

BRITISH GLIDING ASSOCIATION

TECHNICAL COMMITTEE

TNS 5/6/80

1. AIRWORTHINESS "AGGRO"

Please add to the 1980 Green Pages.

- 1.1. Bocian - cracks in Centre Section Structure. Bulletin BE-016/79 and TNS 10/79, require repetitive inspection. Attached sketch illustrates cracks that may develop (Reported by R. Jarvis, S.G.U. Portmoak).
- 1.2. Grob-Astir CS/CS77/CSJEANS. L.B.A. A/D 80-96 and Technical Information TM 306-13 (attached) requires Safety Device on INSPECTION COVER on top of fuselage, to prevent fouling of controls.
- 1.3. Bocian - Lower Rudder Hinge fractured. This defect is recurring and may be aggravated by incorrect adjustment of rudder stops (fibre). (Reported by F.W. Ireland, S.G.U.)
- 1.4. Water Ballast Tank - Leaks. The Gliding Federation of Australia have notified B.G.A. of this defect and recommended pressure test as per sketch attached. "Wet Wing" tanks may need to be "sloshed" with swimming-pool sealant, drained-off and dried, to prevent leakage into the wing structure.
- 1.5. PIK 20E - Insufficient Fuel Flow. Service Bulletin M-20E-4 dated 17/3/80 (attached), has been mailed to owners.
- 1.6. L.S.1., 2, 3 Series Gliders. Tech. Bulletin 38-1013 (Mailed to owners) requires replacement of the Spring Member in the elevator drive. LBA A/D 79-109 (BGA TNS 9/10/79) imposed speed Restriction of 108 knot pending compliance with T.B. 38-1013. (Bulletin received from Soaring Association of America).
- 1.7. Mini-Nimbus Series - Landing Gear. Tech. Note 328-5 (attached) draws attention to damage that may occur to front landing gear strut, by the brake arm during heavy landings, with brake on.
- 1.8. PIK 20D (Serial Nos. 20566 - 20593) Wing Surface Skin, improper bonding to the core on small spots. Service bulletin M.20D-24 requires inspection and repair in accordance with instruction LAM 3 (attached).

2. GENERAL MATTERS (GLIDERS)

- 2.1. ASW 19 - Bigger Air Brake Area. Tech. Note 11 introduces more effective airbrakes. Kit available from London Sailplanes, Tring Road, Dunstable, Beds.
- 2.2. ASW 20- Undercarriage Security Lock. R. Cousins, Kent G.C. has proposed the attached lock approved by the B.G.A. as a "Minor" modification Ref. BGA/ASW 20L/1/80.
- 2.3. Blanik Safe-Life. The B.G.A. Technical Committee, at their meeting 30/4/80, approved an interim life extension from 15,000 flights to 18,000 flights, pending a further review when strain gauge results become available from Australian Dept. of Transport. (Paper on Blanik Safe Life kindly prepared for B.G.A. by C. Duthy-James, Coventry G.C.)
- 2.4. Motor Gliders (and Tugs). Certificated for 3 years. On the Light Aircraft Maintenance Schedule (L.A.M.S.). The C. of A. only remains valid if maintenance is repeated at 50 HRS, 100 HRS and "annually" as spelt out in the L.A.M.S. for "Private" Category operators - please read page 6/3 and 6/4 of the L.A.M.S. schedule. Proforma maintenance schedules are available from B.G.A. office.
- 2.5. KA6CR Canopies. Tim McFadyen, Cotswold G.C., advises that KA8 canopies make enormous improvements to the all round vision of KA6CR's.
- 2.6. Gliders - New Types. Approved by B.G.A. Tech. Committee. Please add ASK21, and Wright "Falcon" to the list in B.G.A. Green Pages.

3. TUG AIRWORTHINESS "AGGRO"

- 3.1. Citabria - undercarriage attachments. Cracks have again been found, in the longerons to which the undercarriage leg is attached. Repeated inspection is required to avoid costly catastrophe. (Report by Buckminster G.C.).
- 3.2. Citabria - tow hook separated from the Tug. The whole "package" parted company! (Reported by Cambridge Gliding Club)
- 3.3. Piper PA.12/14/16/18/19/20/22 Series, also J4, J5 etc. An emergency A/D has been mailed to all owners, by CAA requiring immediate inspection/replacement of the Wing Lift Strut Forks Part No: 14481-00 and Part No. 11431 (used on J4) (Contact Service Dept. C.S.E. Kidlington 4311) - sketch to identify threads attached.
- 3.4. Tug Flight Manuals. Amended Towing Weights. Tug owner/operators are reminded to apply to C.A.A. (Airworthiness Division), Brabazon House, Redhill, Surrey RH1 1SN, for the latest amendment to their Flight Manuals, authorising increased weights, dual towing etc. Ref. TNS 3/80. para. 3.6. Any queries arising on the amendments should be referred to C.A.A.

- 3.5. Tug Tow Releases. With two fatal tug accidents in 1978 no club/owner/operator should be complacent about the correct location of tow releases, adjacent to the hand operating the engine power-lever and easily accessible, with upper-body restraint tight and under negative "G" conditions! (sketch attached).

4. GENERAL INFORMATION (TUGS)

- 4.1. Lycoming "Narrow-Deck" Cylinders (0-320-150 h.p. engines)  
This particular type of cylinder may become extinct in the not too far future! Therefore wise tug managers will invest in sufficient spares (new or reconditioned) to last them until the engine has to be replaced by an up-dated "wide-deck" version (For advice call Bill McNicholl, C.S.E., Kidlington 4321 or any other source of Lycoming engine spares).

4.2. Tug Managers Advisory Package (T.M.A.P.)

This B.G.A. document is available from the B.G.A. office price 90p and gives useful advice on the management of the most expensive pieces of equipment, owned/operator by any gliding club.



R.B. STRATTON  
CHIEF TECHNICAL OFFICER.

May 1980

## REASON

Insufficient fuel flow.PIK 20E.

## EFFECTIVITY

PIK 20 E serial numbers 20203-20259.

## DESCRIPTION

There have been field reports of insufficient fuel flow, which occurs as rough running when the electric fuel pump is off.

This has been caused by too tight securing clamps on the fuel hose and dirt in the fuel line.

## COMPLIANCE

Within the next five (5) hours of engine time or next maintenance, whichever occurs first.

## INSTRUCTIONS

1. Check that the clamps, securing the fuel line hoses, are in right shape so they do not deform the hose and thus affect the inner diameter.
2. Check the type of the fuel filter. If the type is Mopar Part No. 2084467, then perform the steps 3, 4, 5, 6, 7 and 8.  
If the filter not is a Mopar type, then perform the steps 4, 5, 6, 7 and 8.
3. Check the fuel filter connections if there are any possibilities for the filter to have cut pieces of the hose during the installation of the filter. If it can be seen that the hose is cutted, the carburettor must be opened and the inlet needle cleaned.

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P.T.O.

Lubricate the hose ends with oil and do not twist the hose when connecting the filter. Clean the fuel system by running fuel through the system with help of the electric fuel pump before the hoses are connected to the carburettors.

4. To ensure that the fuel flow is sufficient, a fuel flow test is to be made. Remove the fuel feed line, which comes from the electric fuel pump, at the Mikuni fuel pump on the engine pylon.
5. The fuel tank should be filled with ca 10 litres of fuel.
6. Measure the fuel flow by taking the time for a measuring can to be filled when the electric fuel pump is on. If the fuel flow is less than 35 litres/hour, the fuel system must be rechecked.
7. Change the fuel filter in the next 25 hours maintenance to a new filter P/N 20E-31-001a-11, (Purolator GF6/8S) which does not cut pieces from the hose.
8. Perform a test run. The engine must run at least 5600 rpm smoothly also when the electric fuel pump is off.

WEIGHT AND  
BALANCE

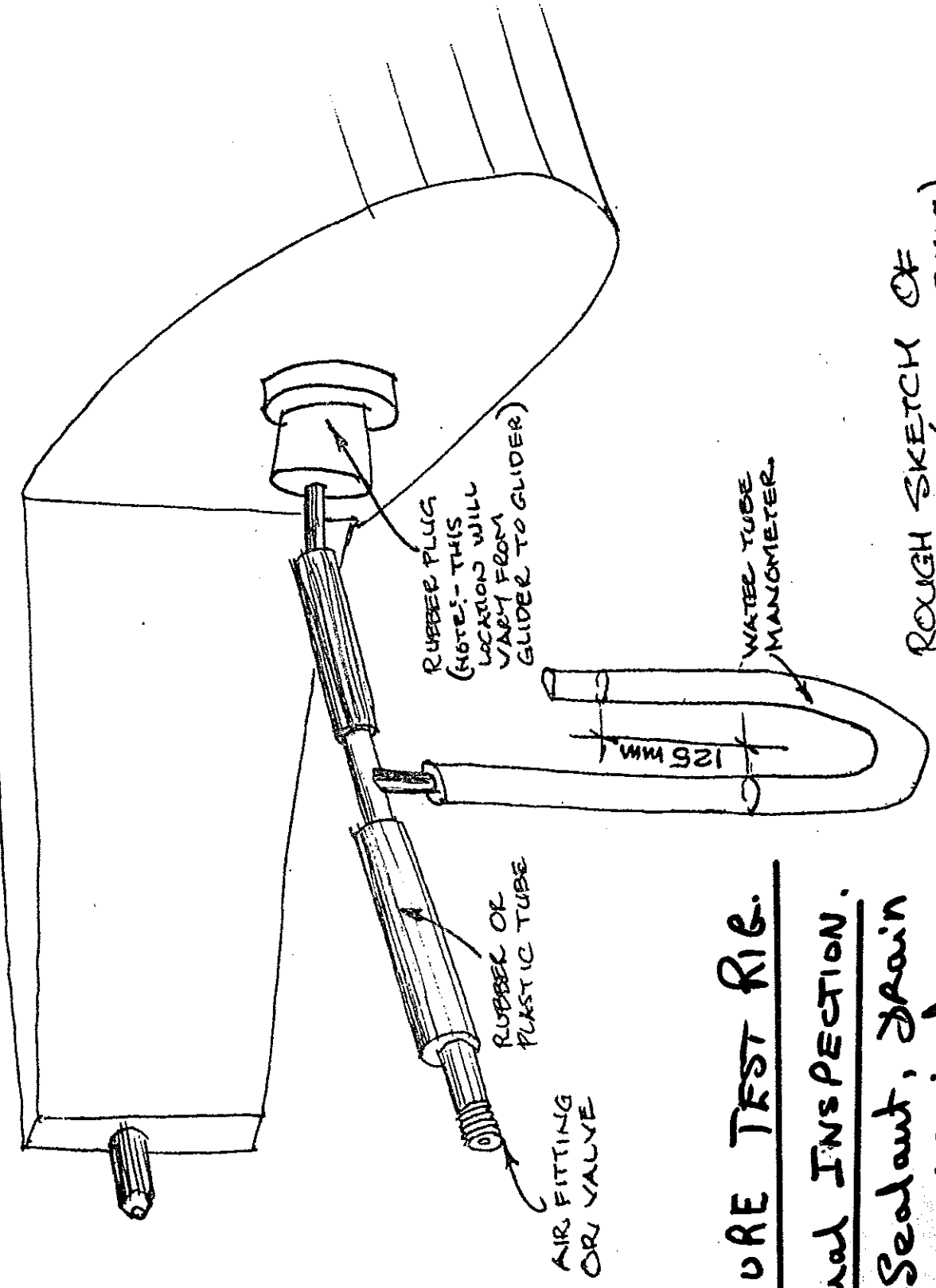
No effect.

APPROVED BY THE  
NATIONAL BOARD OF AVIATION  
IN FINLAND

WATER DALLAST TANKS.

TNS/S/80

GFA/AD/165.



PRESSURE TEST RIG.

ANNUAL INSPECTION.

LOSH' with Sealant, Drain  
is dry, as required.

ROUGH SKETCH OF  
TEST RIG. (NOT TO SCALE).

TNS/5/80

Schempp-Hirth  
GmbH & Co KG  
Kirchheim-Teck

Technical Note No. 328-5

Page 1 (2)

SUBJECT: Landing gear.

AFFECTED  
AIRCRAFT:

Sailplane Mini-Nimbus, T.C.No. 328  
Variants: Mini-Nimbus HS 7  
Mini-Nimbus B  
Mini-Nimbus C

COMPLIANCE:

Action recommended until December 31, 1980

REASON:

At heavy landings with wheel brake put on it is possible that the front landing gear strut may be damaged by the bearing pin for the brake arm. Therefore a replacement of the brake arm is recommended.

ACTION:

1. Solder off the nipple from the brake cable and take off the wheel with the brake arm.
2. Saw off the bearing pin for the brake arm inside of the front landing gear strut and file it down.
3. Put a new brake arm (drawing Mini-Nimbus HS 7 No. 10.039 A) onto the front landing gear strut (see sketch on page 2).
4. Mount the wheel and the brake cable and solder on again the brake cable nipple.

MATERIAL:

Brake arm in accordance with the Drawing Mini-Nimbus HS 7 No. 10.039 A.

WEIGHT:

Change can be disregarded.

C.G. POSITION:

Change can be disregarded.

P.T.O.

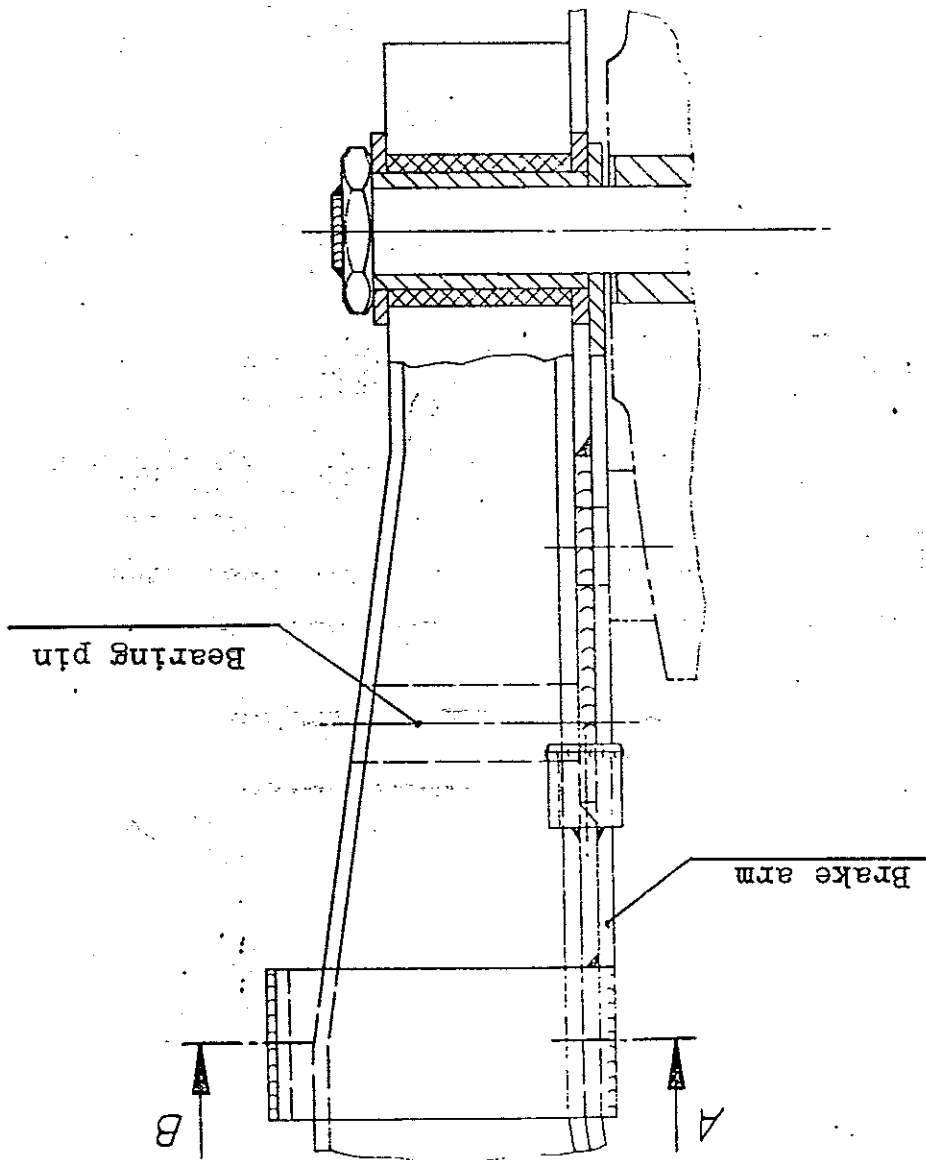
Kirchheim-Teck, January 11, 1980

Signature:

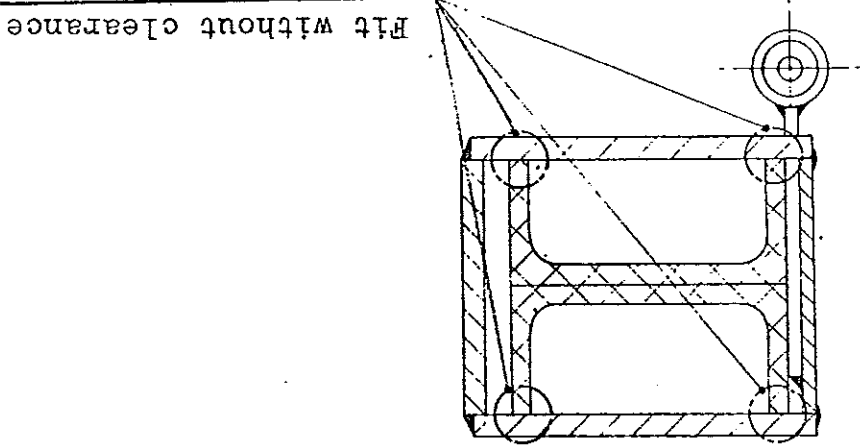
.....*Treiber*.....  
(Treiber)

LBA-approved:

January 25, 1980



Section A - B





**Installation of a safety catch inside inspection hatch on top of fuselage**

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**Materials:**

- 1 safety catch (102-W2653)
- 2 countersunk screws M4 x 15 DIN 963-58
- 2 washers 4,3 LN 9025
- 2 nuts M4 LN 9348
- 1 springcatch

**Tools:**

- 1 drill, 4,2 mm diameter
- 1 countersunk drill 90°
- 1 screwdriver medium
- 1 flatspanner 7 mm
- 1 plier

**Work instruction:**

- Install safety catch inside inspection hatch according to sketch.
- Open inspection hatch and remove key ring with elastic strings from the eyehook underneath the cover.
- Install safety catch 93 mm from the foremost edge of inspection hatch 90 degrees of longitudinal axis of fuselage. Bend ends of safety catch accordingly to shape of fuselage, and line up holes according to sketch.
- Before drilling the holes make sure, that the cover under no circumstances will slip through the inspection hatch behind the safety catch in direction of flight. Otherwise move position of holes back a further 2—3 mm.  
Safety catch must NOT fit under eyehook. Otherwise the elastic strings could not be hooked on.
- Drill holes according to the safety catch. Use 4,2 mm drill.  
Be careful when you use countersunk drill, that edges don't break out.
- Has everything been lined up fasten safety catch with the screws supplied.
- Fasten key ring on spring catch and put spring catch on eyehook of inspection cover.  
(Cover can now be removed from elastic strings when glider gets rigged up).
- If, because of spring catch, elastic strings should be too long, shorten strings by making a knot.

**Remarks:**

Inspection cover is secured with the safety catch against slipping inside the fuselage. To stop cover also from lifting after all these procedures it is advisable, prior to each flight, to secure inspection cover with two short adhesive tapes.

3. 3. 1980

gez. Dipl. Ing. H. Wilser

PIK 20 D

PKI 20 DF  
EIRI KY TNS/S/80  
EIRIAVION  
Kisällinkatu 8  
SF-15170 LAHTI 17

SERVICE BULLETIN April 12, 1980

M 20 D - 24 Page 1 of 1

SUBJECT Wing surface skin.

EFFECTIVITY PIK 20 D serial numbers 20566-20593

COMPLIANCE TIME During next monthly maintenance.

PURPOSE There have been cases where the wing surface skin has been bonded improperly to the core on small spots.

INSTRUCTIONS Inspect and possibly repair the wing surface skin bonding, according to Eiri Ky Working Instruction LAM 3, 12.04.1980.

WEIGHT AND BALANCE When the change of weight, in a possible repair, is greater than 1 kg, the glider must be reweighed.

REMARKS If improper bonding is found according to the inspection instructions given in the Working Instruction, please send the repair report to Eiri Ky.

APPROVED BY THE  
NATIONAL BOARD OF AVIATION  
IN FINLAND

22.8.80

PIK 20 F

S.B. M-20D - 29  
Sent out TWS/S/80

EIRI KY  
Jämijärven tehdas  
38300 JÄMIJÄRVI  
FINLAND

WORKING INSTRUCTION

LAM 3  
12.04.1980

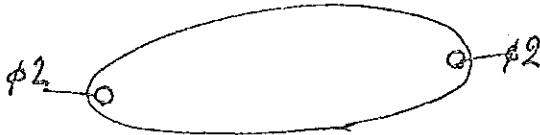


REPAIR OF SANDWICH STRUCTURES WHEN THERE IS AIR BETWEEN THE SURFACE LAMINATE AND THE CORE

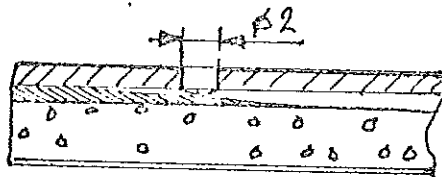
1. Locate the delaminated areas:
  - by taping the surface laminate, a broken area has a distinct sound
  - by viewing against a light, some of the delaminated area can be seen

Mark the areas by drawing a circle around them with a pencil. Areas bigger than 50x200 mm must be repaired according to PIK 20 D Repair Manual section 1. and 3.2.

2. Drill  $\phi 2$  mm holes at both ends of the delaminated area. See figure.



Do not drill into the PVC-foam, only through the surface laminate.



3. Inject LO2+H91 resin with a syringe, so that the lower hole is used for injection and the upper as a bleeding hole. Fill the space with resin until it starts to bleed from the other hole. Cover the holes with tape to prevent further bleeding. If the area, due to pressure of resin, bulges out it can be pressed down with a plate and foam rubber to divide the pressure.
4. When the resin has hardened, check the structure according to step 1. (Min. hardening min. temp. 20°C and 15 h.)

5. Fill and smooth out the holes. Smooth the area by sanding it wet with sandpaper grades 400 to 1000.
6. If the surface paint is sanded away, the area must be repainted, see Repair Manual.

'BOCIAN'

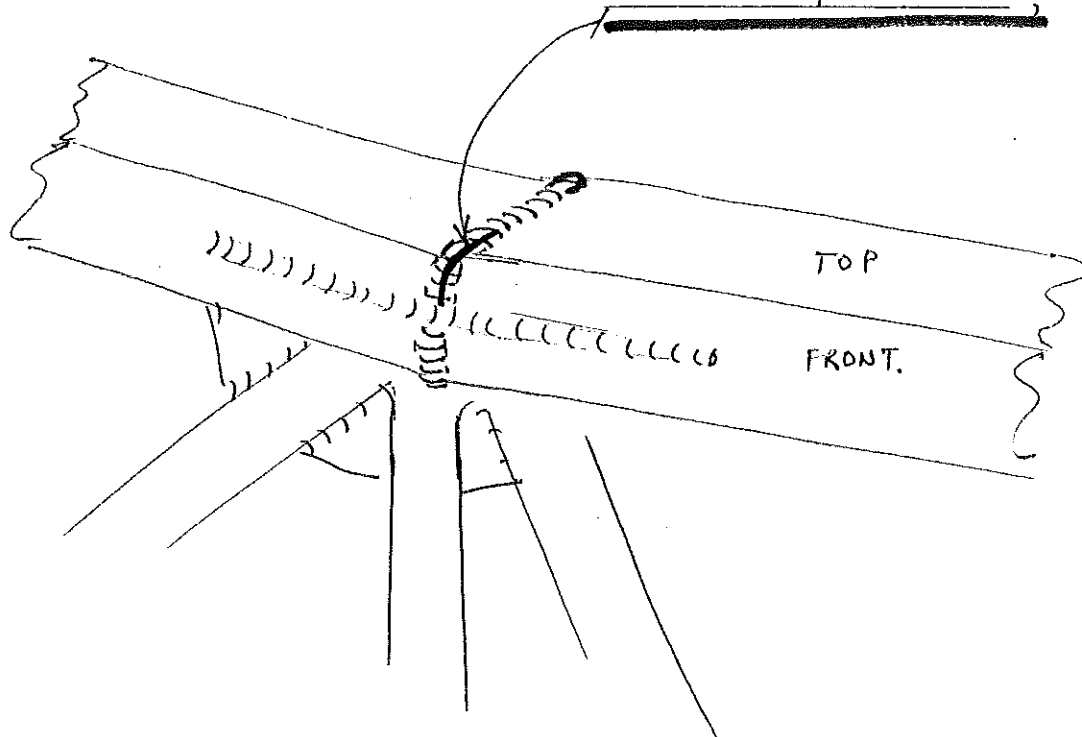
TNS/5/80

REF SKETCH N°2

BULLETIN BE - 016/79 BOCIAN

TNS/10/79. AD/CZLC/1890/79.

CRACK ON C/L OF WELD 1" LONG



BOCIAN 1.D

BGA 2242.

WKS N° 354.

MANUFACTURED 1959.

CRACK VISIBLE  
WITHOUT MAGNIFYING  
GLASS

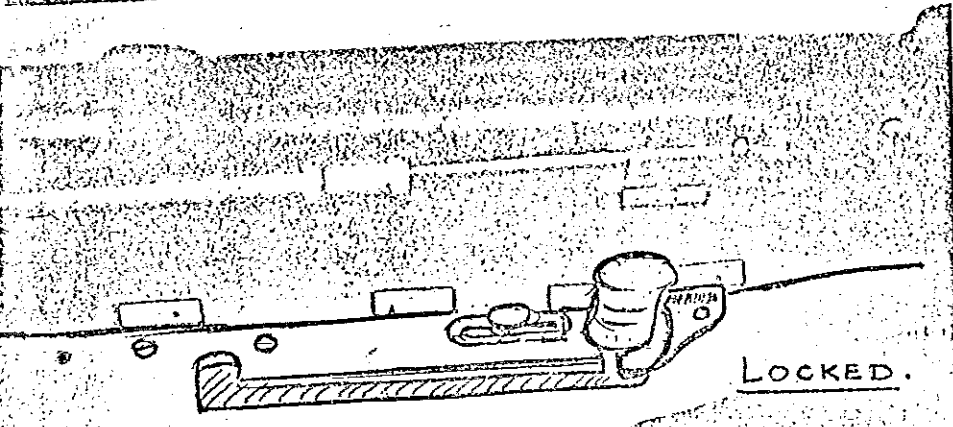
SGU  
PORTMOAK AIRFIELD  
SCOTLANDWELL  
BY KINROSS.

Norris JA 094ME  
2/5/80

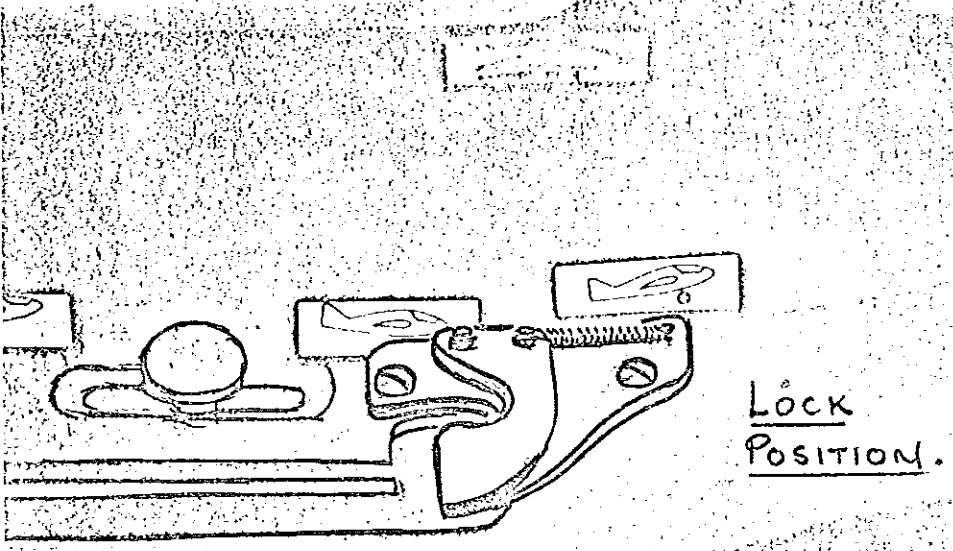
UNDERCARRIAGE  
SECURITY LOCK.  
FOR A.S.W. 20 L

R. COUSINS.  
WINGSPAN  
CHARING HEATH.  
KENT.

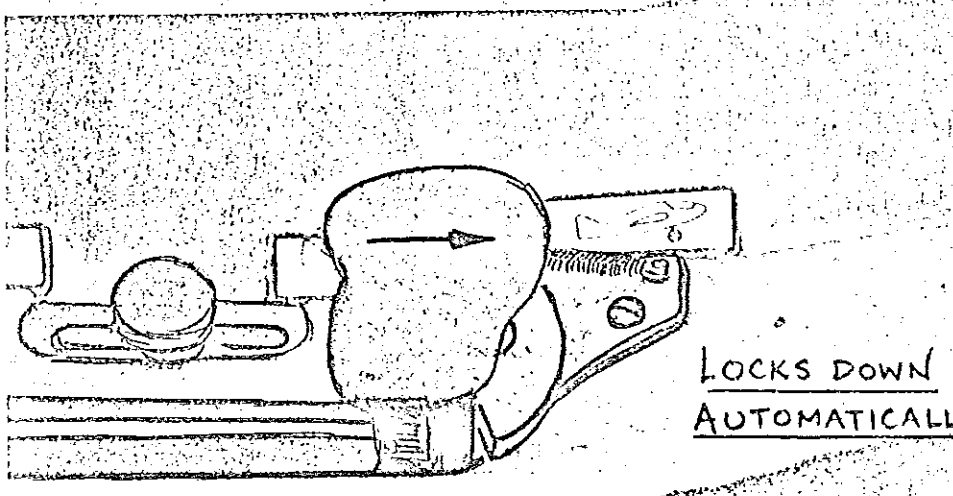
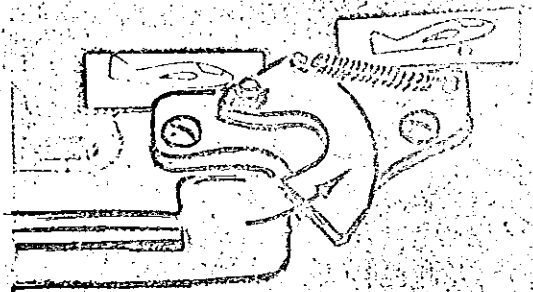
Mod No. 11/80  
8/5/80



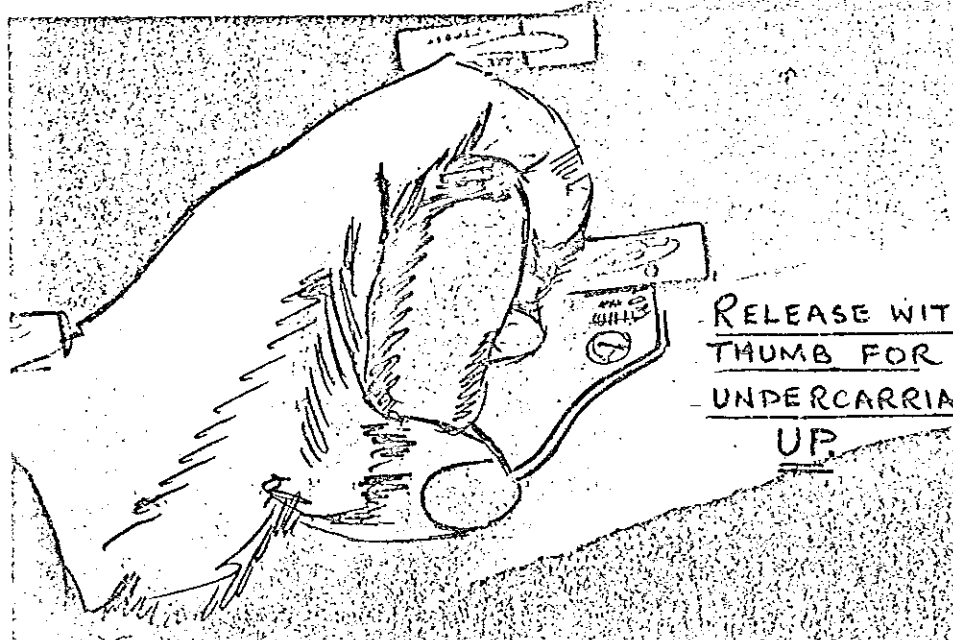
LOCKED.



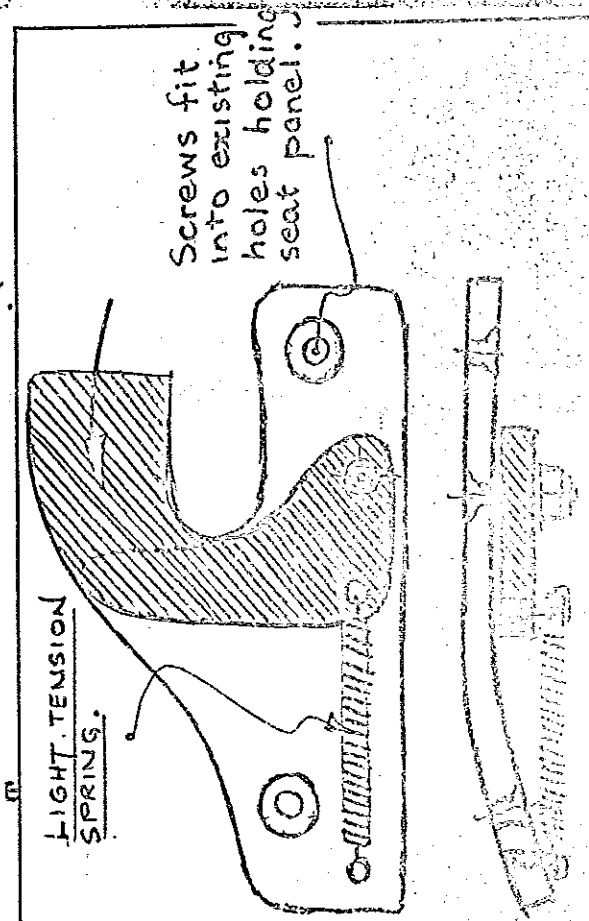
LOCK  
POSITION.



LOCKS DOWN  
AUTOMATICALLY.



RELEASE WITH  
THUMB FOR  
UNDERCARRIAGE  
UP.



Screws fit into existing holes holding seat panel.

LIGHT TENSION  
SPRINGS.

FULL SIZE VIEWS  
MAT: ALUMINIUM

DATE: 4-23-80

PCA/TNS/4/5/80



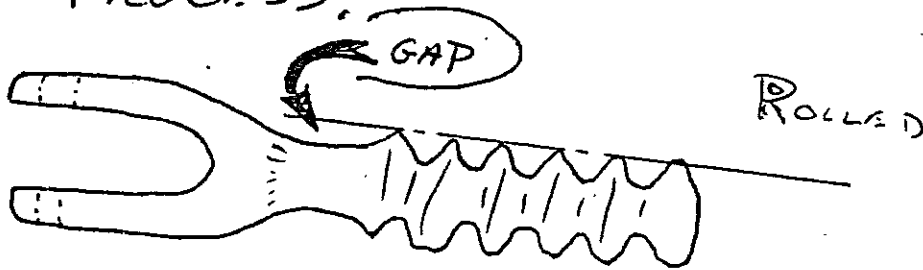
TO: RPSM'S

FROM: *[Signature]*

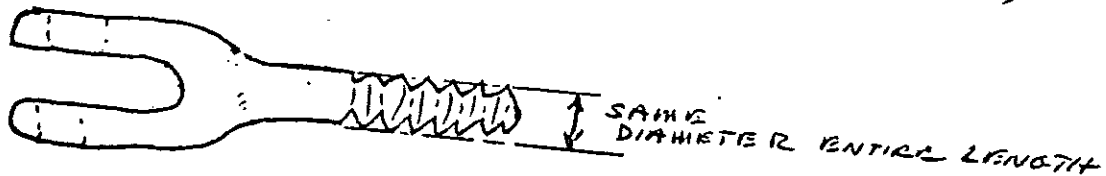
PIPER LIFT STRUT

SUBJECT: UPDATE ON LIFT STRUT AD

ROLLED THREAD FORKS CAN USUALLY BE IDENTIFIED BY THE FACT THAT THE THREAD AREA IS LARGER IN DIAMETER THAN THE SHANK, DUE TO THE THREAD ROLLING PROCESS.



MACHINED THREADS ARE USUALLY THE SAME DIAMETER AS THE FORK SHANK FROM WHICH THE MATERIAL WAS MACHINED (CUT)



MACHINED.

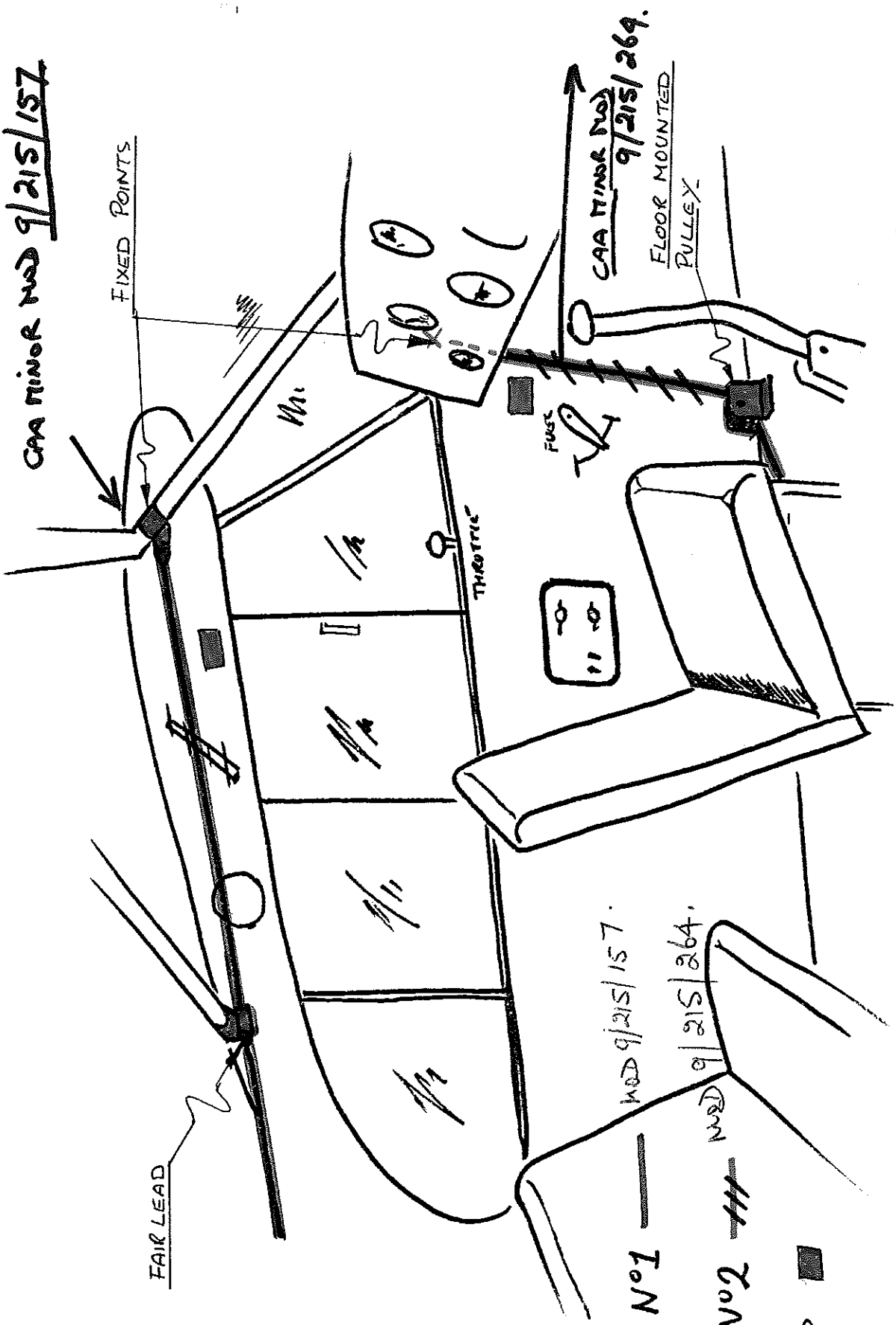
NOTE: SEVERAL DISTRIBUTORS ARE MAGNIFYING THEIR ENTIRE SHELF STOCK JUST TO BE SAFE.

116 101

How To Identify Rolled/Machined Threads on Piper Struts.

BCA TWS/S/80

CAA minor mod 9/215/157



C.S.E.  
IAN BISHOP  
13<sup>TH</sup> MAY 80

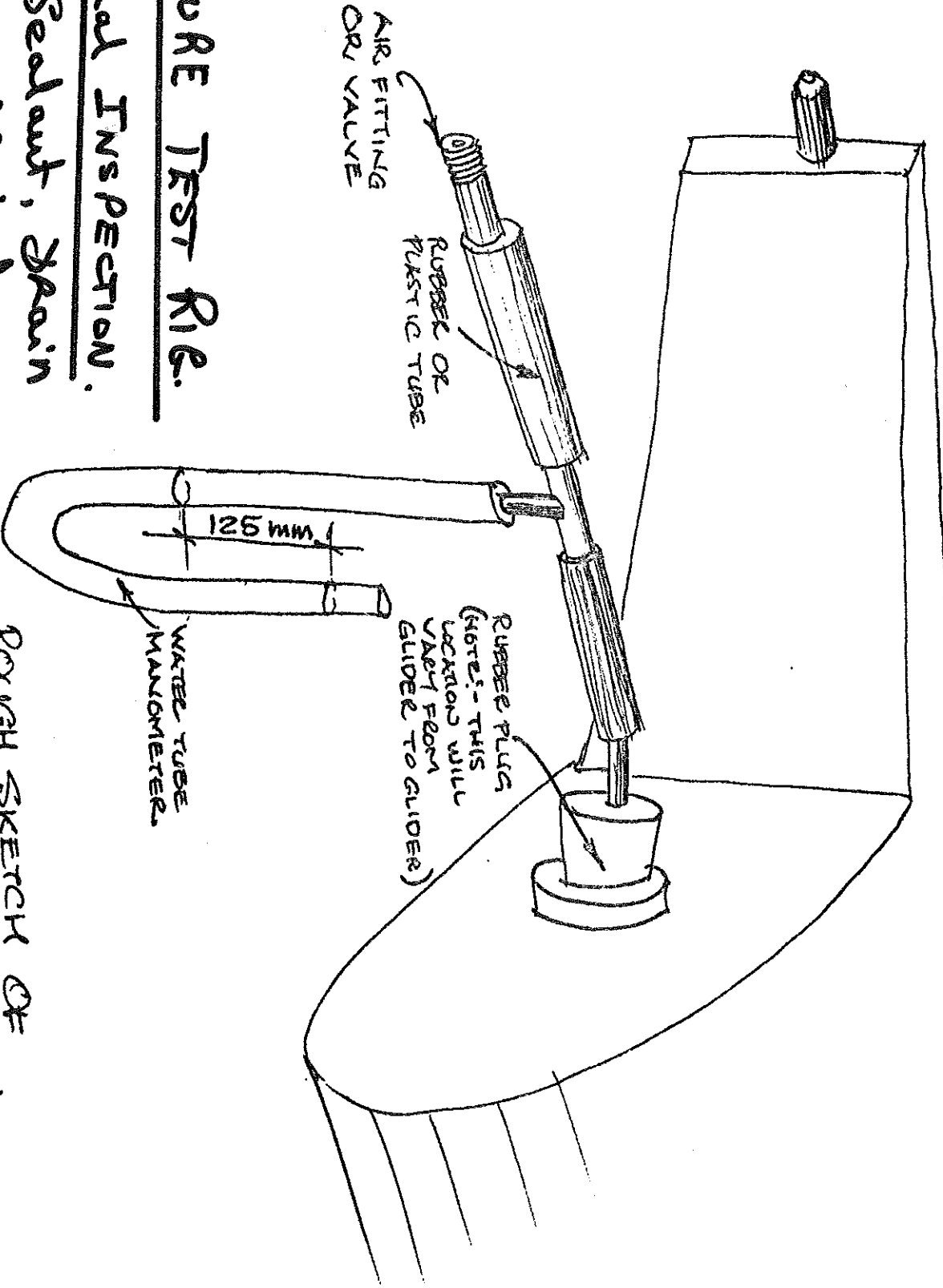
PA 18 (Series).

ALTERNATIVE SYSTEMS FOR GLIDER RELEASE



# WATER BALLAST TANKS.

TWS/S/80



## PRESSURE TEST RIG.

### Annual INSPECTION.

"SLOSH" with Sealant, Drain and dry, as required.

ROUGH SKETCH OF TEST RIG. (NOT TO SCALE).

GFA/AD/65.