

SCISSOR LIFT FREE WHEELS GEMINI LOW PROFILE

OPERATING
INSTRUCTIONS



GLP99SM-GLP99SM/P





SCISSOR LIFT

EC DECLARATION OF CONFORMITY

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DECLARES ON ONE'S OWN RESPONSIBILITY THAT THE EQUIPMENT SPECIFIED BELOW:

TYPE OF EQUIPMENTS: SCISSOR LIFT FREE WHEELS

MODEL: GLP99SM • ; GLP99SM/P • ;

PART NUMBER:

TO WHICH THIS DECLARATION IS RELATED, CONFORMS WITH THE FOLLOWING EUROPEAN DIRECTIVES: 98/37/CEE - 73/23CEE- 93/68 CEE - 89/336
IT ALSO DECLARES THAT THE FOLLOWING EUROPEAN RULES HAVE BEEN RESPECTED :
EN 292.1- EN 292.2- EN294-EN 349- EN 1050- EN 60204-1. ETS 300 683 EN 55022B.

Name and address of the approval body: TÜV PRODUCT SERVICE - Zertifierstelle
Ridlerstrasse 31
D-80339 Munchen
Certificate number: M6 97 12 29366 004
Notifiziert bei der EG Kommission unter Nr. 0123

.....
(Place and date)

.....
(Signature or stamp of the authorized person)

YEAR OF MANUFACTURE				
VOLTAGE	220/380 Vac	220 Vac	240 Vac	110 Vac
Hz	50 Hz	60 Hz		
AUTHORIZED SERVICE CENTER				

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SECOND PART

(For the use of installer)

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SYMBOLS

⚠	HAZARD-DANGER
⊘	PROHIBITED
*	WARNING

Follow the instruction given by the messages preceded by a safety alert symbol

CHAPTER 1- INTRODUCTION - PACKING – TRANSPORT

INTRODUCTION

This manual was written for shop technicians (car lift operators) and maintenance technicians. Before operating these car lifts, please read these instructions completely. This manual gives helpful information about:

- **Safety of people;**
- **Safety of the car lift;**
- **Safety of lifted car.**

This manual is considered to be a permanent part of the lift and must be kept in an easily accessible place so that the operator can find it and refer to it .A particularly careful reading of chapter “3” on safety is recommended.

All versions of “GLP99SM-GLP99SM/P” have been designed and built as required by:

EUROPEAN RECOMMENDATIONS: EEC 98/37/CEE, 73/23/CEE, 93/68/CEE, 89/336/CEE.

EUROPEAN RULES: EN 291/1992, EN 292/1992, EN 294, EN349, EN1050, EN 60204-1, EN 300683, EN 55022B.

Only skilled and previously authorized technicians should be allowed to carry out transport, assembling, setting, maintenance, overhaul, moving, dismantling operations, etc. concerning the lift. The manufacturer is not responsible for possible damage to people, vehicles and objects in the case that said operations are carried out by unauthorized personnel or the lift improperly used.

* Read these instructions completely before operating the lift.

* The lift must only be used for vehicles up to the specified capacity. Any improper use of this lift is strictly forbidden

* Disconnect the lift from the main electric supply before any extraordinary maintenance operation.

* Lift installation must be carried out as specified by these instructions.

The manufacturer is not liable for possible damage resulting from failure to follow the instruction supplied with this car lift.

PACKING

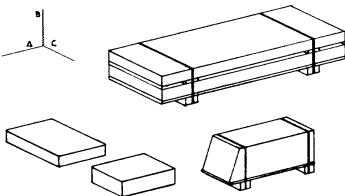
Standard versions of the car lift are pre-assembled and equipped as follows:

2 x bases and platforms (p1-p2) placed on top of each other and sealed with pallet.

1 x control box.

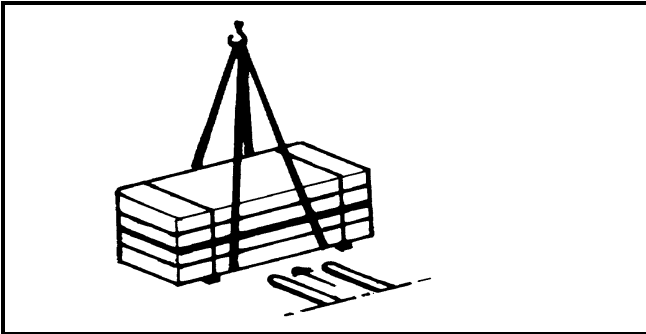
1 x cardboard box equipped with hydraulic connections, rubber pads.

1 x set of lifting/lowering ramps.

MODELS	PACKING	A	B	C	KG.
GLP99SMP		1800	400	600	800
GLP99SM		1800	400	600	800
Control box	(in ground version)	1000	400	500	75
cardboard box		400	300	200	10
ramps		1000	250	600	100
covers		600	250	600	80

TRANSPORT

Packing can be lifted or moved by fork lift trucks, cranes or bridge cranes. In case of slinging, a second persons must always take care of the load to avoid dangerous oscillations. At the arrival of goods, check for possible damage due to transport operations. Also verify that all items specified in the delivery notes are included. In case of damage or possible defects in transit the person in charge or the carrier must be immediately informed. Furthermore, during loading and unloading operations good must be handled as shown in the picture.



PACKING REMOVAL

Wooden packing can be recycled , in case of packing removal, comply with the applicable rules in the lift installation country.

CHAPTER 2- MACHINE DESCRIPTION MODELS-TECHNICAL SPECIFICATIONS

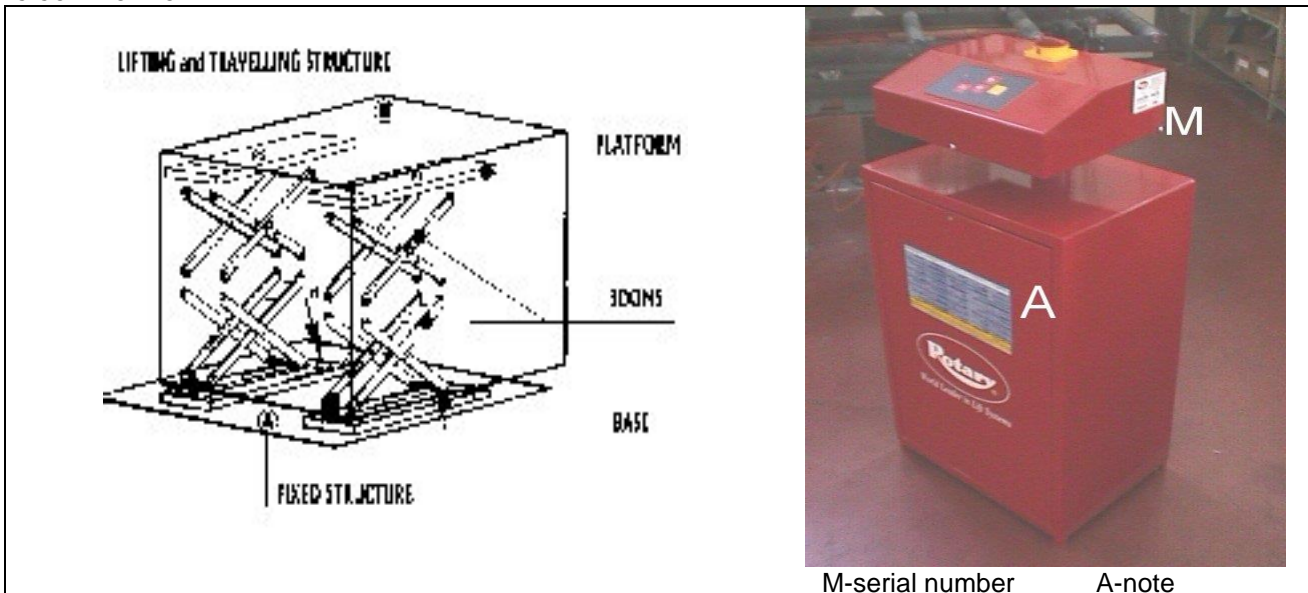
“GLP99SM” models are double scissor, low profile, (only 12 cm.), and fixed (that is anchored to the ground) car lifts and can be delivered in both surface or recessed versions. They have been designed and built for car, van lifting and placing operations.

Our car lifts are equipped as follows:

A-BASE (Fixed structure)

B-BOOMS, PLATFORM (Lifting and travelling structure).

C-CONTROL BOX



M-serial number

A-note

Fixed structure unit.

This is the car lift base, made of steel sheet with floor fixing holes.

Lifting and travelling structure unit.

This is composed of box-type steel sheet booms. The load carrying platform is made of longitudinal steel tubes linked to each other by vertical rods anchored to the booms by steel pins at the fixed points, and by rollers at the movable ones. Lifting system links are equipped with self-lubricating bushings where servicing is not required.

Control box.

The unit with a metallic box that contains oil tank, pump, motor, hand pump and electro-valve sets. There are also power and hydraulic supply connections. Low-voltage controls (24V) are placed on the power unit. they are the following:

- 1.LIFTING PUSH BUTTON
- 2.LOWERING PUSH BUTTON
- 3.LIMIT SWITCH CUTOUT
- 4.LED
- 5.MASTER SWITCH



1- Lifting push button: When pressed, motor and lifting mechanism are operated.

2- Lowering push button: When pressed, motor and lowering mechanism are operated.

3. Limit switch cutout: When pressed, all limit switches on the lift and photoelectric cell are de-activated.

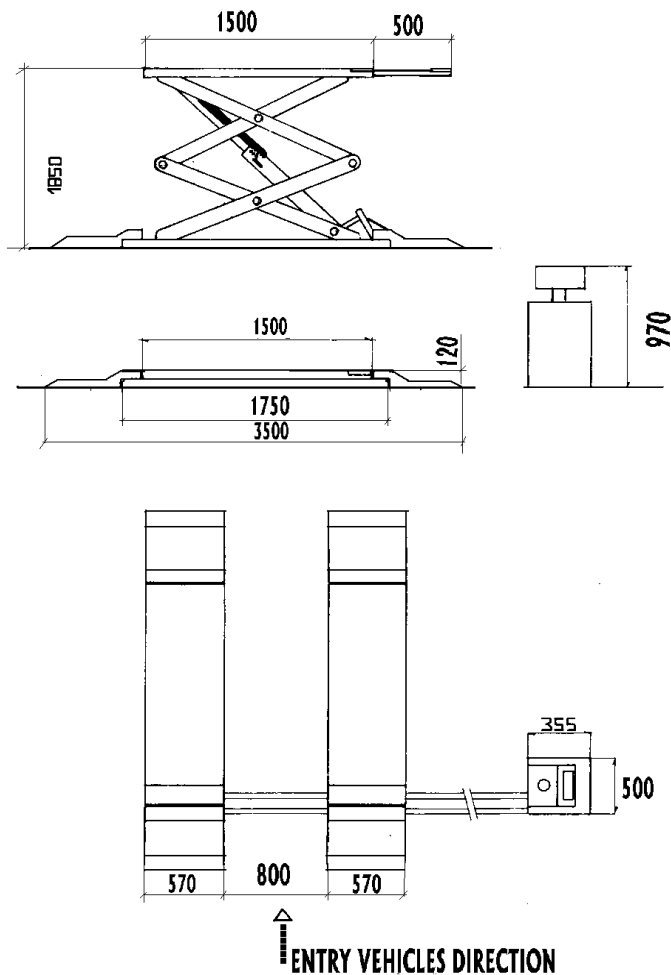
4. Led: Indicates that the control board is powered.

5. Master switch: When in "0" position lift is not powered. The switch can be padlocked to prevent the use of the lift during the maintenance. "1" position: the lift is powered.

"GLP99SM-GLP99SMP" double scissor car lifts are able to lift vehicles and van whose weight is no more than 3000 kg. The height is adjustable so that it can be easily and safely operated as needed. All version are equipped with extension platforms so vehicles with a longer "wheel base" can be lifted. Our range of double scissor lifts can meet any demand coming from car repairmen, tyre dealers, body repairmen etc.



GLP99P OVERALL DIMENSIONS (with lifting and lowering ramps)



***WARNING:** "GLP99SM-GLP99SMP" car lift has been designed and built to lift and place cars in closed areas. Any other use is forbidden, and particularly, the following operations cannot be performed:

-VARNISHING - LIFTING OF PEOPLE OR SCAFFOLDING - SQUASHING PRESS - CAR JACK OR WHEEL REPLACEMENT.

CHARACTERISTICS

- Low-voltage controls (24V).
- Power unit with electromechanic card.
- Hydraulic-volumetric synchronism of platform.
- Acoustic signal at the end of the lowering cycle.
- Mechanical safety system.
- Hand lowering device in case of power failure.
- Double auto-levelling platform device.
- Magnetic induction limit switches.
- "Touchpad" control.
- Safety valve in case of hydraulic failure.

TECHNICAL DATA

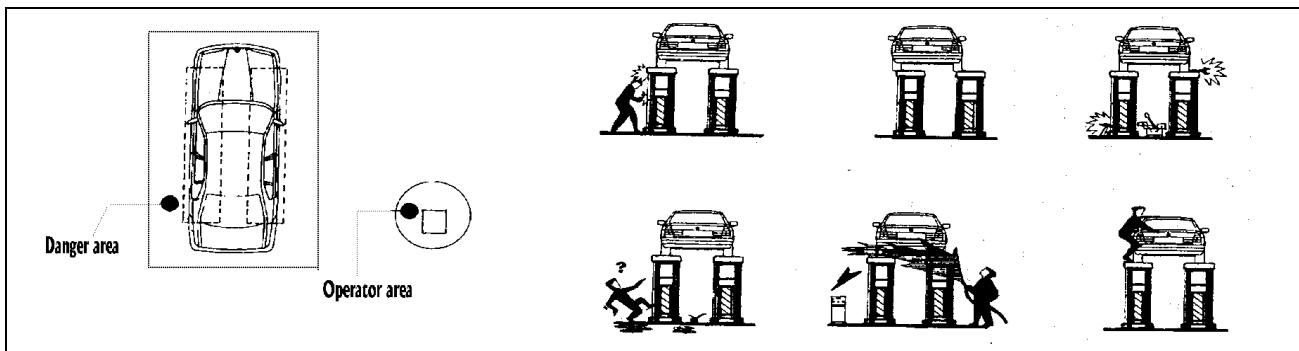
• Operation	Electro-hydraulic.
• Capacity	3000 kg.
• Weight	From 900 to 1000 kg.
• Lifting time	50 sec.
• Lowering time	50 sec.
• Max. lifting height	1850 mm.
• Motor	3ph 3kw 220/380V 50Hz.
• Noise level	<76 dB.
• Working temperature	-10°/+50°.
Working max pressure	250 Bars

The direction of the motor is clockwise, as shown in the table placed on the motor.

CHAPTER 3 – SAFETY

Read this chapter carefully it contains important information concerning the safety of the operator. The operator and the maintenance personnel are required to observe the accident prevention legislation in force in the country of installation of the lift.

- * 1 During lifting or lowering operations, the lift must be operated only from the operator area as shown in the diagram.
- σ 2 Stopping or passing within the danger area when the lift is working or already raised is strictly forbidden. Only the operator is allowed to stay under the lift.
- * 3 The operator must make sure the hazard area is clear when lifting or lowering the lift
- σ 4 Never use the lift without protection or when safety devices are off-line.
- * 5 Always use the rubber pads when lifting a vehicle, observing the proper points of support specified by the vehicle's manufacturer.
- σ* 6 Switch off the engine and engage the parking brake after placing the vehicle on the car lift; Furthermore, disengage the shift lever and move it to the "neutral position".
- σ 7 To prevent the vehicle from falling make sure it is properly placed on the lift.
- σ 8 Getting in or on the vehicle and-or starting the engine when the car lift is raised is strictly forbidden.
- σ 9 Never leave objects and-or obstructions under the vehicle or scattered on it during the lowering phase.
- σ 10 Keep the area under/next to the lift clear and remove possible oil spots to avoid the risk of slipping.
- σ 11 Never use water-steam-varnish-solvent jets in the lift area, and particularly, close to the control box.
- σ 12 Proper lighting is extremely important. Make sure all areas next to the car lift are well and uniformly lit, according to that specified by the applicable laws of the place of installation.
- σ 13 Climbing on the platform when lifting the vehicle or when the same has been already raised is strictly forbidden.
- σ 14 Any use of the lift other than what herein specified can cause serious accidents to the operator as well as to the people in close proximity.
- σ 15 The tampering of safety devices is strictly forbidden.
- σ 16 Never exceed the maximum lifting capacity. Make sure the vehicles to be raised are without loads.
- * 17 In case of anomaly, stop the car lift and block the on/off selector by using a padlock. Only skilled technicians should be allowed to restart the lift. Be sure the power supply is off before repairing and servicing the lift. The operator, the lift or the vehicles raised can be seriously damaged if these instructions are not followed.



SAFETY DEVICES

ANTI-SHEARING SAFETY. The lift is provided with a device that stops it automatically for a few seconds at approximately 30 cm from the floor, when the lift is lowered from this point the device produces a warning acoustical signal.

PHOTOELECTRIC SWITCH (PHOTO CELL). A special device to stop the lift during lowering or lifting operations whenever the presence of obstructions between the two platforms could cause dangerous situations or a difference of 50 mm. exists between the two platforms.

SAFETY VALVE FOR AUTOMATIC LOWERING CUT OUT. Normally open two way safety valves. They are able to automatically lock a single or double-acting cylinder in case a sudden increase in velocity occurs. The valves are located inside the cylinders and prevent the load from falling down in case of sudden pipe bursting or cutting.

DEAD-MAN CONTROL. The car lift is equipped with a dead-man control. Lowering and lifting operations are stopped immediately by releasing push button controls.

MECHANICAL SAFETY DEVICES. A metallic device, pneumatically operated.

CHAPTER 4- INSTALLATION

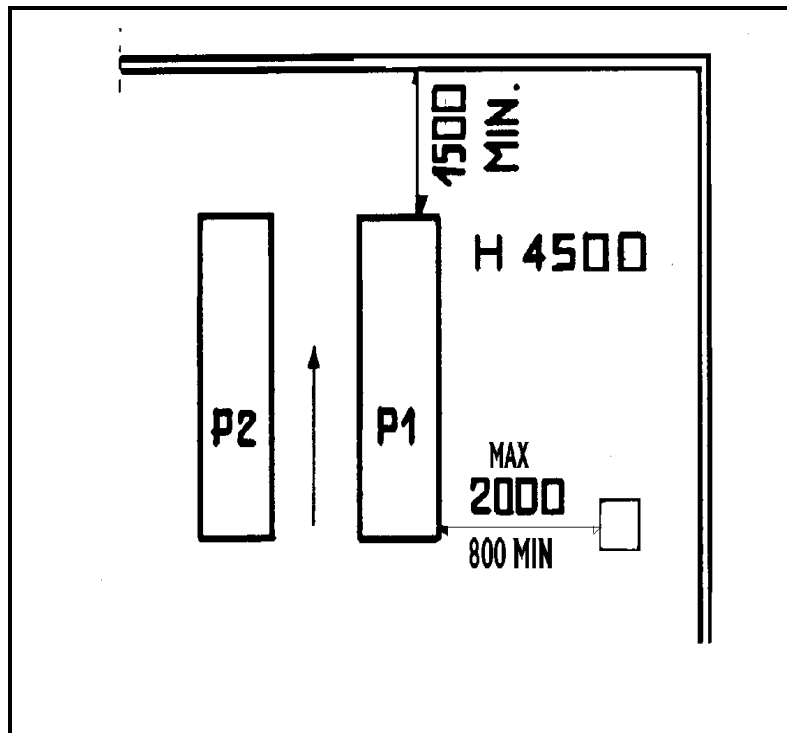
* UNPACK THE GOODS AND CHECK FOR POSSIBLE DAMAGE BEFORE INSTALLING THE LIFT.

σ ONLY SKILLED TECHNICIANS, APPOINTED BY THE MANUFACTURER, OR BY AUTHORIZED DEALERS SHOULD BE ALLOWED TO INSTALL THE CAR LIFT. SERIOUS DAMAGE TO PEOPLE OR EQUIPMENT CAN BE CAUSED IF THIS RULE IS NOT FOLLOWED.

The lift must be installed according to the specified safe distance from walls, columns, other equipments etc. The roof must be a minimum 4500 mm. in height. The minimum distance from walls must be 1500 mm. take into consideration the necessary space to work easily. Further space for the control site and for possible walkways in case of emergency is also necessary. The lift can be placed on any floor, as long as it is perfectly level and sufficiently strong. (250 x cm²).

INSTALLATION PROCEDURE

1. Lift location.
2. Power supply and pneumatic feed availability.
3. Electric connections.
4. Hydraulic connections.
5. Electric network connection.
6. Lift fixing.
7. Initial running.



1) LOCATION OF THE LIFT

Place the automotive lift using a crane truck or any other lifting equipment. Raise the two platforms using a crane, place them at a height of about 75 cm. (to open) and put a wooden block 10x10 in picture. Move the car lift, sling it as described in diagram and adjust the distance between the two platforms so that they are exactly parallel. After having set the location of the lift, it may be necessary to level the unit with metallic shims under the base.

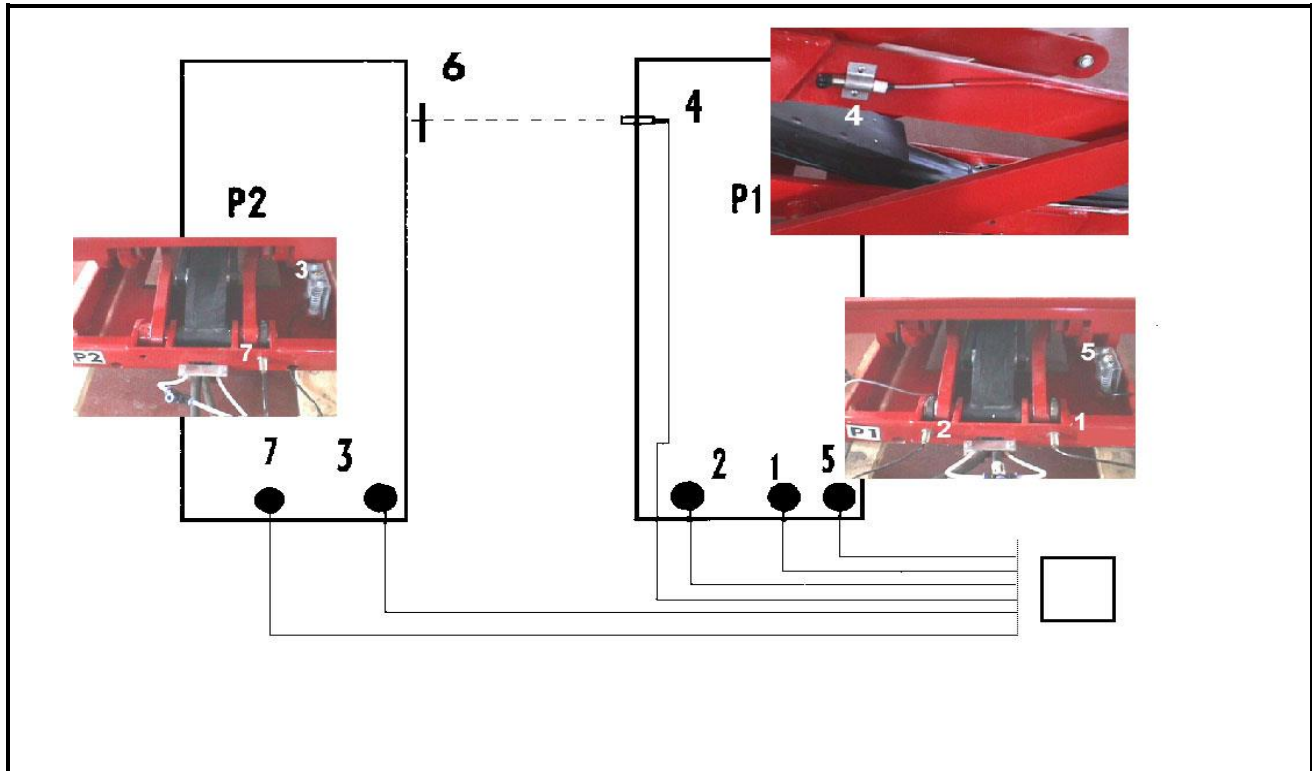
2) POWER SUPPLY AND PNEUMATIC FEED AVAILABILITY CONTROL

The room must be previously arranged for the power supply of the lift. Make sure that supplies are not far from the power unit.

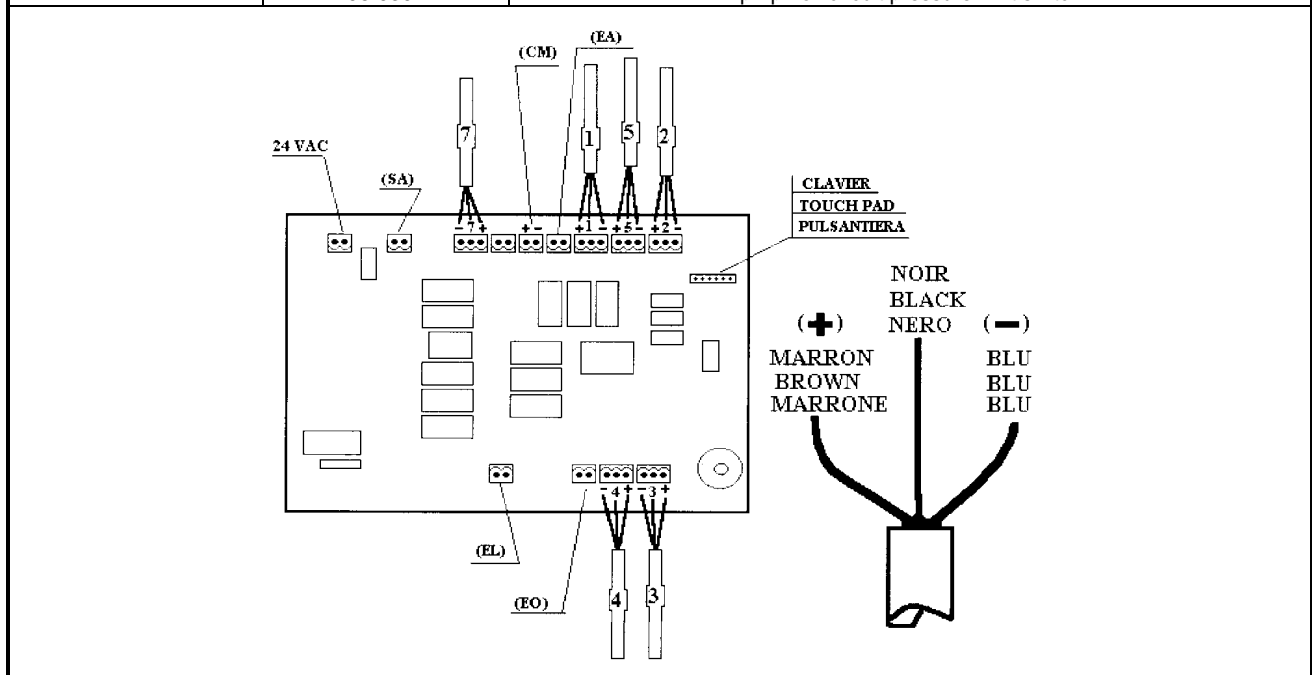
3) ELECTRIC CONNECTIONS

Connect the lift cables numbered (see diagram) to the relative connector placed within the electric card of the power unit.

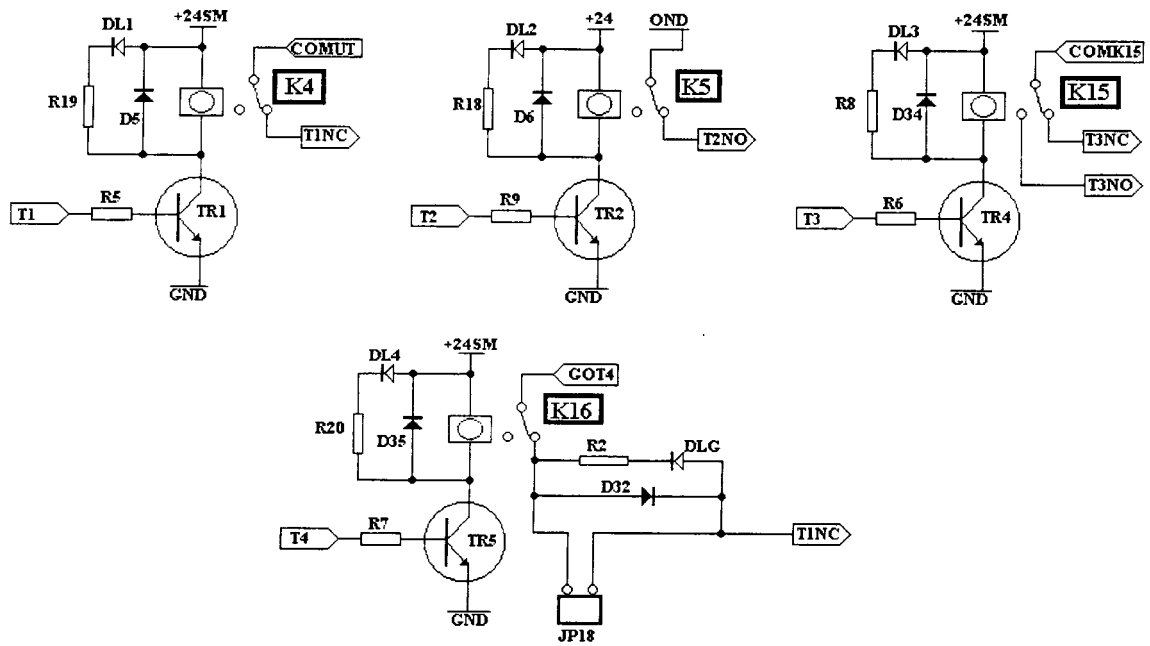
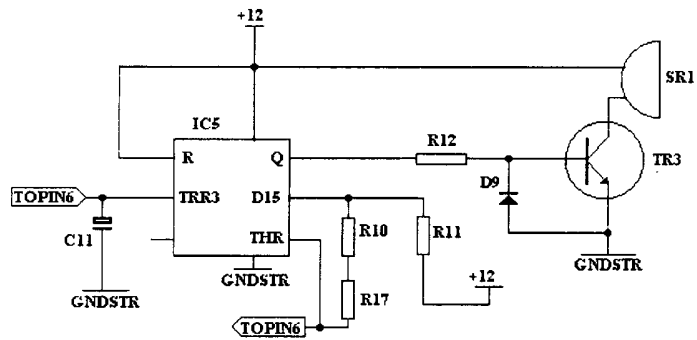
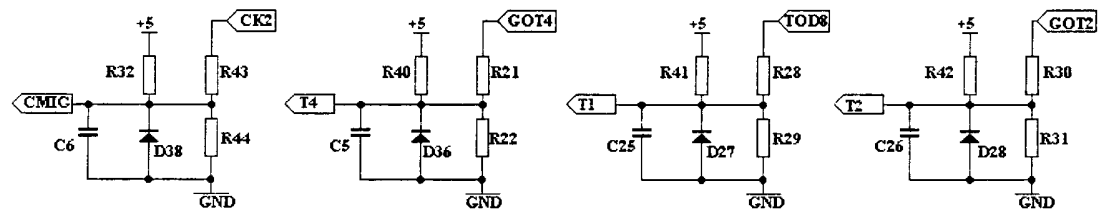
WIRING CONNECTIONS



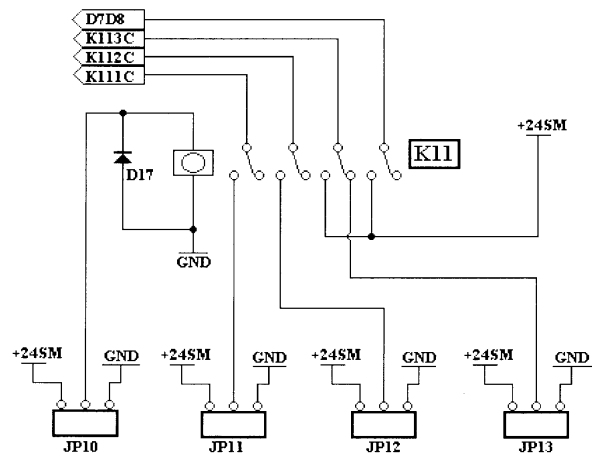
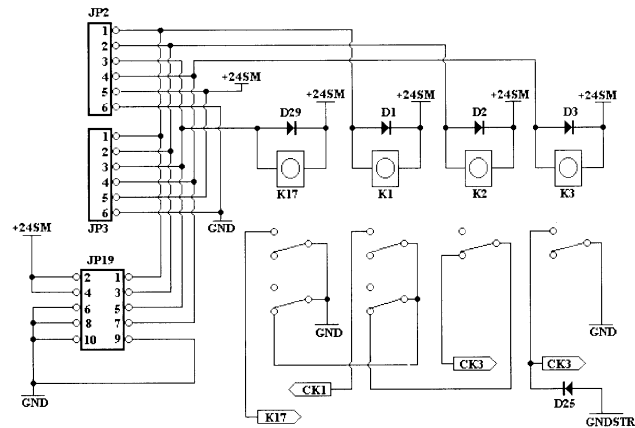
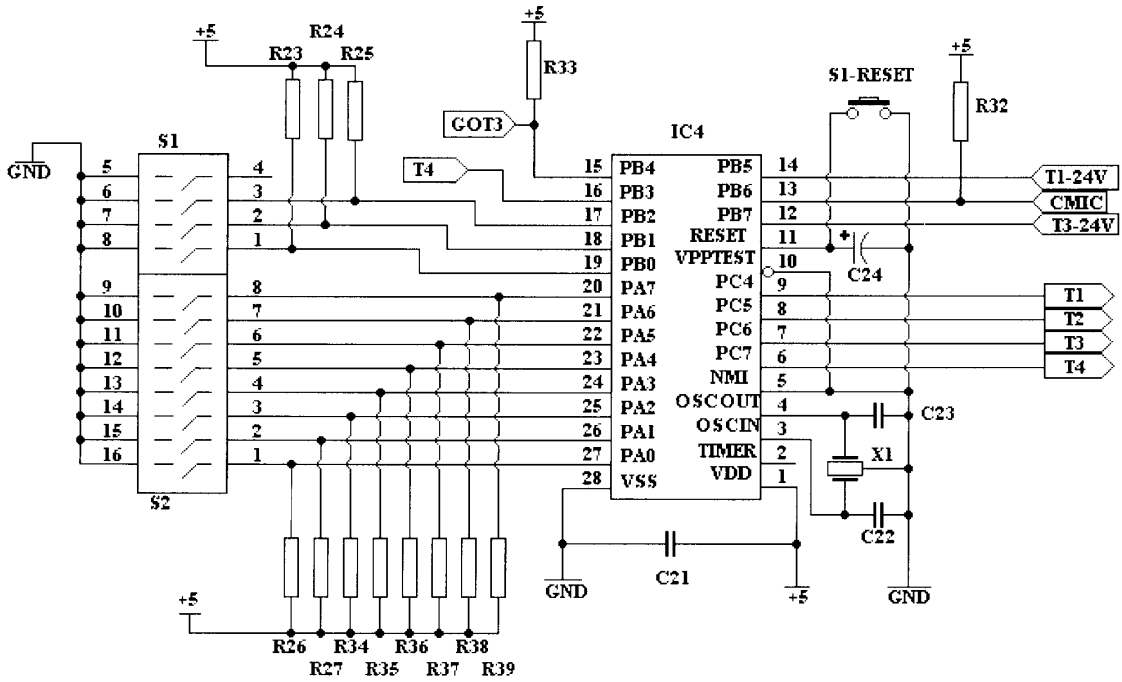
POSITION N.	CODE	DESCRIPTION
1	06-0302	Lifting limit switch
4	06-6607	Photoelectric cell
3	06-0302	P2 platform self levelling
5	06-0302	P1 platform self levelling
2	06-0302	Photoelectric cell cut out
6	06-6692	Reflector
7	06-0302	p1-p2 oil circuit pressure limit switch



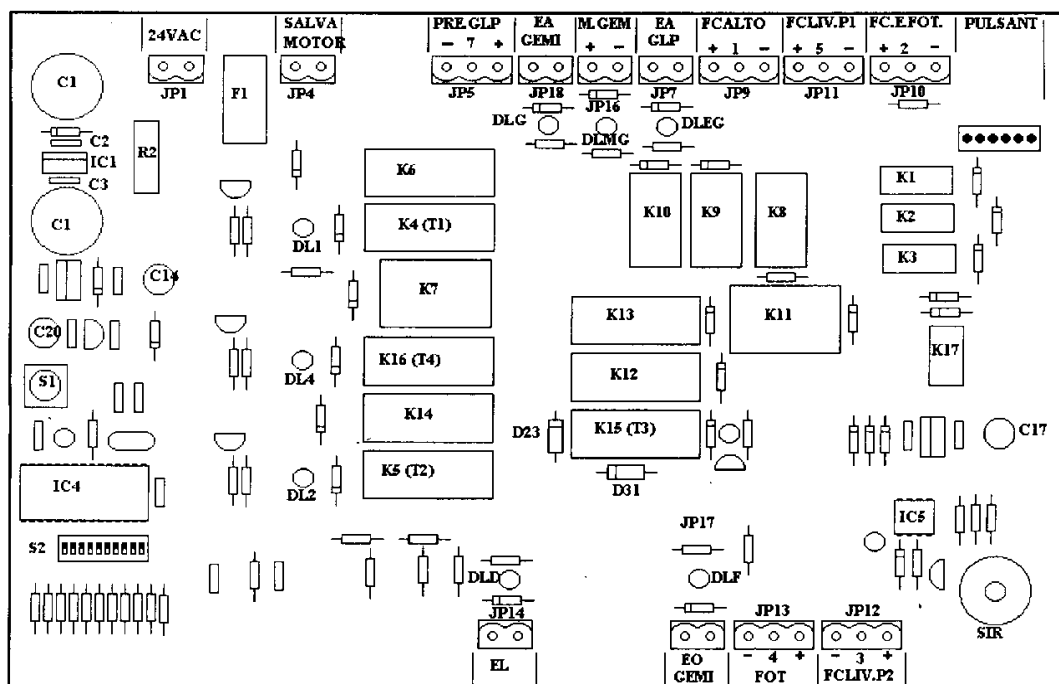
WIRING DIAGRAM



WIRING DIAGRAM



ELECTRIC CARD



JP1/17	CONNECTORS	K1/17	RELAIS
D1/37	DIODS	R1/44	RESISTORS
DL	LED	SPRI	BLEEPER
S1	RESET TIMER BUTTON	S2	TIMER REGULATOR
IC4	TIMER MICROCHIP	ICS	BLEEPER MICROCHIP
C1/24	CAPACITOR	TR1/5	TRANSISTORS
IC 1-2-3-5	VOLTAGE STABILIZER	X1	QUARTZ REGULATOR

TIMERS ADJUSTMENT "S2"



"T1" STOP TIME FOR GEMINI AND LOW PROFILE ADJUSTMENT (1-2)



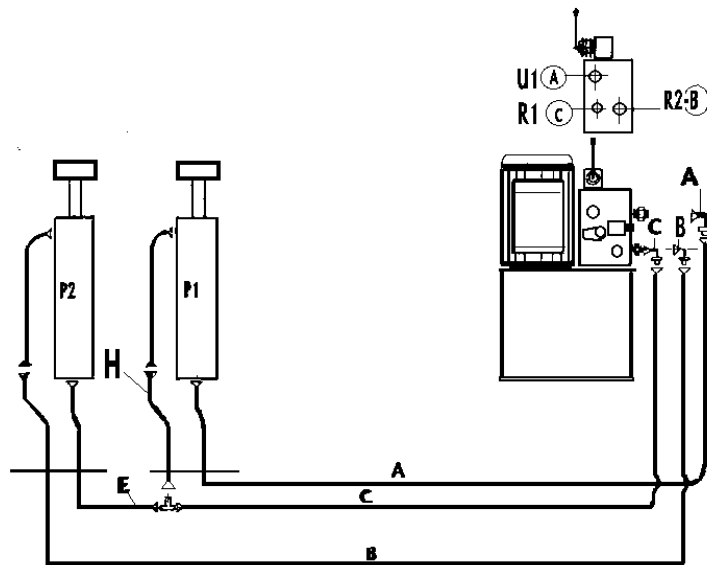
"T2" = GLP PISTON P2 PRELOADING TIME ADJUSTMENT (3-4)



"T3" = "Gemini/Low profile" timer lifting time before the lower action adjustment (5-6)

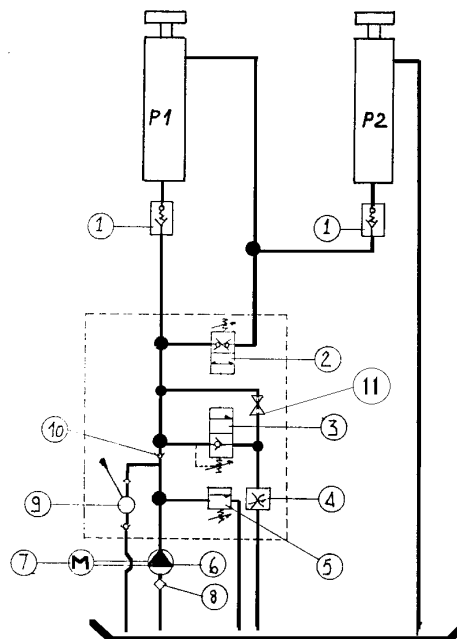


4) HYDRAULIC CONNECTIONS



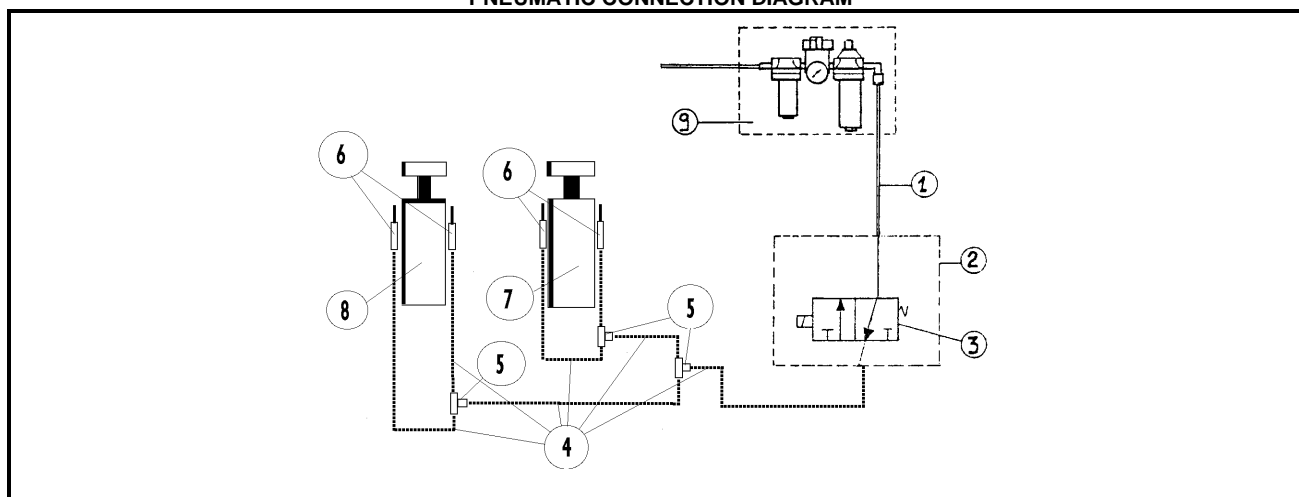
04-3003	P1 DELIVERY (A)	04-3006	CONNECTION-P2 DELIVERY (E)
04-3007	DISCHARGE (B)	04-3001	LEVELLING-P2 DELIVERY (C)
04-3004	PIPE CONNECTION (H) P1		

HYDRAULIC PLAN



1	PARACHUTE VALVE	6	3,5 L. PUMP
2	LEVELLING ELECTRO VALVE (EL)	7	THREE PHASE MOTOR 4 HP
3	LOWERING ELECTRO VALVE (EO)	8	SUCTION FILTER
4	FLOW REGULATOR VALVE	9	HAND PUMP
5	FULL FORCE VALVE	10	DIRECTIONAL VALVE
11	MANUAL LOWERING COCK		

PNEUMATIC CONNECTION DIAGRAM



1	MAIN SUPPLY	6	PNEUMATIC JACK FOR MECHANICAL SAFETY RELEASE
2	CONTROL BOX	7	P 1
3	AIR ELECTRO VALVE	8	P 2
4	"RILSAN" WHITE AIR PIPE	9	AIR FILTER AND LUBRICATOR
5	TEE-PIECE UNION		

5) ELECTRIC SYSTEM CONNECTION

*** Warning ! Only skilled personnel should be allowed to perform the operation shown below.**

Connect as follow:

- Open the control box front cover and using a proper terminal box, connect the electric cable to the master switch cable (be sure that the cable passes through the proper space located behind the control box. This car lift is designed to operate on 380V, in case of a different voltage, change both connections to the motor and the transformer. Before connecting the electric system, make sure that the power supply plant to the lift is equipped with the protection devices required by current standards in the country where the lift is installed.
- Connect the lift cables to the relative cables placed within the electric card as specified on page 8, make sure that the connections are correct.

*** BE CAREFUL**

⚠ Before accessing inside the control box, for connection to the power or for the repair of electric equipments breakdown, make sure that the main power supply is disconnected, to avoid the possibility of electrocution.

COMMERCIAL PARTS - WIRING PLANT

Position n.	Denomination	Manufacturer	Type	Max Appl.
	Proximity	SIEMENS	10...30V DC pnp NC 0'3A-Sn1=2mm.	
FOT	Photoelectric cell	INFRA	18-12M/pnp NO24V	
	Electric cable 2 wires	various	-	
	Electric 3 wires	various	-	
IG	General switch	Sprecher Schuh	L3-32-1753 16A	
T	Touchpad	TASTITALIA	D.ROTARY LIFT	
	Three pole base	WEBER	25A-380V	
F	Fuse	WEBER	Various	
	Contactor	Sprecher Schuh	16A	
TR	Transformer	LSP	70VA	
	Electric card	ROTARY LIFT	D.ROTARY LIFT	

PNEUMATIC PLANT

3	Air Electrovalve	ACL/MM	24V~50/60 HZ 8VA	10 Bar
5	Pneumatic connections	VARIOUS	VARIOUS	16 Bar
4	Pneumatic pipe	RILSAN	Ø 4x6	30 Bar
6	Air piston	ROTARY LIFT		15 Bar
9	Air filter	PIANA	B5AMB006	-

HYDRAULIC PLANT

	Cover Tank	ROTARY LIFT	-	
	Tank	ROTARY LIFT	-	
8	Filter	FBN	-	
6	Pump	HYDROIRMA	UP10K163 MOD.291	250 Bar
7	Motor	ELPROM-ELD	220/380-3PM-50HZ 1400 RPM 3KW 4HP IP54	
5	Max pressure valve	TECNORD		85/220 Bar
3	Lowering electrovalve	TECNORD	24AC 50HZ 20W	250 Bar
2	Levelling electrovalve	TECNORD	89.01.952.1.9	250 Bar
9	Hand pump	TECNORD		
1	Parachute valve	TECNORD		
	P1 Piston	ROTARY LIFT	Ø100	300 Bar
	P2 Piston	ROTARY LIFT	Ø90	300 Bar
	R1 Hydraulic pipe	MANULI	VARIOUS	210 Bar
	R2 Hydraulic pipe	MANULI	VARIOUS	400 Bar
	Crimp fitting	LARGA	VARIOUS	400 Bar
	Hydraulic connection	LARGA	VARIOUS	400 Bar
4	Flow regulator	HYDROIRMA	VRC 10/11	230 Bar

6) LIFT FIXING

After making electric and hydraulic connections, make sure they are properly connected. Now fix the lift to the floor, using the bases as templates, drill a hole into the floor a 18 mm.Ø bit must be used up to a depth of about 150 mm., clean the holes, place the proper inserts with light hammer blows and finally tighten the bolts. In case of an inground, lift, check it is perfectly centred. (To open the lift see chapter "4" INSTALLATION).

7) FIRST STARTING

- * **Warning! Only skilled and authorized personnel should be allowed to perform these operations.**
- * **Carefully follow all instructions shown below to prevent possible damage to the car lift or risk of injury to people.**
- * **Be sure that the operating area is cleared of people.**

After positioning the lift as specified, and performing electric and hydraulic connections the lift can be operated by the procedures shown below: Open the door of the control box and unscrew the oil tank cap, and using a funnel pour about 10 l. of ESSO NUTO H 32 hydraulic oil or equivalent. Move the master switch to "1" position (see pag. 4) and simultaneously press "lifting" and "limit switch cut out" push buttons (see pag.4 pos. 1-4) keep them pressed until P1 comes to a stop. If motors rotate but lifting operations cannot be performed, check motor for proper direction of rotation, exchange the phases if necessary. Add. 5 l. of oil in the tank and press again the two buttons until P2 platform stops. To lower the car lift, press the "lowering" button. Repeat lifting/lowering operations three or four times. In case the platforms do not start simultaneously, it is necessary to set the adjustable TIMER "S2" (see dwg. on page 12) as follows: Place the selectors, following the drawing on page 12 in order to increase or decrease the opening time of the levelling valve. The opening time of the (EL) valve allows the hydraulic circuit, between piston p1 and piston p2, to go through the levelling valve (EL) and load the necessary pressure which guarantees the simultaneous start of the platforms. If the pressure is not sufficient in the hydraulic circuit, the platform p1 will start first. If the pressure is too high, the platform p2 will start first. ("Start" refers to the initial surge) This operation is to be done with no load on the lift for 4/5 times and afterwards repeated with a load between 1500/2000 kg. this last operation is necessary only as a check.

CHAPTER 5 – OPERATION

OPERATION SEQUENCE

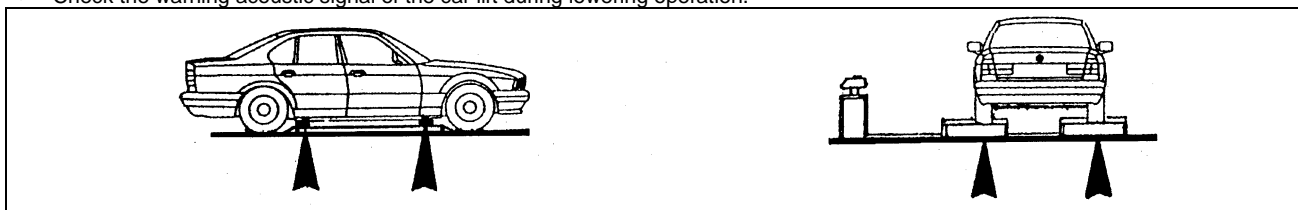
Be sure the platforms are at their minimum height before driving on/off the lift. Get in the vehicle and drive on the lift; be sure the vehicle is centred and both rear and front wheels are properly positioned, place the proper rubber pads on the platform so that they are in line with the lifting points specified by the manufacturer. Press the "lifting" button, keep it pressed until the required height is reached. To lower the lift press the "lowering" button. During the lowering, the lift will stop automatically for some seconds at approximately 30 cm. from the floor, producing a safety acoustic signal, so the lift lowers again.

During the first hours of operation cracking noises could occur. This is due to the natural settlement of mechanical parts and will disappear during the following hours of operation.

CHECKS

Perform the following checks when operating the car lift.

- Carefully check the car lift and its load during lifting/lowering operation.
- Check the warning acoustic signal of the car lift during lowering operation.



CHAPTER 6 – MAINTENANCE

* **WARNING!** Only skilled and authorized personnel should be allowed to service the lift. When servicing the lift, all safety precautions must be followed to avoid accidental starting of the machine. The master switch must be padlocked in "zero" position. During service operations, "safety" precautions must always be followed.

PERIODIC MAINTENANCE

Maintenance operations must be performed at each specified maintenance period in order to keep the car lift in perfect working condition. The manufacturer is not liable for possible damage resulting from failure to follow the above instructions.

- Car lift must be cleaned once a month, at least, without using chemical agents and high pressure washing guns. Always dispose of used brake oil to prevent possible damage to the finishing. Carefully check that piston rods are not damaged since inside seals could be seriously damaged and leakage of oil occur.
- Check safety devices for proper working condition periodically.
- Grease roller slideways periodically.
- Check flexible tubes for proper conditions yearly.
- Change hydraulic system oil at 5 year intervals, at least. **Used oil is a highly pollutant product. Always dispose of used oil as specified by the effective law of the country where the car lift is installed.**

MACHINE DEMOLITION

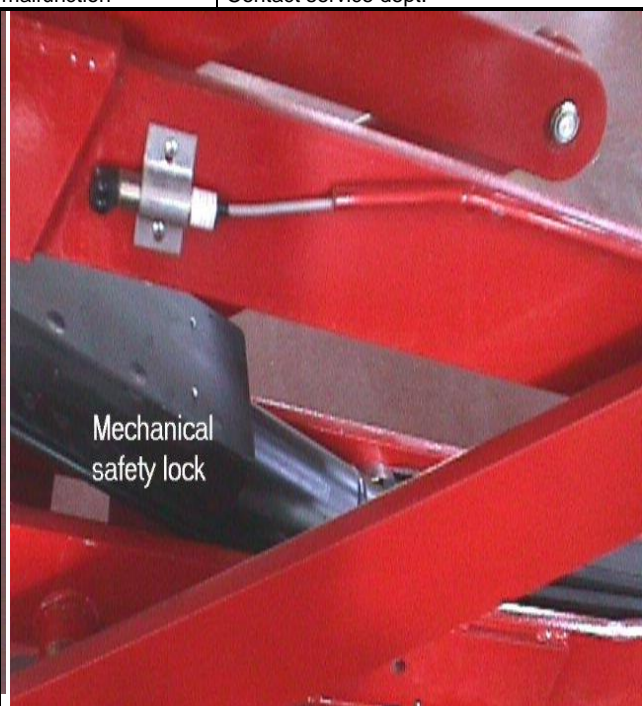
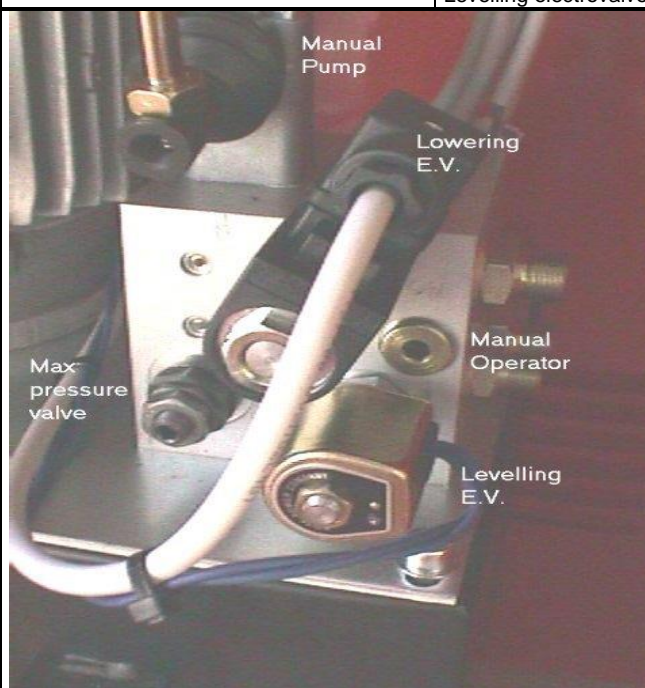
When demolishing the machine all safety precautions specified in chapter "3"- "4" must be followed. Only authorized technicians should be allowed to perform this operation. Metallic parts can be scrapped as "scrap iron". In any case, demolished material must be eliminated according to the effective laws of the country where the car lift is installed. It must be remembered that, for fiscal purposes, any demolition operation must be properly documented as specified by the effective laws of the country where the lift is installed at the time of demolition.

CHAPTER 7 - SYMPTOMS AND SOLUTIONS – TROUBLESHOOTING

Troubleshooting and possible repairs require absolute compliance with all safety precautions indicated in chapter "6 - maintenance" and chapter "3 - safety".

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
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Lift does not operated	Failure in the electric system	Check the connections and electric components for proper conditions.
Lowering operation cannot be performed	Damaged lowering solenoid valve	Check the failure of the electrovalve
Lowering is too slow	Flow regulator valve for lowering control does not work properly	Contact service dept.
Motor rotates, but lifting operation cannot performed.	Lowering solenoid valve locked in opening position. No oil in the tank Motor rotates the wrong way	Contact service dept. Refill with oil to the specified level Check motor for proper direction of rotation. Exchange the phases if necessary
Motor rotates, but lifting speed is extremely slow.	Lowering solenoid valve locked in opening position Worn pump	Contact service dept. Replace the pump
Normal capacity cannot be lifted	Max pressure valve malfunction Suction filter malfunction Worn pump	Contact service dept. Clean the suction filter or contact service dept. Replace the pump
Platform out of synchronization	Leackage in the hydraulic system Levelling electrovalve malfunction	Repair the leackage in the hydraulic system and perform all operation of synchronization. Contact service dept. in case of recurring anomaly. Contact service dept.



Hand lowering

To lower the platforms, raise the lift with the hand pump about 2 cm., lift the mechanical safety pawls using a wooden shim of about 3 cm and place it along the rack. (see diagram.) Unscrew with an hexagonal key (see diagram.) With a "5" hexagonal key unscrew very slowly the hand lowering valve taking care of the lift lowering. when the lift is fully lowered screw the hand lowering valve. Once the trouble has been repaired, raise the lift and remove the wooden shims.

CHAPTER 8-ACCESSORIES

Available optionals are:

- Set of extension hoses

- Rubber support.
 - Rubber pads T4B.
- Standard colours are: RAL 5015- RAL 3002.

If requested, it's possible to have special colours and cold galvanizing.

CHAPTER 9-SPARE PARTS

Respect all the safety precaution indicated on chapter "3" and "6" when making the substitution of the spare parts and the repair intervals.

Spare parts ordering procedure.

When ordering spare parts the following must be clearly specified:

- Car lift serial number and year of manufacturing.
- Code of the part requested.
- Quantity needed.

Request must be directly to the manufacturer.

Specify the colour (r-red, b-blue, rp-special colour).

FIG. 1 BASE

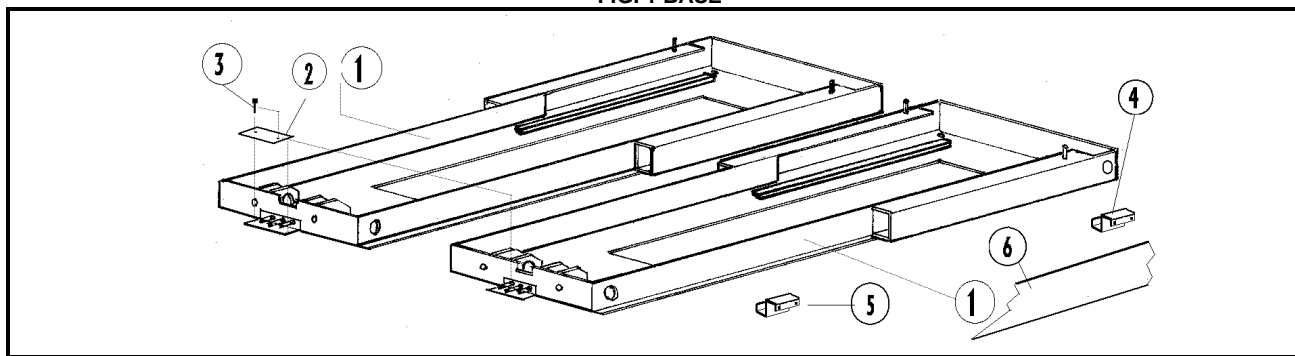


FIG. 2 ARMS

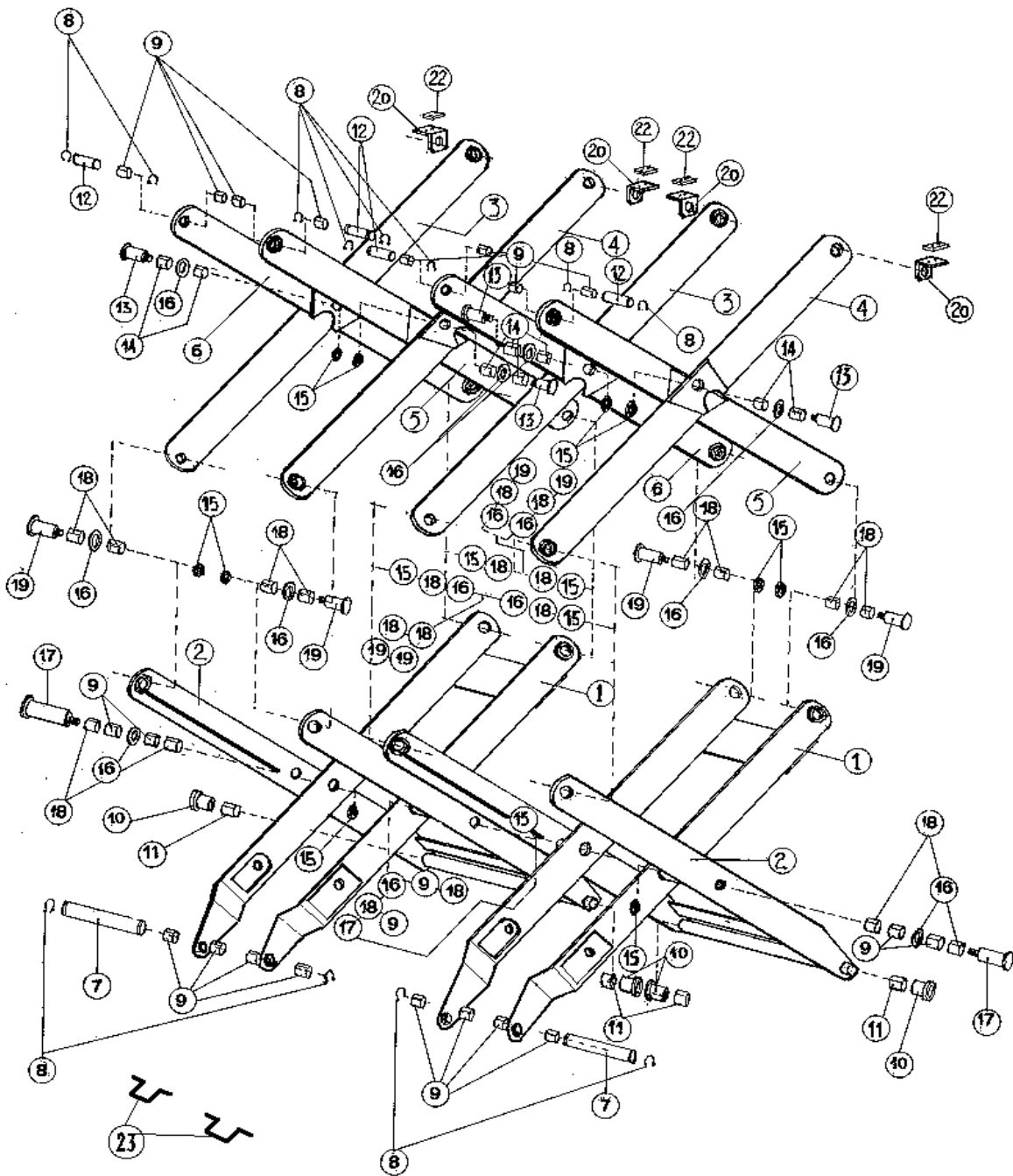


FIG.3 LEVERS AND PISTON

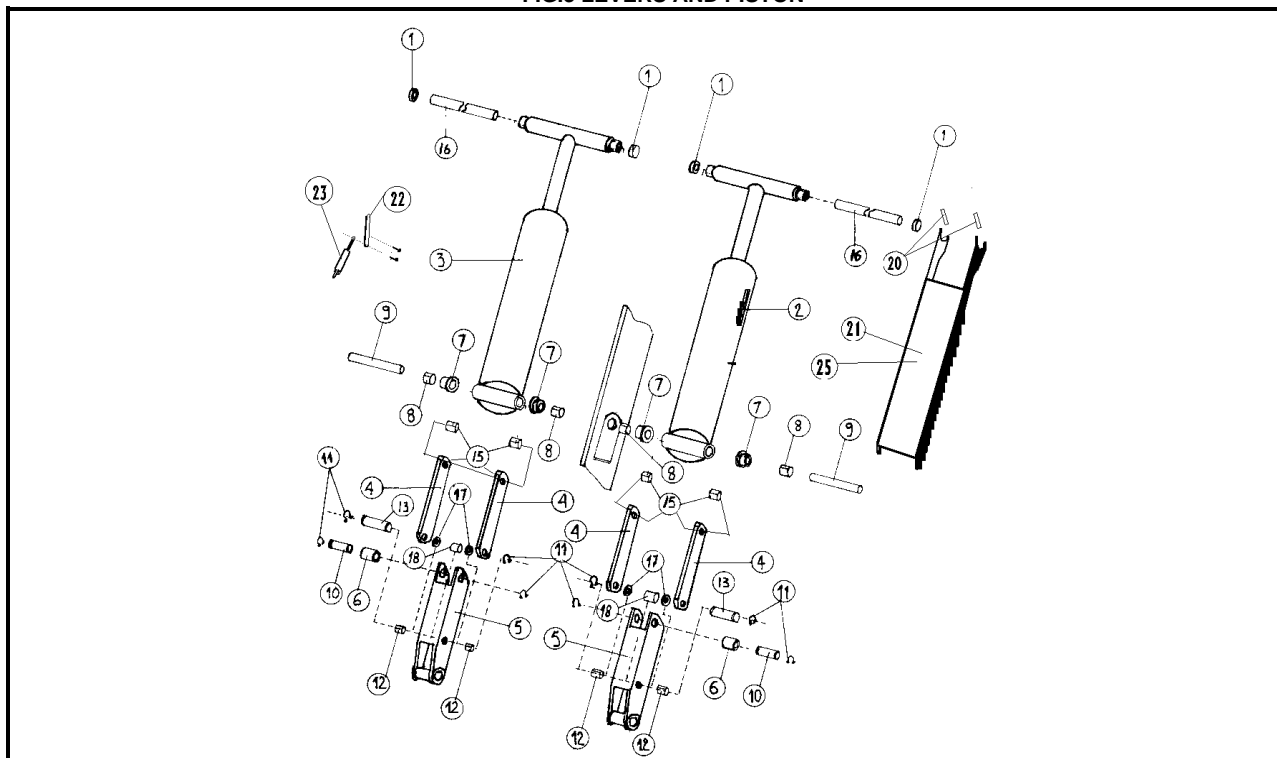


FIG. 4 PLATFORM

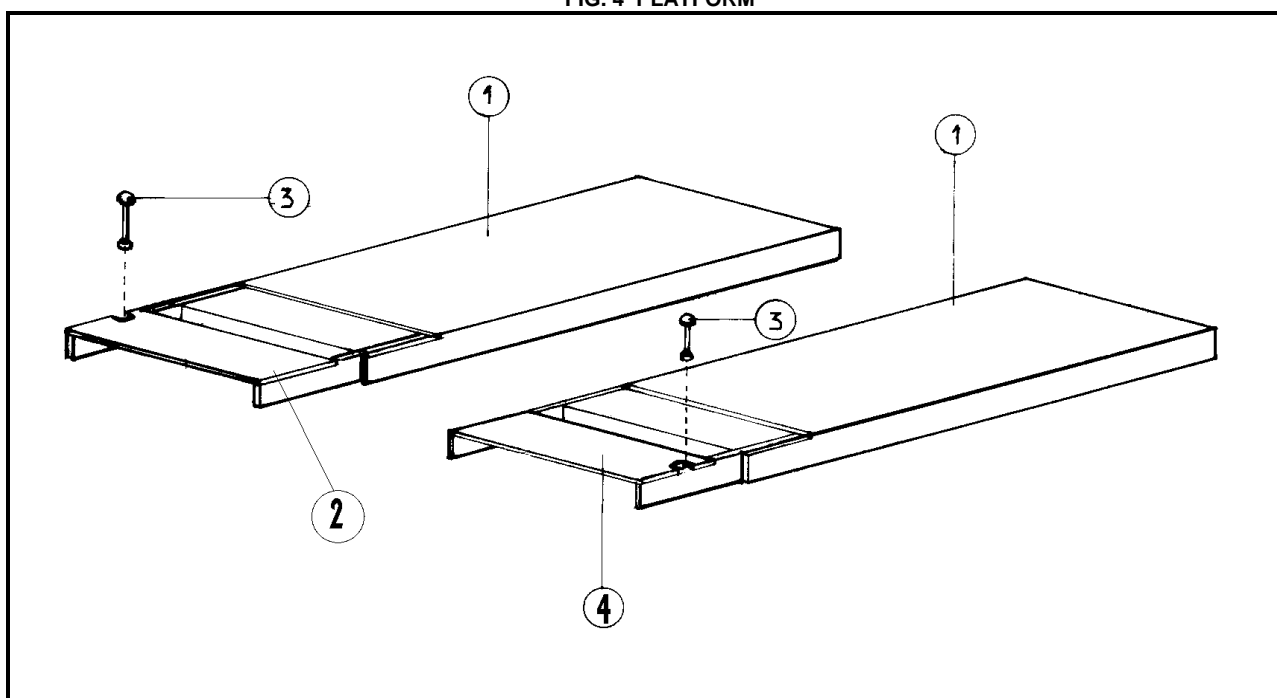


FIG. 5 CONTROL BOX

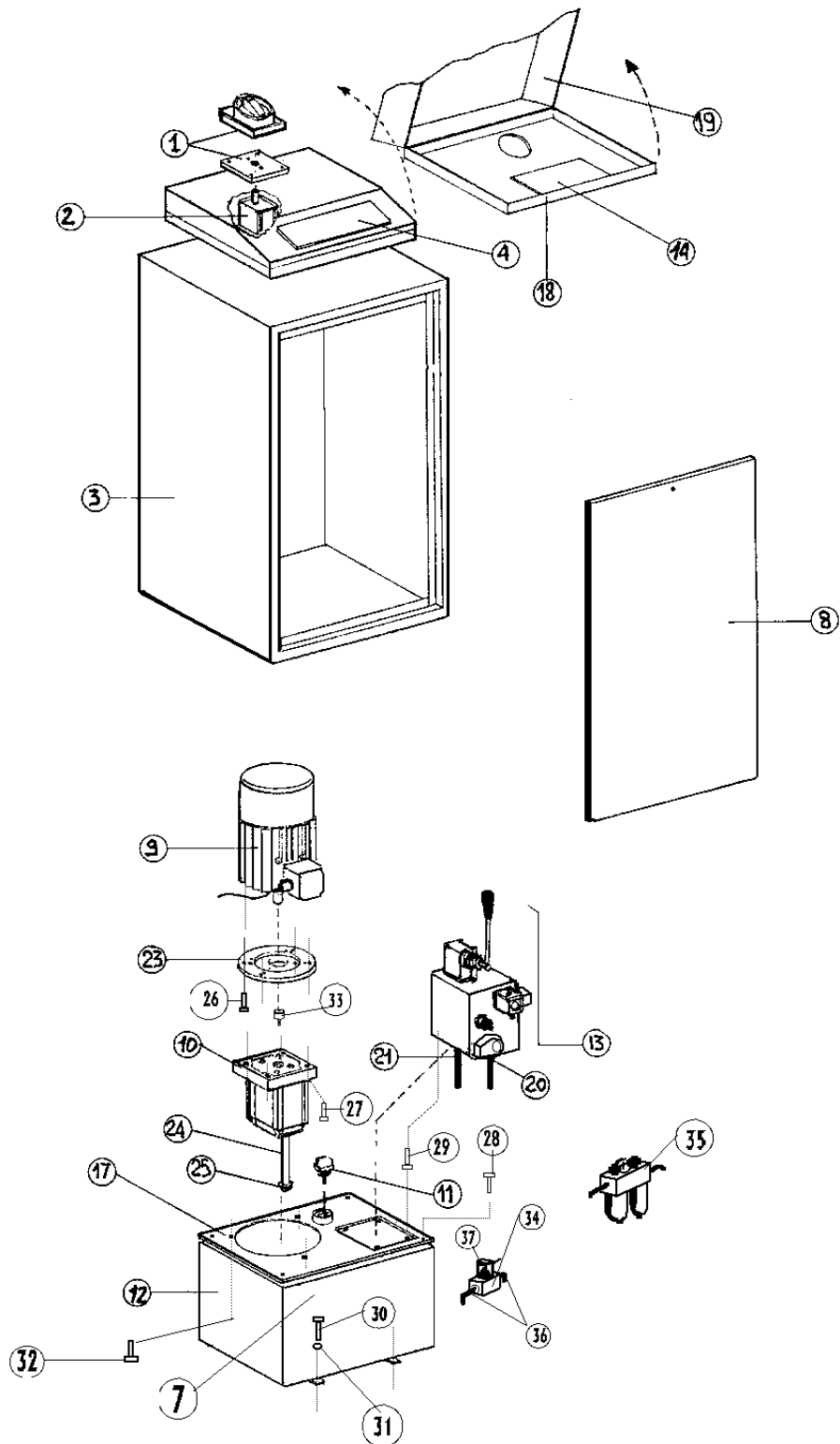


FIG. 6 ELECTRIC COMPONENTS

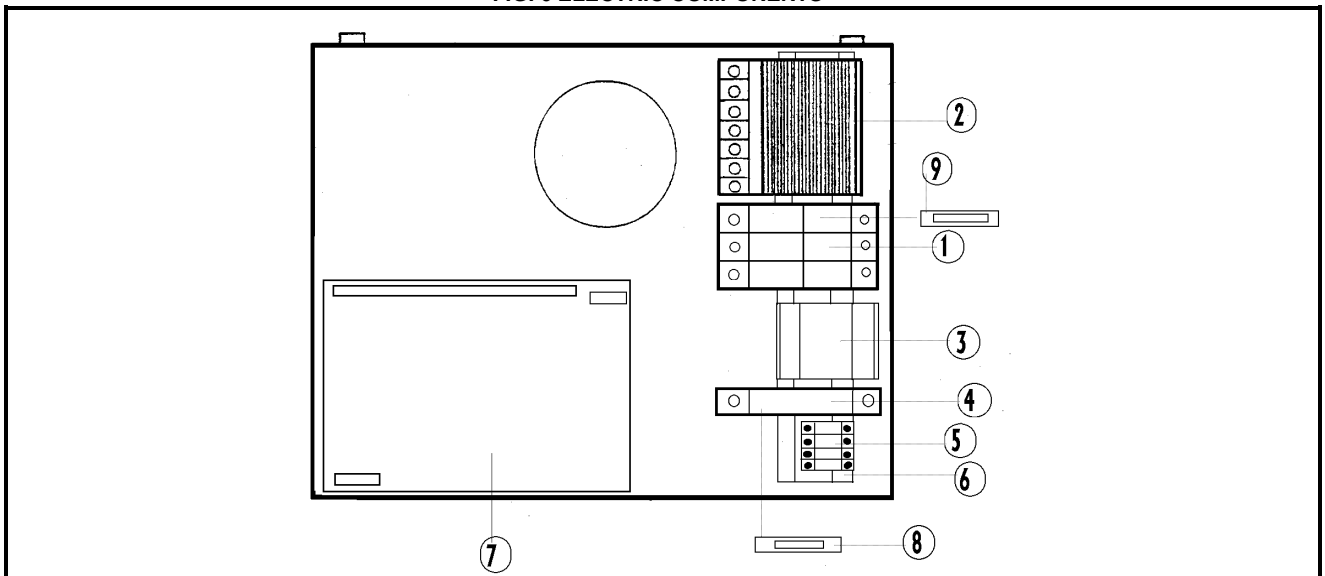


FIG. 7 SAFETY ELEMENTS

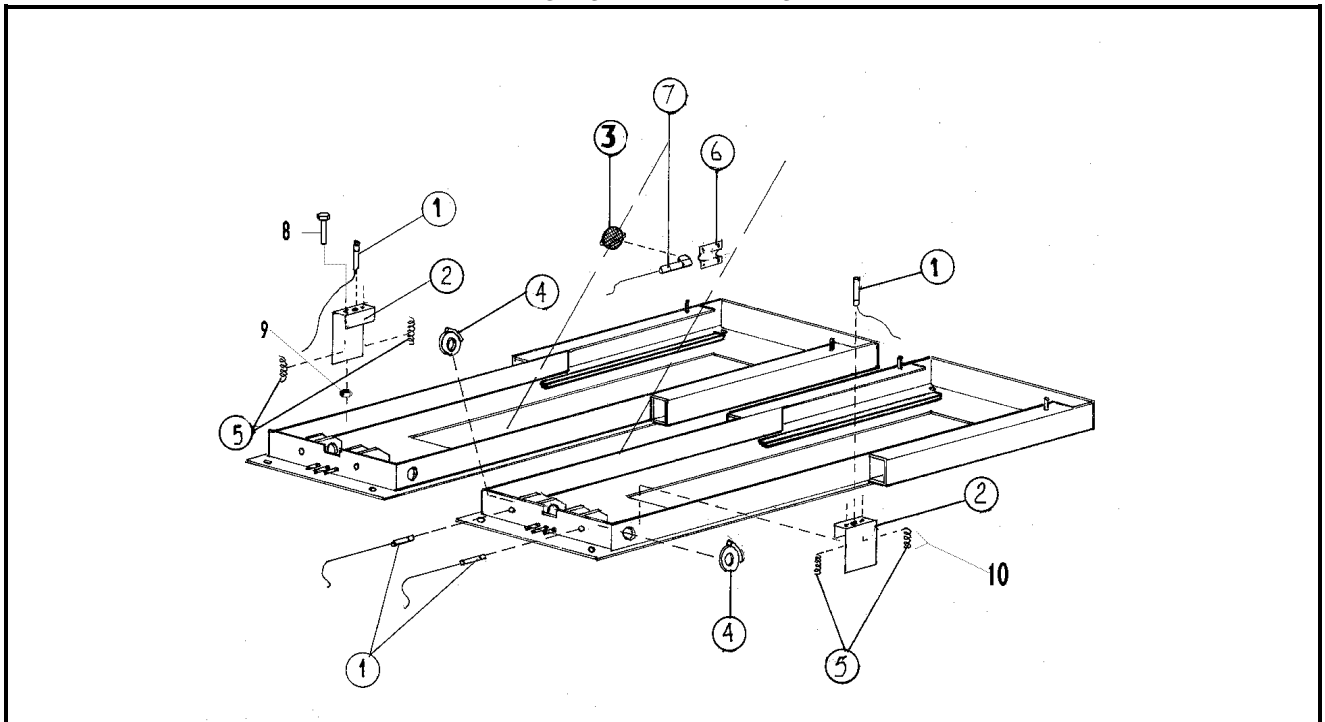


FIG. 8 RAMPS

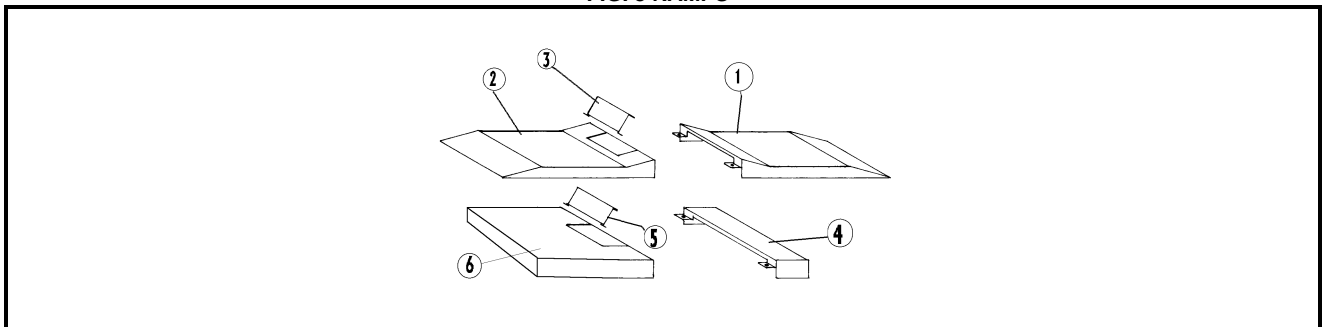


FIG. 1 BASE			
Nr.	CODE	DESCRIPTION	QUANTITY
1	01-2224	P1-P2 BASE	2
2	01-2252	CLAMP	2
3	03-3082	M8X24 TE SCREW	4
4	01L2266Z	CLAMP (ONLY ON FLOOR)	2
5	01L2265Z	CLAMP (ONLY ON FLOOR)	2
6	01L2264G	FOOTGUARD (ONLY ON FLOOR)	2

FIG. 2 ARMS			
1	01-2263	LOWER INSIDE BOOM	2
2	01-2267	LOWER OUTSIDE BOOM	2
3	01-2271	LEFT UPPER OUTSIDE BOOM	2
4	01-2270	RIGHT UPPER OUTSIDE BOOM	2
5	01-2268	RIGHT UPPER INSIDE BOOM	2
6	01-2269	LEFT UPPER INSIDE BOOM	2
7	01-2214	BASE FASTENING PIN	2
8	03-3527	25 mm SNAP RING FOR SHAFTS	12
9	03-3524	25x28x15 SELF LUBRICATING BUSHING	24
10	02-2204	ROLLER	4
11	03-3075	30x34x25 SELF LUBRICATING BUSHING	8
12	02-2215	PLATFORM FASTENING PIN	4
13	02-2212	BOOM COUPLING PIN	4
14	03-3072	25x28x40 SELF LUBRICATING BUSHING	8
15	03-3526	SELF LOCKING-NUT	16
16	03-3070	ANTIFRICTION WASHER	16
17	02-2229	LOWER BOOM COUPLING PIN	4
18	03-3525	25x28x30 SELF LUBRICATING BUSHING	24
19	02-2209	BOOM FASTENING PIN	8
20	01-2214	SLEIGHT	4
22	01-2215	NYLON SKATE	4
23	02-2224	HOSE SUPPORT	2

FIG. 3 LEVERS AND PISTONS			
1	02-2202	DISTANCE PIECE	4
2	04-4100	P1 PISTON	1
3	04-4101	P2 PISTON	1
4	01-2210	LEVER BOOMS	4
5	01-2209	LEVER	2
6	02-2206	LEVER ROLLER	2
7	02-2230	PISTON ROLLER	4
9	02-2213	PISTON FASTENING PIN	2
10	02-2208	ROLLER FASTENING PIN	2
11	03-3527	25 mm SNAP RING FOR SHAFTS	8
12	03-3524	25x28x15 SELF LUBRICATING BUSHING	8
13	02-2207	PIN	2
15	03-3074	30x34x15 SELF LUBRICATING BUSHING	4
16	02-2216	PISTON FASTENING PIN	2
17	02-2205	SHORT DISTANCE PIECE	4
18	02-2218	LONG DISTANCE PIECE	2
20	01-2259	CLAMP	4
25	01-2261	MECHANICAL SAFETY P2	1
21	01-2258	MECHANICAL SAFETY P1	1
22	01-2262	DISENGAGE FOR MECHANICAL SAFETY CLAMP	4
23	02-2233	AIR PISTON	4

FIG. 4 PLATFORM			
1	01-2239	PLATFORM	2
2/4	01-2242/2254	EXTENSION right/left	1-1
3	02-2219	EXTENSION PIN	2

FIG. 5 CONTROL BOX			
Nr.	CODE	DESCRIPTION	QUANTITY
1	06-6012	FINISHING ELEMENTS	1
2	06-6055	MAIN SWITCH	1
3	01-1618	CABINET	1
4	06-1003	TOUCHPAD	1
8	01-1622	DOOR	1
9	06-6126	THREE PHASE MOTOR	1
10	04-4587	PUMP	1
11	04-4024	OIL CAP	1
12	01-1610	OIL TANK	1
13	04-4600	HAND PUMP/ELECTROVALVE BLOCK	1
14	06-0335	FULL ELECTRIC CARD	1
17	01-1611	TANK COVER	1
18	01-1624	CONSOLLE	1
19	01-1625	CONSOLLE COVER	1
20	04-4586	L270 T1 PVC PIPE	1
21	04-4584	P1 FLEX R2TFG3/8 PIPE	1
23	02-2200	MOTOR FLANGE	1
24	04-4585	L170 PVC PIPE	1
25	04-4104	SUCTION FILTER	1
26	03-3086	M8X30 TCEI BOLT	4
27	03-3084	M6X25 TCEI BOLT	4
28	03-3085	M8X16 TCEI BOLT	4
29	03-3080	M8X12 TCEI BOLT	4
30	03-3123	M8X16 TE BOLT	2
31	03-3456	WASHER	2
32	03-3085	M8X16 TCEI BOLT	3
33	04-4598	ACCOUPLEMENT JOINT	1
34	05-5000	AIR ELECTROVALVE	1
35	05-4040	AIR FILTER	1
36	05-5512	90° 1/8 x ø 6 UNION ELBOW	2
37	05-5514	AIR ELECTROVALVE CONNECTOR	1

FIG. 6 ELECTRIC COMPONENTS			
1	06-6123	FUSE CARRIER	1
2	06-6534	TRANSFORMER 70VA	1
3	06-6125	CONTACTOR	1
4	06-6124	FUSE CARRIER	1
5	06-6151	CONNECTOR	3
5	06-6150	CONNECTOR	1
6	06-6127	DIN GUIDE	1
7	06-0335	ELECTRIC CARD	1
8	06-0002	FUSE-1A 10X38	1
9	06-6537	FUSE- 20A	3

FIG. 7 SAFETY ELEMENTS			
1	06-0302	PROXIMITY SWITCH	5
2	01-2220	CLAMP	2
3	06-6692	REFLECTOR	1
4	02-2217	PROXIMITY CAM ACTUATOR	3
5	03-3071	SPRING 18x2xL80 mm.	4
6	01-2219	PHOTOELECTRIC CELL CLAMP	1
7	06-6607	PHOTOELECTRIC CELL	1
8	03-3079	6X90 TCEI BOLT	4
9	03-3078	M6 SELF LOCKING NUT	4
	02-2221	SPRING SUPPORT BUSHING	8

FIG. 8 RAMPS					
1	01-2247	LOWERING RAMP	4	01-2217	FRONT WHEEL TRIMMING
2	01-2248	LIFTING RAMP	5	01-2218	BLACK COVER
3	01-2249	BLACK COVER	6	01-2216	REAR WHEEL TRIMMING

SCISSOR LIFT FREE WHEELS LOW PROFILE MAINTENANCE BOOK LP99/SM-LP99/SMP

INITIAL TEST

N.	DESCRIPTION TEST	YES	NO	Notes
1	Floor consistency check			
2	Safety distances check (from walls, columns, ceiling, other machines etc.)			
3	Power supply line check.			
4	Lift levelling check.			
5	Lift working check.			

6	Hydraulic safeties working check.			
7	Electric safeties working check.			

8	Loaded lift check.			
9	Lift fixing check.			
10	Oil level check.			
11	Hydraulic failure check.			

12	Operating instruction			
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NOTES

Installer	User
Stamp and signature	Stamp and signature
Date	Next test on:

RECURRING OR OCCASIONAL VISIT				
N.	DESCRIPTION OF TEST	YES	NO	Notes
1	Lift maintenance and cleaning check.			
2	Hydraulic safeties working check.			
3	Electric safeties working check.			
4	Oil level check.			
5	Rollers slides fastening.			
6	Movable parts fastening.			
7	High pressure flexible pipes check.			
8	Hydraulic failure check.			
9	Lift levelling check.			
10	Loaded lift check.			
NOTES				
Result of visit				
Positive •				
Negative •				

Installer	User
Stamp and signature	Stamp and signature
Date	Next test on

RECURRING OR OCCASIONAL VISIT				
N.	DESCRIPTION OF TEST	YES	NO	Notes
1	Lift maintenance and cleaning check.			
2	Hydraulic safeties working check.			
3	Electric safeties working check.			
4	Oil level check.			
5	Rollers slides fastening.			
6	Movable parts fastening.			
7	High pressure flexible pipes check.			
8	Hydraulic failure check.			
9	Lift levelling check.			
10	Loaded lift check.			
NOTES				
Result of visit				
Positive •				
Negative •				

Installer	User
Stamp and signature	Stamp and signature
Date	Next test on

TESTS TO BE MADE BY THE USER

TESTS DURING USE

1	Levelling check.
2	Hydraulic failure check.
3	Pneumatic failure check.
4	Safety devices working check.

MONTHLY TESTS

1	Lift through cleaning.
2	Rollers slides check.
3	Cylinders air bleeding (if necessary).

HALF-YEARLY TESTS

1	Oil level check.
2	High pressure flexible pipes check.

IN CASE OF ANOMALY, STOP THE LIFT AND CONTACT OUR SERVICE DEPARTEMENT IMMEDIATELY
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REPAIR	
FAILURE	

ACTION	
--------	--

Date	Stamp and signature
------	---------------------

REPAIR	
FAILURE	

ACTION	
--------	--

Date	Stamp and signature
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October 2000 BY THE GRAPHIC DEPARTEMENT (A.R.)



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