

STOP VALVE XAD 36 et XAD 37

**Description – Installation
Servicing**

SPARE PARTS LIST

U508075-e – Revision 6 – 04 April 2011



This document consists of **25** pages, including the flyleaf

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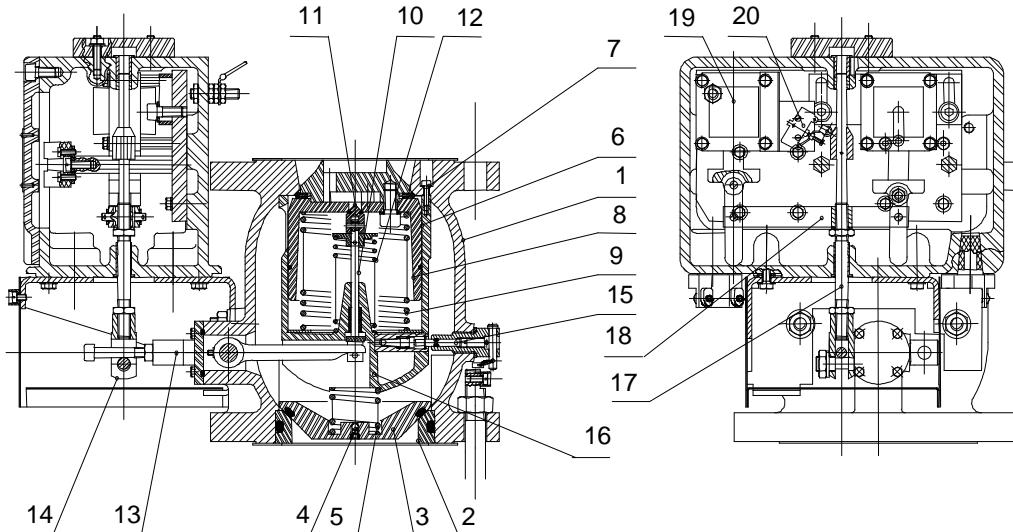
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ELECTRO-MECHANICALLY-OPERATED XAD 36 AND XAD 37 MULTIFUNCTION STOP VALVES



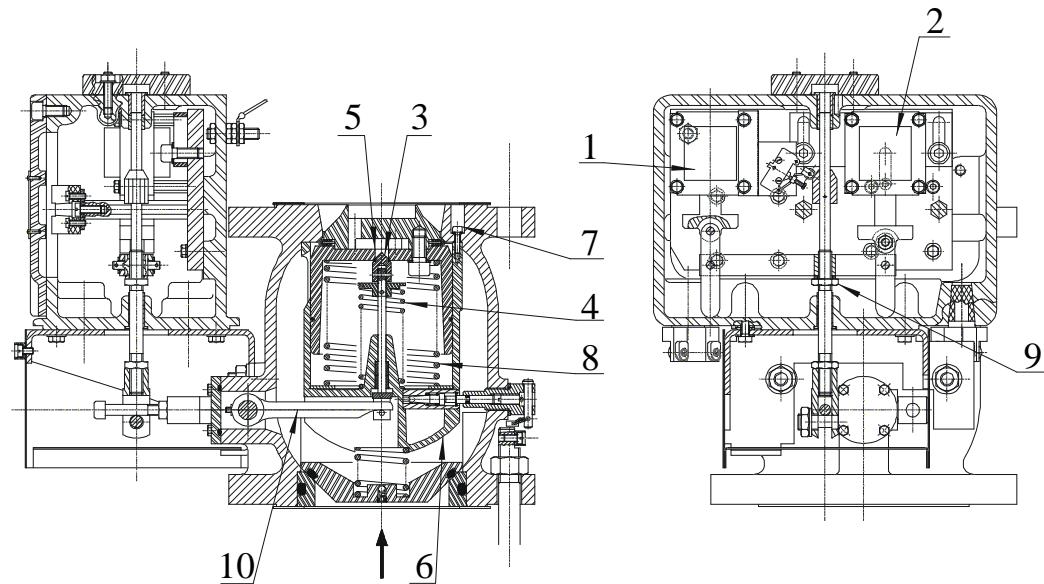
The XAD 36 & 37 Multifunction valves operate by differential pressure. The inlet circuit is controlled by a shaft controlled by the AC 16 box.

The Valve consists of the following parts :

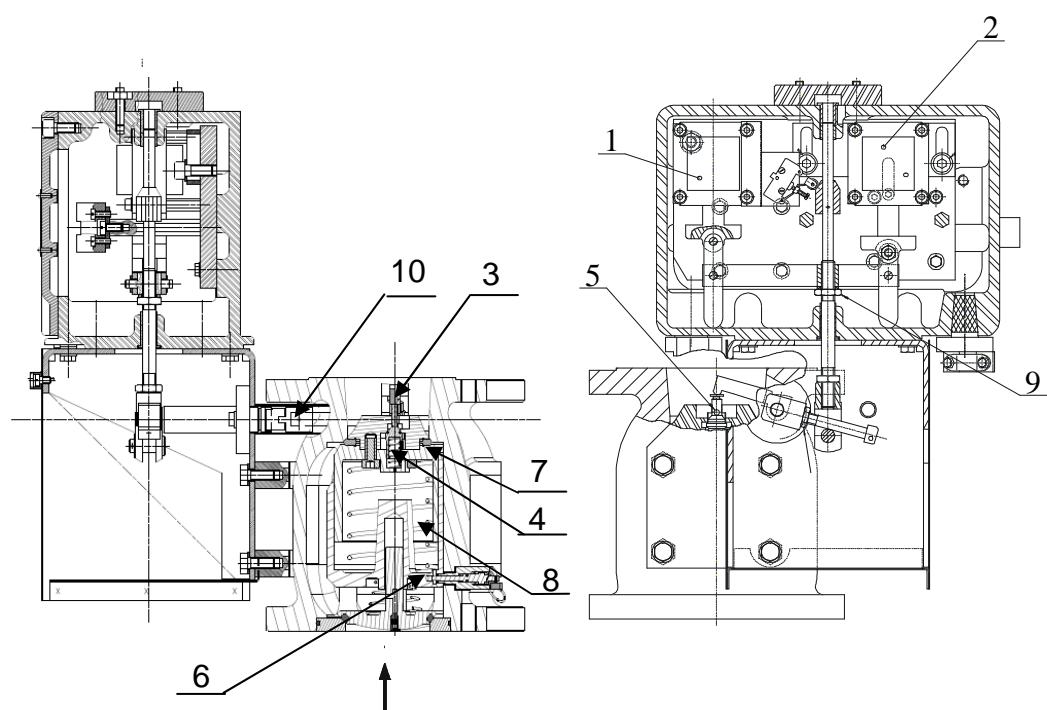
- An outer steel housing (1), at the base of which is located an aluminium no-return valve (3) supported by its valve seat (2). The no-return valve rises during product flow and falls when liquid flow has stopped. This no-return valve has a decompression ball (4) tarred at 0.4 bar, and a stainless steel retaining spring (5).
- The upper part of the housing containing an aluminium chamber (6) fixed by 3 screws (7).
- A moving part (8) consisting of an aluminium piston, a gasket and a deflector sliding freely within the chamber.
- This moving part is kept in place by pressure exerted by spring (9). A stainless steel control lever (10) opens or closes the inlet circuit (11) linking upstream and downstream of the valve. A spring keeps the control shaft (10) in place. A control lever (13) connected to the fork joint (14) in the AC 16 control box acts on this control shaft (10).
- Valve closure time can be adjusted using the calibration screw (15).
- An AC 16 control box in aluminium consisting of : a stainless steel drive shaft (17) equipped with a stainless steel beam (18). This shaft is controlled by 2 electromagnets (19) allowing operation in low flow or high flow, and a micro switch (20).

With regard to the powers, we specify that at the beginning of race it is 1000 VA and from 70 VA in race end.

XAD 36 AND XAD 37 STOP VALVE WITH ADJUSTABLE CLOSURE TIME



Vanne XAD36



Vanne XAD37

OPERATION

The power supply to the electromagnets (1 & 2) is switched off. The pilot (3) is kept in a closed position by the spring (4) and blocks the piston opening (5). In these conditions, liquid pressure upstream of the valve is transferred inside the chamber through the inlet hole (6).

The mobile assembly (7) is kept closed by liquid pressure exerted on the piston and by the spring (8). With the valve closed, if an electrical current is applied to the electromagnets (1 & 2), they change position, forcing the beam (9) up. This movement acts on lever (10) resulting in the pilot opening which in turns opens the inlet circuit connecting the piston chamber with the installation downstream. The piston chamber is thus practically at downstream pressure.

The reticule adjusting screw (6) being of section lower than the hole of evacuation, the fall of pressure which becomes established then in the room(chamber) of the piston with regard to the amount pressure allows the mobile crew (7) to open.

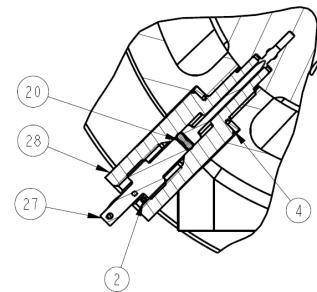
The mobile part (7) remains in open position due to pressure difference upstream and downstream acting on the piston surface.

Transfer from high to low flow : this occurs after switching off the high flow electromagnet (2) and maintaining the low flow electromagnet (1), resulting in the partial closure of the piston.

Valve closure : **this occurs after disconnecting the low flow electromagnet (1).**

Regulation of saw it of the system of amortization on the valve XAD 37

Go up the whole amortization by means of MP07000 to put the torque joint in place in the fat on the pointeau.



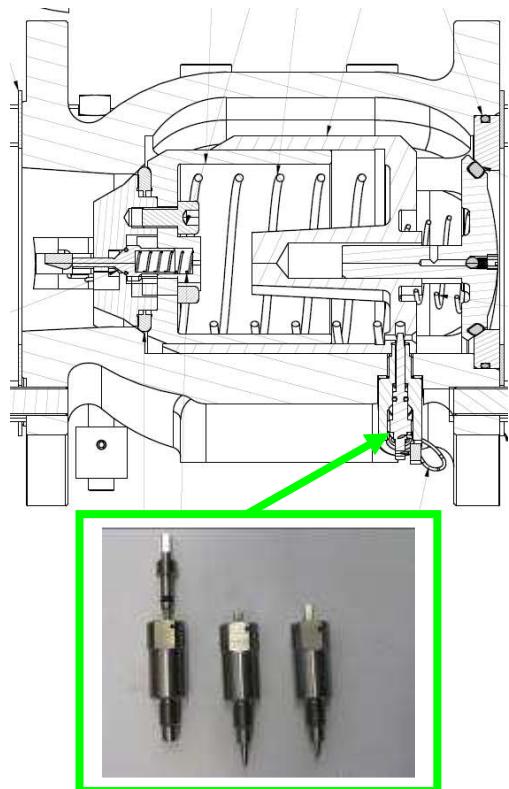
Screw until the earthed up the pointeau and undo it of 1 tower only

- Set up the pin
- To thread the thread of filling to immobilize the pointeau with the body of saw and putting the lead.
- Install the whole amortization by having taking care of inserting the ring BS

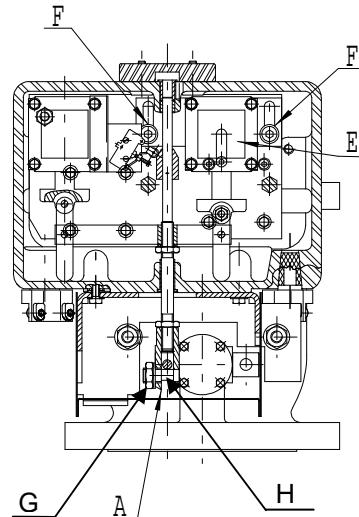
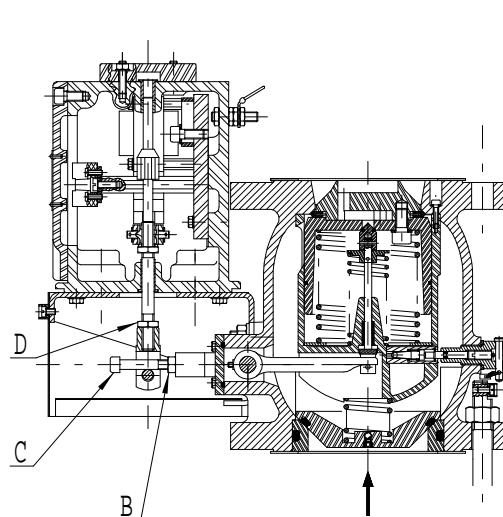
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For information:

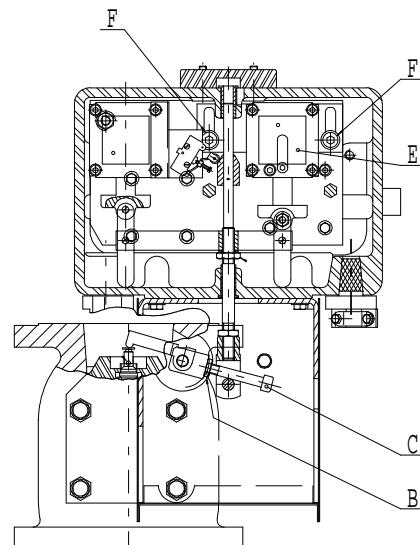
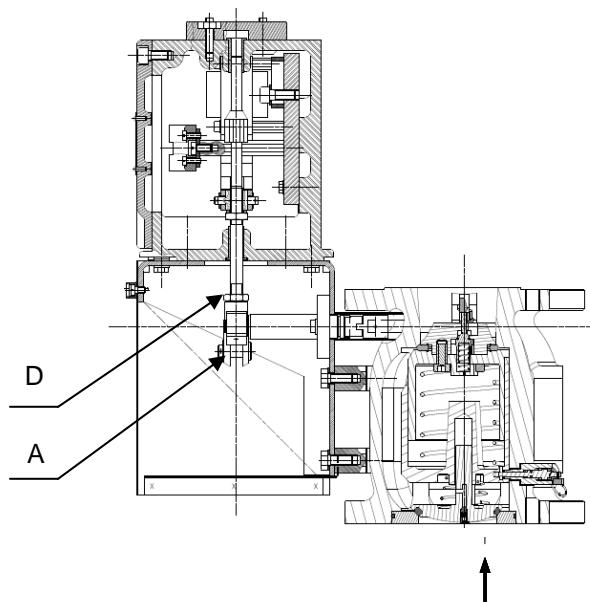
Tours of pointeau by undoing (leaving of pointeau closed)	0	1	2	3	4	5
Number of liters spent before lock in 80 m3 / hour	64,5	47,5	35,5	27,5	25,7	22,7



XAD 36 AND XAD 37 STOP VALVE WITH ADJUSTABLE FLOW ADJUSTMENT



Vanne XAD36



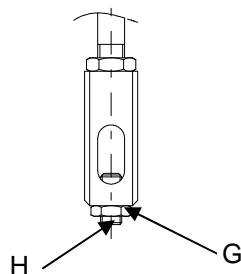
Vanne XAD37

1- Low Flow Rate Adjustment

NB for XAD 37 Low flow : minimum 8m³/h, maximum 13m³/h
 for XAD 36 Low flow : minimum 15 m³/h, maximum 20 m³/h

Adjustment is made via fork (A)

1. Unscrew lock nut (B) and remove axle (C).
2. Unscrew lock nut (D).
 - 2.1 Turn fork (A) clockwise to increase low flow rate.
 - 2.2 Turn fork (A) anticlockwise to decrease low flow rate.
3. Re-assemble the axle (C) with its lock nut (B) and tighten.
4. Tighten lock nut (D) on fork (A).
5. Adjust the debit by loosening the nut (G), turn the eccentric (H), then squeeze the nut (G)
6. Adjust the debit by loosening the nut (G), to squeeze or loosen screw (H), then squeeze the nut (G) according to plan below for the new regulation.



CAUTION : an excessively high setting of the low flow rate may lead to non-closure of the valve.

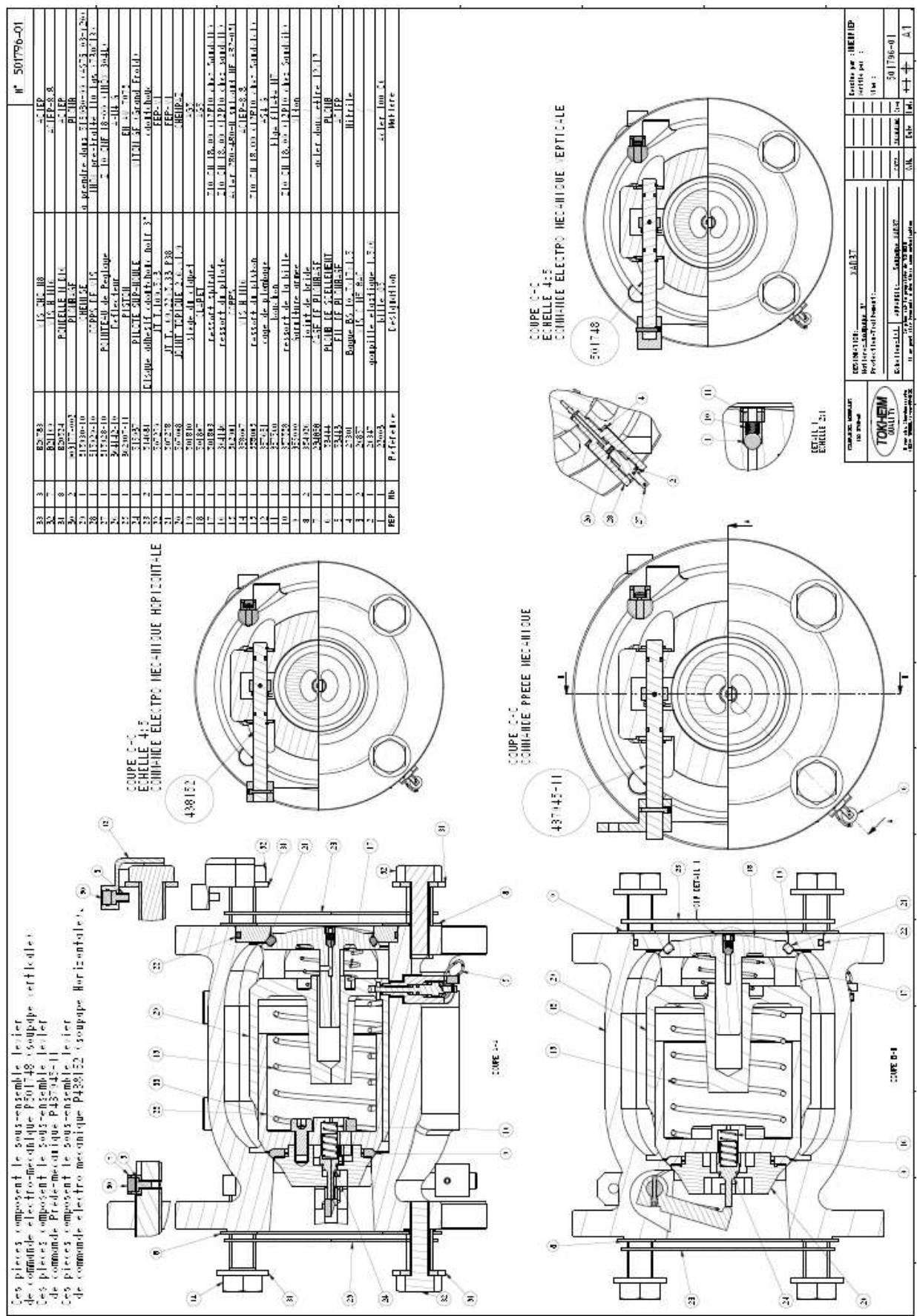
2- High Flow Rate Adjustment

NB for XAD 37 High flow : between 65 - 75 m³/h
 for XAD 36 High flow : between 125 - 130 m³/h

Adjustment is made by positioning the high flow electromagnet E as required.

1. Unscrew screw (F) from the high flow electromagnet support plate (E).
 - 1.1 Move the support plate / Electromagnet E upwards to Increase high flow rate.
 - 1.2 Move the support plate / Electromagnet E downwards to decrease high flow rate.
2. Tighten screw (F) after adjustment.

STOP VALVE XAD 37 – DN 80 (3")

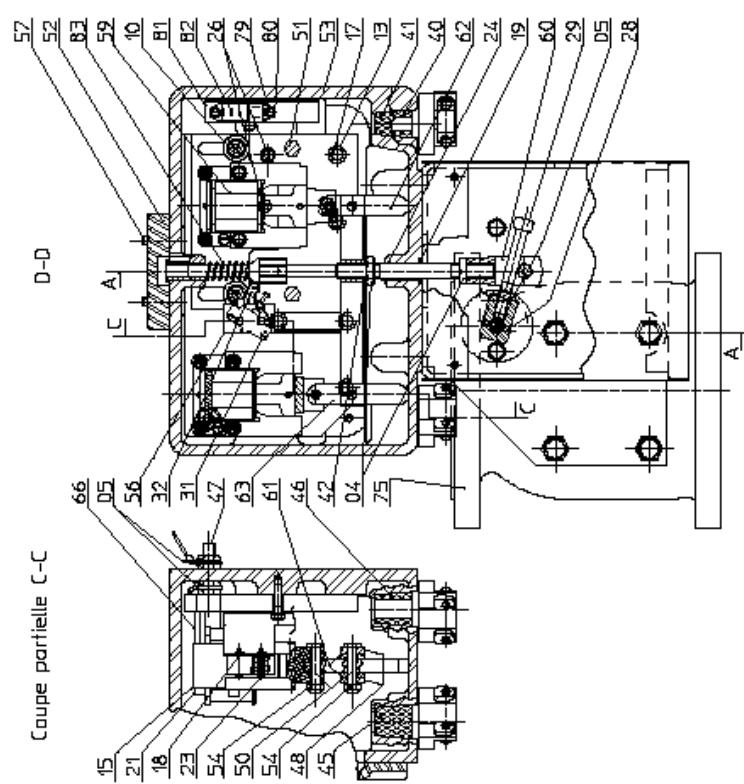
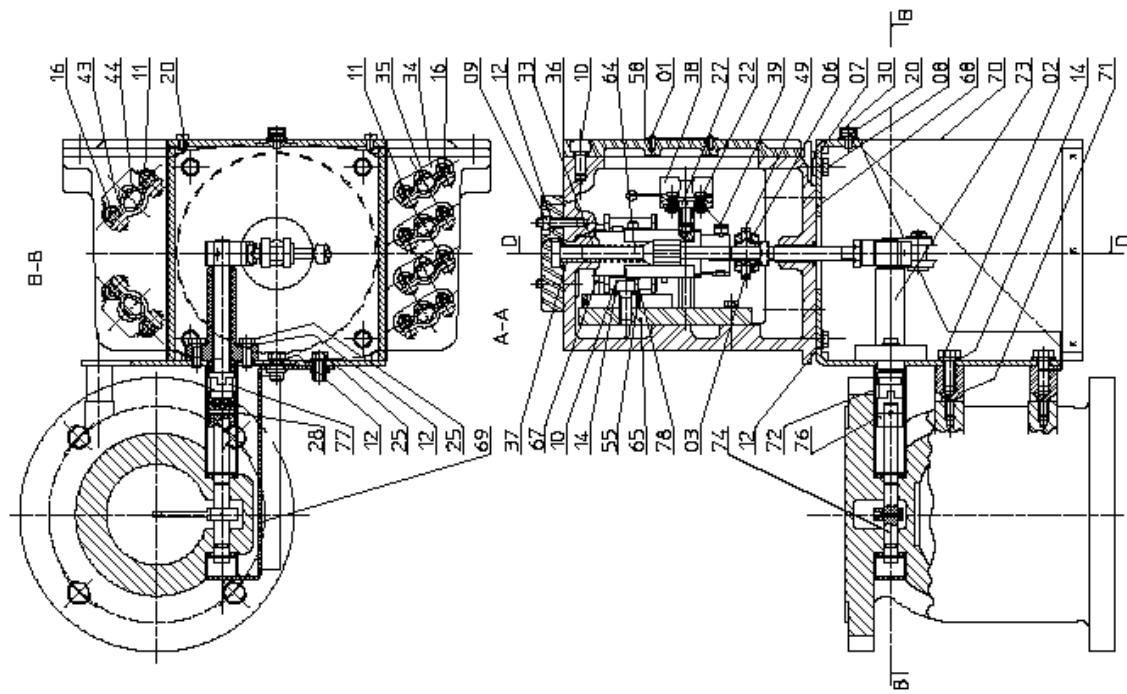


STOP VALVE XAD 37 – DN 80 (3")

Rep	REFERENCE	Qté	DESIGNATION
	501796-10		Stop valve XAD 37
1	22003	1	Ball
2	26347	1	Elasticated pin 1,5x6
3	26857	2	Screw C M5x8AC
4	27301	1	Gasket BS 10,7x17x1,5
5	53443	1	Thread of filling
6	53444	1	Lead of scellement
7	234858	1	Housing for seal
8	354926	2	Gasket
9	355090	1	Main seal
10	357558	1	Spring of the ball
11	357560	1	Plug
12	357651	1	Housing for seal
13	358003	1	Spring of the piston
14	358007	1	Screw H M16
15	362901	1	Body
16	364146	1	Spring of the pilot
17	501803	1	Spring spiral
18	501807	1	Non return valve
19	501810	1	Seat
20	507008	1	O'ring 2,6 x 1,9
21	507278	1	O'ring 69,22 x 5,33 R38
22	507279	1	O'ring 109,5 x 3
23	514681	2	Adhesive disk black rubber 3 "
24	515937	1	Surmoulé pilot
25	362907-11	1	Piston
26	364142-10	1	Déflector
27	515928-10	1	Pointeau of regulation
28	515929-10	1	Body of saw
29	515930-10	1	Housing
30	903177-002	2	Lead seal
31	20524	8	Washer M D16
32	21169	7	Screw H M16
33	26783	3	Screw CHc M8x14
	437945-11	1	Controlling lever - Mechanical control for VR 7889 preset
	501748	ou 1	Controlling lever – Electro magnetic control for vertical installation

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STOP VALVE XAD 37 ELECTRO-MECHANICALLY CONTROLLED



STOP VALVE XAD 37
ELECTRO-MECHANICALY CONTROLLED

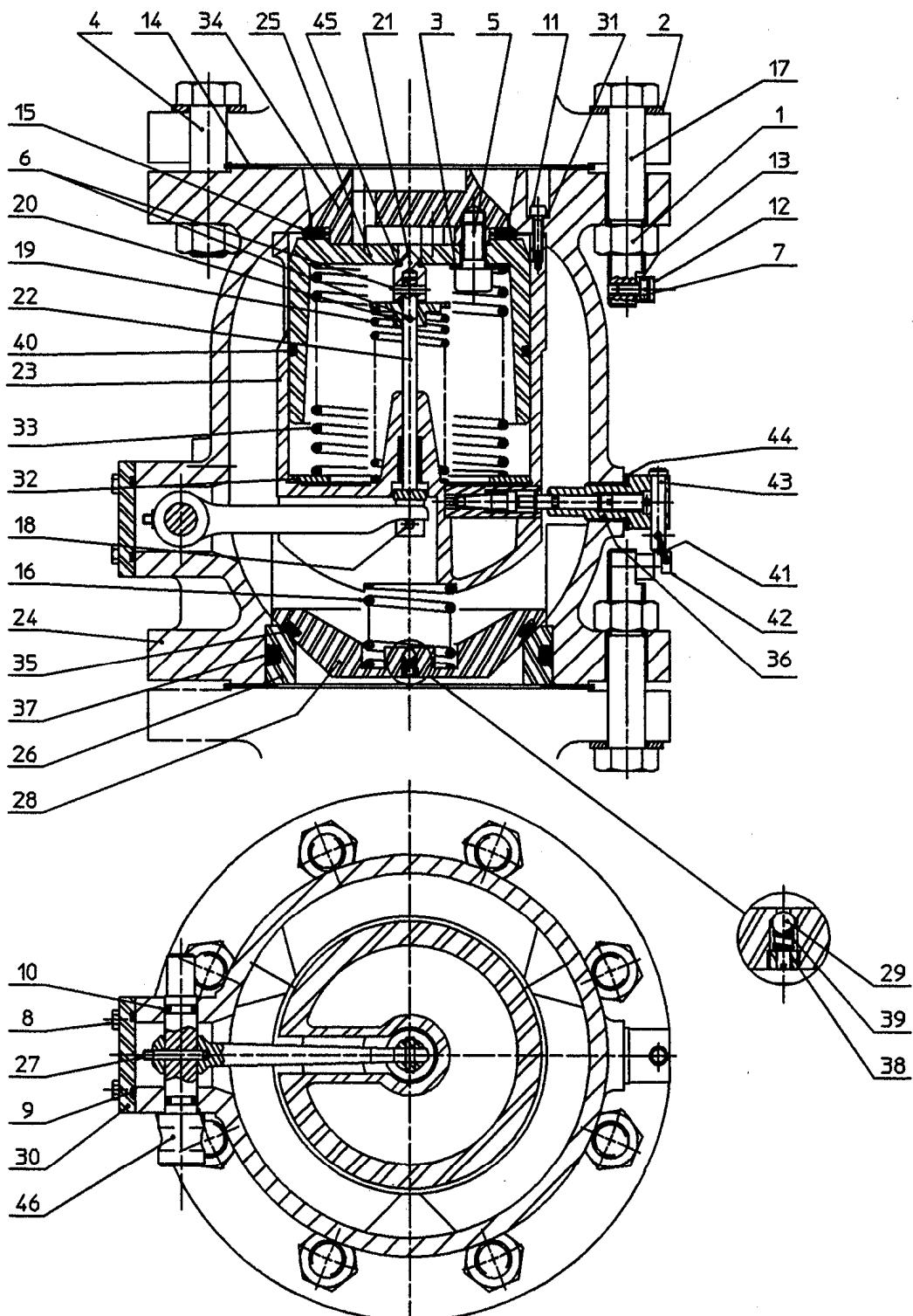
Rep	REFERENCE	Qté	DESIGNATION
	500877		Stop valve XAD 37 électro-mechanicaly controlled
1	9675	4	Rivet Ø 2,9
2	20017	4	Screw H M8x20
3	20120	2	Pin V 1,6x12
4	20415	2	Nut Hm M10
5	20445	5	Nut Hm M8
6	20511	2	Washer Z6
7	20532	8	Washer Z8
8	21075	4	Screw H M6x25
9	20400	4	Nut H M6
10	25949	10	Screw CHc M8x20
11	26480	12	Screw CHc M6x14
12	26742	12	Washer Ø6,5x14x0,5
13	26744	14	Washer Ø5,5x12x0,8
14	903437-001	6	Washer Ø8,5x18x1,2
15	26779	8	Washer Ø4,5x10x0,8
16	26816	12	Screw H M5x12
17	26832	5	Screw H M5x20
18	26846	2	Nut H M2,5
19	900497-003	1	Ring Ø10x13x16
20	26857	5	Screw Tc M5x8
21	515287	8	Screw CHc M4x40
22	27116	8	Screw Tc M4x12
23	26972	2	Screw Tc M2,5x30
24	27018	1	Ring Ø10x13x16
25	27094	4	Screw H M6x16
26	27287	2	Screw CHc M5x10
27	20077	2	Screw Tc M6x12
28	362885	3	Pin
29	27346	1	Screw CHc M8x60
30	903177-002	3	Lead seal
31	144329	1	Micro switch
32	902622	1	Lever
33	232145	1	Ring Ø8x12x12
34	238607	4	Bulkhead
35	902600	4	Collar
36	353089	1	Cover
37	356563	1	Ring Ø8x12x16
38	356961	2	Landmark
39	356968	1	Support
40	356970	1	Stuffing
41	356971	3	Stuffing
42	359397	1	Washer
43	359477	2	Bulkhead

STOP VALVE XAD 37
ELECTRO-MECHANICALY CONTROLLED

Rep	1 REFER2ENCE	Qté	DESIGNATION
44	359478	2	Collar
45	359482	1	Stuffing
46	359483	1	Stuffing
47	359815	1	Tie rot
48	360850	2	Pendulum
49	360851	1	Square guide
50	360854	4	Axle
51	360855	2	Column
52	360857	1	Hood
53	360858	1	Junction bar
54	361841	4	Nut nylstop M6
55	362302-10	1	Support mobile electromagnet
56	362496-10	1	Support minicontact breaker
57	363798	4	Threaded tierod
58	363965	1	Plate
59	516610	2	Electro-magnet 220V
	516610-10	2	Electro-magnet 110V
60	515082	1	Fork - joint
61	501329	4	Drive washer
62	501330	1	Right link
63	501331	1	Left link
64	501333	1	Controlling axle
65	501334-10	1	Support plate
66	511161-25	4	Stud MF 4x25
67	511161	2	Stud MF 4x15
68	501735	1	Support case AC 16
69	501738	1	Square cover
70	501740	1	Bonnet
71	501741	4	Stud
72	501743	1	Protection pipe
73	501745	1	Coupling
74	501748	1	Controlling lever
75	501796-01	1	Stop valve XAD 37
76	502432	1	Coupling box
77	506266	1	Disc coupling
78	511161-12	2	Stud MF 4x12
79	26827	2	Screw TF M3x10
80	900008-012	2	Washer - 9
81	516690	1	Support relay
82	516701	1	Relay
83	516702	1	Spring

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ADJUSTABLE STOP VALVE XAD 36 – DN 100 (4")



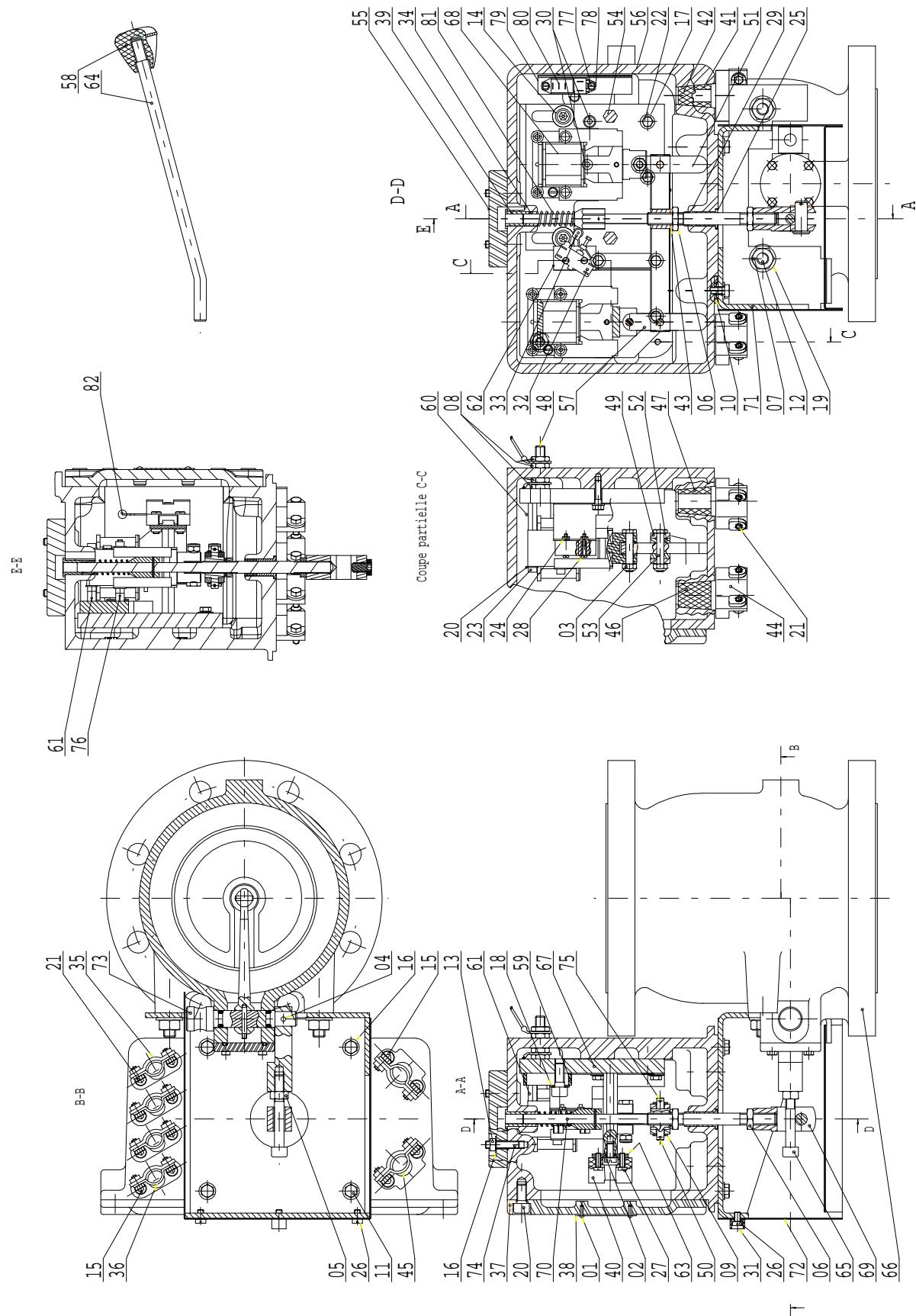
U507960 1/3 Révision 1 Après 12/98

ADJUSTABLE STOP VALVE XAD 36 – DN 100 (4")

Rep	REFERENCE	Qté	DESIGNATION
	504959		Adjustable Stop valve XAD 36
1	20440	16	Nut
2	20524	16	Washer
3	27301	3	Washer
4	21947	14	Screw
5	26494	3	Screw
6	364769	2	Pin
7	26857	2	Screw C M5x8
8	26861	4	Screw
9	364473	1	O'ring
10	507007	2	O'ring
11	27471	3	Screw
12	903177-002	2	Lead seal
13	234858	2	Housing for seal
14	353606	2	Gasket
15	355070-21	1	Main seal
16	501410	1	Spring
17	357999	2	Sealing screw
18	360449	1	Axle
19	360450	1	Spring
20	360451-11	1	Spring stop
21	360452-21	1	Pilot
22	360509-11	1	Axle
23	504960	1	Housing
24	361981-41	1	Body
25	361998-51	1	Piston
26	500525	1	Seat
27	362000	1	Pin
28	500523	1	Non return valve
29	22003	1	Ball
30	362003	1	Cover
31	507015	3	Gasket
32	362811	1	Washer
33	362812	1	Spring
34	500524	1	Piston nose
35	507005	1	O'ring
36	504982	1	Adjustment device
37	507006	1	O'ring
38	357560	1	Plug
39	357558	1	Spring
40	504775	1	O'ring
41	902404-002	1	Wire
42	902403	1	Lead seal
43	504962	1	Seal axle
44	507016	1	Gasket
45	438011	1	Controlling lever - control for VR 7889 preset . Right hand entry
	438012	1	Controlling lever - control for VR 7889 preset . Left hand entry

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**STOP VALVE XAD 36
ELECTRO-MECHANICALLY CONTROLLED**

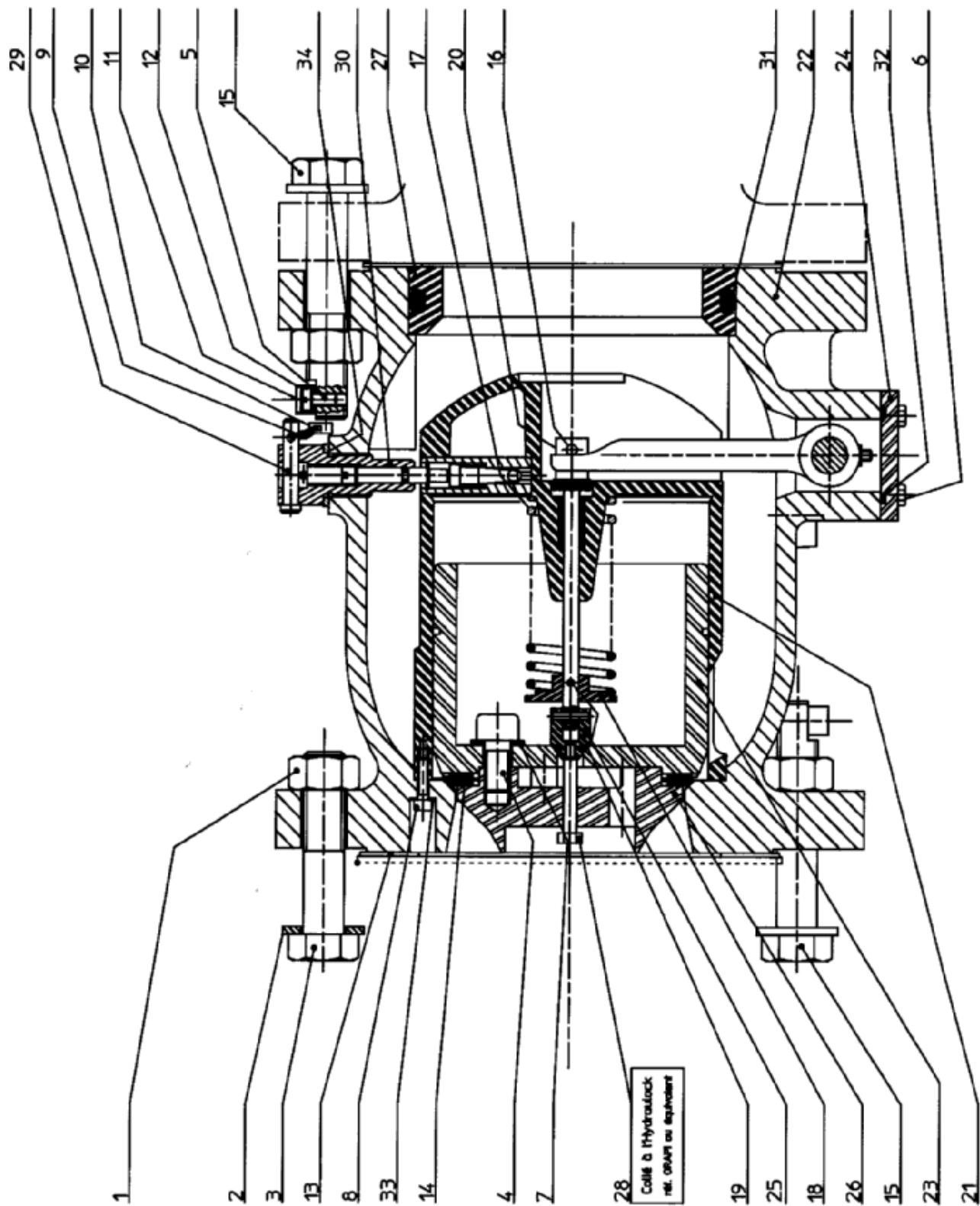


STOP VALVE XAD 36
ELECTRO-MECHANICALY CONTROLLED

Rep	REFERENCE	Qté	DESIGNATION
	501684		Stop valve XAD 36 électro-mechanicaly controlled
1	9675	4	Rivet Ø 2,9
2	20077	2	Screw Tc M6x12
3	361841	4	Nut M6
4	26427	1	Pin G01 – Ø 4x24
5	20411	1	Nut H M8
6	20415	2	Nut Hm M10
7	20417	2	Nut H M10
8	20445	4	Nut Hm M8
9	20511	2	Washer Z6
10	20532	8	Washer Z8
11	21075	4	Screw H M6x25
12	25337	2	Gudgeon bolt M10
13	20400	4	Nut H M6
14	25949	10	Screw CHc M8x20
15	26480	12	Screw CHc M6x14
16	26742	8	Washer Ø6,5x14x0,5
17	26744	5	Washer Ø5,5x12x0,8
18	903437-001	2	Washer Ø8,5x18x1,2
19	26776	2	Washer Ø10,5x22x1,5
20	26779	8	Washer Ø 4,5x10x0,8
21	26816	12	Screw H M5x12
22	26832	5	Screw H M5x20
23	515287	8	Screw CHc M4x40
24	26846	2	Nut H M2,5
25	900497-003	1	Ring Ø10x13x16
26	26857	3	Screw Tc M5x8
27	27116	8	Screw Tc M4x12
28	26972	2	Screw Tc M2,5x30
29	27018	1	Ring Ø10x13x16
30	27287	2	Screw CHc M5x10
31	903177-002	1	Lead seal
32	144329	1	Micro switch
33	902622	1	Lever
34	232145	1	Ring Ø8x12x12
35	238607	4	Bulkhead
36	902600	4	Collar
37	353089	1	Cover
38	363965	1	Plate
39	356563	1	Ring Ø8x12x16
40	356961	2	Landmark
41	356970	1	Stuffing
42	356971	3	Stuffing
43	359397	1	Washer
44	359477	2	Bulkhead

**STOP VALVE XAD 36
ELECTRO-MECHANICALY CONTROLLED**

Rep	¹ REFERENCE	Qté	DESIGNATION
45	359478	2	Collar
46	359482	1	Stuffing
47	359483	1	Stuffing
48	359815	1	Tie tot
49	360850	2	Pendulum
50	360851	1	Square guide
51	501330	1	Right link
52	501329	4	Drive washer
53	360854	4	Axle
54	360855	2	Column
55	360857	1	Hood
56	360858	1	Junction box
57	501331	1	Left link
58	361139	1	Handle
59	362302-10	1	Support
60	511161-25	4	Drive MF 4x25
61	511161	2	Drive MF 4x15
62	362496-10	1	Support minicontact breaker
63	356968	1	Support
64	362718	1	Strengthening lever
65	27346	1	Screw CHc M8x60
66	504959	1	Stop valve XAD 36
67	501334-10	1	Support plate
68	516610	2	Electro-magnet 220V
	516610-10	2	Electro-magnet 110V
69	515082	1	Fork-joint
	515318	1	Screw
	20445	1	Nut
70	501333	1	Controlling axle
71	501328	1	Support case AC 16
72	501393	1	Bonnet
73	437677	1	Controlling lever
74	363798	4	Threaded tierod
75	20120	2	Pin
76	511161-12	2	Stud MF 4x12
77	26827	2	Screw TF M3x10
78	900008-012	2	Washer - 9
79	516690	1	Support relay
80	516701	1	Relay
81	516702	1	Spring
82	508712	1	Heating resistance

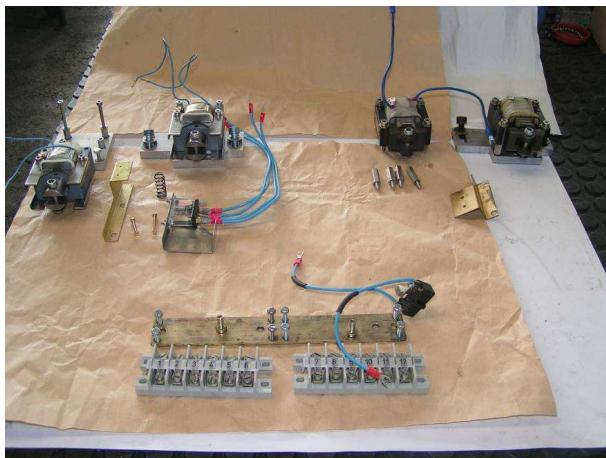


504845-10**GRAVITATING VALVE XAD36 ADJUSTABLE**

1	20440	NUT H M16 -200 AC C8,8	16
2	20524	WASHER.M 16 x32 x3 ACIER Zn	16
3	21947	SCREW H M16 - 70 AC C8,8	14
4	26494	SCREW CHc M10 - 20 AC C8.8 Zn	3
5	26857	SCREW C M 5 - 8 AC ZINGUEE	2
6	26861	SCREW H M 4 - 16 AC ZN	4
7	27301	WASHER BS 10,7-17-1,5 NIT.4490	3
8	27471	SCREW CHc M 4 - 16 AC C8.8 ZING.	3
9	902404-001	WIRE	0,1
10	902403	LEAD SEAL	1
11	903177-002	LEAD SEAL	2
12	234858	HOUSING FOR SEAL	2
13	353606	GASKET BLUE GARD 162X116 EP1.50	2
14	355070-21	MAIN SEAL	1
15	357999	SEALING SCREW	2
16	360449	AXLE	1
17	360450	SPRING	1
18	360451-11	SPRING STOP	1
19	504846-10	GRAVITATING MOULDED PILOT	1
20	360509-11	AXLE	1
21	504960	HOUSING	1
22	361981-41	BODY	1
23	361998-51	PISTON XAD36	1
24	362003	COVER	1
25	364769	PIN SPIRAL 2.5x14	2
26	504848	PRESS TRIMMING	1
27	500525	SEAT	1
28	504847-10	STEM OF RECALL	1
29	504962	CENTER LEADING XAD36	1
30	504982	ADJUSMENT DEVICE	1
31	507006	O'RING T.113,67x6,99 R53 FEP-VI	1
32	364473	O'RING T. 30 x3 DF801	1
33	507015	GASKET BAG.BS 4,6-9-1 VITON	3
34	507016	GASKET.BS 17,25-23,87-2,1 9775	1

ELECTROMAGNETS REPLACEMENT KIT FOR AC16 CASE

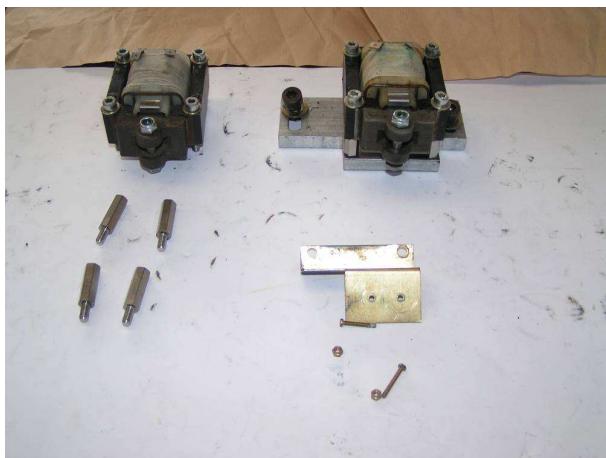
1. Dismantling Case



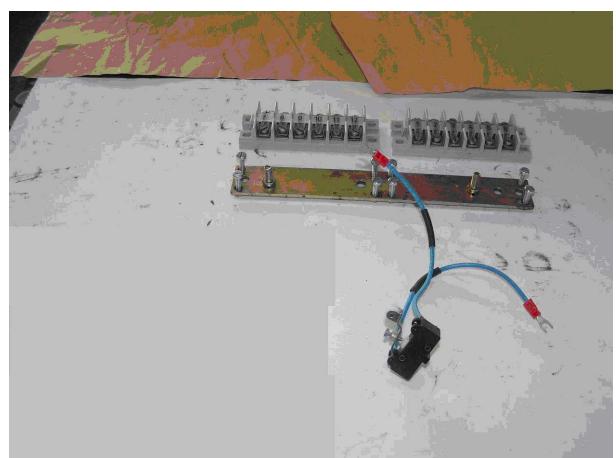
2. Kit of repair



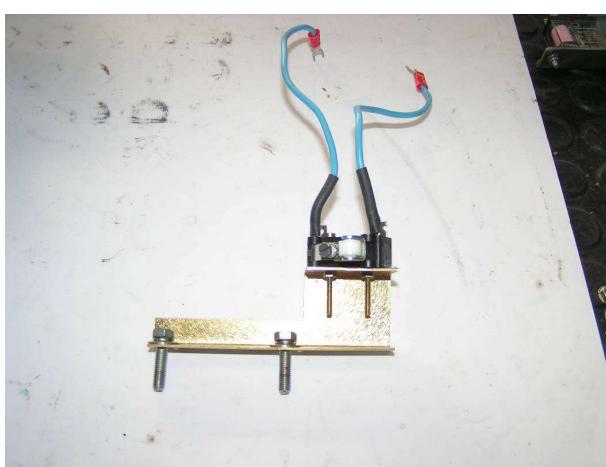
3. Obsolete parts



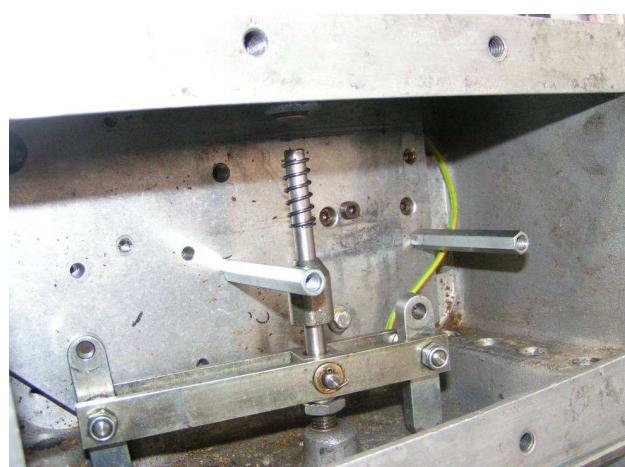
4. Reused rooms



5. Pre-assembly



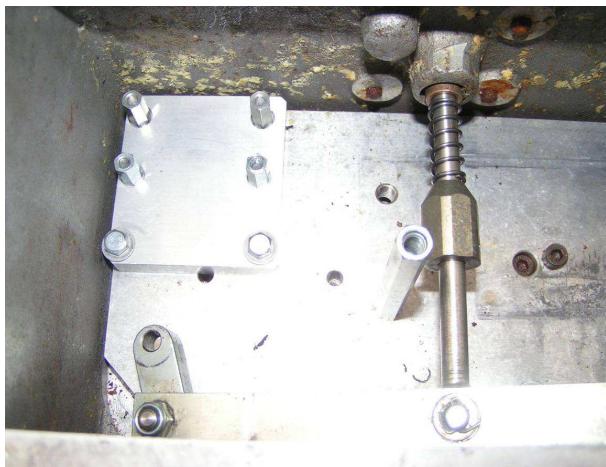
6. Reassembly of the case
Locate the position of against nut



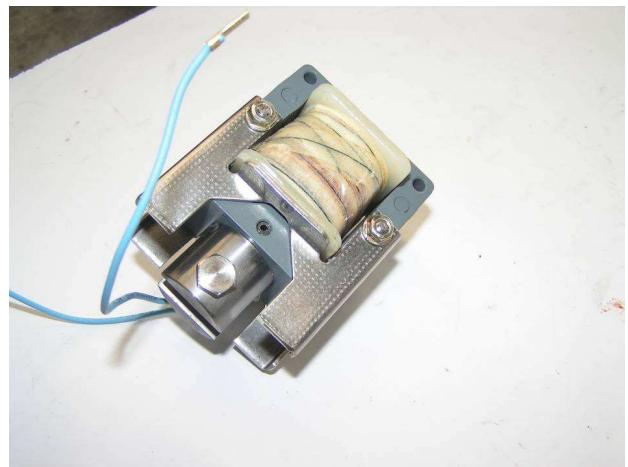
Releasing of against nuts, unscrewing
of the axis at most, assembly of the spring,
re-screw the axis in its initial position

ELECTROMAGNETS REPLACEMENT KIT FOR AC16 CASE

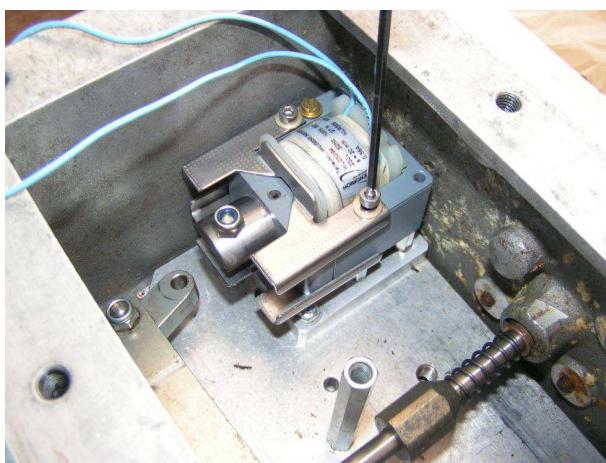
7. Assembly of the patch support



8. Assembly of the 1st electromagnet (small debit)



9. To screw 2 lived in spacers by leaving 3 in 4mm of game



11. Align the axis with holes by lifting the electromagnet And to squeeze 2 screw

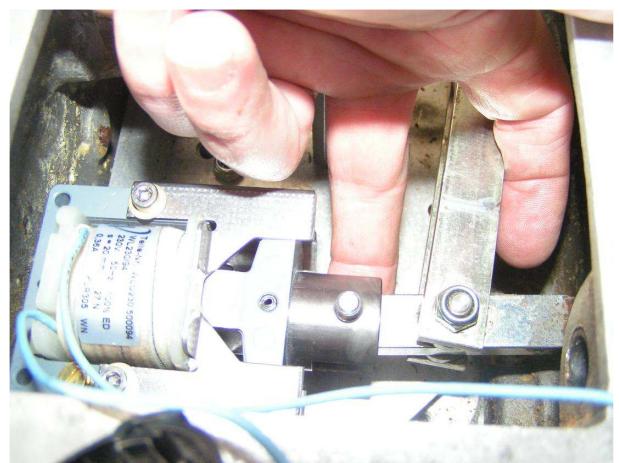


Remove 2 nuts by paying attention not to remove guides

10. Loosen the nut and position the finger in the crack of the electromagnet



12. Lift the axis to go back up the nut



ELECTROMAGNETS REPLACEMENT KIT FOR AC16 CASE

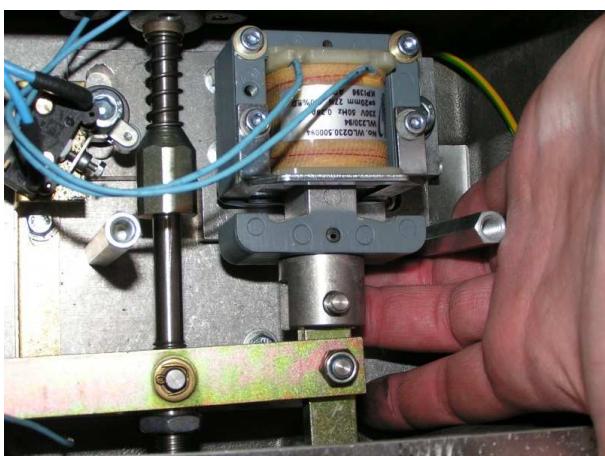
13. Elaborated 2 others screw



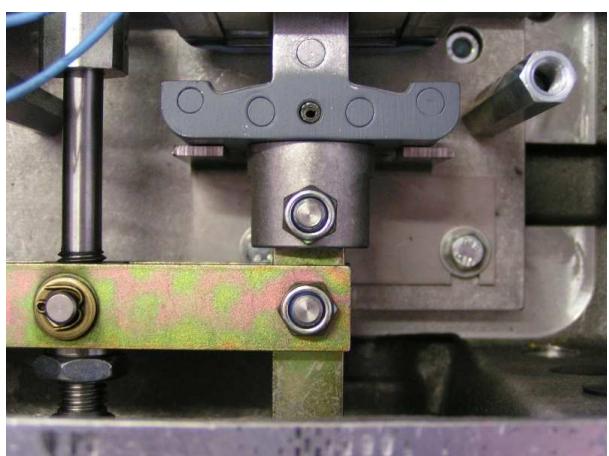
14. Assemble the second electromagnet



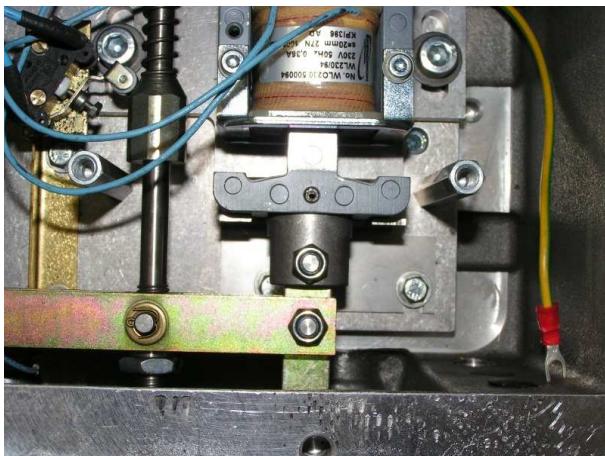
15. To put back screw and the nut in the same way



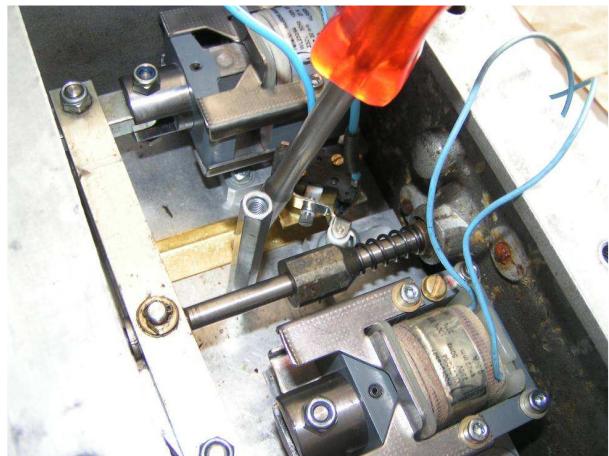
16. Put "L" metallic part with 2 screw on bottom right of case:



17. Adjust the "L" metallic part to realize a stop of the nucleus when the link of pendulum is in vertical position and in contact with the case:

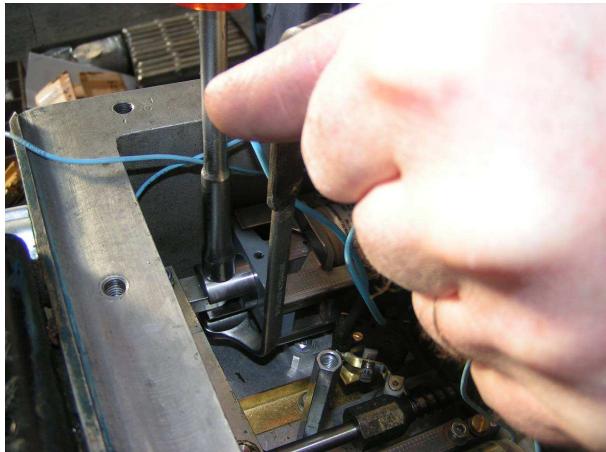


18. Go up the sensor :

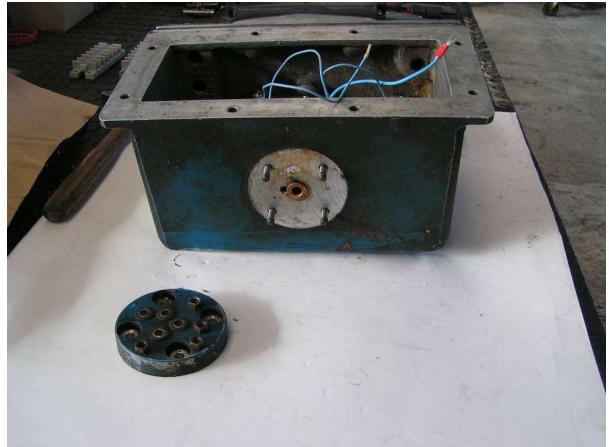


ELECTROMAGNETS REPLACEMENT KIT FOR AC16 CASE

19. Made maneuver freely the axis of command and block all screw them



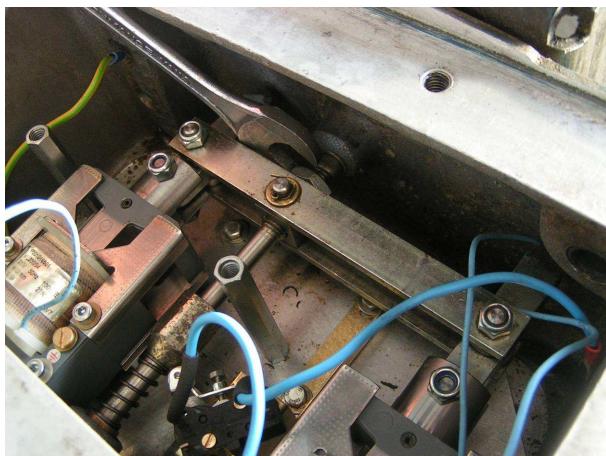
20. Regulation of the axis of command
Remove the hood



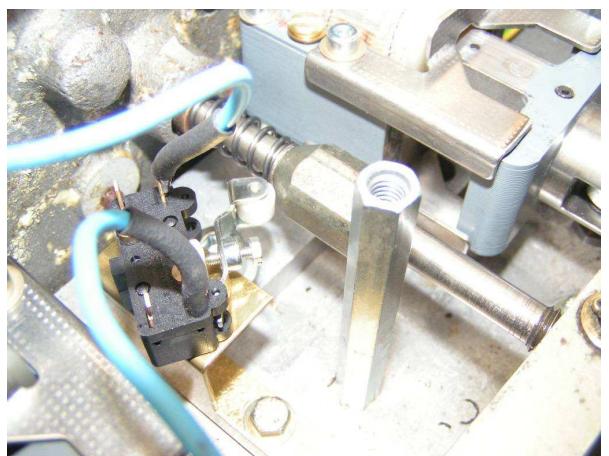
21. Made take out the axis of command of 6 mm with regard to the case when 2 electromagnets are closed



22. Squeeze against nut by paying attention that the contact of the sensor is not on the dish of cam

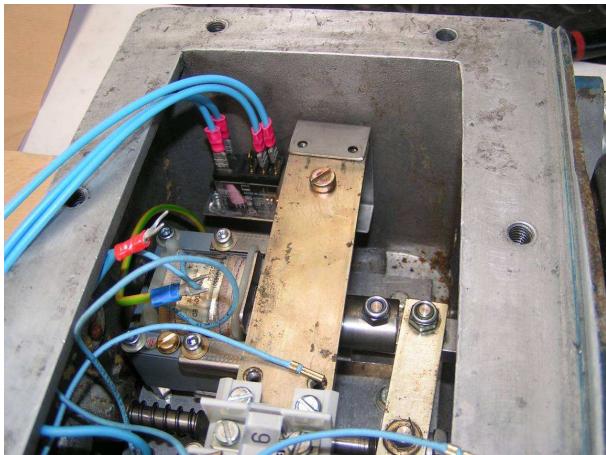


23. Adjust the sensor if need so as to hear the click when the electro pilot small debit is in contact, then to block the position with 2 screw



ELECTROMAGNETS REPLACEMENT KIT FOR AC16 CASE

24. Go back up the support bornier and the bornier then the support relay



25 : Realize the cabling following plans 1 - 6
178015-10 ou 178025-10

