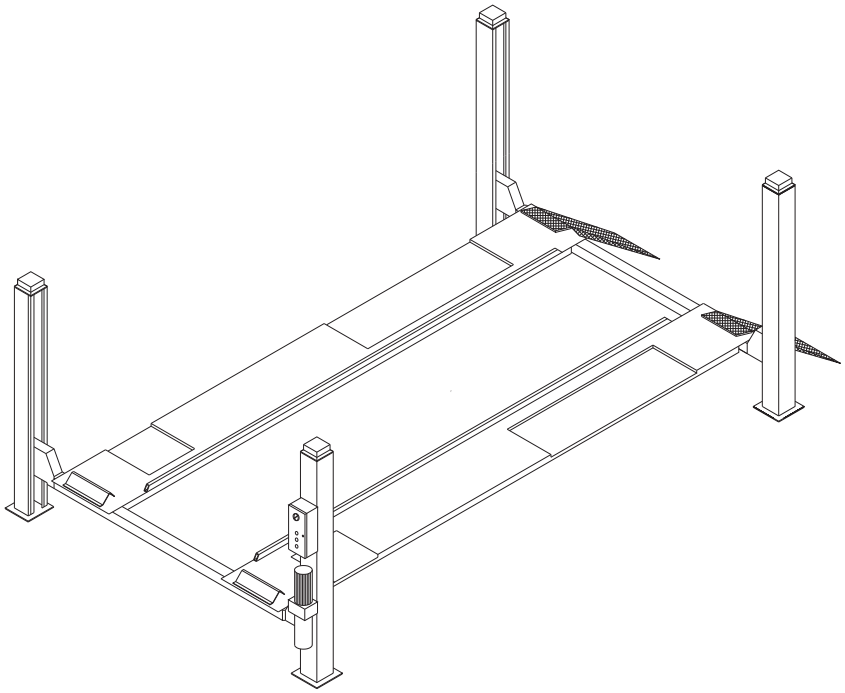
4 Post Lift CFL870/1XL

6.5m Platforms

(Inc. Model 547 ATL Play Detector)

Operator, Installation & Maintenance Manual



Crypton CFL870XL

MANUFACTURER:
WERTHER INTERNATIONAL S.p.A.
Via F. BRUNELLESCHI, 12 - 42040 CADÈ (RE) - ITALY

Authorised Service Centre

Serial Number

Rev.7 . . . . . 27/09/2024

Contents

PACKING, TRANSPORT AND STORAGE.

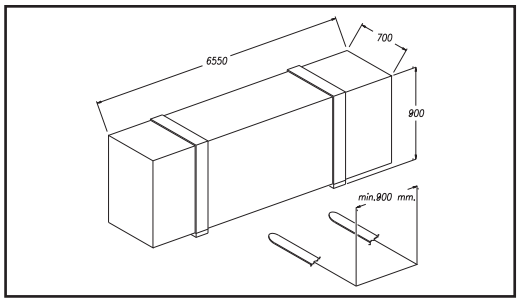
PACKING, LIFTING, HANDLING, TRANSPORTING AND UNPACKING OPERATIONS MUST BE PERFORMED ONLY BY EXPERIENCED PERSONNEL WITH APPROPRIATE KNOWLEDGE OF THE LIFT AND AFTER READING THIS MANUAL

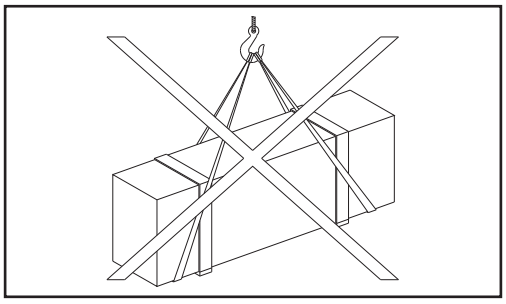
PACKING

The lift is shipped disassembled in the following units:

			Unit weight (kg)
4	posts		44
2	crossbeams		95
2	vehicle ramps		25
2	wheel stops		2,6
2	platform:	control side	480
		opposite side	400
1	hydraulic power unit		30

The lift is shipped in a single pack enclosed by a sheet of heat shrink material and restrained by two steel straps (fig.1).
The average weight of the pack is 1670 kg.





LIFTING AND HANDLING

The packs can be **lifted and transported only using lift trucks**, and keeping the fork arm centres at least 90 cm apart (Fig.1).
Lift only one pack at a time.
The lifting equipment must be capable of lifting and moving the packs in complete safety, bearing in mind the dimensions, weight and centre of gravity of the pack, any protruding parts, and delicate parts to protect from impact damage etc..
NEVER attempt to hoist or transport the unit using lifting slings (Fig.2).

STORAGE

The packs must be kept in a covered and protected area in a temperature range of -10°C to +40°C. They must not be exposed to direct sunlight.

STACKING THE PACKS

We advise against stacking because the packs are not designed for this type of storage. The narrow base, heavy weight and large size of the packs make stacking difficult and potentially dangerous.
If stacking is unavoidable, use all appropriate precautions:
- never stack to more than 2 metres in height;
- never make stacks of single packs, always stack pairs of packs in a cross pattern so that the base is bigger and the resulting stack is more stable; once the stack is complete, restrain it using straps, ropes or other suitable methods.

A maximum of two packs can be stacked on lorries, in containers, and in railway wagons, on the condition that the packs are strapped together and restrained to stop them falling.

OPENING THE PACKS

When the lift is delivered make sure that it has not been damaged during transportation and that all the parts specified on the packing list are effectively present.
Packs must be opened adopting all the precautions required to avoid injury to persons (keep at a safe distance when cutting the straps) or damage to parts of the machine (be careful that no parts are dropped while you are opening the packing).
Take special care with the hydraulic power unit, the control panel and the platform cylinder.

DISPOSAL OF PACKING MATERIAL

The heat shrink plastic sheeting must be disposed of as waste material in conformity with the laws for recycling of plastics in the country of installation of the lift.

INTRODUCTION

WARNING

This manual has been prepared for workshop personnel expert in the use of the lift (operator) and technicians responsible for routine maintenance (maintenance fitter); read the manual before carrying out any operation with the lift and/or the packaging. This manual contains important information regarding:

- THE PERSONAL SAFETY of operators and maintenance workers,
- LIFT SAFETY,
- THE SAFETY OF LIFTED VEHICLES

KEEPING THE MANUAL
The manual is an integral part of the lift , and must be always kept with it , even in the case of sale of the unit.
The manual must be kept next to the lift, in an easily accessible place.
The operator and maintenance staff must be able to locate and consult the manual quickly and at any time.

ATTENTIVE AND REPEATED READING OF **CHAPTER 3**, WHICH CONTAINS IMPORTANT **SAFETY** INFORMATION AND WARNINGS, IS PARTICULARLY RECOMMENDED.

Lifts are designed and built in compliance with:

LAWS:
European directives:2014/30/UE - 2006/42/CE - 2014/35/UE

TECHNICAL STANDARDS:
European standards: EN 1493:2010 - EN ISO 12100:2010

ELECTRICAL SYSTEM:
UNI EN 60204-1

Lifting, transport, unpacking, assembly, installation and commissioning, adjustment and initial set-ups, NON-ROUTINE maintenance, overhauling, moving and taking down of the lift must always be performed by qualified personnel from AUTHORISED DEALERS or LICENSED SERVICE CENTRES (contact your licensed service centre indicated on the title page of this manual):

The manufacturer will not be held liable for personal injury or damage to vehicles or property caused by improper and/or unauthorised use of the lift.

In respect of all the above mentioned activities, this manual covers only such operational and safety aspects that are considered useful for operators and maintenance personnel to gain a more complete understanding of the structure and functions of the lift so that it can be used in the best way.

To ensure adequate comprehension of the technical language in this manual the operator must have specific experience of workshop procedures for servicing, maintenance and repair of vehicles and must also be capable of interpreting the drawings and descriptions in the manual and be aware of general and specific accident prevention regulations in force in the country of installation.
The same considerations apply to the maintenance fitter who must also possess specific technical (mechanical and electrical) skills necessary to perform the various interventions described in the manual in conditions of total safety.

The words “operator” and “maintenance fitter” are used with the following meaning in the manual:

OPERATOR: person in charge of using the lift.
MANUTENANCE FITTER: person in charge of routine maintenance of the lift.

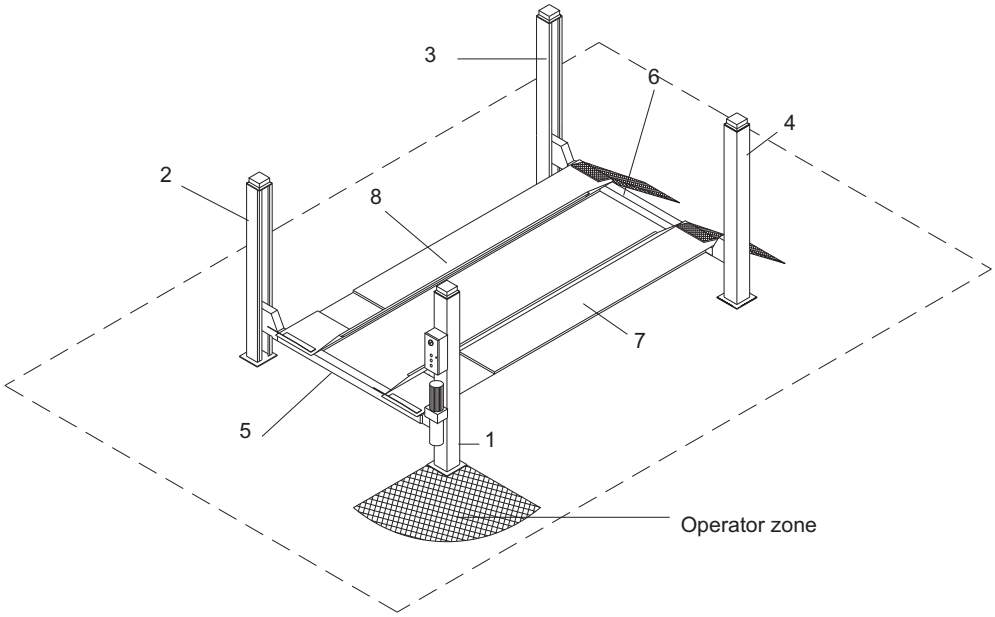
CHAPTER 1. DESCRIPTION OF THE MACHINE

Four-post lifts are fixed installations, i.e. anchored to the floor; the units are designed and built for lifting cars and vans and holding them in an elevated position.
The units are essentially made up of a fixed part that is anchored to the floor (posts) and a moving part (cross-pieces and platforms).
The operation is electro-hydraulic
There are four basic parts of the lifts:
- fixed structure assembly;
- movable structure assembly;
- lifting assembly;
- safety devices.

Figure 3 shows the various parts of the lift and the operating zones in the surrounding area.

Operator side: this is the front of the lift, including the area reserved for the operator with the control panel. The operator side is opposite the vehicle access side.
Rear side: it is the side opposed the operator's one, with the lift access ramps.
Right and left sides: the right and left is considered from the operator's standpoint when facing the lift.
Danger zone: an area that must be kept clear of persons when the lift is in use; refer to "Safety devices" chapter 3 for details.

Key to figure 3:
1 control side post (conventionally the front right-hand post)
2 front left post
3 rear left post
4 rear right post
5 control side cross-piece (front cross-piece)
6 rear cross-piece
7 right fixed platform
8 left moveable platform



FIXED STRUCTURE ASSEMBLY

The structure includes the four vertical posts in bent steel plate with a pre-drilled baseplate for expansion anchors to secure the unit to the floor (see chapter 4 “Installation”).

Each post houses:
- a safety rod with slots (1) to engage the safety wedges,
- a steel rope for lifting (2),
- a guide for the cross-piece vertical sliding (3).

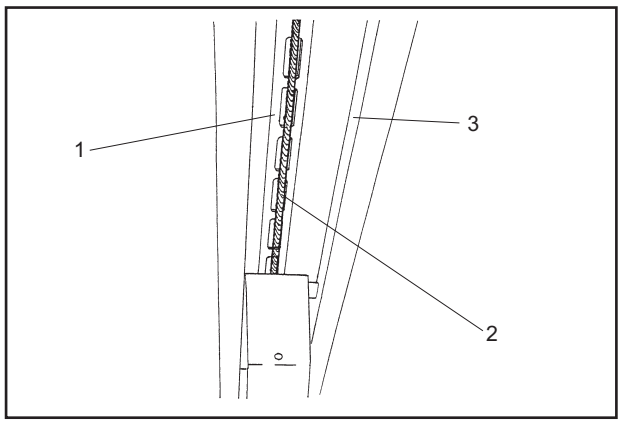


Fig.4 Post

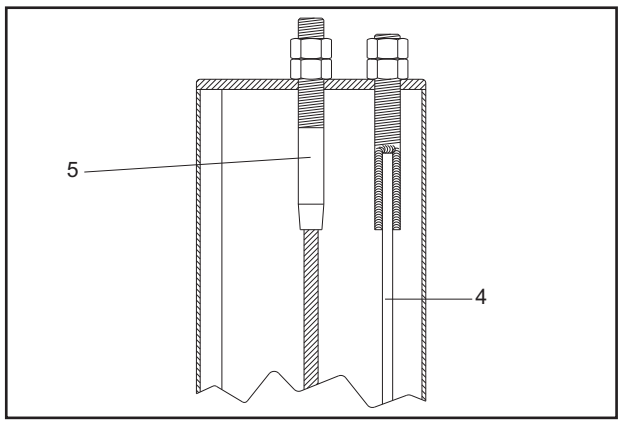


Fig.5 Post top

The following parts are anchored to the top of each post:
- end of safety rod (4), (secured with M20 nut and lock nut, class 8.8);
- the end of the steel cable (5), which is fitted with an M20 threaded shank (fixed with M20 nut and lock nut, class 6S).

The length of the cables can be perfectly adjusted - also to take up slack due to stretching, thanks to the length of the threaded shanks on the ends of the cables.

The drive post (Fig.6) mounts the electrical control panel and the hydraulic power unit.

The following components are present on the control panel:
- main switch (1),
- LIFT button (2),
- LOWERING button (3);
- STOP button (4),
- Lift/play detector selector (5).

The hydraulic power unit comprises:
- motor (10),
- hydraulic gear pump (11),
- lowering solenoid valve (12),
- manual lowering screw (13),
- relief valve (14),
- lift/play detector deviation solenoid valve (15),
- oil reservoir (16),
- lift oil delivery hose (17),
- play detector oil delivery hose (18),
- oil drain hose (19)

NOTE:
The delivery hoses (17 and 18) are sometimes pressurised;
the drain hose (19) is never pressurised.

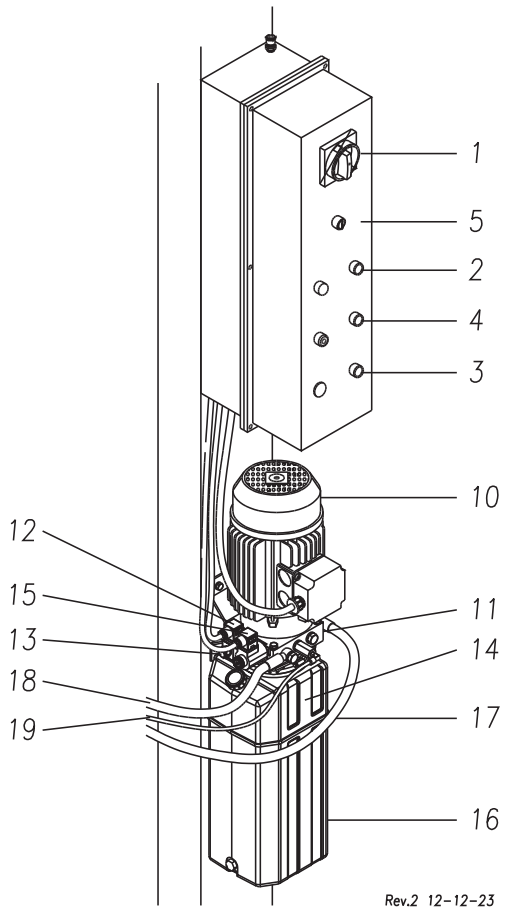


Fig.6 Control panel and hydraulic power unit.

MOVABLE STRUCTURE
The movable structure consist of two cross-pieces and two platforms.
Each cross-piece translates vertically between two posts.
As shown in fig.7, the ends of the cross-pieces are fitted with the following parts:
- return pulleys (1) for the lift cable,
- mechanical safety devices (wedges) (2 and 3).
The wedge (pos. 3) will engage automatically during lifting and when the lift is raised.

In case of failure of the main lifting cable (fig. 7 and 8) the safety wedge (2) engages mechanically and as consequence the cable micro switch (4) disables the low voltage circuit and the parking wedge falls in to parking lock.

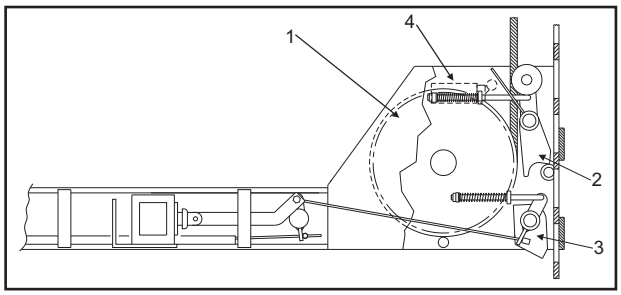


Fig.7

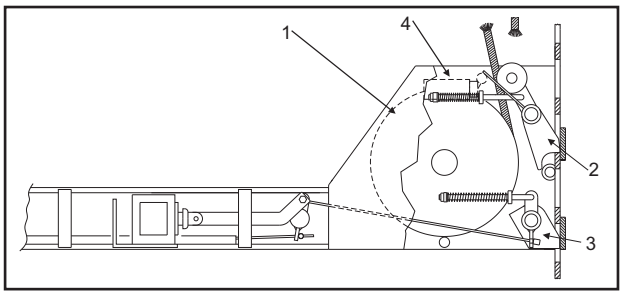


Fig.8

The two platforms (Fig. 9) are supported on the cross-pieces.
The left platform (1) has no adjustment; the right platform (2) is free to slide across the width of the lifting area to adapt to the track width of the vehicle being lifted.
Both platforms have fixed wheel stops (3) to stop the vehicle from going beyond the ends of the platforms;
The access ramps (4), pivoted to the platforms, automatically reach a vertical position when the platforms lift, thereby securing the vehicle also from the access end.

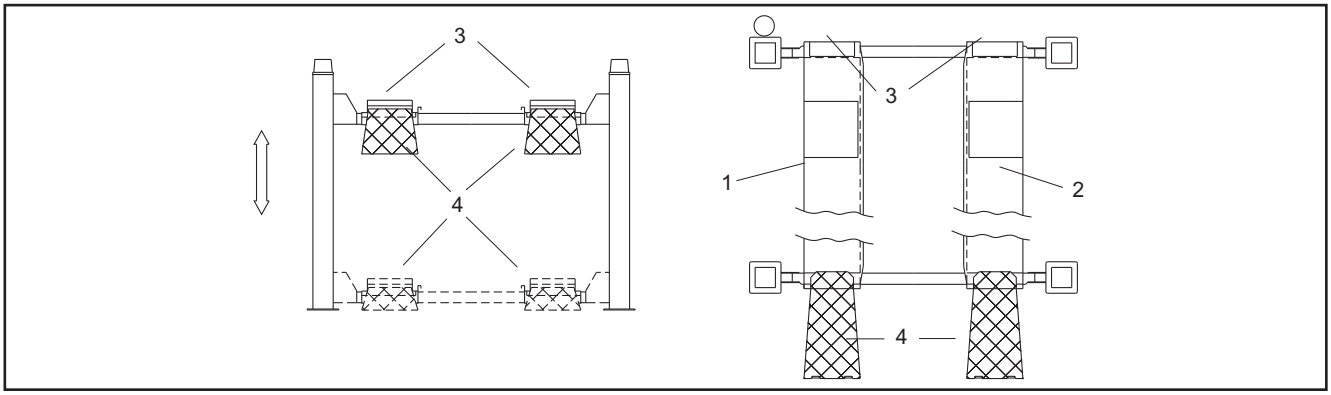
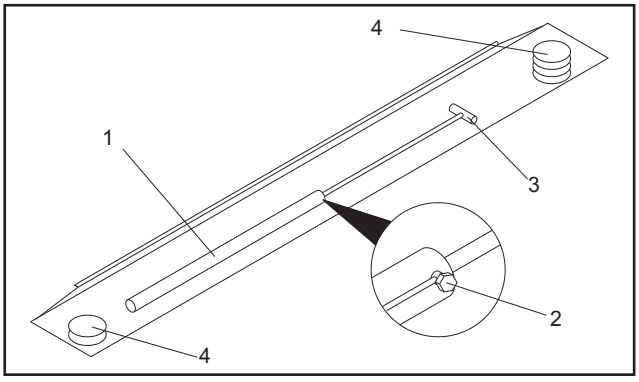


Fig.9 Platforms and cross-pieces

The following components are located beneath the fixed platform (Fig. 10), and are accessible only from underneath:
- hydraulic lift cylinder (1);
- parachute safety valve (2);
- clevis coupling (3) for the steel cables;
- two cable return pulley assemblies (4).



Filg.10 Interior of the fixed platform

CHAPTER 2 SPECIFICATIONS

CAPACITY: .....5000 kg (49050 N)
Max. vehicle lifting height 1830mm
Min. ground clearance of lift structure 155mm
Longitudinal C/C distance between posts .....6300 mm
Transverse C/C distance between posts.....3030 mm
Effective clearance between posts.....2850 mm
Platform width.....630
Platform length .....6500 mm
Lift time.....1.10 min
Lowering time.....45 sec

LIFTING CABLES in steel, having the following features:
Diameter.....11 mm
Strands.....227
Tensile strength of strand .....1960 N
Pulley pitch diameter.....220 mm
Noise.....70dB(A)/1m
OVERALL WEIGHT of lift unit.....1670 kg approx.
Working temperature range .....-10°C / + 50°C
Working pressure.....210 bar

Installation requirements: enclosed area.

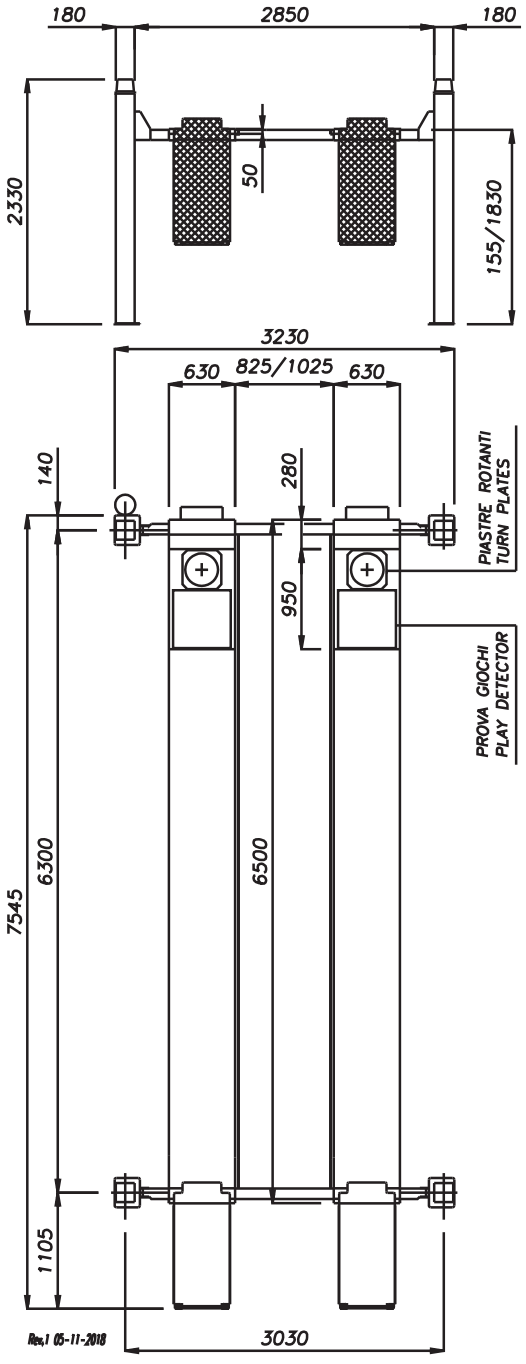


Fig.11 - Overall dimensions and clearances

MOTOR

Type.....C90
Power .....3 kW
Voltage .....230-400V th.-ph. +/-5%
Frequency.....50 Hz
Poles.....4
Speed .....1400 rpm
Building shape .....B 14
Insulation class .....F
Absorption 230V: 15A
.....400V: 8,7A

When connecting the motor refer to the enclosed wiring diagrams.The motor has left-handed rotation (counter-clockwise) as shown on the data plate on the casing.

PUMP

Type 18
Model 10A5X348N
Displacement .....5 cc/rev.
Relief valve set-up .....230 bar

HYDRAULIC POWER UNIT

Irrespective of the model, the lift can be supplied with an option of two different hydraulic power units, i.e. the various components of the pump that convert the rotary motion of the motor into fluid pressure for the hydraulic circuit.
Figure 12 shows the type K3 (OIL SISTEM).

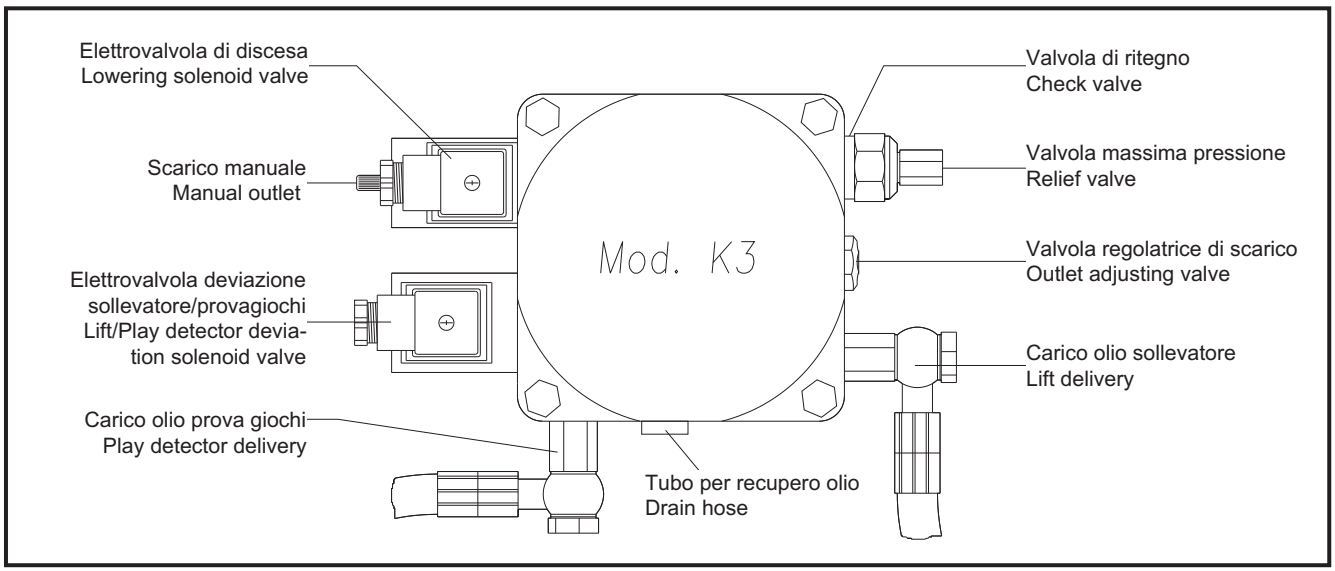
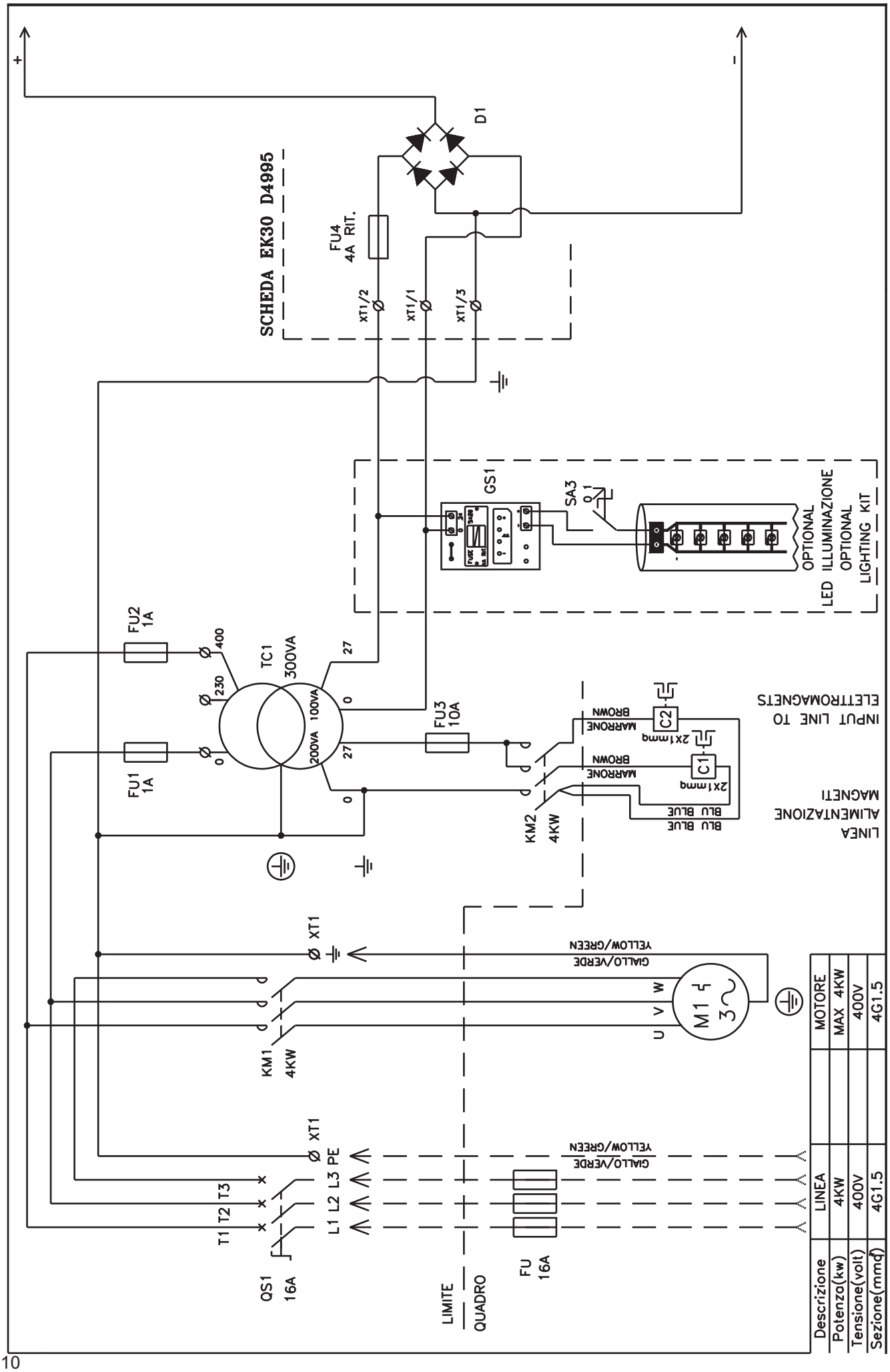


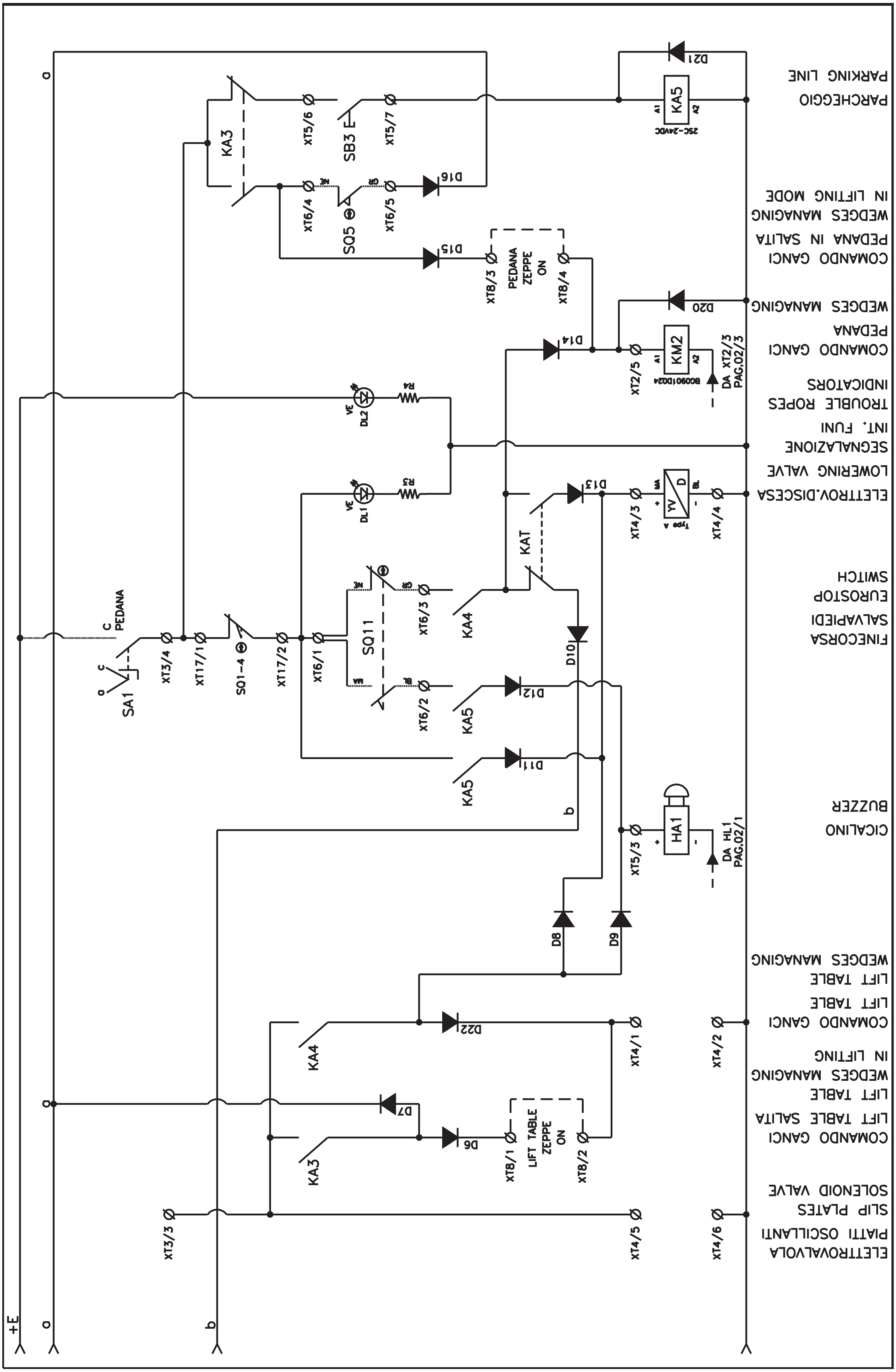
Fig.12 - Hydraulic power unitsOutlet adjusting valve

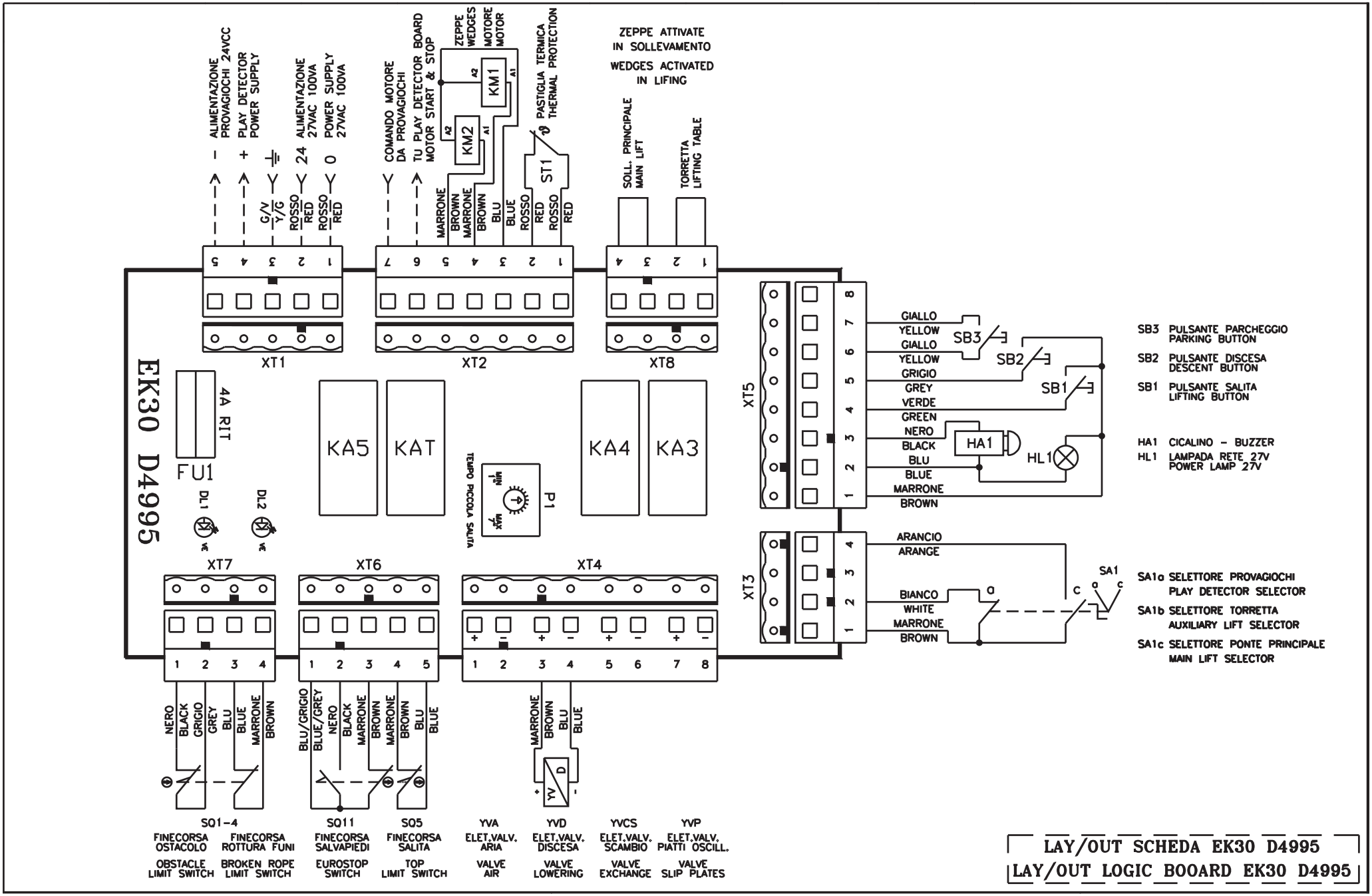
OIL

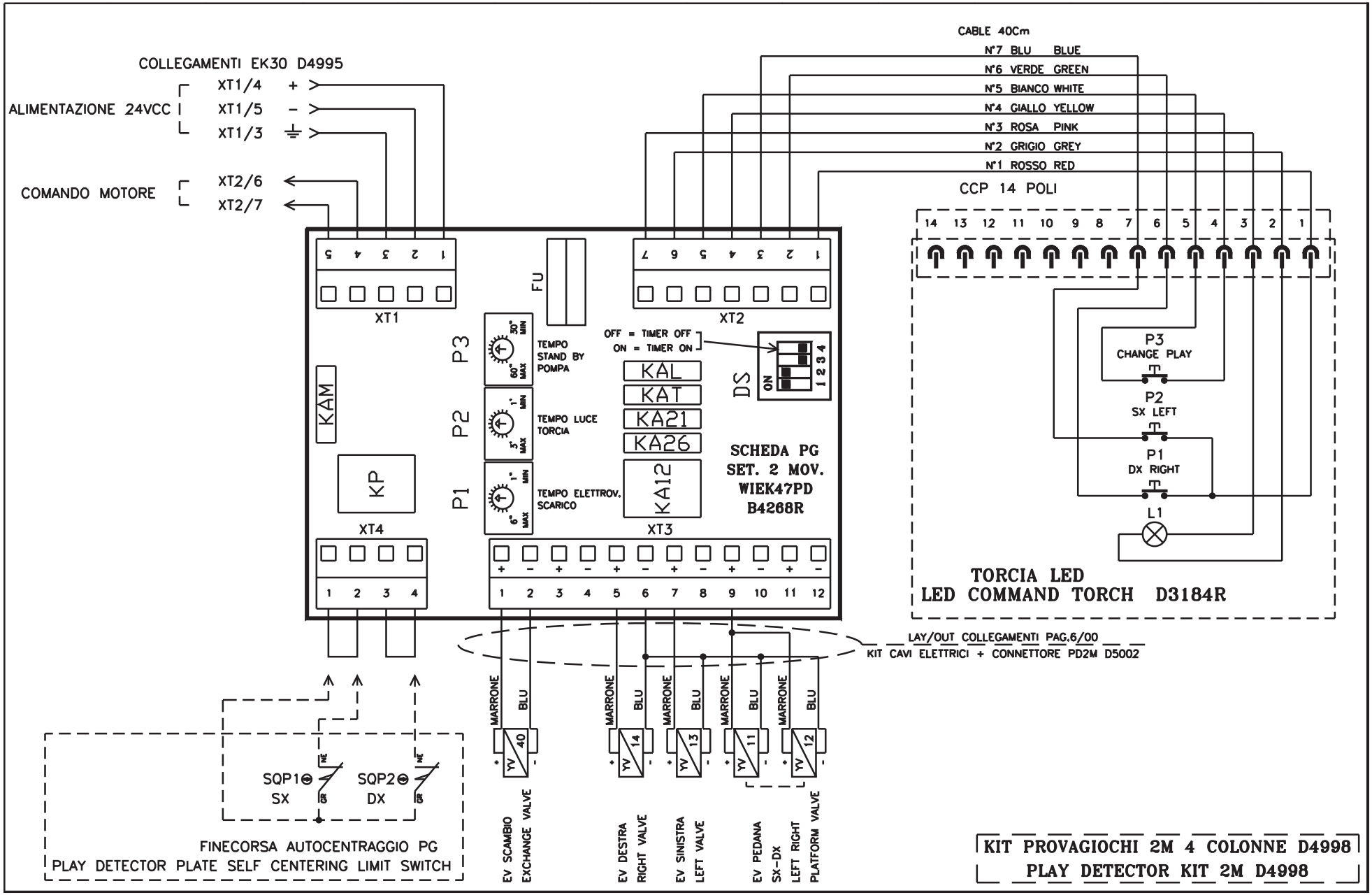
The hydraulic oil reservoir is filled with mineral oil to ISO/DIN 6743/4, contamination category no higher than class 18/15 according to ISO 4406, such as IP HYDRO OIL 46; SHELL TELLUS T 46 or an equivalent oil.

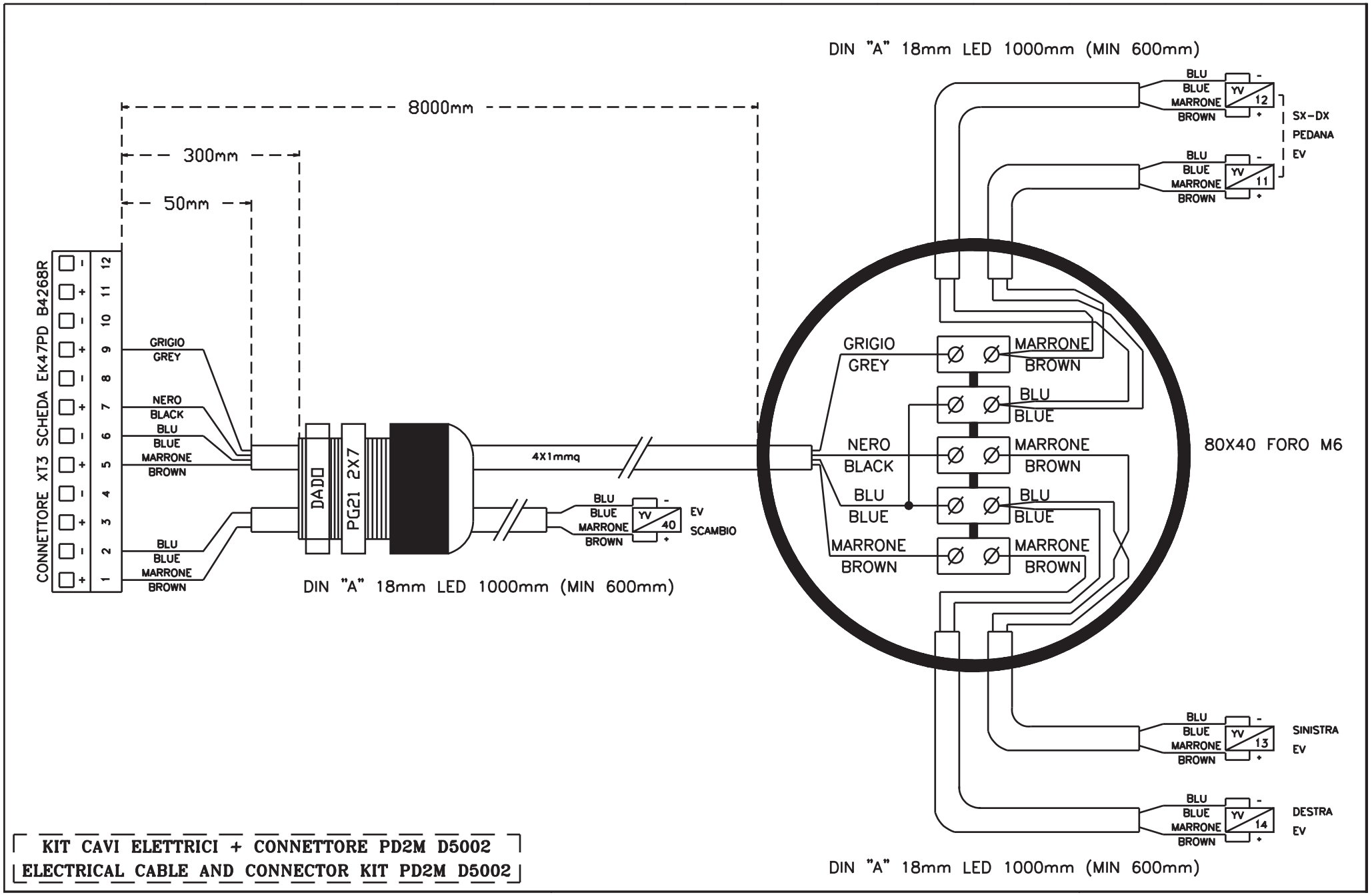

+
-
D1
SCHEDA EK30 D4995
FU4
4A RIT.
XT1/2
XT1/1
XT1/3
GS1
SA3
OPTIONAL
LED ILLUMINAZIONE
OPTIONAL
LIGHTING KIT
FU2
1A
TC1
300VA
400
230
0
27
100VA
200VA
FU1
1A
FU3
10A
INPUT LINE TO
ELETTROMAGNETS
LINEA
ALIMENTAZIONE
MAGNETI
C2
C1
2x1mmq
MARRONE
BROWN
BLU BLUE
KM2
4KW
XT1
GIALLO/VERDE
YELLOW/GREEN
M1
3~
U
V
W
KM1
4KW
T1 T2 T3
L1 L2 L3 PE
QS1
16A
LIMITE
QUADRO
FU
16A
Descrizione
Potenza(kw)
Tensione(volt)
Sezione(mmq)
LINEA
4KW
400V
4G1.5
MOTORE
MAX 4KW
400V
4G1.5

+E
o
b
SB1 E
SB2 E
XT5/4
XT5/5
D23
D19
D18
KA3
KA4
25C-24VDC
C2
D5
KAT
15C-24VDC
Q1
R1
RV1
R2
DZ1
D4
R5
D3
C1
XT5/8
XT4/7
XT4/8
XT17/3
SO1-4
XT17/4
XT3/1
SA1
XT3/2
XT1/4
XT1/5
D2
XT2/7
COMANDO MOTORE DA PG
XT2/6
D17
XT2/1
ST1
XT2/2
XT2/4
KM1
BC0901D024
XT2/3
A KM2 PAG.03/10
XT5/1
HL1
XT5/2
A HA1 PAG.03/5
+
-
LAMPADA RETE
POWER LAMP
COMANDO SALITA
PEDANA
LIFTING LINE
MANAGING
ALIMENTAZIONE
EK47 PROVAGIOCHI
EK47
PLAY DETECTOR
POWER SUPPLY
ELETTROVALVOLA
PIATTI OSCILLANTI
SLIP PLATES
SOLENOID VALVE
RELE' TEMPO
PICCOLA SALITA
(Min 1" Max 7")
TIMER RELAY
CANALE DISCESA
DESCENT LINE
CANALE SALITA
LIFTING LINE

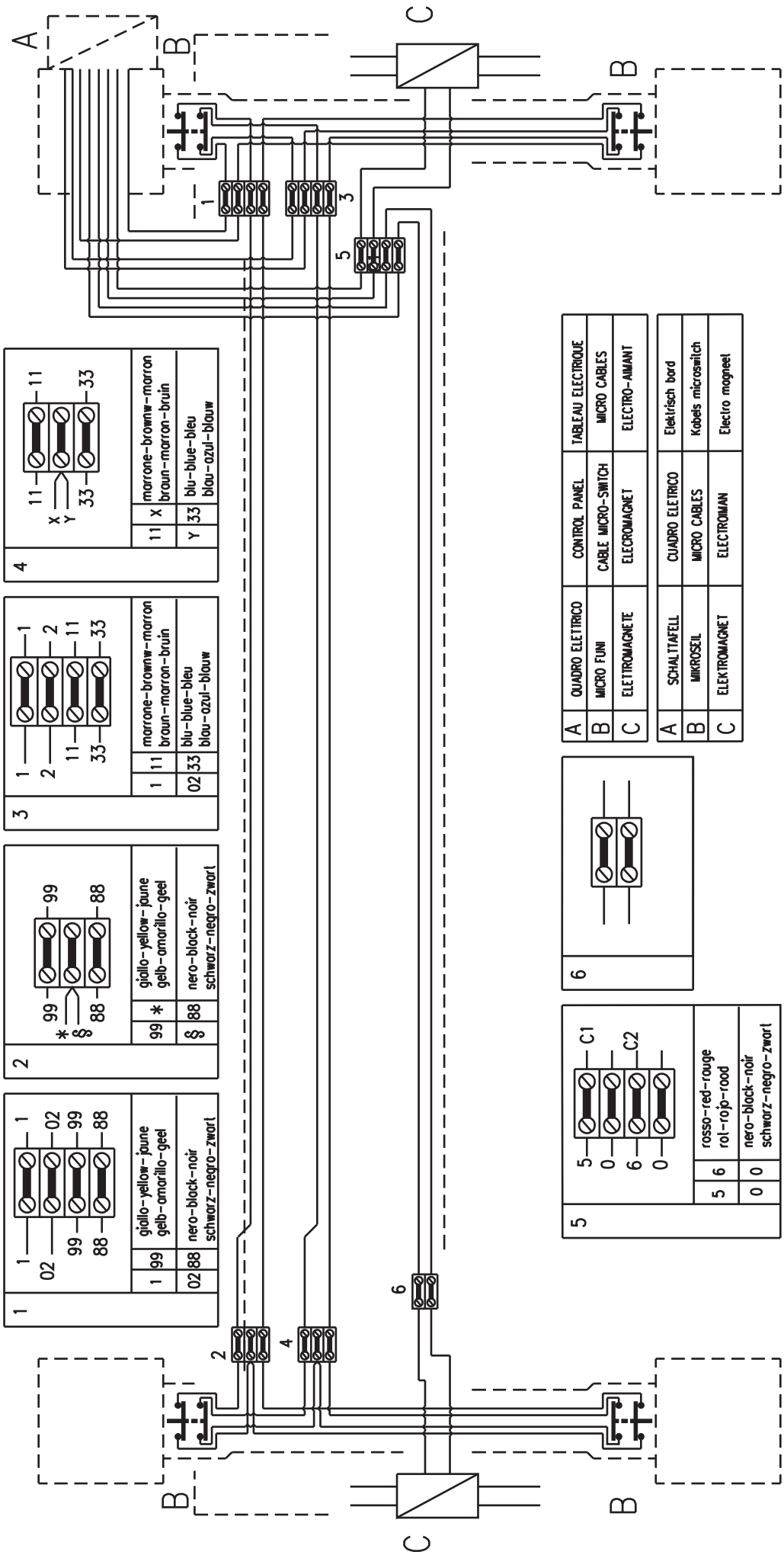

PARCHEGGIO
PARKING LINE
COMANDO GANCI
PEDANA IN SALITA
WEDGES MANAGING
IN LIFTING MODE
COMANDO GANCI
PEDANA
WEDGES MANAGING
SEGNALAZIONE
INT. FUNI
TROUBLE ROPES
INDICATORS
ELETTROV.DISCESA
LOWERING VALVE
FINECORSA
SALVAPIEDI
EUROSTOP
SWITCH
CICALINO
BUZZER
COMANDO GANCI
LIFT TABLE
LIFT TABLE
WEDGES MANAGING
COMANDO GANCI
LIFT TABLE SALITA
LIFT TABLE
WEDGES MANAGING
IN LIFTING
ELETTROVALVOLA
PIATTI OSCILLANTI
SLIP PLATES
SOLENOID VALVE
KA5
KM2
KA3
SB3
SQ5
SQ11
SA1
KA4
KAT
HA1
D21
D20
D16
D15
D14
D13
D12
D11
D10
D9
D8
D22
D7
D6
PEDANA
ZEPPE
ON
LIFT TABLE
ZEPPE
ON
+E

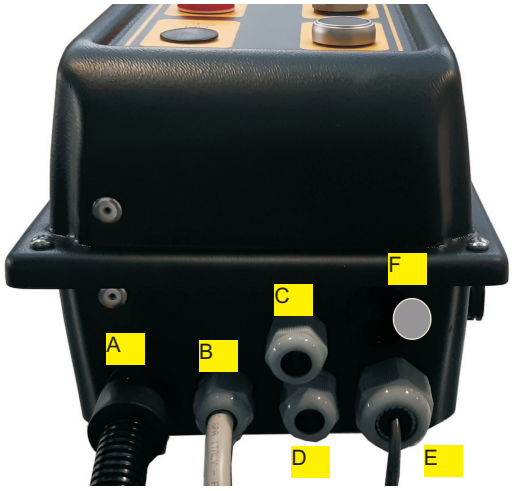

EK30 D4995
ALIMENTAZIONE PROVAGIOCHI 24VCC
PLAY DETECTOR POWER SUPPLY
ALIMENTAZIONE 27VAC 100VA
POWER SUPPLY 27VAC 100VA
COMANDO MOTORE DA PROVAGIOCHI
TU PLAY DETECTOR BOARD MOTOR START & STOP
ZEPPE WEDGES
MOTORE MOTOR
PASTIGLIA TERMICA THERMAL PROTECTION
ZEPPE ATTIVATE IN SOLLEVAMENTO
WEDGES ACTIVATED IN LIFING
SOLL. PRINCIPALE MAIN LIFT
TORRETTA LIFTING TABLE
XT1
XT2
XT8
XT5
XT3
XT7
XT6
XT4
4A RIT
FU1
KA5
KAT
KA4
KA3
TEMPO PICCOLA SALITA
P1
SB3 PULSANTE PARCHEGGIO PARKING BUTTON
SB2 PULSANTE DISCESA DESCENT BUTTON
SB1 PULSANTE SALITA LIFTING BUTTON
HA1 CICALINO - BUZZER
HL1 LAMPADA RETE 27V POWER LAMP 27V
SA1
SA1a SELETTORE PROVAGIOCHI PLAY DETECTOR SELECTOR
SA1b SELETTORE TORRETTA AUXILIARY LIFT SELECTOR
SA1c SELETTORE PONTE PRINCIPALE MAIN LIFT SELECTOR
SQ1-4 FINECORSA OSTACOLO OBSTACLE LIMIT SWITCH
FINECORSA ROTTURA FUNI BROKEN ROPE LIMIT SWITCH
SQ11 FINECORSA SALVAPIEDI EUROSTOP SWITCH
SQ5 FINECORSA SALITA TOP LIMIT SWITCH
YVA ELET.VALV. ARIA VALVE AIR
YVD ELET.VALV. DISCESA VALVE LOWERING
YVCS ELET.VALV. SCAMBIO VALVE EXCHANGE
YVP ELET.VALV. PIATTI OSCILL. VALVE SLIP PLATES
LAY/OUT SCHEDA EK30 D4995
LAY/OUT LOGIC BOOARD EK30 D4995

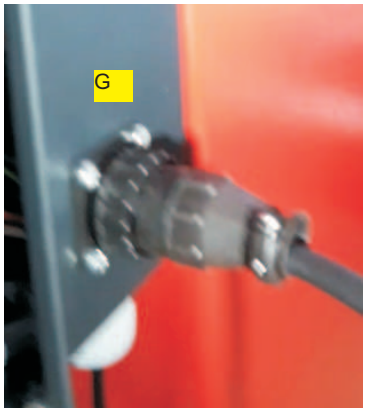

COLLEGAMENTI EK30 D4995
ALIMENTAZIONE 24VCC
XT1/4 +
XT1/5 -
XT1/3
COMANDO MOTORE
XT2/6
XT2/7
CABLE 40Cm
N°7 BLU BLUE
N°6 VERDE GREEN
N°5 BIANCO WHITE
N°4 GIALLO YELLOW
N°3 ROSA PINK
N°2 GRIGIO GREY
N°1 ROSSO RED
CCP 14 POLI
XT1
XT2
XT3
XT4
FU
KAM
KP
KAL
KAT
KA21
KA26
KA12
DS
P1
P2
P3
TEMPO STAND BY POMPA
TEMPO LUCE TORCIA
TEMPO ELETTROV. SCARICO
OFF = TIMER OFF
ON = TIMER ON
SCHEDA PG
SET. 2 MOV.
WIEK47PD
B4268R
CHANGE PLAY
SX LEFT
DX RIGHT
L1
TORCIA LED
LED COMMAND TORCH D3184R
LAY/OUT COLLEGAMENTI PAG.6/00
KIT CAVI ELETTRICI + CONNETTORE PD2M D5002
MARRONE
BLU
SQP1 SX
SQP2 DX
FINECORSA AUTOCENTRAGGIO PG
PLAY DETECTOR PLATE SELF CENTERING LIMIT SWITCH
EV SCAMBIO EXCHANGE VALVE
EV DESTRA RIGHT VALVE
EV SINISTRA LEFT VALVE
EV PEDANA SX-DX LEFT RIGHT PLATFORM VALVE
KIT PROVAGIOCHI 2M 4 COLONNE D4998
PLAY DETECTOR KIT 2M D4998


DIN "A" 18mm LED 1000mm (MIN 600mm)
8000mm
300mm
50mm
CONNETTORE XT3 SCHEDA EK47PD B4268R
GRIGIO
GREY
NERO
BLACK
BLU
BLUE
MARRONE
BROWN
DADO
PG21 2X7
4X1mmq
EV
SCAMBIO
80X40 FORO M6
SX-DX
PEDANA
EV
SINISTRA
EV
DESTRA
EV
KIT CAVI ELETTRICI + CONNETTORE PD2M D5002
ELECTRICAL CABLE AND CONNECTOR KIT PD2M D5002

SIGLA	Description	Part Code
QS1	SWITCH 3X16AMP	B0643
KM1 KM2	CONTACTOR NO 7,5 KW 24VDC	B4085
TC1	TRANSFORMER 75VA	D4994
FU	FUSE HOUSING	
FU1 FU2	FUSE CARRIER 1ARIT	B6511+B5289
FU3	FUSE CARRIER 1ARIT	B6511+B2869
FU4	FUSE 5X20 4A*	B5293
HL1	WHITE LAMP	B2410
HA1	BUZZER 24V	B2681
SB1	BLACK PUSH BUTTON LIFTING	D3077
SB2	BLACK PUSH BUTTON DESCENT	D3077
SB3	BLACK PUSH BUTTON	D4796
SA1	SELECTOR	D2346
EK30	ELECTRONIC BOARD	D4995
YVD	DESCENT SOLENOID VALVE	-
SQ1 - SQ4	LIMIT SWITCH	
SQ11	FOOTGUARDS LIMIT SWITCH	D5010
SQ5	PLATFORM LIFTING LIMIT SWITCH	D5011
C1 C2	MAGNET TYPE WARNER TT6	-
M1	ELECTRICAL MOTOR	-
ST1	TERMAL SWITCH	-

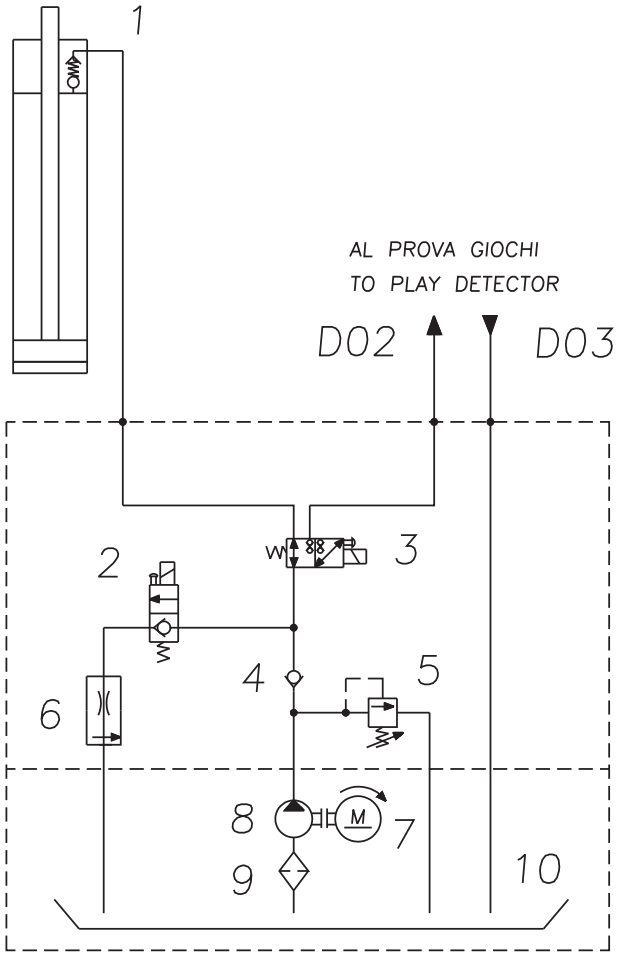

A
B
C
1
2
3
4
5
6
giallo-yellow-jaune
gelb-amarillo-geel
nero-black-noir
schwarz-negro-zwart
marrone-brownw-marron
brown-marron-bruin
blu-blue-bleu
blau-azul-blauw
rosso-red-rouge
rol-rojo-rood
C1
C2
QUADRO ELETTRICO
MICRO FUNI
ELETTROMAGNETE
CONTROL PANEL
CABLE MICRO-SWITCH
ELECROMAGNET
TABLEAU ELECTRIQUE
MICRO CABLES
ELECTRO-AIMANT
SCHALTTAFELL
MIKROSEIL
ELEKTROMAGNET
CUADRO ELETRICO
MICRO CABLES
ELECTROIMAN
Elektrisch bord
Kabels microswitch
Electro magneet



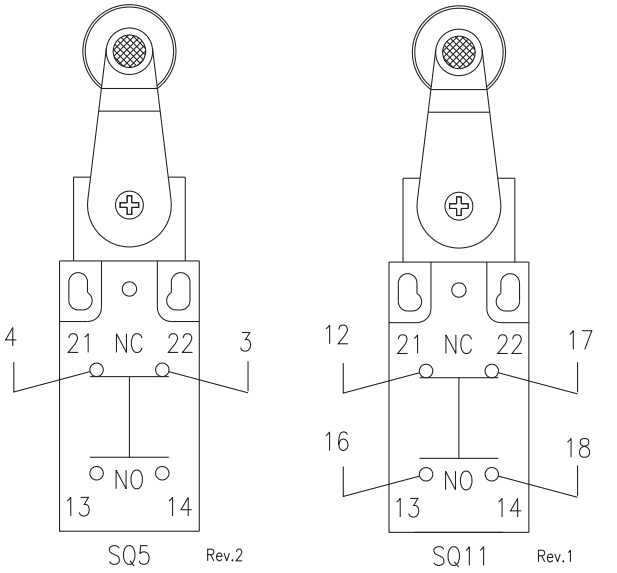


A) Electromagnets (0-5) (0-6) C1-C2
A) ON/OFF switch for broken or slacken rope (1-02) (1-2) SQ1-SQ4
B) Motor and thermal switch (8-9)
C) LOWERING microswitch SQ11 (12-17) (16-18)
C) Platforms LIFTING microswitch (3-4) SQ5
D) Lift/Play detector solenoid valve (0-31) YV40
E) Lowering solenoid valve (0-7) YVD
F) Play detector solenoid valves C11 (12-17) - C12 (12-17) C13 (12-13) - C14 (11-12)
G) Torch

SCHEMA OLEODINAMICO



HYDRAULIC CIRCUIT DIAGRAM



Ref.	Description
1	Parachute valve
2	Lowering valveYVD
3	Excange valve YV40
4	Check valve
5	Relief valve
6	Control flow valve
7	Motor
8	Pump
9	Filter
10	Tank

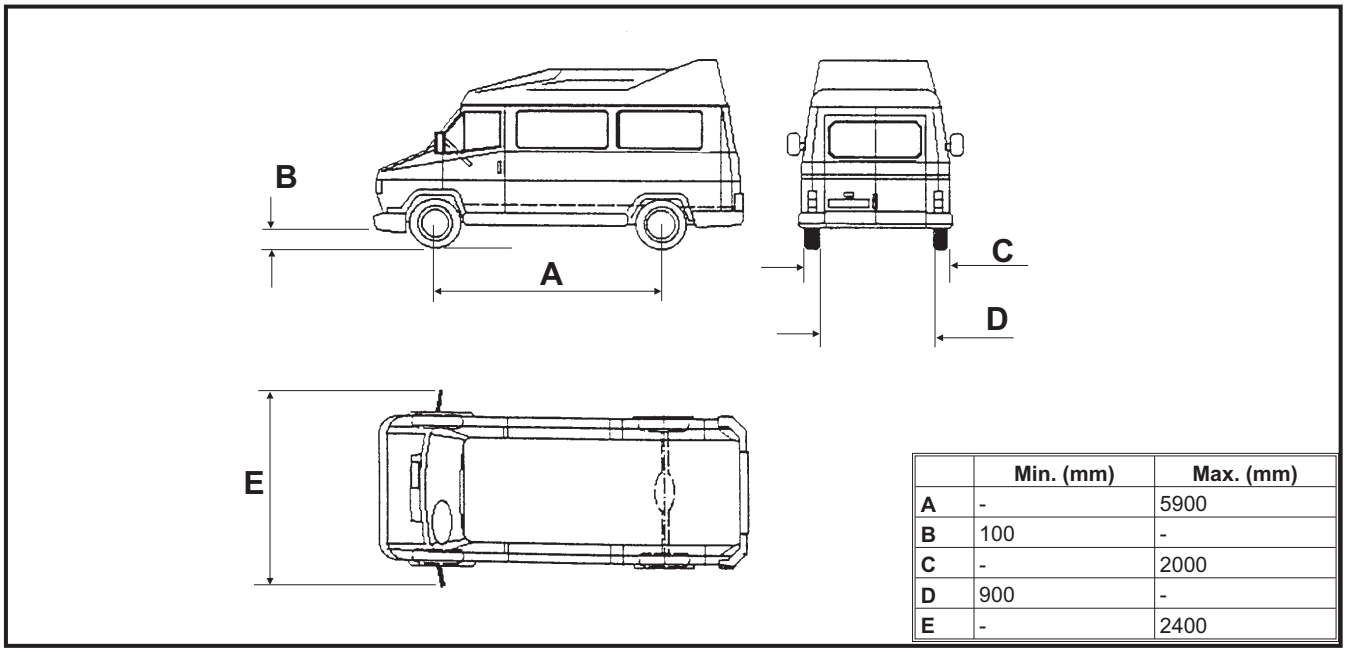
Fig.15

TYPES OF VEHICLES SUITABLE FOR BEING LIFTED AND OVERALL DIMENSIONS
Lifts are suitable for virtually all vehicles with total weight of no more than 5000 kg and with dimensions not exceeding the below data.

MAXIMUM DIMENSIONS OF VEHICLES MAIN LIFTED
Max. width: 2400 mm.
Max. wheelbase: 5900 mm.
Max. distance between outer wall of tyres, inclusive of bulge caused by weight of vehicle on ground: 2000 mm.
Min. distance between inner walls of tyres, inclusive of bulge caused by weight of vehicle on ground: 900 mm.
Caution: the lower parts of the vehicle underbody could interfere with structural parts of the lift.
Take particular care in the case sports-cars.
The lift will also handle customised or non-standard vehicles provided they are within the maximum specified carrying capacity.

Also the personnel danger zone must be defined in relation to vehicles with unusual dimensions.

The following diagrams illustrate criteria used to define the operating limits of the lift.



	Min. (mm)	Max. (mm)
A	-	5900
B	100	-
C	-	2000
D	900	-
E	-	2400

Fig.13 Maximum and minimum dimensions

FOR LARGER DIMENSIONS CHECK THE MAXIMUM LOAD AND POSSIBLE UNBALANCE

MAXIMUM WEIGHTS OF VEHICLES BEING LIFTED

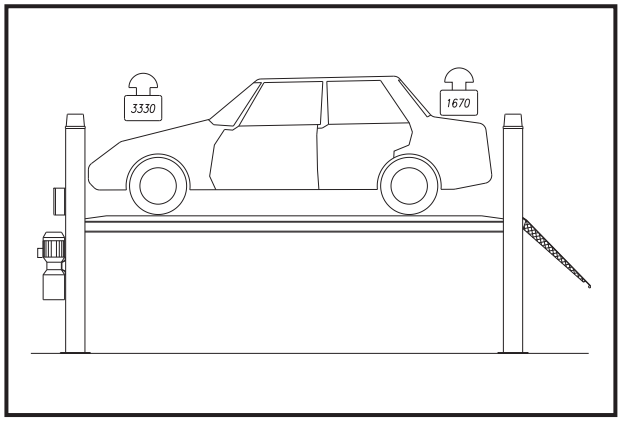


Fig.14 Weight distribution “A”

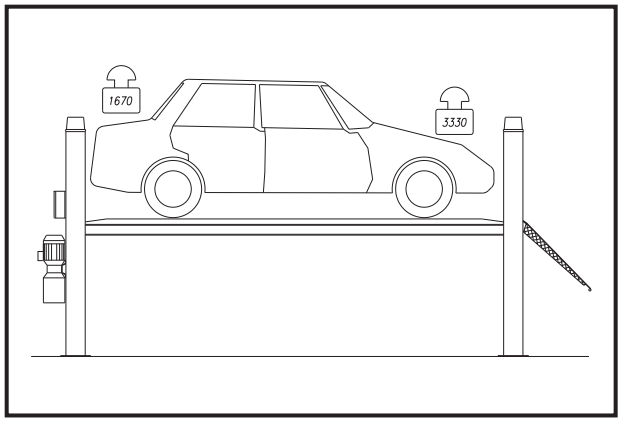


Fig.15 Weight distribution “B”

CHAPTER 3 SAFETY

It is extremely important to read this chapter of the manual carefully and from beginning to end as it contains important information regarding the risks the operator or maintenance fitter may be exposed to if the lift is used incorrectly.
In the following text there are clear explanations regarding certain situations of risk or danger that may arise during the operation or maintenance of the lift, the safety devices installed and the correct use of such systems, residual risks and operative procedures to use (general and specific precautions to eliminate potential hazards).

WARNING:

Lifts are designed and built to lift vehicles and hold them in the elevated position in an enclosed workshop. All other uses of the lifts are unauthorised. In particular, the lifts are not suitable for:
- washing and respray work;
- creating raised platforms for personnel or lifting personnel;
- use as a press for crushing purposes;
- use as elevator;
- use as a lift jack for lifting vehicle bodies or changing wheels.

The manufacturer is not liable for any injury to persons or damage to vehicles and other property caused by the incorrect and unauthorised use of the lifts.
During lift functioning, the operator must remain in the control station as defined in figure 16.
The presence of persons beneath the cross-pieces and/or the platforms when they are moving, or the presence of persons inside the danger zone indicated in figure 16 is strictly prohibited.
The area occupied from the lift and perimetral band of width 1÷2 mt of the lift are defined as "DANGER ZONE".
The operator parking area, only for actioning the lift, is defined as "OPERATOR ZONE".
During operations persons are admitted to the area beneath the vehicle only when the vehicle is already in the elevated position, when the cross-pieces and platforms are stationary, and when the mechanical safety devices (wedges) are firmly engaged in the slots on the safety rods.

WARNING:

THE PRESENCE OF PERSONS BENEATH THE VEHICLE IS PERMITTED ONLY WHEN THE LIFT IS IN THE PARKING POSITION ON THE SAFETY WEDGES.

DO NOT USE THE LIFT WITHOUT PROTECTION DEVICES OR WITH THE PROTECTION DEVICES INHIBITED.

FAILURE TO COMPLY WITH THESE REGULATIONS CAN CAUSE SERIOUS INJURY TO PERSONS, AND IRREPARABLE DAMAGE TO THE LIFT AND THE VEHICLE BEING LIFTED.

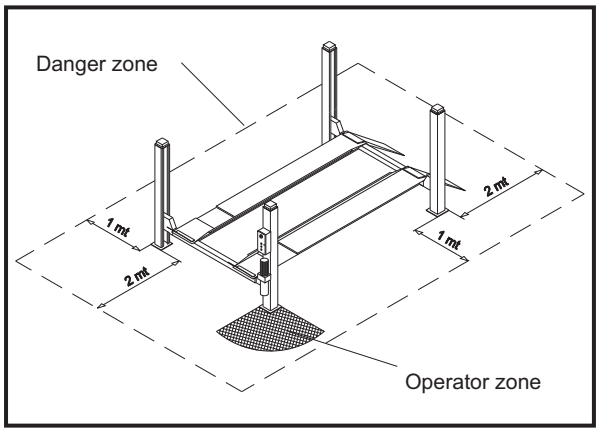


Fig.16

GENERAL PRECAUTIONS
The operator and the maintenance fitter are required to observe the prescriptions of safety regulation in force in the country of installation of the lift.
Furthermore, the operator and maintenance fitter must:
- always work in the stations specified and illustrated in this manual;
- never remove or deactivate the guards and mechanical, electrical, or other types of safety devices;
- read the safety notices placed on the machine and the safety information in this manual.

In the manual all safety notices are shown as follows:

DANGER: indicates imminent danger that can result in serious injury to people or death.

WARNING: indicates situations and/or types of manoeuvres that are unsafe and can cause more or less harmful injuries or death.

CAUTION: indicates situations and/or types of manoeuvres that are unsafe and can cause minor injury to persons and/or damage the lift, the vehicle or other property.

RISK OF ELECTRIC SHOCK: a specific safety notice placed on the lift in areas where the risk of electric shock is particularly high.

RISKS AND PROTECTION DEVICES

We shall now examine the risks that operators or maintenance fitters may be exposed to when the vehicle is standing on the platforms in the raised position, together with the various safety and protection devices adopted by the manufacturer to reduce all such hazards to the minimum:

LONGITUDINAL MOVEMENTS
Longitudinal movements refer to forward and backward movement of the load (vehicle).
To protect against the consequences of longitudinal movement we have installed fixed wheel stops (1) at the front of the lift, and pivoting stops (2) at the rear. The stops are integral with the platforms and serve to secure the vehicle during lifting and lowering movements and when the vehicle is at a standstill in the raised position, thus preventing any potentially dangerous movement.

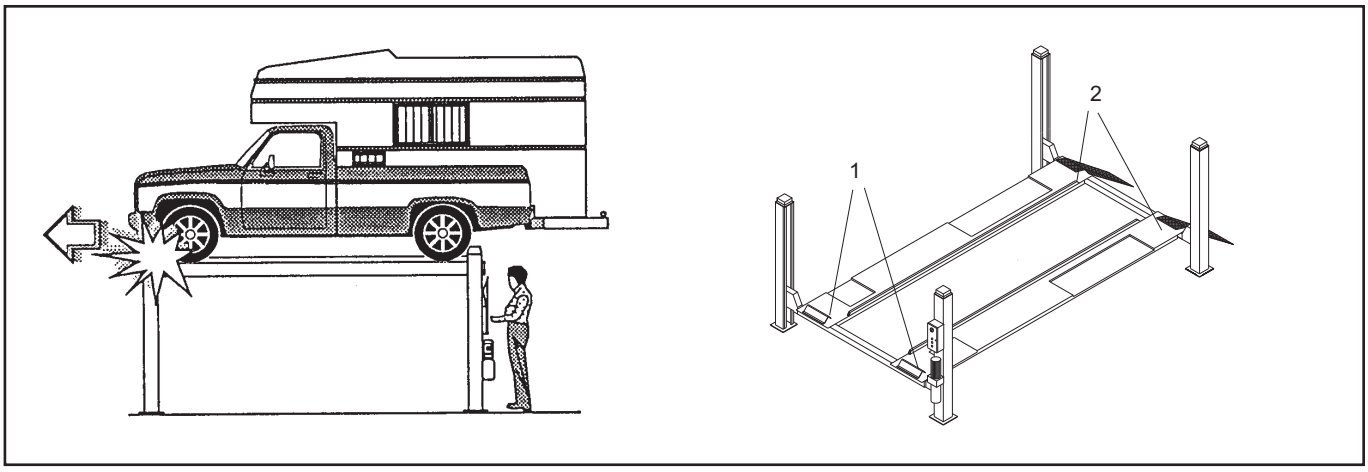


Fig.17 Longitudinal movement and safety systems

SIDE MOVEMENTS

For optimal personal safety and safety of vehicles, observe the following regulations:
- do not enter the danger zone while vehicles are being lifted (see Fig.16),
- switch off the engine of the vehicle, engage a gear and engage the hand brake,
- make sure the vehicle is positioned correctly (see Fig.19);
- be sure to lift only approved vehicles, never exceed the specified carrying capacity, maximum height, and projections (vehicle length and width);
- make sure that there are no persons on the platforms during up and down movements and during standing (Fig.19).

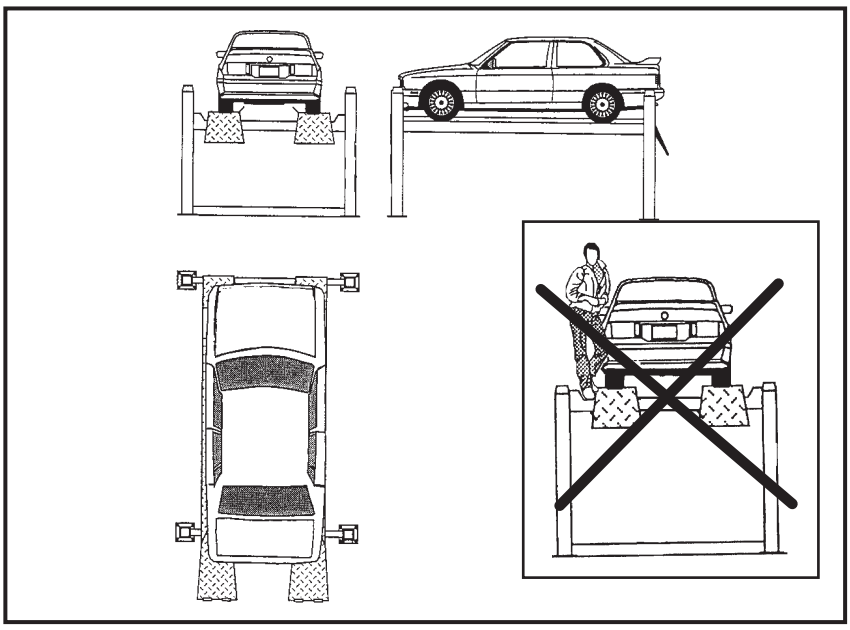


Fig.19 Correctly positioned vehicle

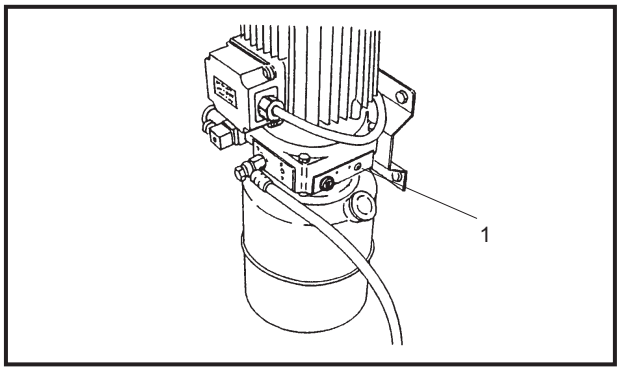


Fig.20

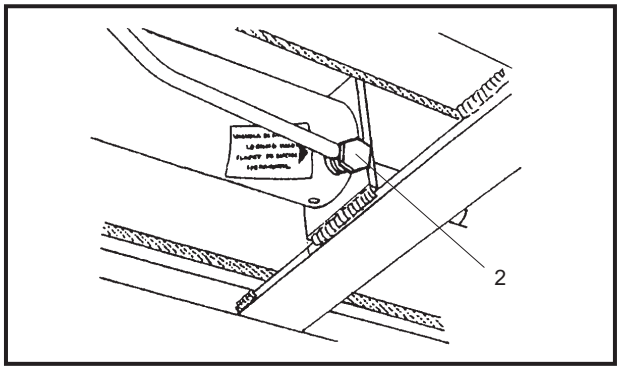


Fig.21 Cylinder locking valve

POTENTIAL RISKS DURING LIFTING

The following safety devices are installed to protect against overloads and possible mechanical failures:

- In the case of excess weight on the lift the relief valve on the hydraulic power unit will open (Pos.1, fig.20).

- If one or more hoses in the hydraulic circuit should break, a cylinder locking valve will operate (Pos.2, fig.21).

- If the movable part of the lift should go in overstroke, there is an electric limit switch (1) in the control post and a steel locking plate (2) on the top of all four posts (fig.22).

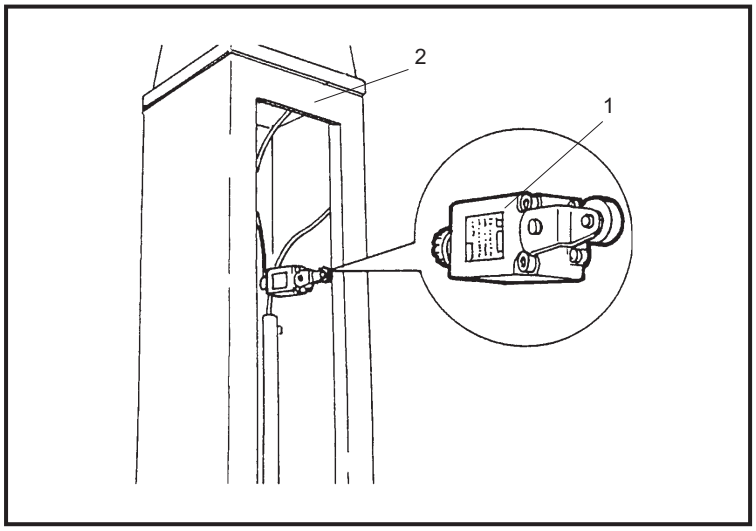


Fig.22 Overstroke safety devices

- Should the steel cables slacken or break, the safety wedges (2) will stop the movable part of the lift and the vehicle in its current position (fig.23) and a microswitch (Pos.4, fig.23) located on the steel cables inside the cross-piece will disconnect the power supply to the motor.

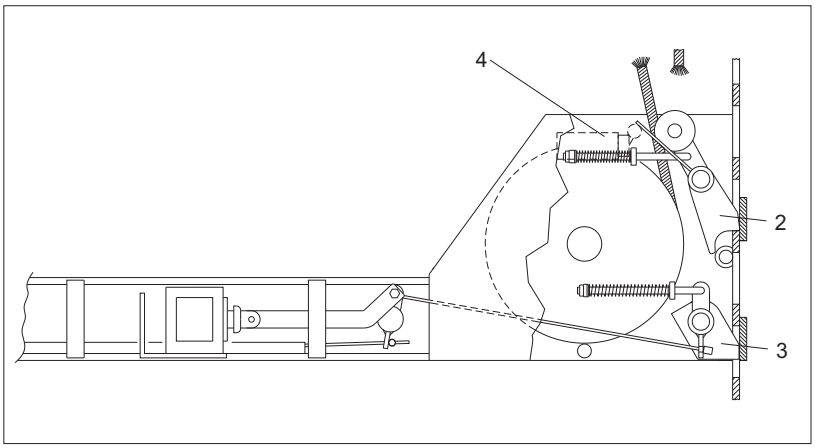


Fig.23 Safety wedge and limit switch

RISKS FOR PERSONNEL

This heading illustrates potential risks for the operator, maintenance fitter, or any other person present in the area around the lift, resulting from incorrect use of the lift.

RISK OF CRUSHING (OPERATOR)
Possible if the operator controlling the lift is not in the specified position at the control panel.

When the platforms (and vehicle) are lowering the operator must never be partly or completely underneath or near of the movable structure. Always remain in the operator zone (fig.25).

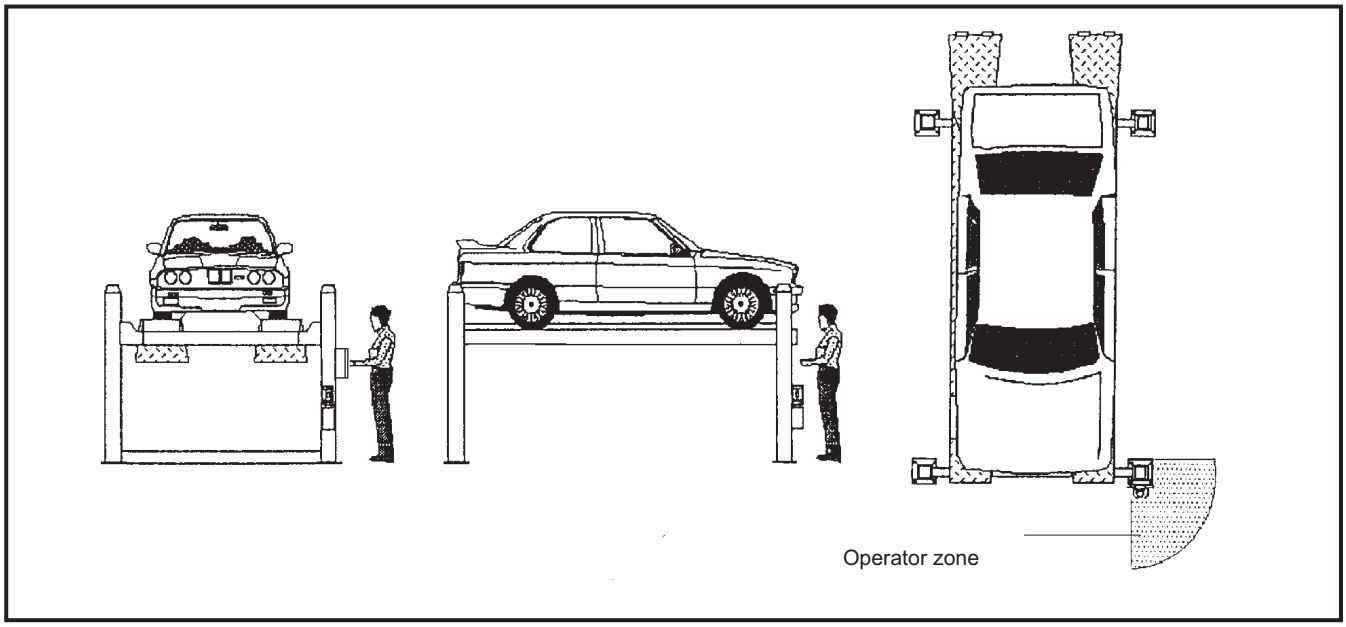
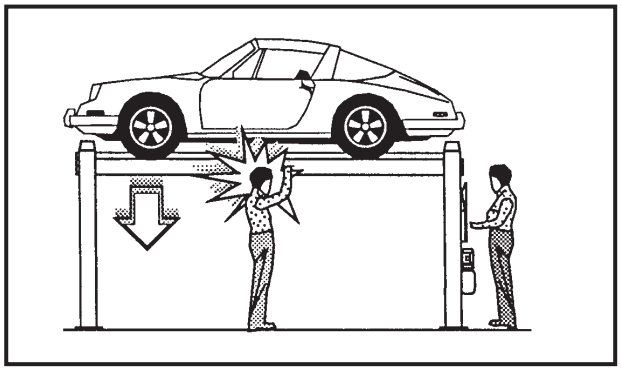


Fig.25 Operator zone

RISK OF CRUSHING (PERSONNEL)
When the platforms and the vehicle are lowering personnel are prohibited from entering the area beneath the movable parts of the lift (fig.26). The lift operator must not start the manoeuvre until it has been clearly established that there are no persons in danger zone (fig.16, 26, 27).



Fig,26

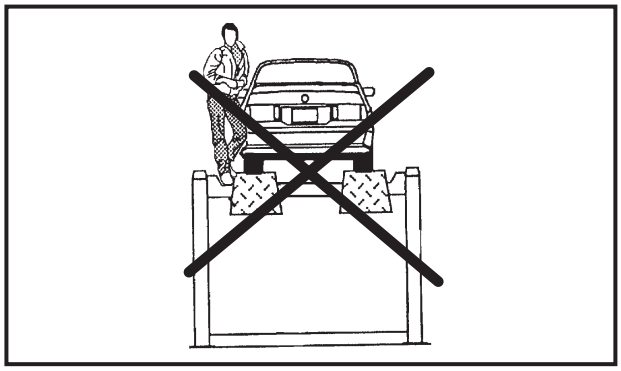


Fig.27

RISK OF IMPACT
Caused by the parts of the lift or the vehicle that are positioned at head height.

When, due to operational reasons, the lift is stopped at relatively low elevations (less than 1.75 m from the ground) personnel must be careful to avoid impact with parts of the machine not marked with special colours (Fig.28).

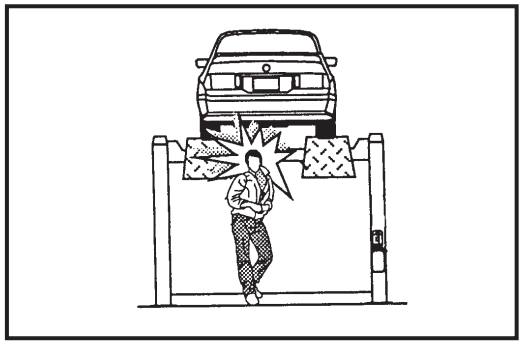


Fig.28 Risk of impact

RISK OF VEHICLE MOVING
Caused by operations involving the application of force sufficient to displace the vehicle.
In the case of large or particularly heavy vehicles, sudden movement could create an unacceptable overload or uneven loadsharing. Therefore, before lifting the vehicle and during all operations on the vehicle
MAKE SURE THAT IT IS PROPERLY STOPPED BY THE HAND BRAKE.

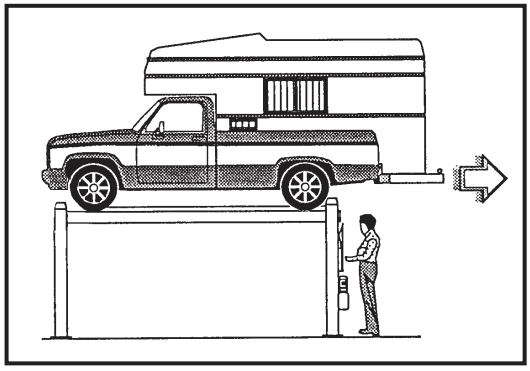


Fig.29 Risk of vehicle moving

RISK OF VEHICLE FALLING FROM LIFT
This hazard may arise in the case of incorrect positioning of the vehicle on the platforms, incorrect stopping of the vehicle, or in the case of vehicles of dimensions that are not compatible with the capacity of the lift.

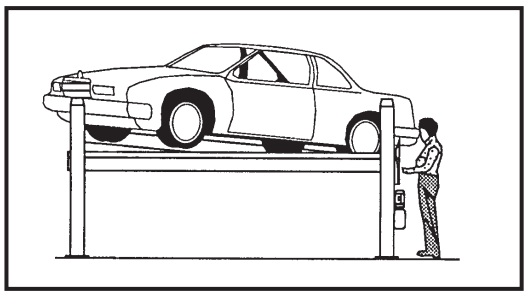


Fig.30 Risk of vehicle falling

NEVER ATTEMPT TO PERFORM TESTS BY DRIVING THE VEHICLE WHILE IT IS ON THE PLATFORMS (e.g. reversing, etc.).

RISK OF SLACKENING OF LIFT CABLES
Caused by objects left leaning against the posts or on the platforms (fig.31).

NEVER LEAN OBJECTS AGAINST THE POSTS OR LEAVE THEM IN THE LOWERING AREA OF THE MOVABLE PARTS OF THE LIFT.

If you leave objects that interfere with the free lowering of the platforms the lowering movement will be interrupted.

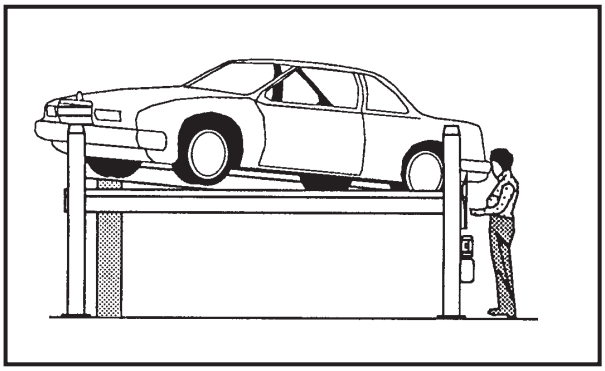


Fig.31 Risk of slackening of lift cables

RISK OF SLIPPING
Caused by lubricant contamination of the floor around the lift (fig.32).

THE AREA BENEATH AND IMMEDIATELY SURROUNDING THE LIFT AND ALSO THE PLATFORMS MUST BE KEPT CLEAN. Remove any oil spills immediately.

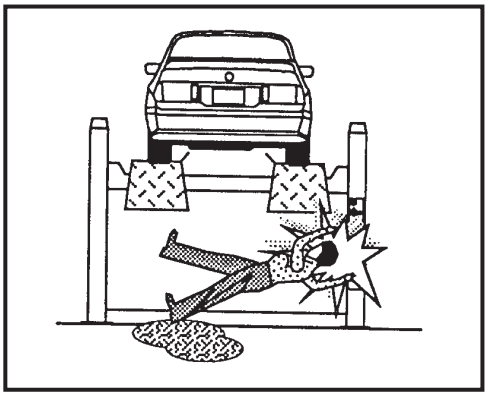


Fig.32 Risk of slipping

When the lift is fully down, do not walk over the platforms or the cross-pieces in places that are lubricated with a film of grease for functional requirements. Reduce the risk of slipping by wearing safety shoes.

RISK OF ELECTRIC SHOCK
Risk of electric shock in areas of the lift housing electrical wiring.

Do not use jets of water, steam (high pressure washers units), solvents or paint next to the lift, and take special care to keep such substances clear of the electrical control panel.

RISKS RELATED TO INAPPROPRIATE LIGHTING
The operator and the maintenance fitter must be able to assure that all the areas of the lift are properly and uniformly illuminated in compliance with the laws in force in the place of installation.

RISK OF COMPONENT FAILURE DURING OPERATION
The manufacturer has used appropriate materials and construction techniques in relation to the specified use of the machine in order to manufacture a reliable and safe lift. Note however, that the lift must be used in conformity with manufacturer's prescriptions, and the frequency of inspections and maintenance works recommended in chapter 6 "MAINTENANCE" must be observed.

RISKS RELATED TO IMPROPER USE
Persons are not permitted to stand or sit on the platforms during the lift manoeuvre or when the vehicle is already lifted (fig.33).

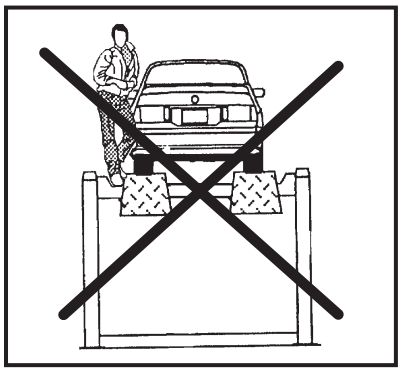


Fig.33

All uses of the lift other than the uses for which it was designed are liable to give rise to serious accidents involving the persons working nearby.

It is therefore essential to adhere scrupulously to all regulations regarding use, maintenance and safety contained in this manual.

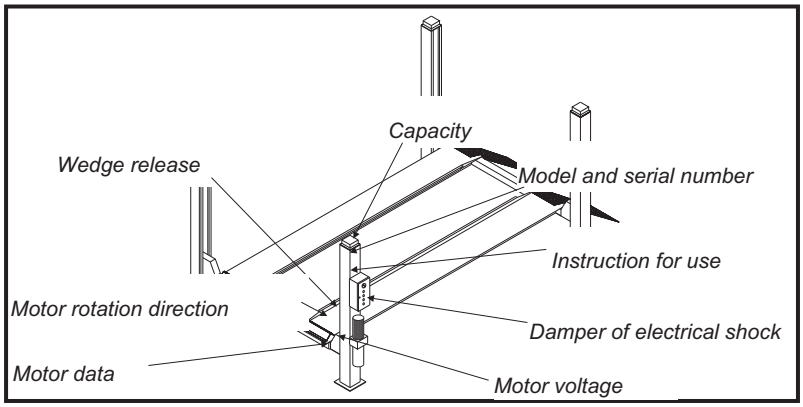


Fig. 34 Safety notices and data plates placed on the machine

CHAPTER 4 INSTALLATION

THE FOLLOWING OPERATIONS MUST BE PERFORMED EXCLUSIVELY BY SPECIALISED TECHNICAL STAFF WITH AUTHORISATION FROM THE MANUFACTURER OR LICENSED DEALER.
IF THESE OPERATIONS ARE PERFORMED BY OTHER PERSONS, SERIOUS PERSONAL INJURY AND/OR IRREPARABLE DAMAGE TO THE LIFT UNIT MAY RESULT.

INSTALLATION REQUIREMENT CHECK

MAKE SURE THAT THE INTENDED PLACE OF INSTALLATION IS SUITABLE.
The lift is designed for installation in enclosed areas suitably protected from weather. The place of installation must be well clear of areas in which washing or painting work is performed, and away from solvent or paint storage areas or areas, where there is a risk of potentially explosive atmosphere.

CHECK OF ROOM SUITABILITY AND SAFETY CLEARANCES.
The lift must be installed in compliance with the clearances between walls, pillars, other machines, etc. indicated in Figure 35 and in compliance with any law requirements in the country of installation.
In any event, there must be a minimum clearance of 700 mm between all movable parts of the lift and the vehicle itself and the nearest fixed or mobile structures in the workshop.

Check:
- height: 5000 mm min.
(calculate also the height of the vehicles you intend to lift),
- distance from walls: 700 mm min.,
- working space: 800 mm min.,
- CONTROL POSITION area,
- maintenance area,
- access,
- escape routes for emergency situations,
- position in relation to other machines,
- rational orientation of the lift,
- possibility of electrical connection.

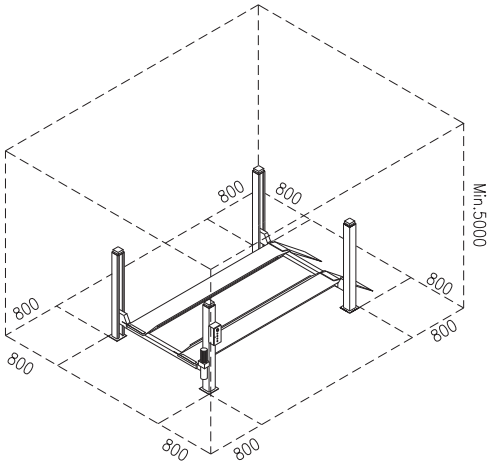


Fig.35 Safety distances

If in a garage several hoists are installed, their emplacement has to be carried out according to the relevant labour safety rules.

LIGHTING
All parts of the machine must be uniformly lit with sufficient light to make sure that the adjustment and maintenance operations specified in the manual can be performed safely, and without areas of shadow, reflected light, glare and avoiding all situations that could give rise to eye fatigue.
The lighting must be installed in accordance with the laws in force in the place of installation (responsibility lies with the lighting equipment fitter).

FLOOR
The lift must be installed on a horizontal concrete bed of adequate strength, of a minimum thickness of 160 mm made in concrete batched with strenght 25 N/mm2.
The floor surface must be flat and levelled (10 mm tolerance).
Consult the manufacturer for special application

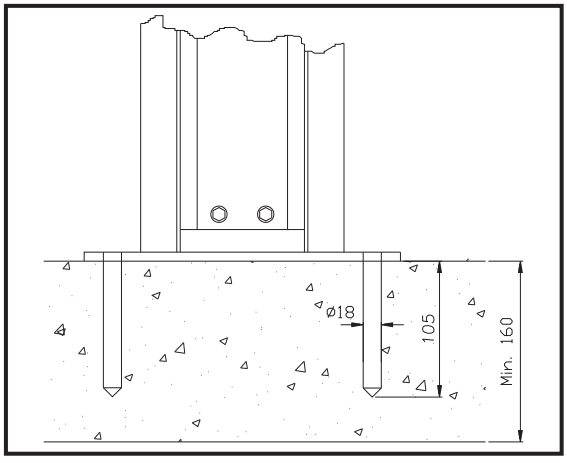


Fig.36 Floor thickness-

PREPARING THE FLOOR - MARKING

Mark the position of the posts on the floor as shown in figure 38.

The measurements shown in the figure are compulsory; maximum tolerance is:
- +/- 1 mm alignment
- +/- 2 mm squaring

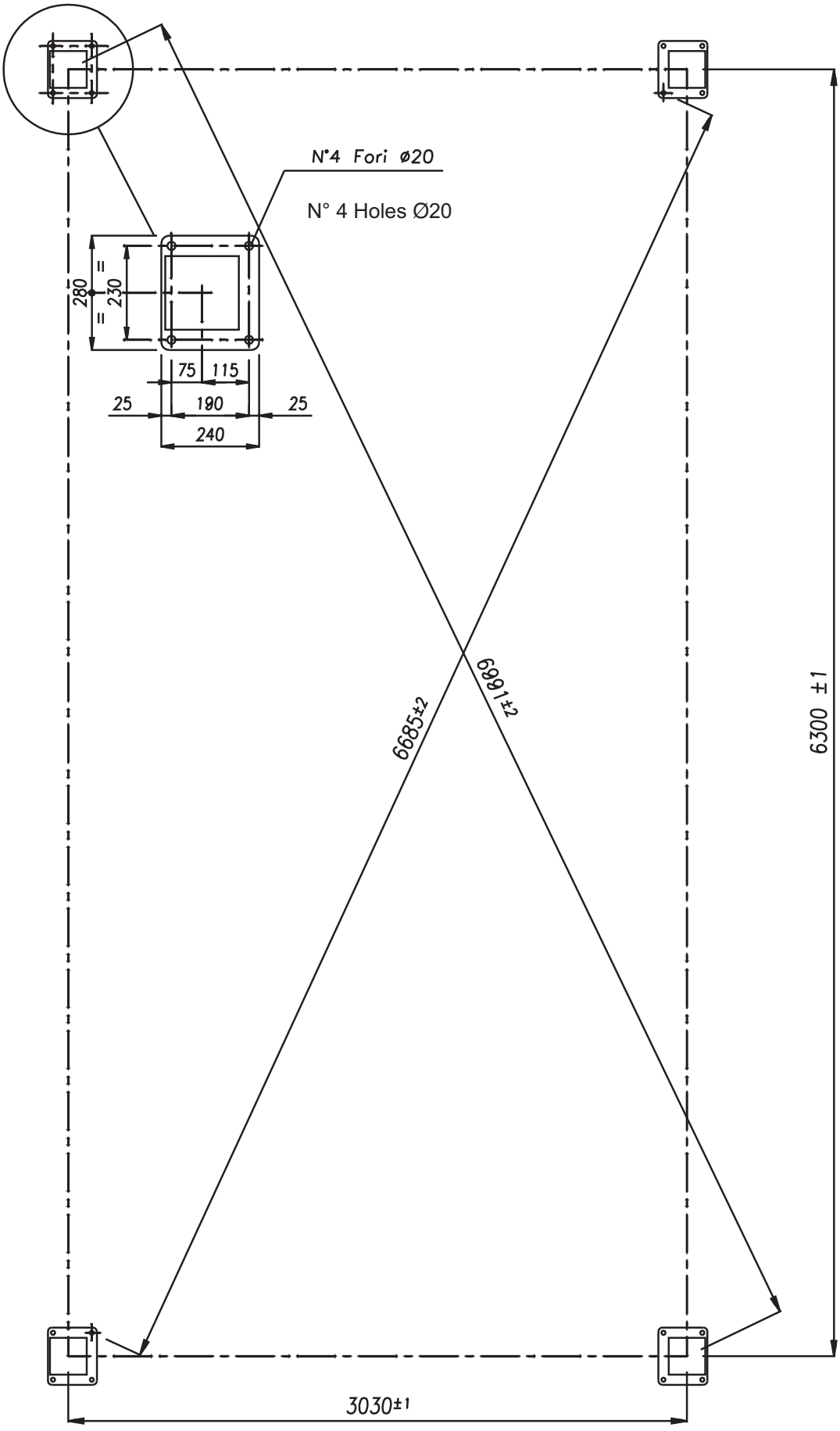


Fig.36 Marking

ASSEMBLY

WARNING

UNAUTHORISED PERSONS MUST NOT BE ADMITTED DURING ASSEMBLY OPERATIONS.

ASSEMBLY OF MOVABLE STRUCTURE (PLATFORM)

1 - Place 4 trestles of the same height and suitably sturdy to hold 250 kg each, in the area where you intend to install the lift. Position the trestles as shown in the figure (A-B-C-D).

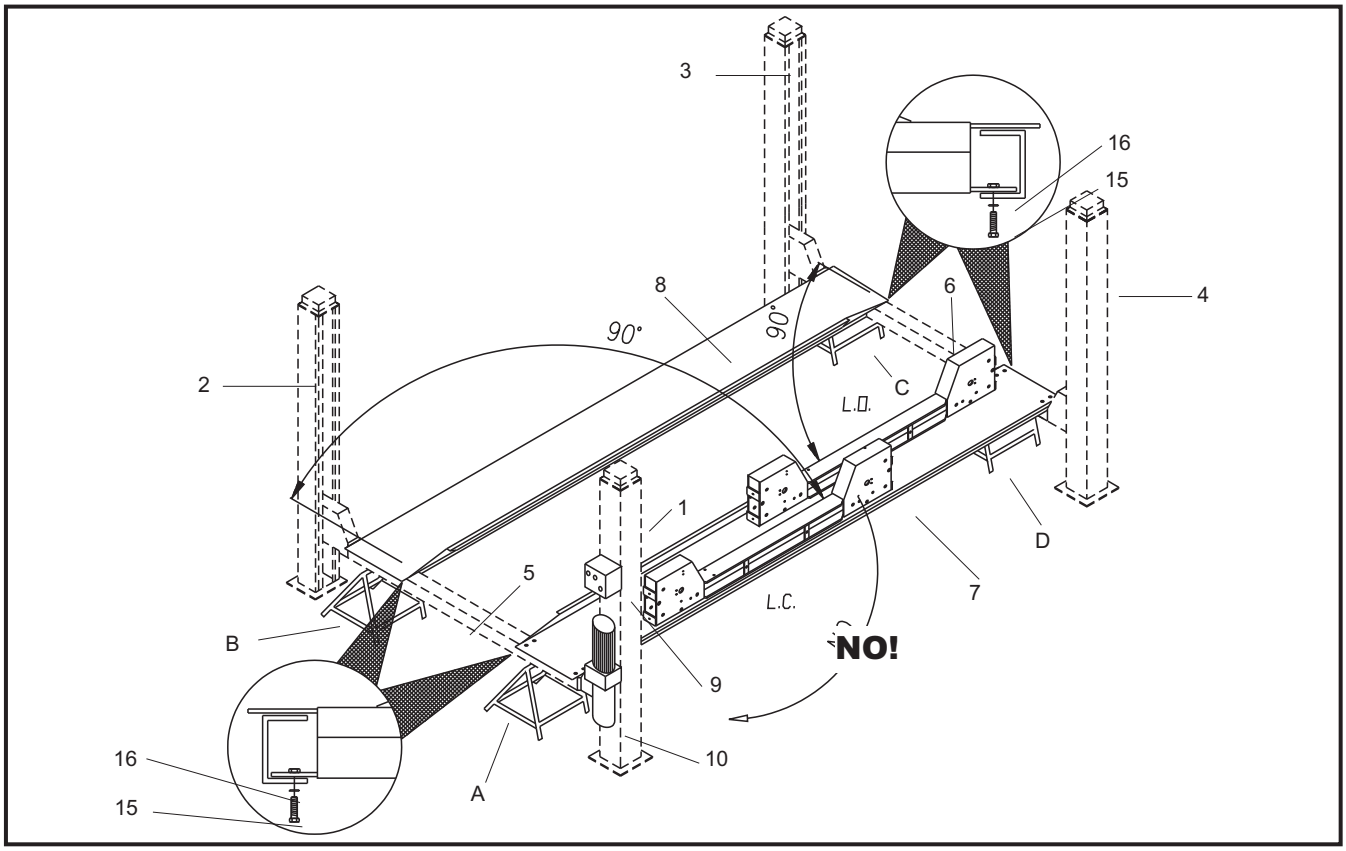


Fig.40

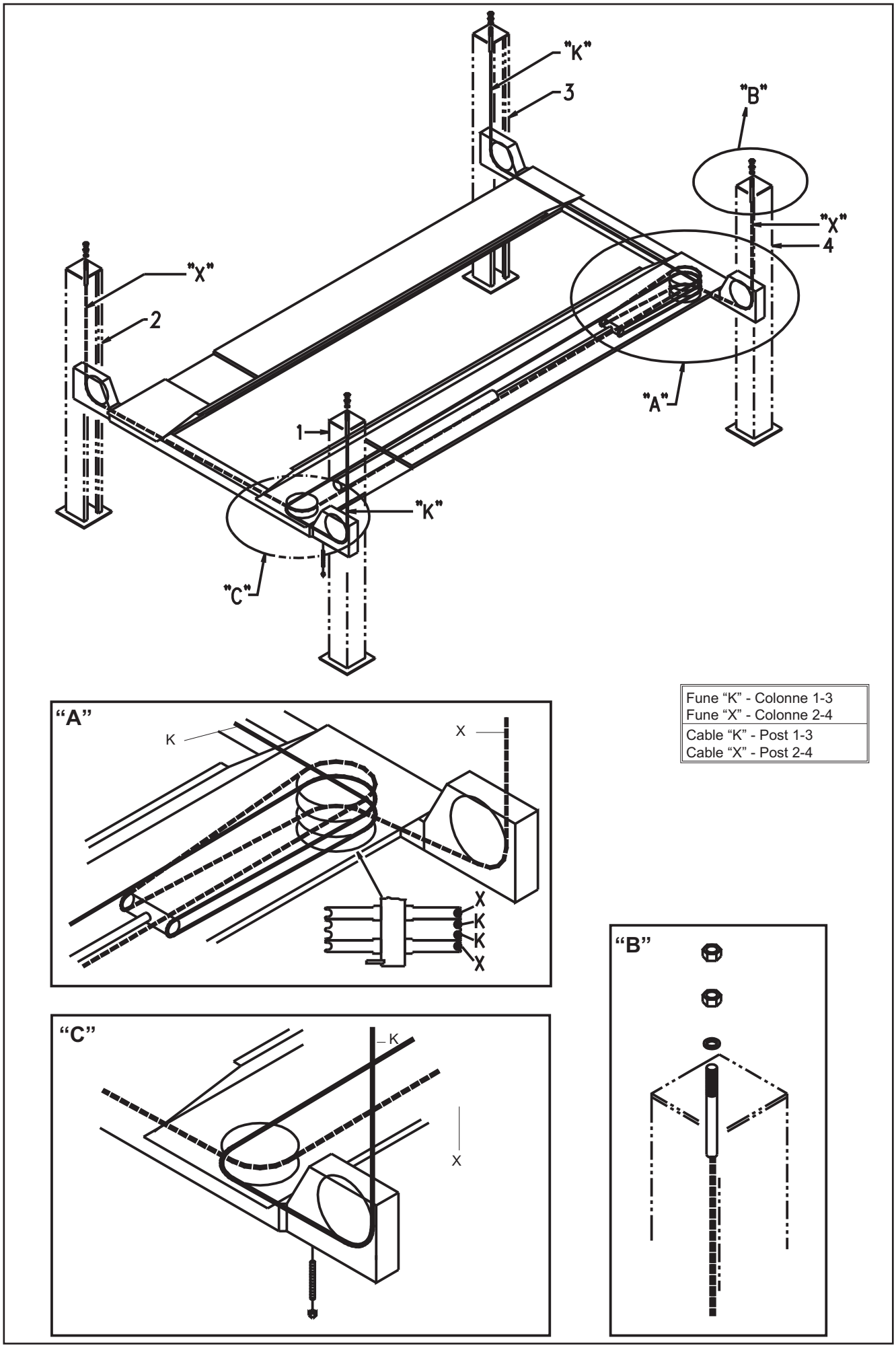
2 - Remove the posts from the packing (1-2-3-4), together with the platforms (7-8), the hydraulic power unit (10) and accessories.

3 - Place the platform (7) on two trestles (A - D) together with the two cross-pieces (5 - 6)

4 - Place the cross-piece (5) on trestle (B) and secure it to the platform (7) using M12 x 25 screws (15) and 12 x 20 toothed washers (16). During these operations check that the steel cables are correctly positioned (see view “C” in fig.40).

5 - Place the platform (8) on the cross-pieces (pos.5-6, fig.39).

6 - Check squaring and the diagonals of the cross-piece - platform assembly; then, fully tighten the screws (15) securing the platforms (7-8).



Fune “K” - Colonne 1-3 Fune “X” - Colonne 2-4
Cable “K” - Post 1-3 Cable “X” - Post 2-4

POST ASSEMBLY
Remove the safety rods (12) from the top of the posts (1-2-3-4) as shown in fig.41.

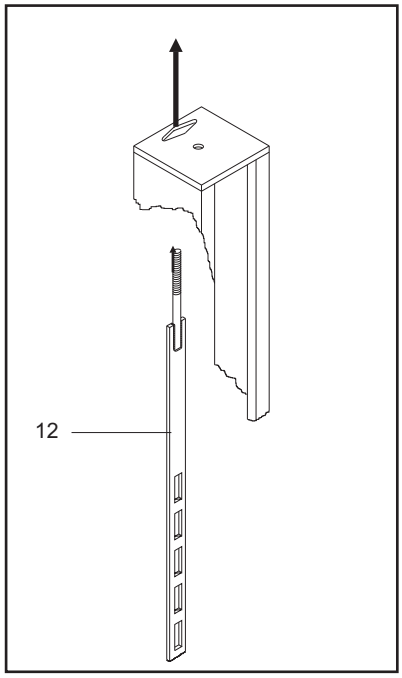


Fig.41 Removing safety rod from top of post

Preparation of the control post (1).
The posts can be identified by the numbers at the top. The control post (1) is also distinguished from the others because it has drilled holes to receive the control panel and the hydraulic power unit (fig.42).
Secure the hydraulic power unit (10) to the control post (1) using M8 x 20 H.H. screws (29) and 8 x 16 washers (28). Fit the control panel (9). Make the electrical connections to motor feeding terminals (14), lowering solenoid valve (15),lift limit switch (16) and lowering microswitch (50) (see wiring diagrams).

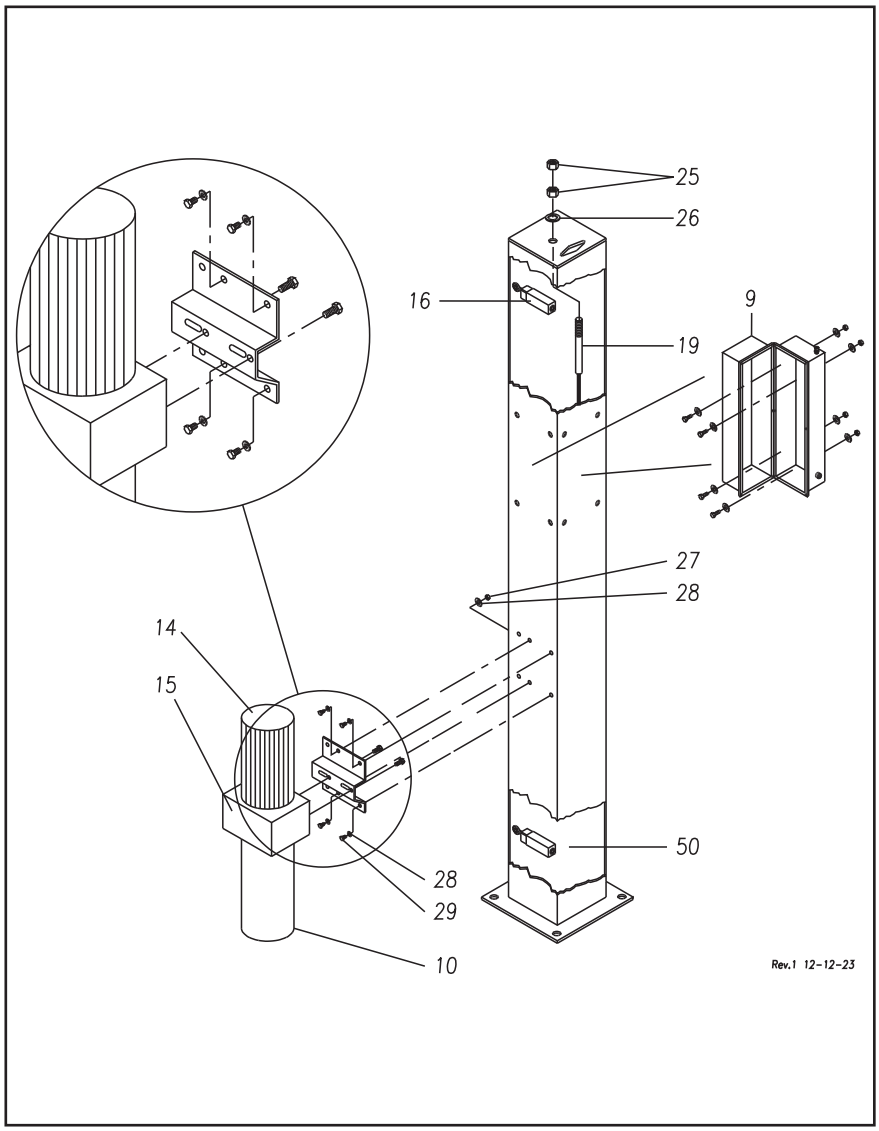


Fig.42 Preparation of post 1

Position the posts at the end of the cross-pieces (pos. 5-6, fig.39) observing the numbering and the lay-out shown in figure 39.
Fit the safety rods (12) from the top of the posts, inserting them between the rear face of the cross-pieces (5-6) and the guide pins (13) as shown in figure 43.
Check the safety rods are straight.
Fit the safety rods with the rounded edges of the slots towards the front of the posts.

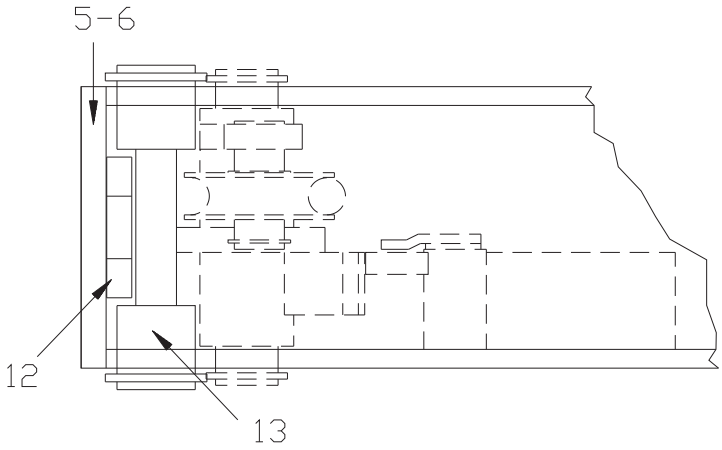


Fig.43 Housing for fitting safety rod

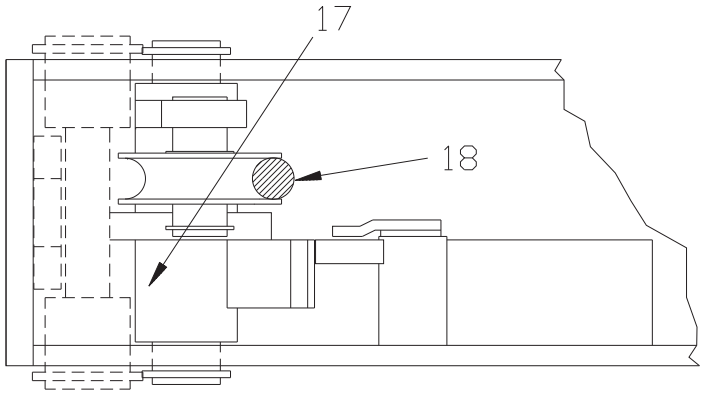


Fig.45 Positioning of lifting cable sensors

HYDRAULIC SYSTEM CONNECTION
Fig.46: Connect the rubber high pressure pipes (D02 and D03) to the cabinet with the screw and the washers, lock them.

WARNING

Keep the detail 4 Fig.46 locked using a wrench (5 Fig.46a).

Insert the discharge pipes, connected to the connection placed on the principal lift cylinder bottom and to the connection of the play detector to the 3-ways connection (1).
Fill the hydraulic power reservoir with oil to maximum level (for oil type see page 10).

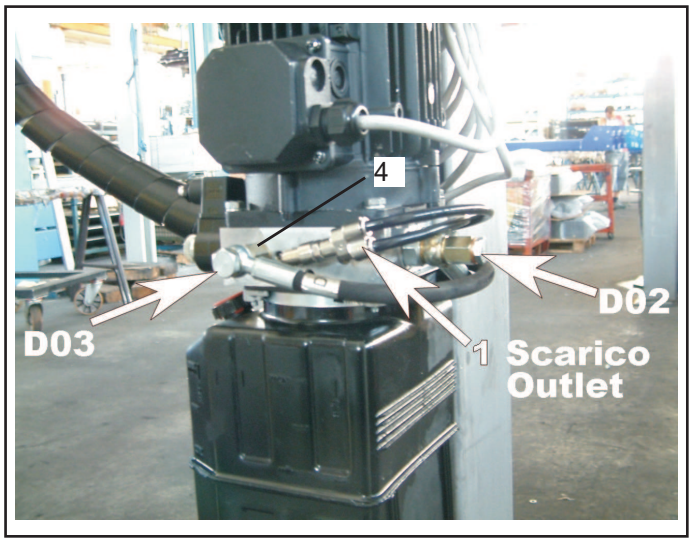


Fig.46 Hydraulic system

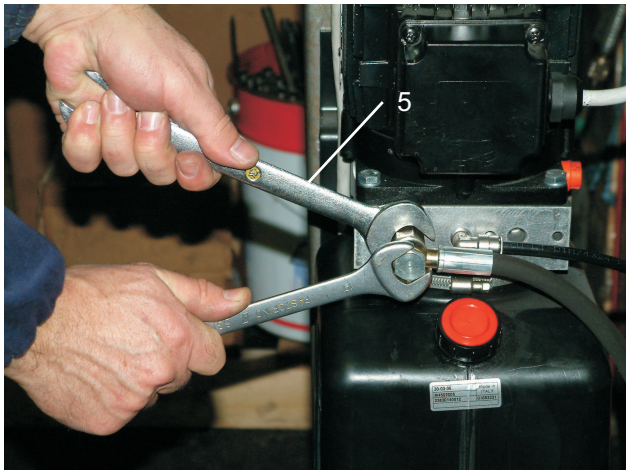


Fig.46a

ELECTRICAL SYSTEM CONNECTION

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 machinery is installed.

Provide protection from 10A for three-phase operation and 16A for singe-phase operation.

Connect the electrical circuit of the cable micro switches, by fastening them to the suitable connector blocks placed in the central part of the posts and following the topographic diagram.

Connect the electric cable comming out from control panel marked with the numbers 3-4 to the lift limit microswitch on the NC contact.

Connect the electric cable comming out from control panel marked with the numbers 0-7 to the solenoid valve.

Connect the wires of the safety wedge release electromagnets to the connector blocks placed in the central part of the cross-pieces, always complying with the topographic diagram.

Open the electric panel and fit the suitable supply cable (min. section 4x4 mm2) through the relevant cable-holder placed - for both models - in the electric panel upper part.

Connect the cable to the terminals inside the panel lower part, including the yellow/green ground terminal.

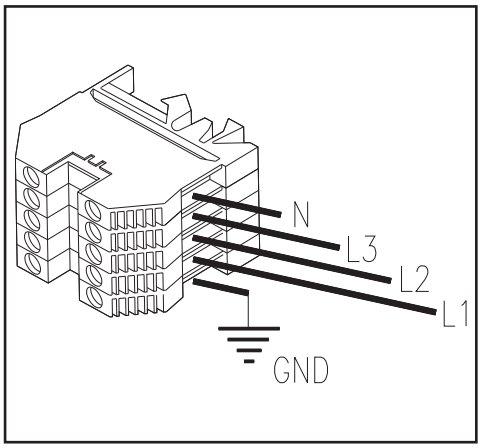


Fig.47

Open the motor contact box and make the connection as shown on fig. 48, depending on the lift supply voltage.

Connected the temperature protection (Ref. 8-9 Fig. 48)

The electric panels are arranged by the manufacturer for operating at 400 V, three-phase: therefore, if you wish the lift to operate at 230 V, three-phase, change the connection on the transformer (see terminal board of the transformer).

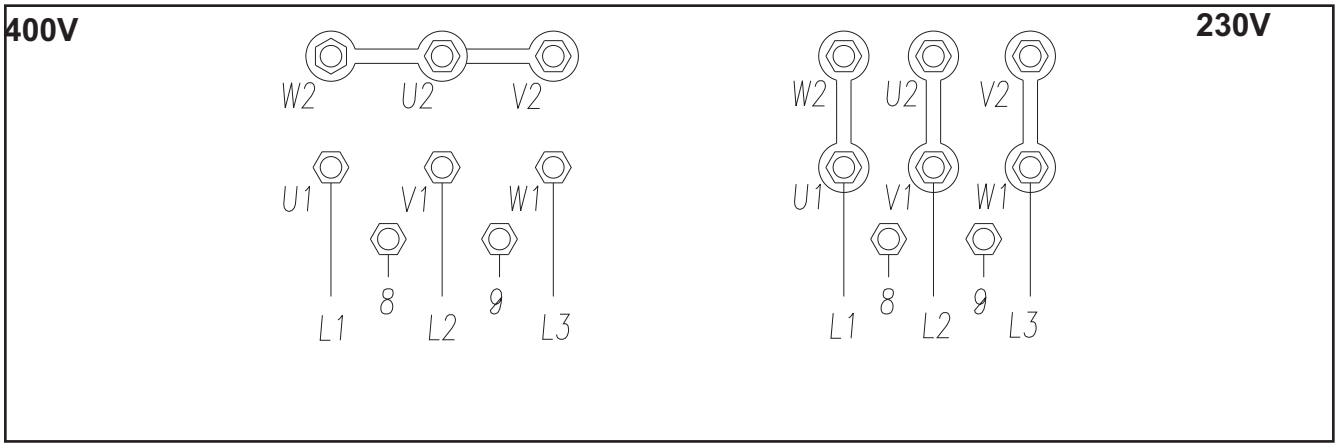


Fig. 48 - Motor connections and transformer

Once checked if everything is complying, close the panel and check, by making the lift rise, the motor rotation direction: it should be the same of the one on the plate of the motor.

If the rotation direction isn't complying, open the panel again, reverse two wires of the phases as per fig. 47, close the panel again and check the rotation direction.

WARNING

ALL THE ABOVE OPERATIONS MUST BE MADE ONLY BY SKILLED PERSONNEL.

Before making any manoeuvres:
1) Check the fluid level, and fill if necessary using mineral oil for hydraulic system
ISO 46 - H-LP DIN 51525
2) Check the rotation direction of the motor by pushing the lifting pushbutton momentarily

WARNING: prolonged rotation in the wrong direction can seriously damage the pump.

3) adjust the opening of the wedges. Keeping the descent button pressed, check the dis
tance between the safety device and the rod is 5 mm. A lesser space could cause the safety device hooking, while a greater space could prevent a perfect electromagnet closure with consequent noisy vibration.

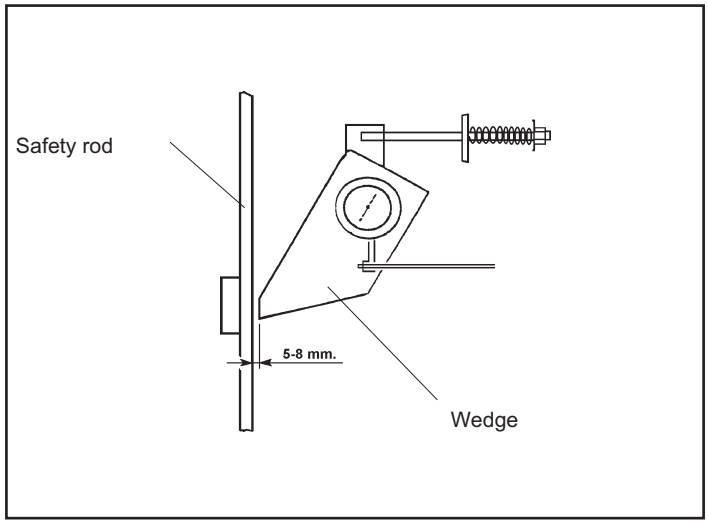


Fig.49

CABLE PRE-ADJUSTMENT
Before operating with the lifter check that the cables are in correct position on the pulleys. Close the panel, put the switch (QS) in pos. 1 and make the lift rise until clearing the wedges (A-B-C-D); then put the switch in position 0 and close them again. Put the main switch (QS in fig. 49) in position 1, press the lowering button (SB2) and check if the lift lowers. If this doesn't happen, check the adjustment of the four cable sensors (pos. 17, fig. 45) and, if necessary, adjuststhem by acting on the screw of the micro switch release lever (pos. 36, fig. 50).

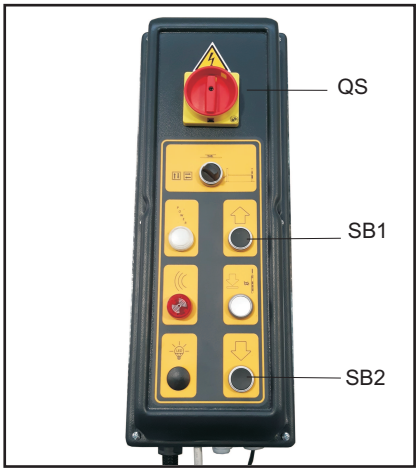


Fig-50 Control panel

Position the lift so that the four wedges (32) in fig.51 are firmly seated in the slots on the safety rods (12). Adjust the nuts (20) on the terminal blocks (19) of the lift cables (33) to level the platforms (7 and 8) so that the entire surface of the movable section of the lift is perfectly level.
Turning the upper nuts (35) of the safety rods, adjust so that the distance between the wedges (32) and the slots in the safety rods (12) is identical on all four posts (1-2-3-4). Tighten the upper part with the lock nut (35).
Lock the safety rods (12) with the collar (34) fixing it uder the top plate of the culomn.

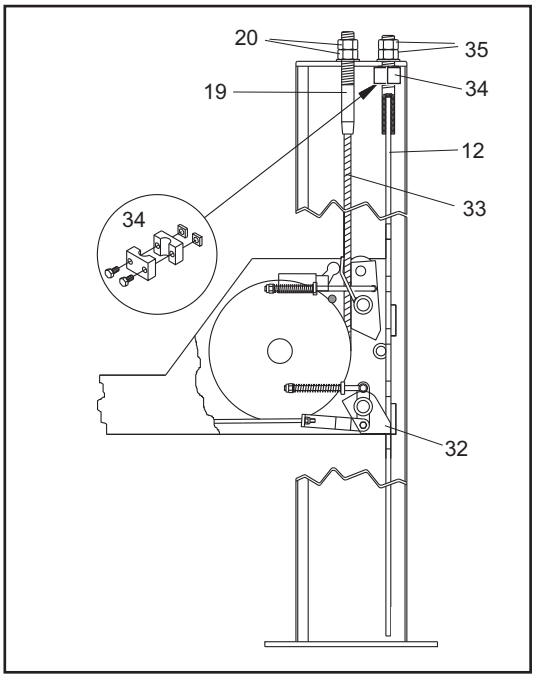


Fig.51 Pre-adjustment of lift cables

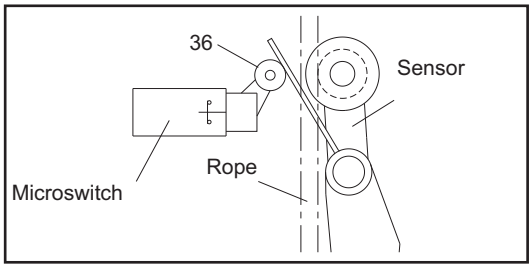


Fig.52

SECURING THE POSTS TO THE GROUND

Lower the platform (see operating instructions) until it is about 30 cm from the ground.

Position the posts so that the nylon skates (rear 37 and side 38) are in contact with the posts (fig.53).

Then proceed to drill into the floor through the fixing holes in the base plates.

Plumb the posts to ensure that they are perfectly perpendicular to the floor, inserting shims where necessary under the baseplates.

Use shims that are as large as possible and always install them close to the anchor holes.

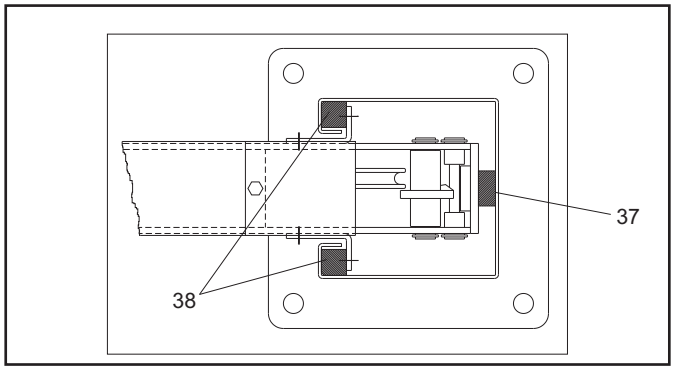


Fig.53 Shoe ad ju stment

Use screw anchors type (see the table):

Marca-Brand	Tipo-Typ	A	B
HILTI	HSL-3 M12/25	18	105
FISCHER	FH II 18/25 H	18	105

Tighten the screws with a torque wrench set to 80 Nm.

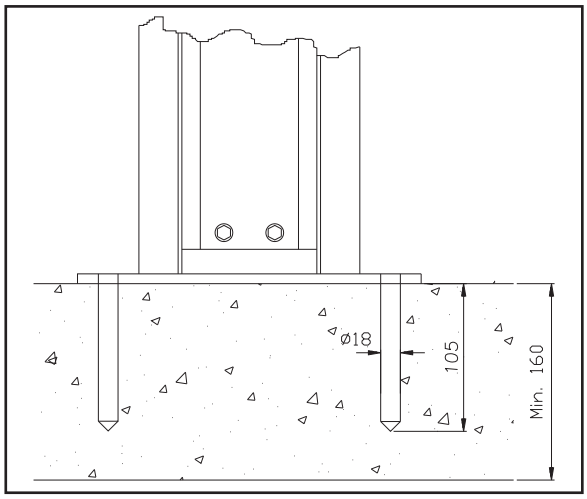


Fig.54 Post anchoring

Press LIFT button (SB1 in fig.52) and complete the lift cycle; during the cycle check that the cross-pieces slide freely and without undue rubbing friction (you may want to stop the lift motion every 20 or 30 cm to make this inspection easier).

If you notice any malfunctions during this operation, check that the posts are perfectly perpendicular.

WARNING

IMPORTANT FOR PLAY DETECTOR: CHECK THAT THE COLUMNS ARE WELL SUPPORTED TO THE NYLON SKATES, AS INDICATED IN FIG. 53.

When the lift cycle is completed, make sure that the lifting limit switch (pos.39, fig.55) is working properly and if necessary, adjust using the cam (40) on the cross-piece.

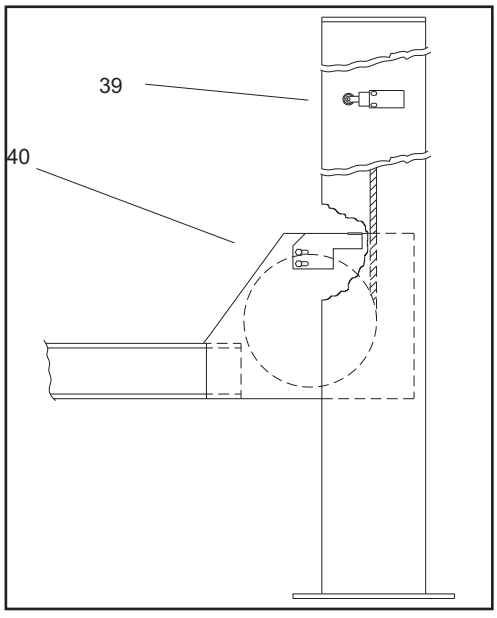


Fig.55

INSTALLING THE VEHICLE RAMPS AND THE WHEEL STOPS
The vehicle ramps (pos.41, fig.56) and the wheel stops (42) can be fitted on either end of platforms (7 - 8) according to the user's requirements.
Fit the ramps (41) by slotting them into the platforms on the required end and then fix the wheel stops (42) on the opposite end using M10 x 25 H.H. screws (43), 11 x 30 washers (44) and M10 nuts (45).
If requered fit the regulation screws for ground positionament (50 and 51).

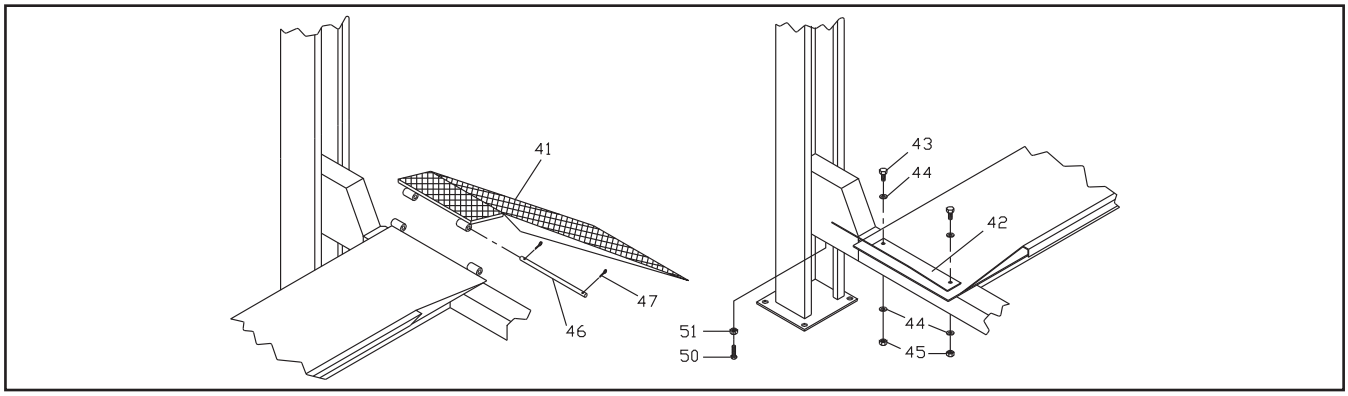


Fig.56 Securing the vehicle ramps and wheel stops

ADJUSTING THE LIFTING CABLES
Fig. 57: drive a vehicle onto the lift.
Raise the lift to the maximum height and check if the four wedges (32) are fitted inside the slots of the safety rods (12).
Check if the distance between the wedges (32) and the slots of the safety rods (12) on the 4 posts (1-2-3-4) is at least 20 mm from the support (**fig. 57**); a lower value would not allow the safety device to rotate, and it would stay attached to the rod.
If necessary, level the unit by adjusting the nuts (20) on the terminals (19) of the cables (33) and the limit micro switch.
When the adjustment is completed, lock with the lock nuts (35).

Check the tightening of the U bolts B5055 that hold the lifting cables (15 Nm).

IMPORTANT: This adjustment must be repeated 1 or 2 weeks after setting up the lift.

Fatten the pulleys where previewed (lubricator on the lower side of the pin) with grease AGIP MU EP 02 or equivalent (SHELL ALVANIA EP 2 or ESSO BEACON EP 2).

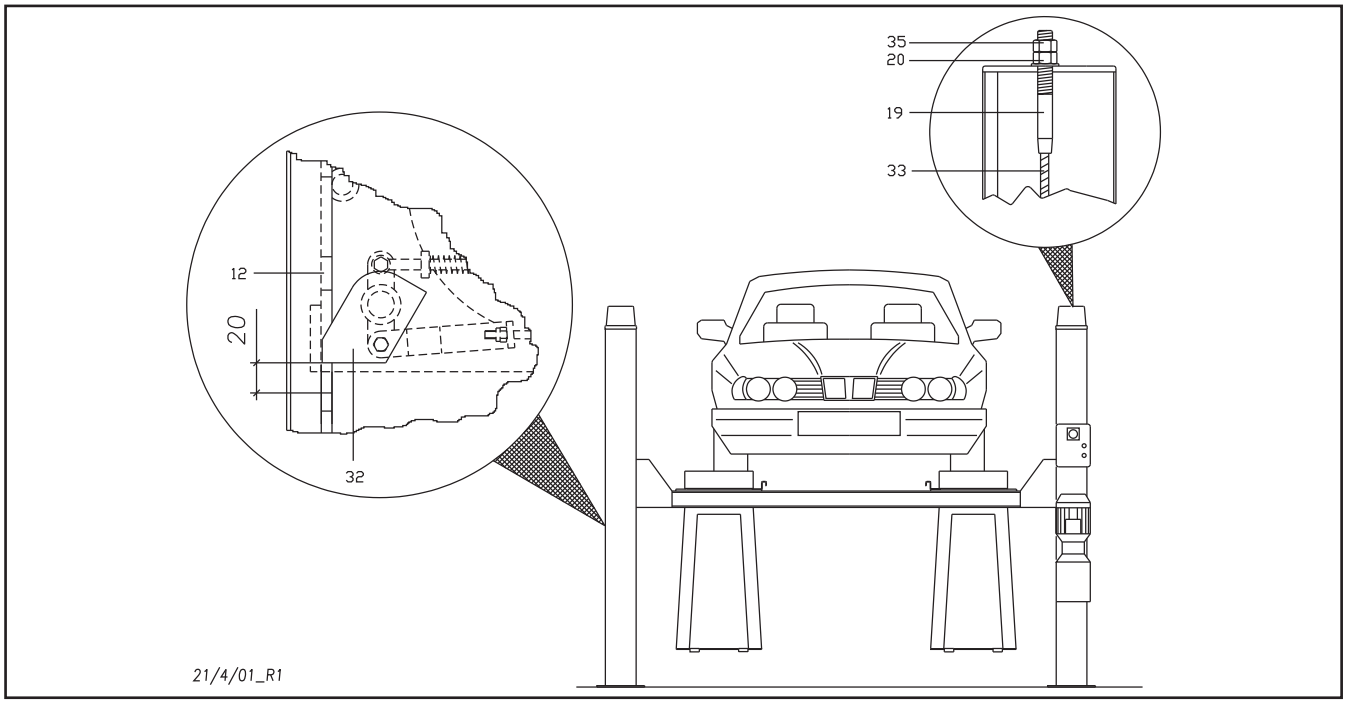


Fig.57 Adjusting the lift cables

MECHANICAL CHECKS

- Check that the cables are in correct position on the pulleys;
- Levelling and alignment;
- Tightness of bolts, unions and connections;
- Free movement of all moving parts;
- Cleaning of the different machine parts;
- Position of guards and protections.

ELECTRICAL CHECKS

- Correct connections in accordance with wiring diagrams;
- Earth connection of the lift;
- The operation of:
  - lifting limit switch,
  - cable slackening limit switch,
  - solenoid valve in the hydraulic system.

HYDRAULIC CHECKS

- Make sure the reservoir is filled with sufficient oil;
- Check for leaks;
- Make sure the cylinder is working properly.

N.B. If there is insufficient oil, top up the reservoir to the correct level.
See chapter 6 “MAINTENANCE” for details of the procedure.

CHECKING MOTOR ROTATION DIRECTION

Check that the motor is turning as indicated by the arrow on the control unit hydraulic pump; do this by running the machine momentarily (maximum 2 seconds to avoid damage).

If the hydraulic system is not working properly, consult the fault diagnosis chart in chapter 7.

SET-UP

WARNING

THE FOLLOWING OPERATIONS ARE TO BE PERFORMED EXCLUSIVELY BY TECHNICIANS FROM THE AUTHORISED SERVICE CENTRE specified on the title page.

- 1.No-load check (no vehicle on lift)

Check, in particular:
- that the LIFT and LOWERING buttons are working properly
- that the lift reaches its maximum elevation;
- that there are no undue vibrations in the posts or the cross-pieces;
- that the wedges fit properly into the safety rod slots;
- that the lift limit switch operates properly;
- that the lift cable limit switches are operating properly;
- that the electromagnets are working properly.

Perform the above checks and inspections during two or three complete lift and lowering cycles.

- 3. Checks with load. Repeat all the above checks with a vehicle on the lift.
- 4. After the checks with vehicle make a visual inspection of the lift and check that the nuts and bolts are tight for the second time.

CHAPTER 5 OPERATING PRINCIPLES AND USE

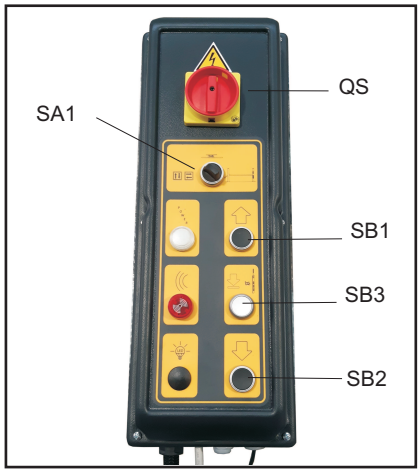


Fig.59

The lift operator controls are:

MAIN SWITCH (QS)
POSITION 0: the lift is not connected to the electrical supply; you can open the control panel and install a lockout on the main switch to prevent unauthorised use of the unit.
POSITION 1: the lift is receiving electrical power; the door of the control panel is locked and cannot be opened inadvertently.
LIFT / PLAY DETECTOR SELECTOR (SA1)
Allows the functionality deviation from the main lift to the play detector.
Turning the selector in hourly sense the left (LIFT) the cylinder of the main lift will be operating, instead turning in counterclockwise sense (PLAY DETECTOR) the cylinders of the play detector will be operating.
LIFT BUTTON (SB1)
“Operator present” type, 24 V; when the LIFT button is pressed the hydraulic control unit will start up.
LOWERING BUTTON (SB2)
Also this button is “operator present” type, 24V; when pressed, it activates the release magnet of the safety wedges and the lowering solenoid valve of the hydraulic control unit.
STOP BUTTON (SB3)
Operator present” type, 24 V; pressing the STOP button activates the lowering solenoid valve in the hydraulic control unit.

LIFTING

Set the main switch (QS) to 1 and press the LIFT button until the lift reaches the desired height.
During its travel, the safety wedge release lever will remain in the “rest” position (raised) so that the wedges automatically engage with each slot of the safety rods.

STOPPING

When a vehicle is stopped in the elevated position, the load must **NEVER** be supported by the lift cables, the load must instead be supported by the stopping wedges which must therefore be engaged automatically in the slots on the safety rods.
When you reach the desired height press the STOP button (SB3).
The movement will be halted automatically as soon as the wedges encounter the first safety rod slots during the initial lowering.

LOWERING

Press the "DOWN BUTTON" SB2 platforms will move up for an adjustable time and then automatically will be disengaged the safety wedges and activated the lowering solenoid valve.
Lowering will be stopped by lowering microswitch. In order to complete the lowering, the push button (SB2) will have to be released and push button (SB3) will have to be pressed. In the last part of the lowering an audible alarm will be heard to prevent from foot treading danger.

If the platform should encounter an obstruction during its lowering the sensors that activate the lift cable slack safety microswitches will operate and stop the lowering movement.
In this situation only the LIFT control is accepted. Note that during lowering cycles protection against the accidental falling of the vehicle is provided by the safety wedge controlled by the lift cable slack sensor (mechanical operation).

CHAPTER 6 MAINTENANCE

WARNING

Maintenance operations must be performed EXCLUSIVELY BY EXPERT PERSONNEL WITH A COMPLETE WORKING KNOWLEDGE OF THE LIFT.

When servicing the lift use all necessary or useful precautions to
PREVENT ACCIDENTAL STARTING OF THE UNIT:

- The main switch on the control panel **MUST BE LOCKED OUT IN POSITION "0"**; see figure 60.
- THE LOCKOUT KEY must be kept by the MAINTENANCE FITTER for the full duration of the work.

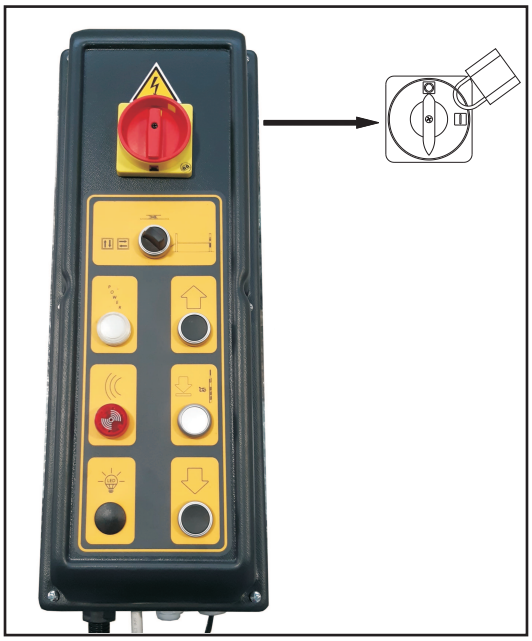


Fig.60

Remember:
- MAIN POSSIBLE POTENTIAL HAZARDS
- SAFETY INSTRUCTIONS IN CHAPTER 3 "SAFETY".

RISK OF ELECTRIC SHOCK
on the machine supply terminal box.

DO NOT ATTEMPT TO ADJUST OR LUBRICATE PARTS OF THE LIFT WHILE THEY ARE IN MOTION.
AFTER EACH MAINTENANCE INTERVENTION REMEMBER TO REFIT THE GUARDS AND REFIT OR REACTIVATE GUARDS AND PROTECTIONS THAT WERE REMOVED OR DISABLED TO MAKE THE MAINTENANCE WORK EASIER.

IMPORTANT
for optimal maintenance of the lift:
- use only original spare parts and the right tools for the job; make sure the tools are in good condition.
- Observe the maintenance intervals recommended in the manual; these times are guidelines and should be construed as the maximum intervals between each intervention.
- Properly executed preventative maintenance calls for constant attention and surveillance of the machine. Immediately check the cause of any anomalies such as undue noise, overheating, leakage of fluids, etc..

Pay particular attention to:
- the condition of the lifting organs (lift cables, cylinder, hydraulic power unit);
- and the safety devices (microswitches, safety wedges).

For correct maintenance refer to the following documents supplied by the lift manufacturer:
- complete functional diagram of the electrical equipment and ancillary equipment, together with indication of the power supply connections;
- hydraulic circuit diagram with list of components and pressure setting values;
- exploded view with all necessary information for ordering spare parts;
- list of possible causes of faults and recommended solutions (chapter 7 of the manual).

PERIODIC MAINTENANCE SCHEDULE

To keep the lift working at optimal efficiency levels observe the recommended maintenance schedule.

If you fail to perform maintenance at the recommend times the manufacturer isn't liable for any damage under the terms of the warranty.

NOTE:

The schedule indicated assumes normal operating conditions; in particularly hostile conditions, intervals between the operations should be reduced.

ALL MAINTENANCE WORK MUST BE PERFORMED WITH THE LIFT STATIONARY, THE POWER SUPPLY DISCONNECTED AND A LOCKOUT ON THE MAIN SWITCH.

EVERY MONTH...

1 - HYDRAULIC POWER UNIT.

- Check oil level using the dipstick fixed to the filler cap.
  Top up if necessary through the filler hole until the oil is at the recommended level. Refer to page 10 "SPECIFICATIONS" for information on the type of oil to use.
- After the first 40 hours of duty check the level of contamination of the filter and the oil.
  (Clean the filter and change the oil if contamination is significant).

2 - HYDRAULIC CIRCUIT

- Make sure there are no oil leaks from the various lines connecting the hydraulic power unit and the lift cylinder or from the lift cylinder seals.
  If you notice oil leaks from the cylinder check the seals and replace them if necessary.

3 - PULLEY LUBRICATION

- Fatten the pulleys where previewed (lubricator on the lower side of the pin) with grease AGIP MU EP 02 or equivalent (SHELL ALVANIA EP 2 or ESSO BEACON EP 2).

EVERY 3 MONTHS...

1 - ANCHOR BOLTS

Check the tightness of the anchor bolts in the baseplates with a torque wrench and make sure they are properly torqued.

2 - LIFT CABLES

- Check the tightening of the U bolts that hold the lifting cables (15 Nm).
- Check that the lift is levelled; if necessary adjust the cables tension.
- Check that the lock nuts of the cable tie rods and the lock nuts of the safety rods are tight.
- Check the condition of the pulleys and relative sheaves.
- Brush the lift cables with grease to avoid rusting and consequent weakening.Grease type: BRILUBE 30 or equivalent.
  The grease must be taken from sealed and/or well conserved packages
  Do not use grease that is too old or has undergone chemical changes to avoid irreversible damage to the lift cables.
- Check lift cable wear by measuring the diameter and checking for possible broken strands or other damage.

WARNING

THE STEEL CABLE HAS LIFTING AND SAFETY FUNCTIONS.
If in doubt or when you need to change the cables, CONTACT YOUR NEAREST AUTHORISED SERVICE CENTRE.

3 - HYDRAULIC PUMP

- Make sure that the hydraulic power unit pump does not change tone during steady-state operation and make sure that the pump fixing bolts are properly torqued.

4 - SAFETY SYSTEM

- Check the operation and efficiency of the safety devices and the wear of the safety wedges and safety rods. Oil the pivot pins of the safety wedges. If excessively worn, replace the wedges and/or the rods.

5 - TOP SURFACE OF THE CROSS-PIECES

Keep the top surface of the cross-pieces lubricated with a light film of grease for a better sliding movement of the movable platform.

EVERY 6 MONTHS...

1 - OIL

Check the oil for contamination or ageing.

Contaminated oil is the main cause of valve malfunctions and will reduce the working life of the gear pumps.

EVERY 12 MONTHS...

1 - GENERAL INSPECTION

- Visual inspection of all structural and mechanical parts to assure that all is fault-free and in good condition.

2 - ELECTRICAL SYSTEM

- Have the electrical system, including motor, wiring, limit switches, and control panel, checked over by a specialised electrician (CONTACT THE SERVICE CENTRE).

3 - HYDRAULIC SYSTEM OIL

Change the oil as follows:

- Lower the lift completely.
- Make sure that the hydraulic cylinder is fully retracted.
- Disconnect the power supply.
- Drain the oil from the circuit by unscrewing the drain plug at the bottom of the reservoir.
- Refit the drain plug.
- Fill the reservoir through the filler hole on the top.
- Make sure the oil is filtered.
- For oil types and characteristics refer to the technical specifications (chapter 2, page 10).
- Close the filler plug.
- Connect the lift to the power supply.
- Perform two or three lift—lowering cycles (to a height of 20 - 30 cm) in order to fill the circuit with oil.

Oil changes: use only recommended oil brands or equivalents; never use oil that has deteriorated because of excessively long storage.

Dispose of used oil as indicated in appendix “A” .

MAINTENANCE OF THE PAINTED SURFACES

It is well known that the paint protects the metallic parts. In order to assure this protection for a long time, it is absolutely necessary and important to keep the lift clean and to perform a regular maintenance.
Please especially take care of the runways where the following maintenance operations are compulsory:

- Prevent or repair the scratches and cracks which damage the paint coating. Materials stuck in the tyres may indeed cause the paint coating to come off.
- Immediately clean the runways in case of battery fluid, brake oil and other corrosive fluids.
- After using the lift, especially in winter, always dry (water contains salt) and clean the surfaces removing the dirt caused by the vehicle: gravel, earth, tar, salt etc.

The coating consists of thermosetting powder enamel and can only be treated with neutral products. Therefore please avoid using aggressive products and high pressure water cleaners.

IN CASE THESE RULES ARE NOT COMPLIED WITH, THE WARRANTY 12 MONTHS WILL NOT BE ACCEPTED.

CHAPTER 7 TROUBLESHOOTING

TROUBLESHOOTING GUIDE

Troubleshooting and possible repairs require absolute compliance with ALL THE SAFETY PRECAUTIONS indicated in chapter 6 “MAINTENANCE” and chapter 3 “SAFETY”.

POSSIBLE PROBLEMS AND SOLUTIONS

Problem	Possible cause	Solution
The lift does not rise when the pushbutton is pressed (motor does not run)	Burnt fuse	Replace fuse
	Line current does not arrive	Connect again
	Malfunction in the electric plant: -broken limit switch -burnt motor	Call Service Centre
The lift does not rise when the pushbutton is pressed (motor runs)	Not enough oil	Fill up oil level
	Drain solenoid valve opened	Check manual outlet or change it
	Max pressure valve working	Check the load and adjust the valve
	Leaks in the hydraulic circuit.	Repair the line
Lift continues to rise after having released the up pushbutton.	Faulty pushbutton.	Unplug the lift and call Service Centre
Lift does not descend	Foreign object	Remove object
	Solenoid valve blocked	Change it (call Service Centre)
	Malfunction in the electric plant	Call Service Centre
	Carriages still lean on security devices	Make the correct descent sequence
	Block valves have tripped.	Repair the hydraulic circuit damage.
The lift does not rise to the maximum height	Oil is not enough	Add oil into the power unit oil tank
After having released the up pushbutton, the lift stops and lowers slowly	Drain valve does not close because it is dirty	At the same time, set the rise and descent movements, to clean the valve
	Defective drain valve	Change (call Service Centre.
The power unit motor overheats	Motor malfunction	Call Service Centre
	Wrong voltage	Check voltage.
Power unit pump is noisy	Dirty oil	Change oil
	Wrong assembling	Call Service Centre
Oil leakage from cylinder.	Damaged gaskets	Change the damaged gaskets
	Dirt in the plant	Clean all parts Check the valves are not damaged.

APPENDIX A SPECIFIC INFORMATION

DISPOSAL OF USED OIL.
Used oil drained from the reservoir of the hydraulic power unit during oil changes is to be treated as a pollutant in accordance with the legislation in force in the country where the lift is installed.

SCRAPPING THE MACHINE

WHEN SCRAPPING THE MACHINE OBSERVE ALL PRECAUTIONS ILLUSTRATED IN CHAPTER 3, ADOPTED ALSO DURING MACHINE ASSEMBLY.

The machine can only be scrapped by authorised technicians, as in the case of assembly.
Used oil must be disposed off in compliance with the methods indicated in appendix “A”.
Metal parts of the lift can be disposed of as scrap ferrous material.
In all cases when the machine is scrapped all materials must be disposed in conformity with the laws in force in the country of installation of the machine.
Note also that for tax purposes the effective scrapping of the machine must be documented with reports and forms in compliance with the laws in force in the country of installation.

APPENDIX B SPARE PARTS

SPARE PARTS

The replacement of parts and repair interventions require the full observance of ALL SAFETY PRECAUTIONS listed in chapter 6 “Maintenance” and chapter 3 “SAFETY.

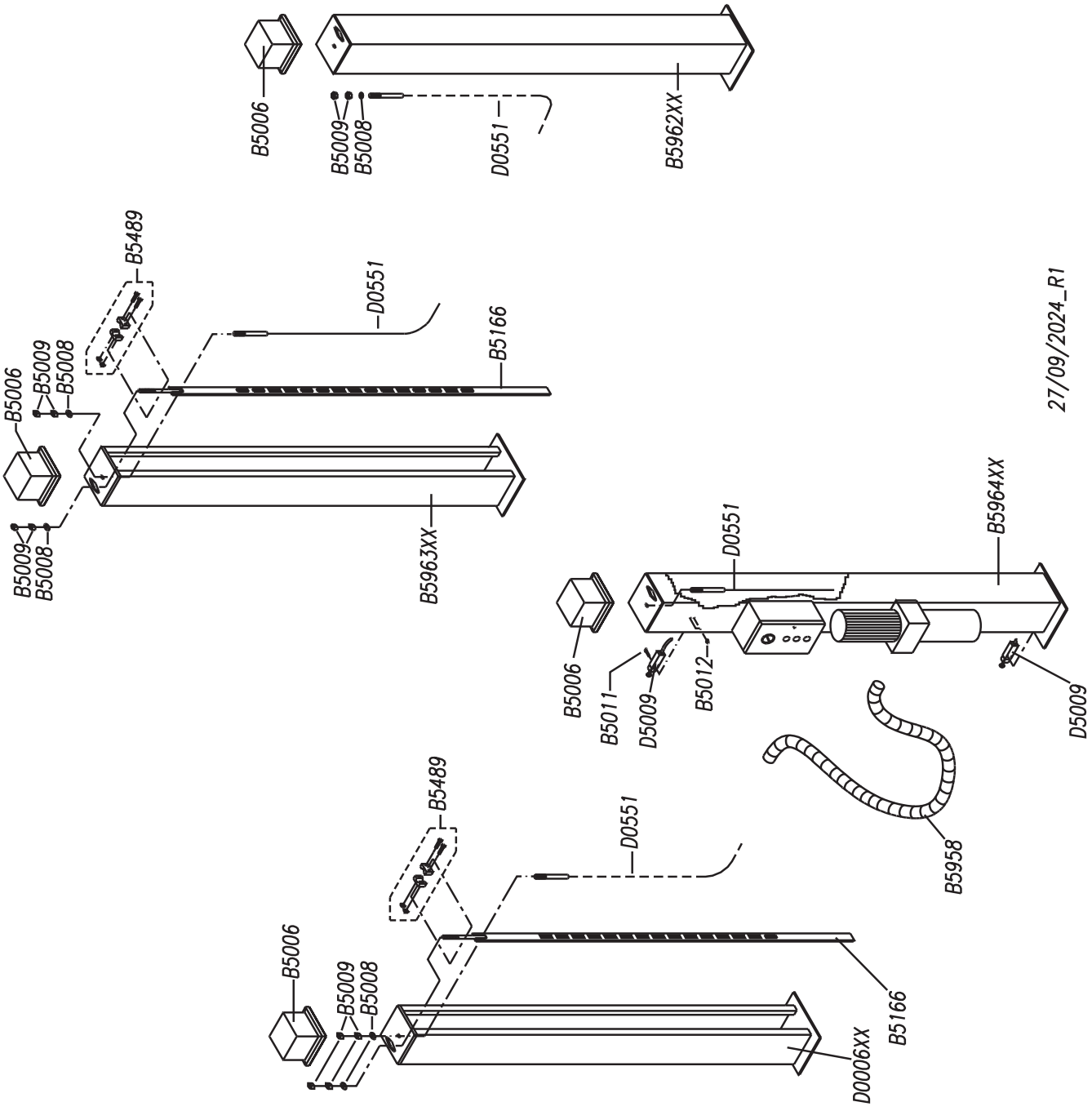
Take all necessary steps to **AVOID POWERING UP THE LIFT INADVERTENTLY:**
- the main switch on the control panel must be locked out in position 0;
- the lockout key must be kept by the maintenance fitter for the full duration of maintenance work.

ORDERING PROCEDURE FOR SPARE PARTS

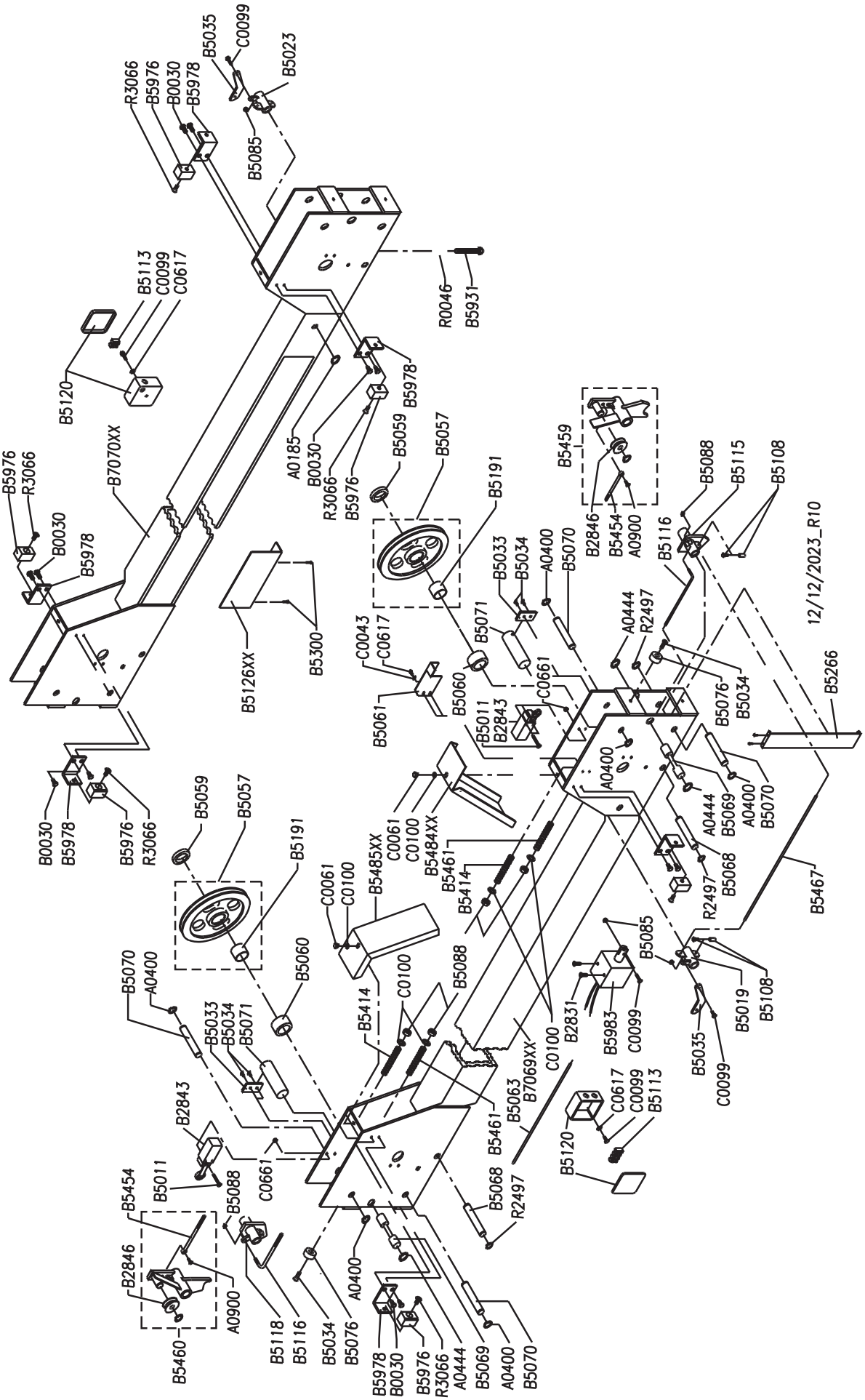
To order spare parts:
- specify the serial number and year of construction of your lift;
- specify the quantity required.

The order must be made to the licensed dealer specified.

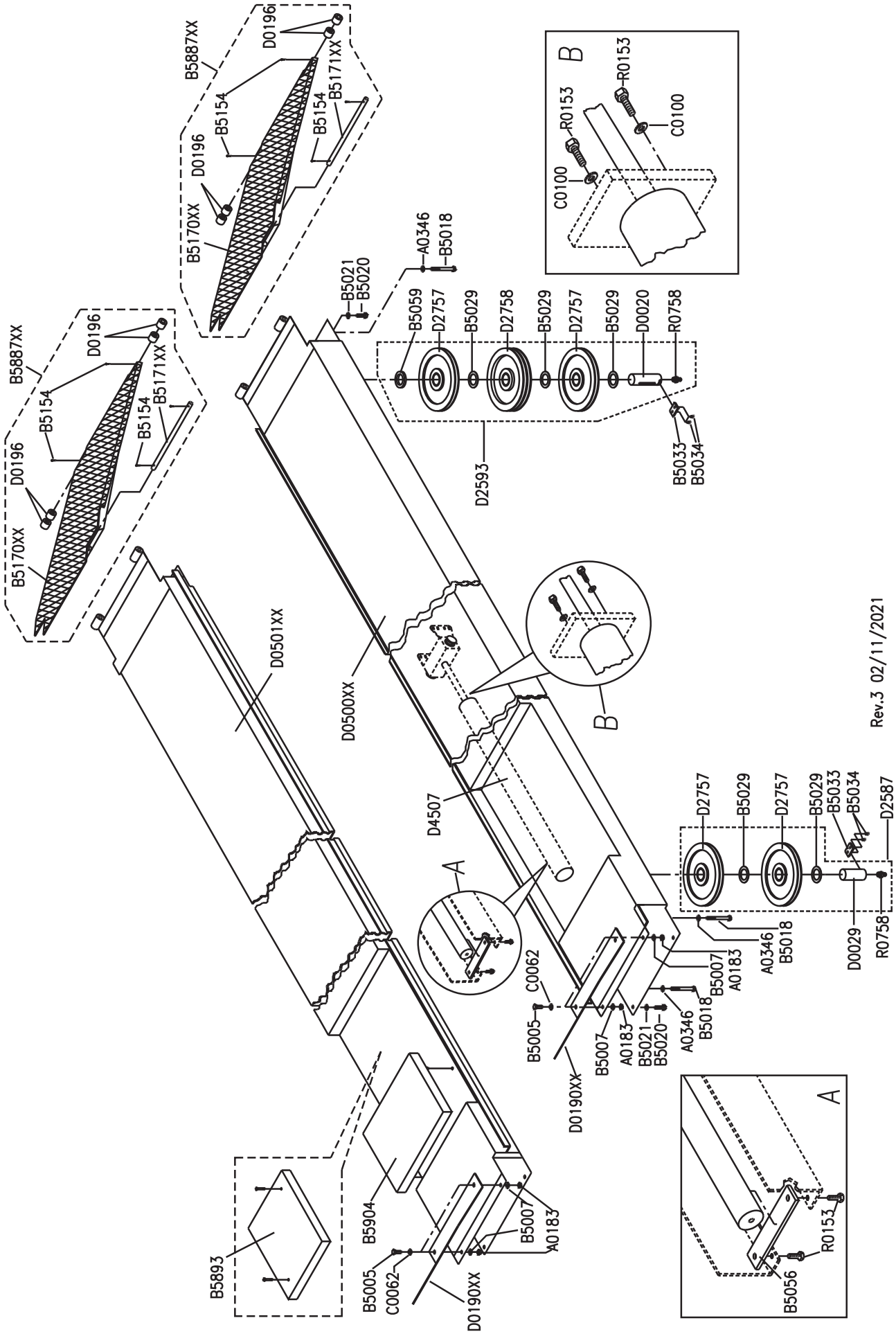
COLONNE	
POSTS	**SÄULEN**
COLONNES	**COLUMNAS**



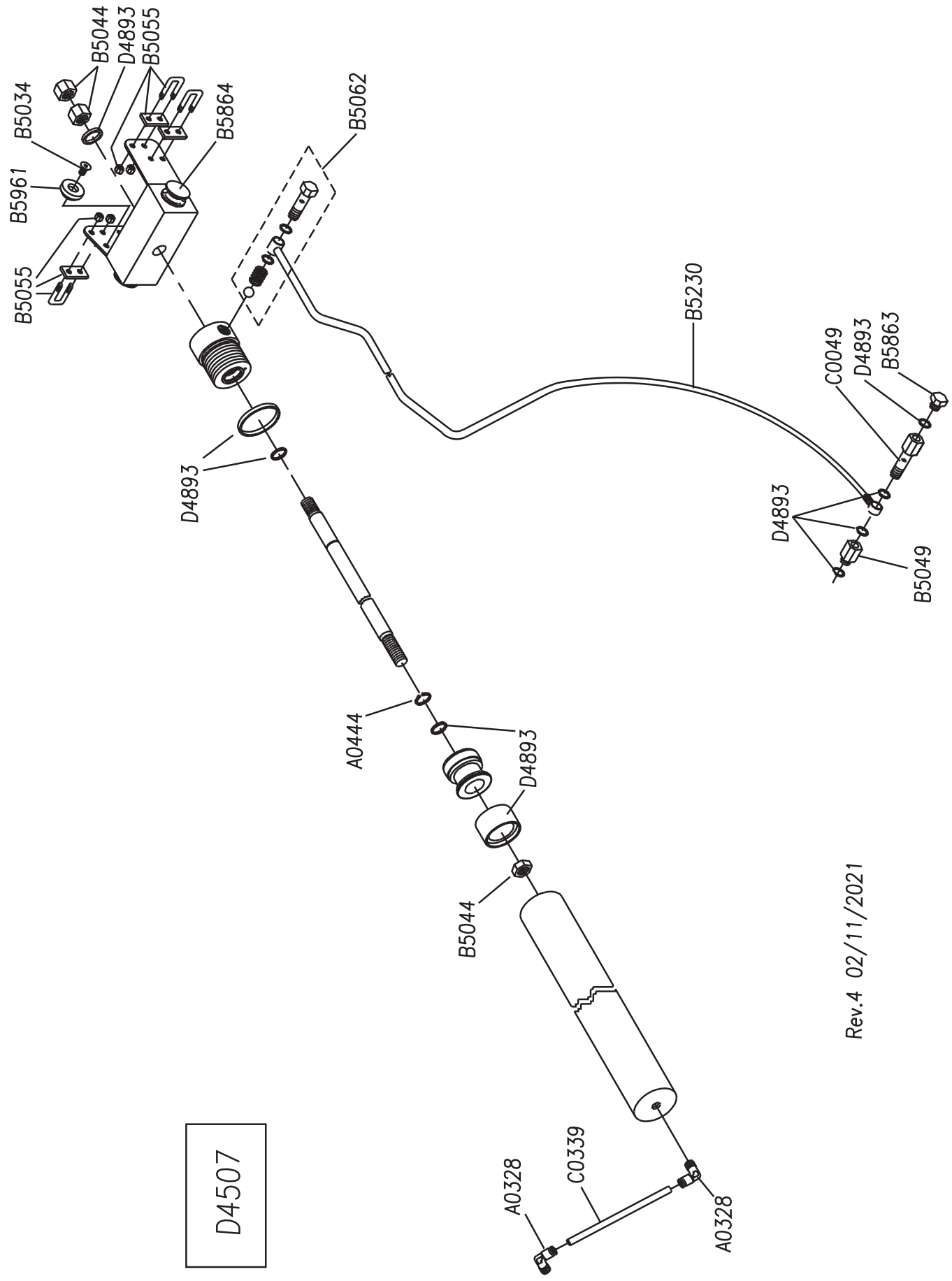
Traverse	
CROSSBEAM	**TRAVERSE**
TRAVERSE	**TRAVERSA**



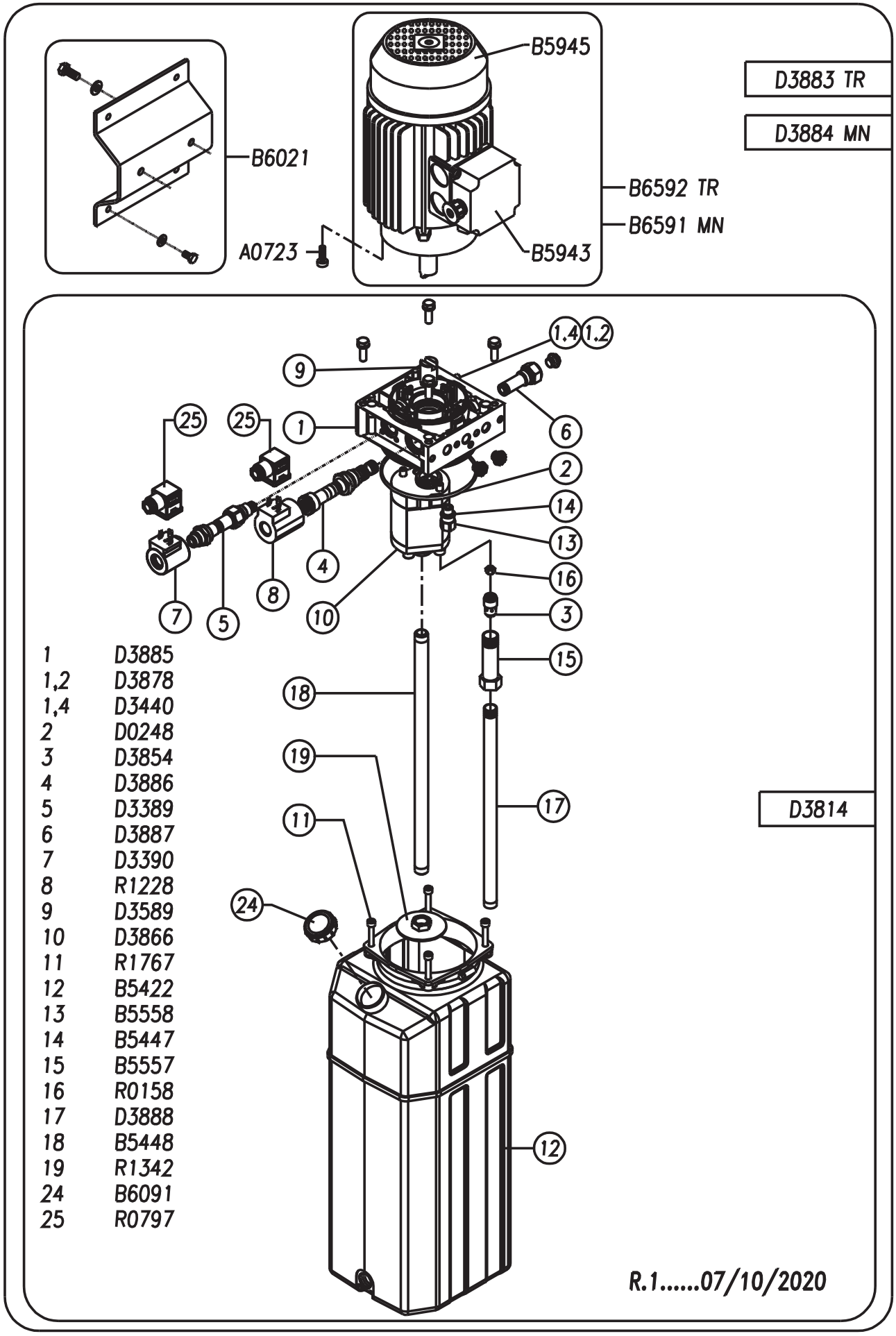
PEDANE	
PLATFORMS	**FAHRSCHIENE**
CHEMINS DE ROULEMENT	**PLATAFORMAS**



CILINDRO	
CYLINDER	**ZYLINDER**
VÉRIN	**CILINDRO**



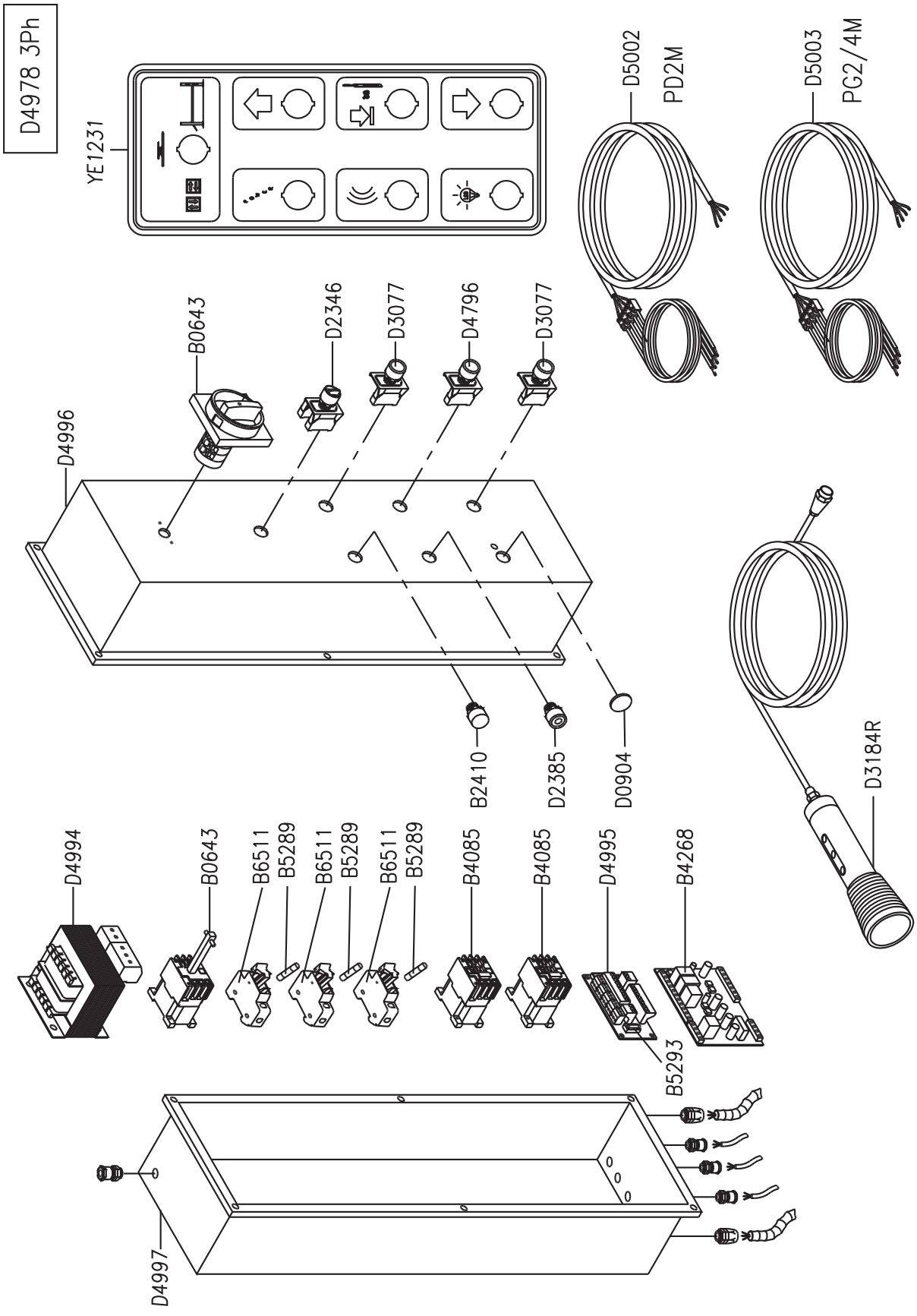
CENTRALINA OLEODINAMICA K3	
OLEODYNAMIC CONTROL UNIT K3	OELDYNAMISCHES SCHALTGEHÄUSE K3
CENTRALE HYDRAULIQUE K3	CENTRALITA OLEODINÁMICA K3

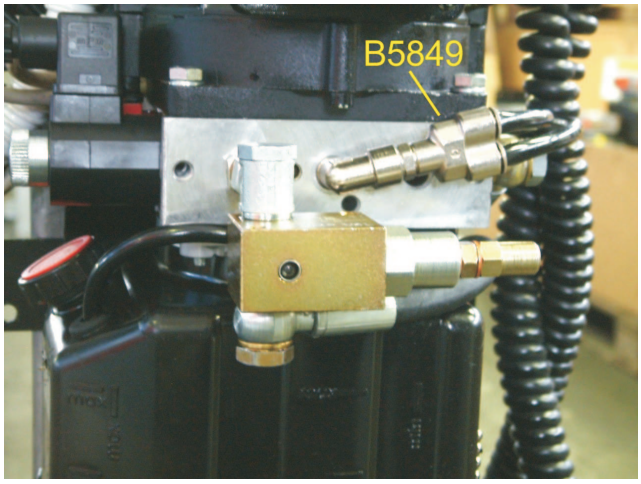


1	D3885
1,2	D3878
1,4	D3440
2	D0248
3	D3854
4	D3886
5	D3389
6	D3887
7	D3390
8	R1228
9	D3589
10	D3866
11	R1767
12	B5422
13	B5558
14	B5447
15	B5557
16	R0158
17	D3888
18	B5448
19	R1342
24	B6091
25	R0797

R.1.....07/10/2020

QUADRO ELETTRICO	
CONTROL PANEL	SCHALTTAFEL DREHSTROM
COFFRET ÉLECTRIQUE	

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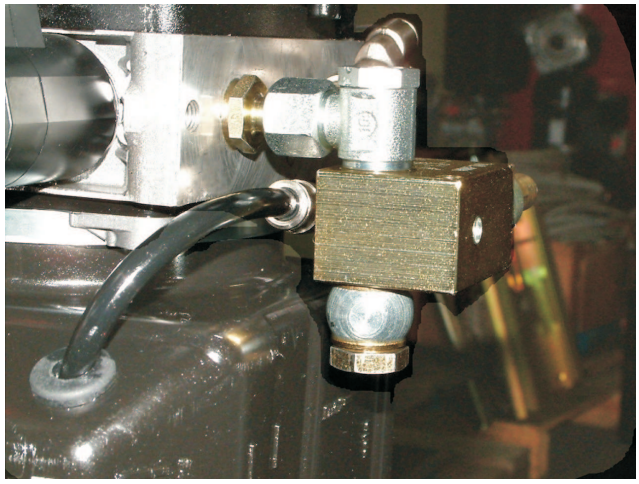

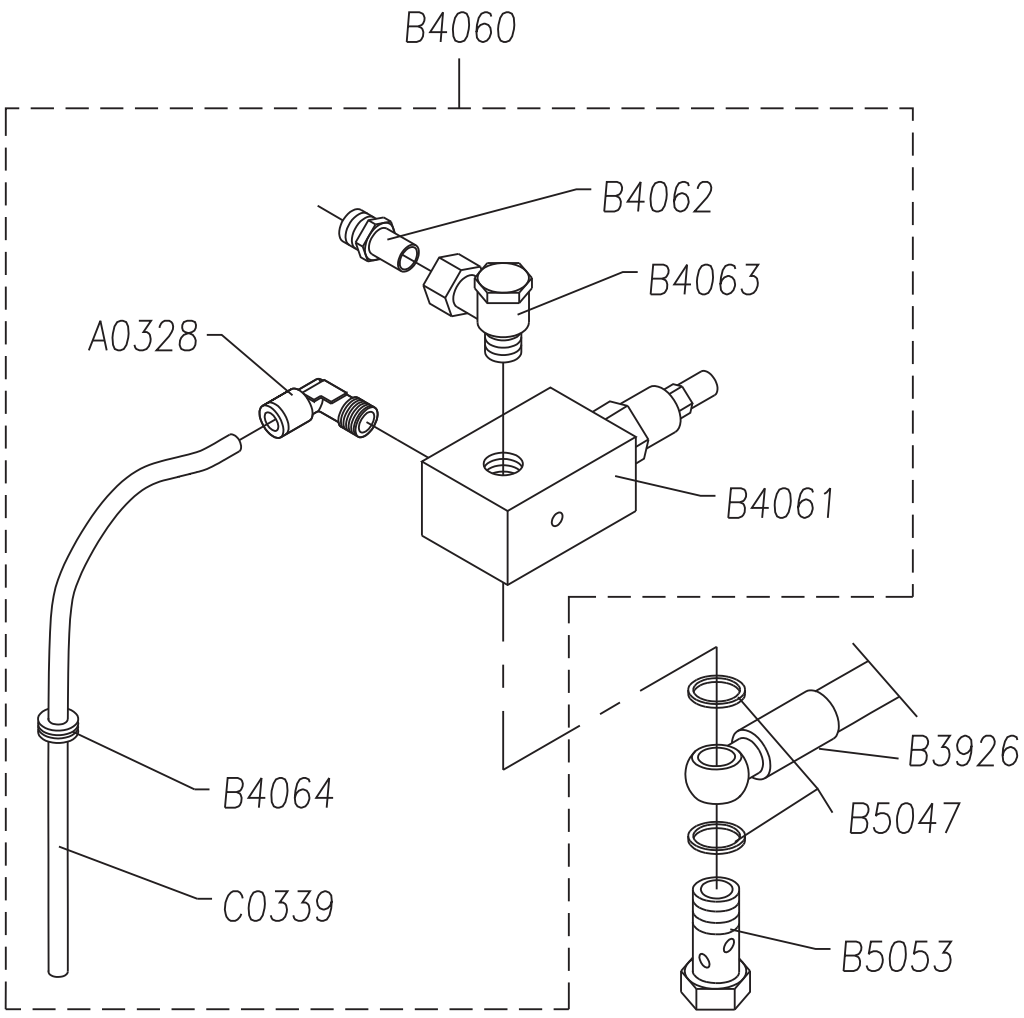
B4060
B4062
B4063
A0328
B4061
B4064
C0339
B3926
B5047
B5053

Part Code	Sugg	Descrizione	Description	Beschreibung	Description	Denominacion
A0183		DADO M10 UNI 5588*	NUT M10 UNI 5588	MUTTER M10 UNI 5588	ÉCROU M10 UNI 5588	TUERCA M10 UNI 5588
A0185		SEEGER E18 UNI 7435	SNAP RING E18 UNI 7435	SEEGER E18 UNI 7435	ANNEAU DE FIXAGE E18 UNI 7435	SEEGER E18 UNI 7435
A0328		RACCORDO “L” M 1/4X8	L-SHAPED COUPLING 1/4" M FOR PIPE Ø 8	“L” ANSCHLUSSKEGELG1/4"-Ø8	RACCORD “L” G 1/4" - Ø8	RACOR “L” 1/4" M PARA TUBO Ø 8
A0346		RONDELLA P 12X24 UNI 6592 ZB	WASHER 12 X 24 UNI 6592	UNTERLEGSCHEIBE 12 X 24 UNI 6592	RONDELLE Ø13X24 UNI 6592	ARANDELA 13X24
A0400		SEEGER E20 UNI 7435	SNAP RING E20 UNI 7435	SEEGER-RING E20 UNI 7435	CIRCLIPS E 20 UNI 7435	SEEGER E20 UNI 7435
A0444		SEEGER E25 UNI 7435	SEEGER E25 UNI 7435	SEEGER E25 UNI 7435	ANNEAU ÉLASTIQUE ØE 25	ARO ELÁSTICO ØE 25
A0723		VITE TCCE M8X20 UNI 5931 ZB	SCREW	SCHRAUBE	VIS	TORNILLO
A0900		VITE TSCE90°M6X18 UNI 5933 ZB	SCREW M6 X 18 UNI 5933	SCHRAUBE TSPEI M6 X 18 UNI 5933	VIS TFHC M6 X 18 UNI 5933	TORNILLO TSPEI M6X18 UNI 5933
B0030		VITE TE M8X16 UNI 5739 ZB	SCREW TE M8X16 UNI 5739	SECHSKANTSCHRAUBE M8X16 UNI 5739	VIS TH M8X16 UNI 5739	TORNILLO TE M8X16
B0643	*	INTERRUT.GENERALE 3X16A D22 @@	MASTER SWITCH 230/400	SCHALTER 230/400	INTERRUPTEUR GÉNÉRAL	INTERRUPTOR GENERAL
B2410	*	LAMPADA BIANCA 24V MM25	WITHE LAMP 24V	WEISSE LAMPE 24V	LAMPE BLANC 24V	LÁMPARABLANA 24V
B2831		VITE TSCE90°M6X14 UNI 5933 ZB	SCREW M6X14 UNI 5933	SCHRAUBE M6X14 UNI 5933	VIS M6X14 UNI 5933	TORNILLO M6X14 UNI 5933
B2843	*	MICROINTER.COMEPI FR1454 W02S	MICROSWITCH TYPE PIZZATO FR 1454	MIKROSCHALTER TYP PIZZATO FR 1454	FIN DE COURSE HAUT PIZZATO FR 1454	MICROINTERRUPTOR FR1454
B2846		PULEGGIA SENSORE FUNE 225I-32	PULLEY	SCHEIBE	POULIE	POLEA
B3926	*	TUBO R1AT L5,15 MANDATA PG4M	PRIMARY HOSE	SCHLAUCH	FLEXIBLE PRIMAIRE	TUBO
B4060	*	RIDUTTORE PRESSIONE PG COMPL.§	COMPLETE PRESSURE REDUCER	REGLER	RÉDUCTEUR	REDUCTOR
B4061	*	RIDUTTORE PRESSIONE PG	PRESSURE REDUCER	REGLER	RÉDUCTEUR	REDUCTOR
B4062		RACCORDO CODULO 10-1/4 RST TN1	CONNECTION 10-1/4" TN 126 - 10 LR	ANSCHLUSS	RACCORD	RACOR
B4063		RACCORDO ORIENT.DIN 2353 RST T	CONNECTION DIN 2353 TN 131 - 10 LR	ANSCHLUSS	RACCORD	RACOR
B4064		PASSACAVO IN GOMMA D11X8	RUBBER CABLE CLAMP 11X8	KABELBUCHSE	SERRE-CABLE	PRENSACABO
B4085	*	TELERUT.NO-4KW 24VCC MIG SAT45	CONTACTOR	FERNSCHALTER	CONTACTEUR	CONTACTO
B4268		KIT EL.PD2M SAT JC *	ELECTRIC BOARD	ELEKTROKARTE	CARTE ELECTRIQUE	PLACA ELECTRONICA
B5005		VITE TE M10X25 UNI 5739 ZB	SCREW TE M10 X 25	SCHRAUBE TE M10 X 25	VIS TH M10 X 25	TORNILLO TE M10X25
B5006		CARTER PST COLONNA 435-436	PLASTIC COVER	PLASTIKABDECKUNG	CAPOT PLASTIQUE	CUBIERTA DE PLÁSTICO
B5007		RONDELLA P 10X30 UNI 6593 ZB	WASHER 10 X 30 UNI 6593	UNTERLEGSCHEIBE 10 X 30 UNI 6593	RONDELLE PLATE 10 X 30 UNI 6593	ARANDELA 10X30 UNI 6593
B5008		RONDELLA P 21X37 UNI 6592 ZB	WASHER Ø21X37X3 UNI 6592	UNTERLEGSCHEIBE Ø21X37X3 UNI 6592	RONDELLE PLATE 21X37 UNI 6592	ARANDELA 21X37 UNI 6592
B5009		DADO MEDIO M20 UNI 5588 ZB	NUT M20 UNI 5588	MUTTER M20 UNI 5588	ECROU M20 UNI 5588	TUERCA M20 UNI 5588
B5011		VITE TCCE M5X35 UNI 5931 ZB	SCREW M5X35 UNI 5931	SCHRAUBE TCCE M5X35 UNI 5931	VIS TCCE M5X35 UNI 5931	TORNILLO TCCE M5X35 UNI 5931
B5012		DADO CIECO M5 UNI 5721 ZB	BLANK NUT M5 UNI 5721	MUTTER M5 UNI 5721	ECROU BORGNE M5 UNI 5721	TUERCA CIEGA M5 UNI 5721
B5018		VITE TE M12X100 PF UNI 5737 ZB	H.H. SCREW M12 X 100 UNI 5737	SCHRAUBE TE M12 X 100 UNI 5737	VIS TE M12 X 100 UNI 5737	TORNILLO TE M12X100 UNI 5737
B5019		AZIONAMENTO ZEPPA DX 430	PIN	BOLZEN	AXE	PERNO
B5020		VITE TE M12X25 UNI 5739 ZB	SCREW TE M12X25 UNI 5739	SCHRAUBE TE M12 X 25 UNI 5739	VIS TE M12X25 UNI 5739	TORNILLO TE M12X25 UNI 5739

B5021		RONDELLA DE 12,5 UNI 8842A ZB	WASHER OD Ø12 DIN 6798 A	UNTERLEGSHEIBE Ø12 UNI 6798A	RONDELLE DE Ø12 DIN 6798 A	ARANDELA DE Ø12 DIN 6798 A
B5023		AZIONAMENTO ZEPPA SX 435	PIN	BOLZEN	AXE	PERNO
B5029	*	DISTANZIALE PULEGGE 40X60X1	SPACER	DISTANZSTUECK	ENTRETOISE	DISTANCIADOR
B5033		LAMA FERMO PERNO 435-436 ZB	PIN STOPPING PLATE	ZAPFENSPERRBLATT	ARRÊTOIR	CHAPA CIERRA-PERNO
B5034		VITE TSCE90°M8X12 UNI 5933 ZB	SCREW TSPEI M8X12 UNI 5933	SCHRAUBE TSPEI M8X12 UNI 5933	VIS TPSCE M8 X 12 UNI 5933	TORNILLO TPSCE M8X12 UNI 5933
B5035		TIRANTE MAGNETE 430 ZB	MAGNET TIE ROD	ZUSTANGE MAGNETE	TIRANT POUR MAGNET	TIRANTE ELECTROIMÁN
B5044		DADO MEDIO M22X1,5 UNI 5588 ZB	NUT M22 X 1.5 UNI 5588	MUTTER M22 X 1,5 UNI 5588	ÉCROU M22 X 1,5 UNI 5588	TUERCA M22X1, 5 UNI 5588
B5047	*	RONDELLA BONDED 1/4" BSPP	GASKET WITH 1/4" SEAL	DICHTUNGSUNTERLEGSCHEIBE MIT DICHTUMG 1/4"	RONDELLE D'ÉTANCHÉITÉ 1/4"	ARANDELA DE CIERRE CON GUARNICIÓN 1/4"
B5049		PROLUNGA M-F 1/4 L=20	EXTENSION	DISTANZSTÜCK	RALLONGE	DISTANCIADOR
B5055		MORSETTO 435-436	CLAMP	KLEME	BORNIER	MORDAZA
B5056		LAMA APPOGGIO CIL.430-441 ZB	CYLINDER SUPPORT	ZYLINDERABLAGE	APPUYE CYLINDRE	APOYO CILINDRO
B5057	*	PULEGGIA 1G D230X40 GHIS+BRON.	1-RACE PULLEY 230 X 40+BUSHING	RIEMENSCHEIBE 230X40 1 KEHLE	POULIE 1 GORGE 230X40+COUSSINET	POLEA 1 CANAL 230X40+COJINETE
B5059	*	DISTANZ.PULEGGIA H=10	SPACER H=10	DISTANZSTUECK H=10	ENTRETOISE H=10	DISTANCIADOR H=10
B5060	*	DISTANZ.PULEGGIA H=26	SPACER H=26	DISTANZSTUECK H=26	ENTRETOISE H=26	DISTANCIADOR H=26
B5061		CAMMA AZIONA MICRO 436 ZB	LIMIT SWITCH ACTUATOR	ENDSCHALTERTIEB	CAME DE FIN DE COURSE	ACCIONADOR FINAL DE CARRERA
B5062	*	KIT VALV.BLOCCAG.CIL.C120-436	CYLINDER SAFETY VALVE ASSEMBLY	ZYLINDERSPERRVENTIL	ENSEMBLE CLAPET PARACHUTE	KIT VÁLVULA DE BLOQUEO
B5063		TIRANTE PERNO AZION.SX 441	LEFT PIN BOLT	SPANNSTANGE DES ANTRIEBSZAPFENS LINKS	TIRANT POUR GOUJON D'ACTIONNEMENT SX	TIRANTE PERNO ACCIONAMIENTO
B5068		PERNO ANTISCARRUCOL.D16X99 ZB	SAFETY PIN Ø16X101	STIFT Ø16X101	AXE DE MAINTIEN DE CÂBLE Ø16X101	PERNO ANTI-DESCARRILAMIENTO Ø16X101
B5069		PERNO GUIDA ASTE SICUR.436 ZB	SAFETY ROD PIN	STIFT	AXE GUIDE-CRÉMAILLÈRE	PERNO GUÍA BARRA DE SEGURIDAD
B5070		PERNO D20X99 436 ZB	PIN Ø20X101	STIFT Ø20X101	AXE Ø20X101	PERNO Ø20X101
B5071		PERNO PULEG.TRAV.D40X104 436	CROSSPIECE PULLEY PIN Ø40 X 104	STIFT Ø40 X 104	AXE DE POULIE DE TRAVERSE Ø 40X104	PERNO POLEA TRAVESAÑO Ø40X104
B5076	*	PATTINO POSTERIORE D35X17 436	REAR SHOE Ø35 X 17	GLEITSTUECK HINTEN Ø35 X 17	PATIN ARRIÈRE Ø35X17	PATÍN POSTERIOR Ø35X17
B5085		DADOBLK BASSO M6 UNI 7474 ZB	SELF-LOCKING NUT M6	SELBSTSICHERNDE MUTTER M6	ECROU FREIN M6 UNI 7474	TUERCA AUTOBLOCANTE M6 UNI 7474
B5088		DADOBLK BASSO M8 UNI 7474 ZB	NUT M8 UNI 7474	MUTTER BLOCK. M8 UNI 7474	ECROU FREIN M8 UNI 7474	TUERCA AUTOBLOCANTE M8 UNI 7474
B5108		MORSETTO PER CAVO D2,5 436	CABLE CLAMP Ø2.5 MM	KABELKLEMME Ø2,5 MM.	SERRE-CÂBLE Ø2,5 MM	MORDAZA PARA CABLE Ø2,5 MM.
B5113		MORSETTIERA 12P MM2,5 E100PA 4	4-POLE TERMINAL BOARD	KLEMMLEISTE MAMMUTH 4 POLE KOMMANDOSEITE	BOÎTE À BORNES MAMMUTH 4 PÔLES	JUEGO TERMINALES MAMMUTH 4 POLOS T.L.C.
B5115		ZEPPA SERV.DX 436 ZB	RIGHT AUXILIARY WEDGE	HAMMER RECHTS	MARTEAUX DE SERVICE-DROITE	CUÑA DE SERVICIO DCHA.
B5116		TIRANTE ZEPPA 436 ZB	BENT TIE ROD	ZUGSTANGE	TIRANT COUDÉ	TIRANTE ACODADO
B5118		ZEPPA SERV.SX 436 ZB	LEFT AUXILIARY WEDGE	HAMMER LINKS	MARTEAUX DE SERVICE-GAUCHE	CUÑA DE SERVICIO IZDA.
B5120		SCATOLA DERIVAZ.TRAV.L.O.430	OPERATOR SIDE CROSSPIECE CONNECTOR BLOCK	UMLEITERDOSE	COMMANDEZ LE BORNIER LATÉRAL DE CROSSPIECE	CAJA DE DERIVACIÓN T.L.O.
B5126XX		CARTER PROTEZIONE MAGNETI	MAGNET PROTECTION CRANKCASE	ABDECKUNG MAGNETSCHUTZ	PROTECTION MAGNETS	CARTER PROTECCIÓN ELECTROIMÁN
B5154		COPIGLIA D3X40 UNI 1336	ZINC-PLATED COTTER PIN Ø3X40	VERZINKT SPLINTE Ø3X40	GOUPILLE Ø3X40 GALVANISÉE	PASADOR Ø3X40 ZINCADO

B5166		ASTA SICUREZZA 443 ZB	SAFETY ROD	KLINKENATANGE	CRÉMAILLÈRE DE SÉCURITÉ	BARRA DE SEGURIDAD
B5170XX		RAMPA DI SALITA	RISE RAMP	AUFFAHRRAMPE	RAMPE DE MONTÉE	RAMPA DE ACCESO
B5171XX		ASTA PER RAMPA DI SALITA	DRIVE ON RAMP PIN	BEFESTIGUNGSBOLZEN	TIGE CHARNIERES	PASADOR BISAGRA
B5191	*	BRONZINA D40X44X40MBI C85 404	BUSHING D40X44X40 MBI C85	LAGERBUCHSE D40X44X40 MBI C85	COUSSINET D40X44X40 MBI C85	COJINETE D40X44X40 MBI C85
B5230		TUBO FLESS.CIL.450JC65 L=6100				
B5266		CAMMA AZION.MICRO 442LP-443 ZB	LIMIT SWITCH ACTUATOR	ENDSCHALTERTIEB	CAME DE FIN DE COURSE	ACCIONADOR FINAL DE CARRERA
B5289	*	FUSIBILE 10X38 1A AM RITARDATO	FUSE 10X38 1A AM	SCHMELZSICHERUNG 10X38 1A AM	FUSIBLE 10X38 1A AM	FUSIBILE 10X38 1A AM
B5293	*	FUSIBILE 5X20 4A AM RITARDATO	FUSE 5X20 4A T	SCHMELZSICHERUNG 5X20 4A T	FUSIBLE 5X20 4A T	FUSIBILE 5X20 4A T
B5300		VITE TCTC 3,9X19 UNI 69543	SCREW 3,9X19	SCHRAUBE TCTC 3,9X19 UNI 69543	VIS TCTC 3,9X19 UNI 69543	TORNILLO TCTC 3,9X19 UNI 69543
B5414	*	MOLLA RICHIAMO MARTELLETTO 460	SRING	FEDER	RESSORT	MUELLE
B5422		SERBAT.L12 PVC NERO CENTR.K3	TANK	BEÄHELTER	RÉSERVOIR	DEPÓSITO
B5447		RONDELLA BONDED M12 GM504	WASHER	UNTERLEGSCHEIBE	RONDELLE	ARANDELA
B5448		TUBO ASPIRAZ.3/8 MOSTEN L=355	DRAIN PIPE	ABLASSROHR	TUBE DE RETOUR	TUBO DE DESCARGA
B5454		TIRANTE TASTAFUNE 435	ROPE -FEELER TIE ROD	ZUGSTANGE SEILTASTER	TIRANT DE PALPEUR DE CÂBLE	TIRANTE
B5459	*	ZEPPA SIC.DX TASTA FUNE 436 ZB	RIGHT ROPE -FEELER SENSOR	SEILABTASTSENSOR RECHTS	PALPEUR DE CÂBLE DROIT	PALPEUR DE CÂBLE DROIT
B5460	*	ZEPPA SIC.SX TASTA FUNE 436 ZB	LEFT ROPE -FEELER SENSOR	SEILABTASTSENSOR LINKS	PALPEUR DE CÂBLE GAUCHE	SENSOR CABLE IZDA.
B5461	*	MOLLA SENSORE FUNE 437-450T	WEDGE RETURN TOP SPRING	FEDER	RESSORT	MUELLE
B5467		TIRANTE PERNO AZION.SX 430BL	LEFT PIN BOLT	SPANNSTANGE DES ANTRIEBSZAPFENS LINKS	TIRANT POUR GOUJON D'ACTIONNEMENT SX	TIRANTE PERNO ACCIONAMIENTO
B5484XX		CARTER TRAVERSA L.C.430-450N	CROSSPIECE CASING	GEHÄUSE	CARTER TRAVERSES	CÁRTER
B5485XX		CARTER TRAVERSA 430-450N	CROSSPIECE CASING	GEHÄUSE	CARTER TRAVERSES	CÁRTER
B5489		CORPO COLLARE SINGOLO D19 2PZ#	SINGLE COLLAR BODY Ø19	KÖRPER EINZELNER BUNDRING Ø19	CORP	CUERPO
B5557		COLONNETTA F-F 3/8" H=120 SCAR	THREADED	VERLÄNGERUNG	RALLONGE	TUBO DE ROSCA
B5558		COLONNETTA FRANGIFLUSSO M12X1	THREADED	VERLÄNGERUNG	RALLONGE	TUBO DE ROSCA
B5863		VITE FORATA 1/4" X MANOMETRO	HOLED SCREW ¼ FOR GAUGE	DECKEL	VIS CREUSE	TAPÓN
B5864		GIOGO ATTACCO FUNI 443LT	BEAM	ZYLINDERZUGSEIL	PALONNIER	YUGO DE APOYO
B5887XX		KIT RAMPA DI SALITA	LIFT RAMP KIT	SET AUFFAHRRAMPE	KIT RAMPE DE MONTÉE	KIT RAMPA DE ACCESO
B5893		COPERTUR.INC.450ATLT 536MM ZB	RECESS COVER	DECKEL	COUVERCLE	TAPA
B5904		TAMPONAMENTO 443JC 340MM ZB	PLUGGING ELEMENT	DECKEL	COUVERCLE	TAPA
B5931		VITE TE M12X100 UNI 5739 ZB	SCREW M12X100 UNI 5739	SCHRAUBE M12X100 UNI 5739	VIS M12X100 UNI 5739	TORNILLO M12X100 UNI 5739
B5943		COPERCHIO MORSETT.MOT.CSM	MOTOR TERMINAL BOARD COVER	KLEMMENBRETTABDECKUNG	COUVERCLE BORNIER	TAPA CAJA DE BORNES
B5945		COPRIVENTOLA MOTORE 90L CSM	MOTOR AIR-CONVEYOR	LUEFTERABDECKUNG	PROTECTION DU VENTILATEUR	PROTECCION VENTILADOR
B5961	*	PATTINO GIOGO	SLIDING PAD	GLEITSCHUH	PATIN	PATÍN
B5962XX		COLONNA 4	POST 4	SÄULE 4	COLONNE 4	COLUMNA 4
B5963XX		COLONNA 3	POST 3	SÄULE 3	COLONNE 3	COLUMNA 3
B5964XX		COLONNA 1: COMANDO	POST 1: CONTROL	BEDIENUNGSSÄULE	COLONNE 1 (MOTRICE)	COLUMNA 1: MANDO
B5976	*	PATTINO LATERALE 443SR	SIDE SLIDING PAD	GLEITSCHUHE	PATIN	PATÍN

B5978		SUPPORTO PATTINO 443SR ZB	SLIDE PAD SUPPORT	HALTERUNG	SUPPORT	SOPORTE
B5983	*	EL.MAGN.TT10 24VAC L=230	ELECTROMAGNET TT10 24VAC L=230	ELEKTROMAGNET TT10 24VAC L=230	ELECTRO-AIMANT TT10 24VAC L=230	ELECTROIMÁN TT10 24VAC L=230
B6021		KIT STAFFA SUPPORTO CENTR.9005	SUPPORT BRACKER KIT	HALTERUNGSBÜGELSET	SUPPORT COMPLET AVEC VIS	KIT ESTRIBO SOPORTE
B6091		TAPPO SERBATOIO X CENTR.K3	TANK PLUG	TANKVERSCHLUß	BOUCHON DE RÉSERVOIR	TAPÓN DEPÓSITO
B6511		PORTAFUSIBILE 10X38 WIMEX PCH1	FUSE CARRIER 10X38 WIMEX PCH10X38	SCHMELZSICHERUNGHALTER	PORTE-FUSIBLE 10X38 WIMEX PCH 10X38	PORTAFUSIBLES 10X38 WIMEX PCH1
B6591	*	MOT.B14 230/50-60M 2,2KW K3	MOTOR B14 230/50-60 1PH 2,2KW-K3	ELEKTRO-MOTOR B14 230/50-60M 2,2KW	MOTEUR B14 230/50-60M 2,2KW	MOTOR ELÉCTRICO 230/50-60M 2,2KW
B6592	*	MOT.B14 230-400/50-60T3KW4C.K3	MOTOR B14 230-400/50T 3KW 4CO.K3	ELEKTRO-MOTOR B14 230-400/50T 3KW 4CO.K3	MOTOR B14 230-400/50T 3KW 4CO.K3	MOTOR ELÉCTRICO B14 230-400/50T 3KW 4CO.K3
B7069XX		TRAVERSA L.C.526JC	CROSSPIECE	TRAVERSE	TRAVERSE	TRAVESAÑO
B7070XX		TRAVERSA L.O.526JC	CROSSPIECE	TRAVERSE	TRAVERSE	TRAVESAÑO L.O.
C0043		VITE TE M6X10 UNI 5739 ZB	SCREW TE M6X10 UNI 5739	SECHSKANTSCHRAUBE M6X10 UNI 5739	VIS TH M6X10 UNI 5739	TORNILLO TE M6X10 ZINCADO
C0049		TAPPO M 1/4	PLUG M1/4	SCHRAUBE 1/4"	BOUCHON RENIFLARD 1/4"	TORNILLO CON ORIFICIO 1/4"
C0061		VITE TE M8X10 UNI 5739 ZB	SCREW TE M8X10 UNI 5739	SECHSKANTSCHRAUBE M8X10 UNI 5739	VIS TH M8X10 UNI 5739	TORNILLO M8X10 UNI 5739
C0062		RONDELLA P 10,5X21 UNI6592 ZB	WASHER Ø10,5X21 UNI 6592	SCHEIBE Ø10,5X21 UNI 6592	RONDELLE Ø10,5X21 UNI 6592	ARANDELA PLANA Ø10 5X21
C0099		VITE TE M6X20 UNI 5739 ZB	SCREW M6X20 - 8.8	SCHRAUBE M6X20 8.8	VIS TH M6 X 20 UNI 5739	TORNILLO TE M6X20 UNI 5739
C0100		RONDELLA P 8,4X16X1,6 6592 ZB	WASHER Ø8,4X17 UNI 6592	SCHEIBE Ø8,4X17 UNI 6592	RONDELLE Ø8,4X17 UNI 6592	ARANDELA Ø8 ZINCADA
C0339		TUBO RILSAN PA12 8X6 NERO	RILSAN HOSE D8X6	SCHLAUCH D.8X6	TUYAU RILSAN D.8X6	TUBO RILSAN Ø8X6
C0617		RONDELLA P 6,4X12 UNI 6592 ZB	WASHER Ø6,4X12,5 UNI 6592	SCHEIBE Ø6,4X12,5 UNI 6592	RONDELLE Ø6,4X12,5 UNI 6592	ARANDELA Ø6,4X12,5 UNI6592
C0661		DADO ALTO M5 UNI 5587 ZB	NUT M5 UNI 5587	MUTTER M5 UNI 5587	ECROU M5 UNI 5587	TUERCA M5 UNI 5587
D0006XX		COLON.4 443SR	POST 4	SÄULE 4	COLONNE 4	COLUMNA 4
D0020		PERNO FRESATO SEDE+INGR.L=121	PIN FOR LUBRIFICATOR L=121	STIFT FUR SCHMIRNIPPEL L=121	AXE PUOR GRAISSEUR L=121	PERNO POR ENGRASADOR L=121
D0029		PERNO FRESATO SEDE+INGR.L=92	PIN	BOLZEN	AXE	PERNO
D0190XX		FERMARUOTA 435-436-437-443	WHEEL STOP	RADBLOCKIERUNG	ARRET-ROUES	TOPE DE RUEDA
D0196		RULLO RAMPA L=25 D40 480 ZB	RAMP ROLLER	FFUEHRUNGSBUCHSE	ROULEAU RAMPE	RODILLO RAMPA
D0248		O'RING 4437 110,7X3,53 NBR70	O'RING	O'RING	JOINT TORIQUE	EMPAQUE
D0500XX		PEDANA L.C.450JC65				
D0501XX		PEDANA L.O.450JC65				
D0551	*	TIRANTE+FUNE D11 450JC65	TIE ROD			
D0904		TAPPO COPRIFORO PVC Ø22	PLUG	DECKEL	BOUCHON	TAPÓN
D2346		SEL.LEVA 0/1 D22 1XNO+NEROIP67	SELECTOR	UMSCHALTER	SÉLECTEUR	SELECTOR
D2385	*	BUZZER LED 24VAC/DC D22	BUZZER	BUZZER	BUZZER	BUZZER
D2587		KIT PACCO 2PULEG.430-443JC	PULLEYS KIT	RIEMENSCHEIBENSATZ	KIT POULIES	JUEGO DE POLEA
D2593		KIT PACCO 3PULEG.430-443JC-450	PULLEYS KIT	RIEMENSCHEIBENSATZ	KIT POULIES	JUEGO DE POLEA
D2757		PULEGGIA 1G D230X23 ACC+BRONZ.	1-RACE PULLEY Ø230X23 + BUSCHING	RIEMENSCHEIBE Ø230X23 1 KEHLE	POULIE 1 GORGE Ø230X23+COUSSINET	POLEA 1 CANAL Ø230X23+COJINETE

D2758		PULEGGIA 2G D230X31 ACC+BRONZ.	2-RACE PULLEY Ø230X31 + BUSCHING	RIEMENSCHEIBE 230X31 2 KEHLE	POULIE 2 GORGE 230X31+COUSSINET	POLEA 2 CANAL 230X31+COJINETE
D3077	*	PULSANTE D22 1XNO NERO IP67	PUSH BUTTON	DRUCKKNOPF	BOUTON	PULSADOR
D3184R		TORCIA LED PG+CAVO+PROTEZIONE	TORCH FOR PLAY DETECTOR	KOMPLETTE HANDLAMPE	TORCHE	SOPLETE
D3389	*	VALV.CON EMERGENZA SRM '17	ELECTRO-VALVE	ELEKTROVENTIL	ELECTROVANNE	ELECTROVÁLVULA
D3390	*	BOBINA 24VDC 20W '17	SOLENOID VALVE COIL	SPULE ELEKTROVENTIL	BOBINE ELECTROVANNE	BOBINA ELECTROVÁLVULA
D3440		VALVOLA MAX VSBN-08S 260 BAR	MAX. PRESSURE VALVE	UEBERDRUCKVENTIL	CLAPET DE PRESSION MAX.	VALVULA DE MAXIMA PRESION
D3589		GIUNTO COLLETTORE-MOTOR.K3 PGB	CONNECTING PUMP K3	GELENK PUMPE K3	ACCOUPLEMENT DE POMPE K3	ACOPLAMIENTO BOMBA K3
D3814		CENTR.KE0 5CC 443JC-450JC '18	HYDRAULIC POWER UNIT	HYDRAULIK GERAET	CENTRALE HYDRAULIQUE	CENTRALITA OLEODINÁMICA
D3854		VALVOLA STF38 9L/MIN	VALVE	VENTIL	SOUPAPE	VÁLVULA
D3866		POMPA 18GH 5CC+VITI '18	PUMP	PUMPE	POMPE	BOMBA
D3878		VALVOLA DI RITEGNO VUSS15	CHECK VALVE	RUECKSCHLAGVENTIL	CLAPET ANTI-RETOUR	VÁLVULA DE RETÉN EN CAVIDAD
D3883		CEN.K3 230-400/50T 3KW 443ATLT	GEARCASE	GERAET	CENTRALE	CENTRALITA
D3884		CEN.K3 230/50-60M2,2KW 443ATLT	GEARCASE	GERAET	CENTRALE	CENTRALITA
D3885		COLLETTORE KE VSBN 175-345	MANIFOLD	KOLLEKTOR	COLLECTEUR	COLECTOR
D3886		VALV.V3D-DT 3/2 DI SCAMBIO	VALVE V3D-DT 3/2	VENTIL V3D-DT 3/2	SOUPAPE V3D-DT 3/2	VÁLVULA V3D-DT 3/2
D3887		TAPPO CAVITÀ TM3 1/4"BSPP	PLUG	DECKEL	BOUCHON	TAPÓN
D3888		TUBO SCARICO L=317 CENTR.	EXHAUST PIPE	ABLASS-SCHLAUCH	TUBE	TUBO DE DESCARGA
D4507		CILINDRO COMPL.450JC 9005 '20	CYLINDER	ZYLINDER	VÉRIN	CILINDRO
D4796	*	PULSANTE D22 2XNO BIANCO IP67	PUSH-BUTTON	DRUCKKNOPF	BOUTON	PULSADOR
D4893	*	KIT GUARNIZ.CIL.450JC 10'20#	CYLINDER GASKETS KIT	DICHTUNGSSATZ	JEU DE JOINTS	JUEGO DE JUNTAS
D4978		QUADRO/T 400 4COL.N+PD2M '23	ELECTRIC CONTROL PANEL	ELEKTRO-STEUERKASTEN	COFFRET ÉLECTRIQUE	CUADRO ELÉCTRICO
D4994		TRAS.300VA 230-400 200V 100VA	TRANSFORMER	TRANSFORMATOR	TRANSFORMATEUR	TRANSFORMADOR
D4995		SCHEDA ELETTRON.LOGICA 4COL'23	ELECTRONIC BOARD	ELEKTRONISCHE KARTE	PLATINE ÉLECTROMÉCANIQUE	PLACA ELECTRONICA
D4996		CASSETTA PVC 4COLONNE '23	PVC BOX	KASTEN PVC	COFFRET PLASTIQUE	CAJA ELÉCTRICA PVC
D4997		FONDO CASSETTA PVC 4COLONNE'23	DEEP ELECTRIC BOX PVC	TIEFES ELEKTRISCHES KASTEN-PVC	PVC ÉLECTRIQUE PROFOND DE BOÎTE	PVC ELÉCTRICO PROFUNDO DE LA CAJA
D5002		KIT CAVI ELETT.+CONNET.PG2M	ELECTIC CABLES KIT	KIT KABEL BODENVERBINDUNG	KIT CÂBLE ÉLECTRIQUE	CABLE ELETRICO
D5003		KIT CAVI ELETT.+CONNET.PG4M	ELECTIC CABLES KIT	KIT KABEL BODENVERBINDUNG	KIT CÂBLE ÉLECTRIQUE	CABLE ELETRICO
D5009		MICROINTER.COMEPI AP1T41Z11				
R0046		DADO MEDIO M12 UNI 5588 ZB	NUT M12 UNI 5588	MUTTER M12 UNI 5588	ECROU M12 UNI 5588	TUERCA M12 UNI 5588
R0153		VITE TE M8X25 UNI 5739 ZB 8.8	HH SCREW M8X25 UNI 5739	SECHSKANTSCHRAUBE M8X25 UNI 5739	VIS TH M8X25 UNI 5739	TORNILLO TE M6X25 UNI5739
R0158		DADO MEDIO M8 UNI 5588 ZB	NUT M8 UNI 5588	MUTTER M8	ÉCROU M8 UNI 5588	TUERCA M8 UNI 5588
R0758	*	INGRASSATORE DRITTO M8 262	STRAIGHT LUBRIFICATOR	GERADER SCHMIRNIPPEL	GRAISSEUR DROIT	ENGRASADOR RECTO
R0797		CONNETT.1,5-230V+RADDRIZZ DC	CONNECTOR FOR SOLENOID VALVE	ANSCHLUSS FUER MAGNETVENTIL	CONNECTEUR POUR ELECTROVANNE	CONECTOR+RECTIFICADOR 230V
R1228	*	BOBINA EL.VALV.24V RAC 262	ELECTRO VALVE COIL	SPULE ELEKTROVENTIL	BOBINE ELECTROVANNE	BOBINA ELECTROVÁLVULA

R1342	*	FILTRO ASPIR.3/8" CENT.263	AIR FILTER	ANSAUGFILTER	FILTRE ASPIRATION	FILTRO DE ASPIRACION
R1767		KIT FISSAGGIO SERBAT.PVC 5-17L	TANK FASTENING KIT	TANK-BEFESTIGUNGSSET	ENSEMBLE FIXATIONS RESERVOIR	JUEGO SUJECION DEPOSITO
R2497		SEEGER E16 UNI 7435	RETAINING RING E16 UNI 7435	SEEGER-RING E16 UNI 7435	ANNEAU DE FIXAGE E16 UNI 7435	SEEGER E16 UNI 7435
R3066		VITE TSCE90°M8X25 UNI 5933 ZB	SCREW M8X25	SENKSCHRAUBE MIT INNENSECHSKANT M8X25	VIS TSCE M8X25	TORNILLO TSPEI M8X25
YE1231		ETICH.POLIC.PLANCIA 4COLON.'23	LABEL	ETIKETTE	ETIQUETTE	ETIQUETA
Z_RICAMBI		* = RICAMBI CONSIGLIATI	* = RECOMMENDED SPARE PARTS	* = EMPFOHLENE E-TEILE	* = PIECES DE RECHANGE CONSEILLEES	* = REPUESTOS ACONSEJAIOS

Dichiarazione di conformità - Déclaration de conformité
Declaration of Conformity - Konformitätserklärung
Declaración de conformidad - Overensstemmelseserklæring
Överensstämmande intyg - EG-Conformiteitsverklaring

WERTHER INTERNATIONAL S.p.A.
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dichiariamo che il ponte sollevatore modello	*declara, que l'elevador modelo*
déclare que le pont elevateur modèle	*Vi erklærer hermed, at autoløfter model*
hereby we declare that the lift model	*Vi förklarer härmed att billyft model*
hiermit erklären wir, daß die Hebebühne Type	*verklaren hiermee, dat*

CFL870XL

Is suitable to accept PLAY DETECTOR MODEL 547 approved by VOSA.

I	è stato costruito in conformità alle direttive 2014/30/UE- 2006/42/CE - e alle norme armonizzate EN1493-2010 - EN13849-1 e EN60204-1	zostal wyprodukowany zgodnie z zasadami dokumentów 2014/30/UE - 2006/42/CE - EN1493-2010 - EN13849-1 oraz EN60204-1	**PL**
GB	has been manufactured in conformity with the directives 2014/30/UE - 2006/42/CE -1 and with harmonized standards EN1493-2010 and EN13849-1 and EN60204-1	er fremstillet i overensstemmelse med bestemmelserne i 2014/30/UE /EØF - 2006/42/EØF - EN1493-2010 - EN13849-1- EN60204-1	**DK**
F	a été construit en conformité avec les directives 2014/30/UE - 2006/42/CE et normes harmonisées EN1493-2010 - EN13849-1 et EN60204-1	är framställt i överensstämelse med bestämelser i RÅDETS DIREKTIV 2014/30/UE - 2006/42/CE - EN1493-2010 - EN13849-1 - EN60204-1	**S**
D	wurde entsprechend den Richtlinien 2014/30/UE - 2006/42/CE - und den harmonisierten Normen EN1493-2010 - EN13849-1 und EN60204-1 gebaut.	Producten zijn gefabriceerd in overeenstemming met de richtlijn 2014/30/UE - 2006/42/CE - en de daarop volgende veranderingen en aanvullingen en EN1493-2010 - EN13849-1 -EN60204-1	**NL**
E	ha sido fabricado según las directives 2014/30/UE - 2006/42/CE y las normas armonizadas EN1493-2010 - EN13849-1 y EN60204-1	ON VALMISTETTU NIIDEN MUKAISESTI DIREKTIIVIEN JA YHDENMUKAISET STANDARDIT 2014/30/UE – 2006/42/CE – EN1493-2010 – EN13849-1 – EN60204-1	**FIN**

Matricola N° - N° de série -
Serial N° - Maschinennummer

Fascicolo tecnico - Dossier technique
Technical file - Techn. Dokumentation

WERTHER INTERNATIONAL S.p.A.
Via F.Brunelleschi,12
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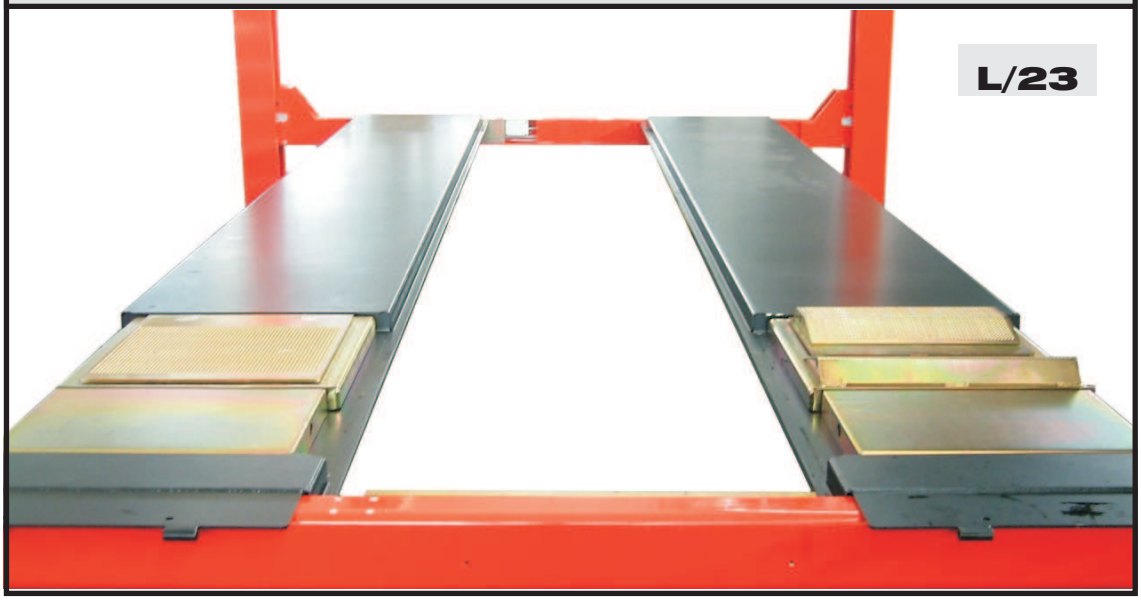
Cadè, 27/09/2024

Legale Rappresentante/Legal Representative
Managing Director
Luca Gazzotti

547



Costruttore **WERTHER INTERNATIONAL S.p.A.**
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E-mail: sales@wertherint.com

Centro di Assistenza Autorizzato
Centre d'Assistance Autorisé
Authorized Service Centre
Kundendienstcenter
Centro de Asistencia Autorisado

Rev.31 .....12/12/2023

INDEX

0 FOREWORD

0.1. HOW TO READ AND USE THIS MANUAL

This Manual is the official document that provides the necessary instructions for use and maintenance of the Machine to which it refers.

The information contained in the Manual should be considered as truthful and in this connection the Manufacturer may not be held responsible for damage to property or persons due to any use of the Machine other than as indicated in this document.

0.2. IMPORTANCE OF THE MANUAL

This Manual must be considered as integral part of the Play Detector.
The Manual should be kept for the entire useful life of the Play Detector.
The Manual should accompany the Play Detector if sold or transferred. In this case the seller should inform the Manufacturer of the transfer by letter or fax.
In addition to all useful information for operators, the Manual contains in specific chapters all wiring, pneumatic and hydraulic diagrams, for any kind of control, maintenance and repair operations.

0.3. CONSERVATION OF THE MANUAL

The Manual should be kept in a safe place protected from humidity and excessive heat.
Consult the Manual in such a way as not to damage all or part of its contents.
Do not tear pages out of the Manual.

0.4. CONSULTING THE MANUAL

The Manual has been drawn up according to the indications in **Machine Directive 2006/42/CE**

It is basically composed of:

A. The cover page with identification
B. Index of chapters
C. Alphabetical index by subjects
D. Instructions for use of Play Detector.
E. Drawings of single and assembled parts.
F. Tables of Spare Parts
G. Enclosures

A - Cover page

The cover in stiff colored cardboard identifies the Play Detector that this Manual refers to.
The cover contains:

The Manufacturer's Logo
The type of Play Detector
Identification code
Date of Edition
Version of Play Detector.

B - Index of Chapters

The Index of Chapters lists the topics covered by the Manual.

C - Index

The Index details the Chapters extending the research of subtitles topic by topic.

D - Instructions for use of Play Detector

This part of the Manual provides a detailed description of how the Play Detector functions, the operations to perform to use it properly, instructions for installation, safety recommendations, procedures for intervention of the operator.

E - Drawings of single and assembled parts

This part contains the main construction drawings and assembled drawings relative to the various parts of the Play Detector.

F - Tables of Spare Parts

These Tables, that refer to the drawings provided in the previous chapter, identify the parts of the relative sections indicating the number installed and the recommended number of spare parts for replacement.

G - Enclosures

This part contains all the technical documents relative to the parts purchased from suppliers and used by the Manufacturer in the construction of the Play Detector. References in the text of the Manual will facilitate their consultation.

0.5. UPDATING THE MANUAL

In case of substantial modifications to the Play Detector, the Manufacturer will provide the Customer with a new version of the Manual in which all the modifications to the Machine will be included.

The previous version will then be withdrawn by the Manufacturer in order to ensure the proper congruence between the Play Detector and the Manual.

0.6. REQUESTING A NEW MANUAL

If this Manual should be lost or damaged, the client can request a copy from the Manufacturer.

Please fax the request with identification data of Play Detector shown on the plate applied to its structure. This will incur an administration charge.

1 GENERAL REMARKS

Simple and affordable construction as well as easy use and maintenance are the key element which feature Play Detector and distinguish from other on the market.

These qualities, the result of accurate calculation and engineering, and the use of the most reliable components, make these machines the best that engineering and advanced technology can offer today in this sector.

1.1. CHARACTERISTICS

Max Capacity on each plate	Kg.	1300
Max. stroke platform DX (RIGHT)	mm	± 40
Max. angle platform SX (LEFT)	°	± 10
Max Thrust for each plate	Kg.	800
Minimum inner distance (to be respected according type of lift)	mm	890
Maximum outer distance (to be respected according type of lift)	mm	2020
Weight	Kg.	90
Power supply	V.	230 ±10% / 50 Hz ± 2% and
	V.	24 ±10% / 50 Hz ± 2%
Power	Kw.	3
Maximum oil pressure	Bar	180
Nominal Motors Absorption	A.	8,7
Working temperature	°c	-10 - 55
Humidity		30 - 95% (without condensation)
Noise	dB (A)	Leq (A) < 75

1.2. LIMITATIONS ON USE

The Play Detector cannot be used for vehicles with tracks widths in the range of Min. 1140 mm -Max. 1800 mm.

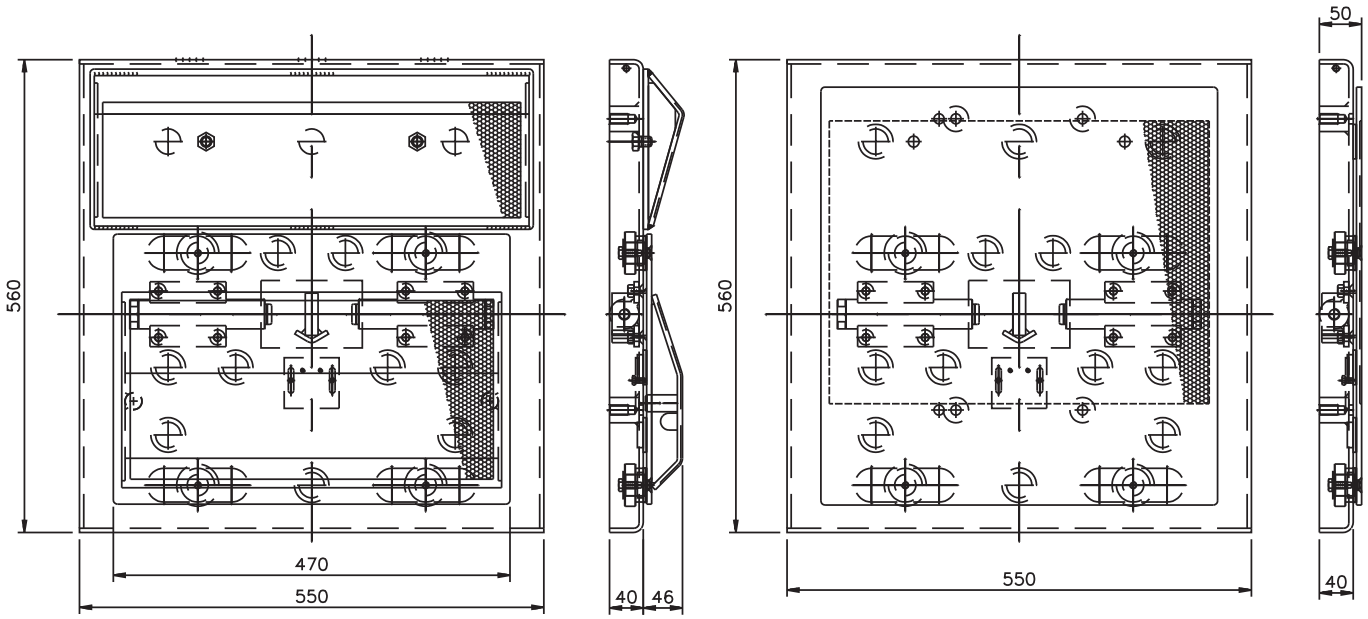
The Play Detector should be used in environments **free of explosion hazards.**

The Play Detector must be housed in an environment having the following characteristics:

- Temperature between -10 and 55 °C
- Humidity between 30 and 95 % without condensation

This Play Detector have been designed and constructed for being used exclusively with vehicle lift manufactured by the company.

PLAY DETECTOR DIMENSIONS

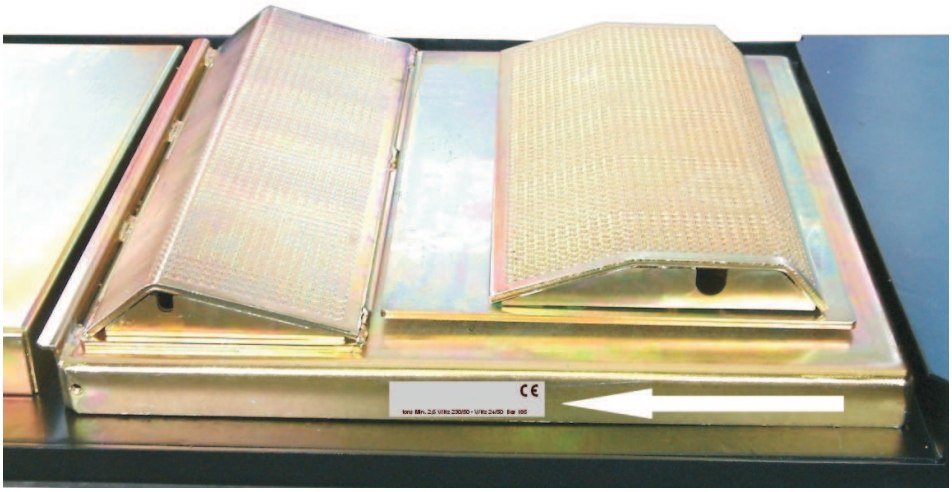


SX
LEFT

DX
RIGHT

1.3. IDENTIFICATION DATA

The identification data for the Play Detector are displayed on an aluminum plate fastened in a readily visible place on the Machine.



See the nameplate position in the following drawing

SX
LEFT

1.4. SERVICE

The Play Detector to which this manual refers is guaranteed by the Manufacturer for a period of 12 months from the date of installation.

Service is guaranteed by the Manufacturer (or local distributor, if any).

2 INSTALLATION

For safe installation of the Play Detector, avoiding risks to third parties as well as to the personnel performing the work, we recommend to follow instruction below:

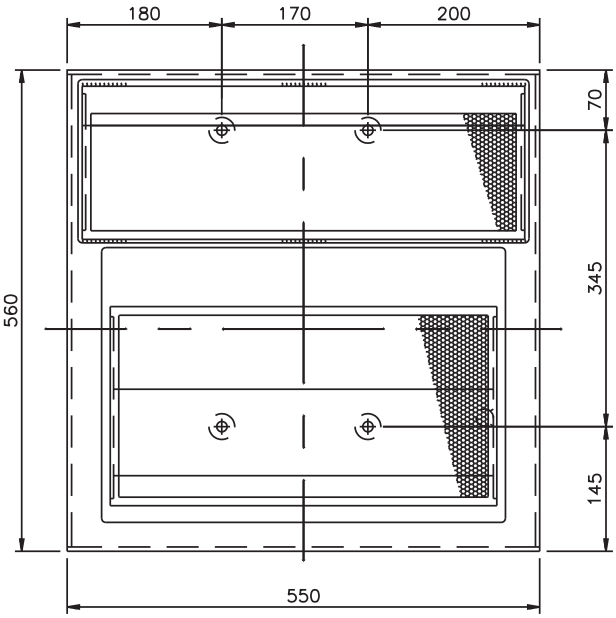
Verify the max pressure of the main hydraulic unit do not exceed 185 bar.

Verify that main supply line could deliver 230V - 50Hz - 1Ph, or 400V - 50Hz - 3Ph.

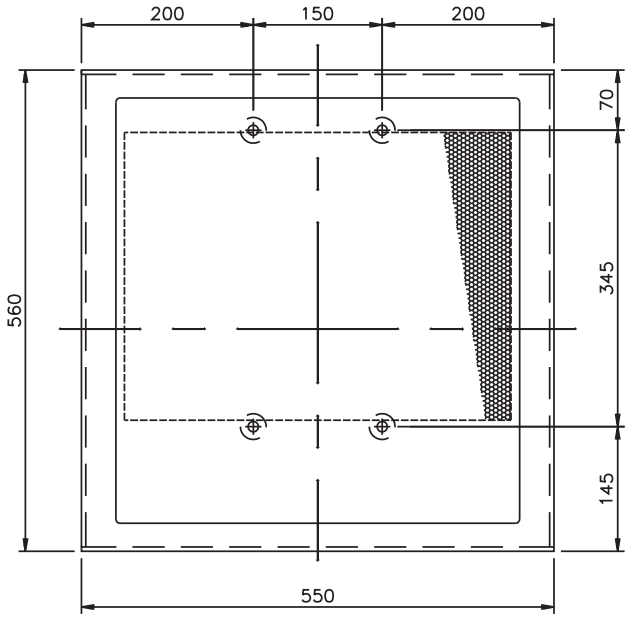
Verify that inside the main control unit could deliver a voltage of 24V 50Hz.

Verify that simple platform (without lifting cilinder) is framed type (fixed with screws to crossmember)

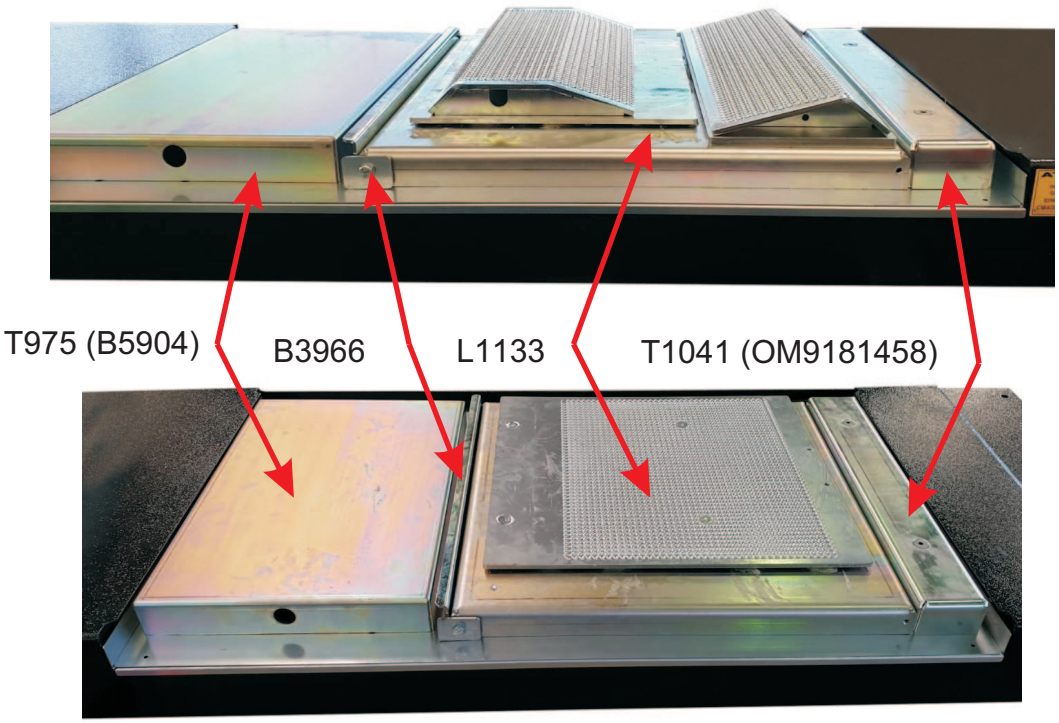
In order to fix both platforms of play detector to main lifting platforms verfy that the following holes are provided in the base surface of each platform's recess:



SX



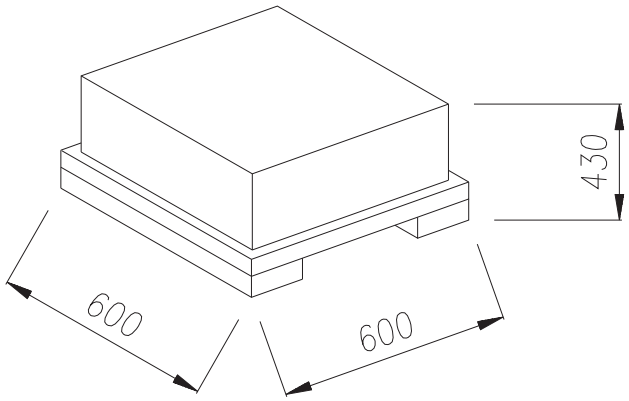
DX



2.1. TRANSPORTATION OF PLAY DETECTOR

All operations of hoisting and unloading the Play Detector must be carried out in full respect of the regulations in effect,

The figures illustrate the method recommended by the Manufacturer for loading and unloading the Play Detectors **in case of delivery without the lift:**



In case of delivery with of 4 post lift the a.m. method is not necessary because the play detector is mounted on lift's platforms.

2.2. INSPECTION OF COMPONENTS

On receipt of the shipment, it is very important to inspect the material received.

Particular attention should be given to:

Documents vs. Goods : no. of packages
Weight and dimensions

Physical state of goods :Condition of packages
Absence of damage

The goods should be inspected with the maximum care in the presence of the carrier because, in spite of the extreme care used by the Manufacturer in the selection of packing materials, there is always the possibility of damage occurring during shipment.

In this connection we point out that the goods are shipped at the buyer's risk, therefore the manufacturer is not responsible for damage during transport.

2.3. INSTALLING THE PLAY DETECTOR

After inspecting the shipment, the play detector can be moved plate by plate by handles, using 2 persons in order to reduce the weight lifted for each of them.

Place platform DX (RIGHT) with only lateral movement on the right side of the vehicle. Verify the efficiency of microswitch (push the lever with roll and hear the click of micro acted).

Place platform SX (LEFT) with steering movement on the left side of the vehicle. Verify the efficiency of microswitch (push the lever with roll and hear the click of micro acted).

Place the control box with handlamp and selector + movement pushbuttons near to the main control box of the lifter to prepare to connect to the main central unit.

Take out the hydraulic rubber hoses and electric cables in order to prepare the connection with electro-valves (either to magnets and to the electro-valve bodies)

Pass rubber hoses from the main central unit where the first flow direction electro-valve is mounted. The supply rubber hose must reach the electro-valve block, as well as the returning rubber hose (or rilsan hose) must be connected to the returning hose of the main lifting unit Make sure all nipless are securely fastened with copper washers.

CAUTION TAKE CARE OF ELECTRIC CABLES

The personnel assigned to perform these operations should make sure no extraneous persons are standing in the way of movement.

2.4. CONNECTION TO POWER MAINS

Connect the main control box of Play Detector near to the main control panel of the lift where the Play Detector is to be mounted.
From lift main control panel must be provided either a 24 VAC – 50 Hz supply (max absorption around 70 VA) , and a 230 VAC – 50 Hz supply fort the handlamp.

Connect ends of microswitches FCDX and FCSX to the right connectors inside the control box. Usually color correspond into color.

Pass cables for electro-valve magnets to reach the position of electro-valve block under the platform designed to house it.

It is up to the user to ascertain that the power mains comply with international and local safety standards. The Manufacturer is not responsible for damage due to "Non-Conformity" of the electrical system. The manufacturer will not be liable for any malfunctioning caused by disturbance from other equipment.

It is essential to make the "*EARTH CONNECTION*", using a 0,03A differential switch, and checking its correct functioning (W) by means of an appropriate measuring device.

2.5. TAKING THE MACHINE OUT OF SERVICE

In order to facilitate disposal of the different play detector components, they should be sorted into categories. Consider the units to be special waste that must be disposed of by specialized companies in compliance with current regulations.

3 DESCRIPTION OF THE PLAY DETECTOR

3.1. BEFORE STARTING OPERATION WITH THE PLAY DETECTOR

Verify the right direction of rubber hoses to cylinders in each platform DX (RIGHT) and SX (LEFT).

Use a male-male ¼" nipple to connect both sides of rubber hoses either in platform DX (RIGHT) and SX (LEFT). As for particular configuration of cylinders this operation looks like to load oil into the complete circuit enabling a first air circuit bleeding. Test the direction of movement using the headlight lamp.

Push one button firmly for 5-10 seconds, then release it up to the motor stop. Push the other button for 5-10 seconds, then release it up to the motor stop. Repeat the operation for 2-3 times so the circuit is completely loaded and bleed from air. Repeat the operation also by switching the handlamp selector from DX (RIGHT) to SX (LEFT).

Open the male-male ¼" nipple and fix both ends of rubber hoses to each of hydraulic cylinder in platform DX (RIGHT). Repeat the operation in hydraulic cylinder platform SX (LEFT).

Make sure the connection of each platform DX (RIGHT) and SX (LEFT) to the main lifter platform are well tightened, as well as connection of both main lifter platforms to both crossmembers.

You are now ready to operate with the play detector.

3.2 OPERATION

Make sure that nobody is on board the vehicle to be lifted. No bystanders are accepted nearby or under the operation area of play detectors and lifter.

Make sure that no tools or parts are placed on both sliding plates of play detector.

Make sure that lift is placed in a locked position in each column, to ensure not to work on stressed lifting cables

In case of error message and block on the control unit, check with care to ascertain the causes of the interruption and remove them before starting the control unit again. Contact the personnel responsible for the Play Detector, if necessary.

On the handlamp you can find 2 pushbuttons and a selector.
Each of the pushbuttons are able to provide either one movement in one direction by pushing and the opposite movement by releasing.
The other pushbutton is able to provide with reverse movement.
These pushbuttons act on solenoid C13 and C14 (see electric scheme annexed)

Selector CTP is able to provide DX (RIGHT) or SX (LEFT) selection.
The selector acts on solenoids C11 and C12 (see electric scheme annexed).

By standing under a lifted vehicle switch on the lamp by using one pushbutton.
Press a mouvement button, the platform will move to the end stroke, then release.
The platform will slide back to its centered position automatically.
Then push the other pushbutton firmly, the platform moves in the oppisite direction,then release.
The platform will slide back to its centered position automatically.

By selecting the other platform with the selector on the handlamp you prepare the other examinations.
Repeat previous operation to act on other platform.

The sliding platform which test the steering clearances consists of one fixed platform and one sliding platform.
The sliding platform is performing a tyre reaction similar to those of a steering movement, without using the steering wheel in the vehicle cabin.

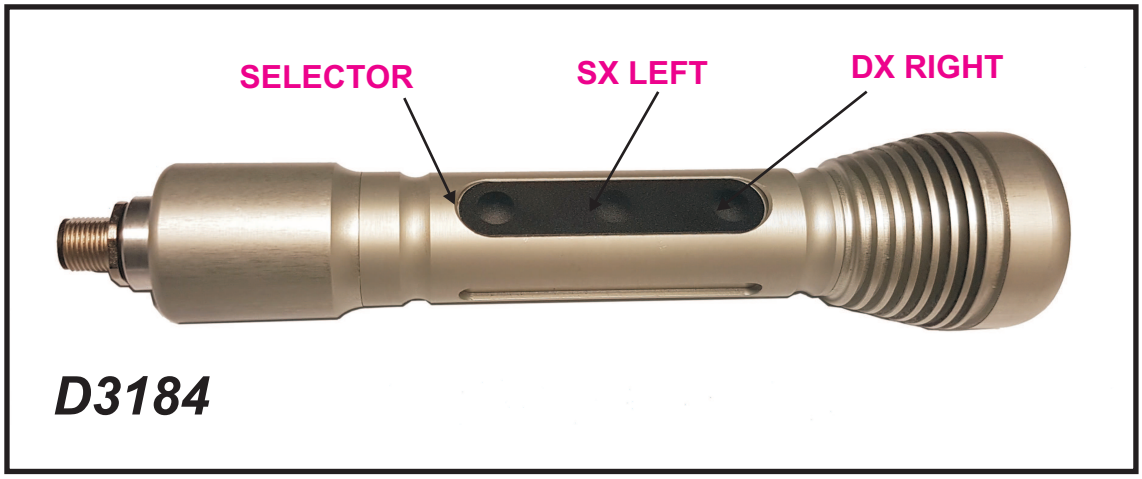
The sequence of operation shall be in accordance with the current issue of:

THE MOT INSPECTION MANUAL Car and Light Commercial vehicle Testing

Do not climb on or off the raised vehicle without using appropriate ladders.

Do not perform tests on the motor or do anything else that could apply traction to the wheels.

Do not load the vehicle with tools or parts that could increase its weight beyond the capacity of the Play Detector



4 SAFETY DEVICES

The Play Detector has been manufactured in compliance with the provisions issued by "Machine Directive 98/37/CEE" and all the following harmonized standards

4.1. PRECAUTIONS

For the safety of the Play Detector and that of the operator using it, the following general rules are provided for correct operation:

- The Play Detector should be under the control of authorized personnel only.

It is important to remember that mobile elements of the Machine are potentially dangerous for possible crushing, pinching and shearing of human body, such as hands, arms, feet, legs, head, either for operators as well as for anyone nearby the machine.

The danger of crush injuries particularly concerns:

A. Persons working under the elevated vehicle, therefore it is required that the operator at the Control Panel have complete visibility of the zone.

The speed of descent of the lift is, slow as compared to the reaction time of an operator, so that he has time to remove the limb without injury.

B. Hands and fingers of operator which is performing the test.

- Make sure the load to be hoisted does not exceed the maximum nominal capacity of the play detector.
- Before hoisting the load, make sure the turning wheels of the vehicle are straight, if the case occurs.

Locate the left wheel of the vehicle into the V recess of steering plate SX (LEFT)

- The work area should be free of unauthorized personnel.

Do not apply external forces on the raised vehicle (Traction, lifting, etc.)

Check the stability of the vehicle in the raised position before any kind of operation.

4.2. SAFETY DEVICE

The Play Detector has been designed to function with ample safety margins thanks to the devices provided by the Manufacturer.

Never disconnect the safety devices for any reason. Otherwise the Manufacturer will not be responsible for any damage to property or persons caused by similar negligence.

The main devices provided are the following:

- Fixed flow limiter (to limit max cylinder speed).
- Mechanical stops at the end of each plate stroke.
- Hydraulic cylinders with overload valve.

4.3. TROUBLE SHOOTING TABLE

SYMPTOM	CAUSE	REMEDY
Plate DX (RIGHT) or SX (LEFT) do not return to centered position, but remains at one end of the stroke.	Fault in either microswitch FCDX or FCSX.	The microswitch could be broken in some inner contacs (it has 2 contact NC).
	Position of microswitch is missed.	Open both plates as described in chapter 5. and verify tightening of microswitch onto main play detector body.
		Verify whether the position of sliders acting on the microswitch is in the correct position, or adjust it.
	Fault in the solenoid C13 or C14.	Check connection on board of solenoid valves C13 and C14, or into the main connector of handlamp.
Platforms are sliding very slowly, even without load.	Dirty part into the orifice at the returning hoses from aluminium solenoid block.	Unscrew nipple ¼" from delivery hose from aluminuim block (made in RILSAN plastic). There is inside a small black screw M8 with an hexagonal female key, which has an orifice diameter 0,8 mm. Check whether this orifice is free or has some dirty part which create obstacle to oil flow.
One platform is working regularly, the other doesn't work at all.	Problem in the handlamp selector. It doesn't switch on C11 and C12	Check whether with selector on handlamp you hear the "tic" which signals the on-switching of both C11 and C12. Check connection on board of solenoid valves, or into the main connector of handlamp.
Both plate work in one direction only.	One pushbutton is broken or contacts are failing.	Open the handlamp and verify the pushbutton and its contacts.

5 MAINTENANCE

Thanks to the simplicity of construction and operation of Play Detector, it requires very little maintenance.

It should be sufficient to follow the few simple rules in this chapter to ensure reliable performance in time.

The play detector could have dirty parts even above or under the sliding platforms.
For this reason it is required to clean and inspect the surface under sliding plate every 6 months.

1) Unscrew the 4 screw under each main lifting platform which fix the play detector to them.
2) Unscrew the 4 screw on sliding rollers inside transversal guides. Rollers are now free to be removed as well as the sliding plate.
3) Remove the sliding plate and clean the surface, taking care of support face of plastic pads which work on the sliding plate. Remove any dust or other parts which could scratch the plastic pad.
4) Clean the rollers sliding into transversal guides, removing any old grease or dust on it.
5) Grease the dismounted part as little as you can (grease is able to capture dust or other hard parts which could damage plastic pads and rollers.
6) Mount again the sliding plate into provided position, mount the sliding plastic rollers, and fix with 4 screws and washer. Then put the plate into the main plate recess and tighten the last 4 screw from underneath the main lifting platform.

Check that other electrical and mechanical parts are in good condition, clean and suitably greased. Check that the paint is in good condition and that there is no rust.

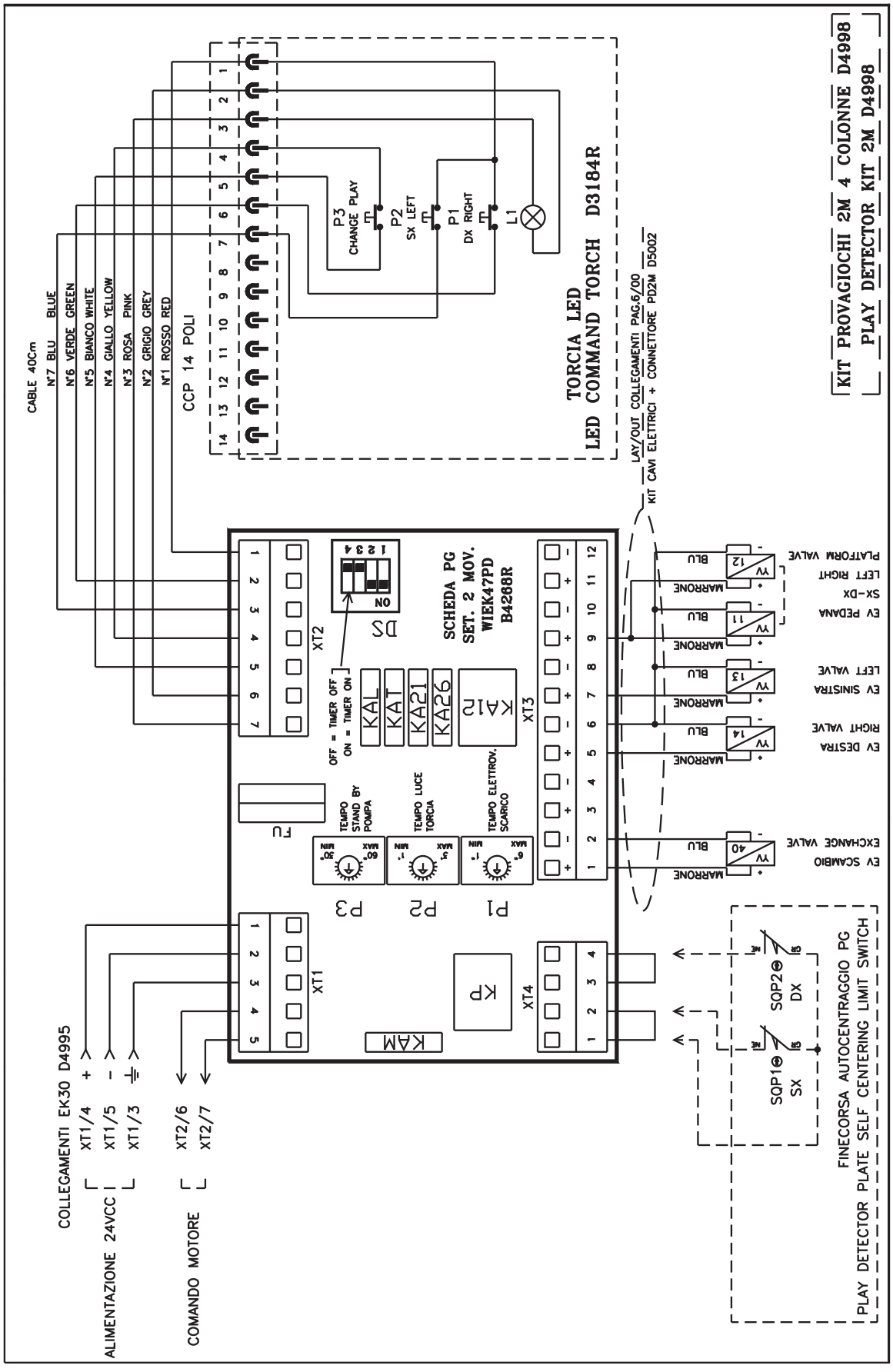
CAUTION !
WHILE DISPOSING USED OILS AND LUBRICANTS REFER TO THE LOCAL RUNNING REGULATION.

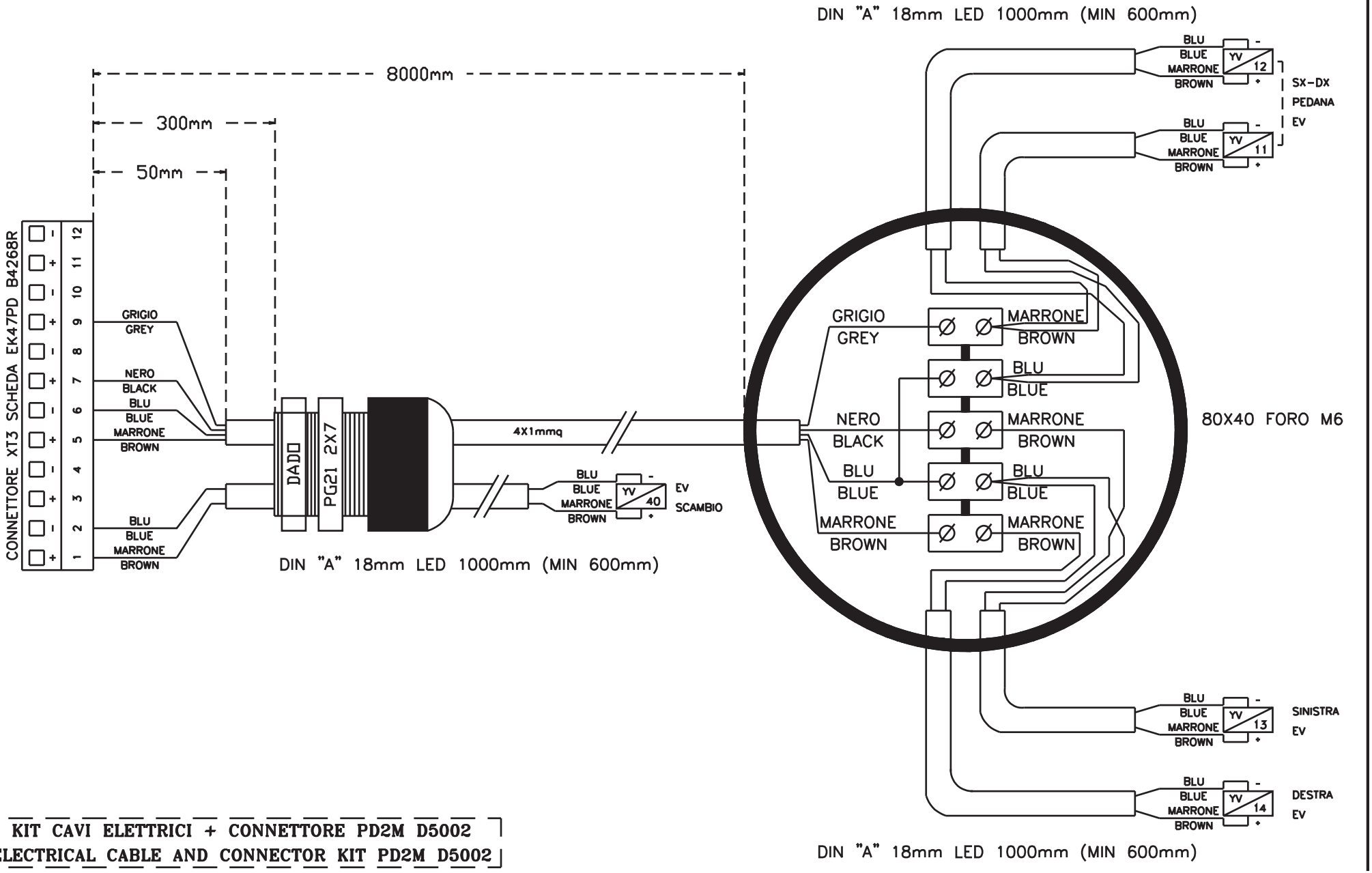
5.1. CONTROLS AND CALIBRATION

The following checks must be made periodically during the maintenance:
check the solenoid connectors whether correctly fixed on the main body of them solenoids.
Check all hydraulic connections.
Verify if the centered position of each sliding plate DX (RIGHT) and SX (LEFT) is maintained with both pushbuttons.
Check that all internal electric connections are secured correctly.

6 ANNEXES – PARTS LIST

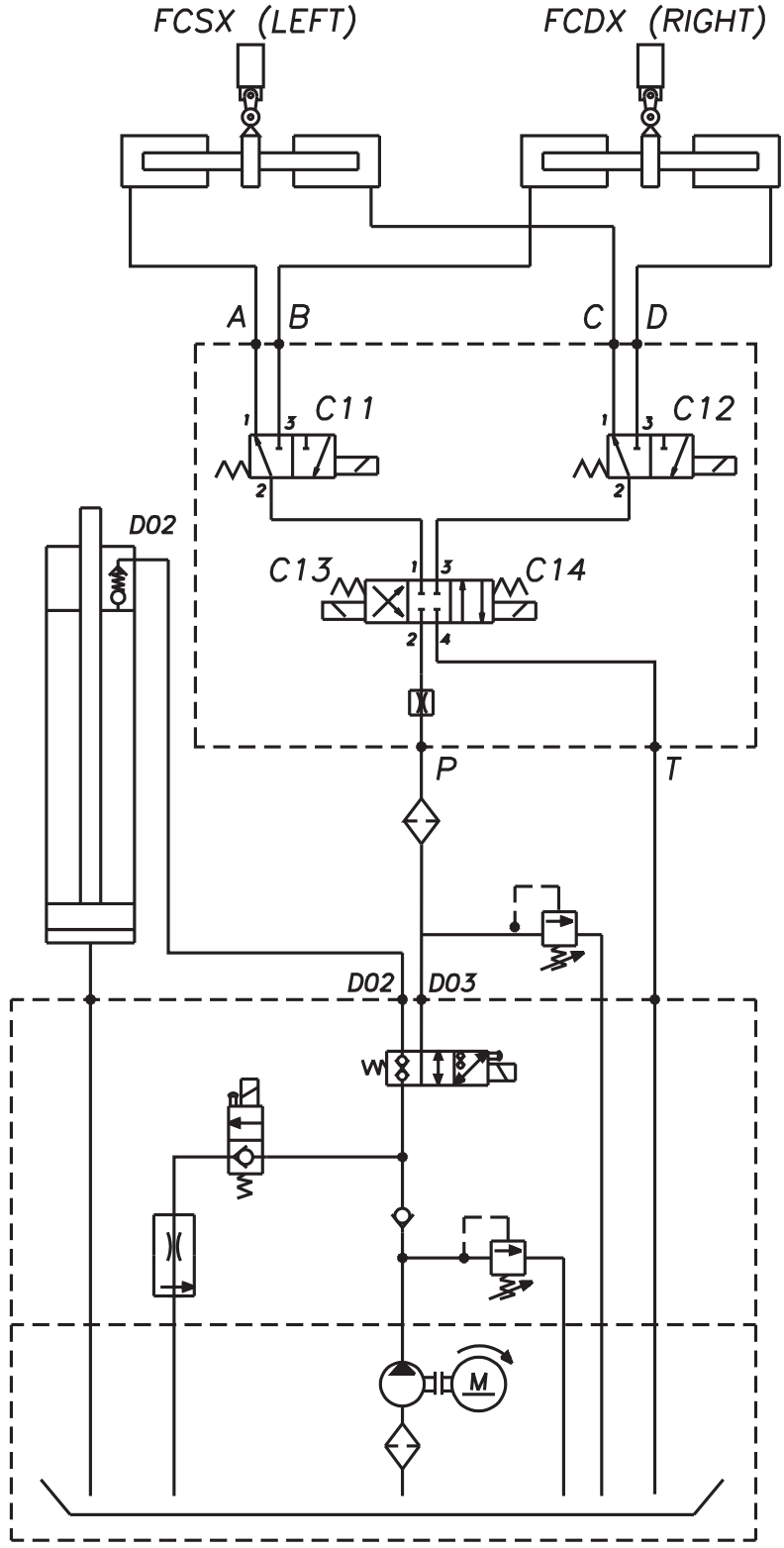
WIRING DIAGRAMS AND HYDRAULIC

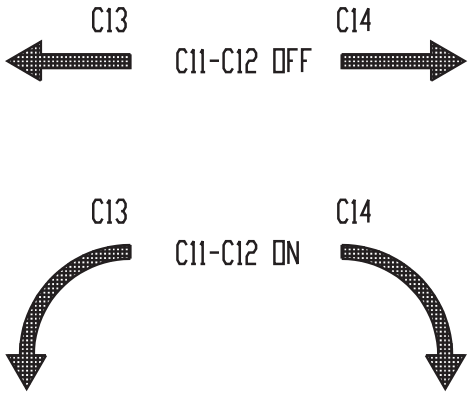


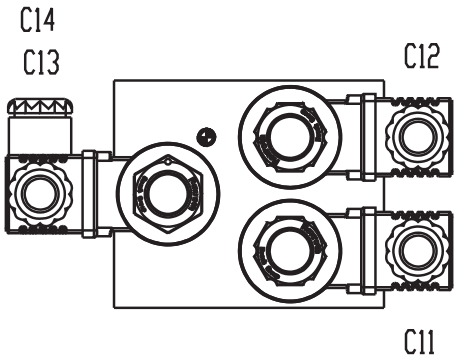


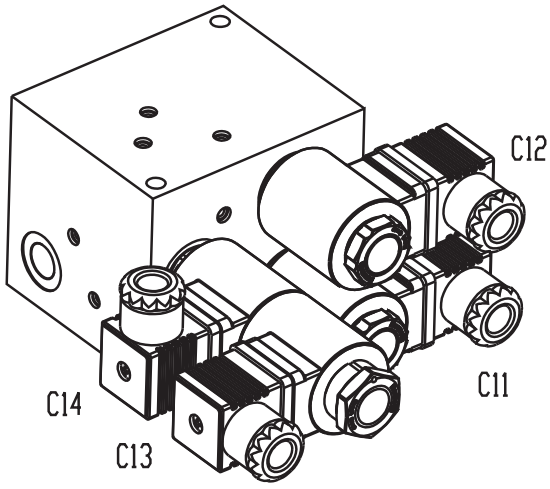
KIT CAVI ELETTRICI + CONNETTORE PD2M D5002
ELECTRICAL CABLE AND CONNECTOR KIT PD2M D5002

HYDRAULIC CIRCUIT DIAGRAM

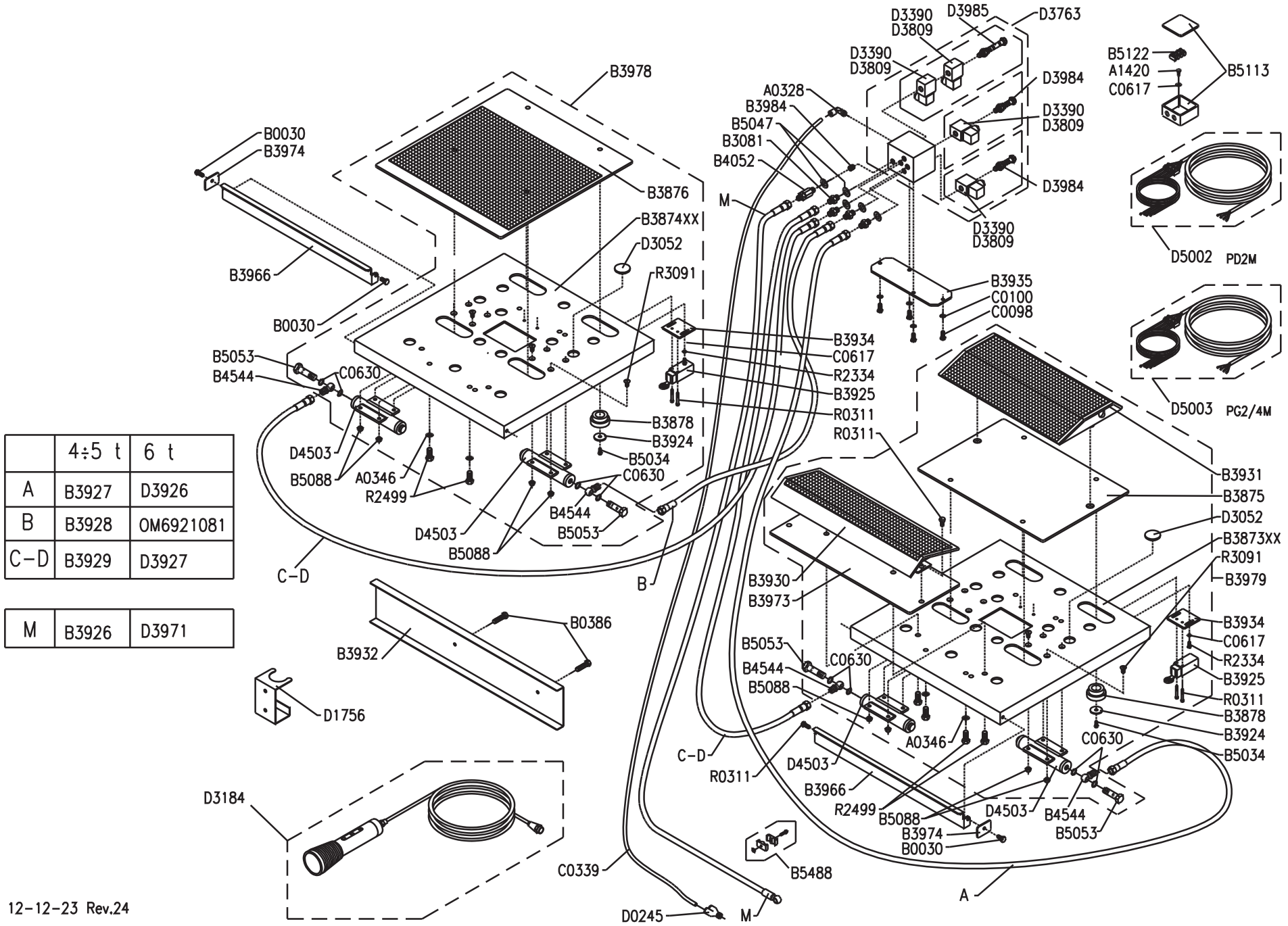








FCDX	Microswitch
FCSX	Microswitch
C11	Solenoid valve
C12	Solenoid valve
C13	Solenoid valve
C14	Solenoid valve



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A	B3927	D3926
B	B3928	OM6921081
C-D	B3929	D3927

M	B3926	D3971

12-12-23 Rev.24

Part Code	Sugg	Descrizione	Description	Beschreibung	Description	Denominacion
A0328		RACCORDO “L” M 1/4X8	L-SHAPED COUPLING 1/4" M FOR PIPE Ø 8	“L” ANSCHLUSSKEGELG1/4"-Ø8	RACCORD “L” G 1/4" - Ø8	RACOR “L” 1/4" M PARA TUBO Ø 8
A0346		RONDELLA P 12X24 UNI 6592 ZB	WASHER 12 X 24 UNI 6592	UNTERLEGSCHEIBE 12 X 24 UNI 6592	RONDELLE Ø13X24 UNI 6592	ARANDELA 13X24
A1420		VITE TE M6X12 UNI 5739	SCREW 6X12 8.8 UNI 5739	SCHRAUBE 6X12 8.8	VIS TE 6X12 8.8	TORNILLO
B0030		VITE TE M8X16 UNI 5739 ZB	SCREW TE M8X16 UNI 5739	SECHSKANTSCHRAUBE M8X16 UNI 5739	VIS TH M8X16 UNI 5739	TORNILLO TE M8X16
B0386		VITE TE M8X40 UNI 5739 ZB	SCREW M8X40 UNI 5739	SECHSKANTSCHRAUBE M8X40 UNI 5739	VIS TH M8X40 UNI 5739	TORNILLO TE M8X40 UNI 5739
B3081		NIPPLO M-M 1/4G OLEODIN.S96	1/4" NIPPLES	DOPPEL GEWINDENIPPEL ¼"	NIPPLE ¼"	NIPLE M-M 1/4 HIDRAULICA
B3873XX		LAMIERA SX PG 2M RIB.MOT	LEFT SHEET PLAYDETECTOR			
B3874XX		LAMIERA DX PG 2M RIB.MOT	RIGHT SHEET PLAYDETECTOR			
B3875		PIASTRA BASE SX SUPER.SCOR.ZB	LEFT FLOWING PLATE			
B3876		PIASTRA SUPERIOR.SCORREVOLE DX	RIGHT UPPER COVER			
B3878	*	RONDELLA SCOR.PG2M RIB.MOT NYL	WASHER SLIDING	SCHEIBE	RONDELLE	ARANDELA
B3924		RONDELLA GREMBIALINA D12X36 ZB	WASHER Ø12X3	SCHEIBE Ø12X36	RONDELLE Ø12X36	ARANDELA Ø12X36
B3925	*	MICROINTER.PIZZATO FR1115-1	MICROSWITCH TYPE PIZZATO FR 1115-1			
B3926	*	TUBO R1AT L5,15 MANDATA PG4M	PRIMARY HOSE	SCHLAUCH	FLEXIBLE PRIMAIRE	TUBO
B3927	*	TUBO R1AT “A” L4,50 PG L1133	PIPE “A”	HOCHDRUCKSCHLAUCH “A”	FLEXIBLE “A”	TUBO “A”
B3928	*	TUBO R1AT “B” L2,50 PG L1133	B HOSE			
B3929	*	TUBO R1AT “C-D” L3,50 PG L1133	PIPE “C-D”	HOCHDRUCKSCHLAUCH “C-D”	FLEXIBLE “C-D”	TUBO “C-D”
B3930		PIASTRA INCLINATA ANTER.ASPOR.	LEFT UPPER FIXED COVER			
B3931		PIASTRA INCLINATA POST.ASP.ZB	LEFT UPPER FLOWING COVER			
B3932		CARTER TUBI TRAVERSA L1133 ZB	HOSE CASING			
B3934		SUPPOR.MICRO L1133 ZB	MICROSWITCH SUPPORT	MIKROSCHALTER SUPPORT	MICRORUPTEUR SUPPORT	APOYO MICROINTERRUPTOR
B3935		SUPPORTO EL.VALVOLA L1133 ZB	MANIFOLD SUPPORT			
B3966		GUIDA PIATTI ROTANTI PG ZB	PROFILE	FÜHURUNG	GUIDE	GUÍA
B3973		LAMIERA BAS.PIAS.SUP.FIS.SX ZB	LEFT FIXED PLATE			
B3974		FERMO PIATTI L1133 ZB	WASHER	SCHEIBE	RONDELLE	ARANDELA
B3978		PIASTRA DX PG/RIB COMPL.ZB	COMPLETE RIGHT PLAY DETECTOR PLATE			
B3979		PIASTRA SX PG/RIB COMPL.ZB	PLATE	PLATTE	PLAQUE	PLACA
B3984	*	STROZZATORE M8X8 Ø0,8 UNI5923	SCREW M8X8 UNI 5923 WITH HOLE Ø0,8			
B4052	*	FILTRO OLIO PG RIC	OIL FILTER	OELFILTER	FILTRE HUILE	FILTRO ACEITE
B4544		OCCHIO 1/4-FILETTO M1/4 SR*	FITTING M1/4	AUF/ABSTIEGSREGLER M1/4	RACCORD M1/4	CONEXION M1/4
B5034		VITE TSCE90°M8X12 UNI 5933 ZB	SCREW TSPEI M8X12 UNI 5933	SCHRAUBE TSPEI M8X12 UNI 5933	VIS TPSCE M8 X 12 UNI 5933	TORNILLO TPSCE M8X12 UNI 5933

B5047	*	RONDELLA BONDED 1/4" BSPP #	GASKET WITH 1/4" SEAL	DICHTUNGSUNTERLEGSCHEIBE MIT DICHTUMG 1/4"	RONDELLE D'ÉTANCHÉITÉ 1/4"	ARANDELA DE CIERRE CON GUARNICIÓN 1/4"
B5053	*	VITE FORATA 1/4"	SCREW 1/4	SCHRAUBE 1/4"	BOUCHON RENIFLARD 1/4"	TORNILLO CON ORIFICIO 1/4"
B5088		DADOBLK BASSO M8 UNI 7474 ZB	NUT M8 UNI 7474	MUTTER BLOCK. M8 UNI 7474	ECROU FREIN M8 UNI 7474	TUERCA AUTOBLOCANTE M8 UNI 7474
B5112		SCATOLA DERIVAZ.TRAVERSE	CONTROL SIDE CROSSPIECE CONNECTOR BLOCK	UMLEITUNGSDOSE KOMMANDOSEITE	COMMANDEZ LE BORNIER LATÉRAL DE CROSSPIECE	CAJA DE DERIVACIÓN
B5113		MORSETTIERA 12P MM2,5 E100PA 4	4-POLE TERMINAL BOARD	KLEMMLEISTE MAMMUTH 4 POLE KOMMANDOSEITE	BOÎTE À BORNES MAMMUTH 4 PÔLES	JUEGO TERMINALES MAMMUTH 4 POLOS T.L.C.
B5488		CORPO COLLARE DOPPIO 1/4	DOUBLE COLLAR BODY 1/4	KÖRPER	CORP	CUERPO
C0098		VITE TE M8X20 UNI 5739 ZB	SCREW M8X20 UNI 5739	SECHSKANTSCHRAUBE M8X20 UNI 5739	VIS TH M8X20 UNI 5739	TORNILLO TE M8X20 ZINCADO
C0100		RONDELLA P 8,4X16X1,6 6592 ZB	WASHER Ø8,4X17 UNI 6592	SCHEIBE Ø8,4X17 UNI 6592	RONDELLE Ø8,4X17 UNI 6592	ARANDELA Ø8 ZINCADA
C0339		TUBO RILSAN PA12 8X6 NERO	RILSAN HOSE D8X6	SCHLAUCH D.8X6	TUYAU RILSAN D.8X6	TUBO RILSAN Ø8X6
C0617		RONDELLA P 6,4X12 UNI 6592 ZB	WASHER Ø6,4X12,5 UNI 6592	SCHEIBE Ø6,4X12,5 UNI 6592	RONDELLE Ø6,4X12,5 UNI 6592	ARANDELA Ø6,4X12,5 UNI6592
C0630		RONDELLA RAME 1/4"	COPPER WASHER Ø14X20	KUPFER-UNTERLEGSCHEIBE Ø14X20	RONDELLE EN CUIVRE Ø14X20	ARANDELA EN COBRE
D0245		RACCORDO "Y" M1/4XD8 RAP.	Y CONNECTION	ANSCHLUSS	RACCORD	CONEXION "Y"
D1756		SUPP.TORCIA PG ELM ZB '14	HAND-LAMP COUPLER			
D3052		PATTINO SCORRIMENTO H=11 L1133	SLIDE PAD	GLEITSCHUH	GLISSIÈRE	PATÍN
D3184		TORCIA LED PG+CAVO TASTI IRRO#	TORCH FOR PLAY DETECTOR	KOMPLETTE HANDLAMPE	TORCHE	SOPLETE
D3390	*	BOBINA 36-K4-20G24 02 24V DC	SOLENOID VALVE COIL	SPULE ELEKTROVENTIL	BOBINE ELECTROVANNE	BOBINA ELECTROVÁLVULA
D3763		BLOCCO IDRAUL.COMP.PG VOSA '18	VALVE BODY	HYDRAULIKBLOCK PG VOSA COMPL	BLOC HYDRAULIQUE PG VOSA COMPL	BLOQUEO HIDRÁULICO PG VOSA COMPL
D3809		CONNETTORE NERO 24V '17	CONNECTOR	ANSCHLUSS	CONNECTEUR	CONECTOR
D3926		TUBO R1AT "A" L5,1 PG 460JC	PIPE "A"	HOCHDRUCKSCHLAUCH "A"	FLEXIBLE "A"	TUBO "A"
D3927		TUBO R1AT "C" L4,9 PG 460JC	PIPE "C"	HOCHDRUCKSCHLAUCH "C"	FLEXIBLE "C"	TUBO "C"
D3971		TUBO R1AT L5,8 MANDATA PG2M 4C	FLEXIBLE HOSE	SCHLAUCH	FLEXIBLE HAUTE	TUBO
D3984		EL.VALVOLA VED-016-32-08A-A-10	ELECTRO-VALVE VED-016-32-08A-A-10	ELEKTROVENTIL VED-016-32-08A-A-10	ELECTROVANNE VED-016-32-08A-A-10	ELECTROVÁLVULA VED-016-32-08A-A-10
D3985		EL.VALVOLA VED-016-43-08	ELECTRO-VALVE VED-016-43-08	ELEKTROVENTIL VED-016-43-08	ELECTROVANNE VED-016-43-08	ELECTROVÁLVULA VED-016-43-08
D4503		CILINDRO IDR.PG2M 9005 '20	CYLINDER	ZYLINDER	VÉRIN	CILINDRO
D5002		KIT CAVI ELETT.+CONNET.PD2M	ELECTIC CABLES KIT	KIT KABEL BODENVERBINDUNG	KIT CÂBLE ÉLECTRIQUE	CABLE ELETRICO
D5003		KIT CAVI ELETT.+CONNET.PG4M	ELECTIC CABLES KIT	KIT KABEL BODENVERBINDUNG	KIT CÂBLE ÉLECTRIQUE	CABLE ELETRICO
OM6921081		TUBO R1AT "B-D" L2,0 PGLT MAND	FLEXIBLE HOSE	SCHLAUCH	FLEXIBLE HAUTE	TUBO
R0311		VITE TCCE M5X30 UNI 5931 PF ZB	SCREW 5X30 UNI 5931	SCHRAUBE TCEI 5X30 UNI 5931	VIS TCSPC 5X30 UNI 5931	TORNILLO
R2334		VITE TCCE M6X8 UNI 5931 ZB	SCREW M6X8 UNI 5931	SCHRAUBE	VIS TCCEI M6X8 UNI 5931	TORNILLO
R2499		VITE TE M12X20 UNI 5739 ZB	SCREW M12X20 UNI 5739	SCHRAUBE TE M12 X 20 UNI 5739	VIS TE M12X20 UNI 5739	TORNILLO TE M12X20 UNI 5739
R3091		VITE TSCE90°M8X20 UNI 5933 ZB	SCREW TSCE 90° M8X20 UNI 5933	SCHRAUBE TSCE 90° M8X20 UNI 5933	VIS TSCE 90° M8X20 UNI 5933	TORNILLO TSCE 90° M8X20 UNI 5933
Z_RICAMBI		* = RICAMBI CONSIGLIATI	* = RECOMMENDED SPARE PARTS	* = EMPFOHLENE E-TEILE	* = PIECES DE RECHANGE CONSEILLEES	* = REPUESTOS ACONSEJAIOS

GARAGE EQUIPMENT ASSOCIATION LIMITED
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email: info@gea.co.uk website: www.gea.co.uk

CERTIFICATE OF ACCEPTANCE

PLAY DETECTORS FOR TESTING STEERING & SUSPENSION

Play Detector Make and Model:

OMA SpA 547 & 547I

Suitable to test:

Classes IV & VII

Service Period:

12 monthly

Must only be used when part of an Automated Test Lane (ATL)

This is to certify that the above Play Detectors meet the requirements of the VOSA 2005 MOT Play Detector Specification. They are therefore acceptable for performing steering and suspension tests when part of an Automated Test Lane (ATL).

8 November 2005

Chief Executive **Date**

For and on behalf of the Garage Equipment Association (GEA), administrators of the VOSA equipment approval scheme

For Manufacturers/Importers use

I certify that the test equipment of the above make and model, bearing the serial number: .....

is installed in VTS No: ..... and is suitable for MOT testing.

Name .....

Address .....

.....

Postcode .....

Name ..... Position .....

Signature ..... Company .....

Dichiarazione di conformità - Declaration of Conformity
Konformitätserklärung - Déclaration de conformité
Declaración de conformidad - Overensstemmelseserklæring
Samsverserklæring - Överensstämmande intyg
EG-Conformiteitsverklaring

WERTHER INTERNATIONAL S.p.A.
Via F.Brunelleschi, 12 42124 CADE' (Reggio Emilia) Italy
Tel.+39/0522/9431 (r.a.) Fax +39/0522/941997

con la presente dichiariamo che
déclare par la presente que
hereby we declare that the
hiermit erklären wir,
por la presente declara,
Vi erklærer hermed,
Vi erklærer herved,
Vi förklarer härmed
verklaren hiermee,

547

I	è stato costruito in conformità alle direttive 2006/42/CE -2014/30/UE	zostal wyprodukowany zgodnie z zasadami dokumentów 2006/42/CE -2014/30/UE	**PL**
GB	has been manufactured in conformity with the directives 2006/42/CE -2014/30/UE	er fremstillet i overensstemmelse med bestemmelserne i 2006/42/CE -2014/30/UE	**DK**
F	a été construit en conformité avec les directives 2006/42/CE -2014/30/UE	är framställt i överensstämelse med bestämelser i RÅDETS DIREKTIV 2006/42/CE- 2014/30/UE	**S**
D	wurde entsprechend den Richtlinien 2006/42/CE - 2014/30/UE -	Producten zijn gefabriceerd in overeenstemming met de richtlijn 2006/42/CE -2014/30/UE	**NL**
E	ha sido fabricado según las directives 2006/42/CE -2014/30/UE	ON VALMISTETTU NIIDEN MUKAISESTI DIREKTIIVIEN JA YHDENMUKAISET STANDARDIT 2006/42/CE -2014/30/UE	**FIN**

Matricola N° - N° de série -
Serial N° - Maschinennummer

Fascicolo tecnico - Dossier technique
Technical file - Techn. Dokumentation

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