

INSPECTION PROGRAM H 36 DIMONA  
3000 hour inspection  
and extension of life time to 6000 hours  
according to Maintenance Manual, item 10.4

date:	order no.:	operator:	
call sign:	serial no.:	hrs. of operation:	no. of landings:
engine:	serial no.:	hrs. of operation:	

Defects occurred or repairs carried out during life time:

Hours of  
Operation:      Description:

Date of issue: August 26, 1991

Instructions to carry out:

This inspection must be carried out by the manufacturer or by maintenance organizations approved by the manufacturer. The results of this inspection have to be listed one by one in a findings report which is enclosed. The repair method must be specified.

After completion, a copy of the whole inspection program must be sent to the manufacturer.

This inspection program refers to airframes of the type H-36 Dimona only.

For repairs of glass-fiber reinforced plastic, the repair methods described in the manufacturer's Maintenance Manual must be followed.

This program consists of:

- Work flow program
- Work order: root rib
- Work order: main bulkhead
- Work order: torsion test
- Work order: inspection of A-bolt fitting
- Findings report
- Weighing report
- Control surfaces adjustment report
- Drawing no. 01.1923.00 (rod end bearing)
- Drawing no. 820-2730-02-08 (distance sleeve)
- Clip of drawing no. 820-2730-02-00

In addition to the working cycles specified in the work flow program, the following items must be carried out, respectively noted:

Weighing: according to enclosed weighing report, including determination of the empty weight CG according to Maintenance Manual, item 6.1.

Control surfaces adjustment: according to control surfaces adjustment report

Comment: If repairs of the paint finish on rudder, ailerons or elevator have been carried out (or detected) during the life time on record, a weighing and a measurement of residual moments of the respective control surfaces must be carried through according to the Maintenance Manual, item 5.3 (ranges of tolerance see control surfaces adjustment report enclosed).

Please note:

The following parts are subject to a limited life time:

- Rudder control cables:	1000 hrs. or 10 yrs.
- Tail wheel steering cables:	1000 hrs. or 10 yrs.
- Air brake control cable:	1000 hrs. or 10 yrs.
- Silent blocks of engine mount:	3000 hrs.
- Engine tensioning cables and turnbuckles:	3000 hrs.
- Electric fuel pump part no. 4412:	1500 hrs.
- Electronic fuel pump part no. 8812:	3000 hrs.
- Fuel shut-off valve type "Truma 8L":	3000 hrs. or 5 yrs.
- Fuel tank made of FRP:	3000 hrs.
- Rod end bearings, fastening screws, and brackets of main landing gear attachment	3000 hrs.
- Outer Rod end bearings of elevator attachment	3000 hrs.
- Flexible fuel and hydraulic lines of airframe / cell	8 yrs.
- Flexible fuel and oil lines in engine compartment	5 yrs.

Also see Maintenance Manual, page 86: "Aircraft components with limited life time".

Comment 1: Where a life time limit is given by the number of operating hours or a time span, the limit that is reached first is relevant. The hours of operation given here conform to those of the aircraft.

Comment 2: The fuel shut-off valve "Truma 8L" may be replaced by the type "Kugelhahn", part no. 190500.

Definition of damages to GFRP parts:

Dent: Deformation to the inside, in particular in case of sandwich parts where the rigid foam between the glass layers has been over-compressed by excessive pressure. May occur beneath undamaged paint.

Delamination: Separation of layers from one another or from the rigid foam. Affected areas turn white. May occur beneath undamaged paint.

Crack: Damaged glass fabric, surrounded by delaminations.

# WORK FLOW PROGRAM

page 1 of 5

date of issue: August 26, 1991

serial no.:

call sign:

no.	part / item of inspection	inspection method	carried out	checked
1	500 hour inspection according to Maintenance Manual, chapter 4			
W I N G				
2	left/right wing skin: cracks, dents, delaminations, trailing and leading edge bondings	tapping test visual inspection		
3	Hole (80 mm diameter) in root rib (see Work Order "Root Rib"), inspect forward web; remove fittings, inspect rearward web.	visual inspection (use bright lamp)		
4	left/right spar stump: cracks, delaminations important: Take extra notice of the junction of spar stump and wing root rib in lower rearward corner and in the region around the spar stump sleeve. Carry through repair according to the manufacturer's regulations only! If spar stump and root rib are painted: remove paint according to Work Order "Root Rib".	visual inspection		
5	left/right wing root rib: bondings with upper and lower skin, cracks	tapping test, visual inspection		
6	left/right aileron web: bonding, delaminations	visual inspection		
7	left/right aileron: bonding, dents, delaminations	visual inspection		
8	left/right aileron drive rib in wing: bonding with upper skin	visual inspection		
9	left/right aileron drive rib in aileron: bonding with aileron skin	tapping test		
10	left/right aileron hinges: wear, attachment, loose rivets	visual inspection		
11	left/right aileron drive rod: remove; deformation, corrosion, chafed spots (protect them from corrosion with paint), wear of rod end bearings	visual inspection		
12	measurement of play of aileron drive: hold control stick fast, actuate aileron with force of fingers, measure deflection Max. allowance: 4 mm	slide gauge or tape measure		
13	left/right spar stump sleeve: tightness of fit, corrosion, striae, delaminations around sleeve	visual inspection		
14 <sup>1</sup>	left/right bearings for A- and B-bolt: attachment, corrosion, delaminations in the region of glass-fiber reinforced plastic around the bearings; condition of sphere surface; inspect attachment of A-bearing with mirror and lamp	visual inspection		
15	left/right wing folding mechanism: inspect telescopic rod and cardan joint for wear, limit stop for functioning	visual inspection		

1) A-bolts and B-bolts are the forward and rearward shearing force fittings

# WORK FLOW PROGRAM

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date of issue: August 26, 1991

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no.	part / item of inspection	inspection method	carried out	checked
16	left/right air brake drive: remove shaft, wear of claws, corrosion	visual inspection		
17	left/right air brake and case: cracks, delaminations, condition of hinges, loose rivets	visual inspection		
18	left/right air brake system: freedom of movement, functioning and corrosion of air brake springs. After mounting the wings, make sure the air brakes open simultaneously.	visual inspection		
19 <sup>1</sup>	left/right eye of the additional fitting: attachment, wear, corrosion	visual inspection		
F U S E L A G E				
20	left/right fuselage skin, outside: cracks, delaminations, bonding of upper and lower skin half	visual inspection		
21	fuselage lower skin: cracks, bonding Remark: Take extra care of rearward bonding at level of wing trailing edge, repair cracks according to manufacturer's regulations	visual inspection		
22	junction of fuselage and rudder fin: cracks, soft spots, carry out torsion test	Work Order "Torsion Test"		
23	left/right A- and B-bolt: tight fit in the fittings, striae (renew bolts upon detection of striae), corrosion; inspect fit of bolts and bearings, max. allowance 0,08 mm. Remark: Removal of bolts is impossible without pulling-off device. Secure bolts with Loctite no. 648.	visual inspection  micrometer gauge		
24	left/right inserts of A- and B-bolts: attachment, delaminations (white spots); A-bolt fittings - check for corrosion (see work order) - metal inserts of A-bolts	visual inspection		
25	left/right main bolt: remove; check for corrosion and striae (renew bolts upon detection of striae); check play between bolts and sleeves.  max. allowance: bolt - guidance 0,125 mm bolt - spar stump sleeve 0,125 mm bolt - main bulkhead sleeve 0,08 mm	visual inspection  micrometer gauge		
26	main bolt locking device: functioning, corrosion	visual inspection		

1) Fitting transmitting tensile force, behind rearward shearing force fitting

# WORK FLOW PROGRAM

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date of issue: August 26, 1991

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no.	part / item of inspection	inspection method	carried out	checked
27	main bulkhead: cracks, delaminations, bonding with fuselage skin, delaminations of lower spar tunnel plate; main bolt fittings: bonding, delaminations (white spots). See Work Order "Main Bulkhead".	visual inspection		
28 <sup>1</sup>	B-bulkhead: cracks, delaminations, bonding with fuselage skin	visual inspection		
29	firewall: cracks, delaminations, inspect engine tensioning cable fastenings in firewall for signs of overload; check tightness against oil and fuel from the engine through forward opening of middle console.	visual inspection		
30	fuselage tube, inside: bondings of the ring frames, cracks (white spots); condition of ring frames (in particular the most rearward); condition of bondings of plywood guides for elevator drive rod.	visual inspection		
31	seat unit and seat bulkheads: condition, cracks, bonding with fuselage skin; condition and attachment of harness fittings	visual inspection		
32	elevator drive rod: remove, inspect for deformation, corrosion, chafed spots (protect these against corrosion with paint), wear of rod end bearings	visual inspection		
33	measurement of play in elevator controls: hold control stick fast, actuate elevator with force of fingers, measure deflection; Max. allowance: 4 mm	slide gauge folding meter-rule		
34	air brake controls: remove, inspect for corrosion and deformation, inspect cable for defects	visual inspection		
35	canopy frame: functioning of lockings, functioning of jettison device, tightness of fit of pins and sleeves of locking, attachment of brackets, functioning and deformation of inner rods	visual inspection		
36	canopy and windows: cracks, scrapers, bonding with canopy frame	visual inspection		
37	engine compartment: attachment of metal sheets, cracks, heat marks, cracks around engine mount bores, condition of seals, functioning of heat valve and cabin air vent	visual inspection		
38	cowling: condition of fire retardant paint; camloc's: tightness of fit	visual inspection		
39	instrument panel: attachment, condition of spring rubbers (if supplied)	visual inspection		
40	engine mount: remove, pickle, inspect for cracks	fluorescent penetration test		
41	additional fitting (SB 19): condition and wear of hook, fast attachment and corrosion of fitting; connection rod: locking device, condition	visual inspection		

1) Bulkhead belonging to rearward shearing force fitting



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no.	part / item of inspection	inspection method	carried out	checked
T A I L   U N I T				
42	rudder unit: bonding of spar, cracks, bonding of rudder fin web	visual inspection		
43	rudder fin rib: bonding with skin of rudder fin, cracks	visual inspection		
44	rudder pedestal: corrosion, cracks, deformation	visual inspection		
45	rudder: dents, cracks, deformation, delaminations, attachment of balancing weights, condition of bearing	visual inspection		
46	elevator: remove; delaminations, cracks; bonding of elevator drive rib in elevator skin; easy running of needle bearing in elevator drive lever; insert nuts of outer bearing: tightness of fit; compare rod end bearing to Hirschmann drawing no. 01.1923.00, replace bearing if it does not match the drawing. Also see drawings 820-2730-02-00 and 820-2730-02-08.	visual inspection		
47	elevator fin: dents, delaminations, cracks; replace outer rod end bearings of elevator attachment	visual inspection		
48	rearward elevator fin bearing: inspect fitting in rudder fin for fast attachment and corrosion; cracks in bonding; fast attachment of bearings	visual inspection		
49	forward rod end bearing of elevator fin: SB 15/2 carried out; remove; cracks and delaminations in the insert area, deformation, fast attachment (secured with safety lacquer), corrosion	visual inspection		
50	elevator unit locking device: functioning, wear (also see Service Bulletin 22)	visual inspection		
51	elevator unit bolt: remove; wear, striae (renew bolts upon detection of striae), corrosion, deformation; inspect fit of bolts in bearings. Max. allowance: 0.10 mm (corresponding to 2 mm at elevator fin tip in horizontal direction and 2 mm in vertical direction).	visual inspection tape measure folding meter-rule		
52	elevator unit fitting: cracks, corrosion, attachment, deformation	decuple magnifying glass, visual inspection		
53	forked guide of elevator drive: deformation, wear	visual inspection		
54	tail wheel block: attachment, bonding, cracks	visual inspection		
55	tail wheel landing gear: remove, disassemble, cleanse; corrosion, cracks. Resilient tail wheel: condition of rubber springing (cracks, porosity), flection of steering shaft (i.e. the shaft that transmits the steering moment through the tail wheel block)	visual inspection, fluorescent penetrating test		
56	bushing in tail wheel steering: tightness of fit, wear, security of groove nut	visual inspection		



# WORK FLOW PROGRAM

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no.	part / item of inspection	inspection method	carried out	checked
L A N D I N G   G E A R				
57	main landing gear: replace all four rod end bearings and all screws of the landing gear attachment			
58	left/right wheel: remove, disassemble, cleanse; cracks in rim left/right wheel bearing: smooth running in outer ring left/right brake disk: wear, cracks; min. thickness: 4,8 mm	visual inspection, fluorescent penetration test		
59	left/right axle: wear, corrosion, deformation, and cracks inside and outside	visual inspection, fluorescent penetration test		
60	landing gear strut: cracks, delaminations; repair according to manufacturer's regulations	visual inspection		

All items of this inspection program have been followed. The repairs have been carried out according to the manufacturer's regulations.

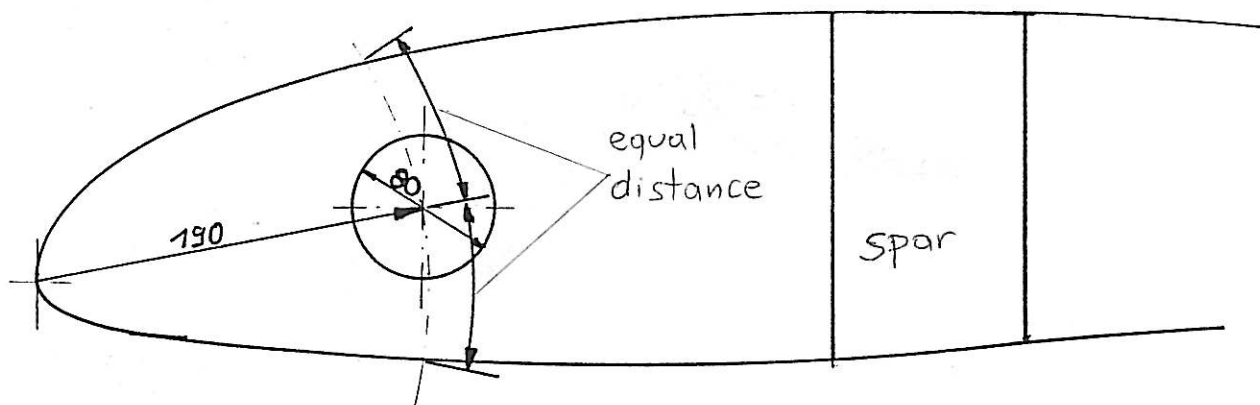
Signature of aircraft maintenance engineer:

## WORK ORDER: ROOT RIB

Part of Inspection Program H 36 DIMONA according to SB 25/1

### 1. INSPECTION HOLE

Mark center 190 mm behind leading edge, exactly in the middle between upper and lower edge of root rib. Cut out inspection hole with 80 mm diameter (e.g. with rotating circular band saw). This hole need not be shut after the inspection.



### 2. PAINT REMOVAL

Several tests with currently available paint removers showed that these agents are harmful to epoxy resin. Therefore the acrylic paint on the root rib may only be removed by sanding or sandblasting. The glass layers must not be damaged!

Sanding must therefore be done by hand, using a 160 grain or finer. In case of sandblasting, no abrasive corundum may be used. The entire root rib including spar stump and bonding of rib and wing skin must be freed from the paint. The sanded surfaces must be kept free from grease and painted with clear epoxy resin in order to seal them.

Epoxy resins complying with JAR 22 made by Scheufler or Bakelite may be used. After sealing, eventual cracks can be seen more clearly than right after sanding.

## WORK ORDER: MAIN BULKHEAD

Part of Inspection Program H 36 DIMONA according to SB 25/1

### GENERAL

The main bulkhead serves as a spar bridge and has to bear the highest loads of all aircraft components. It can be thoroughly inspected from the back side and from inside.

### INSPECTION FROM THE BACK SIDE

1. Remove tank
2. Clean back side of main bulkhead if necessary
3. Inspect back side for cracks and delaminations, in particular around the steel insert for the main bolt
4. Inspect bonding between bulkhead and fuselage
5. Main bolt sleeves: tightness of fit, wear, striae.  
Should striae be detected: replace sleeves.  
Should sleeves be loose: request new, longer sleeves from the manufacturer.

### INSPECTION FROM INSIDE

1. Separate upper spar tunnel plate from bulkhead, leave 10 mm rim.
2. Inspect front and back side with lamp and mirror for cracks and delaminations.
3. Inspect laminate around steel inserts of A- and main bolts on front and back side for delaminations.
4. Inspect bondings of flanges with fuselage skin.
5. If no damages were detected or after repair according to the manufacturer's regulations, re-install spar tunnel plate.

## WORK ORDER: TORSION TEST

Part of Inspection Program H 36 DIMONA according to SB 25/1

This instruction explains how to inspect the region of the junction of rudder unit and fuselage for damages due to overload.

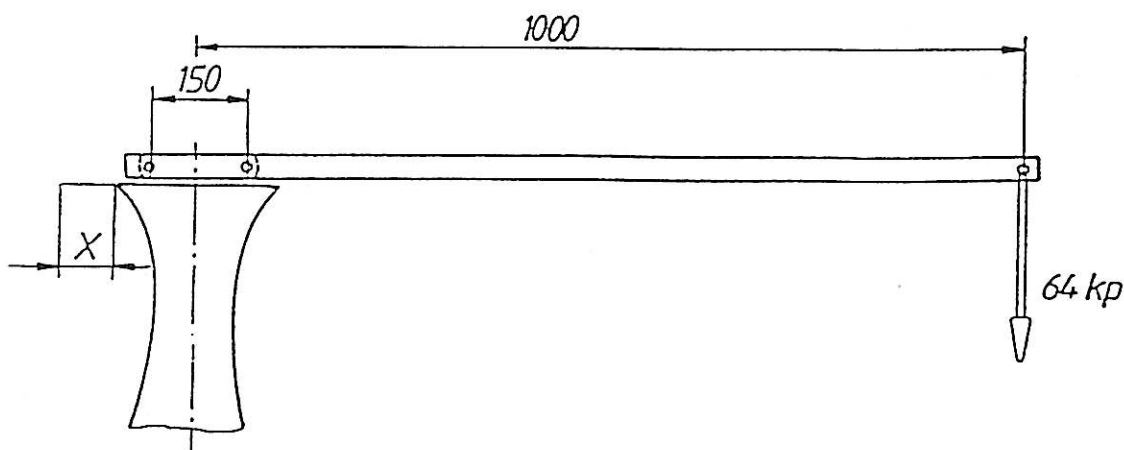
Prepare tool according to sketch below. Lay down fuselage tube onto jack right in front of the tail wheel.

Attach tool to rear bolts of rudder unit according to sketch below. Secure tool against slipping out of place during the test.

Measure movement of rudder unit to either side under load. See value "X" in sketch below.

Deflection greater than 30 mm on one side - suspicion of damage to the structure in the region of junction of rudder unit and fuselage and the region of rudder unit arrangement.

Regardless of the measurement of the deflection, a visual check of the rudder unit, the fuselage tube, and all mounting parts in this area has to be carried out during the torsion test.



material: profile 40 \* 20 mm<sup>2</sup>  
length: 1200 mm

## WORK ORDER: INSPECTION OF A-BOLT FITTING

Part of Inspection Program H 36 DIMONA according to SB 25/1

### GENERAL

The metal fittings of the A-bolts, which are laminated into the glass fiber reinforced plastic, have to be inspected for corrosion at two points.

#### Inspection point 1:

Face of the A-fitting on the outside of the fuselage in the region around the bore for the A-bolt.

#### Inspection point 2:

Back side of the face of the A-fitting in the spar tunnel.

### DETAILED INSTRUCTIONS (see sketch)

- remove cross-screws of the A-bolt fittings
- remove A-bolts with pulling-off device
- inspect hollow shaft of the A-bolt fitting for corrosion inside

#### Inspection point 1:

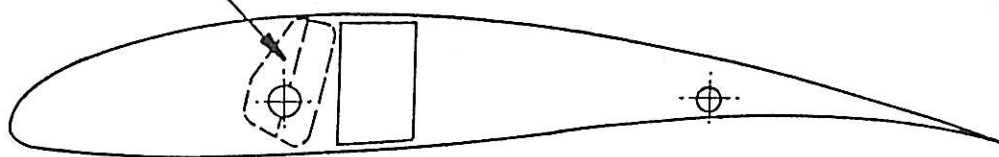
- Remove paint and laminate around the bore for the A-bolt (50 mm) until the steel surface is uncovered. If corrosion is visible, continue uncovering the steel surface of the fitting until no more corrosion is visible.

- Remove corrosion with sanding paper.
- Cover inspection point with laminate as follows and paint it.  
6\*92125 layers, interglass quality finish I 550.
- In order to prevent further moisture from oozing in, seal gap between laminate and fitting with sealing agent PR 1005 L.
- Install A-bolt, secure with Loctite no. 648.
- Mount cross-screws of the fitting, seal with PR 1005 L.

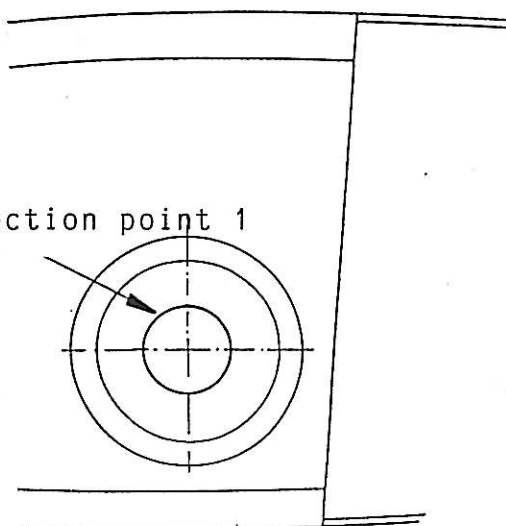
Inspection point 2:

- Uncover back side of the face of the A-fitting in the spar tunnel by removing the laminate. Starting at the rear edge, uncover the steel surface in steps of approximately 5 mm until no more corrosion is visible.
- Remove corrosion.
- Cover inspection point with laminate as follows:  
Paste one roving with at least 38400 tex, length 200 mm, along the rear inner edge of the uncovered fitting surface.  
5\*92125, interglass quality finish I 550. Make sure the repair layers cover the fitting entirely and seal it against moisture.
- Enter the result of the inspection in the Findings Report.

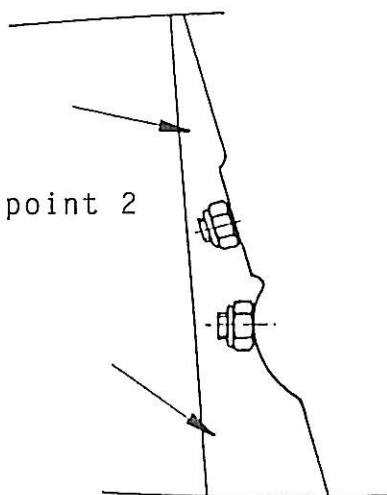
A-bolt, fitting



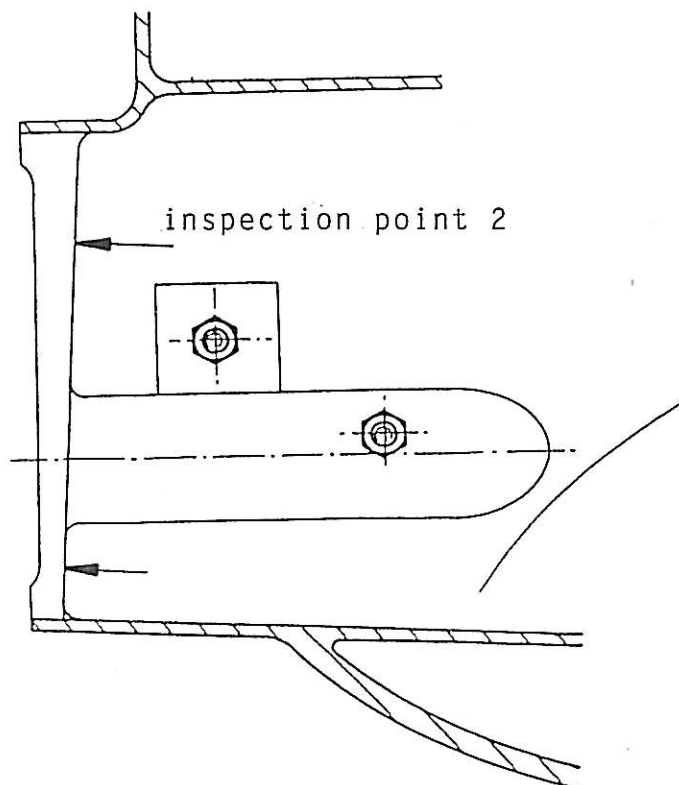
inspection point 1



inspection point 2



inspection point 2





# FINDINGS REPORT

page of  
Date of issue: August 26, 1991

3000 hour inspection H 36 Dimona

Serial no.:

Call sign:

Date:

Maintenance firm:

no.	defects occurred or finding	repair method, remarks	carrd. out	check

Objections have been removed and checked:

date:

stamp:

signature:

HOAC AUSTRIA G.m.b.H.  
N. A. Otto-Strasse 5  
A-2700 Wiener Neustadt

## WEIGHING REPORT

type:  
H 36 Dimona

date:

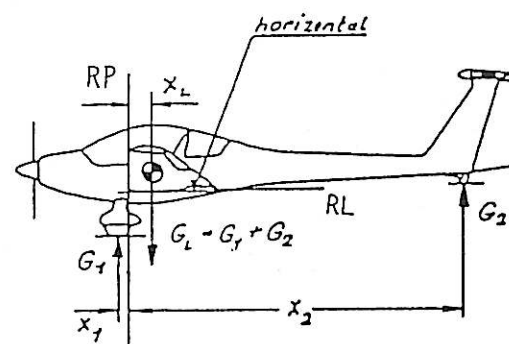
serial no.:

call sign:

reference point RP: leading edge at root rib  
horizontal reference line RL: lower side of root rib  
NLP: non-lifting parts

	[kp]	NLP [kp]		[kp]
main plane structure right			empty weight:	
main plane structure left			useful load:	
fuselage			max. weight:	
			weight of NLP components incl. useful load:	
horizontal tail surfaces			remarks:	
rudder				
useful load				

support	gross [kg]	tare [kg]	net [kg]	lever arm [mm]
front $G_1$				
rear $G_2$				



$$x_{EH} = \frac{x_2 * G_2 - x_1 * G_1}{G_1 + G_2} =$$

$$= \text{_____} = \text{_____ mm}$$

empty weight [kp]	500	510	520	530	540	550	560	570
$x_{EH}$ [mm]	326-356	325-357	324-357	320-358	319-359	317-359	315-360	314-360

Empty weight CG position according to flight manual: from \_\_\_\_\_ mm to \_\_\_\_\_ mm at \_\_\_\_\_ kp.

The calculated CG position is in the allowed range.

The balance document in the plane and in the flight manual have been checked.

Equipment at weighing see equipment list dated \_\_\_\_\_.

(stamp)

(signature)

HOAC AUSTRIA G.m.b.H.  
A-2700 Wiener Neustadt

# CONTROL SURFACES ADJUSTMENT REPORT

serial no.:

call sign:

date:

signature:

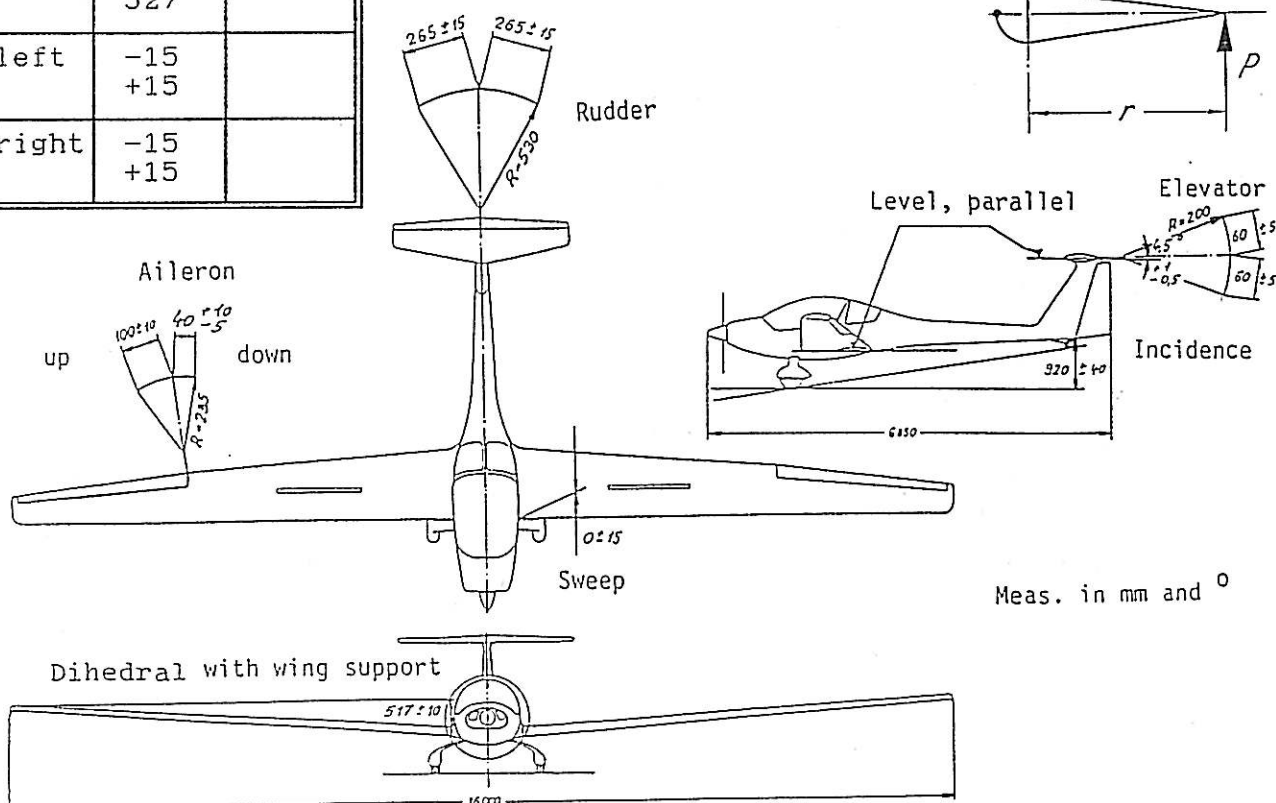
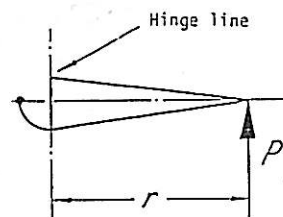
## ADJUSTMENT REPORT

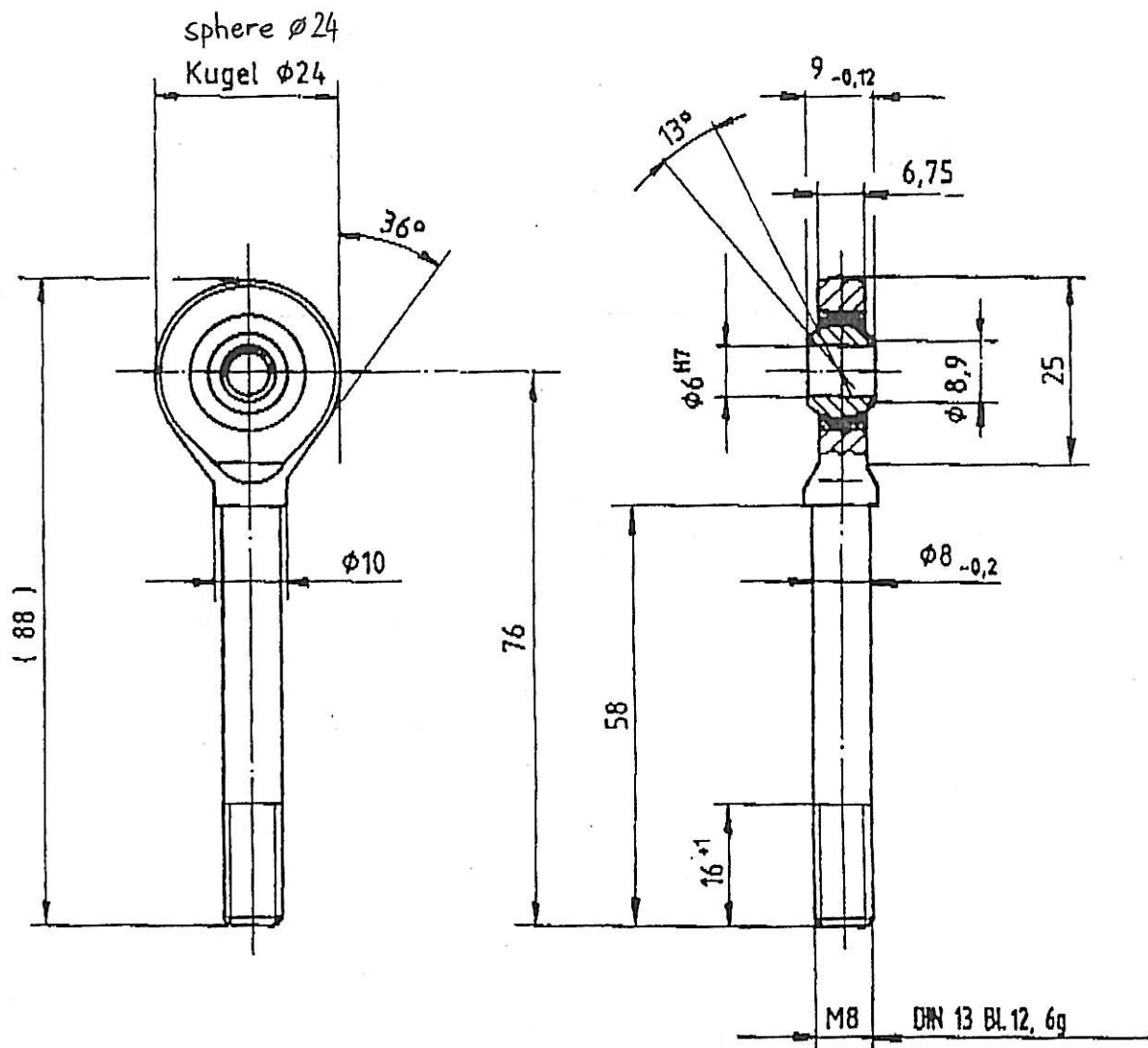
## CONTROL SURFACES WITH MASS BALANCING

		nomin. [mm]	actual [mm]	radius [mm]	weight		P [kp]	r [cm]	residual moment	
					nomin. [kp]	actual [kp]			nominal [kp*cm]	actual [kp*cm]
left aileron	up	90 110		235	3,90				16,80	
	down	35 50		235	1,70				7,50	
right aileron	up	90 110		235	3,90				16,80	
	down	35 50		235	1,70				7,50	
eleva- tor	up	55 65		200	3,08				12,75	
	down	55 65		200	2,05				10,69	
rudder	up	250 280		530	4,73				30,97	
	down	250 280		530	3,02				25,96	


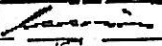
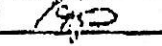
tailplane		3,00 4,50	
dihe- dral	left	507 527	
	right	507 527	
sweep	left	-15 +15	
	right	-15 +15	

With the lever arm  $r$ , which is equal to the distance between the hinge line and the measuring point, the residual moment will be obtained:  $M = P \cdot r$   
with  $P$  in [kp],  $r$  in [cm] !



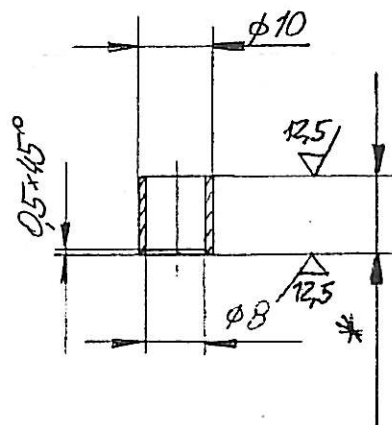


$C_0 = 15\,000\text{ N}$

					1	Gleitfolie Gr.6 - METALOPLAST HP2 -		04	CuSn6/PTFE
					2	P-Lagerschale Gr.6		03	CuZn40AlZ F60
					1	Innenring Gr.6, hartverchromt	648 K	02	1.3505
					1	Außen teil nach 01.1923.01, verg. 800 N/mm <sup>2</sup> , hartverchromt		01	1.7225
					Stück	Benennung	DIN-Nr.	Teil	Werkstoff
					Ohne unsere Genehmigung darf diese Zeichnung weder kopiert, noch vervielfältigt, noch dritten Personen oder Konkurrenzfirmen zugänglich gemacht werden. § 1 u. II des Gesetzes vom 19. 7. 1901			 <b>HIRSCHMANN</b> HIRSCHMANN GMBH D-7239 FLUORN-WINZEL N 1 TELEFON 07402-7021 TELEX 762872 TELEFAX 07402-7026	
Anderung	Index	Tag	Name	1988	Tag	Name	Gelenkkopf SMXCP 6.8H.1923		
Freimaßtoleranz nach DIN 7768 mittel				Gezeichnet	14.03				
				Geprüft			Zeichnungs-Nr. 01.1923.00		
Nennmaßbereiche				Maßstab					
bis 6	6-30	30-120	120-375	375-1000	1 : 1				
±0,1	±0,2	±0,3	±0,5	±0,8					
				Ersatz-Nr.		Ersetzt durch:			

0 10 20 30 40 50 60 70 80 90 100

$\phi (12,5)$



\*: adjust during installation

1	2	Rohr	1.0308 / St35	$\phi 10 \times 1 \times (12)^*$
Pos.	Stk.	Benennung	Werkstoff	Abmessungen
			Freimaßtol.: m DIN 7168	Maßstab: 1:1
			1990	Dat.
			Bearb.	01-25
			Gepr.	07-29
			Normgep	
			Distance sleeve Distanzhülse	
			820-2730-02-08	

Die unbefugte bzw. bestimmungswidrige Verwendung dieser Unterlage ist nicht gestattet und wird gerichtlich verfolgt.

