

## IMPORTANT INFORMATION:

- A copy of our “Safe Operating Practices” Manuals are always available free of charge either by downloading it from our Technical Publications website @ [www.airwinch.com](http://www.airwinch.com) or by contacting the Factory at (800) 866-5457 for North America and (206) 624-0466 for International. The Safe Operating Practices manual must be read prior to anyone operating a **Ingersoll-Rand** winch or hoist. The manual form numbers are as follows:

“Safe Operating Practices Non-Man Rider™ Winches” Manual, Form No. MHD56250

“Safe Operating Practices for Man Rider™ Winches” Manual, Form No. MHD56251

“Safe Operating Practices for Pneumatic, Hydraulic and Electric Hoists” Manual, Form No. MHD56295

- Available winch options may require additional supplements to the basic winch manual.
- For Man Rider™ winches ensure a copy of the Man Rider™ supplement is made available to the operator prior to winch operation.

### Winch Man Rider™ Supplements:

Model:	Publication No.
FA2, FA2.5, FH2, FH2.5	MHD56046
FA5	MHD56042 and MHD56220
FA10	MHD56252
FA2.5A	MHD56236
FA2B and HU40A	MHD56207
FH10MR	MHD56212
Fulcrum Electric	MHD56277
LS500HLP/ LS1000HLP	SAM0004

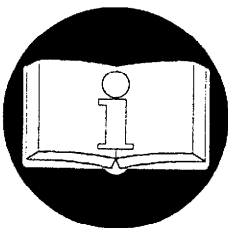
Model:	Publication No.
LS500RLP	SAM0011
LS1000RLP	SAM0012
LS150RLP	SAM0082
LS150RLP/500/ 1000	SAM0115
LS150RLP and LS150PLP-PH	SAM0120
LS500RLP-E	SAM0122
LS150RLP- DP5M-F	SAM0184
LS150HLP	SAM0222

- We strongly recommend that ALL maintenance on **Ingersoll-Rand** equipment be carried out by personnel certified by **Ingersoll-Rand**, or by **Ingersoll-Rand** Authorized Service Centers.
- Contact the Factory if in doubt about installation, operation, inspection and maintenance instructions.
- Use only Genuine **Ingersoll-Rand** parts when maintaining or repairing a winch, hoist or any component of a winch or hoist.
- ANSI / ASME recommends that a winch or hoist (or any components of a winch or hoist) that has been repaired be tested prior to being placed into service:
  - \* **Winches** - ANSI / ASME B30.7 (BASE MOUNTED DRUM HOISTS) Refer to section 7.2.2 - Testing.
  - \* **Hoists** - ANSI / ASME B30.16 (OVERHEAD HOISTS - UNDERHUNG) Refer to section 16.2.2 - Testing.

# PARTS, OPERATION AND MAINTENANCE MANUAL

for

## "PALAIR PLUS" PAL12500K/25000K-2C AIR CHAIN HOIST MODELS



READ THIS MANUAL BEFORE USING THESE PRODUCTS. This manual contains important safety, installation, operation and maintenance information. Make this manual available to all persons responsible for the operation, installation and maintenance of these products.

Do not use this hoist for lifting, supporting, or transporting people or lifting or supporting loads over people.

Always operate, inspect and maintain this hoist in accordance with European Standards and any other applicable safety codes and regulations.

Refer all communications to the nearest IR/SAMIHA Material Handling Products Office or Distributor.

Form SAM0065  
Edition 2  
DECEMBER 1996  
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**PRODUCTION EQUIPMENT**

**IR / SAMILA®**

BP 59  
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## PAL12500 & 25000K AIR CHAIN HOIST

NUMERO DE NOMENCLATURE

**L623**

NUMERO DU DOCUMENT

916107119 1/11

  
 LE CHEF DU BUREAU D'ETUDES

### SUMMARY

DESCRIPTION	DOCUMENT NBR	FOLIOS
• <b>Practical advice</b>	94-09-52	5
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- Accessories drawing and parts list	96-07-20	1
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- assembly drawing and parts list	95-04-06	1
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- Shut-off valve assembly drawing and parts list	95-03-40	1
• <b>Torque Limitor</b>		
- assembly drawing and parts list	95-03-42	1

**PRACTICAL ADVICE  
PALAIR 12500 L & 25000 L****1 - STARTING****• Connecting to air circuit**

- The connection to network of the hoist to the air hose is made on inlet port 2" G on the top of the control valve.
- The Ø of the feeding circuit must not inferior to 2" G.
- Before connecting the air inlet to the PALAIR, it is essential to expel the air in order to get rid of any dirt particles that might be inside the pipe.
- When installing or restarting the hoist, we recommended supplying air gradually in order to obtain a slow rotation of the motor and also running it in both directions for a few results.

**• Lubrication**

- For use in corrosive or moist atmospheres it is recommended to put a "Filter-regulator-lubricator" near the hoist (3m maxi) for air treatment.
- When filling up the oiler, air inlet must be closed :
  - . recommended oil : GRADE ISO 150
  - . minimum viscosity : 135 Cst à 40°C

**2 - MAINTENANCE****• Motor**

- Fill the oil lubricator daily when PALAIR is in constant use.

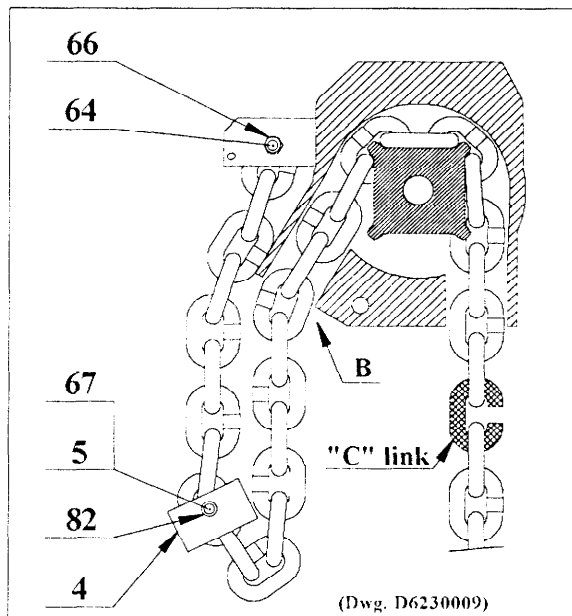
**• Hooks and load chain**

- Inspect hooks, chain and stop buffers regularly.
- Each month, check the condition of hook anchoring points on the chain and on the hoist body.
- Lubricate the chain regularly with a thick oil for gears.
- When you put in a new chain, inspect the drive sprocket of the hoist. If necessary, replace these parts.

**PRACTICAL ADVICE**  
**PALAIR 12500 L & 25000 L****3 - REPLACING THE CHAIN**

- In all cases, we recommend to use only the manufacturer's chain for safety reasons.
- The SAMIIA chain is chosen according to DIN norm 5684- Grade 80 of the correct dimensions and tolerance to suit the load sprocket.

THE SAMIIA WARRANTY CAN NOT BE GIVEN WITHOUT RESPECTING THE ABOVE RECOMMENDATIONS

• Chaining up the hoist

- Take a chain link (with same size) cut like a "C" (see scheme).
- Join the new chain to the old with the link taking care of putting the cut and the welds of the links perpendicularly, facing outside as compared to the hoist axle.
- Run slowly the hoist on lowering direction until the new chain appears (about 2 meter).

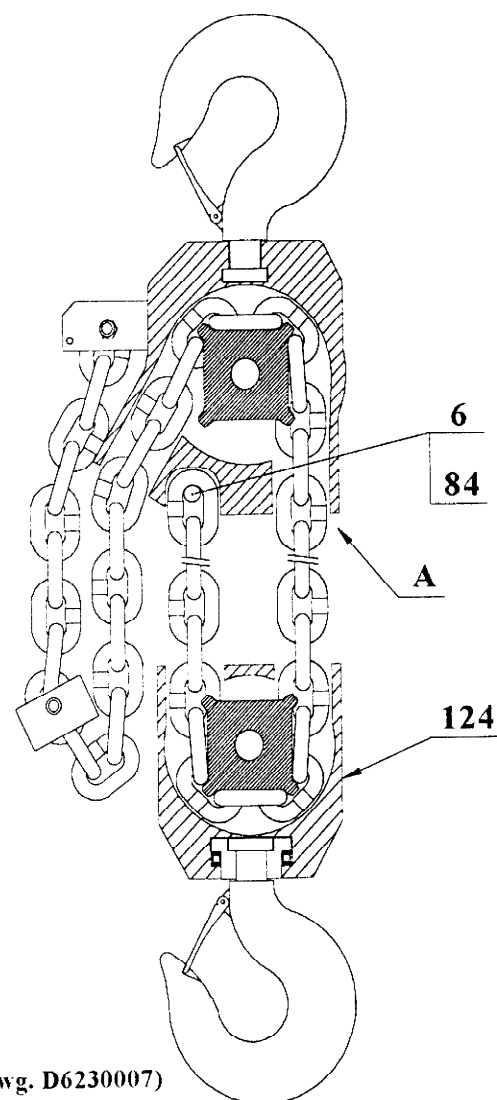
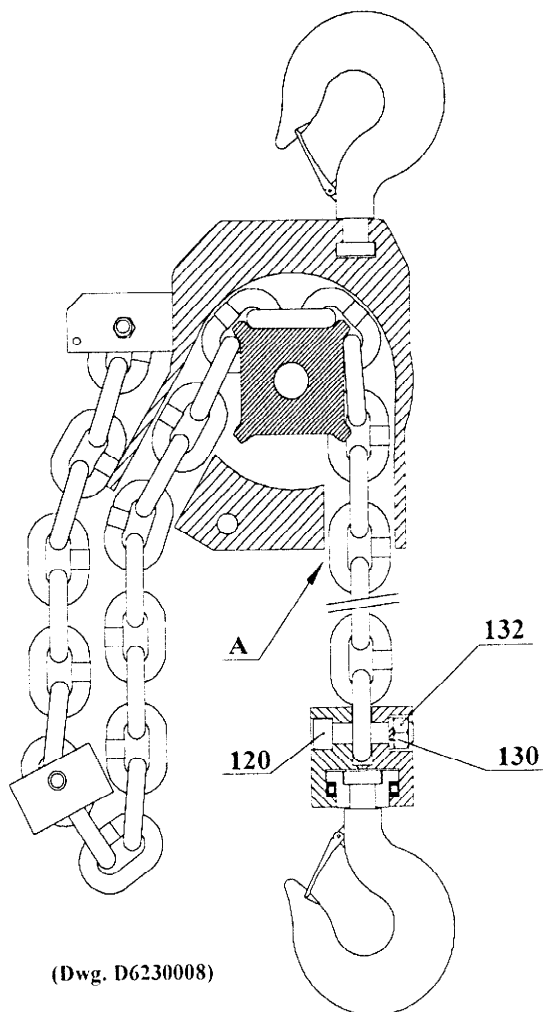
**IMPORTANT** : The chain must not be twisted.

- On the other extremity of the chain fit the buffer (4) onto the chain (this buffer sets in action the bottom switch limit).
- Place the buffer onto the 9th links at the minimum from the chain end.
- Secure the buffer on the chain link with the sleeve axle (5), the washer (67) and the ring (82).
- Secure the last chain link on the hoist with the screw (64) and nut (66).

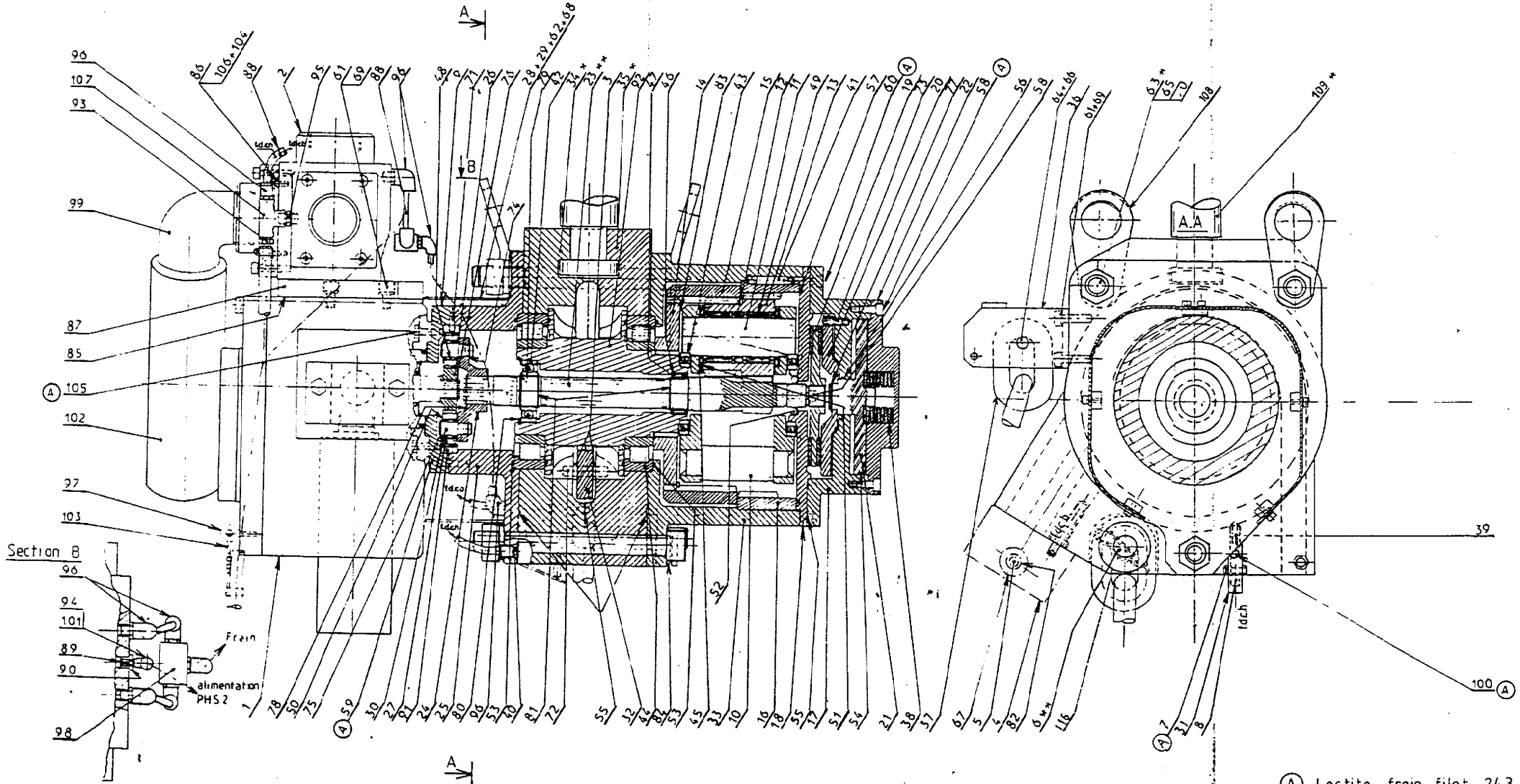
**NB** : We recommend to oil abundantly the chain with a thick grease for gears, when using the chain for the first time.

• Removing the chain

- Disconnect the chain end placed on the body of the hoist (1).
- Dismount the sleeve fitted on the chain.
- Run the hoist in the lifting direction of the free chain fall until this one be at about 25 cm from the hoist.

**Equipments installation****• 25 T bottom block****• 12,5 T hook**

- Introduce the chain end (side A) in the hole of the hook assy.
- Mounting the screw (120), the washer (130) and the nut (132)
- Introduce the chain end (side A) with the steel string in one of the two cross-shaped holes of the block (124) ; the first chain link must be in flat position, perpendicularly to the rotation axle of the sprocket wheel, and the following links must have their welds turned outside as compared to this axle.
- Secure the first chain link in the foreseen place under the hoist with the support axle (6) and the pin (84).



(A) Loctite frein filet 243

• Pièces spécifiques au palan 25000  
 • Pièces spécifiques aux palans 25000 et 12500

Die Firma SAMI ist ein Unternehmen der Technik. Wir sind bereit, unsere Kunden mit allen Informationen zu unterstützen, die sie für die technische Entwicklung ihrer Maschinen und Anlagen benötigen. Wir sind bereit, unsere Kunden mit allen Informationen zu unterstützen, die sie für die technische Entwicklung ihrer Maschinen und Anlagen benötigen. Wir sind bereit, unsere Kunden mit allen Informationen zu unterstützen, die sie für die technische Entwicklung ihrer Maschinen und Anlagen benötigen.

# PRACTICAL ADVICE

## PALAIR 12500 L & 25000 L

### 4 - SPECIAL INSTRUCTIONS

- Stopping of the hoist from 6 months to 1 year

- Coat all the chain with oil
- Put into the air inlet hole some cm<sup>3</sup> of oil
- Run the motor during 2 to 4 seconds
- Then close the air inlet hole of the hoist
- If necessary, pack the hoist in an oiled bag

- Restarting

After more than one month stopping period, we advice to clean and oil PALAIR motor as follows :

- Put into the inlet hole some cm<sup>3</sup> of mineral oil or diesel oil
- Run the motor during 10 seconds to eliminate impurities
- Put into the air inlet hole some cm<sup>3</sup> of oil
- Run the motor during 2 to 4 seconds

The PALAIR is ready to work.

### 5 - OVERHAULING

A COMPLETE ANNUAL CHECK MUST BE DONE IN REPAIR SHOP

- Hooks and load chain

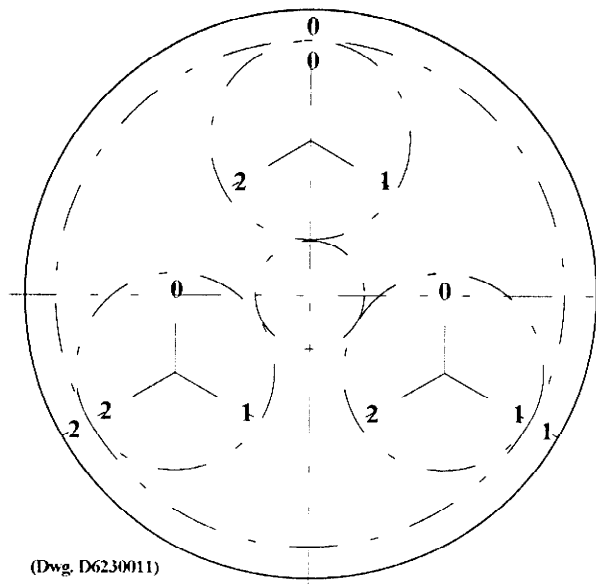
- Foresee a check-up according to the local applying regulation

- Brake assembly

The brake disc does not need any adjustment. The annual maintenance is limited to :

- a general cleaning
- greasing the brake spring washers
- replace the disc brake when its thickness is less than 13,5 mm  
(original thickness = 16 mm)



**PRACTICAL ADVICE  
PALAIR 12500 L & 25000 L**

- **Gear reducer sub-assembly**

The maintenance of the gear reducer is limited to :

- cleaning with mineral oil
- greasing the gears
- put grease on bearing

**IMPORTANT :** When assembling the satellites support with the satellites mounted in the wheel, line-up the repairs 0 - 1 - 2 of satellites with the repairs 0 - 1 - 2 to the wheel.

For gears use half fluid extreme pressure grease for ambient temperature, from - 15° C up to 40° C, ASTM penetration for 25° C (use grease 355/385, dropping point = 150° C)

If you use PALAIR AT A TEMPERATURE LESS THAN 6 20° C , please refer to us.

Quantity of grease for the reducer = about 500 g  
DO NOT PASS BEYOND THIS QUANTITY.

- Motor sub-assembly

For the annual motor maintenance, please proceed as described in paragraph "Restarting", or by complete dismantling : in that case you have to proceed as follows :

- general cleaning
- oil the pieces of the reducer (oil grade ISO 150, viscosity 135 Cst at 40° C)
- put grease on bearing

**IMPORTANT :** Concerning the cleaning of parts of the PALAIR, use preferably :  
MINERAL OIL, DIESEL OIL, ERGEOL.  
THE PALAIR PARTS MUST NEVER BE CLEANED WITH TRICHCLORE.

With regard to the assembly screwing of the hoist, use a peculiar resin allowing disassembling without any damage (resin type LOCTITE-FREIN-FILET blue coloured, or equivalent).

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12500 L &amp; 25000 L AIR CHAIN HOIST

NUMERO DE NOMENCLATURE

**L623**

NUMERO DU DOCUMENT

**191410191413 | A | 1 / 3 |**  
LE CHEF DU BUREAU D'ETUDES

REPERE ITEM	DESIGNATION	DESCRIPTION	Quantité Quantity	CODE	
				12500 L	25000 L
1	Moteur pneumatique	Compressed air motor	1	3616-0005	
2	Distributeur pneumatique	Air control valve	1	3617-0006	
3	Rondelle entretoise	Distance washer	4	9623-0032	
4	Manchon percé	Bored sleeve	1	9623-0035	
5	Axe de manchon	Sleeve axle	1	9623-0036	
6	Axe support	Support axle	1	9623-0037	
7	Corps de fin de course	Limit switch device housing	2	9623-0041	
8	Poussoir de fin de course	Limit switch pusher	2	9623-0042	
9	Couvercle	Cover	1	9623-0044	
10	Porte satellite	Satellite support	1	9623-0052	
11	Axe de satellite	Satellite axle	3	9623-0053	
12	Bague entretoise	Distance ring	3	9623-0054	
13	Satellite	Satellite	3	9623-0055	
14	Flasque de couronne	Ring gear flange	1	9623-0056	
15	Couronne	Ring gear	1	9623-0057	
16	Couronne	Ring gear	1	9623-0058	
17	Corps de frein	Brake casing	1	9623-0059	
18	Couvercle de réducteur	Gear cover	1	9623-0060	
19	Disque de frein	Brake disc	1	9623-0061	
20	Disque de frein	Brake disc	1	9623-0062	
21	Piston	Piston	1	9623-0063	
22	Couvercle	Cover	1	9623-0064	
23	Pignon arbré	Shaft spindle	1	9623-0095	
24	Porte satellite	Satellite support	1	9623-0097	
25	Flasque carter côté moteur	Flange	1	9623-0098	
26	Pignon solaire	Pinion	1	9623-0099	
27	Satellite	Satellite	3	9623-0100	
28	1/2 carter gauche	1/2 carter	1	9623-0109	
29	1/2 carter droit	1/2 carter	1	9623-0110	
30	Axe de satellite	Satellite axle	3	9623-0115	
31	Lame ressort	Spring leaf	1	9623-0116	
32	Décolleur de chaîne	Chain guide stop	1	9623-0117	
33	Carter réducteur	Gear housing	1	9623-0118	
34	1/2 carter guide moteur	1/2 guide housing motor	1	9623-0132	9623-0134
35	1/2 carter guide réducteur	1/2 guide housing gear	1	9623-0133	9623-0135
36	Support	Support	1	9623-0039	
37	Chaîne	Chain	1	6907-0532	
38	Rondelle	Washer	9	6917-1032	
39	Ressort	Spring	2	6917-0632	
40	Raccord droit	Straight fitting	2	6167-1932	
41	Clavette	Key	3	9074-0117	
42	Roulement	Bearing	1	5017-0007	
43	Roulement	Bearing	2	5080-0012	
44	Roulement à rouleaux	Roller bearing	2	5120-0020	
45	Butée à aiguilles	Needle stop	6	5605-6545	
46	Douille à aiguilles	Needle sleeve	1	5632-4020	
47	Bague	Ring	1	5637-0732	
48	Roulement	Bearing	3	5647-2316	
49	Cage à aiguille	Needle cage	6	5650-5936	
50	Contre plaque	Plate	6	5730-8632	

Pour toute commande de pièces de rechange, il est recommandé de rappeler le numéro porté sur la plaque d'identification de l'appareil.

*For each demand of spare parts, it is recommended to specify the number written on the identification plate of the device.*

Bei Bestellung von Ersatzteilen bitte Seriennummer auf dem Identifizierungsschild des Gerätes angeben.

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**PALAN PNEUMATIQUE 12500 L & 25000 L**

12500 L &amp; 25000 L AIR CHAIN HOIST

NUMERO DE NOMENCLATURE

**L623**

NUMERO DU DOCUMENT

9|4|0|9|4|3| A|2|3|

LE CHEF DU BUREAU D'ETUDES

REPERE ITEM	DESIGNATION	DESCRIPTION	Quantité Quantity	CODE	
				12500 L	25000 L
51	Rondelle butée	Thrust washer	6	5737-8832	
52	Joint	Joint	1	5801-8330	
53	Joint torique	O'ring	4	5820-7229	
54	Joint torique	O'ring	1	5820-7329	
55	Joint torique	O'ring	6	5821-4029	
56	Joint torique	O'ring	1	5822-4229	
57	Joint torique	O'ring	1	5822-5529	
58	Vis CHC	Screw	10	4130-1406	
59	Vis CHC	Screw	8	4130-1506	
60	Vis CHC	Screw	8	4130-1606	
61	Vis CHC	Screw	2	4130-7506	
62	Vis CHC	Screw	8	4131-1506	
63	Vis CHC	Screw	3	4131-8506	
64	Vis CHC	Screw	1	4131-5106	
65	Ecrou	Nut	3	4300-0411	
66	Ecrou frein	Lock nut	1	4370-1611	
67	Rondelle	Washer	2	4500-0416	
68	Rondelle grower	Washer	8	4520-0008	
69	Rondelle grower	Washer	2	4520-0010	
70	Rondelle grower	Washer	3	4520-0024	
71	Goupille	Pin	1	4600-1316	
72	Goupille	Pin	2	4640-6518	
73	Goupille	Pin	1	4640-3818	
74	Circlips	Circlips	3	4770-0013	
75	Circlips	Circlips	3	4770-0015	
76	Circlips	Circlips	1	4770-0022	
77	Circlips	Circlips	1	4770-0030	
78	Circlips	Circlips	1	4770-0032	
79	Circlips	Circlips	1	4770-0035	
80	Circlips	Circlips	1	4770-3072	
81	Segment d'arret	Stop segment	2	4780-1539	
82	Anneau expansif	Ring	2	4780-1639	
83	Anneau expansif	Ring	1	4780-1739	
84	Goupille "Beta"	Pin	1	4787-0832	
85	Joint	Joint	1	9617-0010	
86	Plaque d'étranglement	Throttling plate	1	9617-0038	
87	Plaque d'adaptation	Adaptation plate	1	9617-0026	
88	Pneumo-tube	Air tube	4	9623-0072	
89	Gicleur	Jet	1	9623-0087	
90	Manchon de réduction	Gearing sleeve	1	9623-0111	
91	Couronne	Ring gear	1	9412-0062	
92	Noix d'entraînement	Sprocket wheel	1	9623-0001	
93	About 1/4"G	Butt-end 1/4"G	2	6162-9732	
94	About 1/8"G	Butt-end 1/8"G	1	6165-2632	
95	Mamelon	Nioopple	2	6162-3132	
96	Raccort equerre	Square fitting	8	6167-6232	
97	Anneau de levage	Lifting ring	1	6422-2332	
98	Sélecteur de circuit	Circuit selector	1	6770-9232	
99	Coude 2"G	Pipe connection 2"G	1	6821-3628	
100	Vis CHc	Screw	1	4130-0106	
101	Coude 1/8"G	Pipe connection 1/8"G	1	6828-0132	

Pour toute commande de pièces de rechange, il est recommandé de rappeler le numéro porté sur la plaque d'identification de l'appareil.

For each demand of spare parts, it is recommended to specify the number written on the identification plate of the device.

Bei Bestellung von Ersatzteilen bitte Seriennummer auf dem Identifizierungsschild des Gerätes angeben.

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**PALAN PNEUMATIQUE 12500 L & 25000 L**

12500 L &amp; 25000 L AIR CHAIN HOIST

NUMERO DE NOMENCLATURE

**L623**

NUMERO DU DOCUMENT

941091413 | A | 3 / 3

LE CHEF DU BUREAU D'ETUDES

REPERE ITEM	DESIGNATION	DESCRIPTION	Quantité Quantity	CODE	
				12500 L	25000 L
102	Silencieux	Muffler	1	6848-3532	
103	Cose	Thimble	1	6932-5332	
104	Rondelle	Washer	2	4520-0006	
105	Vis	Screw	12	4100-6801	
106	Vis	Screw	2	4130-0206	
107	Te	Tee	2	6131-1332	
108	Oreille de manutention	Handing wing	2	9623-0040	
109	Crochet	Hook	1	9623-0011	9623-0015

Pour toute commande de pièces de rechange, il est recommandé de rappeler le numéro porté sur la plaque d'identification de l'appareil.

*For each demand of spare parts, it is recommended to specify the number written on the identification plate of the device.*

Bei Bestellung von Ersatzteilen bitte Seriennummer auf dem Identifizierungsschild des Geräte angeben.

**A - DISASSEMBLY INSTRUCTIONS**

- 1° • Remove the chain rep 37 - See maintenance manual : paragraphe 3
- 2° • Disconnect all the hoses  
• Remove all the connection accessories Rep 40 - 86 - 89 - 90 - 93 - 94 - 95 - 96 - 97 - 98 - 101 - 104 - 106 - 107  
• Remove the mufflers Rep 102  
• Remove the knie Rep 99  
• Put down the limit switches by removing the screw Rep 100, the spring leaf Rep 31, the limit switches housings Rep 7, the limit switch pushers Rep 8, the springs Rep 39.
- 3° Disassembly of the control valve  
• Remove the screws and washers Rep 18 and 21 - See plan 3617-0006  
• Put down the control valve Rep 2  
• Remove the screws and washers Rep 61 et 69  
• Remove the fitting plate Rep 87 and the joint Rep 85
- 4° Disassembly of the motor  
• Disassembly the motor Rep 1 - See Plan 3616-0005  
• Remove the circlips Rep 76  
• Put down the solar pinion Rep 26
- 5° Disassembly of the entry gear  
• Remove the screws and washers Rep 62 and 68  
• Put down the 2 half-casings Rep 28 and 29  
• Remove the screws Rep 59  
• Put down the cover Rep 9  
• Remove the circlips Rep 78  
• Put down the satellite supports Rep 24 to remove the circlips Rep 74 and 75, the bearing plates Rep 50, put down the satellites Rep 13 by removing the axles Rep 30 and the bearings Rep 48.  
• Put down the ring gear Rep 31 and remove the pin Rep 71
- 6° Disassembly of the brake  
• Remove the screws Rep 58  
• Put down the cover Rep 22  
• Put down the washers Rep 38  
• Remove the screws Rep 60  
• Put down the brake housing Rep 17 to remove the circlips Rep 77, the brake disc Rep 20, the pin Rep 73, the piston Rep 21, the joints Rep 54 and 56, the joint Rep 55  
• Put down the brake disc Rep 19
- 7° Disassembly of the gear  
• Remove the screws Rep 58  
• Put down the gear cover Rep 18 and the joints Rep 52-55-57  
• Put down the ring gear Rep 16 as well as the keys Rep 41

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12500 L &amp; 25000 L AIR CHAIN HOIST

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1914101945 | L12/21

LE CHEF DU BUREAU D'ETUDES

- Put down the satellite support Rep 10 and then :
  - extract the bearings Rep 43
  - remove the axles of satellites Rep 11
  - put down the stop washers Rep 51 and the needle stops Rep 45
  - put down the satellites Rep 13
  - extract the needle cages Rep 49 and the distance rings Rep 12
- Put down the ring gear Rep 15 as well as the expansive ring Rep 83
- Put down the flange of the ring gear Rep 14

## 8° Disassembly of the central part (chain guide assy)

- Remove the screws, nuts and washers Rep 63, 65 and 70, the pin Rep 84, the axle Rep 6
- Put down the gear cover Rep 33
- Put down the casing flange on motor side Rep 25
- Remove the circlips Rep 79 - 80
- Remove the shaft spindle Rep 23
- Put down the half-guiding casings Rep 34-35, the hook Rep 109
- Extract the sprocket wheel Rep 92 with the chain guide Rep 32, the distance washer Rep 3 and the pins Rep 72
- Remove the joints Rep 55
- Extract the bearings Rep 44
- Extract the bearing Rep 42 of the return sprocket wheel Rep 92
- Remove the joints Rep 53
- Remove the circlips Rep 81
- Put down the ring Rep 47
- Extract the needle socket Rep 46 of the driving sprocket wheel Rep 92

**B - ASSEMBLY INSTRUCTIONS**

The assembly has to be carried out in the opposite direction to the one used for the disassembling operation.

For cleaning, greasing of certain parts and the reassembling of the gearings, SEE THE MAINTENANCE MANUAL Chapter 5 (Overhauling).

Important note :

- Screws Rep 58-59-60-105-100 will be mounted and tightened with brake net LOCTITE 243, as well as the limit switch housings Rep 7
- The screws, nuts and washers sub-assemblies Rep 63-65-70 will be tightened at 30 m. daN torque.

**MOTEUR PNEUMATIQUE 10Ch**  
**AIR GEAR MOTOR**

NUMERO DE NOMENCLATURE

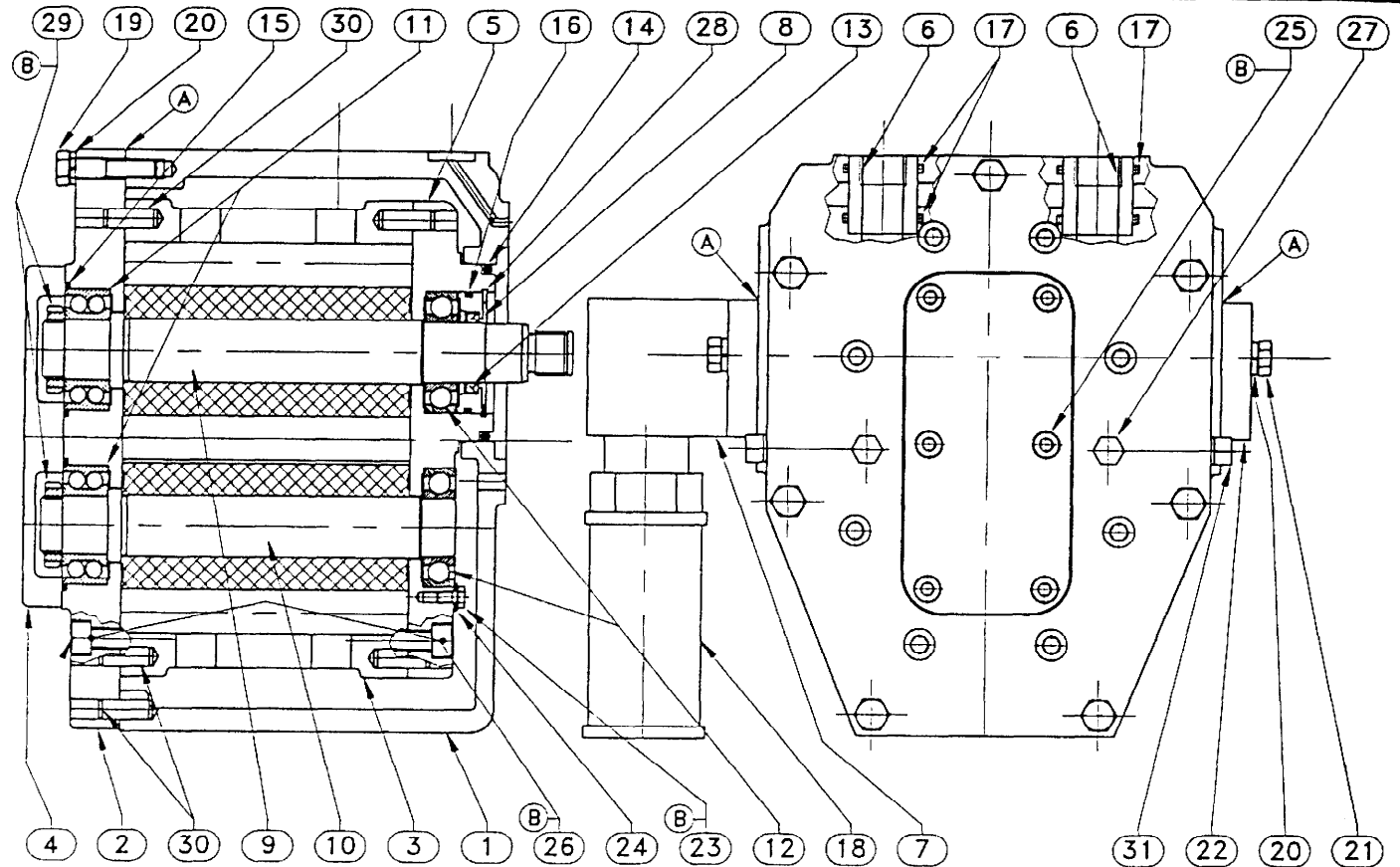
**3.616.0005**

NUMERO DU DOCUMENT

95/08/13 A 1 / 1



LE CHEF DU BUREAU D'ETUDES



REPERE ITEM	DESIGNATION	DESCRIPTION	QUANTITE QUANTITY	CODE
1	Carter moteur	Motor casing	1	9616.0001
2	Plaque arrière	Rear end cover	1	9616.0002
3	Corps moteur	Motor housing	1	9616.0003
4	Couvercle	Cover	1	9616.0004
5	Plaque avant	Front end cover	1	9616.0005
6	Tube	Pipe	2	9616.0006
7	Bride	Flange	2	9616.0007
8	Support de joint	Joint support	1	9616.0008
9	Rotor moteur	Motor rotor	1	9616.0009
10	Rotor répulsion	Repulsion rotor	1	9616.0010
11	Roulement à billes	Ball bearing	2	5018.0906
12	Roulement à billes	Ball bearing	2	5060.0006
13	Bague d'étanchéité	Sealing ring	1	5801.3430
*14	Joint torique	'O'ring	1	5820.8529
*15	Joint torique	'O'ring	2	5821.0429
*16	Joint torique	'O'ring	1	5822.4329
*17	Joint torique	'O'ring	4	5820.0929
18	Silencieux	Muffler	1	6846.6832
19	Vis H	Screw	7	4100.8801
20	Rondelle W	Split washer	11	4520.0010
21	Vis H	Screw	4	4100.0401
22	Plaque d'obturation	Closing plate	1	9616.0011
23	Vis H	Screw	1	4100.7601
24	Rondelle M	Washer	1	4500.0106
25	Vis CHc	Screw	6	4130.1506
26	Vis CHc	Screw	16	4130.2806
27	Bouchon	Plug	2	6512.5832
*28	Circlips	Circlips	1	4770.3062
29	Ecrou	Nut	2	5700.0006
30	Goupille	Pin	5	4600.0816
31	Bouchon	Plug	2	6516.4532

\* Pièce de rechange recommandée - Recommended Spare

(A) = LOCTITE n:574 - (B) = LOCTITE n:243

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## AIR GEAR MOTOR

NUMERO DE NOMENCLATURE

3616-0005

NUMERO DU DOCUMENT

91410949 | 1 | 1 / 1

  
LE CHEF DU BUREAU D'ETUDES

### A - DISASSEMBLY INSTRUCTIONS

- Remove the muffler Rep 18
- Remove the screws and washers Rep 20 - 21
- Put down the flange Rep 7 and the blind plate Rep 31
  
- Extract the pipe Rep 6 and the joints Rep 17
- Remove the screws and washers Rep 19 and 20
- Put down the motor casing block Rep 1 and remove the joint Rep 14
  
- Remove and extract the screws Rep 26 front end cover side Rep 5
- Take off the circlips Rep 28
- Take off the support joint Rep 8 and the joints Rep 13 - 16
- Remove the screws and washers Rep 23 - 24
- Extract the bearings Rep 12
  
- Remove the screws Rep 26 rear end cover side Rep 2 and extract these screws from the motor housing Rep 3
- Remove the screws Rep 25 and put down the cover Rep 4 and the O'rings Rep 15
- Remove the nuts Rep 29 and extract the rotors Rep 9 - 10
- Extract the ball bearings Rep 11 and the rear end cover Rep 2

### B - ASSEMBLY INSTRUCTIONS

The assembly has to be carried out in the opposite direction to the one used for the disassembling operation.

- N.B. :
- The screws Rep 23-24-26 and the nuts Rep 29 will be mounted and tightened with brake net LOCTITE 243
  - Grease the sealing ring Rep 13



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**DISTRIBUTEUR PNEUMATIQUE****(Cde à distance)****AIR CONTROL VALVE****(remote control)**

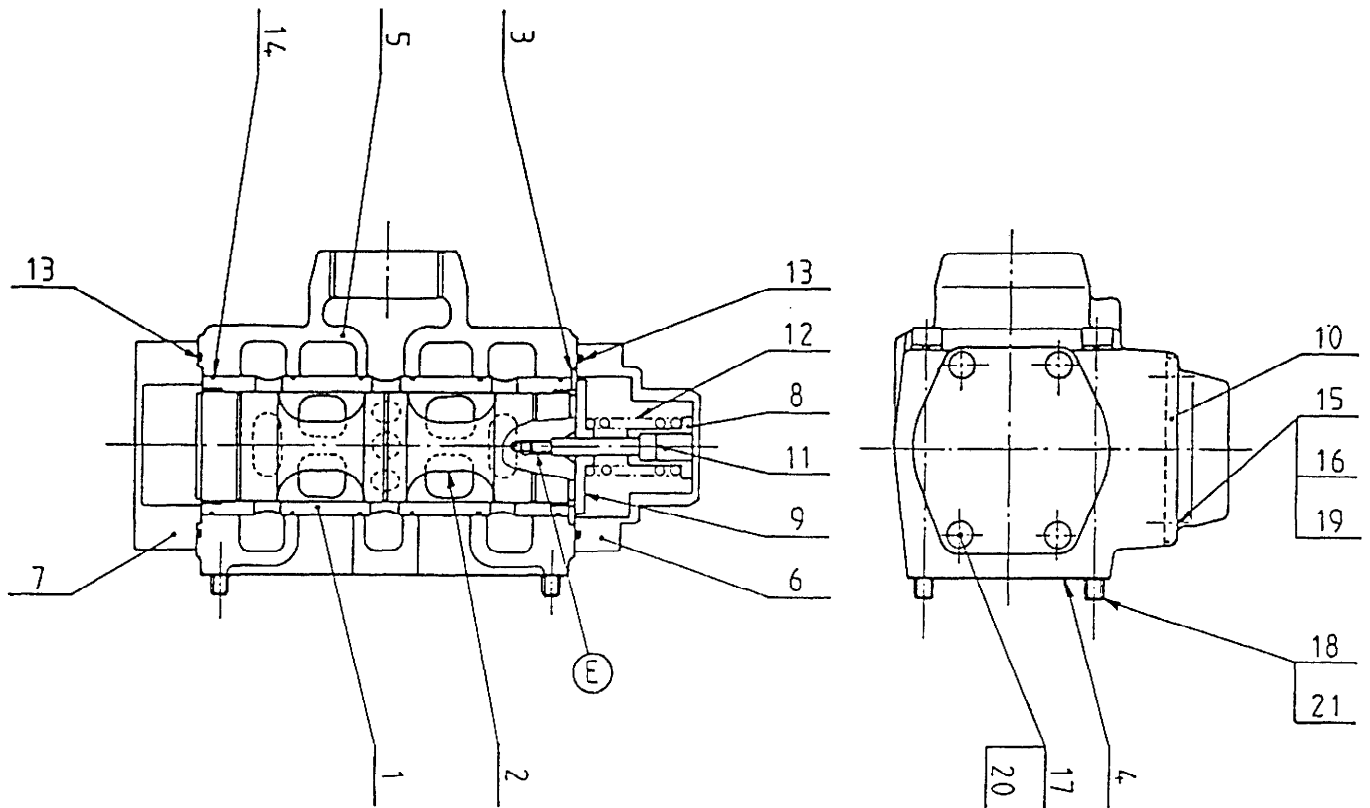
NUMERO DE NOMENCLATURE

**3617-0006**

NUMERO DU DOCUMENT

**91-06-35 A 1/1***Ph. Demese*

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**E: LOCTITE FREIN FILET FORT 270**

Rep Item	Désignation	Description	Qté. Qty.	CODE
1	Cilindre	Cylinder	1	9617.0012
2	Tiroir	Slide valve	1	9617.0013
3	Entretoise	Distance piece	1	9617.0014
4	Joint papier	Paper joint	1	9617.0020
5	Corps	Casing	1	9617.0032
6	Couvercle	Cover	1	9617.0033
7	Couvercle	Cover	1	9617.0034
8	Butée	Stop	1	9617.0035
9	Butée	Stop	1	9617.0036
10	Plaque d'obturation	Cloising plate	2	9617.0037
11	Vis de retenue épaulée	Shouldered locking screw	1	6528.0532
12	Ressort	Spring	1	6918.0432
13	Joint torique	O'ring	2	5821.1129
14	Joint torique	O'ring	6	5822-7929
15	Vis Fhc	Screw	4	4110.4003
16	VisCHc	Screw	2	4130.0206
17	VisCHc	Screw	8	4130.1506
18	VisCHc	Screw	4	4132.0106
19	Rondelle grower	Washer	2	4520.0006
20	Rondelle grower	Washer	8	4520.0008
21	Rondelle grower	Washer	4	4520.0010

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## AIR CONTROL VALVE

NUMERO DE NOMENCLATURE

3617-0006

NUMERO DU DOCUMENT

19 | 4 | 0 | 9 | 4 | 8 | | 1 | 1 |

  
LE CHEF DU BUREAU D'ETUDES

### A - DISASSEMBLY INSTRUCTIONS

- Remove the screw and washer rep 18 - 21
- Remove the screw and washer rep 17 - 20
- Put down the covers Rep 6 - 7 and remove the joint Rep 13
- Remove the screw Rep 11
- Put down the stop Rep 8, the spring Rep 12, the stop Rep 9, the distance piece Rep 3
- Remove the slide valve Rep 2
- Remove the cylinder Rep 1 and the joints Rep 14
- Remove the screws Rep 15 - 16 and the washers Rep 19
- Put down the closing plate Rep 10

### B - ASSEMBLY INSTRUCTIONS

The assembly has to be carried out in the opposite direction to the one used for the disassembling operation.

N.B. : • The screws Rep 11 will be mounted and tightened with brake net LOCTITE 270

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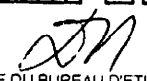
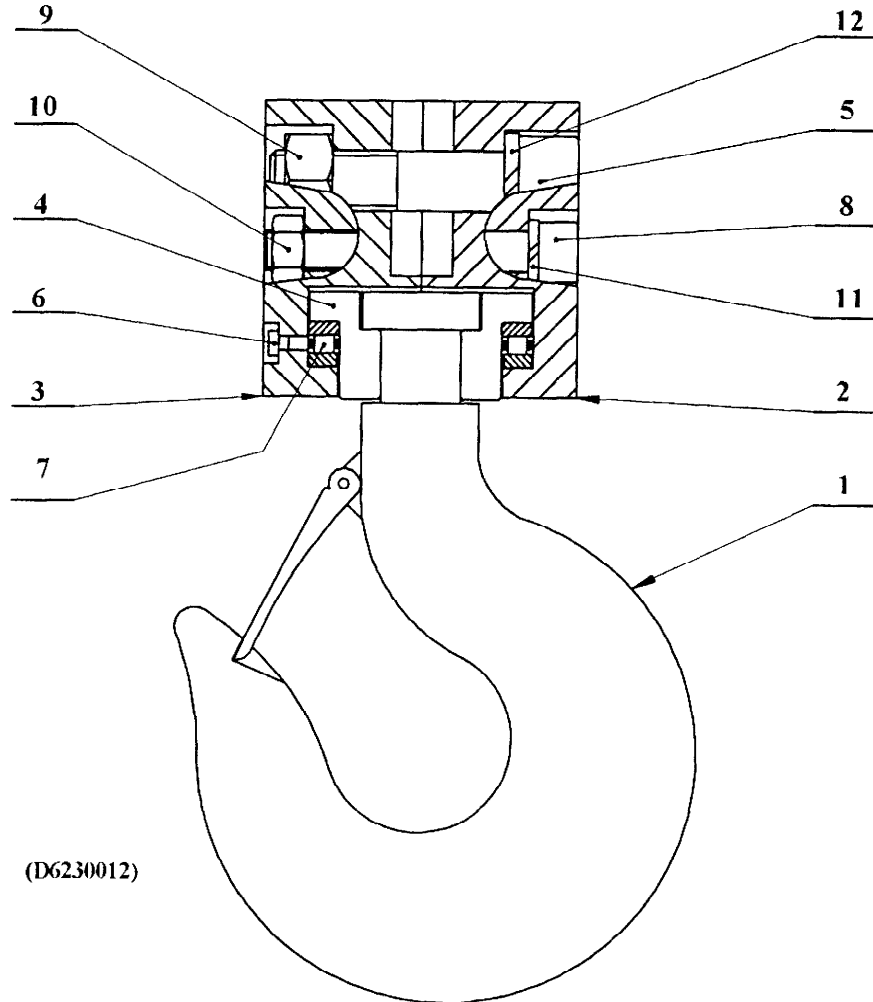
**S/E CROCHET 12,5 T****12,5 T HOOK ASSEMBLY**

NUMERO DE NOMENCLATURE

3623-0010

NUMERO DU DOCUMENT

[9]4[0]9[4]4 | 1 | 1 / 1 |

  
LE CHEF DU BUREAU D'ETUDES


(D6230012)

REPERE ITEM	DESIGNATION	DESCRIPTION	Quantité Quantity	CODE
1	Crochet 12,5 T	12,5 T hook	1	9623-8011
2	1/2 support crochet	1/2 hook support	1	9623-8012
3	1/2 support crochet	1/2 hook support	1	9623-8013
4	Bague épaulée	Shouldered ring	1	9623-7014
5	Vis CHc	Screw	1	9623-0112
6	Graisseur	Greaser	1	6710-0827
7	Butée	Stop	1	5470-0013
8	Vis CHc	Screw	2	4131-9306
9	Ecrou	Nut	1	4300-0411
10	Ecrou	Nut	2	4300-1011
11	Rondelle	Washer	2	4520-0016
12	Rondelle	Washer	1	4520-0024

Pour toute commande de pièces de rechange, il est recommandé de rappeler le numéro porté sur la plaque d'identification de l'appareil.

For each demand of spare parts, it is recommended to specify the number written on the identification plate of the device.

Bei Bestellung von Ersatzteilen bitte Seriennummer auf dem Identifizierungsschild des Gerätes angeben.

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**S/E CROCHET 12,5 T**

**12,5 T HOOK ASSEMBLY**

NUMERO DE NOMENCLATURE

**3623-0010**

NUMERO DU DOCUMENT

91410191417 L11/1

  
LE CHEF DU BUREAU D'ETUDES

**A - DISASSEMBLY INSTRUCTIONS**

- Remove the screw, nut and washer rep 5 - 9 - 12
- Remove the screw, nut and washer rep 8 - 10 - 11
- Separate the hook support rep 2 - 3
- Put down the shouldered ring in 2 parts rep 4, the hook rep 1 and the thrust roller bearing rep 7
- Extract the greaser rep 6 from the hook support rep 3

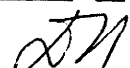
**B - ASSEMBLY INSTRUCTIONS**

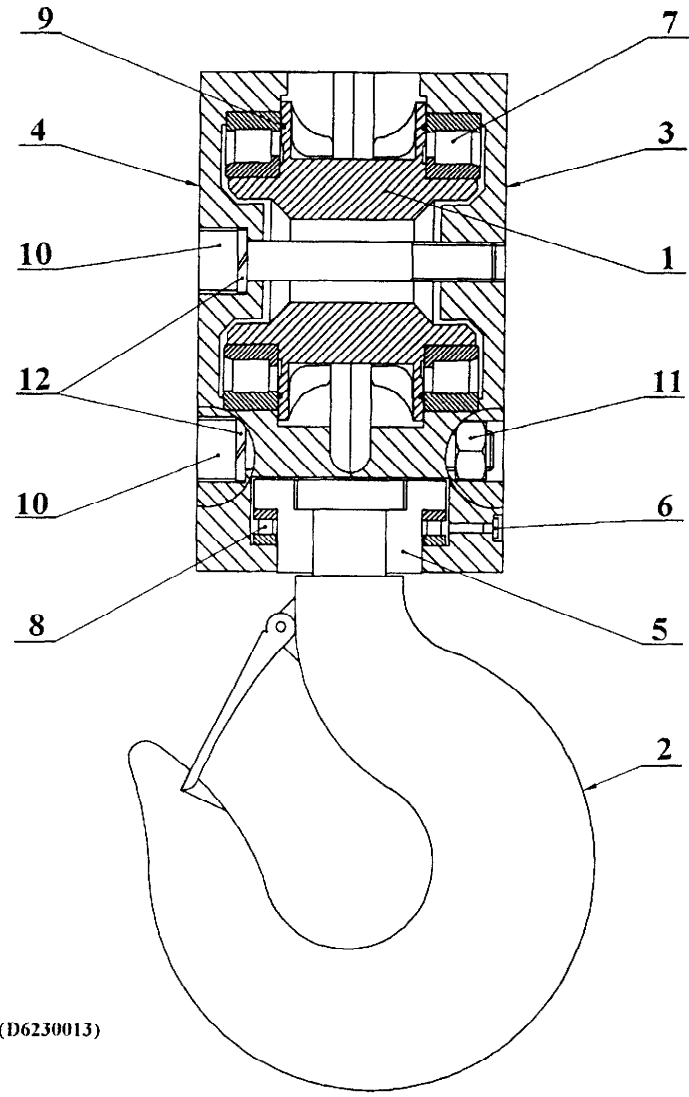
The assembly has to be carried out in the opposite direction to the one used for the disassembling operation.

N.B. : • Put on grease on bearings

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**S/E MOUFLE 25 T**  
**25 T BOTTOM BLOCK  
 ASSEMBLY**

NUMERO DE NOMENCLATURE  
**3623-0011**  
 NUMERO DU DOCUMENT  
**9101101211 | A | 1 / 1**  
  
 LE CHEF DU BUREAU D'ETUDES



(D6230013)

REPÈRE ITEM	DESIGNATION	DESCRIPTION	Quantité Quantity	CODE
1	Noix de chaîne	Sprocket wheel	1	9623-8004
2	Crochet 25 T	25 T hook	1	9623-8015
3	Flasque de moufle	Bottom block flange	1	9623-8024
4	Flasque de moufle	Bottom block flange	1	9623-8025
5	Bague épaulée	Shouldered ring	1	9623-7026
6	Graisseur	Greaser	1	6710-0827
7	Roulement à rouleaux	Roller bearings	2	5120-0020
8	Butée à rouleaux cylindrique	Thrust roller bearings	1	5470-0018
9	Joint torique	O'ring	2	5820-7929
10	Vis CHc	Screw	3	4131-9406
11	Ecrou	Nut	2	4300-0411
12	Rondelle	Washer	3	4520-0024

Pour toute commande de pièces de rechange, il est recommandé de rappeler le numéro porté sur la plaque d'identification de l'appareil.  
 For each demand of spare parts, it is recommended to specify the number written on the identification plate of the device.  
 Bei Bestellung von Ersatzteilen bitte Seriennummer auf dem Identifizierungsschild des Geräte angeben.

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**S/E MOUFLE 25 T**

**25 T BOTTOM BLOCK  
ASSEMBLY**

NUMERO DE NOMENCLATURE

3623-0011

NUMERO DU DOCUMENT

921051319 | A | 1 / 1

  
LE CHEF DU BUREAU D'ETUDES

**A - DISASSEMBLY INSTRUCTIONS**

- Remove the screw, nut and washer rep 5 - 9 - 12
- Remove the screw, nut and washer rep 8 - 10 - 11
- Separate the hook support rep 2 - 3
- Put down the shouldered ring in 2 parts rep 4, the hook rep 1 and the thrust roller bearing rep 7
- Extract the greaser rep 6 from the hook support rep 3

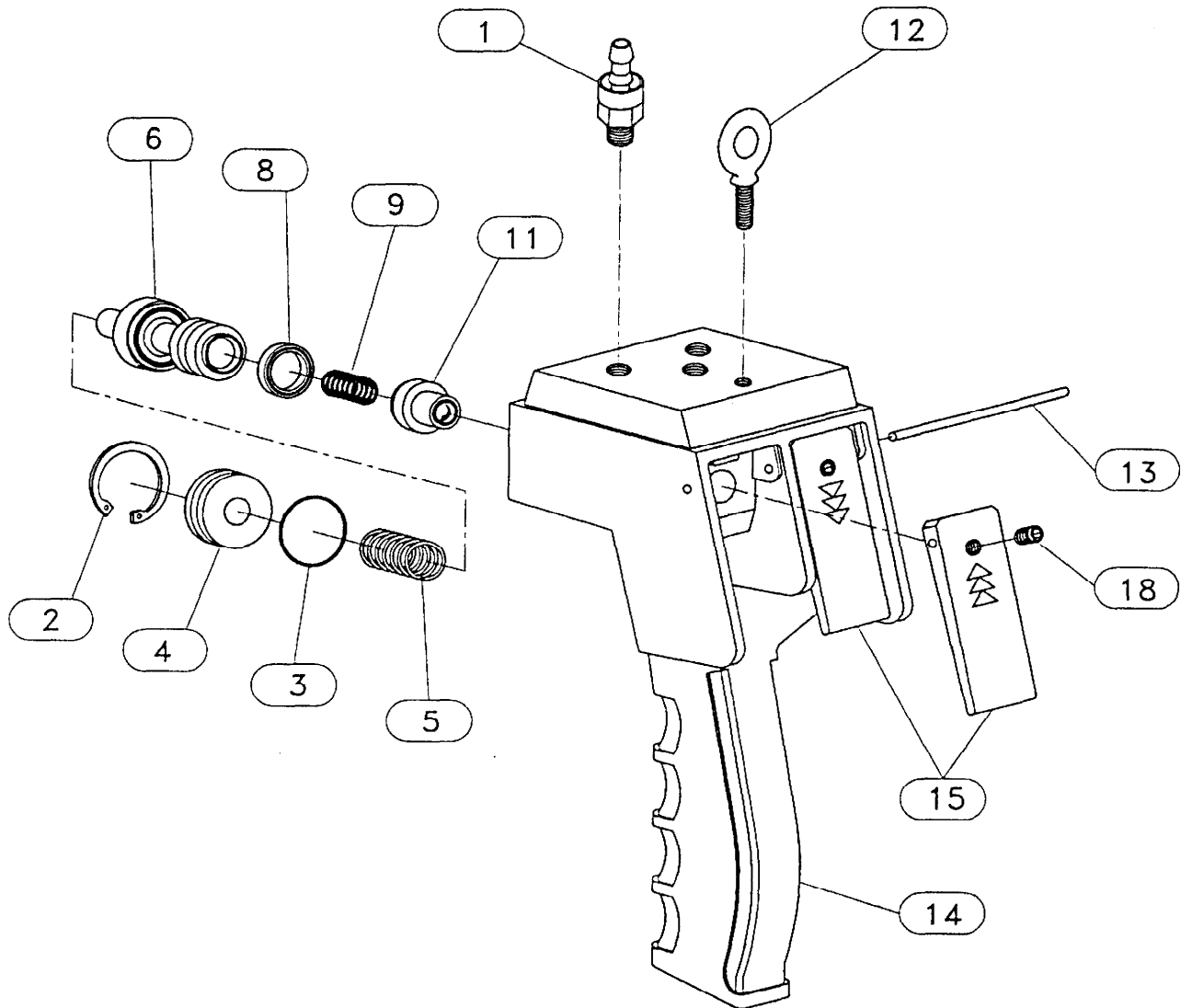
**B - ASSEMBLY INSTRUCTIONS**

The assembly has to be carried out in the opposite direction to the one used for the disassembling operation.

N.B. : • Put on grease on bearings

POIGNEE DE Cde PHS2  
PHS2 REMOTE CONTROL  
PENDANT

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REPERE ITEM	DESIGNATION	DESCRIPTION	QUANTITE QUANTITY	CODE
1	About	Fitting	3	6165.2632
2	Circlips	Retainer Ring	2	4770.3028
* 3	Joint torique	'O' Ring	2	5820.3729
4	Couvercle	Rear cover	2	9579.0037
5	Ressort	Spring	2	6915.8732
6	Tiroir (avec joint serti)	Spool (with 'O' ring crimped)	2	9579.0035
* 8	Joint quad ring	Quad Ring	2	5823.0229
9	Ressort	Spring	2	6915.8632
11	Clapet (avec joint et bille serti)	Valve Assem.(with 'O' ring+ball crimped)	2	9579.0036
12	Anneau de levage	Lifting Eye	1	6422.2332
13	Axe de levier	Pin	1	9579.0040
14	Corps	Pendant Handle	1	9579.0034
15	Levier	Lever	2	9579.0038
18	Vis sans tête	Set screw	2	4200.7407

\* Pièce de rechange recommandée - Recommended Spare

# PNEUMATIC SCHEME

## FOR PALAIR PLUS 50000 SERIES

NUMERO DE NOMENCLATURE

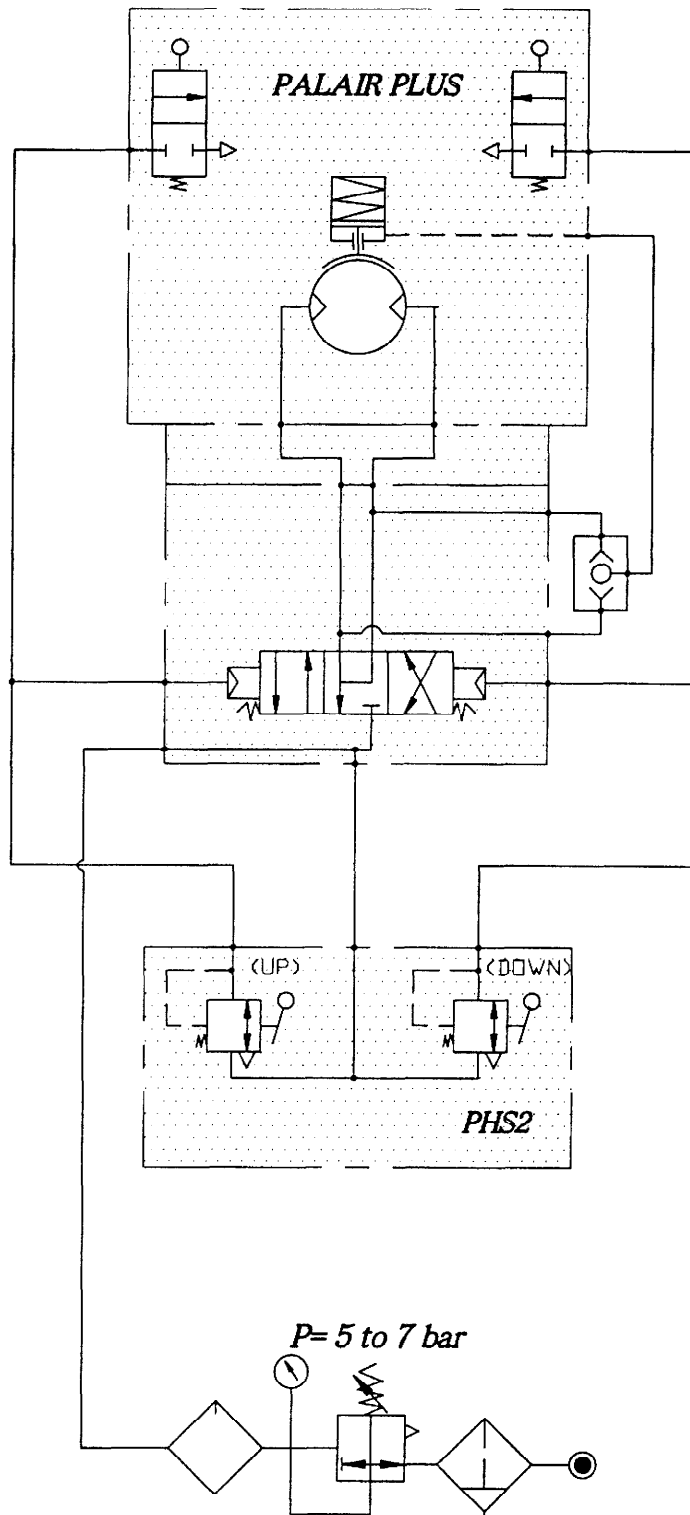
P362-24

NUMERO DU DOCUMENT

96-07-21 A 1 / 1

*L. Quenon*

LE CHEF DU BUREAU D'ETUDES





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**PALAN SERIE 50000/PHS2****PHS2/HOIST 50000 SERIES**

NUMERO DE NOMENCLATURE

**L 579**

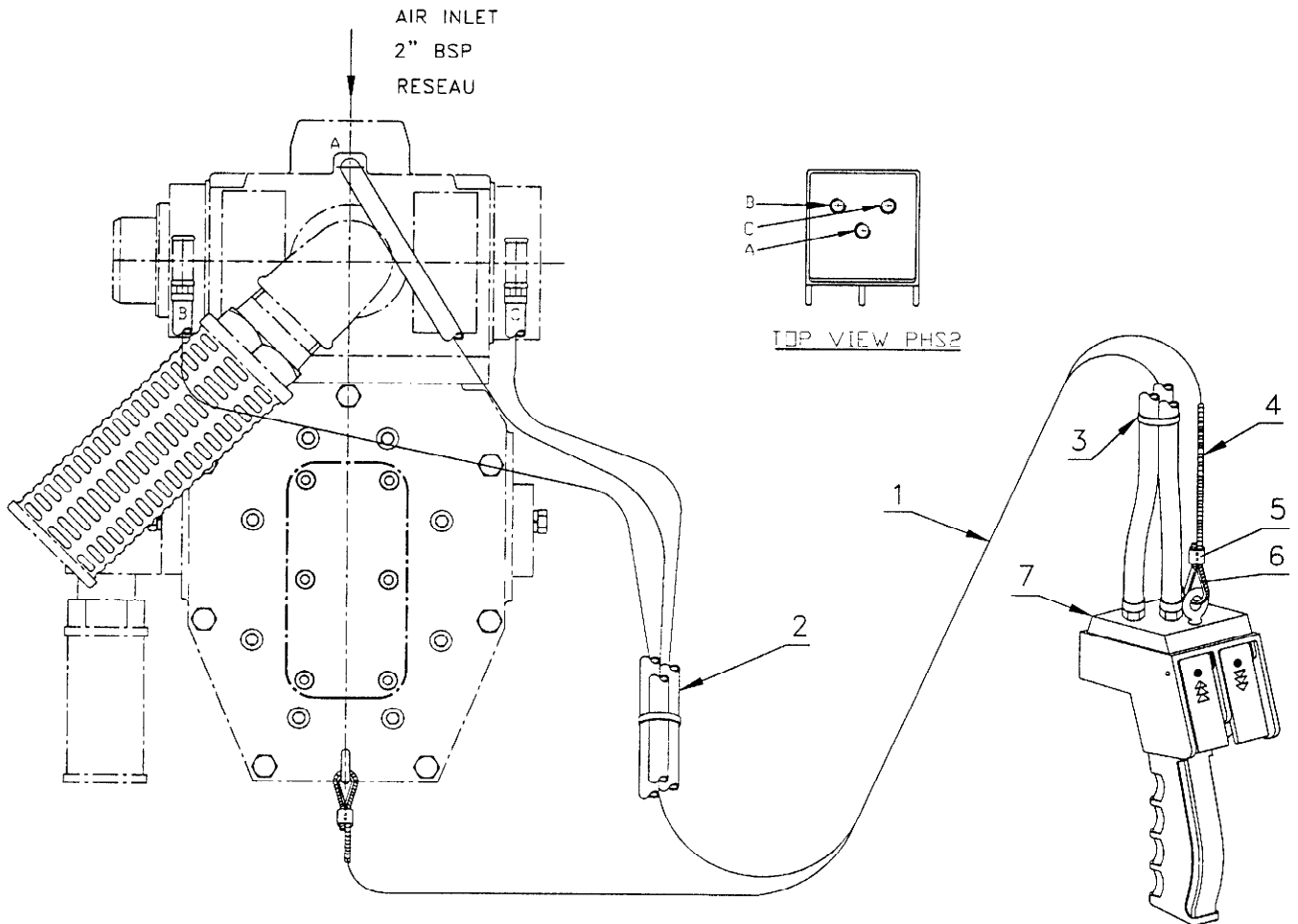
NUMERO DU DOCUMENT

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Rep Item	Désignation	Description	Qté. Qty.	CODE
1	Mètre de télécommande (rep 2 à 4)	Length of control (item 2 to 4)	(*)	3387-0031
2	Flexible	Hose	3	-
3	Collier	Hose Tie	2/m	-
4	Cable	Strain Relief Wire	1	-
5	Serre Cable	Sleeve Clamp	2	6112-5032
6	Cosse Cœur	Thimble	2	6932-5332
7	Poignée PHS2	PHS2 Pendant control	1	7579-0038

(\*) Spécifier la longueur de télécommande à la commande

(\*) Specify length of control when ordering





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# PALAN SERIE 50000/PHS2U AVEC LIMITEUR DE CHARGE PHS2U/HOIST 50000 SERIES WITH TORQUE LIMITEUR

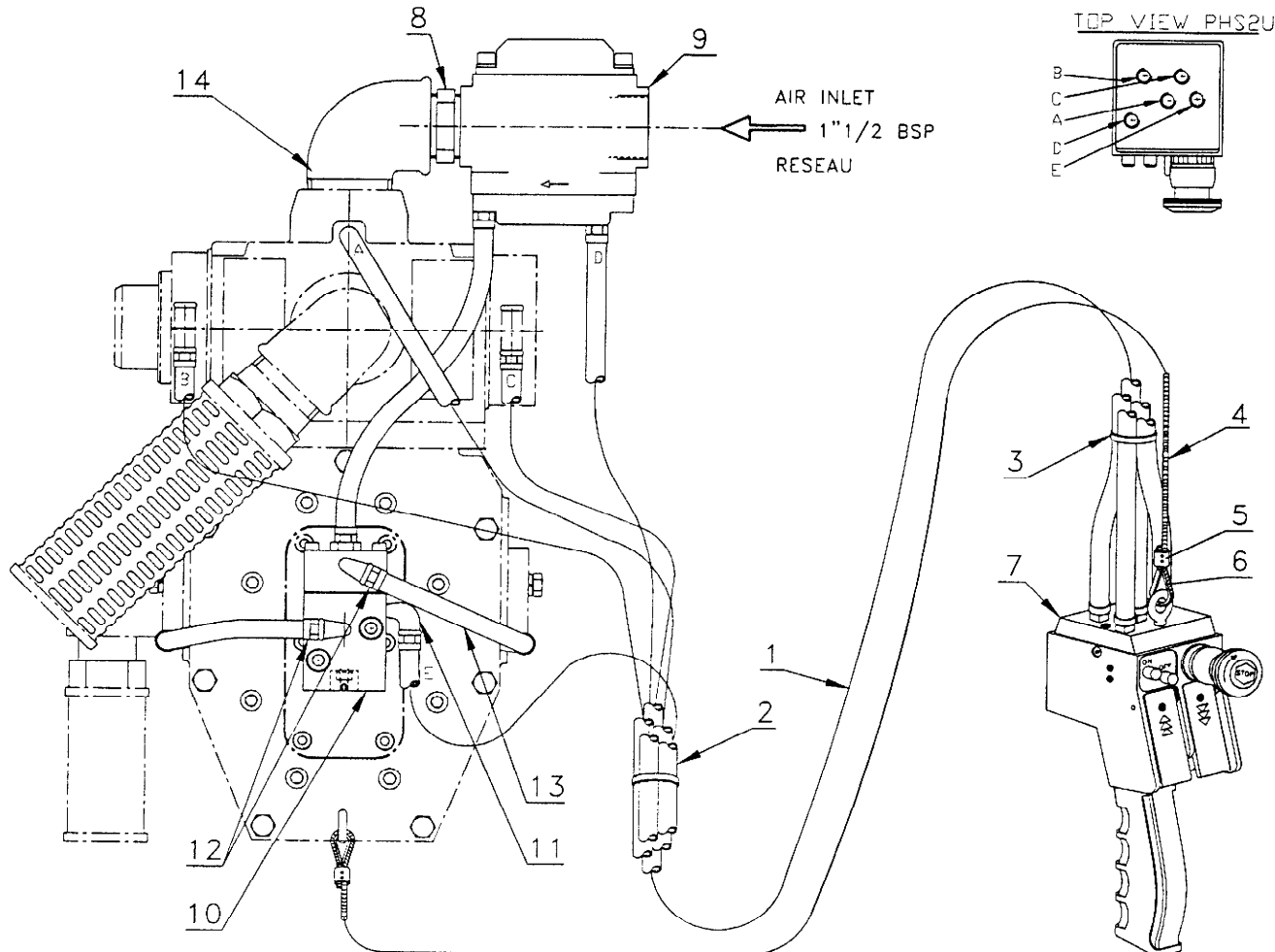
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**L 579**

NUMERO DU DOCUMENT

**95/06/39 B 1/1***Ph. Demeese*

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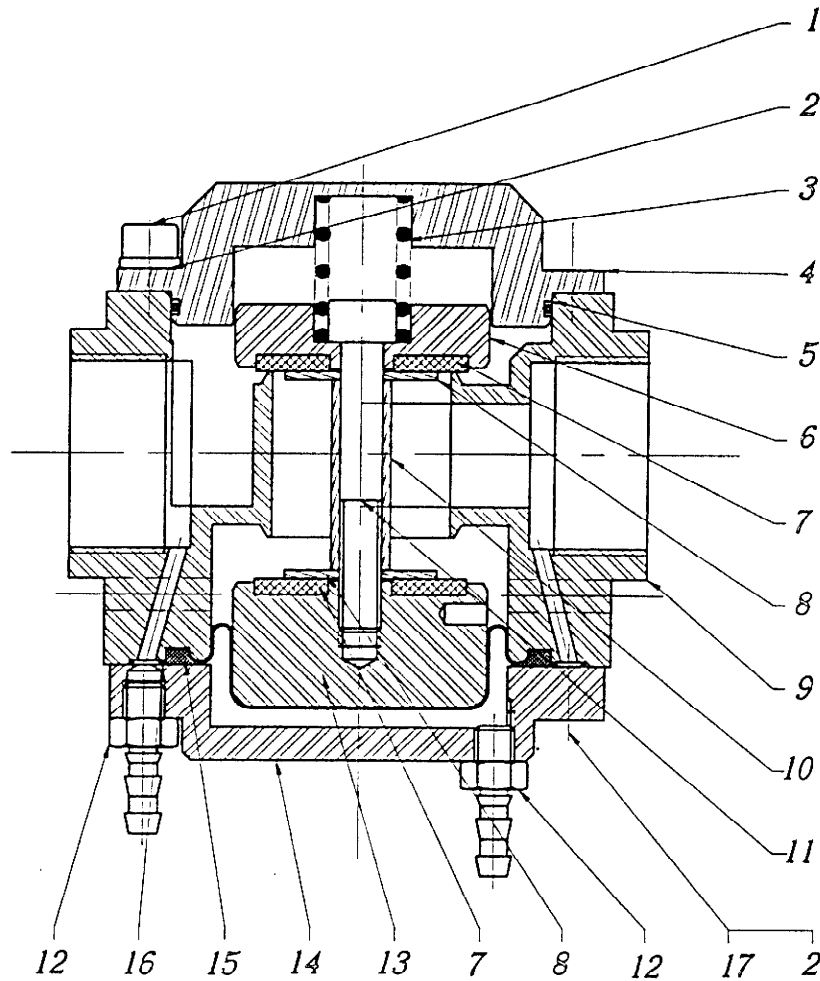


Rep Item	Désignation	Description	Qté. Qty.	CODE
1	Mètre de télécommande (rep 2 à 4)	Length of control (item 2 to 4)	(*)	3525-0003
2	Flexible	Hose	5	-
3	Collier	Hose Tie	2/m	-
4	Cable	Strain Relief Wire	1	-
5	Serre Cable	Sleeve Clamp	2	6112-5032
6	Cosse Cœur	Thimble	2	6932-5332
7	Poignée PHS2U	PHS2U Pendant control	1	7579-0071
8	Mamelon M/M	Nipple	1	6131-6328
9	Valve d'arrêt d'urgence	Shut Off Valve	1	3617-0022
10	Limiteur de couple	Torque Limiter	1	3636-0002
11	Coude M/F	Elbow	5	6828-0132
12	About	Fitting	8	6165-2332
13	Flexible	Hose	1m	6802-4232
14	Coude M/F	Elbow	1	6821-3628

(\*) Spécifier la longueur de télécommande à la commande      (\*) Specify length of control when ordering

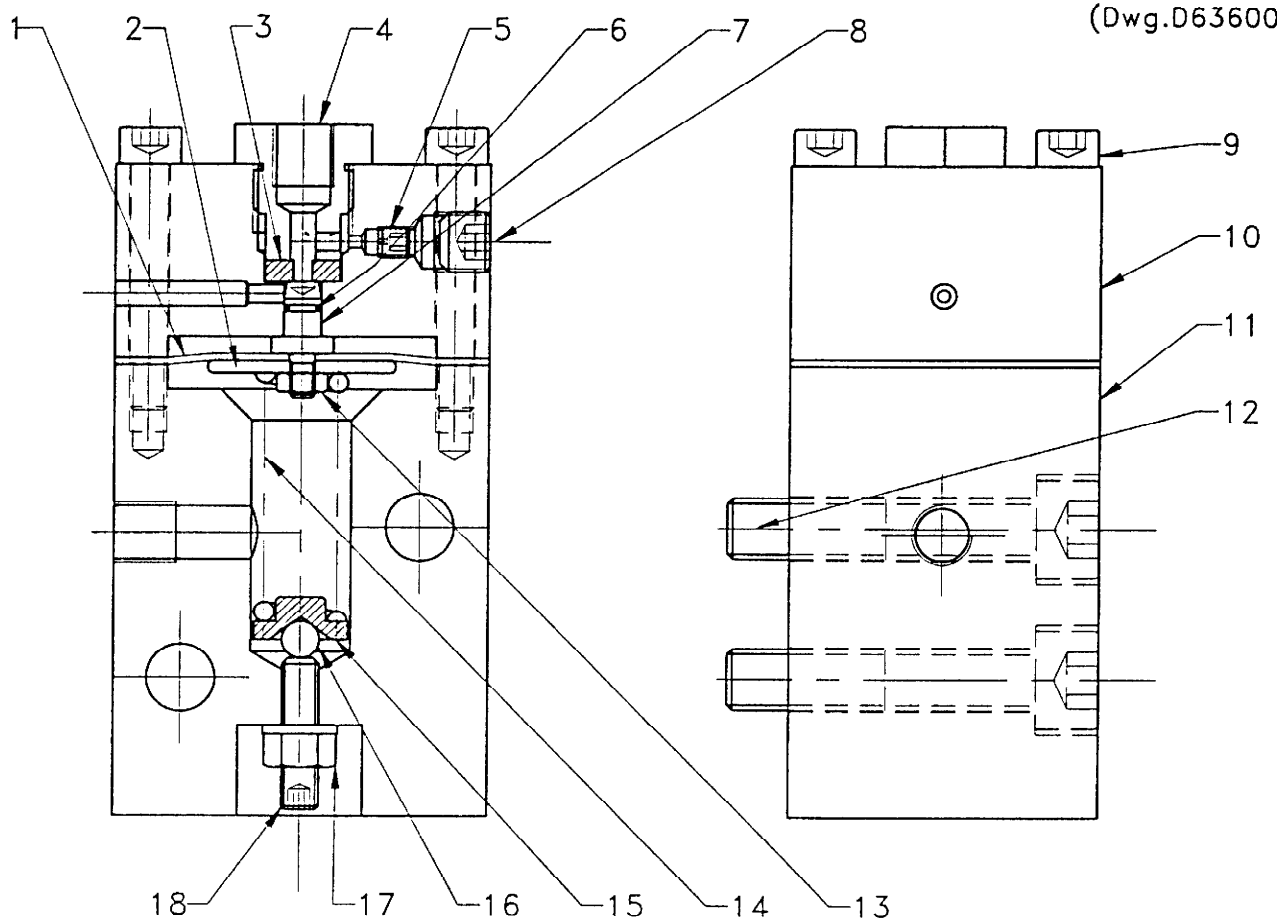
DISTRIBUTEUR 3/2 1"1/2  
CONTROL VALVE

(Dwg.D6170005)



REPÈRE ITEM	DESIGNATION	DESCRIPTION	QUANTITE QUANTITY	CODE
1	Vis Chc	Screw	6	4130.1406
2	Rondelle Grower	Lockwascher	12	4520.0008
3	Ressort	Spring	1	6912.0141
4	Couvercle	Cover	1	9617.0073
5	Joint torique	'O' Ring	1	5821.6129
6	Clapet	Valve	1	9617.0075
7	Joint	Gasket	2	9617.0076
8	Rondelle LL 10 N	Washer	2	4570.0010
9	Corps	Body	1	9617.0072
10	Entretoise	Distance ring	1	9617.0077
11	Vis Chc	Screw	1	4130.4706
12	About	Fitting	2	6165.2632
13	Clapet	Valve	1	9617.0078
14	Couvercle	Cover	1	9617.0074
15	Membrane	Diaphragm	1	6772.0041
16	Joint torique	'O' Ring	2	5820.9229
17	Vis Chc	Screw	6	4130.1506

**LIMITEUR DE COUPLE  
TORQUE LIMITOR**



REPERE ITEM	DESIGNATION	DESCRIPTION	QUANTITE QUANTITY	CODE
1	Membrane	Diaphragm	1	9636.0020
2	Rondelle	Washer	1	9636.0019
3	Joint	Gasket	1	9636.0021
4	Vis	Screw	1	9636.0018
5	Gicleur	Nozzle	1	9617.0071
6	Joint torique	'O' Ring	1	5822.2329
7	Clapet	Valve	1	9636.0017
8	Bouchon	Plug	1	6517.2032
9	Vis Chc	Screw	4	4131.4906
10	Corps	Body	1	9636.0025
11	Couvercle	Cover	1	9636.0024
12	Vis Chc	Screw	2	4130.7406
13	Ecrou	Nut	1	4300.1111
14	Ressort	Spring	1	6911.8541
15	Siège de ressort	Spring seat	1	9636.0023
16	Bille	Ball	1	6940.0125
17	Ecrou d'étanchéité	Nut	1	4300.7811
18	Vis Hc	Screw	1	4200.1607