

TC220S TIRE CHANGER

INSTRUCTION MANUAL



WARNING

This instruction manual is the important part of the product. Please read it carefully and keep it properly.

This machine is only applied to mount, demount and inflate the tire in the specified scope and not for any other purpose.

The manufacturer will not be responsible for the damage or injury caused for the operation not properly and out of the range.

NOTE

This machine should be operated by the special trained qualified personnel. When operating, the unauthorized personnel will be kept far away from the machine.

Please note the safety label stuck on the machine.

Operators should wear safety protective facilities such as working suit, protective glasses and safety shoes. Keep your hands and body from the movable parts as possible as you can. Necklace, bracelet and loosen clothing may cause dangerous to the operators.

Tire changer should be installed and fixed on the flat and solid ground. The more than 0.5m of distance from the rear and lateral side of the machine to the wall can guarantee the perfect air flow and enough operation space.

Do not place the machine in the site of high temperature, high humidity, dust and with flammable and corrosion gas.

Without the permission from the manufacturer, any change on the machine parts will cause injury/damage to the machine/operator.

Pay attention that the tire changer should be operated under the specified voltage and air pressure.

If you want to move the tire changer, you should under the guidance of the professional service personnel.

SAFTTY LABEL INSTRUCTION

⚠ CAUTION	⚠ WARNING	⚠ WARNING
		
KEEP HANDS CLEAR OF BEAD AREA WHEN INFLATING.	BE SURE TO READ ALL WARNING LABELS AND INSTRUCTION MANUAL PRIOR TO OPERATION OF THIS MACHINE	ALWAYS WEAR SAFETY GLASSES WHEN OPERATING THIS MACHINE _{LA009}

Keep your hands far from tire when operation

Carefully read instruction manual before operation

When operation, wear the protective facilities



electrical shock !



Do not reach any part of your body under the mounting tool.



When breaking bead, the bead breaker will quickly move leftwards. The operator must not stand between the bead breaker and the tire.



Note: when press the tire, the opened clamp cylinder may injury the hand of the operator. Keep in minds that do not use your hand to contact the sidewall of the tire.



When clamping the rim, do not reach your hand or other parts of the body in between the clamp & the rim.



When adopt the rapid inflation, you must ensure the wheel has been firmly clamped.

When operation, do not wear long hair, loosen clothing and jewelries.

When operation, do not reach your hand under the falling objects.

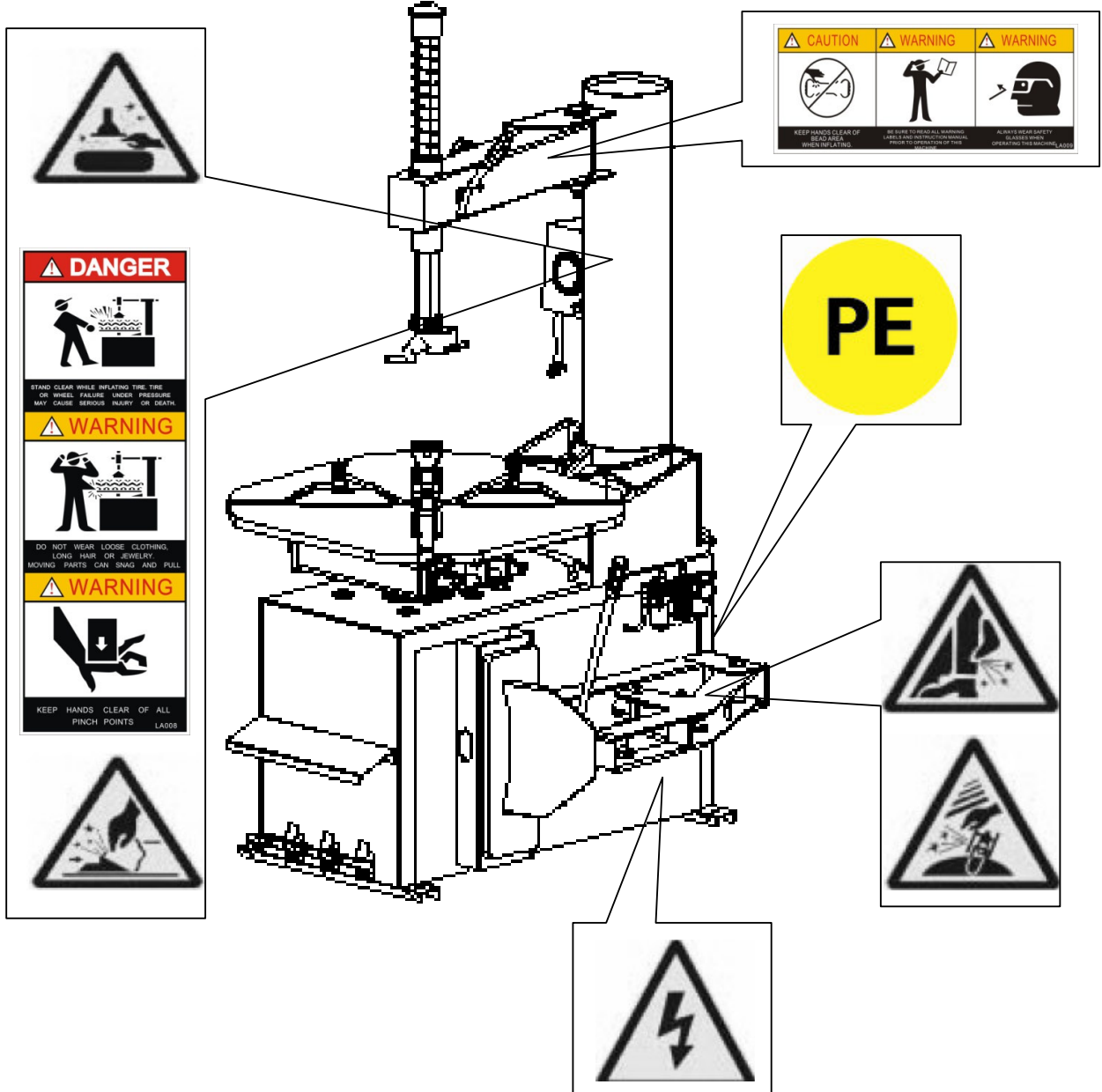


Earth connection

SAFETY LABEL POSITION DIAGRAM

Pay attention to keep the safety labels complete. When it is not clear, you should change the new label.

You should let the operators see the safety labels clearly and understand the meaning of the label.



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CHAPTER 1 GENERAL DESCRIPTION

1.1 PRODUCT INTRODUCTION

This series of equipment is the tire changer with fixed column and rocker arm. It is suitable to mount, demount and inflate all basic tires with tube & tubeless. The operation is easy, convenient, safety and reliable. It is the necessary equipment for the auto service shop and tire shop. The model is MV104E.

1.2 EQUIPMENT BASIC DIMENSION

Model	H (mm)	L (mm)	W (mm)	NW (kg)
MV104E	1820	985	780	225

1.3 TECHNICAL DATA

Operation pressure: 8-10bar

Motor: 60Hz 110V 1.1Kw

RPM of turntable: 6rpm

Noise: <75dB

1.4 APPLICATION SCOPE

Model	Wheel diameter (Max.)	Wheel width (Max.)	Rim Clamp
MV104E	960mm(37")	304mm(12")	10"- 20" 12"- 23"

1.5 ENVIRONMENT REQUIREMENT

Ambient temperature: 0°C~45°C

Relative humidity: 30 -95%

Sea level: max.1000m

Without dust and flammable and explosive gas, the operation space around the machine will not smaller than the indicated in FIG 1. If the machine is installed outdoors, it must have the protective shed to avoid being exploded to the rain and sunlight.



It is forbidden to use in the site with the flammable gas!

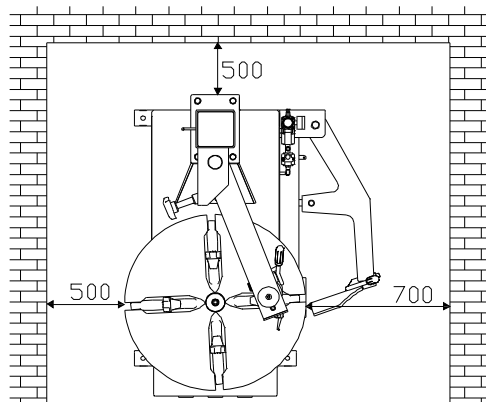


FIG 1

CHAPTER 2 MAIN PARTS

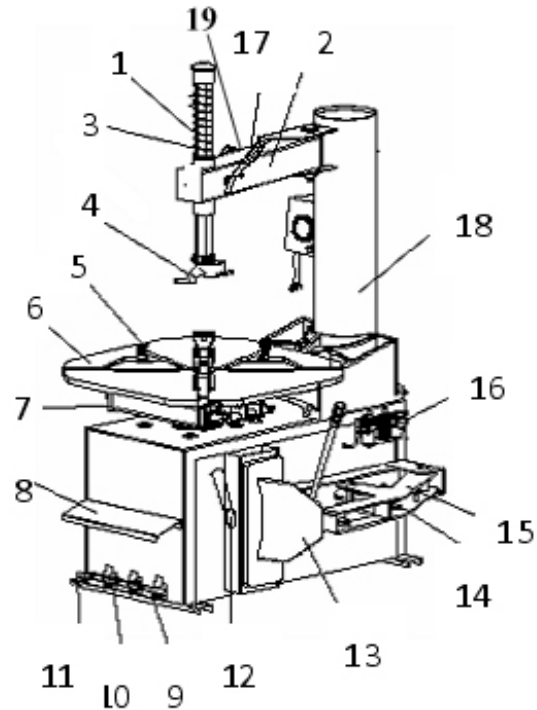


Fig 2

- | | | |
|-----------------------|------------------------|---------------------------|
| 1 vertical rod spring | 2 rocker arm | 3 vertical hexangular rod |
| 4 mounting tool | 5 clamps | 6 turntable |
| 7 turntable cylinder | 8 operation label | 9 clamp pedal |
| 10 press tire pedal | 11 turntable pedal | 12 lever |
| 13 bead breaker | 14 bead breaker piston | 15 bead breaker support |
| 16 air source inlet | 17 lock handle | 18 column |
| 19 position screw | | |

CHAPTER 3 OPERATION

3.1 DEMOUNT TIRE

3.1.1 Deflate the air in the tire completely. Use the special tool to detach the weight on the rim and pull out the core (FIG 3).

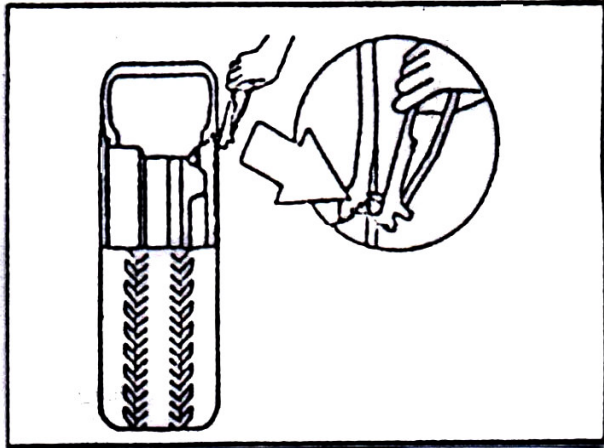


FIG 3

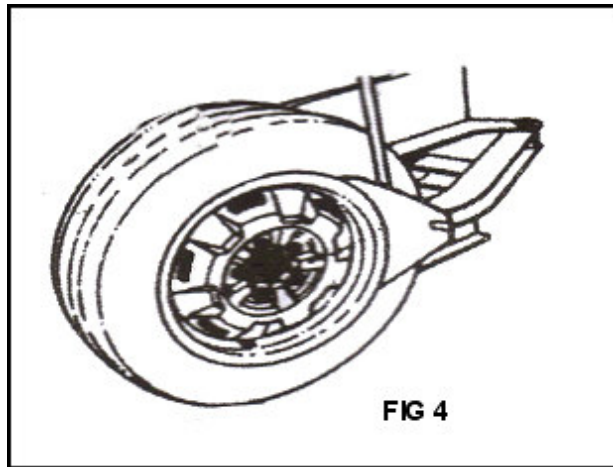


FIG 4

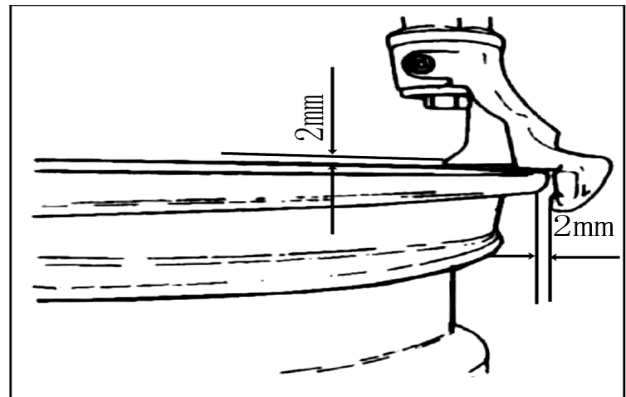
3.1.2 Place the tire between bead breaker and tire pressing runner clog (FIG 4). Then step down the pedal to detach the rim from the tire. Repeat the same operation on the other parts of the tire to make the tire completely detached from the rim.

Place the wheel with the lip detached from the rim on the turntable. Step the clamp pedal (FIG 2-9) to clamp the rim. You can select the internal and external clamping according to the rim. Get ready for tire demounting.

3.1.3 Position the hexangular rod (FIG 2-3) to the

working position to make the mounting tool close to the rim of the wheel, then use the lock handle (FIG 2-17) to lock the hexangular rod. The mounting tool will automatically move up about 2 mm (FIG 5). Please note, if the rim is made of aluminium, then use the position screw (FIG 2-19) to let the mounting tool to move outwards 2mm.

FIG 5



The angle of the mounting tool has been calibrated according to the standard rim 14". If handling the extra-big or extra-small rim, you can reposition.

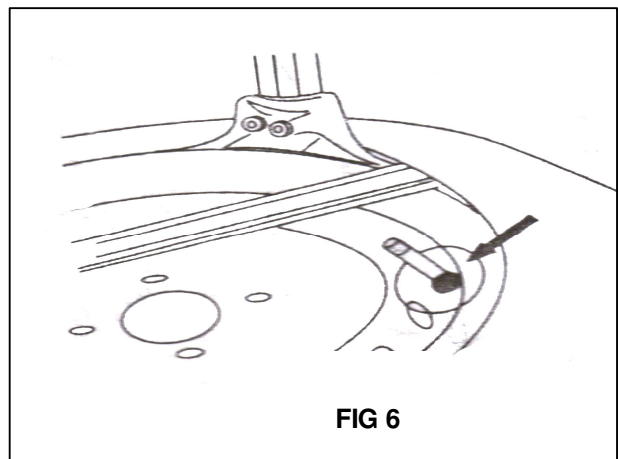


FIG 6

3.1.4 Use the lever to detach until the lip to the hump of the mounting tool (FIG 6). Step the turntable pedal (FIG 2-11) to rotate the turntable clockwise until the entire lip completely detached. If handling the tube tire, to avoid the damage on the tube, you should keep the nozzle of the tire 10cm from the right side of the mounting tool when demounting.



If the demount of the tire is jammed,

please stop the machine immediately and then lift up the pedal to let the turntable rotate counter-clockwise to remove the resistance !

3.1.5 When handling the tube tire, take out the tube and then move the lower lip upwards to the upper edge of the rim and then repeat the above steps to detach the other lip.



In the process of demounting tire, you should keep your hands and the other parts of your body from the movable parts. Necklace, bracelet and the loose clothing can injury personnel !

3.2 MOUNT TIRE:



Before mount tire, check if the tire and rim are of the same dimension !

3.2.1 Clean the dirt and rust on the rim and lock it on the turntable.

3.2.2 Spread the lubrication liquid or soap liquid around the lip. Tilt the tire against the rim and keep the front end upwards. Press down the hexangular rod to move the demount arm to contact with the rim and lock. The left lip above the tail of the mounting tool and the right lip will be positioned under the front end of the mounting tool (FIG 7). Clockwise rotate the turntable to guide the bottom lip into the tire detaching slot.

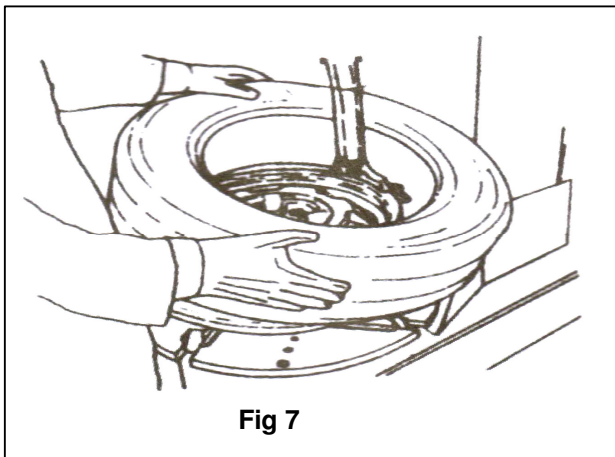


Fig 7

3.2.3 If there is tube, place it in the tire and plug the

core. And assemble the lip according to the above mentioned steps (FIG 8).

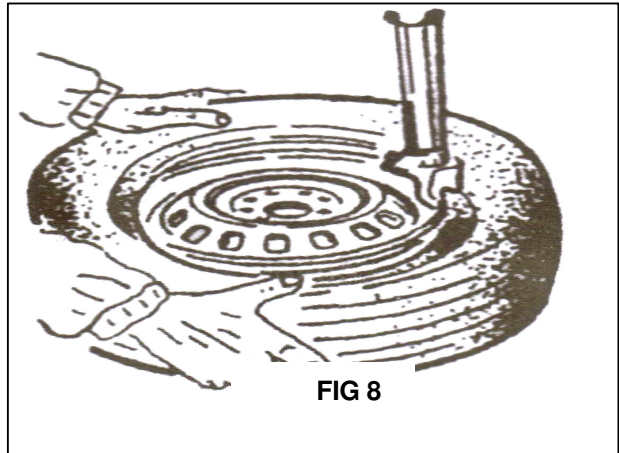


FIG 8



In the process of clamping the rim, do not reach your hands between the rim and the clamp to avoid the damage to the personnel.

3.3 INFLATION:

When inflating the tire, please be carefully and obey the operation process. Check the air route to see if the air connection is OK. This machine is equipped with an inflation gauge for monitoring the inflation of the tire and the inflation pressure.

1. Loosen the tire from the turntable.
2. Connect the inflation hose with the tire valve (FIG 9).

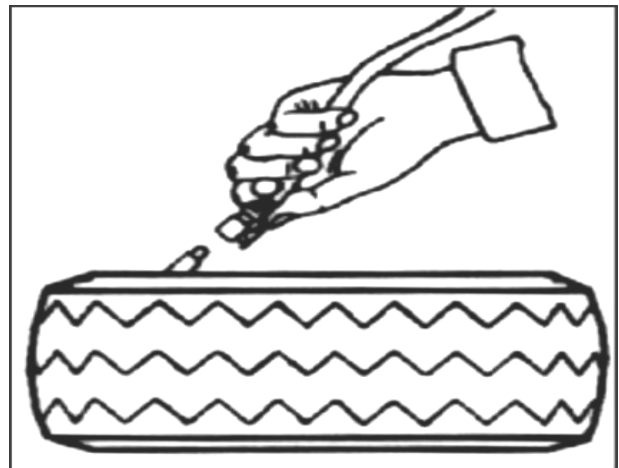


FIG 9

3. In the process of inflation, you should repeat

stepping the inflation pedal to confirm the pressure indicated on the pressure gauge not exceeds the scope specified by the manufacturer.

4. If the inflation pressures too high, you can press down the deflation press button on the inflation device to reach the required air pressure.

3.4 QUICK TIRE INFLATION:

If it is tubeless tire and the sealing of the tire and the rim is no good, the above inflation methods are no useful. On this condition, we should operate the quick tire inflation and then the above methods.

1. There is an inflation pedal on the right side of the body. This pedal has 2 gears. The first gear is for the inflation on the tire with tube. When inflation, you can gently press the pedal for many times to confirm the pressure display of the pressure gauge not exceed the scope specified by the manufacturer.
2. The second gear is the assistant inflation for the tubeless tire. When inflation, you can step the pedal to the floor and then loosen the pedal to make it return to the first gear and then use the inflation hose to inflate.



Warning ! Explosive ! When inflating, please obey the following instructions:

- **Carefully check if the tire and the rim are of the same dimension and check the wear condition of the tire to confirm the tire not damaged before inflation.**
- **When the air pressure needed for inflation relatively high, you can take off the tire and to inflate under the protective cover.**
- **When inflating the tire, please be carefully. Keep your hands and body away from the tire.**

CHAPTER 4 MAINTENANCE AND REPAIR



Only the qualified professional personnel can execute the maintenance. Before any maintenance, cut off the power, and ensure the maintenance personnel can take charge of the power plug. Meanwhile, cut off the air supply and pull off the quick adaptor of supply and completely deflate the residual air in the machine.

To correctly use the tire changer and prolong its working life, it is necessary to periodically maintenance and repair according to the instruction manual. Otherwise the running and reliability of the machine will be affected and the personnel near the machine or the operator will be injured.

Following position should be monthly maintained:

- Keep the machine and working area clean.
- Use the diesel oil to clean the hexangular rod (FIG 10) and use the machine oil to lubricate.



FIG 10

- Use the diesel oil to clean the turntable clamp and guide rail and use the lithium base grease to lubricate. (FIG 11)



FIG 11

- Periodically check the lubrication oil level in the oil

fog device. If the oil level lower than the oil scale, please feed in the SAE 10W ISO 32 oil in time (FIG 12)

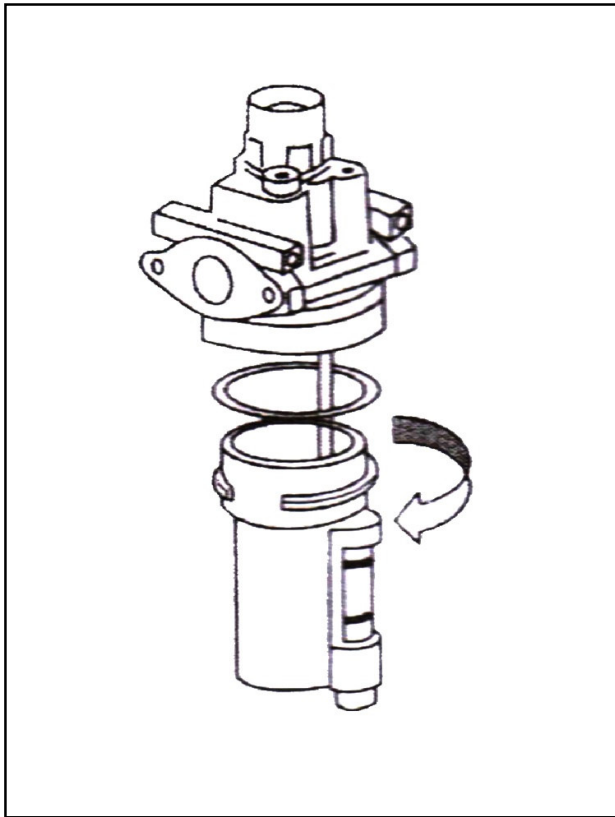


FIG 12

- Drain out the water and impurity in the oil-water separator periodically.
- Periodically check and adjust the tension of the driven belt. Properly adjust the adjust nut in A and B to realize the proper tension. (FIG 13) .

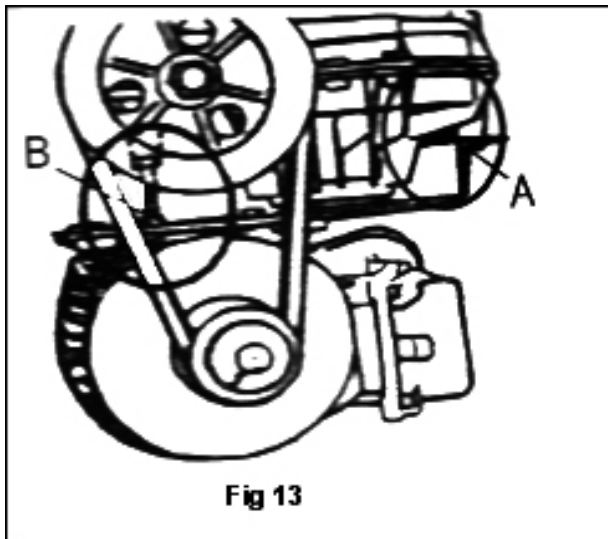


Fig 13

When press downward the hexangular lock handle, the

hexangular rod will vertically slide under the effect of the weight of the hexangular rod and return spring. When the lock handle rotate clockwise for about 100 degree, the cam connected to the handle will push up the lock plate to lock the hexangular rod. If you can not realize this situation, you can reach the target to lock the hexangular rod through adjusting the position of the screws and nuts. (FIG 13)

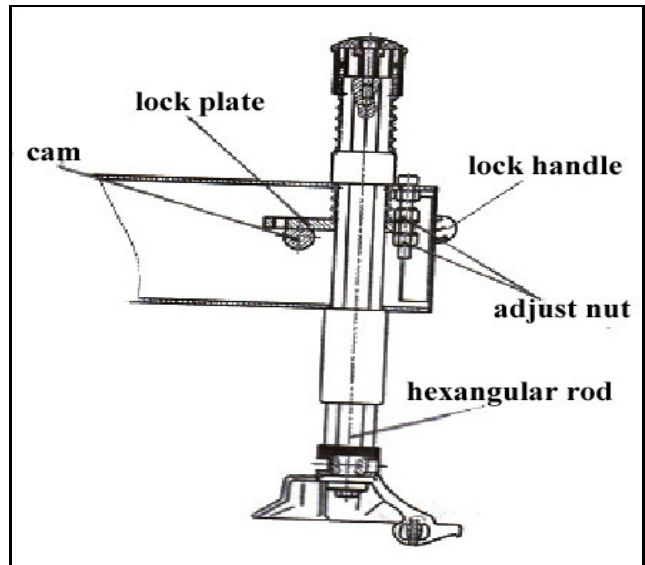


FIG 13

CHAPTER 5 TRANSPORTATION

The machine must apply the original package to the transportation and position according to the indication on the package. The transportation of the machine must use the corresponding forklift (FIG 14) and the stack should not exceed 3 layers.

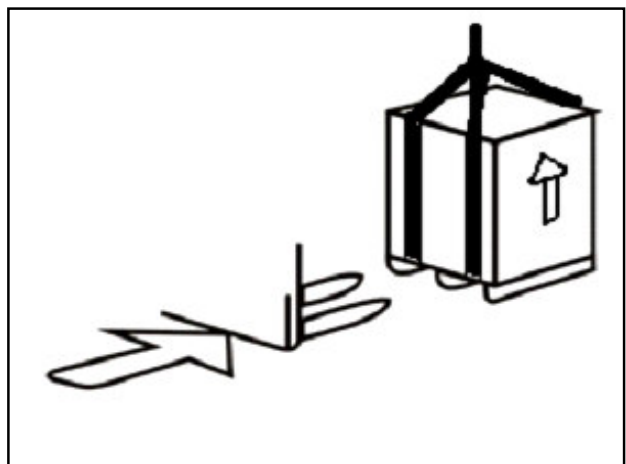
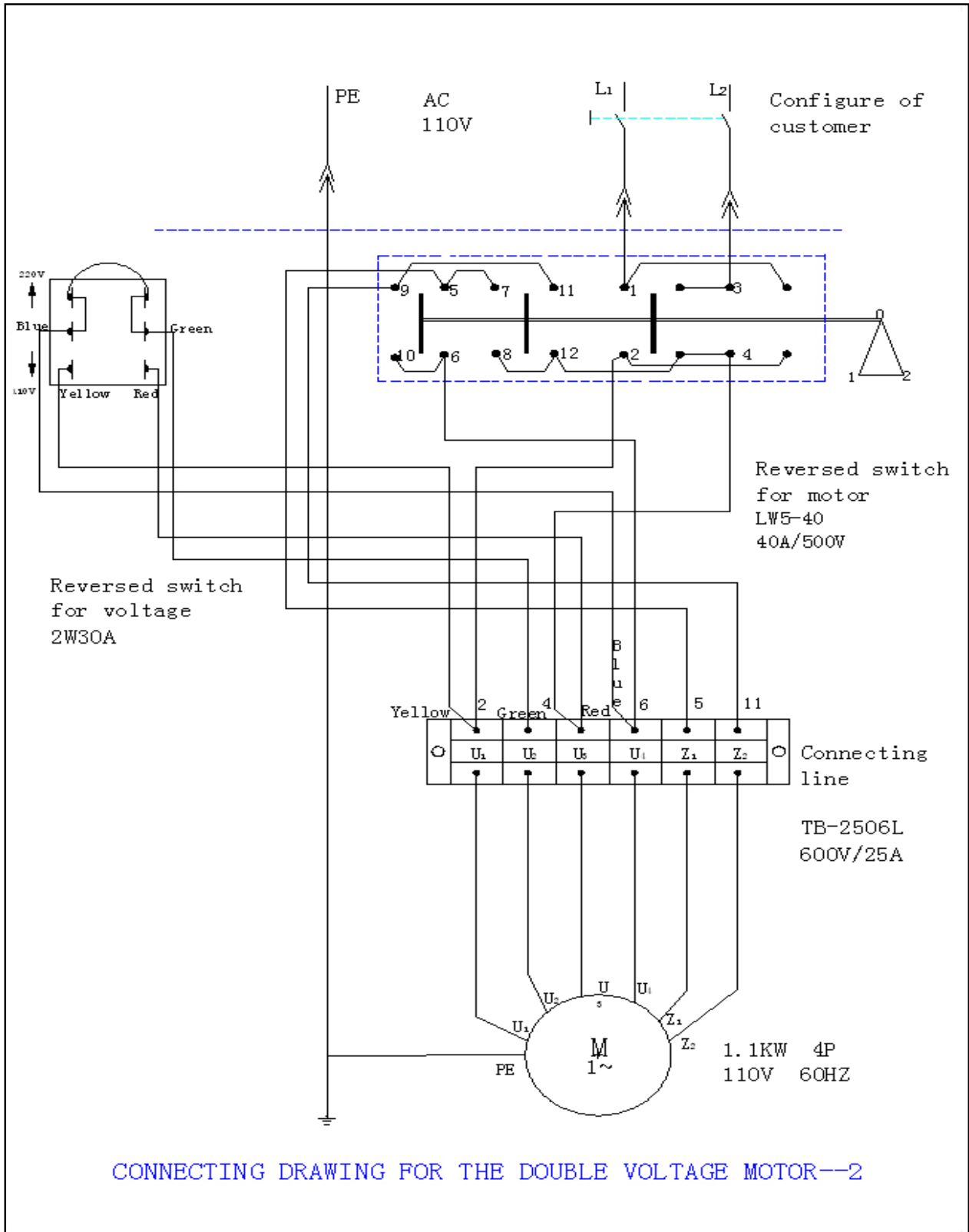


FIG 14

CHAPTER 6 CIRCUIT DIAGRAM



CHAPTER 7 TROUBLESHOOTING

Trouble	Reason	Solution
Turntable rotates in one direction.	Universal switch contact burned	Change Universal switch
Turntable does not rotate.	Belt damage Belt too loose Motor or power source have problems Universal switch contact damage	Change belt Adjust the tension of the belt Check motor, power source and power source cable Change motor Change Universal switch
Turntable can not clamp the rim as normal	Clamp worn Clamp cylinder air leakage	Change clamps Change the air leakage sealing parts
hexangular rod cannot lock	Lock plate not in position	See Chapter 4
Chassis pedal not return.	Pedal return spring damage	Change torsion spring
Motor not rotate or the output torque not enough	Drive system jam Capacitor broken down Voltage not enough Short-circuit	Remove the jam Change capacitor Wait for the restore of the voltage Remove
Cylinder output force not enough	Air leakage Mechanical fault Air pressure not enough	Change sealing parts Remove the fault Adjust the air pressure to meet the requirement
Air leakage	Air pipe damage Pipe connect damage Sealing end damage Sealing glue missing	Change damaged parts Add sealing glue