



# BGA ENGINEERING NEWS

Number 7, July 2001

## **FOOT & MOUTH**

Now some of the restrictions have been lifted and cross country flying can go ahead albeit somewhat restricted. We need to maintain our vigilance as although not reported in the News any more, new cases of F&M are being reported all the time. Take a look at the MAFF website.

Please be careful when accepting gliders or trailers from outside your area. Take disinfecting precautions if necessary. Thank you.

During the course of your inspections you come across any unexpected corrosion and consider that it may have been caused by the application of F&M disinfectant, please notify the BGA so we can alert other inspectors.

## **BGA Exposition**

Enclosed with this newsletter is a letter from John Bradley, Chairman of the BGA Technical Committee and a summary of the BGA Exposition. We are inviting you to review the exposition and make comment.

Your BGA Gliding Club Technical Officer has an

advance copy of the complete document.

## Situation Vacant

### **BGA Inspector**

Queen Mary College, University of London is looking for a BGA inspector to oversee the building of an Edgley EA9 Optimist glider. The glider is being constructed from a kit and being built by graduate students as part of their degree course. The whole project will take several years and will need regular supervision. The intention is to issue the glider with a C of A on completion.

Details:

Current BGA inspector.

Location – London E1 (Stepney Green)

Commitment – probably one day per month, in term time, for about 5 years  
Salary £0. Expenses paid.

Benefits – the satisfaction of helping up and coming aviation professionals to develop hands on skills.

Contact – CTO.



## **Motor Glider C of A Procedure & Paperwork**

The CAA require the BGA to set a date from which we only use the "New" C of A procedure for processing Motor Glider and Tug renewals. The date set is:

1<sup>st</sup> July 2001

from this date we will not follow the old procedure. Any applications not following the new system will be delayed while the appropriate documents are sent from the CAA to the applicant, completed and returned to the BGA.

To assist you, a flow chart and copies of the CAA forms are enclosed with this newsletter.

Motor Glider Paperwork;

There is still confusion as to the correct paperwork to use to certify the maintenance on "G" registered motor gliders.

1/ **All** maintenance checks must be completed using the LAMS worksheets. This includes 50hr/6mts, 150hr, Annual and Star checks. These must be completed and certified using your BGA Authorisation number or PPL number when appropriate. (50hr check).

The LAMS worksheets should be in the back of the log book folder and may be copied. The BGA has A4 copies in the bookshop. The worksheets must be kept with the aircraft records.

2/ BGA form 267 is not for motor gliders and 267M is superseded by the LAMS.

3/ BGA 267FT is for motor glider flight-tests and must be completed fully. Enter N/A in non-applicable sections. The pilot must sign it and enter his/her PPL number.

4/ Please **do not** send LAMS worksheets to the BGA, please keep with the aircraft records.

5/ All maintenance checks must be entered in the Logbook.

6/ Defects must be recorded using a defect worksheet or entered directly in the Logbook. Significant defects recorded on worksheets should also be entered briefly in the logbook. Please don't forget: all entries in logbooks or on worksheets must be certified.

## DH SUPPORT

If you operate a Chipmunk Tug this will be of interest to you.

A new company called DE HAVILLAND SUPPORT Ltd has been set up to provide product support for DH aircraft.

DH Support is now the Type Design organisation for a large number of DH aircraft including the Chipmunk.

You can contact them at;  
Duxford Airfield,  
Cambridgeshire, CB2 4QR  
Tel: 01223 830090  
Fax: 01223 830085  
E-mail:  
[info@dhsupport.com](mailto:info@dhsupport.com)  
Website:  
[www.dhsupport.com](http://www.dhsupport.com)

### Light up your Aircraft

(Extract from GASIL 3 of 2001)

'A recent airprox report was submitted by the pilot of a glider tug who had to take avoiding action on a military Tucano aircraft. In the report the tug pilot mentioned that he was able to see the other aircraft in time to avoid it because the Tucano was showing its landing lights, which attracted his attention early enough for avoiding action to be successful.'

This report highlights the dangers of either poor visibility or conversely very good visibility but with the sun in your eyes at the end of a long day tugging. Gliding sites tend to be busy places so the risk is somewhat greater. Please, if you have landing or anti collision lights fitted please ensure they are serviceable. Don't wait until winter to fix them in the belief that they are only needed in poor light conditions.

Grass boxes are not just fitted to mowers

I know almost everyone knows this but for those who don't or have forgotten and I need an article to fill the last space!!!

Now the sun is shining the grass on the airfield is making good use of that last damp patch (November to April if I remember correctly) and is growing like crazy.

This means more cutting. So the wheel box on your glider will collect every bit of grass it can. Unfortunately this can have some undesirable effects, stopping the wheel rotating freely, clogging up the brakes or providing very good tinder for starting a fire from a hot brake (if it worked!). And, if it survives the aforementioned will make a good sponge to assist with corrosion next time it rains (August probably).

Engine air intakes have a similar attraction to grass but also collect flies, bugs etc. this could effect the engine performance.

So. The message is, keep them clean.

Have a good summer.  
Jim Hammerton  
CTO.

British Gliding Association  
Kimberley House, Vaughan Way, Leicester. LE1 4SE

To BGA Inspectors.

#### REVISED BGA EXPOSITION

The latest draft of the BGA airworthiness Exposition (2001) is being circulated on limited distribution (for reasons of economy) to club Technical Officers and to the professional repair organisations. The existing procedures have been in place for several years and have resulted in an acceptable level of airworthiness being maintained for all classes of aircraft (both with and without engines) for which the BGA has a responsibility. As with any organisation, there is always room for improvement, but the accident and incident rate due to technical causes is smaller than for other comparable airport activities. It might therefore be asked why any changes are needed.

The reasons for a revision of the Exposition arise primarily because we have to satisfy the CAA that we are a competent organisation too look after the powered aircraft for which we hold delegated approval. There have been difficulties in the last 2 years because the BGA Chief Technical Officer, who is a CAA Licensed Engineer, is the person who recommends C of A renewal for all our G registered aircraft operated under the BGA M3 approval. The sheer number of aircraft involved and their geographical distribution meant that CTO could not assure himself personally as to the condition of each one before making C of A renewal recommendations to the CAA. The CAA was not satisfied with this. Also, as the recommendations for C of A renewal were being forwarded to CTO by appropriately rated BGA inspectors rather than CAA licensed engineers, the CAA required assurance that the qualifications for becoming such an inspector were acceptable to them. Up until the end of last year, there was also a real threat that, partly because of the perceived deficiencies in our system, the CAA would demand that self sustaining sailplanes become G -XXXX registered aircraft, with all the implications for licensing and medical standards that would be entailed.

There are of course those who believe that the 8% of motorised aircraft in the movement should not wag the tail of the 92% of unpowered aircraft. We are after all the BGA. However given the growing trend for more self launchers and self sustainers to come on the market, together with the established usefulness of motor gliders for training, then it seemed necessary to maintain the maximum degree of "self government" with respect to this important minority, for the future good of the movement.

Therefore, in order to preserve the flexibility that we have become used to in maintaining our powered aircraft, it was necessary to reach a new agreement

with the CAA that would satisfy them, while accommodating our present "custom and practice" as far as possible.

The draft Exposition represents the outcome of a lot of hard work and debate by various members of the Technical Committee and the CTO. Two days in April were devoted to a line by line review in a meeting with three CAA representatives. It is believed that we have achieved an outcome that preserves, in practice, most of our existing freedoms, albeit within a more structured framework. However before final approval it was felt sensible to expose the proposals for wider comment within the BGA's technical ranks. Jim Hammerton has summarised the major points of the exposition, included with the news letter, but please take the time to locate the copy sent to your club Technical Officer and feel free to pass comments. These should be in writing (or e-mail) to the CTO at the BGA by the 31st July. We cannot guarantee to action each and every individual comment, but will certainly take note of any major reservations and if there emerges a strong consensus that some particular aspect needs to be re-addressed, then this will be done.

John Bradley  
Chairman BGA Technical Committee

E-mail address [cto@gliding.co.uk]

## British Gliding Association

### BGA Airworthiness Exposition Summary

Further to notice of proposed changes published in Engineering News, March 2001.

#### Summary of Changes:

The existing special M3 approval remains in place, although there are significant changes to the way it is implemented. The M3 approval only allows the BGA to recommend renewal of the C of A to the CAA.

The CAA identified that in order for the BGA to continue to operate as an approved company and appoint authorised personnel to certify maintenance on G registered aircraft, (Motor Gliders, Self Launching Sailplanes and Tugs) it was necessary to regularise our position by seeking CAA B1 approval in addition to the M3.

The inspector approval system has been revised to meet criticism that the requirements needed to become an inspector were insufficiently defined. A sub committee was set up and decided that the following categories were appropriate. (It is emphasised that there is no intention of trying to put people off becoming inspectors. The movement needs volunteers with suitable backgrounds to come forward so please encourage likely candidates to do so.)

- Glider Inspector. Entry level for the inspection and certification of Glider, SSS, SLMG and TMG airframes, minor repairs and C of A renewal recommendations (BGA C of A).
- Wooden Airframe Repair Authorisation, Metal Airframe Repair Authorisation and Composite Airframe Repair Authorisation. These repair ratings include all repair work up the level of a Senior inspector that do not involve jiggging, alignment or spars.
- Self Sustainer Sailplane Engine Authorisation. For the certification of SSS engines and systems.
- Motor Glider Maintenance Authorisation. For the certification of motor gliders including engines and systems. Also includes SSS engines.
- Tug Maintenance Authorisation. For the certification of maintenance of BGA registered tugs.
- Chief Engineer. C of A renewal recommendation of BGA registered aircraft with CAA C of A. Authorisation of Fitness for Flight certificates under "A" conditions.
- Senior inspector. For the certification major repairs to any of the above categories of Airframe in line with authorisations held.
- Engine Overhaul. For the certification of engine overhaul for engines installed in SSS, SLMG and TMG.

Although the Glider Inspector authorisation is more restrictive than the existing categories, it gives an entry level qualification for inspectors who do not have the repair experience required under the old system. However the repair, SSS & Motor Glider ratings will allow the same freedom as currently enjoyed by ordinary and senior inspectors. The revised Tug rating and new Engine overhaul will give the BGA more scope.

The privileges and limitations of Authorisation have been identified. A revised syllabus, taking into account the new categories and modern requirements has been introduced.

Flow charts have been drawn up to assist candidates with the authorisation process and to identify the steps and exemptions.

Existing inspectors will have protected rights as far as transfer of authorisations, qualified by past experience (Grandfather rights).

To comply with the CAA requirement for currency, the renewal of the maintenance authorisation will include a self-certification statement for ensuring an inspector is current with the latest regulations.

The Exposition is divided into a forward and four sections;

- Forward – detailing the document administration and a statement from the BGA Chairman.
- Part One – General and Organisation of the BGA. Identifying key personnel and facilities. A glossary of terms is included.
- Part Two – BGA Authorisation of Personnel. This is largely as described above.
- Part Three – BGA Airworthiness control of Tugs, Powered Sailplanes and Motor Gliders. Detailing the procedures in place for the control of airworthiness of aircraft with a CAA C of A.
- Part Four – BGA Airworthiness control of Sailplanes and Self Sustaining Sailplanes. Details the procedures for control of aircraft with a BGA C of A.

Changes to the BGA M3 approval, for the renewal of "G" reg. C of A's, from end of May 2001 the BGA will adopt a new revised procedure in line with the rest of the General Aviation community, tailored to the BGA system. Also from the same time the BGA will not process any new applications for issue of CAA C of A. All requests will be routed through the local CAA area office (details in Airworthiness Notice No 29).

The CAA has decided that they require "first sight" of all "new" aircraft on the British register. The BGA tended to just act as middleman in this process and owners and the CAA working direct should speed thing up, especially if queries are involved.

Motor Glider and Tug C of A renewal recommendations must come from a BGA Chief Engineer (TPM 3.2.1.) who, in the case of motor gliders, need not be licensed, located at a BGA M3 workshop. It has always been a requirement that aircraft operating on the LAMS schedule have their Star check (3 yrs.) carried out at an approved M3 facility (BCAR A8-15).

There will be a 2 year transition period to enable the BGA to fully implement the appointment of a Chief Engineer and formally approve Motor Glider M3 workshops. Guidelines for such approval will be issued as soon as possible to assist clubs in setting up the required facilities.

BGA Technical Committee  
June 2001.

## British Gliding Association – Technical Committee

### Technical News Sheet 05/06/01

#### Part 1      Airworthiness issues (all categories)

- 1.1    **All Glider Types**                      BGA 019/06/2001 issue 1 (Recommended)  
 Seat Trim obstructing exit from glider – inspection  
 Details enclosed
- 1.2    **Centrair 101**                              SB 101-22                              (Mandatory)  
 Aileron hinge pin inspection (English translation not available at this time)  
 + List of Service Bulletins  
 Details enclosed
- 1.3    **Centrair 201 Marianne** SB 201-19                              (Mandatory)  
 Aileron hinge pin inspection (English translation not available at this time)  
 + List of Service Bulletins  
 Details enclosed
- 1.4    **Centrair ASW20F/ FL**    SB 20-21                              (Mandatory)  
 Aileron hinge pin inspection (English translation not available at this time)  
 + List of Service Bulletins  
 Details enclosed
- 1.5    **Centrair Aircraft**                          March 2001  
 Flight and Maintenance Manual Revision Status list for Marianne 201B,  
 SNC34C, Pegase and ASW20F  
 Details enclosed
- 1.6    **MDM FOX**                                    BGA 017/04/2001 issue 2 (Mandatory)  
 Air Brake system – failure of bevel drive gears.  
 Update on applicability and instructions. (MDM FOX uses components  
 supplied from SZD for the airbrake system)  
 Details enclosed.
- 1.7    **Pilatus B4**                                    BGA 018/05/2001 issue 2 (Recommended)  
 Tailplane Mounting – Maintenance advice following heavy landing, ground  
 loop or severe turbulence. Issue 2 supersedes issue 1.  
 Details enclosed
- 1.8    **PZL PW5**                                      SB BI-17-00-12                              (Optional)  
 Installation of ballast weights. SB 5/PW-5/97 is cancelled.  
 Details enclosed
- 1.9    **Scheibe SF36 A/R**                          SB 919-5                                      (Optional)  
 Increase of take off weight  
 + List of AD's and SB's.  
 Details enclosed

- 1.10 **Schleicher ASK 21** TN 15 (Optional)  
 New canopy locking system – interlocks. TN 15 issued May 1984.  
 Clarification of "Mandatory" status in annual compendium.  
 This modification is **optional**, but the BGA Technical Committee considers it highly recommended.
- 1.11 **SZD Aircraft** New contact  
 For SZD 51-1 Junior, 50-3 Puchacz, 48 Jantar and SZD 55-1.  
 Contact:  
 ALLSTAR PZL GLIDER, 0048 33 8153307. E-mail [wkkpapiorek@pro.onet.pl].
- 1.12 **SZD 48 Jantar** BGA 017/04/2001 issue 2 (Mandatory)  
 Air Brake system – failure of bevel drive gears.  
 Update on applicability and instructions.  
 Details enclosed.
- 1.13 **SZD 55-1** BGA 017/04/2001 issue 2 (Mandatory)  
 Air Brake system – failure of bevel drive gears.  
 Update on applicability and instructions.  
 Details enclosed.
- 1.14 **Rotax 912A, F & S** SB 912-028  
 SB 912-028UL AC AD 105 (Mandatory)  
 Engine mount ring crack inspection  
 Details enclosed
- 1.15 **Rotax 912A, F** SB 912-029  
 SB 912-029UL AC AD 107 (Mandatory)  
 Exhaust crack inspection  
 Details enclosed
- 1.16 **Rotax 912A, F & S** SB 912-022 AC AD 108 (Mandatory)  
 Replacement valve spring retainers  
 Details enclosed (For SB contact SKYDRIVE)
- 1.17 **Rotax 914F** SB 914-017  
 SB 914-017UL AC AD 106 (Mandatory)  
 Exhaust crack inspection  
 Details enclosed
- 1.18 **Rotax 914F** SB 914-018  
 SB 914-018UL AC AD 107 (Mandatory)  
 Exhaust crack inspection  
 Details enclosed
- 1.19 **Rotax 914F** SB 914-016  
 SB 914-016UL AC AD 105 (Mandatory)  
 Engine mount ring crack inspection  
 Details enclosed



- 1.20 **Rotax 914 F** SB 914-011 AC AD 108 (Mandatory)  
Replacement valve spring retainers  
Details enclosed (For SB contact SKYDRIVE)
- 1.21 **Rotax Engines** Reported by John McWilliam  
Pulse air supply tube from crankcase to fuel pump restricted by incorrect positioning of hose clamp. This may be applicable to other engine types or applications.  
Details enclosed.
- 1.22 **Rotax Engines** Reported by John McWilliam  
BOSCH spark plug cap shorting internally. The plastic trumpet is susceptible to fracturing inside the metal cap assy. This will not be evident externally but will cause an HT leak to ground. Please be careful not to apply any side load to the trumpet and if suspect, use an HT tester from conductor wire to metal cap.
- 1.23 **Trelleborg Hydro K Hose** Skydrive Safety Bulletin 010501  
Faulty hose batch with code 25 99.  
Details enclosed
- 1.24 **Stainless Steel Control Cables**  
The technical committee advises that although the Piper Service Bulletin 1048 offers a method of extending the otherwise poor service life of SS cables it is not applicable to gliders. The Technical Committee does not advocate the use of SS cables on gliders. Galvanised control cables (Normal cables) do not require any lubrication unless specifically specified in the maintenance manual.  
An easy test to ascertain if you have SS or galvanised cables is to use a magnet. A magnet will attach to galvanised cables and not normally to SS cables.

## Part 2 Modifications

	Type:	Subject:	Mod No:	Contact:
2.1	Puchacz	Elevator retaining ring	BGA 2001/09	BGA
2.2	DART	O/S main pins	BGA 2001/17	Severn Valley SP
2.3	Skylark 4	C of G hook	BGA 2001/18	BGA
2.4	Pirat	Total energy probe	BGA 2001/19	BGA
2.5	Jantar	Wing inspection access	BGA 2001/20	North Yorks. SP
2.6	ASW22	Increase of AUW to 747kg	BGA 2001/21	BGA
2.7	ASK6	O/S drag pins	BGA 2001/22	Severn Valley SP

## Part 3 General Matters

- 3.1 Motor Glider C of A renewals  
Please see section in "Engineering News"  
From 1<sup>st</sup> July 2001 only the "New" system can be used for C of A renewals on G registered aircraft.

- 3.2 BGA aircraft C of A renewal certification.  
Contrary to various letters in circulation, some not from the BGA. The Technical Committee has decided that all C of A renewal certifications must be made by a **current BGA inspector**.
- 3.3 BGA Inspections.  
All new BGA generated inspections will have a new line added to the footnote. "Alternative methods of compliance will be considered providing an equal level of safety is accomplished". It is possible that you may know a better way of carrying out an inspection, if so please contact the CTO.
- 3.4 Airworthiness abbreviations.  
It was requested that some of the abbreviations commonly used should be explained for the benefit on some of the newer inspectors.  
Please see attached sheet.

Compliance Statement:

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

Airworthiness Notices, Contents issue 128

Mandatory Aircraft Modifications & Inspections Summary, issue 248

FAA Summary of Airworthiness Directives. Bi-weekly listing 2001-12

Foreign Airworthiness Directives Vol. I and II – CAA Additional Airworthiness Directives, issue 322

Foreign Airworthiness Directives, issue 332

CAA Mandatory Permit Directives, issue 01/1

Jim Hammerton  
Chief Technical Officer



# British Gliding Association Aircraft Inspection

Number: 019/06/2001	Issue: 1
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Date: 22<sup>nd</sup> June 2001

Recommended

- 05/06/01 1-1
- Subject:            Seat trim obstructing exit from glider
- Applicability:     ALL (problem reported on Duo Discus but is applicable to all gliders with seat back edge trim)
- Accomplishment:  At C of A, annual inspection.
- Reason:            There is a possibility of the seat trim becoming partially detached from the top of the seat back and catching on the pilots parachute while exiting the aircraft. This may impede an emergency exit or possibly deploy the parachute in the aircraft.
- Instructions:      Inspect the seat edging trim if fitted. Replace or reattach if loose. If a replacement trim is not available, remove it to avoid any catching. Consideration must be given to alternative seat back edge protection while the trim is removed. The seat back is probably made from GRP and can have glass splinters.
- Approved By  
Jim Hammerton, Chief Technical Officer

Issued by - The British Gliding Association Ltd, Kimberley House, Vaughan Way, Leicester, LE1 4SE, U.K.

Note: Mandatory inspections must be recorded in the aircraft log book, unless specified, and certified by an appropriately rated BGA inspector. Optional inspections should be entered into the D.I. book or log book as appropriate. Optional inspections may be certified by a BGA Pilot. Alternative methods of compliance will be considered providing an equal level of safety is accomplished. Contact BGA for authorisation.

05/06/01 1.2



# BULLETIN DE SERVICE

N° 101-22

Société Nouvelle Centrair

PLANEURS CENTRAIR 101  
Tous types

Page 1/1

**OBJET :** VERIFICATION AXES DE CHARNIERE GOUVERNE DE PROFONDEUR ET AILERONS

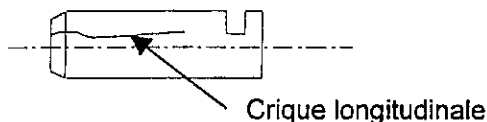
**VALIDITÉ :** Planeurs Pégase tous types, numéros de série entre 101A600 et 101A637 inclus ainsi que tout planeur ayant eu un remplacement d'axes avec des axes livrés par SN CENTRAIR entre le 20/02/1995 et le 28/02/2001.

**BUT :** Vérifier l'apparition de criques

**APPLICATION :** Sous 3 mois après la date d'émission de ce bulletin de service et à chaque GV si les axes ne sont pas remplacés suite à ce Bulletin de Service

**DESCRIPTION :**

Suite à un problème de traitement thermique, un lot d'axes de charnières d'aileron et de profondeur fabriqués début 1995 présente un risque d'apparition de criques. Ces criques sont des criques longitudinales suivant croquis ci-après.



Il est demandé de contrôler ces axes (contrôle visuel + ressuage, Ardrex 996P2+9D1 par exemple). Pour ce faire, il est nécessaire de démonter les ailerons et gouverne de profondeur.

Nous recommandons par ailleurs de remplacer ces axes par des axes neufs (réf. SY991A) évitant ainsi de faire un contrôle par ressuage, pas toujours aisé, et de renouveler ce contrôle à chaque GV.

En cas de constatation de crique, prendre contact avec S.N. CENTRAIR pour l'informer du défaut constaté. Un remplacement des axes concernés est alors impératif.

Société Nouvelle CENTRAIR

Aérodrome - 36300 LE BLANC  
FRANCE

Tél : 02.54.37.07.96 - Fax : 02.54.37.48.64

Approbation

13/03/2001



Classification

- Impératif
- Recommandé
- Pour information

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CENT63-1b



**Société Nouvelle Centrair**  
**LISTE DES BULLETINS DE SERVICE**  
**PLANEUR CENTRAIR 101**

03/2001

NUMERO	TITRE	DATE	CLASSIFICATION
101-01	Dispositif de protection contre les obstacles	18/07/1983	Facultatif
101-02	Prematurely exported gliders (US)	18/07/1983	Facultatif
101-03	Montage des ailes	03/10/1983	Facultatif
101-04 Rév. 1	Articulation supérieure gouverne de direction	16/11/1984	Impératif
101-05	Commande largage câble remorquage	19/12/1984	Impératif
101-06	Cadres renforts fuselage(état et collage)	08/02/1985	Impératif
101-07	Equilibrage ailerons	03/11/1986	Impératif
101-08	Timonerie (fixation guignols)	03/11/1986	Impératif
101-09	Mise en conformité 101D/CDN	18/02/1987	Impératif
101-10	Transformation CDN 101B et 101BC	21/05/1987	Impératif
101-11	Contrôle des pédales de palonnier	19/03/1991	Impératif
101-12	Couleur poignée d'aérofreins	09/04/1991	Impératif
101-13	Inspection emplanture longeron voilure (modification manuel d'entretien)	24/05/1991	Recommandé
101-14	Lest fixe en pied de dérive	28/01/1992	Pour info.
101-15	Modification gaine de frein (train rentrant avec frein en bout d'aérofrein)	15/04/1992	Recommandé
101-16 Rév. 4	Contrôle de la commande d'aérofreins dans fuselage	15/12/1999	Impératif
101-17 Rév. 1	Réduction de la Vra, Va, Vt	01/04/1994	Impératif
101-18 Rév. 1	Inspection embouts et rotules LHOTELLIER	18/11/1997	Impératif
101-19 Rév. 1	Fixation témoin de décharge de batterie	20/05/1997	Impératif
101-20	Ferrure de fixation avant fourche de train fixe	13/09/1999	Impératif
101-21	-		
101-22	Vérification axes de charnière gouverne de profondeur et ailerons SNCA	13/03/2001	Impératif



# BULLETIN DE SERVICE

N° 201-19

Société Nouvelle Centrair

PLANEURS CENTRAIR 201  
Tous types

Page 1/1

**OBJET :** VERIFICATION AXES DE CHARNIERE D'AILERONS

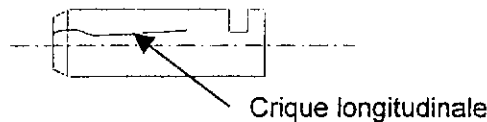
**VALIDITÉ :** Planeurs "Marianne" tous types, numéros de série entre 201B102 et 201B107 inclus ainsi que tout planeur ayant eu un remplacement d'axes avec des axes livrés par SN CENTRAIR entre le 20/02/1995 et le 28/02/2001.

**BUT :** Vérifier l'apparition de criques

**APPLICATION :** Sous 3 mois après la date d'émission de ce bulletin de service et à chaque GV si les axes ne sont pas remplacés suite à ce Bulletin de Service

**DESCRIPTION :**

Suite à un problème de traitement thermique, un lot d'axes de charnières d'aileron et de profondeur fabriqués début 1995 présente un risque d'apparition de criques. Ces criques sont des criques longitudinales suivant croquis ci-après.



Il est demandé de contrôler ces axes (contrôle visuel + ressuage, Ardrex 996P2+9D1 par exemple). Pour ce faire, il est nécessaire de démonter les ailerons.

Nous recommandons par ailleurs de remplacer ces axes par des axes neufs (réf. SY991A) évitant ainsi de faire un contrôle par ressuage, pas toujours aisé, et de renouveler ce contrôle à chaque GV.

En cas de constatation de crique, prendre contact avec S.N. CENTRAIR pour l'informer du défaut constaté. Un remplacement des axes concernés est alors impératif.



Société Nouvelle CENTRAIR

Aérodrome - 36300 LE BLANC  
FRANCE

Tél : 02.54.37.07.96 - Fax : 02.54.37.48.64

**Approbation**

13/03/2001

**Classification**

- Impératif
- Recommandé
- Pour information



03/2001

**Société Nouvelle Centrair**  
**LISTE DES BULLETINS DE SERVICE**  
**PLANEUR CENTRAIR 201**

NUMERO	TITRE	DATE	CLASSIFICATION
201-01	Planeurs MARIANNE N° 201003 à 201025 inclus sous laissez-passer	21/05/1987	Recommandé
201-02	Augmentation masse maximale	21/05/1987	Recommandé
201-03	Autorisation de treuillage	23/10/1987	Recommandé
201-04	Transformation planeurs MARIANNE 201A exportés en planeurs 201B	12/01/1988	Recommandé
201-05	Vérification commande de largage de secours verrières avant et arrière	24/03/1988	Impératif
201-06	Empennage et dérive	13/07/1988	Recommandé
201-07	Contrôle poignée d'aérofreins arrière	19/12/1989	Impératif
201-08	Contrôle des pédales de palonnier	19/03/1991	Impératif
201-09	Couleur poignées d'aérofreins	09/04/1991	Impératif
201-10	Modification manuel d'entretien	24/05/1991	Recommandé
201-11	Fixation des masses d'équilibrage sur ailerons	26/02/1992	Impératif
201-12 Rév. 2	Limite de vie	18/11/1997	Impératif
201-13	Bielle verticale de commande profondeur dans dérive	12/04/1995	Impératif
201-14	Câble de liaison leviers de largage crochet	21/12/1995	Recommandé
201-15 Rév. 1	Inspection embouts et rotules LHOTELLIER	18/11/1997	Impératif
201-16 Rév. 1	Modification système de largage sangle de maintien verrière arrière	15/12/1999	Impératif
201-17	-		
201-18	-		
201-19	Vérification axes de charnière d'ailerons	13/03/2001	Impératif

SNCA

CONSTRUCTION AÉRONAUTIQUE - B.P. 44 - AÉRODROME - 36300 LE BLANC FRANCE  
 TÉL. 02.54.37.07.96 - 02.54.37.06.91 - TÉLÉCOPIEUR 02.54.37.48.64 - E-MAIL : SNCENTRAIR@aol.com

S.N. CENTRAIR - S.A. AU CAPITAL DE 5 250 000 F - R.C.S. CHATEAUXROUX B 344 393 244 - SIRET 344 393 244 00019



# BULLETIN DE SERVICE

N° 20-21

Société Nouvelle Centrair

PLANEURS CENTRAIR "ASW20F"  
et "ASW20FL"

Page 1/1

**OBJET :** VERIFICATION AXES DE CHARNIERE GOUVERNE DE PROFONDEUR, VOILETS ET AILERONS

**VALIDITE :** Planeurs "ASW20F" et "ASW20FL" ayant eu un remplacement d'axes de charnière avec des axes livrés par SN CENTRAIR entre le 20/02/1995 et le 28/02/2001.

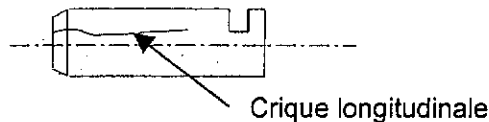
**BUT :** Vérifier l'apparition de criques

**APPLICATION :** Sous 3 mois après la date d'émission de ce bulletin de service et à chaque GV si les axes ne sont pas remplacés suite à ce Bulletin de Service

**DESCRIPTION :**

Suite à un problème de traitement thermique, un lot d'axes de charnières d'aileron, de volets et de profondeur fabriqués début 1995 présente un risque d'apparition de criques.

Ces criques sont des criques longitudinales suivant croquis ci-après.



Il est demandé de contrôler ces axes (contrôle visuel + ressuage, Ardrex 996P2+9D1 par exemple). Pour ce faire, il est nécessaire de démonter les ailerons, volets et gouverne de profondeur.

Nous recommandons par ailleurs de remplacer ces axes par des axes neufs (réf. SY991A) évitant ainsi de faire un contrôle par ressuage, pas toujours aisé, et de renouveler ce contrôle à chaque GV.

En cas de constatation de crique, prendre contact avec S.N. CENTRAIR pour l'informer du défaut constaté. Un remplacement des axes concernés est alors impératif.

Société Nouvelle CENTRAIR

Aérodrome - 36300 LE BLANC  
FRANCE

Tél : 02.54.37.07.96 - Fax : 02.54.37.48.64

**Approbation**

13/03/2001



**Classification**

- Impératif
- Recommandé
- Pour information

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CENT63-1b





05/06/01 . 1.4

03/2001

**Société Nouvelle Centrair**  
**LISTE DES BULLETINS DE SERVICE**  
**PLANEUR CENTRAIR ASW20F**

NUMERO	TITRE	DATE	CLASSIFICATION
20-01	Collage des bagues de longerons d'ailes		
20-02	Water-ballasts		Recommandé
20-03	-		
20-06 Rév. 2	Inspection de la masse et du moment d'équilibrage des ailerons	14/02/1985	Impératif
20-07	Largage verrière	21/09/1982	Recommandé
20-08	Commande de largage du câble de remorquage	19/12/1984	Impératif
20-09	Vérification du collage et de l'état des cadres du fuselage	08/02/1985	Impératif
20-10	Modification manuel d'entretien	03/11/1986	Impératif
20-11	Vibration d'aileron	11/09/1987	Impératif
20-12 Rév. 1	Mesure préventive contre les oscillations de tangage provoquées	13/10/1988	Impératif
20-13	Contrôle des pédales de palonnier	19/03/1991	Impératif
20-14	Couleur poignée d'aérofreins	09/04/1991	Impératif
20-15	Modification manuel d'entretien : Précision sur le programme d'inspection des emplantures de longeron	24/05/1991	Recommandé
20-16 Rév. 1	Utilisation des rallonges d'ailes	20/04/1993	Impératif
20-17	Réduction de la vitesse maximale en air agité	25/11/1992	Impératif
20-18 Rév. 4	Contrôle de la commande d'aérofreins dans le fuselage	22/02/1999	Impératif
20-19 Rév.1	Inspection des embouts et rotules L'HOTELLIER	18/11/1997	Impératif
20-20	-		
20-21	Vérification axes de charnière gouverne de profondeur, volets et ailerons	13/03/2001	Impératif

SNCA



Société Nouvelle Centrair

Mars 2001

## LISTE DES MANUELS A JOUR

### **Planeur MARIANNE 201B**

Manuel de vol, édition 1, révision 5  
Manuel d'entretien, édition 2, révision 10

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### **Planeur SNC34C**

Manuel de vol, édition 1, révision 2  
Manuel d'entretien, édition 1 révision 1

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### **Planeur PEGASE**

Manuel de vol, édition 3, révision 4  
Manuel d'entretien, édition 2, révision 8

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### **Planeur ASW20F**

Manuel de vol, édition 5, révision 1  
Manuel d'entretien, édition 1, révision 6

SNCA

05/06/01



# British Gliding Association Aircraft Inspection

Recommended

Number: 018/05/2001	Issue: 2
------------------------	-------------

Date: 22<sup>nd</sup> June 2001

Subject: Tailplane Mounting

Applicability: Pilatus B4

Accomplishment: Following heavy landing, ground loop or severe turbulence

Reason: Structural failure of tailplane location and retention mounting plate and damage to fin internal structure.

Instructions: Remove tailplane and invert. Closely inspect the long mounting plate for signs of cracking or bending. Pay special attention to the midway point of the 8" location plate. If any damage is found the only repair allowed is by replacement. Inspect the upper fin "V" frame external rivets for pulling. Inspect the lower fin to fuselage saddle for distortion and pulled rivets. Investigate if any abnormality is found. If saddle is damaged inspect fin attachment internal structure.  
Refit tailplane.

Approved By  
Jim Hammerton, Chief Technical Officer

(Issue 2 supersedes issue 1)

Issued by - The British Gliding Association Ltd, Kimberley House, Vaughan Way, Leicester, LE1 4SE, U.K.

Note: Mandatory inspections must be recorded in the aircraft log book, unless specified, and certified by an appropriately rated BGA inspector. Optional inspections should be entered into the D.I. book or log book as appropriate. Optional inspections may be certified by a BGA Pilot.



PZL ŚWIDNIK S.A.

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Fax: (+48 81) 468 09 19, 751 21 73

GILC Approval/Certificate:  
Statement No. 003 dated 4.09.1993

## ADVISORY BULLETIN No. BI-17-00-12

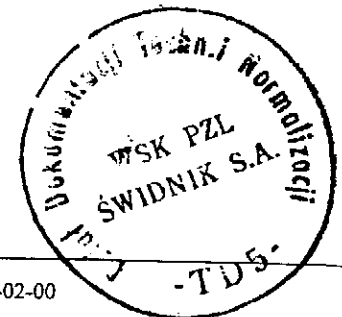
**NAME-TYPE/MODEL:** PW-5 sailplane.

**SERIES/NUMBER:** All sailplanes in operation

**SUBJECT:** Furnishing the sailplanes with a special ballast.

This Bulletin is a true translation of the original Bulletin in the Polish language.

Agnieszka Depa



In relation to the advisory bulletin No. 5/PW-5/97 issued by the Technical University in Warsaw with reference to furnishing the PW-5 sailplane with a special ballast, hereby we notify that the a/m bulletin has been cancelled and its contents is the subject of this bulletin.

### I

Having obtained positive results of ground and flight testing, hereby we advise of the possibility to equip the PW-5 SMYK sailplanes with a special ballast (refer to sketch 1). In relation to the above, as per this bulletin the operational documentation referring to special ballast equipped sailplanes shall be completed with:

1. Supplement to the Flight Manual, doc. No. PW-5/IWLU-4/II/97, "Operation of Special Ballast Equipped Sailplane".
2. Supplement to the Maintenance Manual, doc. No. PW-5/IOTU-1/II/97, "Maintenance of Special Ballast Equipped Sailplane".
3. Limitations placard.

### II

This bulletin advises of the possibility to install the special ballast in sailplanes being in operation.

The work related to preparing a sailplane for installing the ballast:

- 1) Make 8 inspection holes  $\phi 10$  in the pilot seat (refer to sketch 2, item 1).
- 2) Apply the ballast weight marking at each inspection hole in the pilot seat with the red colour enamel (refer to sketch 2, item 2).
- 3) Mark numbers on the ballast chambers on the fuselage bottom with the red colour enamel, correspondingly to the ballast weight numbers (refer to sketch 4).
- 4) Adhesive bond the rings of porous rubber on the pilot seat bottom (refer to sketch 3).
- 5) Adhesive bond the strips of porous rubber on the fuselage bottom in each chamber (refer to sketch 4).
- 6) Adhesive bond the limitations placard on the cockpit fuselage side. The placard contents should be as specified in para 2.4 of Supplement to the Flight Manual, doc. No. PW-5/IWLU-4/II/97 (refer to sketch 5).
- 7) Enclose the Supplements to Flight and Maintenance Manuals.

### III

The work performance:

- 1) The work related to preparing the sailplane for installation of special ballast shall be done by the Manufacturer on the Operator's request.
- 2) The work may be performed by the Operator on his own provided that he complies with the requirements specified in para 8.3 of the Flight Manual.
- 3) As per the order placed by the Operator, the Manufacturer shall supply:
  - ballast weights,
  - Supplement to the Flight Manual, doc. No. PW-5/IWLU-4/II/97,
  - Supplement to the Maintenance Manual, doc. No. PW-5/IOTU-1/II/97,
  - rings and strips of porous rubber to be adhesive bonded in the sailplane,
  - limitations placard.

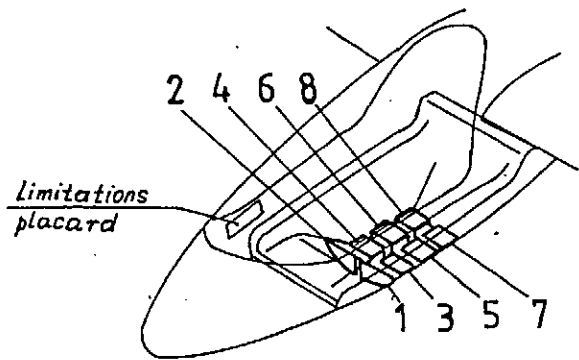
### IV

Recording of the performed work in the operational documentation:

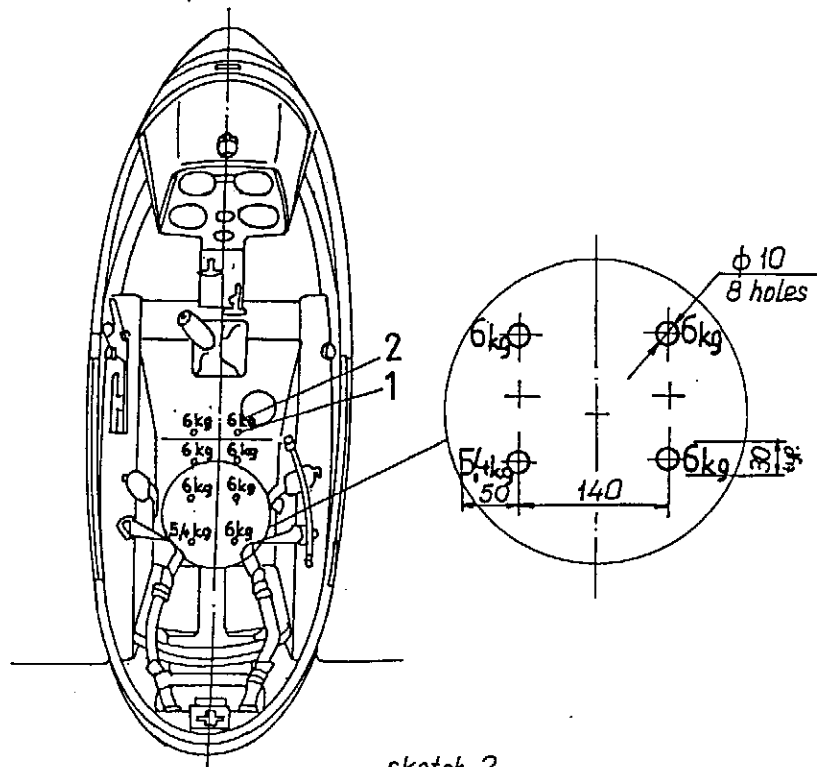
Having equipped the sailplane with the special ballast, make an entry of the bulletin No. BI-17-00-12 performance in the sailplane book, chapter II.

#### Accessory materials:

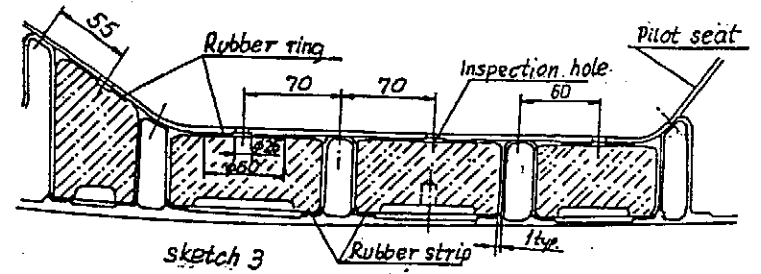
- |   |               |
|---|---------------|
| 1) ballast weights                                  | 1 set         |
| 2) rings of porous rubber $\phi 60 \times 6$        | 8 pcs         |
| 3) strips of porous rubber $1 \times 15 \times 450$ | 8 pcs         |
| 4) EP-140 enamel, red colour                        | approx. 0,1 l |



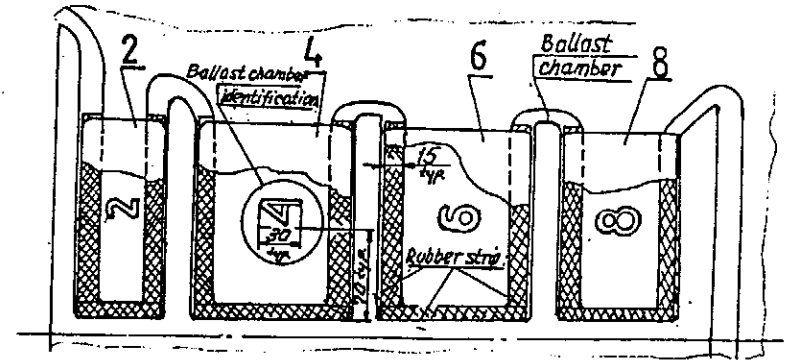
sketch 1



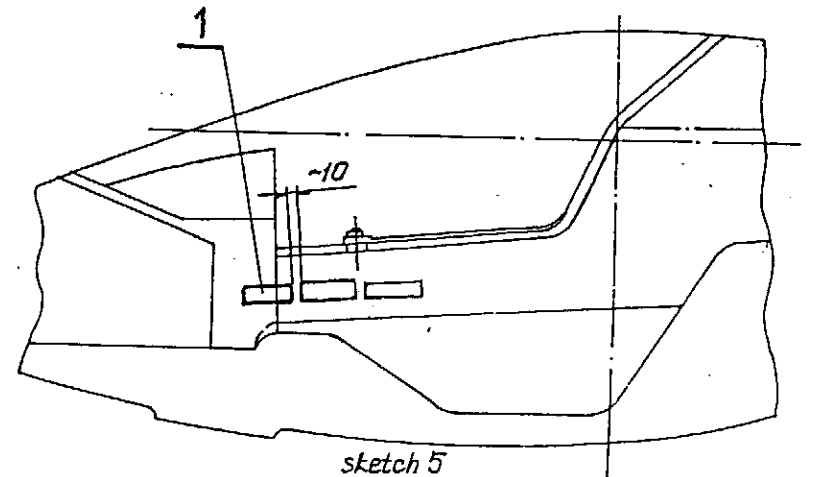
sketch 2



sketch 3



sketch 4



sketch 5

05/06/01 1-9

**Gegenstand:** Erhöhung der maximalen Abflugmasse 725 kg bei Bedarf.

**Betroffen:** Motorsegler der Firma Scheibe Flugzeugbau GmbH  
SF 36 A und SF 36 R, Gerätekenblatt 819.

**Dringlichkeit:** Keine

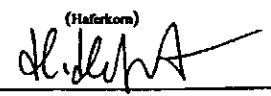
**Vorgang:** Vorgenannte Baureihen A und R des Motorseglers SF 36 sind in ihren Massegrenzen so, daß die höchstzulässige Masse der nichttragenden Teile nicht erreicht wird.  
Um dies zu ändern, soll die bisherige höchstzulässige Masse der nichttragenden Teile von maximal 525 kg ausgenutzt werden können bei gleichzeitiger Erhöhung der höchstzulässigen Abflug- und Landemasse von 715 kg auf maximal 725 kg.

- Maßnahmen:**
- a) Austausch der Flughandbuchseiten
    - II.1, 5.4 (neues Ausg.-Datum 24.04.1998)
    - 1.3, 2.5, 5.3, 5.5, 6.4 (neues Ausg.- Datum 13.06.1997)
    - im FHB- SF 36 R gültige Ausg. 01.07.1994 (mit ROTAX- Motor).
    - Austausch der Flughandbuchseiten
      - II.1, 5.4 (neues Ausg.-Datum 24.04.1998)
      - 1.3, 2.5, 5.3, 5.5, 6.4 (neues Ausg.- Datum 13.06.1997)
      - im FHB- SF 36 A, gültige Ausg. 15.03.1994 (mit SAUER- Motor).
    - Austausch der Flughandbuchseiten
      - II.1, 5.4 (neues Ausg.-Datum 24.04.1998)
      - 1.3, 2.5, 5.3, 5.5, 6.4 (neues Ausg.- Datum 13.06.1997)
      - im FHB- SF 36 A, gültige Ausg. 01.04.1992 (mit LIMBACH- Motor).

b) Änderung des Datenschildes im Cockpit.

**Massen und Schwerpunktlagen:** Sind bei Stückprüfung oder bei Durchführung der Techn. Mitteilung zu ermitteln.

**Hinweise und Anmerkungen:** Diese Änderung ist vom Hersteller oder in einem dafür anerkannten Luftfahrttechnischen Betrieb durchzuführen.  
Ein Eintrag in den Betriebsaufzeichnungen ist vom Prüfer Kl. 3 vorzunehmen.

(Hafertorn)  




**Subject:** Increment of maximum take-off weight up to 725 kg on demand.

**Affected:** Motor gliders from Scheibe Flugzeugbau GmbH  
SF 36 A and SF 36 R, Type certificate data sheet 819

**Urgency:** None

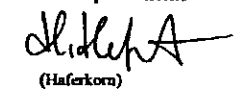
**Reason:** Beforementioned series A and R of the motor glider SF 36 are in their weight limits so that the maximum weight of the non-lifting parts couldn't be reached.  
To change this the take-off- and landing weight will be increased from 715 kg to a maximum of 725 kg together with the uncharged max. weight of the non-lifting parts of 525 kg.

- Actions:**
- a) Changing of pages II.1, 5.4 (new edition 24.04.1998) and 1.3, 2.5, 5.3, 5.5, 6.4 (new edition 13.06.1997) of the flight hand book SF 36 R with Rotax engine, current edition 01.07.1994.
  - Changing of pages II.1, 5.4 (new edition 24.04.1998) and 1.3, 2.5, 5.3, 5.5 6.4 (new edition 13.06.1997) of the flight hand book SF 36 A with Sauer engine, current edition 15.03.1994.
  - Changing of pages II.1, 5.4 (new edition 24.04.1998) and 1.3, 2.5, 5.3, 5.5, 6.4 (new edition 13.06.1997) of the flight hand book SF 36 A with Limbach engine, current edition 01.04.1992.
  - b) Renewal of the data placard in the cockpit.

**Weight and balance:** Has to be checked at manufacturing inspection or at the time of carrying-out the service bulletin.

**Remarks:** This alteration has to be carried out by the manufacturer of the motor glider or an approved service station.  
A logbook entry has to be done by an authorized inspector.

This service bulletin was originally written in German and approved by the German LBA. It is signed by Mr. H. Jung  
The translation has been accomplished to best of our knowledge and judgement. In case of doubt, the German original is authoritative..

(Hafertorn)  




## Übersicht über Lufttüchtigkeitsanweisungen und Technische Mitteilungen

Blatt-Nr.: 3

Muster: <b>SF 36 R</b>		Kennblatt-Nr.: <b>819</b>	Werk-Nr.:	Kennzeichen
LTA-Nr. Ausgabe	TM-Nr. Ausgabe	Gegenstand	Durchführung	Datum Prüfer
97- 140 05.06.1997	653- 67 vom 17.03.1997	Kraftstoffabsperventil TRUMA V8	vor dem nächsten Flug	
97- 171 19.06.1997	ROTAX 912- 18R1 12.03.1997	Kontrolle der Nockenwelle gültig nur für Motore mit S/N 4,380.661 bis 4,380.701	Part I: Vor dem nächsten Flug, dann alle 50 Std. Part II: Spätestens nach 600 Betriebsstunden	
97- 252 11.09.1997	ROTAX 912- 19 30.06.1997	Propellergetriebe für ROTAX- Motore 912 A(3) Maßnahme Part I: Reibmoment der Propellerwelle kontrollieren. Part II: Austausch des Propellergetriebes	betroffene Motorwerknr.: siehe TM Seite 1 Part I: vor dem nächsten Flug Part II: bei nächster 100 <sup>h</sup> Kontrolle	
97- 319 06.11.1997	ROTAX912- 20 September 1997	Kontrolle der Kraftstoffpumpe mit Schraubanschlüssen für Kraftstoffleitungen aus Stahl	a) vor dem nächsten Flug: Kontrolle der Kraftstoffpumpe b) innerhalb der nächsten 25 Betriebsstunden Kraftstoffpumpe erneuern. alle Motore der Werknr. 4,410.122 bis 4,410.180 bzw. alle Kraftstoffpumpen mit den Werknr. 95 0002 bis 97 0100	
97- 140 05.06.1997	819- 4 vom 17.03.1997	Kraftstoffabsperventil TRUMA V8	vor dem nächsten Flug	
--	819- 5 vom 24.04.1998	Erhöhung der max. Abflugmasse auf 725 kg Alle Werknummern	Bei Bedarf	
--	819- 6 21.10.1997	Kraftstoffabsperventil ARGUS, Typ NK, Baureihe 490	bei nächstfälligem Austausch des Brandhahnes entspr. TM 653- 41/2	
97- 319/ 2 26.03.1998	ROTAX 912- 20R1 10. Febr. 1998	Austausch der Kraftstoffpumpe mit Schraubanschlüssen TNr. 996 592 und Stahl- Kraftstoffleitung (Pumpe⇒Klemmstück) an Motoren 912 A: 912 A, S/N 4,410.122 bis einschl. 4,410.252.	1. Inspektion des Kraftstoffsystems, ob eine betroffene Pumpe eingebaut ist. <b>Vor dem nächsten Flug.</b> 2. Inspektion aller betroffenen Kraftstoff- pumpen auf Anzeichen von Undichtigkeiten. <b>Vor dem nächsten Flug.</b> 3. Austausch der Kraftstoffpumpe P/N 996 592 und der Stahl- Kraftstoffleitung P/N 874 282 <b>Vor dem nächsten Flug, wenn</b> Undichtigkeiten festgestellt werden. Werden keine Undichtigkeiten festgestellt, sind die Fristen für den Austausch der genannten TM des Motorenherstellers zu entnehmen..	



## Übersicht über Lufttüchtigkeitsanweisungen und Technische Mitteilungen

Blatt-Nr.: 4

		Kennblatt-Nr.: 819	Werk-Nr.:		
LTA-Nr. Ausgabe	TM-Nr. Ausgabe	Gegenstand	Durchführung	Datum	Prüfer
1999-044 11.02.1999	Allied Signal SB KT76A-7 Juli 1996	Funk-Kennungsgerät KT76A mit S/N 93.000-109.999 (P/N 066-1062-00/10/02) Maßnahme 1: Auswechseln der beiden Resistor-Network-Module RM 401 und RM 402 gegen modifizierte „Mod 7“ Module gemäß SB KT76A-7 Maßnahme 2: Installationsverbot für die betroffenen Funk-Kennungs- geräte KT76A ohne „Mod 7“ Modul-Modifikation	Maßnahme 1: Auswechslung bis spätestens 16.08.1999 Maßnahme 2: Das Installationsverbot gilt für Arbeiten, die ab 11.02.1999 durchgeführt werden.		
1999-315 07.10.1999	---	Alle Luftfahrzeuge, die mit einem oder mehreren an ein TCAS II ange- schlossenes/ angeschlossenen Mode-S-Transponder ausgestattet sind.	Spätestens bis 07.11.1999		
97- 140 05.06.1997	819- 4 vom 17.03.1997	Kraftstoffabsperrventil TRUMA V8	vor dem nächsten Flug		
--	819- 5 vom 24.04.1998	Erhöhung der max. Abflugmasse auf 725 kg Alle Werknummern	Bei Bedarf		
	819 - 8 vom 23.08.2000	Verklebung des V-Spantes	a) innerhalb der nächsten 5 Flugstunden b) vor dem nächsten Kunstflug oder Trudeln		



British Gliding Association  
Aircraft Inspection

05/06/01 1-12

Number: 017/04/2001	Issue: 2
------------------------	-------------

Mandatory

Date: 22<sup>nd</sup> June 2001

- Subject:** Air Brake System – Failure of bevel drive gears.
- Applicability:** SZD-48 Jantar, SZD 55-1 and MDM FOX
- Accomplishment:** Part 1 – Within 10 flight hours and at each annual C of A inspection.  
Part 2 – At each Pre Flight (DI) inspection – optional.
- Reason:** The failure of one of the airbrake mechanism bevel gears will cause asymmetric deployment of the airbrakes, there is a possibility that this may have contributed to a recent accident.
- Instructions:** Part 1.  
1/ De-rig aircraft.  
2/ Locate air brake bevel gears in wing root and ensure they are clean, remove excessive grease as far as possible.  
3/ Using an endoscope or magnifying mirror, strong light or other suitable inspection equipment inspect both bevel gears over entire visible surface and meshed area for cracks, splits, distortion, surface pits or blow holes. Slowly actuate airbrake during inspection. Pay particular attention to the root area of each tooth and the area surrounding the retention ring nut.  
4/ Inspect the face of the meshing teeth for signs of foreign object damage (FOD)  
Note: It has been found that on SZD-48 Jantar and MDM FOX an access hole is required. Some repair schemes have been approved for gaining inspection access. Please contact CTO if details are required.  
To further confirm applicability, if the aircraft has self connecting controls in the form of a stub shaft with a ball machined on the end using and a cross peg to transmit the drive then you almost certainly have these nylon gears installed.

Continued on next page,

Issued by - The British Gliding Association Ltd, Kimberley House, Vaughan Way, Leicester, LE1 4SE, U.K.  
Note: Mandatory inspections must be recorded in the aircraft log book, unless specified, and certified by an appropriately rated BGA inspector. Optional inspections should be entered into the D.I. book or log book as appropriate. Optional inspections may be certified by a BGA Pilot. Alternative methods of compliance will be considered providing an equal level of safety is accomplished. Contact BGA for authorisation.

017/04/2001 issue 2, Page 2

- 5/ If any damage is found or suspected the gears must be removed from the wing and dismantled from the drive shafts for a close inspection prior to further flight.
- 6/ **The aircraft is grounded if defects are present.**  
Please inform the BGA immediately of any defects found as this may have implications for the depth of inspection required on the other aircraft. (Please use BGA 1022 Engineering Occurrence form if possible)
- 7/ Defective gears must be replaced before further flight.
- 8/ Record compliance with this inspection in the Glider log book.

**Part 2 – Optional inspection.**

To be carried out at each pre flight (DI) inspection and may be certified as part of the daily inspection by a qualified pilot.

- 1/ Pay special attention to the operation of the air brake system.  
2/ Check for smooth even operation, lumpiness, stiff spots and excessive over centre lock forces.  
3/ Any abnormality found must be investigated before flight.

Approved By  
Jim Hammerton, Chief Technical Officer

(Issue 2 supersedes Issue 1)

Issued by - The British Gliding Association Ltd, Kimberley House, Vaughan Way, Leicester, LE1 4SE, U.K.  
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# SERVICE BULLETIN

## CHECKING OR REPLACEMENT OF ENGINE SUSPENSION FRAME PART NO. 886 567 ON ROTAX<sub>o</sub> ENGINE TYPE 912 AND 914 (SERIES)

**SB-912-028**

**SB-914-016**

### AIRWORTHINESS DIRECTIVE

No. 105

Inspection for possible cracks on ring engine-mount P/N 886 567 for Rotax 912 A/F/S Series and Rotax 914 F Series engines

1. **Applicability:** Rotax 912 A Series engines  
Rotax 912 F Series engines  
Rotax 912 S Series engines  
Rotax 914 F Series engines
2. **Subject:** Inspection for possible cracks on ring engine-mount P/N 886 567 at the welding points. Engine mounts with other P/N are not affected.
3. **Reason:** On aircraft with Rotax 912/914 engines certain cracks on the ring engine-mount at the welding points were detected.
4. **Action:** A detailed visual inspection of the ring engine-mount P/N 886 567 at the welding points have to be carried out within the compliance time.  
  
The technical informations of Bombardier Rotax Service Bulletin SB-912-028 and Service Bulletin SB-914-016 are herewith part of this AD
5. **Compliance:** a) initial inspection within 10 flight hours, but not later than 01 June 2001, according referenced Bombardier Rotax SB 912-028 respectively SB-914-016  
  
b) every 100 flight hours, inspection according referenced Bombardier Rotax SB 912-028 respectively SB-914-016
6. **Accomplishment:** The required action has to be accomplished by the manufacturer or by a licensed/qualified person. An entry into the aircraft log has to be done.
7. **Effective Date:** 25. April 2001

### MANDATORY

#### Repeating symbols:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

#### 1) Planning information -

##### 1.1) Engines affected

All versions of the engine type:

- 912 A (Series)
- 912 F (Series)
- 912 S (Series)
- 914 F (Series)

if they are equipped with the genuine ROTAX<sub>o</sub> engine suspension frame part no. 886 567. In case of doubt contact your aircraft builder.

##### 1.2) Concurrent ASB/SB/SL and SL

none

##### 1.3) Reason

One or more of the following could result in formation of cracks on the engine suspension frame part no. 886 567:

- Unapproved and untested modifications
- Improper carburetor synchronization
- Unsuitable idle speed (too low)
- Unsuitable engine suspension / non-neutralized vibrations
- Propeller balance out of tolerance
- Friction torque in the backlash range of gearbox not within tolerance
- Lack of maintenance
- Ground contact

Vibrations, impacts, forces etc. could cause cracks on the engine suspension frame part no. 886 567.

▲ **WARNING:** Rectify any of the aforementioned without delay.

##### 1.4) Subject

Checking or replacement of engine suspension frame part no. 886 567.

##### 1.5) Compliance

- Within the next 10 hours of operation, but at the latest by June 1<sup>st</sup> 2001 the checking of the engine suspension frame must be conducted according to the following instructions in section 3.
- Every 100 hours of operation check the engine suspension frame as per the following instructions section 3.

##### 1.6) Approval

The technical content of this Service Bulletin is approved by ACG.

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SB-914-016  
page 1 of 4

- estimated man-hours:  
 engine installed in the aircraft --- manpower time will depend on installation and therefore no estimate is available from the engine manufacturer.

**1.8) Mass data**

- change of weight --- none
- moment of inertia --- unaffected

**1.9) Electrical load data**

no change

**1.10) Software accomplishment summary**

no change

**1.11) References**

In addition to this technical information refer to current issue of  
 - Illustrated Parts Catalog (IPC)  
 - Maintenance Manual (MM)

**1.12) Other publications affected**

none

**1.13) Interchangeability of parts**

At exchange take care of the following:

- If necessary remove the engine suspension frame as per the following instructions and send it to a ROTAX<sub>e</sub> Authorized Distributor or Service Center.

**2) Material Information**

**2.1) Material - cost and availability**

Price and availability will be supplied on request by ROTAX<sub>e</sub> Authorized Distributors or their Service Centers.

**2.2) Company support information**

- Exchanged parts must be returned to an ROTAX<sub>e</sub> Authorized Distributor or Service Center.
- Shipping cost, down time, loss of income, telephone costs etc. or cost of conversion to other engine versions or additional work, as for instance simultaneous engine overhaul is not covered in this scope and will not be borne or reimbursed by ROTAX<sub>e</sub>.

**2.3) Material requirement per engine**

For the replacement of the engine suspension frame the following parts are required:

◆ NOTE: The new parts volume is only necessary if cracks have been detected in the engine suspension frame.

Fig. item no	New part no	Qty per engine	Description	Old part no	application
	886 567	1	engine suspension frame assy.		ROTAX <sub>e</sub> 912 / 914
	941 487	1	Allen screw M10x110		engine suspension frame
	945 753	4	lock washer		engine suspension frame
	840 947	3 / 1	Allen screw M10x35		engine suspension frame 912 / 914
	927 952	NB	thrust washer 10.1/20/0,5		engine suspension frame
	927 953	NB	thrust washer 10.1/20/1,0		engine suspension frame
	640 572	2	Allen screw M10x50		engine suspension frame 914
	927 410	2	washer 10,5		engine suspension frame

**2.4) Material requirement per spare part**

none

**2.5) Rework of parts**

none

**2.6) Special tooling/lubricant/adhesives/sealing compound - Price and availability**

none

**3) Accomplishment / instructions**

**Accomplishment**

All the measures must be taken and confirmed by the following persons or facilities:

- ROTAX<sub>e</sub>-Airworthiness representative
- ROTAX<sub>e</sub>-Distributors or their Service Centers
- Persons approved by the respective Aviation Authority

▲ WARNING: Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation.

- Secure aircraft against unauthorized operation.
- Disconnect negative terminal of aircraft battery.

**3.1) Verification of the engine suspension frame:**

see fig. 1

- Inspect the engine suspension frame assy. in accordance with the relevant Maintenance Manual 914 F. That is also effective ROTAX 912 engines.

◆ NOTE: Scrutinize the welding connections of circular tubing (1) and the struts (2) of the suspension frame. See fig. 1.

- If cracks are detected replace the engine suspension frame in accordance with the relevant Maintenance Manual 914 F. That is also effective ROTAX 912 engines.

◆ NOTE: If absolutely necessary, and if only one of the circular tube or struts are not cracked by more than 50%, a ferry flight is permitted. A complete fracture replacement without delay will be necessary.

- ! Connect negative terminal of aircraft battery.

**3.2) Test run (if maintenance work has been carried out)**

Conduct test run including ignition check and leakage test in accordance with the current Maintenance Manual of the respective engine type.

**3.3) Summary**

These instructions (section 3) have to be conducted in accordance with compliance in section 1.5.

▲ WARNING: Non-compliance with these instructions could result in engine damage, personal injury or death!

Approval of translation to best knowledge and judgement - in any case the original text in German language and the metric units (SI-system) are authoritative.

#### 4) Appendix

The following drawings should convey additional information:

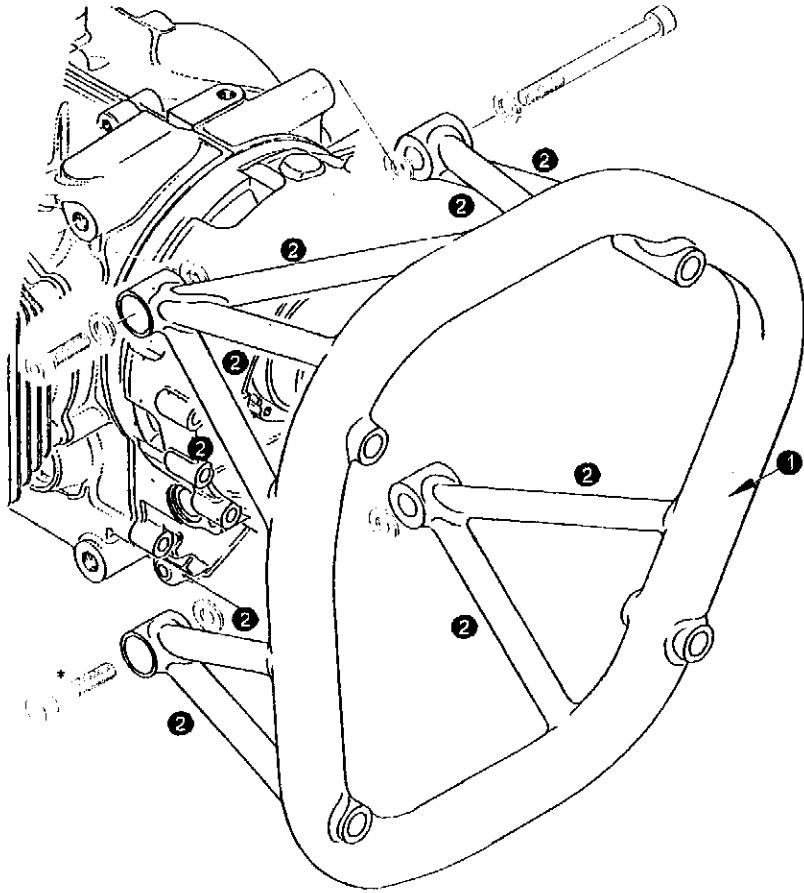


Bild / Fig. 1

◆ NOTE: The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function. Exploded views are no technical drawings and are for reference only. For specific detail, refer to the current documents of the respective engine type.

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Initial Issue

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SB-914-016  
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**ROTAX**  
AIRCRAFT ENGINES

## SERVICE BULLETIN

**CHECKING OR REPLACEMENT OF  
ENGINE SUSPENSION FRAME PART NO. 886 567  
ON ROTAX, ENGINE TYPE 912 AND 914 (SERIES)**

**MANDATORY**

**SB-912-028UL  
SB-914-016UL**

#### Repeating symbols:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.

■ **CAUTION:** Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.

◆ **NOTE:** Information useful for better handling.

#### 1) Planning information

##### 1.1) Engines affected

All versions of the engine type:

- 912UL (Series)
- 912ULS (Series)
- 912ULSFR (Series)
- 914UL (Series)
- V912 pre-production
- V914 pre-production

if they are equipped with the genuine ROTAX, engine suspension frame part no. 886 567. In case of doubt contact your aircraft builder.

For complete instructions and compliance to this service bulletin refer to Service Bulletin SB-912-028 and SB-914-016, latest edition section 1.2 onward.

◆ **NOTE:** Section 1.6) Approval: Is not required for engines of the type UL (series).  
Section 3) Accomplishment: In addition: persons with adequate type-specific training.

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MAY 2001  
Initial Issue

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SB-912-028UL  
SB-914-016UL  
page 1 of 1

# AIRWORTHINESS DIRECTIVE

No. 108

## Replacement of Valve Spring Retainers on Single Valve Spring Configuration of Rotax 912 A/F/S Series and Rotax 914 F Series engines

1. **Applicability:** Rotax 912 A Series engines, S/N 4,410.204 up to and incl. 4,410.421  
 Rotax 912 F Series engines, S/N 4,412.757 up to and incl. 4,412.807, excl. 4,412.795  
 Rotax 912 S Series engines, S/N 4,922.501 up to and incl. 4,922.636, excl. 4,922.535, 4,922.553 and 4,922.578  
 Rotax 914 F Series engines, S/N 4,420.039 up to and incl. 4,420.253, excl. 4,420.049, 4,420.068, 4,420.083, 4,420.098, 4,420.115 and 4,420.156  
  
 and any all engine that have been converted to a single valve spring configuration at engine repair / overhaul according Bombardier Rotax Service Instruction SI-14-1997
2. **Subject:** Replacement of Valve Spring Retainers on Single Valve Spring Configuration
3. **Reason:** During the operation certain cases of a fracture on Valve Spring Retainers were detected.
4. **Action:** Replacement of Valve Spring Retainers on Single Valve Spring Configuration have to be carried out within the compliance time.  
  
 The technical informations of Bombardier Rotax Service Bulletins SB-912-022 and SB-914-011 are herewith part of this AD
5. **Compliance:**
  - a) On new engines, which have not yet been operated, the replacement has to be performed prior to flight operation, but not later than 01. August 2001
  - b) Engines, which have been operated for not more than 10 flight hours, the replacement has to be performed prior to reaching 10 flight hours, but not later than 01. August 2001
  - c) Engines, which have been operated for more than 10 but not more than 25 flight hours, the replacement has to be performed at the 25-hours-inspectionbut not later than 01. August 2001
  - d) Engines, which have had opened the oil system during repair / maintenance, the replacement has to be performed within the next 10 flight hours, but not later than 01. August 2001
  - e) Engines, which have already been operated for more than 25 flight hours (except those affected by action 5.d) the replacement has to be performed at the next 100 hours inspection, but not later than 31. December 2001
6. **Accomplishment:** The required action has to be accomplished by the manufacturer or by a licensed/qualified person. An entry into the aircraft Log has to be done.
7. **Effective Date:** 25. April 2001

# AIRWORTHINESS DIRECTIVE

No. 106

Inspection for possible cracks on exhaust stacks  
(exhaust tubes between cylinder-head and exhaust)  
on Rotax 914 F Series engines

1. **Applicability:** Rotax 914 F Series engines
2. **Subject:** Inspection for possible cracks on exhaust stacks (exhaust tubes between cylinder-head and exhaust)
3. **Reason:** On aircraft with Rotax 914 F engines cracks on the exhaust stacks (exhaust tubes between cylinder-head and exhaust) were detected.
4. **Action:**

A detailed visual inspection on the exhaust stacks (exhaust tubes between cylinder-head and exhaust) have to be carried out within the compliance time.

The technical informations of Bombardier Rotax Service Bulletin SB-914-017 are herewith part of this AD
5. **Compliance:**

a) initial inspection within 50 flight hours, but not later than 01 June 2001, according referenced Bombardier Rotax SB-914-017

b) every 50 flight hours inspection of the exhaust stacks (exhaust tubes between cylinder-head and exhaust) according referenced Bombardier Rotax SB-914-017
6. **Accomplishment:** The required action has to be accomplished by the manufacturer or by a licensed/qualified person. An entry into the aircraft log has to be done.
7. **Effective Date:** 25. April 2001

ROTAX

AIRCRAFT ENGINES

## SERVICE BULLETIN

### CHECKING OR REPLACEMENT OF THE EXHAUST BEND

ON ROTAX ENGINE TYPE 914 (SERIES)

SB-914-017

#### MANDATORY

##### Repeating symbols:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

##### 1) Planning information

###### 1.1) Engines affected

All versions of the engine type:

- 914F (Series)

if they are equipped with the genuine ROTAX<sub>®</sub> exhaust bends. In case of doubt contact your aircraft builder.

###### 1.2) Concurrent ASB/SB/SI and SL

none

###### 1.3) Reason

One or more of the following could result in formation of cracks on the exhaust bends:

- Unapproved and untested modifications
- Improper carburetor synchronization
- Unsuitable idle speed (too low)
- Unsuitable engine suspension / non-neutralized vibrations
- Propeller balance out of tolerance
- Friction torque in the backlash range of gearbox not within tolerance
- Lack of maintenance
- Ground contact
- Excessive thermal strain

Vibrations, impacts, forces, thermal strain etc. could cause cracks on the exhaust bends.

▲ **WARNING:** Rectify any of the aforementioned without delay.

###### 1.4) Subject

Checking or replacement of the exhaust bend.

###### 1.5) Compliance

- Within the next 50 hours of operation, but at the latest by June 1<sup>st</sup> 2001 the checking of the exhaust bends must be conducted according to the following instructions in section 3.
- Every 50 hours a checking of the exhaust bend must be conducted according to the following instructions in section 3.

###### 1.6) Approval

The technical content of this Service Bulletin has been approved by ACG.

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MAY 2001  
Initial issue

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05/06/01  
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- estimated man-hours:  
engine installed in the aircraft --- manpower time will depend on installation and therefore no estimate is available from the engine manufacturer.

**1.8) Mass data**

- change of weight --- none
- moment of inertia --- unaffected

**1.9) Electrical load data**

no change

**1.10) Software accomplishment summary**

no change

**1.11) References**

In addition to this technical information refer to current issue of

- Illustrated Parts Catalog (IPC)
- Maintenance Manual (MM)

**1.12) Other publications affected**

none

**1.13) Interchangeability of parts**

At exchange take care of the following:

- If necessary remove the exhaust bend as per the following instructions and send it to a ROTAX<sub>e</sub> Authorized Distributor or Service Center.

**2) Material information**

**2.1) Material - cost and availability**

Price and availability will be supplied on request by ROTAX<sub>e</sub> Authorized Distributors or their Service Centers.

**2.2) Company support information**

- Exchanged parts must be returned F.O.B. to a ROTAX<sub>e</sub> Authorized Distributor or Service Center.
- Shipping cost, down time, loss of income, telephone costs etc. or cost of conversion to other engine versions or additional work, as for instance simultaneous engine overhaul is not covered in this scope and will not be borne or reimbursed by ROTAX<sub>e</sub>.

**2.3) Material requirement per engine**

For the replacement of the exhaust bend the following parts are required:

- ◆ NOTE: The following new parts are only required when cracks have been detected in the respective exhaust bend.

Fig item no	New part no	Qty per engine	Description	Old part no	application
	979422	1	exhaust bend assy cyl. 1		ROTAX <sub>e</sub> 914
	979432	1	exhaust bend assy cyl. 2		ROTAX <sub>e</sub> 914
	979442	1	exhaust bend assy cyl. 3		ROTAX <sub>e</sub> 914
	979452	1	exhaust bend assy cyl. 4		ROTAX <sub>e</sub> 914
	942035	8	lock nut M8		ROTAX <sub>e</sub> 914 (2 pieces each per exhaust bend)

**2.4) Material requirement per spare part**

none

**2.5) Rework of parts**

none

**Price and availability**

Price and availability:

- Price and availability will be supplied on request by ROTAX<sub>e</sub> Authorized Distributors or their Service Centers.

Parts requirement:

Fig item no	New part no	Qty per engine	Description	Old part no	application
	899651		LOCTITE 648		sluds exhaust
	297434		LOCTITE ANTI SEIZE		labyrinth exhaust bends

**3) Accomplishment / Instructions**

**Accomplishment**

All the measures must be taken and confirmed by the following persons or facilities:

- ROTAX<sub>e</sub> -Airworthiness representative
- ROTAX<sub>e</sub> -Distributors or their Service Centers
- Persons approved by the respective Aviation Authority

▲ WARNING: Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation.

- Secure aircraft against unauthorized operation.
- Disconnect negative terminal of aircraft battery.

**3.1) Checking of the exhaust bend:**

see fig. 1

- Inspect the exhaust bends (1) in accordance with the relevant Maintenance Manual.

◆ NOTE: Scrutinize the exhaust bends for exterior traces of smoke, cracks and other faults especially about the EGT-terminals (2). See fig. 1.

- If cracks are detected replace the exhaust bend in accordance with the relevant Maintenance Manual.
- Reconnect negative terminal of aircraft battery.

**3.2) Test run**

Conduct test run including ignition check and leakage test in accordance with the current Maintenance Manual of the respective engine type.

**3.3) Summary**

These instructions (section 3) have to be conducted in accordance with compliance in section 1.5.

▲ WARNING: Non-compliance with these instructions could result in engine damage, personal injury or death!

Approval of translation to best knowledge and judgement - in any case the original text in German language and the metric units (SI-system) are authoritative.

MAY 2001

Initial issue

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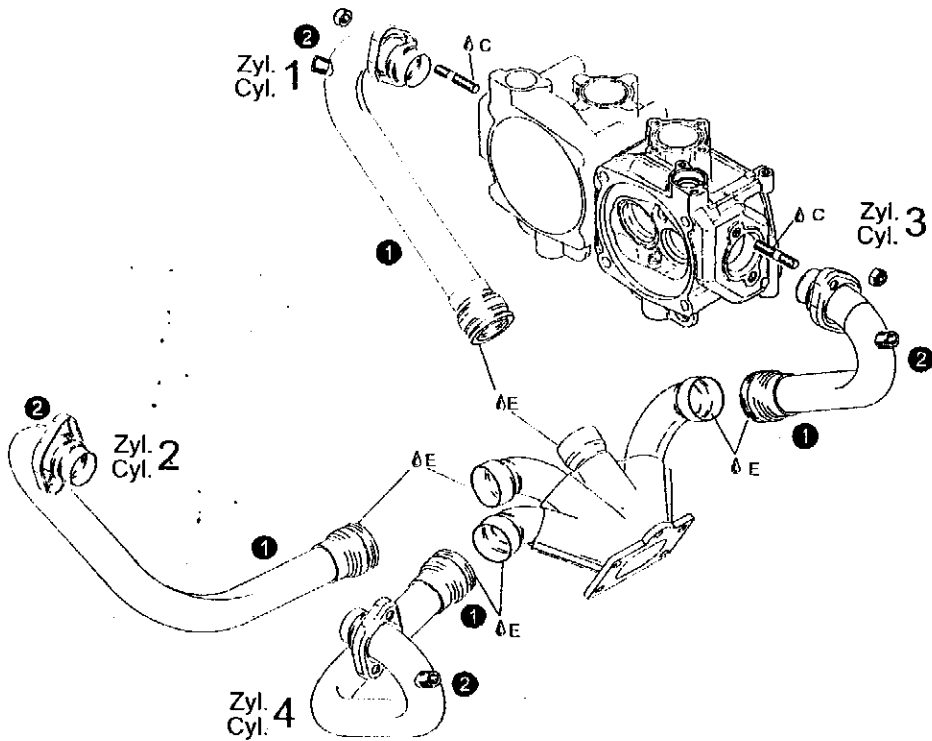
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#### 4) Appendix

The following drawings should convey additional information:



ΔC: LOCTITE 648  
ΔE: LOCTITE ANTI SEIZE

04#25

Bild / Fig. 1

◆ NOTE: The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function. Exploded views are no technical drawings and are for reference only. For specific detail, refer to the current documents of the respective engine type.

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ROTAX  
AIRCRAFT ENGINES

## SERVICE BULLETIN

### CHECKING OR REPLACEMENT OF THE EXHAUST BEND ON ROTAX, ENGINE TYPE 914 (SERIES) SB-914-017UL

#### MANDATORY

##### Repeating symbols:

- Please, pay attention to the following symbols throughout this document emphasizing particular information.
- ▲ WARNING: Identifies an instruction, which if not followed, may cause serious injury or even death.
  - CAUTION: Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.
  - ◆ NOTE: Information useful for better handling.

##### 1) Planning information

###### 1.1) Engines affected

All versions of the engine type:

- 914 UL (Series)
- V914 pre-production

If they are equipped with the genuine ROTAX, exhaust bends. In case of doubt contact your aircraft builder. For complete instructions and compliance to this service bulletin refer to Service Bulletin SB-914-017, latest edition section 1.2 onward.

- ◆ NOTE: Section 1.6) Approval: Is not required for engines of the type UL (series).  
Section 3) Accomplishment: In addition: persons with adequate type-specific training.

001425

MAY 2001  
Initial issue

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SB-914-017UL  
page 1 of 1

# SERVICE BULLETIN

## CHECKING OF THE CRANKCASE ON ROTAX® ENGINE TYPE 912 AND 914 (SERIES)

**SB-912-029**

**SB-914-018**

### AIRWORTHINESS DIRECTIVE

No. 107

Inspection for possible cracks in the crankcase  
of Rotax 912 A/F Series and Rotax 914 F Series engines

**MANDATORY**

1. **Applicability:** Rotax 912 A Series engines, S/N up to and incl. 4,410.384  
Rotax 912 F Series engines, S/N up to and incl. 4,412.796  
Rotax 914 F Series engines, S/N up to and incl. 4,420.156
2. **Subject:** Inspection for possible cracks in crankcase
3. **Reason:** During the operation certain cracks in crankcase were detected.
4. **Action:** A detailed visual inspection of the crankcase have to be carried out within the compliance time.  
  
The technical informations of Bombardier Rotax Service Bulletin SB-912-029 and SB-914-018 are herewith part of this AD
5. **Compliance:** a) initial inspection within 50 flight hours, but not later than 01 June 2001, according referenced Bombardier Rotax SB-912-029 respectively SB-914-018  
  
b) every 100 flight hours inspection according referenced Bombardier Rotax SB-912-029 respectively SB-914-018
6. **Accomplishment:** The required action has to be accomplished by the manufacturer or by a licensed/qualified person. An entry into the aircraft log has to be done.
7. **Effective Date:** 25. April 2001

#### Repeating symbols:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

#### 1) Planning information

##### 1.1) Engines affected

All versions of the engine type:

- 912 A up to S/N 4,410.384
- 912 F up to S/N 4,412.796
- 914 F up to S/N 4,420.156

##### 1.2) Concurrent ASB/SB/Sl and SL

none

##### 1.3) Reason

One or more of the following could result in formation of cracks on the crankcase:

- Unapproved and untested modifications
- Improper carburetor synchronization
- Unsuitable idle speed (too low)
- Unsuitable engine suspension / non-neutralized vibrations
- Propeller balance out of tolerance
- Friction torque in the backlash range of gearbox not within tolerance
- Lack of maintenance
- Ground contact
- Excessive thermal strain
- Exceeding of maximum admissible engine speed
- Exceeding of maximum admissible manifold pressure

Vibrations, impacts, forces, thermal strain etc. could cause cracks on the crankcase.

▲ **WARNING:** Rectify any of the aforementioned without delay.

##### 1.4) Subject

Checking of the crankcase.

##### 1.5) Compliance

- Within the next 50 hours of operation, but at the latest by June 1<sup>st</sup> 2001 the checking of crankcase must be conducted according to the following instructions in section 3.
- Every 100<sup>h</sup> the checking of crankcase must be conducted according to the following instructions in section 3.

##### 1.6) Approval

The technical content of this Service Bulletin has been approved by ACG.

001431

MAY 2001  
Initial issue

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- 1.7) **Manpower**  
 - estimated man-hours:  
 engine installed in the aircraft --- manpower time will depend on installation and therefore no estimate is available from the engine manufacturer
- 1.8) **Mass data**  
 - change of weight --- none.  
 - moment of inertia --- unaffected.
- 1.9) **Electrical load data**  
 no change
- 1.10) **Software accomplishment summary**  
 no change
- 1.11) **References**  
 In addition to this technical information refer to current issue of  
 - Illustrated Parts Catalog (IPC)  
 - Maintenance Manual (MM)
- 1.12) **Other publications affected**  
 none
- 1.13) **Interchangeability of parts**  
 not affected

## 2) Material Information

- 2.1) **Material - cost and availability**  
 Price and availability will be supplied on request by ROTAX<sub>e</sub> Authorized Distributors or their Service Centers.
- 2.2) **Company support information**  
 - In case of cracks on the crankcase the complete engine must be returned F.O.B. to a ROTAX<sub>e</sub> Authorized Distributor or Service Center.  
 - Shipping cost, down time, loss of income, telephone costs etc. or cost of conversion to other engine versions or additional work, as for instance simultaneous engine overhaul is not covered in this scope and will not be borne or reimbursed by ROTAX<sub>e</sub>.
- 2.3) **Material requirement per engine**  
 none. The repair has to be performed by the engine manufacturer.
- 2.4) **Material requirement per spare part**  
 none
- 2.5) **Rework of parts**  
 none
- 2.6) **Special tooling/lubricant-/adhesives-/sealing compound - Price and availability**  
 none

## 3) Accomplishment / Instructions

### Accomplishment

All the measures must be taken and confirmed by the following persons or facilities:

- ROTAX<sub>e</sub> Airworthiness representative
  - ROTAX<sub>e</sub> Distributors or their Service Centers
  - Persons approved by the respective Aviation Authority
- ▲ **WARNING:** Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation.
- Secure aircraft against unauthorized operation.
  - Disconnect negative terminal of aircraft battery (if a removal of engine is necessary).

### 3.1) Checking of crankcase:

see fig. 1

- Inspect the crankcase (1) and engine suspension in accordance with the relevant Maintenance Manual.
- ◆ **NOTE:** Scrutinize the crankcase for cracks especially in the area of cylinder 1 upper side (2), between cylinder 1 and 3 upper side (3) and cylinder 4 lower side (4). See fig. 1.  
 For those engines using cooling air baffle inspect for oil leaks in area (2) and (3). If leaks are found, then further investigation to determine the cause of the oil leak is required. If the exact origin of the leak can not be determined i.e. governor, then removal of the cooling air baffle may be required. Alternative methods of inspection may be used, i.e. bore scope, to inspect the areas without removal of the shroud.
- ◆ **NOTE:** If absolutely necessary, and if only a small amount of oil leakage is found, a ferry flight to a maintenance facility is permitted. At a massive oil leakage replacement of engine without delay will be necessary.
- If cracks are detected the nearest ROTAX<sub>e</sub> Authorized Distributor (see also our official ROTAX-Web-Site: [www.rotax-aircraft-engines.com](http://www.rotax-aircraft-engines.com)) has to be informed and if necessary the engines has to be removed from aircraft and must be returned to a ROTAX<sub>e</sub> Authorized Distributor.
- Reconnect negative terminal of aircraft battery (after installation of engine).

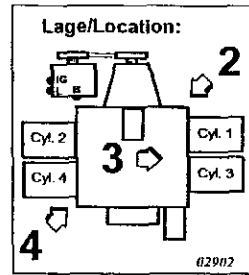
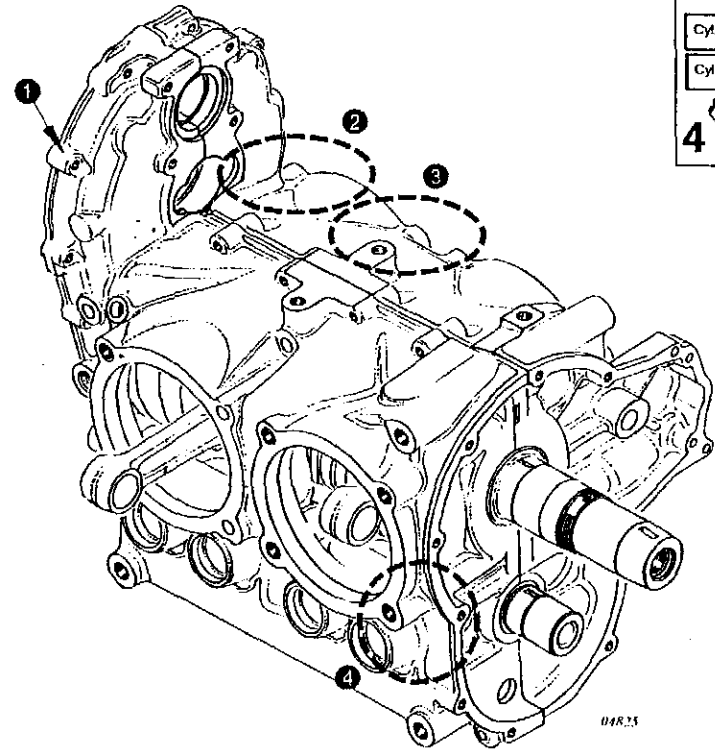
### 3.2) Summary

These instructions (section 3) have to be conducted in accordance with compliance in section 1.5.

▲ **WARNING:** Non-compliance with these instructions could result in engine damage, personal injury or death!

Approval of translation to best knowledge and judgement - in any case the original text in German language and the metric units (SI-system) are authoritative.

The following drawings should convey additional information:



# SERVICE BULLETIN

## CHECKING OF THE CRANKCASE ON ROTAX® ENGINE TYPE 912 AND 914 (SERIES)

**SB-912-029UL**

**SB-914-018UL**

### MANDATORY

#### Repeating symbols:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

#### 1) Planning information

##### 1.1) Engines affected

All versions of the engine type:

- 912 UL up to S/N 4,403,074
- 914 UL up to S/N 4,417,758
- V912 pre-production
- V914 pre-production

For complete instructions and compliance to this service bulletin refer to Service Bulletin SB-912-029 and SB-914-017, latest edition section 1.2 onward.

- ◆ **NOTE:** Section 1.6) Approval: Is not required for engines of the type UL (series).  
Section 3) Accomplishment: In addition: persons with adequate type-specific training.

Bild / Fig. 1

◆ **NOTE:** The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function. Exploded views are no technical drawings and are for reference only. For specific detail, refer to the current documents of the respective engine type.

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REF. ROTAX AND ALL SOFT TO HARD PIPE CONNECTIONS

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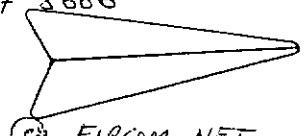
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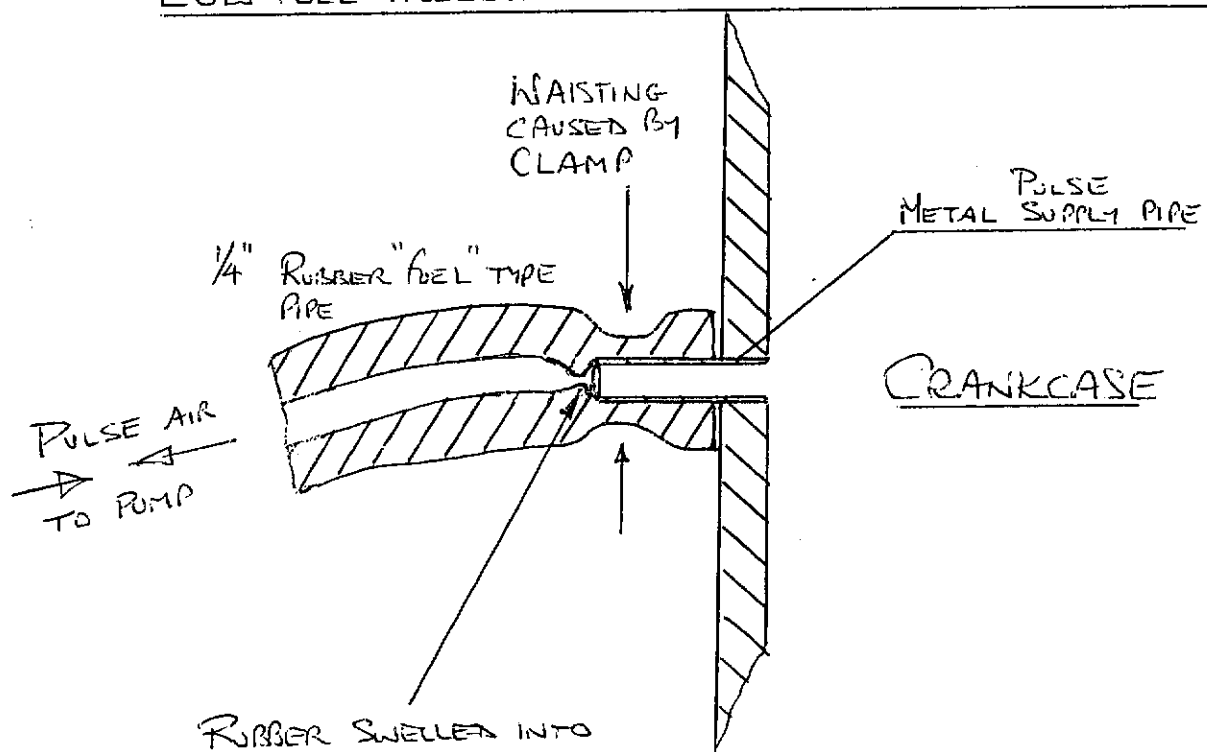


**MESSAGE TO:** JIM HAMMERTON. BGA, CTO.

**FROM:** JOHN McWILLIAM

**DATE:** 3 May 2001

## LOW FUEL PRESSURE OBSERVED ON FUEL PRESSURE GAUGE



RUBBER SWELLED INTO PATH OF AIR OUT OF PULSE PIPE WHEN SQUEEZED FOR LONG TIME BY CLAMP TOO CLOSE TO THE END OF METAL SUPPLY PIPE.

### SUGGESTIONS

1. CHECK FOR SIMILAR PIPE RESTRICTION
2. USE CLEAR URETHANE AIR PULSE PIPE
3. CONSIDER FUEL PRESSURE GAUGE SINCE RPM DROP MEANS EXCESSIVE TEMPERATURE & LOW FUEL SUPPLY HAS ALREADY OCCURED.
4. KEEP CLAMPS CLEAR OF UNSUPPORTED AIR OR FUEL PIPE SECTIONS, AWAY FROM END OF METAL PIPE.

## RESTRICTION BY CLAMP CAUSED LOW FUEL PRESSURE

*John McWilliam*  
Jc/1023ME

DIRECTORS:

JOHN McWILLIAM, Grad.I. Mech.E.

D. M. McWILLIAM, B.A.



# SKYDRIVE

THE DRIVING FORCE IN LIGHT AVIATION

## SAFETY BULLETIN 010501 – TRELLEBORG HYDRO K HOSE

### Background

Hydro K hose supplied by Skydrive is a 6mm bore reinforced black rubber hose which can be used for fuel systems, fuel pressure gauges, coolant carburettor heaters for Rotax 912 engines and possibly other applications.

The hose can be recognised by the words Hydro K printed in blue at intervals along its length, together with an interrupted blue line all along the hose. Other printing is on the hose but has changed over time. A production code is moulded into the hose in small numbers at approx 600mm intervals.

A fault has been discovered in one batch of hose. The inner lining of the hose was not correctly bonded to the intermediate woven fabric reinforcement and the outer rubber layer, causing a partial blockage of the hose. The fault is being investigated by the manufacturer, but we believe it is restricted to one batch of hose, marked with the production code 25 99.

All stock hose, of all production codes, supplied since 30<sup>th</sup> April 2001 has been checked at Skydrive and found to be satisfactory. Users of hose supplied prior to this date are requested to check their installations as described below. Any faulty hose will be exchanged free of charge by Skydrive, up until 30<sup>th</sup> September 2001.

### Fuel Systems

Either remove hoses and check for obstruction of the hose, or carry out a fuel flow check in accordance with BCAR Section S (150% full throttle flow required for gravity fed systems, 125% for pumped systems).

### Fuel Pressure Gauge Kits

Check the short length of hose between the 'T' piece and the carburettor for obstruction. Check that the fuel pressure reading rises to correct range when engine is running.

### Coolant Carburettor Heat Kits for 912 Engine Series

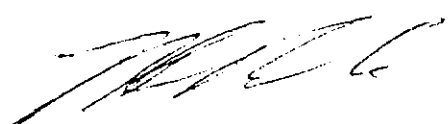
Check that the carburettor heater body temperature (measured by supplied temperature gauge) increases to well above ambient with the engine running, in accordance with the instructions supplied. If in doubt remove hoses and check for obstructions.

### Other Applications

Remove hose and check for obstructions. Checking can be done using a low pressure air line (approx 15-30 psi (1-2 bar)) and checking for free flow.

### Action

Check all possibly affected hose before next flight. Any faulty hose should be returned to Skydrive before 30<sup>th</sup> September 2001. It will be exchanged for new hose with free return postage.



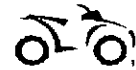
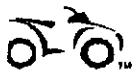
N.R. BEALE

1<sup>st</sup> May 2001

**SKYDRIVE Limited, Burnside, Deppers Bridge, Southam CV47 2SU**

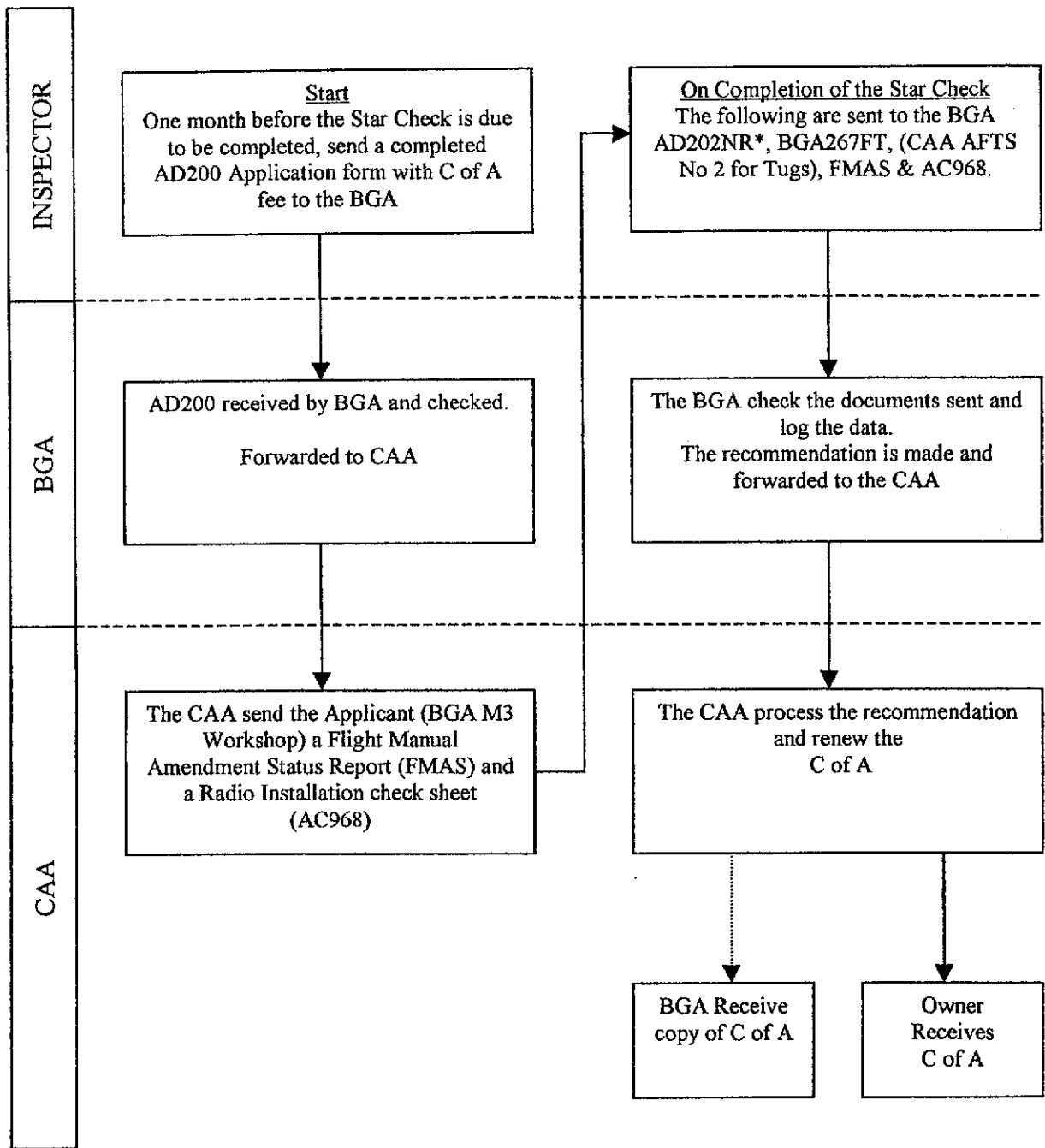
Tel: 01926 612188. Fax 01926 613781. E mail skydrive@avnet.co.uk

Registered in England No. 3361211, VAT No. 335 2061 89, Directors N R Beale B.Sc., M.S.C., M Hurtubise, Company Secretary P J Beale.



## BGA Procedures for CAA C of A Renewal – Flow Chart

This procedure is applicable to Motor Gliders and Tugs using the BGA M3 company approval.



\* AD 202NR to be replaced with BGA C of A Renewal Report on completion of Chief Engineer programme.

# CIVIL AVIATION AUTHORITY

BGA, LEICESTER

The completed application form should be forwarded to the Civil Aviation Authority, Safety Regulation Group, Applications and Certification Section, Aviation House, Gatwick Airport South, West Sussex RH6 0YR and must be accompanied by the appropriate charge in accordance with the current CAA Scheme of Charges.

## APPLICATION FOR THE RENEWAL OF A CERTIFICATE OF AIRWORTHINESS/PERMIT TO FLY

- CERTIFICATE OF AIRWORTHINESS FOR AIRCRAFT ABOVE 15,000 KG OPERATING ON AN AOC
- CERTIFICATE OF AIRWORTHINESS FOR AIRCRAFT BETWEEN 2,730 KG AND 15,000 KG AND FOR AIRCRAFT ABOVE 15,000 KG NON AOC  1 year  3 year
- CERTIFICATE OF AIRWORTHINESS FOR AIRCRAFT BELOW 2,730 KG
- PERMIT TO FLY

## AIRCRAFT DETAILS

Registration  Type

Serial No.  MTOW (Kg)

## EXISTING CERTIFICATE OF AIRWORTHINESS/PERMIT TO FLY

Category  Expiry Date

## CHARGES (See Note 1)

\*The sum of £  is enclosed in payment of the statutory charges.

\*Certificate of Airworthiness Validity Charges are covered by the Air Operators Certificate Charges Scheme.

The aircraft is operated pursuant to AOC No.

Note 1: If the Certificate of Airworthiness or Permit to Fly has expired, a Subsequent Issue application on form CA3 must be submitted, however this will not be necessary unless the expiry period exceeds 12 months.

## FOR CAA USE

£

Date

Folio

Rcvd by

## ADDRESS DETAILS

Name and address of Approved Organisation with whom aircraft is placed for the purpose of this application:

**BRITISH GLIDING ASSOCIATION**  
**KIMBERLEY HOUSE**  
**VAUGHAN WAY, LEICESTER**  
**Tel: Leicester 0116 2531051**

CAA Approval No. DA1/8378/73

Place where aircraft may be surveyed:

## DECLARATION

Name and address of applicant:

Telephone No.

Facsimile No.

I hereby declare that to the best of my knowledge and belief the particulars entered on this application are accurate in every respect. The amount required by the current CAA Airworthiness Scheme of Charges to be paid on application is enclosed herewith. I also agree to pay any further charges in connection with this application in accordance with the said Scheme of Charges and which may be notified to me by the CAA.

Date

Signature

FOR CAA USE ONLY

DATE RENEWAL ACKNOWLEDGED:

SIGNATURE:

\*Delete as applicable



Safety Regulation Group

<b>DISTRIBUTION:</b>	A&C
	Regional Office Name.....
	Approved Organisation/Aircraft Records

**1. AIRCRAFT DETAILS**

Registration:	Type:	Serial No:
Category:	Make and Type of Engine:	

Total hours flown since manufacture to 31 December prior to this renewal.....associated flight cycles/ landings\*.....

Aircraft is subject to flight test at:  1 year  3 year or  Fleet Programme

Date of last satisfactory Flight Test.....Aircraft tested to AFTS.....Issue.....

**2. COMPLIANCE STATEMENT**

I confirm that compliance with the following has been established and is properly entered and certified in the aircraft technical records:-

Airworthiness Notices, Contents Issue:

Mandatory Aircraft Modifications and Inspections Summary, Contents and Check List of Pages, Issue:

FAA Summary of Airworthiness Directives Large Aircraft/Small Aircraft and Rotorcraft at bi-weekly listing No:

Foreign Airworthiness Directives Vols I and II - CAA Additional Airworthiness Directives, Contents and List of Pages, Issue:

Foreign Airworthiness Directives Vol III, Contents and Check List of Pages, Issue:

The aircraft complies with Specification/Type Certificate Data Sheet No\* \_\_\_\_\_ Revision/Issue/Edition No\* \_\_\_\_\_

Scheduled Maintenance and Component Life Limits satisfactory  Schedule ref. MS/MP: \_\_\_\_\_ Issue: \_\_\_\_\_

Reweighting of Aircraft:

The aircraft complies with BCAR A/B3-4 (5 year maximum for aircraft 5700 kg and above).

For JAR-OPS approved AOC operators, the aircraft must comply with JAR-OPS 1/3.605 (4 year maximum/Fleet Sample).

All modifications and repairs revealed during this inspection and carried out since last C of A renewal have been assessed for approval and are adequately recorded and certified in the appropriate Log Books.

The last Maintenance Review is dated ..... or Exemption to the ANO Art. 10 for JAR-OPS 1/3 granted.

Radio equipment in accordance with AC968NR  or the discrepancy is being processed by the regional office.

Total physical survey of aircraft completed within 30 days of recommendation. [N/A for aircraft below 2730 kgs]

**3. CERTIFICATION**

I certify that the appropriate requirements of BCAR, Section A/B Chapter A/B 3-4 have been complied with and the particulars contained herein are correct. It is recommended that the Certificate of Airworthiness be renewed for a period of ..... months, in the following category:

Transport Category (Passenger)/Transport Category (Cargo)/Aerial Work/Private.\*

Organisation: \_\_\_\_\_ Company Approval No: \_\_\_\_\_

Signature: \_\_\_\_\_ Name in block capitals: \_\_\_\_\_ Date: \_\_\_\_\_

<b>FOR CAA USE ONLY</b>		
Certificate number:	Date of validity:	Date of expiry:
Date certificate sent:	Signature:	Name:

# British Gliding Association

## Common airworthiness abbreviations and definitions

- AD** Airworthiness Directive  
Issued by the national airworthiness authority i.e. CAA, LBA, DGAC or FAA. The contents are Mandatory for an aircraft with a CAA C of A. For aircraft with a BGA C of A, AD's would normally also be mandatory unless the Technical Committee specifically approves otherwise. The Certificate of Airworthiness is technically invalid if AD's are not complied with.
- TNS** Technical News Sheet  
Issued by the BGA to inspectors every two months. It contains details of AD's, BGA inspections, manufacturers service bulletins, etc, modifications and general information.
- LTO** Letter to Operators  
Issued by the CAA as a means of communicating with aircraft owners quickly on matters of airworthiness safety.
- SB** Service Bulletin  
Issued by the glider or equipment manufacturer giving details of inspections, modifications, and alterations applicable to their products. These are not mandatory unless backed up with an AD. Some SB's are classified as mandatory because of produce liability. The BGA may classify some SB's mandatory.
- TN** Technical Note  
Issued by the glider or equipment manufacturer. Similar to service bulletins.
- TI** Technical instruction  
Issued by the glider or equipment manufacturer. May be similar to a SB but may contain servicing information.
- SI** Service instruction  
Similar to TI.
- TB** Technical Bulletin  
Similar to SB
- TM** Technical Modification  
Manufacturers approved modification.

With regard to SB, TN, TI, SI, TB & TM different manufacturers use differing terminology for the same type of publication