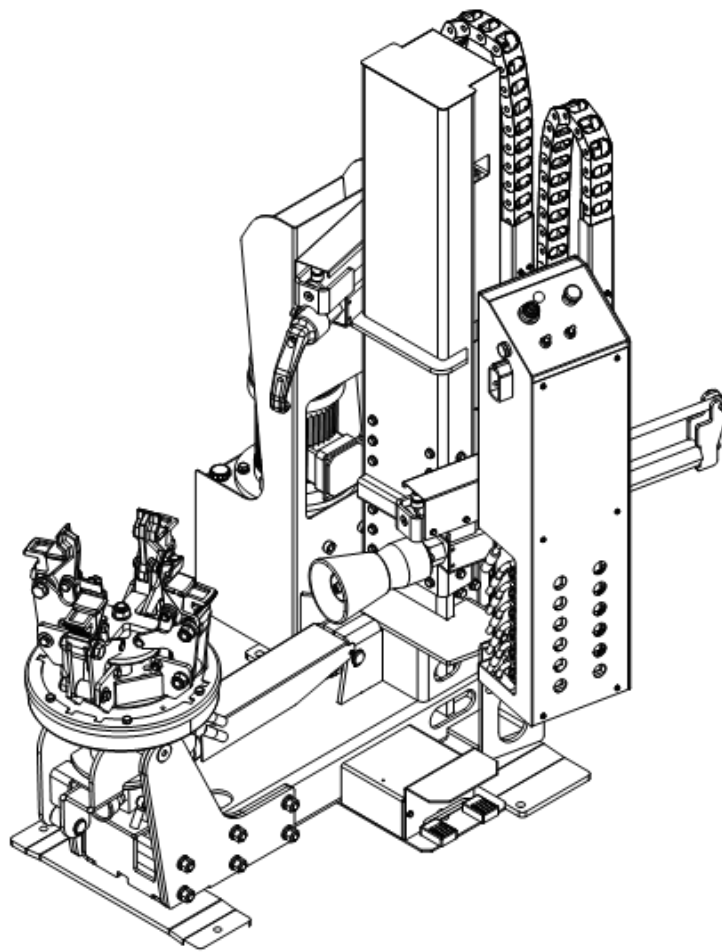


42-in Heavy Duty Truck Tire Changer

MODEL:TMG-TTC42



READ FIRST



Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual.

TRUCK TIRE CHANGER

This instruction manual has been prepared especially for you.

The Automatic Truck Tire Changer, is Invention Patented machine with continuous research, testing and development. The manner in which you care for and maintain your tire changer will have a direct effect on it's overall performance and longevity.

READ THIS ENTIRE MANUAL BEFORE OPERATION BEGINS.

PRODUCT WARRANTY

Your new tire changer is covered under warranty for one year on equipment structure; one year on all operating components and tooling/accessories, to the original purchaser. If there is anything wrong about the components that makes the machine cannot operate, the manufacture should offer the components or parts for free.

The warranty does not extend to...

- ◆ defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation, voltage or lack of required maintenance;
- ◆ damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- ◆ normal wear items or service normally required to maintain the product in a safe operating condition;
- ◆ other items not listed but may be considered general wear parts;
- ◆ damage caused by rain, excessive humidity, corrosive environments or other contaminants.

THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION

**WARRANTY IS NOT VALID UNLESS
WARRANTY CARD IS RETURNED.**

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Chapter 1 INTRODUCTION

TO THE READER

1.1 INTRODUCTION

Thank you for purchasing a product from the line of truck tire changers. The machine has been manufactured in accordance with the very best quality principles. Follow the simple instructions provided in this manual to ensure the correct operation and long life of the machine. Read the entire manual thoroughly and, make sure you understand it.

1.2 MACHINE IDENTIFICATION DATA

A complete description of the our technical assistance to provide service and will facilitate delivery of any required spare parts. For clarity and convenience, we have inserted the data of your machine in the box below. If there is any discrepancy between the data provided in this manual and that shown on the name plate fixed to the tire changer, the latter should be taken as correct.

1.3 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 manual: it shall be given to the new owner if and when the machine is resold.



The illustrations have been made out of prototypes pictures. It is therefore possible that some parts or components of standard production differ from those represented in the pictures.

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.

Personal protective equipment helps make tire changing safer. However, equipment does not take the place of safe operating practices. Always wear durable work clothing during tire service activity. Shop aprons or shop coats may also be worn, however loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect operators hands when handling worn tires and wheels. Sturdy leather work shoes with steel toes and oil resistant soles should be used by tire service personnel to help prevent injury in typical shop activities. Eye protection is essential during tire service activity. Safety glasses with side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing operator protection. Consideration should also be given to the use of hearing protection if tire service activity is performed in an enclosed area, or if noise levels are high.



Chapter 2 GENERAL INFORMATION

2.1 INTENDED USE

- This tire changer has been designed and manufactured exclusively for removing and mounting truck, bus and commercial van tires from/onto rims from 14" to 42" and a maximum diameter of 1500mm.
- In particular **THE MANUFACTURER** cannot be held responsible for any damage caused through the use of its tire changer for purposes other than those specified in this manual, and therefore inappropriate, incorrect and unreasonable.

2.2 GENERAL SAFETY PRECAUTIONS

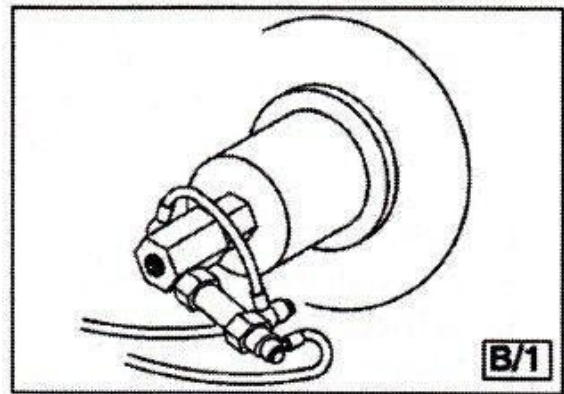
- The machine should only be used by duly authorized and trained personnel.
- The machine should not be used for purposes other than those described in the instruction manual.
- Under no way should the machine be modified except for those modifications made explicitly by **THE MANUFACTURER**.
- Never remove the safety devices. Any work on the machine should only be carried out by specialist personnel.
- Any tampering or modification to the equipment carried out without the manufacturer's prior authorization will free the manufacturer from all responsibility for damage caused directly or indirectly by the above actions.
- Removing or tampering with safety devices immediately invalidates the guarantee.
- The tire changer comes complete with instruction and warning transfers which are designed to be long-lasting. If they should for any reason be damaged or destroyed, please ask immediately for replacements from the manufacturer.

- The machine operator should avoid wearing clothes with flapping edges. Make sure that unauthorized personnel do not approach the machine during the work cycle.

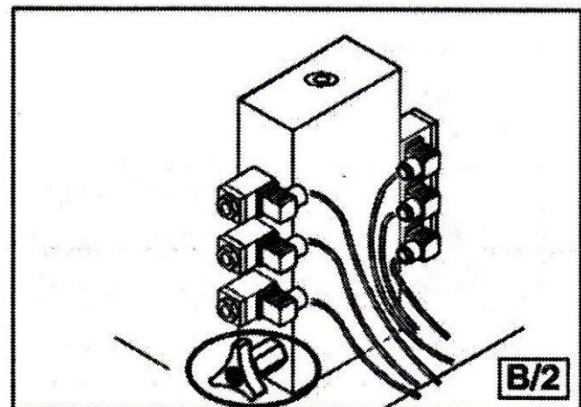
2.3 SAFETY DEVICES

The tire changer has a number of safety devices designed to guarantee the topmost safety:

- **Check valve on the spindle opening hydraulic line** (inside the swivel connector see *Fig. B/1*). This prevents the wheel from falling from the spindle if the hydraulic line is accidentally broken.



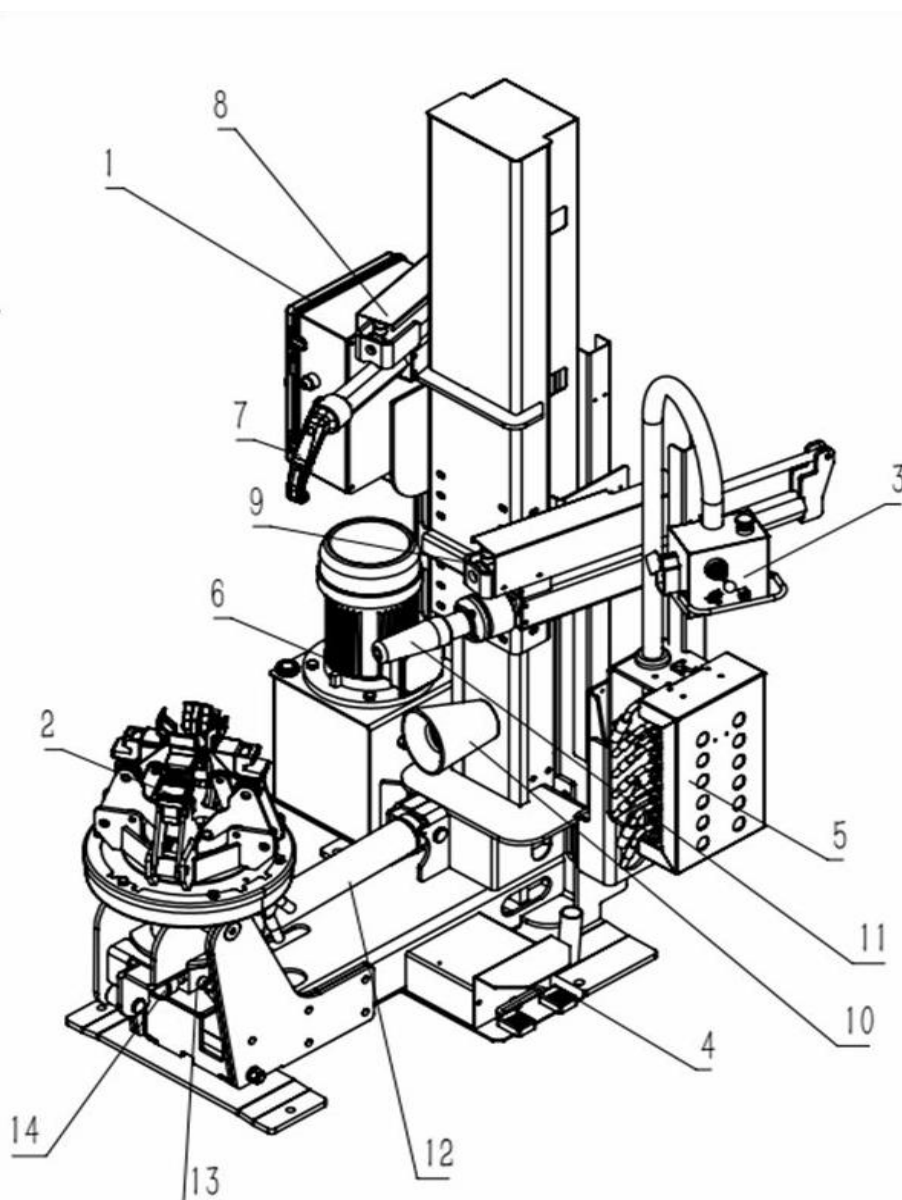
- **Pressure relief valve set at 130 bar +/-10%** (see *Fig. B/2*). This limits the pressure in the hydraulic line and ensures correct operation of the plant.



- **Pump motor overload cut-off** (inside the electric enclosure). This cuts off if the motor overheats to prevent it from burning out.
- **Check valve on the chuck arm lifting hydraulic line**. It prevents the chuck arm from

descending when any accidental break occurs in the hydraulic line.

2.4 PRODUCT DESCRIPTION



1. Control box

2. Chuck rotation unit

3. Hand control switch (demount tool head, pressing roller, lifting and lowering, horizontal moving)

4. Foot pedal switch (clockwise rotation and anticlockwise rotation)

5. Solenoid

6. Power unit

7. Mounting/demounting tool

8. Demount tool head cylinder

9. Pressing roller cylinder

10. Nylon pressing roller (for mounting tire or bead pressing)

11. Lock ring demount bit

12. Chuck cylinder

13. Rotation valve

14. Hydraulic pressure gauge

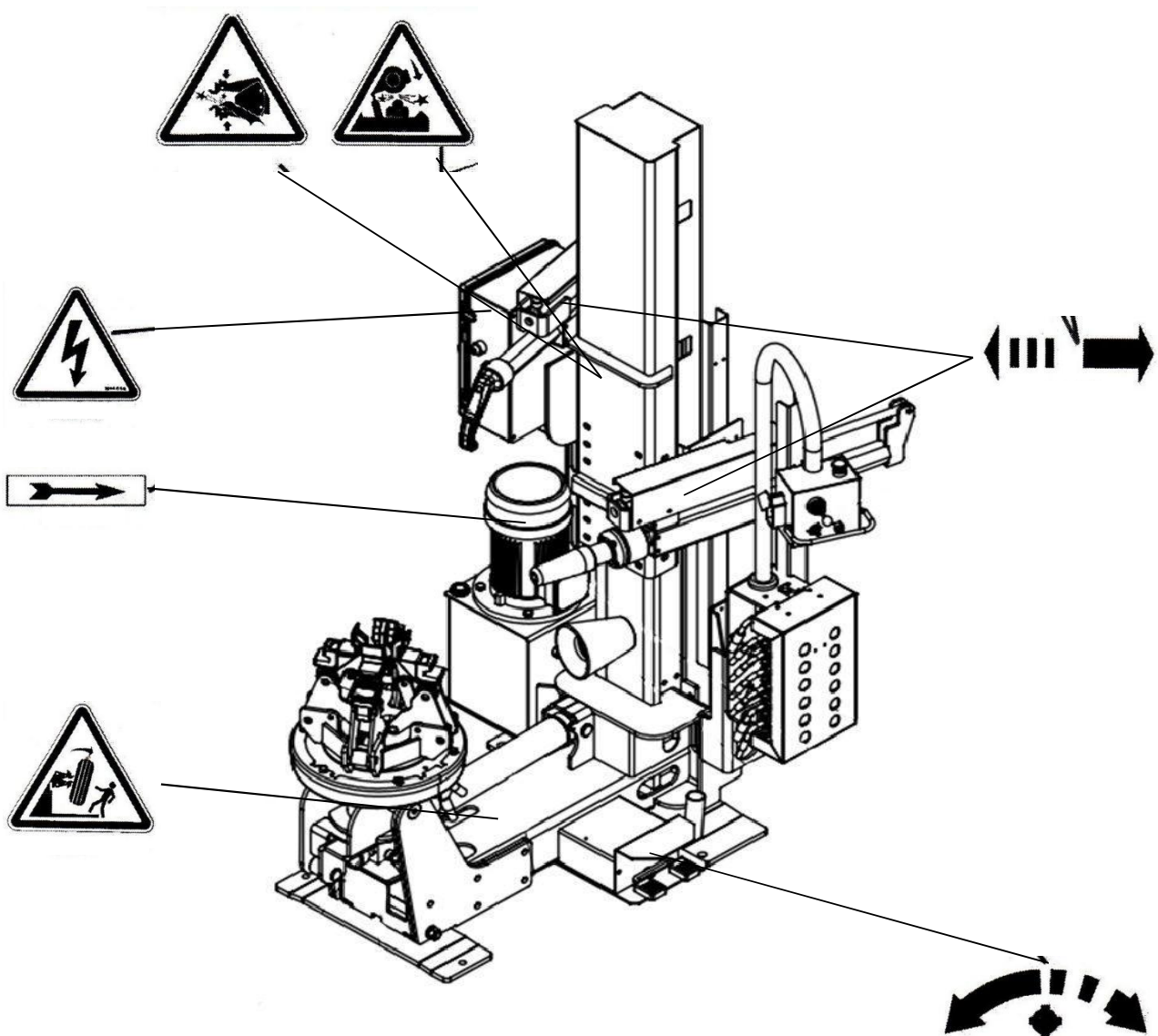


During all operations, keep hands and other parts of the body as far as possible from any moving part of the machine. Necklaces bracelets and too large cloths can be dangerous for the operator.

2.5 TECHNICAL SPECIFICATION

Power	220V/60Hz
Motor	3.0 kW
Handles rim from	14" - 42"
Max. tire diameter	59"
Max. tire width	30"
Max. tire weight	1500 kg
Net weight	570kg
Noise level in working condition	< 70 dB (A)

2.6 WARNING SIGNS

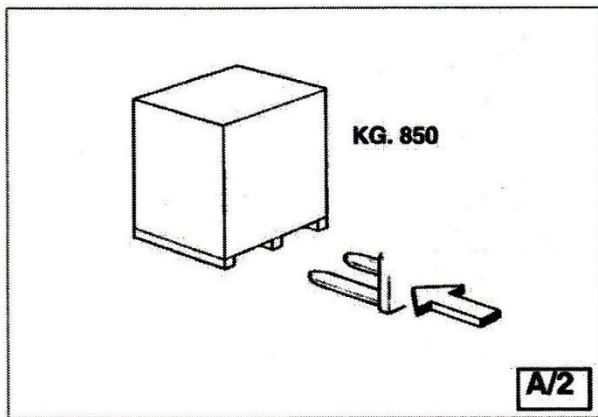


Unreadable and missing warning labels must be replaced immediately. Do not use and add any object that could prevent the operator from seeing the labels.

Chapter 3 TRANSPORTATION, UNPACKING AND STORAGE

3.1 TRANSPORTATION

- The machine must be transported in its original packaging and kept in the position shown on the package itself.
- The packaged machine may be moved by means of a fork lift truck of suitable capacity. Insert the forks at the points shown in **Fig. A/2**.



3.2 UNPACKING

- Remove the protective cardboard and the nylon bag.
- Check that the equipment is in perfect condition, making sure that no parts are damaged or missing.



If in doubt, do not use the machine and contact your retailer.

3.3 STORAGE

Packages must be stored in a covered place, out of direct sunlight and in low humidity, at a temperature between -10°C and +40°C.

In the event of storage for long periods of time, be sure to disconnect all sources of power and grease the clamp sliding guides on the turntable to prevent them from oxidizing.

Chapter 4 INSTALLATION

4.1 INSTALLATION SPACE REQUIRED

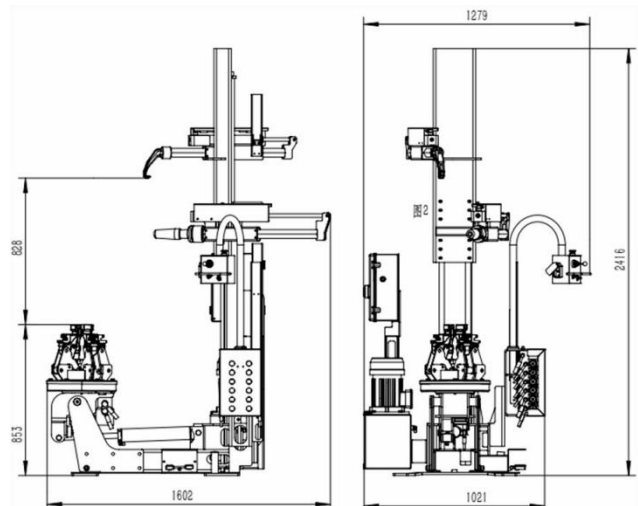


When choosing the place of installation, make sure that it complies with current safety at work regulations .

- The machine must be located on a flat floor of solid construction, preferably concrete. If the floor is uneven or broken the machine will be not stable and the platform roller cannot move freely.
- If the machine is installed outside it must be protected by a lean-to.
- The following work environment conditions are applicable:
 - Relative humidity from 30-95% without condensation;
 - Temperature from 0-55°C.

4.2 WORKPLACE REQUIRED

- Maximum machine space requirements are 90"x65" with a minimum distance from walls as shown in

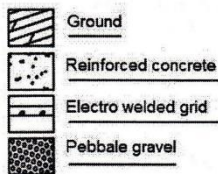
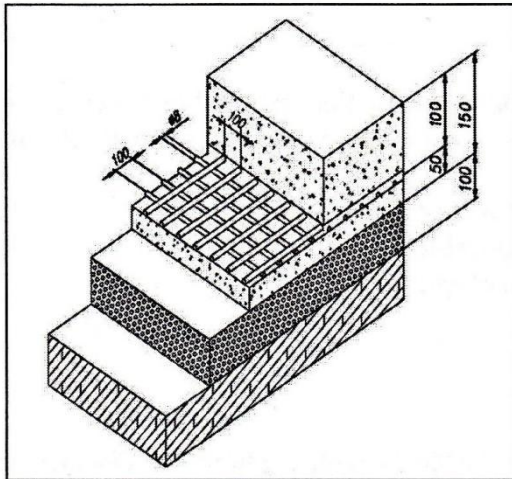


These measurements are also the tire changer working area. Persons other than specially trained and authorized operators are extremely forbidden to enter this area.

4.3 FOUNDATION REQUIREMENT

The tire changer should be installed on a leveled concrete floor at least 20cm thick with a minimum concrete quality of B25 in accordance with DIN 1045 requirements (foundations).

For your reference see the drawings as well as the table below.



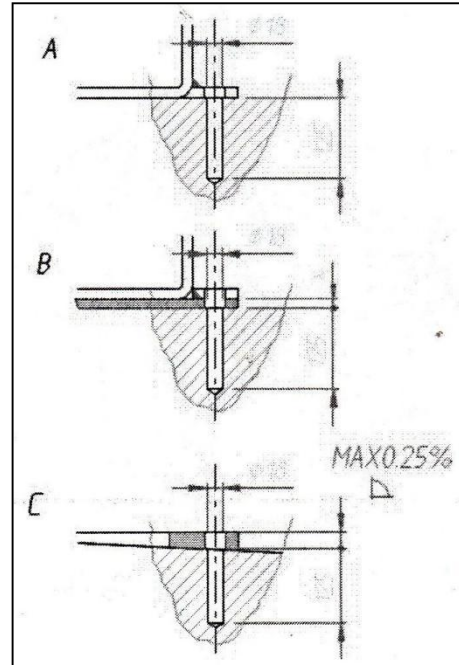
Foundations dimensions in cm.			Concrete quality	Min. pressure resistance
Length	Width	Thickness		
200	164	15	B25	425 Kg / cm ²

If a floor of this type is not available on site, fastening points of the specified concrete quality are acceptable.

- Surface, on which the tire changer is to be installed, must be flat and well leveled in all directions.
- Inclination up to 0.25% relative to the horizontal can be compensated using suitable shims wedges or the alike.



When working with wheels which weight is higher than 500kg, it is necessary to fasten the tire changer to the floor by means of proper anchor bolts.



- By means of a hammer drill 5/8", drill at least 5" into the floor passing through the holes provided on the base frame.
- If there is an additional floor covering (B), or if shims or wedges are necessary for leveling (C), longer bolts must be used.
- Place an anchor bolt into each hole.
- Make sure the anchor bolts extend at least 5" into the concrete slab, as indicated in the drawings.

4.4 ELECTRIC CONNECTION



Any electric connection job must be carried out by professionally qualified personnel.

- Check to make sure the characteristics of your systems correspond to those required by the machine. The supply voltage (and main

frequency) is given on the machine nameplate. It cannot be changed.

- Connect the machine to the main electric power supply. If the machine does not include the electric plug, the user must set one, which must conform to the voltage of the machine, in compliance with the regulations in force.
- The machine should not be started up without proper grounding.

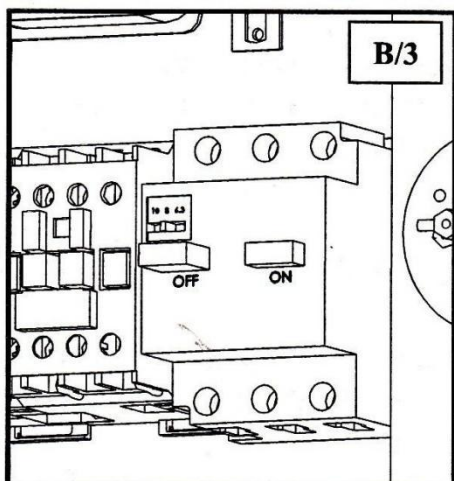


It is absolutely essential that:

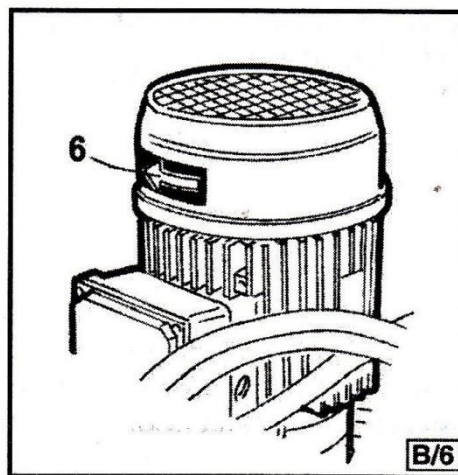
The machine is connected to a power supply line circuit breaker set for 30mA. The current intake is adequately protected against over currents with fuses or automatic magneto-thermic switch with rated value as shown in the table.

Power supply	Rated current	
	Fuse	Switch
220V/230V - 1ph - 50/60Hz	25A AM	25A

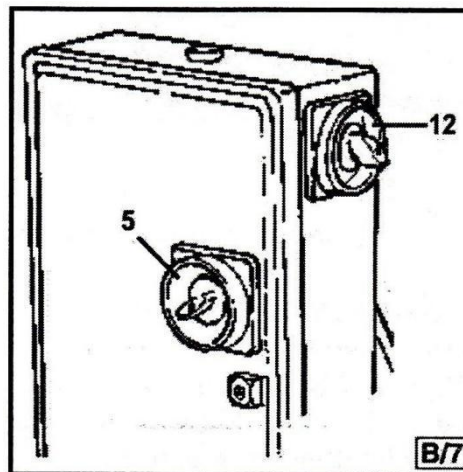
- Open the control panel;
- Switch the breaker on (**Fig. B/3**)



- Switch "ON" (**5, Fig. B/7**) and check that the gearbox motor rotation corresponds to the indicating arrow (**6, Fig. B/6**).



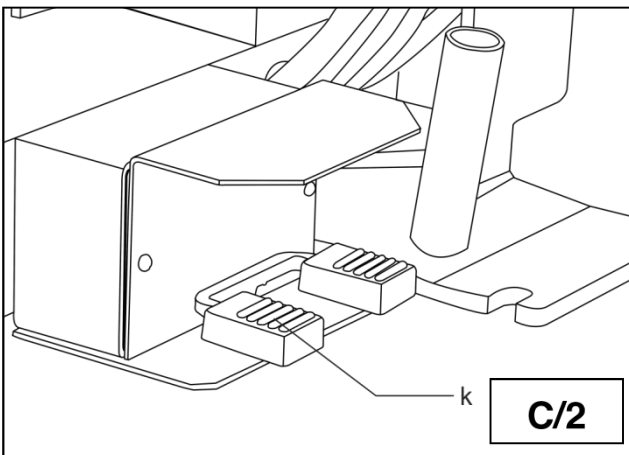
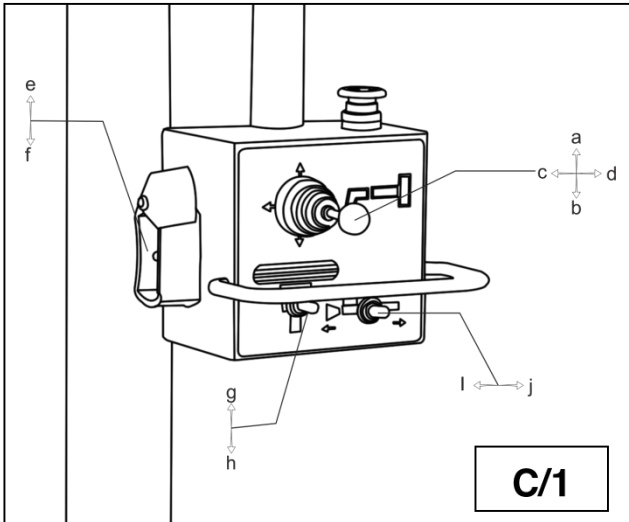
- If not, switch two wires in the plug.



Chapter 5 OPERATION

5.1 CONTROLS

The control centre (**Fig. C**) enables the operator to work at any position around the machine. On this control centre the following controls are located:



- **The lever (Fig. C/1)** which in position **[a]** lifts the chuck arm and in position **[b]** lowers it; in position **[c]** moves the tool holder arm and the sliding table towards the self-centering chuck and in position **[d]** moves them back.
- **The chuck switch (e/f, Fig. C/1)** when moved upwards **[e]**, opens the arms of the self-centering chuck (LOCKING), and when moved down **[f]**, closes the arm of the self-centering chuck (Opening).
- **The bead pressing roller switch (i/j, Fig. C/1)** which in position **[i]** moves the arms of the bead

pressing roller towards the self-centering chuck and in position **[j]** moves them back.

- **The bead pressing roller switch (i/j, Fig. C/1)** which in position **[i]** moves the arms of the bead pressing roller towards the self-centering chuck and in position **[j]** moves them back.
- **The tire lifting switch (g/h, Fig. C/1)** which in position **[g]** lifts the tire and in position **[h]** lowers it.
- **The pedal (Fig. C/2)** when pressed on the left or right side rotates the self-centering chuck in the same direction as shown by the arrows placed on the foot pedal.

5.2 LOCKING THE WHEEL



In locking the wheel, make sure that clamps are properly positioned on the rim, so as to prevent the tire from falling.

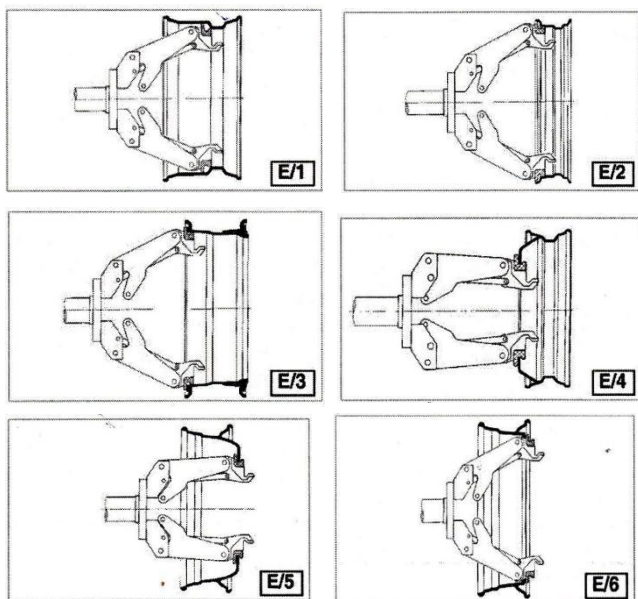


This operation can be extremely dangerous. Do it manually only if you are certain you can keep the wheel balanced.

For large and heavy tires an adequate lifting device must be used.

- 4) Operate joystick to lift or lower the chuck in order to centre the self-centering chuck relative to the rim.
- 5) With the jaws in the closed position, move the wheel to the self-centering chuck. Operate the chuck switch (**e/f, Fig. C/1**) to open the self-centering chuck and lock onto the inside wheel rim.

The most convenient locking position on the rim may be selected according to **Figs E/1-E/2-E/3-E/4-E/5 and E/6**.



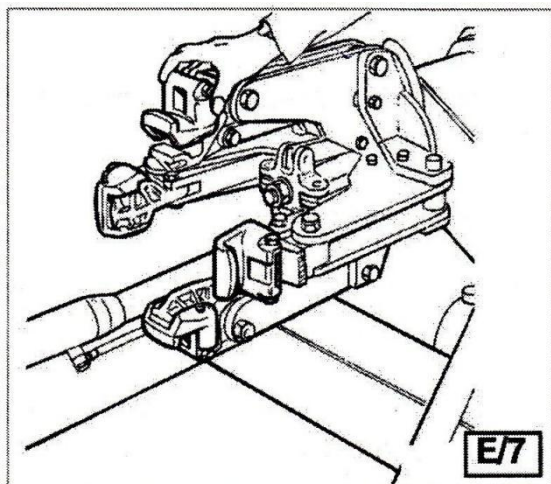
Always remember that the safest locking is on the central FLANGE.

For rims with channel, clamp the wheel so that the channel is near the outside of the rim (Fig. E/1).

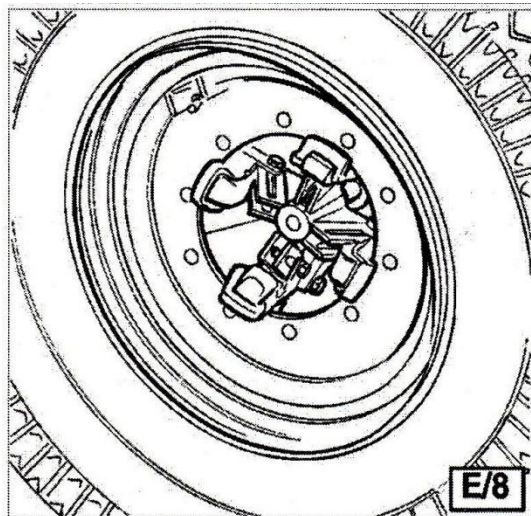
5.2.1 LIGHT-ALLOY RIM LOCKING

Art.137/90 clamps: especially designed for operating on light alloy rims without damaging them and is available upon request.

The clamps are to be inserted (bayonet-like mounting) into the clamp support of the self-centering chuck (see Fig. E/7).



Lock the rim as illustrated in **Fig. E/8**. The specially made pliers Art.138/90 should be attached to the outside edge of the alloy rim at the highest point.



Do not leave the work area with a wheel clamped on the tire changer and lifted up from the floor.

5.3 BEAD BREAKING

1) Lock the wheel on the self-centering chuck, as previously described, and ensure that the tire is deflated.



Always check to be certain that the arm is corrected hooked to the carriage.

2) Operate the bead pressing roller switch (i, Fig. C/1) until the outside of the rim skims the bead pressing roller.



The bead pressing roller must NOT be pressed against the rim but against the tire bead.

3) Rotate the wheel and at the same time advance the bead pressing roller with small movements downward according to the profile of the rim.

4) Continue until the first bead is fully detached. To facilitate this operation, lubricate the bead and the edge of the rim with tire lubricant whilst the wheel is rotated.

Remember: stronger the tire's adherence to the rim, the slower must be the roller's penetration.



To avoid all risks, lubricate the beads turning the wheel clockwise if you are working on the outside plane and anticlockwise if working on the inside plane.

5) Bring the bead pressing arm back from the edge of the rim. And lower the arm to the downside of the tire.

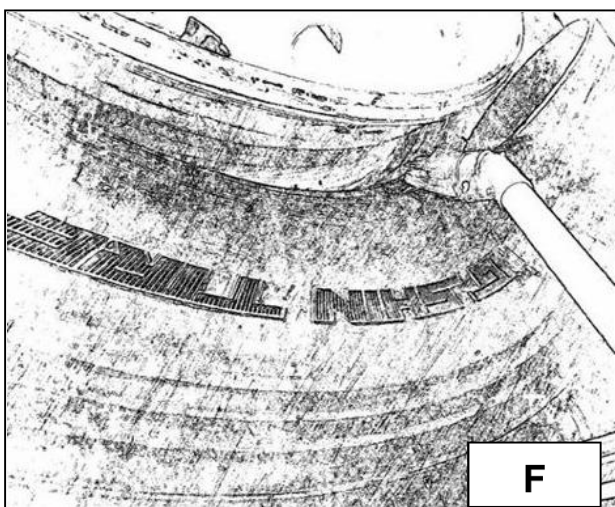


Do not hold your hands on the tool when you bring it back to its work position. Your hand (s) could be frapped between the tool and the wheel.

6) Repeat the operation previously described until the second bead is completely broken.

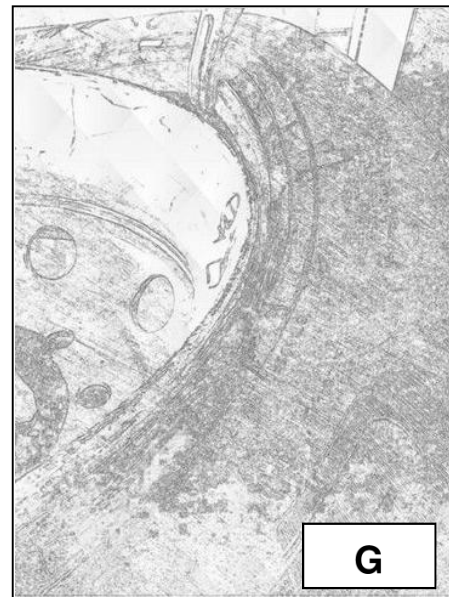
5.4 DEMOUNTING

- Apply tire manufacturer's approved rubber lubricant liberally to entire circumference of both tire beads after loosening.



- Rotate the wheel and at the same time move the hook tool forward to insert it between rim

and bead until it is anchored to the bead (See Fig. G).



- Move the hook tool 4-5 cm from the rim taking care that it does not unhook from the bead.
- Move the hook tool upwards until the reference dot is by the outside edge of the rim.
- Turn the wheel anticlockwise pressing down on pedal until the bead is completely off.
- Move the bead pressing roller carrier arm to downside plane of the wheel.



- Move the roller upwards so that its reference dot is about 3 cm outside the rim.



- Turn the wheel clockwise pressing down on pedal until the tire comes completely off the rim.



When the beads come off the rim the tire will fall. Check to make sure there are no by-standers in the work area.

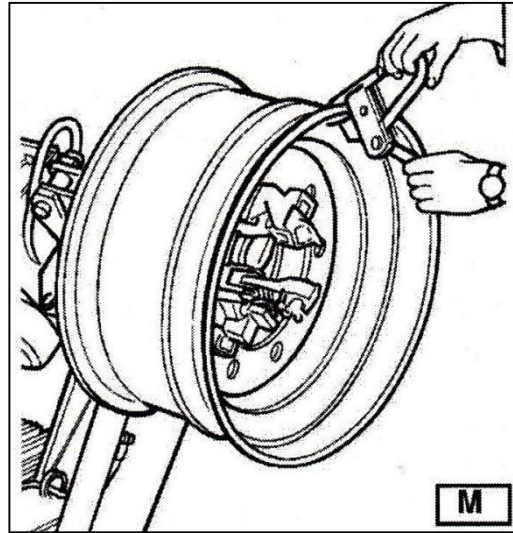
5.5 MOUNTING

Tubeless tires can be mounted using either the **bead pressing roller** or the **hook tool**.

If the tire is not problematic, use the bead pressing roller.

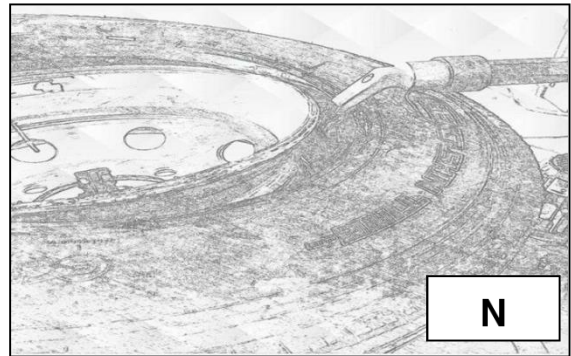
If the tire is very rigid, the hook tool must be used.

- 1) If the rim has been removed from the chuck, put it back on the chuck as described in the section on "CLAMPING THE WHEEL".
- 2) Lubricate both beads and the rim with tire manufacturer recommended lubricant.
- 3) Attach the clip to the outside edge of the rim at the highest point (**See Fig. M**). **Make sure the clip is firmly attached to the rim.**



- 4) Lean the tire against the rim.

- 5) Lift the rim with the hook to it and turn it clockwise about 15-20 cm. The tire will be positioned tilted across the rim.



- 6) Position the hook against the second bead of the tire.

- 7) Move the hook forward until it is about 1-2 cm inside the edge of the rim. Begin to turn the spindle clockwise checking to make sure that, with a 90° turn, the second bead begins to slip into the centre well.

- 8) When the second bead is fully mounted, move the hook downside for about 4cm. Turn the spindle clockwise until the first bead is fully mounted. And remove the clip.

- 9) Lower the spindle until the wheel rests on the floor.

- 10) Close the chuck of the spindle completely. Support the wheel to prevent it falling off.



This operation can be extremely dangerous.

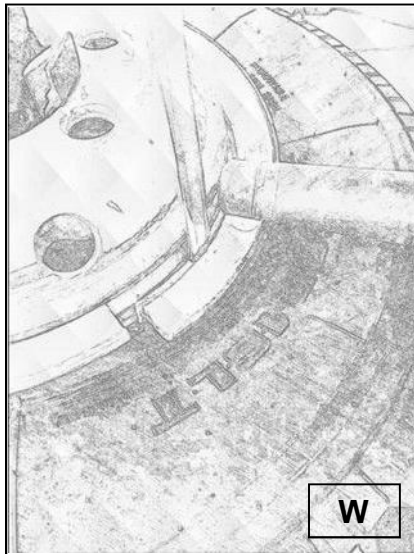
Do it manually only if you are certain you can keep the wheel balanced.

For large and heavy tires, an adequate lifting device must be used.

5.6 WHEELS WITH LOCK RING

5.6.1 DEMOUNTING

- 1) Clamp the wheel on the spindle as described previously and check to make sure it has been deflated.
- 2) Replace the bead pressing roller with lock ring demount bit.
- 3) Position the lock ring demount bit with the rim (**See Fig. W**).



- 4) Press down the demount bit until the lever can be inserted between the lock ring and the rim. Separate the lock ring from the rim.
- 5) Move and insert the demount bit to the bottom of the lock ring.
- 6) Move the demount bit upwards to lift the lock ring to the outside of the rim.



- 6) Turn the spindle clockwise until the lock ring is fully separated.
- 7) Follow 5.5.2 to demount the tire.

5.6.2 MOUNTING

- 1) Follow 5.5.3 to mount the tire.
- 2) Replace the demount bit to bead pressing roller.
- 3) Put the lock ring on the tire. Position the demount bit to one end of the lock ring.
- 4) Press the lock ring to the inside of the rim.
- 5) Insert the lever to keep the lock ring in position.
- 6) Turn the spindle clockwise until the lock ring is completely seated.
- 7) Lower the spindle until the wheel rests on the floor.
- 8) Close the chuck of the spindle completely. Support the wheel to prevent it falling off.



Do not inflate the tire with the wheel mounted on the spindle.

Tire inflation is dangerous and should only be done by removing the wheel from the spindle and placing it inside a safety cage.

Chapter 6 ORDINARY MAINTENANCE



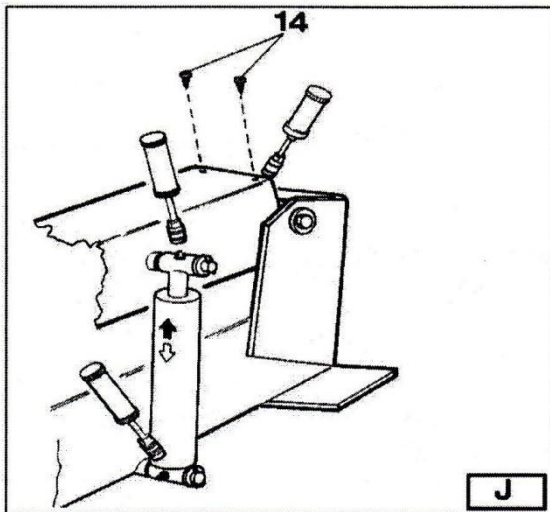
Each maintenance operation must be effected only after the disconnection of the plug from electric network.

To ensure that this tire changer works perfectly over the years, carry out the routine maintenance schedule described below:

1) Lubricate the following parts from time to time after a thorough cleaning with naphtha:

- the various swivels on the spindle
- the tool bracket slide runner
- the carriage guide plate.

2) Grease the spindle bracket lift cylinder from time to time and also its swivel. Add the grease through the grease nipples (**See Fig. J**) using ordinary lubricating grease.



3) From time to time check the oil level in the hydraulic power pack. Use the dipstick under the reservoir cap.

If necessary top up with Esso Nuto H46 or similar hydraulic oil (eg, Agip Oso 46, Shell Tellus Oil46, Mobil DTE 25, Castrol Hyspin AWS 46, Chevron RPM EP Hydraulic Oil46, BP Energol HLP).

4) From time to time check the oil level in the gear unit which, when the tool carrier bracket is completely lowered at end travel, should not show the sight glass on the gear casing as completely empty. If necessary top up with Esso Spartan EP 320 or similar oil (eg, Agip FI REP 237, BP GRX P 320, Chevron Gear Compound 320, Mobil Gear 632, Shell Omala Oil 320, Castrol Alpha SP 320).



If the oil in the gear unit or the hydraulic power pack has to be changed, note that the gear unit and the power pack reservoir have specific drain plug.



Dispose of the used oil following the present legislation on the matter.

Chapter 7 TROUBLE SHOOTING

TROUBLE:	POSSIBLE CAUSE:	SOLUTION:
After having switched on the power switch, the pilot lamp does not light on and no control can function.	The power plug is not inserted.	Insert the plug correctly in its socket.
	No power from the mains electric supply.	Reset the mains electric supply.
After having switched on the power switch, the pilot lamp light on but the motor on the hydraulic power pack does not function.	The circuit breaker is not switched on.	Switch on the circuit breaker.
	The magneto-thermic switch for motor protection is working.	Call for technical assistance.



If, despite of the above mentioned indications the tire changer does not work properly do not use it and call for technical assistance.

Chapter 8 MOVING, STORING AND SCRAPPING

8.1 MOVING THE MACHINE

The tire changer has got the lifting bracket **(1, Fig. A)** which has been positioned there on purpose for moving the machine.

To move the machines, follow these instructions:

- 1) Low the chuck holding arm **(2, Fig. A)** completely down.
- 2) Close completely the jaws of the chuck **(3, Fig. A)**.
- 3) Bring the sliding table **(4, Fig. A)** at the end of its travel, near the arm.
- 4) Insert into the lifting bracket a hoisting belt (at least 60 mm wide and of a length sufficient to bring the hook of the belt above the tire changer).

5) With the special belt ring bring the 2 ends of the belt together and lift the machine with a sufficiently strong lifting truck.

8.2 STORING

If the machine as to be stored for a long time (3-4 months) you have to:

- 1) Close the jaws of the chuck; low the chuck holding arm down; low the tool holding arm down in working position.
- 2) Disconnect the machine from all power sources.
- 3) Grease all the parts that could be damaged if they dry out:
 - the chuck
 - the slot of the tool holding arm
 - the slides of the carriage
 - the tool

4) Empty oil/hydraulic fluid reservoirs and wrap the machine in a sheet of protective plastic to prevent dust from reaching the internal working parts.

If the machine as to working again after a long storing period, it is necessary to:

- fill the oil into the reservoirs again.

8.3 SCRAPPING A MACHINE

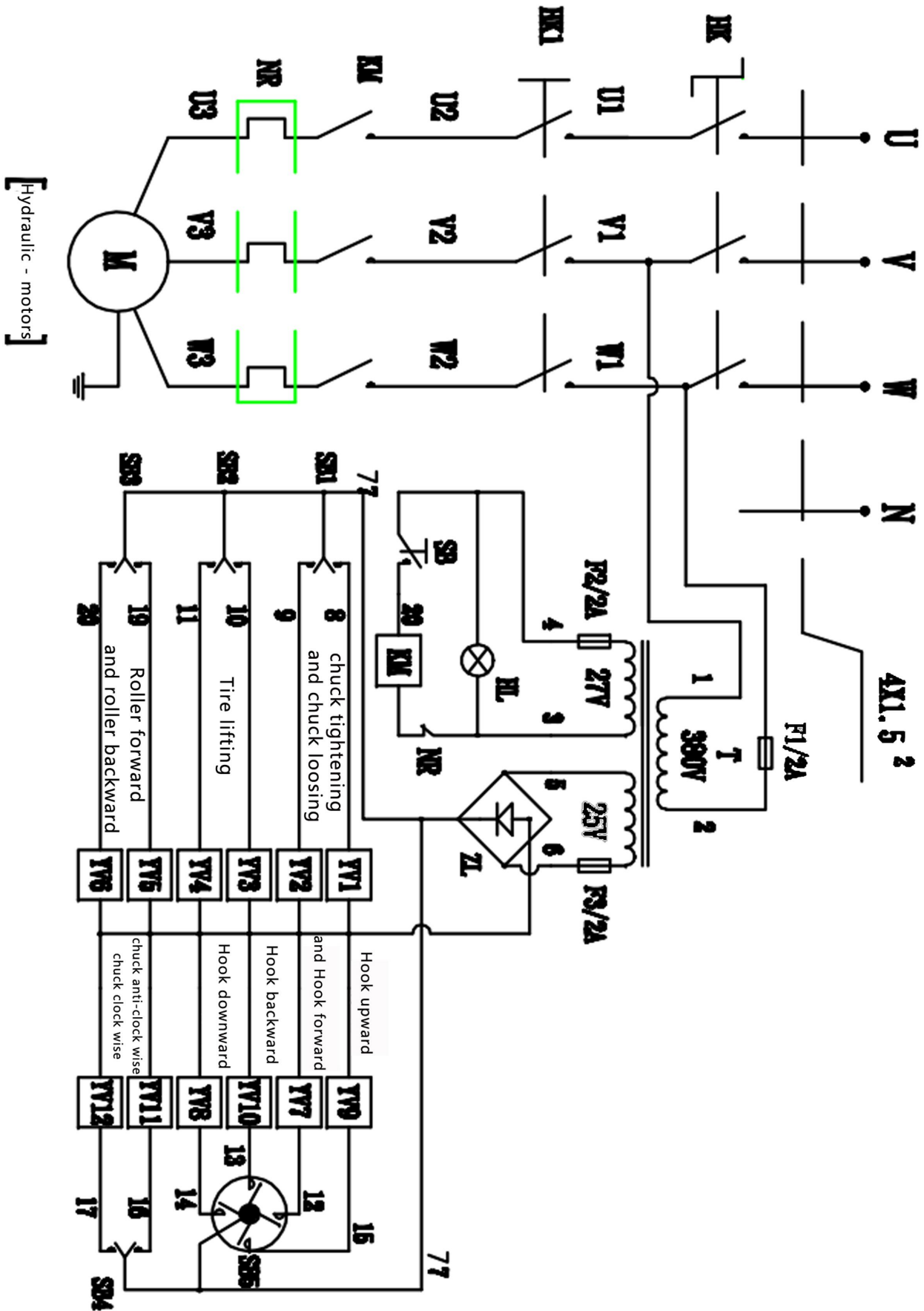
When your machine's working life is over and it can no longer be used, it must be made inoperative by removing any connection to power sources.

These units are considered as special waste material, and should be broken down into uniform parts and disposed of in compliance with current laws and regulations. If the packing are not polluting or non-biodegradable, deliver them to appropriate handling station.



If this machine catches fire, use dust or CO².

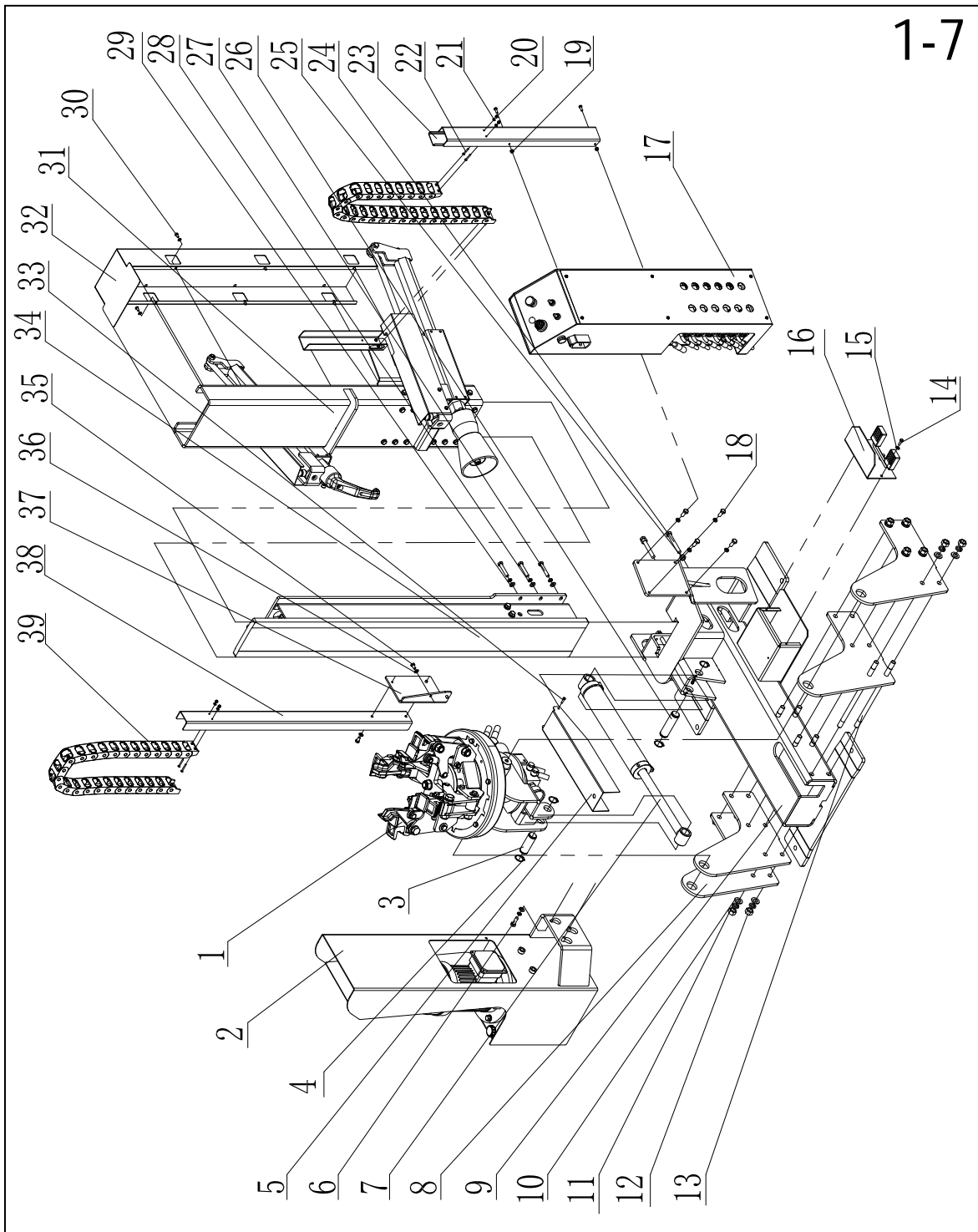
Chapter 9 ELECTRIC DIAGRAM



S/N	Code	Description	Specification	Qty.	Mark
1	HK	Power switch	EN60947-1/20A	1	
2	HK1	Circuit breaker	DZ47-60/D20	1	
3	KH	Contacto	CJX2-1801/AC24V	1	
4	T	Transformer	BK380V/100VA/27V/25V	1	Applicable to single phase power: BK220V/27V/25V
5	F1-F3	Fuse	2A	3	
6	ZL	Rectifier	KBPC3510	1	
7	HL	Power indicator	AD16-AC24V	1	Green
8	SB	Emergency button	ZB2-BE102C	1	
9	SB1-SB3	Button switch	E-TEN123	3	
10	SB4	Pedal switch	EKW-5A-B	2	
11	SB5	Cross switch	RNIL~CS four-way	1	
12	YV1	DC/Solenoid	4WE6-G-60/G24-Z5L	1	Chuck tightening
13	YV2	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Chuck loosing
14	YV3	DC/ Solenoid	41E6-G-60/G24-Z5L	1	Tire Lifting
15	YV4	DC/ Solenoid	41E6-G-60/G24-Z5L	1	Tire Lifting
16	YV5	DC/ Solenoid	41E6-G-60/G24-Z5L	1	Roller forward
17	YV6	DC/ Solenoid	41E6-G-60/G24-Z5L	1	Roller backward
18	YV7	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Hook upward
19	YV8	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Hook downward
20	YV9	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Hook forward
21	YV10	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Hook backward
22	YV11	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Chuck anti-clockwise
23	YV12	DC/ Solenoid	4WE6-G-60/G24-Z5L	1	Chuck clockwise
24	M	Hydraulic pump motor	380V/1.5KW	1	
25		Connection terminal	H3801-12	1	

Chapter10 EXPLOSIVE DRAWING

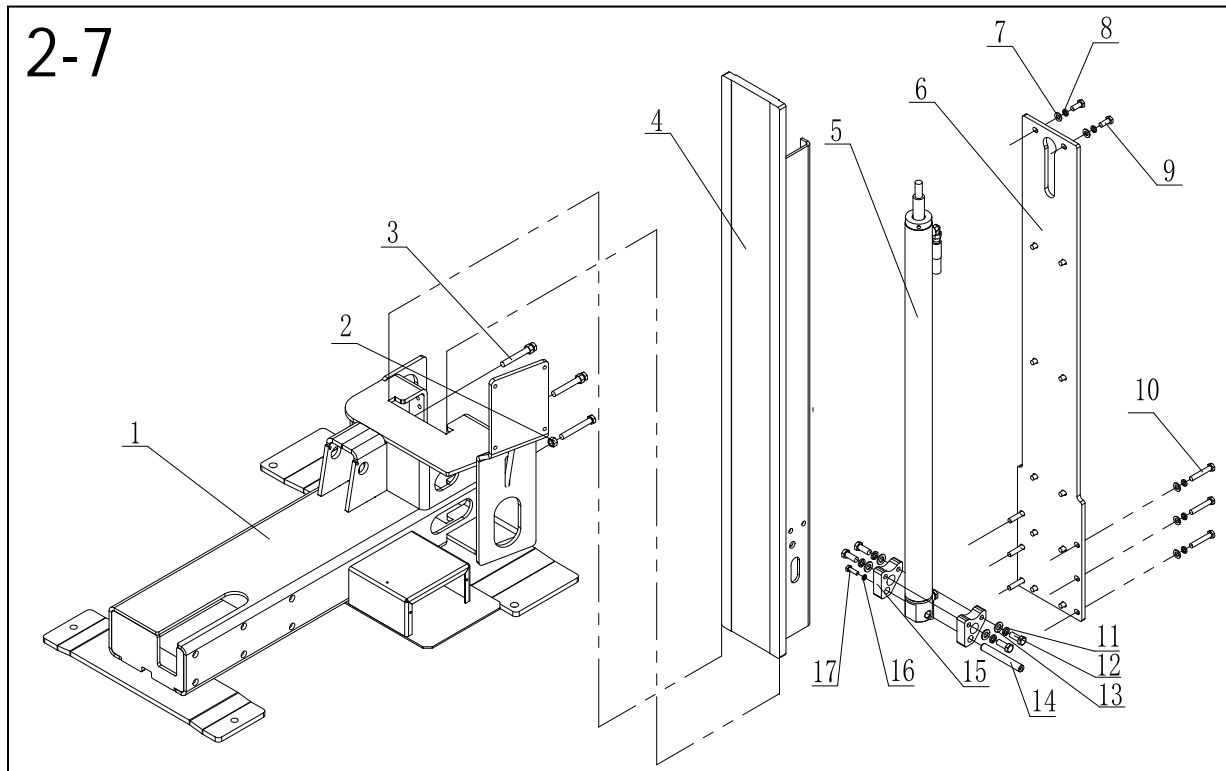
MAIN DRAWING



No.	Code	Name	Qty
1	150-400000	Clamp assembly	1
2	150-510000	Pumping Station Toolbox Assembly	1
3	150-000003	Horizontal shaft of cylinder rod	1
4	GB/T894.1	Elastic ring for shaft 30	4
5	150-000005	Swing cylinder hood	1
6	GB/T5783	Hexagon head bolt M10X30	3
7	150-920000	Assembly of Chipper Swing Cylinder	1
8	150-000001	Panel support plate	4
9	150-100000	Box welding	1
10	GB/T97.1	Flat washer A class 16	14
11	GB/T93	Spring washer 16	12
12	GB/T6170	Hexagon nut M16	12
13	150-000002	Fixed screw	6
14	GB/T5781	Hexagon head bolt M6X16	2
15	GB/T97.1	Flat washer A class 6	8
16	160-812000	Support assembly	1
17	150-810000	Operation table assembly	1
18	GB/T5783	Hexagon head bolt M10X25	4
19	GB/T889.1	Hexagon locking screw M6	2
20	GB/T889.1	Hexagon locking screw M5	10
21	GB/T97.1	Flat washer A 5	10
22	GB/T819.1	M5X25 of cross groove countersunk screws	8
23	150-620000	Trailer right groove welding	1
24	GB/T5783	Hexagon head bolt M12X120	4
25	GB/T6170	Hexagon nut M12	4
26	150-000004	Cylinder Block Shaft	1
27	GB/T5783	Hexagon head bolt M10X60	6
28	GB/T93	Spring washer 10	13
29	GB/T97.1	Flat washer A 10	9
30	GB/T5781	Hexagon head bolt M6X12	8
31	150-300000	Truck assembly	1
32	150-000007	Slip cylinder hood	1
33	GB/T5781	Hexagon head bolt M5X20	2
34	150-200000	Column assembly	1

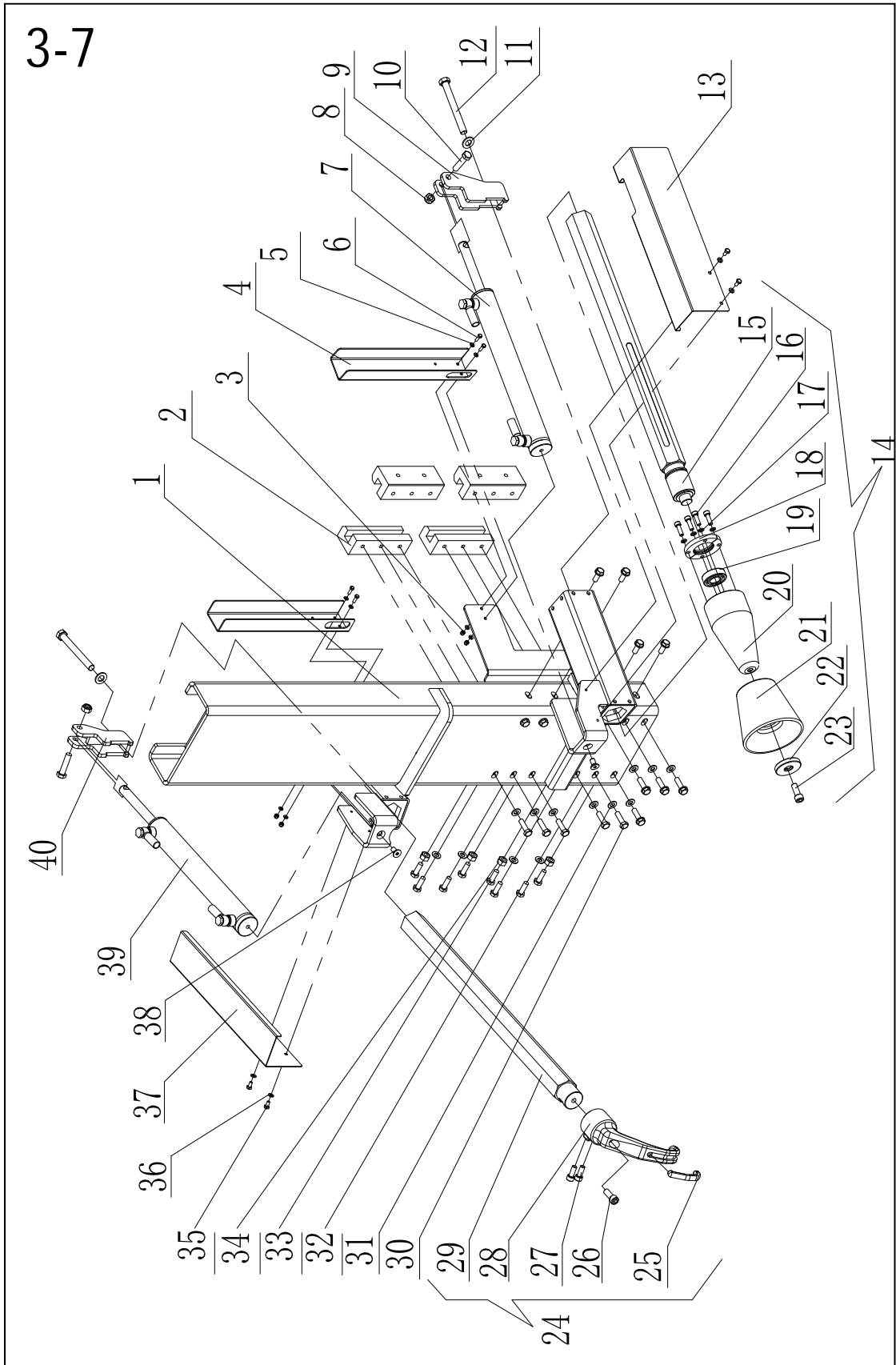
35	GB/T5783	Hexagon head bolt M8X16	4
36	GB/T97.1	Flat washer A class 8	4
37	150-000006	Pipe-slot support	1
38	150-610000	Cross-groove welding	1
39		tubing tow chain	2

BASE AND COLUMN



No.	Code	Name	Qty
1	150-100000	Box welding	1
2	GB/T6170	Hexagon nut M12	4
3	GB/T5783	Hexagon head bolt - full thread M12X90	4
4	150-210000	Column welding	1
5	150-910000	Cylinder	1
6	150-200001	Column hanging cylinder attachment	1
7	GB/T97.1	Flat washer A 10	24
8	GB/T93	Spring washer 10	24
9	GB/T5783	Hexagon head bolt M10X25	12
10	GB/T5783	Hexagon head bolt M10X60	6
11	GB/T93	Spring washer 12	4
12	GB/T5783	Hexagon head bolt M12X30	4
13	GB/T97.1	Flat washer A class 12	4
14	150-200003	Truck cylinder support shaft	1
15	150-200002	Truck lug	2
16	GB/T93	Spring washer 8	18
17	GB/T5783	Hexagon head bolt M8X25	1

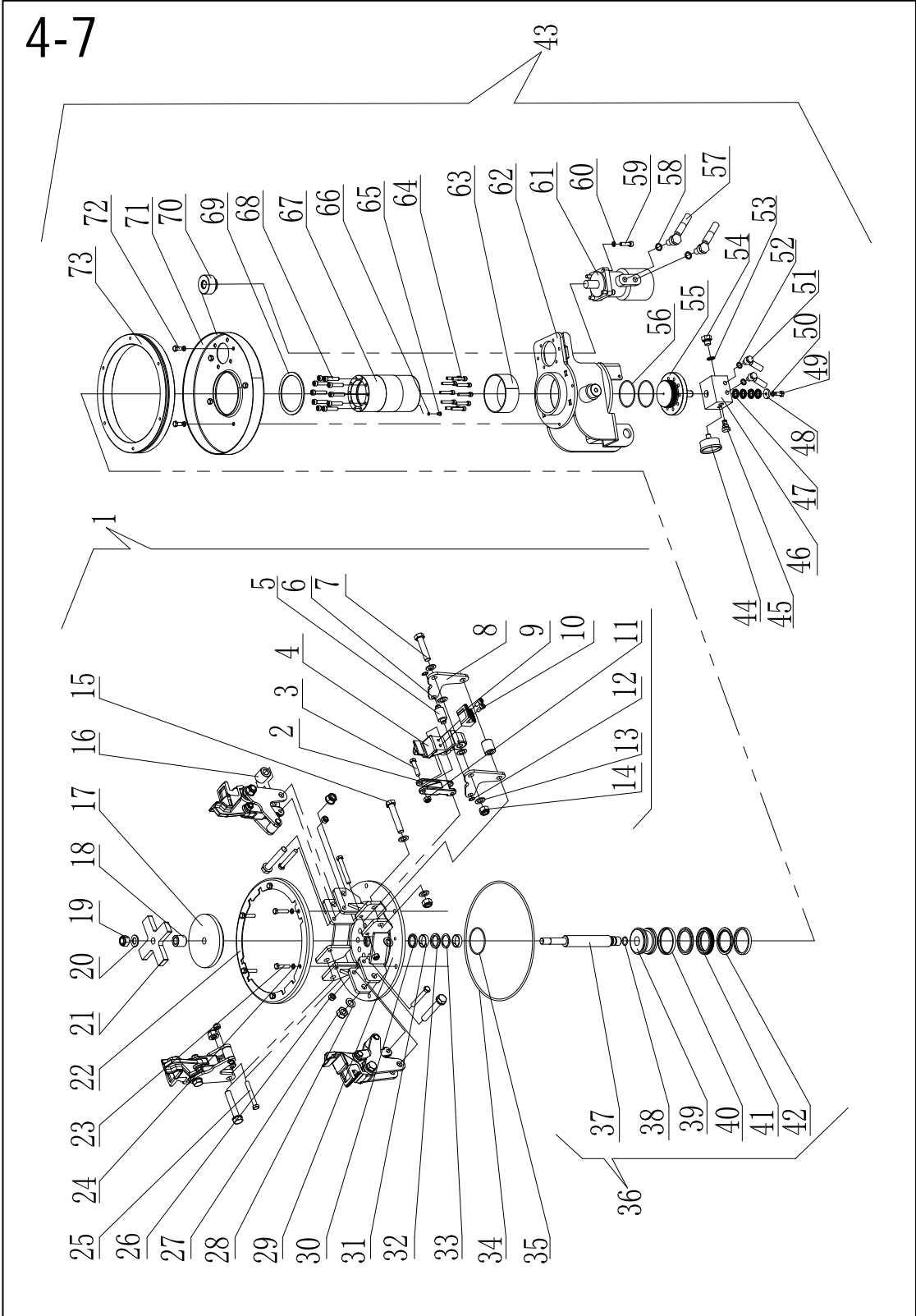
LIFTING ASSEMBLY



No.	Code	Name	Qty
1	150-310000	Welding of pulley	1
2	150-300001	Sliders	4
3	GB/T889.1	Hexagon locking screw M5	4
4	150-300004	Chainage	2
5	GB/T97.1	Flat washer A class 6	4
6	GB/T5781	Hexagon head bolt M 6X12	4
7	150-930000	Cross arm cylinder assembly	1
8	GB/T889.1	Hexagon locking screw M 12	2
9	150-320000	Welding of pressure roller cylinder puller	1
10	GB/T5783	Hexagon head bolt M 12X 50	2
11	GB/T97.1	Flat washer A class 16	2
12	GB/T5783	Hexagon head bolt M 16X 70	2
13	150-300003	Oil cylinder shield right	1
14	150-340000	Press roller assembly	1
15	150-340001	Roller Six Slides	1
16	GB/T70.1	M 8X 25 of internal hexagon cylinder screws	4
17	GB/T93	Spring washer 8	4
18	150-340003	Ring	2
19	GB/T 276	Deep groove ball bearings 6205	1
20	150-340002	Press roller rotary shaft	1
21	150-340004	Cone hole roller	1
22	150-340005	Press pad	1
23	GB/T70.1	M 12X 30 of internal hexagon cylinder screws	1
24	150-350000	Hook head assembly	1
25	150-350003	Hook head pad	1
26	GB/T70.1	M12X 30 of internal hexagon cylinder screws	1
27	GB/T70.1	M10X 25 of internal hexagon cylinder screws	2
28	150-350002	Hook head	1
29	150-350001	Hook head hexagon slide	1
30	GB/T5783	Hexagon head bolt M 10X 35	12
31	GB/T97.1	Flat washer A 10	20
32	GB/T5783	Hexagon head bolt M 10X 30	8

33	GB/T5783	Hexagon head bolt M 10X 25	4
34	GB/T6170	Hexagon nut M10	4
35	GB/T5781	Hexagon head bolt M5X16	4
36	GB/T97.1	Flat washer A 5	8
37	150-300002	Oil cylinder shield left	1
38	GB/T70.3	M10X 25 of internal hexagon countersunk screws	2
39	150-930000	Cross arm cylinder assembly	1
40	150-330000	Welding of hook head oil cylinder pull frame	1

CLAMPING ASSEMBLY

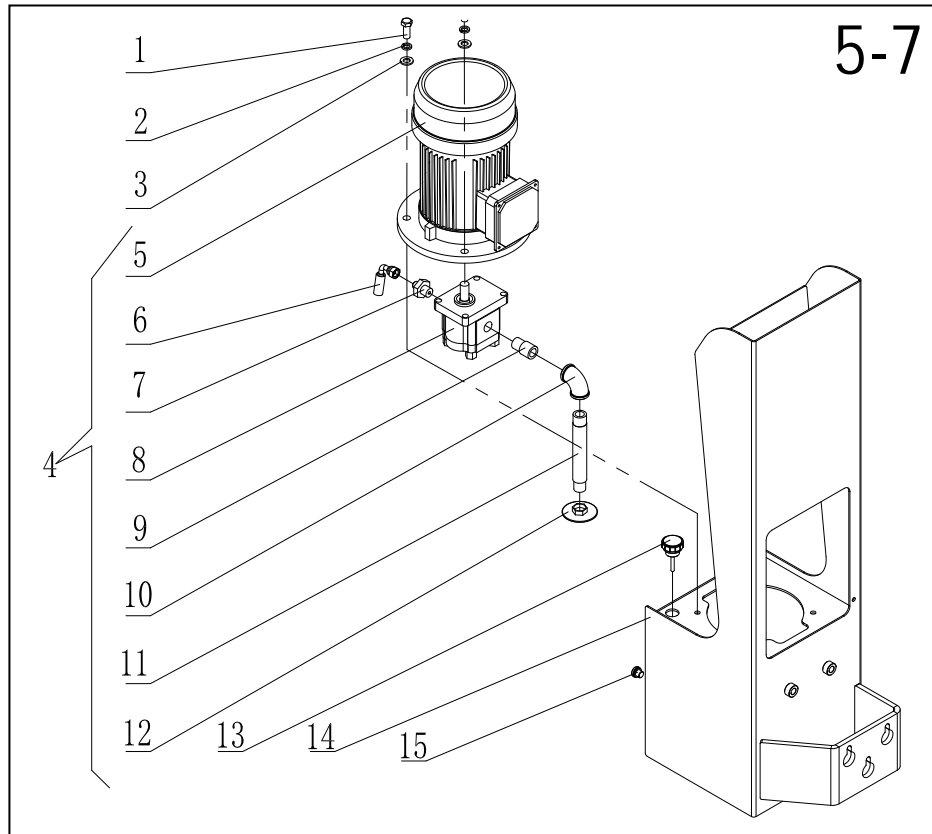


No.	Code	Name	Qty
1	150-460000	Claw Assembly	4
2	150-460002	Steel drawing plate	4
3	GB/T5783	Hexagon head bolt M 12X 50	4
4	160-280001	Claws	4
5	150-460003	Interplate Triangular drawing	4
6	150-460004	Clip claw washer	8
7	GB/T5783	Hexagon head bolt M 18X 80	4
8	150-460001	Triangular tension plate	8
9	160-280002	Claws	4
10	GB/T70.1	M10X 20 of internal hexagon cylinder screws	8
11	GB/T889.1	Hexagon locking screw M 12	4
12	GB/T894.1	Elastic ring for shaft 16	8
13	GB/T97.1	Flat washer A class 18	8
14	GB/T889.1	Hexagon locking screw M 18	4
15	GB/T5783	Hexagon head bolt M 18X 100	4
16	150-400009	Triangular tension plate spacer	4
17	150-400006	Position flange	1
18	150-400007	Positioning Packet	1
19	GB/T889.2	Hexagon locking screw M 20X1.5	1
20	GB/T97.1	Flat washer A class 20	1
21	150-400008	Cross plate	1
22	150-400005	Gear shield	1
23	GB/T5783	Hexagon head bolt M 10X 45	6
24	GB/T93	Spring washer 10	25
25	GB/T5783	Hexagon head bolt M 12X 120	4
26	GB/T889.1	Hexagon locking screw M 12	4
27	GB/T889.1	Hexagon locking screw M 18	4
28	GB/T97.1	Flat washer A class 18	8
29	150-411000	Clamp seat welding	1
30		Y dust ring 35 X45X5	1
31		Guide tape 35 X10X2.5	2

32		Y rubber sealing ring 35 X45X7	1
33	150-410001	front cover Y ring 35 X45X7 nylon pad	1
34	GB 1235	D380X 5.7 of O sealing ring	1
35	GB 1235	D85X 3.1 of O sealing ring	1
36	150-440000	Spindle Piston Assembly	1
37	150-440001	Spindle piston rod	1
38	GB 1235	D28X 3 of O sealing ring	1
39	150-440002	Spindle piston	1
40		Composite rubber coat 85 X77X9.35	2
41		Composite rubber X65X6 85	2
42		Composite rubber X65X14.4 85	1
43	150-430000	Oil body assembly	1
44		Seismic pressure gauge 25 Mpa	1
45		One-way valve	1
46	150-430002	Oil split valve	1
47		K.V.K UHS 20 seal	4
48	150-430003	Body retaining ring	1
49	GB/T5783	Hexagon head bolt M 10X 20	1
50	GB/T93	Spring washer 10	1
51		M14X1.5 hinged hose joints	2
52		Combination pad 14	4
53		Silk Block 18	1
54		M18X2 silk	1
55	150-430001	Oil cylinder rear cover	1
56	GB 1235	D85X 3.1 of O sealing ring	2
57		M18X1.5 of articulated hose joints	2
58		Combination pad 18	4
59	GB/T70.1	M10X 35 of internal hexagon cylinder screws	4
60	GB/T93	Spring washer 8	10
61		Hydraulic motor	1
62	150-421000	Welding of cylinder jacket	1
63	SF-1	Oil-free Lubricating Bearing 11550	2
64	GB/T70.1	M 8X 45 of internal hexagon cylinder screws	10

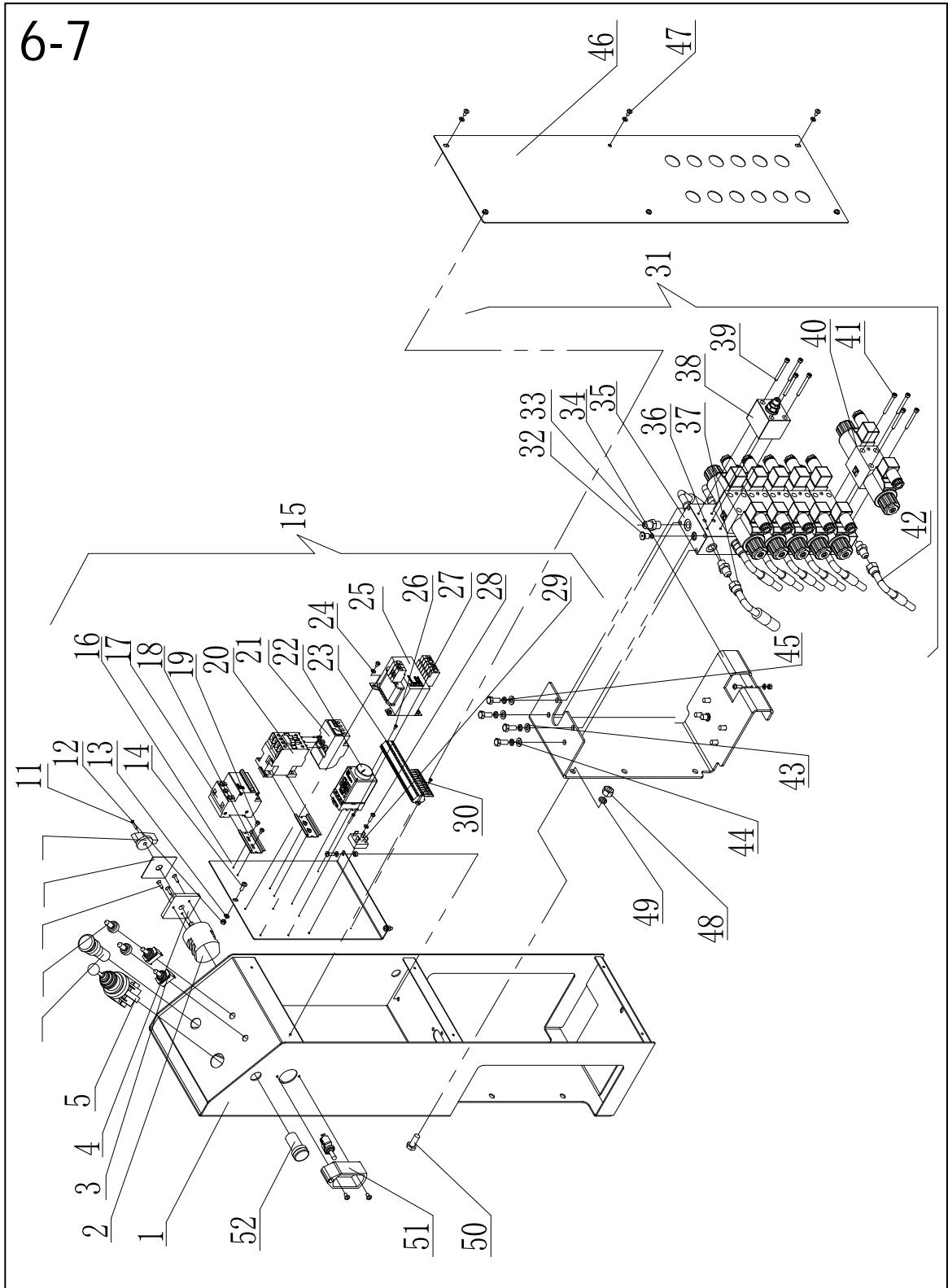
65	GB/T	M 8X 10 of Hexagon Flat Round Screw	1
66	GB 1235	D10X 1.9 of O sealing ring	1
67	150-400001	Main cylinder	1
68	GB/T70.1	M10X 45 of internal hexagon cylinder screws	10
69	150-400002	Wear resistant pad	2
70	150-450001	Motor pinion	1
71	150-400004	Lower gear cover	1
72	GB/T5783	Hexagon head bolt M10X20	5
73	150-400003	Motor Big Gear	1

POWER UNIT



No.	Code	Name	Qty
1	GB/T5783	Hexagon head bolt M12X 30	4
2	GB/T93	Spring washer 12	4
3	GB/T97.1	Flat washer A class 12	4
4	150-512000	Pumping station assembly	1
5		Double speed motor 3-22	1
6		M14X1.5° 90 hose joints	1
7		Variable diameter joints	1
8		Gear pump	1
9	150-512101	Variable diameter pipe joints	1
10		3/4" elbow	1
11	150-512102	Variable diameter pipe joints	1
12		Filter	1
13	160-910002	Tank cover	1
14	150-511000	Toolbox fuel tank welding	1
15		Oil plugging	1

CONTROL ASSEMBLY

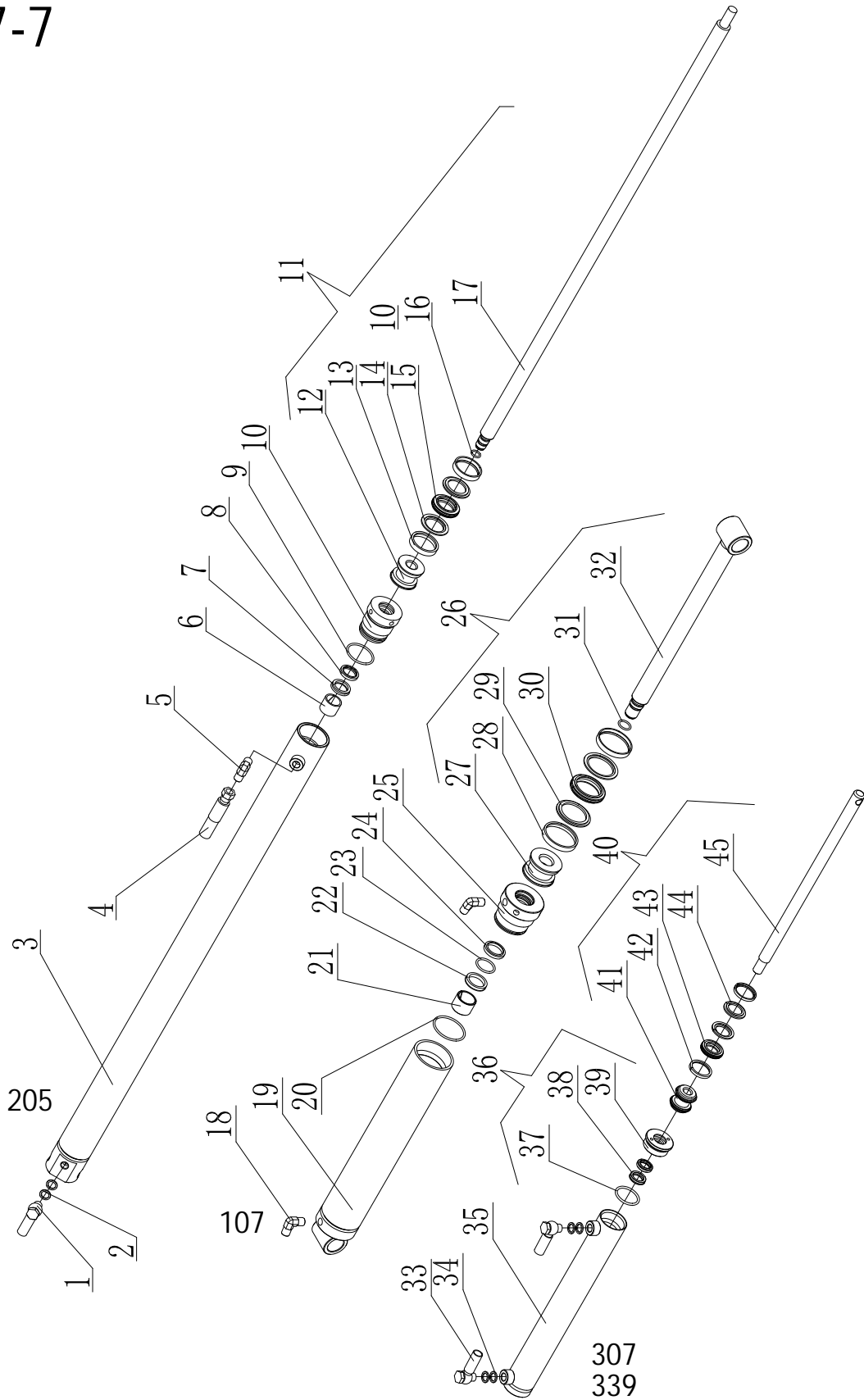


No.	Code	Name	Qty
1	150-811000	Welding table	1
2		Switch	1
3		Button switch (double)	3
4		Switch cover	1
5		Cross switch	1
6		Stop switch	1
7		Switch rubber sleeve	2
8	GB/T819.1	M 5X 16 of cross groove countersunk screws	3
9		Switch mark	1
10		Switch knob	1
11	GB/T818	M 3X 18 of screws for cross groove head	1
12	GB/T6170	Hexagon nut M 5	3
13	GB/T97.1	Flat washer A 5	10
14	GB/T818	M 5X 14 of screws for cross groove head	4
15	150-812000	Assembly of distribution panel	1
16	150-812004	Distribution floor	1
17		DZ47-63/3P-D20A of small circuit breakers	1
18		Guide rail DZ47(55mm x 35mm)	2
19	GB/T818	M 4X 6 of screws for cross groove head	8
20		AC contactor CJX2-1801(AC24V)	1
21		Overload protector	1
22		JSZ3F of Time Relay (ST3PF) DC24V2A	1
23	GB/T97.1	Flat washer A 4	5
24	SHINY-100VA	Transformer 380 V-0-27V-0-25V	1
25		Wiring arrangement (25)	1
26	GB/T818	M 3X 6 of screws for cross groove head	2
27	GB/T818	M 3X 20 of screws for cross groove head	2
28	GB/T818	M 4X 16 of screws for cross groove head	1
29		rectifier bridge block (KBPC3510)	1
30		Secondary	12
31	150-940000	Valve Plate Assembly	1
32	GB/T	M 10X 12 of Hexagon Flat Round Screw	2
33	GB 1235	D10X 1.9 of O sealing ring	2
34	150-940001	Valve plate holder	1

35	150-940002	solenoid valve plate	1
36		N14X1.5 of nozzle bump	15
37		M14X1.5 of tubing elbow connecting pipe	2
38		Speed control valve	1
39	GB/T70.1	M 5X 50 of internal hexagon cylinder screws	4
40	4WE6-G-60-G24-2 5 L	Solenoid	6
41		M14X1.5 of tubing elbow and tubing	12
42	GB/T70.1	M 5X 45 of internal hexagon cylinder screws	24
43	GB/T97.1	Flat washer A class 8	8
44	GB/T93	Spring washer 8	8
45	GB/T5783	Hexagon head bolt M 8X 20	8
46	150-810001	Table cover	1
47	GB/T818	M 5X 8 of screws for cross groove head	8
48	GB/T6170	Hexagon nut M 10	2
49	GB/T93	Spring washer 10	2
50	GB/T5783	Hexagon head bolt M 10X 25	2
51	160-810001	Switching rubber cover	1
52		Indicator	1

HYDRAULIC CYLINDER

7-7



No.	Code	Name	Qty
One	1500-910000	Truck assembly	1
1		M14X1.5 of articulated hose joints	1
2		Combination pad 14	2
3	150-911000	Oil cylinder welding of pulley	1
4		M14X1.5 of hose joints	1
5		M14X1.5 at right angle	1
6		Guide X24X2.5 25	1
7		IDU seal 25 X33X6.7	1
8		Dustproof X33X4.5X6 25	1
9	GB 1235	D45X 3.1 of O sealing ring	1
10	150-910001	Cylinder head	1
11	150-912000	Piston assembly	1
12	150-912002	Piston	1
13		Combined rubber coat 50 X44X9	2
14		Composite rubber 50 X34X5	2
15		Composite rubber 50 X34X12	1
16	GB 1235	D18X2.4 of O sealing ring	1
17	150-912001	Truck, pulley piston rod	1
II	150-920000	Assembly of Chipper Swing Cylinder	1
18		M14X1.5 at right angle	2
19	150-921000	Welding of Chipper Swing Cylinder	1
20	GB 1235	D60X 3.1 of O sealing ring	1
21		Guide tape 35 X25X2.5	1
22		Y rubber sealing ring 38 X30X6	1
23	GB 1235	D36X 3.1 of O sealing ring	1
24		Dustproof ring 30 X38X5 5.6	1
25	150-920001	Swing cylinder head	1
26	150-922000	Piston assembly	1
27	150-922001	Piston	1
28		Combined seal coat 63 X57X9	2
29		Combined seal 63 X47X5	2
30		Combined seal 63 X47X12	1
31	GB 1235	D24X 2.65 of O sealing ring	1
32	150-922100	Piston rod welding	1

III	150-930000	Cross arm cylinder assembly	2
33		M14X1.5 of articulated hose joints	2
34		Combination pad 14	4
35	150-931000	Cross arm cylinder welding	1
36	150-933000	Cylinder head assembly	1
37	GB 1235	D45X 3.55 of O sealing ring	1
38		K.V.K .UHS20 seal	2
39	150-933001	Cylinder gland	1
40	150-932000	Assembly of piston rod with transverse arm	1
41	150-932002	Cross arm cylinder piston	1
42		TBN40-26 guide	2
43		TBN40-26 of seals	1
44		Limit TBN40-26	2
45	150-932001	Cross arm oil cylinder piston rod	1