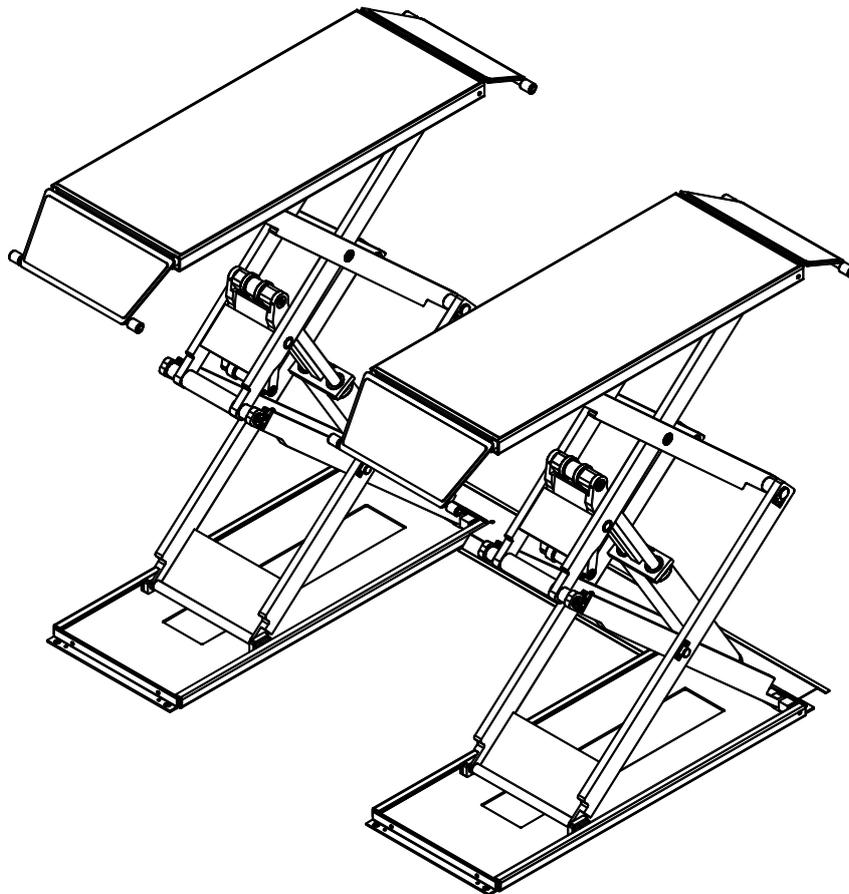


**USE
AND
MAINTENANCE
MANUAL**

**LOW PROFILE SCISSOR LIFT
SURFACE MOUNTED**

F6106



PRINTING CHARACTERS AND SYMBOLS

Throughout this manual, the following symbols and printing characters are used to facilitate reading:

	Indicates the operations which need proper care
	Indicates prohibition
	Indicates a possibility of danger for the operators
	Indicates the direction of access for motor vehicles to the lift
BOLD TYPE	Important information

	WARNING: before operating the lift and carrying out any adjustment, read carefully chapter 7 “installation” where all proper operations for a better functioning of the lift are shown.
---	--

CONTENTS

1	GENERAL INFORMATION	4
2	PRODUCT IDENTIFICATION	6
3	PACKING, TRANSPORT AND STORAGE	7
4	PRODUCT DESCRIPTION	8
5	TECHNICAL SPECIFICATION	10
6	SAFETY	16
7	INSTALLATION	19
8	OPERATION AND USE	25
9	MAINTENANCE	28
10	TROUBLESHOOTING	29

CHAPTER 1 – GENERAL INFORMATION

This chapter contains warning instructions to operate the lift properly and prevent injury to operators or objects.

This manual has been written to be used by shop technicians in charge of the lift (operator) and routine maintenance technician (maintenance operator).

The operating instructions are considered to be an integral part of the machine and must remain with it for its whole useful life.

Read every section of this manual carefully before operating the lift and unpacking it since it gives helpful information about:

- SAFETY OF PEOPLE
- SAFETY OF THE LIFT
- SAFETY OF LIFTED VEHICLES

The company is not liable for possible problems, damage, accidents, etc. resulting from failure to follow the instructions contained in this manual.

Only skilled technicians of **AUTHORISED DEALERS** or **SERVICE CENTRES AUTHORISED** by the manufacturer shall be allowed to carry out lifting, transport, assembling, installation, adjustment, calibration, settings, extraordinary maintenance, repairs, overhauling and dismantling of the lift.

THE MANUFACTURER IS NOT RESPONSIBLE FOR POSSIBLE DAMAGE TO PEOPLE, VEHICLES OR OBJECTS IF SAID OPERATIONS ARE CARRIED OUT BY UNAUTHORIZED PERSONNEL OR THE LIFT IS IMPROPERLY USED.

Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.

1.1 MANUAL KEEPING

For a proper use of this manual, the following is recommended:

- keep the manual near the lift, in an easily accessible place.
- keep the manual in an area protected from the damp.
- use this manual properly without damaging it.
- Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.

This manual is an integral part of the lift: it shall be given to the new owner if and when the lift is resold.

1.2 OBLIGATION IN CASE OF MALFUNCTION

	In case of machine malfunction, follow the instructions contained in the following chapters.
---	---

1.3 CAUTIONS FOR THE SAFETY OF THE OPERATOR

Operators must not be under the influence of sedatives, drugs or alcohol when operating the machine.

	Before operating the lift, operators must be familiar with the position and function of all controls, as well as with the machine features shown in the chapter “Operation and use”
---	--

1.4 WARNINGS

	Unauthorized changes and/or modifications to the machine relieve the manufacturer of any liability for possible damages to objects or people. Do not remove or make inoperative the safety devices, this would cause a violation of safety at work laws and regulations.
---	---

	Any other use which differs from that provided for by the manufacturer of the machine is strictly forbidden.
---	---

	The use of non genuine parts may cause damage to people or objects
--	---

DECLARATION OF WARRANTY AND LIMITATION OF LIABILITY

The manufacturer has paid proper attention to the preparation of this manual. However, nothing contained herein modifies or alters, in any way, the terms and conditions of manufacturer agreement by which this lift was acquired, nor increase, in any way, manufacturer’s liability to the customer.

TO THE READER

Every effort has been made to ensure that the information contained in this manual is correct, complete and up-to date. The manufacturer is not liable for any mistakes made when drawing up this manual and reserves the right to make any changes due the development of the product, at any time.

CHAPTER 2 – PRODUCT IDENTIFICATION

The identification data of the machine are shown in the label placed on the control unit.

LOGO	
Type:
Model:
Serial Number:
Year of manufacturing:
Capacity:
Voltage:
Power:

	Use the above data both to order spare parts and when getting in touch with the manufacturer (inquiry). The removal of this label is strictly forbidden.
---	---

Machines may be updated or slightly modified from an aesthetic point of view and, as a consequence they may present different features from these shown, this without prejudicing what has been described herein.

2.1 WARRANTY CERTIFICATE

The warranty is valid for a period of 12 months starting from the date of the purchase invoice. The warranty will come immediately to an end when unauthorized modifications to the machine or parts of it are carried out. The presence of defects in workmanship must be verified by the Manufacturer's personnel in charge.

2.2 TECHNICAL SERVICING

For all servicing and maintenance operations not specified or shown in these instructions, contact your Dealer where the machine has been bought or the Manufacturer's Commercial Department.

CHAPTER 3 - PACKING, TRANSPORT AND STORAGE

Only skilled personnel who are familiar with the lift and this manual shall be allowed to carry out packing, lifting, handling, transport and unpacking operations.

3.1 PACKING

The packing of the lift is delivered in following components:

- N. 2 base units packed in a steel frame, wrapped up in non-scratch waterproof material and sealed with 2 straps
- N. 1 power unit packed in a plywood box
- N. 4 drive-on ramps wrapped up in non-scratch waterproof material, including N. 4 rubber pads, N. 4 hydraulic hoses and N. 8 anchor bolts.

(If requested, optional accessories are available to satisfy each customer's requirements).

The average weight of the package is *900 kg*

3.2 LIFTING AND HANDLING

When loading/unloading or transporting the equipment to the site, be sure to use suitable loading (e.g. cranes, trucks) and hoisting means. Be sure also to hoist and transport the components securely so that they cannot drop, taking into consideration the package's size, weight and centre of gravity and its fragile parts.



3.3 STORAGE AND STACKING OF PACKAGES

Packages must be stored in a covered place, out of direct sunlight and in low humidity, at a temperature between -10°C and $+40^{\circ}\text{C}$.

Stacking is not recommended: the package's narrow base, as well as its considerable weight and size make it difficult and hazardous.

3.4 DELIVERY AND CHECK OF PACKAGES

When the lift is delivered, check for possible damages due to transport and storage; verify that what is specified in the manufacturer's confirmation of order is included. In case of damage in transit, the customer must immediately inform the carrier of the problem.

Packages must be opened paying attention not to cause damage to people (keep a safe distance when opening straps) and parts of the lift (be careful the objects do not drop from the package when opening).

CHAPTER 4 - PRODUCT DESCRIPTION

4.1 LIFT (ref. Figure 1)

The lift has been designed for the lifting of motor-vehicles and for making them stand at any level between the minimum and maximum height.

The maximum lifting weight, including any additional load on the vehicle, is as specified on the serial plate.

All mechanical frames, such as platforms, extensions, base frames and arms have been built in steel plate to make the frame stiff and strong while keeping a low weight

The electro hydraulic operation is described in detail in chapter 8.

This chapter describes the lift's principal elements, allowing the user to be familiar with the machine. As shown in figure 2, the lift is composed of two platforms (1) each equipped with the extension which can be as the drive-on ramps (2), anchored to the ground by means of two base frames (3).

Platforms are linked to the base frame by means of a scissors lifting system.

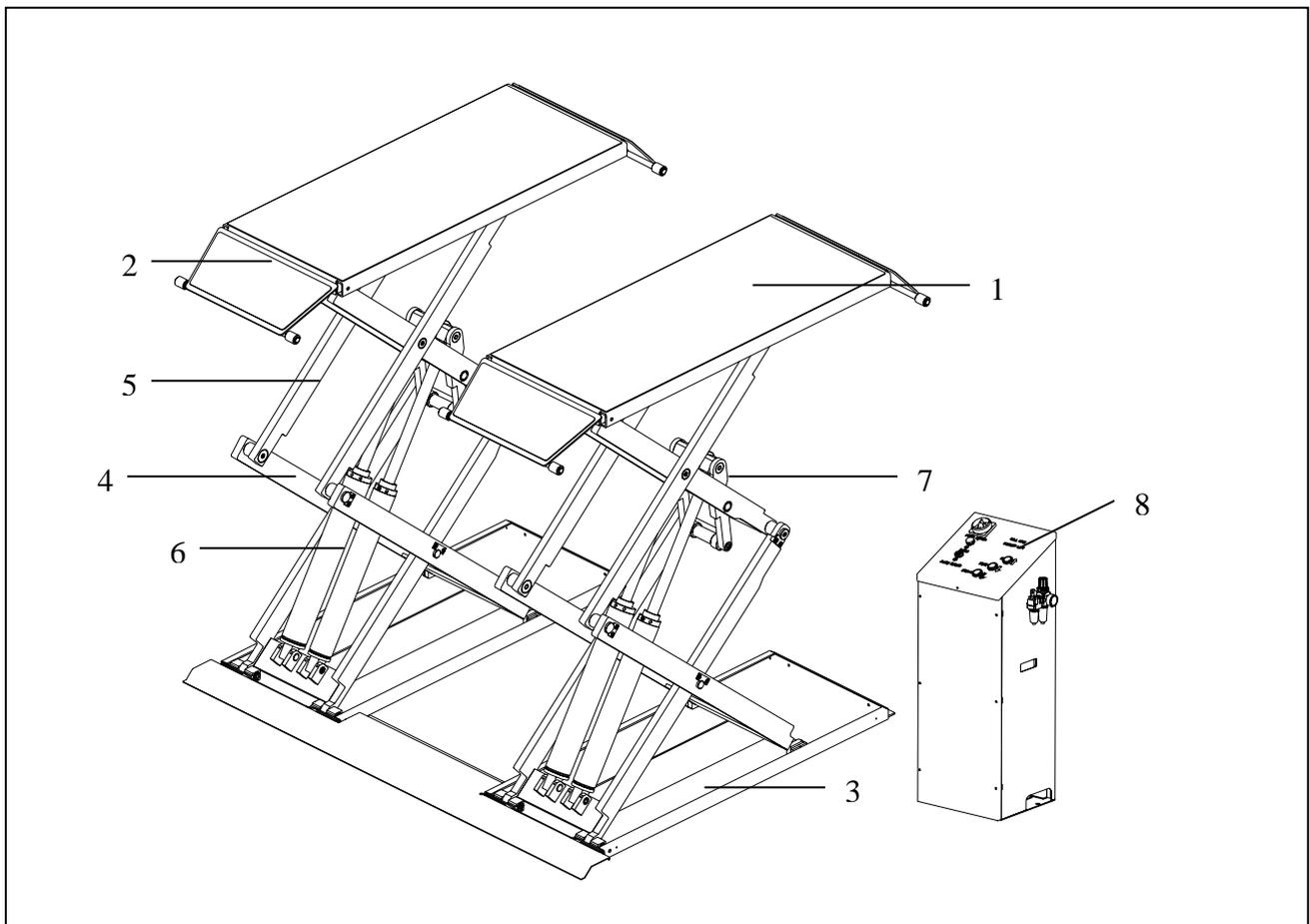
The lifting system of each platform is composed of N.4 arms, two inferior (4) and two superior (5) and a couple of cylinders (6).

Motion is transmitted by a lever system, from the cylinders to the lever arms, (7)

Lowering and lifting are carried out by means of a control unit (8) , placed next to the lift

Two limit switches are installed in the power unit, one for the safety height and the other one for the maximum height.

Figure 1 - LIFT



4.2 OPERATION

Platform lifting is carried out by the hydraulic unit which acts upon the primary cylinders

The platforms are raised simultaneously owing cross feeding of the hydraulic cylinders.

Lowering, even though electrically controlled, is carried out by the weight of both the platforms and the load lifted

The hydraulic system is protected by a max pressure valve thus preventing pressure from exceeding the maximum fixed safety limit.

Lifting and lowering motion of the lift is controlled by the push buttons on the control panel.

Whenever the lift has to be lowered to the ground and the lowering button is pressed, the lift will stop at about *400 mm* from the ground.

In this way, the operator must verify that neither persons nor objects are within the safety area.

If so, the final lowering button can be pressed and the lift be lowered.

A beep sound is heard during the last travel.

CHAPTER 5 - TECHNICAL SPECIFICATION

5.1 SIZE AND MAIN FEATURES (ref. Figure 2)

CAPACITY	3000KG
Maximum lifting height	1850 mm
Minimum height of lift	115 mm
Length of the platform	1435mm/1980mm
Width of platforms	600 mm
Free width between platforms	800 mm
Overall length	2000mm
Overall width	2000mm
Lifting time	50 s
Lowering time	50 s
Noise level	70 dB(A)/1m
Total weight of the lift	900 kg
Working temperature	-10 °C ÷ 40 °C

5.2 ELECTRIC MOTOR

Type	ML90L2	G90N4
Voltage	230V/220V-1Ph	400V/380V-3Ph
Power	2.2 KW	2.6 KW
N° Poles	2	4
Speed	2800 rpm	1375 rpm
Motor enclosure type	B14	
Insulation class	IP 54	

Motor connection must be carried out referring to the attached wiring diagrams (Fig. 5).

The motor direction of rotation is shown in the label placed on the motor.

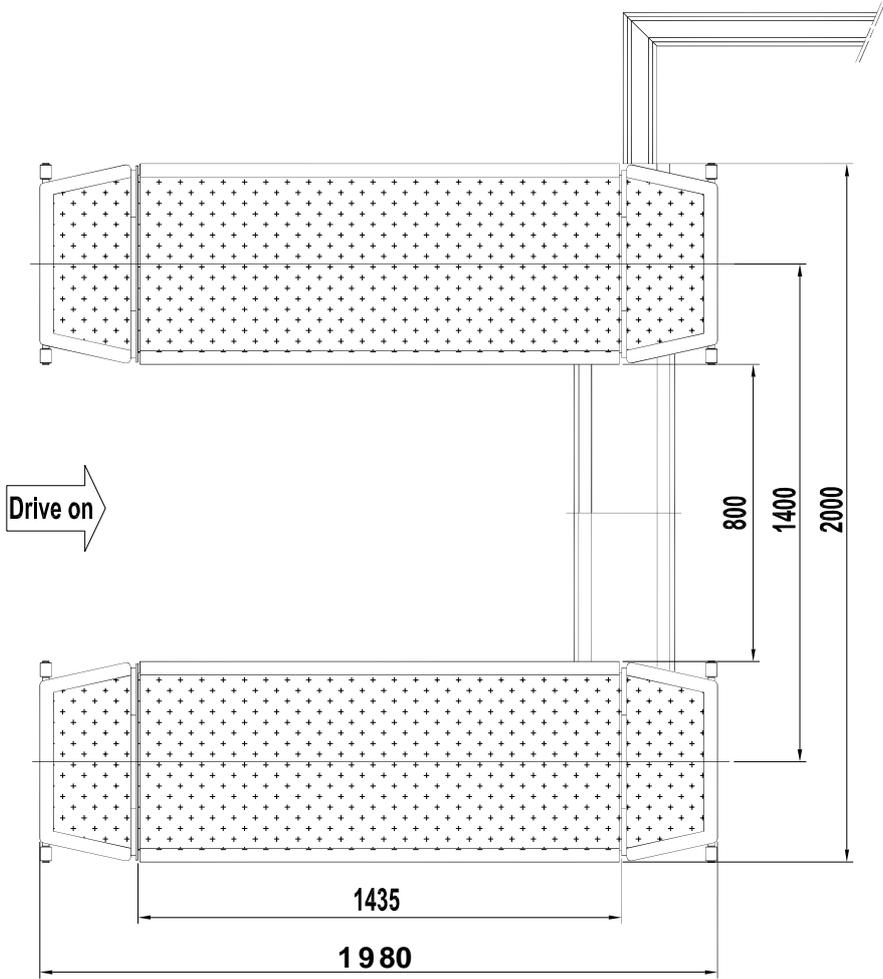
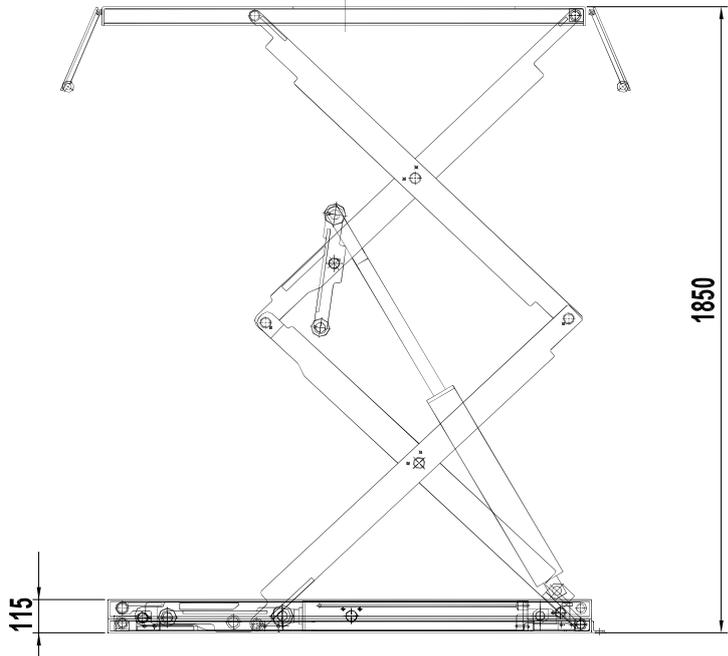
Before use of the lift, make sure to check if the motor specification shown in the nameplate of the motor conforms to the local electric supply.

If there is over 10% fluctuation on the electrical power supply, it is suggested to use the voltage stabilizer to protect the electrical components and system from failure working.

5.3 PUMP

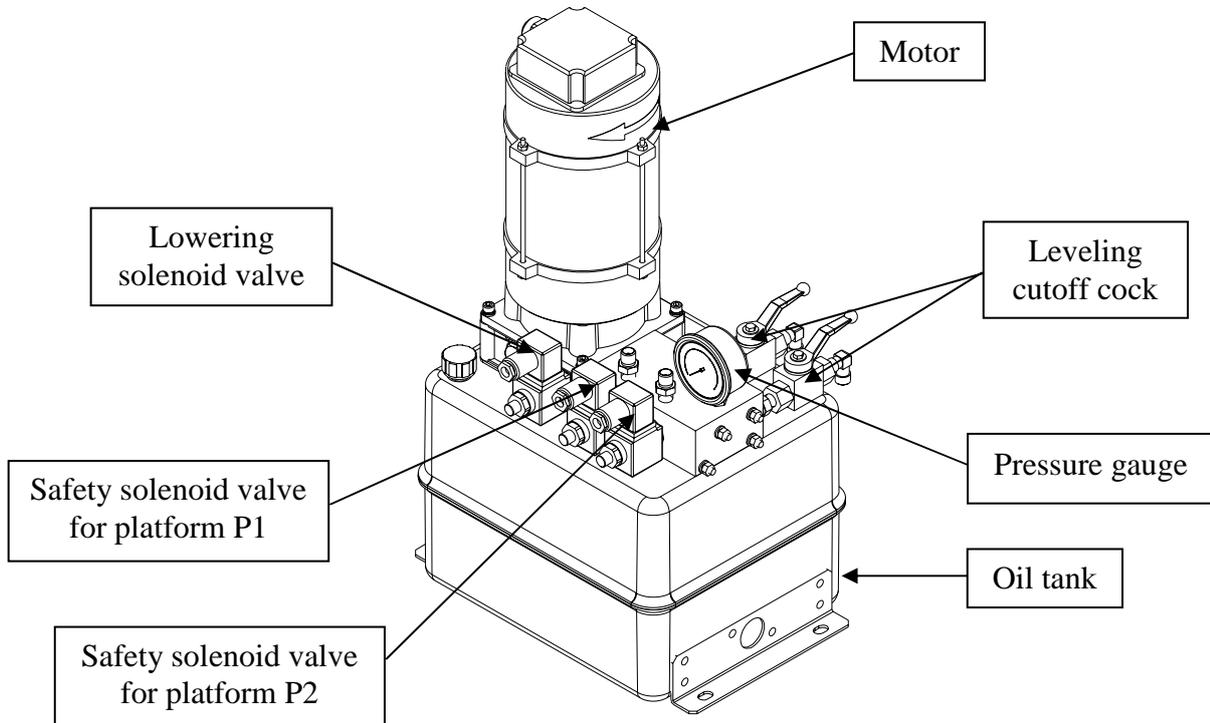
Type	Gear	
Flow rate	2.1 cm ³ /g	4.8 cm ³ /g
Continuous working pressure	210 bar – 230 bar	
Peak pressure	250 bar	

Figure 2 – LAYOUT



5.4 HYDRAULIC POWER UNIT

Figure 3 – HYDRAULIC POWER UNIT



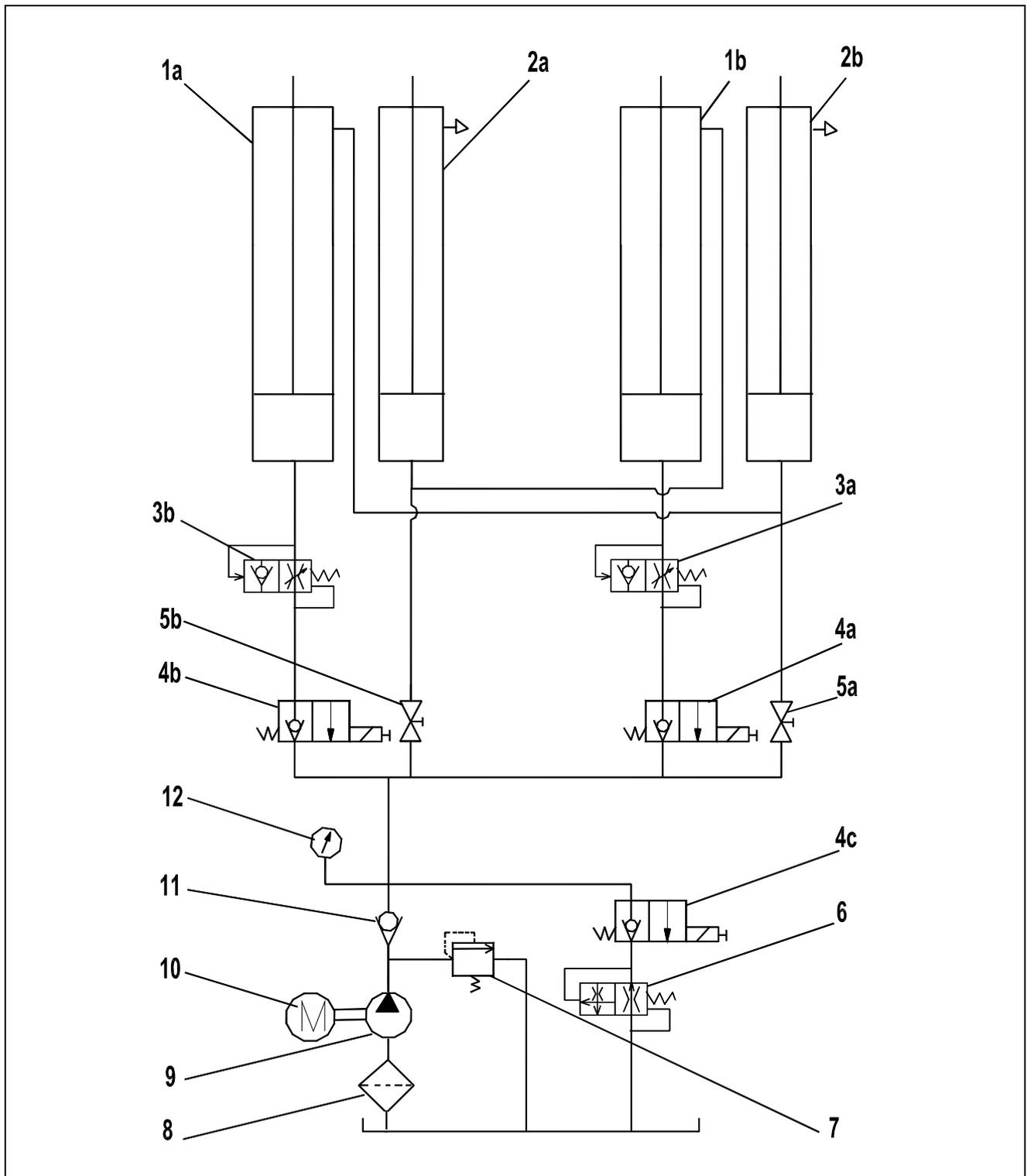
5.5 OIL

Use wear proof oil for hydraulic drive, in conformity with *ISO 6743/4* rules (HM class).

TEST STANDARDS	FEATURES	VALUE
ASTM D 1298	Density 20°C	0.8 kg/l
ASTM D 445	Viscosity 40°C	32 cSt
ASTM D 445	Viscosity 100°C	5.43 cSt
ASTM D 2270	Viscosity index	104 N°
ASTM D 97	Pour point	~ 30 °C
ASTM D 92	Flash point	215 °C
ASTM D 644	Neutralization number	0.5 mg KOH/g

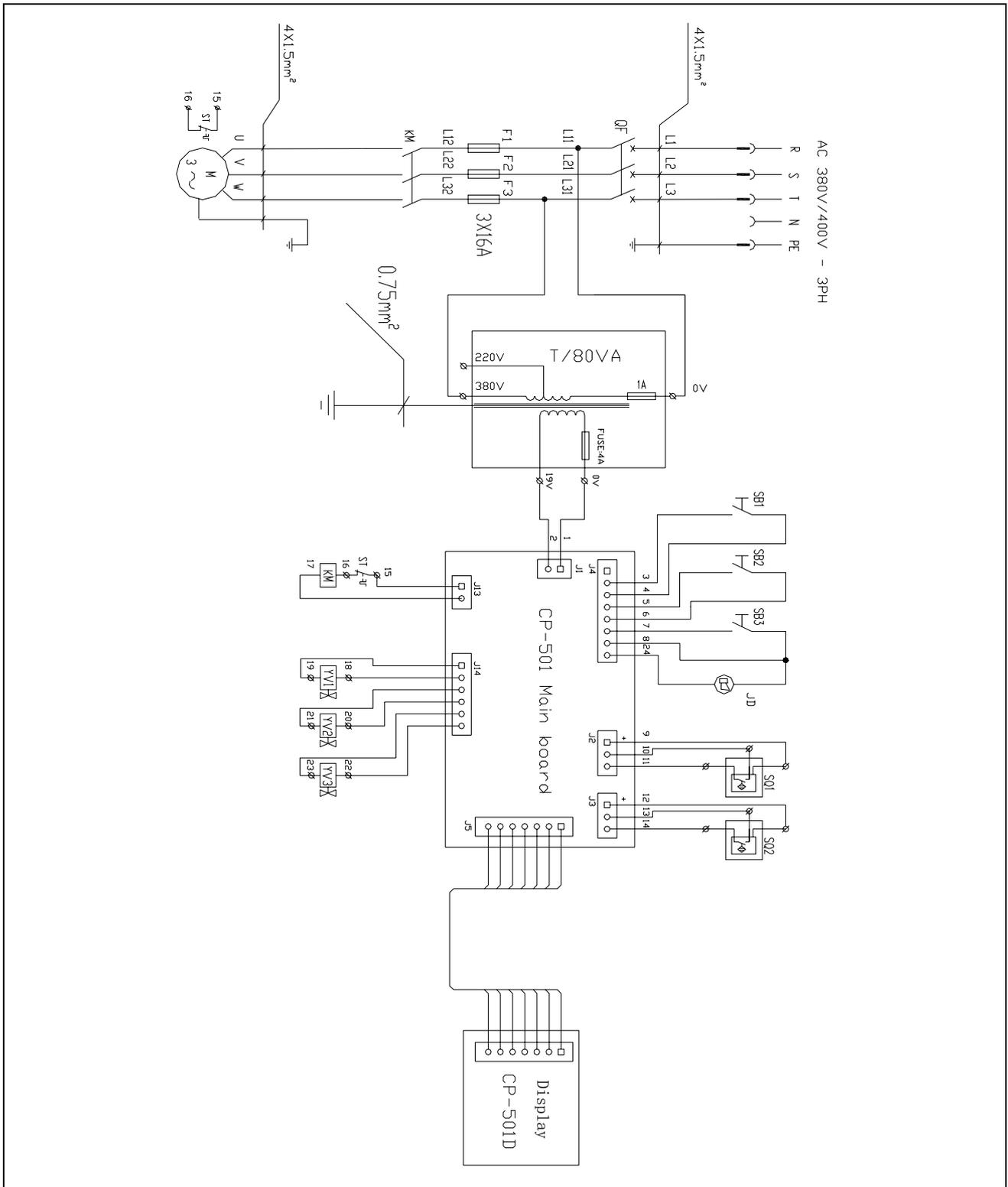
	CHANGE HYDRAULIC OIL AT 1 YEAR INTERVALS
---	---

Figure 4 - HYDRAULIC PLAN



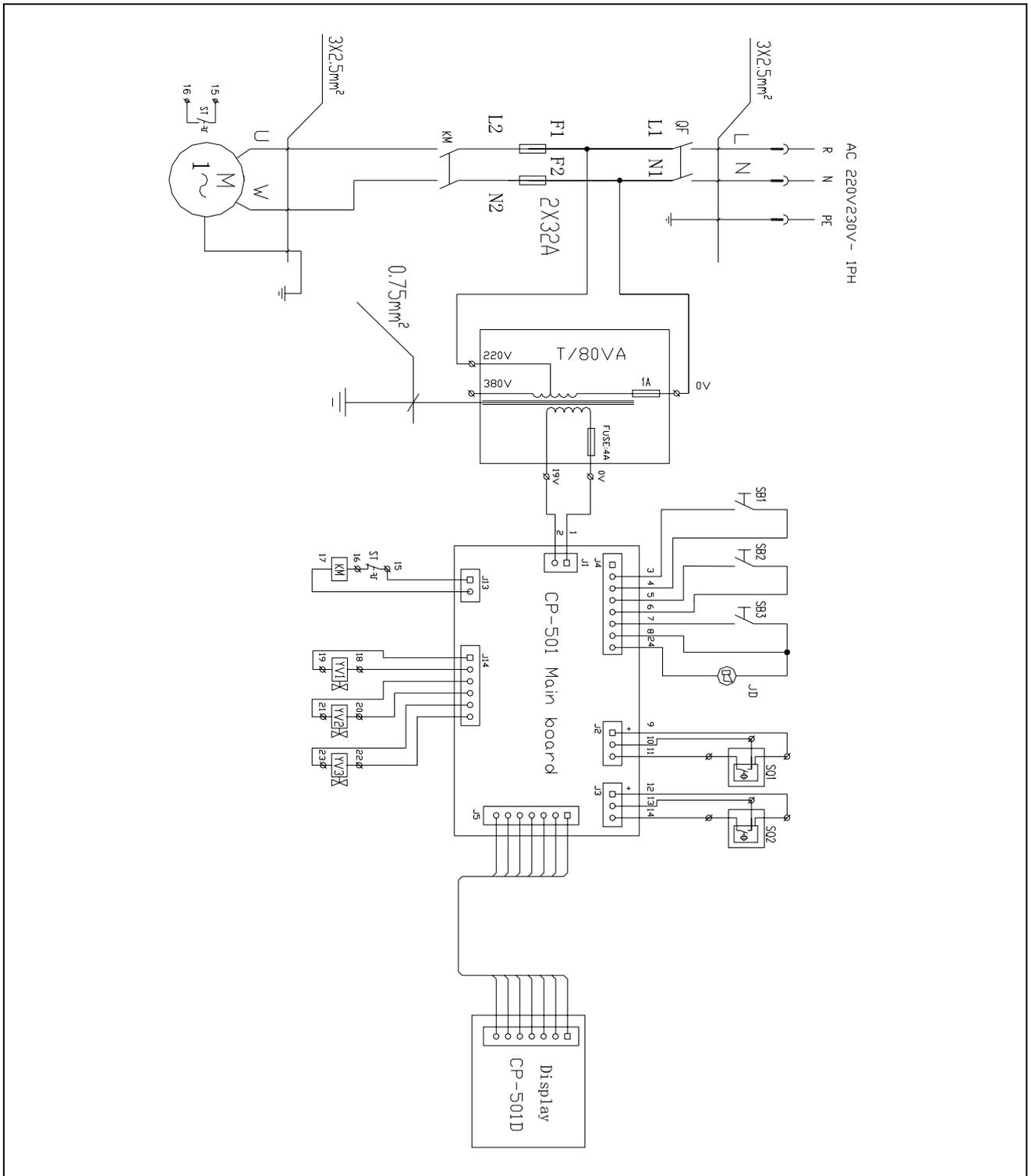
1a	Platform P1 master cylinder	5a	Leveling cutoff cock - platform P2
1b	Platform P2 master cylinder	5b	Leveling cutoff cock - platform P1
2a	Platform P1 slave cylinder	6	Lowering control valve
2b	Platform P2 slave cylinder	7	Maximum pressure valve
3a	Parachute valve - platform P2	8	Oil filter
3b	Parachute valve - platform P1	9	Gear pump
4a	Safety solenoid air valve – platform P2	10	Motor
4b	Safety solenoid air valve – platform P1	11	Non return valve
4c	Lowering solenoid valve	12	Pressure gauge

Figure 5a – ELECTRICAL PLAN (380V/400V-3PH)



QF	Power switch	YV2	Solenoid air valve – platform P2
M	Motor 2.6KW 3PH	SB1	Lifting pushbutton
ST	Overhead protector	SB2	Lowering pushbutton
T	Transformer 80VA	SB3	Final lowering pushbutton
KM	Contactore DC	JD	Beeper
YV1	Lowering solenoid valve	SQ1	Proximity switch – Max. lifting height
YV2	Solenoid air valve – platform P1	SQ1	Proximity switch – safety lifting height

Figure 5b – ELECTRICAL PLAN (220V/230V-1PH)



QF	Power switch	YV2	Solenoid air valve – platform P2
M	Motor 2.2KW 1PH	SB1	Lifting pushbutton
ST	Overhead protector	SB2	Lowering pushbutton
T	Transformer 80VA	SB3	Final lowering pushbutton
KM	Contactora DC	JD	Beeper
YV1	Lowering solenoid valve	SQ1	Proximity switch – Max. lifting height
YV2	Solenoid air valve – platform P1	SQ1	Proximity switch – safety lifting height

CHAPTER 6 - SAFETY

Read this chapter carefully and completely because it contains important information for the safety of the operator and the person in charge of maintenance.

	<p>The lift has been designed and built for lifting vehicles and making them stand above level in a closed area. Any other use is forbidden.</p> <p>The manufacturer is not liable for possible damages to people, vehicles or objects resulting from an improper or unauthorized use of the lift.</p>
---	--

For operator and people safety, a safety area at least 1m free away from the lift must be vacated during lifting and lowering. The lift must be operated only from the operator's control site in this safety area.

Operator's presence under the vehicle, during working, is only admitted when the vehicle is lifted and platforms are not running.

	<p>Never use the lift when safety devices are off-line. People, the lift and the vehicles lifted can be seriously damaged if these instructions are not followed.</p>
---	--

6.1 GENERAL WARNINGS

The operator and the person in charge of maintenance must follow accident-prevention laws and rules in force in the country where the lift is installed

They also must carry out the following:

- neither remove nor disconnect hydraulic, electric or other safety devices;
- carefully follow the safety indications applied on the machine and included in the manual;
- observe the safety area during lifting;
- be sure the motor of the vehicle is off, the gear engaged and the parking brake put on;
- be sure only authorized vehicles are lifted without exceeding the maximum lifting capacity;
- Verify that no one is on the platforms during lifting or standing.

6.2 RISKS DURING VEHICLE LIFTING

To avoid overloading and possible breaking, the following safety devices have been used:

- a maximum pressure valve placed inside the hydraulic unit to prevent excessive weight.
- a special design of the hydraulic system, in case of pipeline failure, to prevent sudden lift lowering..

	<p>The maximum pressure valve has been preset by the manufacturer to a proper pressure. DO NOT try to adjust it to overrun the rated lifting capacity.</p>
---	---

6.3 RISKS FOR PEOPLE

All risks the personnel could run, due to an improper use of the lift, are described in this section.

6.4 PERSONNEL CRUSHING RISKS

During lowering of runways and vehicles, personnel must not be within the area covered by the lowering trajectory. The operator must be sure no one is in danger before operating the lift.



Fig. 6a



Fig. 6b

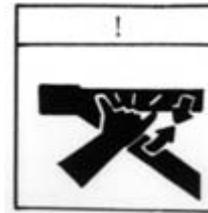


Fig. 6c

6.5 BUMPING RISK

When the lift is stopped at relatively low height for working, the risk of bumping against projecting parts occurs.



Fig. 7

6.6 RISK OF THE VEHICLE FALLING FROM THE LIFT

Vehicle falling from the lift can be caused when the vehicle is improperly placed on platforms, and when its dimensions are incompatible with the lift or by excessive movement of the vehicle. In this case, keep immediately away from the working area.



Fig. 8a



Fig. 8b



Fig. 8c

6.7 SLIPPING RISKS

The risk of slipping can be caused by oil or dirt on the floor near the lift.



Fig. 9



Keep the area under and around the lift clean. Remove all oil spills.

6.8 ELECTROCUTION RISKS

Avoid use of water, steam, and solvent, varnish jets in the lift area where electric cables are placed and, in particular, next to the electric panel.

6.9 RISKS RESULTING FROM IMPROPER LIGHTING

Make sure all areas next to the lift are well and uniformly lit, according to local regulations.

6.10 RISKS OF BREAKING COMPONENT DURING OPERATION

Materials and procedures, suitable for the designed parameters of the lift, have been used by the manufacturer to build a safe and reliable product. Operate the lift only for the use it has been designed for and follow the maintenance schedule shown in the chapter “Maintenance”.



Fig. 10

6.11 RISKS FOR UNAUTHORIZED USES

The presence of unauthorized persons next to the lift and on the platforms is strictly forbidden during lifting as well as when the vehicle has been already lifted



Fig. 11



Any use of the lift other than that herein specified can cause serious accidents to people in close proximity of the machine.

CHAPTER 7 - INSTALLATION



Only skilled technicians, appointed by the manufacturer, or by authorized dealers, must be allowed to carry out installation. Serious damage to people and to the lift can be caused if installations are made by unskilled personnel.



Before carrying out any operations, remember to insert the safety piece of wood between the lower booms and the base frame.

7.1 CHECKING FOR ROOM SUITABILITY

The lift has been designed to be used in covered and sheltered places free of overhead obstructions. The place of installation must not be next to washing areas, painting workbenches, solvent or varnish deposits. The installation near to rooms, where a dangerous situation of explosion can occur, is strictly forbidden. The relevant standards of the local Health and Safety at Work regulations, for instance, with respect to minimum distance to wall or other equipment, escapes and the like, must be observed.

7.2 LIGHTING

Lighting must be carried out according to the effective regulations of the place of installation. All areas next to the lift must be well and uniformly lit.

7.3 INSTALLATION SURFACE

The lift must be placed on level floor and sufficiently resistant. The surface must be suitable for bearing maximum stress values, also in unfavorable working conditions. For installations on raised surface, compliance with the maximum carrying capacity of the surface is recommended.



A level floor is suggested for proper installation. Small differences in floor slope may be compensated for by proper shimming. Any major slope change will affect the level lifting performance. If a floor is of questionable slope (more than 3mm side to side or 5mm within the full length of lift), considering to pour the new concrete slab.

7.4 RUNWAY ASSEMBLY AND CONTROL UNIT POSITIONING



Unauthorized persons are not allowed to enter during assembly...

- Transport platforms to the installation site by using hoisting means with load capacity of 500 kg at least. Transport platforms to the installation site by using hoisting means with load capacity of 500 kg at least.
- Always raise platforms by holding them on the underside of the base frames.
- Position the base frames on the located site according to the drive-on direction of the lift
- Place the control unit in the position provided for.

7.5 HYDRAULIC SYSTEM CONNECTION (Ref. Fig. 12)

- Open the front cover of the control unit.
- Connect hydraulic hose to the fittings referring to the letters shown on them.
- Tighten thoroughly.

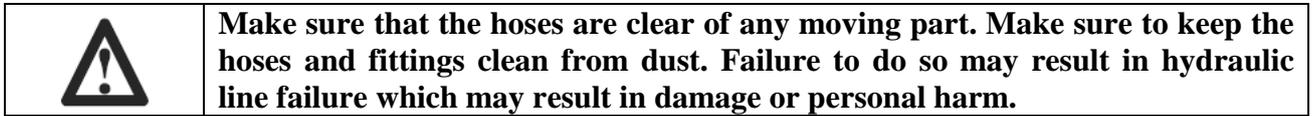
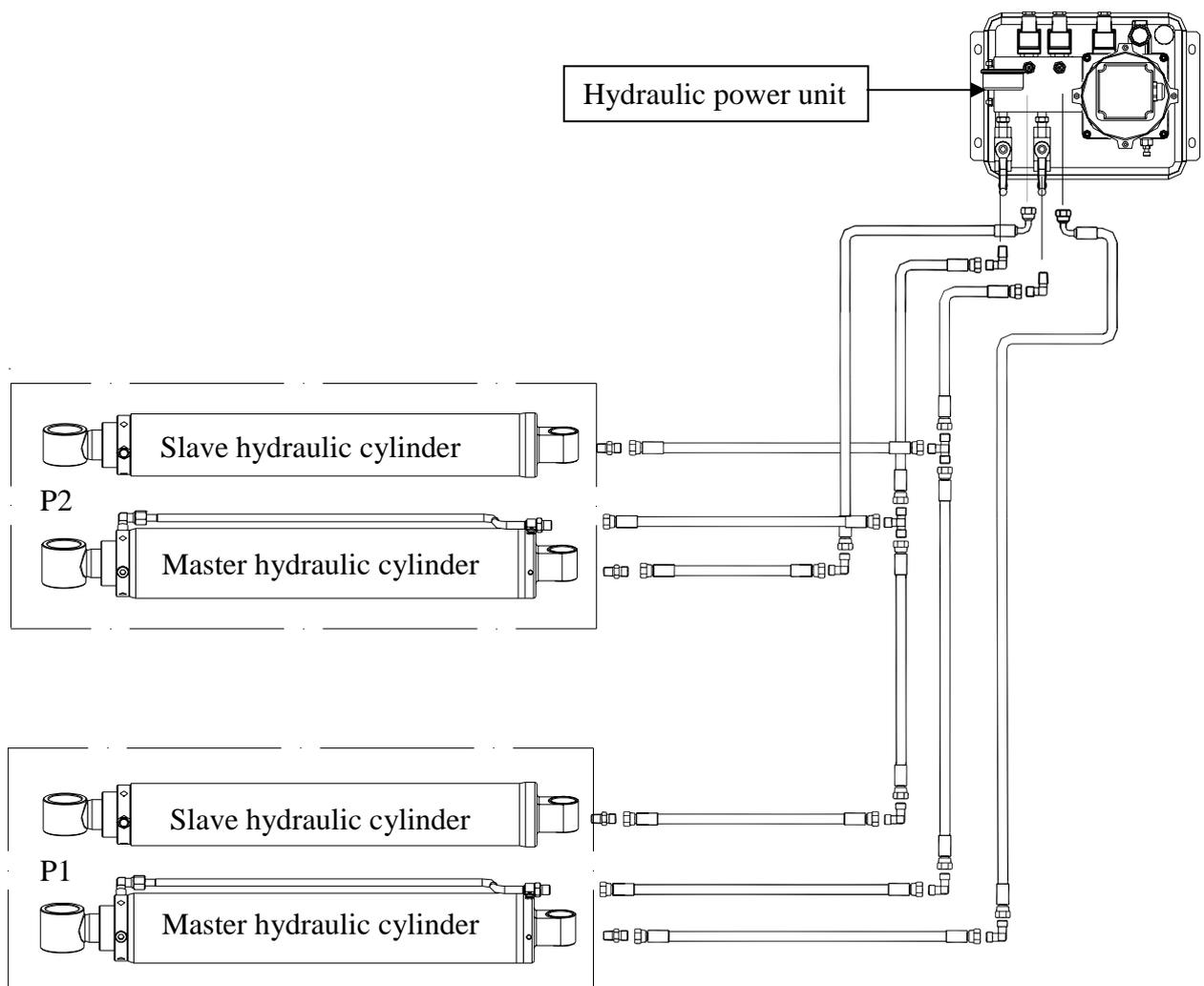


Figure 12 – HYDRAULIC CONNECTION



7.6 MAKE THE ELECTRICAL HOOKUP TO CONTROL UNIT

	<p>The hookup work must be carried out by a qualified electrician.</p> <p>Make sure that the power supply is right.</p> <p>Make sure the connection of the phases is right. Improper electrical hook-up can damage motor and will not be covered under warranty.</p> <p>DO NOT run the hydraulic unit with no oil. Damage to pump can occur.</p> <p>The control unit must be kept dry. Damage to power unit caused by water or other liquids such as detergents, acid etc., is not covered under warrant.</p>
---	--

- Make the electric hookup to the hydraulic power unit referring to the wiring diagram figure. 5 using included electric cable.
- Make sure the connection of the phases is right and the lift is grounded. If no special request, black wires are for phase lines, the blue is for “0” line and the yellow/green is for grounding.

7.7 FEEDING OIL AND BLEEDING

	<p>Make sure to follow carefully the instructions in the coming paragraph for avoiding damages on the lift.</p> <p>Do not install the maximum working height limit switch before bleeding the hydraulic line.</p>
--	---

7.7.1 CHECK

- Make sure all pins and bolts to insure proper mounting
- Make sure the electrical system feeding voltage is equal to that specified in the nameplate on the motor
- Make sure the electric connections are in compliant with the wiring diagrams (figure 5)
- Make sure no leakage or blow-up in hydraulic line and pneumatic line
- Make sure the lift is connected to the ground

7.7.2 START

- Be sure the working area is free from people and objects
- Verify that the control unit is powered
- Pour oil in the tank (about *16 liters more than one time*)
- Feed the lift by the power switch
- Verify that the motor direction of rotation is that shown on the label by pushing the lifting button. **IF MOTOR GETS HOT OR SOUNDS PECULIAR, STOP IMMEDIATELY AND RECHECK THE ELECTRIC CONNECTIONS**

7.7.3 FEEDING OIL

- Turn on the leveling cutoff cocks (Fig.13 - A) and (Fig.13 - B);
- Push the lifting button to feed the oil into the cylinders for approximate 30 seconds;
- Turn off the leveling cutoff cocks (Fig.13 - A) and (Fig.13 - B);

7.7.4 BLEEDING THE HYDRAULIC LINE

- Continue raise the lift by pressing the lifting button until the cylinder bottoms out and stops
- Lower the lift by pressing the lowering button and in the meantime turn on the leveling cutoff cocks (Fig.13 - A) and (Fig.13 - B);
- Keep press the lowering button until the lift reaches the minimum height.
- If the safety height limit switch is already installed, the lift will stop when the lift reaches the safety height. In this case, lower the lift completely by pushing the final lowering button. During this procedure the beeper is activated and remains active during the lift lowering
- Raise the lift to the maximum height and in the meantime turn off the leveling cutoff cocks
- Lower the lift completely and in the meantime turn on the leveling cutoff cocks.
- Follow this procedure and repeat raise and lower the lift at least 5 times to bleed all the air trapped inside the cylinders.

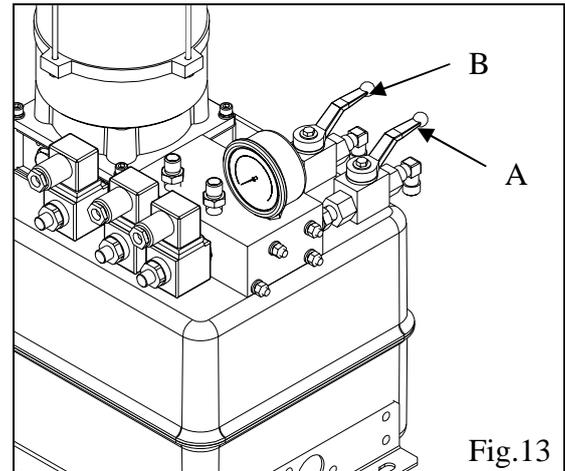


Fig.13

7.7.5 PLATFORM LEVELING

If the platforms weren't leveled (one of the two platform is lower than the other one), follow these instructions:

- Turn on the leveling cutoff cock of the lower platform
- Push the lifting button until two platforms are in the same height
- Turn off the leveling cutoff cock

7.8 ANCHORING THE BASE FRAMES

- Place the platforms approximately 1m above the ground. Be sure two platforms in equal height from the floor and safety locks are fully engaged.
- Using the base frames as guide, drill each hole in the concrete approximately 120mm deep with the rotary hammer drill D.16. To assure full holding power, do not ream the hole or allow drill to wobble.
- After drilling, remove dust thoroughly from each hole using compressed air or wire brush.
- Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. Be sure if shimming is required, enough threads are left exposed.
- If shimming is required, insert the shims as necessary around the anchor bolts.
- With the shims and the supplied anchor bolts in place, tighten by securing the nut to the base.

7.9 ADJUSTMENT OF LIMIT SWITCHES

	<p>Only skilled personnel must be allowed to carry out this operation. An improper adjustment of limit switches could cause damages to the lift, objects and people.</p>
--	--

Limit switches must be adjusted during the installation of the lift

This lift is equipped with 2 proximity switches for the maximum lifting height and the safety height. Both are to be mounted on the base as shown in the figure 14 and can be activated by the slider when it passes by.

If limit switches were not functioning properly, it's possible to adjust them in the following way referring to the figure 15.

7.9.1 ADJUSTMENT OF MAXIMUM LIFTING HEIGHT LIMIT SWITCH

- Place the lift at a height of *1850 mm*;
- Unloose nuts (1) of the limit switch (2) and adjust it at the desired height;
- Tighten the nuts after adjustment.

7.9.2 ADJUSTMENT OF SAFETY HEIGHT LIMIT SWITCH

- Place the lift at a height of *400 mm*;
- Unloose nuts (1) of the limit switch (2) and adjust it at the desired height;
- Tighten the nuts after adjustment.



After adjustment of the switches, make sure to fix the switch protection on the base. Failure to do so can damage the switches.

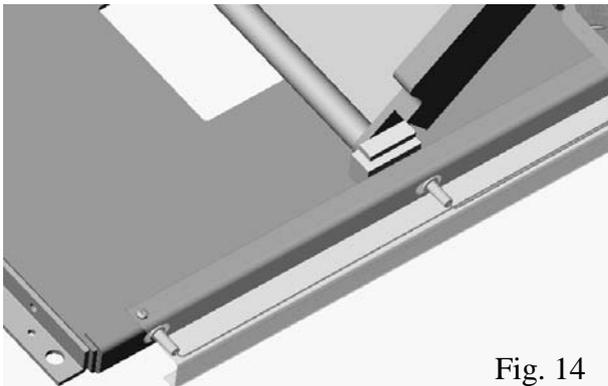


Fig. 14

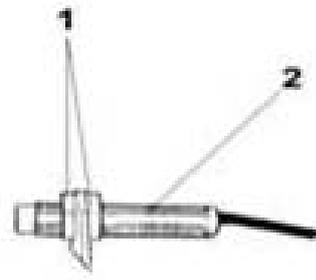


Fig. 15

7.10 LOAD LESS CHECK

Carry out two or three complete cycles of lowering and lifting and check:

- proper oil level in the tank
- no leakage and blow-by in hydraulic line
- cylinders for proper operation
- the level of the platforms
- the lift for reaching its maximum height
- the limit switches for proper operation
- the horn/signaling light for proper operation during the final travel

7.11 CHECKING WITH LOAD

Before carrying out the checks with load, make inspection of the machine and check bolts and nuts for proper tightening.

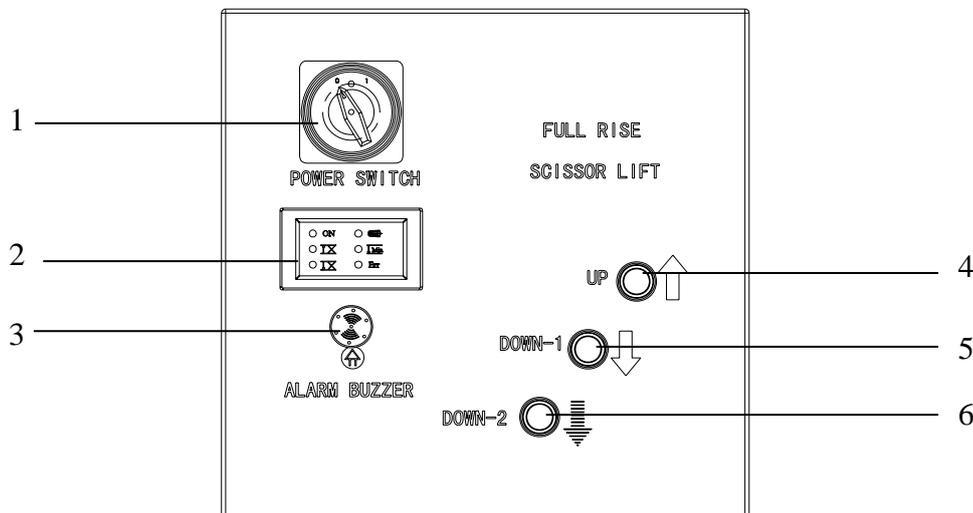
- repeat checks provided for by 7.10 section with the vehicle loaded
- if the platforms weren't leveled, repeat the 7.7 section

CHAPTER 8 - OPERATION AND USE

	<p>Never operate the lift with any person or equipment below.</p> <p>Never exceed the rate lifting capacity.</p> <p>Always ensure that the lift rests on the safety locks before any attempt is made to work on or near the vehicle.</p> <p>If an anchor bolt becomes loose or any component of the lift is found to be defective, DO NOT USE THE LIFT until repairs are made.</p> <p>Do not permit the electric control unit to get wet!</p>
---	--

8.1 CONTROLS

CONTROL PANEL (Figure 16)



Controls for operating the lift are:

POWER SWITCH (1)

The power switch can be set in two positions:

- **0 position:** the lift electric circuit is not powered; the switch can be padlocked to prevent the use of the lift.
- **1 position:** the main electric circuit is powered.

DISPLAY WINDOW (2)

- When **ON** lights, it shows that the electric circuit is powered.
- When **IX** lights, it shows that Max. lifting height limit switch activates.
- When **IX** lights, it shows that the safety height limit switch activates.
- When **Power** lights, it shows that the power unit is working.
- When **Min** lights, it shows that the lift starts the final lowering.
- **Err** indicator is disabled in this lift.

BEEPER (3)

LIFTING BUTTON UP (4)

- When pressed, the electric circuit for the lift operates the motor and hydraulic circuit to raise the lift

LOWERING BUTTON DOWN-1 (5)

- When pressed, the lift begins to descend to the safety height (400mm).

FINAL LOWERING BUTTON DOWN-2 (6)

- When pressed with the lift at the safety height (400mm), it activates first the beeper and then the lift begins to lower to the minimum height.



Be sure the safety area is free from people and objects during the final travel

Lift operation can be summarized into four steps:

8.2 VEHICLE POSITIONING

- Place the vehicle at the centre of the platform and lock the extensions;
- Place pads under the positions indicated for lifting, by the motor vehicle's manufacturer.

8.3 LIFTING

- Set the power switch to 1 position and push the lifting button to lift the vehicle to the required height.

8.4 STANDING

- To rest the lift in standing position, at the desired height release the lifting button, the lift will stop automatically.

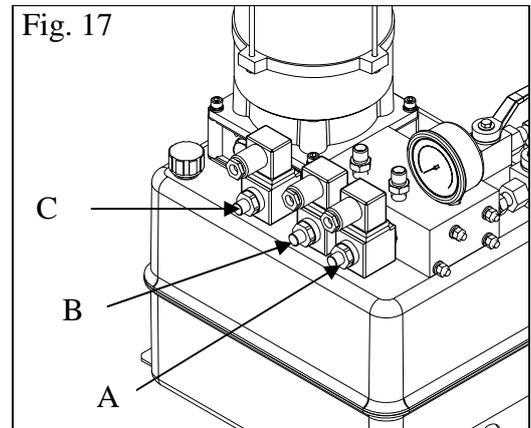
8.5 LOWERING

- Press the lowering button;
- The lift will descend, under its own weight and car's one, at the safety height of 400mm;
- Be sure the safety area is free of people and objects, then press the final lowering button.

8.6 MANUAL EMERGENCY LOWERING (ref. figure 17)

If there is no power or the control box is damaged, lower the lift manually to its initial position as follows:

- Padlock the main switch;
- Open the front cover of control unit;
- Unloosen the solenoid valves for both platforms by turning anticlockwise the emergency screws (A) and (B);
- Unloosen the lowering solenoid valve by turning the emergency screw (C) anti-clockwise to lower the platforms. Screwing or loosening the screw can reduce or increase the lowering speed;
- Screwing all screws clockwise to retighten after the lift is lowered completely.



After manual lowering of the lift, reset ordinary operating conditions. Lift cannot be lifted if manual lowering valve is opened

CHAPTER 9 - MAINTENANCE



Only trained personnel who knows how the lift works, must be allowed to service the lift.

To service properly the lift, the following has to be carried out:

- use only genuine spare parts as well as equipment suitable for the work required;
- follow the scheduled maintenance and check periods shown in the manual;
- discover the reason for possible failures such as too much noise, overheating, oil blow-by, etc.

Refer to documents supplied by the dealer to carry out maintenance:

- functional drawing of the electric and hydraulic equipment
- exploded views with all data necessary for spare parts ordering
- list of possible faults and relevant solutions.



Before carrying out any maintenance or repair on the lift, disconnect the power supply, padlock the general switch and keep the key in a safe place to prevent unauthorized persons from switching on or operating the lift

9.1 ORDINARY MAINTENANCE

The lift has to be properly cleaned at least once a month. Use self-cleaning clothes.



The use of water or inflammable liquid is strictly forbidden

Be sure the rod of the hydraulic cylinders is always clean and not damaged since this may result in leakage from seals and, as a consequence, in possible malfunctions.

9.2 PERIODIC MAINTENANCE

Every 3 months	Hydraulic circuit	<ul style="list-style-type: none"> ▪ check oil tank level; refill with oil, if needed; ▪ check the circuit for oil leakage. ▪ check seals for proper conditions and replace them, if necessary;
	Foundation bolts	<ul style="list-style-type: none"> ▪ check bolts for proper tightening
	Hydraulic pump	<ul style="list-style-type: none"> ▪ verify that no noise changes take place in the pump of the control desk when running and check fixing bolts for proper tightening
	Safety system	<ul style="list-style-type: none"> ▪ check safety devices for proper operation
Every 6 months	Oil	<ul style="list-style-type: none"> ▪ check oil for contamination or ageing. Contaminated oil is the main reason for failure of valves and shorter life of gears pumps
Every 12 months	General check	<ul style="list-style-type: none"> ▪ verify that all components and mechanisms are not damaged
	Electrical system	<ul style="list-style-type: none"> ▪ a check of the electrical system to verify that control desk motor, limit switches and control panel operate properly must be carried out by skilled electricians
	Oil	<ul style="list-style-type: none"> ▪ empty the oil tank and change the hydraulic oil

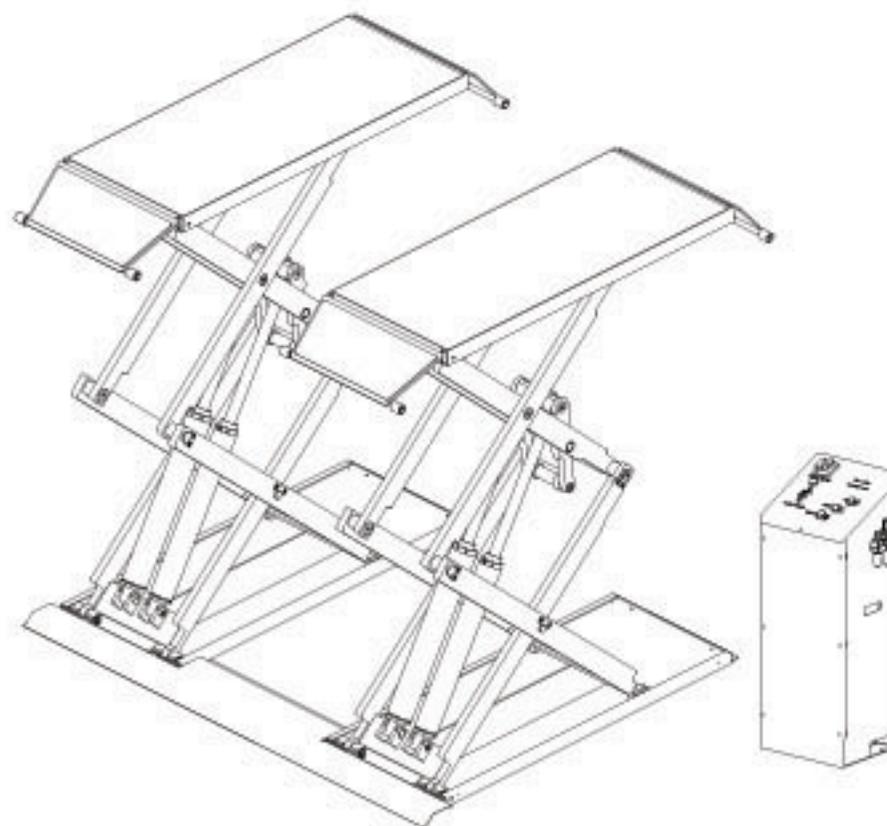
CHAPTER 10 - TROUBLESHOOTING

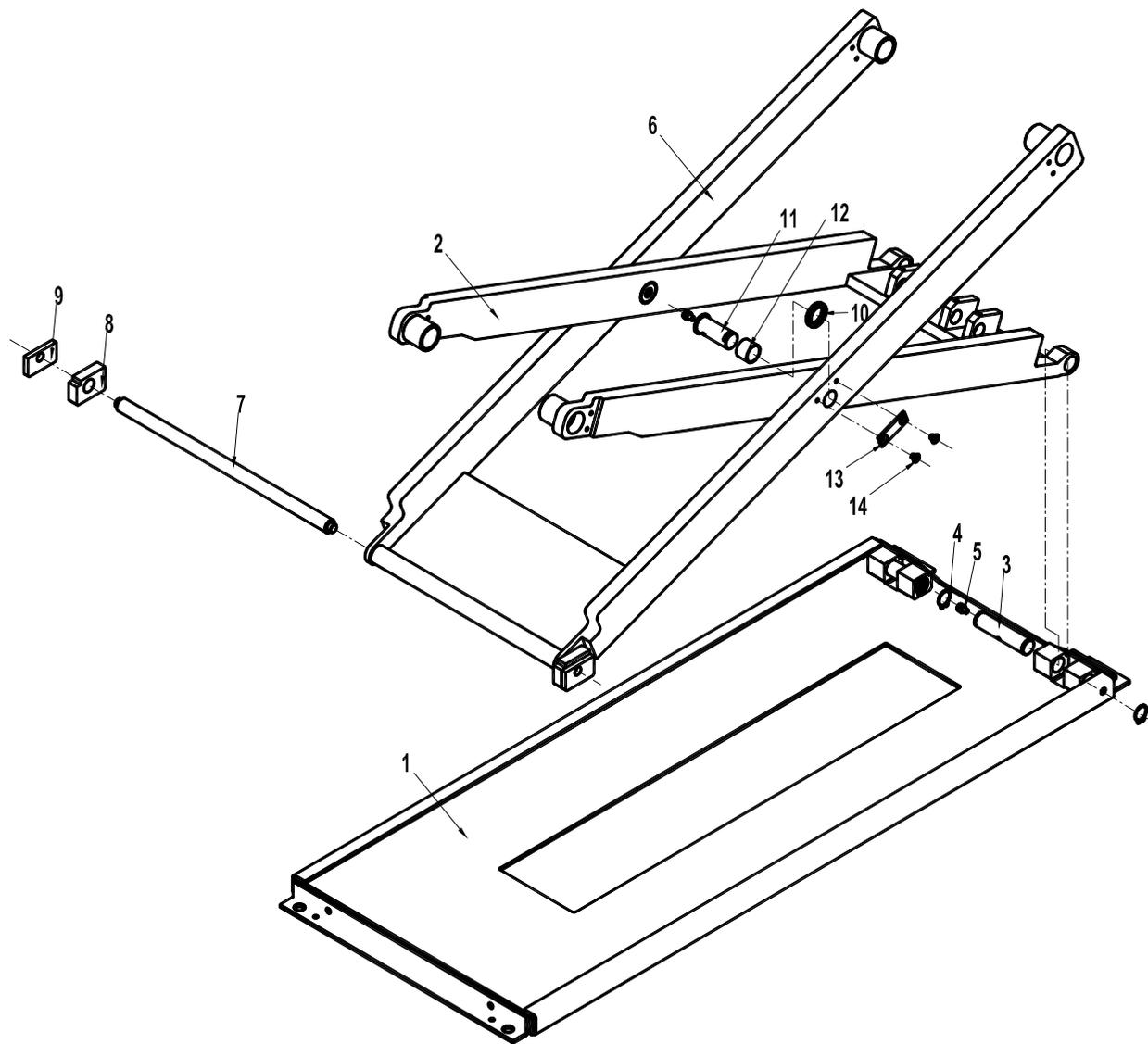
A list of possible troubles and solutions is given below

TROUBLE:	POSSIBLE CAUSE:	SOLUTION:
The lift does not work	The main switch is not turned on	Turn the switch on
	There is no power	Check Power on to restore if necessary
	The electrical wires are disconnected	Replace
	Fuses are blown	Replace
The lift does not raise	The motor direction of rotation is not correct.	Interchange the two phases on the main switch
	The oil in the hydraulic unit is not sufficient.	Add some hydraulic oil
	The UP button is faulty.	Check UP button and connection for proper operation. Replace, if needed
	The maximum height limit switch is faulty.	Check the switch and relevant connection for proper operation. Replace, if needed.
	The lowering solenoid valve does not close.	Check and clean, if dirty, or replace, if faulty
	The suction pump filter is dirty.	Check and clean if needed.
The lifting capacity is not sufficient	The pump is faulty	Check the pump and replace, if needed.
	Oil leakages in hydraulic circuit	Check the circuit for any leakage
The lift does not lower when the DOWN button is pressed	The lowering solenoid valve does not work properly	Verify if it is powered and check magneto for damage (replace if disconnected or blown).
	Safety solenoid valve is jammed	Verify if it is powered and check magneto for damage (replace if disconnected or blown)
	The DOWN button is faulty	Replace the DOWN button
Platforms do not stop in standing position	The lowering and solenoid valves stay opened.	Verify that solenoid valve sliders are not blocked
	Leakage in the hydraulic pipelines.	Check connections for proper tightening and tubes for damage (replace if damaged).
	hydraulic cylinders are faulty	Check and replace if needed
The lift does not lower smoothly	Presence of air in the hydraulic system	Bleed the hydraulic system
Lifting is not synchronized	Leakages or presences of air into hydraulic circuit	Bleed the hydraulic system
The lift does not stop at safety height	The safety height limit switch does not work	Check the limit switch and replace if needed
The motor does not stop when the lift reaches it maximum height	The maximum height limit switch does not work	Check the limit switch and replace if needed

ED. 07/2008

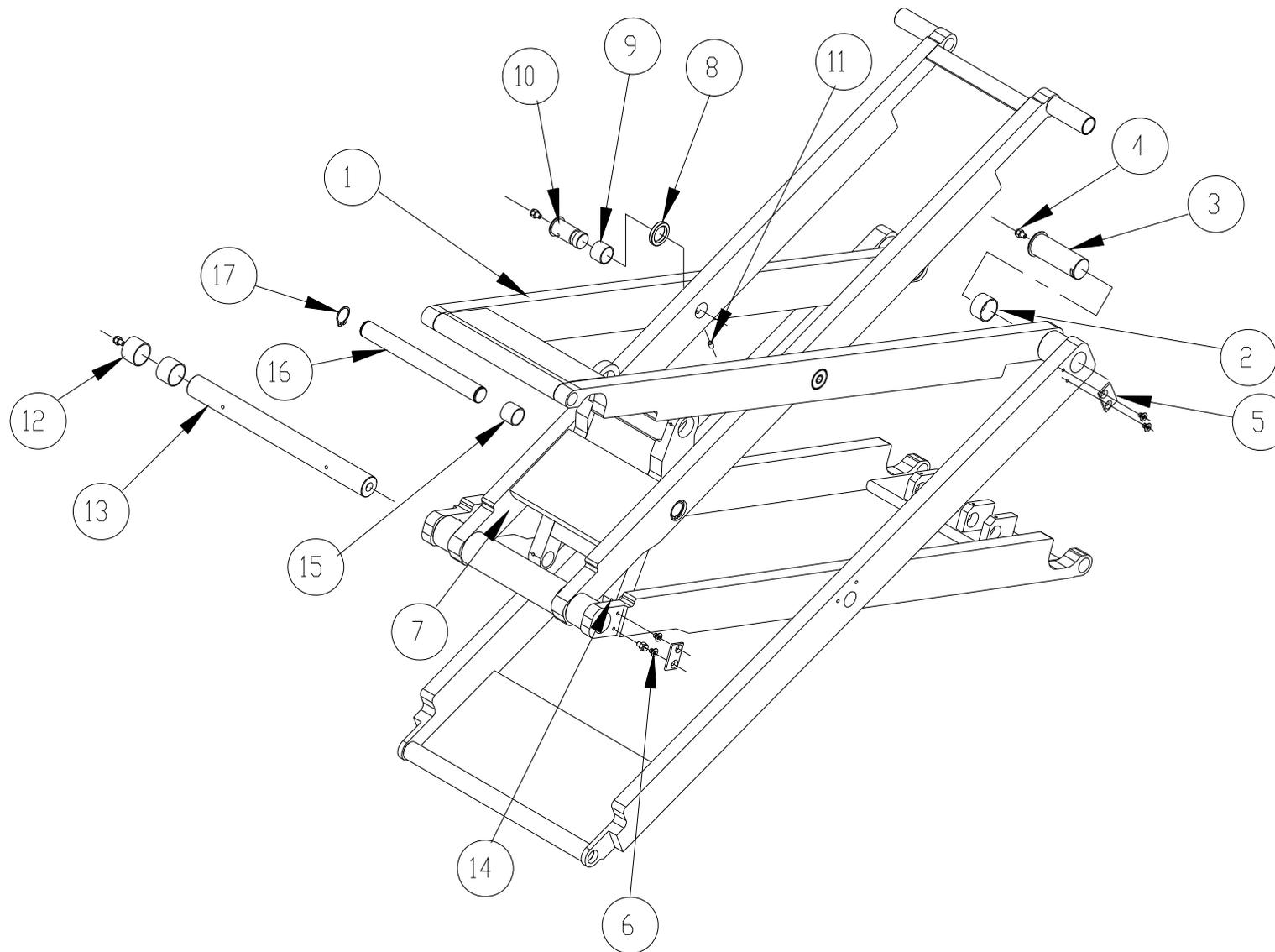
PART CATALOGUE
F6106 LOW-PROFILE SCISSOR LIFT





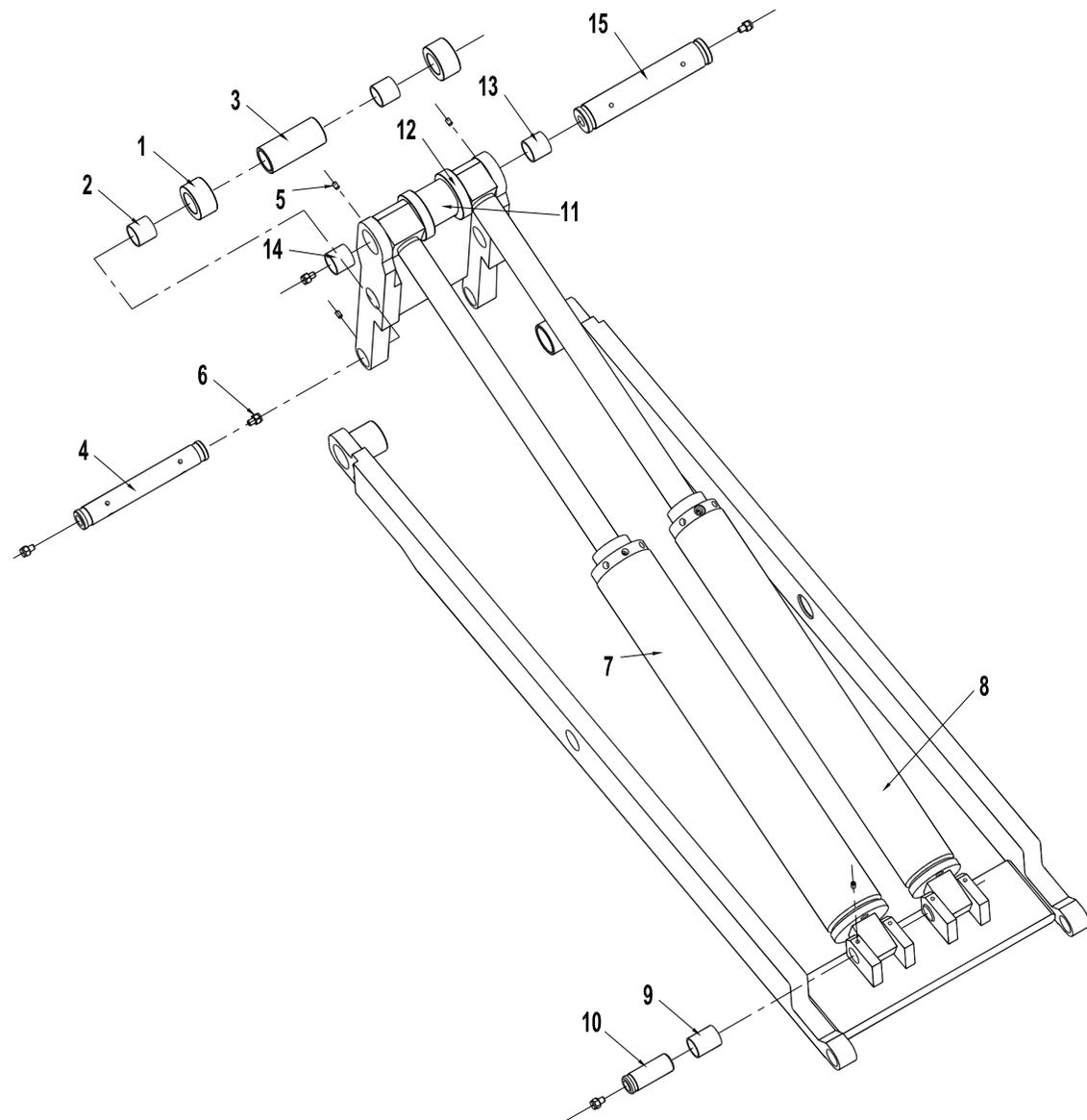
TAV.1.0	INFERIOR ARM SYSTEM	ED. 07/08
---------	---------------------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	NS-10000	Base frame	1	
2	NS-70000-1	Inferior inner arm	1	
3	NS50000-20	Shaft	2	
4	GB/T894.1-1986	Seeger 28	4	
5	GB1152-89	Greaser M8	4	
6	NS60000-1	Inferior outer arm	1	
7	NS50000-14	Shaft	1	
8	NS50000-15	Lower slider 1	2	
9	NS50000-16	Lower slider 2	2	
10	NS50000-06	Spacer	2	
11	NS50000-04	Shaft	2	
12	SF-1 (DU) 3025	Self-lubricated bush	2	
13	NS60000-06	Shaft stop plate	2	
14	GB/T819.1-2000	Screw M8X10	4	



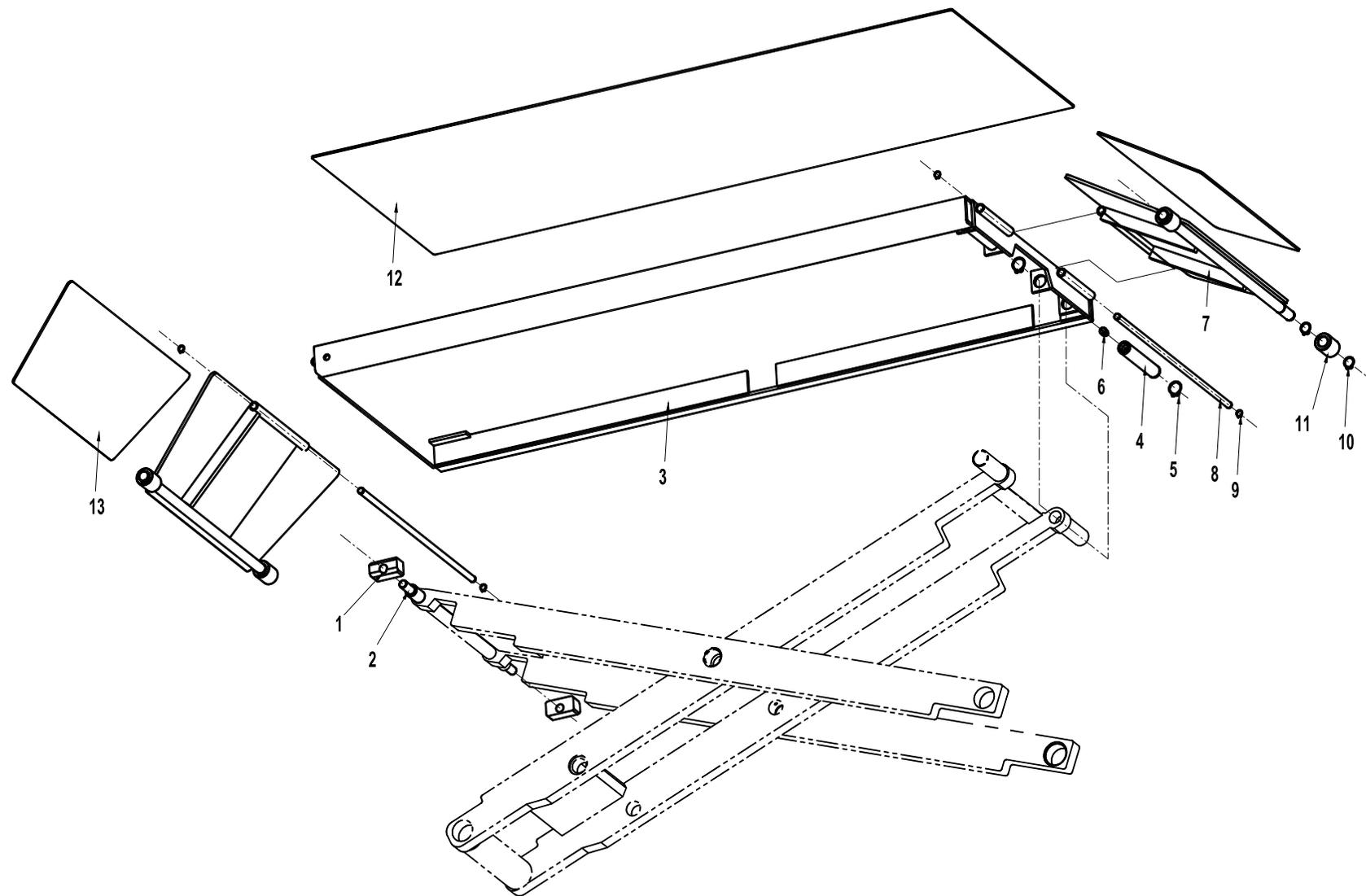
TAV.2.0	SUPERIOR ARM SYSTEM	ED. 07/08
---------	---------------------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	NS-80000	Superior outer arm	1	
2	SF-1 (DU) 4050	Self-lubricated bush	2	
3	NS-50000-02	Shaft	2	
4	GB1152-89	Greaser M8	6	
5	NS60000-05	Shaft stop plate	4	
6	GB/T819.1-2000	Screw M8X10	8	
7	NS-90000	Superior inner arm	1	
8	NS50000-06	Spacer	2	
9	SF-1 (DU) 3025	Self-lubricated bush	2	
10	NS50000-04	Shaft	2	
11	GB/T77-2000	Screw M8X12	2	
12	SF-1 (DU) 4030	Self-lubricated bush	2	
13	NS50000-13	Shaft	1	
14	NS-100000	Lever arm	1	
15	SF-1 (DU) 3027	Self-lubricated bush	2	
16	NS50000-09	Shaft	1	
17	GB/T894.1-1986	Seeger 30	2	



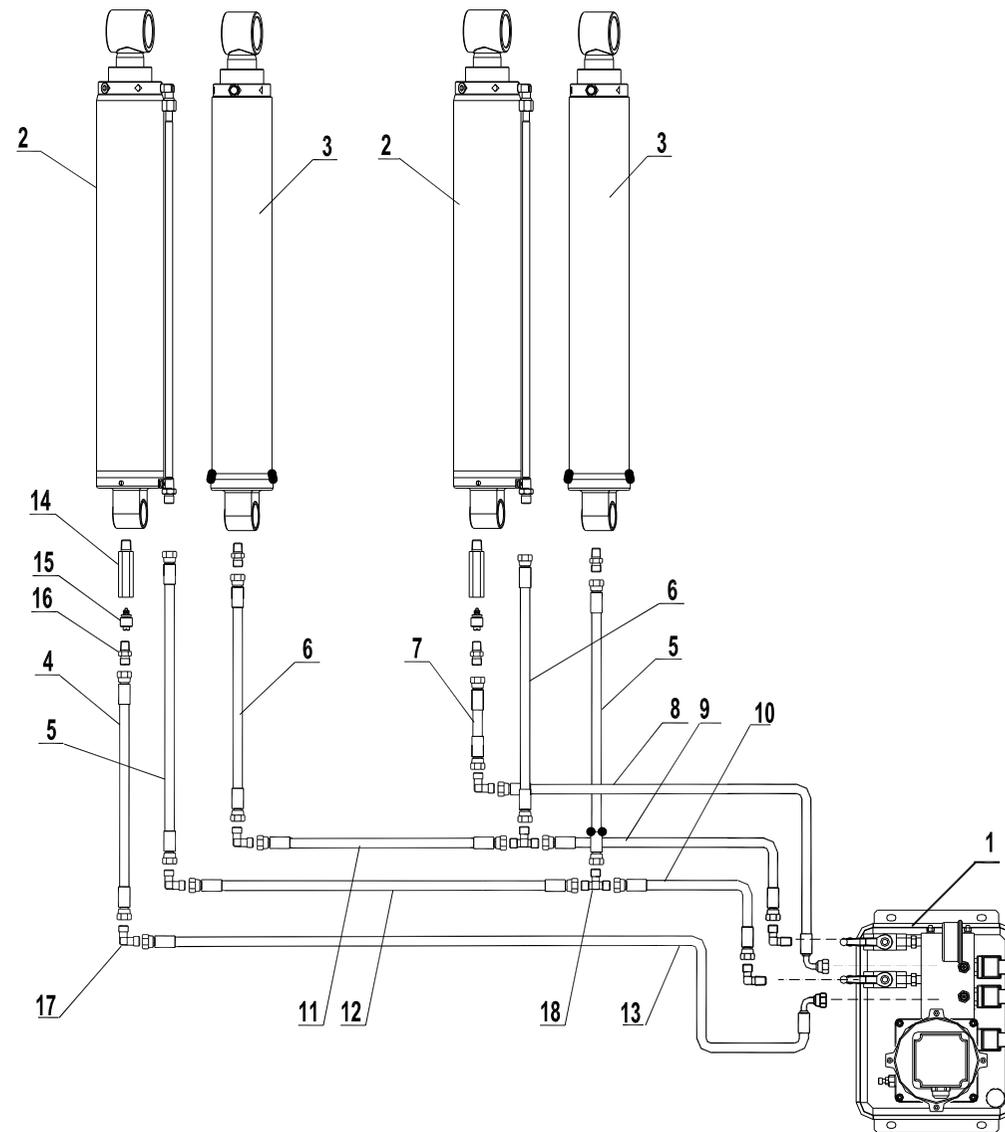
TAV.3.0	LIFTING SYSTEM	ED. 07/08
---------	----------------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	NS50000-11	Wheel	2	
2	SF-1 (DU) 3030	Self-lubricated bush	2	
3	NS50000-11	Spacer	1	
4	NS50000-10	Shaft	1	
5	GB/T77-2000	Screw M6X10	6	
6	GB1152-89	Greaser M8	6	
7	MS-100-80A-0	Master hydraulic cylinder	1	
8	MS-100-70-0	Slave hydraulic cylinder	1	
9	SF-1 (DU) 2840	Self-lubricated bush	2	
10	NS50000-03	Cylinder shaft	2	
11	NS100-82	Bush	1	
12	NS50000-08	Wheel	2	
13	SF-1 (DU) 4040	Self-lubricated bush	1	
14	SF-1 (DU) 4050	Self-lubricated bush	1	
15	NS50000-07	Shaft	1	



TAV.4.0	PLATFORM	ED. 07/08
---------	----------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	NS50000-19	Slider	2	
2	NS50000-17	Shaft	1	
3	NS-20000	Platform	1	
4	NS50000-01	Shaft	2	
5	GB/T894.1-1986	Seeger 25	4	
6	GB1152-89	greaser M8	2	
7	NS-30000-01	Ramp	2	
8	NS-30000-03	Ramp shaft	2	
9	GB/T894.1-1986	Seeger 12	4	
10	GB/T894.1-1986	Seeger 20	8	
11	NS30000-06	Ramp roller	4	
12	NS40000-01	Top anti-skid plate	1	
13	NS40000-02	Ramp anti-skid plate	2	

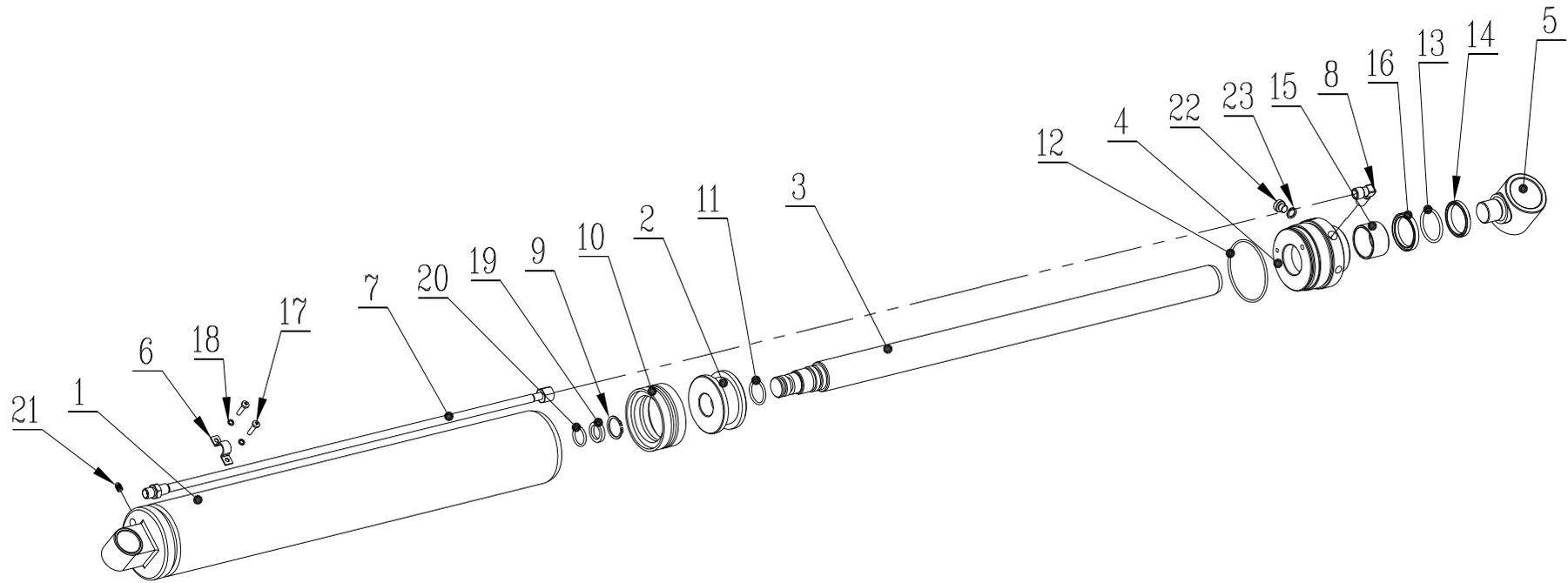


TAV.5.0

HYDRAULIC PIPE SYSTEM

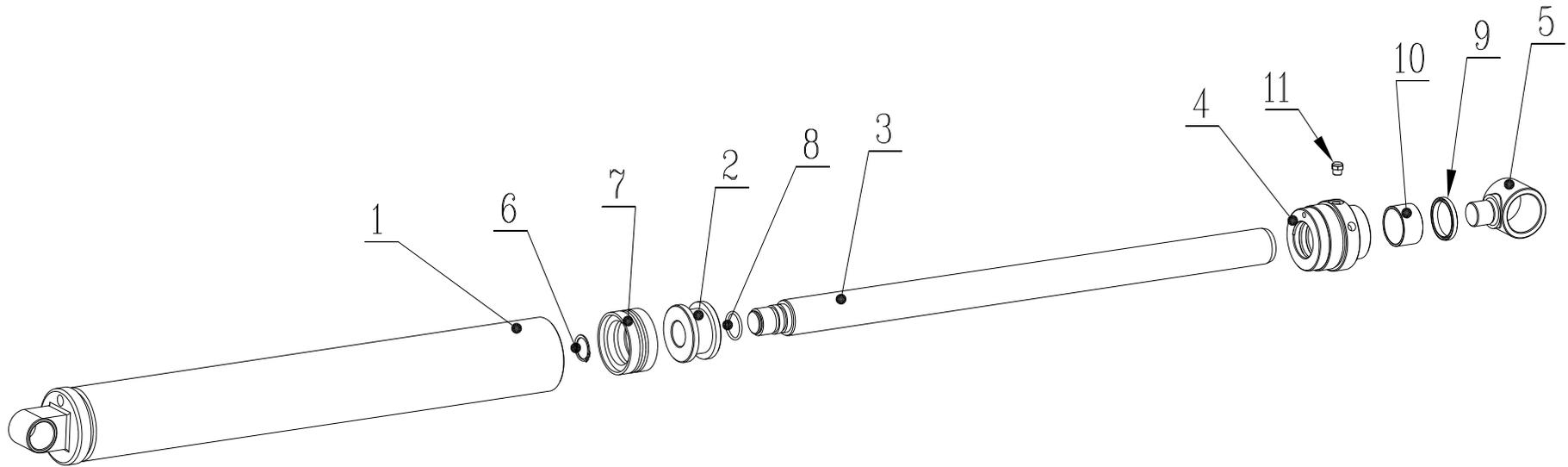
ED. 07/08

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	BZ-YK2-N	Hydraulic power unit	1	
2	MS-100-80A-0	Master hydraulic cylinder	2	
3	MS-100-70-0	Slave hydraulic cylinder	2	
4	7130A-ZZ210	Hydraulic hose L=210mm	1	
5	7130-ZZ220	Hydraulic hose L=220mm	2	
6	7130-ZZ195	Hydraulic hose L=195mm	2	
7	7130A-ZZ170	Hydraulic hose L=215mm	1	
8	7130-ZW2940	Hydraulic hose L=2940mm	1	
9	7130-ZZ2680	Hydraulic hose L=2680mm	1	
10	7130-ZZ2600	Hydraulic hose L=2600mm	1	
11	7130-ZZ1300	Hydraulic hose L=1300mm	1	
12	7130-ZZ1470	Hydraulic hose L=1470mm	1	
13	7130-ZW4340	Hydraulic hose L=4340mm	1	
14	MS-100-A	Valve housing	2	
15	BSPP-1/4"	Parachute valve	2	
16	1BT-04SP	Nipple	4	
17	1B9-04	90° nipple G1/4"	4	
18	AB-04	Tee union	2	



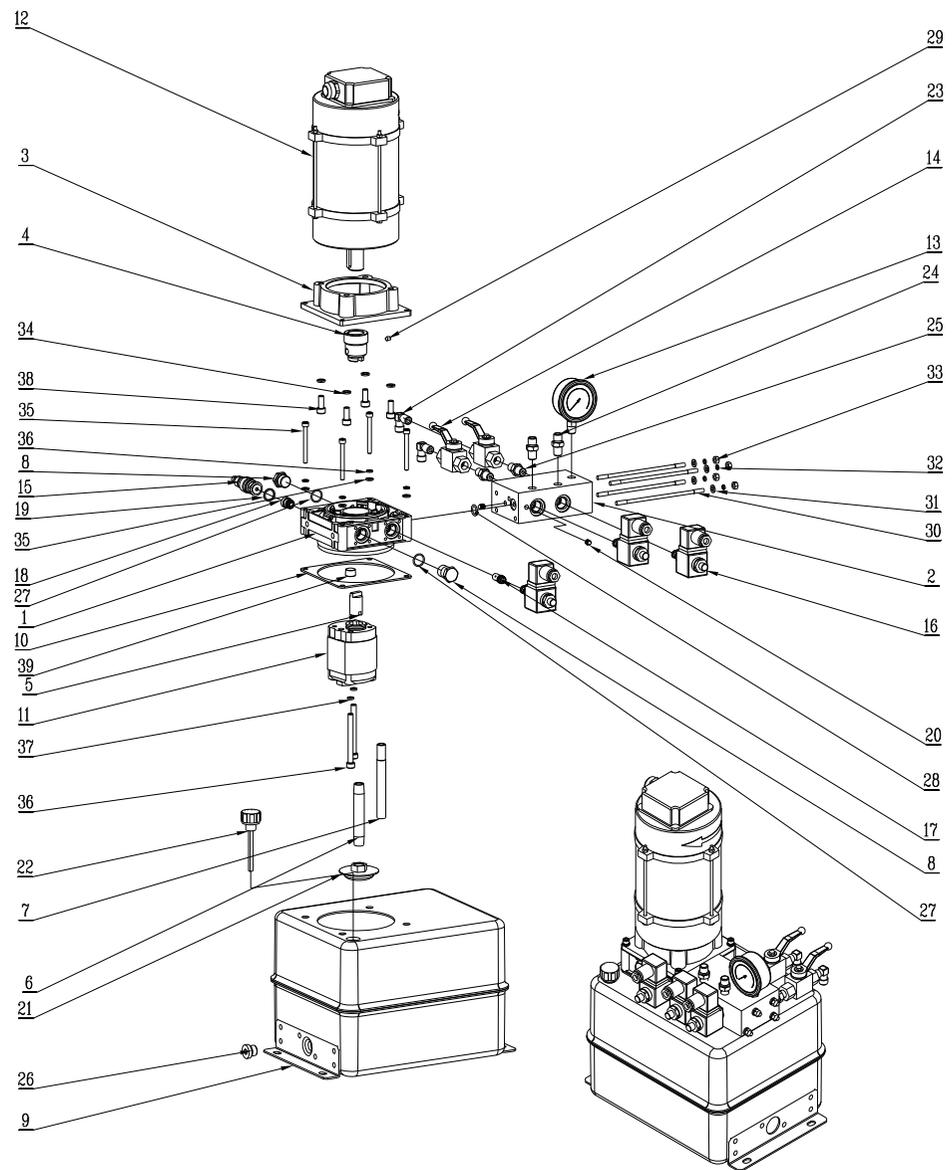
TAV.5.1	MASTER HYDRAULIC CYLINDER	ED. 07/08
---------	---------------------------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	MS100-80-10	Cylinder liner	1	
2	MS100-80-2	Piston	1	
3	MS100-80-4	Piston rod	1	
4	MS100-80-5	Cylinder guiding cover	1	
5	MS100-80-6	Shaft support	1	
6	MS100-80-8	Pipe retainer	1	
7	MS100-80-20	Hydraulic pipe	1	
8	IBT9-04 SP	90° nipple ZG1-4	1	
9	GB/T894.1-1986	Seeger 26 A	1	
10	TPM	Gasket 80X60	1	
11	GB1235-76	O- ring 32X3.1	1	
12	GB1235-76	O- ring 80X3.1	1	
13	GB1235-76	O- ring 44X3.5	1	
14	DH	Scraper ring 38	1	
15	GB/T15242.2-94	Guide ring 38X25X2.5	1	
16	UN	Sealing ring 38X48X6	1	
17	GB/T 818-2000	Screw M5X10 H	2	
18	GB/T 93-1987	Locking washer 5	2	
19	UN	Sealing ring 18X26X5	1	
20	GB1235-76	O- ring 26X3.1	1	
21	ZB J22 007-88	Cap QD07	1	
22	VSCH-G1/8	Cap G1/8	1	
23	JB1002	Copper washer 10X14	1	



TAV.5.2	SLAVE HYDRAULIC CYLINDER	ED. 07/08
---------	--------------------------	-----------

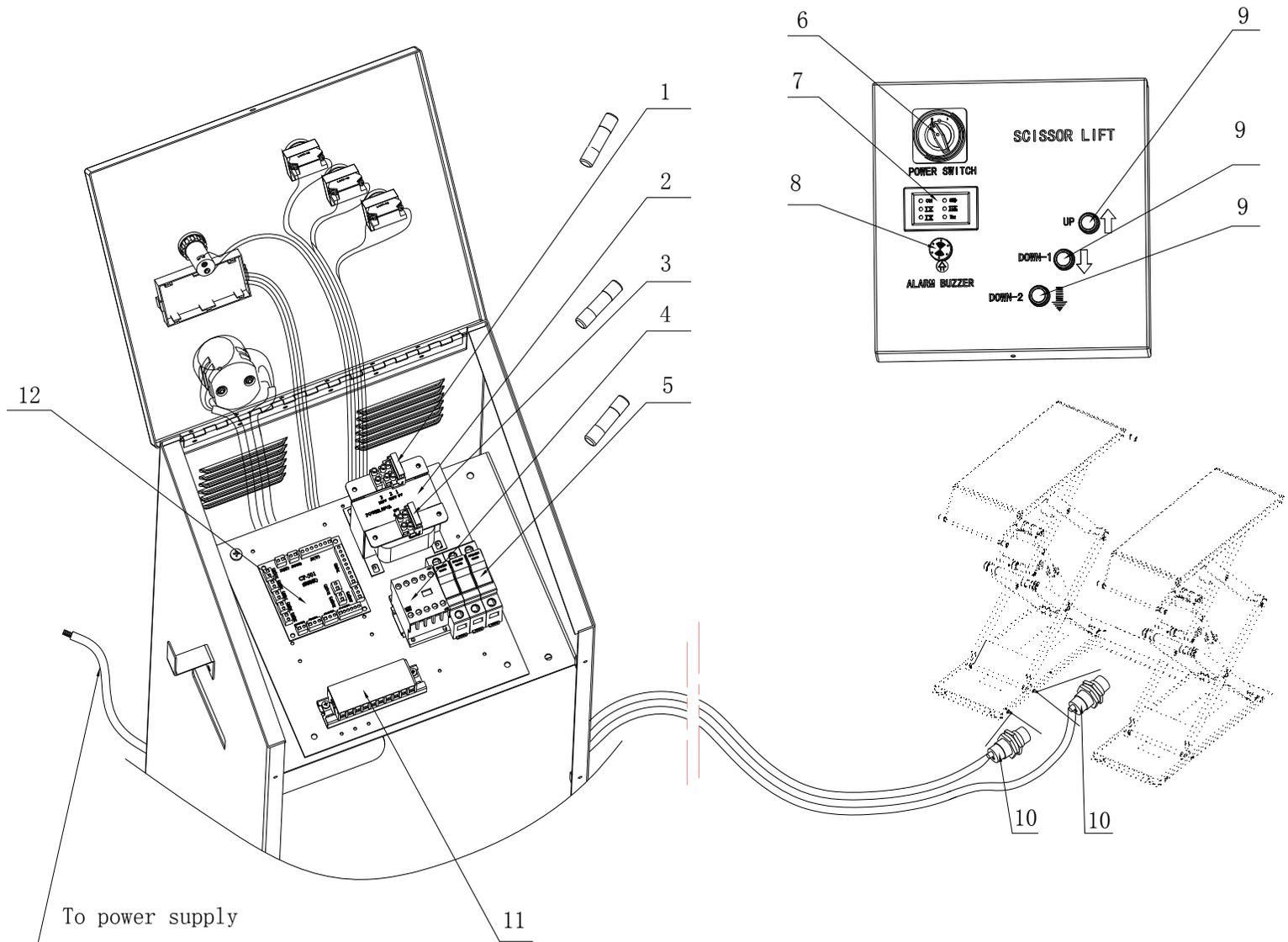
ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	MS100-70-10	Cylinder liner	1	
2	MS100-70-2	Piston	1	
3	MS100-70-4	Piston rod	1	
4	MS100-70-5	Cylinder guiding cover	1	
5	MS100-70-6	Shaft support	1	
6	GB/T894.1-1986 A	Seeger 26	1	
7	TPM	Gasket 70X50	1	
8	GB1235-76	O- ring 32X3.1	1	
9	DH	Scraper ring 40	1	
10	GB/T15242.2-94	Guide ring 40X25X2.5	1	
11	TZ	Silencer G1-8	1	



TAV.5.3	HYDRAULIC POWER UNIT (BZ-YK2-N)	ED. 07/08
---------	---------------------------------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	BZ-ZB-Y	Central valve block	1	
2	BZ-W-YK2	Auxiliary valve block	1	
3	BZ-DJ-1B	Motor flange	1	
4	BZ-ZT24	Motor coupling	1	
5	BZ-BJ36	Pump coupling	1	
6	BZ-G18X110	Oil suction tube	1	
7	BZ-G1/4X120	Oil return tube	1	
8	BZ-SD-01	Cap	2	
9	HK2-0200	Oil tank	1	
10	BZ-F-01	Gasket	1	
11	CBD-F204. 8-L1B-BA	Gear pump 4.8cc	1	For 2.6KW 3PH motor
11	CBD-F202. 1-L1B-BA	Gear pump 2.1cc	1	For 2.2KW 1PH motor
12	TP90L4-B14	Motor 2.6KW 3PH/	1	
12	ML90L2-B14	Motor 2.2KW 1PH	1	
13	LA-60X400	Pressure gauge	1	
14	BKH-G1/4-DN06	Leveling cutoff cock	2	
15	FYF06-01-00	Max. pressure valve	1	
16	EVH041/EC1-F-24DC	Solenoid valve	3	
17	BLF0602-00	Lowering speed control valve D.2.5	1	
18	GDF-06-07-00	Non return valve	1	
19	JB1002	Copper washer 16X20	1	
20	ZB J22 007-88	Cap QD07	2	
21	TZ	Oil level plug	1	
22	ZF-08(ZG3/8")	Oil filter	1	
23	IBT9-04SP	90° union	2	
24	1BT-04SP	Nipple	2	
25	1T-04	Nipple 1/4"	2	

26	VSCH-G3/8	Oil plug G3/8	1
27	GB3452.1-82	O-ring 17.0X1.8	2
28	GB1235-76	O-ring 18X2.4	1
29	GB/T 78-2000	Screw M6x8	1
30	GB/T901-1988	Screw M6X160-6.8	4
31	GB/T 97.1-1985	Washer 6	8
32	GB/T 93-1987	Locking washer 6	8
33	GB/T6170-2000	Nut M6	4
34	GB/T 93-1987	Locking washer 8	4
35	GB/T 70.1-2000	Screw M6X65	4
36	GB/T 70.1-2000	Screw M8X80	2
37	GB/T 93-1987	Locking washer 8	2
38	GB/T 70.1-2000	Screw M8X20	4
39	JB1000-77	Cap ZG3/8"	1



TAV.6.0	ELECTRIC PANEL	ED. 01/09
---------	----------------	-----------

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
1	MY510-2P-1A(5X20)	Breaker	1	
2	JBK-80VA	Transformer	1	
3	MY510-2P-4A(5X20)	Breaker	1	
4	LP1-D1210(DC24V)	Contactor DC	1	
5	RT18-32-16A(10X38)	Breaker	3	For 380V/400V
5	RT18-32-32A(10X38)	Breaker	2	For 220V/230V
6	HZ5-2/20A	Power switch	1	
7	CP-501	Display window	1	
8	AD16-22SM/DC24V	Beeper	1	
9	LAY37-10	Pushbutton	2	
10	IPS-18NO8B-S	Proximity switch	2	
11	JF5-1.5-10	Wiring terminal	1	
12	CP-501.1	Main board	1	