

RECOMMENDED SERVICE BULLETIN

RSB 40-047/4

RSB D4-052/4

RSB F4-008/3

SUPERSEDES RSB40-047/3, RSBD4-052/3, RSBF4-008/2

I TECHNICAL DETAILS

I.1 Category

Recommended

I.2 Airplanes Affected

Type: DA 40 D

Serial Numbers: D4.001 through D4.258 with G 1000 installed

Note: DA 40 and DA 40 F aircraft stated in previous revisions of that service bulletin are considered to be not affected by this service bulletin.

I.3 Date of Effectivity

13-Sep-2006

I.4 <u>Time of Compliance</u>

At owners discretion.

I.5 Subject

To improve service reliability, if the "HDG FAIL" indication is occasionally displayed on the PFD Diamond Aircraft Industries recommends the replacement of the right hand aileron and the relocation of the GMU 44 magnetometer.

I.6 <u>Reason</u>

In the past some heading failure annunciations where triggered by interference of the aileron integrated mass balance with the magnetometer. If the "HDG FAIL" indication is occasionally displayed on the PFD, it is therefore recommended to install a new right hand aileron, which contains a brass counterweight instead of the previously used steel counterweight.

In addition it is recommended to relocate the GMU 44 magnetometer.

I.7 <u>Concurrent Documents</u>

None.



I.8 Approval

The technical information or instructions contained in this document relate to the Design Change Advisories No. MÄM 40-270 and OÄM 40-224/f, which has been approved under the authority of EASA Design Organization Approval No. EASA.21J.052.

The technical content of this document has been approved under the authority of EASA DOA No. EASA.21J.052.

I.9 Accomplishment/Instructions

Comply with WI-RSB-D4-052, latest effective revision.

I.10 Mass (Weight) and CG

n. a.

II PLANNING INFORMATION

II.1 Material & Availability

See WI-RSB D4-052, latest effective revision.

II.2 Special Tools

See WI-RSB D4-052, latest effective revision.

II.3 Labor effort

Approximately 4 hrs.

II.4 <u>Credit</u>

None.

II.5 <u>Reference Documents</u>

DA 40 Series Airplane Maintenance Manual Doc. No. 6.02.01, latest effective revision

III <u>REMARKS</u>

- 1. All measures may only be carried out by Diamond Aircraft Industries or certified Diamond Aircraft Service Centers.
- 2. Accomplishment of the measures must be confirmed in the log book.
- 3. In case of any doubt, contact Diamond Aircraft Industries.



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WORK INSTRUCTION WI-RSB-D4-052 "REPLACEMENT OF RH AILERON AND GMU 44 RELOCATION"

I GENERAL INFORMATION

I.1 Subject:

Replacement of the right hand aileron and the relocation of the GMU 44 magnetometer to improve service reliability of the HDG indication displayed on the PFD.

I.2 <u>Reference Documents:</u>

Diamond Aircraft DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

I.3 <u>Remarks:</u>

- a) The work must be carried out by Diamond Aircraft Industries or certified Diamond Aircraft Service Centers. In case of doubt, contact Diamond Aircraft.
- b) All works, particularly those that are not especially described in this work instruction, have to be carried out in accordance with the referenced maintenance manual.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings:

D4D-5741-00-00x02 D4D-9231-60-01

II.2 Special Tools:

Marking template D4D-5741-00-SO-... (... for Serial Number of Template).

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II.3 Material

Replacement of RH aileron:

Qty	Description	Part Number
1	Right hand aileron	DA4-5762-00-00_1
5	Spring pin	DIN1481-1.5X10-A2
1	Hexagon nut, self locking	DIN985-M6-A2
4	Screws	DIN 7971-C3.5x13-A2

Relocation of GMU 44:

Qty	Description	Part Number
1	Access cover	DA4-5741-23-00
1	Harness extension	D4D-3143-63-00-SB
3	Screw	MS 35214-29
3	Washer	DIN 125A-M4-PA
1	Clamp	187-7700
1	Screw	MS 35214-25
3	Collar bush	D4D-5741-00-30
2	Tie wrap base	EMS-A-D0
3	Tie wrap	PLT2SM30
2	Tie wrap	PLT1MM30
7	Solder sleeve	666-054
1	Terostat MS 9380	MS9380

III INSTRUCTIONS

1.	If RSB D4-052, RSB D4-052/1 or RSB D4-052/2 has been complied with, proceed with item 8.
2.	Remove right hand aileron according to the instructions given in AMM Section 57-60.
3.	Install aileron p/n DA4-5762-00-00_1 according to the instructions given in AMM Chapter 57.
4.	Carry out aileron control system test procedure according to AMM Section 27-10.
5.	Carry out aileron adjustment procedures if out of tolerance.



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6.	Remove the GMU 44 magnetometer in accordance with the instructions given in the AMM.
7.	Replace the 4 screws of the strain relief of the GMU 44 connector and harness connector with DIN 7971-C3.5x13-A2 screws.
8.	Remove RH wing-tip.
9.	Mark drillholes using marking template D4D-5741-00-SO. Refer to Drawing D4D-5741- 00-00x02 and photos. Note: Use notch on Template for measuring. Caution: You must not use marking template as a drilling template!
	345 mm inboard of this edge Or 375 mm inboard of trim edge



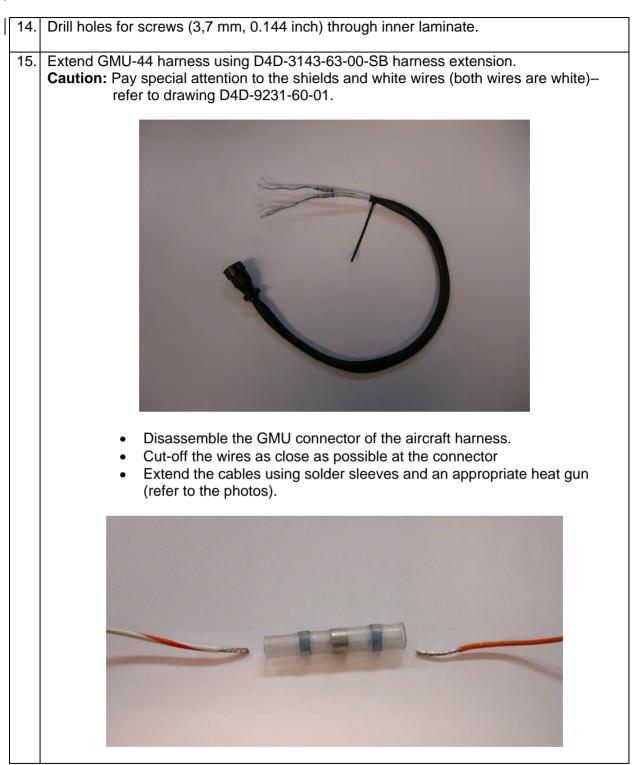
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16.	Install clamp 187-7700 using screw MS 35214-25 on magnetometer and clamp harness plug. Refer to drawing D4D-5741-00-00x02.
17.	Secure harness using a tie wrap socket and a tie wrap. Bond base to wing shell using either bonding paste or 5-min-epoxy.
18.	Install the GMU 44 – assembly in new location using screws MS 35214-29. Secure screws with Loctite 262.
19.	Clean working area and check for foreign objects.
20.	Install access cover DA4-5741-23-00 on access hole at old GMU 44 location.
21.	Install RH wing-tip.
22.	Perform functional check of altered, repaired and new parts.
23.	Test all systems in working area for proper function.
24.	The GRS/GMU calibration must be done in accordance with the instructions given in the G1000 Line Maintenance and Configuration Manual, section 6.4.3. (Only the calibration procedures B (magnetometer calibration), D (engine run-up vibration test) and E (magnetic interference test) must be performed.) Note: For magnetic interference test sequence refer to Appendix A.
25.	Make all necessary entries in the aircraft logs.



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APPENDIX A

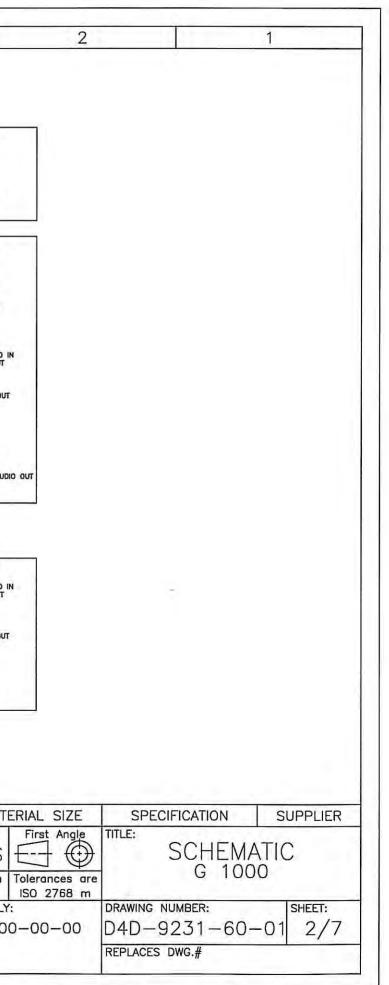
Magnetic interference test sequence:

Elapsed Time since Start of Test	Action
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0:00	Test begins
0:10	Aileron full right
0:20	Aileron full left
0:30	Aileron level
0:40	Flaps down (LDG)
0:50	Flaps up (UP)
1:00	Position lights on
1:10	Position lights off
1:20	Strobe lights on
1:30	Strobe lights off
1:40	End of test

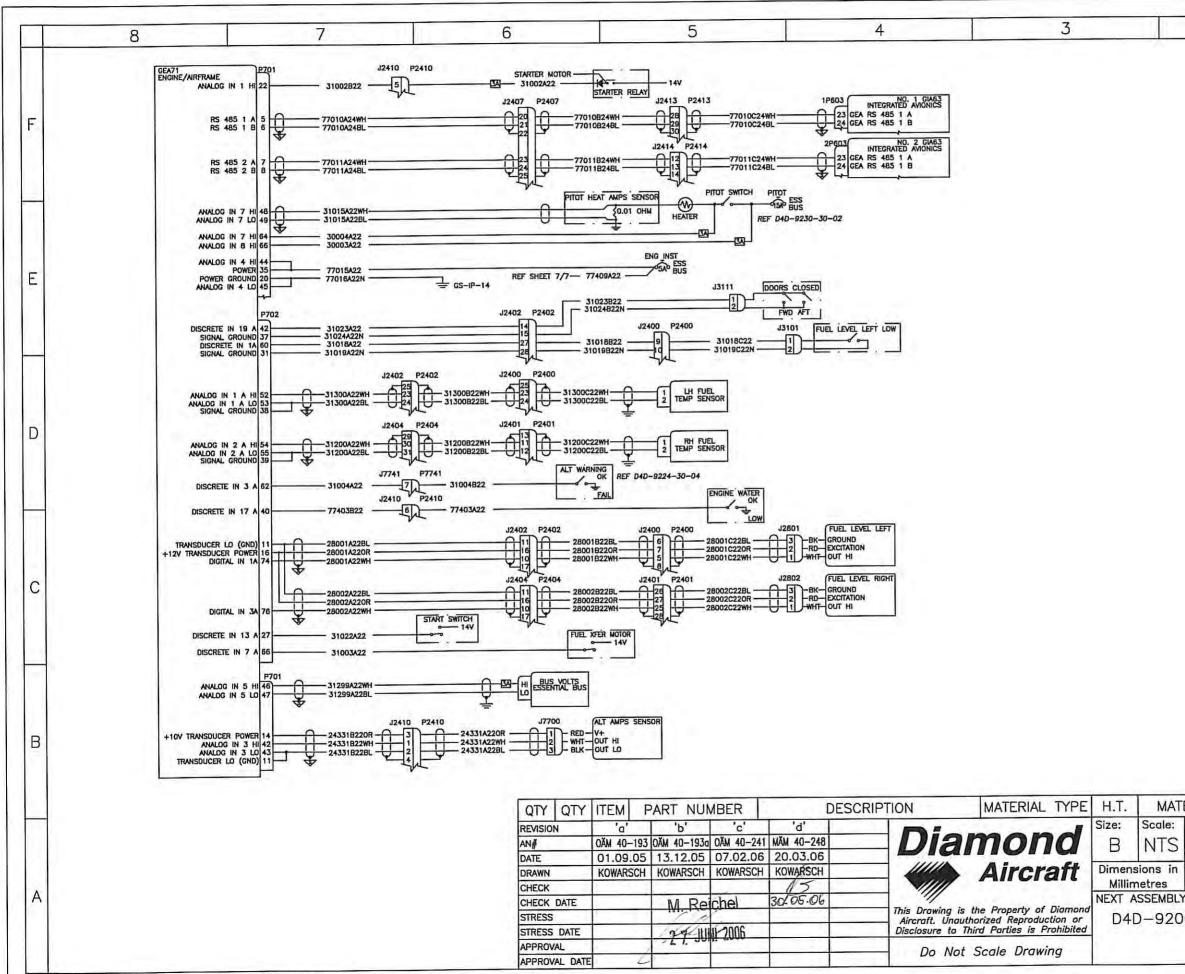
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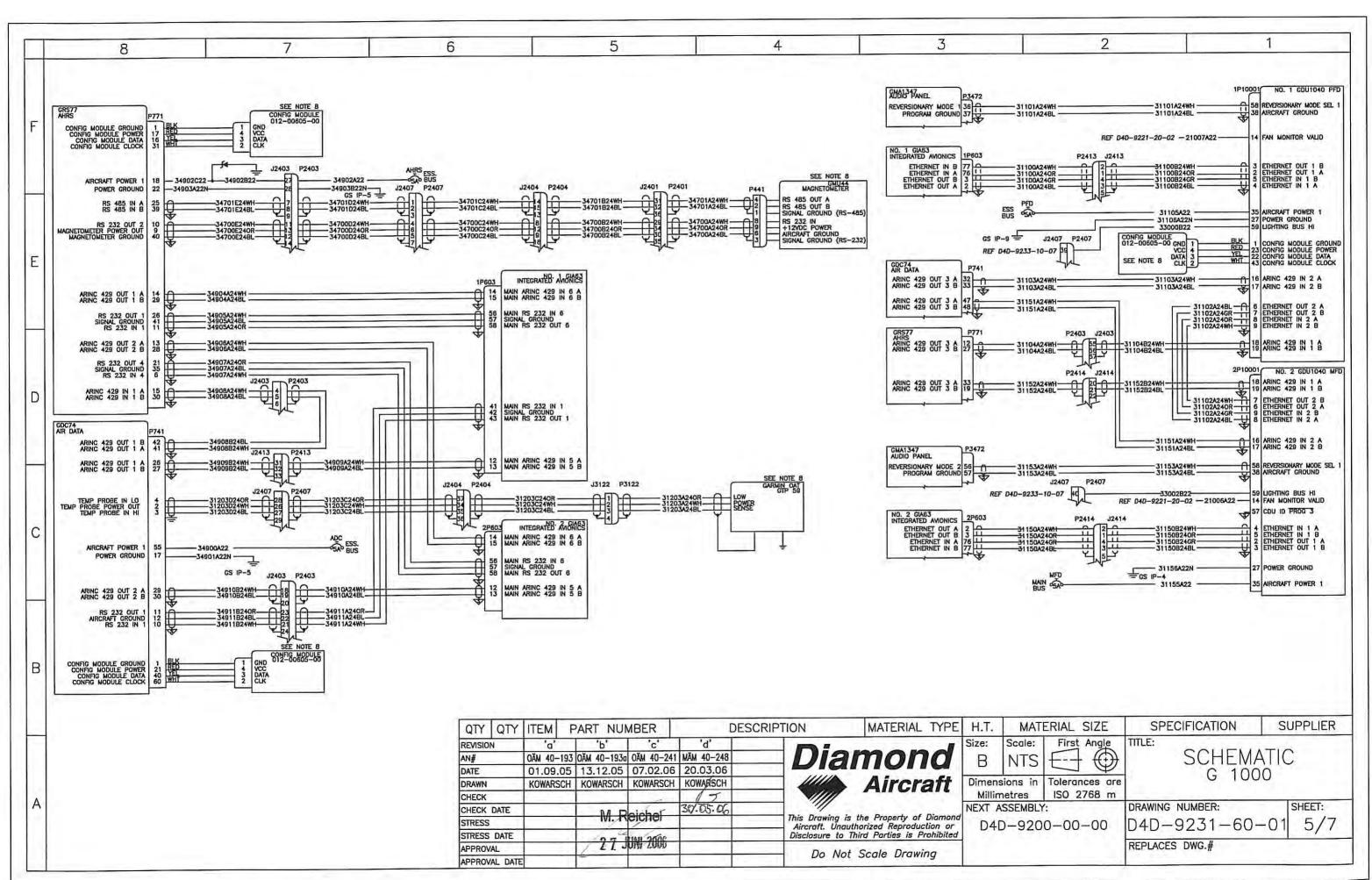
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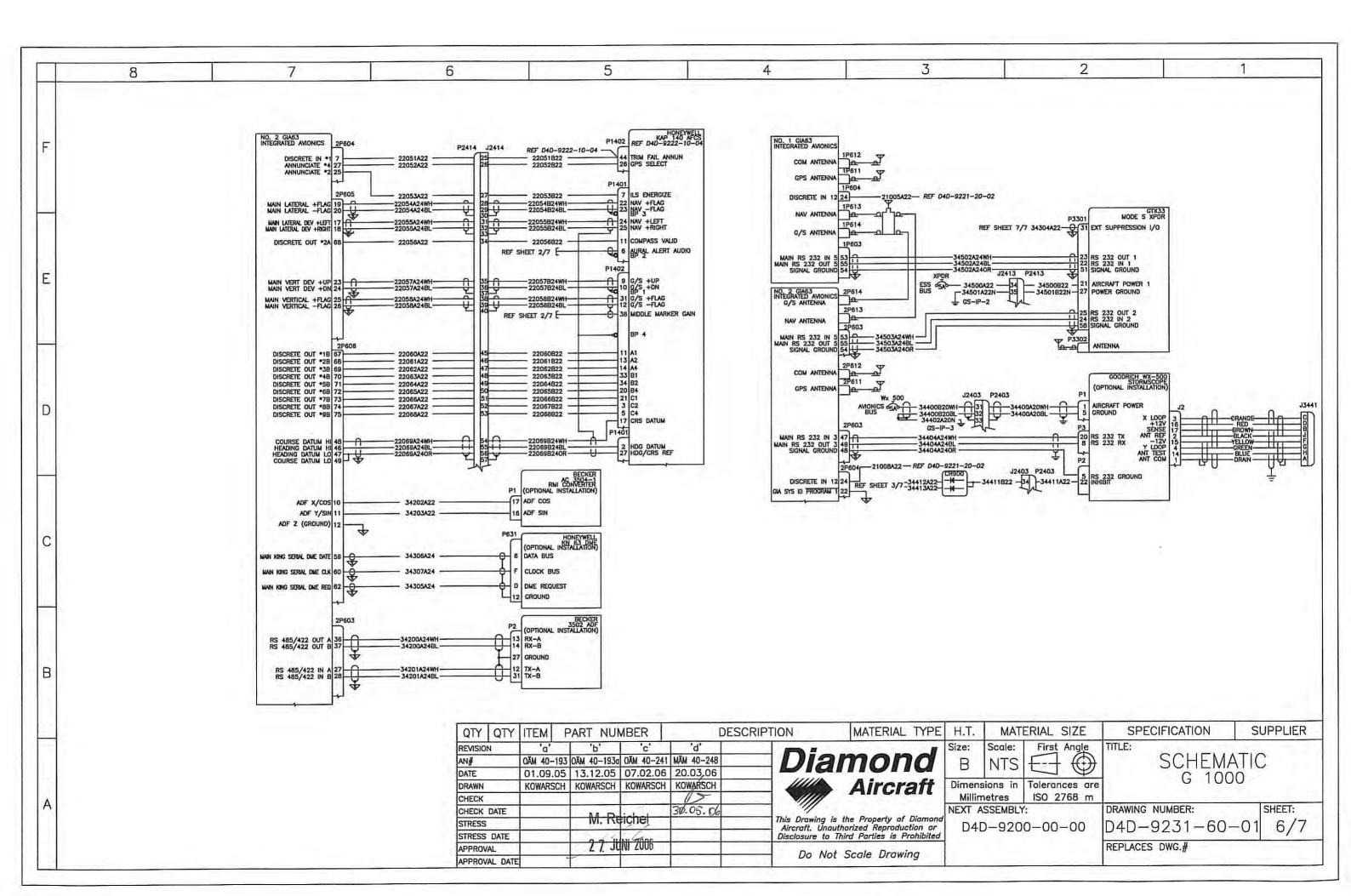
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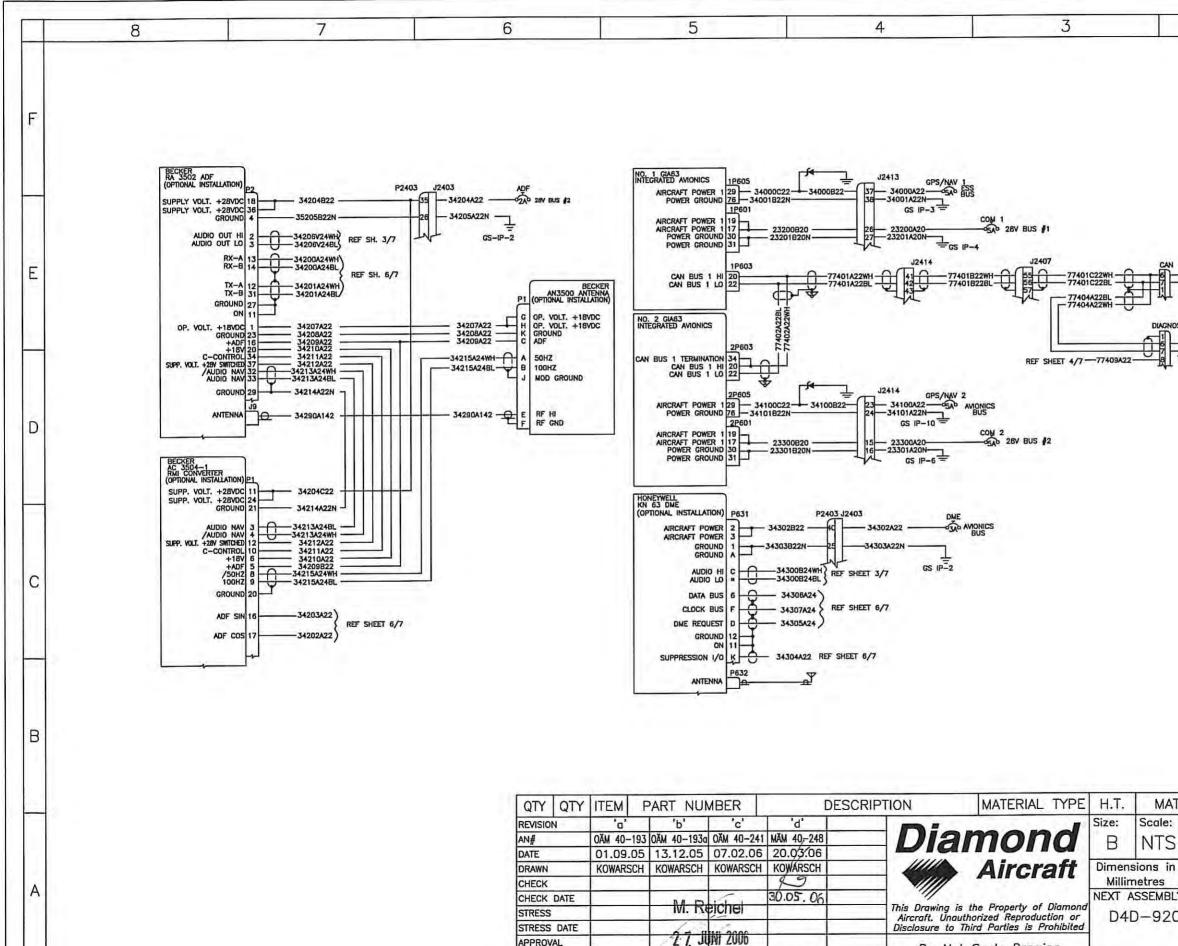


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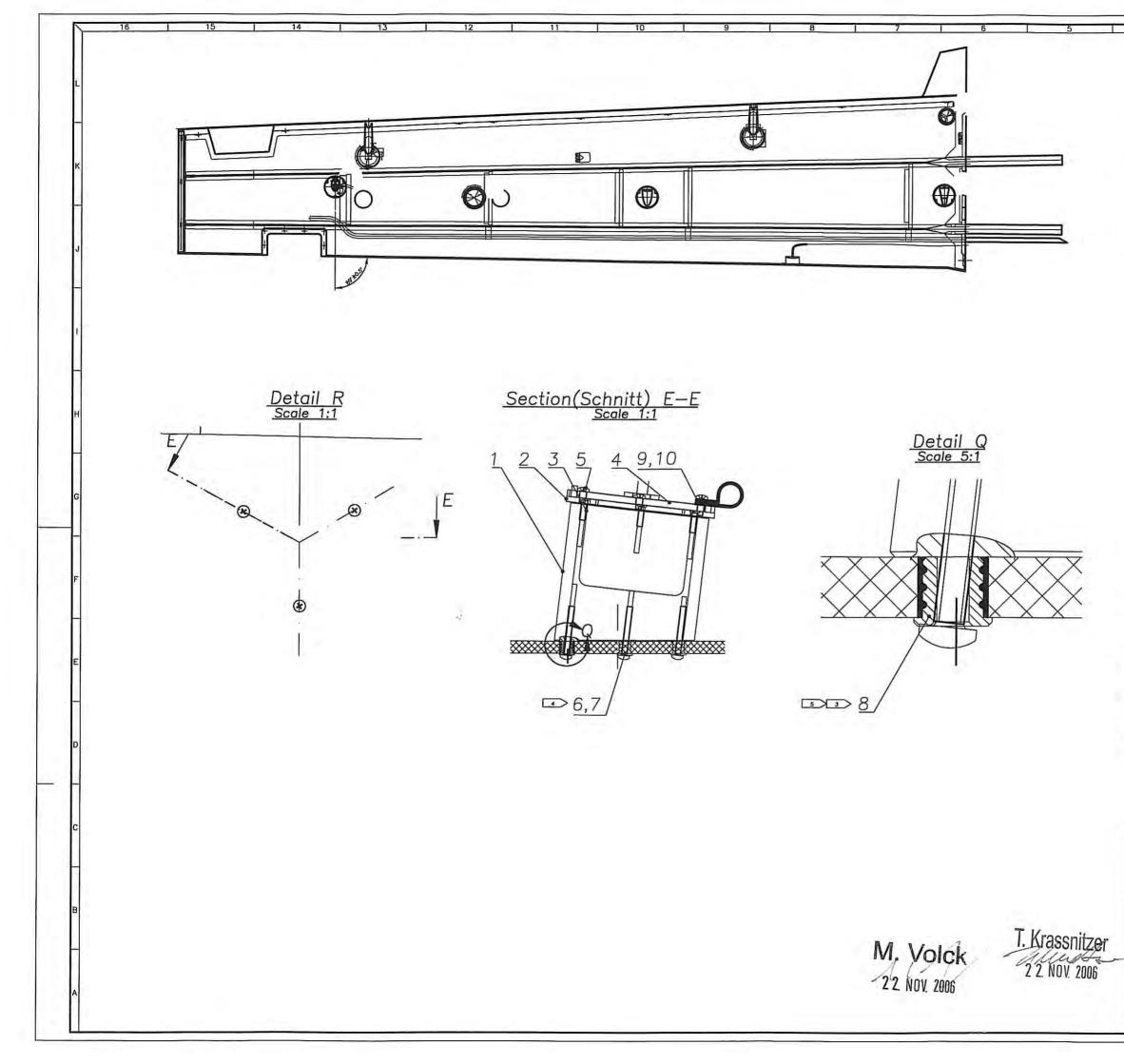


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