TITLE:	Hardware Modification for AD32 Air Data Display (Antivibration measure for AD32 HW4.10)
DOCUMENT NUMBER:	SB AD32/08
EQUIPMENT:	AD32 Air Data Display

RECORD OF REVISIONS

Rev.	Date	Reason for Revision	Prepared	Checked	Approved
1.0	16 Jul 2025	Initial Release	A. Siva	U. Jaeger	G. Schaffner

SERVICE BULLETIN

1. Planning Information

A. Effectivity

The modification procedure described in this Service Bulletin applies to the AD32 Air Data Display with HW 4.10.

B. Concurrent Requirements

None required.

C. Reason

This document is issued to provide information about the mechanical hardware change for a higher vibration protection. This change request is based on the customer requirement described in report RPT-798.

D. Description

The following hardware modification must be done to accomplish a higher Vibration protection in order to the mitigated Test category of MIL-STD-810D, Method 519.3 :

Gluing of the pointer on the motor axle.

Siliconizing the PCB connectors.

Replacement of the MOD status and identification labels.

E. Compliance Recommendation

This Service Bulletin is to introduce improvements for a better vibration protection. Accomplishment is optional.

F. Approval

The AD32 Air Data Display conforms to TSO-C106, TSO-C88a, and TSO-C10b.

This Service Bulletin contains no modification information that revises the approved configuration and therefore does not require any implementation of governmental or other regulatory agency approval.

G. Manpower

This modification can be done by THOMMEN AIRCRAFT EQUIPMENT AG or its approved service centres.

The modification (excluding removal, reinstallation of the unit and acceptance test) requires approximately one man-hour.

H. Weight and Balance

The Weight will slightly increase to the amount of the used glue and silicon.

I. Electrical Load Data

Not changed.

J. Software Accomplishment Summary

Not applicable.

K. References

REFERENCE	ITEM
WIN-0010-002	Work Instructions - AD32
CMM-34-16-10	Component Maintenance Manual - AD3x.()
IPL-34-16-10	Illustrated Parts List and List of Special Executions - AD3x.()
AD-QTR-AW129	AD32 Qualification Test Report
TR-0010-19445	Technical Report “Investigation after failures found after failures found during vibration test”
RPT-798	Anti Vibration Measures for Gun Fire Vibration Test on AD32.EK
RPT-1074	Implementation of Anti Vibration Measures for AD32.EK for AW129 Project

L. Other Publications Affected

REFERENCE	ITEM
AD-DDP-400 Rev 4.4	Declaration of Design and Performance
AD-INSOP-400 Rev 2.2	Installation and Operation Manual - AD3x.()

M. Interchangeability of Parts

EXISTING PARTS		AINTIVIBRATION TREATMENT
ITEM	PART NUMBER	PROCESS
Zeiger kpl	211595524	Gluing together with Locking fluid
Motor-Modul kpl	211622913	
PCBA POWER 28VDC AD3X/AC3X	211621223	--
=>2 x 15 pin PCB connector	80131441	Siliconizing the connectors
=>2 x 10 pin PCB connector	80131446	Siliconizing the connectors

All other parts are unaffected by this Service Bulletin.

2. Material Information

A. Material - Price and Availability

The hardware parts/materials required for this modification are procured by THOMMEN AIRCRAFT EQUIPMENT AG or its approved service centres.

Installation of this Service Bulletin is subject to no special pricing.

For more information please contact:

THOMMEN AIRCRAFT EQUIPMENT AG
Technical Support Department
Hofackerstrasse 48
CH-4132 Muttenz
Switzerland
Tel: +41 (0)61 965 22 22
Fax: +41 (0)61 965 22 88

NOTE:
All units subject for modification must be scheduled prior to shipping. Contact THOMMEN AIRCRAFT EQUIPMENT AG for further lead time and delivery schedule.

B. Tooling - Price and Availability

No special tools are required.

3. Accomplishment Instructions

The modification procedure can be accomplished by THOMMEN AIRCRAFT EQUIPMENT AG or its approved service centres.

A. Preparation

(1) Have the unit ready and check carefully whether this SB is applicable to this device

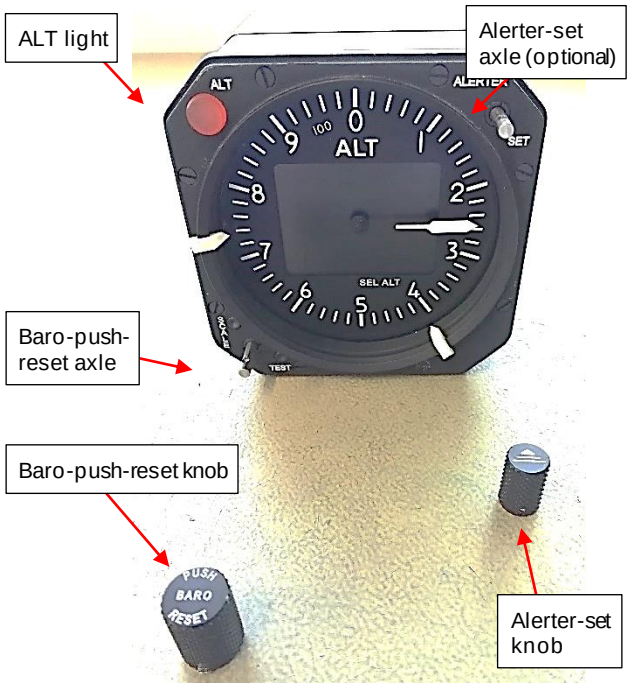
(2) Make sure that the workstation is clean and clear of unwanted parts and materials

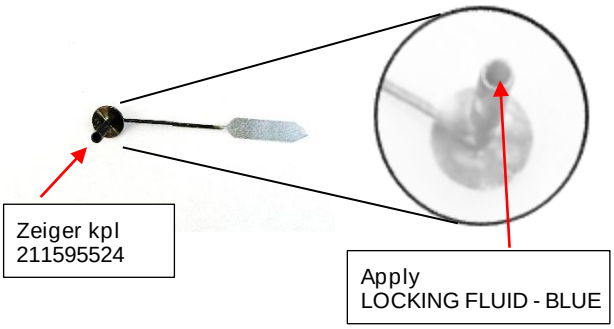
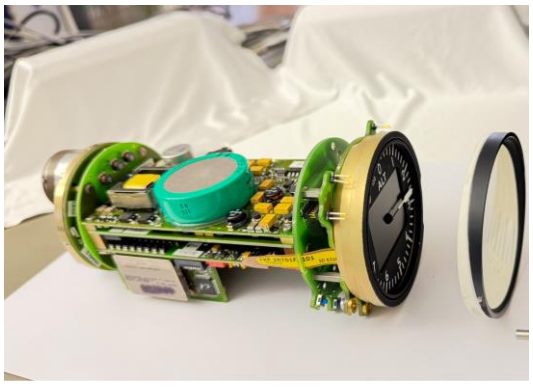
B. Procedure

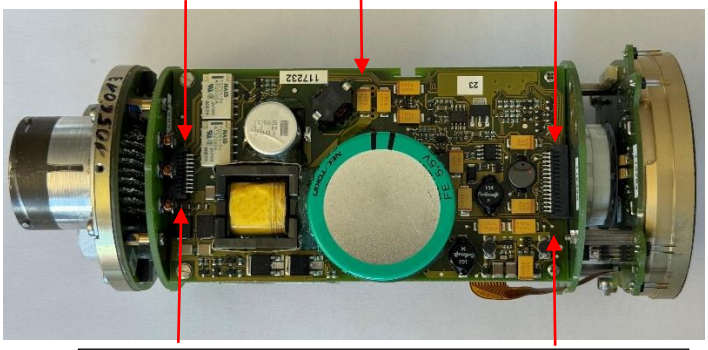
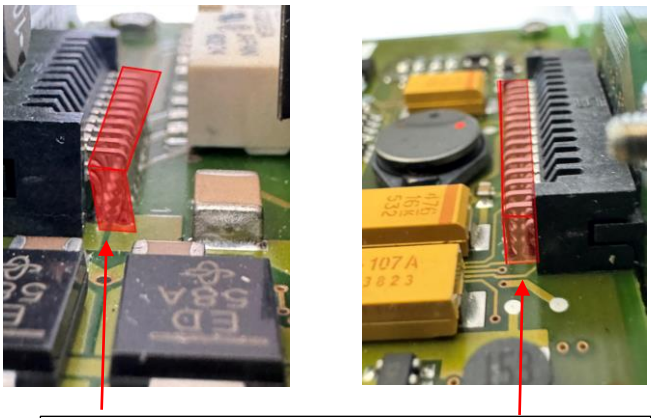
CAUTION: THE PRINTED CIRCUIT BOARDS (PCB) INSIDE THE AD32 ARE ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) PARTS. YOU MUST MAKE SURE THAT THE WORKSTATION IS ELECTROSTATIC DISCHARGE (ESD) COMPATIBLE BEFORE DOING THE FOLLOWING PROCEDURE.

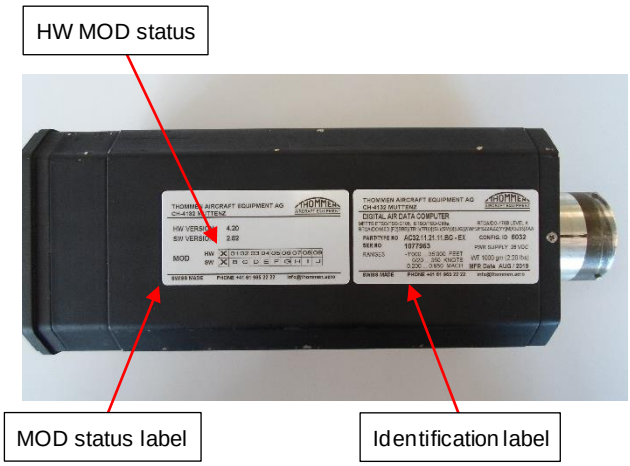
CONSUMABLES

REFERENCE	ITEM	USED IN PROCEDURE - STEP
55553001	LOCKING FLUID - BLUE	3
55621038	SILICONE ADHESIVE, 3145 (TRANSPARENT)	5 , 6
70580007	SYRINGE (5 CC)	3

STEP	PICTURE	PROCEDURE
1		NOTE: The AD32, HW 4.10, can be either with or without an ALT light. The AD32, HW 4.10, can be either with or without an alerter-set knob. This procedure is the same for all variants. Remove the grub screw from the baro-push-reset knob, then remove the knob from the axle. If installed, remove the grub screw from the alerter-set knob, then remove the knob from the axle. Clean the two knobs and grub screws.

STEP	PICTURE	PROCEDURE
2	 Zeiger kpl 211595524	Dismantle the front ring and housing. Gently remove the pointer (Zeiger kpl) from the fitting of the motor kpl. *This procedure and steps 3 to 4 only need to be carried out if the pointer is not already glued to the motor shaft.*
3	 Zeiger kpl 211595524 Apply LOCKING FLUID - BLUE	Apply LOCKING FLUID - BLUE in the shaft of the pointer with a SYRINGE. Make sure that a small amount is sufficient. The Locking fluid should not overflow from the socket. Without any further delay stick the pointer back into the motor shaft.
4		Put all parts back in place. Press the centering ring on the main assembly. Make sure that the recess at the bottom of the centering ring aligns with the recess next to the lighting PCB.

STEP	PICTURE	PROCEDURE
5	 Only these two PCB connectors need to be siliconised	Prepare the siliconization of the PCB connectors on the Power board. This treatment is done only for the two connectors on Power board. Apply SILICONE ADHESIVE on the angled 20 pin and the 15 pin PCB connector. *This procedure and step 6 must be carried out if* SILICONE ADHESIVE *has not already been applied to the PCB connectors.*
6	 Cover only the pins with SILICONE ADHESIVE	Only cover the pins with the SILICONE ADHESIVE . No SILICONE ADHESIVE should get between two PCBs. The power board must still be removable after this treatment.

STEP	PICTURE	PROCEDURE
7		Assemble all parts together. Print a new MOD status label with the HW MOD status incremented (all other information is unchanged). Print a new identification label (all information is unchanged). Attach the new labels to the new housing as shown in the photograph. NOTE: The photograph shows only typical identification labels. Do not copy the information shown.

C. Close Up

Do an acceptance test in accordance with the applicable Acceptance Test Procedure (ATP) and the associated Acceptance Test Record (ATR).

All testing will be carried out by THOMMEN AIRCRAFT EQUIPMENT AG or its approved service centres.