BRITISH GLIDING ASSOCIATION

BGA TECHNICAL COMMITTEE

TECHNICAL NEWSHEET TNS 7/8/93

PART 1 Airworthiness "AGGRO". Please refer to the 1993 Blue Pages.

1.1. Obsolescent Control Cables. Cables having a hemp (or manila) core attract moisture, and corrode internally. Service difficulty alert from Canada (herewith) recommends removal of all such cables. BGA supports this recommendation.

1.2. ASW 15. Undercarriage Handle Locking Pin Fails, knob becomes detached, and releases spring assembly. Report by A. Kerby attached.

1.3. Grob G.103 Twin III. Serial No's as listed in LBA Airworthiness Directive 93-134. Extends Operational Limitations. (Copy herewith).

1.4. SF25E Falke 2000. Interference between Airbrake and Wheel-brake. Failure of the bolt that secures the port wheel-brake shoe, allowed the airbrake interconnect cable to wrap around the wheel axle, locking the airbrakes closed and snatching the airbrake lever from the students hand. (Reported by York Soaring Centre - Rufforth).

1.5. GADRINGER Safety Belts (DG Owners etc). An anti-slip modification kit is available, details herewith.

1.6. Aileron Control Rods Found Damaged, almost to failure. (Libelle).

Report from John Ellis in South Africa, suggests the damage is caused by unsecured rods fretting against Root Ribs in trailers. Could apply to many types of gliders.

1.7. ASW 20FL with WING EXTENTIONS. Centrair SB 20-16 Revision 1 dated 04/20/93 (herewith) is the latest information. BGA have written to Bureau Veritas for further information, since this S.B. does not have the status of an Airworthiness Directive.

1.8. Centrair ASW 20 & 20FL. Air Brake Control, failure of welds. SB 20-18 (11/25/92) has been re-issued.

1.9. Piper (all strutted types). FAA A/D 93-10-06 (herewith) draws attention to Corroded Wing Lift Struts & Cracked Forks. Consult your Maintenance Organisation for action as required in this A/D.

1.10. Blaniks (L13/062) (TNS 3/4/93/1.11) Crack Inspection by dye penetrant method, has uncovered one set of cracks - How diligently have you applied Service Bulletin L13/062? Total time was 2100 hours - all aerotow.

1.11. KA21 - Canopy Support Structure - Failure. This problem has been repeated, further details herewith from Cranwell G.C.

PART 2 GENERAL MATTERS

2.1. Maintenance Complaints to the CAA. Extract from GASIL, gives sound advice, which could also be applied when contracting out maintenance on gliders.

2.2. C.of.A. Renewal Submissions and Expiring 30 Day Tickets. (Gliders).

In a recent (fatal) gliding accident, the C.of.A. renewal was completed but had not been dispatched to the BGA, and the 30 day ticket had expired! All interest parties should ensure that such procedural errors never occur, if insurance cover is to remain valid?

2.3. Motor Glider Handling with Engine Extended. Safety Note from USA draws attention to changes in handling characteristics which arise when the turbo unit is erected. (Copy herewith).

2.4. GRP Courses at the Marine Builders Training Trust. Course schedule and content are listed herein.

Dick Stratton
Chief Technical Officer

Transport Canada / Transports Canada

Aviation Regulation / Réglementation Aérienne

SERVICE DIFFICULTY ALERT

This Service Difficulty Alert brings to your attention a potential hazard identified by the Service Difficulty Reporting Program.

This Alert is a non-mandatory notification and does not preclude issuance of an Airworthiness Directive.

GLIDERS BUILT IN EUROPE BEFORE 1975

OBSOLESCENT CONTROL CABLES

A recent investigation by the Transportation Safety Board of Canada (TSB) into an accident involving a glider built in Eastern Europe in 1968 revealed a serious airworthiness discrepancy which may still exist in a number of similar older gliders. The pilot lost rudder control due to the failure of one rudder cable and the glider was damaged in the ensuing landing. The rudder cable had failed at a worn spot due to prolonged contact with a pulley under the pilot's seat. The other rudder cable from the same glider also failed at the same spot when tested in the TSB lab.

The failed cables are of an old-fashioned DIN specification material composed of six strands, each of seven steel wires, wrapped around a manila cord (also known as 6x7 cable). Generally, cables incorporating manila cord are to be replaced if they show any sign of wear deeper than a polished surface of the wires. Any visible wear significantly decreases the strength of the cable and is cause for rejection.

The inspection techniques applicable to the commonly used seven wire, seven-strand (7x7) cable of snagging broken wires on a cloth or looking for signs of fraying, are not valid checks for the 6x7 cable. This is because the 6x7 cable is made of less brittle material and the wires are not likely to break and fray individually when worn. Therefore, changing of cables based on wire-strand breaks as on the 7x7 cable is not an appropriate criterion for the older 6x7 cable.

HEMP CORED CABLES!

Most glider manufacturers have issued maintenance manuals or service bulletins which limit the life of the old style control cables. These life limits must be strictly adhered to (see Airworthiness Manual Chapter 571.5(c)(1)). In addition, in 1974, the German airworthiness authority (LBA) issued Airworthiness Directive No. 74/323/2, which mandated the replacement of manila core control cables on all gliders of German manufacture.

Transport Canada strongly recommends that the maintenance records of gliders built anywhere in Europe before 1975 be checked for evidence that the control cables have been replaced by all-steel cables. If not replaced, the manila core cables should be inspected for any sign of wear as soon as practicable.

Any defects should be reported by sending a Service Difficulty Report to your nearest regional airworthiness office.

For more information, please contact your nearest Regional or District Airworthiness Office or call directly Mr. Paul Fortier in Ottawa at (613) 952-4357 or facsimile (613) 996-9178.

For Director, Airworthiness

Chief, Contin
Chef, Maintien de l

For any address change, print new address on the envelope in which this Alert was received and return to Transport Canada, AANDHD, Ottawa, Ontario, K1A 0N8 (Full postage required).

Pour tout changement sur l'enveloppe qui con Transports Canada, AA (Affranchir suffisamme

TAS 7/8/93

ASW 15.

B.G.A
Kimberly House
Vaughan Way
Leicester
LE1 4SE

Mr B Kerby
45.Watkins Gdns
Northfield
Birmingham
B31 2EY

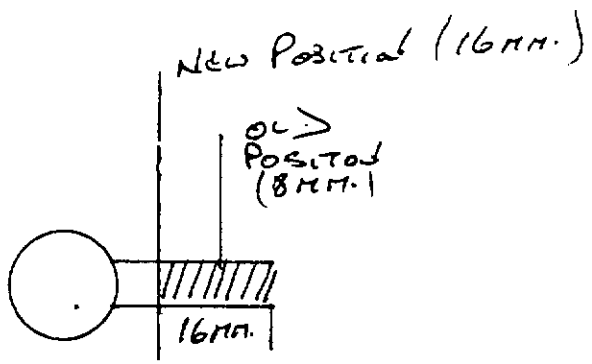
12/7/93

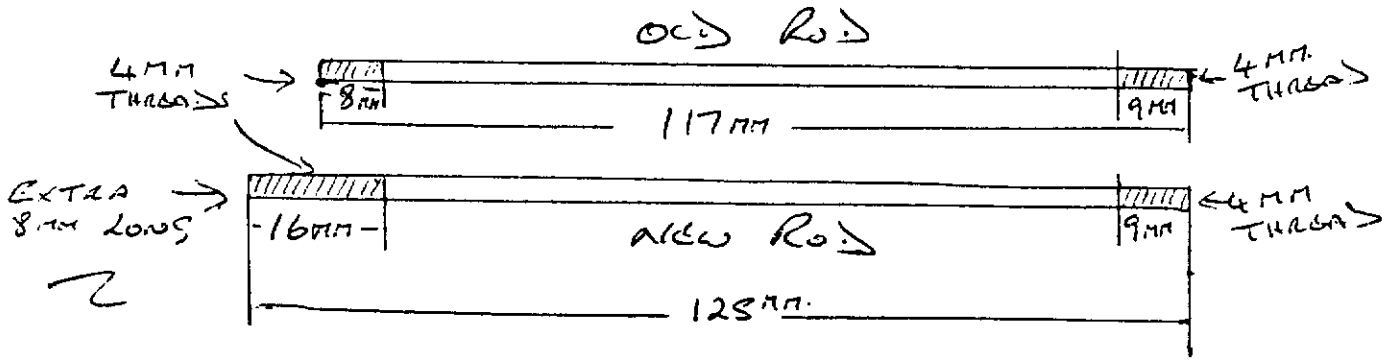
Glider : A.S.W 15A . B.G.A No 3736

Subject: Under-Carriage handle locking pin

Glider Damage: Nil

The above glider landed with its under-carraige held retracted due to the locking mechanisam knob becoming detached from its rod, On inspection it was found that the thread in the knob was stripped. The knob had only been threaded for 8mm but drilled to 20mm. Due to the way this part flew around the cockpit followed by a long spring there was a real danger of the pilot being seriously hurt. The above glider has been modified by fitting a new rod 16mm longer and the knob internal thread tapped to suit. Recommend check and mod if required





Subject: Extension of operational limitations

Concerned: G 103C TWIN III, S/N's 36001 - 36014

Urgency: Action 1 - 4: not later than 31 August 1993
Action 5 : optional

Procedure: The airworthiness requirement LFSM § 2601 (efficiency of airbrakes) must be complied with, to maintain the certification of the concerned airplanes for limited aerobatics and to extend the certification to cloud flying. The necessary increase in the airspeed V_{NE} has been demonstrated using calculations and flight test.

Actions:

1. The following revisions must be entered into the manuals:

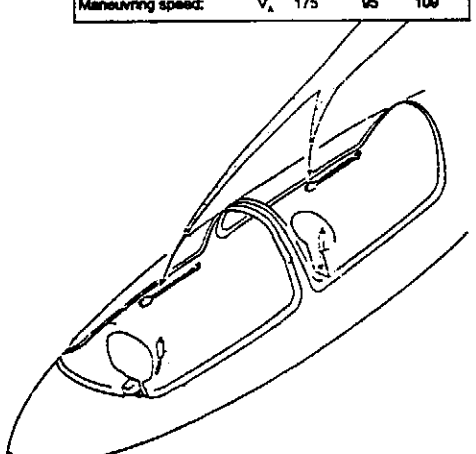
· Flight Manual (German issue)	Revision 2 (2/ 18.05.93)
· Flight Manual (English issue)	Revision 2 (2/ 18.05.93)
· Maintenance Manual (German issue)	Revision 3 (3/ 18.05.93)
· Maintenance Manual (English issue)	Revision 3 (3/ 18.05.93)

2. Installation of new airspeed indicators (new markings) in the front and rear instrument panel.

3. Airbrake hole blanking (for procedure refer to Service Bulletin TM 315-55).

4. a. Installation of the following placards to the right side wall of front and rear cockpit (remove old placards!):

Maximum flying weight		600 kg	(1323 lbs)
Maximum airspeeds:		km/h	kts	mph
In calm air:	V_{NE}	260	140	162
In rough air:	V_{RA}	194	105	121
Aerotow:	V_T	175	95	109
Winch/ Automobile tow:	V_W	140	76	87
Airbrakes extended:	V_{FE}	260	140	162
Maneuvring speed:	V_A	175	95	109



Subject: Modification of the airbrakes

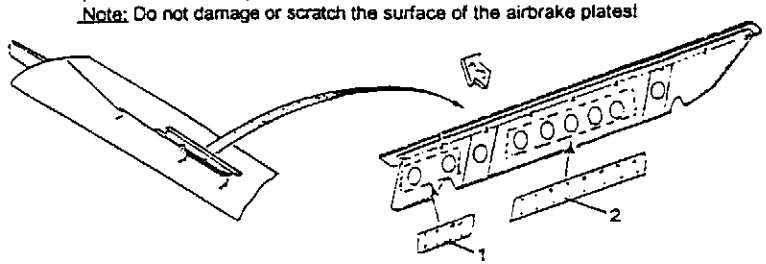
Concerned: G 103C TWIN III ACRO, S/N's 34171 - 34185

Urgency: not later than 31 August 1993

Procedure: Airbrakes with holes in the airbrake plates are installed in the sailplanes with the above S/N's, contrary to the type specification. To assure the airbrake efficiency in the speed range of V_{NE}, a modification to the airbrakes is mandatory.

Actions: The airbrake plates must be modified as follows (hole blanking):

1. Extend airbrakes fully, lock airbrakes and secure against unintentional retraction.
2. Position blanking plates from the front (smaller [1] inboard, larger [2] outboard) on the airbrake plates (10 mm below and 10 mm left or right of the edge of the holes) and secure blanking plates (note the countersunk holes in the blanking plates face forward!).
   Note: Do not damage or scratch the surface of the airbrake plates!



3. Drill the airbrake from the holes in the blanking plates using a 3.1 ø drill. Remove blanking plates and clean.
4. Rivet the blanking plates with aluminium countersunk rivets, size 3x8.
5. Clean airbrake box from swarf and all foreign objects.
6. Perform function test of airbrake control.

Material: The coverplates [1] and [2] and the aluminium rivets [qty. 36] are attached to the Service Bulletin.

Weight and Balance: negligible

Remarks:

1. The modification can be performed by a competent person or an authorized aviation work shop and has to be certified in the logbook by an authorized inspector.
2. If you have sold your sailplane in the meantime, wold you kindly pass this information on to the new owner and forward his nam and address and aircraft S/N to us.

Mattsies, 26 May 1993

Dipl.Ing. J. Altmann
(Musterprüfleitstelle)

LBA approved:
This Service Bulletin is originally written in German and approved by the German LBA on the 26 May 1993 and is signed by Mr. U. Kopp. 17. 06. 93
The translation has been accomplished to the best of our knowledge und judgement. In case of doubt, the German original is authoritative.

D G - I N F O

Dear DG-owner,

please note the following informations:

GADRINGER SAFETY BELTS

These belts can be improved now. The normal belts become loose during long flight, especially when executing aerobatics.

To solve this problem, Gadringer has developed modification kits for the adjustment fittings.
Belts from year of construction 1986 and later where the adjustment fittings are marked with "GG" can be modified.

One set (4 parts) costs DM 46,40 plus VAT

Please order these parts through your agent.

L'HOTELLIER CONTROL QUICK CONNECTS

The german LBA has issued an Airworthiness directive LTA 93-001 which makes securing of the connects during flight operation mandatory and requires regular inspections.

Please refer to the enclosed Info 01/93.

If you want more information, please contact your agent.

Sincerely yours

Dipl. - Ing. W. Dirks

GLASER - DIRKS FLUGZEUGBAU GMBH

Bruchsal 4, 17.05.93

- Enclosures -

S.N.CentrAir

AERODROME 36300 LE BLANC

SERVICE BULLETIN

N° : 20-16 Rev. 1

CENTRAIR SAILPLANES ASW20FL

Translation of ' BULLETIN de SERVICE '. In case of any difficulty, reference should be made to the French original issue.

SAILPLANES AFFECTED : ASW20FL GLIDERS ALL SERIAL NUMBERS FOR WHICH THE MAJOR MODIFICATION ASW20F/11 HAS NOT BEEN CARRIED OUT

SUBJECT : FLIGHT WITH WING EXTENSIONS

TIME OF COMPLIANCE : BEFORE FLYING

A recent analysis has been carried out on the gliders ASW20FL with wing extensions. The result is that the safety range on the strength at the spar root is lower than required by the airworthiness rules.

In order to recover this safety margin, SN CENTRAIR has studied and got the approval of the major modification ASW20F/11.

As a matter of fact, it is forbidden to fly with the wing extensions with the gliders on which the major modification ASW20F/11 has not been carried out.

S.N. CENTRAIR is at your disposal for the conditions of application of this modification, in order to recover the use of the wing tips.

BBA Note. THIS S.B HAS NOT the LEGAL STATUS OF an AIRWORTHINESS DIRECTIVE!

27/1/93

STE NOUVELLE CENTRAIR

Tel : 54.37.07.96
Telefax : 54.37.48.64

Approbation of the French original issue

Date : 04/20/93

recommended ☐
for information ☐
imperative ☒

S.N.CentrAir

AERODROME 36300 LE BLANC

SERVICE BULLETIN

N° : 20-18

CENTRAIR SAILPLANES
ASW20F and ASW20FL

Translation of ' BULLETIN de SERVICE '. In case of any difficulty, reference should be made to the French original issue.

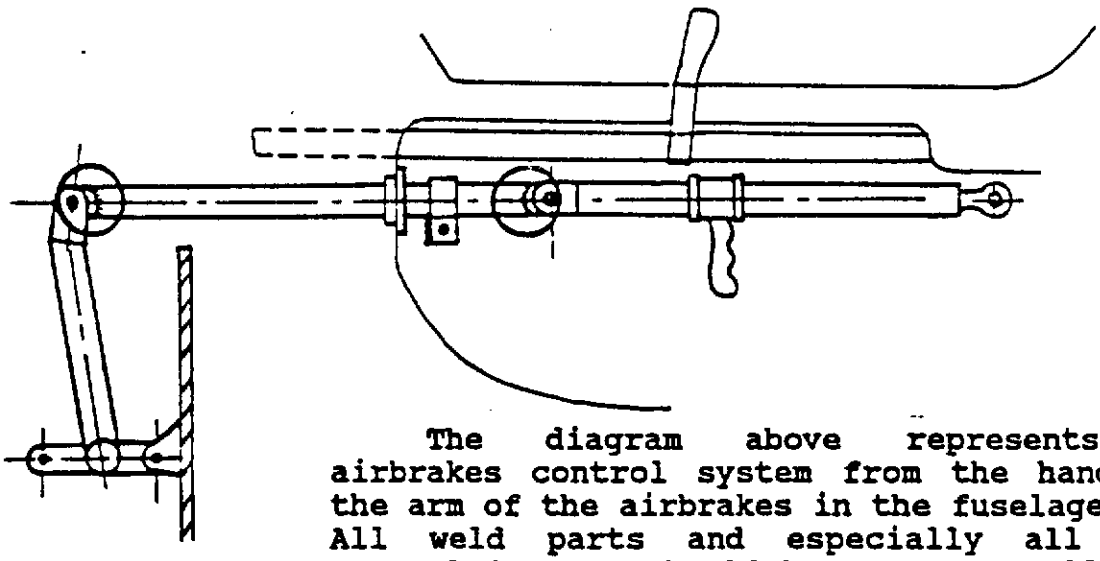
SAILPLANES AFFECTED : ASW20F / ASW20FL GLIDERS ALL SERIAL NUMBERS

SUBJECT : AIRBRAKES CONTROL CHECKING IN THE FUSELAGE

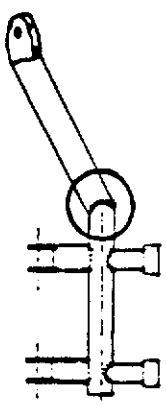
TIME OF COMPLIANCE : AT NEXT SMALL MAINTENANCE INSPECTION

Inspection's procedures for flying controls steering are described paragraph VI section II in the maintenance manual. Among other things, it is specified that during every annual maintenance inspection, all the controls should be checked.

The pilots attention is drawn to the importance of these inspections, especially to the airbrakes control sequence in the fuselage which is particularly sollicitated.



The diagram above represents the airbrakes control system from the handle to the arm of the airbrakes in the fuselage.
All weld parts and especially all above encercled parts should be very carefully eye-checked. If necessary and after cleaning, use a mirror or a lamp to check if there is any crack starts.



It appears that this kind of inspection hasn't been effected during each scheduled maintenance check, so we enjoin you :

- To inspect each glider as it is described above during the next small maintenance inspection.

- To contact SN CENTRAIR in case of cracks.

STE NOUVELLE CENTRAIR

Tel : 54.37.07.96
Telefax : 54.37.48.64

Approbation of the French original issue :

Date : 11/25/92

recommended ☒
for information ☐
imperative ☐

BW 93-11

PIPER AIRCRAFT CORPORATION
AIRWORTHINESS DIRECTIVE
SMALL AIRCRAFT & ROTORCRAFT

93-10-06 PIPER AIRCRAFT CORPORATION: Amendment 39-8586. Docket No. 90-CE-21-AD. Supersedes AD 77-03-08, Amendments 39-2833 and 39-3269, and AD 81-25-05, Amendment 39-4276.

Applicability: The following model and serial number airplanes, certificated in any category:

Models	**Serial Numbers**
J-2 Series	500 through 1975
J-3, NE-1, and L-4	All serial numbers
J-4 Series	4-401 through 4-1649
J-5, J-5C, L-14, AE-1, and HE-1 Series	5-1 through 5-1389
PA-11 Series	11-1 through 11-1678
PA-12 Series	12-1 through 12-4036
PA-14 Series	14-1 through 14-523
PA-15	15-1 through 15-388
PA-16	16-1 through 16-736
PA-17	17-1 through 17-215
PA-18 and PA-18A	18-1 through 18-8309025, 1809001 through 1809032, and 1809034 through 1809040
PA-19	19-1, 19-2, and 19-3
PA-20 Series	20-1 through 20-1121
PA-22 Series	22-1 through 22-9848
PA-25 Series	25-1 through 25-8156024

Compliance: Required as indicated, unless already accomplished.

To prevent in-flight separation of the wing from the airplane caused by corroded wing lift struts or cracked forks, accomplish the following:

(a) Within the next 30 calendar days after the effective date of this AD or within two calendar years after the last inspection accomplished in accordance with AD 77-03-08, whichever occurs later, remove the wing lift struts in accordance with the applicable maintenance manual, and accomplish the actions of either paragraph (a)(1), (a)(2), (a)(3), or (a)(4) below:

(1) Inspect the wing lift struts for corrosion in accordance with the instructions in either Piper Service Bulletin (SB) No. 528D, dated October 19, 1990, or Piper SB No. 910A, dated October 10, 1989, as applicable.

NOTE 1: Inspection methods such as x-ray or boroscope may be utilized provided they are approved as an alternative method of compliance in accordance with the procedures specified in paragraph (f) of this AD.

(i) If corrosion is not found, reinspect at intervals not to exceed 2 calendar years.

(ii) If corrosion is found, prior to further flight, accomplish either paragraph (a)(2), (a)(3), or (a)(4) of this AD.

(iii) If holes have been drilled in sealed struts to attach cuffs, door clips, or other hardware, reinspect the wing lift struts at intervals not to exceed 2 calendar years.

(2) Install original equipment manufacturer (OEM) part number wing lift struts or FAA-approved equivalent wing lift struts that have been inspected and found airworthy. Inspect these wing lift struts as specified in paragraph (a)(1) of this AD at intervals not to exceed 2 calendar years.

(3) Install new sealed wing lift strut assemblies (part numbers as specified in Piper SB No. 528D or Piper SB No. 910A) or Univair FAA Parts Manufacturer Approved (PMA) equivalent wing lift strut assemblies on each wing.

NOTE 2: These new sealed wing lift strut assemblies contain both a sealed strut and redesigned fork.

(4) Install F. Atlee Dodge wing lift struts in accordance with the instructions to Supplemental Type Certificate (STC) SA4635NM, and inspect the wing lift struts as specified in paragraph (a)(1) of this AD at intervals not to exceed 5 calendar years.

(b) Within the next 100 hours time-in-service (TIS) after the effective date of this AD or within 500 hours TIS after the last inspection accomplished in accordance with AD 81-25-05, whichever occurs later, remove the wing lift strut forks and accomplish the actions of either paragraph (b)(1), (b)(2), (b)(3), or (b)(4) below:

(1) Inspect the wing lift strut forks using currently approved magnetic procedures.

(i) If no cracks are found, reinspect at intervals not to exceed 500 hours TIS and replace the lift strut forks at the time specified in either paragraph (b)(1)(i)(A) or (b)(1)(i)(B) below:

(A) If airplane is or has been equipped with floats, upon the accumulation of 1,000 hours TIS.

(B) If airplane has never been equipped with floats, upon the accumulation of 2,000 hours TIS.

(ii) Replacement parts shall be of the same part number of the existing part and shall be manufactured with rolled threads or an FAA-approved equivalent part. Lift strut forks manufactured with machined (cut) threads shall not be utilized.

(iii) If cracks are found, prior to further flight, install forks as specified in either paragraph (b)(2), (b)(3), or (b)(4) of this AD.

(2) Install OEM part number wing lift strut forks that have been inspected and found airworthy. Reinspect using currently approved magnetic procedures at intervals specified in paragraph (b)(1) of this AD.

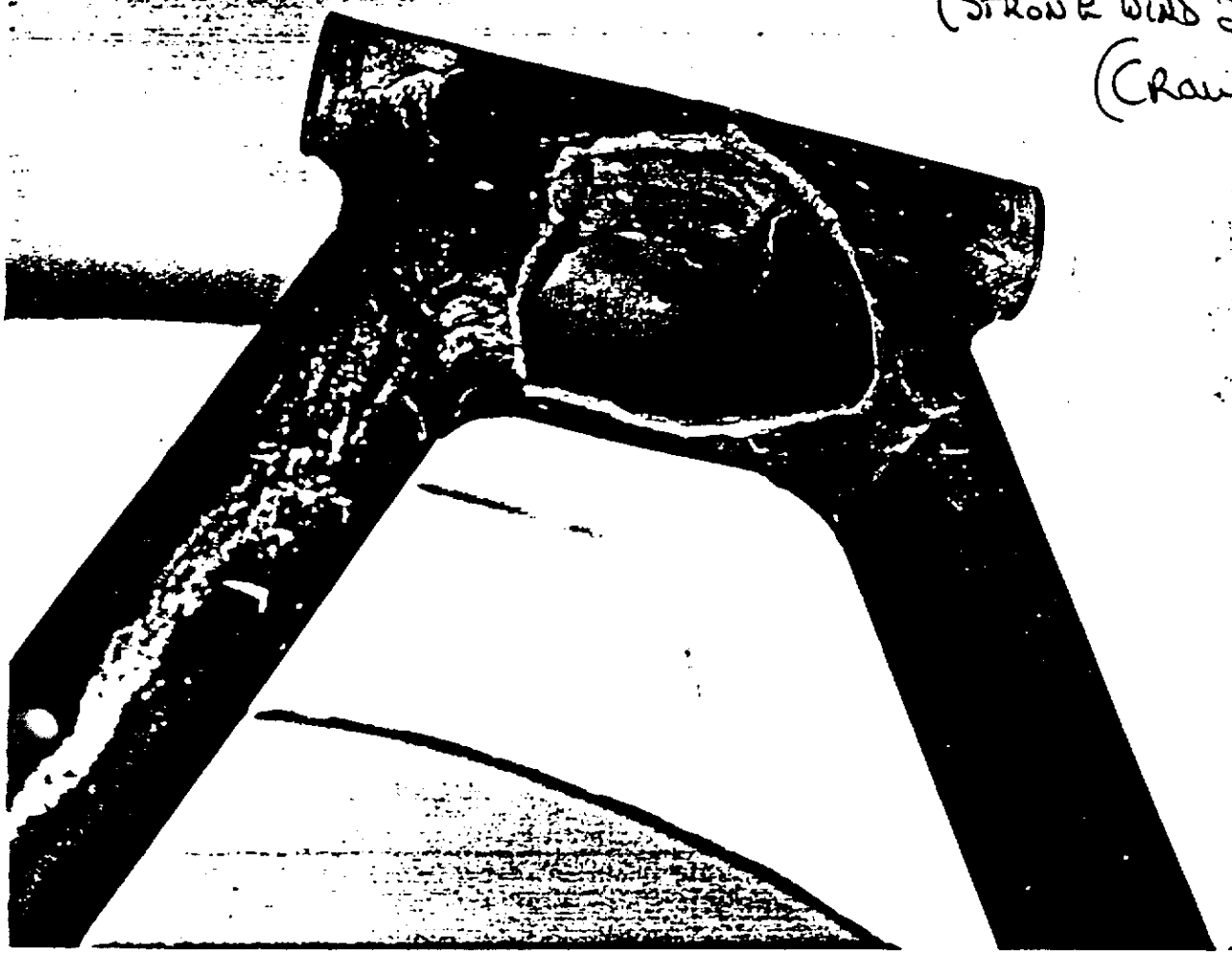
(3) Install new sealed wing lift strut assemblies (part numbers as specified in Piper SB No. 528D or Piper SB No. 910A) or Univair FAA PMA equivalent wing lift strut assemblies on each wing. The installation of these assemblies may have already been accomplished in accordance with paragraph (a)(3) of this AD.

(4) Install F. Atlee Dodge wing lift strut forks in accordance with the instructions to STC SA4635NM.

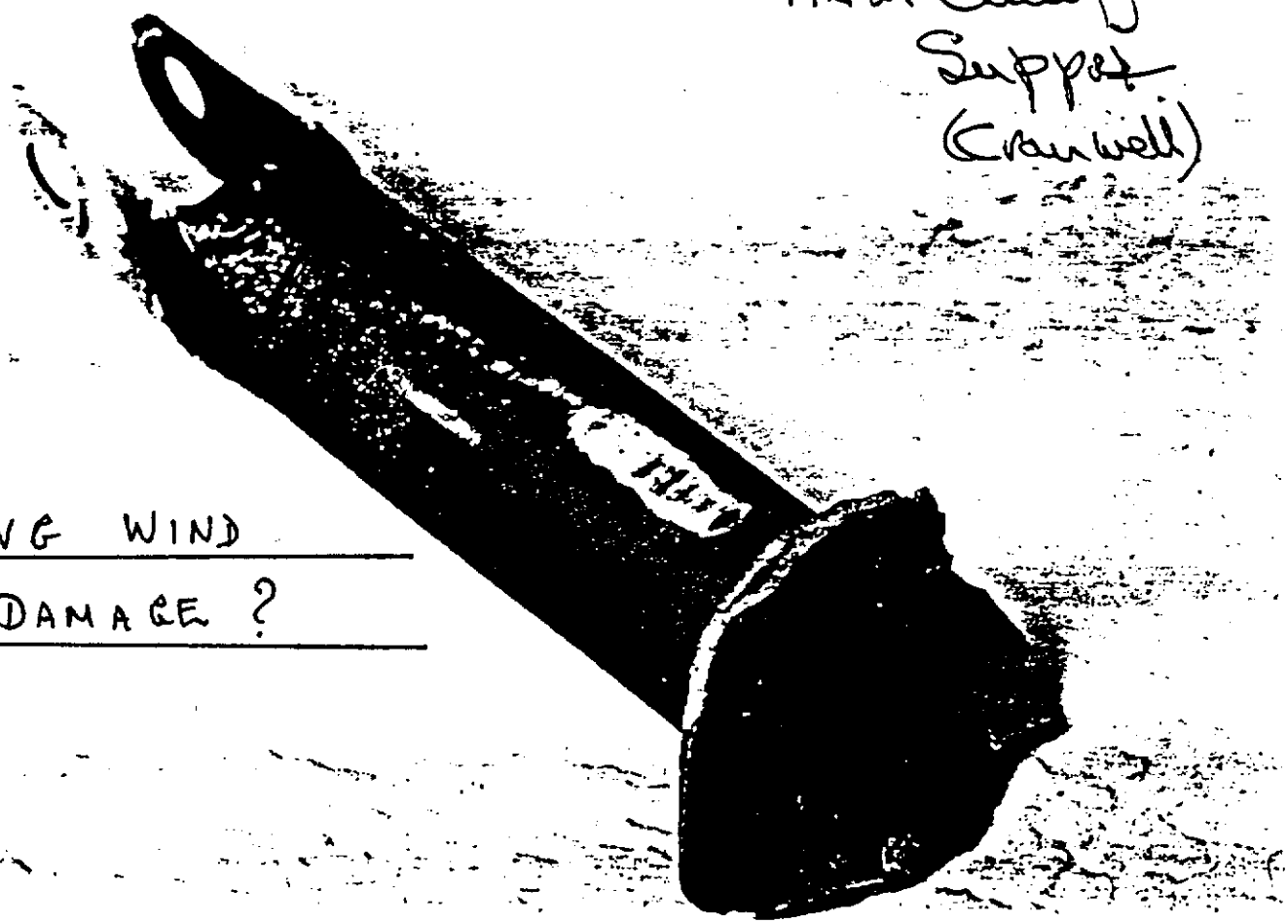
(c) The installation of new sealed wing lift strut assemblies as specified in paragraphs (a)(3) and (b)(3) of this AD is considered terminating action for the repetitive inspection requirement of this AD.

(d) The installation of F. Atlee Dodge wing lift strut forks as specified in paragraph (b)(4) of this AD is considered terminating action for the repetitive inspection requirement of paragraph (b)(1) of this AD.

KA 21. Support
(STRONG WIND Damage?)
(Cranwell)



KA 21 Canopy
Support
(Cranwell)



STRONG WIND
DAMAGE ?

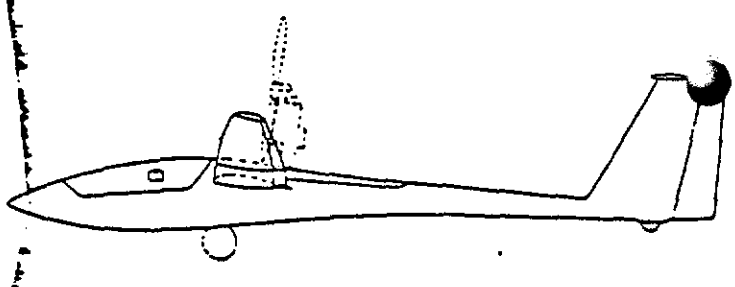
(Turbo) Motor Glider Handling

Motorglider Safety Tip...

Reprinted by Permission from Soaring Pilot Magazine Issue 2 1993.

"The engine on many motorgliders extends from a compartment behind the wing. The propeller is then behind the center of pressure, or center of lift created by the wing. If the engine fails during the takeoff climb, the drag of the prop and engine mechanism is substantial and will prevent a normal response to the proper stick forward motion to keep flying speed. The typical glider pilot might not push the stick forward far enough or with enough authority to make the nose go down positively. The result might be a stall at very low altitude. In fact, this is a possible solution to several motorglider accidents after a low altitude engine failure, followed by a stall-spin. If you fly motorgliders, you should do some practice of engine failure procedures (at a safe altitude). Pay particular attention to the amount of elevator travel and the time it requires to assume a normal gliding attitude. I would appreciate some reports about this subject".

Tom Knauff (USA).



T&S 7/8/93 CASIL

MAINTENANCE COMPLAINTS TO THE CAA

Increasingly, the CAA Aircraft Maintenance Standards Department is being asked to investigate complaints from aircraft owners and operators of general aviation aircraft about the size of maintenance contractors' bills and the standards of maintenance In most cases, we find that safety standards have not been compromised and that the real complaint concerns maintenance costs, which come about because the business arrangements between the parties involved have been inadequate or too informal for the complexity of the maintenance to be undertaken.This is an area in which CAA cannot be, and would not wish to be involved.

The complaints invariably have a common theme: the aircraft has only flown 100 or so hours since the last significant maintenance check, - LAMS 150 hour or Annual and now, at the Annual or 150 hour check, the engineers have come up with a long list of expensive rectification. The complainant invariably goes on to say that: *"had the last maintenance organisation done their job properly this rectification would not have been required, and how is it that the CAA can allow these organisations to continue to be approved when their work is of such a poor standard"?*

The CAA is duty bound to acknowledge complaints and to undertake an investigation into their background. Investigations have found that, in many cases, the allegations of shoddy and inappropriate maintenance are often unfounded and that the cause of the complaint can often be laid at the door of the complainant.

The problems which give rise to complaints are generally due to over expectation of what the certification of a check or annual inspection means to those who have to pay the bills.

Scheduled maintenance checks carried out to aircraft are intended to ensure that an aircraft remains airworthy. Achieving an acceptable level of airworthiness without unjustifiable cost is where the real problems lie.

All the maintenance programmes approved by the CAA are based on the philosophy of achieving an acceptable minimum standard of airworthiness. This in general terms means that, provided established inspection and good engineering standards are practised, a level of airworthiness will be sustained which is in keeping with achieving an acceptable minimum standard.

Another factor which will have a direct bearing on the condition of an aircraft is the extent of cosmetic maintenance carried out. This is over and above maintenance to achieve acceptable minimum airworthiness. They are clearly not the same thing. Cosmetic maintenance depends on how much one is prepared to spend. Cleaning an aircraft in order to facilitate proper maintenance is not cosmetic but cutting back the paintwork and polishing after a maintenance input clearly is. It is therefore essential that a clearly defined works order is agreed between the operator and the maintenance contractor for the protection of both parties. The CAA cannot act as an arbitrator in such disputes.

The following case is typical, it involves a second hand aircraft operated by a small group. The aircraft was old and had been worked hard; it had had an Annual Inspection and was certified as airworthy. The point that needs to be understood here is that it was declared airworthy until the next check (ie for a LAMS aircraft, the next 150 hours or Annual, whichever occurs first), on the basis of engineering judgement made at the time of the inspection, with interim Checks A and 50 hours Checks to monitor the progress towards the next check 150/Annual. These would be irrespective of routine defects that could reasonably be expected to occur. The aircraft reached the next 150 hours/ Annual Check, and at that inspection, with a different maintenance organisation, substantial and expensive work was considered necessary. The allegation that the extra work was due entirely to the last Annual Inspection not being done properly is almost impossible to substantiate, and it is not a case that the CAA can consider. The aircraft was declared airworthy at the previous Annual inspection and it had operated normally until its next Annual. This substantiates the original judgement that the aircraft, although old and somewhat worn, was airworthy and that the judgement made by the engineer who certified the previous check was correct.

Again, the fact that an aircraft has only flown 10 hours over a maintenance period and is then found to be in need of some expensive repairs may not be a valid reason for apportioning blame, because significant deterioration can take place when aircraft are not flown. A frequently used aircraft will normally be quite reliable.

....Continued Overleaf

It should be remembered that certain worn components such as tyres and brakes may be judged as only capable of sustaining an acceptable standard of airworthiness until the next 50 hour check.

Even if the maintenance contractor does not highlight this, and in the case of a private aircraft,- where the operator undertakes the responsibility for accomplishing the 50 hour Check,- if the item is missed it is the operator's responsibility and there is no case for a complaint to the CAA against the contractor who certified the last check. Nor is there a case for a complaint to the CAA which involves a disagreement between an operator and a maintenance contractor about lack of lubrication after or between scheduled maintenance inputs where an aircraft has been spruced up by the operator using an aircraft cleaning service employing steam cleaning equipment and shampoos, or by casual labour using excessive concentrations of cleaning fluid. *Aircraft, unlike cars and commercial vehicles are not designed to tolerate modern high performance cleaning processes without subsequent thorough relubrication.*

A significant factor in aircraft maintenance is the age of an aircraft; this is purposely highlighted in Paragraph 2 of Section 2 - Foreword - of the LAMS, which says: *the depth of inspection shall be related to the service history of the aeroplane/rotorcraft.*

Inevitably, there will be some variation in the interpretation of this statement and therefore in its application In investigating complaints from owners/operators about maintenance, the root of the story is often found in the owner's relationship with the maintenance contractor. Frequently it transpires that an owner/operator, who has had an aircraft maintained by one organisation or individual, suddenly finds somebody else who seems to be a bit cheaper and promptly transfers his business. The new organisation may then present a larger than anticipated bill for what apparently needed to be done. As well as the accumulated past knowledge of the overall airworthiness of the aircraft, the previous maintenance organisation may have been monitoring the state of various components/systems in terms of their serviceability, to get the maximum life from them. *This is completely overlooked in the anticipated lower costs of the new organisation.* Again it is not for the CAA to make judgements about such a case.

Many complaints stem from a lack of information in an aircraft's logbooks, particularly where the aircraft is secondhand. The complaint being that there are minimal records of past maintenance. Hydraulic pipe replacement/ pressure testing is a frequent example. Another example is that all the entries refer to work sheets which are not available to the owner/operator. These complaints highlight two points. The first point is that when buying a secondhand aircraft, the new owner does not always examine the logbooks for content. If the aircraft was purchased from a flying school, or other commercial air transport organisation, the aircraft records may well have been maintained through a technical records department, using component record cards and worksheets. In this event, the aircraft logbooks may well only contain the minimum legally required records. However a prospective customer is in a good position to obtain copies of all important supporting maintenance records. For example, Article 16 (3) of the Air Navigation Order states that: *entries in a log book may refer to other documents, which shall be clearly identified, and any other documents so referred to shall be deemed, for the purposes of this Order, to be part of the log book.*

When an aircraft and its log book(s) change hands, the new operator has a right to the custody of the complete log book(s) by virtue of Article 65 of the Air Navigation Order. The second point is that before to accepting delivery of the aircraft, the new owner/operator did not obtain a comprehensive statement of maintenance from the vendor. Such a statement should detail the maintenance status of the aircraft at time of purchase, as well as all out of phase maintenance, ie *repetitive Airworthiness Directives, calendar controlled items and items specific to the type, which if not in the LAMS supplements will be found in the manufacturers maintenance programme.*

Therefore finding alleged non-compliance with scheduled maintenance at the first Annual after purchase of an aircraft is not a matter for complaint to the CAA.

There is not much point in coming to the CAA with a complaint alleging maintenance malpractice several months after a maintenance event, particularly if the aircraft has continued to be flown by the owner/operator since that event. If an aircraft was not considered to be airworthy as the result of an alleged maintenance malpractice then it should not be flown and the incident should be reported to the nearest CAA Regional Safety Regulation Group office as a matter of urgency, because, if an accident does occur, all the flights after the alleged maintenance malpractice could be construed as flights with an invalid Certificate of Airworthiness. *Addresses for the CAA Regional Offices are to be found in Airworthiness Notice 29.*

The CAA will rigorously investigate complaints of genuine maintenance and airworthiness malpractice, provided they are put forward in good time and with comprehensive details. Investigating complaints is expensive in terms of time and resources, and the Authority cannot afford to expend resources on what so often turn out to be ill founded claims.

MBTT

MARINE BUILDER'S TRAINING TRUST

Reg. No. 1642305 *V.A.T. Reg. No. 522 0686 68*

HAZEL RD, WOOLSTON, SOUTHAMPTON SO2 7GB Tel: (0703) 446824
Fax: (0703) 431740

Our Ref:

G.R.P. HAND LAMINATING SKILLS COURSE PROGRAMME INCORPORATING CITY AND GUILDS SKILLS TEST

DURATION 5 DAYS

PARTICIPANTS This course is intended for members who require not only practical experience but also the technical knowledge for selection of suitable methods of G.R.P. application.

OBJECTIVES Course members will acquire the skills to:-

1. Carry out correct lay-up sequences and repairs procedures.
2. Identify various reinforcements and their correct application.
3. Recognise and diagnose various laminating faults.
4. Select various plug and mould making techniques.
5. Recognise the hazards inherent with G.R.P. processes and take action to meet the current requirements of the Health and Safety at Work Act. Carry out Safe Working practices in the storing and handling of hazardous chemicals and materials.
6. Undertake the appropriate City and Guilds Skills test for G.R.P. Hand Laminating.

COURSE CONTENT

TECHNICAL LECTURES

a) G.R.P. Safety

b) Resin and catalyst systems

c) Reinforcements and construction techniques

d) Plug and mould construction

e) Moulding methods

f) Faults analysis

INSTRUCTION AND PRACTICE

a) Mould preparation release systems

b) Resin mixes

c) Reinforcements and ratios

d) Lay-up procedures

e) Release and trimming

f) Correct repair techniques

CITY AND GUILDS SKILLS TEST

1. Multiple choice question papers
2. Practical Test

APPROVED TRAINING ORGANISATION

The MBTT is an equal opportunities training organisation

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Our Ref:

COURSE PROGRAMME

PROPOSED GRP/FRP COURSE DATES

1993

COURSE	DATE
GRP HAND LAMINATING SKILLS COURSE**	28 JUNE - 2 JULY
ADVANCED FRP TECHNIQUES COURSE	5 - 9 JULY
GRP HAND LAMINATING SKILLS COURSE**	12 - 16 JULY
GRP HAND LAMINATING SKILLS COURSE**	26 - 30 JULY
GRP HAND LAMINATING SKILLS COURSE**	6 - 10 SEPT.
GRP HAND LAMINATING SKILLS COURSE**	20 - 24 SEPT.
ADVANCED FRP TECHNIQUES COURSE	27 SEPT - 1 OCT.
GRP HAND LAMINATING SKILLS COURSE**	4 - 8 OCT.
GRP HAND LAMINATING SKILLS COURSE**	18 - 22 OCT.
ADVANCED FRP TECHNIQUES COURSE	25 - 29 OCT.
GRP HAND LAMINATING SKILLS COURSE**	8 NOV - 12 NOV.
ADVANCED FRP TECHNIQUES COURSE	22 - 26 NOV.
GRP HAND LAMINATING SKILLS COURSE**	29 NOV - 3 DEC.
GRP HAND LAMINATING SKILLS COURSE**	13 - 17 DEC.

**** INCLUDING CITY AND GUILDS SKILLS TEST**

FEES

GRP HAND LAMINATING SKILLS COURSE (including City and Guilds Test Fee)	**£290.00** + V.A.T. (totalling £340.75)
ADVANCED FRP TECHNIQUES COURSE	**£390.00** + V.A.T. (totalling £446.50)

CONDITIONS

All course fees are payable prior to the commencement of the course. 50% of all fees will be charged for bookings cancelled less than two weeks before the course starts. No refunds can be made in respect of cancellations received by the Trust after this period.

ACCOMMODATION

Ample accommodation is available in guest houses and hotels in and around Southampton and a list of addresses can be obtained on request.

JUN.93

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