

OPTIONAL SERVICE BULLETIN

OSB 42-124

OSB 42NG-062

I TECHNICAL DETAILS

I.1 Category

Optional.

I.2 Airplanes affected

Type: DA 42, DA 42 M, DA 42 NG, DA 42 M-NG
Serial numbers: 42.004 and subsequent
42.AC001 and subsequent
42.M001 and subsequent
42.N001 through 42.N068, 42.N100 through 42.N217, 42.N219
42.NC001 through 42.NC006
42.MN001 through 42.MN040 and 42.MN050 through 42.MN052

I.3 Date of effectivity

02-Feb-2017

I.4 Time of Compliance

At owner's discretion

I.5 Subject

Retrofit installation of single piece heater valve bowden cable and alternate air valve bowden cable.

ATA-Code: 21-40

I.6 Reason

The heating and alternate air single piece Bowden cable improves smoothness, handling and reliability of the levers.

I.7 Concurrent Documents

None.

I.8 Approval

The technical information or instructions contained in this document relate to the Design Change Advisories No. MÄM 42-739 and MÄM 42-933, which have been approved under the authority of EASA Design Organization Approval ref. EASA.21J.052.

The technical content of this document has been approved under the authority of DOA ref. EASA.21J.052.

I.9 Accomplishments / Instructions

See WI-OSB 42-124/WI-OSB 42NG-062, latest effective issue.

I.10 Mass (Weight) and CG

None.

II PLANNING INFORMATION

II.1 Material and Availability

See WI-OSB 42-124/WI-OSB 42NG-062, latest effective issue.

II.2 Special Tools

None.

II.3 Labour Effort

Approx. 12 hours.

II.4 Credit

None.

II.5 Reference Documents

DA 42 Series Airplane Maintenance Manual, Doc. No. 7.02.01, latest effective issue.

DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, latest effective issue.

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular that which is not especially described in this Service Bulletin, must be done in accordance with the referenced Maintenance Manual.
3. Completion of all work must be recorded in the log book.
4. In case of doubt contact Diamond Aircraft Industries GmbH.

**EXECUTION REPORT TO
SERVICE BULLETIN
OSB 42-124
OSB 42NG-062****AIRPLANE INFORMATION**

Airplane Serial Number _____

Airplane Registration _____

Airplane Operator _____

Hours of operation of airplane _____

No. of landings _____

Hours of operation-engine LH _____

RH _____

Typical operation of airplane private, club, training, other _____

Date, Name, SignPlease fax the completed form to Fax No. +43-2622-26780 or e-mail to
executionreports@diamond-air.at

WORK INSTRUCTION

WI-OSB 42-124

WI-OSB 42NG-062

I GENERAL INFORMATION

I.1 Subject

Retrofit installation of single piece heater valve bowden cable and alternate air valve bowden cable.

I.2 Reference Documents

DA 42 Airplane Maintenance Manual, Doc. No. 7.02.01, latest effective issue.

DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, latest effective issue

I.3 Remarks

- a) All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
- b) All work, in particular that which is not especially described in this work instruction, must be done in accordance with the referenced maintenance manual.
- c) In case of doubt, contact Diamond Aircraft Industries GmbH.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings

D64-7103-00-00_01 Rev. “-“

D64-7613-10-00_04 Rev. “a“

II.2 Special Tools

None.

II.3 Material

Quantity	Part No.	Description
2	D67-9021-43-01	Heating Bowden Cable
6	DAI-9071-03-01	Screw Nipple
2	D67-7613-10-20	Lever Heat Valve
1	D67-7613-11-08	Bracket Bowden Cable
6	DIN7337A-3,2x6,7-A2	Blind Rivet
4	DIN439-BM6-B	Hexagon Nut
4	DIN6797-J6.4-ZP	Tooth lock washer
2	ISO15983-3,2x16-A2	Blind Rivet
1	D67-7163-00-04	Alternate Air Bowden Cable Bracket
1	D67-7163-02-00	Alternate Air Control Lever assy
2	D67-9071-63-02	Alternate Air Bowden Cable
1	DS BU1-08-05-0355-B	Bushing
1	DS BU2-08-05-0225-N	Bushing
5	DIN125-A5,3-A2	Washer
6	DIN125-A6,4-A2	Washer
4	DIN934-M6-A2	Hexagon Nut
3	DIN985-M5-A2	Hexagon Nut self-locking
2	DIN985-M6-A2	Hexagon Nut self-locking
1	DIN9021-5,3-A2	Washer
1	LN 9037-05020	Screw, hexagon Head
1	LN 9037-M5x42	Screw, hexagon Head
1	LN 9037-M5x54	Screw, hexagon Head

Material is available from Diamond Aircraft Industries.

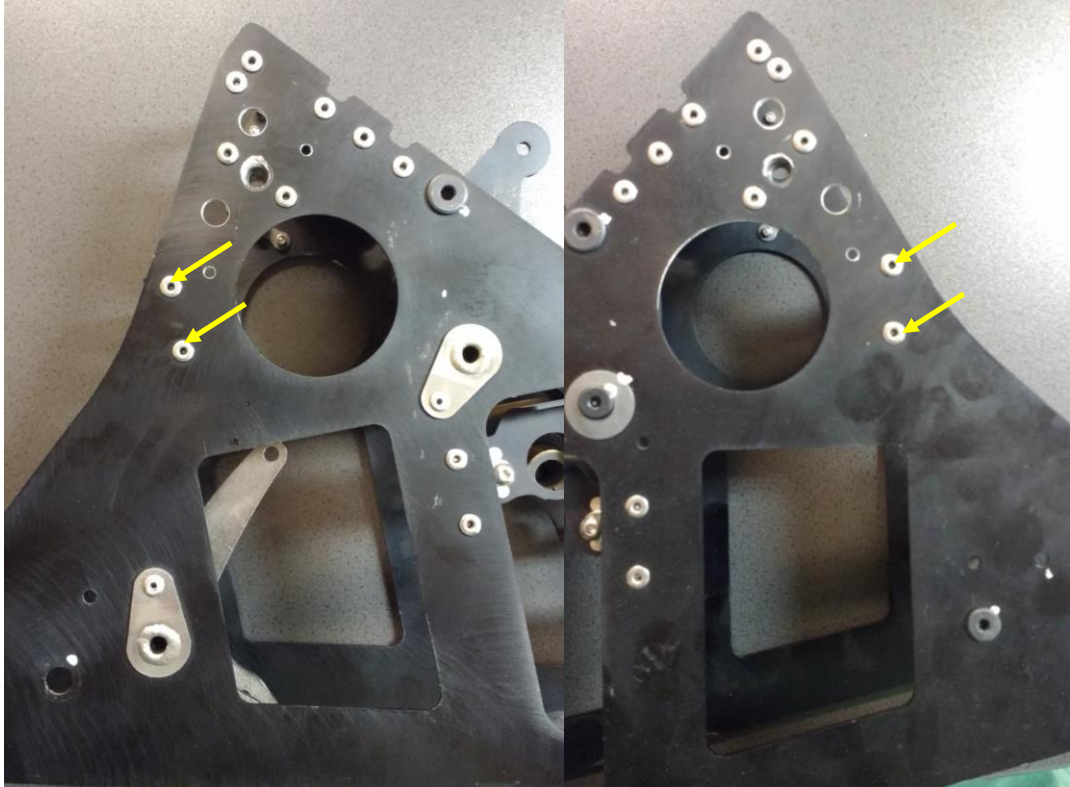
III INSTRUCTIONS

1	Remove pilot and copilot seats i.a.w. AMM section 25-10.
2	Remove engine control assy i.a.w. AMM section 76-00.
3	Remove the alternate air control lever.
4	Remove the LH and RH nacelle maintenance cap ECU i.a.w. AMM section 52-40.
5	Remove engine cowlings i.a.w. AMM section 71-00.

6	Remove the LH unfeathering accumulator from engine mount. Note: Do not disconnect hose.
7	Remove the RH charged air hose between turbo charger and intercooler.
8	Drill out one rivet of the bowden cable firewall grommet on LH and RH nacelles. Slide sheet metal half shells aside to gain better access to the bowden cable lead through.
9	Remove sealant from the LH and RH lead -through.
10	Remove the bowden cable grommets from the LH and RH grommet (2 pcs per bowden cable).
11	Disconnect the heating-, defrost- and alternate air bowden cables located inside the engine compartment.
12	Push back the bowden cables through the firewall into the nacelle.
13	Disconnect heating-, defrost- and alternate air bowden cables from bowden cable relay lever assembly, positioned on the front bulkhead.
14	Disconnect the bowden cables from the engine control assy and from bowden cable relay lever assembly.
15	Disconnect the bowden cables from alternate air control lever and the LH bowden cable relay lever assembly.
16	Remove the bowden cable wire from the bowden cables.
17	Insert the wire of the new Bowden cables heating D67-9021-43-01 and defrost bowden cable D67-9071-63-02 in the old Bowden cable wrapper.
18	Replace the old bowden cable wrapper by the new one. Use the wire to grind the wrapper from the nacelle to the cockpit. Not: Make sure that the wire stays in place.
19	Guide the bowden cables through the firewall.
20	Connect the heating and defrost bowden cables with hexagon nut DIN439-BM6-B and tooth lock washer DIN6797-J6.4-ZP to the heating and defrost valve in the engine compartment. Connect the alternate air bowden cables with hexagon nut DIN934-M6-A2 and washer DIN125-A6,4-A2.
21	Install the bowden cable bushings at LH and RH lead -through 2 pcs per bowden cable.
22	Apply a small amount of sealant on the bushings. Slide the sheet metal half shells back in place and install rivet ISO15983-3,2x16-A2.
23	Install alternate air control lever i.a.w. drawing D64-7103-00-00_01. Adapt glas insert plate and center console to new hole pattern i.a.w. alternate air bowden cable bracket D67-7163-00-04.

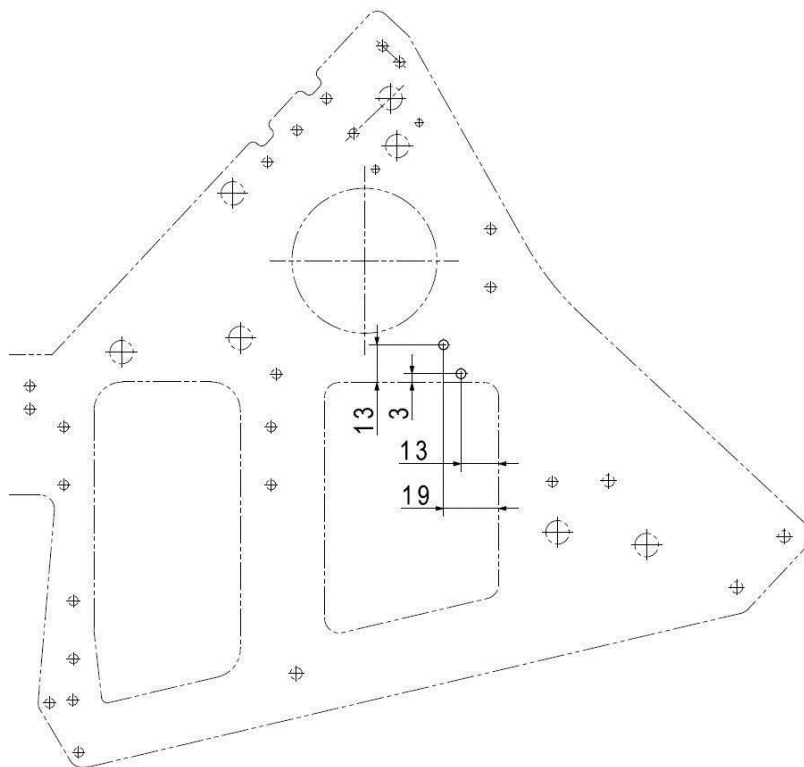
Drill out the rivets from the old bowden cable bracket in the engine control assy and discard bracket.

24

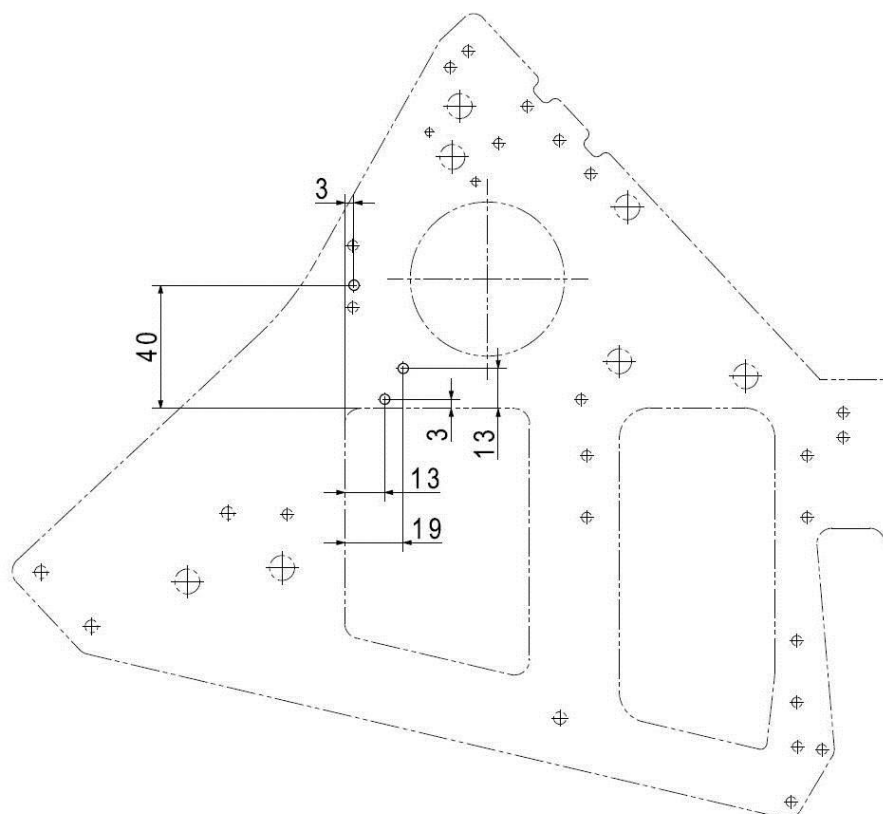


Mark the position for the new bowden cable bracket according figure below.

RH side



25 LH side



26	Drill holes for new bowden cable bracket on marked position.
27	Position the new bowden cable bracket D67-7613-11-08 and install it with rivets DIN7337A-3,2x6,7-A2.
28	Remove the axle from the heating-, defrost and brake lever.
29	Reassemble the axle with new heating and defrost levers D67-7163-02-00 i.a.w. drawing D64-7613-10-00_04 page 2 Section B-B. Note: Take care of correct reassembly sequence of bushings and washers.
30	Guide bowden cables through the center console to their final installation position.
31	Connect the alternate air bowden cables to the alternate air lever.
32	Reinstall the engine control assy and connect new heating and defrost bowden cable.
33	Make sure that all bowden cables are adjusted and for function properly.
34	Attach bowden cables with cable ties where necessary.
35	Install the LH unfeathering accumulator to the engine mount.
36	Install the RH charged air hose between turbo charger and intercooler.
37	Install the LH and RH nacelle maintenance cap ECU i.a.w. AMM section 52-40.
38	Install pilot and copilot seats i.a.w. AMM section 25-10.
39	Install engine cowlings i.a.w. AMM section 71-00.
40	Clean working areas, check for foreign objects.
41	Check all altered, replaced, repaired parts for proper function.
42	Test all systems in working area for function.
43	Make all necessary entries in the airplane logs.

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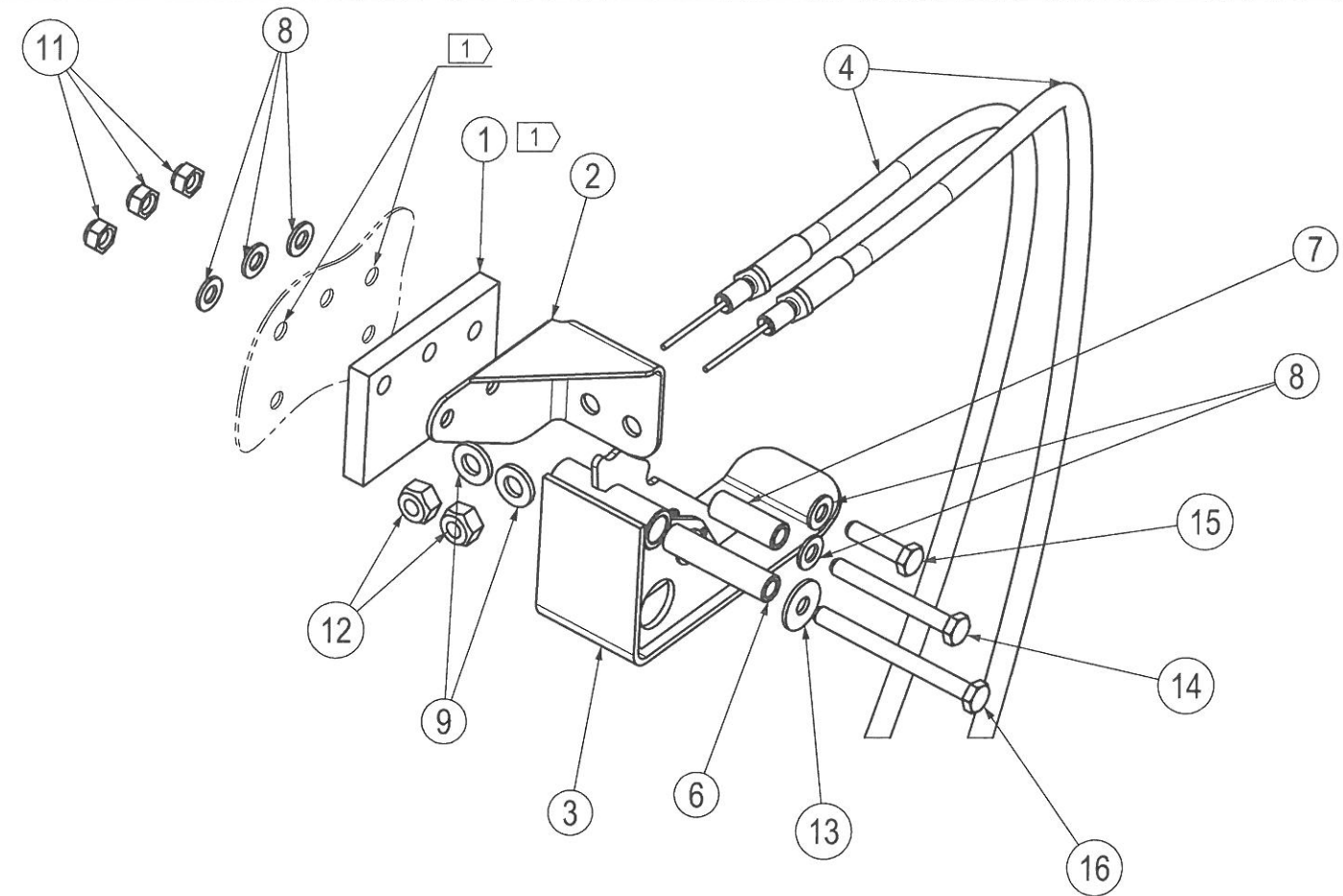
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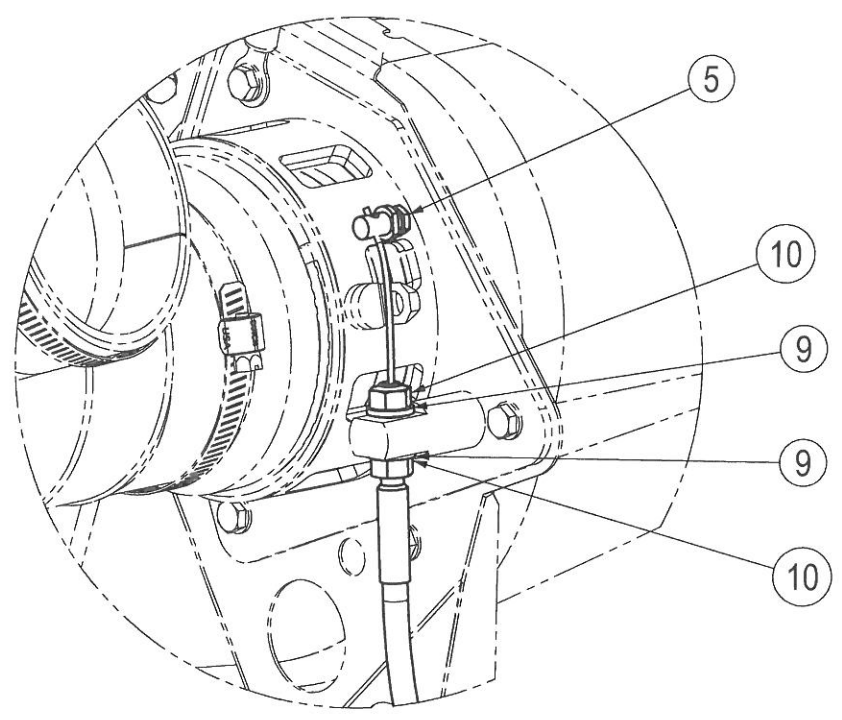
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REV	SH	ZONE	DESCRIPTION	DATE
-	01	ALL	MÄM 42-933 NEW DRAWING, SUPERSEDES D64-7103-00-00; DA 62 DESIGN IMPLEMENTED.	24.02.16



FLAG NOTES

1 DRILL HOLES ACCORDING TO ITEM 1, Ø 5,5mm

16	1	LN 9037 - 05 055	SCREW, HEX	1.7220.5				LN 9037	
15	1	LN 9037 - 05 020	SCREW, HEX	1.7220.5				LN 9037	
14	1	LN 9037 - 05 042	SCREW, HEX	1.7220.5				LN 9037	
13	1	DIN 9021 - 5,3 - A2	WASHER	A2					
12	2	DIN 985 - M6 - A2	NUT, HEX, SELF-LOCKING, PA INSERT						
11	3	DIN 985 - M5 - A2	NUT, HEX, SELF-LOCKING, PA INSERT						
10	4	DIN 934 - M6 - A2	HEXAGON NUT	A2					
9	6	DIN 125 A 6,4 - A2	WASHER	A2					
8	5	DIN 125 A 5,3 - A2	WASHER	A2					
7	1	DS BU2-08-05-0225-N	BUSHING	PA6					
6	1	DS BU1-08-05-0355-B	BUSHING	3.3535.24					
5	2	DAI-9071-03-01	SCREWED FITTING	CuZnPb3ZH		Ø9 x 11			
4	2	D67-9071-63-02	ALT. AIR BOWDEN CABLE RH						
3	1	D67-7163-02-00	ALTERNATE AIR CONTROL LEVER, ASSY						
2	1	D67-7163-00-04	ALTERNATE AIR BOWDEN CABLE BRACKET						
1	1	D64-7103-00-70	GLAS INSERT ALTERNATE AIR						
ITEM	QTY	PART NUMBER		DESCRIPTION	MATERIAL TYPE	H.T.	MATERIAL SIZE	SPECIFICATION	REMARK



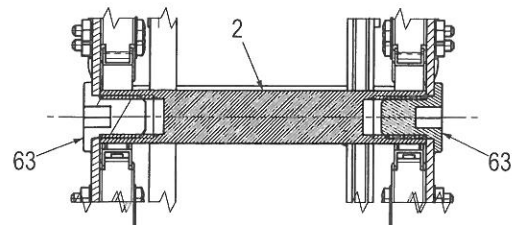
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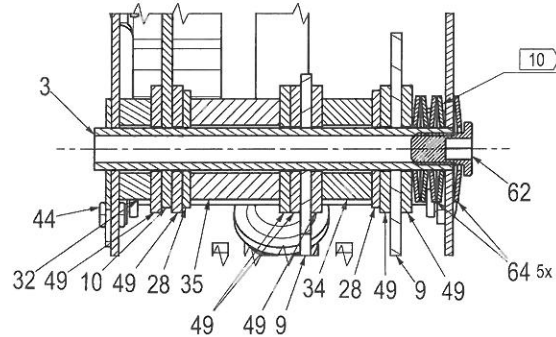
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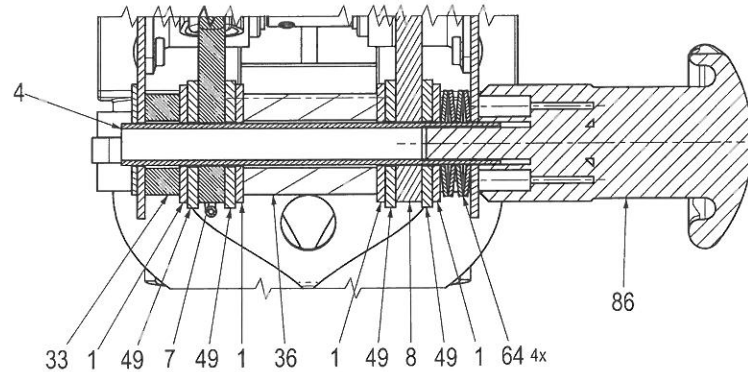
SECTION A-A
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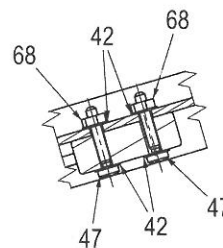
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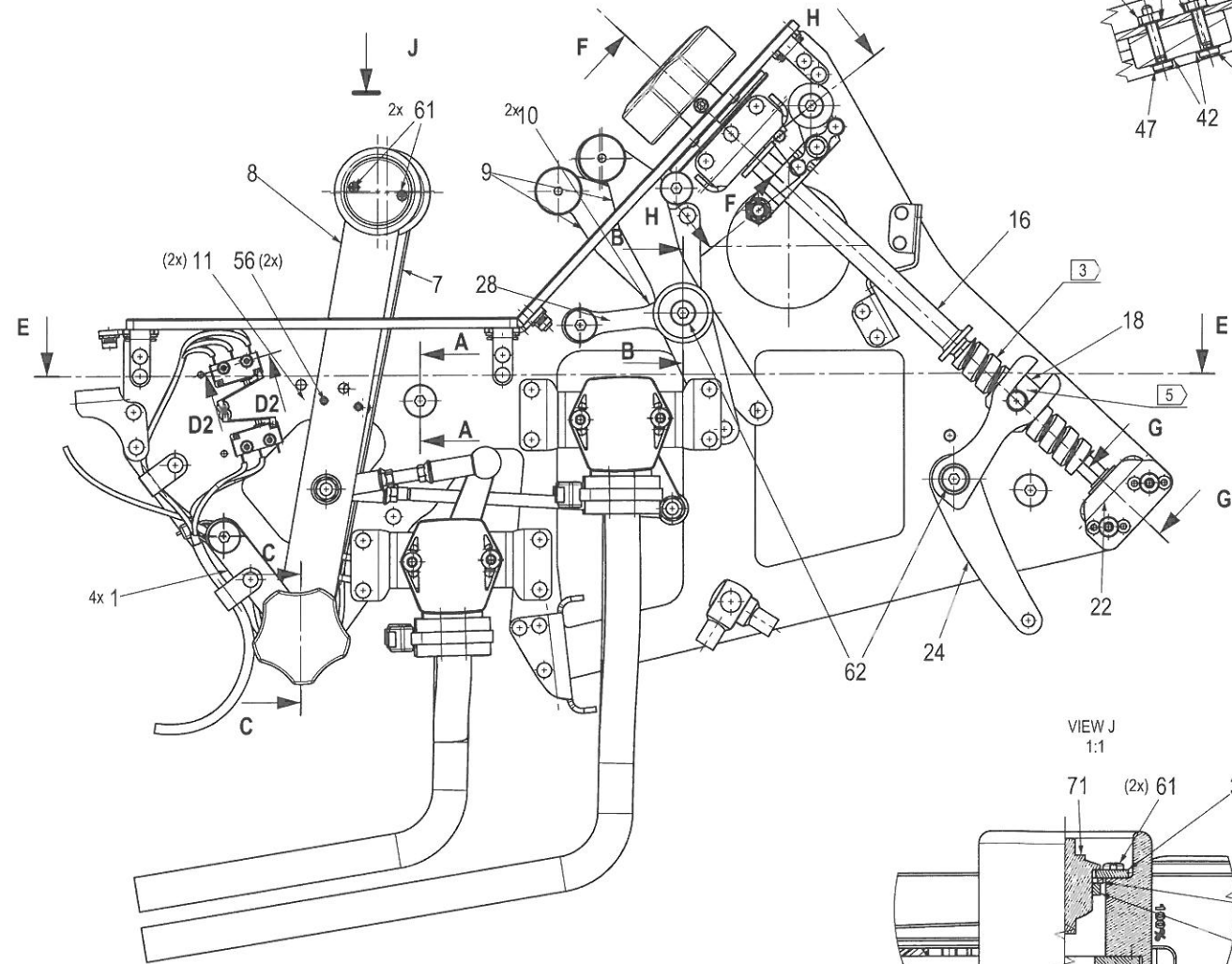
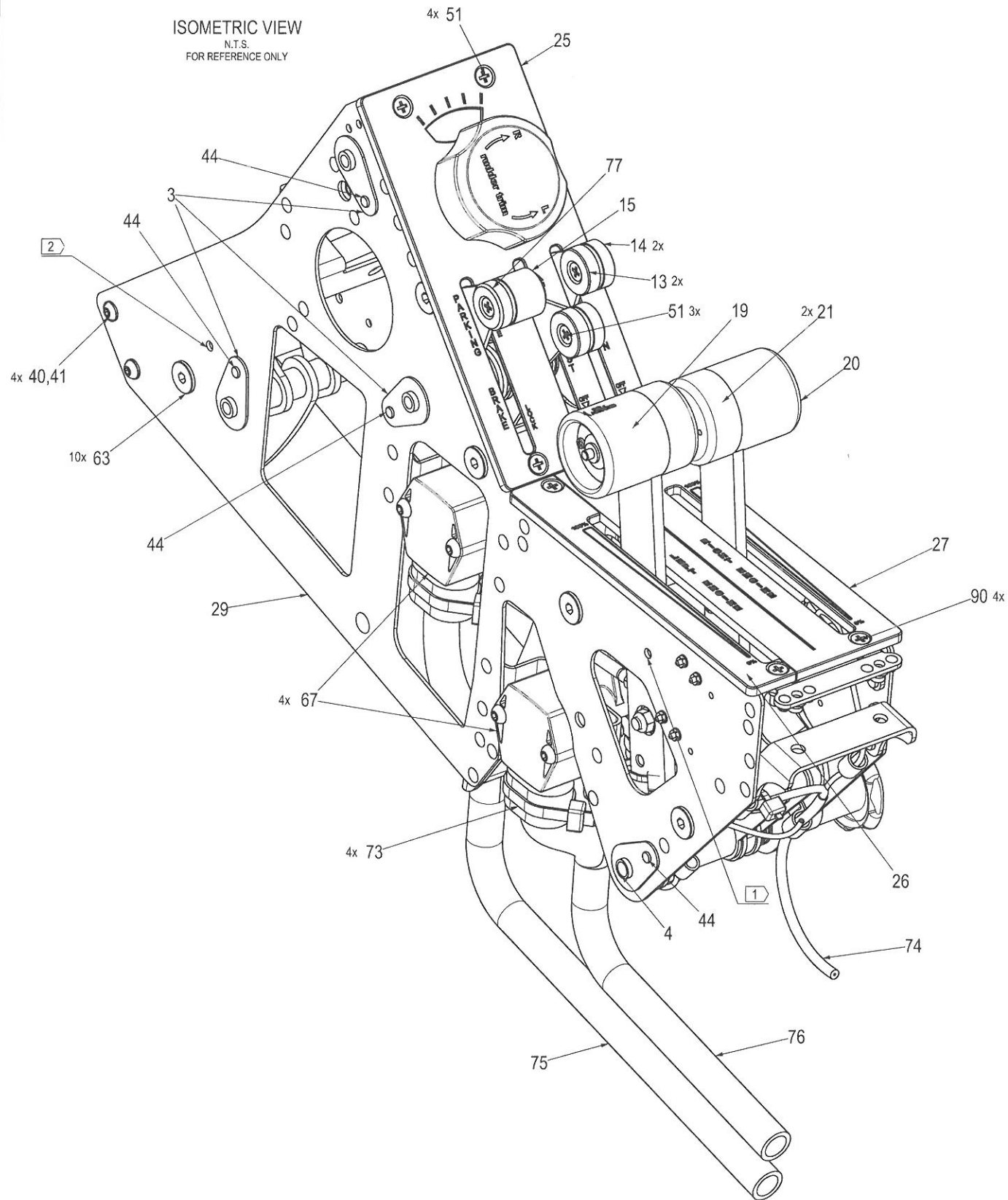
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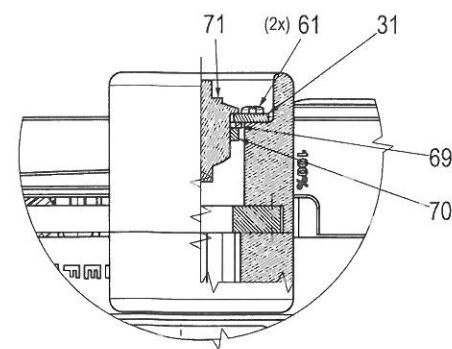
SECTION D-D
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MOUNTING OF GFC 700 SWITCH (4x)
SEE ALSO D64-2403-40-00 FOR WIRING HARNESS



ISOMETRIC VIEW
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FOR REFERENCE ONLY

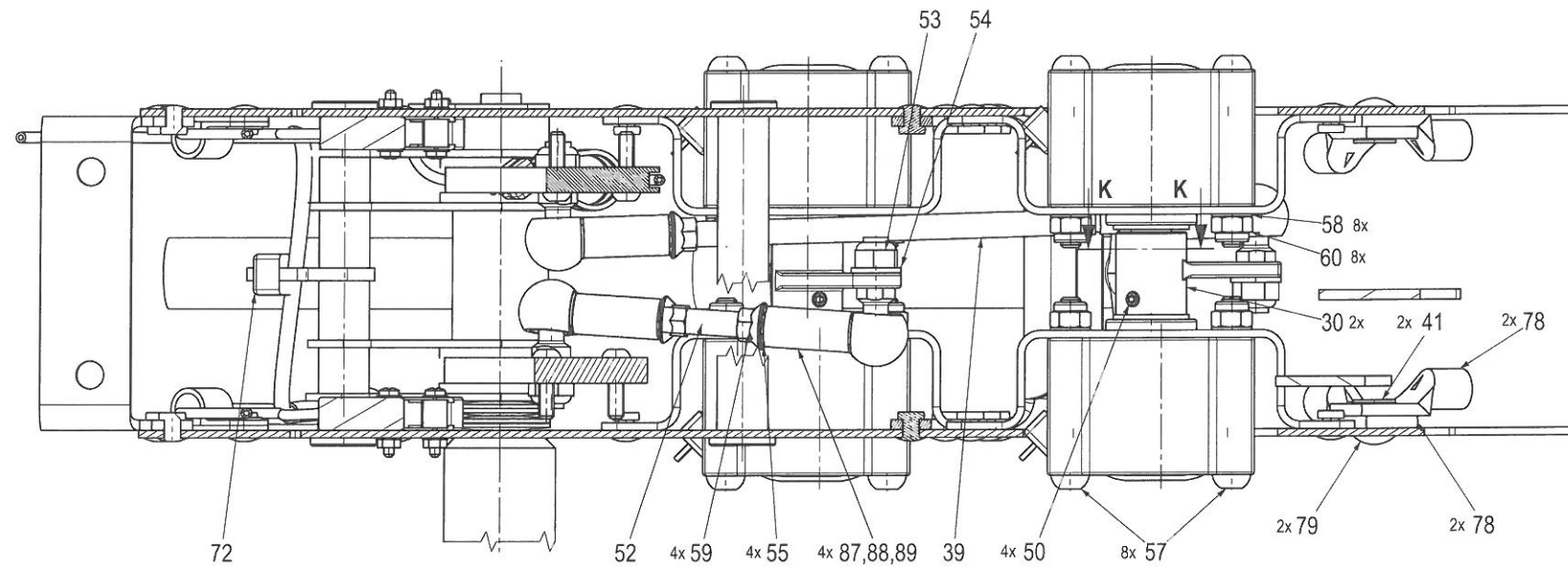


VIEW J
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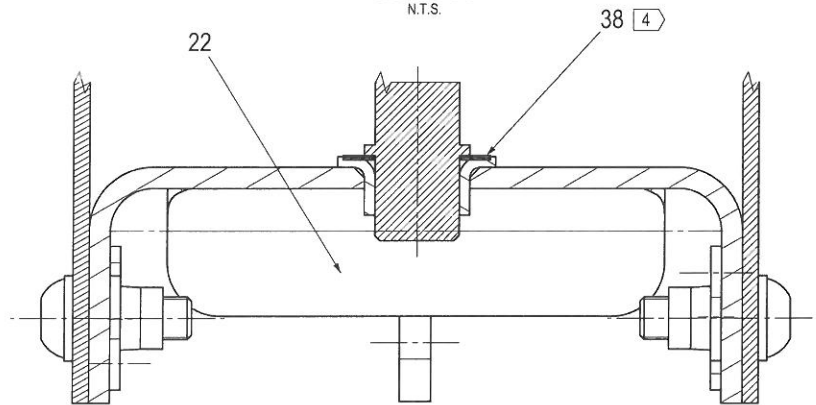


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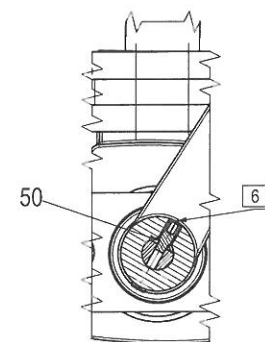
SECTION E-E
HALL SENSOR AND LEVER INSTALLATION
SEE ALSO D64-2403-51/52-00 FOR WIRING HARNESS



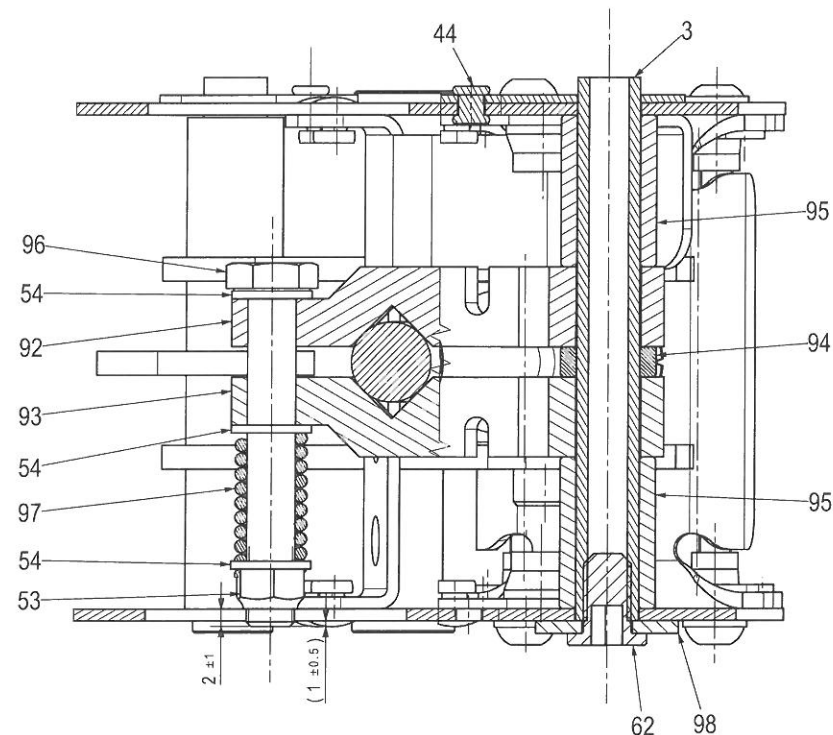
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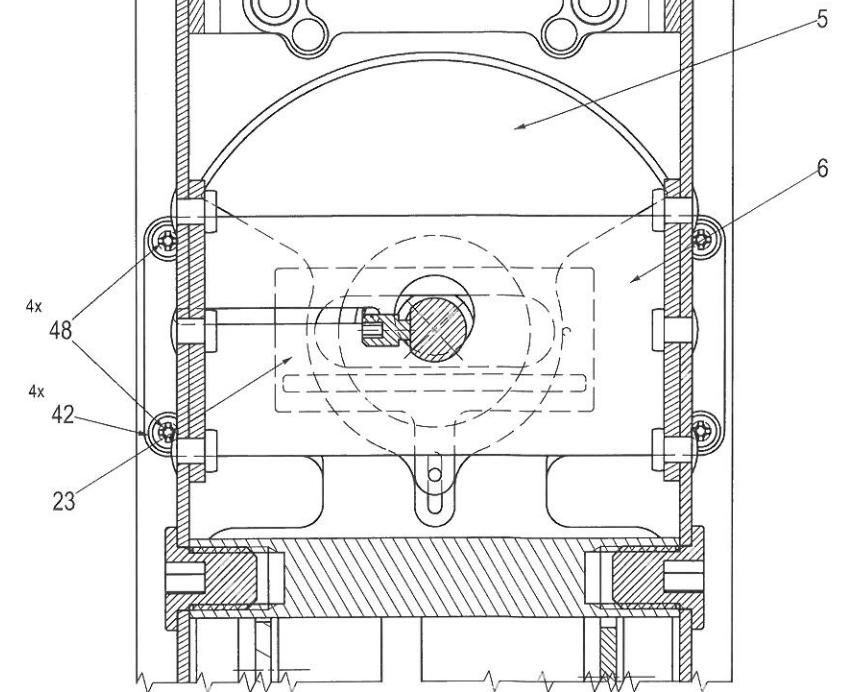
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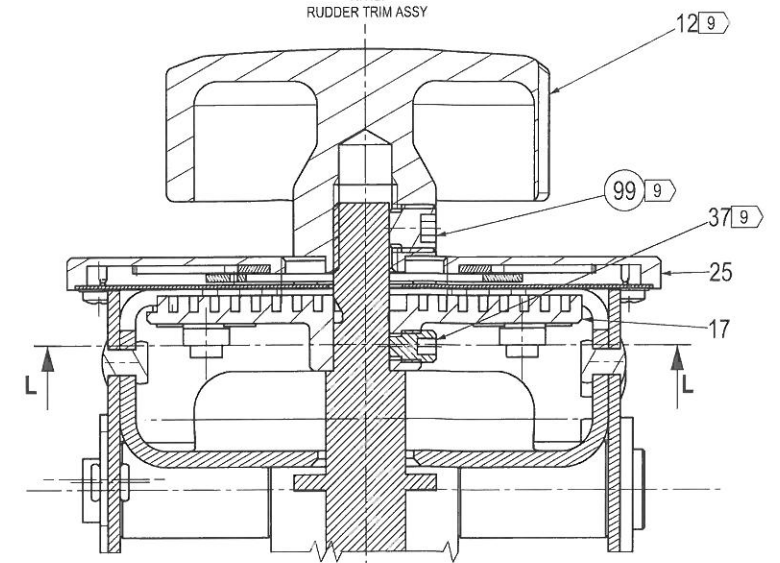
SECTION H-H
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SECTION L-L
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WITHOUT SPINDLE

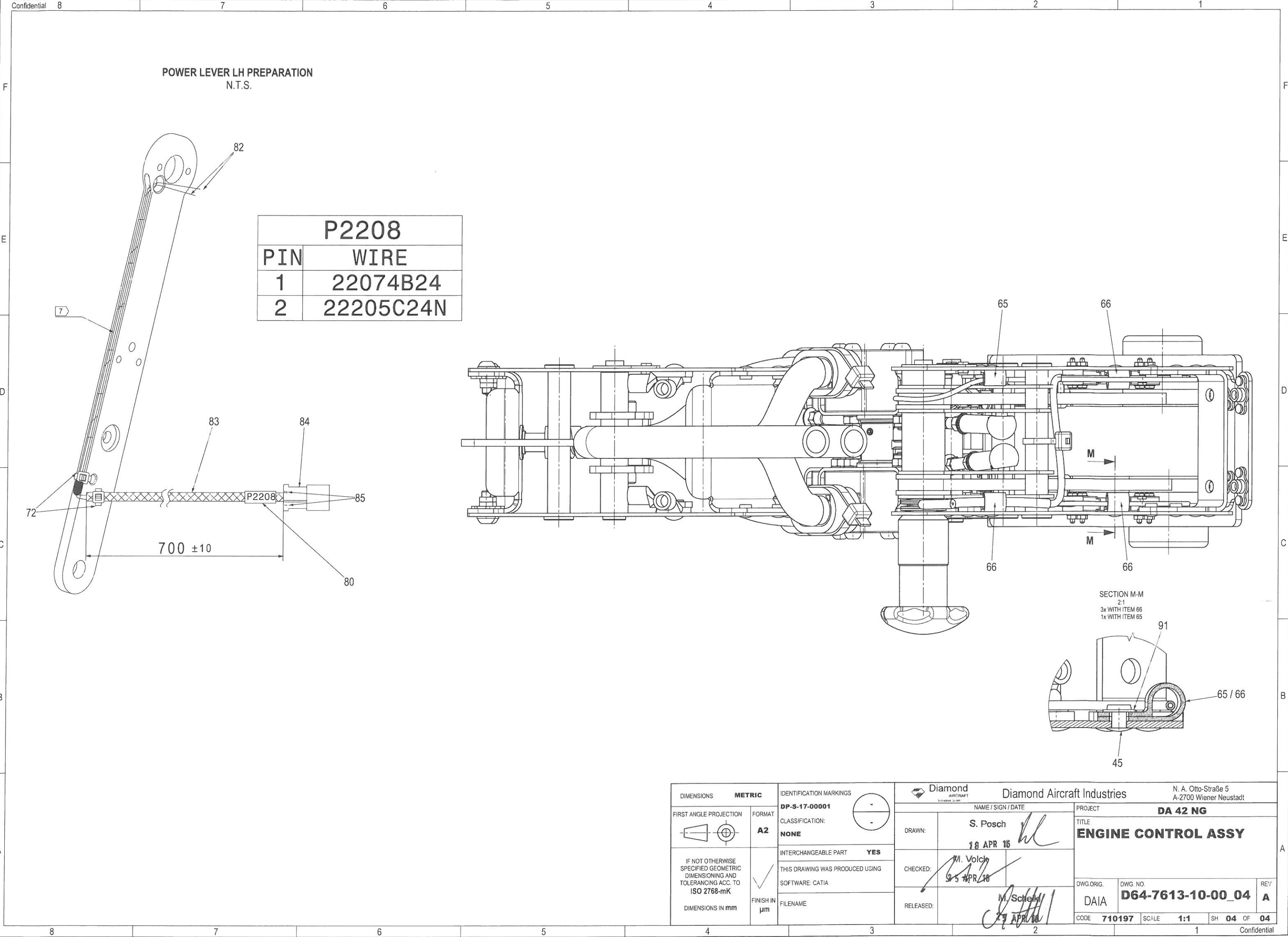


SECTION F-F
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