfaces, flaps and other high lift devices.	INSP	Annual		
9	Normal and emergency doors and windows, door hinges, door hinge attachment points, required placards and operating instructions.	INSP	Annual		
10	Doors, hatches and windows latching and locking.	OP/C	Annual		
11	Internal structure of fuselage, floors, bulkheads, main planes, nacelles, empennage. Control surfaces, flaps and other high lift devices, structural attachment joint assemblies, struts, bracing wires and their attachments.	INSP	Annual		
12	Inspection of main rigging pin AD 82-134/2	INSP	Annual		
13	GR 8 Fabric inspection	INSP	Annual		
14	Wooden/Composite Construction: Vent holes, glued joints, bonded assemblies, protective treatments and finishes. **Note:** The need for removal of fabric for detailed inspection of attachments must be assessed when accomplishing this task at the annual check.	INSP	Annual		
15	Internal corrosion protective treatments, drain holes and paths.	INSP	Annual		
16	Emergency exit by internal and external release methods.	OP/C	Annual		

APPENDIX 3

CAA CAP 543

Task, Inspection or Component	Pos'n	Part No. / Serial No.	Date/ Hours/Cycles At Fitting	Hours/Cycles Run / Life Remaining	Due At	Entry made by (company* or LAE) / Date of Entry
Airframe fuel hoses pressure test	All	Various	01 Dec 2009	36 months	01 Dec 2012	I/A/1234
		N/A	450	36 months		01 Dec 2009
Engine Oil & Fuel Hoses pressure test	All	various	01 Jan 2011	Nil	01 Jan 2017	I/A/1234
		N/A	500	72 months		01 Jan 2011
Slick magneto inspection	N/A	4500	01 Jan 2011	Nil	750 hrs	I/A/1234
		123456	500	250 hrs		01 Jan 2011

NOTES All component changes etc. recorded here must be entered in Part A for certification.
* (Column 7) Include abbreviated company name to identify origin.

APPENDIX 4

BGA 280 AD Status report.

BRITISH GLIDING ASSOCIATION

AD Status report / Record of mandatory and non-mandatory tasks

File ref:G02/2011

Sheet: 1 of: 1

Registration: G-ABCD	BGA Number: 1234	Aircraft Type: VENTUS C	Serial Number: 567
Engine Type: N/A	Serial Number:	Propeller Type:	Serial number:

Airworthiness Directive Number (AD)	Non mandatory task number (TN, SB)	Description	Method of compliance	Frequency (Hrs, Launches, calendar, one time)	Last complied with (Hrs, Launches, date)	Next due	Signature & date
2001-258	349-9	FLAP DRIVE	N/A TO TYPE			N/A	A Inspector 12/07/2010
1998-116	349-13	AIRBRAKES	N/A BY SERIAL NUMBER			N/A	A Inspector 12/07/2010
1992-360/2	349-16	ELEVATOR ROD	REPLACEMENT	ONE TIME	24/12/1992	N/A	A Inspector 12/07/2010
1993-001/3	349-17	L'HOTELLIER	FIT SAFETY CLIP	ONE TIME	10/07/1993	N/A	A Inspector 12/07/2010
1994-001/2		L'HOTELLIER	INSPECTION	ANNUAL	15/07/2009	15/07/2010	A Inspector 12/07/2010
1999-001	349-24	EXTENSION OF SERVICE LIFE	INSPECTION	ONE TIME	N/A	6000HRS	A Inspector 12/07/2010
1989-018/3		TOST RELEASE NOSE	O/H REPLACEMENT	2000L	1995L	3995L	A Inspector 12/07/2010
1989-018/3		TOST RELEASE C of G	O/H REPLACEMENT	2000L	1995L	3995L	A Inspector 12/07/2010
2008-0158R1		TRT600 TRANSPONDER	CHECK	2 YEARS	12/07/2010	12/07/2012	A Inspector 12/07/2010
1994-001/2		L'HOTELLIER	INSPECTION	ANNUAL	12/07/2010	12/07/2011	A Inspector 12/07/2010

Enter details of the Airworthiness Directive or non mandatory task, brief description, brief method of compliance (inspection, replacement, service etc), frequency of the task (hours, launches, calendar time, one time), when the requirement was last complied with, when its next due (some tasks have more than one requirement) sign and date the entry. The signature does not constitute a certificate of release to service, this should be entered in the log book, Add new AD's when they are published even if compliance is due in the future.

BGA 280 07/10

APPENDIX 5

BGA Sailplane Log Book "Pink Pages" Non Applicable AD's

THE MANDATORY REQUIREMENTS LISTED BELOW ARE NOT APPLICABLE TO THIS SAILPLANE					
Airworthiness Directive No	Reason	Name & Date	Airworthiness Directive No	Reason	Name & Date
2001-258	N/A type	A Inspector 01/1/2011			
2001-259	N/A serial No	A Inspector 01/1/2011			
2003-280	N/A type	A Inspector 01/1/2011			
2005-136	N/A type	A Inspector 01/1/2011			

EXAMPLE

APPENDIX 6

BGA Sailplane Log Book "Pink Pages" One Time Requirements

ONE TIME REQUIREMENTS & INSPECTIONS				
Reference AD/TN/SB	Subject	Method of compliance	Date & hours at compliance	Signature & date
72-7	Elevator glue	Inspection	1/3/1972	A Inspector 01/01/2011
82-216	Nicropress sleeves	Inspection	1/12/1982	A Inspector 01/01/2011
91-144 TN 13	Main fittings	Inspection	1/8/1991	A Inspector 01/01/2011
BGA 045/07/2005	Elevator tab	Inspection	1/8/2005	A Inspector 01/01/2011
Note: These entries do not constitute a Certificate of Release to Service – enter details in Part A, column 8 and 9				

EXAMPLE

APPENDIX 7

BGA Sailplane Log Book "Pink Pages" Repetitive Inspections

REPETITIVE INSPECTIONS			
Reference AD/TN/SB	Subject	Frequency	Mandatory Y/N
91-173 TN 14	Air brake bearing brackets	Annual	Yes
Brief details of task	Inspecting the bearing brackets and the toggle force of the air brake control circuit		
Method of compliance	Date & hours at compliance	Next compliance	Signature & date
Inspection and force check	1/2/ 2010 1234 hrs	1/2/2011	*A Inspector 1/2/2010*
Inspection and force check	28/1/2011 1299 hrs	28/1/2012	*A Inspector 28/1/2011*
Continued on page.....			
Note: These entries do not constitute a Certificate of Release to Service – enter details in Part A, column 8 and 9			

APPENDIX 8

BGA Sailplane Log Book "Pink Pages" showing AD part 2 due in the future.

ONE TIME REQUIREMENTS & INSPECTIONS				
Reference AD/TN/SB	Subject	Method of compliance	Date & hours at compliance	Signature & date
2011-000	Pylon Part 1	Inspection	1/1 2011	*A Inspector 1/1/2011*
2011-000	Pylon Part 2	Modification Due 30/08/2011		
Note: These entries do not constitute a Certificate of Release to Service – enter details in Part A, column 8 and 9				